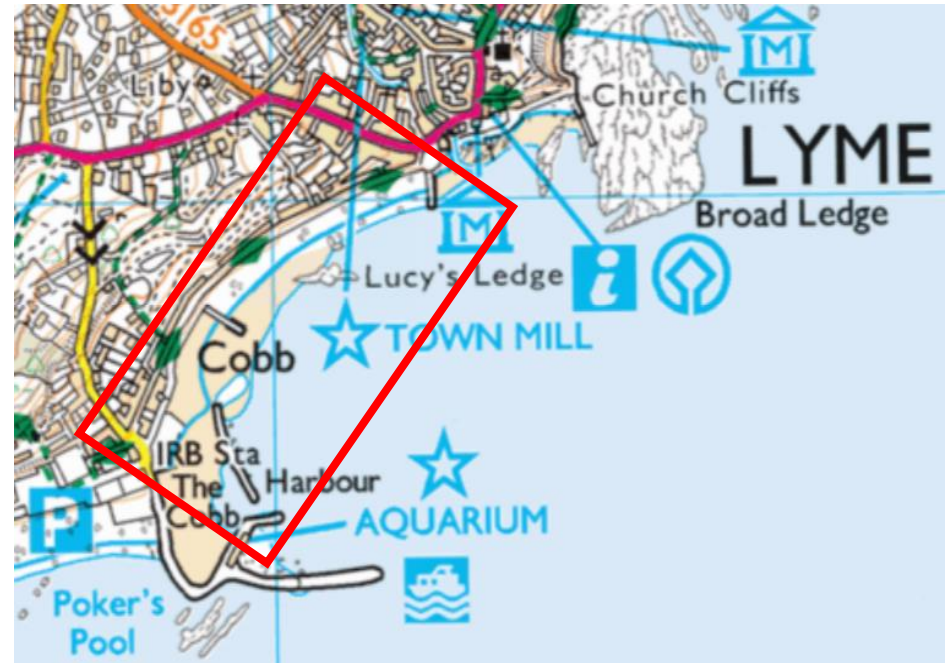


# RNLI Beach Safety Assessment Report



Beach Name: <b>Lyme Regis (Cobb) Beach</b>	Also known as: <b>Cobb Beach/Front Beach</b>	Management Authority: <b>Lyme Regis Town Council</b>
Date: <b>28.10.2024</b>	Version: <b>4.0</b>	Suggested review date: <b>28.10.2025 / 28.10.2029</b>
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## Field beach safety assessment package



### Section 1 Executive Summary

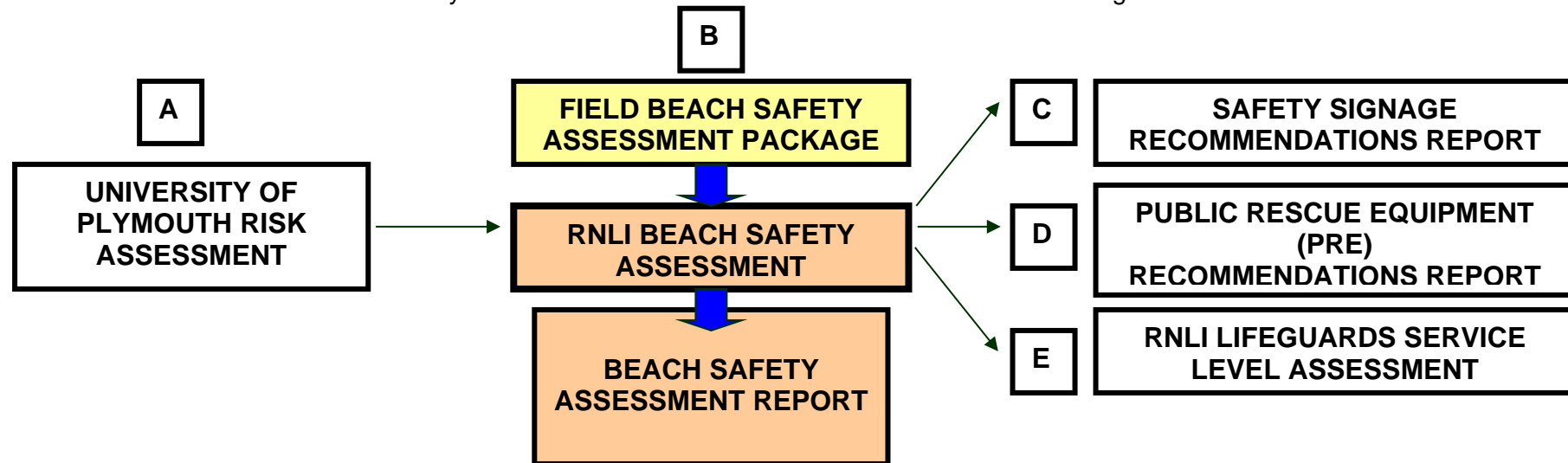
- Introduction to the RNLI and Beach Safety Assessment
  - Summary of Findings
  - Simplified Risk Calculator for Beaches
- University of Plymouth UKBSAM Beach Type
  - Risk Priority Matrix Summary

## 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 were a number of hazards identified where the level of risk was felt to be high. Control measures should be considered. Priority hazards are:

- 10.9 Pier Jumping
- 10.2 Diving
- 6.5 UV radiation (Sun) short-term

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:

- Update signage to meet national guidelines
- Review Public Rescue Equipment (PRE) to ensure it meets new national guidelines
- Participate in National Beach Safety working group
- Provide beach safety information to targeted groups such as school groups and Tourist Information Centres
- Establishing volunteer codes of practice and review byelaws to manage potential activity conflict

It is further recommended that the following additional reports are undertaken:

- Signage recommendations report
- Public Rescue Equipment (PRE) recommendations report

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:

**Weymouth Support Centre:**

Alice Higgins  
Lead Lifeguard Supervisor  
RNLI  
[Weymouth\\_SC@rnli.org.uk](mailto:Weymouth_SC@rnli.org.uk)

**Central Lifeguard Services:**

Lifeguard Supervisor  
Risk and Implementation  
RNLI  
[BSA@rnli.org.uk](mailto:BSA@rnli.org.uk)

General Manager-Lifeguard Operations  
Lifeguard Services  
RNLI  
[BSA@rnli.org.uk](mailto: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) +/- UKBSAM weighting = Risk**

## Winter Season

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

**Lyme Regis beach is a Medium risk beach during Peak season, a Lower 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	Lifeguards may regularly close the beach to aquatic activities Lifeguards will require additional support (increased personnel or equipment levels)
12-15	Medium–higher	Lifeguards may occasionally close the beach to aquatic activities Lifeguard may require additional support (increased personnel or equipment levels)
8-12	Medium	Lifeguards normally recommended
5-8	Lower –medium	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	Signage should be considered PRE may be considered Pre-arrival education

**NB – if population in water is low, lifeguards may not be a cost effective and therefore reasonable control measure.**

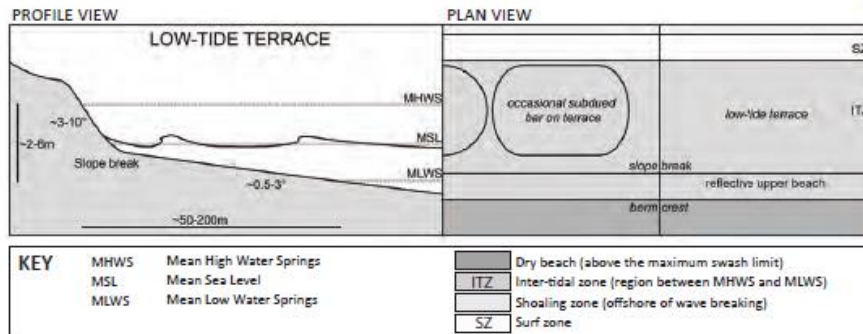


## University of Plymouth UK Beach Safety Assessment Model (UKBSAM) Beach Type

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 - medium, LW: v.low.

**Swash:** HW: low (medium), LW: v.low.

**Tidal cut-off:** low - medium.

**Littoral currents:** HW: low (medium), LW: low (medium).

**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

**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.

# RNLI Beach Safety Assessment Report

## 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'.

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

<b>Likelihood</b>	Almost Certain (5)		6.5 UV radiation (Sun) short-term			
	Likely (4)	9.1 General beach activities	8.4 Dangerous litter			
	Possible (3)	4.1 Storm-water outlet 7.2 Marine envenomation i.e. weaver fish / jelly fish	9.6 Large kite flying	2.3 Rock shelves/reefs 2.4 Submerged rocks/debris 6.1 Strong winds	10.2 Diving 10.9 Pier jumping 10.12 Kitesurfing	
	Unlikely (2)	7.3 Other dangerous marine life	1.5a Unsafe walkways, lookouts and promenades 4.4 Water quality/pollution 9.2 Cycling	1.5b Unsafe walkways, lookouts and promenades 3.5 Buildings and structures 6.3 Fog/mist (reduced visibility) 7.1 Dogs 8.1 Fire safety 8.3 Hazardous or explosive substances 9.10 Sand digging/tunnelling	2.1 Sudden drop-off/steep slope 3.2 Groynes and coastal defences 3.3 Jetties/piers 3.6 Buoys, lines and netting 5.1 Wave type 5.3 Topographically constrained rip 6.6 UV radiation (Sun) long-term 9.4 Rock walking/rock fishing 10.1 Paddling/wading 10.3 Swimming 10.4 Inflatable users 10.5 Skimboarding 10.7 Bodyboarding 10.8 Wave dodging 10.10 Surfing 10.11 Windsurfing 10.13 E-Foiling or Wing Foiling 11.1 Oar or paddle craft 11.2 Sailing 11.3 Snorkelling/ spear fishing 11.4 Scuba diving 11.5 Personal watercraft (PWC)	1.4 Tidal cut off
	Rare (1)			9.5 Managed vehicle use and parking	6.2 Storms/hail/heavy rain 6.4 Lightning 9.3 Beach/pier fishing 10.6 Bodsurfing	
		Negligible (1)	Low (2)	Moderate (3)	High (4)	Severe (5)
<b>Consequence</b>						

## 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: Consequence x Likelihood = Risk

<b>Likelihood</b>	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)
<b>Consequence</b>						

