

## MAP 1 FIFENESS TO KINGSBARNES HARBOUR

**Built heritage and archaeology** - The rocky foreland of Fife Ness has long provided a hazard to shipping and monuments existing at the coast edge mostly relate to man's attempts to combat this hazard. The lighthouse construction site (NO60NW33.1 site description 1) consisting of the circular indented base for work on Robert Stevenson's lighthouse for the North Carr rocks is visible cut into the littoral rocks, and the nearby 16th Century Fifeness harbour with early 19th Century harbour wharf (NO60NW33.0 site description 1) and the nearby Tidemill (NO60NW9) are the most important features. The effects of wave action on this exposed headland have been detrimental to these monuments, in reducing the height of the existing stone wharf to below High Water level. The important small harbour of Kingsbarns (NO61SW11) has shown visible deterioration in the last five years (site description 2). However, the important site of the recently scheduled Constantine's Cave (NO61SW6) and the non-scheduled Randerston's Cave (NO61SW7), set back as they are from the coast edge appear to be fairly stable; a golf course track fronts Constantine's Cave in which the incised crosses are visible although the 2 crude animal figures mentioned by RCAHMS were not decipherable. The front of Randerston's cave is overgrown by shrubs making it almost impenetrable. Two of the three pillboxes previously recorded on the coast edge by Balcomie Links (NO61SW16 and NO61SW17) were not identified and the presence of concrete debris dumped on the coast edge nearby to each recorded position suggests that these pillboxes may have been knocked down to make way for golf course works and to protect the coast edge. NO61SW16 has been recently scheduled and its disappearance may therefore be give cause for concern. Previously unrecorded sites include enhanced natural harbours (NO62071085 and NO61061141), and a rough stone wall in the intertidal zone known locally as 'Fluked Dub' but marked on the Pathfinder maps as 'Fluked dubh' (NO62771057) which was created by clearing an area of beach of stones for the creation of a landing place for catches of herring during the summer months (Dobson 1997,22). Catches would have been carried inland via a track through the break in the boundary wall behind. Earthwork mounds at a sandstone face nearby to the site of Randerston Castle (NO61SW4) probably probably represent spoil mounds from the 'old quarry' that is marked at this point in the OS. 1st Edition maps (1854).

**Hinterland geology and coastal geomorphology; Erosion class**-Carboniferous Calciferous Sandstone Measures, consisting of resistant sandstone and limestone, compose the rock peninsulas of Fife Ness and Cambo Ness and the rock platform which dominates the foreshore. There are two main beaches; Balcomie and Cambo Sands. The curved sand beaches have developed between resistant rock peninsulas, where abraded mudstones compose the rock platform. Blown sands create a dune zone at the coast edge, which is stabilised with marram grasses and other dune species. Localised dune undercutting is the result of human disturbance and erosion during high wave activity (Erosion Unit 5). particularly where breaks in the rock platform intensify wave attack on sandy raised beach deposits at the coast edge (Erosion Unit 10). Fence posts along the edge of Balcomie golf course have been moved inland indicating ongoing erosion, and the dumping of debris concrete, possibly originating from pillboxes, confirms this. Blown sands create a links area in the structural lows between the higher rock peninsulas while a low raised beach terrace rises slowly to an escarpment behind which is a coastal plateau of glacial deposition. The remaining coastline is associated with fringing sand and shingle beaches situated at the top of the rock platform. The raised shoreline is situated at the coast edge, Constantine's Cave was excavated in the former shoreline by the sea. The coast edge is stable where resistant hard rock composes the edge. There is localised scour erosion by shingle where breaks in the rock platform intensify wave attack on sandy raised beach deposits at the coast edge.

