

MAP 29: MEGGERLAND POINT TO MULL OF ROSS

Hinterland Geology and Coastal Geomorphology: This region of the coast has an irregular cliff-edge overlain by till as far as Ringdoo Point (NX 609459). Here glacial sands and gravel outcrop above a very fractured cliff-edge. Morainic drift outcrops at Borness Point. Here an extensive exposures of well-bedded greywackees of the Cairgidown Formation (Hawick Group). The greywackee beds are repeatedly folded and cleaved. Brighthouse Bay has a wide stretch of sand between the high and low water marks. High cliff-platform continues eastwards from Mull Point.

Erosion Class: This coastline is classified as definitely eroded. It is severely effected by wave attack and wave-induced sediment transportation. Erosion is evident below the MHWL as tabular wave-cut platforms occur at Borness Point. The long fetch up Brighthouse Bay is scouring out the softer silt-stones at the base of the greywackee cliffs.

Built Heritage & Archaeology: The majority of sites in the scattered distribution contained in this stretch of the coastline belong to the first millennium BC/AD and include promontory forts, settlements, an enclosure and a cave. All are situated on the coastal edge and are suffering from varying degrees of coastal and wind erosion. Visitor impact, affecting in particular Borness Batteries, should also be taken into account. Bone Cave, Borness, situated close by and excavated between 1872 and 1878, is now inaccessible and thus possibly indicative of coastal erosion in the last century. Excavations of both Bone Cave and Brighthouse Bay have yielded evidence of Romano-British occupation in this area of the coast (Clarke, 1876; Clarke, 1878; Curle, 1932; Maynard et al, 1994). A programme of surveying and monitoring of the erosion of this stretch of the coast is highly recommended.

Map 29: Hinterland Geology and Coastal Geomorphology

1. MEGGERLAND POINT east to MANXMAN'S ROCKS

NX 613 450

4km

Cliff (< 10m)

Till over exposed rock

Fractured coastal edge with till overlying exposed greywackee platforms. These are deeply incised along the softer cleavage lines. Glacial sands and gravels outcrop at Ringdoo Point (NX 609459).

2. MANXMAN'S ROCKS to FAULDBOG BAY

NX 685 445

5km

Cliff (< 10m)

Till and drift deposits over exposed rock

This is an exposed irregular coast including Brighthouse Bay (NX 635455). The cliff-edge is fractured and incised. Greywackee platforms are exposed throughout this unit. Brighthouse bay is exposed at low water and consists of mainly sand and shingle up to the MHWL.

