

Map 26: NIGG FERRY TO KINGS CAVE

Hinterland Geology and Coastal Geomorphology: North Sutor forms a headland overlooking Nigg Ferry and rises to a height of 635m. The basement geology is dominated by undifferentiated Moine schist and Old Red Sandstone. Nigg Ferry is a cusped foreland built out at present and the post-glacial epoch. The foreland consists of a dune system the western side of which was used to create the fabrication yard.

Erosion class: The beach at Nigg Ferry is accreting with a high proportion of gravel and shingle increasing eastwards. Smith and Mather (1973) noted that the dune system fronting the low gradient beach was undergoing serious erosion. This was due to recreational use of the dune by a caravan park. Today the dune system is stable as it has only limited visitor pressure. The dune-beach margin is however undergoing rabbit erosion and dune blow-out. The latter was seen within the sides of the cuttings that are used as pathways. The low gradient beach is stable and becomes noticeably rockier eastwards where the sand ends and boulder cover dominates. Rock armour defends the shoreline immediately in front of Nigg Ferry Hotel.

Built Heritage and Archaeology: The built heritage archaeology of this area includes the military complex and coastal batteries on both the hinterland, on top of the cliffs and near the HWM at the North Sutor and Dunskeath castle. The 12th century motte of Dunskeath castle was recorded in a fair state and the earthworks were damaged by rabbit erosion. The 19th century fishing station at Caarnrigh indicates one of the previous industries of this coastline and its current state demonstrates the erosion potential of the environment.

Map 26: Hinterland Geology and Coastal Geomorphology

1. NIGG FERRY

NH 796 689

1km

Sand

Low edge (<10m)

Blown sand/dune formation

Formed on a cusped foreland is sequence of dune sand. Low lying at 10m below OD, the dune can be traced landwards for c. 0.3km. The beach is sandy. (Further note on dune significance in Smith and Mather 1973)

2. NIGG FERRY to south of CASTLECRAIG

NH 816 687

1.7km

Rock Platform

High cliff (25m)

Glacial deposits over exposed rock

Irregular high cliff of the North Sutor overlain by glacial drift on exposed rock. The cliff edge is irregular and precipitous with sea caves and rock platforms.

