## **Joint Tactical Exercise Planning Staff**



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JTEPS JW132

10 September 2013

# JOINT WARRIOR 132 SUBMARINE, MINEWARFARE, LIVE FIRING AND DENIAL OF GPS TRAINING ACTIVITY

- 1. Joint Warrior (JW) 132, will take place from 7 until 17 October 2013 and will comprise of a programme of exercises conducted by land forces, warships, submarines and aircraft across the UK. The maritime element (7 until 17 October) is focussed in the offshore and coastal waters to the north east, north and north west of Scotland. This booklet provides outline information on scheduled maritime operations as well as details of intended gunnery and aircraft bombing activity at Cape Wrath and in some open ocean areas.
- 2. The information is correct at the time of going to print but the routine **SUBFACTS** and **GUNFACTS** broadcasts, made during the exercise, will provide updated information.
- 3. The information provided in this booklet will also be published in Fleet Ops Notice to Fishermen, Defence Training Estate Scotland Notice to Fishermen and Cape Wrath Range Notices. This document is also on the internet at http://www.qhm.mod.uk/clyde.
- 4. This booklet contains the following sections:
  - a. Submarine Activity.
  - b. Warship Activity.
  - c. Minewarfare Activity.
  - d. Live Firing and Gunnery Activity.
  - e. Denial of GPS Services.
  - f. Unexploded Ordnance Advice.
- 5. The warships taking part have been instructed to offer fishing vessels and the wider civilian community every assistance in their dealings with exercise activity, especially when in the vicinity of submarines or participants conducting live firing or when GPS is denied for training. You are invited to contact them as required to ensure that military training and civilian activities do not come into conflict.

6. Throughout JW 132 the following points of contact are available on a 24/7 basis to attend to any immediate problems or questions:

Primary - Joint Warrior Duty Controller 01436 674321 Ext. 6469

Secondary - Duty Submarine Controller 01923 956366

HM Coastguard at Clyde, Stornoway and Aberdeen can also contact the Joint Warrior staff directly and will relay information if necessary.

7. If you have any queries, problems, or suggestions as to how JTEPS can improve this booklet, please do not hesitate to contact the Staff Officer Submarines at the above address.

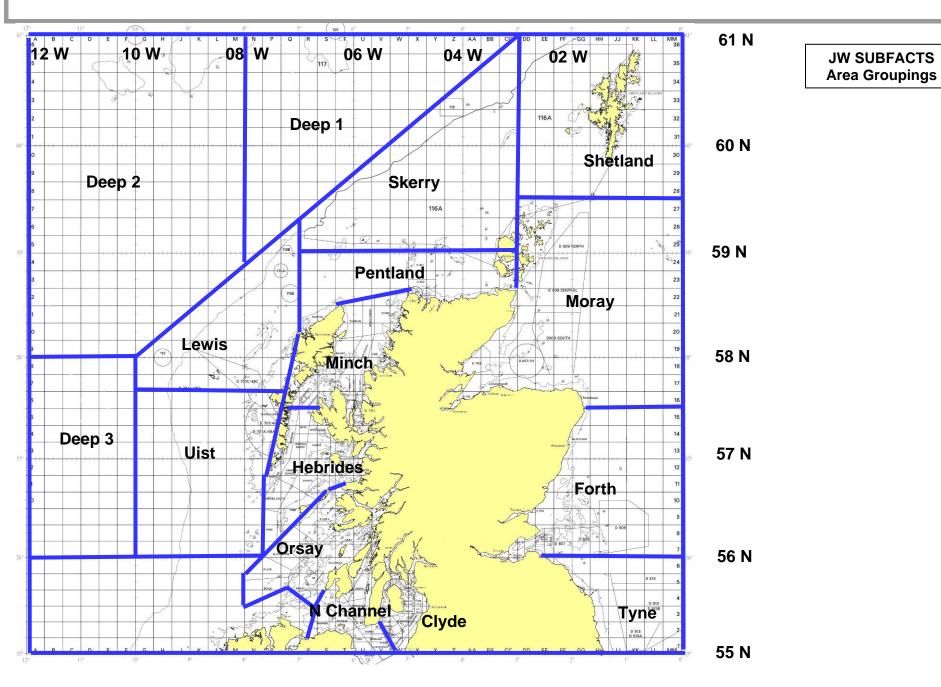
A J L Watt Captain Royal Navy Captain JTEPS