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

# RNLI Beach Safety Assessment Report

## 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	E-Foiling / Wing Foiling	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			0	1		1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1
Scuba diving	0	0	1	1	0		0			0	1		0	0	1	0	0	0	0	0	0	0	1	1	1	1	1	1	2	
Snorkelling / spear fishing	0	0	1	1	0		0			0	1		0	1	1	1	0	1	1	1	1	1	1	1	1	1	1			
Sailing	0	0	1	0	0		0			0	1		0	0	2	1	0	1	0	0	1	0	1	1	1	1	1			
Rowing	0	0	1	0	0		0			0	1		0	0	1	1	0	1	0	0	1	1	1	1	1	1				
Kite surfing	0	0	1	0	0		0			0	1		0	0	2	2	0	2	2	2	1	2	2	2						
Windsurfing	0	0	1	0	0		0			0	1		0	0	2	2	0	2	2	2	1	2	2							
Stand up Paddle boarding	0	0	1	0	0		0			0	2		0	0	2	2	0	2	2	2	1	2								
Surfing	0	0	1	0	0		0			0	2		0	0	2	2	0	2	2	2	1									
Cliff, rock or pier jumping	0	0	1	1	0		1			0	0		0	0	1	1	0	0	0	0										
Wave dodging	0	0	1	0	0		0			0	0		1	0	1	2	0	2	2											
Body boarding	0	0	1	0	0		0			0	2		0	0	1	2	0	2												
Body surfing	0	0	1	0	0		0			0	2		0	0	1	2	0													
Skim boarding	0	0	1	0	0		0			1	0		2	0	1	1														
Inflatable users	0	0	1	0	0		0			0	2		0	0	0															
Swimming	0	0	2	0	0		0			0	2		0	0																
Diving	0	0	1	0	0		0			0	0		0																	
Paddling / wading	1	0	1	0	0		0			0	1																			
Paragliding / hand gliding																														
E-Foiling / Wing Foiling	1	0	0	0	0		0			0																				
Sand digging / tunnelling	1	0	0	0	0		0																							
Wind powered vehicles																														
Horse riding																														
Climbing / bouldering	0	0	0	1	0																									
Large kite flying																														
Managed vehicle use and parking	1	1	0	0																										
Rock walking / rock fishing	1	0	1																											
Beach / pier fishing	1	0																												
Cycling	2																													
General beach activities																														

0 = No conflict of activities.

1 = Low Risk. Remote chance of activity conflict arising resulting in major 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.

Template updated 16/10/2024

## 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 contact the report author or [BSA@rnli.org.uk](mailto:BSA@rnli.org.uk).

**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				

**ACTION PLAN (MANAGEMENT AUTHORITY TO COMPLETE)**

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



**ACTION PLAN (MANAGEMENT AUTHORITY TO COMPLETE)**

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

## 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

What and where is the hazard

Types of people most likely to be impacted by the risk identified

What are the associated risks with that hazard

C = Consequence (1 = lowest 5 = highest)  
L = Likelihood (1 = lowest 5 = highest)  
Risk Rating = C x L, refer to priority table above

Are the existing control measures in place effective at controlling risk? Yes / No

What existing control measure/treatment plans are in place at the location(s) to reduce or remove risk

Given the control measures in place, how does this affect the consequence, likelihood and therefore the overall risk rating




Brief description of other additional control measures that could be used to reduce the risk rating further. Those highlighted are the ones the Institution considers the most appropriate for this specific hazard and location.

# 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	<b>Steep cliffs</b>						Hazard not present or seen at time of assessment			
1.2	<b>Unstable cliffs/rock falls/mud slides</b>						Hazard not present or seen at time of assessment			
1.3	<b>Unstable and/or eroded dunes</b>						Hazard not present or seen at time of assessment			
1.4	<b>Tidal cut off</b> North Wall – cut off at high tide  (October 2024)	Employees Males Very young 16–35 TVM 60+ Non-swimmers	Tidal cut off Incoming tide can trap persons on the North Wall Drowning Hyperthermia / Exposure Potential for cold water shock	5	4	20	Pre-arrival education (RNLI - On The Beach Guide) Signage (state sign)  Emergency communications PRE Trained observer provision First aid provision Zoning (supervised area) Lifeguard provision Red and Yellow Flags Tide times displayed – at Harbour Masters Office PRE (national guidance)	Y	10	<b>Pre-arrival education (Beware North Wall can be cut off at High Tide on <a href="http://www.lymeregis.org/beaches.aspx">http://www.lymeregis.org/beaches.aspx</a> &amp; <a href="https://www.lymeregistowncouncil.gov.uk/">https://www.lymeregistowncouncil.gov.uk/</a>, including link to <a href="https://rnl.org/safety/know-the-risks/tides">https://rnl.org/safety/know-the-risks/tides</a>)</b> <b>Signage (national guidance) Tidal cut off at High Tide to North Wall displayed at entrances to Cobb Beach, Supervise children at all times</b>  Danger area zoned (beach / map) Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision Emergency escape route Means of beach closure Other tidal alert system e.g. traffic lights




## RNLI Beach Safety Assessment Report

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)
1.5a	<b>Unsafe walkways, lookouts and promenades</b>  Cart Road	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	Emergency communications PRE Trained observer provision First aid provision Zoning (supervised area) Lifeguard provision Red and Yellow Flags Means of closure (beach / prom) Inspection/repair Spinal board	Y	4	<b>Pre-arrival education (unguarded drops &amp; uneven surfaces)</b> <b>Signage (national guidance) Uneven surface, Supervise children at all times</b>  Barriers High visibility line Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision
1.5b	<b>Unsafe walkways, lookouts and promenades</b>  The Cobb	Employees Males Very young 16–35 TVM 60+	Extreme weather causing waves to break over prom etc. Impact injuries from debris in the water. Topographically constrained rips*  <i>*For associated currents and drowning see topographically constrained rip</i>	3	2	6	PRE Emergency communications Trained observer provision First aid provision Lifeguard provision Means of closure (beach / prom) Inspection/repair Spinal board	Y	6	<b>Pre-arrival education (Take care in extreme weather – Harbour Wall)</b> <b>Signage (national guidance) Uneven surface, Supervise Children at all Times</b>  PRE (national guidance) Barriers Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision
1.6	<b>Other</b>									


# 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	<b>Sudden drop-off/steep slope</b>	Males Very young 16–35 TVM 60+ Non-swimmers Weak swimmers	Rapid change of water depth (especially hazardous for children) Drowning Dumping waves / shore break*  <i>*For problems associated with waves see Wave Type</i>	4	3	12	Pre-arrival education (RNLI - On The Beach Guide) Emergency communications PRE Trained observer provision First aid provision Lifeguard provision Red and yellow flags Means of beach closure Red flag Tide times	Y	8	<b>Signage (national guidance) Steep Shelving Beach, Supervisor Children at all Times</b>  <b>PRE (national guidance)</b> <b>Zoning (designated bathing area - beach / map)</b> Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision
2.2	<b>Shallow sandbanks</b>	Hazard not present or seen at time of assessment								
2.3	<b>Rock shelves/reefs</b>	Employees Males Very young 16–35 TVM 60+ 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 (location of reefs: <a href="http://lymeregis.org/beaches">lymeregis.org/beaches</a> ) Signage:  Emergency communications PRE Trained observer provision First aid provision Lifeguard provision Red and yellow flags Tide times outside Harbour Master Office Spinal boards Means of beach closure Red flag	Y	9	<b>Signage (national guidance) Submerged Objects, Supervisor children at all Times</b>  <b>Zoning (swim / craft / launch – map)</b> Emergency communications (national guidance) PRE (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision Marker buoys / hazard markers Craft regulations / restrictions / byelaws







## RNLI Beach Safety Assessment Report

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	<b>Submerged rocks/debris</b>	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 (RNLI - On The Beach Guide) Emergency communications PRE Trained observer provision First aid provision Lifeguard provision Red and yellow flags Tide times outside Harbour Master Office Spinal boards Means of beach closure Red flag Craft regulations / restrictions / byelaws ( <i>Speed restriction near Harbour – DEAD SLOW</i> )	Y	9	<b>Signage (national guidance)</b> <b>Submerged Objects, Supervise children at all times</b>   <b>Zoning (swim / craft / launch - map)</b> Emergency communications (national guidance) PRE (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision Removal of objects Marker buoys / hazard markers
2.5	<b>River/stream mouth</b>	Hazard not present or seen at time of assessment								
2.6	<b>Mud/quicksand</b>	Hazard not present or seen at time of assessment								
2.7	<b>Inshore holes/channels/ gutters</b>	Hazard not present or seen at time of assessment								
2.8	<b>Other</b>									



# 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	<b>Overhead power lines</b>	Hazard not present or seen at time of assessment								
3.2	<b>Groynes and coastal defences</b>  Seawall – North Wall  Rock Groyne – Cobb Beach  Rock Groyne & Seawall – Cobb Gate 	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 (RNLI - On The Beach Guide) Signage – Caution this wall will be cut off at High tide, Danger shallow water, Danger shallow water, Strictly No Swimming or personal access to the water  Signage (national guidance): No Swimming/No Diving   Zoning (designated bathing area) (beach / map) Red and yellow flags PRE Trained observer provision First aid provision Lifeguard provision Inspection/repair Craft regulations / restrictions / byelaws ( <i>Speed restriction near Harbour – DEAD SLOW</i> ) Means of beach closure Inspection/repair Red flag Spinal boards	Y	8	<b>Signage (national guidance) - No diving/jumping off groyne, Supervisor children at all times</b>  <b>Zoning (swim / craft / launch - map)</b> Emergency communications (national guidance) PRE (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision Extend lifeguard provision Removal Groyne markers Restricted access Swim exclusion zone by structure

