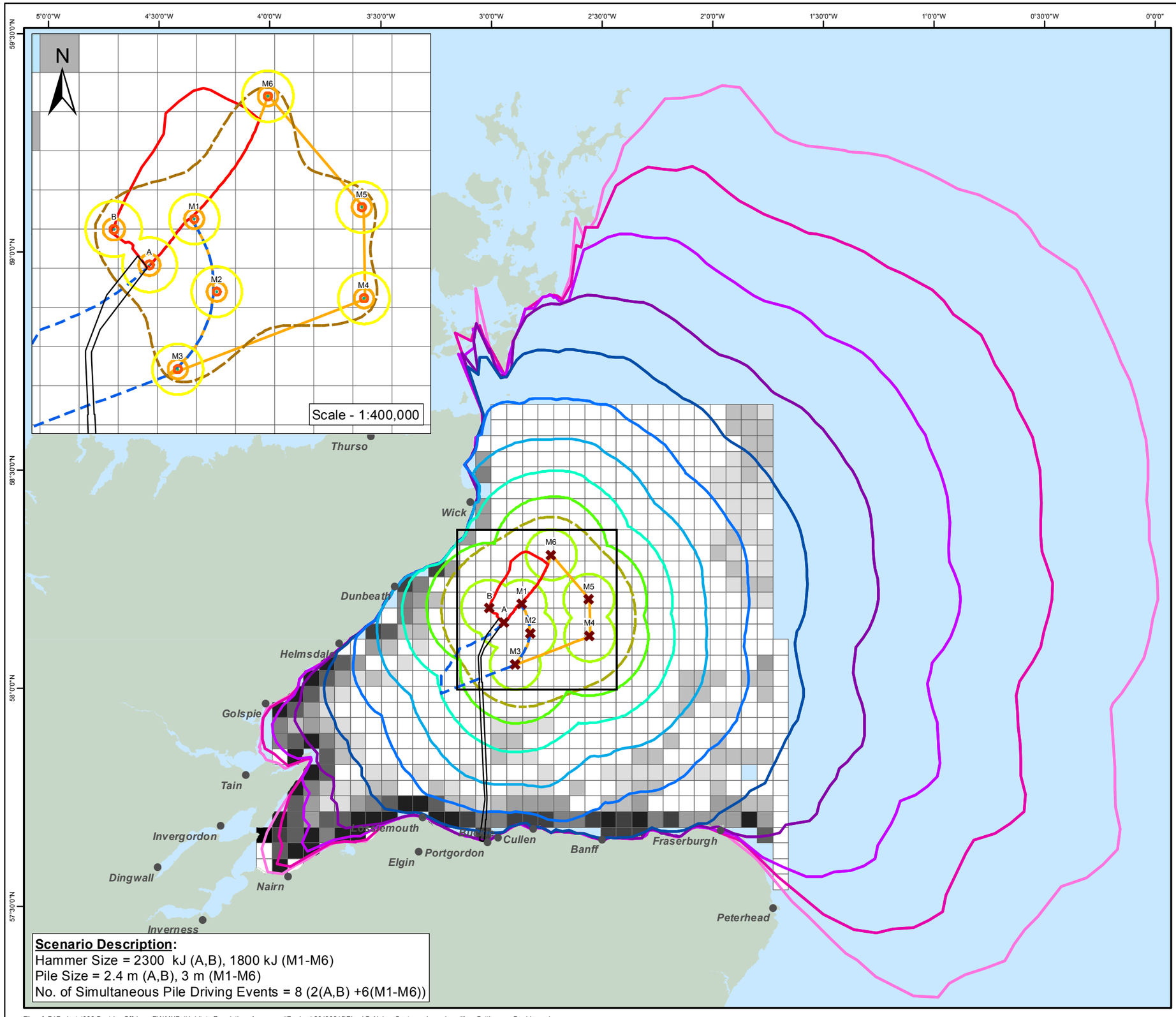

Scenario Description:
Hammer Size = 2300 kJ (A,B), 1800 kJ (M1-M6)
Pile Size = 2.4 m (A,B), 3 m (M1-M6)
No. of Simultaneous Pile Driving Events = 8 (2(A,B) +6(M1-M6))

Legend

- Wind Farm Site
- Amended OfTW Corridor
- 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 *(Inset Only)*
- 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)*

Bottlenose Dolphin Presence

Probability per 4 x 4 km Square

- 0
- <0.10
- 0.10 - 0.20
- 0.20 - 0.30
- 0.30 - 0.40
- 0.40 - 0.50
- 0.50 - 0.60
- 0.60 - 0.70
- 0.70 - 0.80

0 5 10 20 km
0 3.5 7 14 nm

UK Offshore Development

Figure 4.7

Noise Contours for the In-Combination Concurrent Piling Scenario (worst case spatially) Overlaid on the Probability of Occurrence of Bottlenose Dolphin within the Moray Firth

Drawn: SC	Checked: TJM	Approved: TJM
Date: 26/01/2012	Scale: 1:1,000,000 @ A3	
Drawing Number: BEA-MAP-EWF-BOWL-372		Revision: 01
Datum: WGS84	Projection: UTM30N	

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File ref: P:\Projects\886 Beatrice Offshore EIA\MXDs\Habitats Regulations Assesment\Revised 20130219\Fig_4.7_Noise_Contours_incombo_piling_Bottlenose_Dophin.mxd