

Inch Cape Offshore Wind Farm

New Energy for Scotland

Offshore Environmental Statement:
VOLUME 2B
**Annex 10A.2: Modelled Baseline
Plots**





**INCH CAPE OFFSHORE
LIMITED**

**ANNEX10A.2 MODELLED
BASELINE PLOTS**

TECHNICAL REPORT

Report Reference. Annex 10A.2 Rev2.docx

Issued: 24 May 2013

Intertek
Exchange House
Liphook
Hants GU30 7DW
United Kingdom



Tel: +44 (0) 1428 727800
Fax: +44 (0) 1428 727122

E-mail: energy.water.info@intertek.com
Web Site: www.intertek.com

DOCUMENT RELEASE FORM

Title:	ANNEX10A.2 MODELLED BASELINE PLOTS TECHNICAL REPORT
Client:	INCH CAPE OFFSHORE LIMITED
Report Reference:	ANNEX 10A.2 REV2.DOCX
Date of Issue:	24 May 2013

		Hard Copy	Digital
Distribution:	INCH CAPE OFFSHORE LIMITED	No: n/a	PDF
	Intertek METOC	No: n/a	PDF
Prepared By:	Emma White, Paul Taylor		

Project Manager:  Paul Taylor	Authoriser:  Chris Mooij
--	--

Rev No	Date	Reason	Author	Checker	Authoriser
Rev 0	26/10/12	Original	EW	PAT	CPM
Rev 1	28/11/12	Revision	PAT	KRM	CPM
Rev 2	24/05/13	Final edits	PAT	KRM	CPM

COPY NUMBER: (applies to hard copies only)

"We draw your attention to our company policy for documents supplied in electronic form:

- a) our formal product is the (fully quality assured and authorised) signed pdf or paper copy of our report;
- b) Intertek METOC will not accept any responsibility for the report if it is amended in any way from its original format or content without our prior written agreement;
- c) if amendments are made to the content without our written approval, then it should be clearly indicated that the final product is "based on a report issued by Intertek METOC" rather than being a Intertek METOC report;
- d) we would be grateful if you could let us have a copy of the amended report for our files".

Intertek METOC is the trading name of Metoc Ltd, a member of the Intertek group of companies

FIGURES

FIGURE 10A.2.1: MEAN SPRING TIDE, HIGH WATER (HW) LEVEL (M) – REGIONAL	1
FIGURE 10A.2.2: MEAN SPRING TIDE, LOW WATER (LW) LEVEL (M) – REGIONAL	2
FIGURE 10A.2.3: MEAN NEAP TIDE, HIGH WATER (HW) LEVEL (M) – REGIONAL	3
FIGURE 10A.2.4: MEAN NEAP TIDE, LOW WATER (LW) LEVEL (M) – REGIONAL	4
FIGURE 10A.2.5: MEAN SPRING TIDE, PEAK FLOOD CURRENTS (M/S) – REGIONAL	5
FIGURE 10A.2.6: MEAN SPRING TIDE, PEAK EBB CURRENTS (M/S) – REGIONAL.....	6
FIGURE 10A.2.7: MEAN NEAP TIDE, PEAK FLOOD CURRENTS (M/S) – REGIONAL	7
FIGURE 10A.2.8: MEAN NEAP TIDE, PEAK EBB CURRENTS (M/S) – REGIONAL.....	8
FIGURE 10A.2.9: 50-PERCENTILE CURRENTS (M/S) OVER A MEAN SPRING AND NEAP TIDE – REGIONAL.....	9
FIGURE 10A.2.10: 90-PERCENTILE CURRENTS (M/S) OVER A MEAN SPRING AND NEAP TIDE – REGIONAL.....	10
FIGURE 10A.2.11: 95-PERCENTILE CURRENTS (M/S) OVER A MEAN SPRING AND NEAP TIDE – REGIONAL.....	11
FIGURE 10A.2.12: 99-PERCENTILE CURRENTS (M/S) OVER A MEAN SPRING AND NEAP TIDE – REGIONAL.....	12
FIGURE 10A.2.13: MEAN SPRING TIDE, HIGH WATER (HW) LEVEL (M) – INCH CAPE OWF (NEAR- FIELD) SCALE.....	13
FIGURE 10A.2.14: MEAN SPRING TIDE, LOW WATER (LW) LEVEL (M) – INCH CAPE OWF (NEAR- FIELD) SCALE.....	14
FIGURE 10A.2.15: MEAN NEAP TIDE, HIGH WATER (HW) LEVEL (M) – INCH CAPE OWF (NEAR- FIELD) SCALE.....	15
FIGURE 10A.2.16: MEAN NEAP TIDE, LOW WATER (LW) LEVEL (M) – INCH CAPE OWF (NEAR- FIELD) SCALE.....	16
FIGURE 10A.2.17: MEAN SPRING TIDE, PEAK FLOOD CURRENTS (M/S) – INCH CAPE OWF (NEAR- FIELD) SCALE.....	17
FIGURE 10A.2.18: MEAN SPRING TIDE, PEAK EBB CURRENTS (M/S) – INCH CAPE OWF (NEAR- FIELD) SCALE.....	18
FIGURE 10A.2.19: MEAN NEAP TIDE, PEAK FLOOD CURRENTS (M/S) – INCH CAPE OWF (NEAR- FIELD) SCALE.....	19
FIGURE 10A.2.20: MEAN NEAP TIDE, PEAK EBB CURRENTS (M/S) – INCH CAPE OWF (NEAR- FIELD) SCALE.....	20
FIGURE 10A.2.21: 50-PERCENTILE CURRENTS (M/S) OVER A MEAN SPRING AND NEAP TIDE – INCH CAPE OWF (NEAR-FIELD) SCALE	21
FIGURE 10A.2.22: 90-PERCENTILE CURRENTS (M/S) OVER A MEAN SPRING AND NEAP TIDE – INCH CAPE OWF (NEAR-FIELD) SCALE	22

FIGURE 10A.2.23: 95-PERCENTILE CURRENTS (M/S) OVER A MEAN SPRING AND NEAP TIDE – INCH CAPE OWF (NEAR-FIELD) SCALE	23
FIGURE 10A.2.24: 99-PERCENTILE CURRENTS (M/S) OVER A MEAN SPRING AND NEAP TIDE – INCH CAPE OWF (NEAR-FIELD) SCALE	24
FIGURE 10A.2.25: 50%ILE SIGNIFICANT WAVE HEIGHT (M) – REGIONAL (FAR-FIELD) SCALE	25
FIGURE 10A.2.26: 90%ILE SIGNIFICANT WAVE HEIGHT (M) – REGIONAL (FAR-FIELD) SCALE	26
FIGURE 10A.2.27: 95%ILE SIGNIFICANT WAVE HEIGHT (M) – REGIONAL (FAR-FIELD) SCALE	27
FIGURE 10A.2.28: 99%ILE SIGNIFICANT WAVE HEIGHT (M) – REGIONAL (FAR-FIELD) SCALE	28
FIGURE 10A.2.29: 50%ILE MEAN WAVE PERIOD (S) – REGIONAL (FAR-FIELD) SCALE	29
FIGURE 10A.2.30: 90%ILE MEAN WAVE PERIOD (S) – REGIONAL (FAR-FIELD) SCALE	30
FIGURE 10A.2.31: 95%ILE MEAN WAVE PERIOD (S) – REGIONAL (FAR-FIELD) SCALE	31
FIGURE 10A.2.32: 99%ILE MEAN WAVE PERIOD (S) – REGIONAL (FAR-FIELD) SCALE	32
FIGURE 10A.2.33: 50%ILE PEAK WAVE PERIOD (S) – REGIONAL (FAR-FIELD) SCALE	33
FIGURE 10A.2.34: 90%ILE PEAK WAVE PERIOD (S) – REGIONAL (FAR-FIELD) SCALE	34
FIGURE 10A.2.35: 95%ILE PEAK WAVE PERIOD (S) – REGIONAL (FAR-FIELD) SCALE	35
FIGURE 10A.2.36: 99%ILE PEAK WAVE PERIOD (S) – REGIONAL (FAR-FIELD) SCALE	36
FIGURE 10A.2.37: BASELINE 50%ILE SIGNIFICANT WAVE HEIGHT (M) – INCH CAPE OWF (NEAR-FIELD) SCALE	37
FIGURE 10A.2.38: BASELINE 90%ILE SIGNIFICANT WAVE HEIGHT (M) – INCH CAPE OWF (NEAR-FIELD) SCALE	38
FIGURE 10A.2.39: BASELINE 95%ILE SIGNIFICANT WAVE HEIGHT (M) – INCH CAPE OWF (NEAR-FIELD) SCALE	39
FIGURE 10A.2.40: BASELINE 99%ILE SIGNIFICANT WAVE HEIGHT (M) – INCH CAPE OWF (NEAR-FIELD) SCALE	40
FIGURE 10A.2.41: BASELINE 50%ILE MEAN WAVE PERIOD (S) – INCH CAPE OWF (NEAR-FIELD) SCALE	41
FIGURE 10A.2.42: BASELINE 90%ILE MEAN WAVE PERIOD (S) – INCH CAPE OWF (NEAR-FIELD) SCALE	42
FIGURE 10A.2.43: BASELINE 95%ILE MEAN WAVE PERIOD (S) – INCH CAPE OWF (NEAR-FIELD) SCALE	43
FIGURE 10A.2.44: BASELINE 99%ILE MEAN WAVE PERIOD (S) – INCH CAPE OWF (NEAR-FIELD) SCALE	44
FIGURE 10A.2.45: BASELINE 50%ILE PEAK WAVE PERIOD (S) – INCH CAPE OWF (NEAR-FIELD) SCALE	45
FIGURE 10A.2.46: BASELINE 90%ILE PEAK WAVE PERIOD (S) – INCH CAPE OWF (NEAR-FIELD) SCALE	46
FIGURE 10A.2.47: BASELINE 95%ILE PEAK WAVE PERIOD (S) – INCH CAPE OWF (NEAR-FIELD) SCALE	47

FIGURE 10A.2.48: BASELINE 99%ILE PEAK WAVE PERIOD (s) – INCH CAPE OWF (NEAR-FIELD) SCALE	48
FIGURE 10A.2.49: CRITICAL SHEAR STRESS FOR ENTRAINMENT (N/M2) – REGIONAL (FAR-FIELD) SCALE	49
FIGURE 10A.2.50: 50%ILE BED SHEAR STRESS - DUE TO CURRENTS (N/M2) – REGIONAL (FAR-FIELD) SCALE	50
FIGURE 10A.2.51: 90%ILE BED SHEAR STRESS - DUE TO CURRENTS (N/M2) – REGIONAL (FAR-FIELD) SCALE	51
FIGURE 10A.2.52: 95%ILE BED SHEAR STRESS - DUE TO CURRENTS (N/M2) – REGIONAL (FAR-FIELD) SCALE	52
FIGURE 10A.2.53: 99%ILE BED SHEAR STRESS - DUE TO CURRENTS (N/M2) – REGIONAL (FAR-FIELD) SCALE	53
FIGURE 10A.2.54: 50%ILE BED SHEAR STRESS - DUE TO WAVES (N/M2) – REGIONAL (FAR-FIELD) SCALE	54
FIGURE 10A.2.55: 90%ILE BED SHEAR STRESS - DUE TO WAVES (N/M2) – REGIONAL (FAR-FIELD) SCALE	55
FIGURE 10A.2.56: 95%ILE BED SHEAR STRESS - DUE TO WAVES (N/M2) – REGIONAL (FAR-FIELD) SCALE	56
FIGURE 10A.2.57: 99%ILE BED SHEAR STRESS - DUE TO WAVES (N/M2) – REGIONAL (FAR-FIELD) SCALE	57
FIGURE 10A.2.58: 50%ILE BED SHEAR STRESS - DUE TO MEAN COMBINED CURRENT AND WAVES (N/M2) – REGIONAL (FAR-FIELD) SCALE	58
FIGURE 10A.2.59: 90%ILE BED SHEAR STRESS - DUE TO MEAN COMBINED CURRENT AND WAVES (N/M2) – REGIONAL (FAR-FIELD) SCALE	59
FIGURE 10A.2.60: 95%ILE BED SHEAR STRESS - DUE TO MEAN COMBINED CURRENT AND WAVES (N/M2) – REGIONAL (FAR-FIELD) SCALE	60
FIGURE 10A.2.61: 99%ILE BED SHEAR STRESS - DUE TO MEAN COMBINED CURRENT AND WAVES (N/M2) – REGIONAL (FAR-FIELD) SCALE	61
FIGURE 10A.2.62: 50%ILE BED SHEAR STRESS - DUE TO MAXIMUM COMBINED CURRENT AND WAVES (N/M2) – REGIONAL (FAR-FIELD) SCALE	62
FIGURE 10A.2.63: 90%ILE BED SHEAR STRESS - DUE TO MAXIMUM COMBINED CURRENT AND WAVES (N/M2) – REGIONAL (FAR-FIELD) SCALE	63
FIGURE 10A.2.64: 95%ILE BED SHEAR STRESS - DUE TO MAXIMUM COMBINED CURRENT AND WAVES (N/M2) – REGIONAL (FAR-FIELD) SCALE	64
FIGURE 10A.2.65: 99%ILE BED SHEAR STRESS - DUE TO MAXIMUM COMBINED CURRENT AND WAVES (N/M2) – REGIONAL (FAR-FIELD) SCALE	65
FIGURE 10A.2.66: EXCEEDANCE OF THE CRITICAL SHEAR STRESS FOR ENTRAINMENT DUE TO MEAN COMBINED BED SHEAR STRESS – REGIONAL (FAR-FIELD) SCALE	66
FIGURE 10A.2.67: EXCEEDANCE OF THE CRITICAL SHEAR STRESS FOR ENTRAINMENT DUE TO MAXIMUM COMBINED BED SHEAR STRESS – REGIONAL (FAR-FIELD) SCALE	67

FIGURE 10A.2.68: CRITICAL SHEAR STRESS FOR ENTRAINMENT (N/M ²) – INCH CAPE OWF (NEAR-FIELD) SCALE	68
FIGURE 10A.2.69: 50%ILE BED SHEAR STRESS - DUE TO CURRENTS (N/M ²) – INCH CAPE OWF (NEAR-FIELD) SCALE	69
FIGURE 10A.2.70: 90%ILE BED SHEAR STRESS - DUE TO CURRENTS (N/M ²) – INCH CAPE OWF (NEAR-FIELD) SCALE	70
FIGURE 10A.2.71: 95%ILE BED SHEAR STRESS - DUE TO CURRENTS (N/M ²) – INCH CAPE OWF (NEAR-FIELD) SCALE	71
FIGURE 10A.2.72: 99%ILE BED SHEAR STRESS - DUE TO CURRENTS (N/M ²) – INCH CAPE OWF (NEAR-FIELD) SCALE	72
FIGURE 10A.2.73: 50%ILE BED SHEAR STRESS - DUE TO WAVES (N/M ²) – INCH CAPE OWF (NEAR-FIELD) SCALE	73
FIGURE 10A.2.74: 90%ILE BED SHEAR STRESS - DUE TO WAVES (N/M ²) – INCH CAPE OWF (NEAR-FIELD) SCALE	74
FIGURE 10A.2.75: 95%ILE BED SHEAR STRESS - DUE TO WAVES (N/M ²) – INCH CAPE OWF (NEAR-FIELD) SCALE	75
FIGURE 10A.2.76: 99%ILE BED SHEAR STRESS - DUE TO WAVES (N/M ²) – INCH CAPE OWF (NEAR-FIELD) SCALE	76
FIGURE 10A.2.77: 50%ILE BED SHEAR STRESS - DUE TO MEAN COMBINED CURRENT AND WAVES (N/M ²) – INCH CAPE OWF (NEAR-FIELD) SCALE	77
FIGURE 10A.2.78: 90%ILE BED SHEAR STRESS - DUE TO MEAN COMBINED CURRENT AND WAVES (N/M ²) – INCH CAPE OWF (NEAR-FIELD) SCALE	78
FIGURE 10A.2.79: 95%ILE BED SHEAR STRESS - DUE TO MEAN COMBINED CURRENT AND WAVES (N/M ²) – INCH CAPE OWF (NEAR-FIELD) SCALE	79
FIGURE 10A.2.80: 99%ILE BED SHEAR STRESS - DUE TO MEAN COMBINED CURRENT AND WAVES (N/M ²) – INCH CAPE OWF (NEAR-FIELD) SCALE	80
FIGURE 10A.2.81: 50%ILE BED SHEAR STRESS - DUE TO MAXIMUM COMBINED CURRENT AND WAVES (N/M ²) – INCH CAPE OWF (NEAR-FIELD) SCALE	81
FIGURE 10A.2.82: 90%ILE BED SHEAR STRESS - DUE TO MAXIMUM COMBINED CURRENT AND WAVES (N/M ²) – INCH CAPE OWF (NEAR-FIELD) SCALE	82
FIGURE 10A.2.83: 95%ILE BED SHEAR STRESS - DUE TO MAXIMUM COMBINED CURRENT AND WAVES (N/M ²) – INCH CAPE OWF (NEAR-FIELD) SCALE	83
FIGURE 10A.2.84: 99%ILE BED SHEAR STRESS - DUE TO MAXIMUM COMBINED CURRENT AND WAVES (N/M ²) – INCH CAPE OWF (NEAR-FIELD) SCALE	84
FIGURE 10A.2.85: EXCEEDANCE OF THE CRITICAL SHEAR STRESS FOR ENTRAINMENT DUE TO MEAN COMBINED BED SHEAR STRESS – INCH CAPE OWF (NEAR-FIELD) SCALE	85
FIGURE 10A.2.86: EXCEEDANCE OF THE CRITICAL SHEAR STRESS FOR ENTRAINMENT DUE TO MAXIMUM COMBINED BED SHEAR STRESS – INCH CAPE OWF (NEAR-FIELD) SCALE	86

FIGURE 10A.2.87: INCH CAPE ADCP SPRING MODELLED TIDAL ELEVATIONS AGAINST PREDICTED FIELD DATA 87

FIGURE 10A.2.88: INCH CAPE ADCP SPRING MODELLED TIDAL CURRENTS SPEED (ms^{-1}) AND CURRENT DIRECTION (DEG T) AGAINST PREDICTED FIELD DATA 87

FIGURE 10A.2.89: INCH CAPE ADCP NEAP MODELLED TIDAL ELEVATIONS AGAINST PREDICTED FIELD DATA..... 88

FIGURE 10A.2.90: INCH CAPE ADCP NEAP MODELLED TIDAL CURRENTS SPEED (ms^{-1}) AND CURRENT DIRECTION (DEG T) AGAINST PREDICTED FIELD DATA 88

FIGURE 10A.2.91: EASTERLY STORM EVENT - INCH CAPE, WAVERIDER BUOY MODELLED H_s (M), T_p (S) AND WAVE DIRECTION (DEG T) AGAINST MEASURED FIELD DATA 89

FIGURE 10A.2.92: OFFSHORE WIND EVENT – INCH CAPE, WAVERIDER BUOY MODELLED H_s (M), T_p (S) AND WAVE DIRECTION (DEG T) AGAINST MEASURED FIELD DATA..... 90

FIGURE 10A.2.93: NORTHERLY STORM EVENT – INCH CAPE, WAVERIDER BUOY MODELLED H_s (M), T_p (S) AND WAVE DIRECTION (DEG T) AGAINST MEASURED FIELD DATA 91

FIGURE 10A.2.94: SOUTHEASTERLY STORM EVENT – INCH CAPE, WAVERIDER BUOY MODELLED H_s (M), T_p (S) AND WAVE DIRECTION (DEG T) AGAINST MEASURED FIELD DATA..... 92

FIGURE 10A.2.95: OFFSHORE WIND EVENT – INCH CAPE, WAVERIDER BUOY MODELLED H_s (M), T_p (S) AND WAVE DIRECTION (DEG T) AGAINST MEASURED FIELD DATA..... 93