**MAP 1 FIFE NESS TO  
KINGSBARN HARBOUR**

**EROSION UNITS**

**1**  
NO63690982  
0.5 km  
Stable  
*The prominent rock peninsula with a wide foreshore platform is composed of resistant sandstone. During high wave activity there is localised undercutting by shingle. The shingle is thrown against the coast edge eroding the drift that overlies the hard rock. The loosely consolidated sediments composing the harbour coast edge is also susceptible to erosion by shingle scour.*

**2**  
NO63551021  
0.8 km  
Eroding or stable  
*The low link/dune edge of the Balcomie golf course is undercut where marram grasses are sparse. Posts marking the edge of the golf course have been replaced inland. Human disturbance to protect the golf greens includes the tipping of bricks possibly originating from the demolition of pill boxes and large boulders placed along the coast edge.*

**3**  
NO63171035  
0.4 km  
Accreting or stable  
*At Balcomie beach 2-6 metre high dunes are situated in the centre of the bay. The dunes display old blow out erosion hollows, however there is little present day erosion. The crests of the dunes are set*

*back from the present coast edge, suggesting long term accretion. The dunes are stabilised by marram grasses and sea lyme species, except where tracks are heavily used over the dunes and at the stream outlet.*

**4**  
NO62871067  
1 km  
Eroding or stable  
*The foreshore is stable consisting of a resistant rock platform with a fringing coarse beach. Where vegetation is sparse there is localised undercutting of the low coast edge during high wave activity. Tipping of bricks and concrete debris, in addition to large glacial boulders protect the coast edge.*

**5**  
NO62111072  
0.7 km  
Definitely eroding  
*Localised undercutting of the coast edge is evident from stranded fence posts. A new fence has been positioned inland. The blown sand deposits which compose the coast edge are easily eroded. Erosion is most serious where breaks in the rock platform intensify wave attack. Tipping at the end of the golf course provides some protection.*

**6**  
NO61621108  
0.5 km  
Stable  
*The stable sandstone cliffs, in addition to the protective rock platform provide resistance to wave attack.*

**7**

NO61341132  
0.6 km  
Eroding or stable  
*In the vicinity of Old Haiks localised undercutting during high wave activity exposes bare blown sand deposits at the coast edge. To the north, a groyne cemented to the rock platform traps sand which is stabilised by marram grasses at the back of the beach.*

**8**  
NO60981152  
0.2 km  
Stable  
*Resistant hard rock creates a stable coast edge and foreshore.*

**9**  
NO60821185  
0.4 km  
Eroding or stable  
*At the Cambo stream outlet a steep shingle storm bank protects the coast edge under most forms of wave attack. The Cambo Ness peninsula is actively undercut on the north side. A seawall was constructed in 1984 to combat the erosion.*

**10**  
NO60551232  
0.9 km  
Both accreting and eroding  
*The south of Cambo sands has advancing marram and dune species at the coast edge. A double fence at the crest of the dunes suggests the dune bank is stable. North of the stream, mature dunes extend inland however there are signs of undercutting and bank collapse along short lengths of the coast edge. The most damaged area is at the stream outlet. A restricted dune rehabilitation zone is combating trampling damage, however dunes with*

*bare sand faces are still evident.*

**11**  
NO60341267  
0.5 km  
Eroding or stable  
*South of Kingsbarns Harbour the coast edge has high stable dunes. Where visitor pressure is greatest the dunes display undercut bare sand faces. Sand is accreting on the foreshore as there is a gap in the rock platform and the collapse of the south harbour pier wall prevents sand from moving northwards. On the other side of the collapsed pier the foreshore is 0.5m lower and the coast edge has retreated inland. At the north harbour pier, sand is beginning to break through the wall. The restriction of sand has lowered the foreshore once more and the coast edge has cut further inland.*

**12**  
NO60141271  
0.3 km  
Stable  
*Large rock boulders are situated at the base of the stable cliffs at the coast edge which are composed of resistant sandstone.*