## RNLI Beach Safety Assessment Report



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)
3.3	<b>Jetties/piers</b>  North Wall 	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions Non-swimmers Weak swimmers	Misadventure – jumping/diving Slips, trips and falls Impact injuries Entrapment 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 (RNLI - On The Beach Guide) Signage Zoning (designated bathing area) (beach / map) Red and yellow flags / Red flag PRE Trained observer provision First aid provision Lifeguard provision Inspection/repair Craft regulations / restrictions / byelaws ( <i>Speed restriction near Harbour – DEAD SLOW</i> ) Means of beach closure Inspection/repair Spinal boards PRE (national guidance) Groyne marker	Y	8	<b>Signage (national guidance) - No diving/jumping off Jetty, Supervise Children at all times</b>    <b>Zoning (swim / craft / launch - map)</b> Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision Extend lifeguard provision Removal Restricted access Swim exclusion zone by structure
3.4	<b>Rock swimming and paddling pools</b>	Hazard not present or seen at time of assessment								
3.5	<b>Buildings and structures</b>	Employees Males Very young 16–35 TVM	Misadventure Slips, trips and falls Impact injuries	3	2	6	Trained observer provision First aid provision Lifeguard provision Removal – out of season Inspection/repair	Y	6	Signage (national guidance) Keep Off Buildings Emergency communications (national guidance) Extend trained observer provision Extend first aid provision
3.6	<b>Buoys, lines and netting</b>	Employees Males Very young 16–35 TVM 60+ Pre-existing medical condition Non-swimmers Weak swimmers	Slips, trips and falls Beyond capability attraction Entrapment Drowning Craft entanglement	4	2	8	Pre-arrival education (RNLI - On The Beach Guide) Zoning (craft / swim) Red and yellow flags PRE Trained observer provision First aid provision Lifeguard provision Inspection/repair Removal – out of season Craft regulations / restrictions / byelaws ( <i>Speed restriction near Harbour – DEAD SLOW</i> ) Activity restrictions e.g. fishing	Y	8	Signage (national guidance) Emergency communications (national guidance) PRE (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision Decoy buoy – allurement located away from Harbour Entrance
3.7	<b>Other</b>									





# 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	<b>Storm-water outlet</b>  A storm overflow operates during heavy rainfall when the sewerage system becomes overwhelmed by the amount of surface water. The overflow prevents sewage from backing up pipes and flooding properties and gardens. An emergency overflow will only operate infrequently, for example due to pump failure or blockage in the sewerage system. The storm/emergency overflow from the Cobb pumping station, is just to the south of the Cobb breakwater. The operation of the overflow can lead to a drop in bathing water quality.  Classification GOOD, samples taken weekly between May 1st 2024 and Sep 30th 2024.  2024 classification ★★☆☆ good 2023 classification ★★☆☆ good 2022 classification ★★☆☆ good 2021 classification ★★☆☆ good <a href="https://environment.data.gov.uk/bwg/profile.html?site=ukk2205-21500">https://environment.data.gov.uk/bwg/profile.html?site=ukk2205-21500</a>	Employees Males Very young 16–35 TVM Pre-existing medical conditions Swimmers	Water quality/pollution Sharps	1	3	3	Pre-arrival education (RNLI - On The Beach Guide) Signage:  Inspection - Trained observer provision (water quality testing)  First aid provision Lifeguard provision Red and yellow flags Means of beach closure Red flag Emergency action plan Beach cleaning/monitoring Liaise with Environment Agency for advice	Y	3	<b>Signage (national guidance)</b> <b>Safer Seas alert link</b> <a href="https://www.sas.org.uk/map/">https://www.sas.org.uk/map/</a> on <a href="http://www.lymeregis.org/beaches.aspx">http://www.lymeregis.org/beaches.aspx</a> & <a href="https://www.lymeregistowncouncil.gov.uk/">https://www.lymeregistowncouncil.gov.uk/</a> Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision Safer Seas alert
4.2	<b>Sewage outlet</b>		Hazard not present or seen at time of assessment							
4.3	<b>Agricultural run-off</b>		Hazard not present or seen at time of assessment							



## RNLI Beach Safety Assessment Report

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)
4.4	<b>Water quality/pollution</b>  This bathing water is subject to short term pollution procedures. The Environment Agency makes a daily pollution risk forecast at this site based on the effects of rain, tide, wind, sunlight and seasonality on bathing water quality. These factors affect the levels of bacteria that get washed into the sea from livestock, sewage and urban drainage via rivers and streams and how they disperse. When these factors combine to make short term pollution likely we issue a pollution risk warning on this website and the beach manager will display a sign advising against bathing at the bathing water. After a short term pollution event, levels of bacteria typically return to normal after a day or so but it's possible to have several warning days in a row. In 2023 7 pollution risk warnings were issued for this bathing water. All bathing waters have the potential to be affected by a pollution incident and if this occurs a pollution risk warning will be issued with associated advice against bathing on this website.  Classification GOOD, samples taken weekly between May 1st 2024 and Sep 30th 2024.  2024 classification ★★☆☆ good 2023 classification ★★☆☆ good 2022 classification ★★☆☆ good 2021 classification ★★☆☆ good  <a href="https://environment.data.gov.uk/bwa/pr-0files/profile.html?site=ukk2205-21500">https://environment.data.gov.uk/bwa/pr-0files/profile.html?site=ukk2205-21500</a>	Employees Males Very young 16–35 TVM Pre-existing medical conditions Swimmers	Water quality/pollution Microbiological e.g. e coli	2	2	4	Pre-arrival education (RNLI - On The Beach Guide) Signage:  Inspection - Trained observer provision (water quality testing)  First aid provision Lifeguard provision Red and yellow flags Means of beach closure Red flag Emergency action plan Beach cleaning/monitoring Liaise with Environment Agency for advice	Y	4	<b>Safer Seas alert link</b> <a href="https://www.sas.org.uk/map/">https://www.sas.org.uk/map/</a> on <a href="http://www.lymeregis.org/beaches.aspx">http://www.lymeregis.org/beaches.aspx</a> & <a href="https://www.lymeregistowncouncil.gov.uk/">https://www.lymeregistowncouncil.gov.uk/</a> Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision
4.5	<b>Other</b>									

# 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	<b>Wave type:</b>  <b>Plunging waves</b> ✓  <b>Shore break</b>  <b>Surging waves</b> ✓  <b>Spilling</b> ✓  <b>Passing vessels</b> ✓	Employees Males Very young 16–35 TVM Pre-existing medical conditions Non-swimmers Weak swimmers	Impact injuries Drowning	4	3	12	Pre-arrival education (RNLI - On The Beach Guide) Red and yellow flags PRE Trained observer provision First aid provision Lifeguard provision Means of beach closure Red Flag	Y	8	<b>PRE (national guidance)</b> <b>Signage (national guidance) - Supervise children at all times</b>  Zoning (designated bathing area - map) Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision Signage (state sign)
5.2	<b>Beach rip:</b>	Hazard not present or seen at time of assessment								
5.3	<b>Topographically constrained rip:</b>  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 groynes.  These rips will generally be semi-permanent features depending primarily on wave height.  Large South Westerly swells create a rip that runs out along the North Wall and across the Harbour Entrance	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 (RNLI - On The Beach Guide) Red and yellow flags PRE Trained observer provision First aid provision Lifeguard provision Means of beach closure Red Flag	Y	8	<b>PRE (national guidance)</b> <b>Signage (national guidance) - Supervise children at all times</b>  Zoning (designated bathing area - map) Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision Signage (state sign) Signage (national guidance) (state sign)
5.4	<b>Free rip:</b>	Hazard not present or seen at time of assessment								



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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)
5.5	<b>Tidal/river/estuarine currents</b>	Hazard not present or seen at time of assessment								
5.6	<b>Extensive tide range</b>	Hazard not present or seen at time of assessment								
5.7	<b>Other</b>									




# 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	<b>Strong winds</b>	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 (RNLI - On The Beach Guide, RNLI - In The Surf Guide) Emergency communications Red and yellow flags PRE Trained observer provision First aid provision Lifeguard provision Means of closure – windsock Red flags Emergency action plan	Y	9	<b>Restrict local inflatables sales</b> <b>Pre-arrival education (Inflatable information -</b> <a href="http://www.lymeregis.org/beaches.aspx">http://www.lymeregis.org/beaches.aspx</a> & <a href="https://www.lymeregistowncouncil.gov.uk/">https://www.lymeregistowncouncil.gov.uk/</a> - <b>include a link to</b> <a href="https://rnl.org/magazine/magazine-featured-list/2019/july/bringing-inflatables-to-the-beach">https://rnl.org/magazine/magazine-featured-list/2019/july/bringing-inflatables-to-the-beach</a> <b>Signage (national guidance) -</b> <b>Supervise children at all times</b>  Emergency communications (national guidance) Zoning (designated bathing / activity area - map) PRE (national guidance) Extend trained observer provision Extend first aid provision
6.2	<b>Storms/hail/heavy rain</b>	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions Swimmers	Flash flooding	4	1	4	Red and yellow flags PRE Trained observer provision First aid provision Lifeguard provision Means of beach closure Red flag Emergency action plan	Y	4	<b>Signage (national guidance) -</b> <b>Supervise children at all times</b>  <b>PRE (national guidance)</b> Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision

## RNLI Beach Safety Assessment Report

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)
6.3	<b>Fog/mist (reduced visibility)</b>	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 (RNLI - On The Beach Guide) Zoning (supervised zone) Red and yellow flags PRE Trained observer provision First aid provision Lifeguard provision Means of beach closure Red flag Emergency action plan Craft regulations / restrictions / byelaws (Speed Restriction near Harbour)	Y	6	<b>Signage (national guidance) - Supervise children at all times</b>  <b>PRE (national guidance)</b> Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision
6.4	<b>Lightning</b>	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions Unfit Swimmers	Electrocution risk Fire risk	4	1	4	Pre-arrival education (RNLI - On The Beach Guide) Zoning (supervised zone) Red and yellow flags PRE Trained observer provision First aid provision Lifeguard provision Means of beach closure Red flag Emergency action plan	Y	4	<b>Signage (national guidance) - Supervise children at all times</b>  Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision
6.5	<b>UV radiation (Sun) short-term</b>	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions	Sunburn and heat stroke	2	5	10	Pre-arrival education (RNLI - On The Beach Guide) Trained observer provision First aid provision Lifeguard provision Drinking water point Parasol hire	N	10	<b>Signage (national guidance) – Sun Safety Message, Supervise children at all times</b>  <b>Work with PCT sun safety clinics</b> Extend trained observer provision Extend lifeguard provision Extend first aid provision <b>Provide sun block</b>


## RNLI Beach Safety Assessment Report

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)
6.6	<b>UV radiation (Sun) long-term</b>	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions	Skin cancer	4	2	8	Pre-arrival education (RNLI - On The Beach Guide) Trained observer provision First aid provision Lifeguard provision Drinking water point Parasol hire	N	8	<b>Signage (national guidance) – Sun Safety Message, Supervise children at all times</b>  <b>Work with PCT sun safety clinics</b> Extend trained observer provision Extend lifeguard provision Extend first aid provision <b>Provide sun block</b>
6.7	<b>Other</b>									

