

## EXERCISE JOINT WARRIOR 241

### THE ENVIRONMENTAL AND SUSTAINABILITY IMPACT STATEMENT FOR ACTIVITY WITHIN THE UK EEZ

#### EXERCISE JOINT WARRIOR 241 – 24 February 2024 – 4 March 2024

1. **Introduction.** Exercise Joint Warrior (JW) will take places in waters to the east and north of the UK and then proceed north into the Norwegian Sea during the period 24 February – 4 March. More than forty ships and aircraft will be participating within the exercises which will be controlled from by an Exercise Control organisation located in Norway. This impact assessment is a live document and is designed to cover directed maritime activity for the duration of JW programmed serials and events within the UK EEZ. Activity outside of the UK will be subject to Norwegian regulations<sup>1</sup>. It is updated when required following a change in the programme.

2. This impact statement covers JW241 activity within the UK EEZ and is written in compliance with:

Wildlife and Countryside Act 1981 (as amended)  
The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended)  
Nature Conservation (Scotland) Act 2004  
Marine and Coastal Access Act 2009 (as amended)  
The Marine (Scotland) Act 2010  
The Conservation of Habitats and Species Regulations 2017  
The Conservation of Offshore Marine Habitats and Species Regulations 2017

3. **Activity/Location.** This major multi-ship exercise involves forces from invited nations and covers all forms of the following:

- Air defence
- Gunnery (including shore bombardment)
- Anti-submarine warfare
- Surface warfare
- Fixed wing/helicopter flying operations
- Replenishment at sea

#### Impact Assessment

4. Having reviewed all planned activity against the Military Activity Environmental Guidelines (attached) it has been assessed that following standard operational mitigation and the mitigation stated below there is no environmental impact greater than '**MINOR**' throughout the JW Exercise.

#### Joint Warrior 241 – Environmental Risk

5. The Environmental Risk section of the Exercise Plan (EXPLAN) sets out individual and collective environmental responsibilities which will be adhered to throughout the exercise. The UK areas section of this document reflects and supports the environmental

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<sup>1</sup> UK units will be subject UK or Norwegian regulations when operating outside the UK EEZ, the more restrictive regulations are to be followed

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SOPs in Naval reference documents BRd 10, BRd 167, BRd 5063 and BRd 4985. The general principle being that, for the duration of this exercise, **environmental safety is to take priority over the completion of directed training activities**. The specific intent is that all activities shall be governed by the need to adequately protect the environment in the open ocean and within designated Marine Protected Areas (MPA).

6. Cape Wrath Range will be the only area in which shore bombardment will be exercised during JW241 and environmental mitigation measures are contained in the Defence Infrastructure Organisation (DIO) Range Standing Orders for Cape Wrath.

### Mitigation

7. Where required, the mitigation to be imposed on JW activities is set out in detail in Tables 1 and 2 below. The main rules for each Environmental Theme are:

- a. **Air Operations.** Throughout the exercise FW and HELLO low flying in the UK will be in accordance with the MOD Low Flying Handbook.
- b. **Inshore Operations** – no inshore operations are programmed to take place.
- c. **Gunnery**
  - i) Medium calibre gunnery will take place at Cape Wrath Range, all firings will be iaw DIO Range Standing Orders which include environmental mitigation measures.
  - ii) All other gunnery will take place outside of maritime protected areas with the exception of those areas designated for the protection of benthic seabed features entirely at depths greater than 20m.

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### d. Sonar

i) All sonar operations within the UK EEZ will comply with the RN command guidance in BRd 4985 Vol 5<sup>2</sup> and NATO guidance MC0547<sup>3</sup> for both nations waters.

ii) To keep the risk to marine mammals as “low<sup>4</sup>” individual units are to limit their active sonar transmissions to the lowest source level as follows

(1) 211dB 1µ Pa @ 1m for 1 second pulse length, maximum of 6 pulses per minute, transmissions of up to 8 hours in any 24-hour period.

OR

(2) A source level where PTS and TTS are within the Mitigation Action Zone which is within 2000yards of the source unit<sup>5</sup>. Transmissions are limited to a maximum of 6 pulses per minute and up to 8 hours in any 24-hour period.