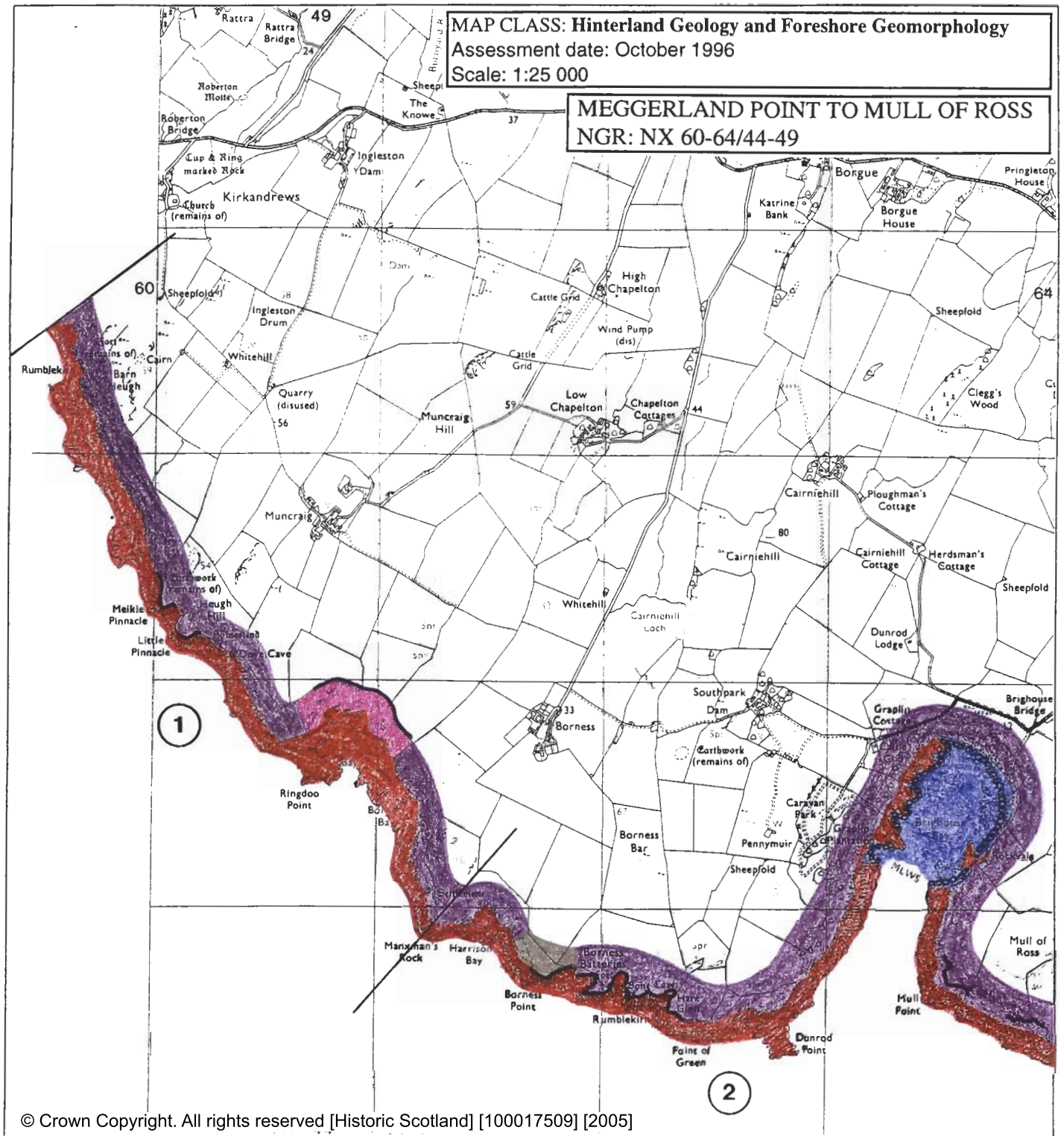
MAP CLASS: Hinterland Geology and Foreshore Geomorphology