Section 1: Hydrodynamic regime

Figure 10A.2.1: Mean spring tide, high water (HW) level (m) – Regional

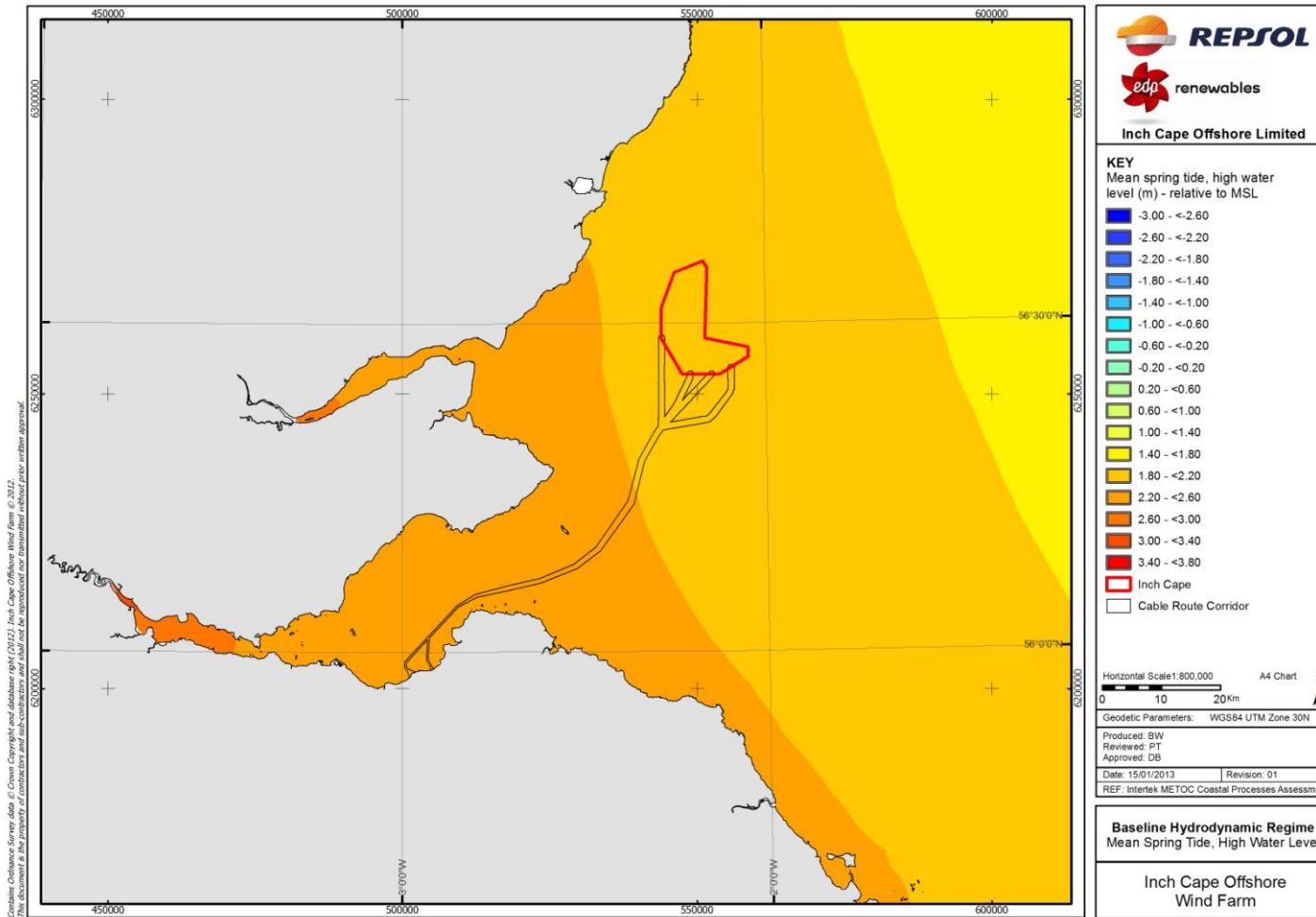


Figure 10A.2.2: Mean spring tide, low water (LW) level (m) – Regional

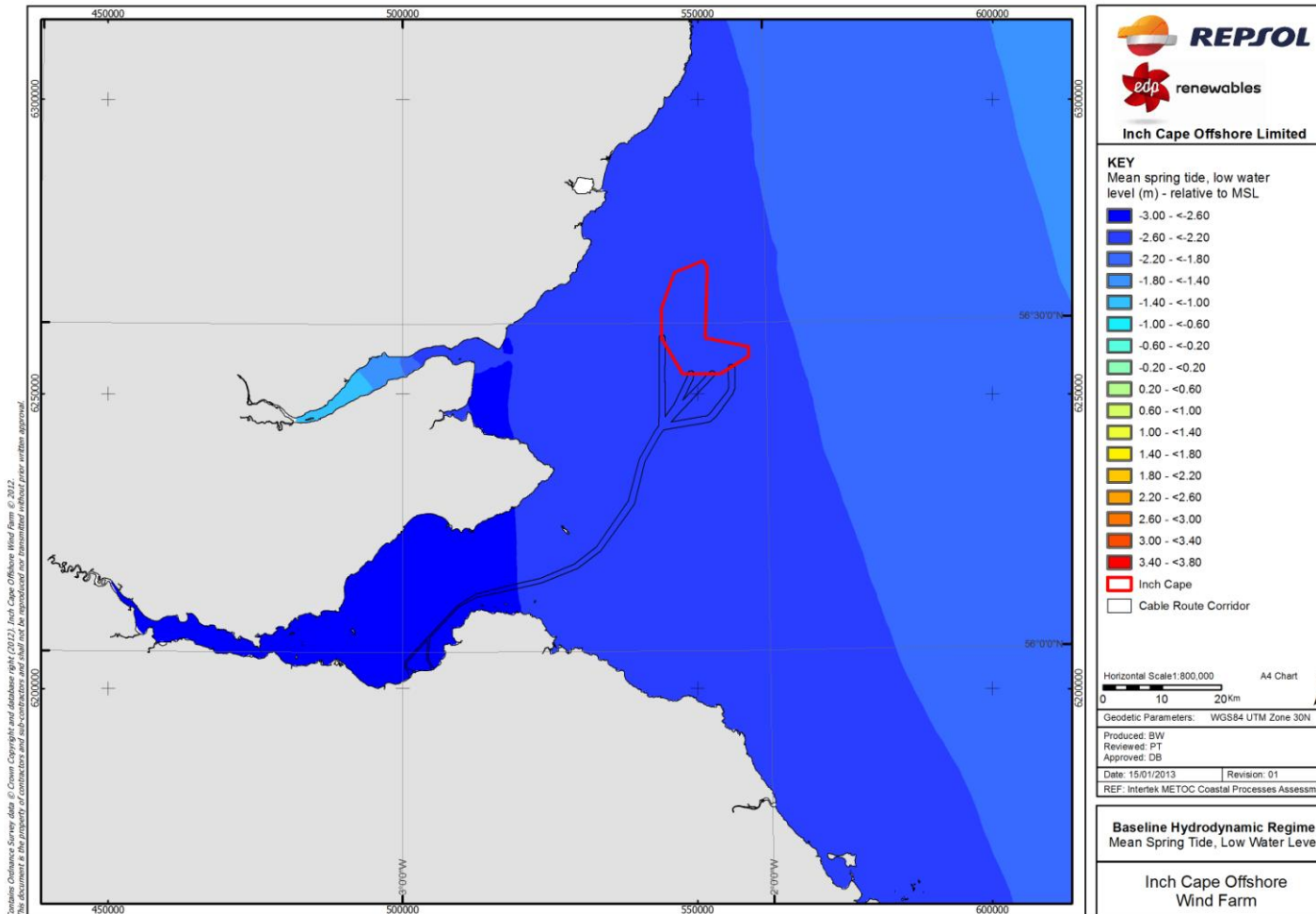


Figure 10A.2.3: Mean neap tide, high water (HW) level (m) – Regional

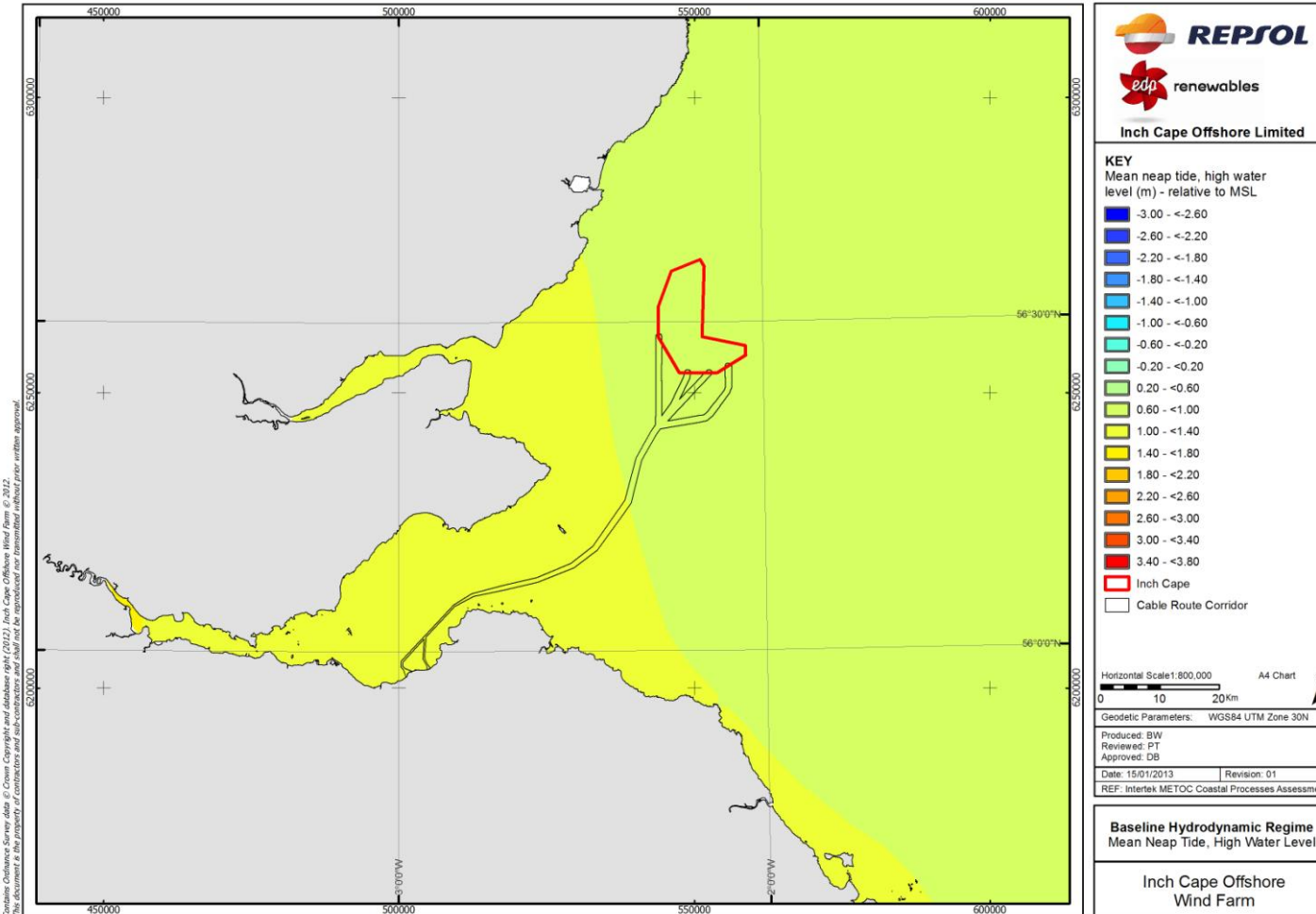


Figure 10A.2.4: Mean neap tide, low water (LW) level (m) – Regional

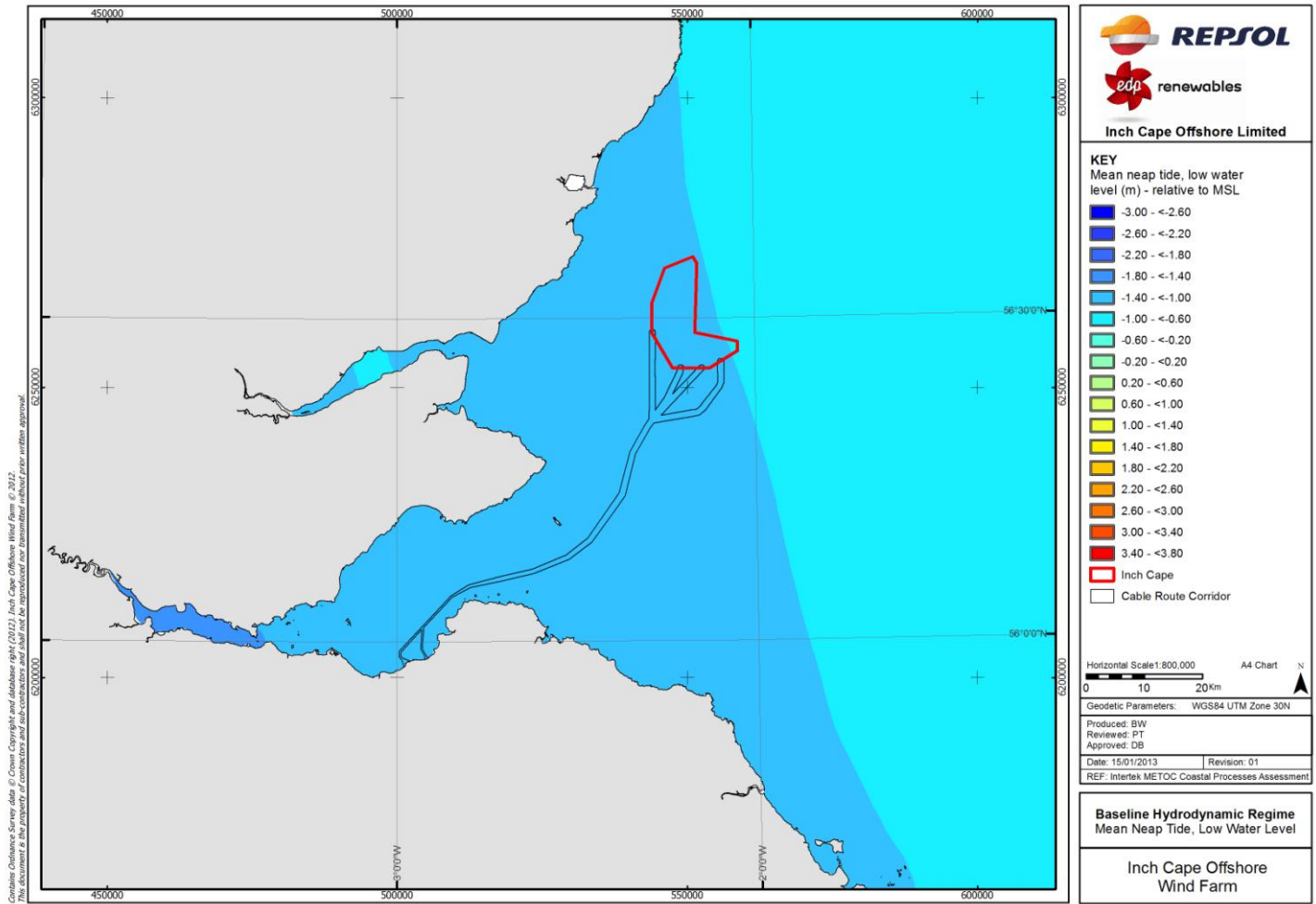


Figure 10A.2.5: Mean spring tide, peak flood currents (m/s) – Regional

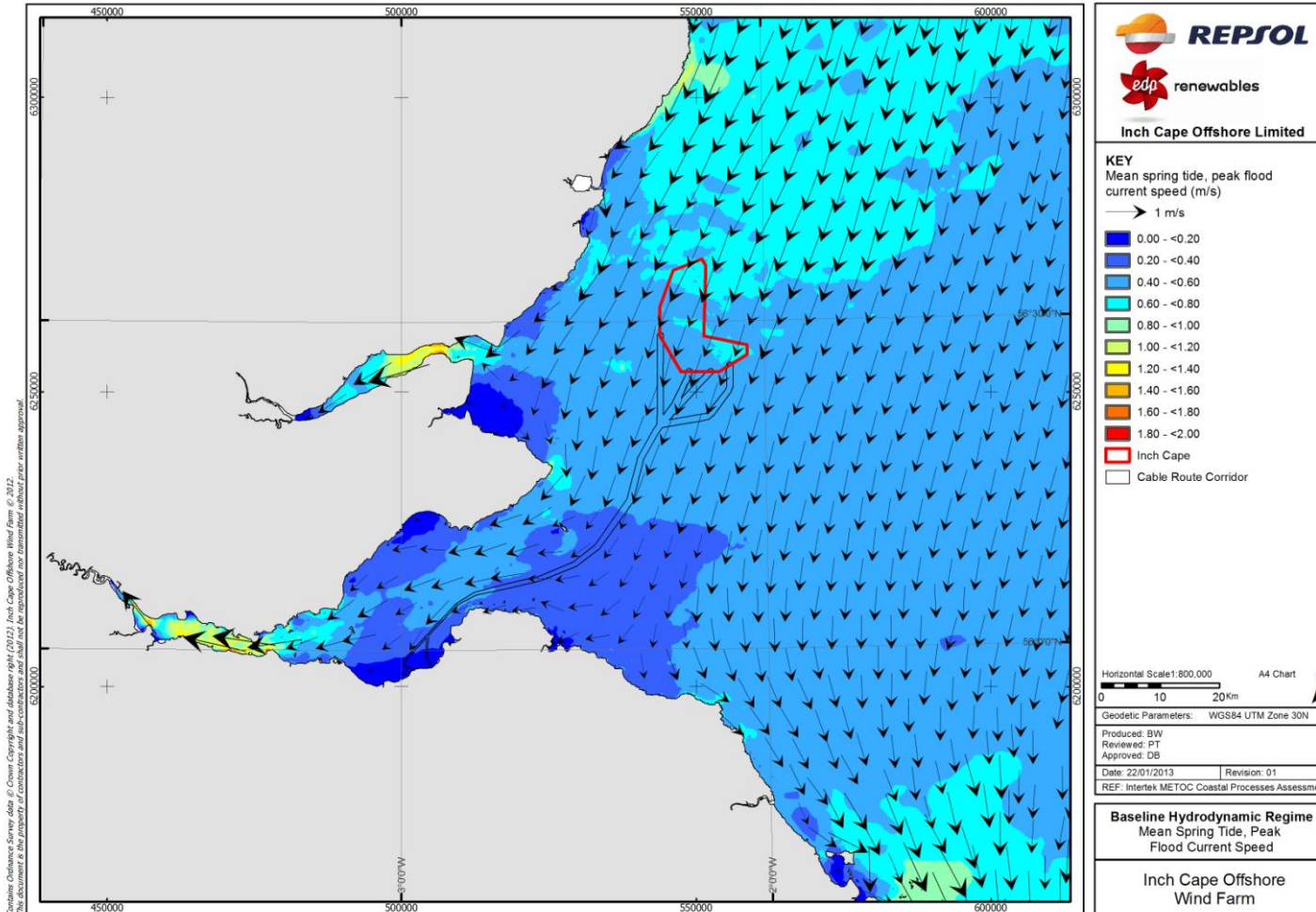


Figure 10A.2.6: Mean spring tide, peak ebb currents (m/s) – Regional

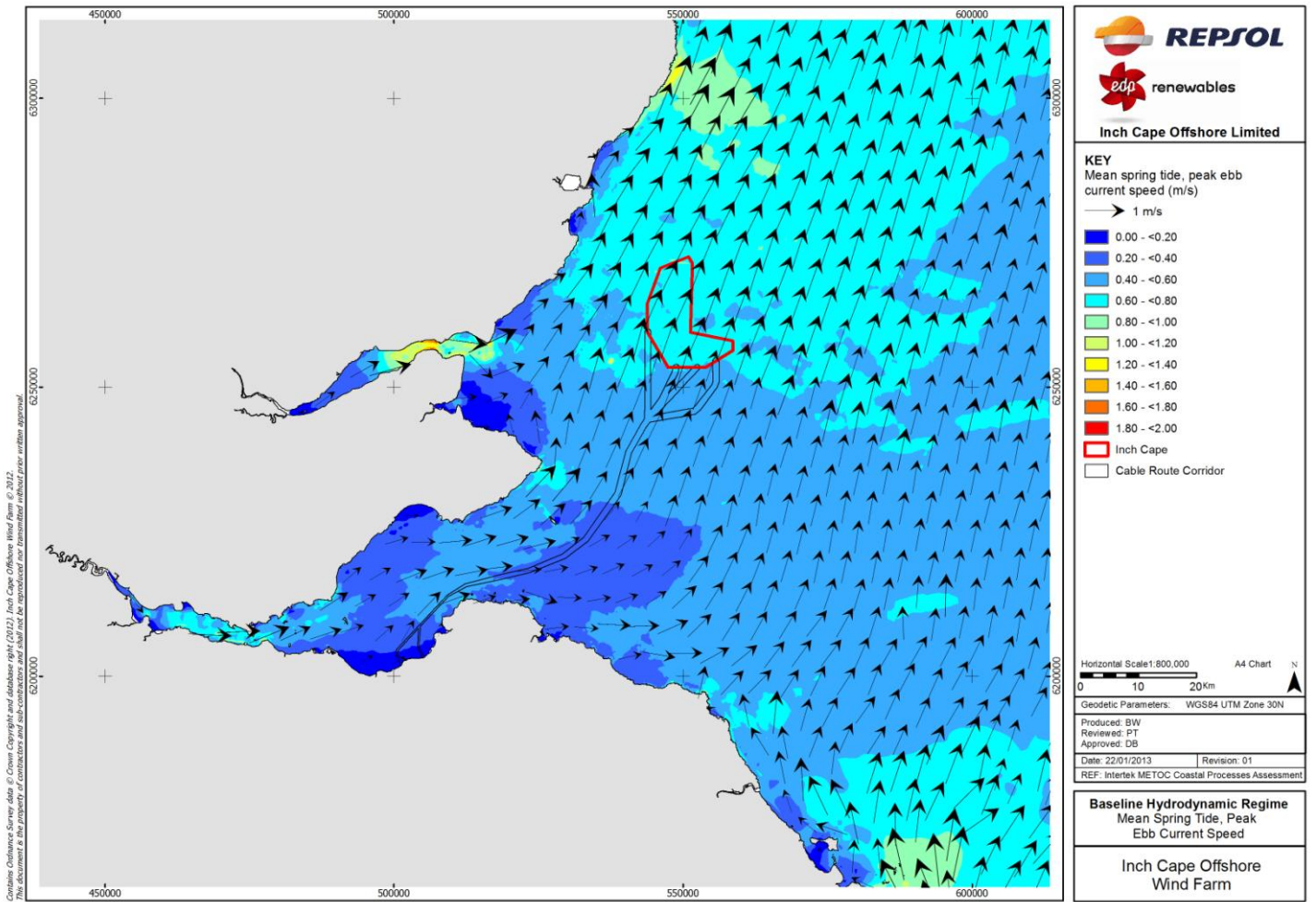


Figure 10A.2.7: Mean neap tide, peak flood currents (m/s) – Regional

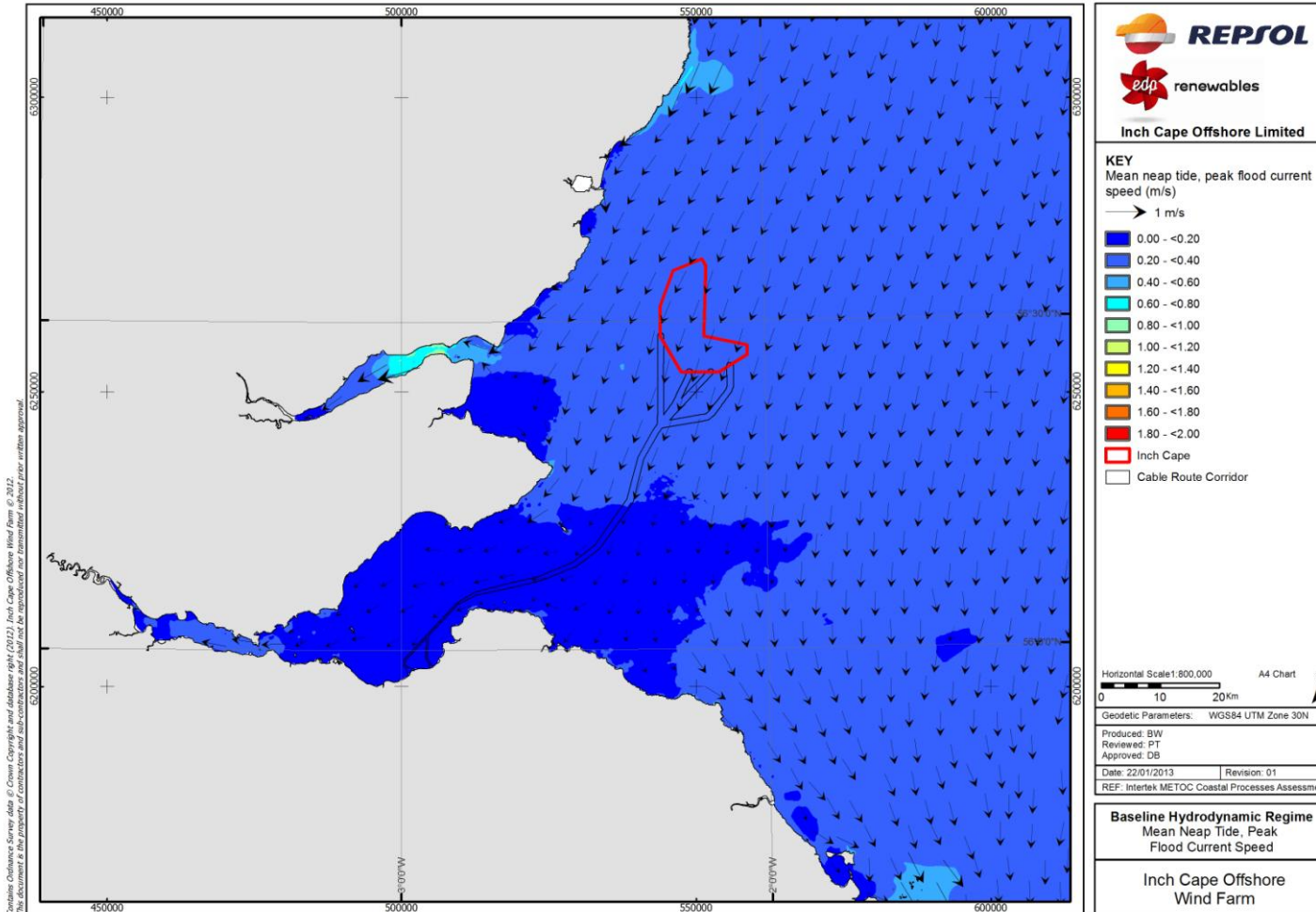


Figure 10A.2.8: Mean neap tide, peak ebb currents (m/s) – Regional

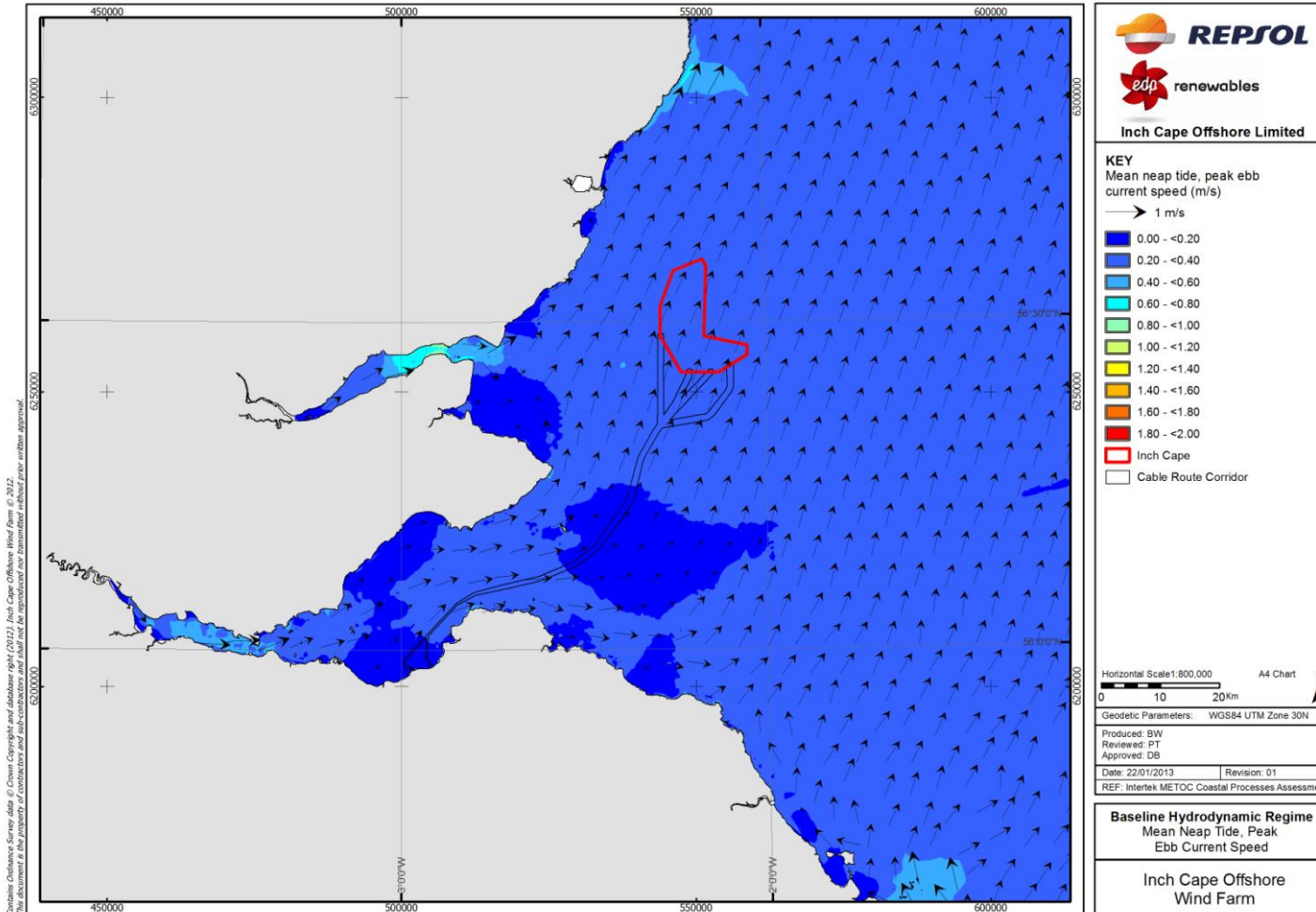


Figure 10A.2.9: 50-percentile currents (m/s) over a mean spring and neap tide – Regional

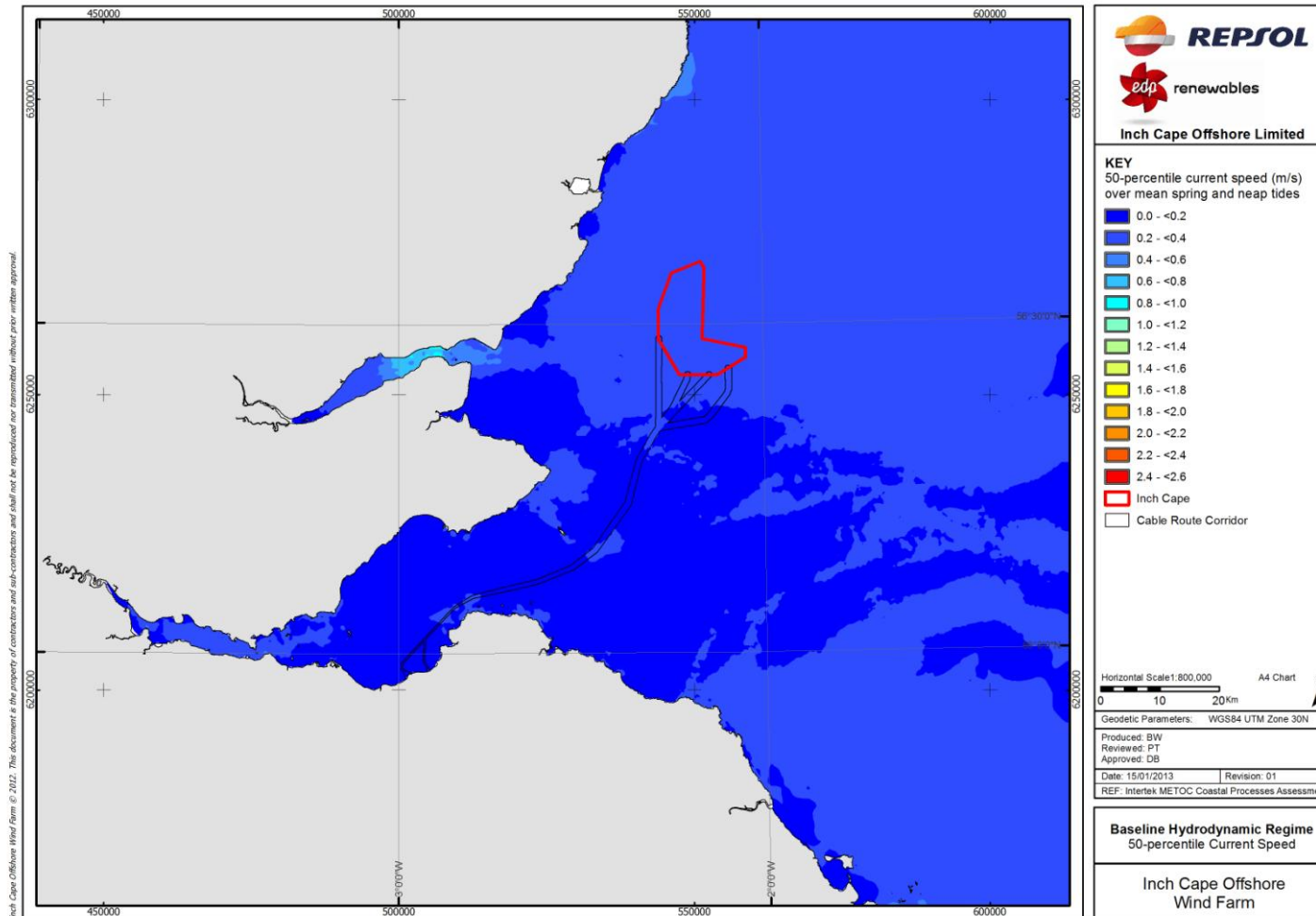


Figure 10A.2.10: 90-percentile currents (m/s) over a mean spring and neap tide – Regional

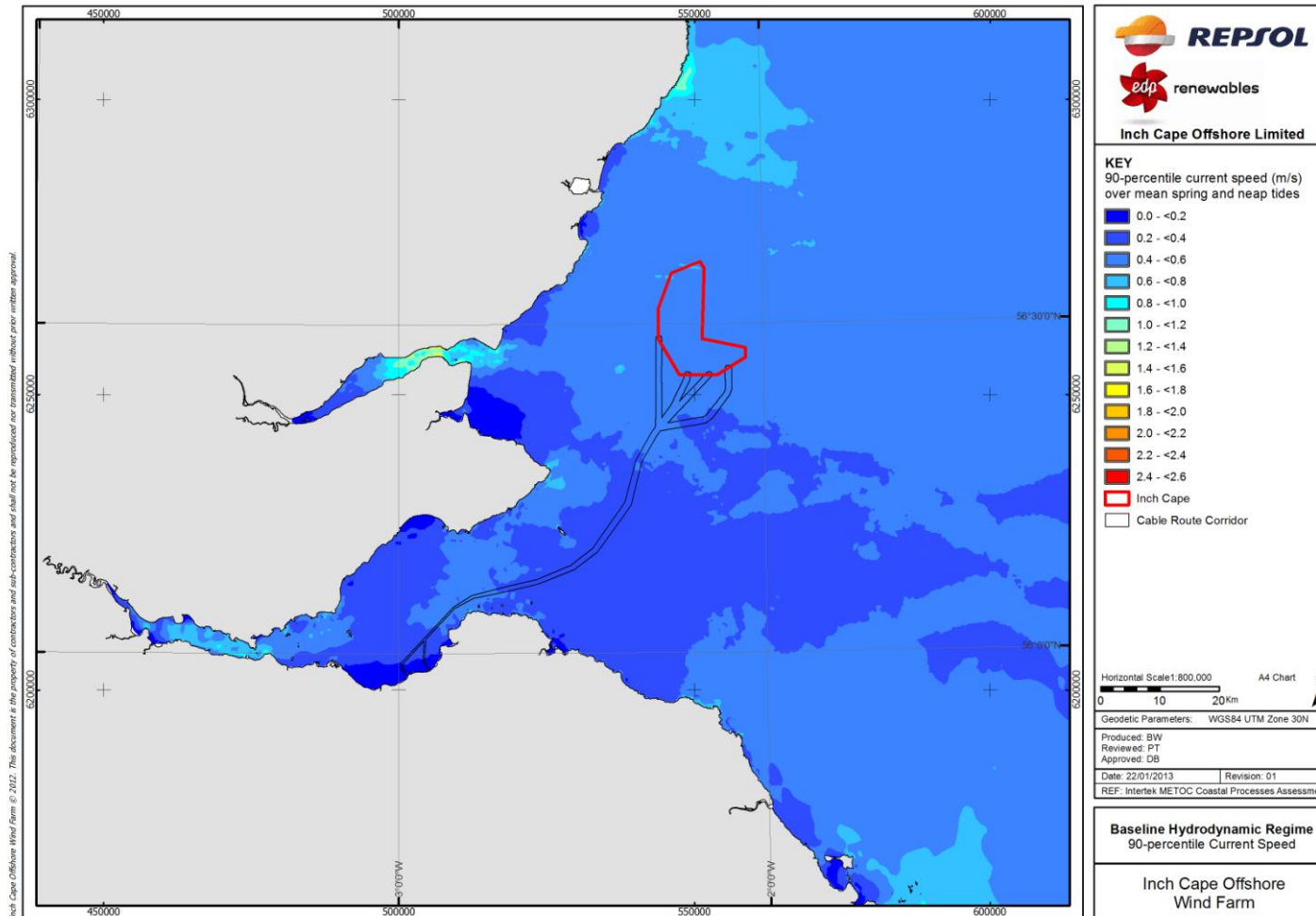


Figure 10A.2.11: 95-percentile currents (m/s) over a mean spring and neap tide – Regional

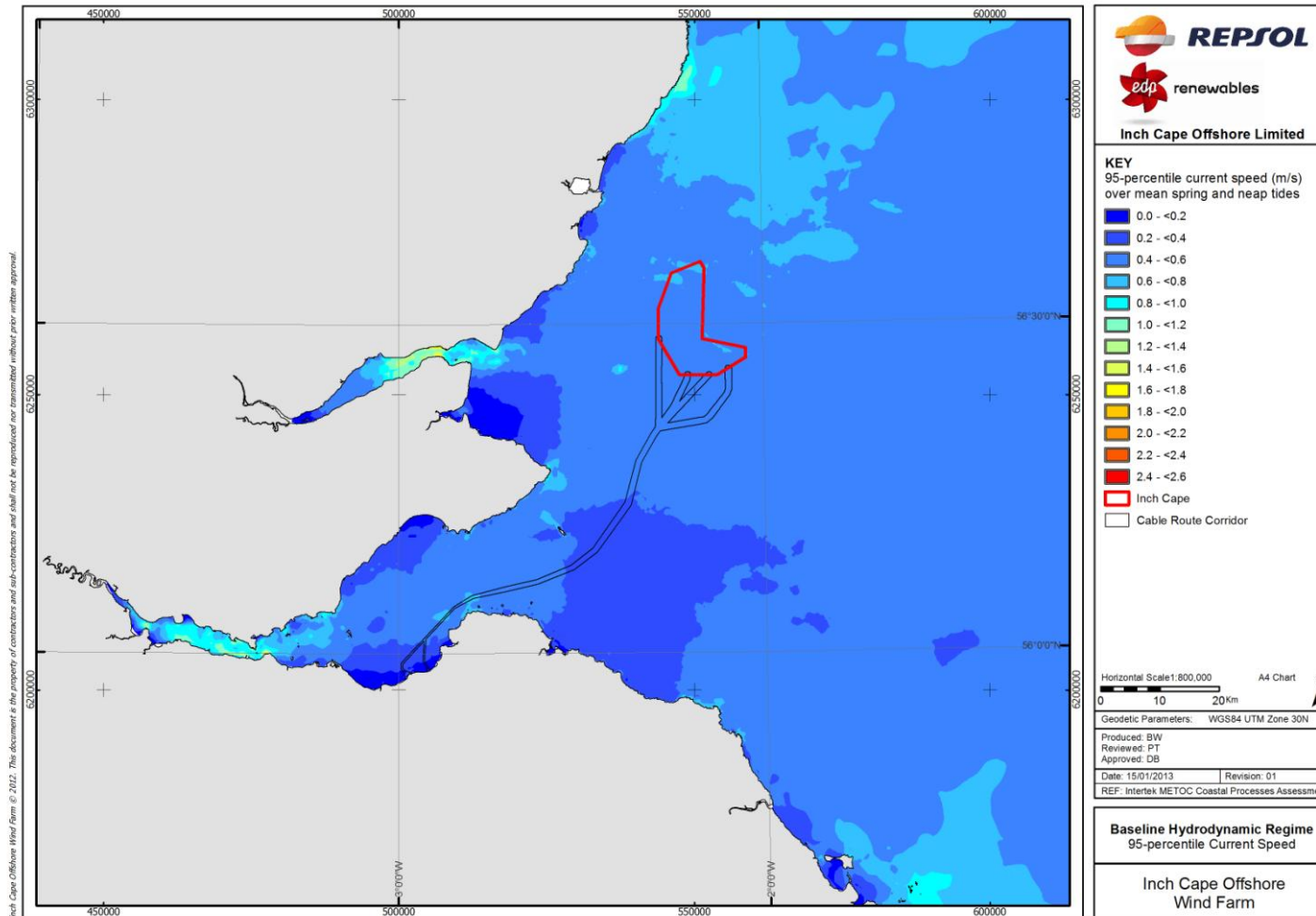


Figure 10A.2.12: 99-percentile currents (m/s) over a mean spring and neap tide – Regional

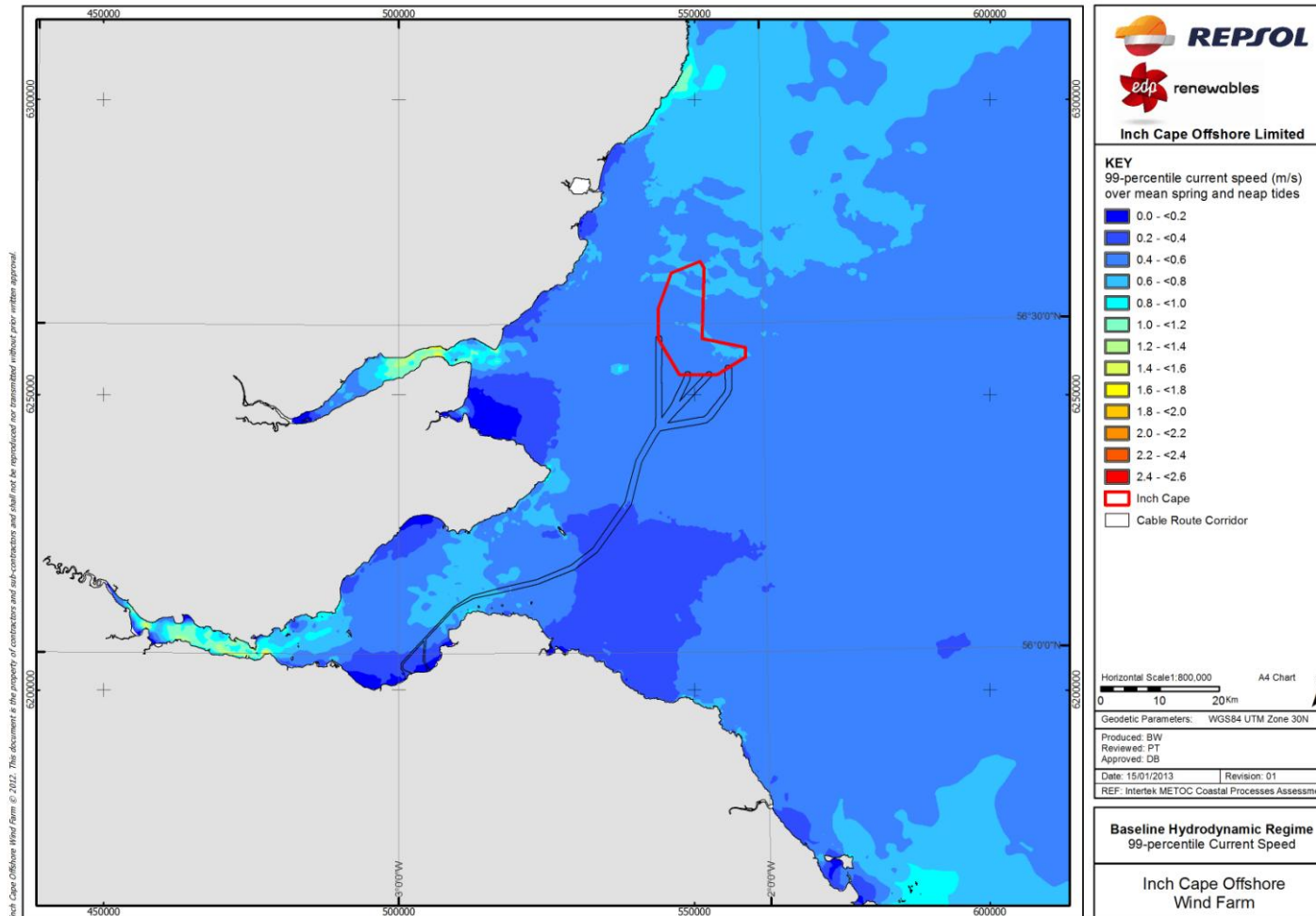


Figure 10A.2.13: Mean spring tide, high water (HW) level (m) – Inch Cape OWF (near-field) scale

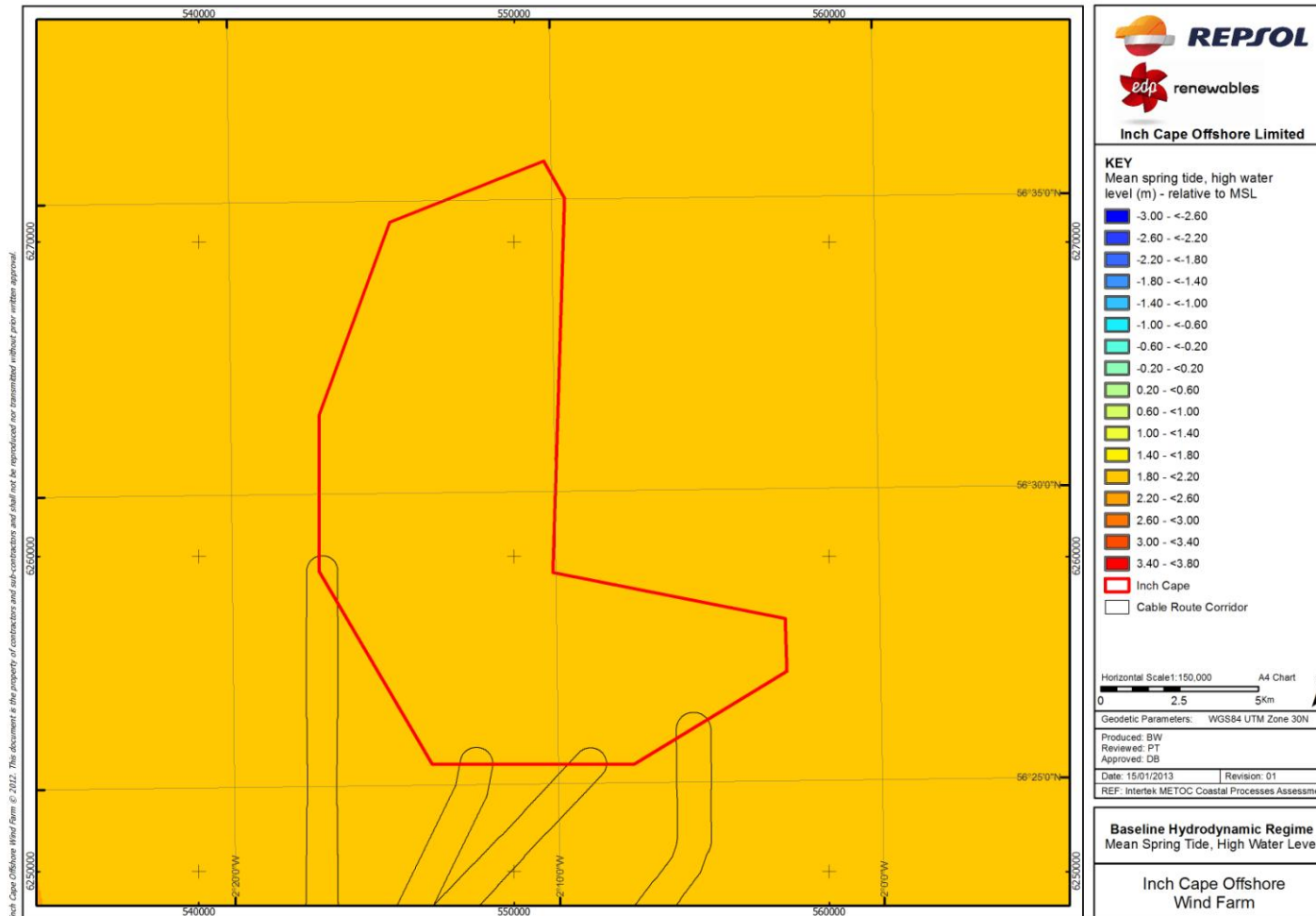


Figure 10A.2.14: Mean spring tide, low water (LW) level (m) – Inch Cape OWF (near-field) scale

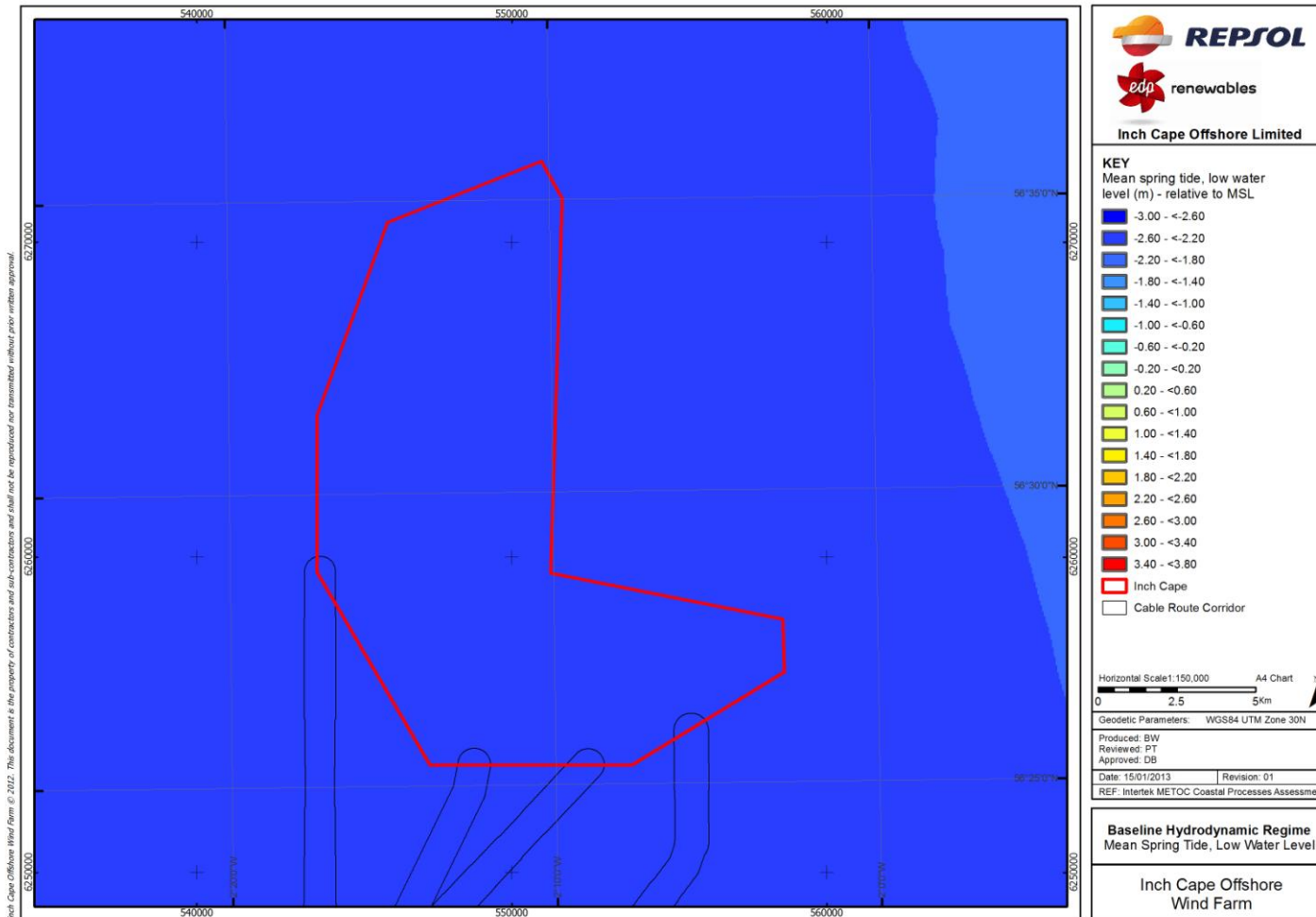


Figure 10A.2.15: Mean neap tide, high water (HW) level (m) – Inch Cape OWF (near-field) scale