## 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	<b>Dogs</b>	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions	Impact/bite injuries/infection Excrement	3	3	9	<p>Pre-arrival education (Dogs and beaches:  <a href="http://www.lymeregis.org/beaches.aspx">http://www.lymeregis.org/beaches.aspx</a>)                      Signage</p>  <p>Signage (national guidance)                      Byelaw / control orders (<i>Dogs excluded 1 May 30 Sep inclusive – Front Beaches</i>)                      Zoning / restrictions                      Dogs on lead                      Emergency communications                      Beach cleaning                      Trained observer provision – dog wardens                      First aid provision                      Lifeguard provision</p>	Y	6	<p><b>Dog waste bins</b>                      Emergency communications (national guidance)                      Extend trained observer provision – dog wardens                      Extend first aid provision                      Extend lifeguard provision</p>
7.2	<b>Marine envenomation i.e. weaver fish / jelly fish</b>	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions Swimmers	Stings, cuts, swelling Anaphylactic shock	1	4	4	<p>Pre-arrival education (RNLI - On The Beach Guide)                      Zoning (supervised zone)                      Red and yellow flags                      PRE                      Trained observer provision                      First aid provision                      Lifeguard provision                      Means of beach closure                      Red flag                      Monitoring                      PRE (national guidance)</p>	Y	3	<p>Emergency communications (national guidance)                      Extend trained observer provision                      Extend first aid provision                      Extend lifeguard provision</p>




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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)
7.3	<b>Other dangerous marine life</b>  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 (RNLI - On The Beach Guide) Zoning (supervised zone) Red and yellow flags PRE Trained observer provision First aid provision Lifeguard provision Means of beach closure Red flag Monitoring	Y	2	<b>Signage (national guidance) - Supervise children at all times</b>    Pre-arrival education (BDMLR resources and downloads at <a href="http://www.bdmlr.org.uk/index.php?page=resources">http://www.bdmlr.org.uk/index.php?page=resources</a> & <a href="https://www.dorsetwildlifetrust.org.uk/">https://www.dorsetwildlifetrust.org.uk/</a> ) Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision
7.4	<b>Dangerous snakes – Adders</b>	Hazard not present or seen at time of assessment								
7.5	<b>Other</b>									


# 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	<b>Fire safety</b>  Typically as a result of bonfires 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	Emergency communications Trained observer provision First aid provision Lifeguard provision Hot BBQ disposal bins 	Y	6	<b>Fire safety risk assessment</b> Pre-arrival education (BBQ safe practice information, fire safety information) Signage (national guidance) Emergency communications (national guidance) Public firefighting equipment Extend trained observer provision Extend first aid provision Designated BBQ / fire areas Emergency action plan
8.2	<b>Electrical safety</b>  Excluding overhead power lines	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions	Electrocution Fire risk	3	2	6	Emergency communications Trained observer provision First aid provision Lifeguard provision Removal Inspection/repair	Y	6	<b>Electrical risk assessment</b> Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision
8.3	<b>Hazardous or explosive substances</b>  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	Trained observer provision First aid provision Lifeguard provision Means of beach closure Red Flag	Y	6	<b>Hazardous / explosive substances risk assessment</b> Pre-arrival education Signage (national guidance) Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision <b>Safe storage</b> <b>Emergency action plan</b>





## RNLI Beach Safety Assessment Report

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)
8.4	<b>Dangerous litter</b>  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 (RNLI - On The Beach Guide) Trained observer provision First aid provision Lifeguard provision Beach cleaning Waste Bins Sharps box Hot BBQ disposal bins    Means of beach closure	Y	8	Signage (national guidance) (No glass or bottles on beach) Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Designated BBQ / fire areas
8.5	<b>Other</b>									




## RNLI Beach Safety Assessment Report

### 9.0 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	<b>General beach activities</b>	< 7500	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 (On The Beach Leaflet) Trained observer provision First aid provision Lifeguard provision Lost child scheme (Coastguard wristbands)	Y	4	<b>Signage (national guidance) general beach safety advice, Supervise children at all times</b>  <b>Zoning – activities</b> <b>Beach reference / meeting points</b> Emergency communications (national guidance) Extend trained observer provision Extend first aid provision
9.2	<b>Cycling</b>  No Cycling permitted along Marine Parade 	< 15	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions	Impact injuries Collision with pedestrians	2	3	6	Signage (national guidance)  Byelaw / bicycle restrictions – (Cycling permitted along Cart Road but not Marine Parade, advisory only) Emergency communications Trained observer provision First aid provision Lifeguard provision	Y	4	<b>Pre-arrival education (Cycle areas)</b> <b>Signage (national guidance) - Supervisor children at all times</b>  <b>Zoning – cycle route / lane</b> Emergency communications (national guidance) 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)
9.3	<b>Beach/pier fishing</b>	< 10	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 Trained observer provision First aid provision Red and yellow flags Lifeguard provision Means of beach closure Red flag Equipment disposal bins	Y	4	<b>Pre-arrival education (Fishing safety)</b> <b>Signage (national guidance)</b> <b>Fishing, Supervise children at all times</b>  <b>Zoning (designated swim / activity zone - map)</b> <b>Club/self-regulation</b> Emergency communications (national guidance) <b>PRE (national guidance)</b> Extend trained observer provision Extend first aid provision Extend lifeguard provision Byelaw Sharps box
9.4	<b>Rock walking/rock fishing</b> 	< 15	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 Trained observer provision First aid provision Red and yellow flags Lifeguard provision Means of beach closure Red flag Equipment disposal bins	Y	8	<b>Pre-arrival education (Fishing safety)</b> <b>Signage (national guidance)</b> <b>Fishing, Supervise children at all times</b>  <b>Zoning (designated swim / activity zone - map)</b> <b>Club/self-regulation</b> Emergency communications (national guidance) <b>PRE (national guidance)</b> Extend trained observer provision Extend first aid provision Extend lifeguard provision Sharps box Byelaw

## 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)
9.5	<b>Managed vehicle use and parking</b>	< 10	Employees Males Very young 16-35 TVM 60+	Impact injuries Vehicle collisions Crush injuries	3	2	6	Authorised vehicles only - self regulation Signage:  Byelaw Zoning – safe transport route Emergency communications Trained observer provision First aid provision Lifeguard provision Spinal board	Y	3	Pre-arrival education (vehicle usage) Signage (national guidance) motor vehicles, Supervise children at all times  Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision
9.6	<b>Large kite flying</b>	Hazard not present or seen at time of assessment									
9.7	<b>Climbing/ bouldering</b> 	20-30	Employees Males Very young 16-35 TVM 60+ Pre-existing medical conditions	Falls from height Impact injuries Entrapment Suspension trauma Exposure	3	3	9	Pre-arrival education (RNLI On The Beach Guide) Signage (national guidance) (lifeguarded patrol area) Red and yellow flags PRE (national guidance) Trained observer provision First aid provision Lifeguard provision Inspection/repair Means of beach closure Red flag Spinal boards	Y	6	<b>Signage (national guidance) - Do not climb on the rocks, Supervise children at all times</b>  Zoning (designated bathing area) (beach / map) Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision Restricted access Swim exclusion zone by structure
9.8	<b>Horse-riding</b>	Hazard not present or seen at time of assessment									





## 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)
9.9	Wind-powered vehicles	Hazard not present or seen at time of assessment									
9.10	Sand digging/ tunnelling	< 30	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 (On The Beach) Trained observer provision First aid provision Lifeguard provision Zoning (supervised zone)	Y	4	<b>Pre-arrival education – Sand Hole Collapse Dangers:</b> <a href="https://www.gov.uk/government/news/sand-hole-digging-dangers">https://www.gov.uk/government/news/sand-hole-digging-dangers</a> to be added onto <a href="http://www.lymeregis.org/beaches.aspx">http://www.lymeregis.org/beaches.aspx</a> & <a href="https://www.lymeregistowncouncil.gov.uk/">https://www.lymeregistowncouncil.gov.uk/</a> <b>Signage (national guidance) - Supervise children at all times</b>  Emergency communications (national guidance) Extend trained observer provision Extend lifeguard provision Extend first aid provision
9.11	4WD vehicles/quad/ dirt bikes	Hazard not present or seen at time of assessment									
9.12	Paragliding / hang gliding	Hazard not present or seen at time of assessment									
9.13	Other										

## RNLI Beach Safety Assessment Report





### 10.0 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	<b>Paddling/wading</b>	< 250	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions Non-swimmers Weak swimmers	Drowning	4	2	8	Pre-arrival education (RNLI - On The Beach Guide) Zoning (designated swim / activity zone) Red and yellow flags PRE Trained observer provision First aid provision Lifeguard provision Means of beach closure Red flag	Y	8	<b>Signage (national guidance) - Supervise children at all times</b>  <b>Zoning (designated swim / activity zone - map / beach)</b> PRE (national guidance) Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision
10.2	<b>Diving</b>	< 25	Employees Males Very young 16–35 TVM Non-swimmers Weak swimmers	Head, neck and back injuries Drowning	4	3	12	Pre-arrival education (RNLI - On The Beach Guide) Signage:  Signage (national guidance):  PRE Trained observer provision First aid provision Lifeguard provision Spinal board	N	12	<b>Byelaw (no jumping or diving off groyne or harbour wall)</b> <b>Signage (national guidance) No jumping / diving, Supervise children at all times</b>  PRE (national guidance) Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision Spinal board







## 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)
10.3	<b>Swimming</b>	< 250	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions Non-swimmers Weak swimmers	Drowning	4	3	12	Pre-arrival education (RNLI - On The Beach Guide) Signage (national guidance) – water safety message  Zoning (designated swim / activity zone) Red and yellow flags PRE Trained observer provision First aid provision Lifeguard provision Means of beach closure Red flag	Y	8	<b>Signage (national guidance) - Supervise children at all times</b>  <b>Zoning (designated swim / activity zone - map / beach)</b> PRE (national guidance) Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision
10.4	<b>Inflatable users</b>	< 25	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 (RNLI - On The Beach Guide) Signage (national guidance) – water safety message  Emergency communications Red and yellow flags Trained observer provision First aid provision Lifeguard provision Means of closure – Orange Windsock & Red flags Emergency action plan PRE	Y	8	<b>Restrict local inflatables sales</b> <b>Pre-arrival education (Inflatable information -</b> <a href="http://www.lymeregis.org/beaches.aspx">http://www.lymeregis.org/beaches.aspx</a> & <a href="https://www.lymeregistowncouncil.gov.uk/">https://www.lymeregistowncouncil.gov.uk/</a> <b>include a link to...</b> <a href="https://rnl.org/magazine/magazine-featured-list/2019/july/bringing-inflatables-to-the-beach">https://rnl.org/magazine/magazine-featured-list/2019/july/bringing-inflatables-to-the-beach</a> <b>Signage (national guidance) - Inflatable dangers, Water Safety messages, Supervise children at all times</b>  Emergency communications (national guidance) Zoning (designated bathing / activity area -map) PRE (national guidance) Extend trained observer provision Extend first aid 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)
10.5	<b>Skim boarding</b>	< 10	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions Non-swimmers Weak swimmers	Impact Injuries Head, neck and back injuries Drowning	4	3	12	<p>Pre-arrival education (RNLI - On The Beach Guide) Signage (national guidance) – water safety message</p>  <p>Trained observer provision First aid provision Emergency Communications Lifeguard provision Red and yellow flags Spinal Board Means of beach closure Red Flag PRE</p>	Y	8	<p><b>Signage (national guidance) - Supervise children at all times</b></p>  <p>Zoning (designated swim / activity zone - map / beach) Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision PRE (national guidance)</p>
10.6	<b>Bodysurfing</b>	< 15	Employees Males 16–35 TVM Pre-existing medical conditions Non-swimmers Weak swimmers	Head, neck and back injuries Impact injuries Drowning	4	2	8	<p>Pre-arrival education (RNLI - On The Beach Guide) Signage (national guidance) – water safety message</p>  <p>Trained observer provision First aid provision Emergency Communications Lifeguard provision Red and yellow flags Spinal Board Means of beach closure Red Flag PRE</p>	Y	4	<p><b>Signage (national guidance) - Supervise children at all times</b></p>  <p><b>Zoning (designated swim / activity zone - map / beach)</b> Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision</p>





