

RNLI Beach Safety Assessment Report



Beach Name: Dawlish Warren	Also known as:	Management Authority: Teignbridge District Council
Date: 19/01/2023	Version:	Suggested review date: 19/01/2024
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Field beach safety assessment package



Section 1: Executive Summary

Introduction to the RNLI and Beach Safety Assessment

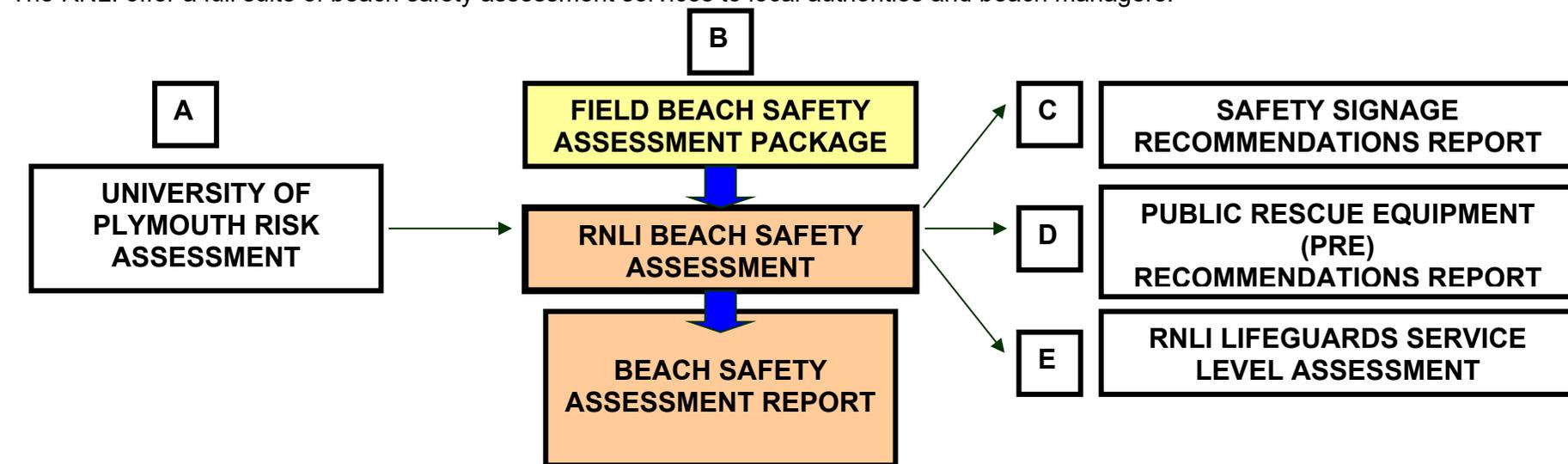
- Summary of Findings
- Simplified Risk Calculator for Beaches
- University of Plymouth UKBSAM Beach Type
 - Risk Priority Matrix Summary

Introduction to the RNLI and Beach Safety Assessment

The Royal National Lifeboat Institution is a registered charity that saves lives at sea. It provides, on call, a 24-hour lifeboat search and rescue service up to 100 nautical miles out from the coast of the United Kingdom and Republic of Ireland and a beach lifeguard service on appropriate beaches in the United Kingdom and Republic of Ireland.

The RNLI Lifeguards have developed a “total service” concept where a drowning prevention strategy is used to control risk. Conducting a beach safety assessment is the first step to improving safety on the beach.

The RNLI offer a full suite of beach safety assessment services to local authorities and beach managers:



THIS REPORT CONTAINS A FULL FIELD BEACH SAFETY ASSESSMENT PACKAGE (PARTS A & B)

The University of Plymouth risk assessment is based on a beach safety and management programme developed in Australia.

Field beach safety assessment package:
This package provides the user with a toolkit to conduct an assessment of risk based on history and observation.

The RNLI provides a series of specialist reports based on best practice and national standard guidance. Reports C (Safety Signage) and D (PRE) are available on request. Report E (RNLI Lifeguards Service Level Assessment) is only available to beach owners who are exploring the option of the RNLI providing a lifeguard service.

Summary of Findings

Conducting a beach safety assessment is the first step in improving safety on the beach.

During the assessment there was a hazard identified where the level of risk was felt to be high. Control measures should be considered.

Priority hazard is:

10.8 Wave dodging

The following series of potential control measures have been suggested in this report to manage high level risks and specific hazards as well as broader recommendations relating to management strategies. These include:

- Signage along the promenade warning of breaking waves against the sea wall.
- Complete centre disk on Public Rescue Equipment (PRE) housing regarding reference points
- Review Public Rescue Equipment (PRE) to ensure it meets new national guidelines
- Ensure suite of standard and local operating procedures are in place for all activities performed or managed
- Provide beach safety information to targeted groups such as school groups and Tourist Information Centres
- Use National Water Safety forms for recording of incidents and actions.

It is the responsibility of the management authority to formulate an action plan based on the recommendations. An action plan template is included in section two of this report.

The RNLI is currently reviewing options for providing ongoing assistance and support to management authorities that they do not necessarily provide Lifeguard Services for. Management authorities could gain from this assistance by formally approaching the RNLI to develop a longer-term association. These services are provided at either no cost or at cost recovery only.

Many management authorities currently benefit from advice relating to community education, risk assessments, signage, standard operating procedures and equipment procurement.

For further advice please contact:

Lifeguard Services:

Lifeguard Supervisor
Risk and Implementation
RNLI
BSA@rnli.org.uk

General Manager-Lifeguard Operations
Lifeguard Services
RNLI
BSA@rnli.org.uk

Please note: all advice is given as recommendations and does not constitute any formal agreements

Simplified risk calculator

Peak season

Level	Tides	Energy		Population	
		Tidal flow*	Average wave height*	Population (in-water)**	Conflicting activities
7			2.0m+	200+	
6			1.5–2.0m	150–200	
5		White water	1.0–1.5m	100–150	
4	Extensive tidal range with potential for cut off	6+ knots	0.75–1.0m	75–100	Persistent and dangerous
3	Potential for tidal cut off	4–6 knots	0.5–0.75m	50–75	Persistent
2	Extensive tidal range	2–4 knots	0.25–0.5m	25–50	Regular
1	Normal tidal range	0–2 knots	0–0.25m	10–25	Occasional
0	No tidal effect	Static	0	0-10***	Isolated

*Tidal flow versus Average wave height: Only use the one most appropriate measure of energy
 ** For calculating the in-water population to include surf craft: a novice surfer or body boarder = 0.5; an experienced surfer = 0.25
 ***If population in-water is 0 the beach will default to lower risk, if 1-10 the beach cannot rank higher than lower-medium risk

UKBSAM beach type	Weighting	UKBSAM beach type	Weighting
LTT+R(HE)	3	UD(HE)	-1
LTBR(HE)	3	LTT(LE)	-1
STB (HE)	2	NBD(HE)	-1
MITB (LE)	1	R	-1
LTT+MITB	1	NDI	-1
UD+TF(LE)	0	STB(LE)	-2
LTT(HE)	0	NBD(LE)	-2
R(HE)	0	Unclassified	0

Early/Late Season

Level	Tides	Energy		Population	
		Tidal flow*	Average wave height*	Population (in-water)**	Conflicting activities
7			2.0m+	200+	
6			1.5–2.0m	150–200	
5		White water	1.0–1.5m	100–150	
4	Extensive tidal range with potential for cut off	6+ knots	0.75–1.0m	75–100	Persistent and dangerous
3	Potential for tidal cut off	4–6 knots	0.5–0.75m	50–75	Persistent
2	Extensive tidal range	2–4 knots	0.25–0.5m	25–50	Regular
1	Normal tidal range	0–2 knots	0–0.25m	10–25	Occasional
0	No tidal effect	Static	0	0-10***	Isolated

*Tidal flow versus Average wave height: Only use the one most appropriate measure of energy
 ** For calculating the in-water population to include surf craft: a novice surfer or body boarder = 0.5; an experienced surfer = 0.25
 ***If population in-water is 0 the beach will default to lower risk, if 1-10 the beach cannot rank higher than lower-medium risk

UKBSAM beach type	Weighting	UKBSAM beach type	Weighting
LTT+R(HE)	3	UD(HE)	-1
LTBR(HE)	3	LTT(LE)	-1
STB (HE)	2	NBD(HE)	-1
MITB (LE)	1	R	-1
LTT+MITB	1	NDI	-1
UD+TF(LE)	0	STB(LE)	-2
LTT(HE)	0	NBD(LE)	-2
R(HE)	0	Unclassified	0

Energy (Tides + Average wave height or Flow*) + Population (In-water population + Conflicting activity) +/- UKBSAMP weighting = Risk

RNLI Beach Safety Assessment Report

Winter

Level	Energy			Population	
	Tides	Tidal flow*	Average wave height*	Population (in-water)**	Conflicting activities
7			2.0m+	200+	
6			1.5–2.0m	150–200	
5		White water	1.0–1.5m	100–150	
4	Extensive tidal range with potential for cut off	6+ knots	0.75–1.0m	75–100	Persistent and dangerous
3	Potential for tidal cut off	4–6 knots	0.5–0.75m	50–75	Persistent
2	Extensive tidal range	2–4 knots	0.25–0.5m	25–50	Regular
1	Normal tidal range	0–2 knots	0–0.25m	10–25	Occasional
0	No tidal effect	Static	0	0-10***	Isolated

*Tidal flow versus Average wave height: Only use the one most appropriate measure of energy

** For calculating the in-water population to include surf craft: a novice surfer or body boarder = 0.5; an experienced surfer = 0.25

***If population in-water is 0 the beach will default to lower risk, if 1-10 the beach cannot rank higher than lower-medium risk

UKBSAM beach type	Weighting	UKBSAM beach type	Weighting
LTT+R(HE)	3	UD(HE)	-1
LTBR(HE)	3	LTT(LE)	-1
STB (HE)	2	NBD(HE)	-1
MITB (LE)	1	R	-1
LTT+MITB	1	NDI	-1
UD+TF(LE)	0	STB(LE)	-2
LTT(HE)	0	NBD(LE)	-2
R(HE)	0	Unclassified	0

Dawlish Warren beach is a medium risk beach during peak season, a lower-medium risk beach during early / late season and a lower risk beach during winter.

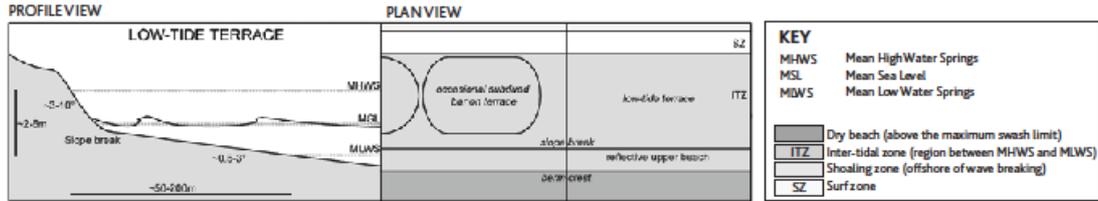
Score	Risk level	Suggested controls – <i>provided as a general indicator only</i>
15+	Higher	<ul style="list-style-type: none"> • Lifeguards may regularly close the beach to aquatic activities • Lifeguards will require additional support (increased personnel or equipment levels)
12-15	Medium–higher	<ul style="list-style-type: none"> • Lifeguards may occasionally close the beach to aquatic activities • Lifeguard may require additional support (increased personnel or equipment levels)
8-12	Medium	<ul style="list-style-type: none"> • Lifeguards normally recommended
5-8	Lower –medium	<ul style="list-style-type: none"> • Monitoring of in-water population should be undertaken, with the provision of a lifeguard service considered • PRE should be considered • Signage strongly recommended
0-5	Lower	<ul style="list-style-type: none"> • Signage should be considered • PRE may be considered • Pre-arrival education

University of Plymouth UK Beach Safety Assessment Model (UKBSAM) Beach Type

NB. For further information on the partnership work between the RNLI and the University of Plymouth please see Appendix 2



BEACH TYPE: LOW-TIDE TERRACE (LOW ENERGY)



EXAMPLE LOCATION MAP

UK BEACH TYPE EXAMPLES

1. Marazion, Cornwall
2. Millendreath, Cornwall
3. Seaton, Cornwall

BEACH TYPE CHARACTERISTICS

Wave: low energy mixed wave regime, HW: surging-plunging, LW: plunging-spilling.
 Sediment: HW: medium sand to gravel/boulder, LW: fine-medium sand.
 Tide: micro-tidal to macro-tidal.
 Surf zone width: HW: very narrow-medium, LW: medium-wide.
 Comments: HW: the majority of wave energy reaches the HW beach, cusp formations occasionally found at high-water level, LW: beach exhibits clear break in slope at approximately MSL (level varies), often accompanied by a change in sediment size and groundwater seepage. Lower beach is flat and featureless. A dissipative surf zone with spilling waves usually dominates during LW. Occasionally subdued inter-tidal bars (linear intersected) can form throughout the low-tide terrace.
 General stability: medium.