3. South of CASTLE CRAIG to south of Kings

Cave

NH 823 690

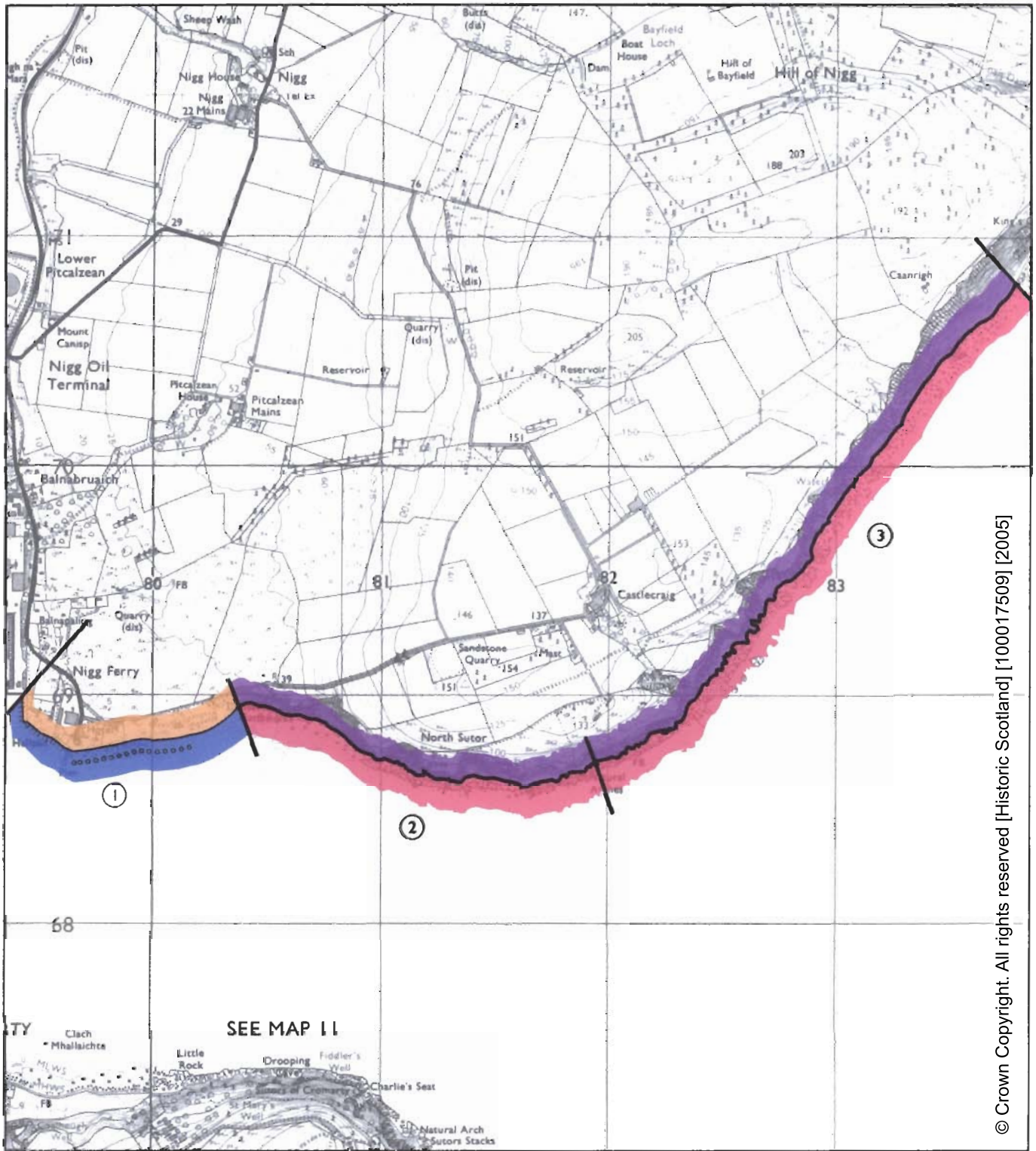
2.8km

Rock platform

High cliff (c. 75-80m)

Glacial till over visible rock

Irregular sheer cliff-line with sea arches and offshore stacks. The hinterland geology is dominated by glacial till over exposed rock.



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MAP 26: NIGG FERRY TO KING'S CAVE

MORAY FIRTH SURVEY Grid ref: NH 80-84/67-72

1:25 000

Basemap: O.S. Pathfinder Series Sheet 134

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HINTERLAND GEOLOGY AND FORESHORE GEOMORPHOLOGY

Assessment date: 21 September 1998

Hinterland:

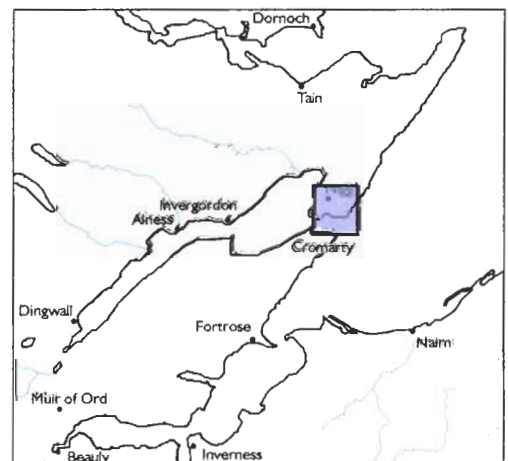
- Drift, boulder clay
- Drift, boulder clay over visible rock
- Raised beach and marine deposits
- Blown sand
- Glacial sand and gravel
- Alluvium

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 26: EROSION

1. NIGG FERRY

NH 800 688

0.9km

Accreting or eroding

Part defended by recent boulder armouring at the ferry terminal and pier region. Eastwards these hard defences give way to an extensive dune system that is undergoing erosion in parts by rabbit damage and visitor stress, particularly where tracks through the dune are well pronounced. The beach has a shallow gradient becoming increasingly stonier towards the east.