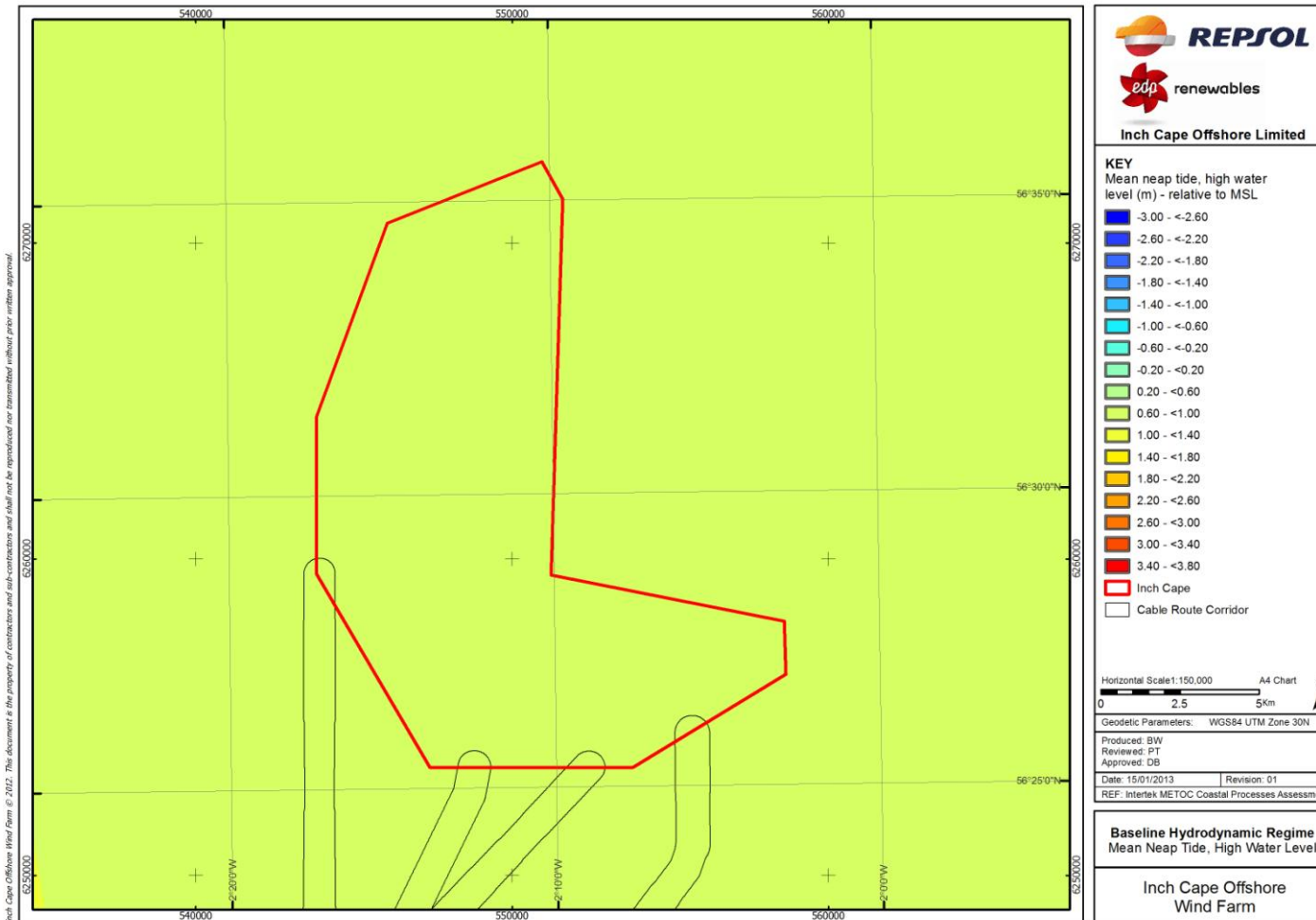


Figure 10A.2.16: Mean neap tide, low water (LW) level (m) – Inch Cape OWF (near-field) scale

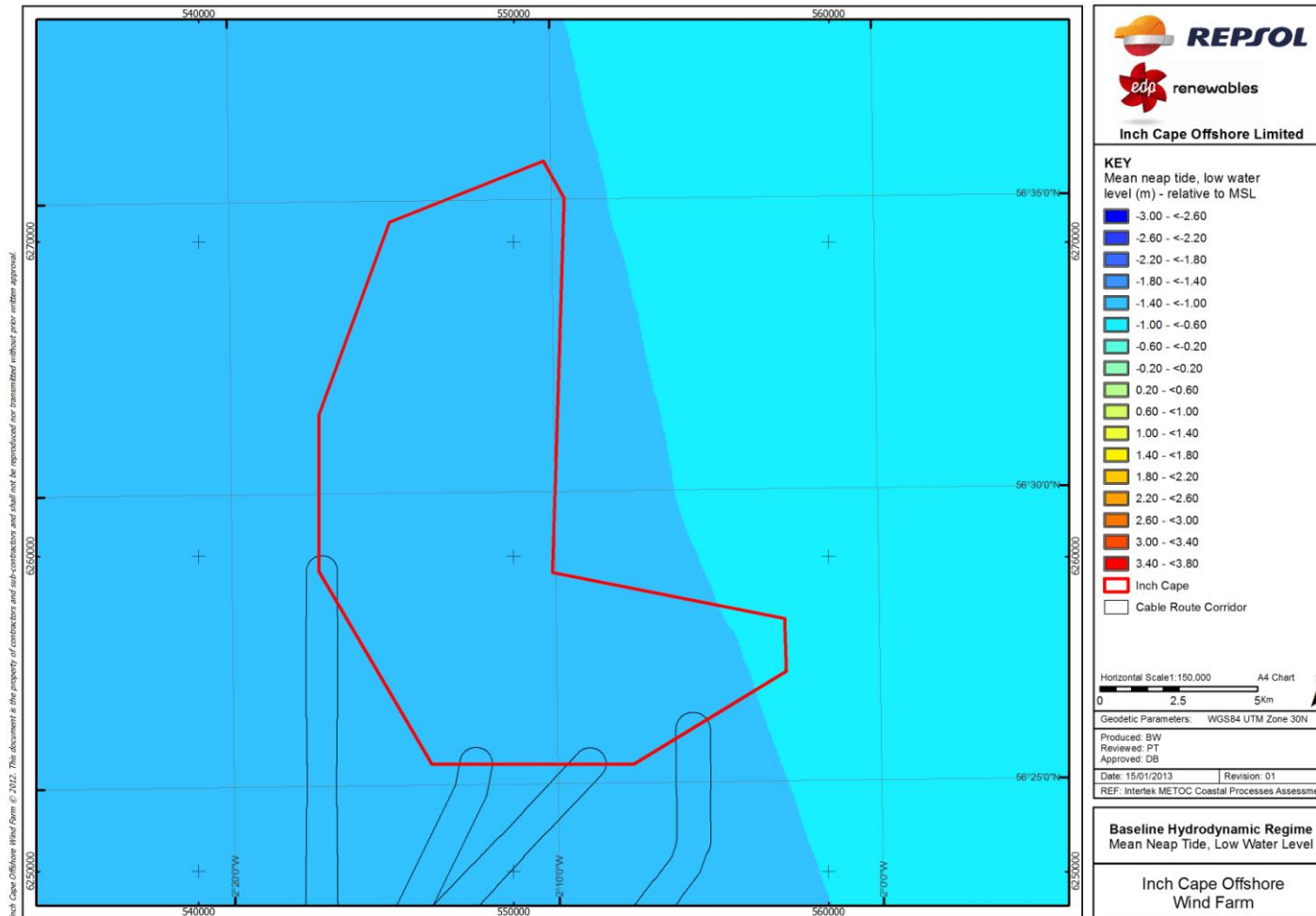


Figure 10A.2.17: Mean spring tide, peak flood currents (m/s) – Inch Cape OWF (near-field) scale

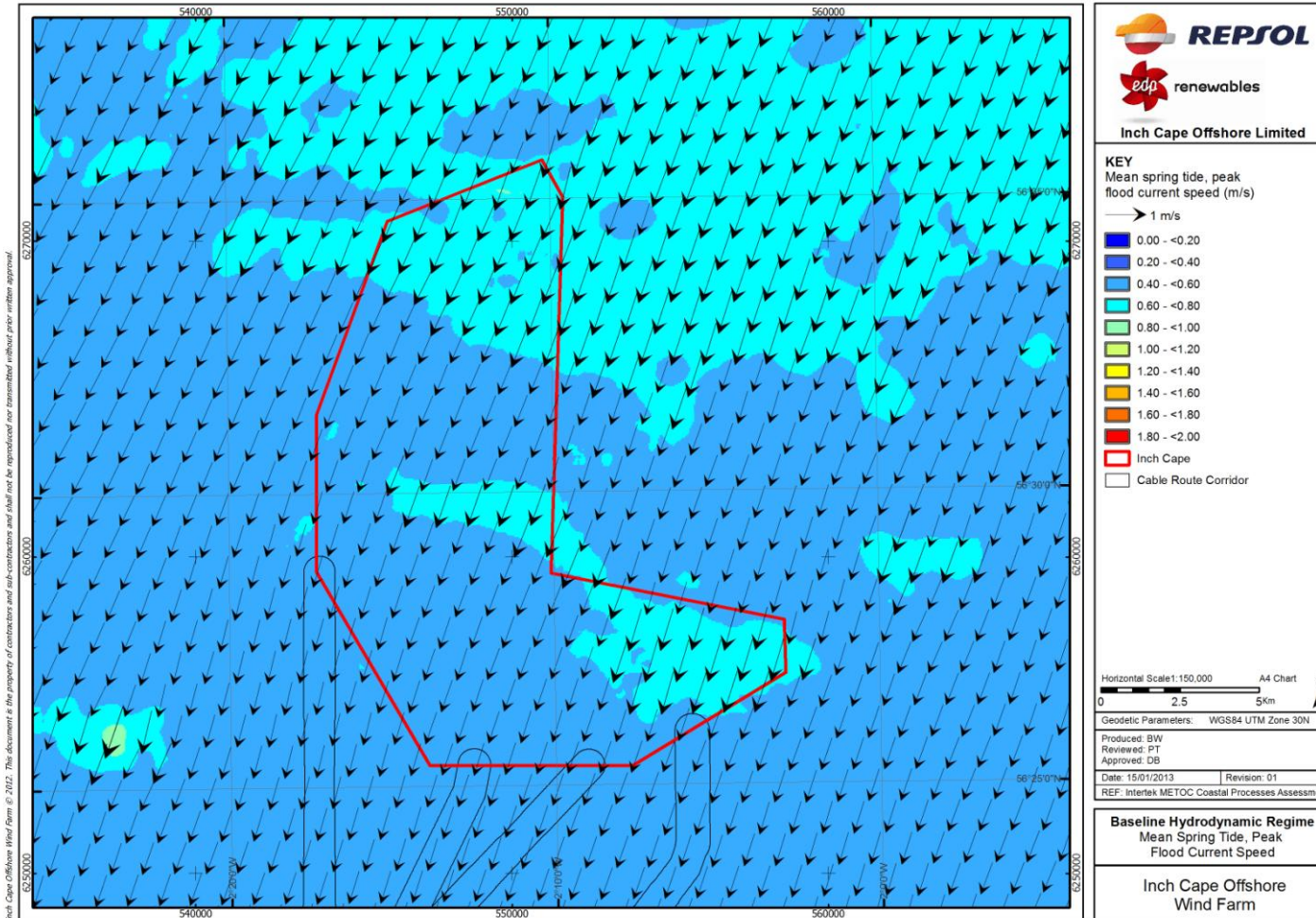


Figure 10A.2.18: Mean spring tide, peak ebb currents (m/s) – Inch Cape OWF (near-field) scale

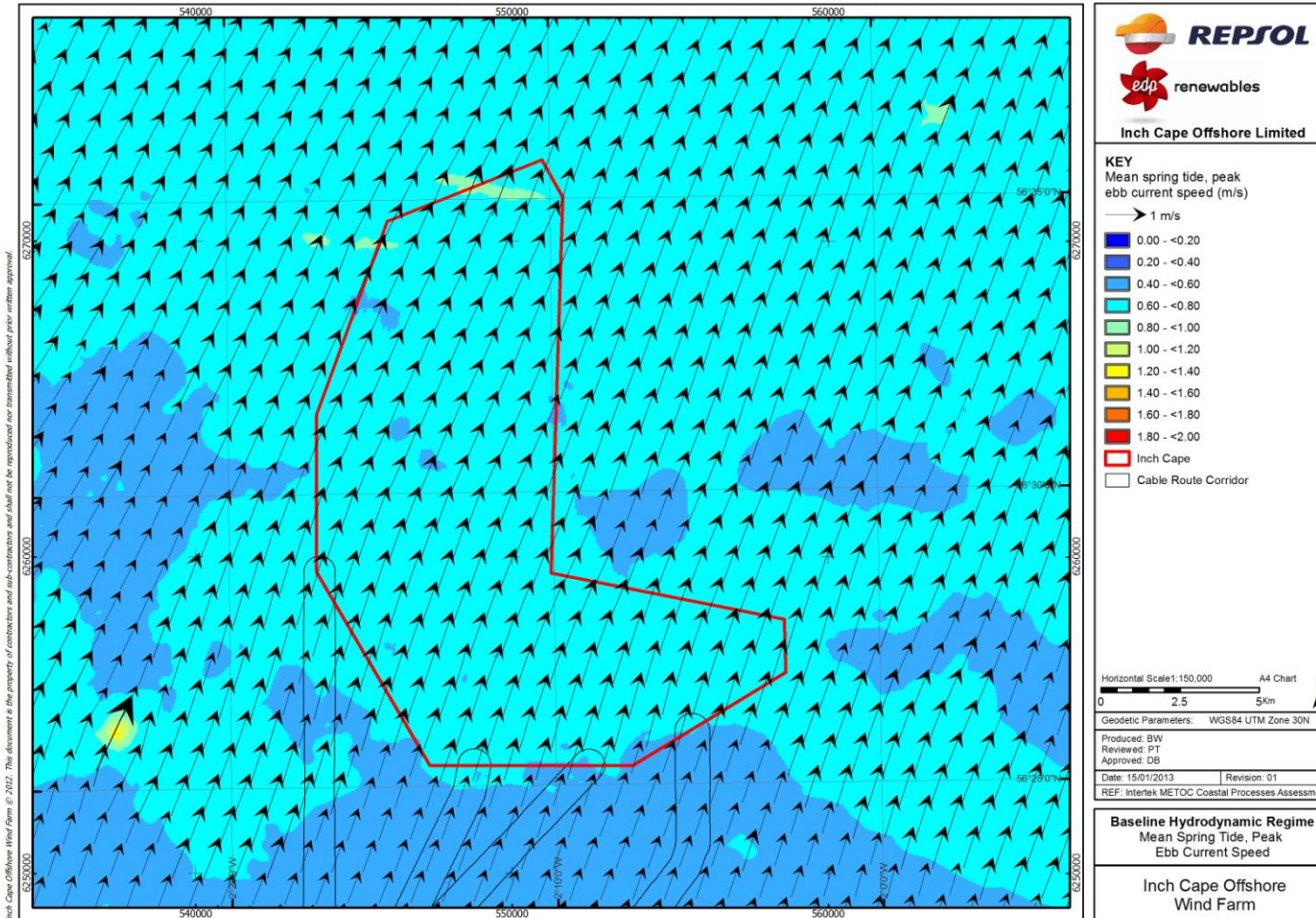


Figure 10A.2.19: Mean neap tide, peak flood currents (m/s) – Inch Cape OWF (near-field) scale

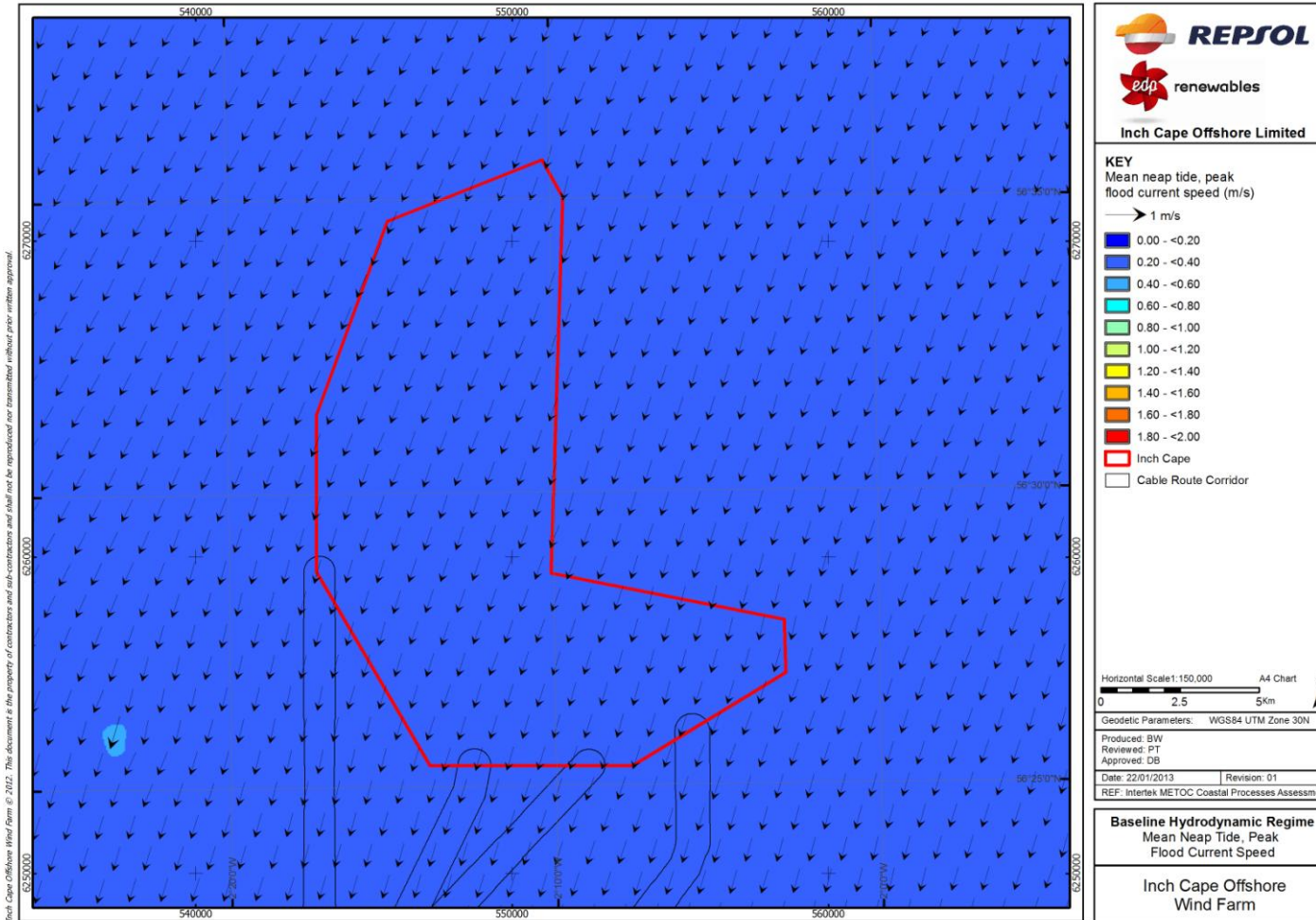


Figure 10A.2.20: Mean neap tide, peak ebb currents (m/s) – Inch Cape OWF (near-field) scale

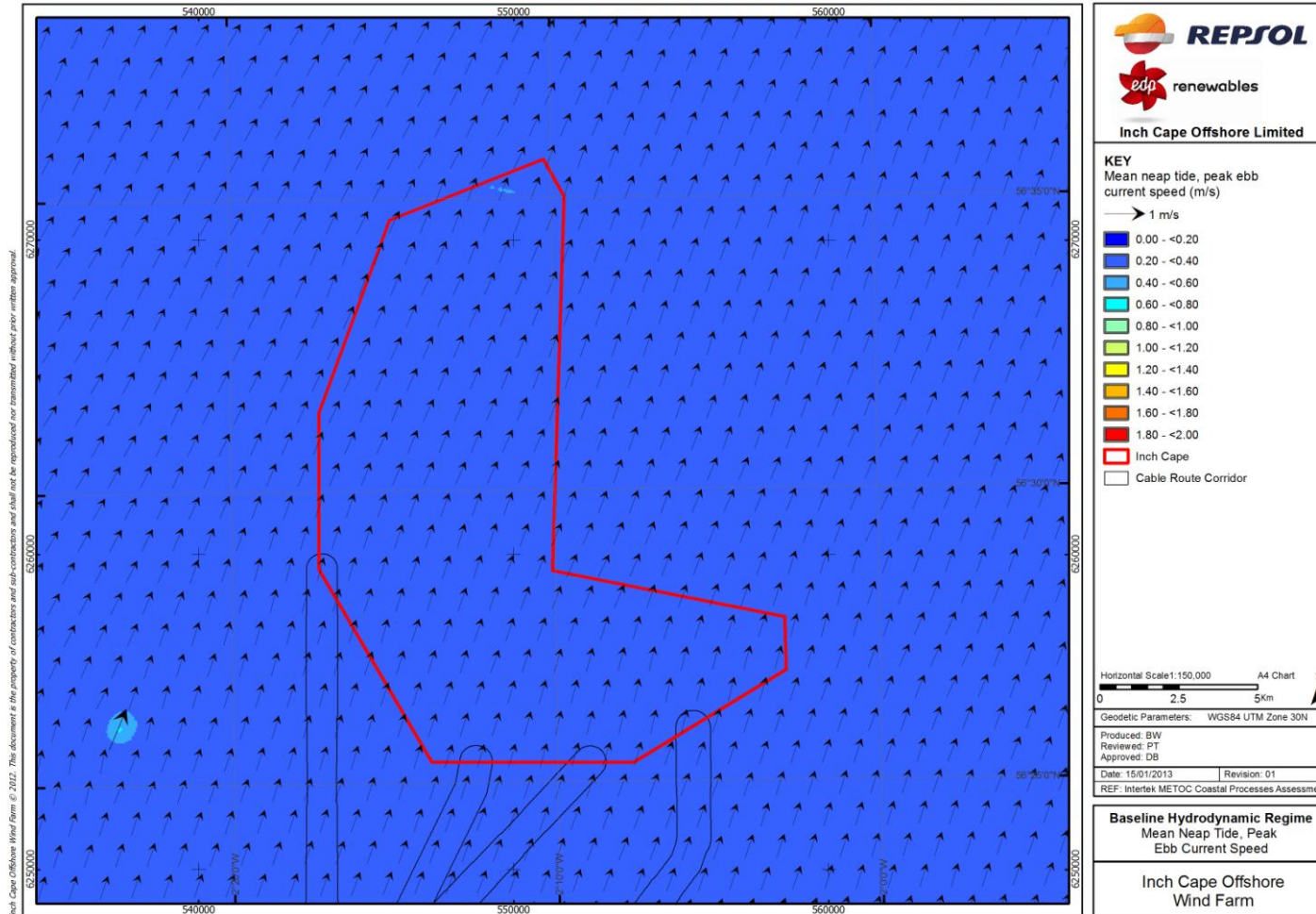


Figure 10A.2.21: 50-percentile currents (m/s) over a mean spring and neap tide – Inch Cape OWF (near-field) scale

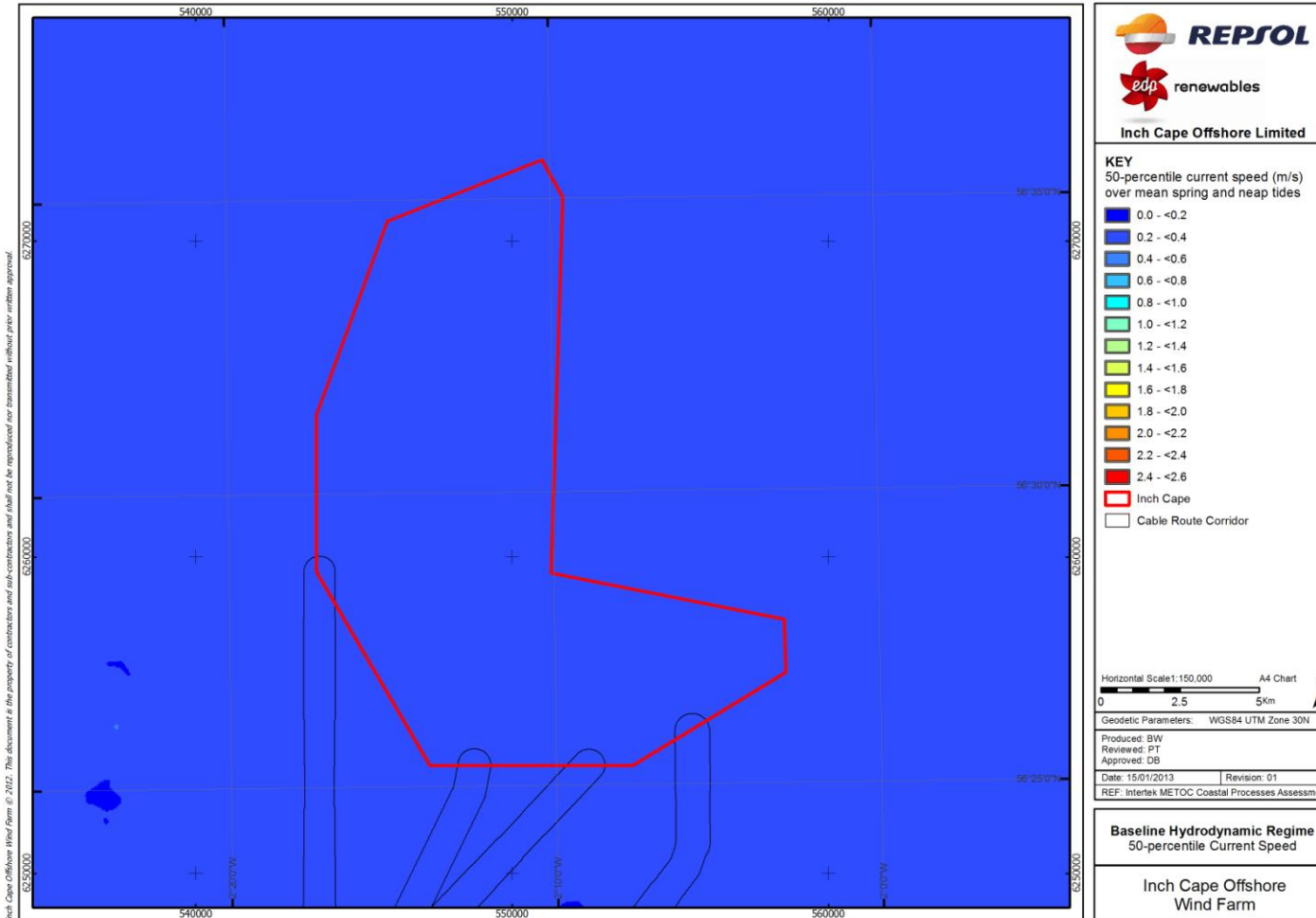


Figure 10A.2.22: 90-percentile currents (m/s) over a mean spring and neap tide – Inch Cape OWF (near-field) scale

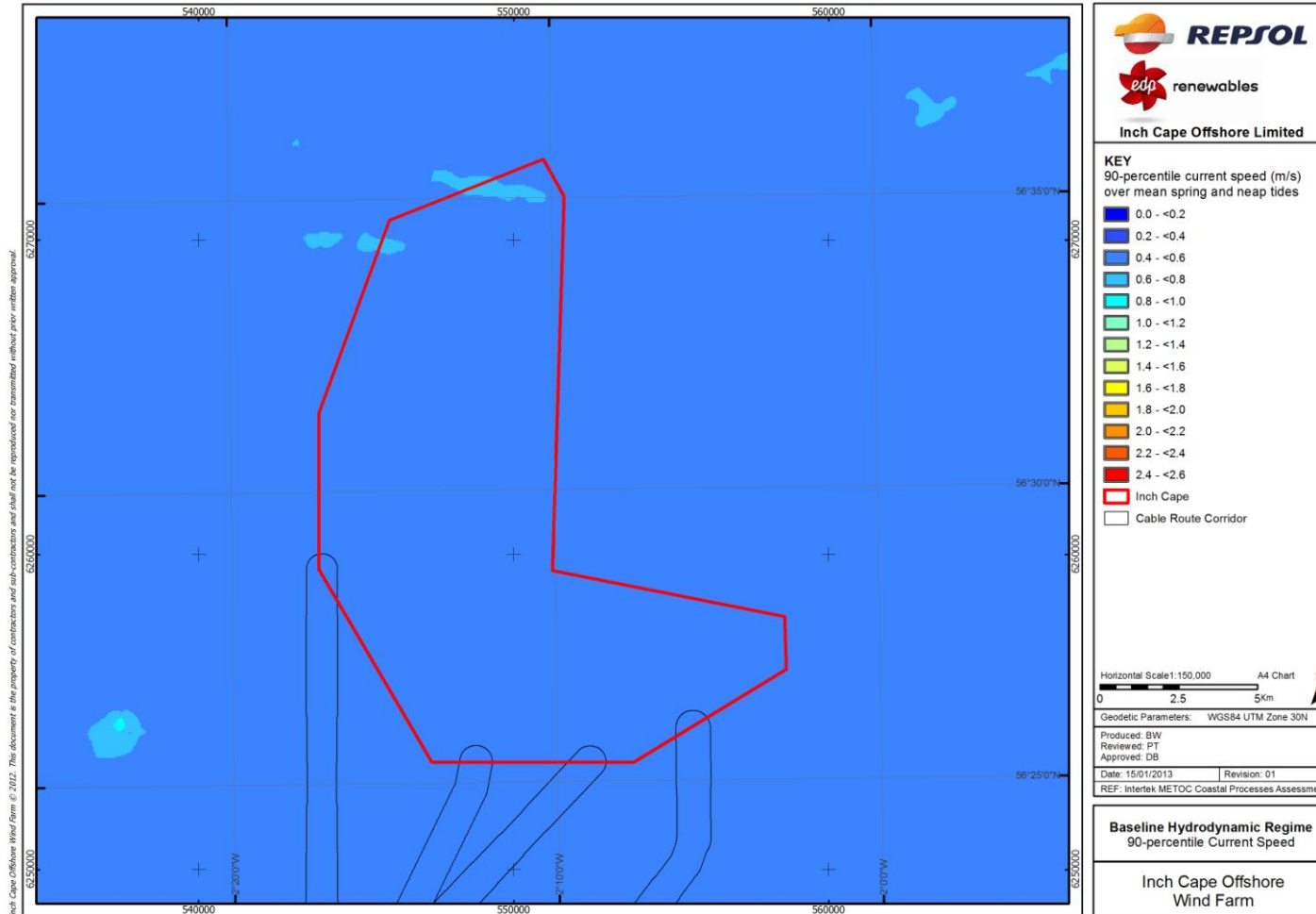


Figure 10A.2.23: 95-percentile currents (m/s) over a mean spring and neap tide – Inch Cape OWF (near-field) scale

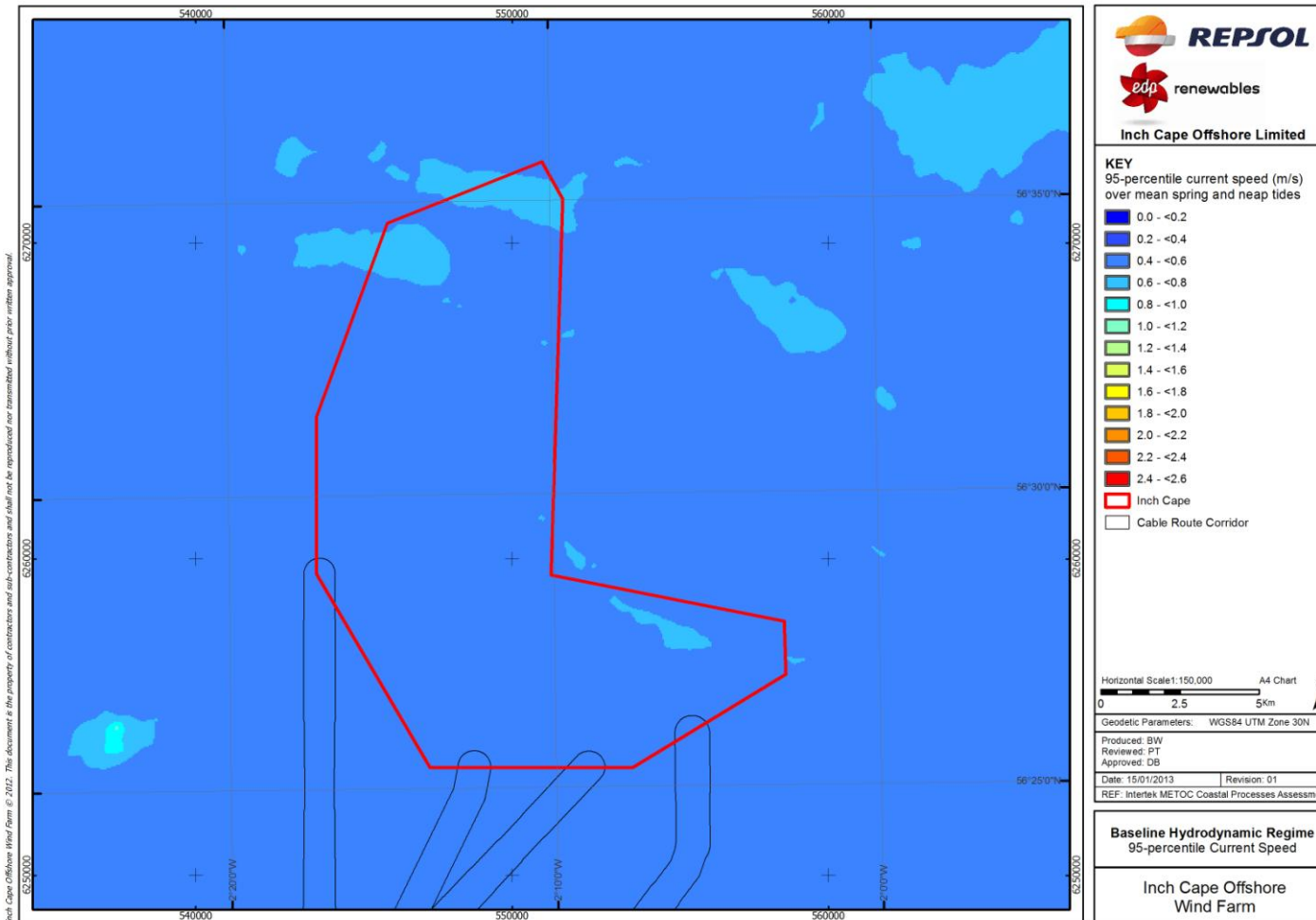
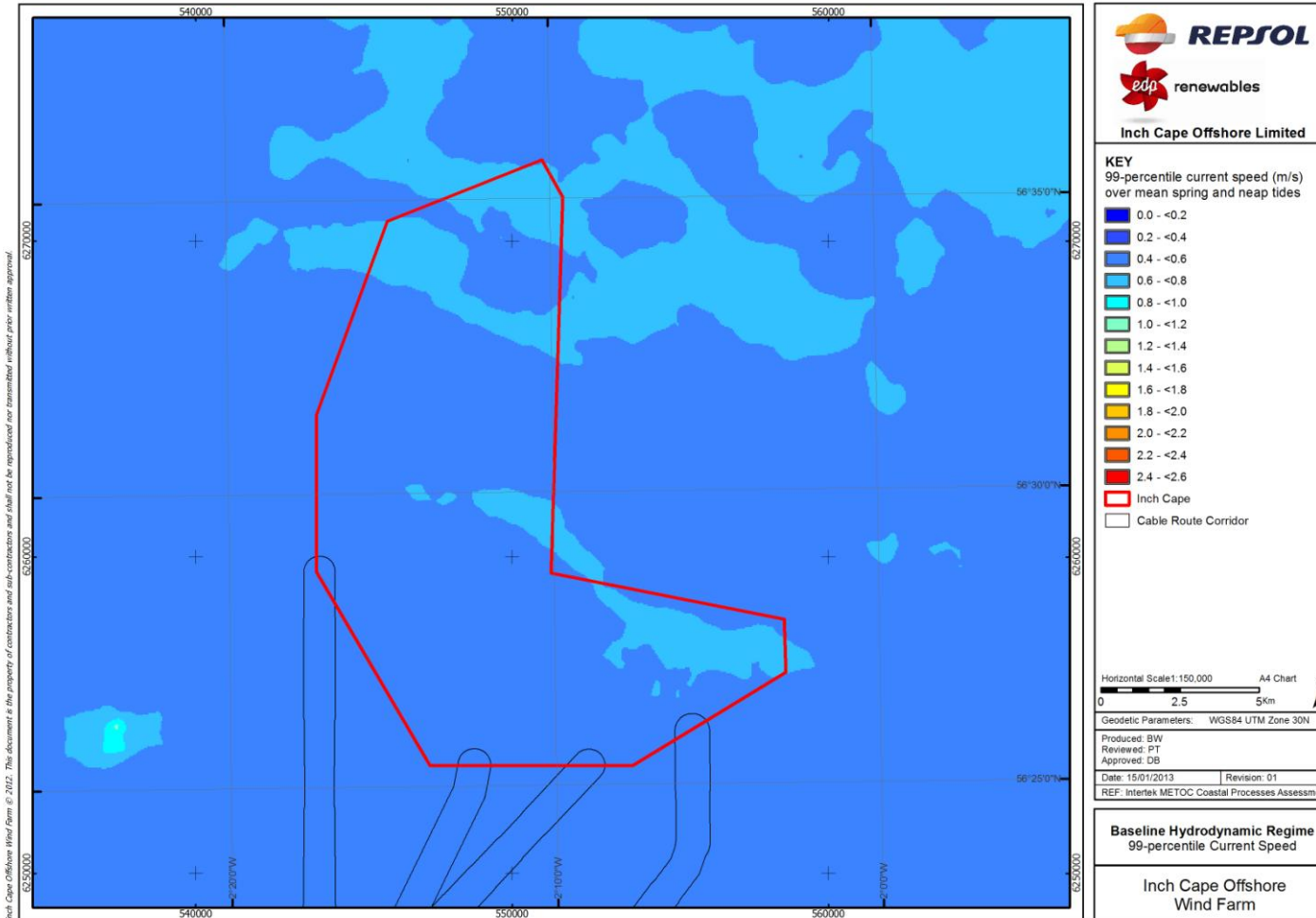


Figure 10A.2.24: 99-percentile currents (m/s) over a mean spring and neap tide – Inch Cape OWF (near-field) scale



