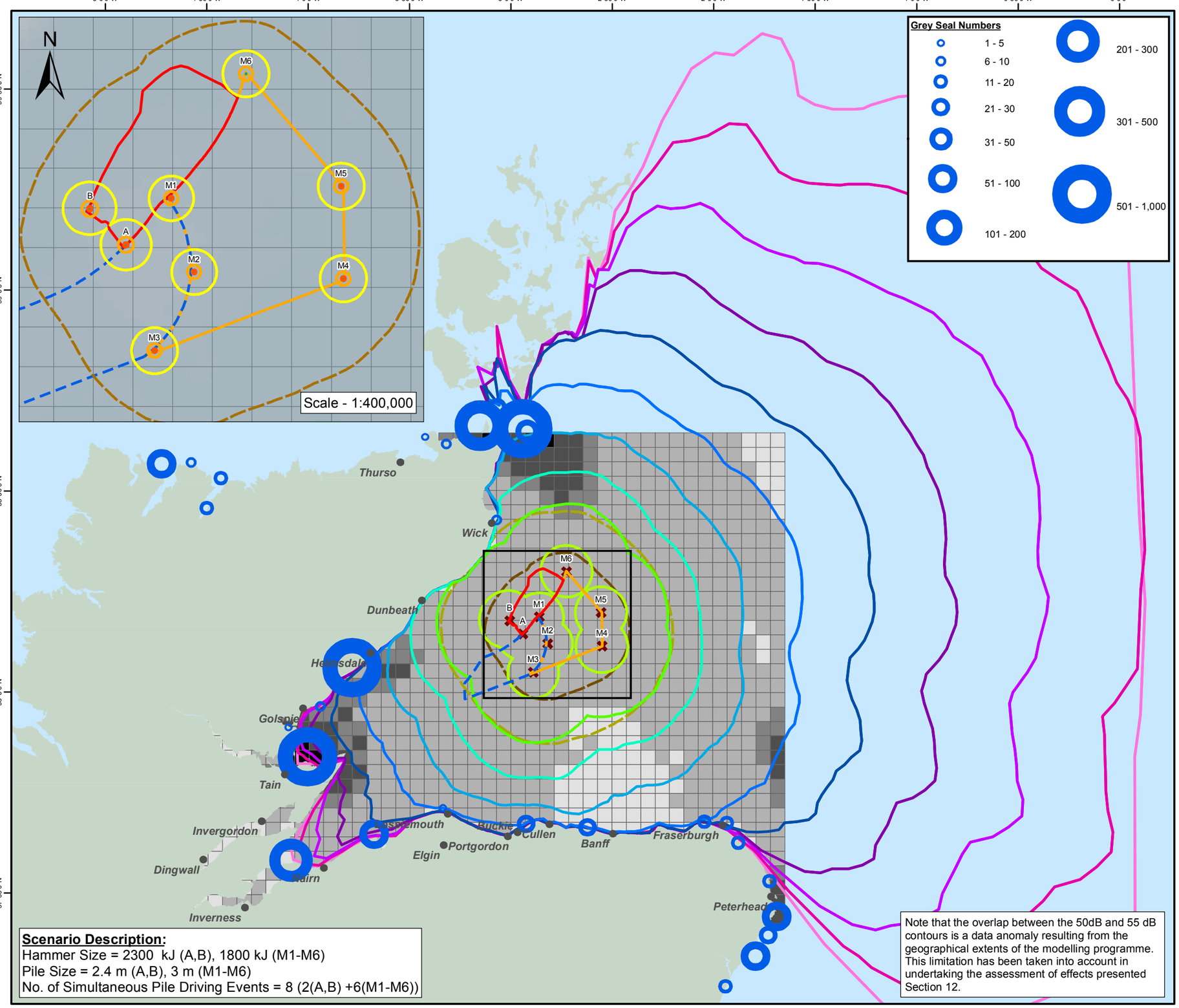

Scenario Description:
Hammer Size = 2300 kJ (A,B), 1800 kJ (M1-M6)
Pile Size = 2.4 m (A,B), 3 m (M1-M6)
No. of Simultaneous Pile Driving Events = 8 (2(A,B) +6(M1-M6))

Note that the overlap between the 50dB and 55 dB contours is a data anomaly resulting from the geographical extents of the modelling programme. This limitation has been taken into account in undertaking the assessment of effects presented Section 12.

Legend

- Beatrice Offshore Wind Farm Site
- MORL Site - Eastern Development Zone
- MORL Site - Western Development Zone
- Pile Positions

Area of Permanent Physical Injury / Death

- 220 $dB_{(ht)}$ - Unweighted *(Inset Only)*

Area of Permanent Threshold Shift (PTS)

- 198 dB re. 1 μPa²/s - Fleeing
- 198 dB re. 1 μPa²/s - Stationary

Area of Behavioural Effect

- 50 $dB_{(ht)}$
- 55 $dB_{(ht)}$
- 60 $dB_{(ht)}$
- 65 $dB_{(ht)}$
- 70 $dB_{(ht)}$
- 75 $dB_{(ht)}$
- 80 $dB_{(ht)}$
- 85 $dB_{(ht)}$
- 90 $dB_{(ht)}$
- 100 $dB_{(ht)}$
- 110 $dB_{(ht)}$ *(Inset Only)*
- 120 $dB_{(ht)}$ *(Inset Only)*
- 130 $dB_{(ht)}$ *(Inset Only)*

Grey Seal Density (At-Sea Usage)

Proportion per 4 x 4 km Grid Square

- 0 -< 1
- 1 -< 5
- 5 -< 10
- 10 -< 50
- >50

Data Source: Cheney et al 2011

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0 10 20 40 km 0 3.75 7.5 15 nm

UK Offshore Development

Figure 12.14

BOWL and MORL Cumulative Piling Scenario for Grey Seal

Drawn: SC	Checked: LHu	Approved: VR
Date: 26/01/2012	Scale: 1:1,100,000 @ A3	
Drawing Number: BEA-MAP-EWF-BOWL-197		Revision: 01
Datum: WGS84	Projection: UTM30N	

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