- 1. The Submarine Activity Grid on the following page shows the areas and time periods where submarine activity associated with Joint Warrior (JW) is forecast. Please note that other submarines that are not part of the exercise may transit the areas north west of Scotland; their activity is not covered in this brief. The daily SUBFACTS broadcast by the Coastguard will provide notification of the actual areas where <u>all</u> submarine activity is taking place. During Joint Warrior, in order to keep the SUBFACTS broadcast short, a number Scottish Exercise Areas are grouped together. The groupings are shown in the chartlet and table in this section.
- 2. Communications can be established with submarines during JW when they are surfaced or at periscope depth on VHF Ch 16 (working Ch 73). In the event that they are operating with warships, one of the warships will have been detailed to act as the Fishing Vessel Safety Ship (FVSS) in accordance with the Code of Practice. The FVSS has two overarching duties:
  - a. To make fishing vessels aware of submarine activity in their vicinity and to provide information and advice to minimise the risk of interaction.
  - b. To provide assistance to the participating submarine in compiling a comprehensive surface picture in order to minimise the risk of interaction with non-exercise vessels.
- 3. It is usually easier to establish communications with the FVSS than with a submarine. However, any warship in the vicinity may be contacted and asked for a report on any exercises involving submarines which are being conducted in the local area. Alternatively, the ship may be used to relay messages or instructions to the submarine if required.

# Exercise Joint Warrior 132 SUBFACTS AREAS ACTIVATION GRID

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The planned activity in the JW SUBFACTS AREAS is indicated by the letter **A** in the grid above. There may be changes to this planned activity. Daily SUBFACTS Broadcasts will contain the most up to date information regarding the activation of the areas.



## SCOTTISH EXERCISE AREAS – JW SUBFACTS GROUPING

## **CLYDE**

BALLANTRAE	AYR	TARBERT
AILSA	BRODICK	MINARD
STAFNISH	IRVINE	FYNE
PLADDA	LAGGAN	WEST KYLE
TURNBERRY	GARROCH	EAST KYLE
DAVAAR	LOCHRANZA	CUMBRAE
LAMLASH	SKIPNESS	STRIVEN
GOIL	ROSNEATH	GARELOCH
COVE		

## **ORSAY**

STAFFA	EIGG	COLONSAY
MULL	JURA SOUND	LINNHE
BLACKSTONE	PLACE	BOYLE
MACKENZIE	ORSAY	

## **NORTH CHANNEL**

ISLAY	OTTER	GIGHA
EARADALE	KINTYRE	SKERRIES
RATHLIN	MAIDEN	CORSEWALL
MAGEE	BEAUFORT	ARDGLASS
PEEL	MERMAID	SANDA
TORR		

## **HEBRIDES**

USHENISH	NEIST	BRACADALE
CANNA	RHUM	SLEAT
HEBRIDES NORTH	HEBRIDES CENTRAL	<b>HEBRIDES SOUTH</b>
TIREE	HAWES	EIGG
BARRA	FORD	

## MINCH

RONA NORTH	RONA SOUTH	RONA WEST
RAASAY	TIUMPAN	STOFR
SHIANT	EWE	MINCH NORTH
MINCH SOUTH	PORTREE	TRODDAY
LOCHMADDY	DUNVEGAN	CROWLIN

#### **Warship Activity**

#### **VHF Challenges**

1. In light of ever changing threats to our Armed Forces, military ships maintain a detailed plot of maritime activity in their vicinity, which includes establishing the identity of small fishing vessels. This can be achieved visually from helicopters or by challenges on IMM VHF radio by ships. Mariners are advised that warships from various Allied Nations will be conducting such reconnaissance and challenges. Areas likely to be affected are the Clyde, North Channel, South of the Sea of Hebrides, the Sea of Hebrides, the Little Minch, North Minch, the area near Cape Wrath, Loch Eriboll and the Outer Hebrides. Mariner's co-operation during this time would be much appreciated. A small number of contracted civilian vessels including high speed craft will be operating in the vicinity of the Minches in support of this training task. Every effort will be made to avoid interference to fishing vessels.

#### **Small Boat Activity**

2. On Monday 7 October, north of Arran a large number of fast small boats (both contracted civilian and military) will operate with Warships and helicopters. This activity will remain clear of the main shipping and ferry routes.