Section 2: Wave climate

Figure 10A.2.25: 50%ile significant wave height (m) – Regional (far-field) scale

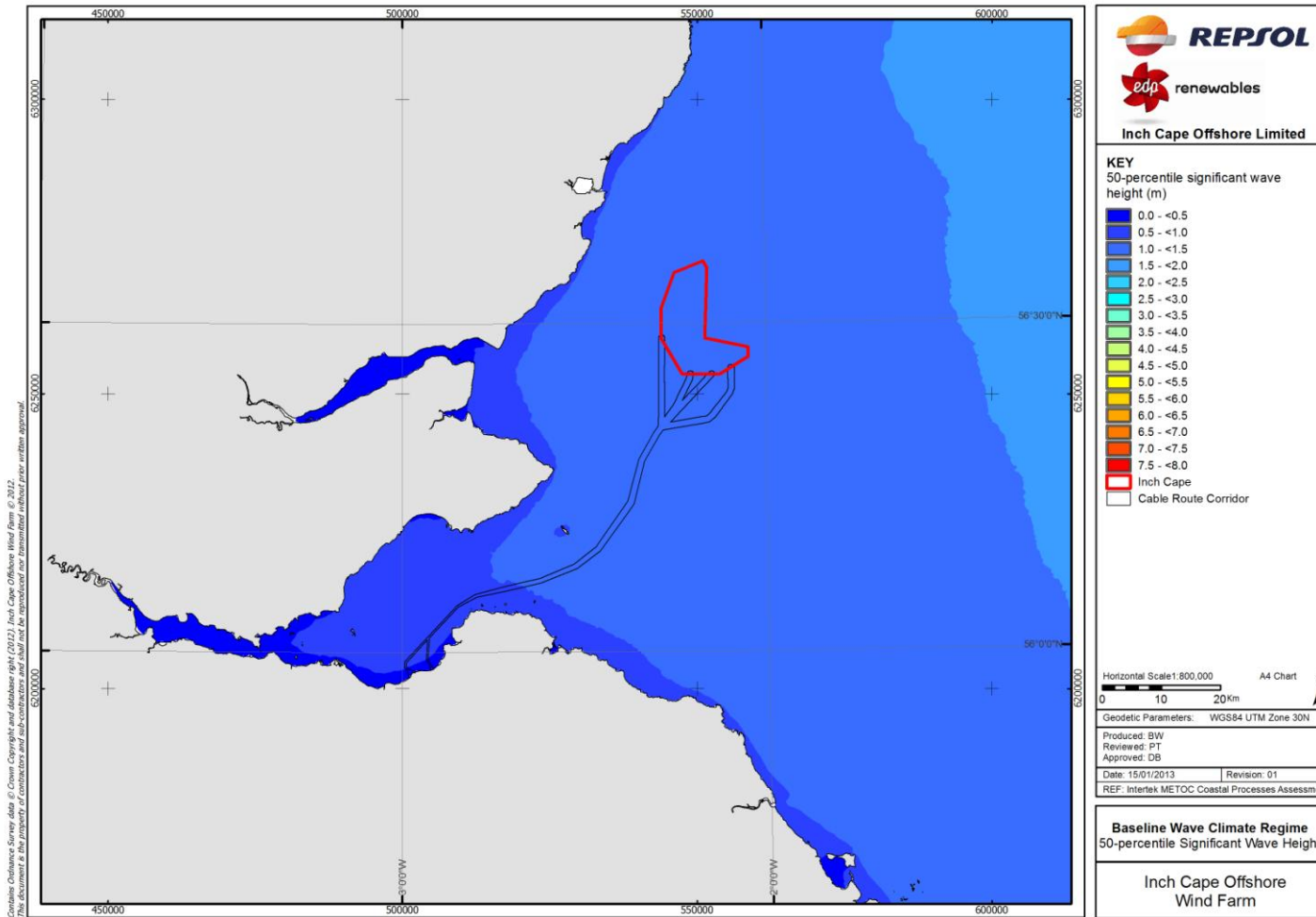


Figure 10A.2.26: 90%ile significant wave height (m) – Regional (far-field) scale

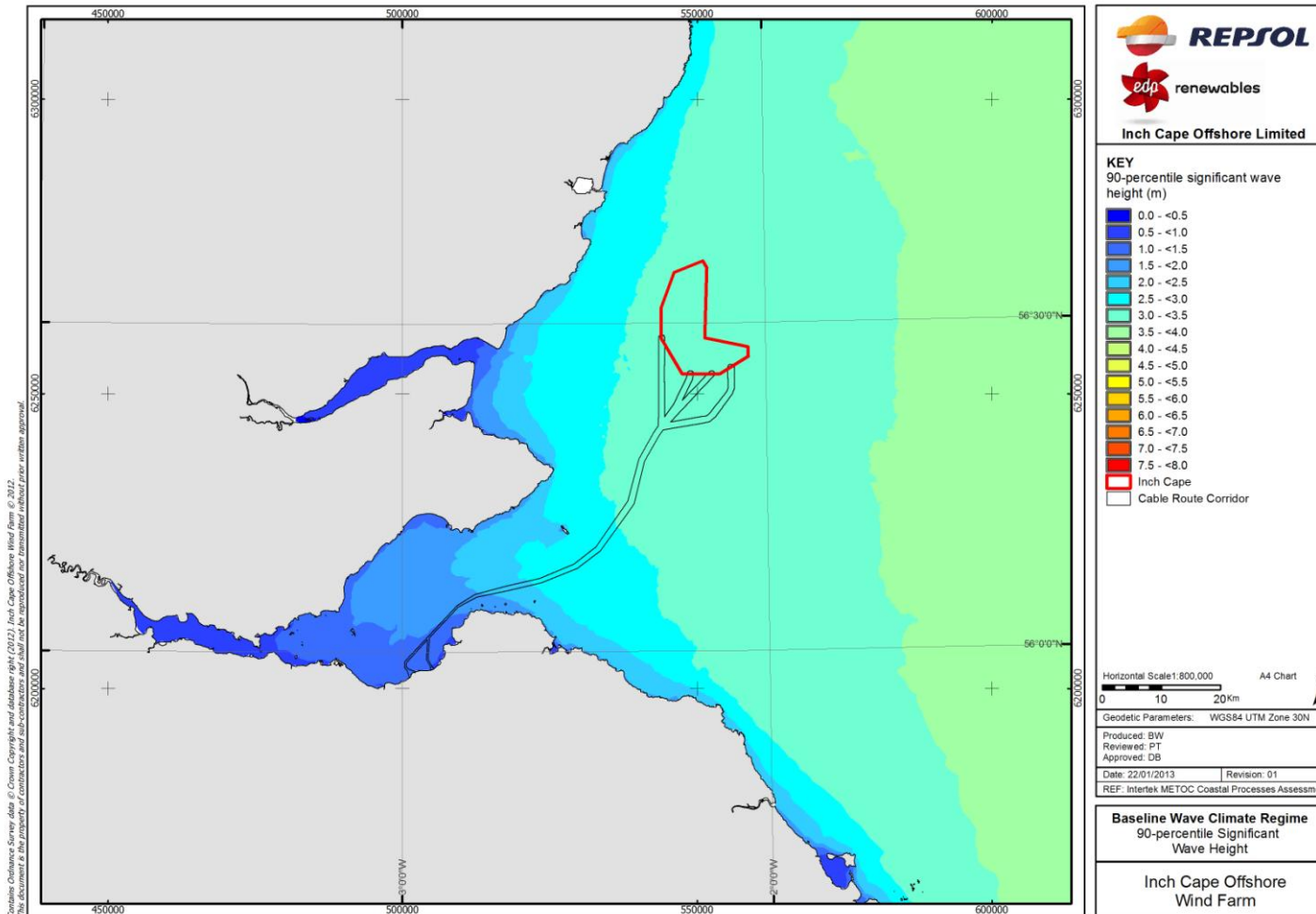


Figure 10A.2.27: 95%ile significant wave height (m) – Regional (far-field) scale

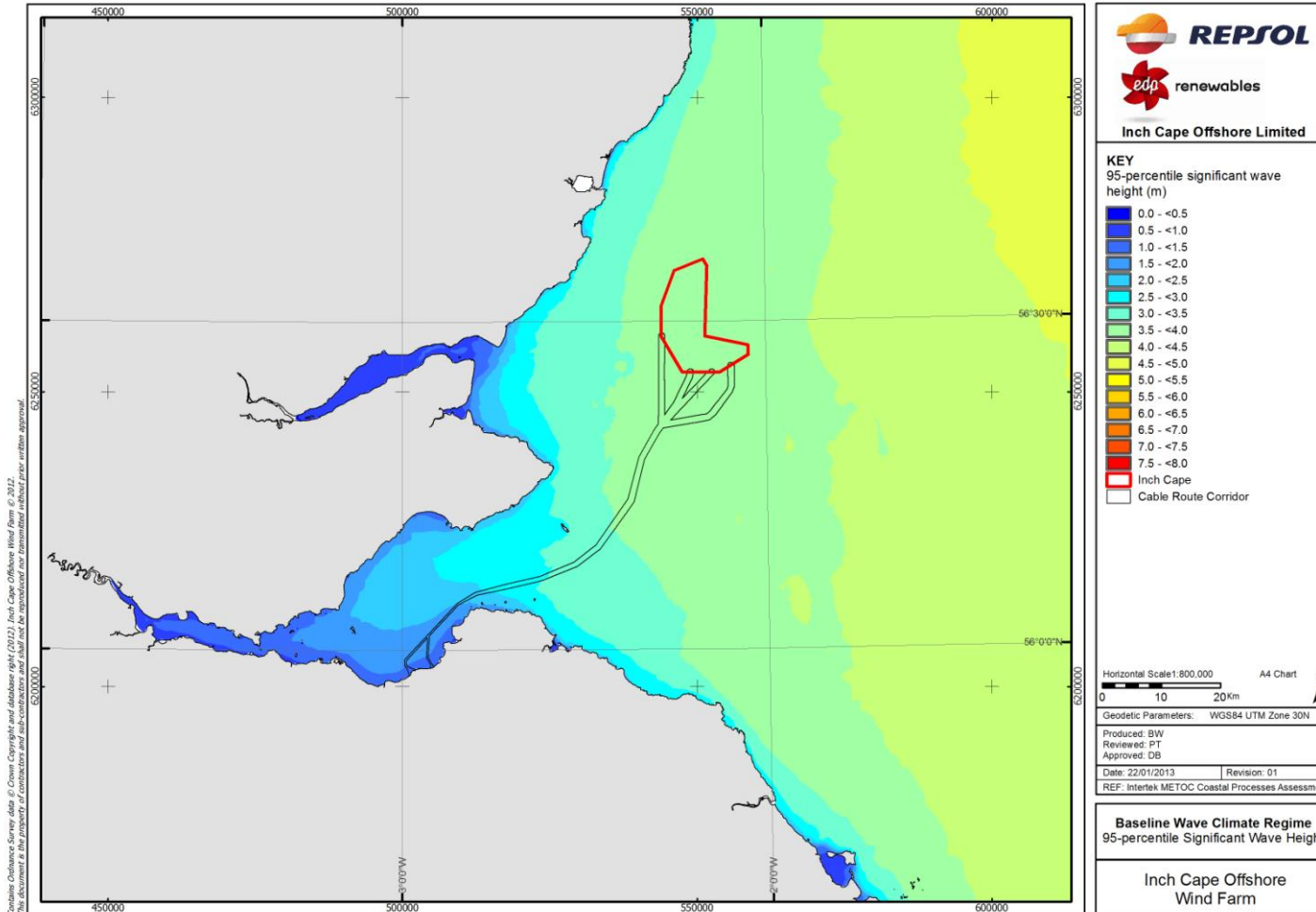


Figure 10A.2.28: 99%ile significant wave height (m) – Regional (far-field) scale

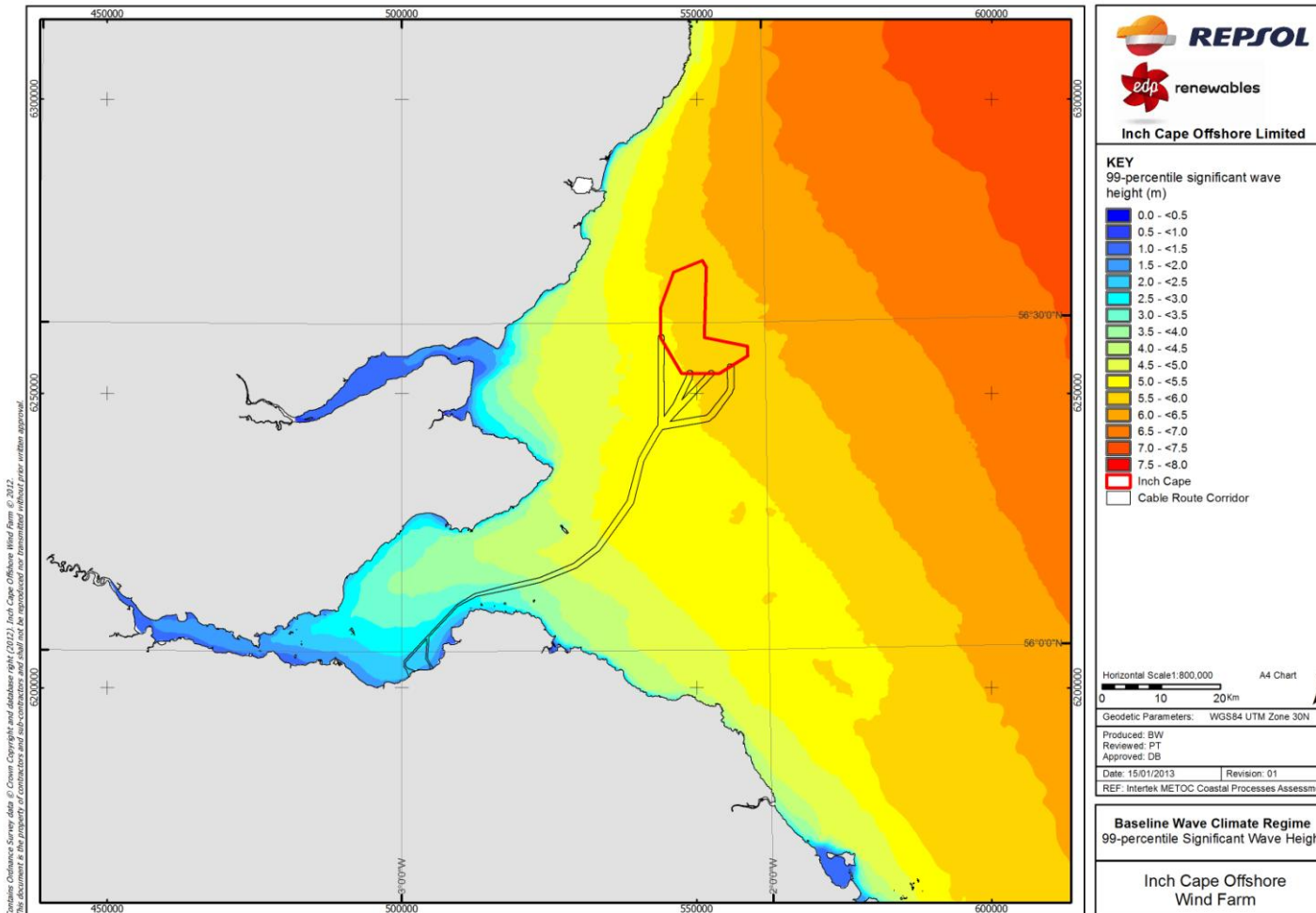


Figure 10A.2.29: 50%ile mean wave period (s) – Regional (far-field) scale

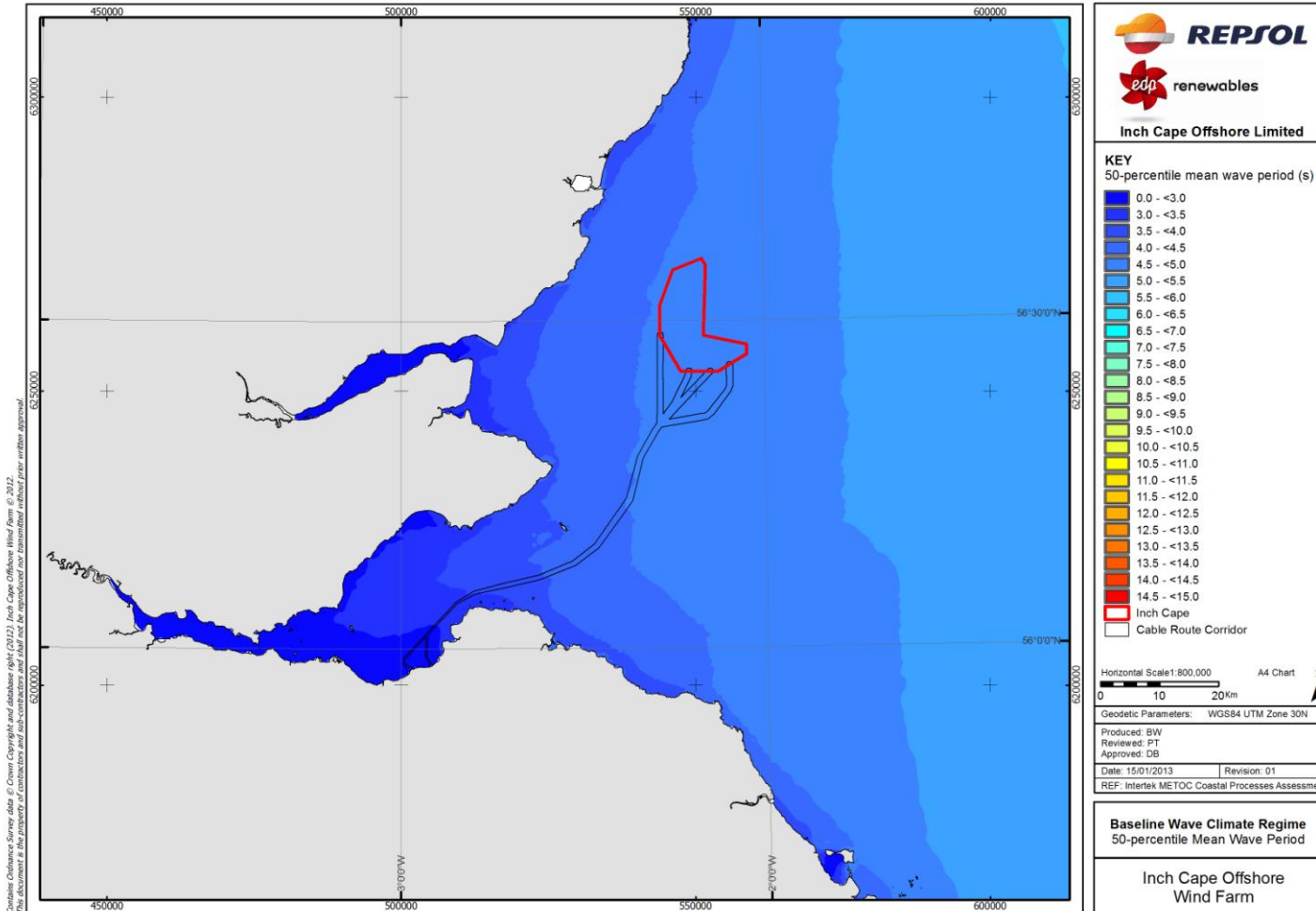


Figure 10A.2.30: 90%ile mean wave period (s) – Regional (far-field) scale

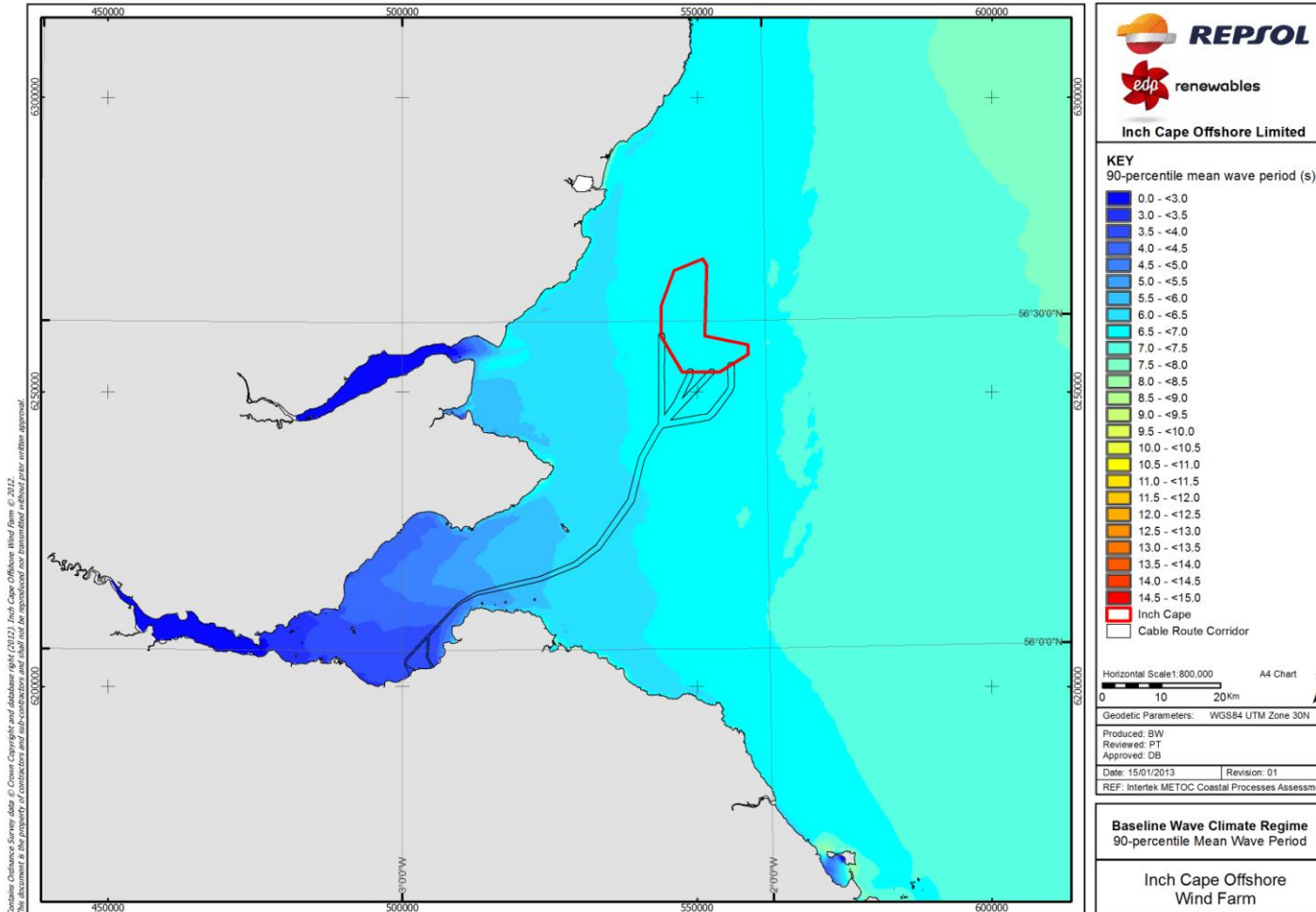


Figure 10A.2.31: 95%ile mean wave period (s) – Regional (far-field) scale

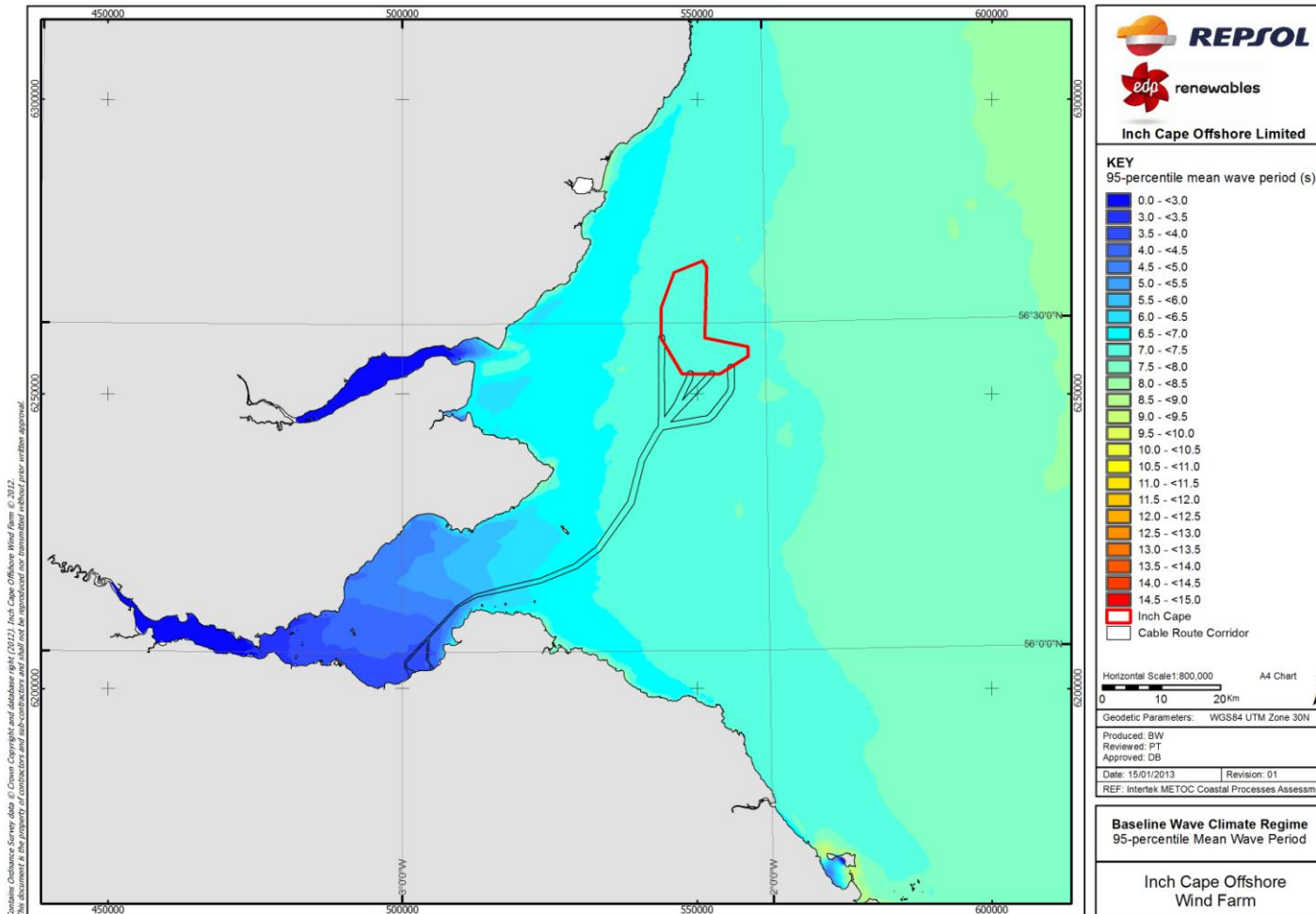


Figure 10A.2.32: 99%ile mean wave period (s) – Regional (far-field) scale

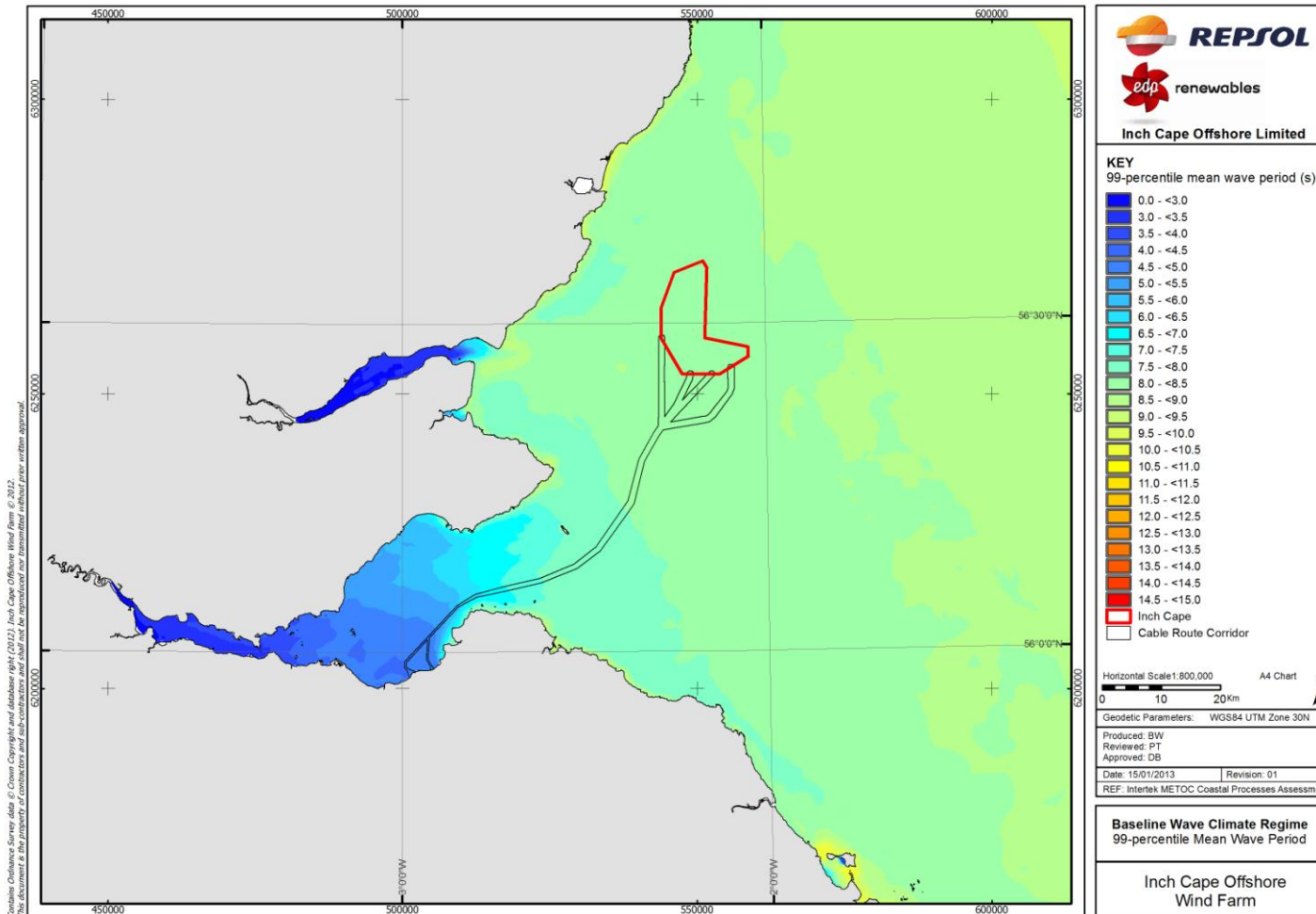


Figure 10A.2.33: 50%ile peak wave period (s) – Regional (far-field) scale

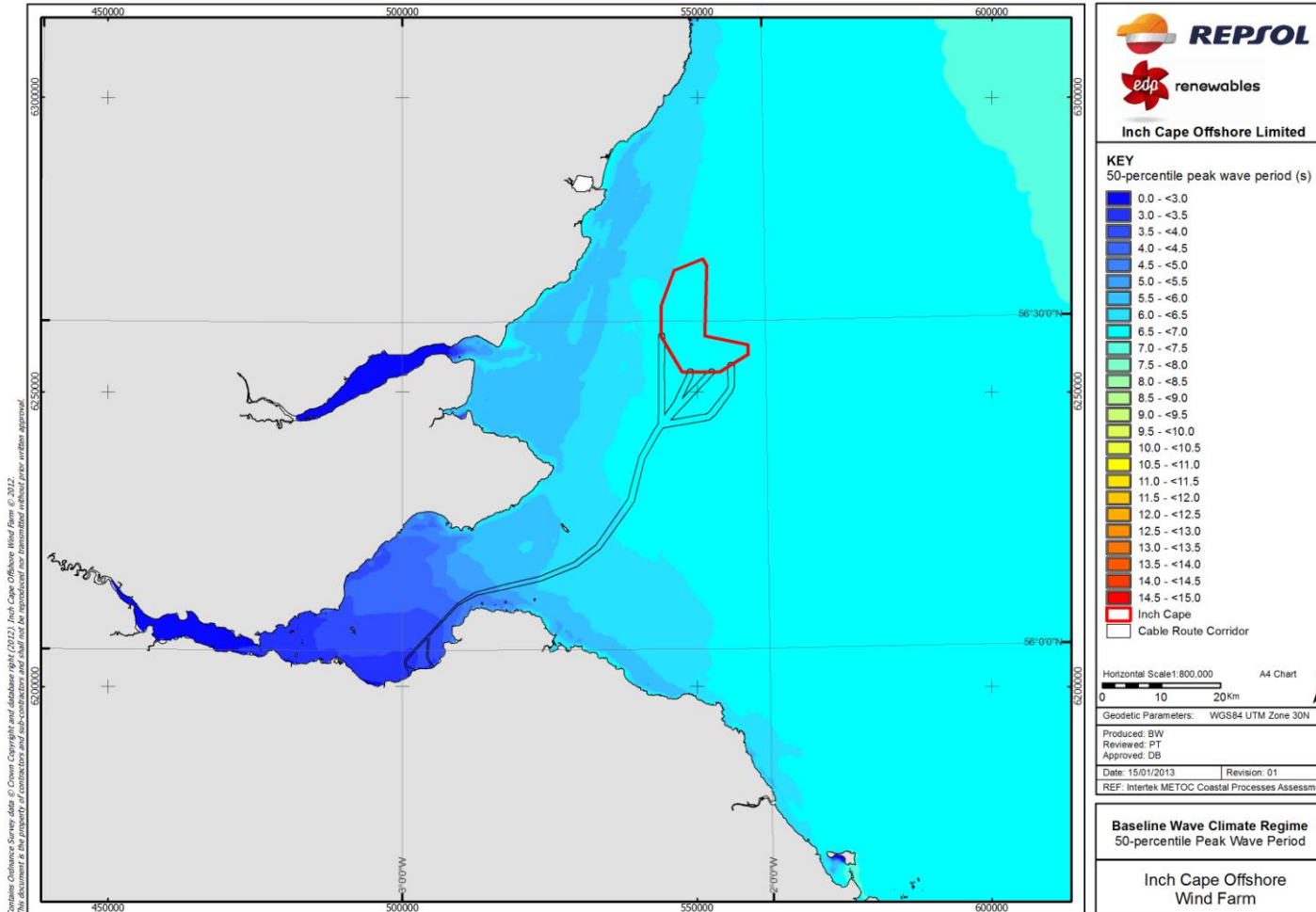


Figure 10A.2.34: 90%ile peak wave period (s) – Regional (far-field) scale

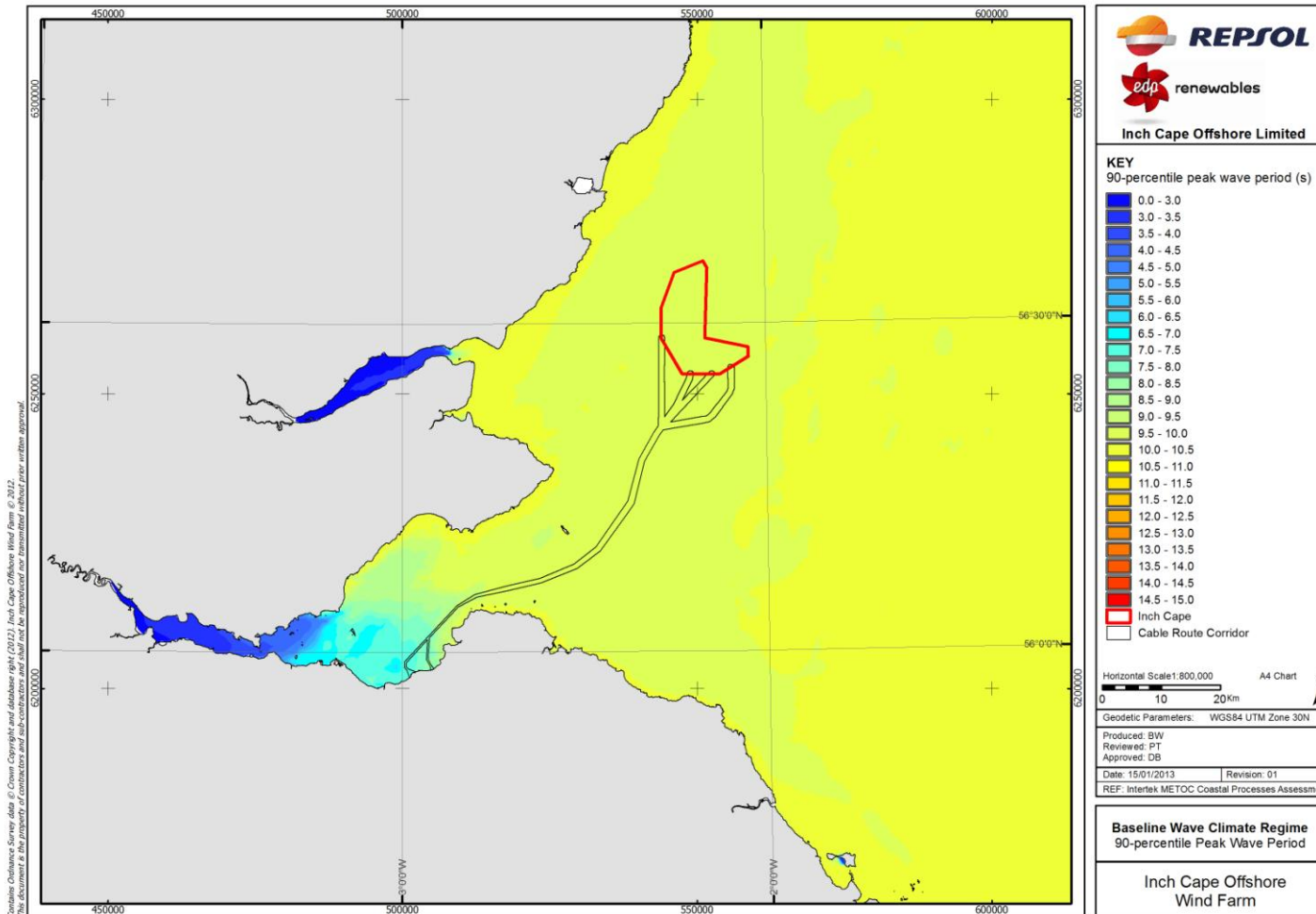


Figure 10A.2.35: 95%ile peak wave period (s) – Regional (far-field) scale