Assessment date: October 1996

Scale: 1:25 000

MEGGERLAND POINT TO MULL OF ROSS

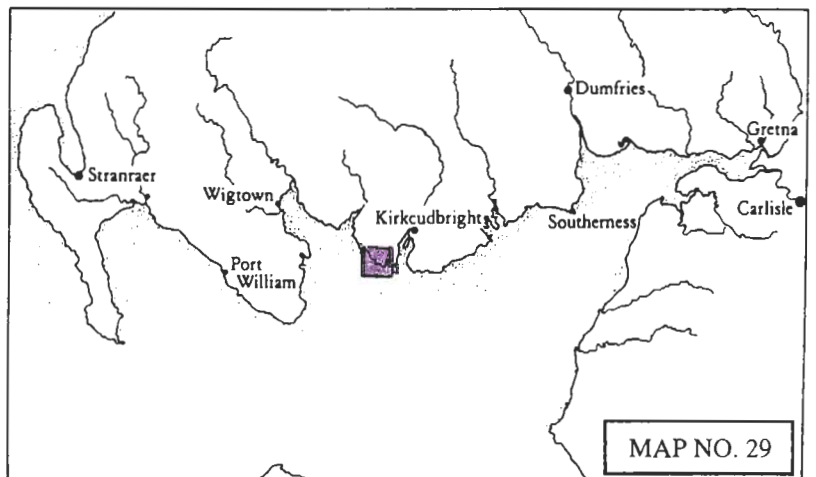
NGR: NX 60-64/44-49



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KEY

Hinterland Geology	Derwent Code	Colour
Drift, boulder clay	French Grey	
Drift, boulder clay over visible rock	Dark Violet	
Raised beach and marine deposits	Golden Brown	
Blown sand	Pink Madder Lake	
Glacial sand and gravel	Magenta	
Alluvium	Emerald Green	
Coastal Geomorphology		
Mainly rock platform	Deep vermilion	
Mainly sand	Ultramarine	
Mainly alluvial/marine mud	Venetian Red	
Marsh	May Green	
Coast Edge		
Low edge (<5m)	Thin black line	—
Cliff (>5m)	Solid black line	—
Man made barrier	Black line with spines	—
Shingle beach	Small circles	○○○○○○
Human disturbance	Black carats	^^^^^^



MAP 29: EROSION

1. MEGGERLAND POINT to RINGDOO POINT

NX 605 460

2km

Definitely eroding

This unit has a highly irregular cliff-edge cut by wave action into numerous gullies. The bedding planes within the Greywackee cliffs are more susceptible to erosion by wave action and basal scouring. Cliff retreat is evident but considered to be slow.

2. RINGDOO POINT to north of MANXMAN'S ROCK

NX 610 456

0.6km

Definitely eroding

This unit includes Ringdoo Bay and Borness Bay, both of which have been formed by a combination of wave action and glacial processes. The rate of cliff-edge erosion is hard to determine but it is considered to be slow owing to the resilient nature of the Greywackee geology.

3. North of MANXMAN'S ROCK to GRAPLIN PLANTATION

NX 625 444

2.8km

Definitely eroding

This unit has an irregular cliff-edge which is deeply incised into numerous gullies. Wave cut platforms and stacks occur at the promontory headland at Dunrod Point (NX 628446) and into Brighthouse Bay where the cliffs show a greater tendency for folding. Although this unit is definitely eroding it is envisaged to be occurring at a very slow rate.