- 1. Mine Counter Measures (MCM) vessels will conduct minehunting exercises using sonar to look for potential mines both on the seabed and moored to the seabed that are subsequently investigated by remote controlled submersible vehicles and divers.
- 2. Towed sweeps for minesweeping will not be used during JW 132.
- 3. All participating MCM vessels will be thoroughly briefed on local fishing operations in advance of the exercise and are instructed to make early liaison calls to fishing vessels on VHF. Skippers of fishing vessels operating in the vicinity of these ships are encouraged to talk to them and discuss intentions.
- 4. If any difficulty is experienced a call should be made to the Duty Submarine Controller at CTF 311 OPS ROOM on the "**Fishermen's Hotline**" number, **01923 956366**. This line is permanently manned.
- 5. The following MCM vessels will participate in Ex JW 132:

Name	Nationality	Pennant No
HMS BROCKLESBY	British	M33
HMS BANGOR	British	M109
HMS BLYTH	British	M111
HMS CATTISTOCK	British	M31

- 6. Inert mines have been laid for the exercise, in the following areas:
  - a. **LOCH EWE** (see chartlet 1)

All areas within Loch Ewe between latitudes 57 52.28N and 57 49.20N

b. **MINCHES** (see chartlet 2)

Along the following line:

- A. 57 32.98N 006 52.06W
   B. 57 41.98N 006 35.06W
   C. 57 50.18N 006 16.06W
- c. **CARN SKERRIES/HORSE ISLAND** (see chartlet 1)
  - A. 57 57.94N 005 20.08W
    B. 57 57.55N 005 20.57W
    C. 57 58.44N 005 23.08W
    D. 57 58.84N 005 22.58 W
- d. **EILEAN DUBH** (see chartlet 1)
  - A. 57 59.23N 005 25.60W B. 57 58.85N 005 25.50W C. 57 58.75N 005 26.84W D. 57 59.60N 005 26.90W

### e. **PRIEST ISLAND (SOUTH)** (see chartlet 1)

- A. 57 56.91N 005 31.48W
- B. 57 56.50N 005 31.82W
- C. 57 56.83N 005 33.32W
- D. 57 57.27N 005 33.00W

## f. GRUINARD BAY APPROACH (see chartlet 1)

- A. 57 56.24N 005 28.57W
- B. 57 55.80N 005 28.91W
- C. 57 56.25N 005 30.70W
- D. 57 56.68N 005 30.46W

#### g. **GRUINARD BAY** (see chartlet 1)

- A. 57 54.00N 005 29.61W
- B. 57 52.80N 005 29.61W
- C. 57 52.80N 005 30.80W
- D. 57 53.02N 005 30.80W
- E. 67 53.02N 005 30.00W
- F. 57 54.00N 005 30.00W