OR

(3) In accordance with national guidelines

iii) UK units may alter sonar parameters provided a S2117 assesement has been undertaken. In all cases the risk level is to remain low.

iv) Outside maritime protected areas for marine mamals UK units MAY increase their sources level to “medium” with additional mitigation which the Exercise Director must approve prior to any increase<sup>6</sup>.

v) Marine Mammal Observers (MMO) will be employed on deck a minimum of 60 minutes prior to, during and 60 minutes after any transmission on active sonar (Reduced to 30 minutes if depth of water is less than 200m). MMOs are to visually search for marine mammals. As well as the visual monitoring all units are to use passive acoustic means by their sonar outfit to detect detect marine mammals.

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<sup>2</sup> UK units will conduct at S2117 Sonar Risk Assessment, foreign units will use their own national procedure to conduct a sonar risk assessment as they do not have access to S2117.

<sup>3</sup> MC0547 states that only the lowest power levels should bea used to achieve the training aim.

<sup>4</sup> Permanent Threshold Shift (PTS) is irreversible physiological damage caused by rupture of the hair cells of the inner ear, resulting in a permanent loss of hearing sensitivity. The consequence of this is a permanent shift in the threshold of hearing of the receptor.

TTS is a temporary loss in the efficiency of the mechanical-chemical electrical transfer function in the inner ear, resulting in a temporary loss of hearing sensitivity. The consequence of this is a temporary shift in the threshold of hearing of the receptor.

Low risk level is when PTS and TTS are within 2000 yards.

<sup>5</sup> A MAZ is a fixed monitoring range of 2000 yards around the sound source unit which the surveillance effort can, under normal conditions, be reasonably expected to detect the presence of marine mammal activity and therefore initiate appropriate mitigation action.

<sup>6</sup> Guidance in BRd4985 Vol 5 will be followed. Additional mitigation will take account of visibility, daylight and number of aircraft airborne.

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- vi) For maritime patrol aircraft - if the area is passively acoustically monitored by a field of sonar buoys which is large enough such that all sonar transmissions can be monitored within the field then the area need only be monitored for 30 minutes.
- vii) Ramp up procedures will be used at the start of any transmission by all sonar devices capable of doing so.
- viii) If marine mammals are observed within the mitigation action zone (MAZ) for a sonar prior to transmission, a delay of 60 minutes will be implemented before transmissions are allowed. Similarly, if sonar is shut down as a result of detecting a marine mammal during transmissions a period of 60 minutes will be allowed from last sighting before retransmitting. This is reduced to 30 minutes in waters of less than 200m.
- ix) Sonar transmissions East of the Pentland Firth and south of 59 00N are only authorised for Maritime Patrol Helicopters, prior to any sonar transmissions their own S2117 Sonar Risk Assessment is to be completed.
- x) The MoD considers waters from the coast to the 50M contour to be a Human Dive Zone (HDZ) in view of the increased likelihood of human diving activity. No anti-submarine warfare sonar activity is permitted within a HDZ. Furthermore, if operating outside a designated HDZ adjacent to the 50M contour, a buffer zone equal to the maximum stand-off range of the sonar in use is applied.

### **Seabed and Sediments**

8. Throughout the exercise all units will comply with the rules set out in the attached Military Activity Environmental Guidelines for the protection of the seabed.

### **Biodiversity and Nature**

9. Throughout the exercise all units will comply with the rules set out in Tables 1 and 2 below.

10. No disruptive manoeuvres which could disturb the seabed or adjacent wildlife will take place within 0.5 miles of designated MPA.

11. Precautions to prevent harassment of seals will be employed throughout JW areas wherever seals are found ashore.

12. For mitigation of noise disruption see Para 7 above.

### **Historic Environment and Wrecks**

13. It is assessed that JW241 will have NEGLIGIBLE impact on the historic environment and wrecks. However, all units will avoid anchoring which has the potential to disrupt or damage known charted wreck sites.

### **Other Issues**

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14. The impact on Oslo/Paris Convention for the Protection of the Marine Environment in the NE Atlantic 1992 (OSPAR) and The Ramsar Iran Convention for the Conservation of Wetlands 1976 (RAMSAR) sites is assessed as no greater than **MINOR**. Mitigation measures listed above apply equally to these sites which are included in the MPAs which have been identified as possibly being affected.

15. **Sites of Special Scientific Interest (SSSIs)**. Where activity takes place on DIO managed MOD owned estate participants will abide by site specific range orders which take account of SSSIs. Overall, taking account of standard operating procedures and the additional mitigations covered here, the impact of JW activities on adjacent SSSIs is assessed as **NEGLIGIBLE**.

### **Actions by Planning Staff**

16. JTEPS will remotely or in person brief all group and individual unit commanders and direct them to implement the listed mitigation whilst operating in the UK EEZ. The participants will also receive a copy of this assessment and the Exercise Director's Environmental Command Guidance outlining the key environmental mitigation in order to ensure they abide by the actions listed in this document.

