

## MAP 17: WHITE HILL TO CRUGGLETON BAY

**Hinterland Geology and Coastal Geomorphology:** This region of the coast has an exposed easterly aspect. The hinterland geomorphology is undulating with till over exposed rock. From White Port to Siddery Point the cliff-edge is precipitous and irregular and overlooks cliffs, caves and inlets. Cruggleton Bay is backed by till with a wide intertidal zone consisting of sand (forming occasional sandy spits), cobbles, boulders and sandy spits.

**Erosion Class:** Cliff-edge recession is an ongoing process along this stretch of coastline. From Port Allen to Siddery Point the cliff-edge shows clear evidence for slumping and sub-aerial weathering of the cliff face. The presence of caves provides further evidence for erosion. Cruggleton Bay shows evidence of wave attack towards Siddery Point. Scouring, induced by recent storm activity has resulted in sand and shingle build up some distance from the current HWMS. The northern half of the bay appears to more stable judging by the more even sand cover that is less disturbed.

**Built Heritage & Archaeology:** A wide distribution of isolated sites are included in this section. The sites can be generally divided into two chronological groups; two promontory forts, Dinnans and Old Fort Dinnans, and the castle and settlement of Cruggleton Castle, belonging to the 1<sup>st</sup> Millennium BC/AD and medieval period (Ewart, 1985) distributed along the coast south of Garlieston; and a second group of more widely distributed World War 2 structures, comprising a pillbox, watchtower and a mulberry. Also included in this section is a sea wall at Garlieston Bay, a landing place at Port Allen and the gardens of Galloway House. Both the two latter sites and the sites of group 1 are affected by coastal erosion to various degrees and surveying and monitoring is recommended. The promontory forts of Dinnans and Old Fort Dinnans are also adversely affected by the impact of cattle, particularly so in the case of the latter. Cruggleton Castle, excavated between 1978 and 1981 (Ewart, 1985) may also be at threat from agricultural impact in addition to the coastal erosion already documented (Ewart, 1985, 4-6).

## Map 17: Hinterland Geology and Coastal Geomorphology

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### 1. HOWE HOLE of SHADDOCK to PORT ALLEN

NX 478 400

1.4km

Cliff (> 10m)

*Till over exposed rock*

Irregular incised high cliff-edge overlain by till. Greywackee platforms moulded by wave action occur throughout the length of this unit.

### 2. PORT ALLEN to SIDDERY POINT

NX 418 420

3km

Cliff (> 10m)

*Till over exposed rock*

This exposed region of the coast is highly indented and sea-caves are present. The foreshore is narrow with rock and boulders exposed at the MLWM.

### 3. SIDDERY POINT to DUMBIE POINT

NX 482 460

3km

Low edge (< 5m)

*Till*

This unit includes the sheltered Crugleton Bay. The hinterland consists of till. The foreshore within the bay is very wide (c.60m to the MLWM) and continues to Garlieston Bay. The foreshore consists of poorly sorted boulders (c.70%) and sand. Shingle is banked against the backshore.

