



**Legend**

- Wind Farm Project Boundary
- Transmission Asset Project
- Immediate Study Area
- Firth of Forth Round 3 Zone 2
- Wider Study Area

**Herring Larvae Density m<sup>2</sup> per Sample 2009-2011 (Marine Scotland, 2009)**

- 0 - 0.5
- 0.51 - 1
- 1.1 - 1.5
- 1.51 - 2
- 2.1 - 2.5

**Sandeel Abundance (Marine Scotland, 2009)**

- 1 - 500
- 501 - 2000
- 2001 - 5000
- 5001 - 10000
- 10001 - 30000

**Noise Contours (Nedwell et al. 2012)**

<b>GM1 (alpha) scenario</b>	<b>GM1 (bravo) scenario</b>
dBht Level	dBht Level
<span style="color: green; font-weight: bold;">—</span> 75	<span style="color: orange; font-weight: bold;">—</span> 75
<span style="color: green; font-weight: bold;">—</span> 90	<span style="color: orange; font-weight: bold;">—</span> 90
<span style="color: green; font-weight: bold;">—</span> 130	<span style="color: orange; font-weight: bold;">—</span> 130

**Spawning and Nursery Grounds (Coull et. al., 1998 and Cefas, 2010)**

<b>Spawning Ground</b>	<b>Spawning and Nursery Grounds</b>
<span style="border: 1px dashed orange; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> High Intensity	<span style="border: 1px dashed purple; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> High Intensity
<span style="border: 1px dashed blue; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Low Intensity	<span style="border: 1px dashed magenta; display: inline-block; width: 10px; height: 10px; margin-right: 5px;"></span> Low Intensity

**Coordinate System**  
 UTM Zone 30 North (WGS84)  
 Projection: Transverse Mercator  
 Central Meridian: -3° East  
 Scale Factor: 0.9996  
 Latitude of Origin: 0° North  
 False Easting: 500000.0  
 False Northing: 0.0  
 Reference Spheroid: WGS84  
 Semi-major Axis: 6378137.0  
 Inverse Flattening: 298.2572236



Title:  
**Firth of Forth Offshore Wind Farm**



Figure / Drawing Title:  
**NOISE CONTOURS (HERRING AND SANDEEL)  
 FOR PROJECT ALPHA AND BRAVO**

Figure/Drawing Number: **FIGURE 12.13**

UNLESS THE REVISION IS B OR HIGHER THE DRAWING IS NOT TO BE USED FOR DESIGN OR CONSTRUCTION

REV	DATE	DESCRIPTION	BY	CKD	APPR DEV	APPR ENG
B1	15 OCT 12	FOR FORMAL SUBMISSION	AZ	TR	PP	NC