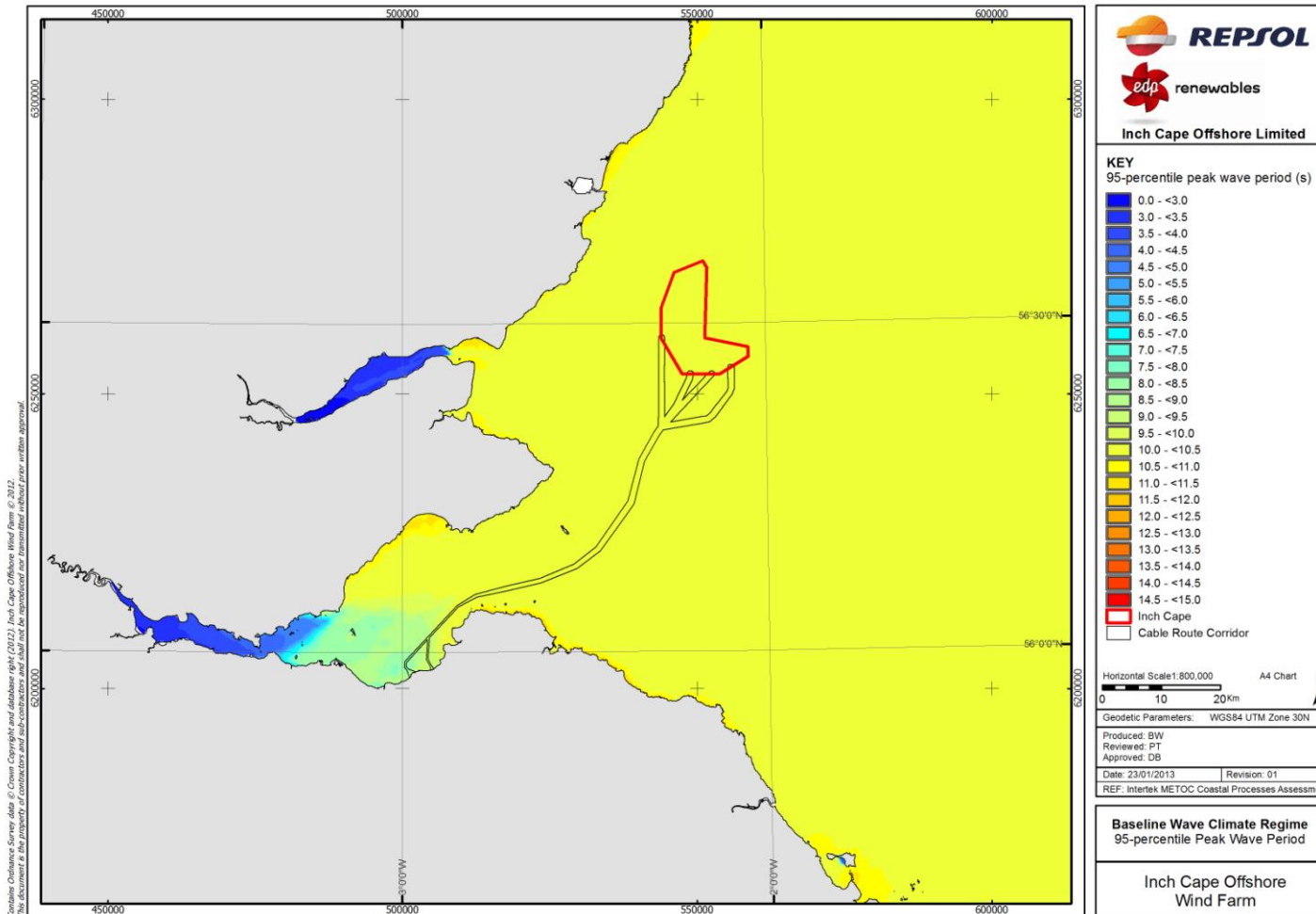


Figure 10A.2.36: 99%ile peak wave period (s) – Regional (far-field) scale

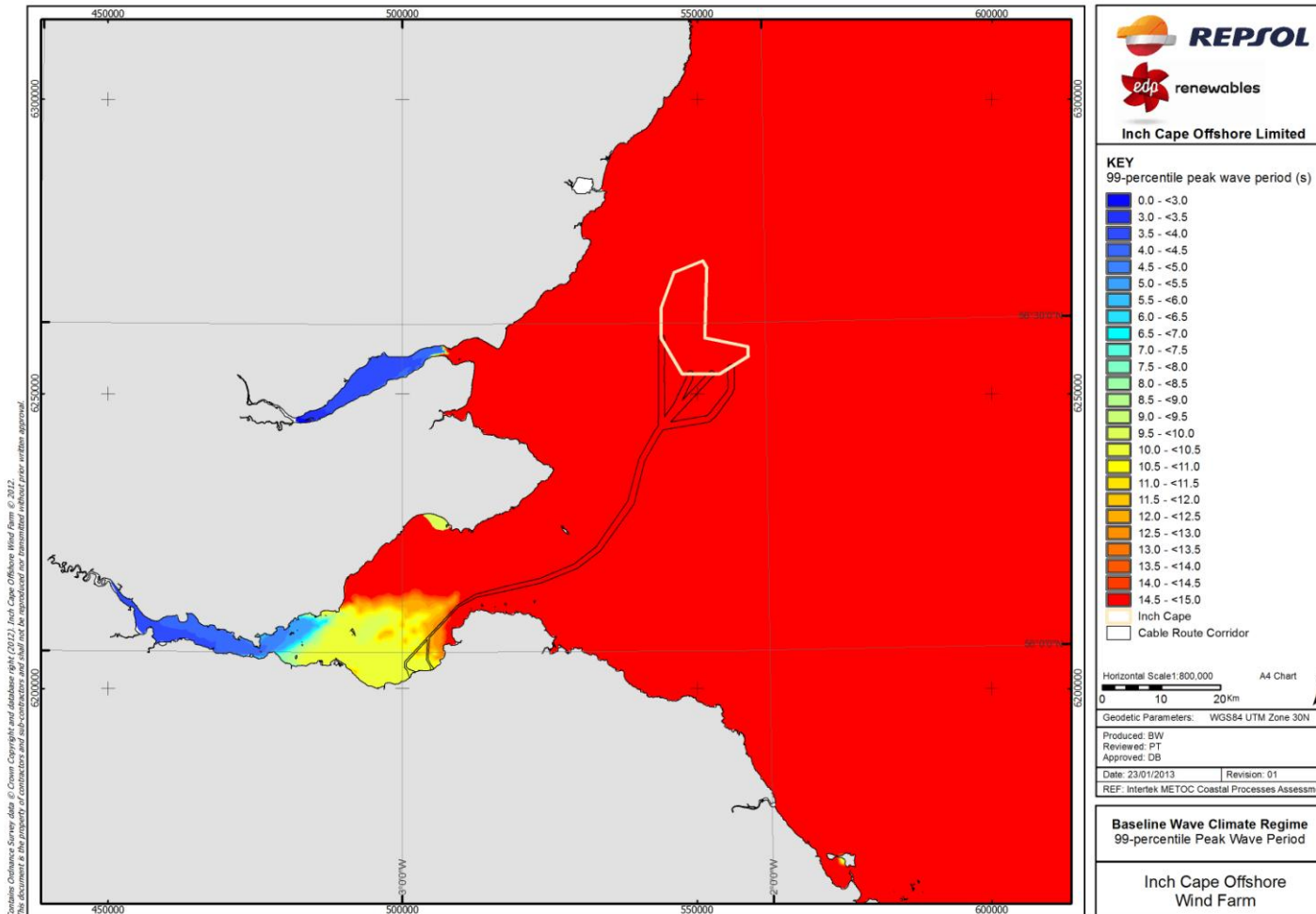


Figure 10A.2.37: Baseline 50%ile significant wave height (m) – Inch Cape OWF (near-field) scale

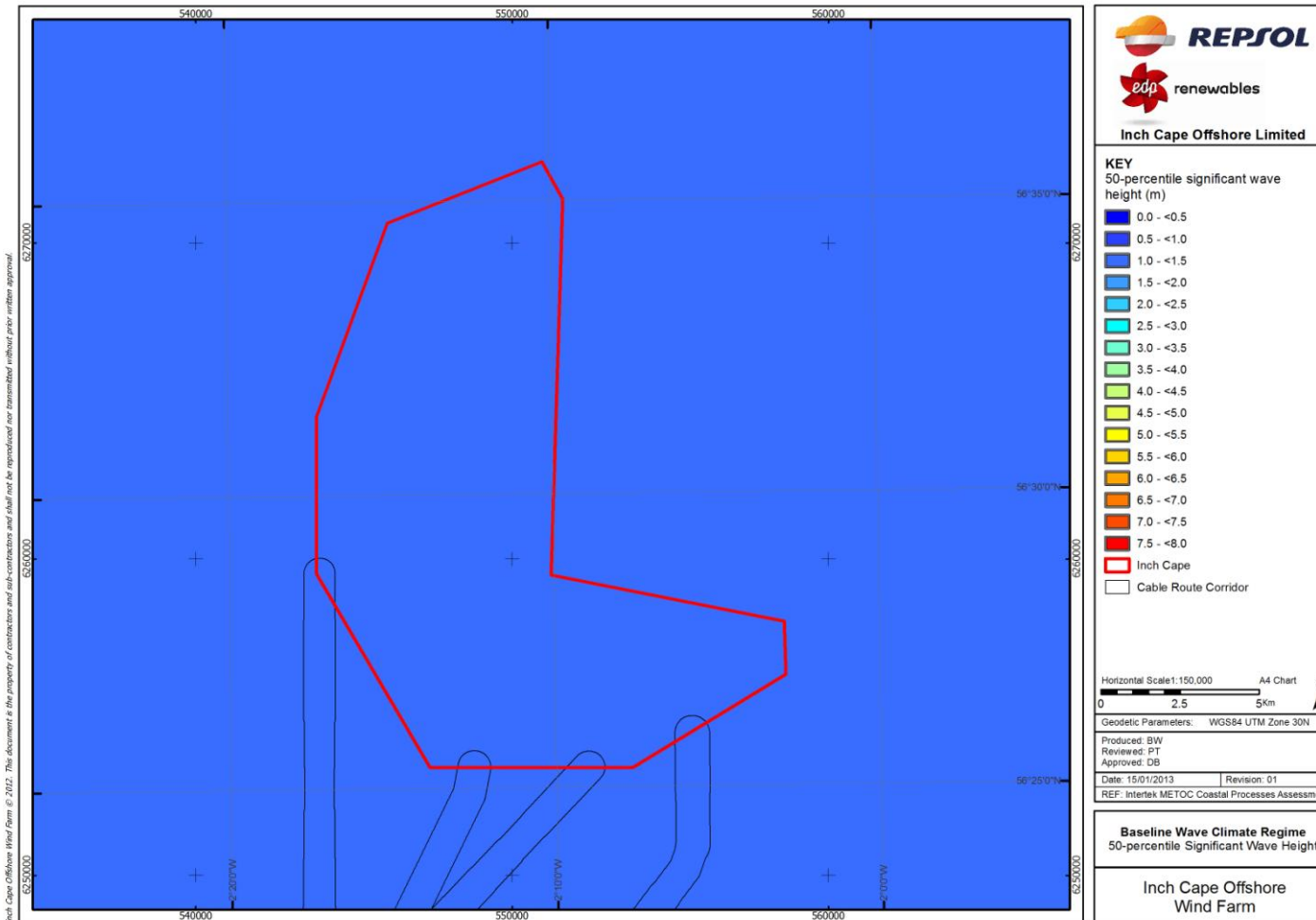


Figure 10A.2.38: Baseline 90%ile significant wave height (m) – Inch Cape OWF (near-field) scale

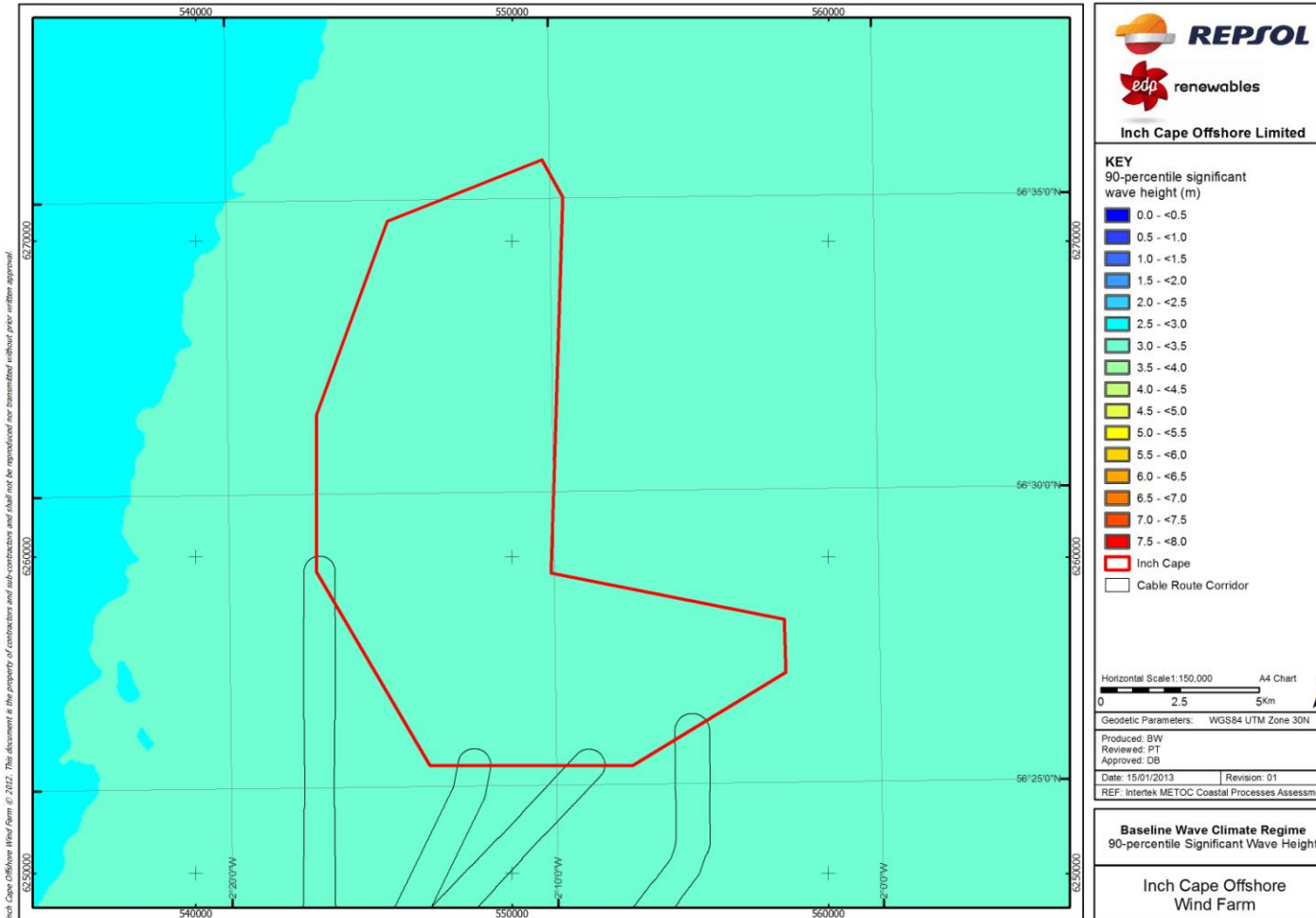


Figure 10A.2.39: Baseline 95%ile significant wave height (m) – Inch Cape OWF (near-field) scale

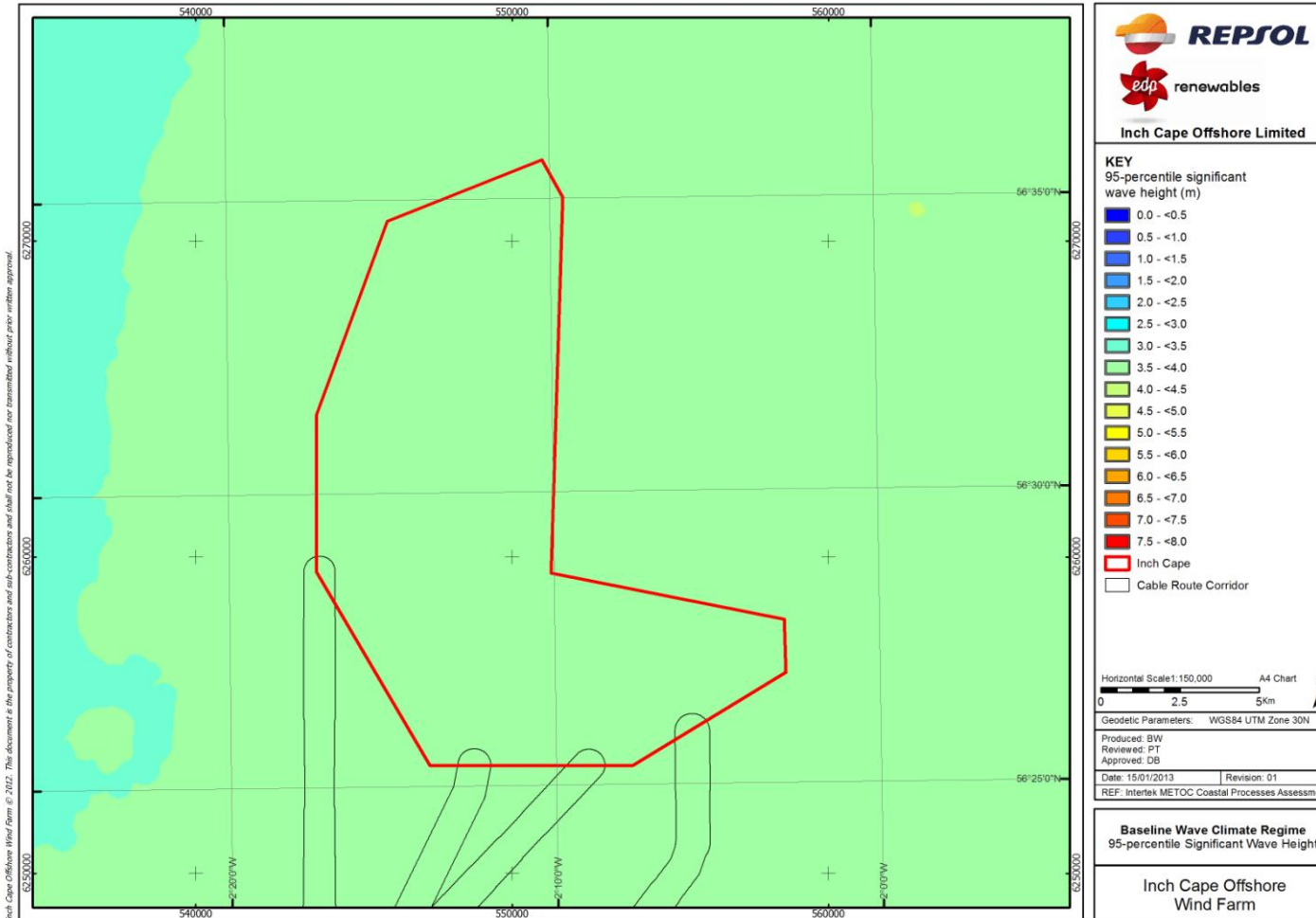


Figure 10A.2.40: Baseline 99%ile significant wave height (m) – Inch Cape OWF (near-field) scale

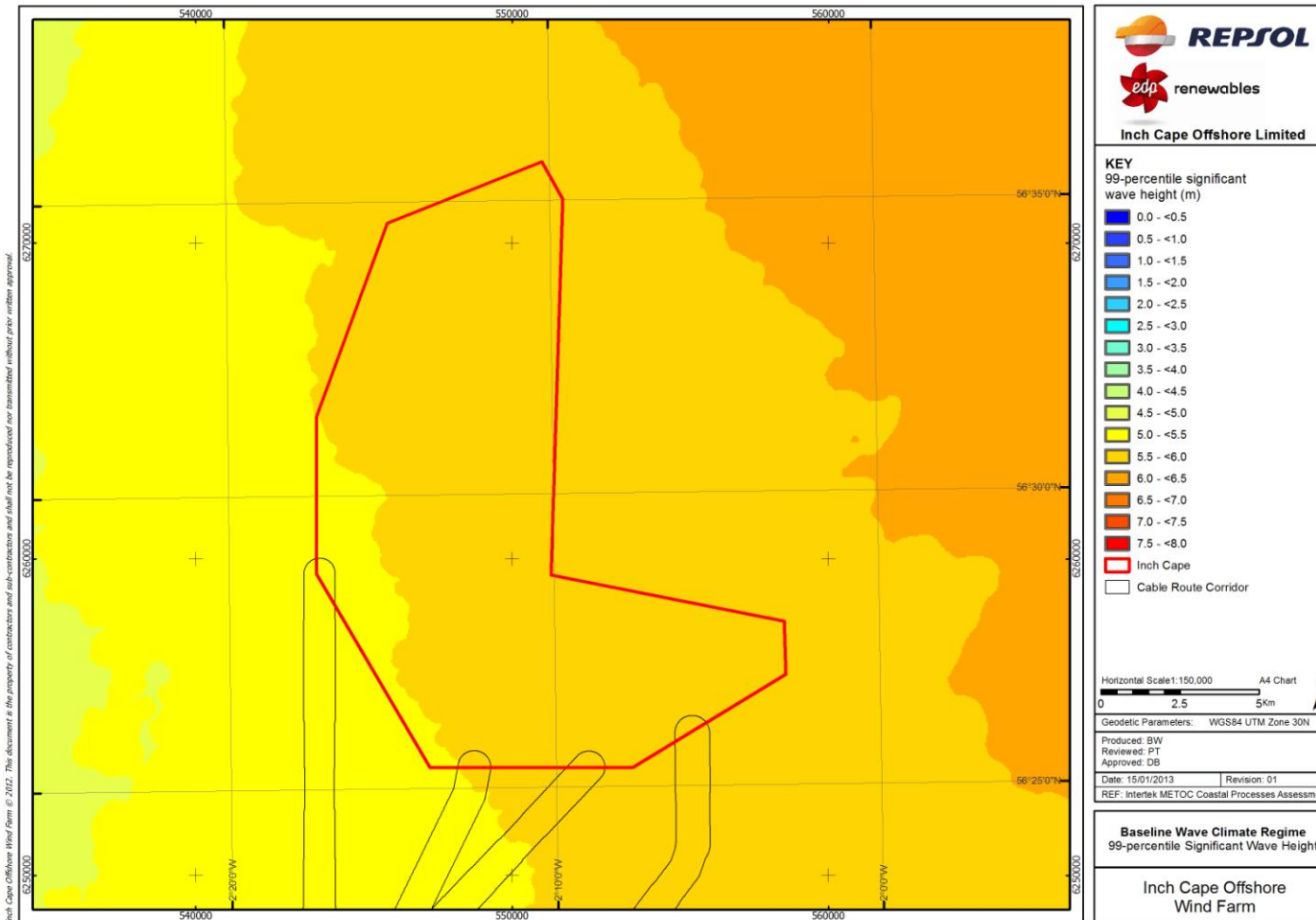


Figure 10A.2.41: Baseline 50%ile mean wave period (s) – Inch Cape OWF (near-field) scale

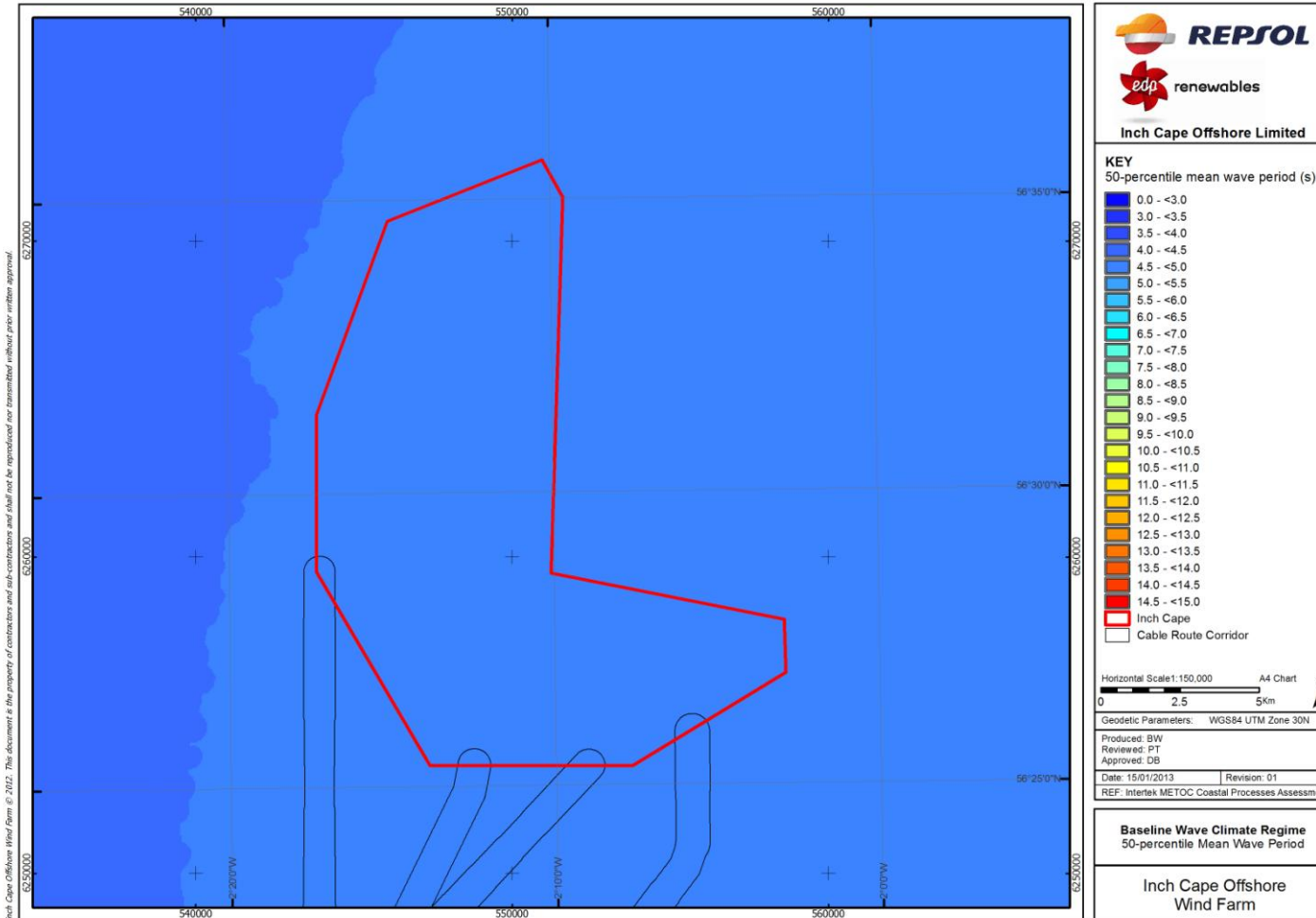


Figure 10A.2.42: Baseline 90%ile mean wave period (s) – Inch Cape OWF (near-field) scale

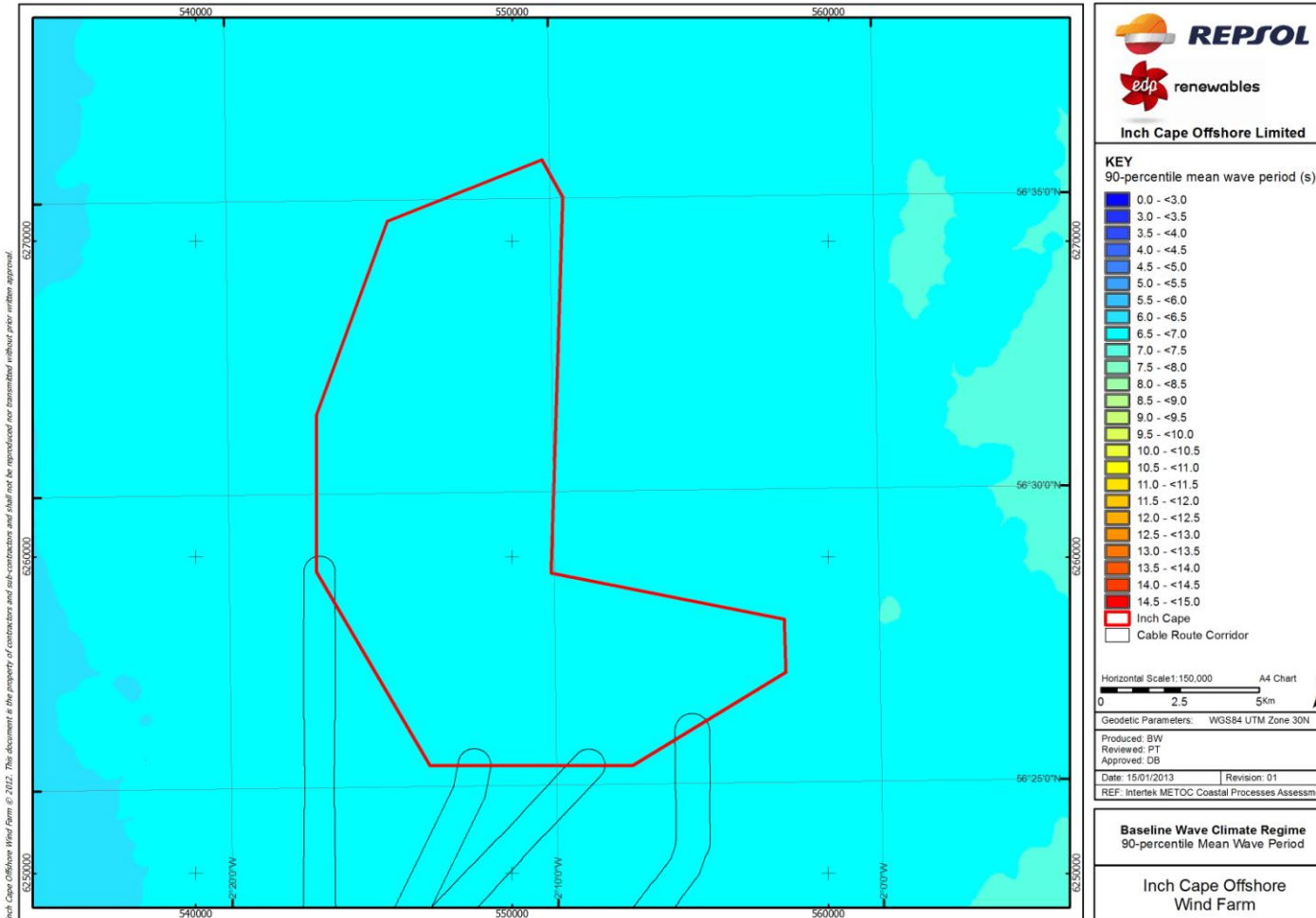


Figure 10A.2.43: Baseline 95%ile mean wave period (s) – Inch Cape OWF (near-field) scale

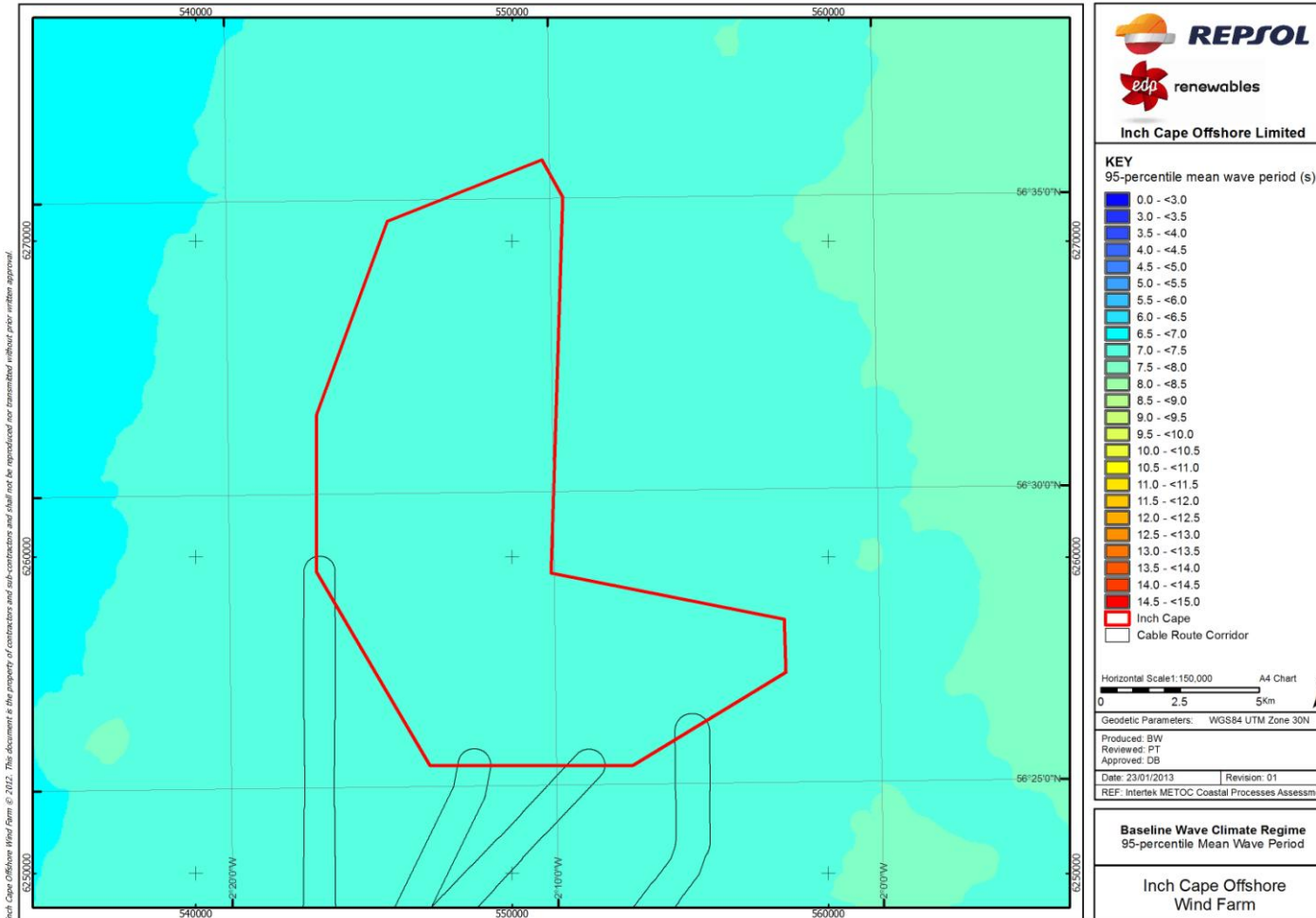


Figure 10A.2.44: Baseline 99%ile mean wave period (s) – Inch Cape OWF (near-field) scale

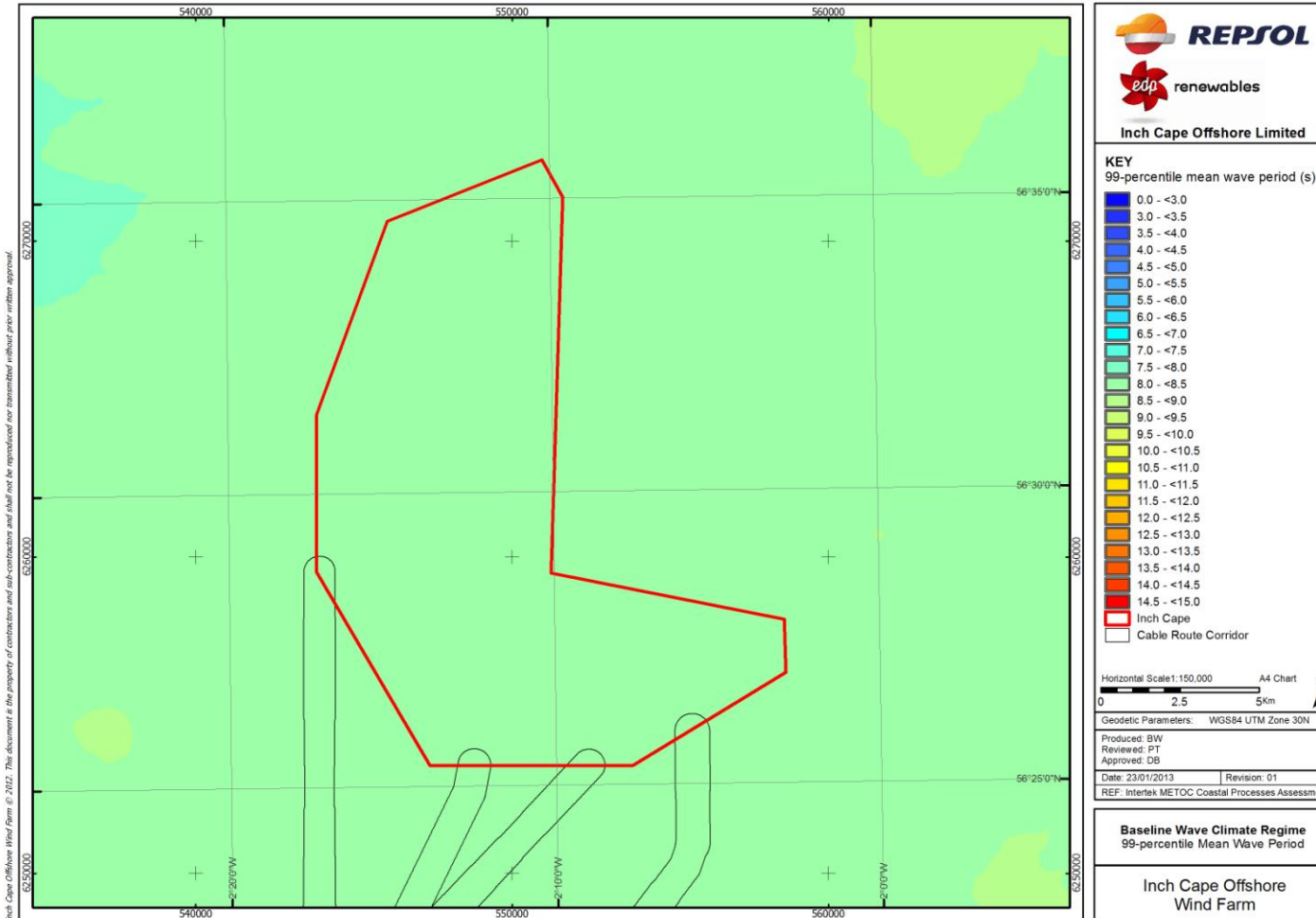


Figure 10A.2.45: Baseline 50%ile peak wave period (s) – Inch Cape OWF (near-field) scale

