

MAP 4 ST ANDREWS CATHEDRAL TO COBLE SHORE

Built heritage and archaeology - The most important site in the St. Andrews sector is St. Andrews Castle (NO51NW3.0), situated on a high rock promontory. On the castle's south eastern quarter, a sand beach is accreting up against what appear to be old storage cellars, that were once open to the beach but were then blocked up by later masonry work. These may have been used for storage of materials offloaded from ships. The castle walls are stable at this point although localised damage has been caused by vandals lighting fires up against the wall. The remainder of the coast edge adjacent to the castle structure has been protected by a sea-wall which has stabilised any erosion to the castle foundations. The gardens of several listed buildings back onto the coast edge as the high cliff runs north west from the castle complex. Erosion to this coast edge has exposed several 19th Century drains (NO51111701, NO51001702, NO51NW109), and a sandstone wall (NO50951589) which will all disappear if the erosion along this short sector continues unchecked. Although not threatened by erosion as such, mention should be made of several Fife the wooden fishing boats which were buried under concrete during the construction of the Bruce Embankment car park (NO506173) during the early 20th Century. The wide expanse of sands which stretch out towards the sandy spit of Out Head and the mouth of the Eden estuary, is fairly short on monuments. Of note, are intermittently exposed lines of square, and occasionally pyramidal tank traps just behind the existing sand dune system (NO50071821 etc.), a pillbox situated on the beach wall overlooking the sands (NO50421723) and the timber remains of a ship, possibly the 'Jean' or 'Wilhelmina' (NO50461734), wrecked on the sands, heavily salvaged by the locals, and now almost entirely buried. A magnetometer survey carried out by the Archaeological Diving Unit (*Pers.comm.*) has indicated that the wreckage of the ship covers a wide area of the foreshore at this point and if any beach lowering occurs, these remains may become exposed. The wide mud-flats of the Eden estuary area and the coast edge behind provide an ideal burial environment for archaeological remains and must therefore be considered to have substantial archaeological potential. O.S. 1st Edition maps (1854) point out 'muscle beds' suggesting widespread harvest of shellfish for bait and human consumption. The existence of a mussel holding tank visible near Coble Shore (NO46951940) provides material evidence of this activity which is no longer practiced since the mussels were declared unfit for human consumption (Dobson 1997,11). However, the thickness of the mud makes access and investigation of features difficult and this limited the survey team's coverage of the foreshore zone. Although the foreshore was not widely covered on foot, aerial photographs do show the system of channels and mudflats but do not show any obvious man-made features. Other monuments that were visible include the old groyne systems at Out Head (NO491912) and lines of wooden stakes (NO47531862 and NO47941826) near the coast edge and on the coast edge itself, the embankment of the old St. Andrews railway line running parallel to the coast edge to the west of NO48331813 and a cobbled slipway (NO47401868).

Hinterland geology and coastal geomorphology; Erosion class-Looking south from West Sands it is possible to identify the raised shorelines in the hinterland. The slope behind the Guardbridge road represents the former shoreline 23 m above the present sealevel and next to the main road itself there is a raised beach which reappears at North Haugh and Kincapple farm. The lower beach consists of blown sands which extend as a spit at Outhead. From St Andrews Castle to the car park at NO503172, Calciferous Sandstone Measures can be followed along the Scores cliff, with evidence of coal seams. The foreshore is dominated by a rock platform although small sand and shingle beaches accreting at the top of the rock platform can be seen at Castle Sands, Witches Lake and Step Rock. West Sands/Pilmour Links is an extensive area of blown sands with relic dunes set in from the present dune zone. Human pressure degraded the dunes to a very vulnerable state in the 1980s. However, since then a rehabilitation zone has stabilised the dune zone. Outhead is a dynamic spit formation which is migrating north-eastwards into the Eden, as a result a complex interplay of natural and human forces. The outer Eden estuary is susceptible to erosion as a result of the changing position of the river and groynes and gabion baskets have been deployed to protect the eroding dune edge of the golf course (Erosion Unit 10).

**MAP 4 ST ANDREWS
CATHEDRAL TO COBBLE
SHORE**

EROSION UNITS

1
NO51211691
0.4 km
Accreting or stable
Castle beach experiences sand accretion at the top of a rock platform according to the wave and tidal climate. A steep beach has built up adjacent to the Castle walls. Coastal protection works reinforce the eroding cliffs behind.