PHYSICAL HAZARDS MODAL (HIGH ENERGY)

Rip currents: HW: low, LW: low (medium).
 Wave breaking: HW: low (medium), LW: low.
 Surf zone energy: HW: low (medium), LW: low.
 Beach gradient: HW: low, LW: v.low.
 Swash: HW: low (medium), LW: v.low.
 Tidal cut-off: low - medium.
 Littoral currents: HW: low (medium), LW: low (medium).

IMPORTANT General beach type hazards provide an overview of common hazards associated with generic beach types. On a local scale, these hazards can be modified by local environmental conditions (rock exposure, drainage, coastal structures etc). Please refer to the 'Environmental setting additional hazards checklist' for more information on potential levels of hazard modification from the general beach hazards provided here.

Summary: low hazard under modal conditions. Potential tidal cut-off hazard due to increased tidal translation rates across low-tide terrace. Beach type is characterised by a clear transition from a strongly reflective surf zone at high-tide to strongly dissipative at low-tide. There is a potential for heightened rip (transient) and littoral current hazards during high-energy conditions. Mild beach rips can form over the occasional subdued intersected intertidal bars.
 Hazard Rating: low

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Risk Priority Matrix Summary - (Risk rating below includes current control measures)

All hazards identified on the beach are included below. For more detailed information on each specific hazard see section 2 'Audit'.

Likelihood	Almost Certain (5)	9.1 General beach activities				
	Likely (4)	7.2 Marine envenomation	3.2 Groynes and coastal defences 2.2 Shallow sandbanks		11.3 Snorkelling/spear fishing 11.5 Personal water craft	
	Possible (3)		2.7 Inshore holes	2.4 Submerged rocks 6.1 Strong winds 6.3 Fog/mist	2.2 Sudden drop off 5.3 Topographical rips 10.4 Inflatable users 10.10 Surfing 11.1 Paddlecraft 10.8 Wave dodging	1.4 Tidal cut off
	Unlikely (2)	7.3 Dangerous marine life	1.5a Unsafe Walkways 7.4 Dangerous snakes 9.2 Cycling	4.4 Water quality 7.1 Dogs 8.3 Hazardous substances 9.5 Managed vehicle use 9.10 Sand digging	5.1 Wave type 5.2 Beach Rip 5.5 Tidal currents 6.6 UV long term 8.4 dangerous litter 9.3 Beach fishing 9.4 Rock fishing/walking 10.1 Paddling / wading 10.2 Diving 10.3 Swimming 10.5 Skimboarding 10.6 Body surfing 10.7 Body boarding	6.5 UV short term
	Rare (1)			1.3 Unstable / eroded dunes 3.5 Buildings + Structures 8.1 Fire Safety	6.2 Storm rain 6.4 Lightning	
		Negligible (1)	Low (2)	Moderate (3)	High (4)	Severe (5)
Consequence						

BOLD denotes those hazards where the current controls are felt to be inadequate.

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Risk Matrix Summary Explained

	Stop	Stop activity and immediate action
	Urgent Action	Take immediate action and stop activity if necessary, maintain existing controls rigorously
	Action	Improve within specified timescale
	Monitor	Look to improve at next review or if there is a significant change
	No Action	No further action, but ensure controls are maintained and reviewed

The numbers in the table below are calculated thus: $\text{Consequence} \times \text{Likelihood} = \text{Risk}$

Likelihood	Almost Certain (5)	5	10	15	20	25
	Likely (4)	4	8	12	16	20
	Possible (3)	3	6	9	12	15
	Unlikely (2)	2	4	6	8	10
	Rare (1)	1	1	3	4	5
		Negligible (1)	Low (2)	Moderate (3)	High (4)	Severe (5)
Consequence						

N.B. Some activities i.e. extreme sports are by their very nature intermittently dangerous. In certain circumstances, hazards may remind in the high risk field despite adequate controls being in place. Hazards that are therefore felt to be insufficiently controlled are highlighted in bold.

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		Conflicting Activities Matrix																												
	General beach activities	Cycling	Beach / pier fishing	Rock walking / rock fishing	Managed vehicle use and parking	Large kite flying	Climbing / bouldering	Horse riding	Wind powered vehicles	Sand digging / tunnelling	4wd vehicles, quad / dirt bikes	Paragliding / hand gliding	Paddling / wading	Diving	Swimming	Inflatable users	Skim boarding	Body surfing	Body boarding	Wave dodging	Cliff, rock or pier jumping	Surfing	Stand up paddle boarding	Windsurfing	Kite surfing	Rowing	Sailing	Snorkelling / spear fishing	Scuba diving	Personal Water Craft (PWC)
Personal Water Craft (PWC)	0	0	1	1	0					0			1	1	1	1	1	1	1			1	1				1		1	
Scuba diving																														
Snorkelling / spear fishing	0	0	1	1	0					0			0	1	1	1	0	1	1			1	1				1			
Sailing																														
Rowing	0	0	0	0	0					0			1	1	1	1	1	1	1			1	1							
Kite surfing																														
Windsurfing																														
Stand up Paddle boarding	1	1	1	1	0					0			1	1	1	1	1	1	1			1								
Surfing	0	0	1	0	0					0			1	1	1	1	1	1	1											
Cliff, rock or pier jumping																														
Wave dodging																														
Body boarding	0	0	1	0	0					0			1	1	1	1	1	1												
Body surfing	0	0	1	0	0					0			1	1	1	1	1													
Skim boarding	0	0	1	0	0					0			1	1	1	1														
Inflatable users	1	1	1	1	0					0			1	1	1															
Swimming	0	0	1	1	0					0			1	1																
Diving	0	0	1	1	0					0			1																	
Paddling / wading	0	0	1	1	0					0																				
Paragliding / hand gliding																														
4wd vehicles, quad / dirt bikes																														
Sand digging / tunnelling	1	0	0	0	1																									
Wind powered vehicles																														
Horse riding																														
Climbing / bouldering																														
Large kite flying																														
Managed vehicle use and parking	1	1	0	0																										
Rock walking / rock fishing	0	0	0																											
Beach / pier fishing	1	0																												
Cycling	1																													
General beach activities																														

0 = No conflict of activities.

1 = Low Risk. Remote chance of activity conflict arising resulting in mayor injury OR occasional chance of activity conflict arising resulting in minor injury. No additional management intervention required.

2 = Medium risk. Occasional chance of activity conflict arising resulting in critical injury OR probable chance of activity conflict arising resulting in mayor injury. Additional temporary / seasonal management intervention required.

3 = High risk. Occasional chance of activity conflict arising resulting in a fatality OR probable chance of activity conflict arising resulting in a critical injury. Additional permanent management intervention required.

Field beach safety assessment package



Section 2: Audit

- Action Planning Explained
 - Action Plan
 - Audit Explained
 - Audit

Action Planning Explained

It is the responsibility of the management authority to complete an action plan based on the observations reported in this assessment

A template has been provided to assist in the completion of such a report. It is not mandatory to use this format, however ISO standard 31000:2009(E) (Risk management – principles and guidelines), does require a section to be completed on the treatment of risk and the continued monitoring and review of hazards.

An essential element of coastal risk management is communication and consultation; it is also recommended that a communications plan be developed which relates to the risk itself and the process to manage it. It is important that consultation does not end when the formal risk assessment is complete. Consideration should be given to the formation of a working group that allows ongoing dialogue with stakeholders.

It is recommended that you prioritise those hazards with the highest risk first, these are detailed in the red section of the risk priority matrix summary and listed in the summary of finding earlier in the document.

The RNLI are happy to work with the management authority in the completion of any action plan. For further assistance with this please call the lifeguard services team on 01202 663384.

ACTION PLAN (MANAGEMENT AUTHORITY TO COMPLETE)

Ref	Hazard	Additional control measures	Priority			Person responsible for implementing control measures	Complete by date	Details of action taken	Review date
			H	M	L				

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Ref	Hazard	Additional control measures	Priority			Person responsible for implementing control measures	Complete by date	Details of action taken	Review date
			H	M	L				

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ACTION PLAN (MANAGEMENT AUTHORITY TO COMPLETE)

Ref	Hazard	Additional control measures	Priority			Person responsible for implementing control measures	Complete by date	Details of action taken	Review date
			H	M	L				

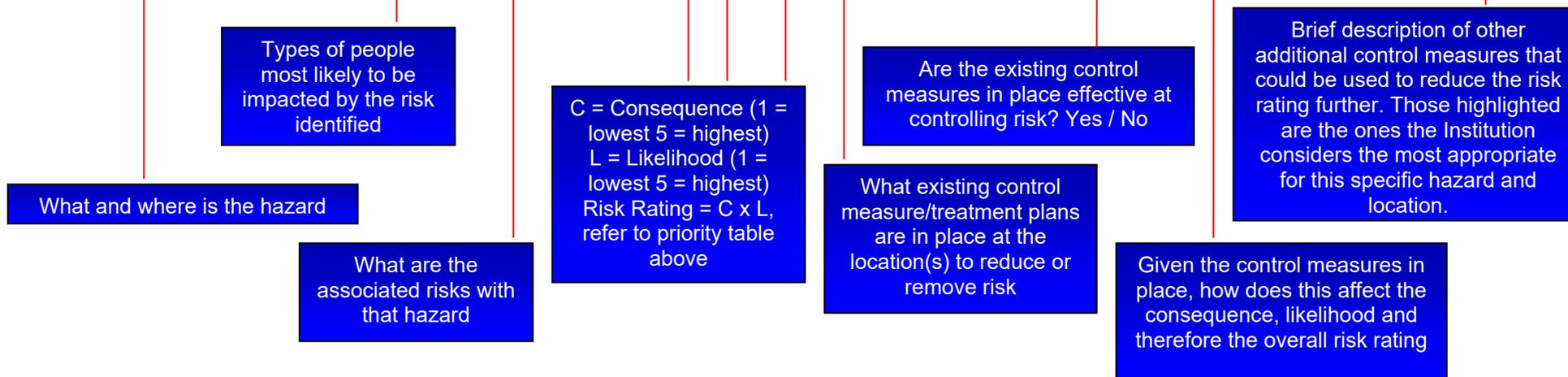
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Audit Explained

The following section is the detailed coastal risk audit for the area under assessment. To help further understand and interpret the information contained within the risk tables, the reader may wish to read the explanation contained within the appendices before continuing with this section of the report.

Key - risk assessment table:

Ref	Hazard (and location if applicable)	At increased risk groups	Associated problems	C	L	Risk rating	Existing control measures	Existing controls sufficient Y/N	Control risk rating	Alternative potential control measures (BOLD – Suggested control measures)
1.1	Steep cliffs	Employees Males Very young 16–35 TVM Pre-existing medical conditions	Falls from height Persons becoming stranded on cliff face	3	3	9	Signage Zoning, fencing Emergency communications Trained observer provision First aid provision	Y	6	Pre-arrival education Signage (national guidance) Emergency communications (national guidance) Extend first aid provision Extend trained observer provision Removal/closure



RNLI Beach Safety Assessment Report

Audit

1.0 Surrounding environments

Consequence: 1 negligible, 2 low, 3 moderate, 4 high, 5 severe
Likelihood: 1 rare, 2 unlikely, 3 possible, 4 likely, 5 almost certain

Ref	Hazard (and location if applicable)	At increased risk groups	Associated problems	C	L	Risk rating	Existing control measures	Existing controls sufficient Y/N	Control risk rating	Alternative potential control measures (BOLD – Suggested control measures)
1.1	Steep cliffs		N/A							
1.2	Unstable cliffs/rock falls/mud slides		N/A							
1.3	Unstable and/or eroded dunes	Employees Males Very young 16–35 TVM 60+	Falls from height Dune collapse leading to entrapment / suffocation	3	2	6	Signage (Safety Warning) Signage (Dune paths closed) Zoning (supervised area) Barriers (partial / full) First aid provision Lifeguard provision Designated safe footpath Spinal board	Y	3	Barriers (partial / full) Emergency communications (national guidance) Trained observer provision Extend first aid provision Extend lifeguard provision Inspection/repair
1.4	Tidal cut off Cut off area near groyne 5. Approximately 2 hours before High tide. Unable to get off the beach due to dune fencing and no stair access or egress.	Employees Males Very young 16–35 TVM 60+ Non-swimmers	Tidal cut off Incoming tide can trap persons on sandbar or beach. Incoming tide can trap persons on cove/shoreline Drowning Hyperthermia / Exposure Potential for cold water shock	5	4	20	Pre-arrival education (Warning) Signage (Safety Warning) Zoning (supervised area) Emergency communications (National guidance) PRE First aid provision Lifeguard provision Tide Times	Y	15	Pre-arrival education (More Warning signage) Signage (national guidance) Tidal cut off Danger area zoned (beach / map) Additional PRE (national guidance) Trained observer provision Extend first aid provision Extend lifeguard provision Additional Tide times displayed Emergency escape route Means of beach closure Other tidal alert system e.g. traffic lights
1.5 a	Unsafe walkways, lookouts and promenades	Employees Males Very young 16–35 TVM 60+	Slips, trips and falls Activity conflict* <i>*For activity conflict see section 9</i>	2	3	6	Barriers High visibility line Emergency communications (national guidance) First aid provision Lifeguard provision Means of closure Inspection/repair	Y	4	Pre-arrival education (Danger Notice) Signage (national guidance) (No Access) Zoning (activities) Additional Barriers Trained observer provision Extend first aid provision Extend lifeguard provision Means of closure
1.5 b	Unsafe walkways, lookouts and promenades		N/A							
1.6	Other									

