

Map 21: ALNESS POINT TO INVERGORDON

Hinterland Geology and Coastal Geomorphology: Old Red Sandstone forms the basement geology. Drift lithologies along this unit of coastline are mainly derived from marine deposits and freshwater alluvium. Freshwater alluvium derived from the River Alness has formed an extensive alluvial tail that extends out into the Cromarty Firth. Eighteenth and nineteenth century reclamation is also a factor in its development. Three marine incursions are represented by the positions of raised beach terraces that converge within the hinterland. Further inland morainic drift dominates the cover soil. The land behind Alness Point and along to Invergordon is low-lying at below 10m OD (NH 684 695). Invergordon is heavily developed and the foreshore is armoured and greatly modified.

Erosion class: Saltmarsh lends stability to the low coastal edge south of Dalmore (NH 660 680). Conditions on the foreshore along this unit of coast are stable or accreting. At Belle Port the shore is heavily armoured to defend the B817 trunk road. Mud is accreting against the concrete seawalls that protect the industrial installations of Invergordon.

Built Heritage and Archaeology: The sites in this area are very diverse in both age and condition. The built heritage on the coastal hinterland ranges from the well preserved 17th century ginnal and later icehouse at Alness Point to the limited remains of the RAF seaplane base to the west. Around Dalmore the foreshore remains include timber pier posts, fish trap mounds and fish trap stone alignments. The Pictish Class 1 symbol stone at Rosskeen appears to be affected by coastal weather systems, especially westerlies which have eroded the side of the stone facing the shoreline. The railway bridges at Rosskeen are good examples of different bridge designs.

Map 21: Hinterland Geology and Coastal Geomorphology

1. ALNESS POINT to near BELLPORT PIER

NH 660 680

1.9km

Saltmarsh/mud and shingle

Low edge (<10m)

Alluvium (freshwater)

Deeply incised stretch of saltmarsh fronted by a foreshore dominated by mud and shingle. The hinterland consists of alluvial deposits in the form of an alluvial fan formed at the head of the Alness River.

2. BELLPORT PIER to ROSKEEN BRIDGE

NH 680 690

1.9km

Estuarine mud and shingle

Low edge (<10m)

Raised beach and marine deposits

The hinterland consists of raised beach and marine deposits and is low lying. The foreshore is narrower at this point and consists of mud and shingle.