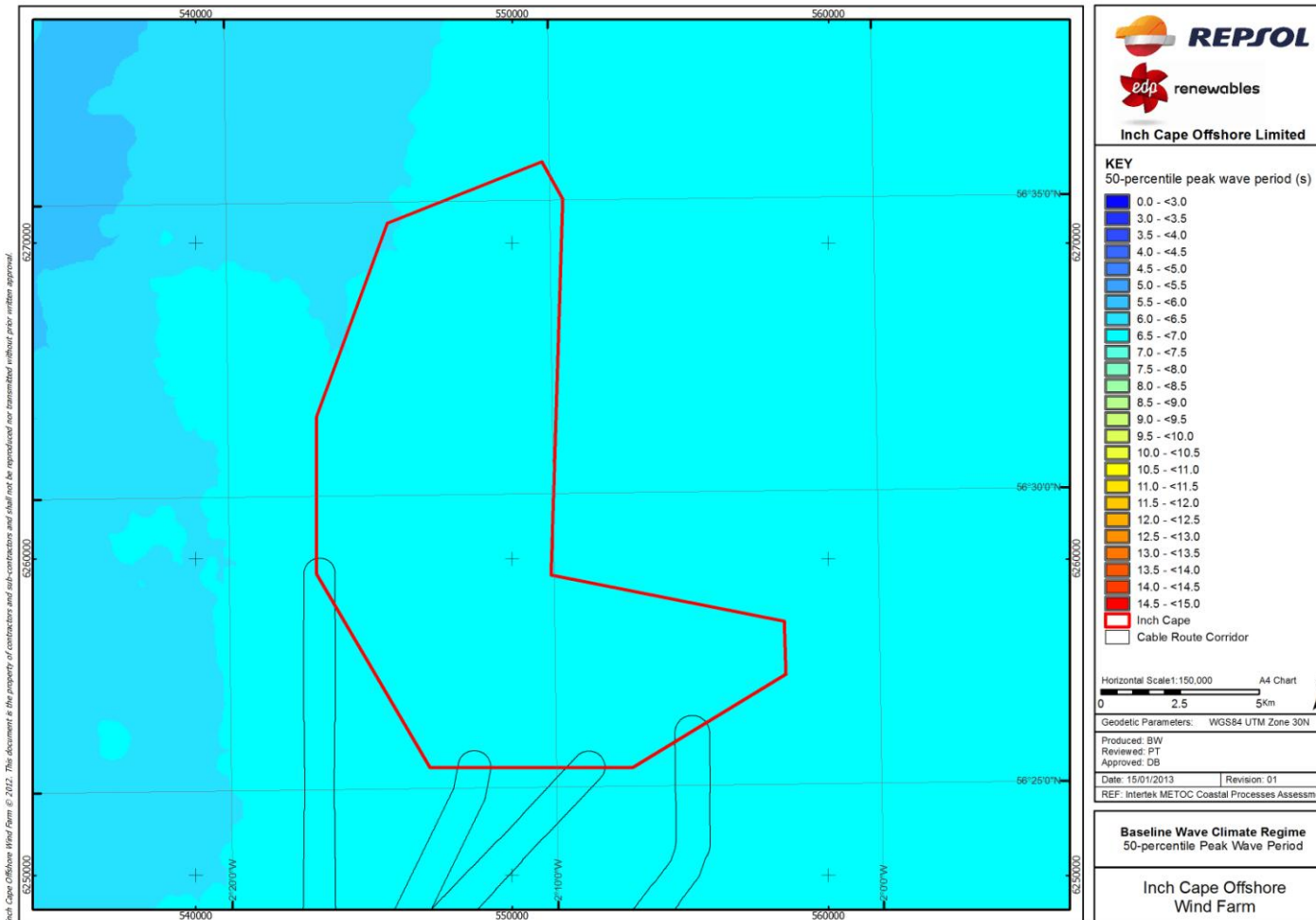


Figure 10A.2.46: Baseline 90%ile peak wave period (s) – Inch Cape OWF (near-field) scale

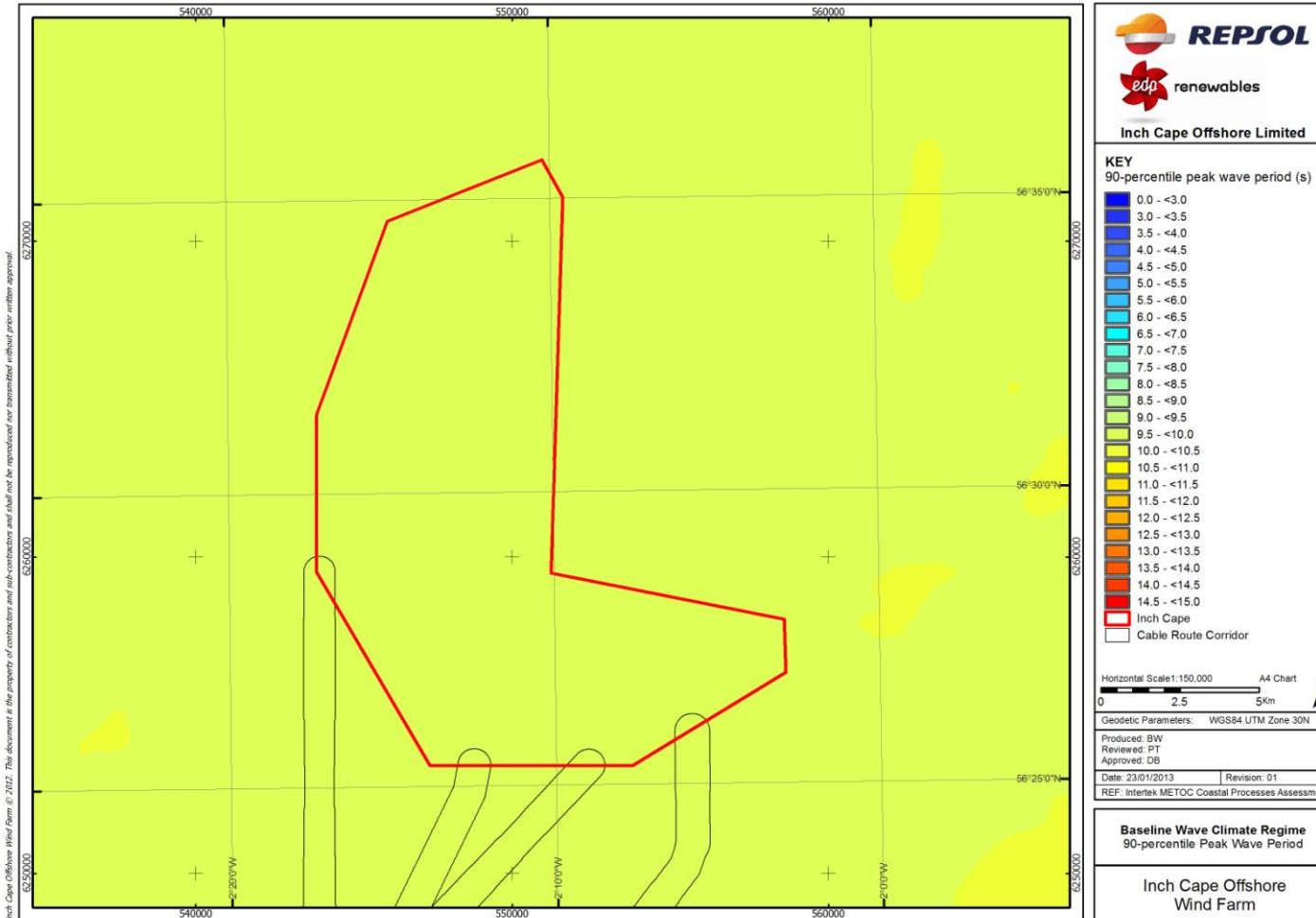


Figure 10A.2.47: Baseline 95%ile peak wave period (s) – Inch Cape OWF (near-field) scale

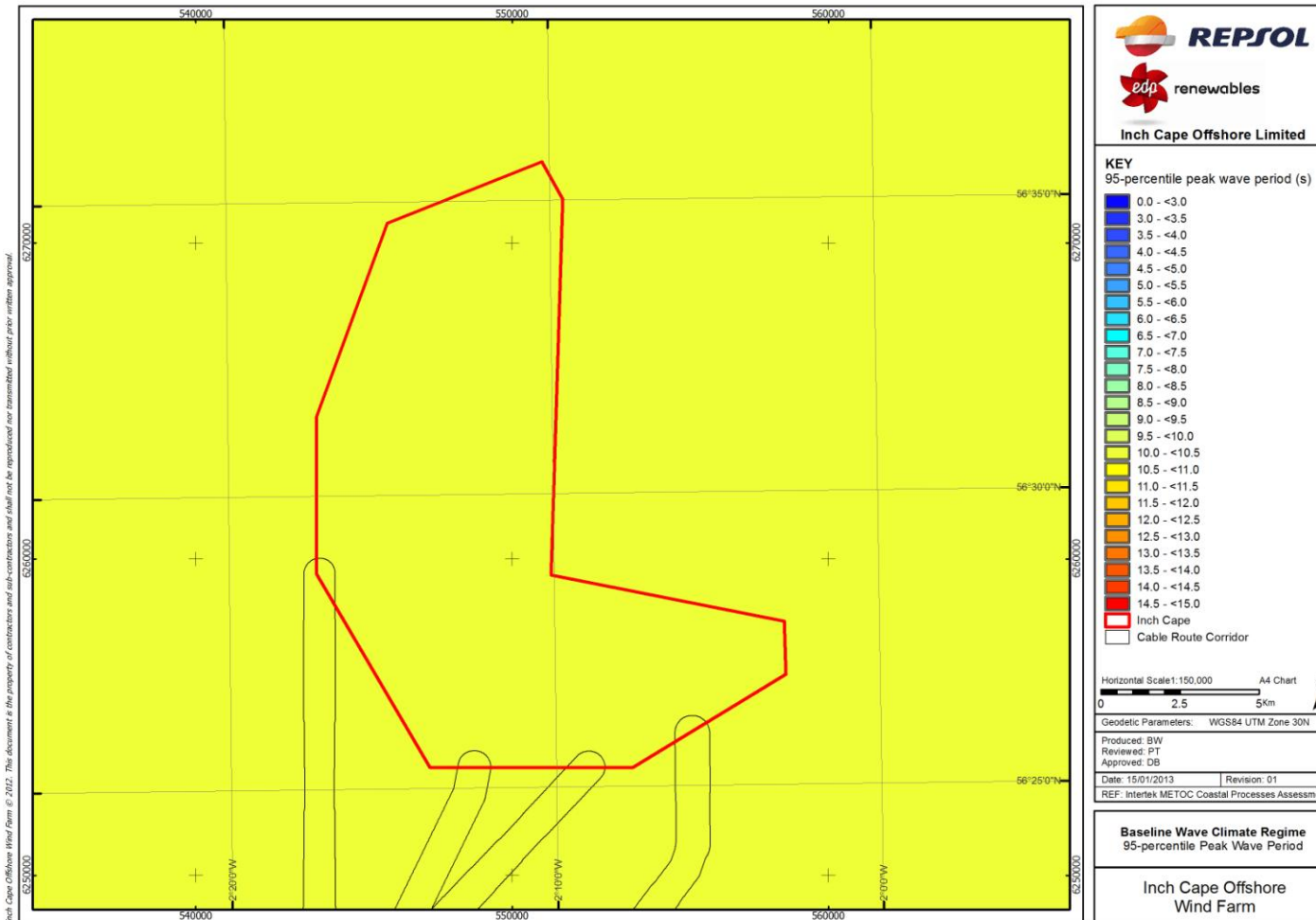


Figure 10A.2.48: Baseline 99%ile peak wave period (s) – Inch Cape OWF (near-field) scale



Section 3: Sediment regime

Figure 10A.2.49: Critical shear stress for entrainment (N/m²) – Regional (far-field) scale

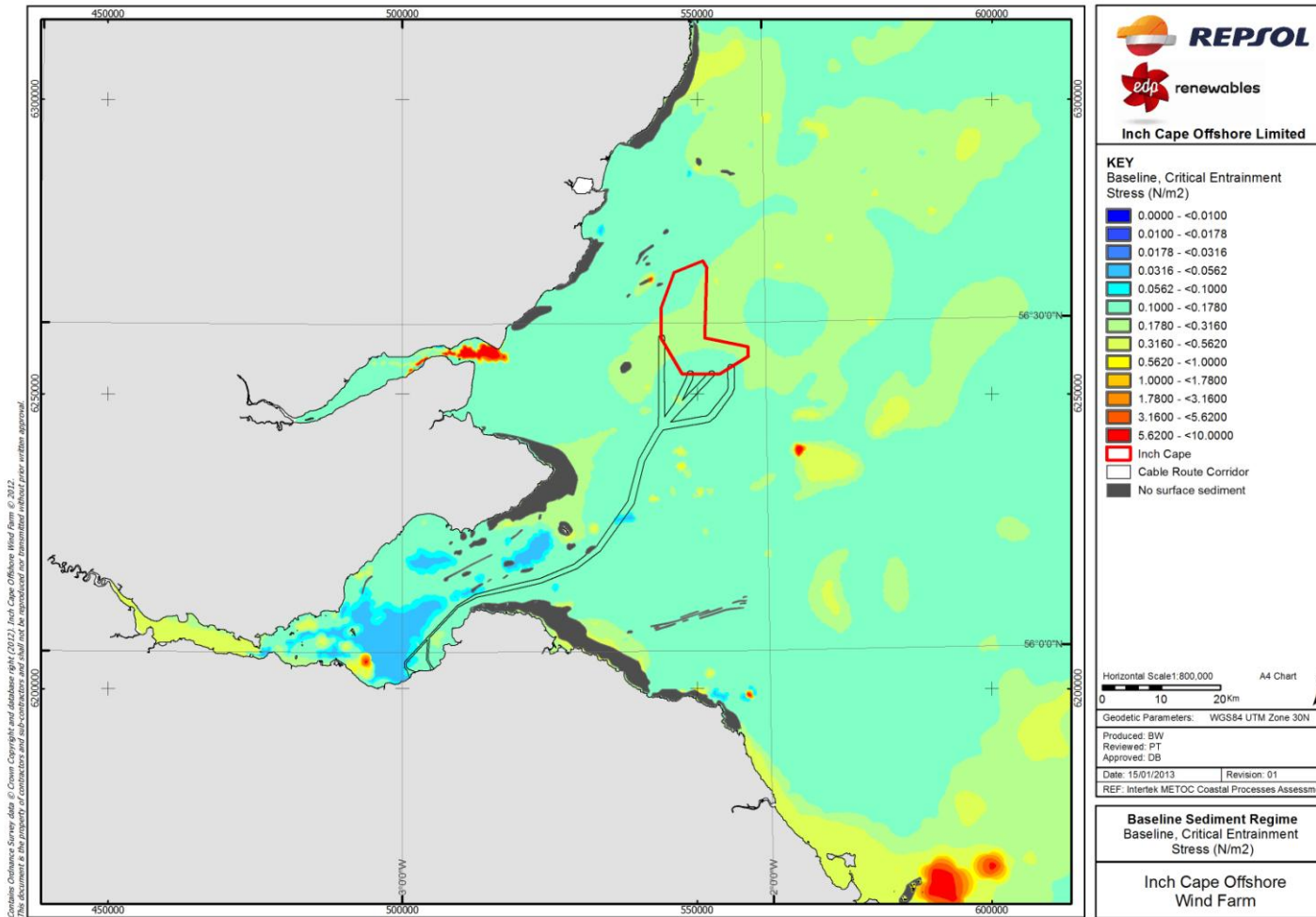


Figure 10A.2.50: 50%ile bed shear stress - due to currents (N/m²) – Regional (far-field) scale

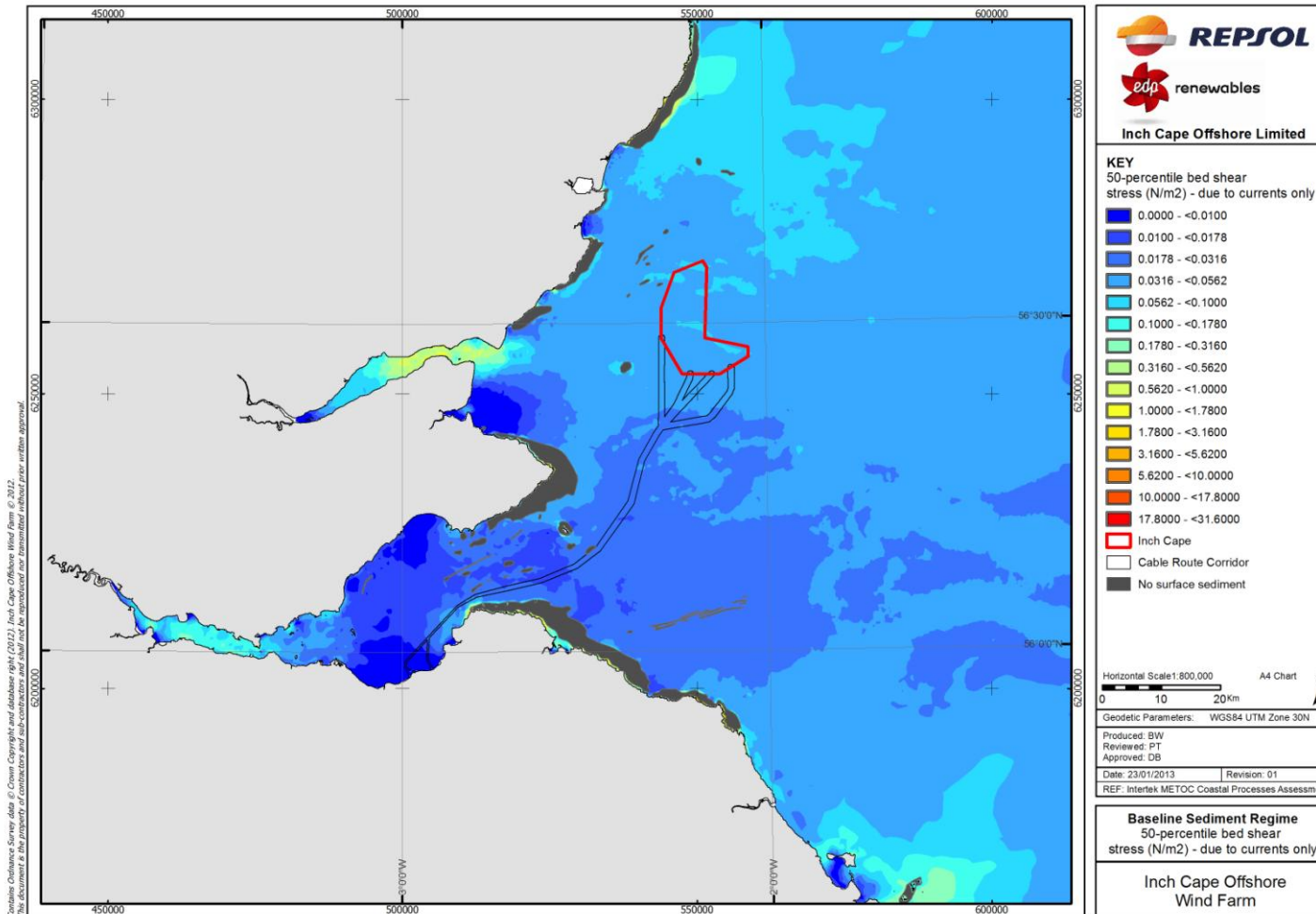


Figure 10A.2.51: 90%ile bed shear stress - due to currents (N/m²) – Regional (far-field) scale

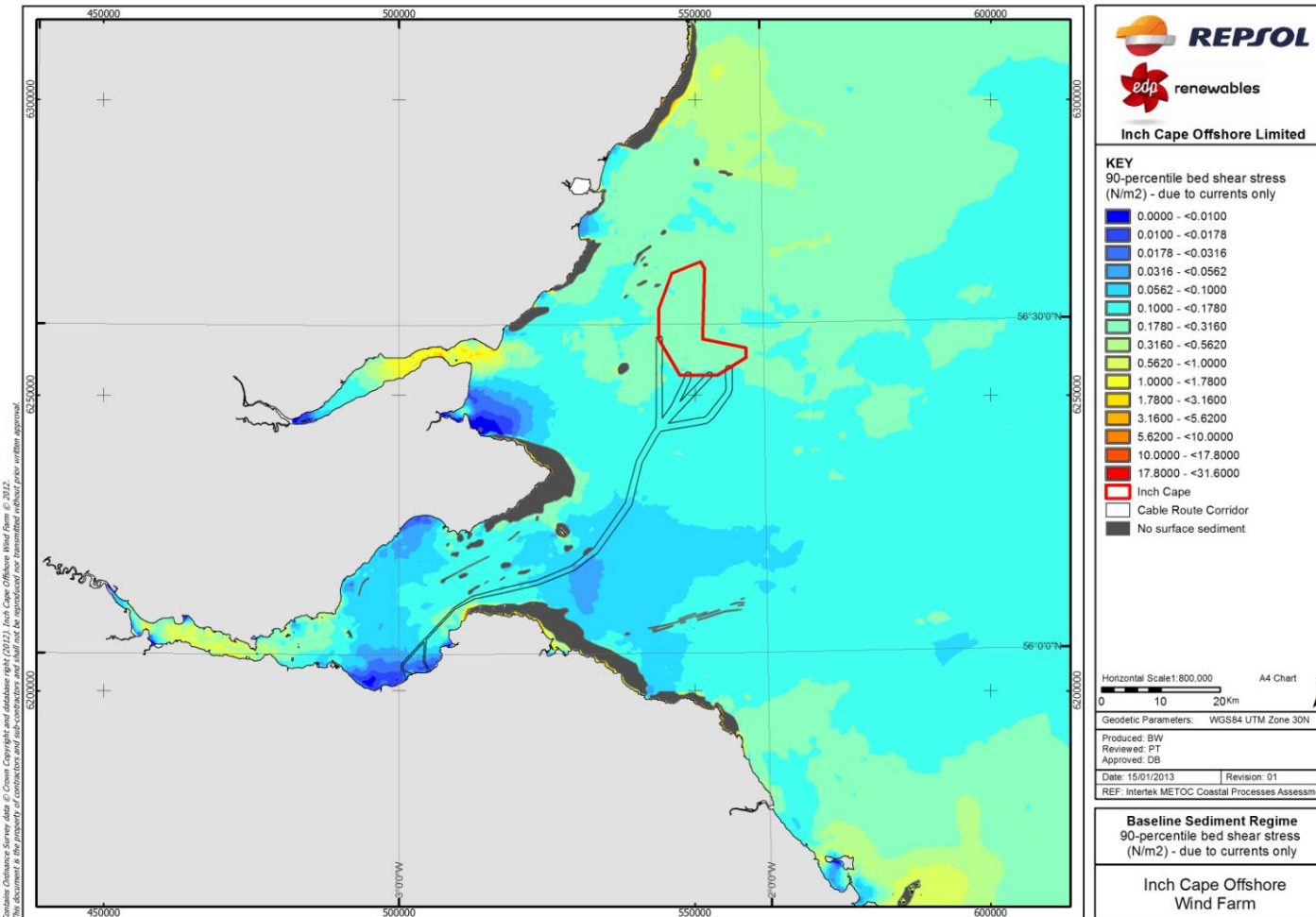


Figure 10A.2.52: 95%ile bed shear stress - due to currents (N/m²) – Regional (far-field) scale

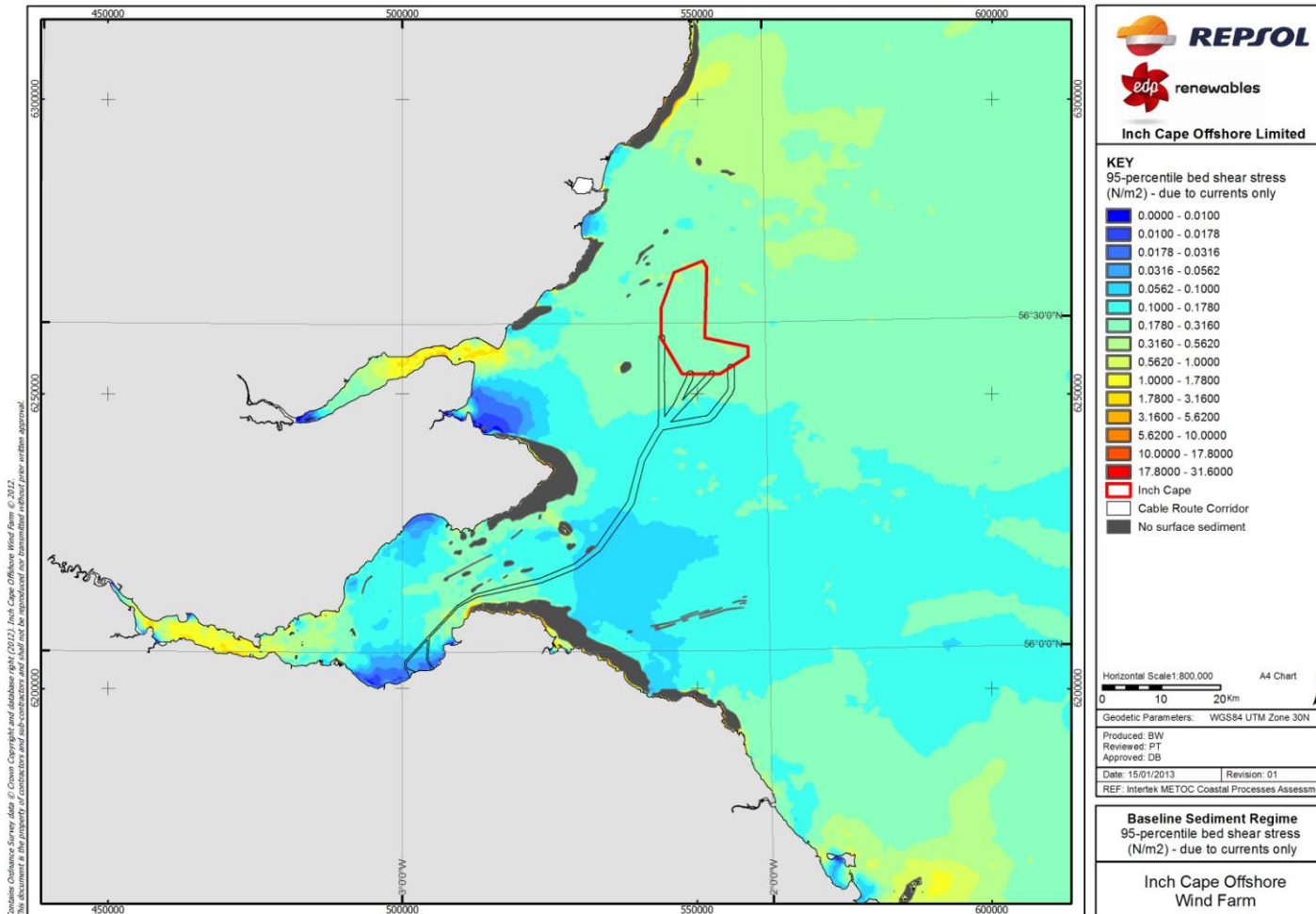


Figure 10A.2.53: 99%ile bed shear stress - due to currents (N/m²) – Regional (far-field) scale

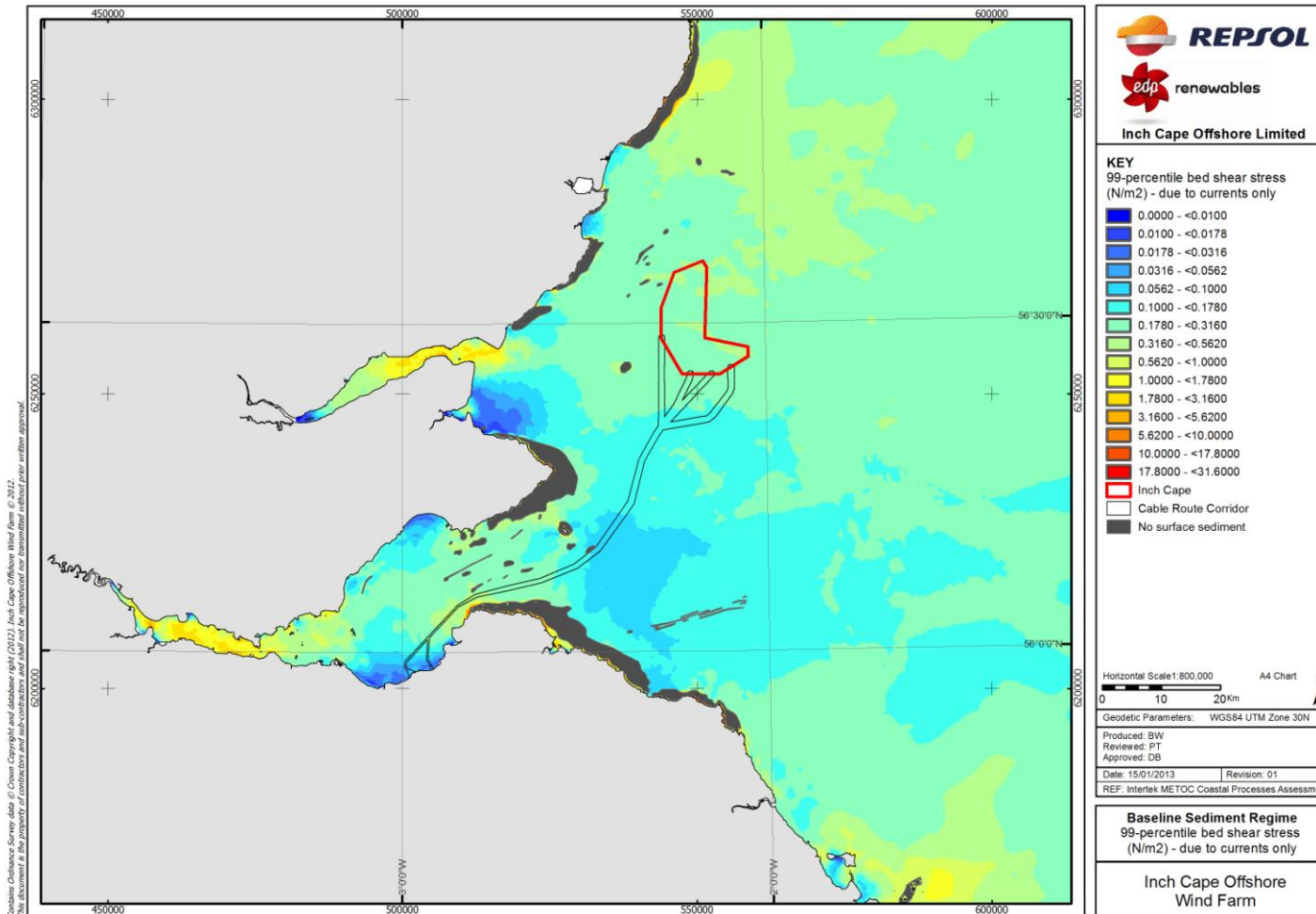


Figure 10A.2.54: 50%ile bed shear stress - due to waves (N/m²) – Regional (far-field) scale

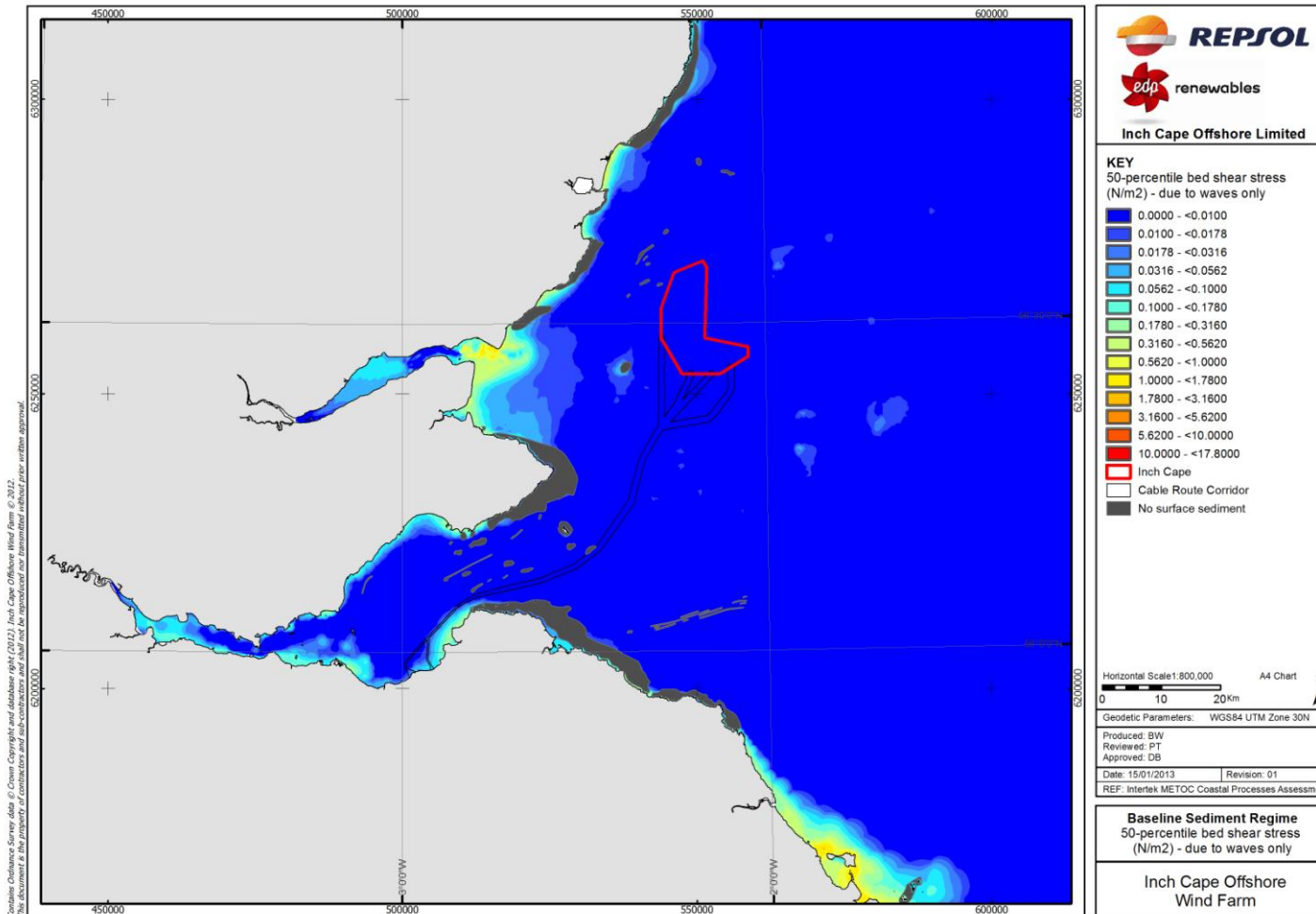


Figure 10A.2.55: 90%ile bed shear stress - due to waves (N/m²) – Regional (far-field) scale

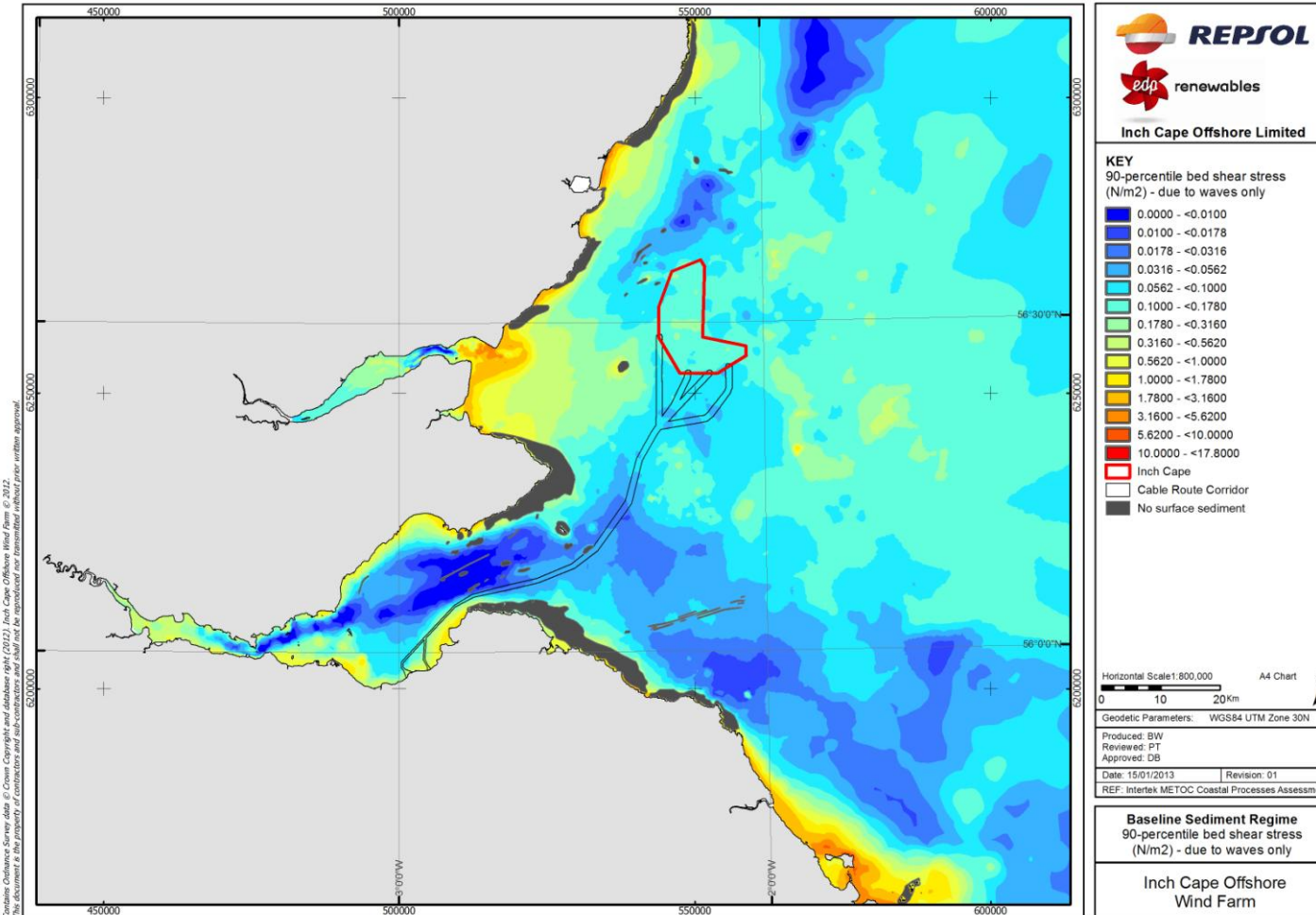


Figure 10A.2.56: 95%ile bed shear stress - due to waves (N/m²) – Regional (far-field) scale