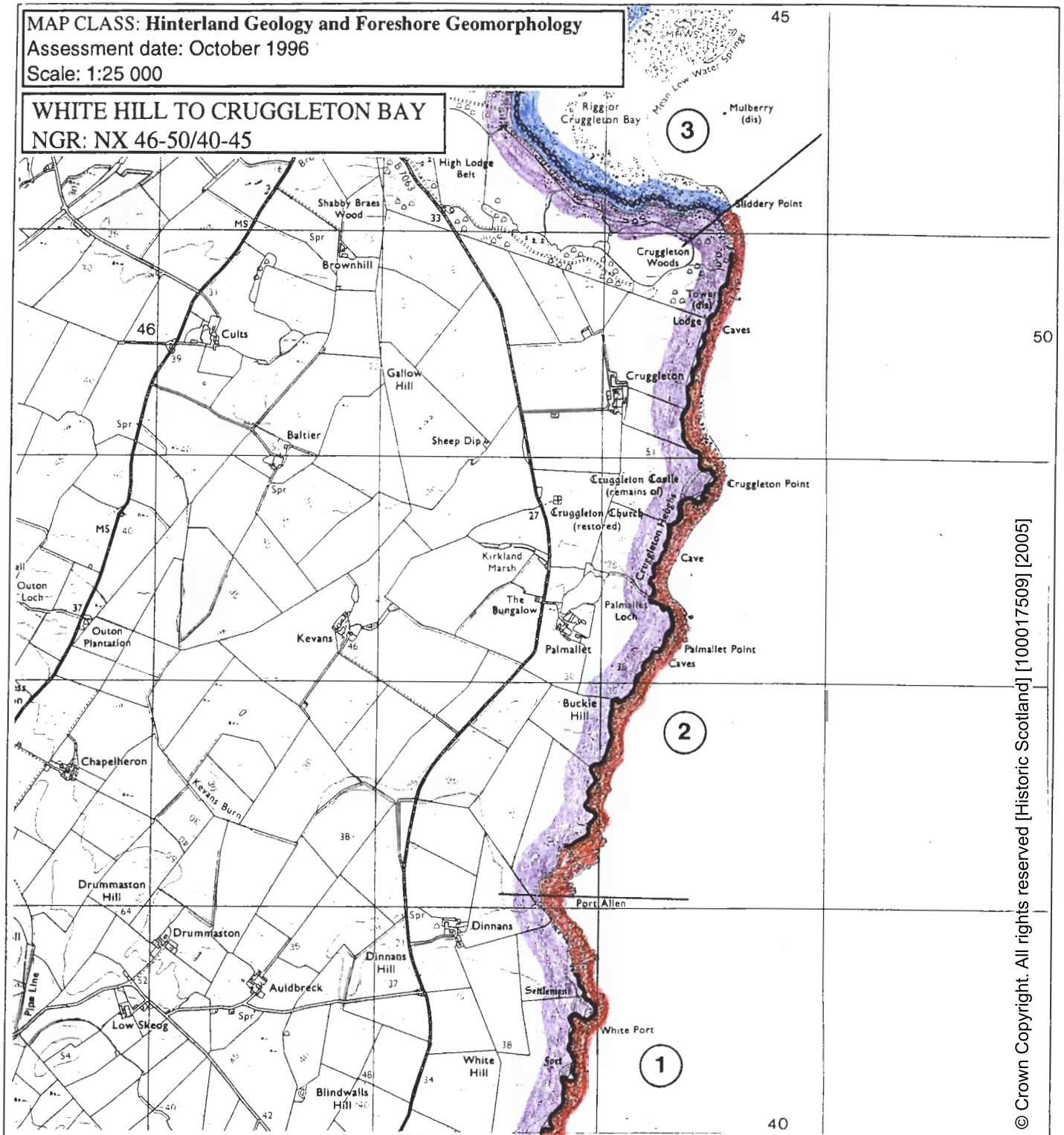
**MAP CLASS: Hinterland Geology and Foreshore Geomorphology**

Assessment date: October 1996

Scale: 1:25 000

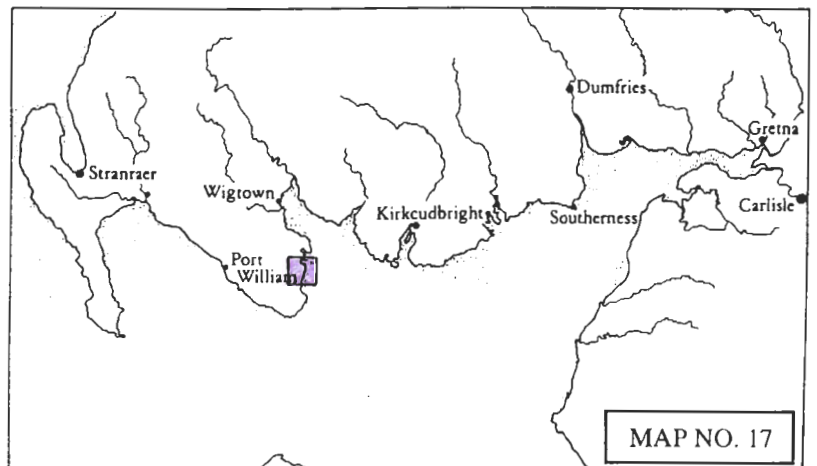
**WHITE HILL TO CRUGGLETON BAY**

NGR: NX 46-50/40-45



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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 NO. 17

## MAP 17: EROSION

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### 1. PORT ALLEN to SIDDERY POINT

NX 485430

#### *Definitely eroding*

This region of coast has an exposed easterly aspect and an irregular cliff-edge. The middle section of this unit includes Cruggleton Heughs (NX 483426) which is an indented cliff line of steep cliffs with sea caves. Small embayments occur at Cruggleton Point (NX485429). The precipitous nature of the cliffs with slope-over-wall characteristics suggest that this region is definitely eroding, the speed of which is difficult to monitor, but it is considered to be slow.