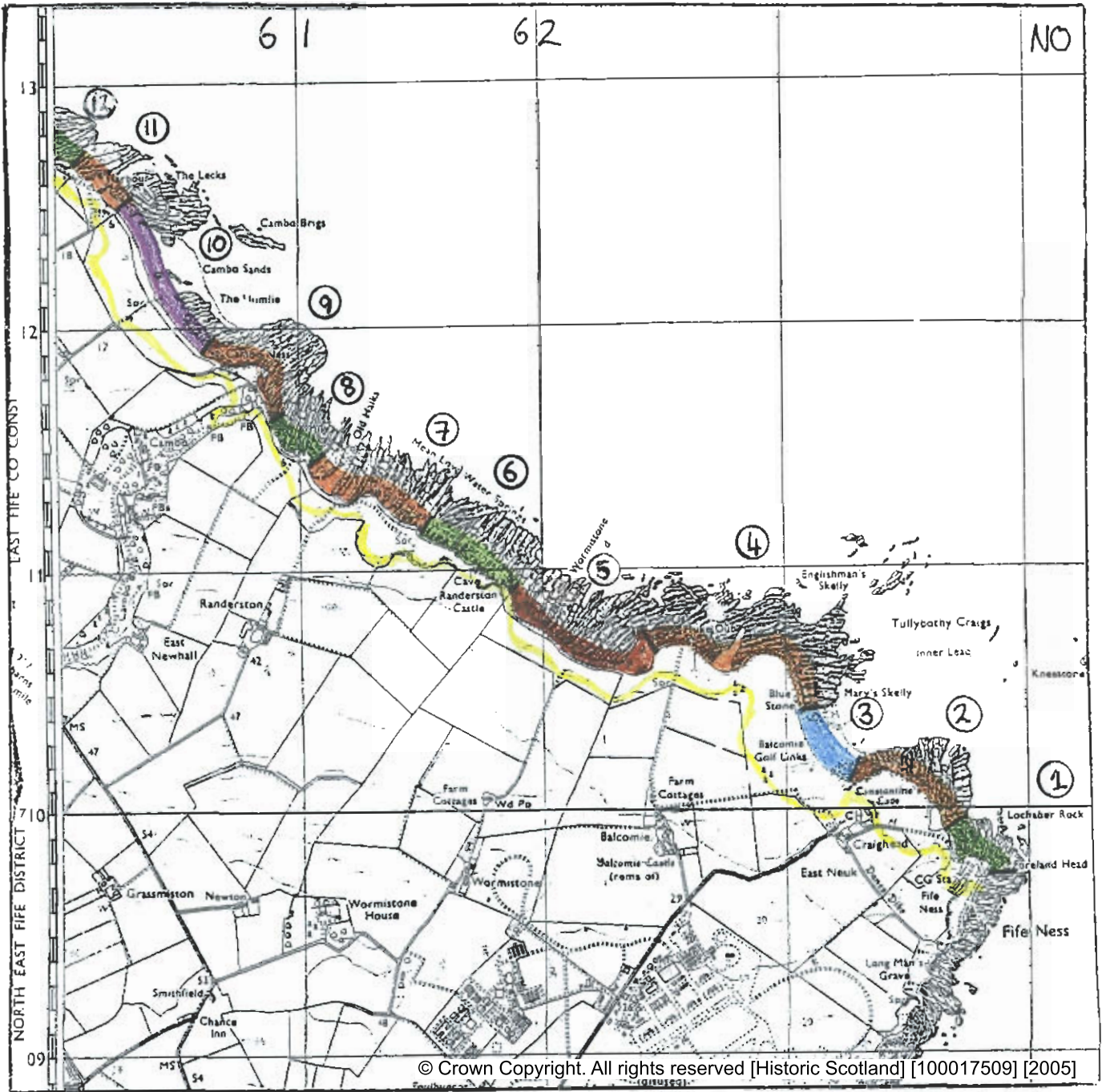
MAP CLASS: EROSION

(Assessment date: 29. 30 September 1996 )

NO 60/61.