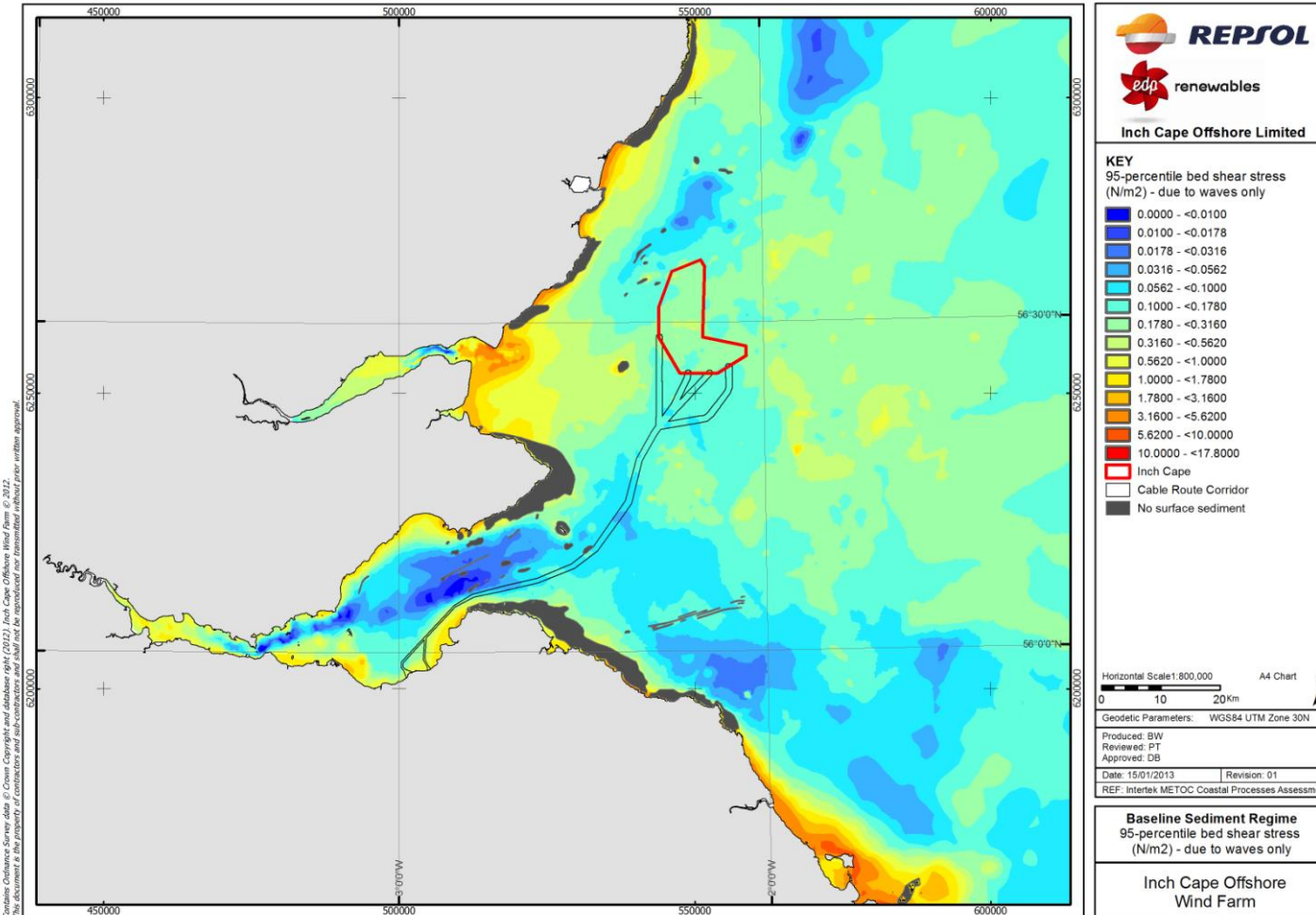


Figure 10A.2.57: 99%ile bed shear stress - due to waves (N/m²) – Regional (far-field) scale

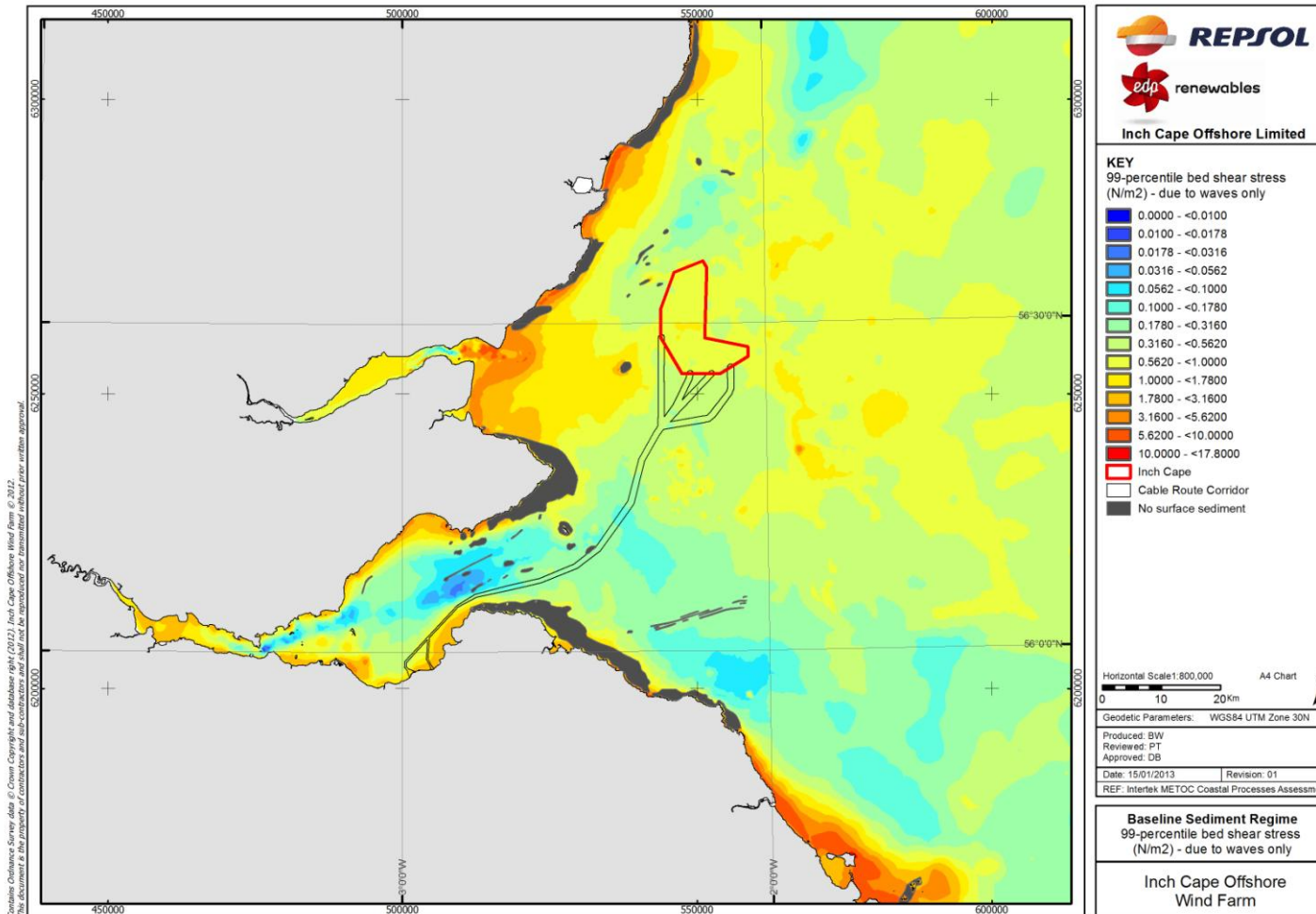


Figure 10A.2.58: 50%ile bed shear stress - due to mean combined current and waves (N/m²) – Regional (far-field) scale

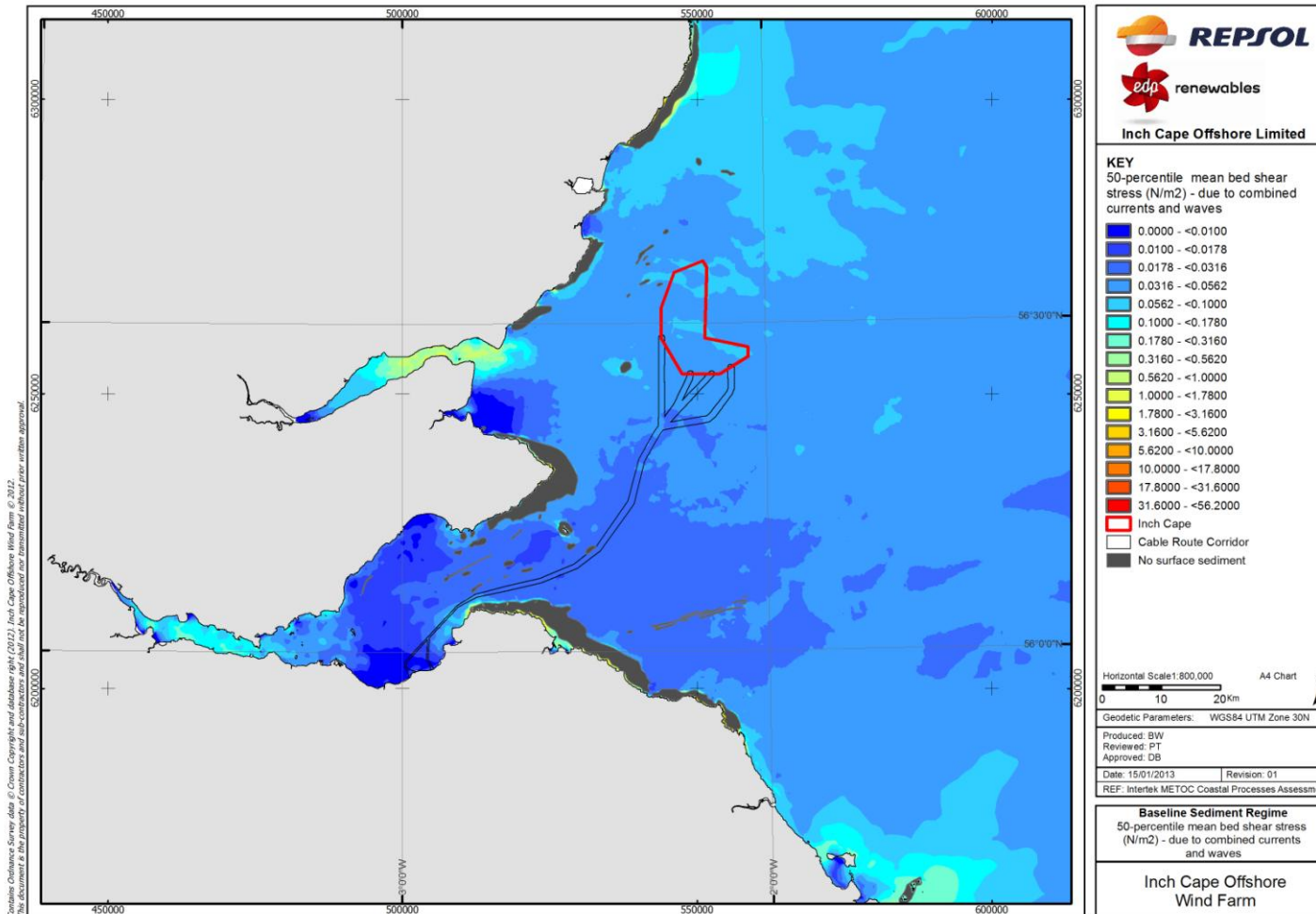


Figure 10A.2.59: 90%ile bed shear stress - due to mean combined current and waves (N/m²) – Regional (far-field) scale

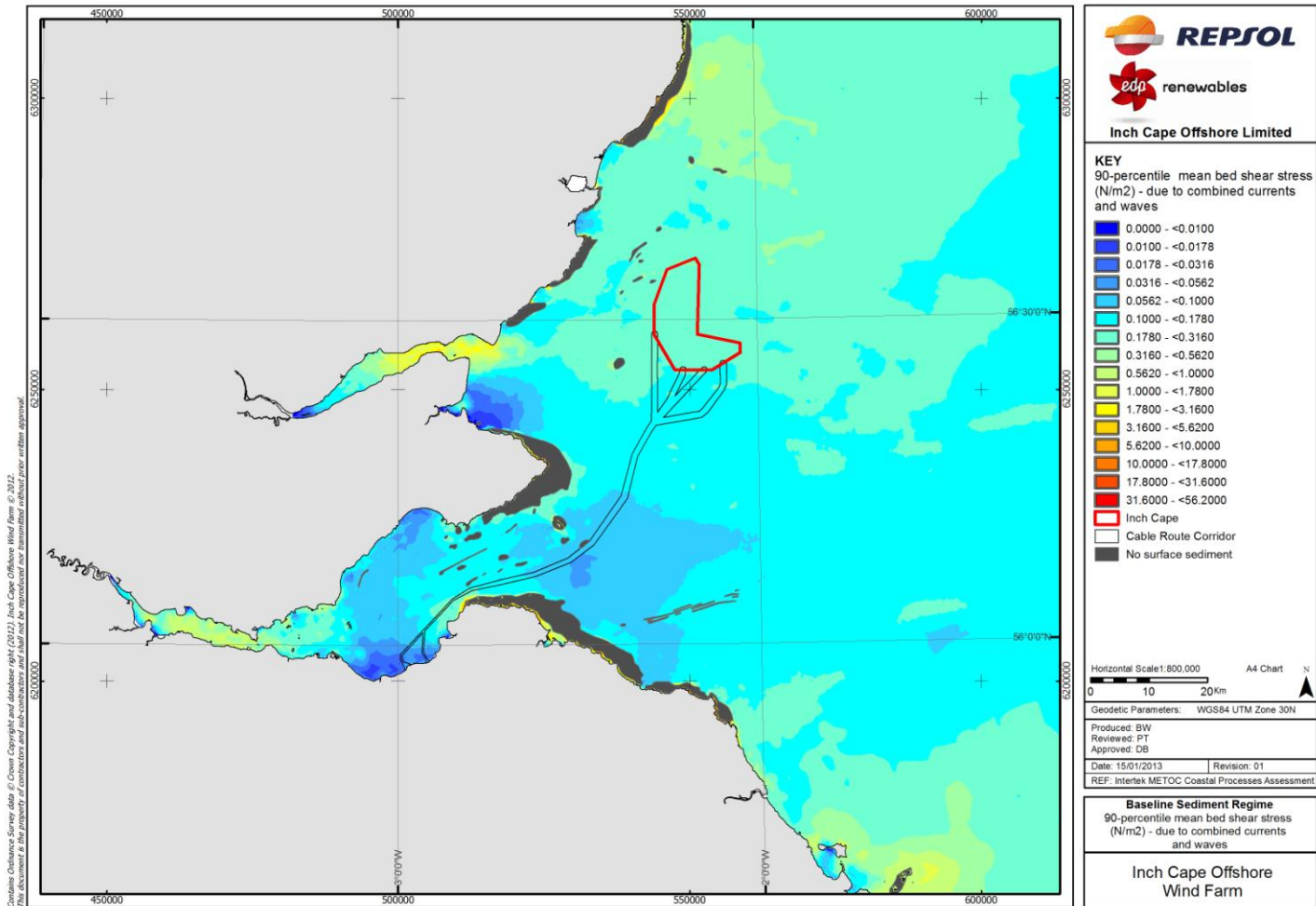


Figure 10A.2.60: 95%ile bed shear stress - due to mean combined current and waves (N/m²) – Regional (far-field) scale

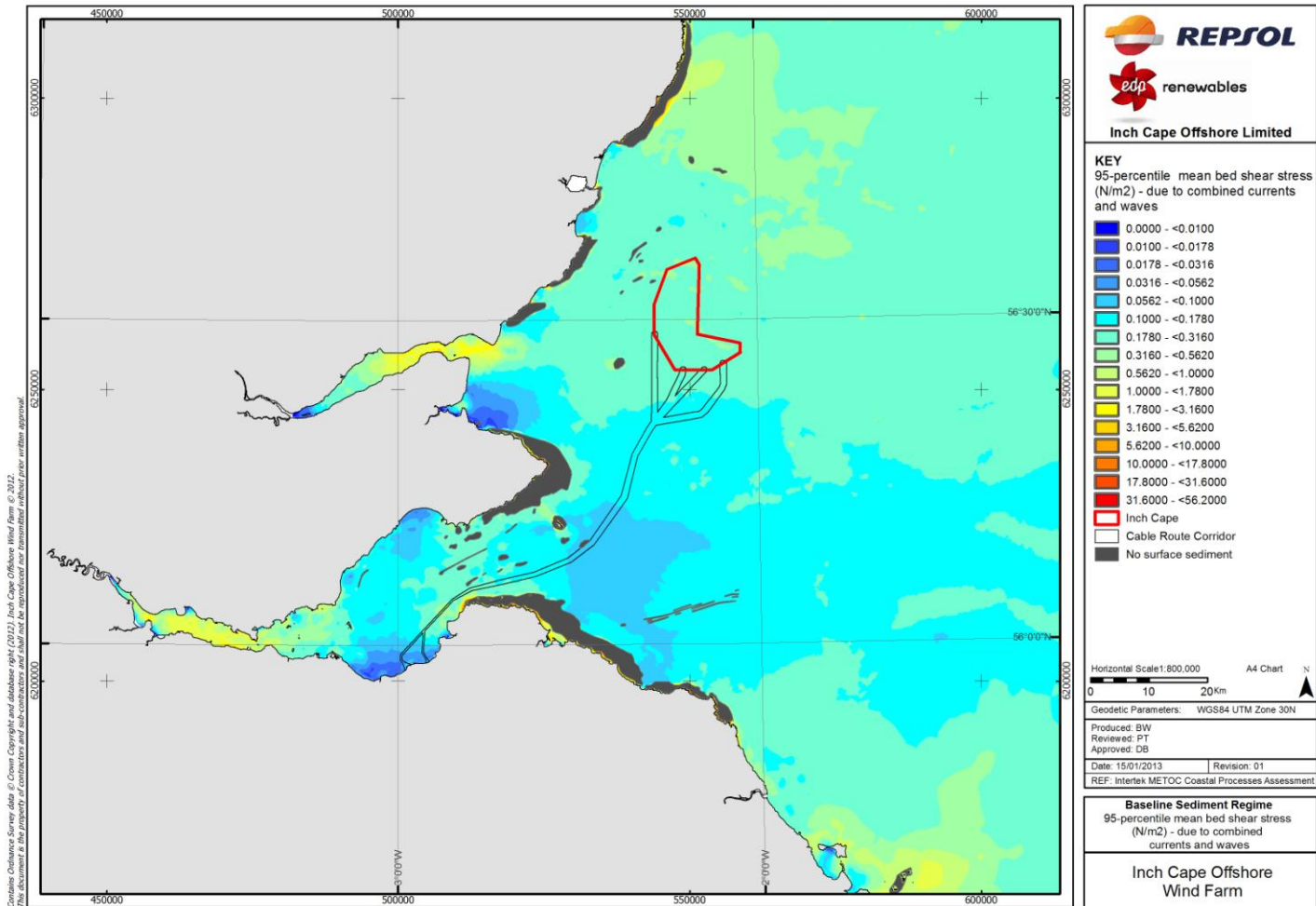


Figure 10A.2.61: 99%ile bed shear stress - due to mean combined current and waves (N/m²) – Regional (far-field) scale

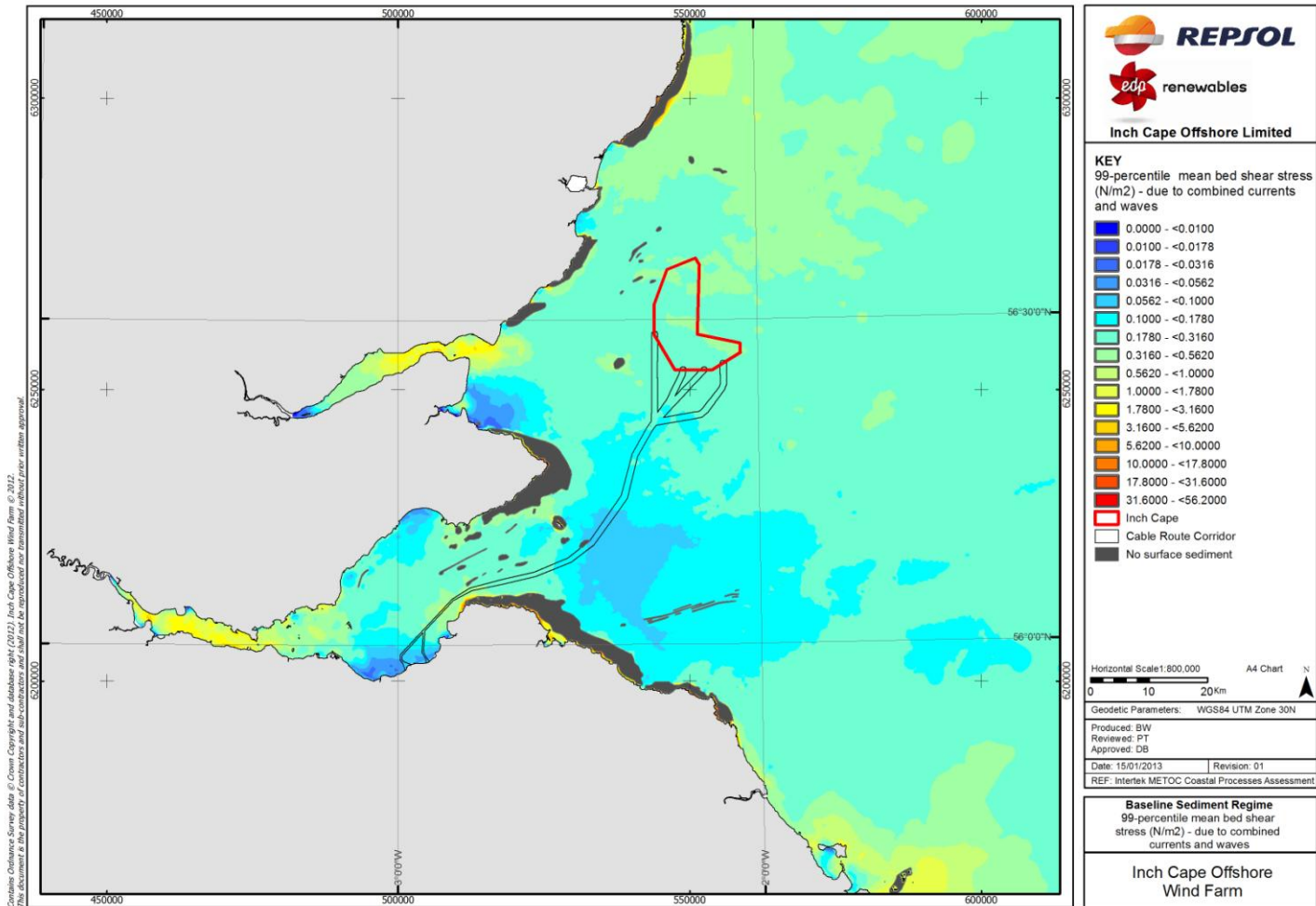


Figure 10A.2.62: 50%ile bed shear stress - due to maximum combined current and waves (N/m²) – Regional (far-field) scale

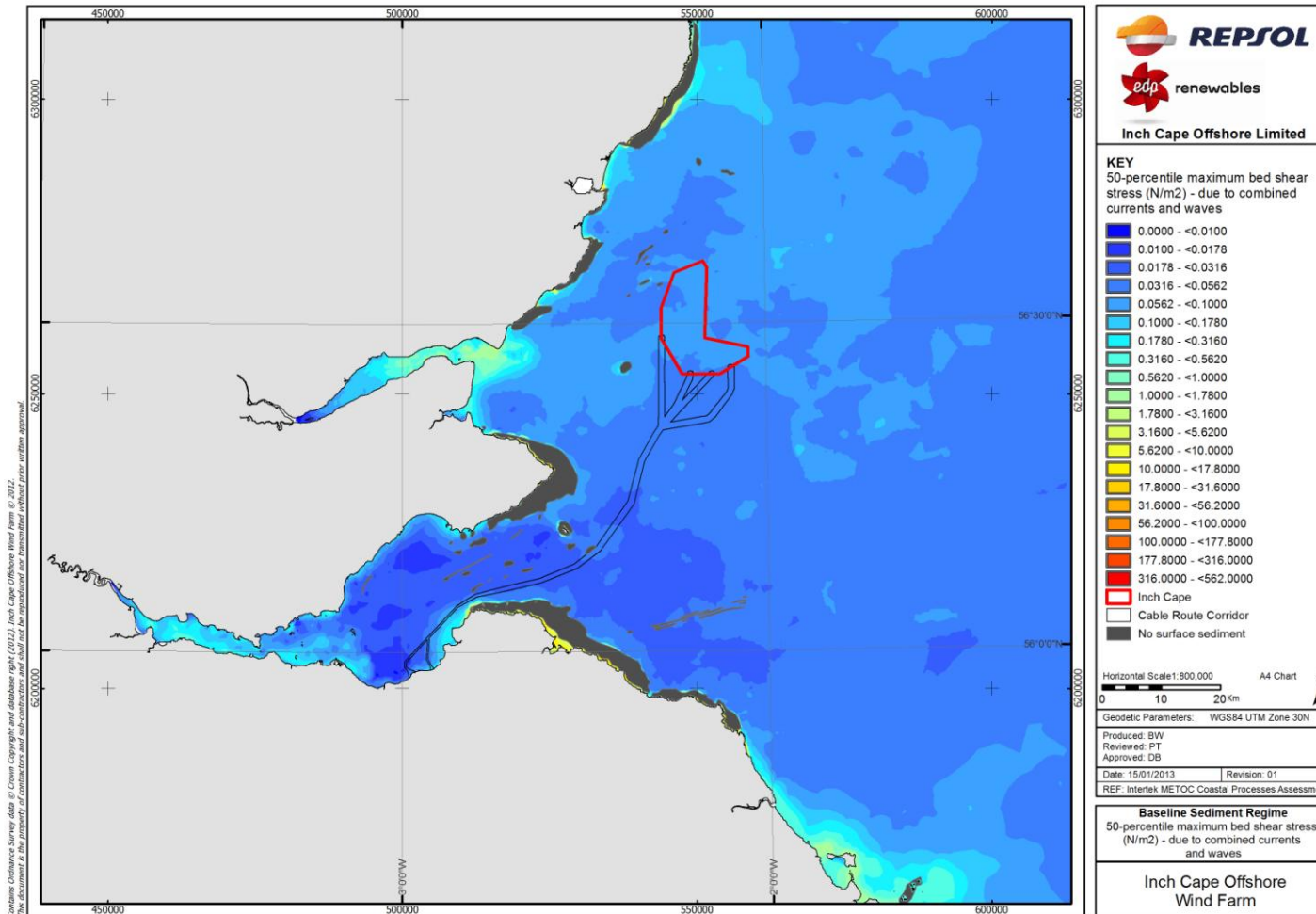


Figure 10A.2.63: 90%ile bed shear stress - due to maximum combined current and waves (N/m²) – Regional (far-field) scale

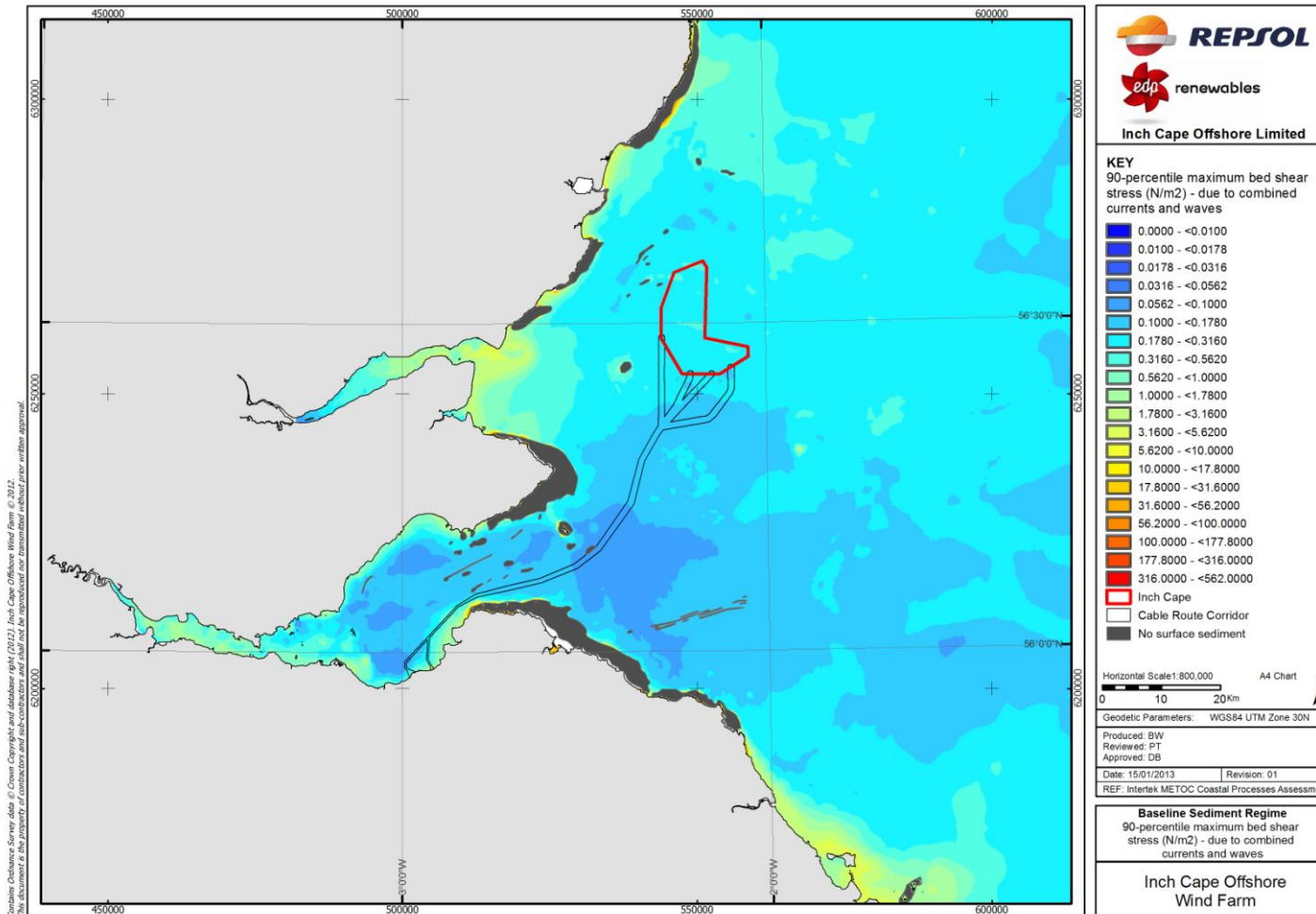


Figure 10A.2.64: 95%ile bed shear stress - due to maximum combined current and waves (N/m²) – Regional (far-field) scale

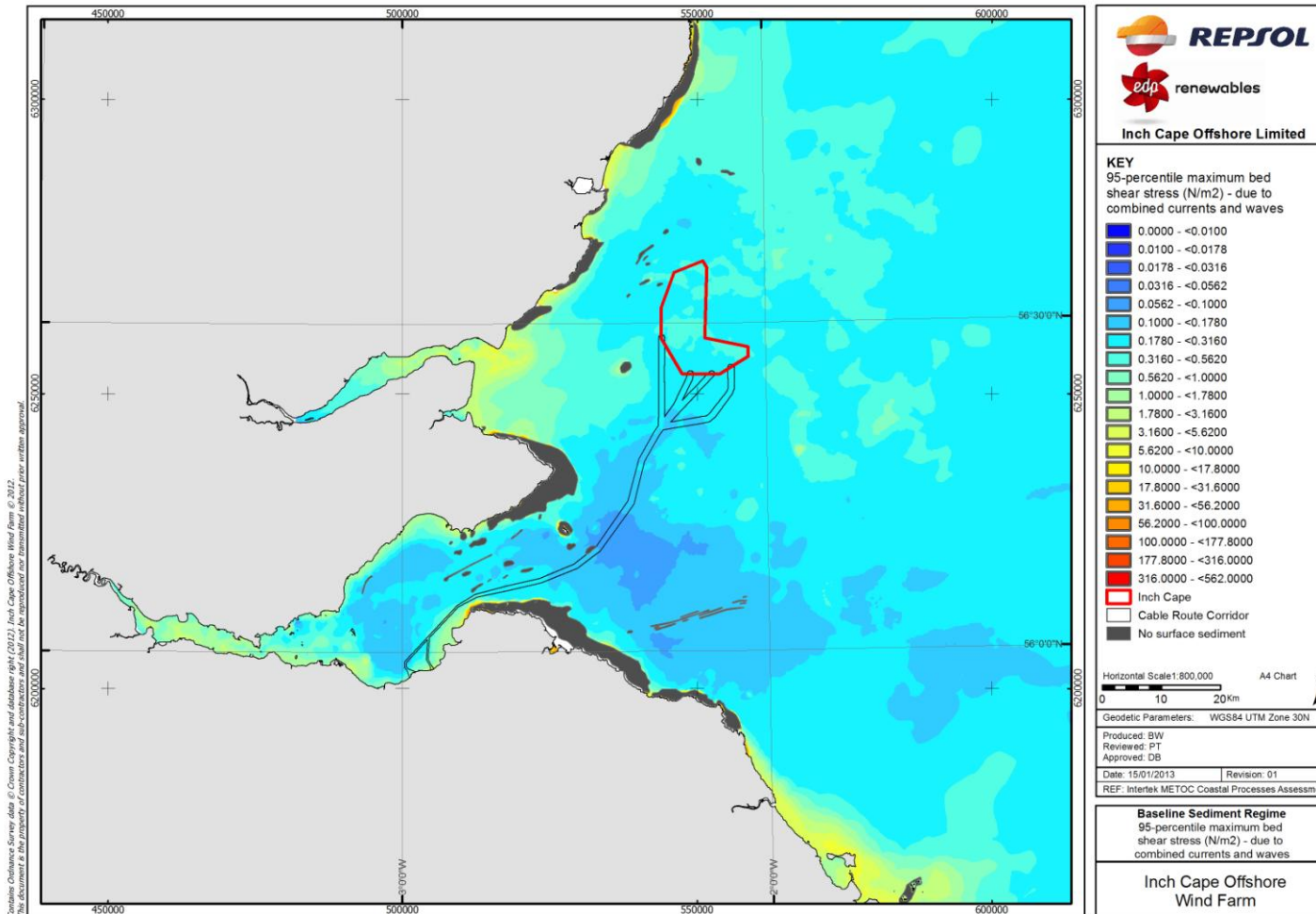


Figure 10A.2.65: 99%ile bed shear stress - due to maximum combined current and waves (N/m²) – Regional (far-field) scale