## 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)
10.7	<b>Bodyboarding</b>	< 25	Employees Males 16–35 TVM Pre-existing medical conditions Non-swimmers Weak swimmers	Head, neck and back injuries Impact injuries Drowning	4	3	12	<p>Pre-arrival education (RNLI - On The Beach Guide) Signage (national guidance) – water safety message</p>  <p>Trained observer provision First aid provision Emergency Communications Lifeguard provision Red and yellow flags Spinal Board Means of beach closure Red Flag PRE</p>	Y	8	<p><b>Signage (national guidance) - Supervise children at all times</b></p>  <p><b>Zoning (designated swim / activity zone - map / beach)</b> Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision</p>
10.8	<b>Wave dodging</b>	< 10	Employees Males Very young 16–35 TVM Pre-existing medical conditions Non-swimmers Weak swimmers	Impact injuries Drowning	4	3	12	<p>Pre-arrival education (RNLI - On The Beach Guide) Signage (national guidance) – water safety message</p>  <p>Trained observer provision First aid provision Emergency Communications Lifeguard provision Red and yellow flags Spinal Board Means of beach closure Red Flag PRE</p>	Y	8	<p><b>Signage (national guidance) - Supervise children at all times</b></p>  <p><b>Zoning (designated swim / activity zone - map / beach)</b> Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision Restricted to access to slipway/structures</p>


## 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)
10.9	<b>Cliff, rock or pier jumping</b>	< 50	Employees Males Very young 16–35 TVM Pre-existing medical conditions Non-swimmers Weak swimmers	Head, neck and back injuries Impact injuries Drowning	4	4	16	<p>Pre-arrival education (RNLI - On The Beach Guide) Signage:</p>  <p>Signage (national guidance):</p>  <p>Trained observer provision First aid provision Lifeguard provision Spinal board PRE</p>	N	12	<p><b>Signage (national guidance) - Supervise children at all times</b></p>  <p><b>Byelaw (no Jumping or Diving off groyne or Harbour Wall)</b> PRE (national guidance) Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision Restrict access to structures Restrict access to sites</p>
10.10	<b>Surfing</b>	< 20	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	<p>Pre-arrival education (RNLI - On The Beach Guide) Signage (national guidance) – water safety message</p>  <p>Trained observer provision First aid provision Emergency Communications Lifeguard provision Red and yellow flags Spinal Board Means of beach closure Red Flag PRE</p>	Y	8	<p><b>Signage (national guidance) - Supervise children at all times</b></p>  <p><b>Zoning (designated swim / activity zone - map / beach)</b> Black and white flags <b>Club/self-regulation</b> Emergency communications (national guidance) PRE (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision</p>

## 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)
10.11	<b>Windsurfing</b>	< 20	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	<p>Pre-arrival education (RNLI - On The Beach Guide) Signage (national guidance) – water safety message</p>  <p>Red and yellow flags Club/self regulation PRE Trained observer provision First aid provision Emergency Communications Lifeguard provision Means of beach closure Red flag Spinal board</p>	Y	8	<p><b>Signage (national guidance) - Supervise children at all times</b></p>  <p><b>Zoning (designated swim / activity zone - map / beach)</b> Black and white flags <b>Club/self-regulation</b> Emergency communications (national guidance) PRE (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision Byelaw / craft restrictions / regulations</p>
10.12	<b>Kitesurfing</b>	< 20	Employees Males 16–35 TVM Pre-existing medical conditions Non-swimmers Weak swimmers	Head, neck and back injuries Falls from height Impact injuries Drowning Collision with other water users Entanglement	4	4	16	<p>Pre-arrival education (RNLI - On The Beach Guide) Signage (national guidance) – water safety message</p>  <p>Red and yellow flags Club/self regulation PRE Trained observer provision First aid provision Emergency Communications Lifeguard provision Means of beach closure Red flag Spinal board</p>	Y	12	<p><b>Signage (national guidance) - Supervise children at all times</b></p>  <p><b>Zoning (designated swim / activity zone - map / beach)</b> Black and white flags <b>Club/self-regulation</b> Emergency communications (national guidance) PRE (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision Byelaw / craft restrictions / regulations</p>



## 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)
10.13	<b>E-Foiling or Wing Foiling</b>	< 10	Employees Males 16–35 TVM Pre-existing medical conditions Non-swimmers Weak swimmers	Head, neck and back injuries Falls from height Impact injuries Drowning Collision with other water users Entanglement	4	3	12	Pre-arrival education (RNLI - On The Beach Guide) Signage (national guidance): Swim Between The Flags Red and yellow flags Self regulation PRE Trained observer provision First aid provision Lifeguard provision Means of beach closure Red flag Spinal board Launch restrictions	Y	8	<b>Signage (national guidance) - Supervise children at all times</b>  <b>Zoning (designated swim / activity zone - map / beach)</b> Black and white flags <b>Club/self-regulation</b> Emergency communications (national guidance) PRE (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision Byelaw / craft restrictions / regulations


## RNLI Beach Safety Assessment Report

### 11.0 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	Control Risk level	Alternative potential control measures (BOLD – Suggested control measures)
11.1	<b>Oar or paddle craft:</b>  Rowing (oar or paddle) ✓ Boats ✓ Kayaks ✓ Canoes ✓ Stand up Paddleboard ✓	< 50	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 (RNLI - On The Beach Guide) Signage (national guidance): Swim Between The Flags Red and yellow flags Self regulation PRE Trained observer provision First aid provision Lifeguard provision Means of beach closure Red flag Spinal board Launch restrictions	Y	8	<b>Signage (national guidance) - Supervise children at all times</b>  <b>Zoning (designated swim / activity zone - map / beach)</b> PRE (national guidance) Byelaw / craft restrictions / regulations Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision
11.2	<b>Sailing</b>	< 50	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions Swimmers Non-swimmers Weak swimmers	Collisions Drifting Drowning Entanglement	4	3	12	Pre-arrival education (RNLI - On The Beach Guide) Club/self regulation Trained observer provision First aid provision Emergency Communications Lifeguard provision Red and yellow flags Launch restrictions	Y	8	<b>Signage (national guidance) - Supervise children at all times</b>  <b>Zoning (designated swim / activity zone - map / beach)</b> PRE (national guidance) Byelaw / craft restrictions / regulations Emergency communications (national guidance) 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)
11.3	<b>Snorkelling/ spear fishing</b>	< 5	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 (RNLI - On The Beach Guide) Club/self regulation Trained observer provision First aid provision Emergency Communications Lifeguard provision Red and yellow flags Launch restrictions	Y	8	<b>Signage (national guidance) - Supervise children at all times</b>  <b>Pre-arrival education (link to snorkelling &amp; spear fishing safety:</b> <a href="https://www.bsac.com/news-and-blog/how-to-stay-safe-when-snorkelling-in-the-uk/">https://www.bsac.com/news-and-blog/how-to-stay-safe-when-snorkelling-in-the-uk/</a> & <a href="http://underwaterfishing.co.uk/reports/SAFETY%20GUIDE.pdf">http://underwaterfishing.co.uk/reports/SAFETY%20GUIDE.pdf</a> ) Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision
11.4	<b>Scuba diving</b>	< 12	Employees Males Very young 16–35 TVM 60+ Pre-existing medical conditions Swimmers Non-swimmers Weak swimmers	Drowning Entanglement Impact injuries Decompression injuries	4	4	16	Pre-arrival education (RNLI - On The Beach Guide) Club/self regulation Trained observer provision First aid provision Lifeguard provision Red and yellow flags Means of beach closure Red flag	Y	8	<b>Pre-arrival education (links to nearby SCUBA facilities/companies -</b> <a href="http://www.blueturtle.uk.com/">http://www.blueturtle.uk.com/</a> & <b>SCUBA Safety</b> <a href="https://rnli.org/safety/choose-your-activity/scuba-diving">https://rnli.org/safety/choose-your-activity/scuba-diving</a> to be added to <a href="https://www.lymeregisharbour.co.uk/scuba%20diving/">https://www.lymeregisharbour.co.uk/scuba%20diving/</a> ) Zoning (designated swim / activity zone) (map / beach) Emergency communications (national guidance) 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)
11.5	<b>Personal watercraft (PWC)/powered craft/skiing</b>	< 5	Employees Males Very young 16–35 TVM Swimmers	Impact injuries Collisions Drowning	4	4	16	<p>Pre-arrival education – <a href="https://www.lymeregisharbour.co.uk/power%20boats/">https://www.lymeregisharbour.co.uk/power%20boats/</a> Signage (national guidance)</p>  <p>Byelaw / craft restrictions / regulations (<i>No water skiing or the use of jet skis shall be permitted in the Harbour</i>) Red and yellow flags Emergency communications Trained observer provision First aid provision Lifeguard provision Launch restrictions / regulations</p>	Y	8	<p><b>Signage (national guidance) - Supervise children at all times</b></p>  <p><b>Zoning (designated swim / activity / launch zone - map / beach)</b> Emergency communications (national guidance) Extend trained observer provision Extend first aid provision Extend lifeguard provision</p>
11.6	<b>Other</b>										