Scale 1:25,000

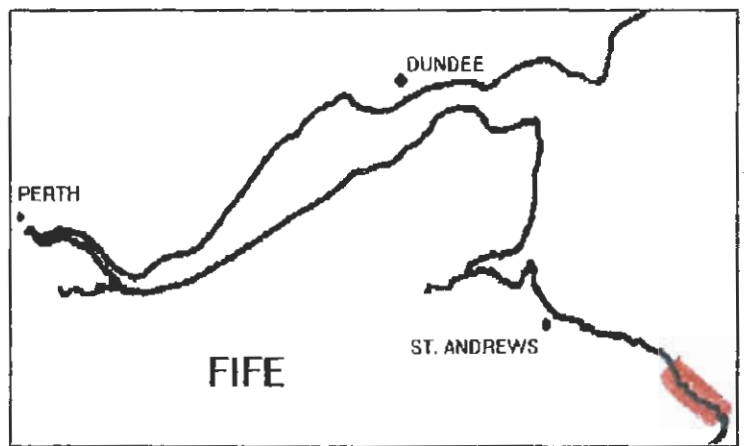
FIFENESS TO KINGSBARN'S HARBOUR



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KEY

Erosion class	Staedtler 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 1 FIFE NESS TO  
KINGSBARN'S HARBOUR**

**GEOLOGY UNITS**

**1**  
NO63770997  
0.9 km  
Mainly rock platform  
Low edge (<5 metres)  
Raised beach and marine deposits  
*The coast edge has rocky inlets and a sloping rock platform with a vegetation cover. The composition and structure of the geology accounts for the localised variations. Where abraded mudstones occur in the platform there are fringing beaches of shingle and sand. The hinterland consists of a flat links/dune area in a structural depression between higher rock ridges. Inland the raised beach deposits rise as a gentle escarpment to a plateau of glacial deposition.*

**2**  
NO63171032  
0.4 km  
Sand  
Low edge (<5 metres)  
Blown sand  
*In the centre of Balcomie beach, 2-6 metre dunes lead to a dune platform of sea lyme and marram grasses. The dune edge lowers to the north and south ends of the Bay. The curved northeast facing sand beach has a concave profile with a flat wet lower beach and a steep dry upper beach. The sand has a high shell content as the rock platform offshore favours the growth of shells.*

**3**  
NO62551077  
1.4 km  
Mainly rock platform  
Low edge (<5 metres)  
Raised beach and marine deposits  
*North of Balcomie beach the dune zone ends and the coast edge is a steep, stable bank around the promontory. Fringe beaches correspond to breaks in the rock platform. North of the promontory the coast edge lowers to an irregular dune ridge. This coastal bank can be traced*

*to the west with a fringe of mixed sands and shingle. To the north the links area is narrow and the land rises steeply to a raised beach escarpment.*

**4**  
NO61691109  
0.6 km  
Rock platform  
Cliff (> 5 metres)  
Raised beach and marine deposits  
*The Randerston promontory has no fringing beaches, and the rock platform dominates the foreshore. The raised sandstone cliffs are situated at the coast edge.*

**5**  
NO61321135  
0.8 km  
Mainly rock platform  
Low edge (<5 metres)  
Raised beach and marine deposits  
*Sand beaches are best developed where the rock platform is composed of abraded mudstones compose such as at Old Haiks. The low coast edge consists of rock platform with overlying raised beach deposits.*