RNLI Beach Safety Assessment Report

2.0 Beach profiles

Consequence: 1 negligible, 2 low, 3 moderate, 4 high, 5 severe
Likelihood: 1 rare, 2 unlikely, 3 possible, 4 likely, 5 almost certain

Ref	Hazard (and location if applicable)	At increased risk groups	Associated problems	C	L	Risk rating	Existing control measures	Existing controls sufficient Y/N	Control risk rating	Alternative potential control measures (BOLD – Suggested control measures)
2.1	Sudden drop-off/steep slope	Males Very young 16–35 TVM 60+ Non-swimmers Weak swimmers	Rapid change of water depth (especially hazardous for children) Slope leading down to waters edge Drop off wall at bottom of slipway Drowning Dumping waves / shore break* <i>*For problems associated with waves see Wave Type</i>	4	4	16	Pre-arrival education (No boat launching) Signage (Exposed metal danger) Red and yellow flags Emergency communications (national guidance) PRE First aid provision Lifeguard provision Means of beach closure Red flag Tide times	Y	12	Pre-arrival education (Drop off/ steep slope) Signage (national guidance) steep shelving beach Zoning (designated bathing area) (beach / map) PRE (national guidance) Trained observer provision Extend first aid provision Extend lifeguard provision Additional Tide Times
2.2	Shallow sandbanks	Employees Males Very young 16–35 TVM 60+ Non-swimmers Weak swimmers	Head, neck and back injuries from diving into shallow water Beaching craft impacting with sandbank Associated currents* Stranding** <i>*For associated currents and drowning see beach rip</i> <i>**For stranding see Tidal cut off</i>	3	4	12	Pre-arrival education (Council link to RNLI Website) Zoning (swim / craft / launch) (beach / map) Red and yellow flags Emergency communications (national guidance) PRE First aid provision Lifeguard provision Tide times Spinal boards Means of beach closure Red flag	Y	8	Pre-arrival education (state message) Signage (national guidance) shallow sand banks PRE (national guidance) Trained observer provision Extend first aid provision Extend lifeguard provision Craft regulations / restrictions / byelaws (please define)
2.3	Rock shelves/reefs		N/A							

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Ref	Hazard (and location if applicable)	At increased risk groups	Associated problems	C	L	Risk rating	Existing control measures	Existing controls sufficient Y/N	Control risk rating	Alternative potential control measures (BOLD – Suggested control measures)
2.4	Submerged rocks/debris	Employees Males Very young 16–35 TVM Non-swimmers Weak swimmers	Head, neck and back injuries from diving into shallow water Craft impacting with shelf/reef Impact injuries Entrapment Cuts and lacerations Soft tissue injuries Associated currents* Stranding** <i>*For associated currents and drowning see topographically constrained rip</i> <i>**For stranding see Tidal cut off</i>	3	4	12	Pre-arrival education (Link to RNLI website) Signage (national guidance) (Danger rocks below Environment agency) Red and yellow flags Emergency communications (national guidance) PRE First aid provision Lifeguard provision Tide times Spinal boards Red flag	Y	6	Additional Signage (Danger) submerged rocks Zoning (swim / craft / launch) (map / beach) Trained observer provision Extend first aid provision Extend lifeguard provision Removal of objects Marker buoys / hazard markers Means of beach closure
2.5	River/stream mouth		N/A							
2.6	Mud/quicksand		N/A							
2.7	Inshore holes/channels/gutters	Employees Very young 16–35 TVM Pre-existing medical conditions Unfit Non-swimmers Weak swimmers	Associated currents* Rapid change of water depth (especially hazardous for children) <i>*For associated currents see Topographically constrained rip</i>	3	3	9	Pre-arrival education (Council website link to RNLI, Environment agency, beach live) Red and yellow flags Emergency communications (national guidance) PRE First aid provision Lifeguard provision Means of beach closure Red flag	Y	6	Signage (national guidance) (state Danger indicator) Zoning (designated bathing area) (beach / map) Trained observer provision Extend trained observer provision Extend first aid provision Extend lifeguard provision
2.8	Other									

RNLI Beach Safety Assessment Report

3.0 Man-made structures

Consequence: 1 negligible, 2 low, 3 moderate, 4 high, 5 severe
Likelihood: 1 rare, 2 unlikely, 3 possible, 4 likely, 5 almost certain

Ref	Hazard (and location if applicable)	At increased risk groups	Associated problems	C	L	Risk rating	Existing control measures	Existing controls sufficient Y/N	Control risk rating	Alternative potential control measures (BOLD – Suggested control measures)
3.1	Overhead power lines		N/A							
3.2	Groynes and coastal defences Wooden Groynes and rock sea defences See appendix photos	Employees Males Very young 16–35 TVM Pre-existing medical conditions Non-swimmers Weak swimmers	Misadventure – jumping/diving Slips, trips, and falls Impact injuries Collision risk Entrapment Associated currents* Activity conflict** <i>*For associated currents and drowning see topographically constrained rip</i> <i>**For activity conflict see section 9</i>	4	3	12	Pre-arrival education (Beware Groynes) Zoning (designated bathing area) (beach / map) Red and yellow flags Emergency communications (national guidance) PRE First aid provision Lifeguard provision Groyne markers (Not all) Means of beach closure Red flag Spinal boards Swim exclusion zone by structure	Y	8	Signage (national guidance) (Danger/ Warning signs on each Groyne) Trained observer provision Extend first aid provision Extend lifeguard provision Removal Inspection/repair Craft regulations / restrictions / byelaws (please define) Groyne markers (On each Groyne) Restricted access
3.3	Jetties/piers									
3.4	Rock swimming and paddling pools									
3.5	Buildings and structures	Employees Males Very young 16–35 TVM	Misadventure Slips, trips and falls Impact injuries	3	2	6	Pre-arrival education (Council website link to RNLI, Environment agency, beach live) Emergency communications (national guidance) First aid provision Lifeguard provision Removal – out of season Inspection/repair	Y	3	Pre-arrival education (state message) Signage (national guidance) keep off buildings Emergency communications (national guidance) Trained observer provision Extend trained observer provision Extend first aid provision Extend lifeguard provision
3.6	Buoys, lines, and netting		N/A							
3.7	Other									

RNLI Beach Safety Assessment Report

4.0 Water quality

Consequence: 1 negligible, 2 low, 3 moderate, 4 high, 5 severe
Likelihood: 1 rare, 2 unlikely, 3 possible, 4 likely, 5 almost certain

Ref	Hazard (and location if applicable)	At increased risk groups	Associated problems	C	L	Risk level	Existing control measures	Existing controls sufficient Y/N	Control risk level	Alternative potential control measures (BOLD – Suggested control measures)
4.1	Storm-water outlet		N/A							
4.2	Sewage outlet		N/A							
4.3	Agricultural run-off		N/A							
4.4	<p>Water quality/pollution</p> <p style="color: red;">If a bathing water include the current classification and the latest weekly water quality measurement (these are available on the environment agency website)</p> <p>This beach is not included in the safer seas app. (Just Dawlish Town)</p>	<p>Employees</p> <p>Males</p> <p>Very young 16–35</p> <p>TVM</p> <p>Pre-existing medical conditions</p> <p>Swimmers</p>	<p>Water quality/pollution</p> <p>Microbiological e.g. e coli</p>	2	2	4	<p>Pre-arrival education (Council website link to RNLI, Environment agency, beach live)</p> <p>Signage (national guidance) (Bathing water quality info)</p> <p>Red and yellow flags</p> <p>Emergency communications (national guidance)</p> <p>Inspection - Trained observer</p> <p>First aid provision</p> <p>Lifeguard provision</p> <p>Means of beach closure</p> <p>Red flag</p> <p>Emergency action plan</p> <p>Liaise with Environment agency for advice</p>	Y	4	<p>Signage (national guidance) (Updated pollution alert sign?)</p> <p>Zoning (designated bathing area) (beach / map)</p> <p>Trained observer provision</p> <p>Extend first aid provision</p> <p>Extend lifeguard provision</p> <p>Beach cleaning/monitoring</p> <p>Liaise with Environment Agency for advice</p> <p>Work with local farmers / landowners</p> <p>Safer Seas alert</p>
4.5	Other									

RNLI Beach Safety Assessment Report

5.0 Surf conditions

Consequence: 1 negligible, 2 low, 3 moderate, 4 high, 5 severe
Likelihood: 1 rare, 2 unlikely, 3 possible, 4 likely, 5 almost certain

Ref	Hazard (and location if applicable)	At increased risk groups	Associated problems	C	L	Risk level	Existing control measures	Existing controls sufficient Y/N	Control risk level	Alternative potential control measures (BOLD – Suggested control measures)
5.1	Wave type: Plunging waves Shore break Surging waves Spilling ✓ Passing vessels	Employees Males Very young 16–35 TVM Pre-existing medical conditions Non-swimmers Weak swimmers	Impact injuries Drowning	4	3	12	Pre-arrival education (Council website link to RNLI, Environment agency, beach live) Zoning (designated bathing area) (beach / map) Red and yellow flags Emergency communications (national guidance) PRE First aid provision Lifeguard provision Red Flag	Y	8	Signage (national guidance) large breaking waves) Trained observer provision Extend first aid provision Extend lifeguard provision
5.2	Beach rip: Topographically driven rip currents are associated with sandbanks and troughs. The rip currents flow seaward through a trough or 'hole'. These currents often occur only for a short time in the day (10–30 minutes).	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions Non-swimmers Weak swimmers	Drowning	4	3	12	Pre-arrival education (Council website link to RNLI, Environment agency, beach live) Zoning (designated bathing area) (beach / map) Red and yellow flags Emergency communications (national guidance) PRE First aid provision Lifeguard provision Means of beach closure Red flag Tide times	Y	8	Signage (national guidance) rips Trained observer provision Extend trained observer provision Extend first aid provision Extend lifeguard provision
5.3	Topographically constrained rip: These rip currents are very common in the UK and are caused by solid objects in the surf zone such as rock outcrops, headlands and groyne. These rips will generally be semi-permanent features depending primarily on wave height.	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions Unfit Non-swimmers Weak swimmers	Impact injuries Drowning	4	4	16	Pre-arrival education ((Council website link to RNLI, Environment agency, beach live) Zoning (designated bathing area) Red and yellow flags Emergency communications (national guidance) PRE First aid provision Lifeguard provision Means of beach closure Red flag Tide times	Y	12	Signage (national guidance) (Danger of rips/ show on map) Extend trained observer provision Extend first aid provision Extend lifeguard provision Trained observer provision

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Ref	Hazard (and location if applicable)	At increased risk groups	Associated problems	C	L	Risk level	Existing control measures	Existing controls sufficient Y/N	Control risk level	Alternative potential control measures (BOLD – Suggested control measures)
5.4	Free rip: These rips can occur anywhere on the beach. Caused by water movement in the surf zone, they can occur on a flat beach and can come and go very quickly.		N/A							
5.5	Tidal/river/estuarine currents	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions Unfit Non-swimmers Weak swimmers	Drowning	4	3	12	Pre-arrival education (Council website link to RNLI, Environment agency, beach live) Signage (national guidance) (Fast moving tide) Zoning (designated bathing area) (beach / map) Red and yellow flags Emergency communications (national guidance) PRE First aid provision Lifeguard provision Means of beach closure Red Flag Tide times	Y	8	Pre-arrival education (state message) Signage (national guidance) tides Extend trained observer provision Extend first aid provision Extend lifeguard provision Trained observer provision
5.6	Extensive tide range		N/A							
5.7	Other									

RNLI Beach Safety Assessment Report

6.0 Weather

Consequence: 1 negligible, 2 low, 3 moderate, 4 high, 5 severe
Likelihood: 1 rare, 2 unlikely, 3 possible, 4 likely, 5 almost certain

Ref	Hazard (and location if applicable)	At increased risk groups	Associated problems	C	L	Risk level	Existing control measures	Existing controls sufficient Y/N	Control risk level	Alternative potential control measures (BOLD – Suggested control measures)
6.1	Strong winds	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions Swimmers	Inflatables being blown out to sea	3	4	12	Pre-arrival education (Council website link to RNLI, Environment agency, beach live) Signage (national guidance) (Offshore wind, No inflatable sign) Emergency communications (national guidance) Zoning (designated bathing / activity area) (beach / map) Red and yellow flags PRE First aid provision Lifeguard provision Means of closure – wind sock Red flags Emergency action plan	Y	9	Additional Signage (national guidance) no inflatables Extend trained observer provision Extend first aid provision Extend lifeguard provision Restrict local sales Trained observer provision
6.2	Storms/hail/heavy rain	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions Swimmers	Flash flooding	4	1	4	Pre-arrival education (Council website link to RNLI, Environment agency, beach live) Emergency communications (national guidance) Zoning (designated bathing / activity area) (beach / map) Red and yellow flags PRE First aid provision Lifeguard provision Red flag Emergency action plan	Y	4	Extend trained observer provision Extend first aid provision Extend lifeguard provision Means of beach closure
6.3	Fog/mist (reduced visibility)	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions Unfit Swimmers	Persons becoming lost in sea Observers losing sight of swimmers Collision danger to watercraft	3	2	6	Pre-arrival education (Council website link to RNLI, Environment agency, beach live) Emergency communications (national guidance) Zoning (supervised zone) Red and yellow flags PRE First aid provision Lifeguard provision Means of beach closure Red flag Emergency action plan Craft regulations / restrictions / byelaws (No Launching)	Y	6	Signage (national guidance) reduced visibility PRE (national guidance) Trained observer provision Extend first aid provision Extend lifeguard provision

