

COASTAL EROSION MANAGEMENT MANUAL

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A. WHAT TO LOOK FOR ON A SITE

A.1 INTRODUCTION

A site inspection is necessary to obtain information that cannot be found in the office study, to supplement incomplete data, to serve as a check on the gathered information, and to check on any preliminary interpretations. The focus of the site inspection should be to:

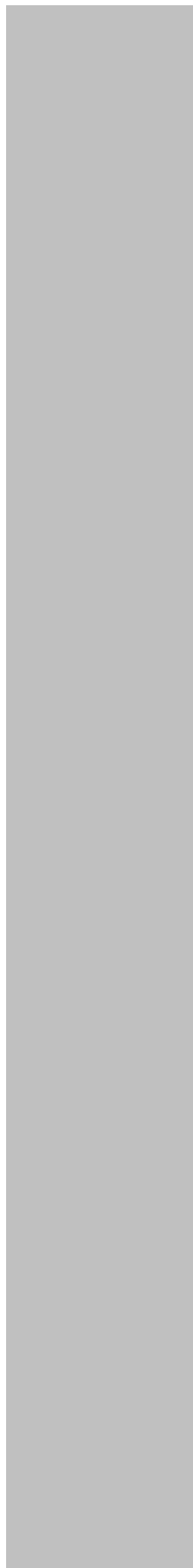
- familiarise self/team members with site characteristics;
- record site characteristics;
- identify potential triggers of coastline change;
- establish the representativeness of any monitoring data;
- refine the understanding of the system;
- identify key matters to be considered in the assessment of effects on the environment; and
- specify causes of any erosion.

The following checklist may be used to assist in determining whether there is a coastal erosion problem, the cause of any erosion problem, and for understanding the environmental context of the site. The checklist summarises the information contained in Part 1: Section 2, 3, and 4, and part 2: section C and F of this manual.

The checklist is designed to record on-site observations, though it would be advantageous to note details in the Environmental Conditions section prior to undertaking the site inspection.

When inspecting a site it is important to relate the physical condition at that time to the recent environmental conditions, e.g. erosion scarp may be a short term feature caused by recent storm waves, and to discern between the current state and the modal state of that environment.

It is usually preferable to undertake a site inspection during low tide conditions, to gain access to the site and adjacent areas, and to identify features otherwise covered by the tide.



A.2 SITE VISIT CHECKLIST		
LOCATION		
DATE AND TIME		
A) SITE DESCRIPTION		
<p><i>Describe in broad terms locality and landform characteristics, e.g. West Coast, open coast high energy environment; coastline type: soft, semi-hard, hard; main morphological features such as beach-dune system, estuarine beach fronting clayey bank.</i></p>		
B) ENVIRONMENTAL CONDITIONS		
<p>Morphology: planform & profile. Describe features, e.g. dunes, berms, nearshore bar. Use descriptors, e.g. height, slope. Note evidence of erosion, e.g. slips, caves.</p>		
<p>Beach Sediment Characteristics: grain size, composition, sorting, colour</p>		
<p>Soil/Rock Type: e.g. material, strength, colour, susceptibility to erosion</p>		
<p>Lithology: e.g. bedding planes, fractures</p>		
	Desk-top Information	On-site Observations
<p>Tide Regime: range & character (e.g. semi-diurnal)</p>		
<p>Water Level: indicators of variable water levels, e.g. storm cut platform, strand lines</p>		
<p>Current Regime: direction & speed of currents</p>		
<p>Wave Climate: wave height, period, length, direction</p>		
<p>Wind Regime: direction, speed, & frequency</p>		

C) INDICATIONS OF COASTAL EROSION (Recent & Historic)	
<p>Beach Morphology:</p> <ul style="list-style-type: none"> • narrow or absent berm • incipient dune • erosion scarp • over-steep dune slopes • blowouts • regularity of foredune crest • mobile sand in backdune area 	
<p>Semi-Hard or Hard Coasts:</p> <ul style="list-style-type: none"> • overly steep • evidence of rock/soil failures • nature & extent of erosion at toe of slope • debris at toe of slope • evidence of undermining 	
<p>Vegetation:</p> <ul style="list-style-type: none"> • cover continuous or discontinuous • main species • condition • location • leaning trees at top of cliff/bank • inter-tidal vegetation 	
<p>Structures/Works:</p> <ul style="list-style-type: none"> • existing erosion management structures • condition & age of works • other structures, e.g. ramps, stormwater outfall structures • earthworks 	
D) CAUSES OF EROSION	
<p>Natural Processes:</p> <ul style="list-style-type: none"> • change in sediment supply • change in controls, e.g. erosion of headlands • mass movement • undermining • weathering • loss of vegetation 	

<p>Human Activities:</p> <ul style="list-style-type: none"> • stormwater discharges • overloading of slope • loss/removal of vegetation • reduced supply of sediment • disturbance • structures • animal/stock action 	
<p>E) LOCAL ENVIRONMENTAL CONTEXT</p>	
<p>Values:</p> <ul style="list-style-type: none"> • natural character • landscape • natural features and ecosystems • cultural & spiritual • public access • uses made of area • intensity of activities 	
<p>Degree of Development / Use:</p> <ul style="list-style-type: none"> • along coastline • along the backshore • width of esplanade reserve • proximity of structures to coastal marine area • age of development 	
<p>Description of the Adjacent Coastline:</p>	
<p>Additional Comments:</p>	