17. This assessment forms part of the JW241 planning process and will be updated to reflect any pertinent changes from that detailed in this document in the exercise activity or location. Before assigning any mission or task to subordinate Commanders/Units, the lead planner will be advised on the environmental guidelines for the intended areas.

18. Nothing within this statement relieves the Commanding Officers of their obligations to comply with legislation and the RN Navy Command environmental guidelines for activities they undertake.

19. This document will be reviewed by JTEPS post exercise.

20. Archive this assessment for review and inclusion in future JW exercise planning.

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TABLE 1

MITIGATION OF MILITARY ACTIVITY BY ACTIVITY TYPE AND ASSOCIATED MPA

POST MITIGATION ENVIRONMENTAL IMPACT LEVELS:

1. **Negligible** = No likelihood of any measurable disturbance or harm.
2. **Minor** = Low likelihood of localised or temporary disturbance or harm.
3. **Significant** = Residual risk of significant disturbance or harm.

Having reviewed all planned activity against the Military Activity Environmental Guidelines it has been assessed that following standard operational mitigation and the mitigation stated below there is no environmental impact greater than ‘**MINOR**’ throughout the JW Exercise.

Activity	Lead JTEPS Planner	MPAs which may be affected requiring control measures	Mitigation Measures
ASW	SO2 UW	10458 West Shetland Shelf 10451 North West Orkney 10444 Central Fladen UK9002091 Fair Isle UK9002511 Sumburgh Head UK9020331 Seas off Foula 10446 Faroe Shetland Sponge Belt 10450 North-east Faroe-Shetland Channel UK9001011 North Rona and Sula Sgeir (SPA) UK0012696 North Rona SAC	For active sonar transmissions in addition to Environmental Guidelines the following specific mitigation is to be applied:  -To keep the risk to marine mammals as “low” individual units are to limit their active sonar transmissions to the lowest source level as follows  (1) 211dB 1µ Pa @ 1m for 1 second pulse length, maximum of 6 pulses per minute, transmissions of up to 8 hours in any 24-hour period.  OR  (2) A source level where PTS and TTS are within the Mitigation Action Zone which is within 2000yards of the source unit . Transmissions are limited to a maximum of 6 pulses per minute and up to 8 hours in any 24-hour period.  OR  (3) In accordance with national guidelines

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Activity	Lead JTEPS Planner	MPAs which may be affected requiring control measures	Mitigation Measures
			<ul style="list-style-type: none"> <li>- MMO are to be employed on deck 60 minutes prior to, during and 60 minutes after any transmission on active sonar. This maybe reduced to 30 minutes in waters of 200m or less.</li> <li>- All means available are to be used to detect marine mammals.</li> <li>- All capable sonar devices will utilise ramp up procedures at the start of any transmission.</li> <li>- If marine mammals are observed within the MAZ for a sonar prior to transmission, a delay of 60 minutes will be implemented before transmissions are allowed. Similarly, if sonar is shut down as a result of detecting a marine mammal during transmissions, a period of 60 minutes will be allowed from last sighting before retransmitting. This time is reduced to 30 minutes if the area is passively acoustically monitored by sonar buoys or in waters of 200m or less.</li> </ul>
AAW	SO2 AAW	UK0030395 Southern North Sea SAC UK0030358 North Norfolk Sandbanks and Saturn Reef SAC UKMCZ0026 Swallow Sand MCZ 10447 Firth of Forth Banks Complex Outer Firth of Forth and St Andrews Bay Complex UK9020316 UK9004171 Forth Islands	Nil in addition to Environmental Guidelines.
Rotary and fixed wing flying	ALL	All areas	Aircrew are to remain vigilant for aggregations of marine mammals and seals hauled and avoid hovering or repeated low level overflight in their vicinity.  At all times disturbance must be avoided and seals must never be approached by personnel due to their potential aggressive behaviour.  Aircraft are to adhere to the Low Flying System which includes designated areas which must be avoided.
Replenishment At Sea	SO2 UW	All areas	Nil in addition to Environmental Guidelines.

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Activity	Lead JTEPS Planner	MPAs which may be affected requiring control measures	Mitigation Measures
Gunnery	SO2 UW	UK 0030108 Cape Wrath SAC UK 9001231 Cape Wrath SPA UK003030386 Solan Bank Reef	Gunnery at Cape Wrath will be in accordance with Range Orders, which include environmental mitigation measures.
Anchoring	ALL		Nil in addition to Environmental Guidelines.