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Ref	Hazard (and location if applicable)	At increased risk groups	Associated problems	C	L	Risk level	Existing control measures	Existing controls sufficient Y/N	Control risk level	Alternative potential control measures (BOLD – Suggested control measures)
6.4	Lightning	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions Unfit Swimmers	Electrocution risk Fire risk	4	1	4	Pre-arrival education (Council website link to RNLI, Environment agency, beach live) Emergency communications (national guidance) Zoning (supervised zone) Red and yellow flags PRE First aid provision Lifeguard provision Means of beach closure Red flag Emergency action plan	Y	4	Signage (national guidance) lightning Zoning (supervised zone) PRE (national guidance) Trained observer provision Extend first aid provision Extend lifeguard provision
6.5	UV radiation (Sun) short-term	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions	Sunburn and heat stroke	2	5	10	Pre-arrival education (Council website link to RNLI, Environment agency, beach live) First aid provision Lifeguard provision Provide Sun block Drinking water point Parasol hire	Y	10	Signage (national guidance) – sun safety message Work with PCT sun safety clinics Trained observer provision Extend lifeguard provision Extend first aid provision Provide sun block
6.6	UV radiation (Sun) long-term	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions	Skin cancer	4	2	8	Pre-arrival education (Council website link to RNLI, Environment agency, beach live) First aid provision Lifeguard provision Provide Sun block Drinking water point Parasol hire	Y	8	Signage (national guidance) – sun safety message Work with PCT sun safety clinics Trained observer provision Extend first aid provision Extend lifeguard provision Provide sun block
6.7	Other									

RNLI Beach Safety Assessment Report

7.0 Animals

Consequence: 1 negligible, 2 low, 3 moderate, 4 high, 5 severe
Likelihood: 1 rare, 2 unlikely, 3 possible, 4 likely, 5 almost certain

Ref	Hazard (and location if applicable)	At increased risk groups	Associated problems	C	L	Risk level	Existing control measures	Existing controls sufficient Y/N	Control risk level	Alternative potential control measures (BOLD – Suggested control measures)
7.1	Dogs	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions	Impact/bite injuries/infection Excrement	3	3	9	Pre-arrival education (Council website link to RNLI, Environment agency, beach live) Signage (Pick after dogs) Signage (national guidance) (No dogs beyond certain point) Byelaw / control orders (1 st April-30 th September) Zoning / restrictions Emergency communications (national guidance) Dog bin provision First aid provision Lifeguard provision	Y	6	Beach cleaning Dog bin provision Trained observer provision – dog wardens Extend first aid provision Extend lifeguard provision
7.2	Marine envenomation i.e. weaver fish / jelly fish	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions Swimmers	Stings, cuts, swelling Anaphylactic shock	1	4	4	Pre-arrival education (Council website link to RNLI, Environment agency, beach live) Zoning (supervised zone) Red and yellow flags Emergency communications (national guidance) PRE First aid provision Lifeguard provision Means of beach closure Red flag Monitoring	Y	4	Signage (national guidance) (Weaver Fish treatment) Trained observer provision Extend trained observer provision Extend first aid provision Extend lifeguard provision
7.3	Other dangerous marine life Marine life in itself may not be dangerous but it could either provoke panic (lack of awareness e.g. basking shark) or be an allurements to encourage people into the water (e.g. dolphins) Seals, whales, basking sharks, sea gulls, dolphins and turtles.	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions Swimmers	Bites Beyond capability attraction Mass panic	1	2	2	Pre-arrival education (Council website link to RNLI, Environment agency, beach live) Zoning (supervised zone) Red and yellow flags Emergency communications (national guidance) PRE First aid provision Lifeguard provision Means of beach closure Red flag Monitoring	Y	2	Signage (national guidance) (Wildlife advice/ info) Zoning (supervised zone) Trained observer provision Extend first aid provision Extend lifeguard provision

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Ref	Hazard (and location if applicable)	At increased risk groups	Associated problems	C	L	Risk level	Existing control measures	Existing controls sufficient Y/N	Control risk level	Alternative potential control measures (BOLD – Suggested control measures)
7.4	Dangerous snakes - Adders	Employees Males Very young 16-35 TVM 60+ Pre-existing medical conditions	Bites, swelling Anaphylactic shock	2	2	4	Pre-arrival education (Council website link to RNLI, Environment agency, beach live) Emergency communications (national guidance) First aid provision Lifeguard provision Means of beach closure Monitoring	Y	4	Trained observer provision Extend first aid provision Extend lifeguard provision
7.5	Other									

RNLI Beach Safety Assessment Report

8.0 General hazards

Consequence: 1 negligible, 2 low, 3 moderate, 4 high, 5 severe
Likelihood: 1 rare, 2 unlikely, 3 possible, 4 likely, 5 almost certain

Ref	Hazard (and location if applicable)	At increased risk groups	Associated problems	c	L	Risk level	Existing control measures	Existing controls sufficient Y/N	Control risk level	Alternative potential control measures (BOLD – Suggested control measures)
8.1	Fire safety Typically as a result of bon fires or bbq use/ disposal.	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions	Burns Smoke inhalation Damage to wildlife Damage to property Life risk	3	2	6	Fire safety risk assessment Pre-arrival education (Council website link to RNLI, Environment agency, beach live) Signage (national guidance) (No fires or BBQ's) Byelaw – fires / BBQ (No fires or BBQ's allowed) Emergency communications (national guidance) First aid provision Lifeguard provision Emergency action plan	Y	3	Fire safety risk assessment Trained observer provision Extend first aid provision Extend lifeguard provision Public firefighting Equipment
8.2	Electrical safety (Excluding overhead power lines)		N/A							
8.3	Hazardous or explosive substances Examples: Gas bottles Munitions Flares Pyrotechnics Chemicals Canisters Fuels / Oils	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions	Life and property risk	3	2	6	Hazardous / explosive substances risk assessment Pre-arrival education ((Council website link to RNLI, Environment agency, beach live) Signage (Warning) Emergency communications (national guidance) First aid provision Lifeguard provision Means of beach closure Emergency action plan	Y	6	Trained observer provision Extend first aid provision Extend lifeguard provision Safe storage Signage (national guidance) (state sign)
8.4	Dangerous litter Examples: Glass, Disposable BBQs, Sharps Fishing hooks	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions Swimmers	Cuts Burns Needle stick injuries	2	4	8	Pre-arrival education (Council website link to RNLI, Environment agency, beach live) Byelaw (No BBQs) Emergency communications (national guidance) First aid provision Lifeguard provision Beach cleaning Waste Bins Sharps box Means of beach closure	Y	8	Trained observer provision Extend first aid provision Extend lifeguard provision Equipment disposal bins
8.5	Other									

RNLI Beach Safety Assessment Report

Beach and dune areas

Consequence: 1 negligible, 2 low, 3 moderate, 4 high, 5 severe
Likelihood: 1 rare, 2 unlikely, 3 possible, 4 likely, 5 almost certain

Ref	Hazard (and location if applicable)	Number pursuing activity / freq.	At increased risk groups	Associated problems	C	L	Risk level	Existing control measures	Existing controls sufficient Y/N	Control risk level	Alternative potential control measures (BOLD – Suggested control measures)
9.1	General beach activities		Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions	Slips, trips and falls Lost children/adults	1	5	5	Pre-arrival education ((Council website link to RNLI, Environment agency, beach live) Zoning – activities Beach reference / meeting points Emergency communications (national guidance) First aid provision Lifeguard provision Lost child scheme	Y	5	Trained observer provision Extend first aid provision Extend lifeguard provision
9.2	Cycling		Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions	Impact injuries Collision with pedestrians	2	3	6	Pre-arrival education (Council website link to RNLI, Environment agency, beach live) Emergency communications (national guidance) First aid provision Lifeguard provision	Y	6	Zoning – cycle route / lane Trained observer provision Extend first aid provision Extend lifeguard provision
9.3	Beach/pier fishing Occasional fishing from the rock sea defences.		Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions Non-swimmers Weak swimmers	Puncture injuries from hooks* Drowning (after fall or surging wave) * see dangerous litter	4	2	8	Pre-arrival education (Council website link to RNLI, Environment agency, beach live) Zoning (designated swim / activity zone) (map / beach) Red and yellow flags Emergency communications (national guidance) PRE First aid provision Lifeguard provision Means of beach closure Red flag	Y	8	Signage (national guidance) (fishing) Club/self-regulation Trained observer provision Extend first aid provision Extend lifeguard provision

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Ref	Hazard (and location if applicable)	Number pursuing activity / freq.	At increased risk groups	Associated problems	C	L	Risk level	Existing control measures	Existing controls sufficient Y/N	Contr ol risk level	Alternative potential control measures (BOLD – Suggested control measures)
9.4	Rock walking/rock fishing		Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions Unfit Non-swimmers Weak swimmers	Puncture injuries from hooks* Slips, trips and falls Impact injuries Lacerations from rocks/barnacles Entrapment * see dangerous litter	4	3	12	Pre-arrival education (Council website link to RNLI, Environment agency, beach live) Zoning (designated swim / activity zone) (map / beach) Red and yellow flags Emergency communications (national guidance) PRE First aid provision Lifeguard provision Means of beach closure Red flag	Y	8	Signage (national guidance) (fishing) Club/self-regulation Trained observer provision Extend first aid provision Extend lifeguard provision
9.5	Managed vehicle use and parking. Council vehicle only permitted on the beach essential use only.		Employees Males Very young 16–35 TVM 60+	Impact injuries Vehicle collisions Crush injuries	3	2	6	Pre-arrival education (Council website link to RNLI, Environment agency, beach live) Zoning – safe transport route Emergency communications (national guidance) First aid provision Lifeguard provision Authorised vehicles only - self regulation Spinal board	Y	6	Pre-arrival education (state message) Trained observer provision Extend first aid provision Extend lifeguard provision
9.6	Large kite flying		N/A								
9.7	Climbing/bouldering		N/A								
9.8	Horse-riding		N/A								
9.9	Wind-powered vehicles		N/A								
9.10	Sand digging/tunnelling		Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions	Entrapment Asphyxiation Falls from height into open holes Activity conflict e.g. horses / wind powered vehicles	3	2	6	Pre-arrival education(Council website link to RNLI, Environment agency, beach live) Zoning (supervised zone) Emergency communications (national guidance) First aid provision Lifeguard provision	Y	6	Signage (national guidance) (Sand digging/ tunnelling warning) Zoning (supervised zone) Trained observer provision Extend lifeguard provision Extend first aid provision
9.11	4WD vehicles/quad/dirt bikes		N/A								
9.12	Paragliding / hang gliding		N/A								
9.13	Other										

RNLI Beach Safety Assessment Report

9.0 Surf zones

Consequence: 1 negligible, 2 low, 3 moderate, 4 high, 5 severe
Likelihood: 1 rare, 2 unlikely, 3 possible, 4 likely, 5 almost certain

Ref	Hazard (and location if applicable)	Number pursuing activity / Freq.	At increased risk groups	Associated problems	C	L	Risk level	Existing control measures	Existing controls sufficient Y/N	Control risk level	Alternative potential control measures (BOLD – Suggested control measures)
10.1	Paddling/wading		Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions Non-swimmers Weak swimmers	Drowning	4	2	8	Pre-arrival education (Council website link to RNLI, Environment agency, beach live) Signage (national guidance) (Beware of fast moving tide) Zoning (designated swim / activity zone) (map / beach) Red and yellow flags Emergency communications (national guidance) PRE First aid provision Lifeguard provision Means of beach closure Red flag	Y	8	Pre-arrival education – RNLI On the beach guide Signage (national guidance) – water safety message Trained observer provision Extend first aid provision Extend lifeguard provision
10.2	Diving		Employees Males Very young 16–35 TVM Non-swimmers Weak swimmers	Head, neck and back injuries Drowning	4	3	12	Pre-arrival education (Council website link to RNLI, Environment agency, beach live) Zoning (supervised zone) Red and yellow flags Emergency communications (national guidance) PRE Trained observer provision First aid provision Lifeguard provision Spinal board	Y	8	Signage (national guidance) no jumping / diving Emergency communications (national guidance) Trained observer provision Extend first aid provision Extend lifeguard provision