2
NO50991702
0.5 km
Eroding or stable
The Castle promontory has reinforced cliffs and the overhangs of sandstone are supported with pillars. To the north the Calciferous sandstones are interspersed with peat earths, mudstones and coals which are more susceptible to wave attack. Weaknesses along faults and caves are vulnerable to rockfall. Although rockfall is infrequent, the foot of the cliffs display evidence of fallen rock and pipes are left suspended from the cliff face.

NO50651704
0.2 km
Stable
Vitch Lake is a small stable sand beach with floating debris situated at the top of a rock platform. Buildings protect the coast edge.

NO50581718
0.3 km
Definitely accreting
At Step Rock beach sand accretion is building up the level of the upper foreshore. To the north a seawall restricts the longshore drift of sand.

NO50351719
5 km

Stable
The car park is situated on reclaimed land protected by a seawall at the coast edge. At the south end of West Sands the Swilken Burn outflows, a stone embankment stabilises the coast edge.

6
NO50191759
0.8 km
Accreting or stable
At the south end of West Sands the dunes at the coast edge have experienced accretion over the last ten years. In the past human exploitation degraded the dunes to point where they were extremely vulnerable to erosion. The dune area is now a restricted rehabilitation zone with raised wooden access points to the beach. Vegetation is now stabilising the dunes, trapping blown sands and restricting wind erosion.

7
NO50021855
1.5 km
Definitely accreting
To the north antitank blocks emplaced at the coast edge in 1941 are now buried by blown sands. A 30metre wide active dune zone is situated in front of the blocks. The dunes are 10m high and marram grasses stabilise the accreting sands. There is localised trampling damage over the dunes.

8
NO49891930
0.5 km
Definitely eroding
Towards Outhead reclaimed land composed of loosely compacted wastes creates an unstable edge. At high waters the edge is undercut.

9
NO49511972
0.7 km
Both accreting and eroding
Outhead is a dynamic sand formation at the northern point of West Sands. Outhead is migrating northeast, experiencing both accretion and erosion according to the outlet position of the Eden and the longshore drift along West sands. Human tipping has

also affected the movement of Outhead. Erosion is most pronounced on the west side of Outhead, with dune undercutting.

10
NO49041888
1.5 km
Definitely eroding
Wooden groynes and fences protecting the undercut links/golf courses are damaged. There are coastal defences along this entire section, consisting of wooden groynes or antitank blocks placed perpendicular to the shore. Rubble mounds and gabion baskets protect most of the coast edge, however high wave action dislodges rubble from within the baskets.