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TABLE 2

MARITIME PROTECTED AREAS IN PROXIMITY TO MILITARY ACTIVITY AND ASSOCIATED ENVIRONMENTAL GUIDELINES

Group 1

Maritime Protected Areas designated primarily for the protection of birds including Specially Protected Area and RAMSAR sites (RAMSAR site refers to a wetland site of international importance)

MPA DETAILS	ENVIRONMENTAL ACTIVITY GUIDELINES
<p>UK9002091 Fair Isle UK9002511 Sumburgh Head UK9020331 Seas off Foula UK9001011 North Rona and Sula Sgeir (SPA) Outer Firth of Forth and St Andrews Bay Complex UK9020316 UK9004171 Forth Islands</p>	<p style="text-align: center;"><b>RESTRICTED ACTIVITIES</b></p> <p><b>AIR:</b> 1. No activity involving air launch of live or inert munitions should take place inside or within 500 yards of the MPAs unless such firings are programmed with an established MOD air weapons range when local range orders are to be observed.</p> <p><b>ANTI-AIR AND ANTI-SURFACE WARFARE:</b> 1. No activity involving the firing of live or inert munitions should take place inside or within 500 yards of the MPAs unless such firings are programmed within an established MOD weapons range when local range orders are to be observed.</p> <p><b>SUBMARINE AND ANTI-SUBMARINE WARFARE:</b> 1. No activities involving live or inert firings or exploded ordnance should take place inside or within 500 yards of the MPAs unless such firings are programmed within an established MOD weapons range when local range orders are to be observed.</p> <p><b>GENERAL AND INSHORE ACTIVITIES:</b> 1. No activities involving live firings, exploding ordnance, smoke or flares are to take place inside or within 500 yards of the MPAs unless such firings are programmed within an established MOD weapons range when local range orders are to be observed.</p> <p><b>MCM AND EOD:</b></p>

1. No activities involving exploding ordnance should take place inside or within 500 yards of the MPAs unless cleared as operationally essential (see Note 1) or unless such firings are programmed within an established MOD weapons range when local range orders are to be observed.

**CONROL MEASURES REQUIRED**

**AIR:**

1. All flying operations are to be in accordance with the UK Military Low Flying System (UKLFS) (see Note 2).

**SUBMARINE AND ANTI-SUBMARINE:**

1. All activities involving the use of active sonar are to be in accordance with the Command Guidance in BRd 4985 Vol.5 and s2117 assessment tool.

**GENERAL AND INSHORE ACTIVITIES:**

1. Activities involving the use of fixed seabed arrays for acoustic trials, noise ranging and degaussing should be conducted within the established range limits and in accordance with range orders.
2. Use of sonar in surveying is to be in accordance with the Command Guidance in BRd 4985 and s2117 assessment tool.
3. Parachuting is only to take place with prior approval of the Unit's operational commander. Such approval must be informed by the Environmental Protection (EP) staff of Defence Training Estates (DTE).
4. Fast Inshore Attack Craft (FIAC) and Landing Craft Air Cushion (LCAC), When operating inside these MPAs where rafting aggregations of sea birds have been sighted, operators should moderate speed and proceed in such a manner as to eliminate risk of unnecessary disturbance. This control applies equally to high speed/power manoeuvres by any vessel.

**AMPHIBIOUS:**

1. Amphibious landings (including use of Landing Craft Air Cushion; LCAC) may take place across any shoreline within the area limits of the MPAs but must have the prior approval of the Unit's Operational Commander.

**MCM AND EOD:**

1. Use of sonar for MCM is to be in accordance with the Command Guidance in BRd 4985 and s2117 assessment tool.

**NO ADDITIONAL CONTROL MEASURES REQUIRED**

**SUBMARINE AND ANTI-SUBMARINE WARFARE:**

1. All activities not involving weapon firings or exploding ordnance.

**ANTI-AIR AND ANTI-SURFACE WARFARE:**

1. All Activities not involving weapons firings.

**GENERAL AND INSHORE ACTIVITIES:**

1. Activities relating to seabed sampling and equipment attachment to the seabed.
2. Human diving.

**MCM AND EOD:**

1. All activities not involving weapons firings and exploding ordnance.

**MISCELLANEOUS (see Note 3):**

1. No restrictions on RAS, boarding, anti-piracy or anchoring.

**GENERAL:**

1. Units should remain vigilant at all times and moderate activities in accordance with SOPs whenever random encounters with marine mammals or aggregations of seabirds occur.

