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## **Glossary**

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### ***Organisations***

BC	Borough Council
CC	County Council or City Council
DC	District Council
MAFF	Ministry of Agriculture, Fisheries and Food
MoD	Ministry of Defence
DoT	Department of Transport

### ***Conservation designations***

AONB	Area of Outstanding Natural Beauty
CHS	Countryside Heritage Site
GCRS	Geological Conservation Review Site
LNR	Local Nature Reserve
NNR	National Nature Reserve
Ramsar	Designated under the Ramsar Convention on Wetland of International Importance especially as Waterfowl Habitat
SAC	Special Area of Conservation
SINC	Site of Importance for Nature Conservation (Hampshire)
SNCI	Site of Nature Conservation Interest (West Sussex)
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest

### ***Tidal levels***

LAT	Lowest Astronomical Tide
MLW (S or N)	Mean Low Water (Spring or Neap)
MHW (S or N)	Mean High Water (Spring or Neap)
HAT	Highest Astronomical Tide

### ***Waves***

H <sub>s</sub> or Significant wave height	Height of 1/3 highest waves in a given event or period
Swell	Waves generated by winds outside the area
Wind sea	Waves generated by local winds including storm waves
T <sub>m</sub>	Mean time interval between successive wave crests

### ***Cross-shore zones***

Beach head	The cliff, dune or seawall forming the landward limit of the active beach
Backshore	Area above normal maximum high water, but affected by coastal processes
Beach crest	The point representing the limit of high tide storm wave run-up
Intertidal or foreshore	Area between LAT and HAT
Nearshore	Area over which seabed transport can be caused by storm waves, including intertidal zone
Offshore	Area seaward of nearshore zone where sea bed transport is not normally driven by waves

### ***Beach morphology and materials***

Fines	Particle diameter less than 0.063mm (silt and clay)
Sand	Particle diameter between 0.063mm and 2mm
Shingle	Clast diameter between 2mm and 75mm, also gravel
Cobbles	Clast diameter greater than 75mm
Dune	Wind blown sand deposit, often vegetated
Shingle ridge	Upper beach feature with low lying backshore subject to flooding
Spit	A long narrow accumulation of sand or shingle, lying generally in line with the coast, with one end attached to the land the other projecting into the sea or across the mouth of an estuary

Foreland Relict backshore area formed by long term seaward development of shoreline

### *Coastal defence structures*

Apron	Layer of stone, concrete or other material to protect the toe of a seawall
Detached breakwater	A breakwater without a constructed connection to the shore
Embankment	Earth bank raised above low lying hinterland area to prevent flooding
Gabions	Wire mesh baskets filled with rock
Groyne	Cross-shore structure designed to reduce longshore transport by causing a reorientation of the beach
Revetment	General term for sloping, often permeable structures, providing flood or erosion protection to the backshore
Seawall	General term for vertical or near vertical impermeable structures, providing flood or erosion protection to the backshore

### *General glossary*

Accretion	Accumulation of (beach) sediment by natural processes
BP	Before Present
Bathymetry	Spatial variability of levels on the seabed
Beach management	Management of a beach as a coastal defence with a pre-determined standard of protection, using combinations of beach recharge, recycling, reprofiling, beach control structures and a programme of monitoring
Beach plan shape	The shape of the beach in plan: usually shown as a contour line, combination of contour lines or recognisable features such as beach crest and/or still water line
Beach profile	A cross-section taken perpendicular to a given beach contour; the profile may include the face of a dune or seawall, extend over the backshore, across the foreshore, and seaward underwater into the nearshore zone
Beach recharge	Supplementing the natural volume of sediment on a beach, using material from elsewhere - also known as beach replenishment / nourishment / feeding
Bed forms	Features on a seabed (e.g. ripples and sand waves) resulting from the movement of sediment over it
Bed load	Sediment transport mode in which individual particles either roll or slide along the seabed as a shallow, mobile layer a few particle diameters deep
Breaching	Failure of the beach head allowing flooding by tidal action
Bypassing	Moving beach material from the updrift to the downdrift side of an obstruction to longshore-drift
Chart Datum (CD)	The level to which both tidal levels and water depths are reduced - on most UK charts, this level is that of the predicted lowest astronomical tide level (LAT)
Coastal defence	General term used to encompass both coast protection against erosion and sea defence against flooding
Coastal processes	Collective term covering the action of natural forces on the shoreline and nearshore seabed
Coast protection	Protection of the land from erosion and encroachment by the sea
Cross-shore	Perpendicular to the shoreline
Depth-limited	Situation in which wave generation (or wave height) is limited by water depth
Diffraction	Process affecting wave propagation, by which wave energy is radiated normal to the direction of wave propagation in to the lee of an island or breakwater
Downdrift	In the direction of the nett longshore transport of beach material
Drift	See Longshore drift
Ebb	Period when tide level is falling; often taken to mean the ebb current which

