

# MARA

An tÚdarás Rialála Limistéir Mhuirí  
Maritime Area Regulatory Authority

## **MARA Technical Mapping Guidance**

### **Notes for MAC/MUL Applications in the**

### **Maritime Area under the Maritime**

### **Area Planning Act 2021 (MAPA)**



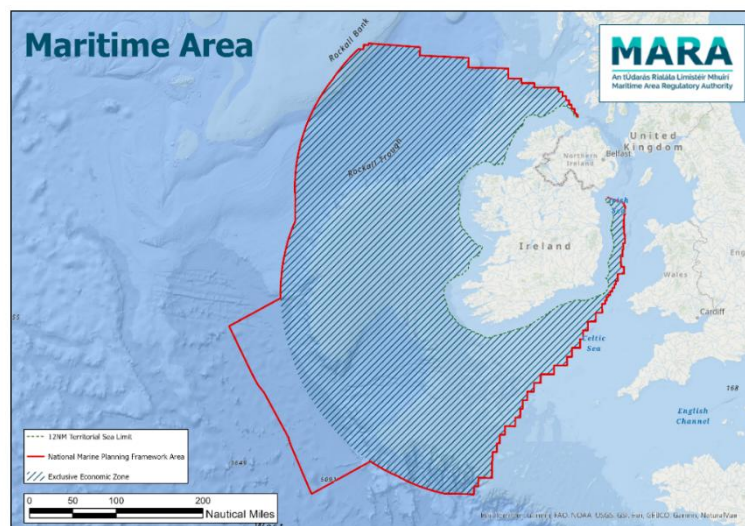


This guidance is issued to support an applicant in preparing a valid MAC/MUL application for a Maritime Area Consent (MAC) or Maritime Usage Licence (MUL).

It is important to note that the content of the application and supporting documentation is for the applicant to determine in conjunction with their own suitably qualified expert advisers and, where necessary, following consultation with the relevant responsible government department and agencies.

## Maritime Area

- The limit of the Maritime Area at its landward extent is defined by the High Water line of ordinary or medium tides which is the High Water Mark (HWM) as defined by the Chief Boundary Surveyor (CBS). This is normally the HWM as shown on the OSI Historic 1888-1913 25 Inch mapping, or occasionally as shown on the 6 Inch mapping with modern updates defined by the CBS through Maritime Boundary Orders.
- Where the MAC/MUL area abuts the land, the boundary of the MAC/MUL area must coincide with and map exactly to the High Water Mark as defined by the Chief Boundary Surveyor.
  - For MULs, including marine environmental surveys, it is only necessary to map the area of proposed maritime usage and therefore if the proposed area does not abut the land it is not necessary to map to the High Water Mark.
- A digitised representation of the HWM as defined by the CBS is available at <https://arcg.is/1GqHWr2> but this is always subject to confirmation from the original source.
- The limit of the Maritime Area to seaward is the outer limit of the Continental Shelf and the Exclusive Economic Zone (EEZ). This is recognised as the National Marine Planning Framework Area and is available to download, as a zipped ESRI Shapefile, from MARA's Data Download section: <https://www.maritimeregulator.ie/knowledge-centre/data-downloads/>





## Mapping Deliverables to MARA

Submit the following with all Maritime Area Consent (MAC) and Maritime Usage Licence (MUL) applications.

### 1. Proposed MAC/MUL Map

#### 1.1. Map Layout

- 1.1.1. MAC/MUL Map to be titled “Proposed MAC/MUL Map”:
  - Number MAC/MUL map sequentially if more than one map is required
- 1.1.2. MAC/MUL Map Area Label:
  - Outline the proposed MAC/MUL area in red;
  - Label “Area A, XXha”, XX being the area in m<sup>2</sup>, hectares or km<sup>2</sup> as appropriate using the appropriate unit of measurement;
  - Label Multiple areas alphabetically, e.g. Area A, XXha, Area B, XXha etc.;
  - For proposed MAC/MUL areas in the Outer Maritime Area (beyond 3NM) display MAC/MUL boundary centroids on the map in the appropriate coordinate system, see Section 2.2.

Area Plots	
Size	Decimal & Rounding
<1000 metre squared	Use m <sup>2</sup> with no decimal place
> 0.1 hectare $\approx$ 1 hectare	Use m <sup>2</sup> rounded 2 decimal place
> 1 hectare $\approx$ 100 hectare	Use ha rounded 2 decimal place
> 100 hectares	Use km <sup>2</sup> rounded 2 decimal place

Unit of measurement		
Metre	Hectare	Km <sup>2</sup>
1000	0.1	0.001
10000	1	0.01
100000	10	0.1
	100	1
	1000	10
	10000	100
	100000	1000

- 1.1.3. Area calculations (i.e. geometry calculation) to be calculated using appropriate coordinate system:
  - Nearshore (up to 3NM from the HWM) use ITM or ETRS 1989 UTM Zone 28N, 29N or 30N as relevant;
  - Outer Maritime Area (beyond 3NM) use ETRS 1989 UTM Zone 28N, 29N, or 30N as relevant or ETRS 1989 LAEA if across multiple UTM Zones.