4. BRIGHOUSE BAY to MULL POINT

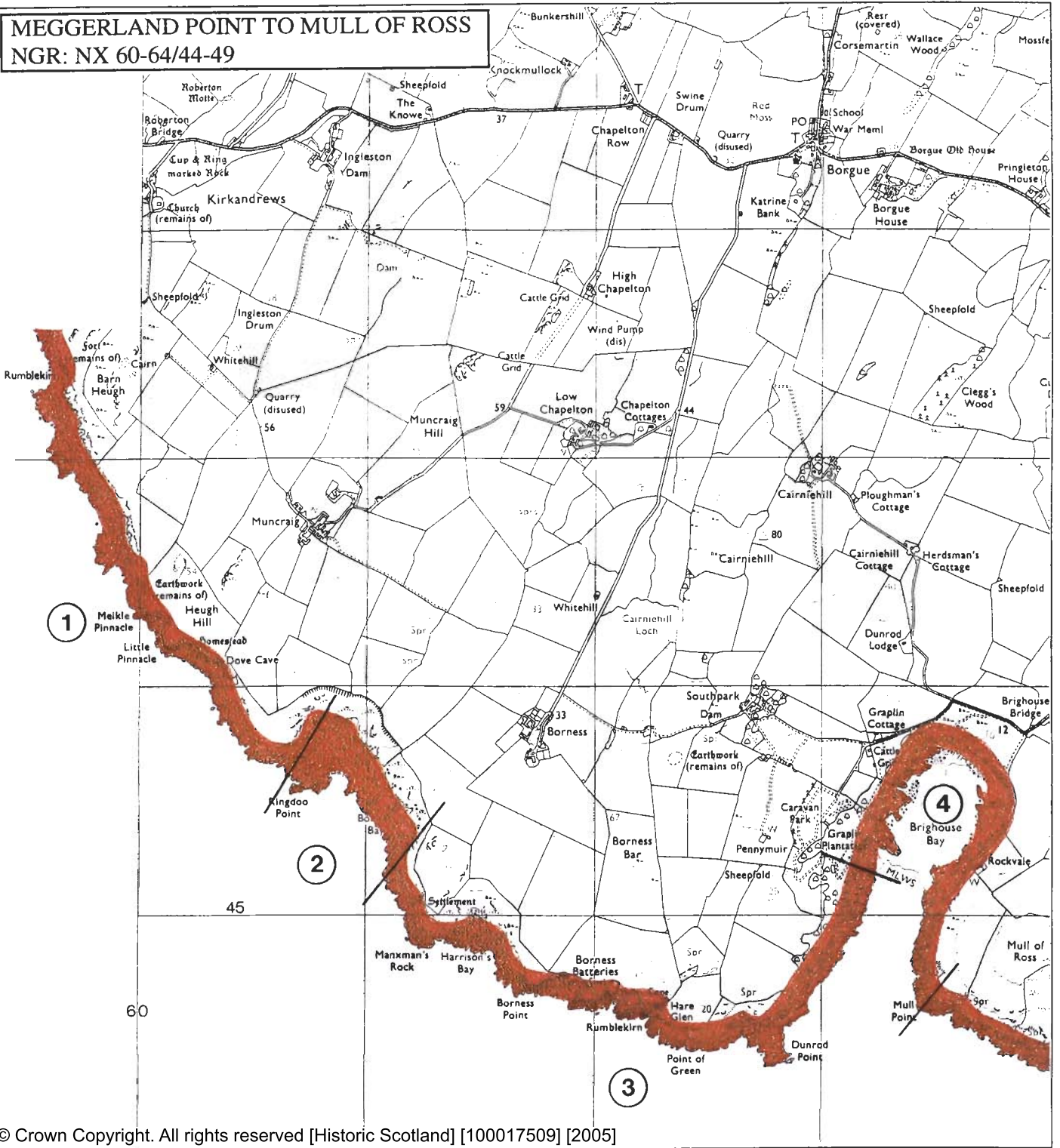
NX 635 456

2km

Definitely eroding

This unit consists of Brighthouse Bay which is exposed to the fetch of south westerly gales. The surrounding shoreline is rocky with a wide intertidal area. The foreshore consists of sand and pebbles that are eroding out from the hinterland at the MHWL.

MEGGERLAND POINT TO MULL OF ROSS
 NGR: NX 60-64/44-49



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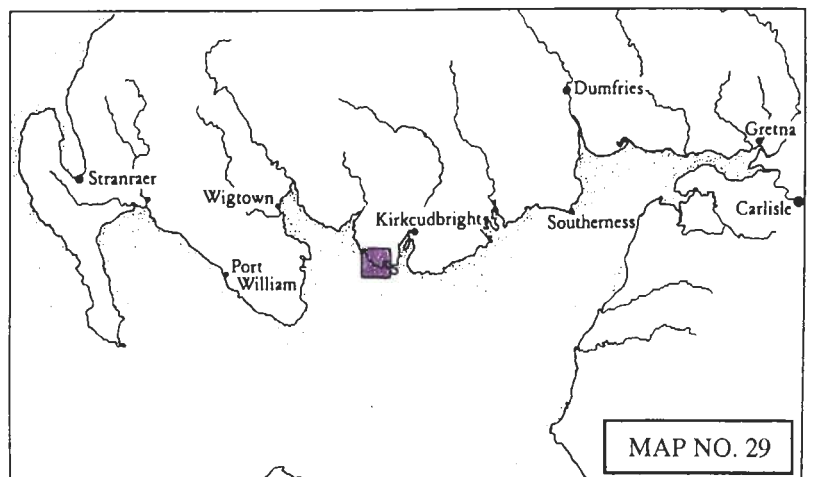
KEY