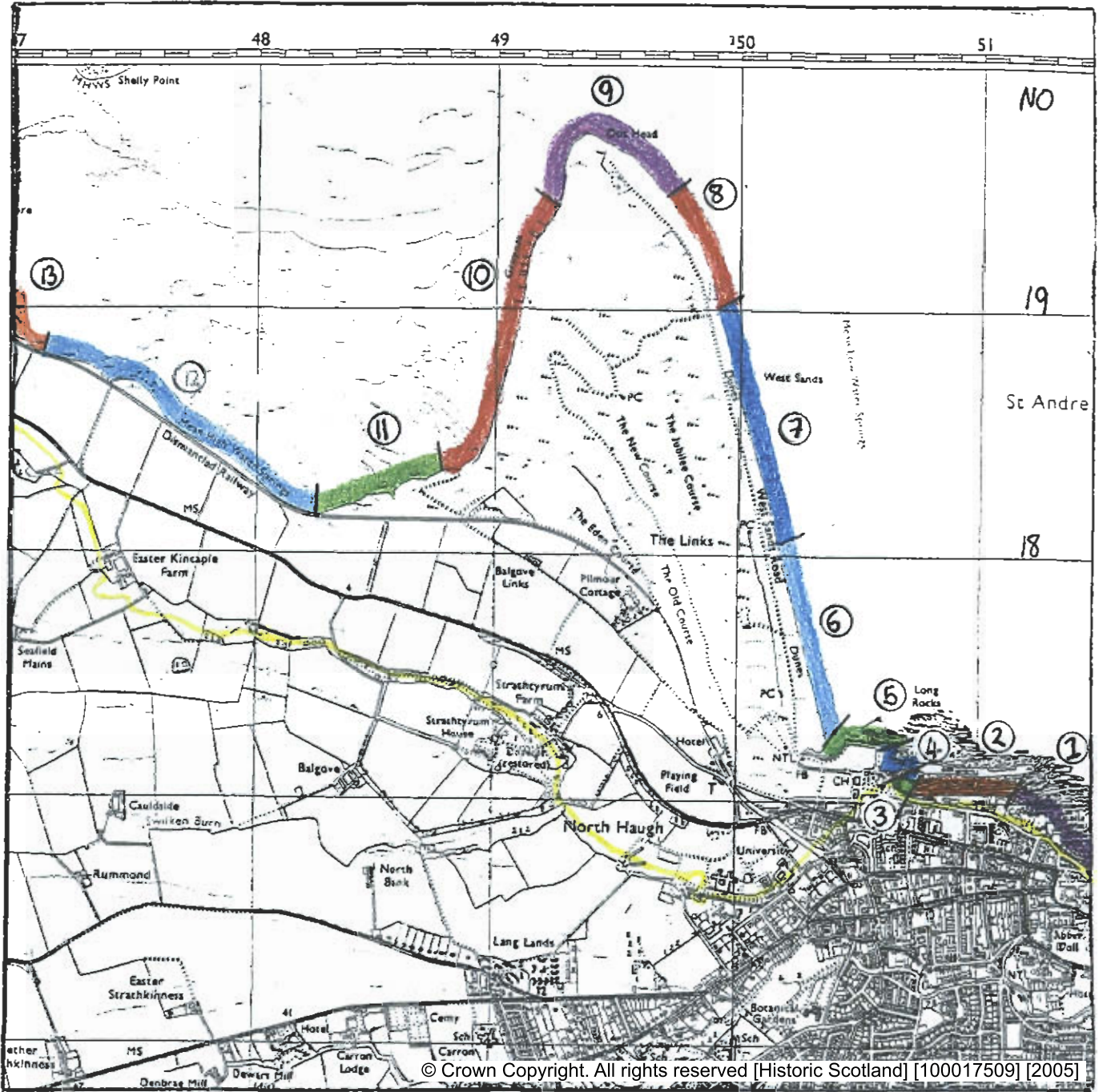
11
NO48501827
0.6 km
Stable
The coast edge has no manmade protection, mud flats with marsh stabilise the upper foreshore.

12
NO47721853
1.4 km
Accreting or stable
Mud accretion on the foreshore encourages marsh. The coast edge is protected by an old railway embankment. Dislodged stone blocks of the embankment and erosion hollows are the result of trampling damage and rabbit infestation.

13
NO46981891
0.4 km
Eroding or stable
The railway embankment no longer protects the coast edge. The loosely consolidated coast edge is unstable at high waters erosion has indented the edge. In addition, there is trampling damage from horses. Tipping of concrete rubble and bricks on the foreshore provides only limited protection.

MAP CLASS: EROSION
 (Assessment date: 2 October 1996)
 NO 41/51. Scale 1:25,000

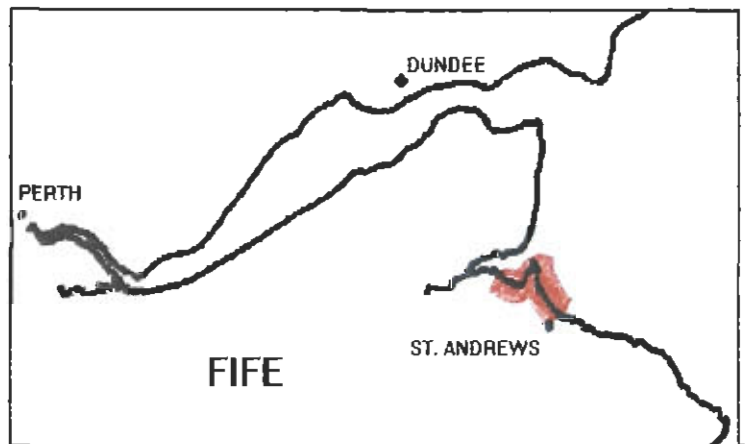
ST ANDREWS CATHEDRAL TO SHELLY POINT, LEUCHARS