- 1.1.4. Labelled coordinate intersects to be shown in all four corners of the map for geo-referencing purposes:
  - ITM grid coordinate intersects to be Easting and Northing in Metres (whole numbers);
  - ETRS 1989 grid coordinate intersects to be in the relevant coordinate system Easting and Northing in Metres (whole numbers).
- 1.1.5. MAC/MUL map projection to be displayed on applicant map.
- 1.1.6. MAC/MUL map to be at A3 size; at an appropriate and suitable scale to accurately describe the area:
  - If, for example, a cable corridor or similar study area corridor, is to be included in the MAC/MUL area, include a landing map with the digital High Water Mark clearly displayed on an inset map or second map.
- 1.1.7. MAC/MUL map to include at least one townland or place name to enable the location to be reasonably determined by a person viewing the map.
- 1.1.8. MAC/MUL map to be prepared by a suitably qualified person and have standard details; name, qualification of the person who prepared it, drawing number, revision, date, projection and MARA file reference if available.

## **1.2. Projection for Mapping**

- 1.2.1. For applications entirely within the nearshore (up to 3NM from the HWM) the map(s) to be submitted in Irish Transvers Mercator (ITM) or ETRS 1989 UTM Zone 28N, 29N or 30N as relevant.
- 1.2.2. For applications in the Outer Maritime Area (beyond 3NM) the map(s) to be submitted in ETRS 1989 UTM Zone 28N, 29N, 30N as relevant or ETRS 1989 LAEA if across multiple UTM Zones.
- 1.2.3. For applications in the Outer Maritime Area (beyond 3NM) that cover multiple UTM Zones, the map(s) to be submitted in ETRS 1989 LAEA.

## **1.3. Background Mapping**

- 1.3.1. For applications entirely within the nearshore applicants can use an OSI map where the HWM shown is confirmed by the applicant to be the same as the HWM as defined by the CBS or where the HWM is not contiguous, adjacent or relevant to MAC area.
- 1.3.2. For all applications in the Outer Maritime Area the appropriate navigation chart should be used as the background mapping.
- 1.3.3. Where a navigation chart or similar is used as the background mapping due to the scale of the map the boundary abutting the HWM is not clearly defined the following note should be clearly displayed on the MAC/MUL map "Where the MAC/MUL area abuts the land, the boundary of the MAC/MUL area should coincide with and follow exactly the High Water Mark as defined by the Chief Boundary Surveyor".



1.3.4. The coordinates of the vertices of the MAC/MUL area should not be shown on the MAC/MUL map.

1.3.5. The proposed structures, activity or development should not be shown on the MAC/MUL map.

## **2. GIS Data**

### **2.1. Shapefile format**

2.1.1. Submit MAC/MUL Area polygon in Shapefile format:

- MAC/MULs are for areas only i.e. MAC/MUL areas for linear or point features must be buffered to create a polygon to match the Maritime Usages footprint.
- For MAC/MUL applications with multiple areas a single shapefile with an attributed polygon for each area to be submitted, named sequentially, A, B, C, D etc.

### **2.2. Coordinate Reference System**

2.2.1. For applications entirely within the Nearshore (up to 3NM from the HWM) the coordinate reference system Irish Transverse Mercator (ITM) (EPSG:2157) or ETRS 1989 (EPSG:4258).

2.2.2. For applications in the Outer Maritime Area (beyond 3NM) the coordinate reference system ETRS 1989 (EPSG:4258) or ETRS 1989 UTM Zone 28N (EPSG:25828), 29N (EPSG:25829) or 30N (EPSG:25830) as relevant.

2.2.3. For applications in the Outer Maritime Area (beyond 3NM) that cover multiple UTM Zones the coordinate reference system ETRS 1989 LAEA (EPSG:3035).

### **2.3. Shapefile File Reference Name**

2.3.1. Filename: File Reference Number as assigned by MARA i.e. MAC/MUL#####.



## 2.4. Shapefile Schema

2.4.1. Polygon Shapefile Schema to be attributed:

MARA MAC/MUL Shapefile Schema			
Field Name	Alias	Data Type	Length
OBJECTID	OBJECTID	Object ID	
FileRecordNumber	File_R_N	Text	255
SiteReference	Site_Ref	Text	255
AreaXX (Unit of Measurement)	AreaXX	Double	
Projection	Projection	Text	255
Shape (Default)	Shape	Geometry	
Shape_Length (Default)	Shape_Length	Double	
Shape_Area (Default)	Shape_Area	Double	

- AreaXX – Insert Unit of Measurement used in calculating area, e.g. m2, ha, km2;
- Projection – Insert Projection used in calculating area, e.g. ITM, ETRS 1989 UTM Zone.