### 2. SIDDERY POINT to east of HIGH LODGE POINT

NX 480 441

0.9km

#### *Eroding or stable*

Southern end of Rigg of Garlieston Bay. The intertidal area is strewn with poorly sorted cobbles and boulders. The exposed rocky outcrops are being scoured by shingle which suggests that erosion is ongoing.

### 3. HIGH LODGE BELT to south of GARLIESTON SCHOOL

NX 476 447

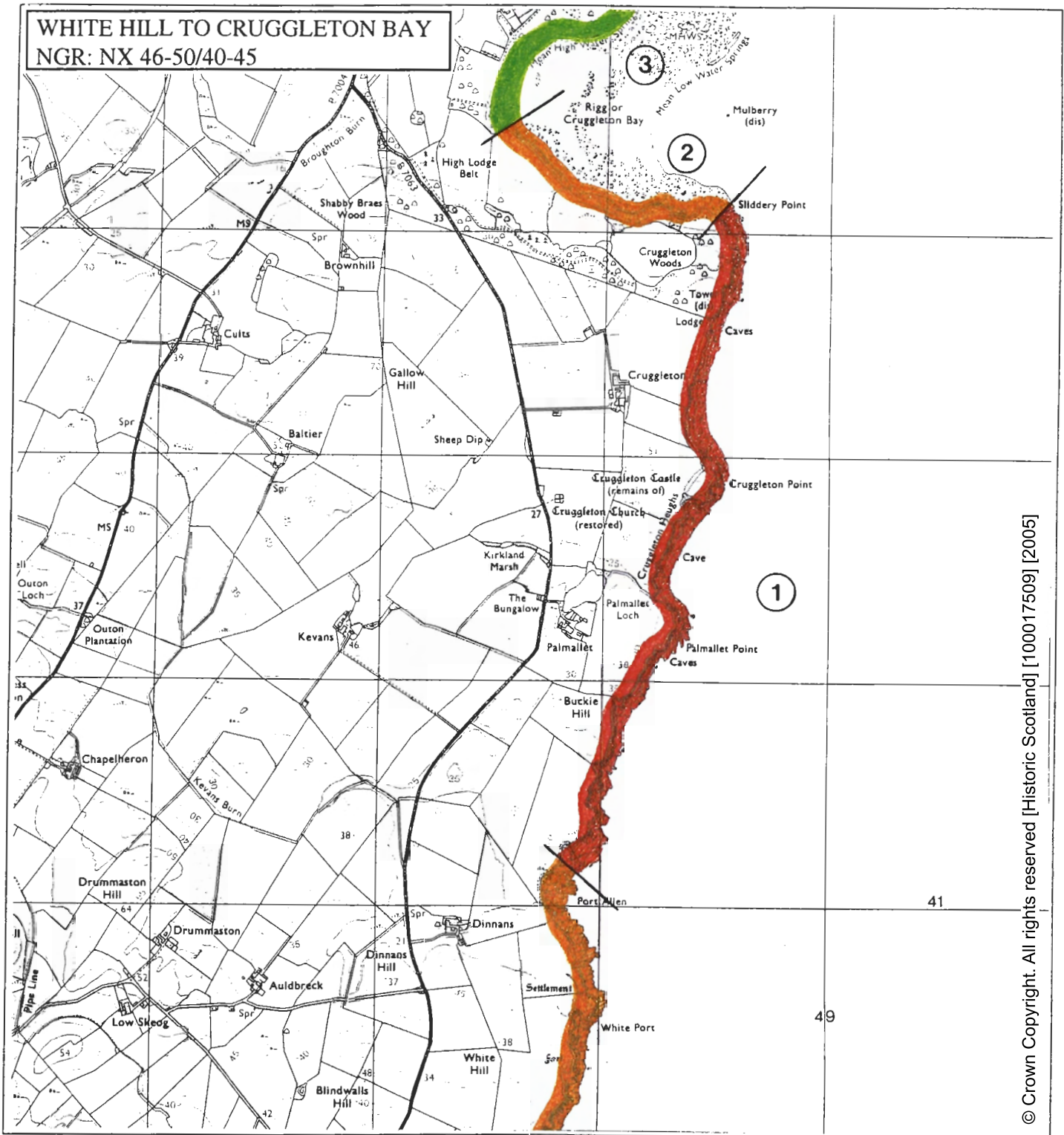
0.9

#### *Stable*

This unit is at the present stable owing to the shelter afforded by the bay. Shingle and sand cover the foreshore and the backshore is protected by a sea wall.