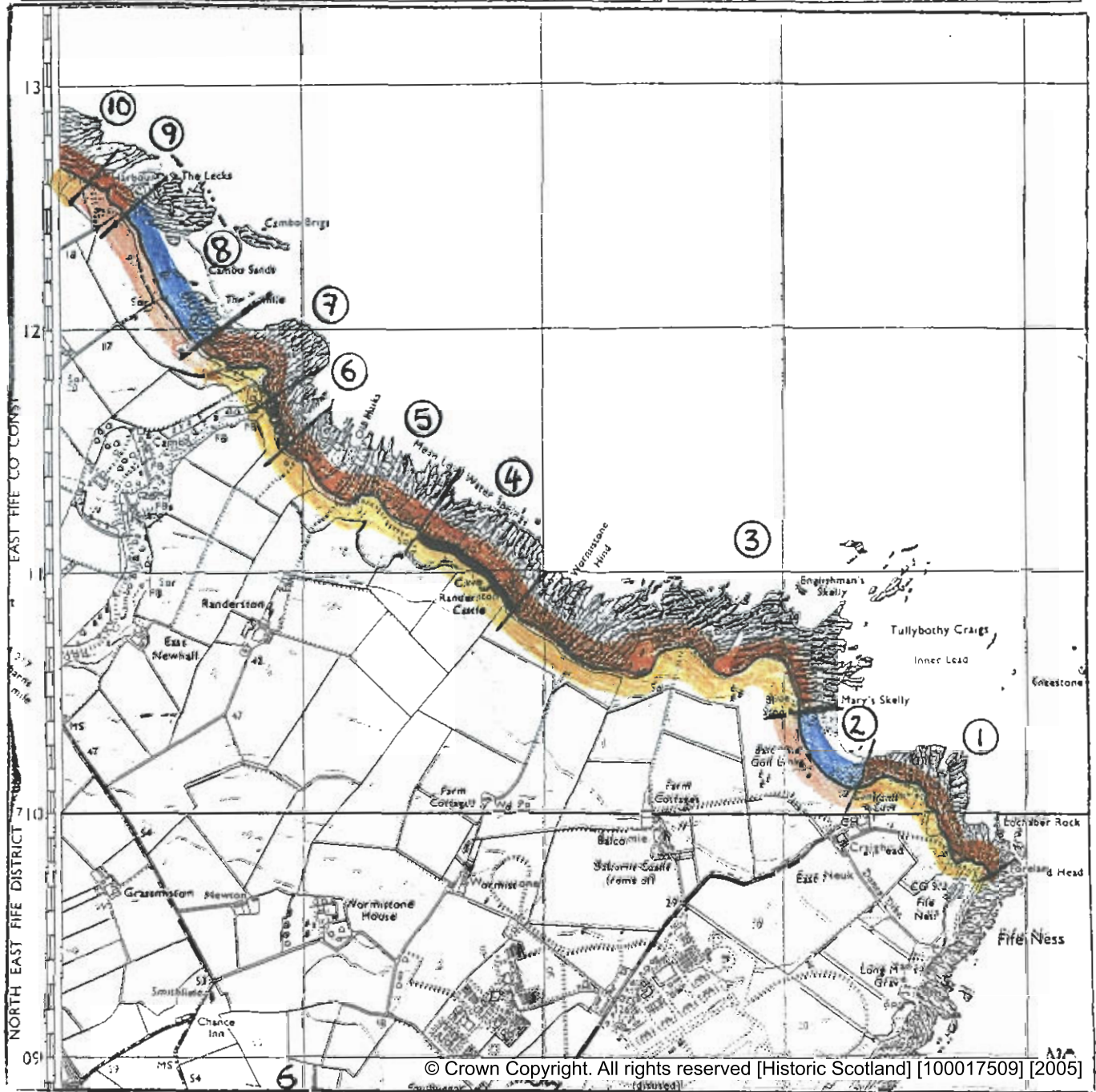
**6**  
NO60871175  
0.3 km  
Mainly rock platform  
Shingle  
Raised beach and marine deposits  
*The foreshore just south of the Cambo Ness promontory is composed of coarse shingle, thrown high up the beach during storm activity to create a steep storm ridge. The raised beach escarpment is close to the coast edge.*

**7**  
NO60781188  
0.5 km  
Mainly rock platform  
Low edge (<5 metres)  
Raised beach and marine deposits  
*Cambo Ness is a distinct rocky peninsula 6m above sea level. It is a raised beach surface consisting of a base of bedrock. On the north side of the promontory there is a narrow cobble storm beach at the base of a low cliff section. A seawall protects the coast edge.*