#### h. **BROAD BAY** (see chartlet 3)

- A. 58 16.60N 006 14.60W
- B. 58 16.60N 006 12.20W
- C. 58 15.40N 006 12.20W
- D. 58 15.40N 006 12.20W

#### i. **LOCH ERIBOLL APPROACH** (see chartlet 4)

- A. 58 42.97N 004 42.00W
- B. 58 34.00N 004 36.72W
- C. 58 31.96N 004 38.16W
- D. 58 29.70N 004 41.30W

#### j. LOCH ERIBOLL ANCHORAGE (NORTH) (see chartlet 4)

- A. 58 33.30N 004 38.00W
- B. 58 33.30N 004 36.40W
- C. 58 32.00N 004 36.40W
- D. 58 32.00N 004 38.00W

#### I. LOCH SNIZORT

- A. 57 33.00N 006 25.00W
- B. 57 37.00N 006 25.00W
- C. 57 37.00N 006 29.50W
- D. 57 33.00N 006 29.50W

#### m. **CLYDE APPROACHES**

#### **ETTRICK BAY**

A.	55 44.86N	005 13.27W
B.	55 47.84N	005 12.81W
C.	55 49.44N	005 08.78W
D.	55 50.64N	005 08.78W

#### **BRODICK BAY**

A.	55 31.99N	004 54.12W
B.	55 35.49N	005 06.42W
C	55 35 23N	005 08 85W

#### LAMLASH APPROACH

Α.	55 31.99N	004 54.12W
B.	55 32.54N	005 04.82W
C.	55 31.80N	005 07.05W

#### n. **CAMPBELTOWN APPROACHES**

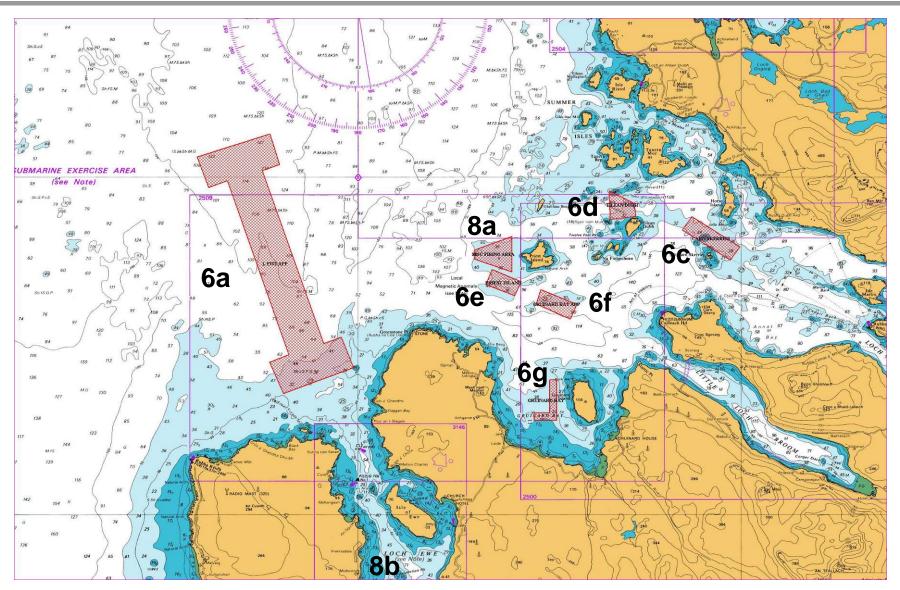
A.	54 50.00N	005 18.06W
B.	55 15.50N	005 21.36W
C.	55 18.00N	005 21.01W
D.	55 22.00N	005 21.46W
E.	55 26.49N	005 30.76W

- 7. The planed minelay and recovery programme.
  - a. **Minelay**. No additional mine targets will be put down without further Notice to Fishermen. All the above areas are established exercise areas with existing targets on the sea bed.
  - b. **Mine recovery**. There is no dedicated mine recovery period during JW 132. This will occur throughout the exercise.
- 8. Minehunters will conduct live firings of mine disposal charges in the following area:
  - a. MINE DISPOSAL CHARGE FIRING AREA (see chartlet 1)

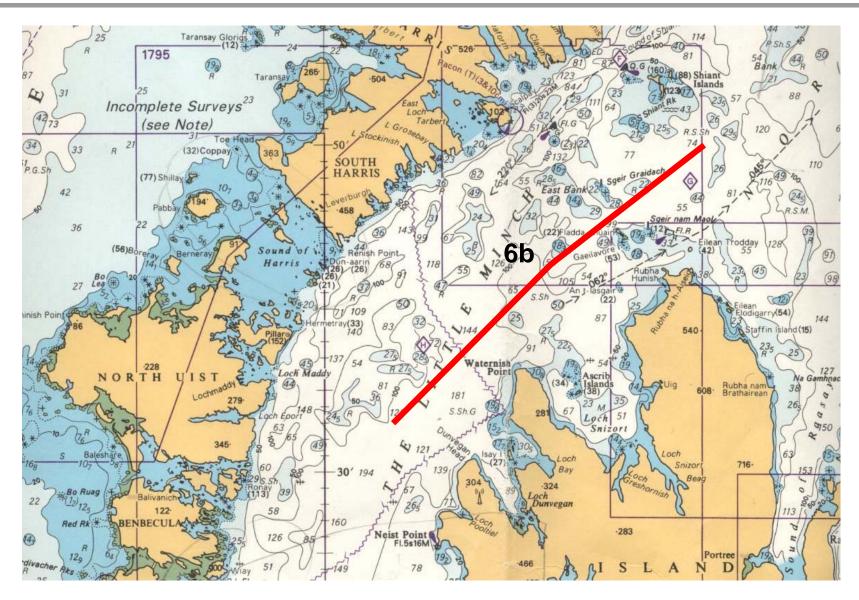
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A. 57 57.58N 005 33.93W
B. 57 57.85N 005 33.93W
C. 57 58.25N 005 31.97W
D. 57 57.02N 005 31.97W
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b. **DIVER PLACED CHARGES FIRING AREA** in Loch EWE will take place within a circle, with a radius of 200m, centred on 57 47.90N 005 38.90W.