**Note 1:** Operationally essential is defined as activities conducted during hostilities or activities or for which there is an overriding public interest – in which case, a MESAT assessment is recommended, to determine level of environmental risk.

**Note 2:** Seasonal avoidance of specific Schedule 1 nesting and breeding sites may be required and will be promulgated by UKLFS CAT Y NOTAM.

**Note 3:** Miscellaneous activities include e.g. RAS, boarding, anti-piracy, high speed / power manoeuvres, sea-boat drills and anchoring.

**Maritime Protected Areas for the protection of general coastal features**

MPA DETAILS	ENVIRONMENTAL ACTIVITY GUIDELINES
<p>Nil</p>	<p style="text-align: center;"><b>RESTRICTED ACTIVITIES</b></p> <p><b>AIR:</b>                      1. No activity involving air launch of live or inert munitions with land or sea surface impact should take place inside or within 500 yards of the MPAs unless such firings are programmed within an established MOD air weapons range when local range orders are to be observed.</p> <p><b>ANTI-AIR AND ANTI-SURFACE WARFARE:</b>                      1. No activity involving firing of live or inert munitions with land or sea surface impact should take place inside or within 500 yards of the MPAs unless such firings are programmed within an established MOD weapons range when local range orders are to be observed.</p> <p><b>SUBMARINE AND ANTI-SUBMARINE WARFARE:</b>                      1. No activities involving live or inert firings or exploding ordnance should take place inside or within 500 yards of the MPAs unless such firings are programmed within an established MOD weapons range when local range orders are to be observed.</p> <p><b>GENERAL AND INSHORE ACTIVITIES:</b>                      1. No live or inert weapon trials should take place inside or within 500 yards of the MPAs unless such firings are programmed within an established MOD weapons range when local range orders are to be observed.</p> <p><b>MCM AND EOD:</b>                      1. No MCM or mine laying (including dummy mines) should take place within 0.5 nm of the MPAs.                      2. No activities involving exploding ordnance should take place inside or within 500 yards of the MPAs unless cleared as operationally essential (see Note 1) or unless such firings are programmed within an established MOD weapons range when local range orders are to be observed.</p>

**MISCELLANEOUS (See Note 2):**

1. Anchoring should not take place in or within 0.5 nm of the MPAs unless specifically cleared within harbour limits as part of port authorities' management plans.

**CONTROL MEASURES REQUIRED**

**AIR:**

1. All flying activities are to be in accordance with the UK Military Low Flying System (UKLFS).

**SUBMARINE AND ANTI-SUBMARINE WARFARE:**

1. All activities involving the use of active sonar are to be in accordance with the Command Guidance in BRd 4985 Vol.5 and s2117 assessment tool.

**GENERAL AND INSHORE ACTIVITIES:**

1. Activities involving the use of fixed sea bed arrays for acoustic trials, noise ranging and degaussing are to be conducted within the established range limits and in accordance with range orders.
2. Use of sonar in surveying is to be in accordance with the Command Guidance in BRd 4985 and s2117 assessment tool.

**AMPHIBIOUS:**

1. Amphibious landing operations (including use of Landing Craft Air Cushion; LCAC and parachuting of personnel and equipment) may take place across any shoreline within the area limits of the MPAs but must have the prior approval of the Unit's Operational Commander.

**MCM AND EOD:**

2. Use of sonar for MCM is to be in accordance with the Command Guidance in BRd 4985 and s2117 assessment tool.

**NO ADDITIONAL CONTROL MEASURES REQUIRED**

**AIR:**

1. Air to air weapons firings.

**ANTI-AIR AND ANTI-SURFACE WARFARE:**

1. Any activity not involving firings.

**SUBMARINE AND ANTI-SUBMARINE WARFARE:**

1. Any activities not involving firings.
2. All activities involving the use of active sonar are to be in accordance with the Command Guidance in BRd 4985 Vol.5 and s2117 assessment tool.

**GENERAL AND INSHORE ACTIVITIES:**

1. Use of flares or smoke.
2. Activities relating to seabed sampling, equipment attachment and human diving.
3. Fast Inshore Attack Craft (FIAC).
4. Use of sonar in surveying is to be in accordance with the Command Guidance in BRd 4985 and s2117 assessment tool.