## 2.5. Submission Format

2.5.1. The MAC/MUL area(s) shapefile and associated files (.shp, .shx, .dbf, .prj) to be submitted in a single zip file named:

- **GIS\_File\_MAC#####.zip**
- **GIS\_File\_MUL#####.zip**
  - MAC##### / MUL##### being the File Reference Number as assigned by MARA.





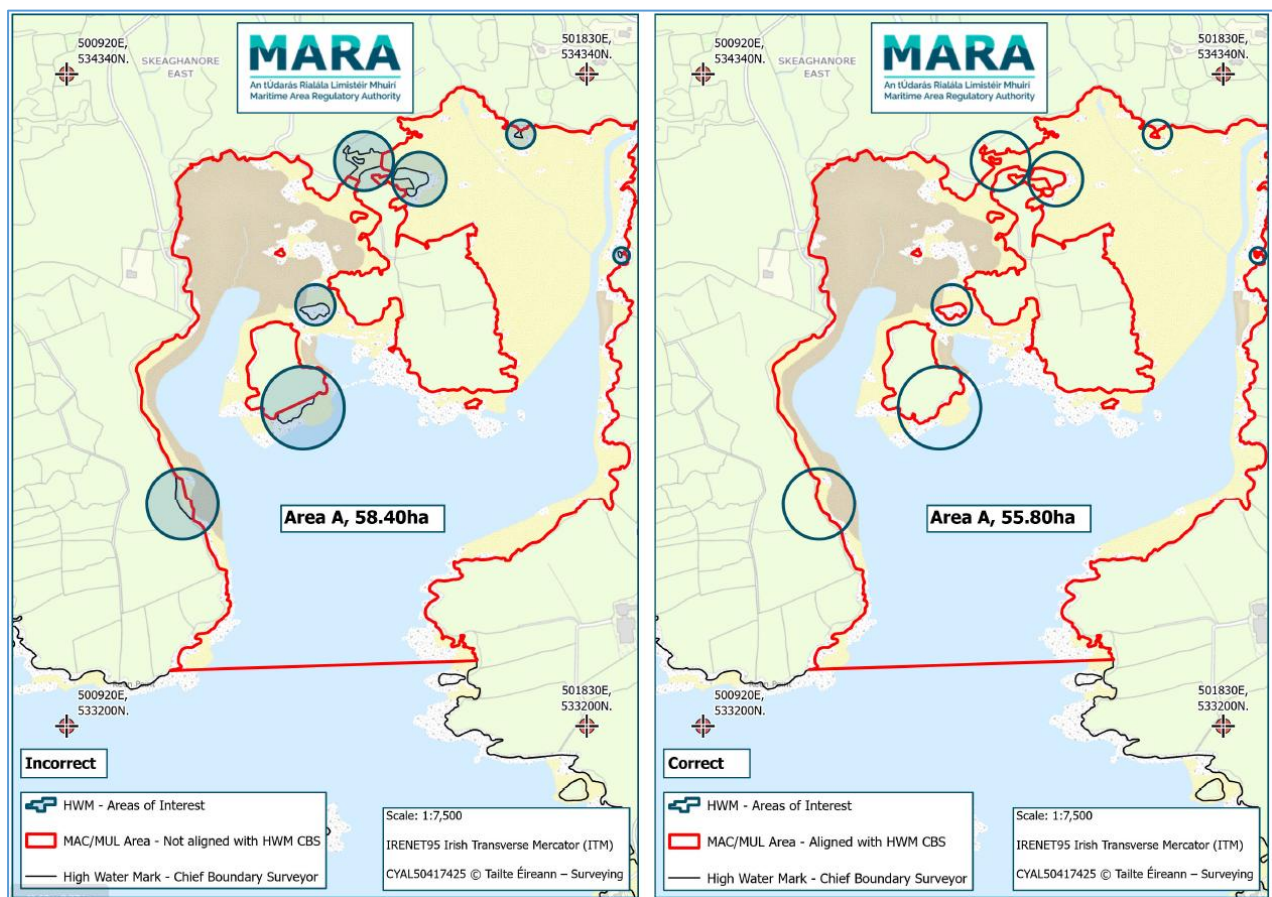
## MARA Reference Maps

- **MARA High Water Mark - Example Maps**

- MARA Map to the left highlights where the High Water Mark as defined by the Chief Boundary Surveyor has not been used correctly in defining the proposed MAC/MUL area, i.e.

