

Glossary of Terms

A

Accretion

The accumulation of sediment by the action of natural forces.

Advance the existing line

A Strategy to move the defence of an area seaward of its existing position.

B

Backshore

The beach area landward of the foreshore above the normal reach of the tides that provides the primary protection to the hinterland.

Backwash

The water that runs back down the beach following waves breaking.

Bathymetry

The topographic relief of the seabed.

Beach

The deposit of non-cohesive material on the interface between dry land and the sea.

Benefits

The value of an area being defended.

C

Coastal processes

Collective term covering the action of natural forces on the shoreline and adjoining seabed.

Coastal response

The movement of coastal sediments and coastline position as a result of natural forces.

Collapsing waves

A combination of plunging and surging waves.

D

Do nothing

Carry out no coastal defence activity except for safety measures.

Downdrift affects

Impacts occurring in the 'shadow' of any coastal processes, particularly sediment movements

E

Erosion

The wearing away of material by the action of natural forces.

F

Fetch

The distance of open water over which wind blows.

Foreshore

The area of the beach lying between high water and low water

G

Geomorphology

The study of land forms and land forming processes (including the mobile seabed).

H

Hard defences

Static shoreline structures such as those constructed from timber, steel, concrete, asphalt and

rubble.

High tide

The result of the Moon's gravitational pull on the Earth creating a bulging in the sea surface. Occurs twice daily.

Hinterland

The area extending landward from the upper limit of extreme wave and tidal activity.

Hold the Line

A strategy to continue to hold the line of defence to an area where it is; continuing to protect the coastline.

I

J

K

L

Line of defence

The position of the existing defended area which may be an existing defence structure or the natural coastline where no structures exist.

Longshore movement/transport

Movement of material approximately parallel to the shoreline

Low tide

The areas of water on the Earth's surface between high tide bulges that repel water.

M

Managed retreat

See 'retreat the existing line.'

Management unit

A length of coast with coherent characteristics in terms of natural coastal processes and land use that requires a specific coastal defence option for the future which is consistent with the overall strategic requirements for a management area.

N

Natural coastline/shoreline movement/evolution

The movement of the coastline should natural development continue without the intervention of any defences.

Neap tides

Where the Moon isn't aligned with the Sun and Earth, and it's gravitational pull is reduced by the Sun's.

Nearshore

The area adjacent to the coast where significant seabed profile change and sediment movements occur as a consequence of storm action and the beach.

O

Onshore-offshore sediment movement/transport

Movement of material perpendicular to the shore.

Overflow

The flow of water over the top of a defence as a result of the prevailing tidal water level exceeding the crest height of the defence.

Overtopping

The flow of water over the top of a defence as a result of wave run-up or surge action.

P

Plunge line

The point where wave steepness exceeds 1:7 and the wave breaks.

Plunging waves

Occur on medium steepness beaches, and are characterised by a steep wave face with the crest curling over the top.

Process unit

A sub-section of coastline defined for management purposes that possesses coherent characteristics, in terms of natural coastal processes, which are sufficiently independent of adjacent stretches of shoreline.

Q

R

Residual life

The remaining working life of a defence structure.

Retreat of the existing line/managed retreat

A strategy to encourage the movement of the shoreline landward of its present position in a managed or controlled manner, hence the term "managed retreat". Sometimes also referred to as "managed set-back".

S

Sediment budget

A description of the movement of coastal sediments including their sources and sinks (areas of deposition).

Sediment cell

A length of coastline, and its associated nearshore area, within which the movement of sand and shingle is largely self contained

Sediment sub-cell

A division of a sediment cell based on best available knowledge of large scale processes within that cell

Shoreline

The interface between land and sea.

Shoreline Management Plan (SMP)

A document that sets out a strategy for coastal defence for a specified length of coast, taking account of natural coastal processes and human and environmental influences and needs.

Soft defences

Mobile/responsive defence measures which consist of sand or shingle (beaches, and dunes or banks) which may be natural or constructed, and may include control structures.

Spilling waves

These occur on gently sloping beaches, where the crest breaks and spills down the face of the wave.

Spring tides

When the Moon, Earth, and Sun are aligned to create a larger tidal bulge.

Standard of service

The overall level of protection provided by the defence against sea conditions. Usually expressed in terms of the largest storm return period for which the defence can provide adequate protection.

Strategic coastal defence options

Generic term for any coastal management strategy e.g. do nothing, advance, retreat or hold the existing coastal defence line.

Surf Zone

The area where waves break.

Surging waves

These occur on steep beaches, with smooth wave faces and little foam or bubbles.

Swash

The foaming body of water after a wave has broken

T

Tidal range

The difference between high and low tides.

Tsunami

Waves caused by submarine shockwaves generated by seismic activity.

U

V

W

Wave

The result of the transfer of frictional energy from wind blowing across open water.

Wave Crest

The lowest point of a wave.

Wave Energy

Proportional to the square of wave height multiplied by wave length ($E \propto LH^2$)

Wave Length

The distance between two consecutive crests.

Wave Period

The time taken for a wave to travel one wave length.

Wave Height

The distance between each crest and trough.

Wave refraction

Where the drag of the seabed on an irregular coastline slows and bends waves at different rates so that the waves are shore parallel.

Wave Steepness

The ratio of wave height to wave length.

Wave Trough

The highest point of a wave.

Wave Velocity / Celerity

The speed of a wave crest over a period of time.

X

Y

Z