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KEY

Erosion class	Staettler colour	Colour
Definitely Accreting	ultramarine blue	
Accreting or stable	light blue	
Stable	light green	
Eroding or stable	orange	
Definitely Eroding	scarlet	
Both accreting and eroding	purple	
No access	blank	
Land below 10m	canary yellow	



MAP 4 ST ANDREWS TO COBBLE SHORE

GEOLOGY UNITS

1
NO51211691
0.4 km
Mainly sand
Cliffs (>5 metres)
Raised beach and marine deposits
Castle Sands is a small southeast facing beach at the top of a rock platform. The beach is composed of sand, although under certain wave and tidal conditions the sand is replaced with shingle. Coastal protection has been necessary to reinforce the eroding cliffs behind. The hinterland consists of Carboniferous Calciferous Sandstone cliffs overlain with raised beach deposits of the former shoreline.

2
NO50991702
0.5km
Mainly rock platform
Cliff (>5 metres)
Raised beach and marine deposits
The high cliffs are composed of Calciferous Sandstone Measures with coal seams. The cliffs are overlain with raised beach deposits.

3
NO50651704
0.5 km
Mainly rock platform
Manmade barrier
Raised beach and marine deposits
Witch Lake beach faces east and is the result of sand and floating debris trapped at the head of a narrow inlet in the rock platform. The beach has a high cliffed coast edge to the east. The back of the beach is manmade, with steps, seawalls, buildings and a pool.

4
NO50581718
0.3 km
Mainly sand
Manmade barrier
Raised beach and marine deposits
Step Rock is a sandy beach that has accumulated at the top of a rock platform. The coast edge is a wall at the

town side and a groyne at the seaward side which traps sand.

5
NO50351719
0.5 km
Mainly rock platform
Manmade barrier
Raised beach and marine deposits
The carpark is situated on reclaimed land of the Bruce Embankment. At the south end of West Sands, the Swilken Burn runs parallel to a sloping stone embankment. Raised shorelines can be identified to the south.

6
NO50101835
2.5 km
Sand
Low edge (<5 metres)
Blown sands
West Sands is a wide sandy beach with a low gradient. A 30metre wide dune zone with dunes up to 5 metres in height is situated at the coast edge. The highest dunes are to the north stabilised with marram grasses and other dune species which trap the blown sands. The hinterland consists of a links/blown sand depression with manmade and natural advance dune ridges of gorse and shrub within the golf area. Beyond the links, an escarpment of the former shoreline runs continuously northwestwards.

7
NO49651950
0.7 km
Sand
Human disturbance
Blown sands
The dunes come to an end and the coast edge is reclaimed land composed of tipped waste. Blown sands/links occur to the west.