**8**  
NO60551232  
0.8 km  
Sand  
Low edge (<5 metres)  
Blown sand  
*Cambo Sands is a curved sand beach associated with an extensive gap in the rock platform. The beach is 800m wide at the top of the foreshore and narrows to 300m at low water and it is protected by marginal rock platform. Offshore sand banks nourish the beach system. The coast edge consists of 5m high dunes vegetated with marram grasses and pioneer species. A double fence is positioned at the dune crest dividing the dune and link environments. The hinterland geology consists of an undulating links area of blown sands which have encroached towards the former coastline escarpment.*

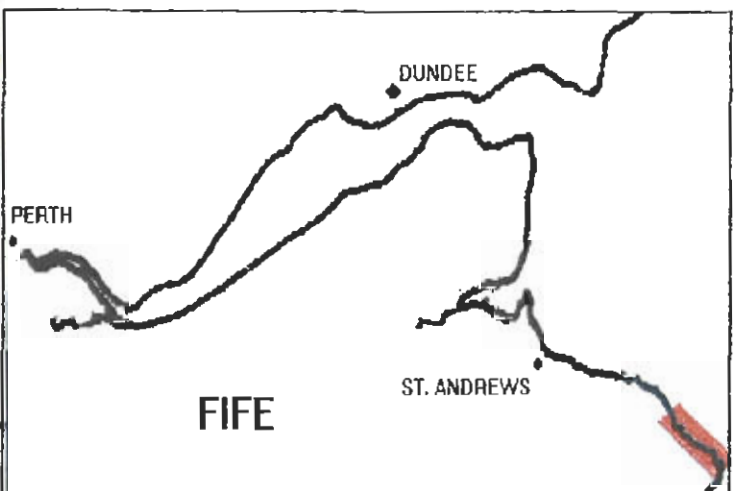
**9**  
NO60341267  
0.5 km  
Mainly rock platform  
Low edge (<5 metres)  
Blown sand  
*At Kingsbarns Harbour a sand beach has formed at a break in the rock platform. Beside the car park the links surface narrows and there are hummocky old dune forms. The former cliffline slope is relatively steep.*

**10**  
NO60141271  
0.3 km  
Mainly rock platform  
Low edge (<5 metres)  
Raised beach and marine deposits  
*A rocky peninsula composed of sandstone creates a cliffed coast edge. A fringing sand beach is situated on the upper foreshore with rock platform on the lower foreshore. The hinterland consists of an uneven sand terrace that continues northwards.*



Hinterland Geology	Shieldlike colour	
Drift, boulder clay	light grey	
Drift, boulder clay over visible rock	Caran D'acha violet	
Raised beach and marine deposits	golden brown	
Blown sand	peach	
Glacial sand and gravel	magenta	
Alluvium	grass green	
<b>Coast edge</b>		
Low edge (< 5m)	thin black line	
Cliff (> 5m)	solid black line	
Main erode barrier	black line with spines	
Shingle beach	small circles	
Fluvial disturbance	black criss	
<b>Coastal Geomorphology</b>		
Mainly rock platform	vermillion	
Mainly sand	indigo	
Mainly alluvial/marine-mud	sienna brown	
Mudflats	iris green	

KEY



**MAP 1: FIFE NESS TO  
KINGSBARNES HARBOUR**

**BUILT HERITAGE AND  
ARCHAEOLOGY UNITS**

*Sites behind the coast edge*

**NO60NW52**  
FIFE NESS,  
COASTGUARD STATION  
COASTGUARD STATION  
20th Century  
Good  
*Nil*

**NO60NW5**  
DANES DYKE  
EARTHWORK  
PROTECTED ANCIENT  
MONUMENT  
Uncertain  
Fair  
*Nil*

**NO61SW4**  
RANDERSTON CASTLE  
FORT; CASTLE  
MONUMENT FORMALLY  
PROPOSED FOR  
PROTECTION BY  
HISTORIC SCOTLAND  
15th-16th Century  
Fair  
*Nil*