## Field beach safety audit package



### Appendix 1: Supporting Beach Information

- Existing Services Overview
- Emergency Services Overview
  - Existing Control Measures
- Control Measures Reference Sheet
  - UKBSAM 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	July to September 1000hrs to 1800hrs	ILS recognised Surf Beach lifeguard qualification (RLSS / SLSGB)
First aiders	RNLI	July to September 1000hrs to 1800hrs	RNLI Casualty Care
Lost children provision	RNLI	July to September 1000hrs to 1800hrs	DBS Checked and Safeguarding Training

Patrol Zone set up	Lifeguard Power craft
Small beach, no lifeguards	<p>Used for rescues and short duration work only</p> <p>1 craft used for constant patrols</p> <p>2 craft used for constant patrols</p> <p>Served by power craft from neighbouring beach</p> <p>Nearest slipway/launching site</p> <p>- 250 metres west of the Lifeguard Unit</p>
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? ✓	
Is observation affected by tides? NO	

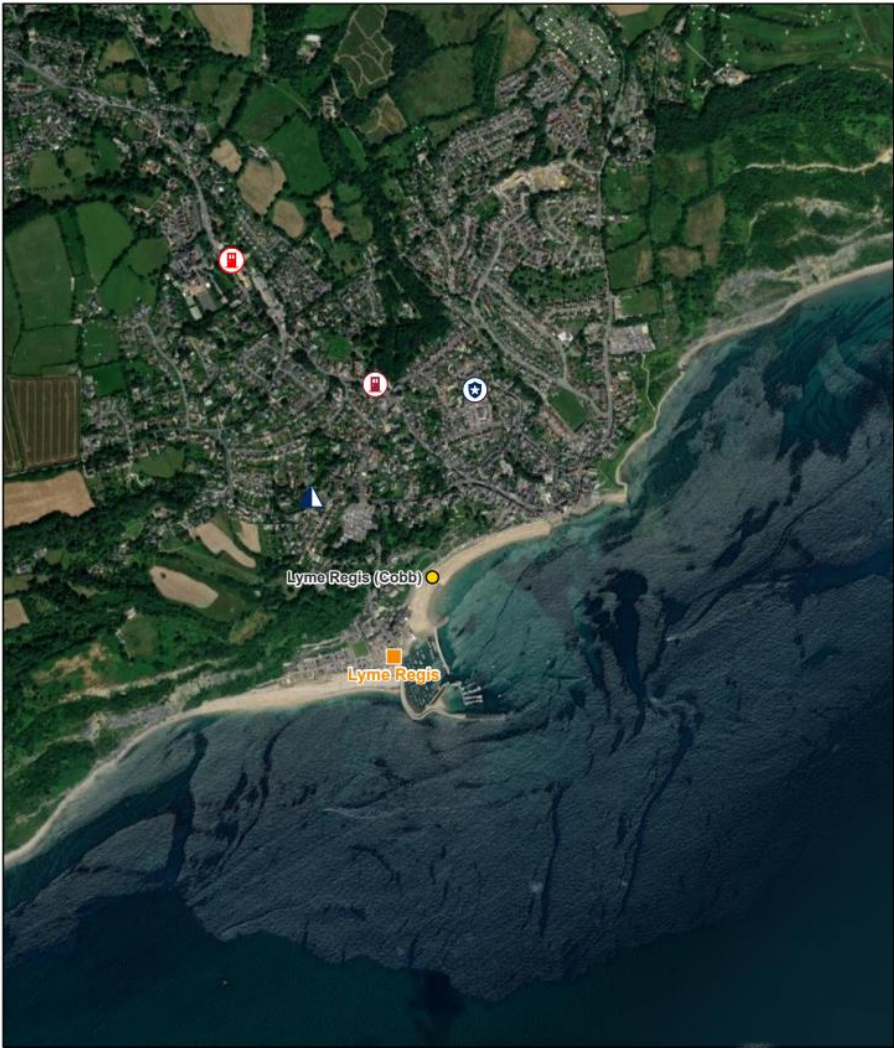
## Emergency Services Overview

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

Emergency services	Nearest facility / contact details / response time
Ambulance	<b>Bridport Ambulance Station</b> – 999, Ambulance - Category 1 target time: 7 minutes
Air ambulance	<b>Dorset and Somerset Air Ambulance</b> – 999, Ambulance - 15 minutes
Local police unit	<b>Lyme Regis Police Station</b> – 999 Police - 10 minutes
Coastguard	<b>Lyme Regis Coastguard Rescue Team</b> – 999, Coastguard – 10 minutes
Lifeboats	<b>RNLI Lyme Regis Atlantic 85 Lifeboat</b> – 999, Coastguard – 10 minutes
Other:	<b>Lyme Regis on-call Fire Station, Dorset and Wiltshire Fire and Rescue Service</b> – 999, Fire Service – 7 minutes <b>Lyme Regis Harbour Office</b> - +44(0)1297 442137 – 08:00 to 18:00 Mon – Fri, 0700 – 1900 Sat - Sun in summer season

Designated access route for emergency response vehicles:	Yes
Mobile phone coverage: Best network:	<b>Very Good</b> <b>O2</b>
Public telephone located nearby:	<b>No</b>
Designated Emergency Telephone/call point:	<b>No</b>
Public Rescue Equipment	<b>Yes</b> Type? <b>Life ring</b> Is it National Guideline Standard? <b>No</b>

Lifeguard Services Overview

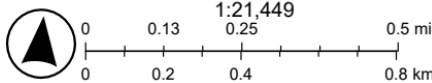


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- RNLI Lifeguard Units
- RNLI Lifeboat Station Locations
- Fire Station / Service Training
- Police (Station / Transport / Police Box / Kiosk / Training)
- Health Centre
- Coastguard Rescue / Lookout / Station
- Health Care Services / Pharmacy
- Coastguard Rescue Team





# 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		Craft	
<div>RNLI <i>On the beach</i> guide</div> <div></div> <div>In Lifeguard unit when operational</div>	✓	<div>Primary (Single)</div> <div>✓</div> <div>At Cobb Gate</div> <div>NO MAP</div>	<div>Secondary</div> <div>NONE</div>	<div>Dogs on beach – rules and map showing control areas</div> <div></div>	<div>Dog Ban / Dogs on leads / Pick up waste</div> <div>Dogs not allowed on the beach from 1st May to Sept 30<sup>th</sup> inclusive</div> <div>Public Space Protection Order (PSPOs) in place</div>
		<div>Reminder</div> <div>NONE</div>	<div>Hazards</div> <div>Prohibitions</div>	<div>Town Map – places of interest Emergency Vehicles Only Please do not feed the seagulls Seagull 'Please Don't Feed Me'</div> <div></div>	<div>Cycling / Skateboarding</div> <div>Not permitted along Marine Parade, but is permitted on Cart Road.</div>
		<div>WARNING: Strong Currents Keep inflatables tethered</div> <div>LIFEGUARD SERVICE: 10am – 6pm July – August Look for the flags on the beach, No Flags = No Lifeguards Red &amp; Yellow - Swim between the flags Red – Do not swim Orange Windsock – Do not use inflatables Call 999 in an Emergency and ask for the Coastguard</div> <div>Beware slipway and boat movement</div> <div>No launching of PWC and variants allowed</div> <div>No swimming in the harbour/No Swimming or Diving</div>	<div>No Skateboarding</div> <div>No Cycling</div> <div>Clean up after your Dog (PSPO) Keep Dogs on Leads</div> <div>No person at any time shall provide or deposit food for consumption by gulls (PSPO)</div> <div>No access to beach – follow footpath</div> <div>No Swimming in the Harbour</div> <div>CCTV in operation</div>	<div>Horses</div> <div>NONE</div>	<div>Other Control Measures (e.g. PRE)</div>
<div>Websites</div> <div><a href="http://www.lymeregis.org/beaches.aspx">http://www.lymeregis.org/beaches.aspx</a></div> <div><a href="https://www.lymeregistowncouncil.gov.uk/">https://www.lymeregistowncouncil.gov.uk/</a></div> <div><a href="https://www.dorsetcouncil.gov.uk/countryside-coast-parks/harbours-and-quays/lyme-regis-harbour.aspx">https://www.dorsetcouncil.gov.uk/countryside-coast-parks/harbours-and-quays/lyme-regis-harbour.aspx</a></div> <div><a href="https://rnl.org/find-my-nearest/lifeguarded-beaches/lyme-regis-beach">https://rnl.org/find-my-nearest/lifeguarded-beaches/lyme-regis-beach</a></div> <div><a href="https://www.weymouthtowncouncil.gov.uk/services/the-beach/">https://www.weymouthtowncouncil.gov.uk/services/the-beach/</a></div>			<div>Caution This Wall is cut off at High Tide Water quality &amp; sampling point information</div> <div></div> <div>To the beach – Please stay outside railings. Do not cross slipway Access for harbour users only No parking at any time</div>	<div>Life ring</div> <div></div> <div>✓ Non-NG</div>	
				<div>Throwline</div> <div>NONE</div>	
				<div>Emergency Communication</div> <div>NONE</div>	
				<div>Public AED</div> <div></div> <div>✓ Marine Parade and outside Harbour office</div>	



Lyme Regis - Cobb			
Beach Information		Environment	
Unique MCS ID	323.2	Average/max wave height (summer), m	0.3/0.7
Alt beach name		Average wave period (summer), s	0
Nearest town		Average wave direction (summer), deg. from N	270
County		Tide range (vertical), m	3.8
Latitude	50.72123	Submerged at high tide	yes
Longitude	-2.93831	Enclosed beach	yes
Beach length / Beach width, m	500/50	Estuary inlet/river	no/no
Beach faces angle, deg. from N	120	Geology HW/LW/ST	no/yes/yes
RNLI/other lifeguards	no/no	Rock HW/IT	no/yes
Designated bathing water		Boulder HW/IT	no/no
Car park area within 1km, m <sup>2</sup>	28098	Shingle HW/IT	yes/yes
Distance to nearest B-road, m	454	Sand HW/IT	yes/yes
<u>Risk/ranking</u> 1 (high) – 640 (low)		Mud HW/IT	no/no
Predicted Life Risk*	0.3 (0.09-1.05) – rank 86	Engineered	yes
Predicted Exposure**	102 (55-191) – rank 165	Groynes	2
Predicted Hazard level***	0.003 (0.0007-0.012) – rank 78	Breakwater	1
<u>Hazards</u> 1 (low) – 4 (high)		Pier	0
UKBSAM Hazard rating	2	Slipway	1
Rip/current type HW	2,	Average morphology	Low-tide terrace (low)
Rip/current type LW	2,	Bar type	No bar
Wave breaking HW/LW	2/2	Seawall	1
Wave energy HW/LW	2/2	Harbour or marina	1
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