3. ROSKEEN BRIDGE to INVERGORDON PIER

NH 680 690

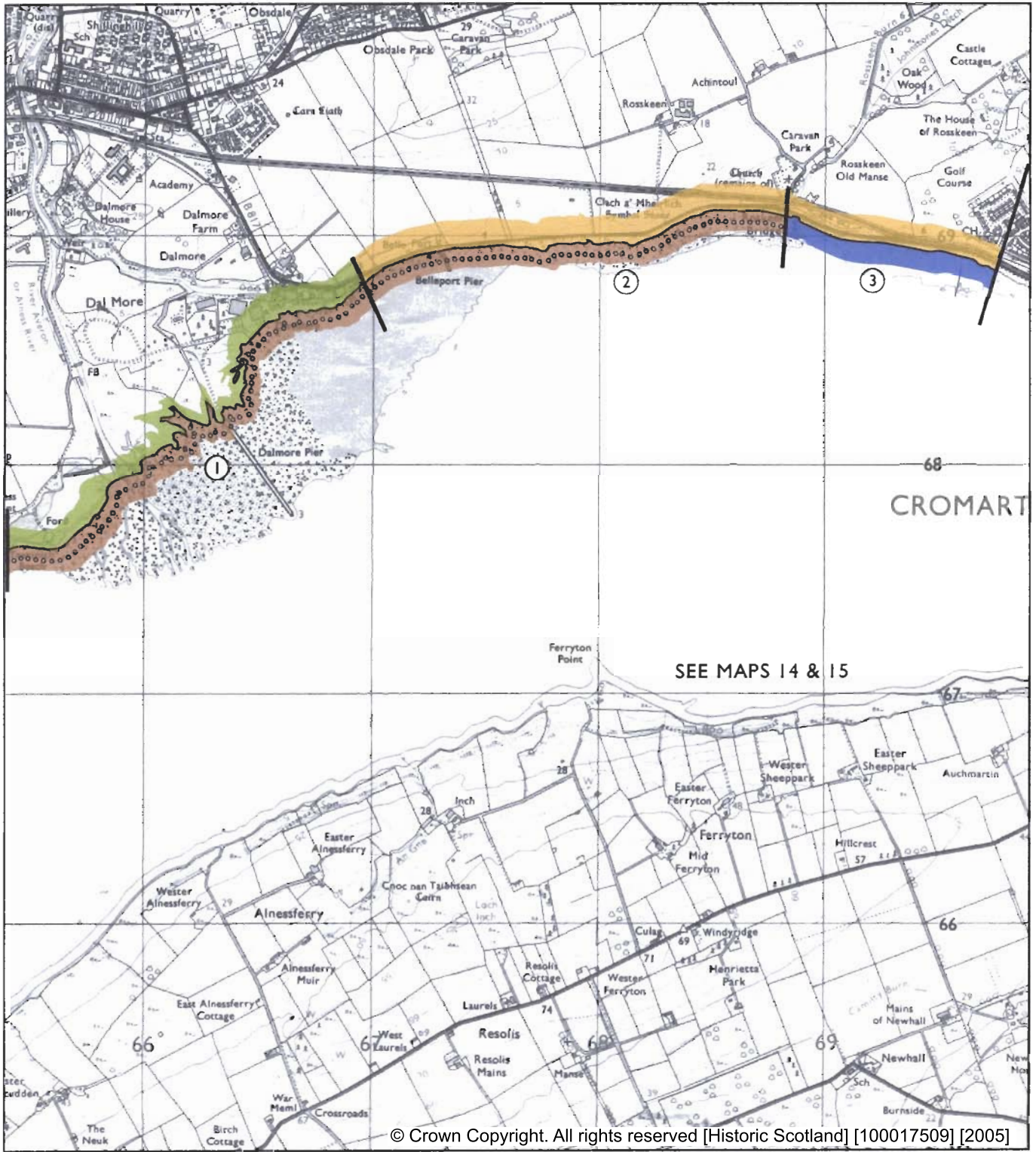
1.9km

Estuarine mud, sand and shingle

Low edge (10m)

Raised beach and marine deposits

The hinterland consists of raised beach and marine deposits and has been heavily modified by industrial development. The foreshore is narrow and consists of mud and shingle



MAP 21: ALNESS POINT TO INVERGORDON 1:25 000
 MORAY FIRTH SURVEY Grid ref: NH 66-69/65-70

Basemap: O.S. Pathfinder Series Sheet 144
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HINTERLAND GEOLOGY AND FORESHORE GEOMORPHOLOGY

Assessment date: 16 September 1998

Hinterland:

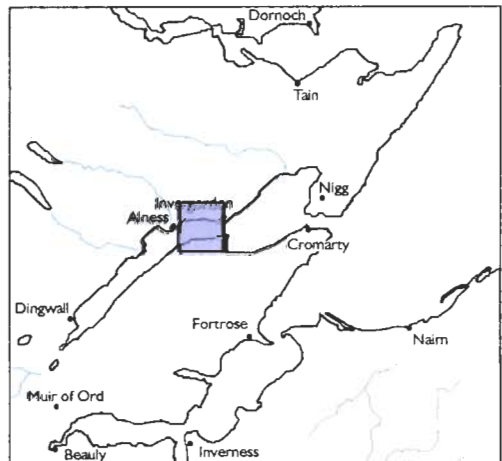
- Drift, boulder clay
- Drift, boulder clay over visible rock
- Raised beach and marine deposits
- Blown sand
- Glacial sand and gravel
- Alluvium

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 21: EROSION

1. TEANINICH BEACH to DALMORE PIER

NH 660 679

1km

Accreting or stable

Sediment loading and re-deposition is occurring at the mouth of the River Alness. Accreting mud forms low banks at around the MHWL down to LWMS. Conditions appear to be stable.