8
NO49541969
0.4 km
Sand
Low edge (<5 metres)
Blown sands
Outhead is a dynamic sand

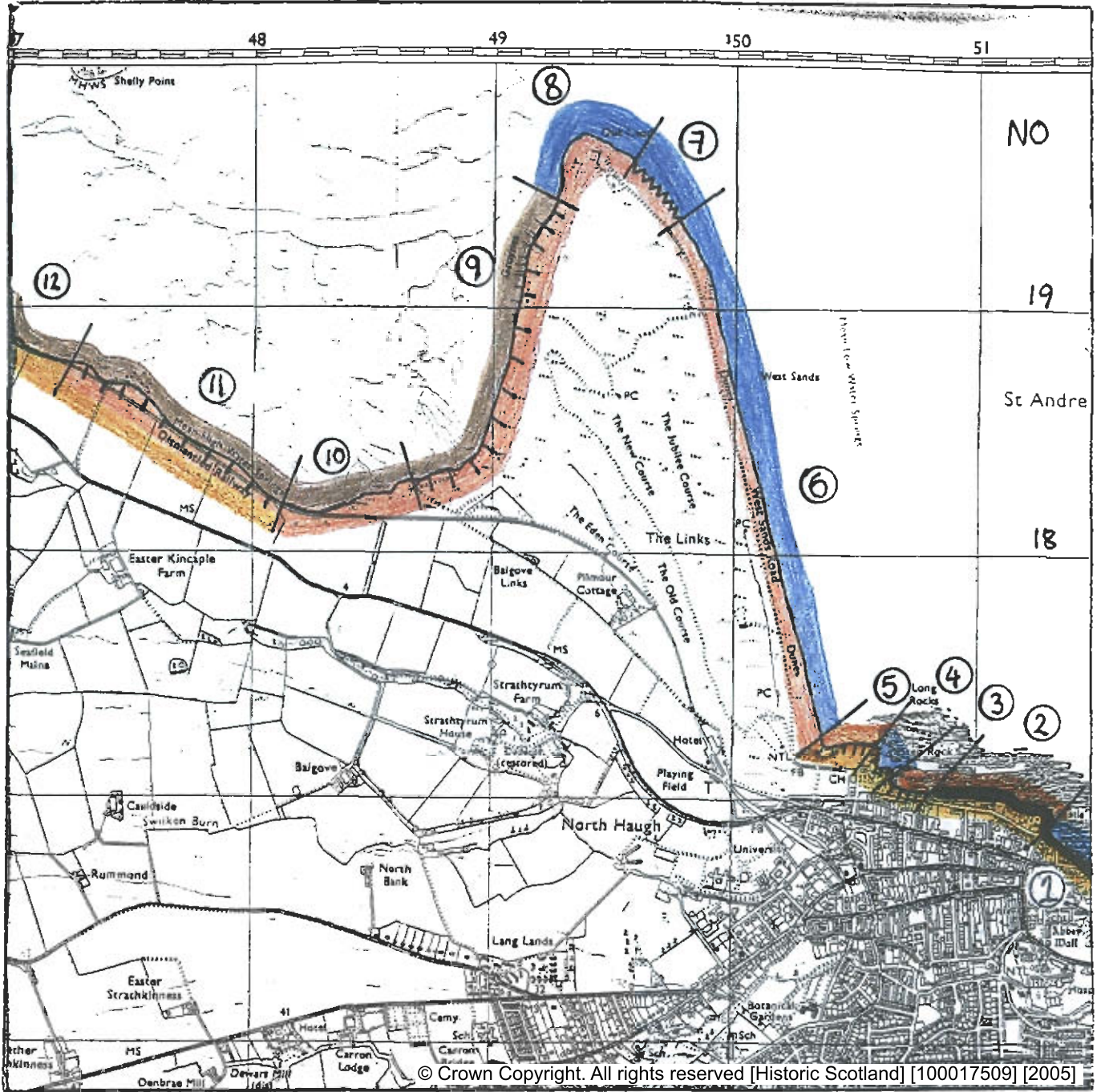
formation with a history of movement associated with the outlet of the Eden and the longshore drift of sand along West Sands. Blown sands compose the hinterland, with evidence of relic dune ridges.

9
NO49041888
1.8 km
Mainly alluvial/marine muds
Manmade barrier
Blown sands
To the east the upper sandy foreshore passes into silty sand and muds on the middle and lower foreshore. A manmade coast edge protects the blown sands. Defences include groyne, gabion baskets and rubble mounds.

10
NO48491827
0.7 km
Mainly alluvial /marine muds
Low edge (<5 metres)
Blown sands
The estuary is composed of muds, with silty sands on the upper foreshore. The low edge is composed of blown sands. There is localised human disturbance associated with tipping. To the west, the blown sands pass into raised beach and marine deposits, which consist of sands and shingle.

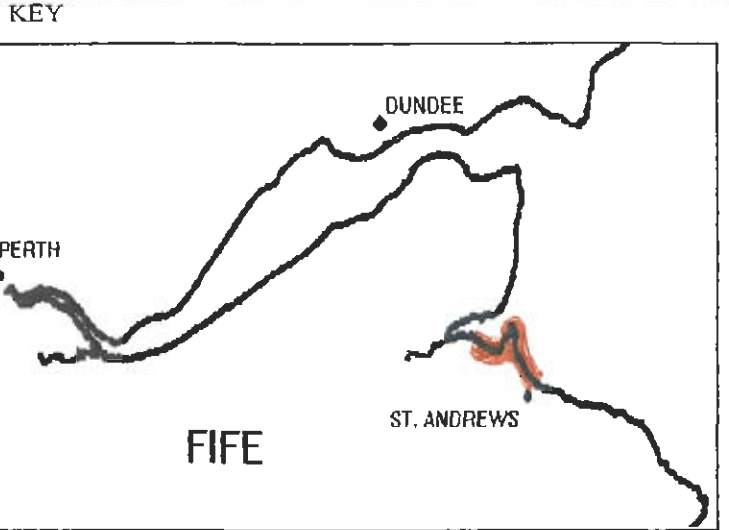
11
NO47671869
1.2 km
Mainly alluvial/marine muds
Manmade barrier
Blown sands with raised beach and marine deposits
The foreshore is predominantly muds. On the upper foreshore there are mud flats with marsh and reed beds. The coast edge is the old stone railway embankment. The raised shoreline can be seen in the hinterland in the vicinity of Kincaple farm.