**NO61541101**  
Sandstone quarry and spoil  
piles  
Uncertain  
Fair  
*Survey*

**NO60871164**  
Cambo House  
House  
Uncertain  
Fair  
*Nil*

*Sites on the coast edge and  
foreshore*

**NO63820971**  
Fife Ness Lighthouse  
20th Century  
Good

*Nil*

**NO60NW33.0**  
FIFE NESS, HARBOUR  
HARBOUR QUAY  
16th - 20th Centuries  
Poor

*Monitor*  
\*See site description 1

**NO60NW33.1**  
FIFE NESS, LIGHTHOUSE  
CONSTRUCTION SITE  
LIGHTHOUSE  
CONSTRUCTION SITE  
19th Century

Fair  
*Monitor*  
\*See site description 1

**NO60NW9**  
FIFE NESS, TIDE MILL:  
KILN  
TIDE MILL: KILN  
19th Century  
Fair  
*Nil*

**NO61SW16**  
CRAIL AIRFIELD,  
BALCOMIE GOLF LINKS,  
FIFE NESS  
TWO MAN DOMED  
SHEET IRON PILLBOX  
PROTECTED ANCIENT  
MONUMENT  
20th Century (Possibly  
knocked down during golf  
course works)  
Not seen  
*Monitor*

**NO61SW6**  
CONSTANTINE'S CAVE,  
FIFE NESS  
ROCK CARVINGS;  
CAVE; ROMAN GLASS;  
POTTERY  
PROTECTED ANCIENT  
MONUMENT  
2nd to 10th Centuries A.D.  
Fair  
*Nil*

**NO61SW19**  
BALCOMIE GOLF LINKS  
BUILDING

LIFEBOAT SHED.  
19th Century  
Good  
*Nil*

**NO63231030**  
Metal winch posts and  
shackle maybe associated  
with lifeboat shed.  
Uncertain  
Fair  
*Nil*

**NO61SW17**  
CRAIL AIRFIELD,  
BALCOMIE GOLF LINKS,  
FIFE NESS  
TWO MAN DOMED  
SHEET IRON PILLBOX  
20th Century  
Not seen  
*Nil*

**NO62771057**  
Linear stone wall, 1  
Result of stone clearance to  
create boat landing place on  
beach  
20th Century  
Poor  
*Survey*

**NO61SW18**  
CRAIL AIRFIELD,  
BALCOMIE GOLF LINKS,  
FIFE NESS  
TWO MAN DOMED  
SHEET IRON PILLBOX  
PROTECTED ANCIENT  
MONUMENT  
20th Century  
Poor (Dome roof seen but  
concrete base was not seen  
and this may have been  
destroyed or covered over by  
beach defences))  
*Monitor*

**NO62071085**  
Harbour  
Natural rock cut harbour  
with gap in boundary fence  
behind  
Uncertain  
Fair  
*Nil*

**NO61861093**  
Stone boundary wall  
continues onto foreshore  
Uncertain  
Good  
*Nil*

**NO61SW7**  
RANDERSTON CASTLE  
CAVE; CROSSES  
CAVE; CROSSES  
Uncertain  
Not seen  
*Nil*

**NO61141128**  
Linear wall onto foreshore  
Uncertain  
Fair  
*Nil*

**NO61SW2**  
OLD HAIKS LONG  
CIST CEMETERY  
CISTS  
Uncertain  
Not seen  
*Nil*

**NO61061141**  
Metal mooring hoop  
Suggesting an enhanced  
natural harbour at 'Old  
Haiks'  
19th-20th Centuries  
Fair  
*Nil*

**NO604125**  
Wreck  
Scattered remains of  
Torpedo destroyer HMS  
Success low down on  
foreshore  
20th Century  
Poor  
*Nil*

**NO61SW11**  
KINGSBARNES,  
HARBOUR  
HARBOUR AND  
LIMEKILN  
19th Century  
Poor  
*Monitor*  
\*See site description 2