Erosion class	Derwent Code	Colour
Definitely accreting	Prussian Blue	
Accreting/stable	Light Blue	
Stable	Grass Green	
Stable/eroding	Deep Chrome	
Definitely eroding	Deep Vermilion	
Both accreting and eroding	Imperial Purple	
No access	Blank	
Land below 10m	Straw Yellow	

MAP CLASS: EROSION

Assessment date: 03.10.96

Scale 1:25 000



MAP NO. 29

MAP 29: BUILT HERITAGE AND ARCHAEOLOGY

Sites on the Coast Edge & Foreshore

NX64NW 7
NX 6028 4615
MUNCRAIG HEUGH
Homestead / Fort
Scheduled Ancient Monument
1st Mill BC/AD
Fair
Survey & Monitor

NX64SW 3
NX 6128 4498
MANXMAN'S ROCK
Settlement
1st Mill BC/AD
Fair
Survey & Monitor

NX64SW 2
NX 6198 4466
BORNESS BATTERIES
Promontory Fort
Scheduled Ancient Monument
1st Mill BC/AD
Fair
Survey & Monitor

NX64SW 1
NX 6208 4466
BONE CAVE, BORNESS
Cave
2nd Century AD
Uncertain; not located
Monitor

NX 6270 4455
DUNROD POINT
Possible Enclosure
Uncertain
Uncertain; not visited
Monitor

NX 63 45
BRIGHOUSE BAY
Romano-British Settlement
2nd-3rd centuries AD
Fair
Monitor