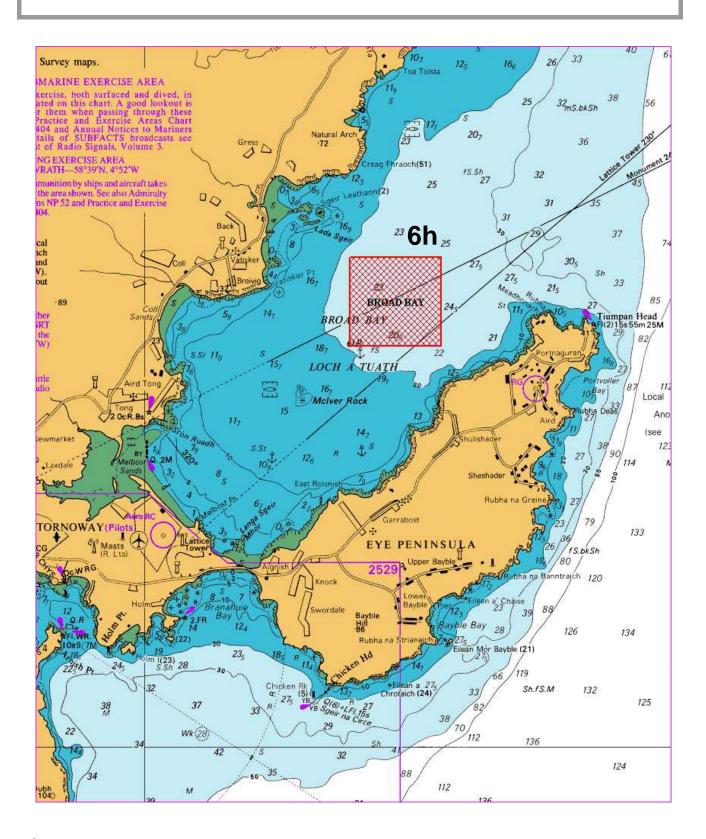
- 9. Liaison between the MoD and appropriate fishermen's associations/organisations, in some cases with individual owners/skippers, HM Coastguard and Marine Scotland have been made to use the above areas. Should anyone consider that their organisation/association should be included in this process in future please contact Lieutenant Commander Matt Offord (FOSNNI SMCDO) on 01436 674321 ext. 6510.
- 10. All participating MCM vessels will be thoroughly briefed on local fishing operations in advance of the exercise and are instructed to make early liaison calls to fishing vessels on VHF. Skippers of fishing vessels operating in the vicinity of these ships are encouraged to talk to them and discuss intentions.



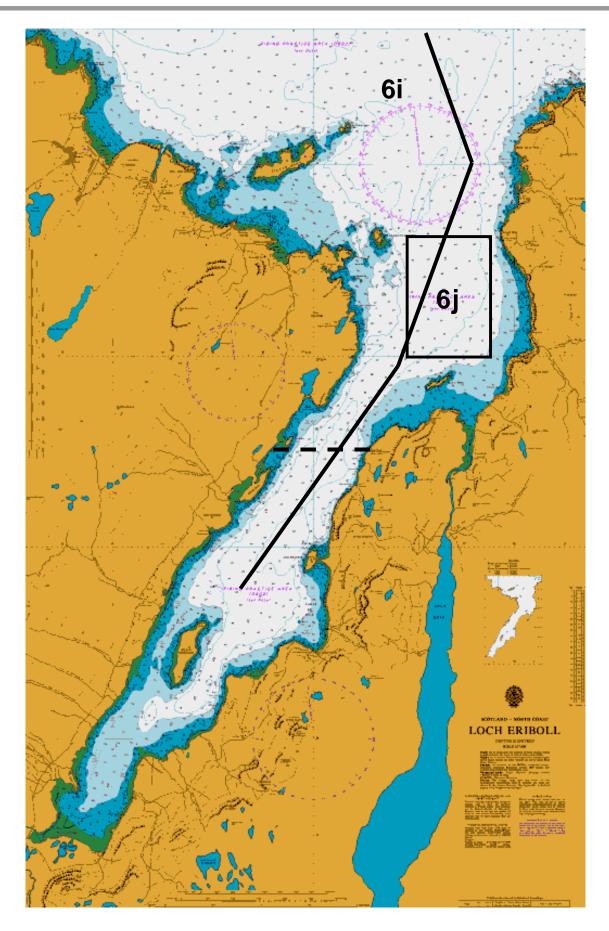
Chartlet 1



**Chartlet 2** 



#### **Chartlet 3**



Chartlet 4

#### **Live Firing and Gunnery**

- 1. During Joint Warrior, Cape Wrath Range, including Garvie Island (An Garbh-eilean) will be active with various combinations of air bombardment, naval gunfire support and helicopter operations. In addition a Joint Warrior Firing and Danger Area will be activated for offshore gunnery. The Gunfacts and JW Offshore Firing Areas Activation Grid on the following page shows the areas and time periods where gunnery associated with Joint Warrior is forecast to take place. The daily GUNFACTS Broadcast by the Coastguard and Cape Wrath Range will provide notification of the actual areas where all the gunnery activity is taking place.
- 2. Joint Warrior Firing and Danger Area coordinates are in the accompanying chartlet.
- 3. It is mandatory that vessels in the vicinity of the Cape Wrath Range keep a listening watch on VHF Channel 16. Further information regarding firing at can be obtained by telephoning:

Cape Wrath Information Line on FREEPHONE 0800 833300.

or **01862 892185** 

The number will provide specific information about active/non-active periods and when the Range road (U70) will be open/closed for public access.

## **Live Firing and Gunnery**

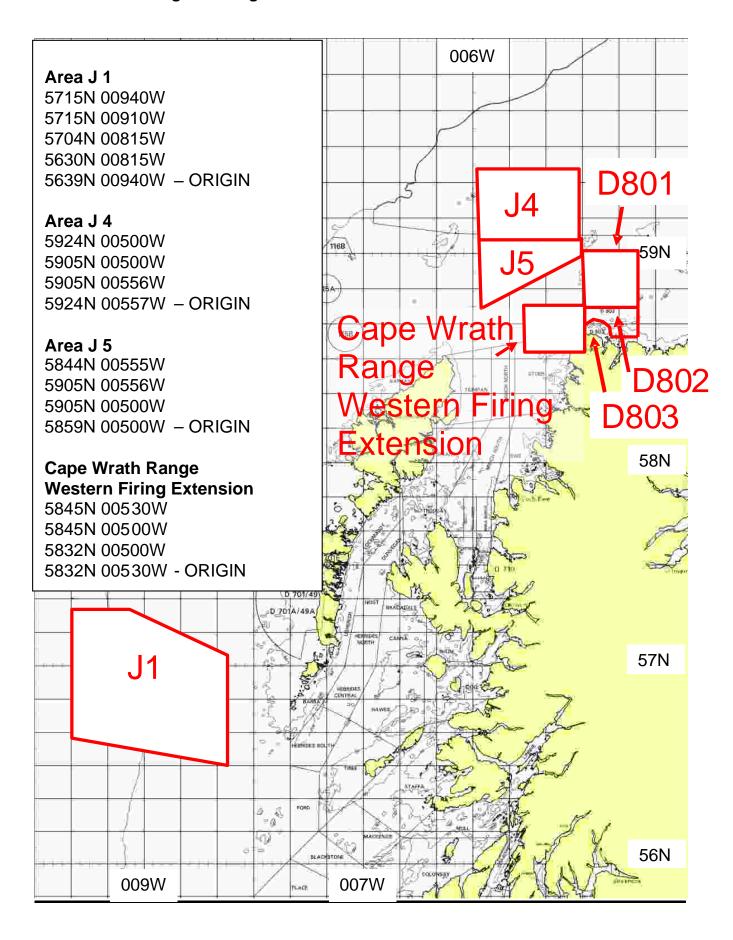
#### Exercise Joint Warrior 132

## **GUNFACTS AND JW OFFSHORE FIRING AREAS ACTIVATION GRID**

	7 OCT	8 OCT	9 OCT	10 OCT	11 OCT	12 OCT	13 OCT	14 OCT	15 OCT	15 OCT	17 OCT
,	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU
Cape Wrath Range (Ashore)	0001-2359	0001-2359	0001-2359	0001-2359	0001-2359	0001-2359	0001-2359	0001-2359	0001-2359	0001-2359	0001-2359
Cape Wrath D801				1000-1830	1530-1830						
Cape Wrath D802			0700-1900	0001-1900	0800-2300			0700-2300	0700-2300	0700-2300	0700-1200
Garvie Island D803			0700-1900	0001-1900	0800-2300			0700-2300	0700-2300	0700-2300	0700-1200
JW Danger Area J1											
JW Danger Area J4			1030-1700	0930-1530							
JW Danger Area J5			1030-1700	0930-1530							
Cape Wrath Western Firing Extension											
Clyde Areas D 509		0900-1400									