2. NORTH SUTOR

NH 814 686

2.km

Eroding or stable

This section of coast lies in front of precipitous cliffs that rise steeply. The coastline is strewn with large boulders and exposed rocky platforms that are under constant wear by wave action. Given the fairly resilient nature of the sandstone cliff erosion at the base is considered to be reasonably slow.

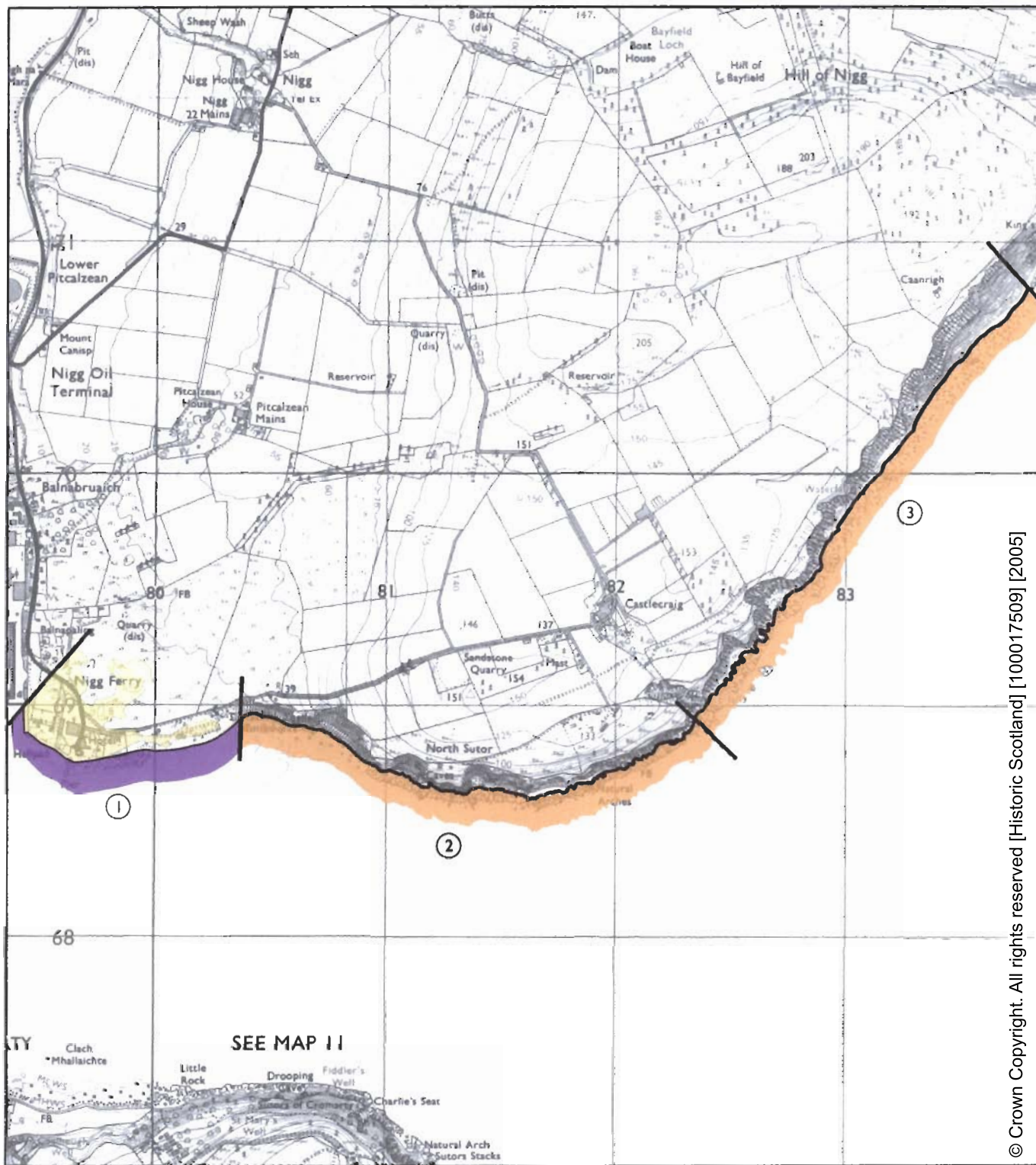
3. East of CASTLECRAIG to KINGS CAVE

NH 830 870

2.6km

Eroding or stable

Exposed precipitous cliffs overlook a rock platform shoreline. The cliff base is undergoing constant erosion by wave attack but the rate of erosion is considered to be slow owing to the resilient nature of the sandstone cliff and sea platforms.



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1:25 000

Basemap: O.S. Pathfinder Series
Sheet 134

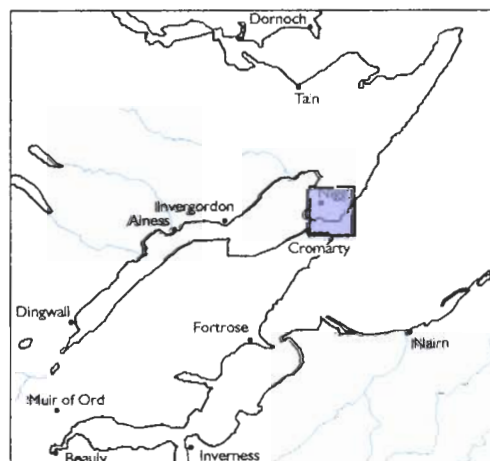
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EROSION CLASS