Sites in the Hinterland

NX64NW 45
NX 6370 4530
ROCKVALE, BRIGHOUSE BAY
Quay
Uncertain
Good
Nil

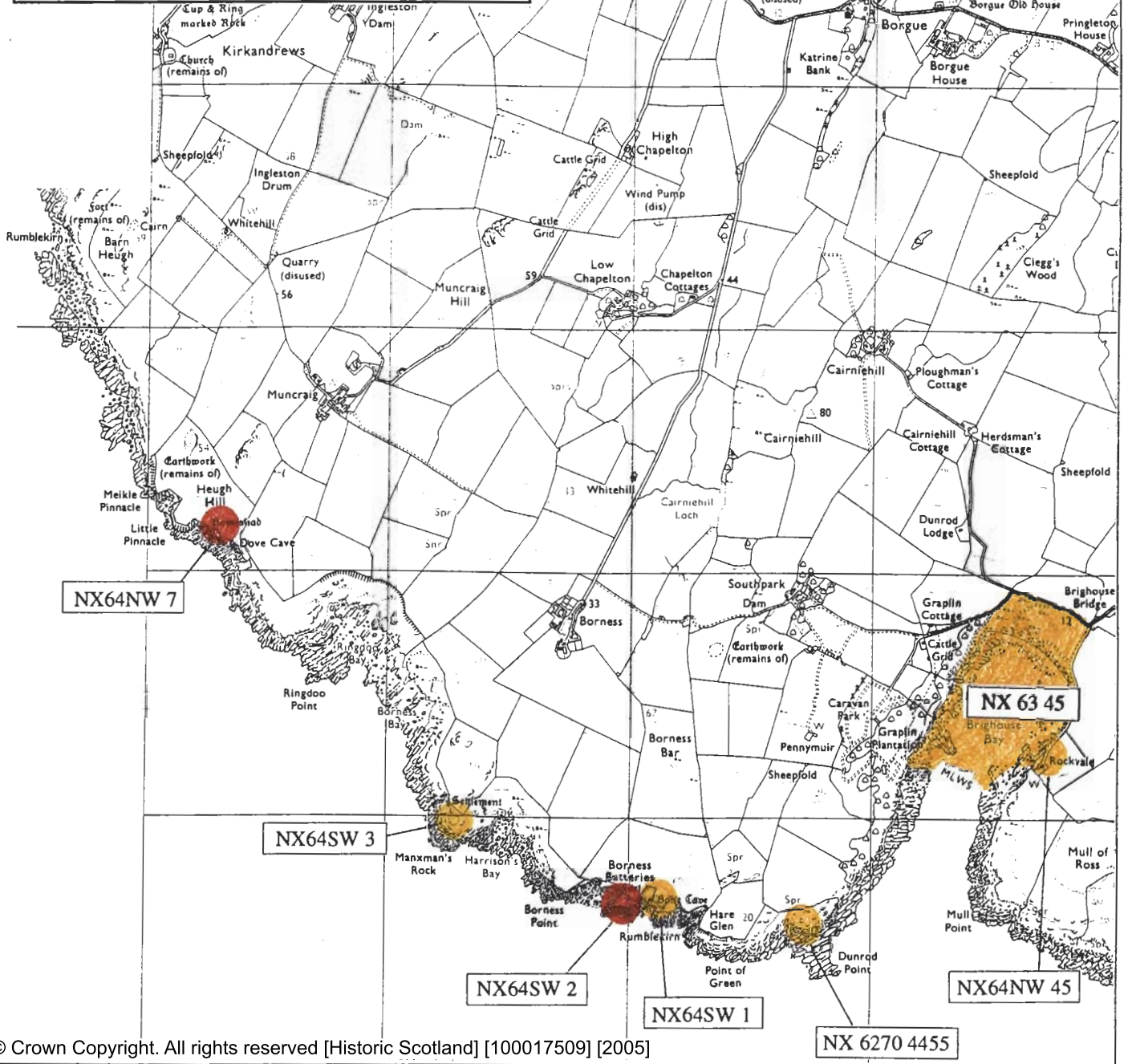
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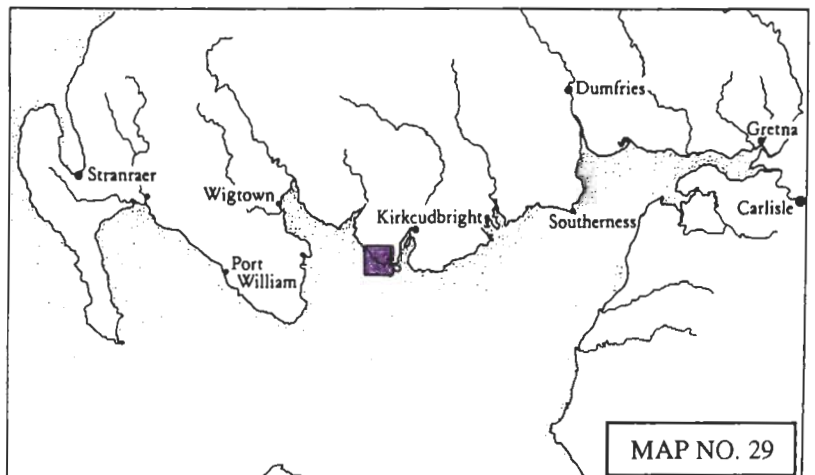
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KEY

Site location	Symbol	Colour	Significance
NGR ref. - eg.	Roundel - Solid, (or area)	Red	Protected Ancient Monument
	Cross	Red	Listed Historic Building
NX 143 368	Roundel - Open, (or area)	Red	Monument formally proposed by Historic Scotland for designation
NMRS ref. - eg.	Roundel - Solid, (or area)	Yellow	Other known Ancient Monument
	Dashed outline	Yellow	Gardens/Designed landscape
NX13 SW17	Roundel - Solid, (or area)	Yellow	Undesignated wreck
	Area	Green	Insufficient information; more work needed
	Area	Blue	Probably archaeologically sterile



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