**MCM AND EOD:**

1. Use of ROV.

**MISCELLANEOUS (See Note 2):**

1. No restrictions on miscellaneous activities except for anchoring as stated above.

**Note 1:** Operationally essential is defined as activities conducted during hostilities or activities or for which there is an overriding public interest – in which case, a MESAT assessment is recommended, to determine level of environmental risk.

**Note 2:** Miscellaneous activities include e.g. RAS, boarding, anti-piracy, high speed / power manoeuvres, sea-boat drills and anchoring.

**Maritime Protected Areas designated primarily for the protection of benthic seabed features with some depths less than 20m**

UK0030358 North Norfolk Sandbanks and Saturn Reef SAC

**RESTRICTED ACTIVITIES**

**AIR:**

1. No air launched firings involving sea surface or water column impact or explosions should take place inside or within 500 yards of the MPAs unless such firings are programmed within an established MOD air weapons range when local range orders are to be observed.

**ANTI-AIR AND ANTI-SURFACE WARFARE:**

1. No activity involving sea surface or water column explosions should take place inside or within 500 yards of the MPAs unless such firings are programmed within an established MOD weapons range when local range orders are to be observed.

**SUBMARINE AND ANTI-SUBMARINE WARFARE:**

1. No activities involving exploding ordnance should take place inside or within 500 yards of the MPAs unless such firings are programmed within an established MOD weapons range when local range orders are to be observed.
2. No physical interaction with the seabed should occur within the MPAs.

**GENERAL AND INSHORE ACTIVITIES:**

1. No activities involving live firings or exploding ordnance should take place inside or within 500 yards of the MPAs unless such firings are programmed within an established MOD weapons range when local range orders are to be observed.
2. Anchoring should not take place within 0.5 nm of the MPAs unless specifically cleared within harbour limits as part of the port authorities' management plans.
3. No human diving incorporating interactions with the seabed should take place within the MPAs.
4. No seabed samples should be taken and no equipment should be attached to the seabed with the MPAs.

**MCM AND EOD:**

1. No MCM or minelaying activities (including dummy mines) should take place within 0.5 nm of the MPAs.
2. No activities involving exploding ordnance should take place inside or within 500 yards of the MPAs unless cleared as operationally essential (see Note 1) or unless such firings are programmes within an established MOD weapons range when local range orders are to be observed.

**AMPHIBIOUS:**

1. Amphibious landings (including Landing Craft Air Cushion; LCAC) are prohibited across any shoreline within the area limits of the MPAs without the prior approval of the Unit's Operational Command, unless within an established MOD site when local orders are to be observed.

**GENERAL AND INSHORE ACTIVITIES:**

1. Human diving activities including interaction with the seabed, should not take place within the MPAs.
2. No seabed samples should be taken within the MPA and survey equipment should not be attached to the seabed.

**CONTROL MEASURES REQUIRED**

**AIR:**

1. All flying operations are to be in accordance with the UK Military Low Flying System (UKLFS).

**SUBMARINE AND ANTI-SUBMARINE WARFARE:**

1. All activities involving the use of active sonar are to be in accordance with the Command Guidance in BRd 4985 Vol.5 and s2117 assessment tool.

**GENERAL AND INSHORE ACTIVITIES:**

1. Activities involving the use of fixed sea bed arrays for acoustic trials, noise ranging and degaussing are to be conducted within the established range limits and in accordance with range orders.
2. Use of sonar in surveying is to be in accordance with the Command Guidance in BRd 4985 and s2117 assessment tool.
3. Fast Inshore Attack Craft (FIAC) and Landing Craft Air Cushion (LCAC). When operating inside these MPAs and in shallow waters operators should moderate speed and proceed in such a manner as to avoid disturbance of the seabed.



**MCM AND EOD:**

1. Use of sonar for MCM is to be in accordance with the Command Guidance in BRd 4985 and s2117 assessment tool.

**NO ADDITIONAL CONTROL MEASURES REQUIRED**

**AIR:**

1. Air-to-air and air-to-land surface firings.

**ANTI-AIR AND ANTI-SURFACE WARFARE:**

1. All activities not involving sea surface or water column explosions.

**SUBMARINE AND ANTI-SUBMARINE WARFARE:**

1. All activities not involving exploding ordnance.

**GENERAL AND INSHORE ACTIVITIES:**

1. Parachuting of personnel and stores or equipment.
2. Use of flares and smoke.

**MCM AND EOD:**

1. Use of ROV.

**MISCELLANEOUS (see Note 2):**

1. No restrictions on miscellaneous activities except for anchoring as stated above.

**Note 1:** Operationally essential is defined as activities conducted during hostilities or activities or for which there is an overriding public interest – in which case, a full MESAT assessment is recommended, to determine level of environmental risk.