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**WHITE HILL TO CRUGGLETON BAY**  
 NGR: NX 46-50/40-45

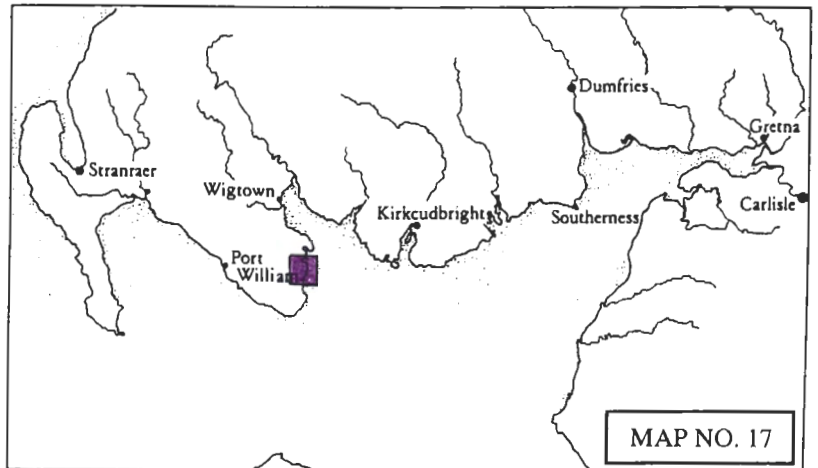


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**KEY**

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: 30.9.96  
 Scale 1:25 000



**MAP NO. 17**

## MAP 17: BUILT HERITAGE AND ARCHAEOLOGY

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### Sites on the Coast Edge & Foreshore

**NX44SE 3**  
NX 4786 4026  
OLD FORT, DINNANS  
Promontory Fort  
Scheduled Ancient Monument  
1<sup>st</sup> Mill BC/AD  
Poor  
Survey & Monitor

**NX 4790 4024**  
DINNANS  
WW2 Pillbox  
Mid 20<sup>th</sup> century  
Good  
Nil

**NX44SE 2**  
NX 4792 4057  
DINNANS  
Promontory Fort  
Scheduled Ancient Monument  
1<sup>st</sup> Mill BC/AD  
Fair  
Survey & Monitor

**NX44SE 18**  
NX 477 410  
PORT ALLEN  
Landing Place  
Uncertain  
Poor  
Monitor

**NX44SE 4**  
NX 4842 4281  
CRUGGLETON CASTLE  
Castle/Motte/Settlement  
Scheduled Ancient Monument  
1<sup>st</sup> century AD - 17<sup>th</sup> century  
Fair  
Monitor