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Ref	Hazard (and location if applicable)	Number pursuing activity / Freq.	At increased risk groups	Associated problems	C	L	Risk level	Existing control measures	Existing controls sufficient Y/N	Control risk level	Alternative potential control measures (BOLD – Suggested control measures)
10.3	Swimming		Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions Non-swimmers Weak swimmers	Drowning	4	3	12	Pre-arrival education(Council website link to RNLI, Environment agency, beach live) Signage (national guidance) (Do not swim beyond groyne 3) Zoning (designated swim / activity zone) (map / beach) Red and yellow flags Emergency communications (national guidance) PRE First aid provision Lifeguard provision Means of beach closure Red flag	Y	8	Additional Signage (national guidance) – water safety message Trained observer provision Extend first aid provision Extend lifeguard provision
10.4	Inflatable users		Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions Non-swimmers Weak swimmers	Drifting offshore (offshore winds) Drowning	4	4	16	Pre-arrival education (Council website link to RNLI, Environment agency, beach live) Signage (national guidance) (Do not use inflatables in offshore winds) Zoning (designated swim / activity zone) (map / beach) Red and yellow flags Emergency communications (national guidance) PRE (national guidance) First aid provision Lifeguard provision Closure – wind sock	Y	12	Additional Signage (national guidance) no inflatables Zoning (designated swim / activity zone) (map / beach) Trained observer provision Extend first aid provision Extend lifeguard provision Restrict inflatable sales locally
10.5	Skim boarding		Employees Males Very young 16–35 TVM Pre-existing medical conditions Non-swimmers Weak swimmers	Impact Injuries Head, neck and back injuries Drowning	4	3	12	Pre-arrival education(Council website link to RNLI, Environment agency, beach live) Zoning (designated swim / activity zone) (map / beach) Red and yellow flags Emergency communications (national guidance) PRE First aid provision Lifeguard provision Means of beach closure Red Flag Spinal board	Y	8	Signage (national guidance) – water safety message Zoning (designated swim / activity zone) (map / beach) Trained observer provision Extend first aid provision Extend lifeguard provision Means of beach closure

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Ref	Hazard (and location if applicable)	Number pursuing activity / Freq.	At increased risk groups	Associated problems	C	L	Risk level	Existing control measures	Existing controls sufficient Y/N	Control risk level	Alternative potential control measures (BOLD – Suggested control measures)
10.6	Bodysurfing		Employees Males 16–35 TVM Pre-existing medical conditions Non-swimmers Weak swimmers	Head, neck and back injuries Impact injuries Drowning	4	2	8	Pre-arrival education (Council website link to RNLI, Environment agency, beach live) Zoning (designated swim / activity zone) (map / beach) Red and yellow flags Emergency communications (national guidance) PRE First aid provision Lifeguard provision Means of beach closure Red flag Spinal board	Y	8	Signage (national guidance) – water safety message Trained observer provision Extend first aid provision Extend lifeguard provision
10.7	Bodyboarding		Employees Males 16–35 TVM Pre-existing medical conditions Non-swimmers Weak swimmers	Head, neck and back injuries Impact injuries Drowning	4	3	12	Pre-arrival education (Council website link to RNLI, Environment agency, beach live) Zoning (designated swim / activity zone) (map / beach) Red and yellow flags Black and white flags Emergency communications (national guidance) PRE First aid provision Lifeguard provision Means of beach closure Red flag Spinal board	Y	8	Signage (national guidance) – water safety message Club / self-regulation Emergency communications (national guidance) Trained observer provision Extend first aid provision Extend lifeguard provision
10.8	Wave dodging Along the concrete plinth at the bottom of the concrete slope that runs along the beach from the LG BLU to groyne 2 and only at HW. This plinth has previously been covered but due to sand erosion is now visible.		Employees Males 16–35 TVM Pre-existing medical conditions Non-swimmers Weak swimmers	Impact injuries Drowning	4	3	12	Pre-arrival education (state message) Zoning (supervised zone) Red and yellow flags Emergency communications (national guidance) PRE First aid provision Lifeguard provision Means of beach closure Red flag	N	12	Pre-arrival education – RNLI On the beach guide Signage (national guidance) – water safety message PRE (national guidance) Trained observer provision Extend first aid provision Extend lifeguard provision
10.9	Cliff, rock or pier jumping		N/A								

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Ref	Hazard (and location if applicable)	Number pursuing activity / Freq.	At increased risk groups	Associated problems	C	L	Risk level	Existing control measures	Existing controls sufficient Y/N	Control risk level	Alternative potential control measures (BOLD – Suggested control measures)
10.10	Surfing	Less than 10 only when conditions allow.	Employees Males 16–35 TVM Pre-existing medical conditions Non-swimmers Weak swimmers	Head, neck and back injuries Impact injuries Drowning Collision with other water users	4	4	16	Pre-arrival education (state message) Zoning (designated swim / activity zone) (map / beach) Red and yellow flags Black and white flags self-regulation Emergency communications (national guidance) PRE First aid provision Lifeguard provision Means of beach closure Red flag Spinal board	Y	12	Pre-arrival education – RNLI <i>In the surf</i> guide Signage (national guidance) surfers Byelaw (please define) Trained observer provision Extend trained observer provision Extend first aid provision Extend lifeguard provision
10.11	Windsurfing		N/A								
10.12	Kitesurfing		N/A								
10.13	Other										

RNLI Beach Safety Assessment Report

10.0 Beyond surf zones

Consequence: 1 negligible, 2 low, 3 moderate, 4 high, 5 severe
Likelihood: 1 rare, 2 unlikely, 3 possible, 4 likely, 5 almost certain

Ref	Hazard (and location if applicable)	Number pursuing activity /Freq.	At increased risk groups	Associated problems	C	L	Risk level	Existing control measures	Existing controls sufficient Y/N	Contr ol Risk level	Alternative potential control measures (BOLD – Suggested control measures)
11.1	Oar or paddle craft: Rowing (oar or paddle) ✓ Boats ✓ Kayaks ✓ Canoes ✓ Stand up Paddleboard ✓	Very few craft except SUPs	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions Swimmers Non-swimmers Weak swimmers	Collisions Drifting Drowning	4	3	12	Pre-arrival education (state message) Byelaw / craft restrictions / regulations (please state) Red and yellow flags Black and white flags self-regulation Emergency communications (national guidance) First aid provision Lifeguard provision Launch restrictions (boats only)	Y	12	Pre-arrival education – RNLI <i>In the surf</i> guide Signage (national guidance) (state sign) Zoning (designated swim / activity zone) (map / beach) Trained observer provision Extend trained observer provision Extend first aid provision Extend lifeguard provision
11.2	Sailing		N/A								
11.3	Snorkelling/ spear fishing		Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions Swimmers Non-swimmers Weak swimmers	Drowning Entanglement Impact injuries	4	4	16	Pre-arrival education (state message) Red and yellow flags Black and white flags self-regulation Emergency communications (national guidance) First aid provision Lifeguard provision Means of beach closure Red flag	Y	16	Pre-arrival education (state message) Signage (national guidance) (state sign) Byelaw (please define) Zoning (designated swim / activity zone) (map / beach) Trained observer provision Extend trained observer provision Extend first aid provision Extend lifeguard provision
11.4	Scuba diving		N/A								
11.5	Personal watercraft (PWC)/powered craft/skiing	Minimal numbers very infrequent	Employees Males Very young 16–35 TVM Swimmers	Impact injuries Collisions Drowning	4	4	16	Pre-arrival education (state message) Red and yellow flags Black and white flags self-regulation Emergency communications (national guidance) First aid provision Lifeguard provision Launch restrictions / regulations	Y	16	Pre-arrival education (state message) Signage (national guidance) (state sign) Byelaw / craft restrictions / regulations (please define) Zoning (designated swim / activity / launch zone) (map / beach) Trained observer provision Extend trained observer provision Extend first aid provision Extend lifeguard provision

RNLI Beach Safety Assessment Report

Ref	Hazard (and location if applicable)	Number pursuing activity /Freq.	At increased risk groups	Associated problems	C	L	Risk level	Existing control measures	Existing controls sufficient Y/N	Control Risk level	Alternative potential control measures (BOLD – Suggested control measures)
11.6	Other										

Field beach safety audit package



Appendix 1: Supporting Beach Information

- Existing Services Overview
- Emergency Services Overview
 - Existing Control Measures
- Control Measures Reference Sheet
 - UBSAM Data
 - General Beach Observations
- % of Daily and Monthly Visitors
- Behaviours and Perceived Incidence
- Communication and Consultation
 - Photograph Reference Sheet
 - Supporting Photographs

RNLI Beach Safety Assessment Report

Existing Services Overview

	Employer/Organisation	Dates/Hours	Other info e.g. qualification level
Lifeguard service	RNLI	Whitsun week daily 10 – 18:00 then weekends only 10 – 18.00. 1 st weekend July – 1 st weekend in Sept 10 – 18.00	SLSGB, RLSS BL award or equivalent
First aiders	RNLI / TDC Resort Staff	Whitsun week daily 10 – 18:00 then weekends only 10 – 18.00. 1 st weekend July – 1 st weekend in Sept 10 – 18.00	CC4LG / first aid at work + defib Emergency first aid
Lost children provision	RNLI / TDC Resort Staff	Whitsun week daily 10 – 18:00 then weekends only 10 – 18.00. 1 st weekend July – 1 st weekend in Sept 10 – 18.00	RNLI LG DBS checks

Patrol Zone set up		Lifeguard Power craft
Small beach, no lifeguards		Used for rescues and short duration work only 1 craft used for constant patrols 2 craft used for constant patrols Served by power craft from neighbouring beach ✓ Nearest slipway/launching site
Flagged small under 200m	✓	
Flagged medium 200-1000m		
Flagged large over 1000m		
Open beach		
Multiple flagged over 1000m and open	✓	
Is there an extended response zone of more than 500m?	Yes	
Is observation affected by tides?	No	

RNLI Beach Safety Assessment Report

Emergency Services Overview

Emergency and other services that respond or which have responsibility within the assessment area

Emergency services	Response time / nearest facility / contact details
Ambulance	Anything up to several hours
Air ambulance	Exeter from 15-minute response time
Local police unit	Dawlish PCSO response time unknown
Coastguard	Dawlish around 30-minute response time
Lifeboats	Exmouth RNLI Lifeboat, Andy Stott, 20-minute response time
Other:	Dawlish Warren SLSC.

Designated access route for emergency response vehicles:	No access for ambulances due to low railway bridge on the entrance to the inner car park. TDC 4x4 can be used to evacuate casualties.
Mobile phone coverage: Best network:	Excellent all networks
Public telephone located nearby:	No
Designated Emergency Telephone/call point:	Yes Is it National Guideline Standard? Yes Location:- Resort office wall near the toilet block
Public Rescue Equipment	Yes Type? Life ring Is it National Guideline Standard? No (How to use Instructions missing)

RNLI Beach Safety Assessment Report

Control Measures Reference Sheet - Below is a summary of existing broad level control measures in place.

Pre-arrival Education Record all hazards and activities highlighted on pre-arrival materials		Signage Record all hazards and prohibitions highlighted on existing signage at beach location				Byelaws Record all relevant byelaws relating to beach based hazards or activities	
Leaflets	Posters	National Guideline		Non-National Guideline		Dogs on leads	Dogs on a lead in the main resort
RNLI <i>On the beach</i> guide	Bus shelters- RNLI poster	Primary	Yes	Map	Yes	Pick up dog waste	Pick up after your dog
e surf guide		Secondary	Yes			Dog Ban	Upto groyne 3 1 st April to 30 th September. Not past groyne 9
		Reminder	Yes			Craft	No launching with info on nearest launch site
		Hazards – Beware fast moving tides Beware during extreme conditions Beware of groynes Beware of submerged objects Beware of tidal cut off	Prohibitions – Do not climb on rock armour Swimming not suitable past groyne 3 Don't use inflatables in strong winds Don't use motorised craft No BBQs No Fires Don't litter No camping No launching No dog fouling			Horses	N/A
Websites						Other Control Measures (e.g. PRE)	
TDC – links to: RNLI Bathing water quality Devon loves dogs Keep Britain tidy Met office Visit South Devon						Life ring	Yes Non-NG Missing instructions and grid ref information.
						Throwline	N/A N/A
						Emergency Communications	Yes phone outside the resort office
						Public De-Fib	Yes



Plymouth University QOBR2 PDF's

Dawlish Warren			
Beach Information		Environment	
Unique MCS ID	259	Average/max wave height (summer), m	0.3/0.8
Alt beach name		Average wave period (summer), s	6.2
Nearest town	Dawlish	Average wave direction (summer), deg. from N	215
County	Devon	Tide range (vertical), m	4.1
Latitude	50.59866	Submerged at high tide	yes
Longitude	-3.43948	Enclosed beach	no
Beach length / Beach width, m	/150	Estuary inlet/river	yes/yes
Beach faces angle, deg. from N	120	Geology HW/LW/ST	no/yes/no
RNLI/other lifeguards	yes/no	Rock HW/IT	no/no
Designated bathing water	yes	Boulder HW/IT	no/no
Car park area within 1km, m ²	38417	Shingle HW/IT	yes/no
Distance to nearest B-road, m	2896	Sand HW/IT	yes/yes
Risk/ranking 1 (high) – 640 (low)		Mud HW/IT	no/no
Predicted Life Risk*	0.19 (0.05-0.64) – rank 141	Engineered	yes
Predicted Exposure**	95 (51-177) – rank 206	Groynes	10
Predicted Hazard level***	0.002 (0.0005-0.0079) – rank 150	Breakwater	0
Hazards 1 (low) – 4 (high)		Pier	0
UKBSAM Hazard rating	2	Slipway	1
Rip/current type HW	2, Topographic rips (natural/man-made)	Average morphology	Low-tide terrace (low)
Rip/current type LW	2, Topographic rips (natural/man-made)	Bar type	No bar
Wave breaking HW/LW	2/2	Seawall	1
Wave energy HW/LW	2/2	Harbour or marina	0
Beach gradient HW/LW	2-3/1	Seabed object	0
Swash HW/LW	2/1	* fatalities/lives saved or equivalent summed incidents per summer season	
Tidal cut-off	2-3	** In-water summer head count (momentary)	
Littoral currents HW/LW	2/2	*** Risk divided by Exposure HW – high water, LW – low water IT – intertidal, ST – subtidal	