**Note 2:** Miscellaneous activities include e.g. RAS, boarding, anti-piracy, high speed / power manoeuvres, sea-boat drills and anchoring.

**Maritime Protected Areas with marine mammal interests including whales, dolphins and seals**

MPA DETAILS	ENVIRONMENTAL ACTIVITY GUIDELINES
<p>UK0012696 North Rona SAC UK0030395 Southern North Sea SAC</p>	<p style="text-align: center;"><b>RESTRICTED ACTIVITIES</b></p> <p><b>AIR:</b> 1. No activity involving the air launch of live or inert munitions with land or sea surface impact should take place inside or within 500 yards of the MPAs unless such firings are programmed within an established MOD air weapons range when local range orders are to be observed.</p> <p><b>ANTI-AIR AND ANTI-SURFACE WARFARE:</b> 1. No activity involving firing of live or inert munitions should take place inside or within 500 yards of the MPAs unless such firings are programmed within an established MOD weapons range when local range orders are to be observed.</p> <p><b>SUBMARINE AND ANTI-SUBMARINE WARFARE:</b> 1. No activities involving live or inert firings or exploding ordnance should take place inside or within 500 yards of the MPAs unless such firings are programmed within an established MOD weapons range when local range orders are to be observed.</p> <p><b>GENERAL AND INSHORE ACTIVITIES:</b> 1. No activities involving live firings, exploding ordnance, smoke or flares should take place inside or within 500 yards of the MPAs unless such firings are programmed within an established MOD weapons range when local range orders are to be observed.</p> <p><b>MCM AND EOD:</b> 1. No MCM or minelaying activities (including dummy mines) should take place within 0.5 nm of the MPAs. 2. No activities involving exploding ordnance should take place inside or within 500 yards of the MPAs unless cleared as operationally essential (see Note 1), or unless such firings are</p>

programmed within an established MOD weapons range when local range orders are to be observed.

### CONTROL MEASURES REQUIRED

#### AIR:

1. All flying activities are to be in accordance with the UK Military Low Flying System (UKLFS) (Note 2). Caution should be exercised when flying over sighted aggregations of cetaceans, avoiding hovering or low level activities overhead.

#### SUBMARINE AND ANTI-SUBMARINE WARFARE:

1. All activities involving the use of active sonar are to be in accordance with the Command Guidance in BRd 4985 Vol.5 and s2117 assessment tool, noting that within Group 4 MPAs, units should routinely operate at low risk.

#### GENERAL AND INSHORE ACTIVITIES:

1. Activities involving the use of fixed sea bed arrays for acoustic trials, noise ranging and degaussing are to be conducted within the established range limits and in accordance with range orders.
2. Surveying should not take place inside or within 500 yards of the MPAs unless prior agreement has been reached with appropriate authorities.
3. Use of sonar in surveying is to be in accordance with the Command Guidance in BRd 4985 Vol.5 and s2117 assessment tool.
4. Parachuting is only to take place with prior approval of the Unit's operational commander. Such approval must be informed by the Environmental Protection (EP) staff of Defence Training Estates (DTE).
5. Fast Inshore Attack Craft (FIAC) and Landing Craft Air Cushion (LCAC). When operating inside these MPAs where marine mammals and / or basking sharks have been sighted, operators should moderate speed and proceed in such a manner as to eliminate risk of collision and disturbance. This control applies equally to high speed/power manoeuvres by any vessel.

#### AMPHIBIOUS:

1. Amphibious landings (including use of Landing Craft Air Cushion; LCAC) may take place across any shoreline within the area limits of the MPAs, but must have the prior approval of the Unit's Operational Commander.

**MCM AND EOD:**

3. Use of sonar for MCM is to be in accordance with the Command Guidance in BRd 4985 and s2117 assessment tool.

**NO ADDITIONAL CONTROL MEASURES REQUIRED**

**ANTI-AIR AND ANTI-SURFACE WARFARE:**

1. All activities not involving weapon firings or explosions.

**SUBMARINE AND ANTI-SUBMARINE WARFARE:**

1. All activities not involving weapon firings or explosions.

**MCM AND EOD:**

1. Use of ROV.

**GENERAL AND INSHORE ACTIVITIES:**

1. Activities relating to seabed sampling, seabed equipment attachment and human diving (see control measures for use of sonar). Such activities are to be moderated to take account of any marine mammals in the close vicinity.

