

## MARINE MAMMAL RECORDING FORM - COVER PAGE

<b>Regulatory reference number</b> (e.g. DECC no., BOEM permit no., OCS lease no., etc.)	<b>Country</b>	<b>Location</b>	<b>Ship/ platform name</b>
<b>Client</b>	<b>Contractor</b>	<b>Survey type</b>	
<b>Start date</b>	<b>End date</b>	<input type="checkbox"/> site <input type="checkbox"/> VSP <input type="checkbox"/> 2D <input type="checkbox"/> WAZ <input type="checkbox"/> 3D <input type="checkbox"/> piling <input type="checkbox"/> 4D <input type="checkbox"/> explosives <input type="checkbox"/> OBC <input type="checkbox"/> other <input type="checkbox"/> 4C	

<b>Number of source vessels</b>	<b>Type of source</b> (e.g. airguns)	<b>Number of airguns</b> (only if airguns used)	<b>Source volume</b> (cu. in.)
<b>Source depth</b> (metres)	<b>Frequency</b> (range in which peak energy is emitted, in Hz)	<b>Intensity</b> (primary peak-to-peak amplitude in dB re. 1µPa or bar metres)	<b>Shot point interval</b> (metres)
<b>Method of soft start</b>			
<input type="checkbox"/> increase number of guns <input type="checkbox"/> increase frequency (where permitted) <input type="checkbox"/> increase pressure (where permitted) <input type="checkbox"/> increase number and frequency <input type="checkbox"/> increase number and pressure <input type="checkbox"/> other			

<b>Visual monitoring equipment used</b> (e.g. binoculars, big eyes, etc.)	<b>Magnification of optical equipment</b> (e.g. binoculars)	<b>Height of eye above water surface</b> (metres)	<b>How was distance of animals estimated?</b>
			<input type="checkbox"/> by eye <input type="checkbox"/> with laser rangefinder <input type="checkbox"/> with rangefinder stick/ callipers <input type="checkbox"/> with reticle binoculars <input type="checkbox"/> by relating to object at known distance <input type="checkbox"/> other
<b>Number of dedicated MMOs</b>		<b>Training of MMOs</b>	
		<input type="checkbox"/> JNCC approved MMO training 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"/> MMO training course for New Zealand waters <input type="checkbox"/> other <input type="checkbox"/> none	

<b>Was PAM used?</b>	<b>Number of PAM operators</b>	
<input type="checkbox"/> yes <input type="checkbox"/> no		
<b>Description of PAM equipment</b>		
<b>Range of PAM hydrophones from airguns</b> (metres)	<b>Bearing of PAM hydrophones from airguns</b> (relative to direction of travel)	<b>Depth of PAM hydrophones</b> (metres)





## MARINE MAMMAL RECORDING FORM - SIGHTINGS

<b>Regulatory reference number</b> <small>(e.g. DECC no., BOEM permit no., OCS lease no., etc.)</small>	<b>Ship/ platform name</b>	<b>Sighting number</b> <small>(start at 1 for first sighting of survey)</small>	<b>Acoustic detection number</b> <small>(start at 500 for first detection of survey)</small>	
<b>Date</b>		<b>Time at start of encounter</b> <small>(UTC, 24hr clock)</small>	<b>Time at end of encounter</b> <small>(UTC, 24hr clock)</small>	
<b>Were animals detected visually and/ or acoustically?</b>  <input type="checkbox"/> visual <input type="checkbox"/> acoustic <input type="checkbox"/> both	<b>How were the animals first detected?</b>  <input type="checkbox"/> visually detected by observer keeping a continuous watch <input type="checkbox"/> visually spotted incidentally by observer or someone else <input type="checkbox"/> acoustically detected by PAM <input type="checkbox"/> both visually and acoustically before operators/ observers informed each other			
<b>Observer's/ operator's name</b>	<b>Position</b> <small>(latitude and longitude)</small>		<b>Water depth</b> <small>(metres)</small>	
<b>Species/ species group</b>		<b>Description</b> <small>(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; characteristics of whistles/ clicks)</small>		
<b>Bearing to animal</b> <small>(when first seen or heard) (bearing from true north)</small>	<b>Range to animal</b> <small>(when first seen or heard) (metres)</small>			
<b>Total number</b>	<b>Number of adults</b> <small>(visual sightings only)</small>	<b>Number of juveniles</b> <small>(visual sightings only)</small>	<b>Number of calves</b> <small>(visual sightings only)</small>	<b>Photograph taken</b>  <input type="checkbox"/> yes <input type="checkbox"/> no
<b>Behaviour</b> <small>(visual sightings only)</small>				
<b>Direction of travel</b> <small>(relative to ship)</small>  <input type="checkbox"/> towards ship <input type="checkbox"/> away from ship <input type="checkbox"/> parallel to ship in same direction as ship <input type="checkbox"/> parallel to opposite direction to ship <input type="checkbox"/> crossing perpendicular ahead of ship			<b>Direction of travel</b> <small>(compass points)</small>  <input type="checkbox"/> N <input type="checkbox"/> W <input type="checkbox"/> NE <input type="checkbox"/> NW <input type="checkbox"/> E <input type="checkbox"/> variable <input type="checkbox"/> SE <input type="checkbox"/> stationary <input type="checkbox"/> S <input type="checkbox"/> unknown <input type="checkbox"/> SW	
<b>Airgun (or other source) activity when animals first detected</b>  <input type="checkbox"/> full power <input type="checkbox"/> not firing <input type="checkbox"/> soft start <input type="checkbox"/> reduced power <small>(other than soft start)</small>	<b>Airgun (or other source) activity when animals last detected</b>  <input type="checkbox"/> full power <input type="checkbox"/> not firing <input type="checkbox"/> soft start <input type="checkbox"/> reduced power <small>(other than soft start)</small>	<b>Time animals entered mitigation/ exclusion zone</b> <small>(UTC, 24hr clock)</small>	<b>Time animals left mitigation/ exclusion zone</b> <small>(UTC, 24hr clock)</small>	
<b>Closest distance of animals from airguns (or other source)</b> <small>(metres)</small>		<b>Time of closest approach</b> <small>(UTC, 24hr clock)</small>		
<b>If seen during soft start give:</b>  <b>First distance</b>  <b>Closest distance</b>  <b>Last distance</b> <small>during soft start (metres)</small>	<b>What action was taken?</b> <small>(according to requirements of guidelines/ regulations in country concerned)</small>  <input type="checkbox"/> none required <input type="checkbox"/> delay start of firing <input type="checkbox"/> shut-down of active source <input type="checkbox"/> power-down of active source <input type="checkbox"/> power-down then shut-down of active source	<b>Length of power-down and/ or shut-down</b> <small>(if relevant) (length of time until subsequent soft start, in minutes)</small>	<b>Estimated loss of production (if relevant) due to mitigating actions</b> <small>(km)</small>	