12
NO46911895
0.3 km
Mainly alluvial/marine muds
Low edge (<5 metres)
Raised beach and marine deposits
Silty sands with a shingle fringe compose the upper foreshore, with muds on the lower foreshore. A low blown sand ridge is situated at the coast edge, with human disturbance as a result of tipping.



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Hinterland Geology	Shedler colour	
Cliff, boulder clay	light grey	
Cliff, boulder clay over visible rock	Caran D'ache violet	
Raised beach and marine deposits	golden brown	
Blown sand	peach	
Glacial sand and gravel	magenta	
Alluvium	grass 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	
Coastal Geomorphology		
Mainly rock platform	vermillion	
Mainly sand	indigo	
Mainly alluvial/marine mud	sienna brown	
Mud	me green	



**MAP 4: ST. ANDREWS
CATHEDRAL TO SHELLY POINT,
LEUCHARS**

**BUILT HERITAGE AND
ARCHAEOLOGY UNITS**

*Sites behind the coast edge at St
Andrews (St.A)*

NO51NW16
ST ANDREWS, NORTH STREET,
DEAN'S COURT
HOUSE; WELL; CUP-MARKINGS
16th Century
Not seen
Nil

NO51241680
35-39 NORTH CASTLE ST
LISTED BUILDING
17th-18th Century
Not seen
Nil

NO51241682
41 NORTH CASTLE ST
LISTED BUILDING
18th Century
Not seen
Nil

NO51241683
43 NORTH CASTLE ST
LISTED BUILDING
18th Century
Not seen
Nil

NO51241685
45-49 NORTH CASTLE ST
LISTED BUILDING
19th Century
Not seen
Nil

NO51241686
51 NORTH CASTLE ST
LISTED BUILDING
19th Century
Not seen
Nil

NO51NW20
ST ANDREWS, CASTLE STREET
COIN HOARD
Medieval

Not seen
Nil

NO51231686
CASTLEMOUNT, NORTH
CASTLE ST
LISTED BUILDING
19th Century
Not seen
Nil

NO51NW218
ST ANDREWS, THE SCORES,
ST SALVATOR HALL
20th Century
Not seen
Nil

NO51041699
EDGECLIFFE, 5&7 THE
SCORES
LISTED BUILDING
19th Century
Not seen
Nil

NO50981701
UNIVERSITY HOUSE, 9 THE
SCORES
LISTED BUILDING
19th Century
Not seen
Nil

NO50801701
THE SWALLOWGATE, THE
SCORES
LISTED BUILDING
19th Century
Not seen
Nil

NO51NW217
ST JAMES RC CHURCH, THE
SCORES
LISTED BUILDING
20th Century
Not seen
Nil

NO50781699
22 THE SCORES
LISTED BUILDING
19th Century
Not seen
Nil

NO50641701
6 GILLESPIE TERRACE, THE
SCORES
LISTED BUILDING
19th Century
Not seen
Nil

NO50631702
5&5A GILLESPIE TERRACE, THE
SCORES
LISTED BUILDING
19th Century
Not seen
Nil

NO50621702
4 GILLESPIE TERRACE, THE
SCORES
LISTED BUILDING
19th Century
Not seen
Nil

NO50611702
3 GILLESPIE TERRACE, THE
SCORES
LISTED BUILDING
19th Century
Not seen
Nil

NO50601702
2 GILLESPIE TERRACE, THE
SCORES
LISTED BUILDING
19th Century
Not seen
Nil

NO50581702
1 GILLESPIE TERRACE, THE
SCORES
LISTED BUILDING
19th Century
Not seen
Nil

NO50601706
MARTYRS MONUMENT, THE
SCORES
LISTED BUILDING
19th Century
Not seen
Nil