2. Units are to remain vigilant at all times and moderate activities in accordance with SOPs whenever random encounters with marine mammals or rafting aggregates of seabirds occur.

**MISCELLANEOUS (see Note 3):**

1. No restrictions on miscellaneous activities except for high speed/power manoeuvres as stated above.

**Note 1:** Operationally essential is defined as activities conducted during hostilities or activities or for which there is an overriding public interest – in which case, a full MESAT assessment is recommended, to determine level of environmental risk.

**Note 2:** Seasonal avoidance of specific Schedule 1 nesting and breeding sites may be required and will be promulgated by UKLFS CAT Y NOTAM.

**Note 3:** Miscellaneous activities include e.g. RAS, boarding, anti-piracy, high speed / power manoeuvres, sea-boat drills and anchoring.

**Benthic seabed features entirely at depths greater than 20m**

MPA DETAILS	ENVIRONMENTAL ACTIVITY GUIDELINES
<p>10458 West Shetland Shelf                      10444 Central Fladen                      10446 Faroe Shetland Sponge Belt                      10450 North-east Faroe-Shetland Channel                      UKMCZ0026 Swallow Sand MCZ                      10447 Firth of Forth Banks Complex                      UK0030386 Solan Bank Reef</p>	<p style="text-align: center;"><b>RESTRICTED ACTIVITIES</b></p> <p><b>MCM AND EOD:</b>                      1. No MCM or minelaying activities (including dummy mines) should take place within 0.5nm of the MPA.                      2. No activities involving exploding ordnance on the seabed should take place inside or within 500 yards of the MPAs unless cleared as operationally essential (see Note 1) or unless firings are programmed within an established MOD weapons range when local range orders are to be observed.</p> <p><b>Note</b>  <b>MISCELLANEOUS (see Note 2):</b>                      1. No anchoring should take place in or within 0.5 nm of the MPAs.</p> <p><b>SUBMARINE AND ANTI-SUBMARINE WARFARE:</b>                      1. No physical interaction with the seabed should occur within the MPAs.</p> <p><b>GENERAL AND INSHORE ACTIVITIES:</b>                      1. No human diving incorporating interactions with the seabed should take place within the MPAs.                      2. No seabed samples should be taken and no equipment should be attached to the seabed with the MPAs.</p> <p style="text-align: center;"><b>CONTROL MEASURES REQUIRED</b></p> <p><b>SUBMARINE AND ANTI-SUBMARINE WARFARE:</b>                      1. All activities involving the use of active sonar are to be in accordance with the Command Guidance in BRd 4985 Vol.5 and s2117 assessment tool.</p>

**GENERAL AND INSHORE ACTIVITIES:**

1. Activities involving the use of fixed seabed arrays for acoustic trials, noise ranging and degaussing are to be conducted within the established range limits and in accordance with range orders.
2. Use of sonar in surveying is to be in accordance with the Command Guidance in BRd 4985 and s2117 assessment tool.

**MCM AND EOD:**

1. Use of sonar in MCM is to be in accordance with the Command Guidance in BRd 4985 and s2117 assessment tool.

**NO ADDITIONAL CONTROL MEASURES REQUIRED**

**AIR:**

1. Firings, both live and inert, are to be managed in accordance with established MOD clear range procedures.

**ANTI-AIR AND ANTI-SURFACE WARFARE:**

1. All forms of anti-air and anti-surface firings, both live and inert, are to be conducted in accordance with established MOD clear range procedures.

**SUBMARINE AND ANTI-SUBMARINE WARFARE:**

1. All activities involving live or inert firings are to be conducted in accordance with established MOD clear range procedures.

**GENERAL AND INSHORE ACTIVITIES:**

1. Use of flares or smoke.
2. Parachuting of personnel and stores or equipment.
3. Fast Inshore Attack Craft (FIAC) and Landing Craft Air Cushion (LCAC).

**MCM AND EOD:**

1. Use of ROV.

**MISCELLANEOUS (see Note 2):**

1. No restrictions apart from anchoring.

**GENERAL:**

1. Units should remain vigilant at all times and moderate activities in accordance with SOPs whenever random encounters with marine mammals or aggregations of seabirds occur.

**Note 1:** Operationally essential is defined as activities conducted during hostilities or activities or for which there is an overriding public interest – in which case, a full MESAT assessment is recommended, to determine level of environmental risk.

**Note 2:** Miscellaneous activities include e.g. RAS, boarding, anti-piracy, high speed / power manoeuvres, sea-boat drills and anchoring.