	occurs during this period
Ebb tide delta	Area of sediment accretion formed where strong tidal currents decrease in velocity after leaving a restricted channel and entering a more open nearshore area
Fetch	Distance over which a wind acts to produce waves - also termed fetch length
Fetch-limited	Situation in which wave energy (or wave height) is limited by the size of the wave generation area
Freeboard	The height of the crest of a structure above the still water level
Frontager	Person or persons owning, and often living in, property immediately landward of the beach
Joint probability	The probability of two (or more) things occurring simultaneously
Kelp rafting	Transport of shingle and cobbles from the outer nearshore zone to the beach while attached to the foot of neutrally buoyant seaweed; rafted material is much more mobile than normal shingle
Littoral drift, Littoral Transport	The movement of beach material in the littoral zone by waves and currents. Includes movement parallel (longshore drift) and perpendicular (cross-shore transport) to the shore
Longshore	Parallel and close to the coastline
Longshore drift	Movement of (beach) sediments approximately parallel to the coastline
Managed retreat	The deliberate setting back of the existing line of defence in order to obtain engineering and/or environmental advantages
Mud flat	An area of fine silt usually exposed at low tide but covered at high tide, occurring in sheltered estuaries or behind shingle bars or sand spits
Ordnance Datum (OD)	Standard reference level used by the Ordnance Survey for land survey in the UK, based on mean sea level at Newlyn, Cornwall
Overtopping	Water carried over the top of a coastal defence due to wave run-up exceeding the crest height
Potential drift rate	Theoretical longshore drift rate assuming no restriction on supply of material. Actual drift is often much less due to lack of supply or interruption due to cross-shore structures (e.g. groynes)
Refraction	The process by which the direction of a wave moving in shallow water at an angle to the contours is changed so that the wave crests tend to become more aligned with those contours
Return period	Average time between occurrences of a given event
Saltmarsh	Area of salt tolerant vegetation within the intertidal zone
Sea defences	Works to alleviate flooding by the sea
Sea level rise	The long term upward trend in mean sea level resulting from a combination of local or regional geological movements and global climate change
Sediment sink	Point or area at which beach material is irretrievably lost from a coastal cell, such as an estuary or a deep channel in the seabed
Sediment source	Point or area on a coast from which beach material arises, such as an eroding cliff, or river mouth
Shoreline management	The development of a strategic, long-term and sustainable coastal defence policy within a sediment cell
Standard of service	The adequacy of defence measured in terms of the return period (years) of the event which causes a critical condition (e.g. breaching, overtopping) to be reached
Surge	Changes in water level as a result of meteorological forcing (wind, high or low barometric pressure) causing a difference between the recorded water level and that predicted using harmonic analysis, may be positive or negative

Suspended load	A mode of sediment transport in which the particles are supported, and are carried along by the fluid
Tidal current	The movement of water associated with the rise and fall of the tides
Tidal range	Vertical difference between high and low water level
Tide	The periodic rise and fall in the level of the water in oceans and seas; the result of gravitational attraction of the sun and moon
Updrift	The direction opposite to that of the predominant longshore movement of beach material
Wave climate	The seasonal or annual distribution of wave height, period and direction
Wave rose	Diagram showing the long-term distribution of wave height and direction