NO50551702

CASTLECLIFFE HOUSE & WALL, THE SCORES LISTED BUILDING 19th Century Not seen <i>Nil</i>	PROTECTED ANCIENT MONUMENT; BUILDING 14th Century Fair <i>Monitor</i>	NO50691702 Old coastal defence wall protecting cliff from sea earth 19th Century Fair <i>Nil</i>
NO50551709 BAND STAND, THE SCORES LISTED BUILDING 19th Century Not seen <i>Nil</i>	NO51NW3.1 ST ANDREWS CASTLE BEAKER BEAKER Early Bronze Age Not seen <i>Nil</i>	NO50701705 Square wooden post 19th-20th Century Fair <i>Nil</i>
NO50501709 ROYAL & ANCIENT GOLF CLUB HOUSE, THE SCORES LISTED BUILDING 19th Century Not seen <i>Nil</i>	NO51NW 3.2 ST. ANDREWS CASTLE MINE MINE AND COUNTERMINE Uncertain Not seen <i>Nil</i>	NO50751715 Sea Life Centre and tidal swimming pool 19th Century Fair <i>Nil</i>
NO51NW33 ST ANDREWS, NORTH STREET WINDMILL 17th Century Not seen <i>Nil</i>	NO51111701 Vertical stone and brick drainage section cut into cliff 19th Century Poor <i>Nil</i>	NO506173 Fifes buried under carpark 19th-20th Century Not seen <i>Nil</i>
NO50021831 1 NORTH ST LISTED BUILDING Uncertain Not seen <i>Nil</i>	NO51001702 Square drainage exit at top of cliff exposed by cliff fall 19th Century Poor <i>Nil</i>	NO50421723 Pillbox Facing west up West Sands. Built into concrete sea defence - one slit and interior infilled with stone and concrete to stabilise area under modern car-park. 20th Century Fair <i>Nil</i>
Sites on the coast edge and foreshore		
NO51NW118 Sequence of 3-5 breaks in rock-cut platform provided access for ships to unload, enhanced by metal mooring points and stepways. Uncertain - 19th Century Poor <i>Survey</i> *See site description 3	NO50951689 Sandstone boundary wall eroding at top of cliff edge 19th Century Poor <i>Nil</i>	NO50461734 'Jean' or 'Wilhelmina' - wooden wreckage, possible an exposed part of the sternpost 20th Century Fair <i>Nil</i>
NO51331687 Tidal swimming pool 19th Century Fair <i>Nil</i>	NO51NW109 ST ANDREWS, WITCH LAKE DRAIN DRAIN 19th Century Not seen <i>Nil</i>	NO50071821 -NO49901870. Tank traps Line of square traps lying parallel to beach NO50071821 - NO50021831. Partially buried between NO50021831 and NO49951865 reappearing as two lines that disappear at NO49901870. 20th Century Fair <i>Nil</i>
NO51NW3.0 ST ANDREWS CASTLE CASTLE	NO51NW62 ST ANDREWS, STEP ROCK BURIALS Uncertain Not seen <i>Nil</i>	

Sites on the coast edge and foreshore (Cont.)

NO49351969

2 wooden posts embedded in sand at mouth of foreshore to Eden Estuary

Uncertain

Poor

Nil

NO493196

Linear feature visible on 1946 1:10,000 aerial photographs

Uncertain

Not seen

Nil

NO491192

Old groyne system comprising reused tanktraps and lines of wooden posts with planking inbetween