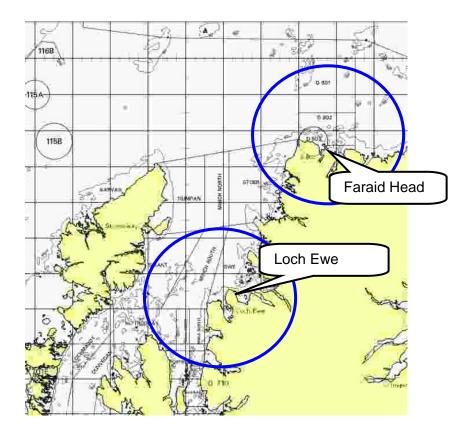
The planned times of firings at Cape Wrath Range and JW Firing areas is indicated in the grid above. There may be changes to this planned activity. Daily GUNFACTS Broadcasts and Cape Wrath Range Broadcasts will contain the most up to date information regarding the activation of the areas. Times are Local.

#### **Joint Warrior Firing and Danger Areas**



#### **Denial of GPS Service**

- 1. Denial of GPS services through the jamming of the GPS signal is an essential part of preparation for military operations and the training is likely to impact to both military and civilian users on land, sea and in the air. The ability to conduct jamming is spread throughout the modern world. Consequently, Military Forces are required to train under such conditions in order to demonstrate the effects it has on systems and to train personnel in other modes of operating. The jamming equipment is located at:
  - a. Faraid Head 58 36.2N 004 46.4W
  - b. Loch Ewe 57 51.9N 005 41.1W



- 2. Jamming of GPS signals may affect equipment using GPS within the North Minch northwards from Rubha Réidh 57-52N 005-48W to Stoer Head 58-14N 005-24W and within 35 nautical miles line of sight from the Faraid Head jamming site, depending on receiver antenna height. Plots showing predictions of areas where interference can be expected are included at the end of this section.
- 3. Subject to approval from the MOD to conduct GPS denial training the planned times GPS Denial are shown in the time table on the next page. A sécurité message will be broadcast by Stornoway and Shetland CG prior to and on completion of the jamming period, during which time GPS receivers and any related equipment may not function, or give incorrect position info or default to DR mode. If this occurs, positional assurance will have to be determined by other means and manually updated at regular intervals. Crews should be aware of these limitations and use alternative means of navigation during jamming periods to confirm their position and check the equipment on completion. Military

#### **Denial of GPS Service**

vessels in the Faraid Head jamming area are, as part of their Gunnery clear range procedure, to inform civilian vessels in their vicinity via VHF that GPS jamming is taking place and that they should manually update their DSC position.

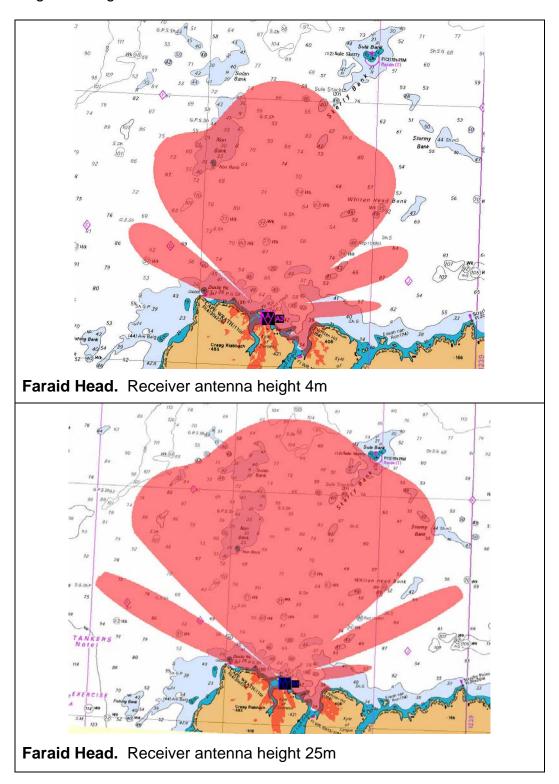
- 4. All military vessels and aircraft will be ordered to maintain a lookout for any abnormal vessel behaviour during jamming periods and warn vessels as required
- 5. Emergency cease jam via VHF to Stornoway CG or Joint Warrior duty controller 01436 674321 ext. 6469.