2. DLAMORE PIER

NH 664 680

0.2km

Definitely Eroding

Rubble from attempts to stabilise erosion of the pier is being scoured by wave action. Some accretion is occurring against other parts of the pier base.

3. DALMORE PIER to east of BELLE PORT PIER

NH 665 686

0.7km

Accreting or eroding

Accreting estuary mud and shingle is ongoing in front of the distillery sea wall. Erosion confined to scouring around pier base. Mud and shingle is accreting down to the LWM.

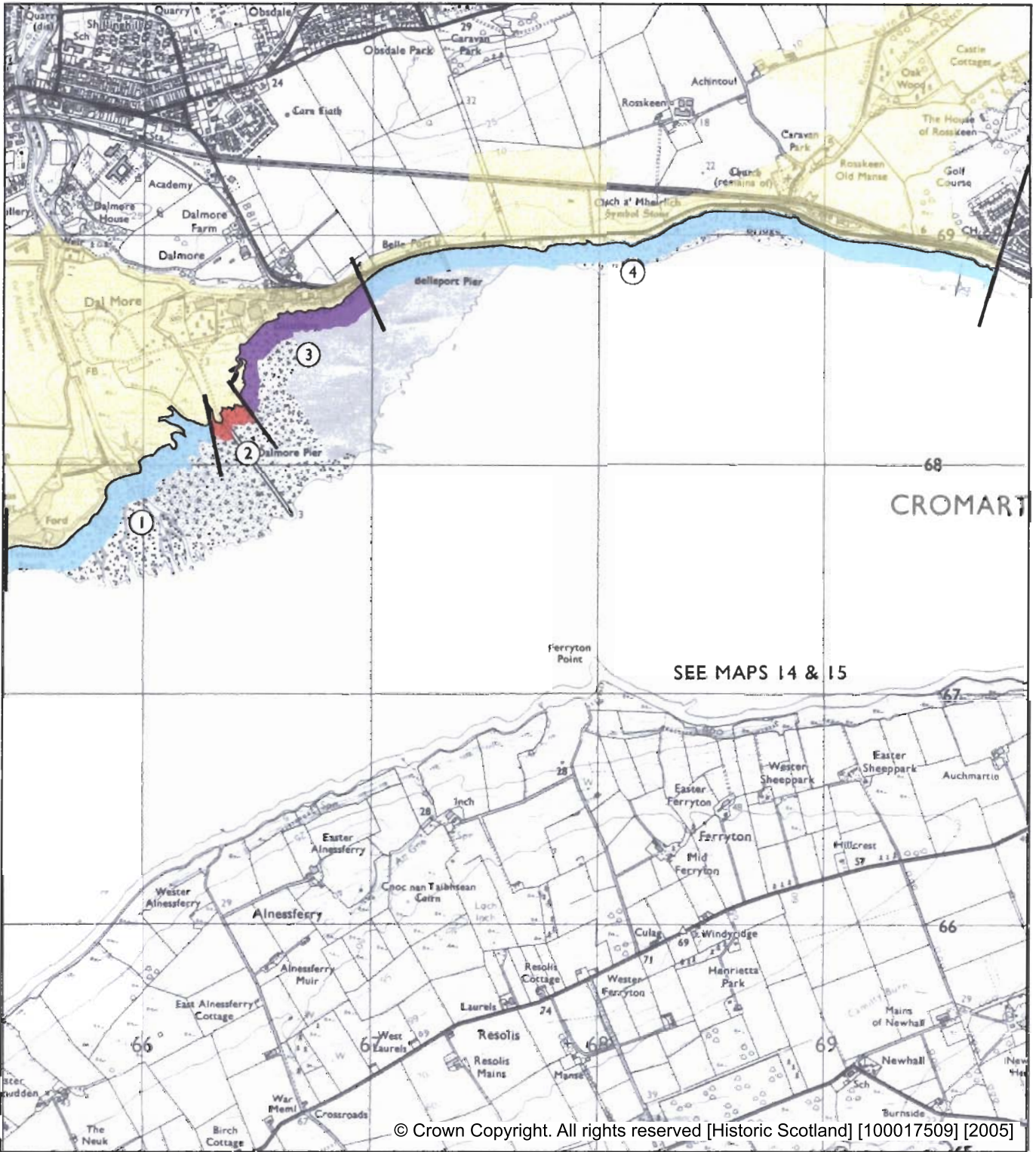
4. East of BELLE PORT to INVERGORDON

NH 676 689

2.8km

Accreting or stable

The foreshore appears to be stable with accreting mud. At Belle Port pier the shore is heavily armoured to defend the B817 trunk road.