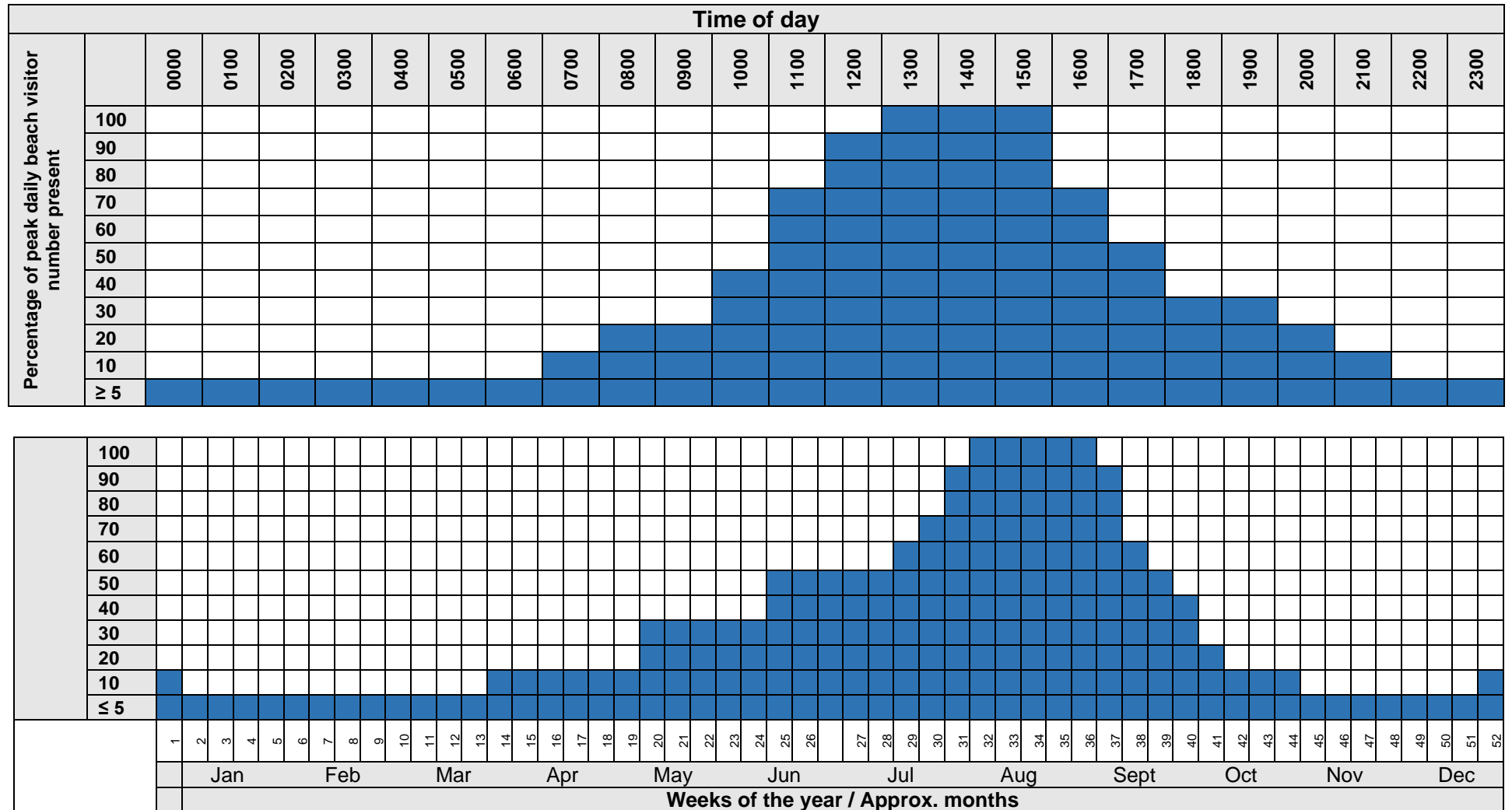
Type of facility provision	Type of activity being promoted	Visitor Profile	Ethnic Profile (if known)
No definable beach access	Scenic walks and views ✓	Family ✓	IC1 White - North European ✓
Informal access points ✓	Beach and coastal walks ✓	Young (U18) ✓	IC2 Mediterranean - South ✓
Formal access points ✓	Extreme sports ✓	Elderly ✓	European ✓
Specific beach parking ✓	- <i>Kitesurfing</i>	Local visitors ✓	IC3 Black ✓
Public transport ✓	- <i>Windsurfing</i>	National visitors ✓	IC4 Asian ✓
Shower points ✓	Family activities (beach) ✓	International visitors ✓	IC5 Chinese, Japanese or other ✓
Public toilets ✓	Family activities (water) ✓	Average visitor numbers during peak times: 3,000	(South) East Asian ✓
Changing rooms	Local tourism ✓		IC6 Arabic or North African ✓
Off-beach commercial activity ✓	National tourism ✓		IC9 Unknown ✓
On-beach commercial activity ✓	International tourism ✓		Significant high risk groups or second languages
	Organised water activities ✓		
	- <i>Pedalo/Kayak hire</i> ✓		
	- <i>Stand up paddleboard</i> ✓		

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	State award:
Resort beach ✓	Estuarine	Good ✓	- <i>Purple Flag</i>
		Excellent	- <i>Gold Best Seaside Towns for Families</i>
Vehicle access to beach ✓	Sand ✓	Alerts go to the Harbour Master at 0900 daily – information put on signage	
4x4 access to beach ✓	Pebble ✓		
	Shingle ✓		
Beach backed by road ✓	Mud		
	Multi-terrain		



## RNLI Beach Safety Assessment Report

*Risk = potential severity of a hazard and the likely exposure to it. Throughout the year as visitors come and go, exposure will vary and risk will change. The audit is a snapshot of the beach on a 'typical' summer's day with average usage. The below is a guide to allow a forecast of how risk may change throughout the season. When fewer visitors are exposed to the hazard, the risk will be reduced proportionately.*





### **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		✓			Increase in distance and winter swimmers and stand-up paddleboard hire
Uncontrolled risk taking behaviour	No	✓				
Aggressive / violent behaviour	No	✓				
Criminal / Antisocial behaviour	Yes		✓			ASB behaviour from more people causing damage to property in the gardens

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

### **Communication and Consultation**

## RNLI Beach Safety Assessment Report

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Stakeholders involved in beach safety assessment process:

**Stakeholders:**

RNLI  
Lyme Regis Town Council  
Dorset Council

**Working group details:**

Is there a coastal safety working group (or similar) in existence?

Yes

If no working group is in place, will a working group be formed?

Lyme Regis Town Centre will be invited to attend the National Water Safety Forum

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

Harbour Consultative Group – Dorset Council

**Members:**

The Consultative Group consists of twelve representatives invited from various organisations and harbour interest groups including Weymouth Harbour and Bridport Harbour.

<https://www.lymeregisharbour.co.uk/harbour-consultative-group/>

**Recording and reporting of incidents:**

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

Yes

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

N/A

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

RNLI report forms

## RNLI Beach Safety Assessment Report

### Photograph reference sheet

#	Photo	Comment
1	Beach profile	Front beach facing north. Sandy section with an adjacent shingle beach towards Cobb gate
2	Harbour wall	Looking towards the Aquarium and Harbour entrance
3	Signage and PRE	Positioned at the end of the Harbour wall, also known as North Wall
4	Rock groyne	At the start of North Wall
5	Signage and PRE on harbour wall	Signs stating - Danger shallow water – Strictly no swimming or personal access to the water Caution – This wall will be cut off at high tide
6	National Guidance signage	Primary signage placed at the entrance to the beach at Cobb Gate – printed front and back
7	PSPO Signage	Public Spaces Protection Order sign at harbour car park
8	Dog Signage	Information for dog owners at entrance to sandy section of beach
9	Public defibrillator	Placed outside of Lyme Regis RNLI Lifeboat station next door to the Harbour office
10	Prohibition signage	Signage placed at the entrance to the Harbour slipway
11	PRE on promenade	Life ring PRE placed on railings at promenade behind sandy section of the beach
12	PRE on promenade	Life ring PRE placed at the entrance to the sandy section of the beach. Several life rings positioned along promenade.
13	Water quality signage	Signage on railings. Updated by Harbour office.
14	Various	Photo shows dog waste bag point, beach toys recycling, signage related to seagulls and a wheelchair accessible section of the beach
15	Various	Photo shows kayak hire, information for dog owners and a locked box containing first aid supplies and a throwline for use by local swim group under guidance of the local RNLI Water Safety Officers.
16	Public defibrillator	Public defibrillator located on marine parade outside the Jubilee Pavilion
17	Marine Parade	Facing down towards the Jubilee Pavilion and National Trust Shop
18	Gardens	View of beachfront from Langmoor and Lister Gardens looking towards Cobb Gate end of beach
19	Langmoor and Lister Gardens	View of beachfront from the gardens looking towards harbour end of beach. Viewpoint of concrete rainwater outflow in the centre of the beach.
20	Access	Access points to the beachfront from the gardens above Swim restaurant to Marine Parade and Cart Road
21	Access	Emergency vehicle access to Cart Road
22	Shower	Fresh water shower and foot rinse on sandy section of beach

Photographs 1 and 2



### Photographs 3 and 4





Photographs 5 and 6





### Photographs 7 and 8



Photographs 9 and 10





Photographs 11 and 12



Photographs 13 and 14





Photographs 15 and 16



Photographs 17 and 18





Photographs 19 and 20



Photographs 21 and 22





## Field beach safety assessment package



### Appendix 2: Risk Assessment Theory

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

### **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:

**Conduct a beach risk audit and prepare a report:**

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:

- *Safety on beaches, Operational guidelines* (RoSPA, 2004)
- *A guide to beach safety signs, flags and symbols* (RNLI, Version 2, 2007)
- *A guide to coastal public rescue equipment* (RNLI, 2007)
- *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:

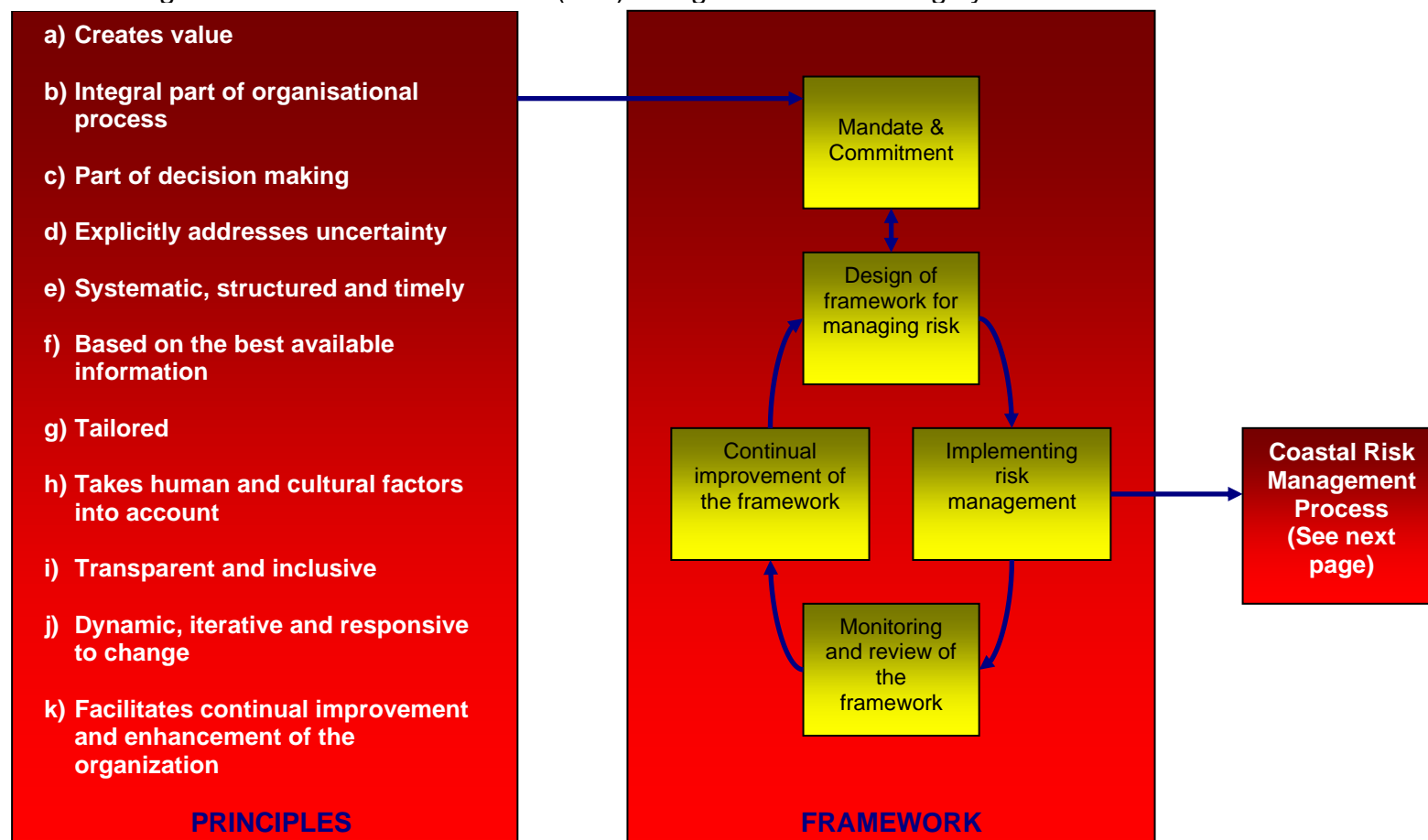
- Inspection of the coastal environment and adjoining associated sites
- Interviews with selected staff.

**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.

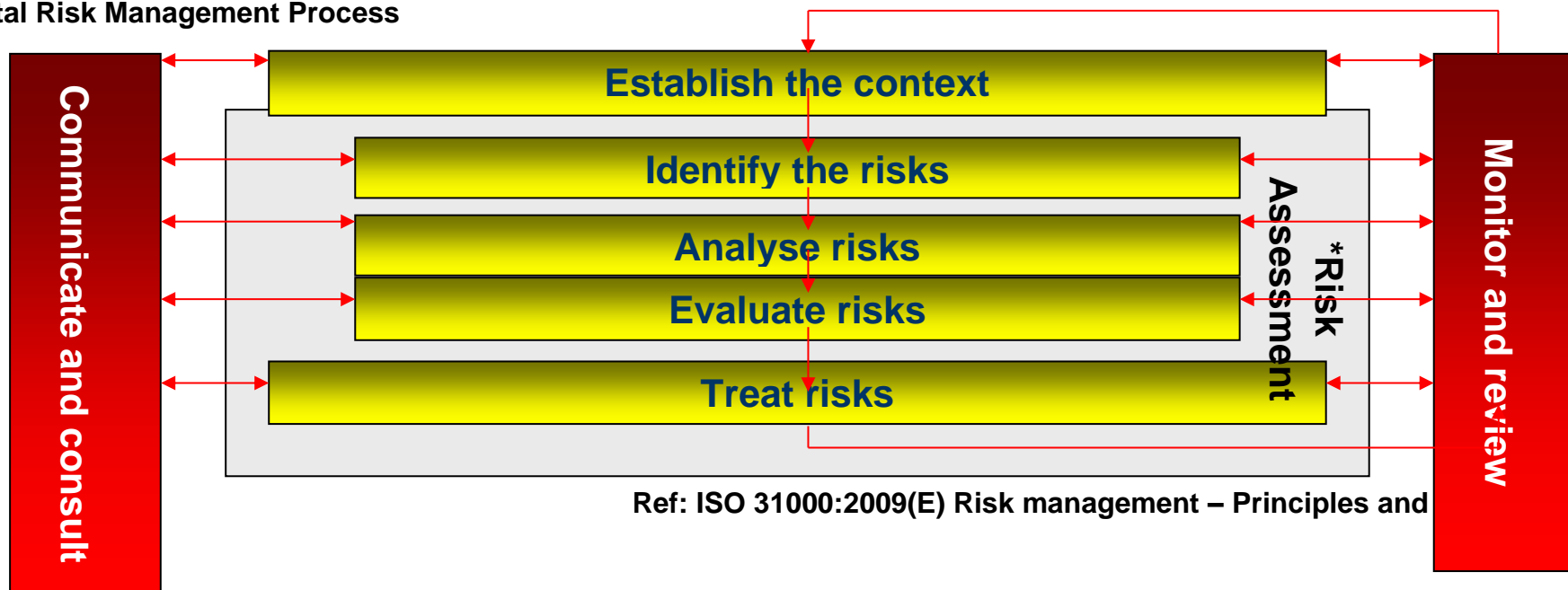
## **ISO Risk Assessment Principles and Practice**

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



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

Countermeasure	Control measures	Applications	Residual risk factors
<b>Denial of access and/or provision of warnings</b>	Barriers	Access barriers	<ul style="list-style-type: none"> <li>Avoids or breaches barriers</li> <li>Barriers creating a hazard</li> </ul>
	Signage	<ul style="list-style-type: none"> <li>Information signage</li> <li>Warning signage</li> <li>Prohibition signage</li> </ul>	<ul style="list-style-type: none"> <li>Did not see signage or did not understand signage</li> <li>Does not interpret hazard as being a risk to themselves</li> <li>Accepts risk</li> </ul>



## RNLI Beach Safety Assessment Report

	Byelaw development	<ul style="list-style-type: none"> <li>• Formal regulatory arrangements</li> <li>• Recognition of lifeguard services and other services</li> </ul>	Inability to 'police' regulations
--	--------------------	--	-----------------------------------

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

## RNLI Beach Safety Assessment Report

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

## Field beach safety assessment package



### Appendix 3: Glossary

- RNLI Glossary
- University of Plymouth Glossary

## RNLi Glossary

### At Risk Groups

<b>Males</b>	Males feature prominently in coastal incident statistics. This is usually attributed to a greater tendency to participate in risk taking activity.
<b>Very young</b>	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.
<b>16–35 year olds</b>	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.
<b>Elderly</b>	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.
<b>Tourists/visitors/migrants (TVM)</b>	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.
<b>Pre-existing medical conditions</b>	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.
<b>Physically unfit</b>	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.
<b>Non-swimmers</b>	Any non-swimmer is at risk in the water. Most non-swimmers enter deep water accidentally.
<b>Poor or weak swimmers</b>	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.
<b>Employees</b>	All employers have a legal responsibility to look after the health and welfare of their employees.

## Perceived Behaviours - Definitions

BEHAVIOUR	CHARACTERISTICS
<b>Alcohol use</b>	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.
<b>Drug use</b>	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.
<b>Controlled risk taking behaviour</b>	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.
<b>Uncontrolled risk taking behaviour</b>	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.
<b>Aggressive / Violent Behaviour</b>	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.
<b>Criminal / Antisocial Behaviour</b>	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.

## 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%

### General Beach Observations – Type of Built Environment

#### Remote Rural

**Descriptor:** Remote Rural beaches are isolated and often difficult to access, requiring a significant journey from urban centres. These beaches are usually situated in sparsely populated areas with little to no development. Facilities and amenities are minimal or non-existent, providing a pristine natural environment. These locations are ideal for those seeking solitude and an untouched natural setting.

#### Rural Accessible Coast

**Descriptor:** Rural Accessible Coast beaches are located in rural areas but are more easily accessible than remote rural beaches. These beaches can be reached via well-maintained roads and may have some basic amenities such as restrooms, picnic areas, and parking facilities. The surrounding areas might have small communities or villages, providing a tranquil setting with a touch of local culture.

#### Coastal Rural Resort

**Descriptor:** Coastal Rural Resort beaches are situated in rural areas but have been developed into tourist destinations. These beaches often feature resort facilities, including hotels, restaurants, and recreational activities. They balance natural beauty with comfort and convenience, attracting visitors who seek a relaxing vacation with access to amenities while still enjoying a scenic, less crowded environment.

#### Metropolitan/Urban Beach

**Descriptor:** Metropolitan/Urban beaches are located within or near large cities, providing easy access for city residents and tourists. These beaches are highly developed with extensive amenities, such as promenades, restaurants, shops, and entertainment options. They are often crowded and bustling with activity, catering to those who enjoy a lively, vibrant beach experience close to urban conveniences.

#### Resort Beach

**Descriptor:** Resort beaches are highly developed coastal areas specifically designed for tourism. These beaches are often part of larger resort complexes that offer a wide range of services and amenities, including accommodation, dining, water sports, and organized activities. Resort beaches are well maintained and often have awards.

## **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.

### 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.

### 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.

**Embaymentisation:** 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.