RNLI Beach Safety Assessment Report

General Beach Observations

Type of facility provision	Type of activity being promoted	Visitor Profile	Ethnic Profile (if known)
No definable beach access	Scenic walks and views ✓	Family ✓	IC1 White - North European
Informal access points ✓	Beach and coastal walks ✓	Young (U18) ✓	IC2 Mediterranean - South
Formal access points ✓	Extreme sports	Elderly ✓	European
Specific beach parking ✓	Family activities (beach) ✓	Local visitors ✓	IC3 Black
Public transport ✓	Family activities (water) ✓	National visitors ✓	IC4 Asian
Shower points	Local tourism ✓	International visitors ✓	IC5 Chinese, Japanese or other
Public toilets ✓	National tourism ✓	Average visitor numbers during peak times 1500	(South) East Asian
Changing rooms	International tourism ✓		IC6 Arabic or North African
Off-beach commercial activity ✓	Organised water activities		IC9 Unknown
On-beach commercial activity			Significant high risk groups or second languages

Type of built environment	Type of natural environment	Water Quality	Awards
Remote rural	Cliffs and rocky coastline	Designated bathing beach ✓	Blue Flag ✓
Rural accessible coast	Embayment	Not tested	Seaside Award
Coastal (rural) resort	Partial embayment	Poor	Green Flag
Metropolitan /urban beach	Open beach ✓	Sufficient	Quality Coast
Resort beach ✓	Estuarine	Good	State award:
	Sand ✓	Excellent ✓	
Vehicle access to beach	Pebble		
4x4 access to beach ✓	Shingle		
	Mud		
Beach backed by road	Multi-terrain		

Behaviours and Perceived Incidence (Stakeholder Perception)

Behaviour	Associated impact	No change	Increasing	Decreasing	No Answer	Comment
Alcohol use	No	✓				
Drug use	No	✓				
Controlled risk taking behaviour	No	✓				
Uncontrolled risk taking behaviour	No	✓				
Aggressive / violent behaviour	No	✓				
Criminal / Antisocial behaviour	No	✓				

NB. For definitions of the terms mentioned above please see RNLI glossary at Appendix 3.

Communication and Consultation

Stakeholders involved in beach safety assessment process:

Stakeholders: Jake Butt – RNLI Lifeguard Supervisor - 07773652322
Julian Smart – RNLI Lifeguard Supervisor – 07900918147
Sarah Holgate/ Anna Snow – Teignbridge district Council

Working group details:

Is there a coastal safety working group (or similar) in existence?
group but this hasn't held a meeting since Covid.

Yes. TDC used to engage with the South West Coastal advisory

If yes, what's the name of the working group?

Members:

Recording and reporting of incidents:

Do you use the National Water Safety Forum forms to record incidents?

No

If no, who produces the forms you use to record incidents?

TDC incident forms.

How do you report upon incidents recorded e.g. WAID database?

Incidents are reported to RIDDOR

RNLI Beach Safety Assessment Report

Photograph reference sheet

#	Photo	Comment
1	Primary sign	Highly visible on the main entrance to the beach
2	Environment agency sign	Showing info on the beach regeneration project
3	Lifeguards sign	Various sign positioned along the paths and prom
4	LG info sign	
5	LG info sign	
6	Groyne 3 sign	
7	No launching sign	
8	Nature reserve	
9	Dog Sign	
10	Bird flu sign	
11	Rock sign	
12	Tide Times	Displayed all year round by TDC
13	PRE	Non guidance – No instructions on the correct use.
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		

Photographs 1 and 2



Photographs 3 and 4



Photographs 5 and 6



Photographs 7 and 8



Photographs 11 and 12



Photograph 13



Field beach safety assessment package



Appendix 2: Risk Assessment Theory

- RNLI Beach Safety Assessment
 - Establishing the Context
- IOS Risk Assessment Principles and Practice
 - University of Plymouth Risk Assessment
 - Considering Risk Verses Benefit
 - Residual Risk
 - RNLI

RNLI Beach Safety Assessment

Coastal management authorities need to take preventative actions to avoid foreseeable loss of life and injury on any section of coastline likely to be visited by the public. The RNLI has been proactive in working with various groups with the objective of reducing risk and therefore liability. There is no such thing as zero risk. The purpose of hazard and risk assessment is to assess the probability that certain events will take place and assess the potential adverse impact these events may have on people, property or the environment or other adverse outcomes.

By definition, a **hazard** is a set of circumstances that may lead to injury or death, and the term **risk** is used to describe the probability that a given exposure to a hazard will lead to an adverse health outcome. Thus, hazards can be viewed as a combination of (1) the potential cause of an injury/illness and (2) the absence of measures to prevent exposure or mitigate against a more severe adverse outcome.

The job of accurately analysing the potential personal risk to members of the public at a coastal location is a difficult one. The determination and evaluation of potential risks is made more complicated in coastal regions due to the continually changing nature of the environment.

Coastal regions are dynamic environments where the presence and level of a potential danger varies with numerous factors such as time, weather and human interaction. In order to effectively assess hazards and their associated risks, the assessor must understand all the contributing factors that go together to create the danger, for example the beach topography and the prevailing weather and wave climates.

Consideration is required to treat and manage the risks present to ensure visitors can enjoy the safest aquatic recreation possible.

Solutions will include:

- removal of hazards where possible
- community education programmes to raise awareness of potential hazards
- signage to allow visitors to make informed decisions on whether they wish to proceed into an area or with an activity
- supervision through the deployment of appropriately trained personnel
- appropriate emergency management systems put in place.

Establishing the Context

Establishing the context of the risk assessment helps define the basic parameters within which risks must be managed and sets the scope of the risk management process. It is important to ensure that the objectives defined in the risk management process take into account the organisational and external environment.

Authority: This beach risk and safety consultation has been conducted under the authority of the management authority.

Scope: The scope of the risk audit is to:

- 1) Conduct a beach risk audit and prepare a report
- 2) Make recommendations on improving the level of risk and safety management on the beaches through the use of risk management practices in line with the current standards and best practices.

References: The primary reference documents used for this inspection were:

- 1) *Safety on beaches, Operational guidelines* (RoSPA, 2004)
- 2) *A guide to beach safety signs, flags and symbols* (RNLI, Version 2, 2007)
- 3) *A guide to coastal public rescue equipment* (RNLI, 2007)
- 4) *ISO 31000:2009(E) Risk Management – Principles and guidelines*

RNLI beach risk assessment protocols and procedures were applied where appropriate.

Methodology: For the purpose of this site inspection, the following techniques were employed:

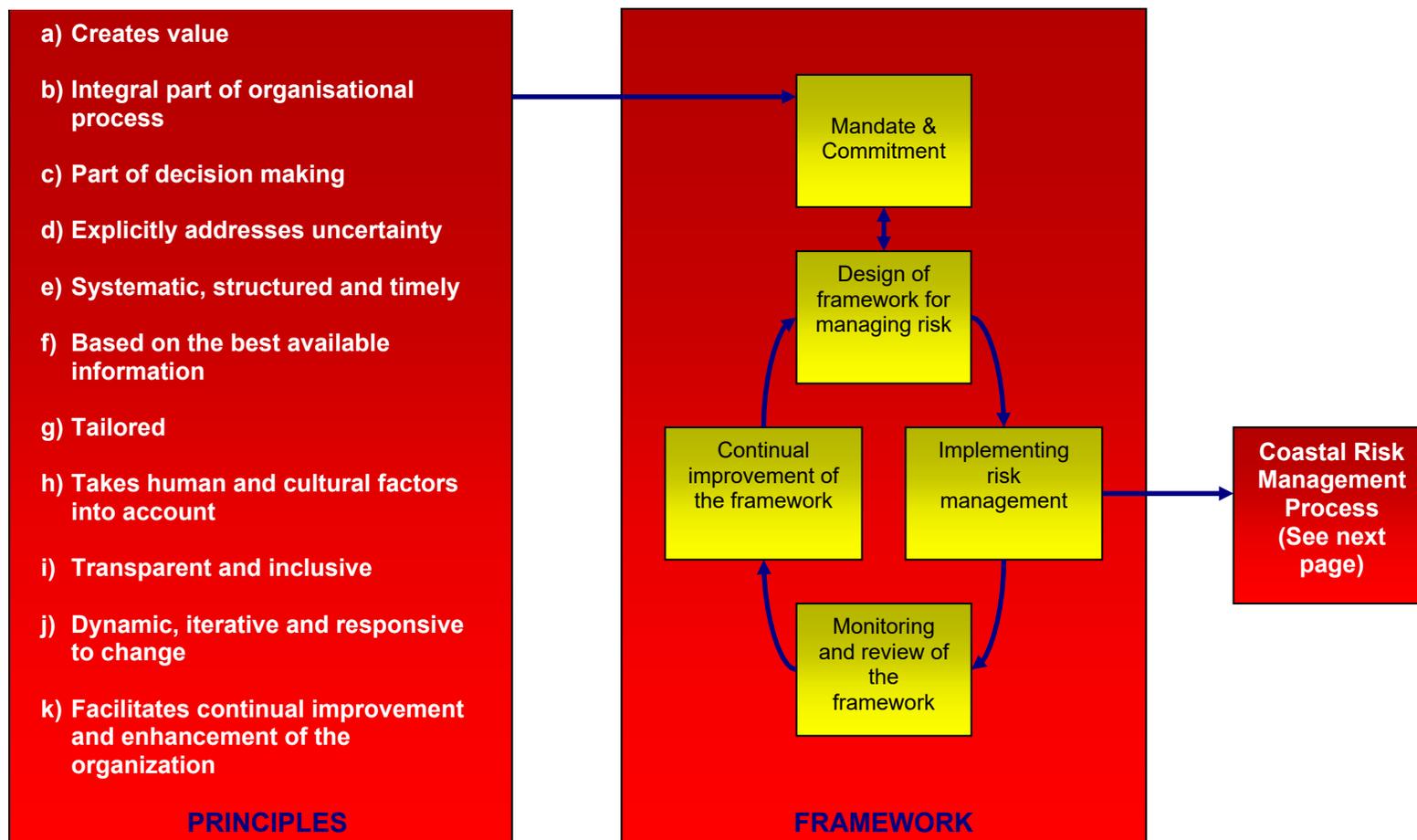
- 1) Inspection of the coastal environment and adjoining associated sites
- 2) Interviews with selected staff.

Findings: Observations from site inspections are limited due to the timing of the inspections. It is recommended that risk audits be completed at different times of the year and at varying tide / weather conditions.

Additional information can be gained through interviews with staff.

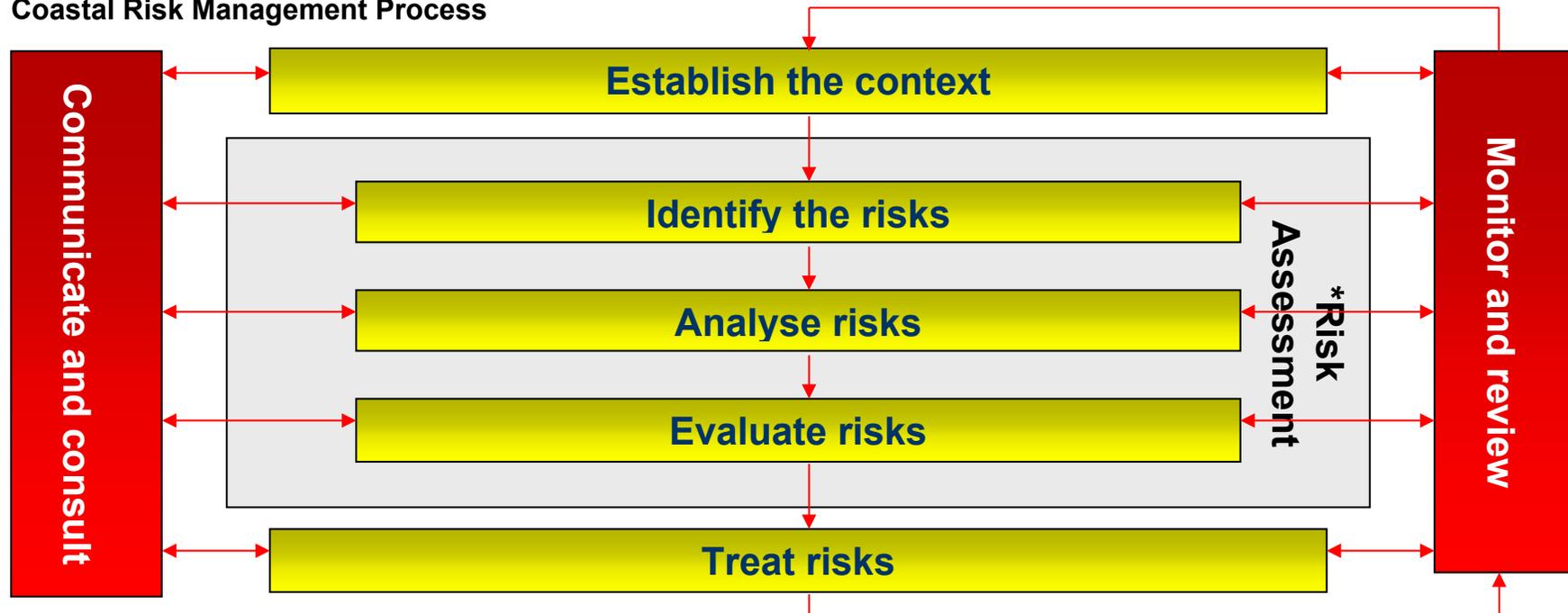
ISO Risk Assessment Principles and Practice

The International Organisation for Standardisation (ISO) recognises the following system for beach risk assessment:



Ref: ISO 31000:2009(E) Risk management – Principles and guidelines

Coastal Risk Management Process



Ref: ISO 31000:2009(E) Risk management – Principles and guidelines

*The RNLI risk assessment process satisfies the ISO requirements for these 3 steps. It is the beach manager's responsibility to put this risk assessment into the wider context of risk management.