#### **GPS DENIAL TIME TABLE**

Date	Loch Ewe	Faraid Head
	N57 51.9	N58 36.2
Times are local	W005 41.1	W004 46.4
Mon 7 Oct 13	0800-0900	1100-1200
	1100-1200	1400-1500
Tue 8 Oct 13	1100 – 1200	1130 – 1230
	1600 – 1700	1730 – 1830
Wed 9 Oct 13	1100 – 1200	
	1400 – 1500	1500 – 1600
	1800 – 1900	1900 – 2000
Thu 10 Oct 13	1100 – 1200	
	1400 – 1500	1500 – 1600
	1800 – 1900	1900 – 2000
Fri 11 Oct 13	0900 – 1000	1100 – 1200
	1530 – 1630	1400 – 1500
	1900 – 2000	
Sat 12 Oct 13	0900 – 1000	1030 – 1130
	1400 – 1500	1500 – 1600
	2030 – 2130	
Sun 13 Oct 13	1230 – 1330	
	1900 – 2000	
Mon 14 Oct 13	0800 – 0900	1100 – 1200
	1200 – 1300	1400 – 1500
	1500 – 1600	1600 – 1700
	1800 – 1900	
Tue 15 Oct 13	1030 – 1130	1200 – 1300
	1230 – 1330	1500 – 1600
	1600 – 1700	1700 – 1800
	1930 – 2030	
Wed 16 Oct 13	0900 – 1000	1100 – 1200
	1300 – 1400	1630 – 1730
	1500 – 1600	
	1900 – 2000	
Thu 17 Oct 13	0900 – 1000	
	1200 – 1300	

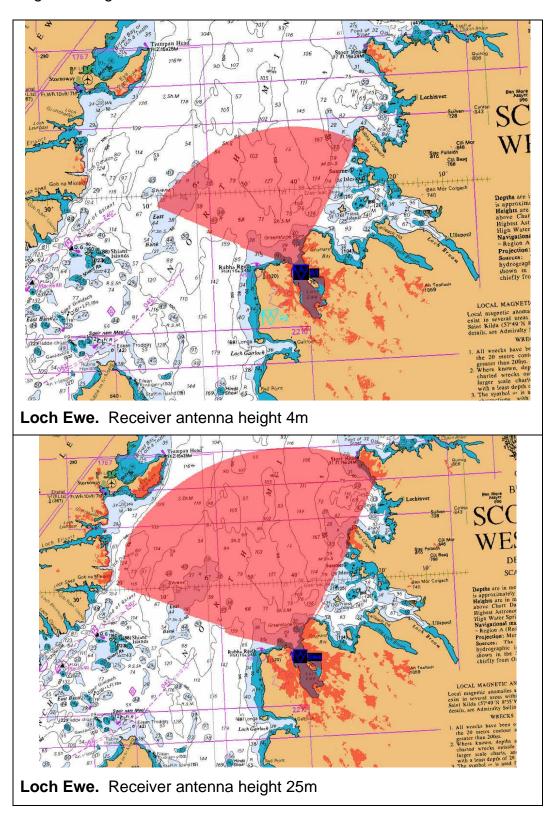
#### **GPS RECEIVER INTERFERENCE PREDICTION PLOTS FOR FARAID HEAD**

The shaded areas represent the 30dB J/S threshold vs the minimum GPS L1 C/A-Code measured signal strength of -157dBW.



## **GPS RECEIVER INTERFERENCE PREDICTION PLOTS FOR LOCH EWE**

The shaded areas represent the 30dB J/S threshold vs the minimum GPS L1 C/A-Code measured signal strength of -157dBW.



## **Unexploded Ordnance Advice**

1. The following general advice is offered to anyone discovering anything believed to be unexploded ordnance:

**DIVERS** DO NOT TOUCH

**FISHERMEN** Contact the coastguard. If this is not possible, lay the item

in about 60ft of water, away from shipping routes and mark

the position with a float.

**EVERYONE** DO NOT TOUCH – dial 999 for coastguard or Police.

#### **Contact Telephone Numbers**

UNEXPLODED ORDINANCE (FLEET DUTY CONTROLLER) 01923 956366

FISHERMAN'S HOTLINE (FLEET DUTY CONTROLLER)

SUBMARINE RELATED 01923 956366

HOTLINE (JOINT WARRIOR DUTY CONTROLLER)

**GPS JAMMING RELATED** 01436 674321 Extn 6469

JOINT WARRIOR CONTROLLER 01436 674321 Extn 4372

CAPE WRATH INFORMATION LINE FREEPHONE 0800 833300

If future versions of this brief are not required please contact:

Joint Tactical Exercise Planning Staff, JHQ Room 501, Northwood Headquarters, Sandy Lane, NORTHWOOD, Middlesex HA6 3HP

Telephone: 01923 958788.

E-Mail: JTEPS-SM-SO2@mod.uk