Assessment date: 21 September 1998

Key:

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



MAP 26: BUILT HERITAGE AND ARCHAEOLOGY

Sites on the Coastal Edge & Foreshore

NH76NE 45
 NH 7961 6869
 NIGG FERRY
 Pier
 20th century AD
 Good
 Nil

NH 7973 7872
 NIGG FERRY
 Car ferry slipway
 20th century
 Good
 Nil

NH 7965 6879
 NIGG FERRY
 Sandstone quay
 Uncertain
 Fair
 Monitor

NH 8240 6867
 NORTH SUTOR
 Coastal defence lookout posts
 20th century AD; WWI and WWII
 Poor
 Monitor

NH 8350 7050
 CAANRIGH
 Timber hut, salmon fishing station
 19th/20th century AD
 Poor
 Survey and monitor

Sites in the Hinterland

NH 7965 6879
 NIGG FERRY
 Pillbox
 20th century AD; WW II
 Good
 Nil

NH76NE 42
 NH 7968 6882
 NIGG FERRY
 Giral/hotel
 17th/18th century AD
 Fair
 Nil

NH 8040 6898
 NIGG FERRY
 Concrete faced tunnel
 20th century AD
 Fair
 Nil

NH86NW 7
 NH 8048 6901
 BALNAPALING
 Shell midden
 Uncertain
 Fair
 Survey and monitor

