

# MARINE MAMMAL RECORDING FORM - COVER PAGE

Authorisation Number	Country	Ship/ platform name
Client	Contractor	<b>Survey type</b> <div style="margin-left: 20px; margin-top: 10px;"> <input type="checkbox"/> site      <input type="checkbox"/> 4C  <input type="checkbox"/> 2D      <input type="checkbox"/> VSP  <input type="checkbox"/> 3D      <input type="checkbox"/> WAZ  <input type="checkbox"/> 4D      <input type="checkbox"/> other  <input type="checkbox"/> OBC         </div>
Start date	End date	

Number of source vessels	Type of source (e.g. airguns)	Number of airguns (only if airguns used)	Source volume (cu. in.)
Source depth (metres)	Frequency (Hz)	Intensity (dB re. 1µPa or bar metres)	Shot point interval (seconds)
<b>Method of soft start</b> <div style="margin-left: 20px;"> <input type="checkbox"/> increase number of guns      <input type="checkbox"/> increase pressure (where permitted)      <input type="checkbox"/> increase frequency (where permitted)      <input type="checkbox"/> other         </div>			

Visual monitoring equipment used (e.g. binoculars, big eyes, etc.)	Magnification of optical equipment (e.g. binoculars)	Height of eye (metres)	How was distance of animals estimated?
			<input type="checkbox"/> by eye <input type="checkbox"/> with laser rangefinder <input type="checkbox"/> with rangefinder stick/ calipers <input type="checkbox"/> with reticle binoculars <input type="checkbox"/> by relating to object at known distance <input type="checkbox"/> other
Number of dedicated MMOs	<b>Training of MMOs</b> <div style="margin-left: 20px;"> <input type="checkbox"/> JNCC approved MMO induction course for UK waters  <input type="checkbox"/> PSO training course for the Gulf of Mexico  <input type="checkbox"/> MMO training course for Irish waters  <input type="checkbox"/> other  <input type="checkbox"/> none         </div>		

Was PAM used?	Number of PAM operators	
<input type="checkbox"/> yes <input type="checkbox"/> no		
<b>Description of PAM equipment</b> <div style="height: 100px; border: 1px solid black; margin-top: 10px;"></div>		
Range of PAM hydrophones from airguns (metres)	Bearing of PAM hydrophones from airguns (relative to direction of travel)	Depth of PAM hydrophones (metres)

# MARINE MAMMAL RECORDING FORM - SIGHTINGS

Authorisation Number	Ship/ platform name		Sighting number (start at 1 for first sighting of survey)	Acoustic detection number (start at 500 for first detection of survey)
Date			Time at start of encounter (UTC, 24hr clock)	Time at end of encounter (UTC, 24hr clock)
Were animals detected visually and/ or acoustically?	<b>How were the animals first detected?</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> visually detected by observer keeping a continuous watch</li> <li><input type="checkbox"/> visually spotted incidentally by observer or someone else</li> <li><input type="checkbox"/> acoustically detected by PAM</li> <li><input type="checkbox"/> both visually and acoustically before operators/ observers informed each other</li> </ul>			
Observer's/ operator's name	Position (latitude and longitude)			Water depth (metres)
Species/ species group		<b>Description</b> (include features such as overall size; shape of head; colour and pattern; size, shape and position of dorsal fin; height, direction and shape of blow)		
Bearing to animal (when first seen or heard)	Range to animal (when first seen or heard) (metres)			
Total number	Number of adults (visual sightings only)		Number of calves (visual sightings only)	
Behaviour (visual sightings only)				
Direction of travel (relative to ship)			Direction of travel (compass points)	
<ul style="list-style-type: none"> <li><input type="checkbox"/> towards ship</li> <li><input type="checkbox"/> away from ship</li> <li><input type="checkbox"/> parallel to ship in same direction as ship</li> <li><input type="checkbox"/> travelling in opposite direction to ship</li> </ul>			<ul style="list-style-type: none"> <li><input type="checkbox"/> crossing ahead of ship</li> <li><input type="checkbox"/> variable</li> <li><input type="checkbox"/> milling</li> <li><input type="checkbox"/> other</li> </ul>	
<ul style="list-style-type: none"> <li><input type="checkbox"/> N</li> <li><input type="checkbox"/> S</li> <li><input type="checkbox"/> NE</li> <li><input type="checkbox"/> SW</li> <li><input type="checkbox"/> E</li> <li><input type="checkbox"/> W</li> <li><input type="checkbox"/> SE</li> <li><input type="checkbox"/> NW</li> <li><input type="checkbox"/> variable</li> </ul>				
Airgun (or other source) activity when animals first detected	Airgun (or other source) activity when animals last detected		Closest distance of animals from airguns (or other source) (metres)	Time of closest approach (UTC, 24hr clock)
<ul style="list-style-type: none"> <li><input type="checkbox"/> full power</li> <li><input type="checkbox"/> not firing</li> <li><input type="checkbox"/> soft start</li> <li><input type="checkbox"/> reduced power (other than soft start)</li> </ul>			<ul style="list-style-type: none"> <li><input type="checkbox"/> full power</li> <li><input type="checkbox"/> not firing</li> <li><input type="checkbox"/> soft start</li> <li><input type="checkbox"/> reduced power (other than soft start)</li> </ul>	
<b>If seen during soft start give:</b> <b>First distance    Closest distance    Last distance</b> <span style="float: right;">during soft start (metres)</span>				
What action was taken? (according to requirements of guidelines/ regulations in country concerned)			Length of power-down and/ or shut-down (if relevant) (length of time until subsequent soft start, in minutes)	Estimated loss of production (if relevant) due to mitigating actions (km)
<ul style="list-style-type: none"> <li><input type="checkbox"/> none required</li> <li><input type="checkbox"/> delay start of firing</li> <li><input type="checkbox"/> shut-down of active source</li> <li><input type="checkbox"/> power-down of active source</li> <li><input type="checkbox"/> power-down then shut-down of active source</li> </ul>				