University of Plymouth UK Beach Safety Assessment Model (UKBSAM)

The RNLI beach risk audits are based upon a comprehensive, up-to-date, scientific understanding of the dynamics and hazards of beaches in the United Kingdom (UK). Research conducted at the University of Plymouth (UoP) for the RNLI has identified a strong link between beach type and the baseline physical hazard levels present at UK beaches. This research, which analysed physical scientific data from over 100 beaches around the UK in conjunction with the archive of RNLI incident reports, has led to the generation of a UK Beach Safety Assessment Model (UKBSAM), developed by Dr Tim Scott at the UoP in collaboration with the RNLI. The UKBSAM comprises of a UK beach classification and hazard assessment model. Baseline beach information that feeds the model is derived from a comprehensive, standardised and scientific database, collected by the UoP, containing physical environmental information about all bathing beaches in the UK relevant to assessing their potential physical hazards. This baseline assessment of physical beach hazards then provides valuable background understanding, helping to inform the context of the risk assessment, from which point the beach risk audit visit is conducted.

Beach Classification: By classifying a beach as one of 15 distinct types identified by the research, it is possible to make informed assessments about the likely physical hazards present and their potential variation throughout a typical year, providing an understanding of the seasonal variation in tide, waves, wind and beach shape that is expected to be observed, complementing the assessment of physical beach hazards during site visits. Following the classification of beach type, a hazard index is used to identify levels of specific hazards typically associated with that particular beach type.

Environmental setting: In addition to a general beach type classification, a number of local environmental parameters associated with each beach site are recorded in the database. These data provide important information in furthering the understanding of the surrounding natural environment and how it can modify the hazard levels already identified by the general beach type classification.

Coastal Risk Summary: The UKBSAM informs the simplified risk calculation for beaches and comprises part of the generalised beach observations.

Considering Risk Versus Benefit

No matter how well risks are managed there will always be some inherent dangers associated with visiting the beach environment but in this risk conscious society it is important to also recognise the benefits in spending time in and around the water.

“The sea has always been associated with recovery and health and led to the development of health resorts along the coast. There is good scientific evidence that living by the coast can reduce symptoms in those suffering from asthma and bronchitis due to the cleaner air. Research has also found that people living on or near the coast are more physically active. This coastal effect is due to the attraction of the sea front offering an attractive flat and uninterrupted walk, jog or bike ride which is usually easy to access.

Being regularly active has very strong health benefits including halving the risk of developing heart disease or diabetes and significantly reducing the risk of breast and bowel cancer. According to the chief medical officer physical activity is as effective as anti-depressants in treating depression. Water based exercise raises the heart rate without putting any stress on the main joints.

Another benefit of the coast, beach and sea is the contact with nature. Research has shown that this contact with the natural world immediately reduces blood pressure, pulse rate and most importantly stress. It is constant stress that is now known to be an important cause for heart disease, cancer, diabetes and even obesity. Regular visits to the beach will help the body become more resilient to many of the main health problems we suffer from.

The Blue Gym aims to get more people more active near, in, on or under the water! The Blue Gym believes that by developing a strong connection to the natural water environment our health and wellbeing will benefit along with a greater respect and protection to the natural world on which our health depends.

Come on in the water is lovely!”

Dr William Bird for The Blue Gym

For more information visit <http://www.bluegym.org.uk/>



Residual Risk Factors

Risk assessments are designed to limit risk as far as possible. There is always potential for residual risk. The main residual risk factors to be aware of in the coastal environment are outlined below:

Countermeasure	Control measures	Applications	Residual risk factors
Education and information	Pre-arrival education	<ul style="list-style-type: none"> ▪ Electronic and digital media ▪ Leaflets/brochures ▪ Awareness programmes 	<ul style="list-style-type: none"> ▪ Did not receive or understand awareness information ▪ Does not interpret hazard as being a risk to themselves ▪ Accepts risk
	Arrival information	<ul style="list-style-type: none"> ▪ Information signage 	<ul style="list-style-type: none"> ▪ Did not see signage or did not understand signage ▪ Does not interpret hazard as being a risk to themselves ▪ Accepts risk
	Safe beach access	<ul style="list-style-type: none"> ▪ Formal access ways 	<ul style="list-style-type: none"> ▪ Access ways not maintained
	On-site education	<ul style="list-style-type: none"> ▪ Public address systems ▪ Face-to-face 	<ul style="list-style-type: none"> ▪ Did not receive or understand awareness information ▪ Does not interpret hazard as being a risk to themselves ▪ Accepts risk

RNLI Beach Safety Assessment Report

Countermeasure	Control measures	Applications	Residual risk factors
Denial of access and/or provision of warnings	Barriers	<ul style="list-style-type: none"> ▪ Access barriers 	<ul style="list-style-type: none"> ▪ Avoids or breaches barriers ▪ Barriers creating a hazard
	Signage	<ul style="list-style-type: none"> ▪ Information signage ▪ Warning signage ▪ Prohibition signage 	<ul style="list-style-type: none"> ▪ Did not see signage or did not understand signage ▪ Does not interpret hazard as being a risk to themselves ▪ Accepts risk
	Byelaw development	<ul style="list-style-type: none"> ▪ Formal regulatory arrangements ▪ Recognition of lifeguard services and other service 	<ul style="list-style-type: none"> ▪ Inability to 'police' regulations

RNLI Beach Safety Assessment Report

Countermeasure	Control measures	Applications	Residual risk factors
Provision of supervision	Trained observers	<ul style="list-style-type: none"> ▪ Trained activity supervisors 	<ul style="list-style-type: none"> ▪ Outside of staff hours of duty or season ▪ Not within area of coverage ▪ Observers fail to identify person in difficulty ▪ Observers failure to respond appropriately
	First aid facilities	<ul style="list-style-type: none"> ▪ Portable first aid kits ▪ Permanent/fixed facilities 	<ul style="list-style-type: none"> ▪ Outside of staff hours of duty or season ▪ Not within the area of coverage ▪ Staff failure to identify person in difficulty ▪ Staff failure respond appropriately
	Lifeguard services	<ul style="list-style-type: none"> ▪ Intermittent (roving) ▪ Surveillance ▪ Full service (between the flags or open beach) ▪ After-hours call out 	<ul style="list-style-type: none"> ▪ Outside of lifeguard hours of duty or season ▪ Not within the lifeguarded area ▪ Lifeguards' failure to identify person in difficulty ▪ Lifeguards' failure to reach person(s) in difficulty
	Activity management	<ul style="list-style-type: none"> ▪ Club/group registration ▪ Self-regulation programme ▪ Permit systems 	<ul style="list-style-type: none"> ▪ Individuals not aware of self-regulation programmes, permit systems or clubs ▪ Rogue operators/individuals
	Activity restrictions	<ul style="list-style-type: none"> ▪ Zoning ▪ Beach/water closure 	<ul style="list-style-type: none"> ▪ Individuals not aware of zoning systems ▪ Rogue operators/individuals

RNLI Beach Safety Assessment Report

Countermeasure	Control measures	Applications	Residual risk factors
Acquisition of survival skills	Community training	<ul style="list-style-type: none"> ▪ Survival skills ▪ Self-rescue skills ▪ Rescue skills 	<ul style="list-style-type: none"> ▪ Did not receive training ▪ Inappropriate or incomplete training ▪ Over confidence of individual, therefore assuming a higher level of risk
	Emergency communications	<ul style="list-style-type: none"> ▪ Public telephone ▪ Outpost alarms ▪ Dedicated emergency telephone ▪ Radio 	<ul style="list-style-type: none"> ▪ Equipment not able to be seen or accessed ▪ Equipment not available or fit for purpose (vandalism or theft) ▪ Equipment not suitable for purpose
	Public Rescue Equipment (PRE)	<ul style="list-style-type: none"> ▪ Lifebuoys ▪ Throw lines ▪ Other extraction equipment and fixtures 	<ul style="list-style-type: none"> ▪ Equipment not able to be seen or reached ▪ Equipment not in place or not in a usable condition (stolen or vandalised) ▪ Rescuer not able to use equipment ▪ Rescuer enters water and places themselves at risk ▪ Equipment not suitable for task

Field beach safety assessment package



Appendix 3: Glossary

- RNLI Glossary
- University of Plymouth Glossary

RNLI Glossary

At Risk Groups

Males	Males feature prominently in coastal incident statistics. This is usually attributed to a greater tendency to participate in risk taking activity.
Very young	The very young (0–4 years) are the highest risk group for drowning in still-water environments. This group is vulnerable without constant adult supervision.
16–35 year olds	People in this age group, in particular young males, tend to participate both in more physical and more risk-taking activities. This risk-taking behaviour is often increased when there are groups involved.
Elderly	The elderly tend to be less adventurous, however, they often lack the physical skills and abilities to self-recover if they get themselves into difficulties.
Tourists/visitors/migrants (TVM)	Tourists are usually unfamiliar with the local environment, often having little or no experience with coastal hazards. They may be identifiable as being improperly dressed for beach conditions. However, with surf clothing being highly available and considered fashionable, this is not always the case. Lacking a tan, being sunburnt and certain ethnic groups may also be indicators, but these are unreliable. International visitors may also present additional communication difficulties.
Pre-existing medical conditions	Pre-existing medical conditions, in particular cardiac conditions and conditions that affect consciousness; can increase the risk to an individual. People with physical or mental disabilities may also be at increased risk.
Physically unfit	Participation in many beach and aquatic activities can be very dynamic and many people are unprepared for the physical demands. They may be identifiable as being overweight or significantly underweight, but this is not always the case.
Non-swimmers	Any non-swimmer is at risk in the water. Most non-swimmers enter deep water accidentally.
Poor or weak swimmers	Poor or weak swimmers may overestimate their ability or underestimate the risks. They may also be overly reliant on surfing equipment, flotation devices, and other equipment for survival.
Employees	All employers have a legal responsibility to look after the health and welfare of their employees.

Perceived Behaviours - Definitions

BEHAVIOUR	CHARACTERISTICS
Alcohol use	Alcohol is linked to a high percentage of coastal incidents. Alcohol makes a person less aware of hazards and less capable of responding once in difficulty.
Drug use	As with alcohol a person under the influence of either legal or illegal drugs may become less aware of hazards and less capable of responding appropriately, however, the extent of this problem is less well known.
Controlled risk taking behaviour	Controlled risk taking is associated with adventure/extreme sports enthusiasts who follow defined safety rules and tend to understand their own limits and that of their equipment. There is still the chance of equipment failure, miscalculation or other misadventure. Controlled risk taking behaviour lends itself to management through voluntary codes of practices.
Uncontrolled risk taking behaviour	Uncontrolled risk takers fail to take appropriate precautions and often endanger themselves or others through ignorance or by committing acts of bravado. This behaviour is also strongly associated with alcohol use.
Aggressive / Violent Behaviour	Problems associated with aggressive or violent behaviour will be exacerbated by alcohol or drug use. It is also a feature of over-crowding and competition for limited space or opportunities and conflicting activities.
Criminal / Antisocial Behaviour	Coastal areas are not immune to problems that affect other parts of society. The most common criminal behaviours are normally opportunistic in nature and often associated with groups.