*“MAC/MUL area abuts the land, the boundary of the MAC/MUL area should coincide with and follow exactly the High Water Mark as defined by the Chief Boundary Surveyor”*

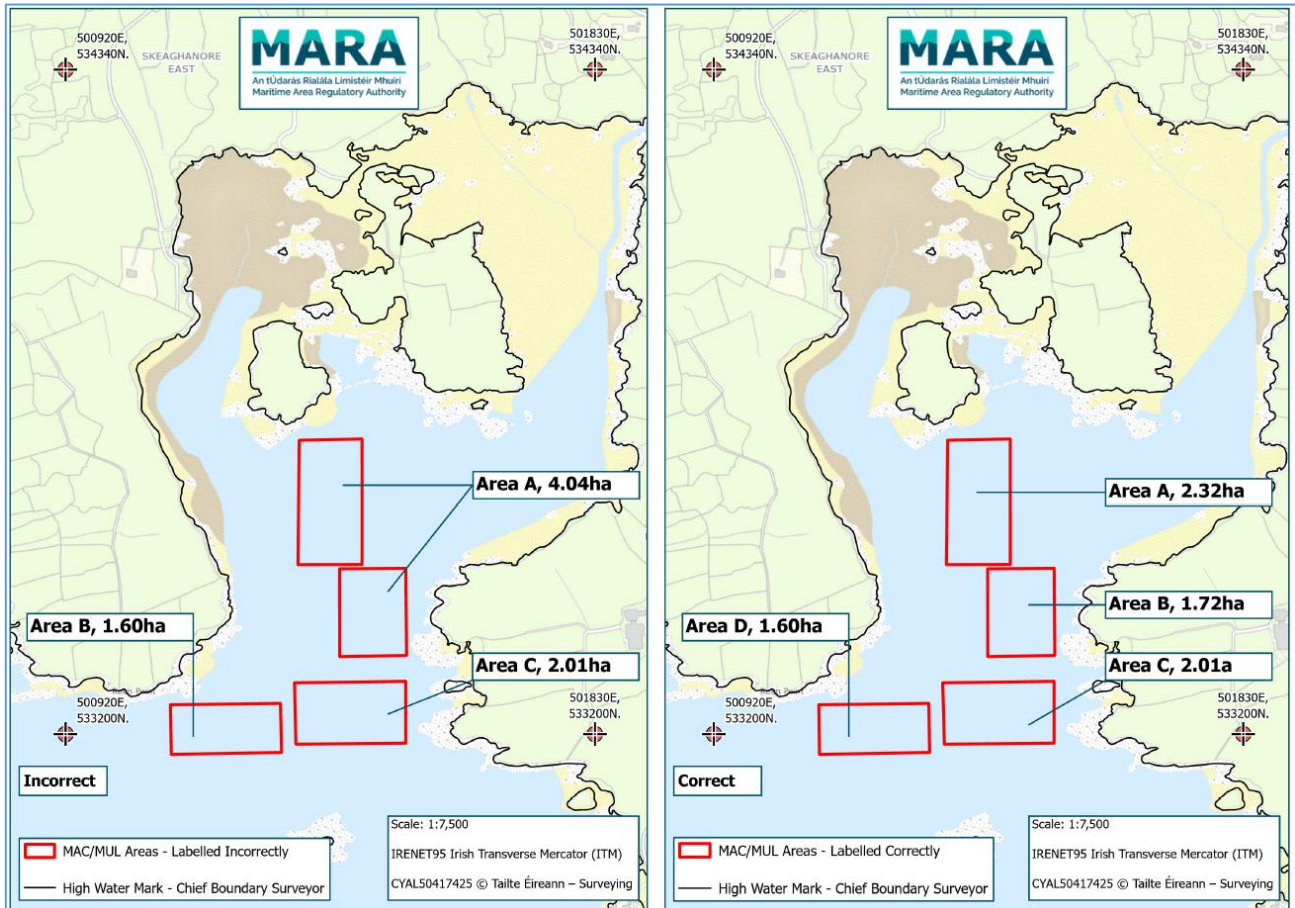
- MARA Map to the right highlights where the High Water Mark as defined by the Chief Boundary Surveyor has been used correctly in defining the proposed MAC/MUL area.





- **MARA Multiple Areas - Example Maps**

- MARA Map to the left highlights where proposed MAC/MUL areas are labelled incorrectly;
- MARA Map to the right highlights where proposed MAC/MUL areas are labelled correctly.



## Mapping Queries to MARA

Submit all queries to the MAC/MUL Case Worker at the following email address referencing your MARA File Reference Number (i.e. MAC##### / MUL#####):

- [mac@mara.gov.ie](mailto:mac@mara.gov.ie)
- [licence@mara.gov.ie](mailto:licence@mara.gov.ie)