**NX 48 43**  
GALLOWAY HOUSE  
Gardens  
19/20<sup>th</sup> century  
Poor  
Monitor

### Sites in the Hinterland

**NX 4799 4190**  
BUCKLE HILL, PALMALLET  
WW2 Coastal Watchtower  
Mid 20<sup>th</sup> century  
Good  
Nil

**NX 4792 4481**  
CRUGGLETON  
BAY  
Curvilinear Wall  
20<sup>th</sup> century  
Good  
Nil

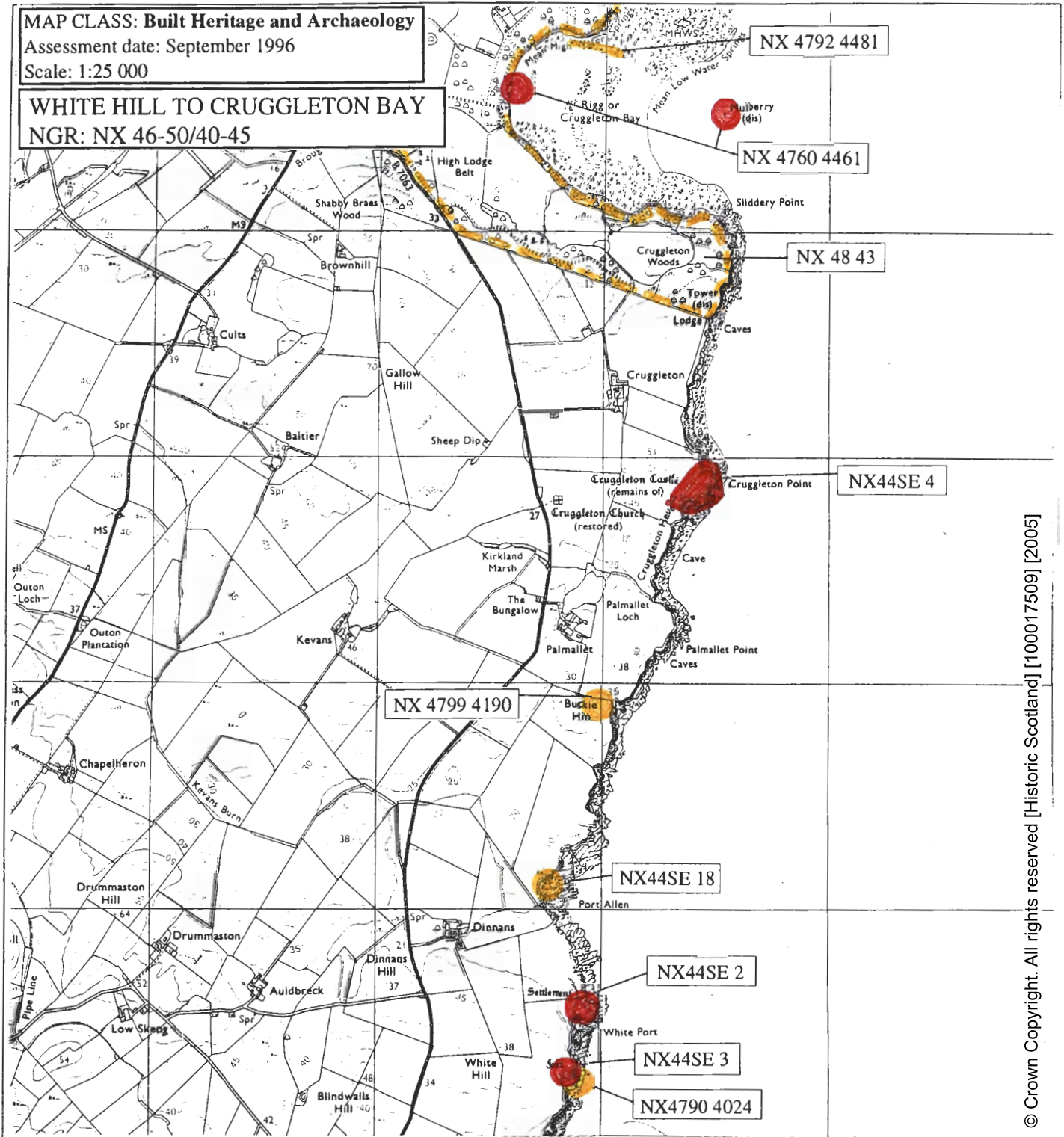
**MAP CLASS: Built Heritage and Archaeology**

Assessment date: September 1996

Scale: 1:25 000

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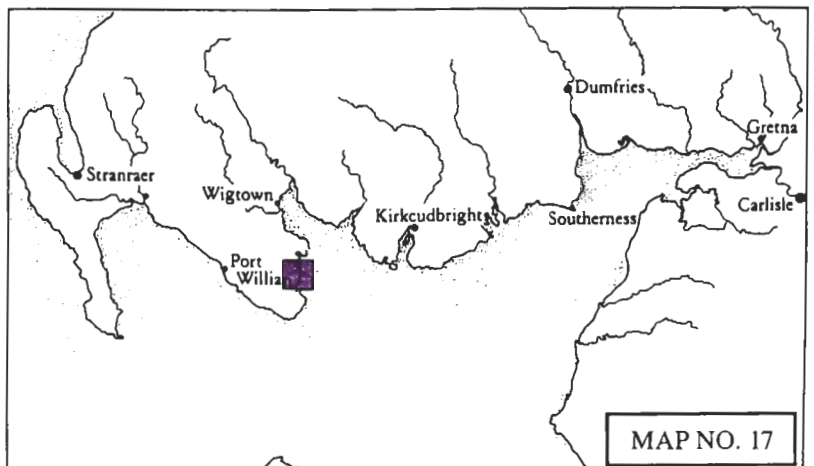
NGR: NX 46-50/40-45



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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
	Roundel - Solid, (or area)	Yellow	Other known Ancient Monument
NMRS ref. - eg.	Dashed outline	Yellow	Gardens/Designed landscape
	Roundel - Solid, (or area)	Yellow	Undesignated wreck
NX13 SW17	Area	Green	Insufficient information; more work needed
	Area	Blue	Probably archaeologically sterile



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