RNLI Beach Safety Assessment Report

Consequence and Likelihood Explained

Consequence	Level	Definition
Negligible	1	No Injury and no time off work, and no equipment, property or environmental impact
Low	2	Minor Injury requiring first aid on site or minor equipment, property or environmental impact
Moderate	3	Injury resulting in time off work but no hospital treatment or moderate equipment, property or environmental impact
High	4	Major injury resulting in hospital treatment, time off work or major equipment, property or environmental impact
Severe	5	Multiple Injuries, fatality or severe equipment, property or environmental impact

Likelihood	Level	Definition	Indicator
Rare	1	So unlikely that it is not expected to happen again	Less than 1%
Unlikely	2	It is not expected to happen again in the foreseeable future	Less than 10%
Possible	3	It may occur from time to time	Less than 50%
Likely	4	It will occur but not as an everyday event	Less than 80%
Almost Certain	5	It will happen and soon	Greater than 80%

University of Plymouth UKBSAM Glossary

BEACH TYPE DESCRIPTIONS (PHYSICAL CHARACTERISTICS)

PHYSICAL HAZARDS MODAL (HIGH ENERGY)

General: Where appropriate hazard levels are given for high water levels (HW) and low water levels (LW). Hazard levels are considered for modal and high energy conditions (associated with 10% exceedance wave events). Hazard ratings are described on five levels (very low, low, medium, high and very high). These levels are specific to each hazard and levels for different hazards should not be directly compared as some hazards carry a greater severity than others (e.g. rip currents are more severe than beach gradient hazards).

Rip currents: Rip currents are wave driven current circulations in the surf zone, which have a strong offshore flowing component associated with them. These currents are the greatest cause of incident at RNLI beaches and worldwide. They can potentially transport a bather from a region of low hazard to one of increased hazard by moving them both laterally along the beach to deeper water and offshore through the surf zone and occasionally beyond. A number of rip current types exist but the beach type classification guide refers only to accretionary and erosional beach rips driven by sandbar formations and high energy waves, respectively. These hazards are often strongly controlled by the prevailing wave conditions and tidal levels, appearing and disappearing under a combination of wave, tide and sandbar conditions. Permanent topographic rips, associated with rock outcrops and headlands are a locally derived hazard (see 'Environmental setting additional hazards checklist').

Wave breaking: Wave breaking hazard in this context refers to the hazard presented to the bather through different types of wave breaking, classified as: spilling, plunging, collapsing and surging. Generally, spilling waves are associated with dissipative beaches and plunging and collapsing/surging are associated with intermediate and reflective types respectively. Essentially the plunging wave type expends its energy over a shorter distance than dissipative types and plunging / collapsing waves are responsible for increased submersion, disorientation and potentially seabed collision hazard through more energetic wave breaking. For additional surging hazards see Swash

Surf zone energy: High surf zone energy and waves lead to a turbulent and dynamic surf zone where forcing by larger waves can generate high levels of water movement in the surf zone. These increases levels of bather submersion and disorientation, limiting the ability of the in sea beach user to be aware of their location and the associated hazards within the surf zone. This also reduces their ability to escape the regions of high hazard.

Beach gradient: Referring to the steepness of the beach surface. Reflective regimes are associated with steeper gradients than dissipative regimes and therefore present greater beach gradient hazards. Beach gradient hazard is driven by the rate at which a bather or water user can be out of their depth from the shore. In addition to overall beach slope, beach morphology in the form of sandbars and sandbanks creates a hazard through rapid variations of water depth within the inner surf zone.

Swash: Associated with swash events and surging waves (occurring at seconds to minutes associated with individual waves and groups or sets of waves respectively), the rapid lateral movement of the shoreline (up and down the beach) can act to overpower the beach user either transporting them seawards to a region of increased hazard, or creating a collision hazard through falling (e.g. on slipway).

Tidal cut-off: The varying of tidal level creates a temporal reduction in beach area and can rapidly increase water depth that a bather needs to pass to reach a region of reduced hazard (dry beach), often associated with headlands and cliff-foot beaches that are submerged at high water. In addition to beach area at high water, beach morphology in the form of sandbars and sandbanks can increase cut-off hazard through the isolation of sandbars during the flooding tide.

Littoral currents: An alongshore current hazard (parallel to the beach), causing the relocation of the in sea beach user parallel to the shoreline. This is often associated with a rip current hazard as rip current hazard levels are commonly variable in the alongshore. Littoral currents are often driven by strong winds, high waves and waves approaching the beach at an angle.

Summary: Provides a description of some of the key hazards and hazard levels associated with the specific beach type in question.

Hazard Rating: The hazard rating represents the general overall level of hazard associated with the beach type when taking into account the specific hazards described above. This hazard represents the common level of hazard under average wave conditions for the beach type in question.

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BEACH TYPE CHARACTERISTICS

(**HW**: high water; **LW**: low water)

Wave: Wave energy is defined as either high or low. The distinction is important to differentiate between expected surf zone processes. Typically, high-energy beaches are dominated by ocean swell waves. Wave climate characteristics are described as either swell, mixed or wind. Wind waves ('wind chop') are termed 'steep waves', they are derived from local winds and tend to have a lower wave period in relation to the wave height when compared to swell waves. Swell waves ('ground swell') arrive at the coast from a distant source and have a high wave period in relation to wave height. The concept of wave steepness plays an important role in controlling beach type. Mixed wave climates have significant amounts of wind and swell wave influences.

Sediment: Sediment size typically ranges from fine sand (occasionally mud) to boulders. For a beach to exist there must be an accumulation of mobile sediment, therefore the properties of this sediment are crucial in determining how the waves and currents will move it around determining the type of beach that is formed. In general, the average sediment size is the parameter used to describe sediment characteristics. In simple terms, the grain size will control whether the sediment is more likely to be moved onshore or offshore. Coarser sediment encourages onshore movement and finer sediment offshore movement, hence in most cases the coarser sediments are found at the top of the beach.

Tide: The tide range (TR) in the UK varies enormously and ranges from what is called micro-tidal (<2 m), through meso-tidal (2 m > TR < 4 m) to macro-tidal (4 m < TR < 8 m) and in some cases mega-tidal (>8m). Most of the coast is in the meso- to macro-tidal range. An increase in tide range, in effect, smears and flattens the beach between high- and low-tide and increases the amount of exposed beach episodically exposed at low-tide. This smearing reduces the amount of time the different wave processes have to generate beach forms like bars at any one position as the shoreline is always moving. But, during the period around high and especially low-tide still-stand, the wave processes have the opportunity to create beach forms, hence on beaches with a large tidal range, if bar systems are present they are often found within the low-tide region.

Surf zone width: The surf zone width is the distance from the shoreline to the point of wave breaking under average wave and beach conditions. Descriptions of surf zone width range from very narrow very wide.

Comments: The comments section provides a description of some distinguishing characteristics of each beach type that may be of significance to beach safety. Some commonly used terms are:

Reflective - These beaches are so called because they have a reflective surf zone regime throughout the tidal cycle with a steep beach slope. Consequently, the majority of wave energy reaches the shoreline and breaks energetically through plunging and surging waves.

Intermediate - These beaches lie between the two reflective and dissipative end-members and possess elements of both regimes. Within this type the nature of wave breaking and beach slope often vary within the tidal cycle with a predominantly steeper reflective beach at high water becoming flatter and more dissipative towards low water. Transmission of wave energy to the shoreline varies with the tide; plunging and surging waves break at the shoreline at high water and a wider more dissipative surf zone develops as the tide drops. Intermediate beaches are often characterized by the presence of sand bars at mid- and low-tide, which can create a mix of plunging and dissipative wave breaking, driving surf zone currents (i.e. rip currents). Rhythmic low-tide sand bar formations typically range from longshore bar/trough (a fairly straight 'winter' formation with a deep trough between shoreline and breaker zone) and transverse bar/rip (3D 'summer' configuration where sand shoals have welded to low-tide beach intersected by deep rip channels).

Dissipative - Dissipative beaches, so called because they have a dissipative surf zone regime throughout the tidal cycle, are characterised by spilling breakers across the surf zone. Typically exhibiting a shallow slope and a wide inter-tidal beach, significant attenuation of wave energy from breaking to the shoreline occurs across the surf zone, leading to limited incident wave energy reaching the shoreline. These beaches are often fine grained and/or high energy with large tidal ranges. They rarely accommodate significant bar systems.

Ultra-dissipative - These beaches typically lie in low-energy mega-tidal regions. At spring low-tide they often represent the transition to tidal flats. Unlike the other wave dominated and tide-modified regimes, tidal influence begins to rival, and sometimes dominate, that of waves. High levels of wave energy attenuation throughout the near-shore and surf zone through wave shoaling and wave breaking mean little incident wave energy reaches the shoreline, except possibly at high-tide. Sediment at low-tide is commonly mud/fine sand and can coarsen throughout the transition to the upper beach.

General stability: Refers to the potential of the beach to alter in shape significantly under varying environmental (principally wave) conditions. This variation can lead to either a change in bar configuration or a change to a different beach type/state. Often these changes can occur seasonally due to variations in the wave climate (winter - storm, summer - calm) or can be due to significant storm events. Factors such as the introduction new coastal protection schemes or beach nourishment are not considered here.

IMPORTANT General beach type physical characteristics provide an overview of generic beach types. On a local scale, these physical characteristics can be modified by local environmental conditions (rock exposure, drainage, coastal structures etc). Please refer to the 'Environmental setting additional hazards checklist' for more information on how local environmental characteristics in addition to the general beach type can modify levels of hazard.

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ENVIRONMENTAL SETTING (ADDITIONAL HAZARDS CHECKLIST) GLOSSARY OF TERMS

ENVIRONMENTAL SETTING

General: Aspects of the local environmental setting associated with a beach system can have a significant modifying effect on the general beach type characteristics and hazards.

Drainage: The presence of beach drainage can alter the character of the beach shape, affect the potential for bar formation and modify surf zone currents. Beach drainage characteristics within a beach system are classified as either estuary/inlet, river or stream (intermittent flow).

Coastal morphology: The characteristics of the land boundary of the beach system. Important backshore characteristics for interpreting hazards are the presence of dunes, high (>20 m) and low (<20 m) cliffs and whether the beach is bound by headlands and whether it is embayed or open. These characteristics influence surf zone circulation and levels of beach segmentation at high water.

Segmentation/submersion: Where beaches have a lack of sediment supply, are eroding coasts or the inter-tidal zone is intersected by rock outcrops or headlands. The fluctuation of the tide can segment the beach at high-tide into smaller sections and leave regions completely submerged.

Embayment: A value relating to the relationship between the straight-line distance between headlands (chord) and that of the distance along the shoreline from headland to headland (arc).

Inter-/sub-tidal geology: Indicates the presence of inter-tidal hard rock exposure within the inter-tidal (region exposed during the tide) and sub-tidal zone (region below low water).

Coastal structure (man-made): The presence of coastal structures within the beach system can dramatically alter the beach shape and surf zone circulation potentially having significant implications for bathing hazards. Types of structures include groynes, piers, slipways, breakwaters, seawalls and harbours (marinas).

ADDITIONAL HAZARDS

Topographic and Mega rip currents: A strongly embayed beach has a high potential for mega-rips to exist under high energy conditions. These rips are fixed and driven by the headlands. These rips flow at the greatest speeds and can often flow far beyond the edge of the surf zone. Similarly, Topographic rips driven by solid obstruction caused by the presence of headlands, inter-tidal and sub-tidal geology act to constrain surf-zone circulation on what may be a beach type where rips are generally uncommon (rock exposure can vary seasonally with sand cover). Topographic rips are also generated by the presence of man-made structure that interacts with the surf zone.

Beach rip currents: The presence of drainage systems flowing into/through beaches can generate morphology (bedforms like sandbars and sandbanks) that is not typical of the general beach type. These bedforms can drive beach rip systems when they are located within the surf zone and significantly modify beach hazard levels associated with the general beach type. Sub-tidal geology (e.g. reefs) can affect the wave breaking patterns on the beach which can in turn lead to the generation of beach rips. This may affect hazard levels if that general beach type is not typically associated with bar/rip morphology.

Wave breaking: Sandbars and sandbanks often associated with river mouths and estuaries/inlets can induce heavy wave breaking (plunging/dumping waves). Rock outcropping and reefs that exist below low-tide can induce heavy irregular wave breaking (plunging/dumping waves). Rock exposure can vary seasonally with sand cover. Wave breaking may also be modified by man-made structures in the surf zone increasing wave breaking hazard.

Beach gradient: Exposed hard rock geology within the inter-tidal beach can modify beach gradient essentially leading to sudden drop-off or shallowing (rock exposure can vary seasonally with sand cover). Man-made structures are a significant cause of beach gradient hazard in some cases creating a vertical drop-off of varying severity into deep water.

Tidal cut-off: In environments where a larger low-tide beach is isolated into a number of smaller beaches by headlands, promontories or cliffs during the higher tide, an increased tidal cut-off hazard is created. This is exacerbated by beaches that are completely submerged at high water.

Littoral currents: Strong littoral currents can be created due to the presence of an estuary/inlet or river system. Embayed beaches can also experience strong variation in wave height from more sheltered to more exposed sections of the beach. This variation can drive littoral currents in the surf zone. In some cases on embayed beaches these currents can be associated with headland controlled mega-rips. The modification of the surf zone with man-made structures can drive strong littoral currents too (i.e. along the base of a breakwater or seawall if waves approach at an angle).

Collision: Headlands, inter-tidal geology, sub-tidal geology and man-made structures, when occurring within the surf zone, present an increased collision hazard. It is important to remember that rock exposure can vary seasonally with sand cover.

Offshore wind: If the average annual wind direction is greater than 90 degrees to the beach orientation there is a high percentage of days with offshore wind. This can create a hazard by causing bathers to be blown away from the beach into deeper water. This hazard is particularly important if there is a high level of inflatable and unpowered water craft use. Often these beaches will have a low wave height, promoting inflatable use.