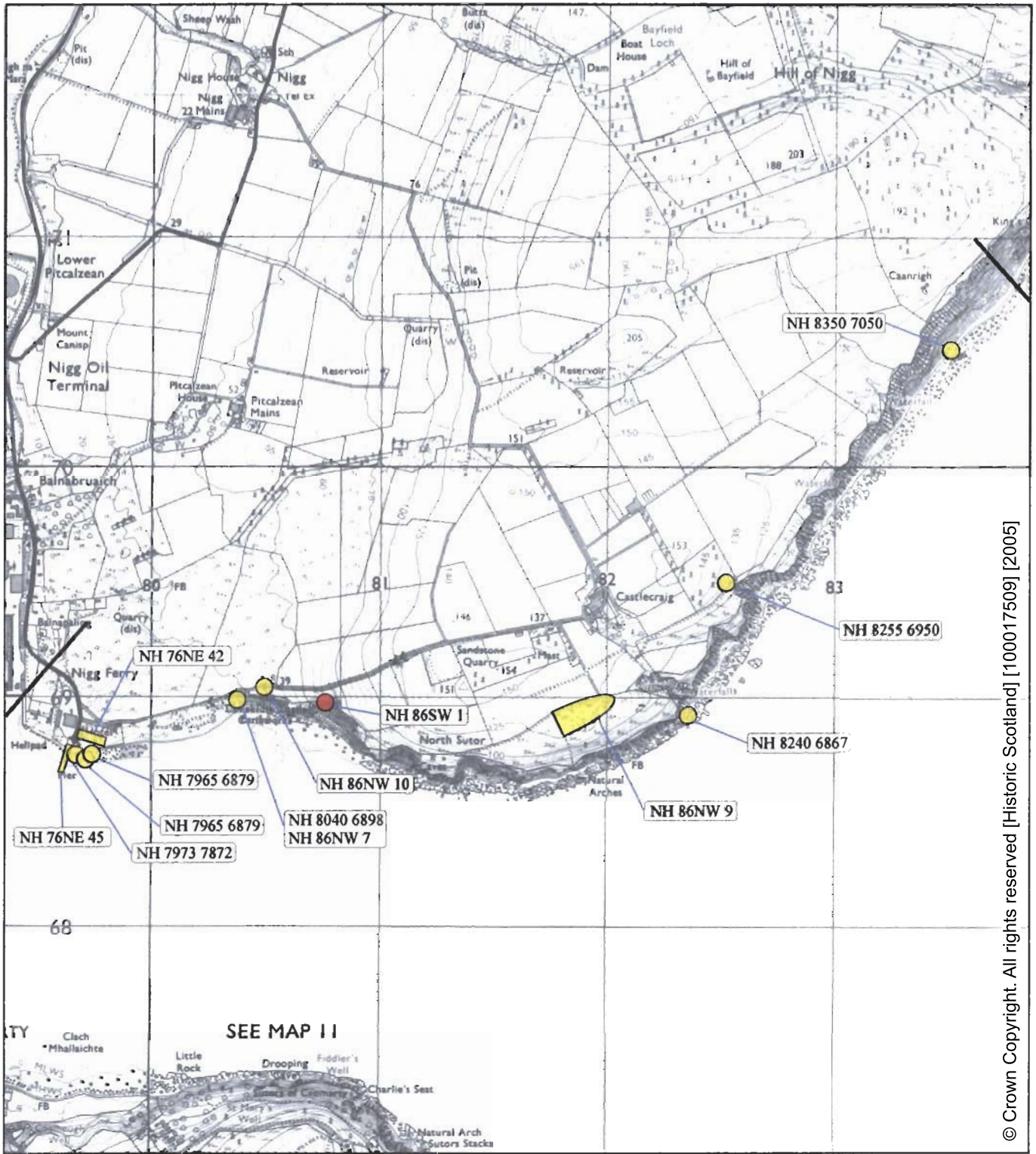
NH86NW 10
 NH 8050 6903
 DUNSKEATH CASTLE
 Coastal battery
 20th century AD
 Poor
 Monitor

Sites in the Hinterland

NH86NW 1 - Scheduled
 NH 8070 6898
 DUNSKEATH CASTLE
 Motte
 12th century AD
 Fair
 Monitor

NH86NW 9
 NH 8210 6877 & 8195
 6896
 NORTH SUTOR
 Coastal batteries; military
 20th century AD; WWI and
 WWII
 Fair
 Monitor

NH 8255 6950
 NORTH SUTOR
 Military buildings
 20th century AD; WWI and
 WWII
 Good
 Monitor



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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