20th Century

Poor

Nil

NO48331813

Railway embankment meets coast edge

19th Century

Fair

Nil

NO47941826

Drainage stakes lying perpendicular to railway embankment

Uncertain

Fair

Nil

NO47531862

Drainage stakes lying perpendicular to railway embankment

Uncertain

Fair

Nil

NO47401868

Cobbled slipway

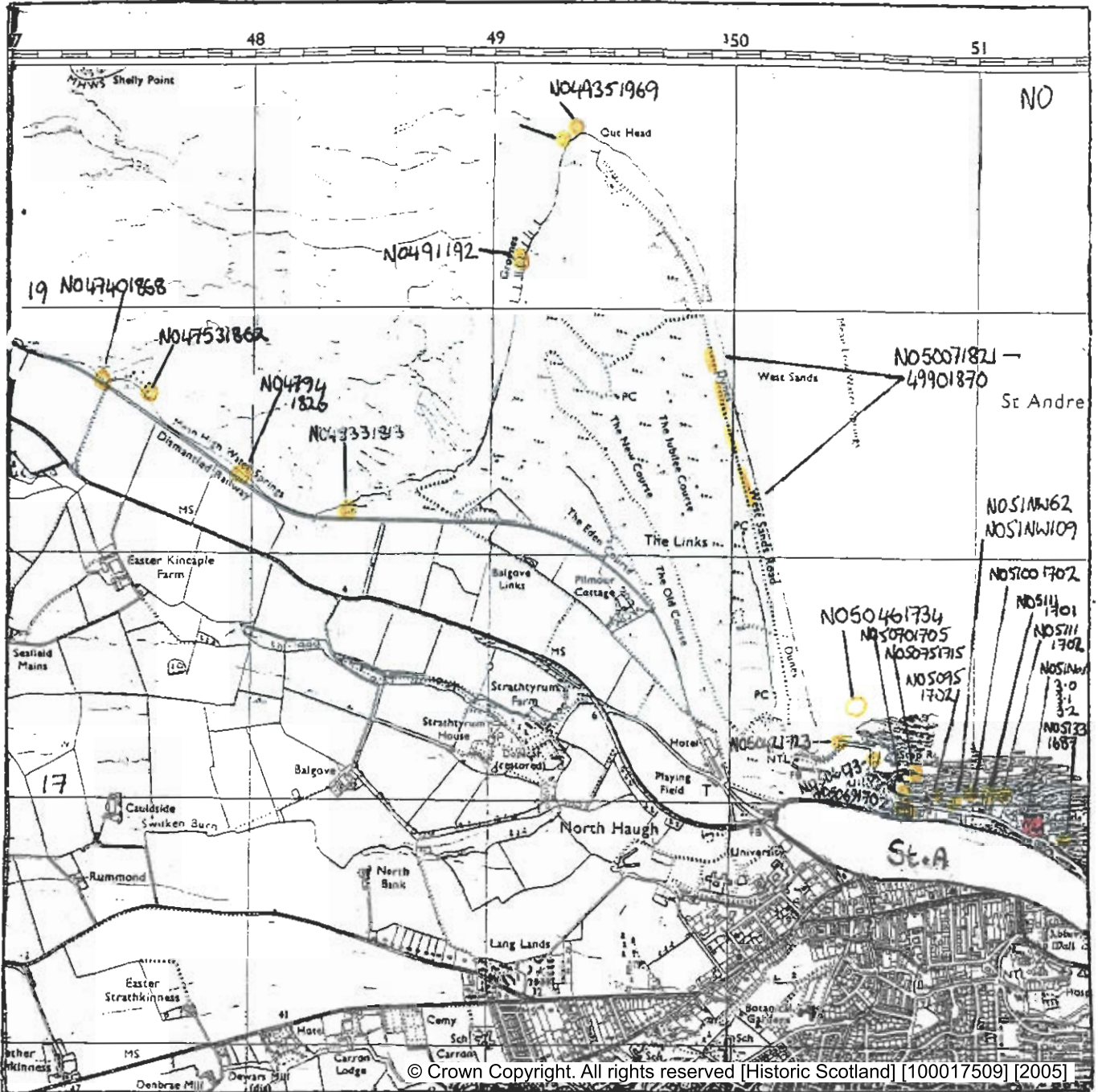
19th Century

Fair - poor (eroding at edges)

Monitor

MAP CLASS: **Built Heritage and Archaeology**
 (Assessment date: 2 October 1996)
 NO 41/51. Scale 1:25,000

STANDREWS CATHEDRAL TO SHELLY POINT, LEUCHARS



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KEY

Site location	Symbol	Staedtler colour	Significance
	solid roundel	carmine	Protected Ancient Monument
NGR e.g.	cross	carmine	Listed Historic Building
NO12345678	open roundel	carmine	Monument formally proposed by Historic Scotland for designation
	solid roundel	yellow ochre	Other known monument
NMRS e.g.	dashed outline	yellow ochre	Designed landscape
NO28NW35	open roundel	yellow ochre	Undesignated wreck
	area	green	Insufficient information, more work needed (no access, or not walked)
	area	blue	Probably archaeologically sterile