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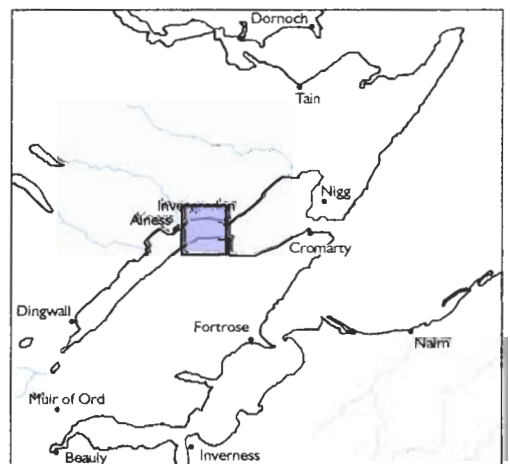
Basemap: O.S. Pathfinder Series
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EROSION CLASS

Assessment date: 16 September 1998

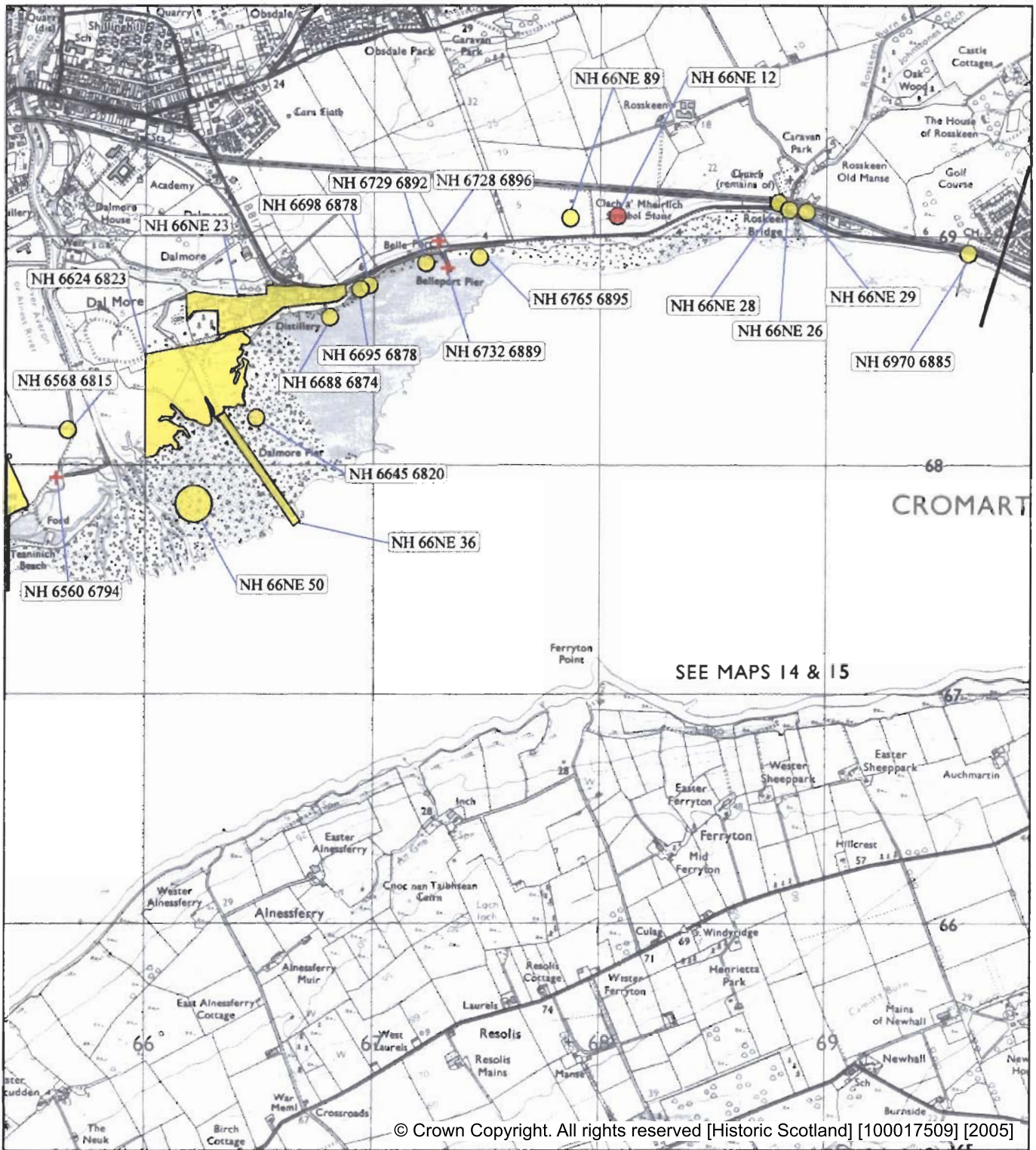
Key:

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



MAP 21: BUILT HERITAGE AND ARCHAEOLOGY

Sites on the Coastal Edge & Foreshore	Sites on the Coastal Edge & Foreshore	Sites in the Hinterland	Sites in the Hinterland
<p>NH66NE 50 NH 662 678 area ALNESS POINT Fishing cairns 19th-20th century AD Poor Survey</p>	<p>NH 6729 6892 BELLEPORT Possible fish trap Uncertain Poor Survey</p>	<p>NH66NE 23 NH 6658 6870 DALMORE Distillery 19th/20th century AD Good Nil</p>	<p>NH66NE 28 NH 6886 6914 ROSSKEEN Railway bridge 19th/20th century AD Good Nil</p>
<p>NH66NE 36 NH 6636 6819 DALMORE Alness pier and harbour 19th century AD Good Nil</p>	<p>NH66NE 30 - Listed C NH 6732 6889 BELLEPORT Jetty / pier 19th/20th century AD Fair Monitor</p>	<p>NH66NE 88 -Grade C NH 6728 6896 BELLEPORT HOUSE Residential house 19th century AD Good Nil</p>	<p>NH66NE 26 NH 6886 6915 ROSSKEEN Railway bridge 19th/20th century AD Good Nil</p>
<p>NH6645 6820 DALMORE PIER Fish trap mound Uncertain Poor Survey</p>	<p>NH 6765 6885 BELLEPORT Possible fish trap mound Uncertain Poor Survey</p>	<p>NH66NE 89 NH 6787 6915 ROSSKEEN Anti-aircraft battery (site of) 20th century AD; WWII Poor Nil</p>	<p>NH66NE 29 NH 6893 6913 ROSSKEEN Railway bridge, ornamental 19th/20th century AD Good Nil</p>
<p>NH 6688 6874 DALMORE Timber pier posts Uncertain Poor Monitor</p>	<p>Sites in the Hinterland NH 6513 6775 ALNESS POINT Ruined building 19th century AD or earlier Poor Monitor</p>	<p>NH66NE 12 - Scheduled NH 6810 6902 ROSSKEEN, CLACH A' MHEIRLICH Pictish Class I symbol stone 7th/8th/9th century AD Fair Monitor</p>	<p>NH 6970 6885 INVERGORDON Military pillbox 20th century AD, WW II Good Nil</p>
<p>NH 6695 6878 DALMORE Fish trap Uncertain Poor Survey</p>	<p>NH66NE 52 NH 6515 6794 ALNESS POINT Royal Air Force seaplane base (site of) 20th century AD; WWII Fair Nil</p>		
<p>NH 6698 6878 DALMORE Fish trap Uncertain Poor Survey</p>	<p>NH66NE 24 - Listed B NH 6560 6794 ALNESS POINT Girnal 17th/18th century AD Good Nil</p>		



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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