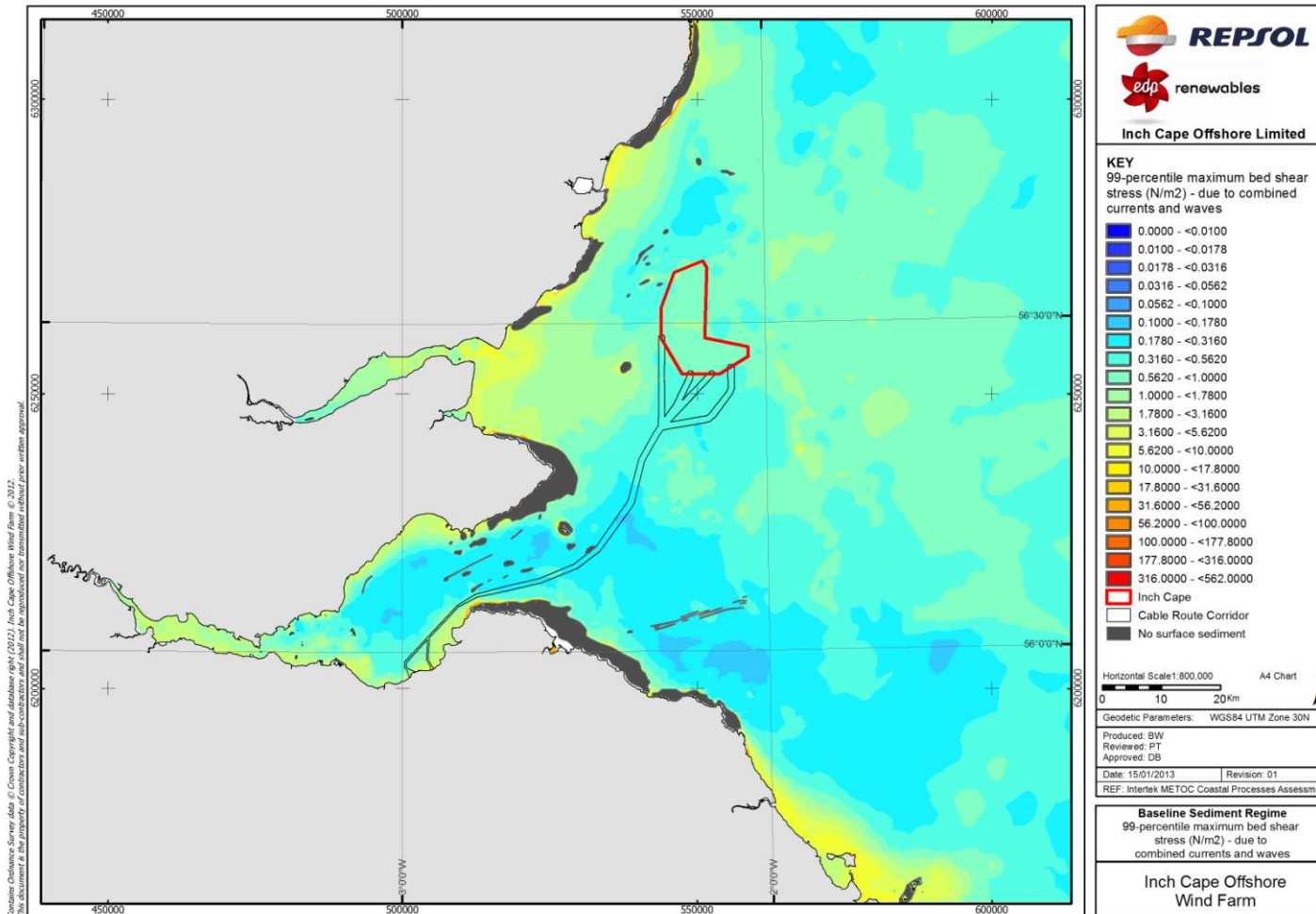


Figure 10A.2.66: Exceedance of the critical shear stress for entrainment due to mean combined bed shear stress – Regional (far-field) scale

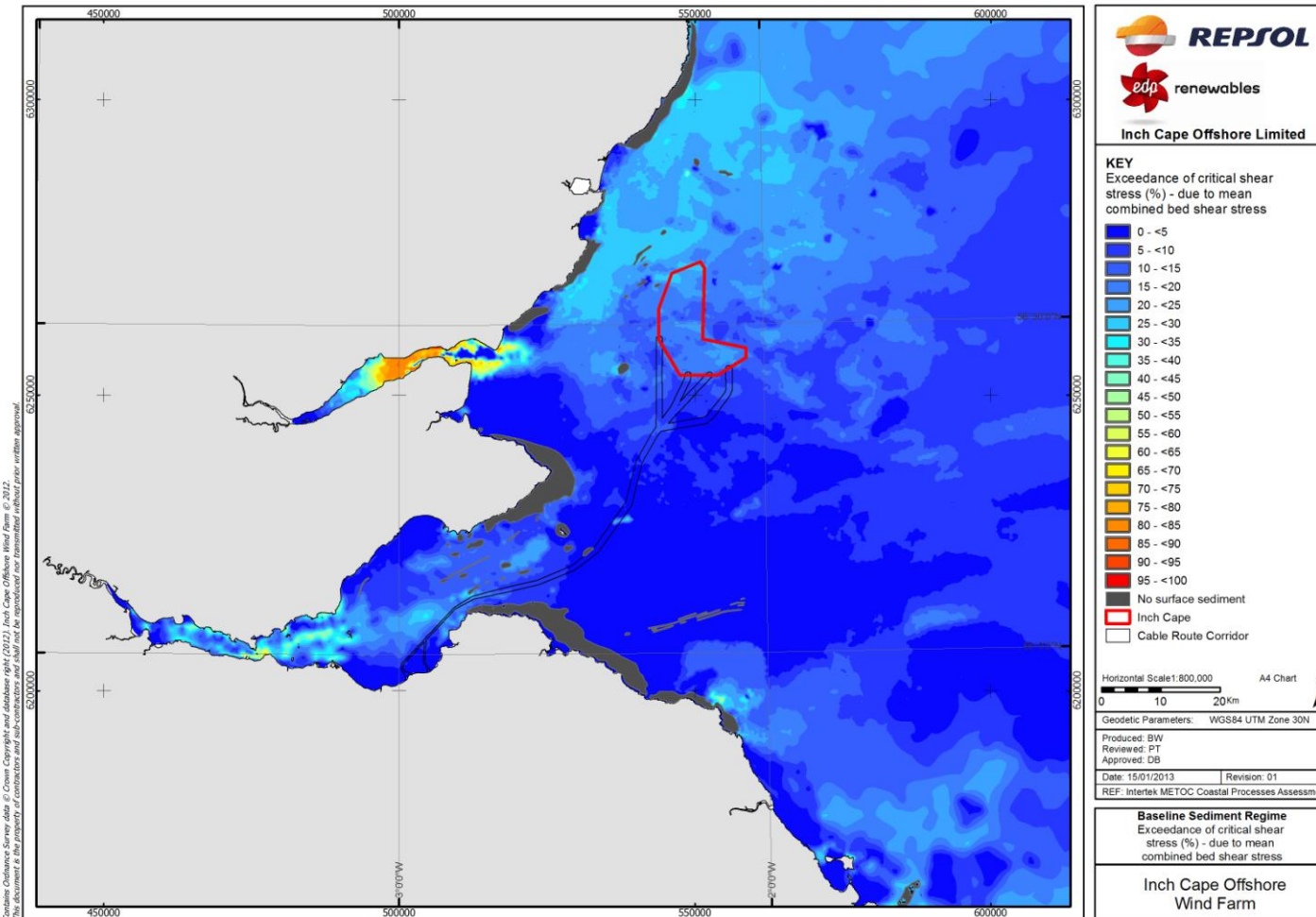


Figure 10A.2.67: Exceedance of the critical shear stress for entrainment due to maximum combined bed shear stress – Regional (far-field) scale

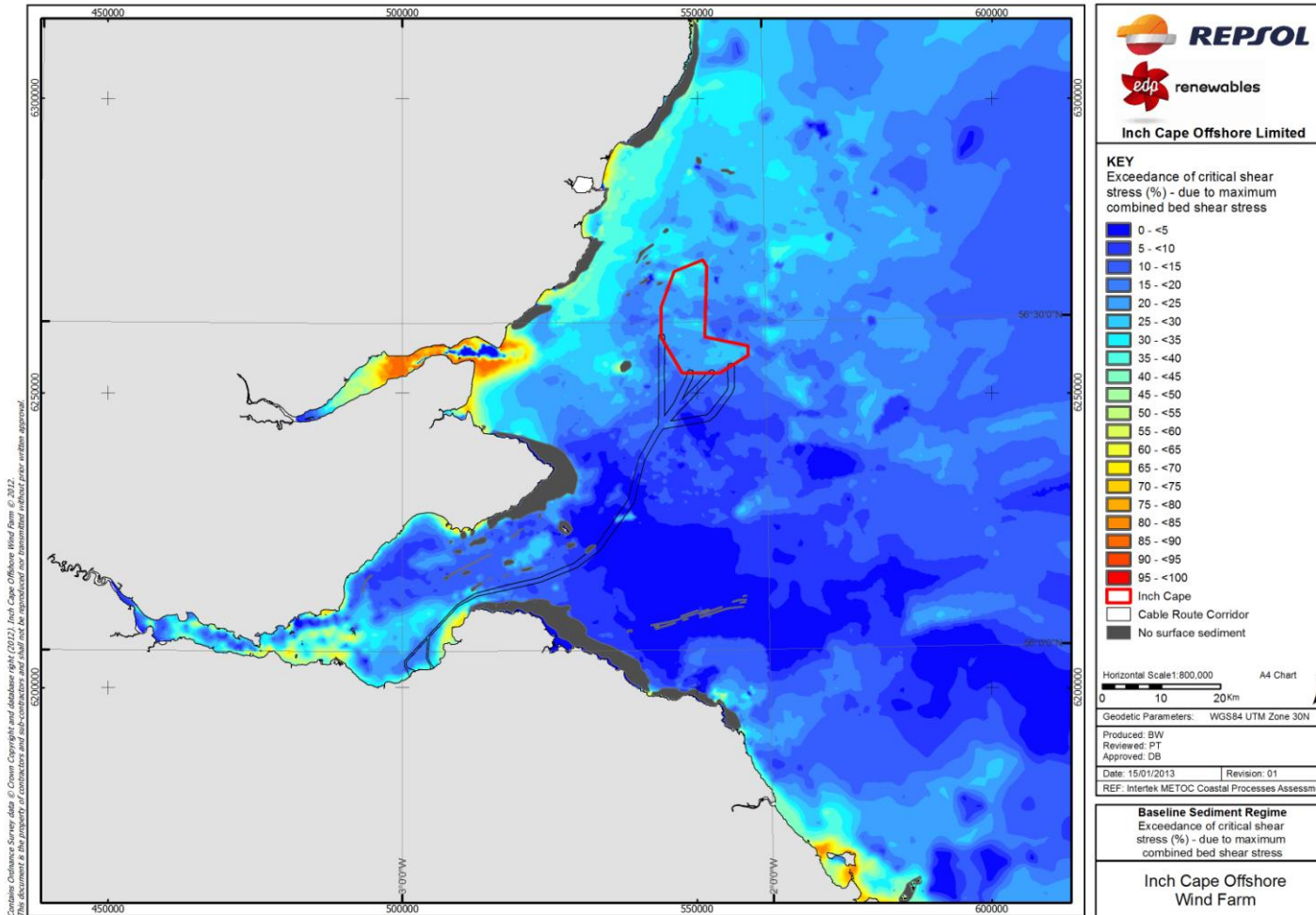


Figure 10A.2.68: Critical shear stress for entrainment (N/m²) – Inch Cape OWF (near-field) scale

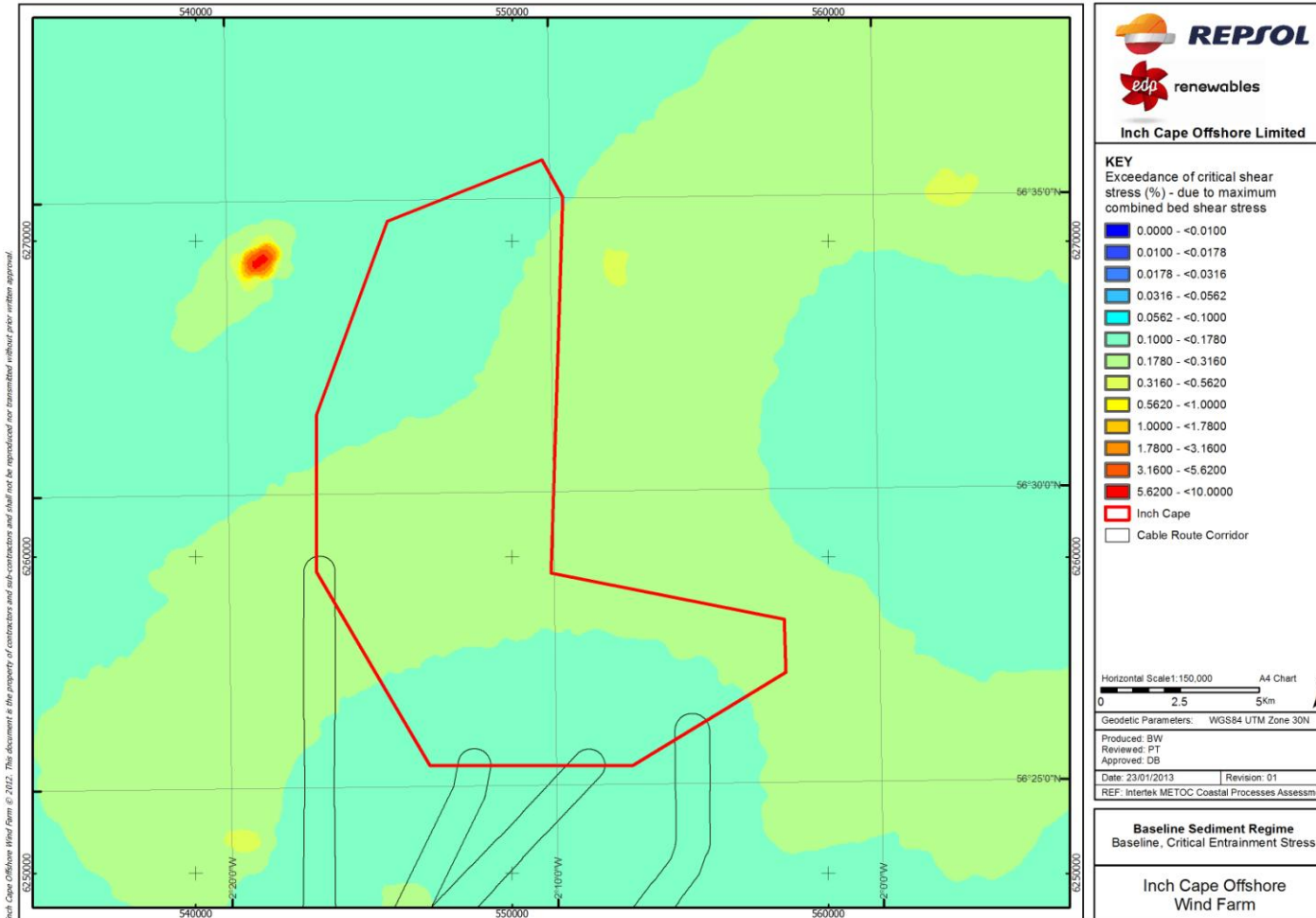


Figure 10A.2.69: 50%ile bed shear stress - due to currents (N/m²) – Inch Cape OWF (near-field) scale

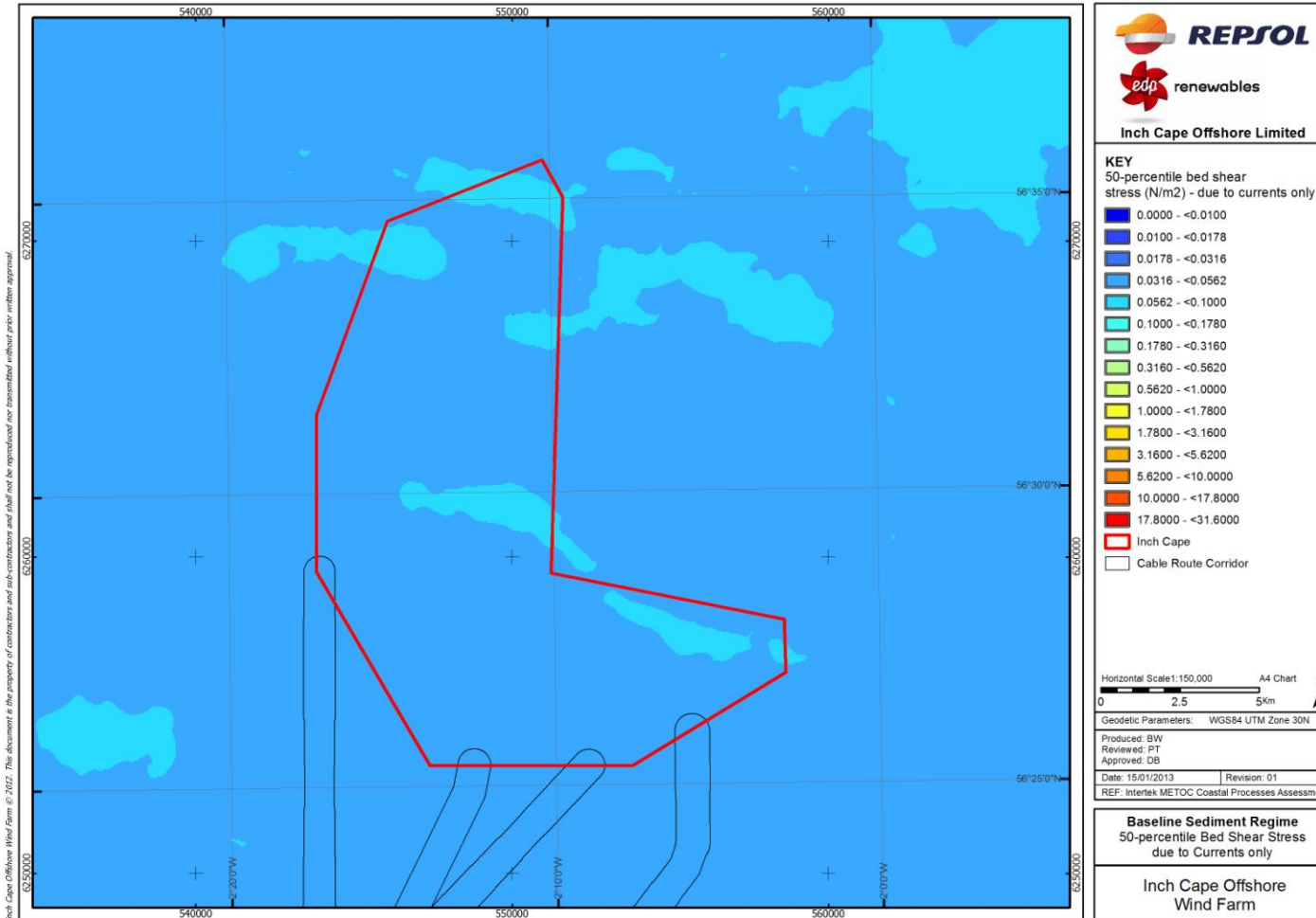


Figure 10A.2.70: 90%ile bed shear stress - due to currents (N/m²) – Inch Cape OWF (near-field) scale

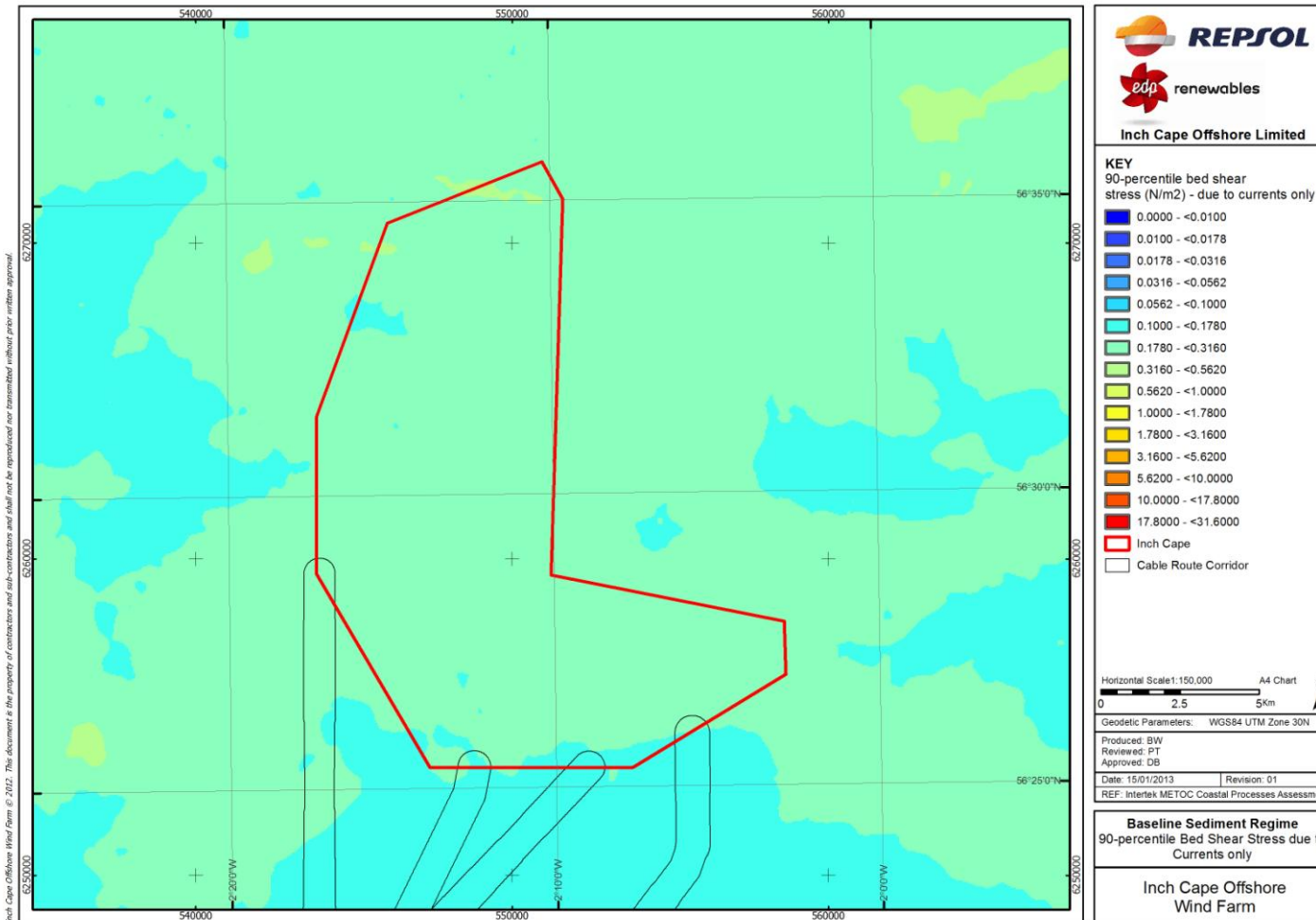


Figure 10A.2.71: 95%ile bed shear stress - due to currents (N/m²) – Inch Cape OWF (near-field) scale

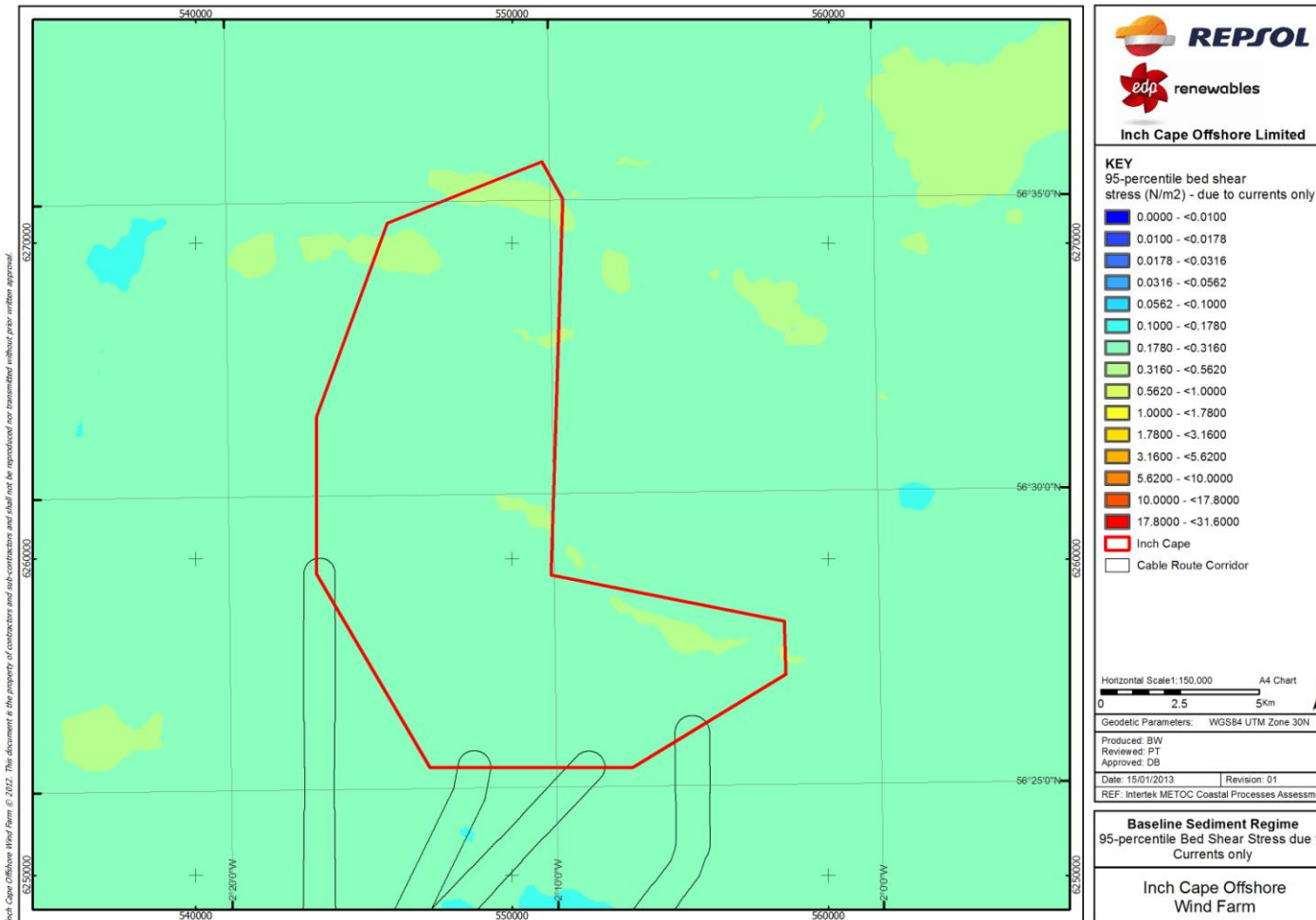


Figure 10A.2.72: 99%ile bed shear stress - due to currents (N/m²) – Inch Cape OWF (near-field) scale

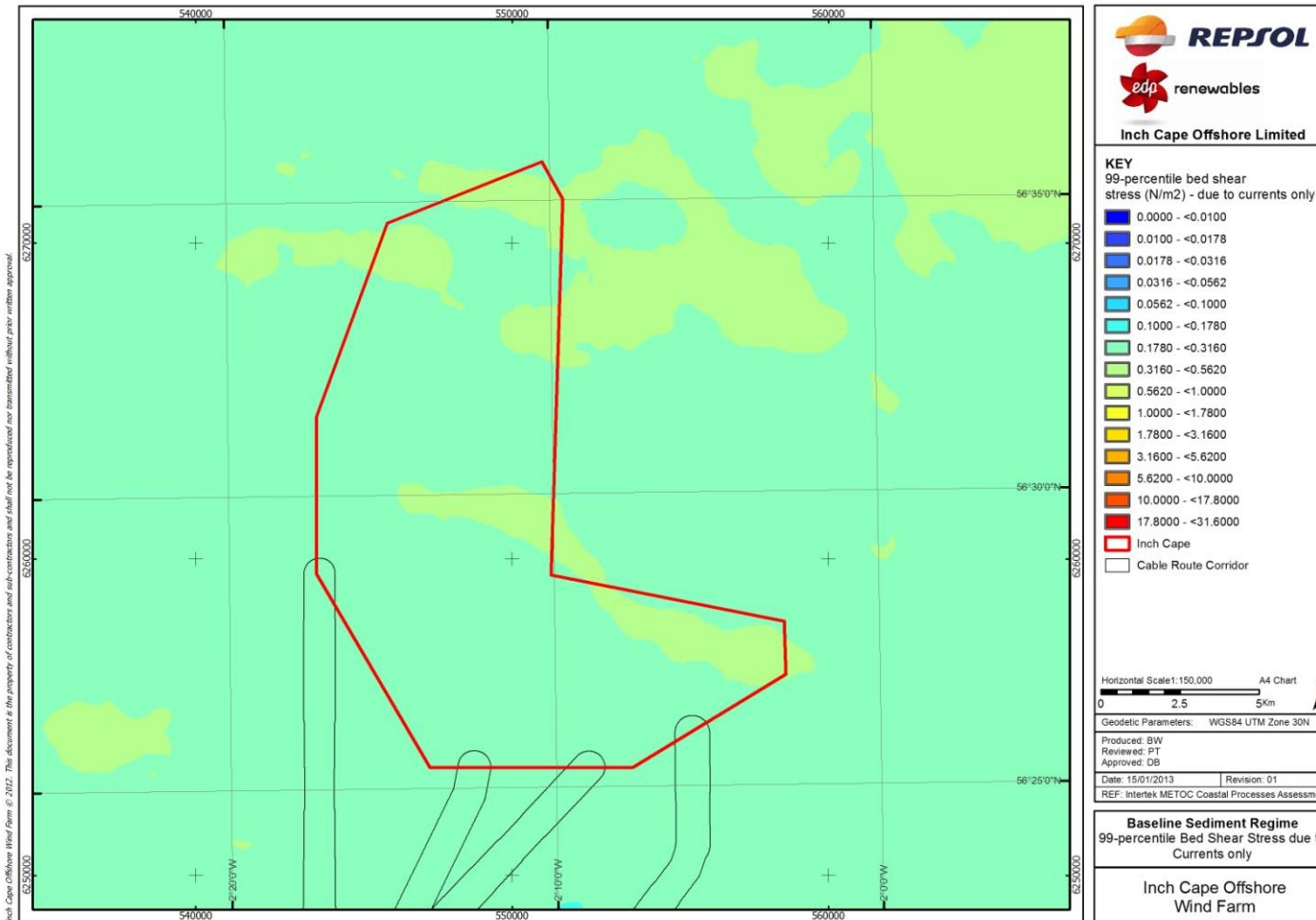


Figure 10A.2.73: 50%ile bed shear stress - due to waves (N/m²) – Inch Cape OWF (near-field) scale

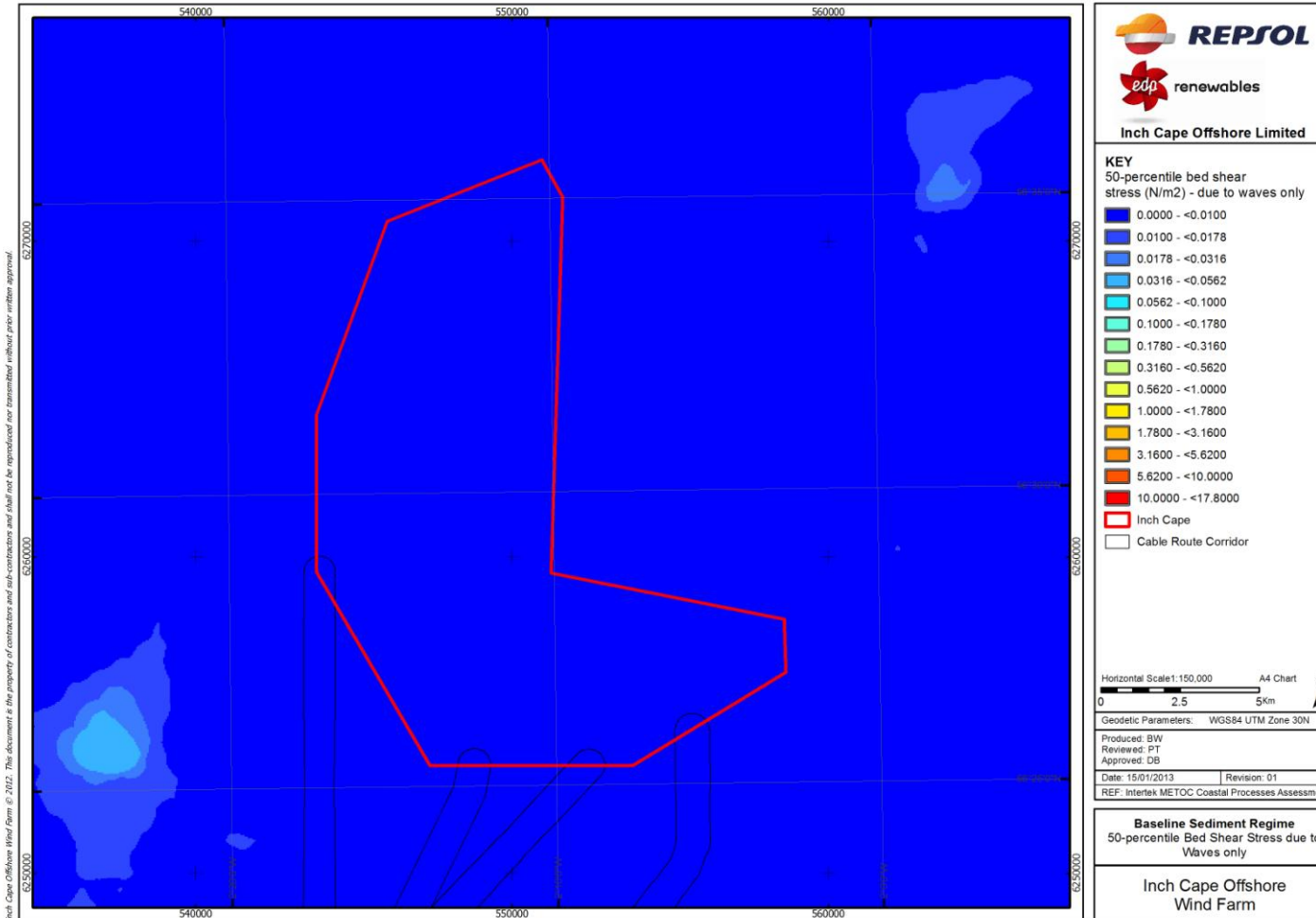


Figure 10A.2.74: 90%ile bed shear stress - due to waves (N/m²) – Inch Cape OWF (near-field) scale

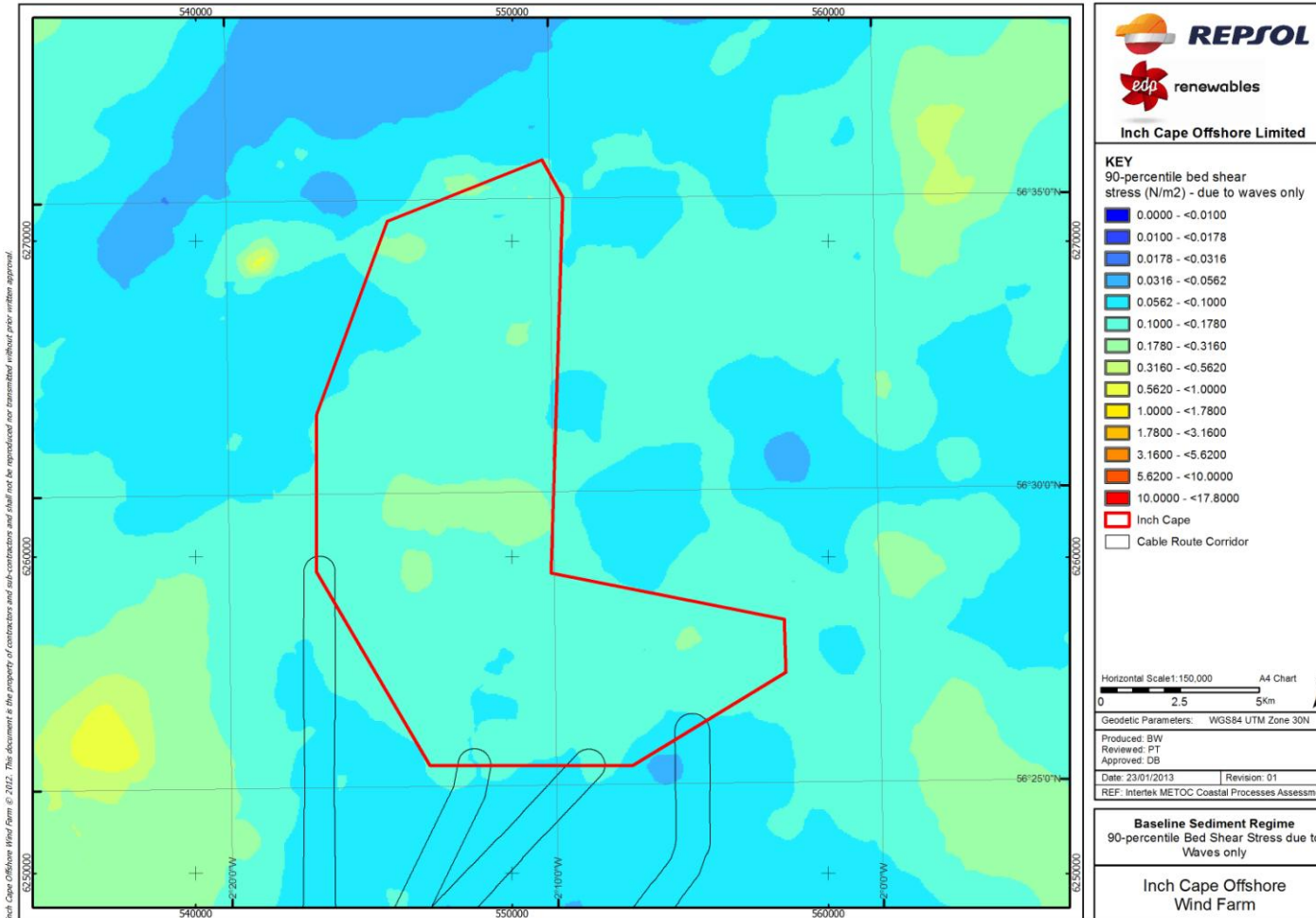


Figure 10A.2.75: 95%ile bed shear stress - due to waves (N/m²) – Inch Cape OWF (near-field) scale

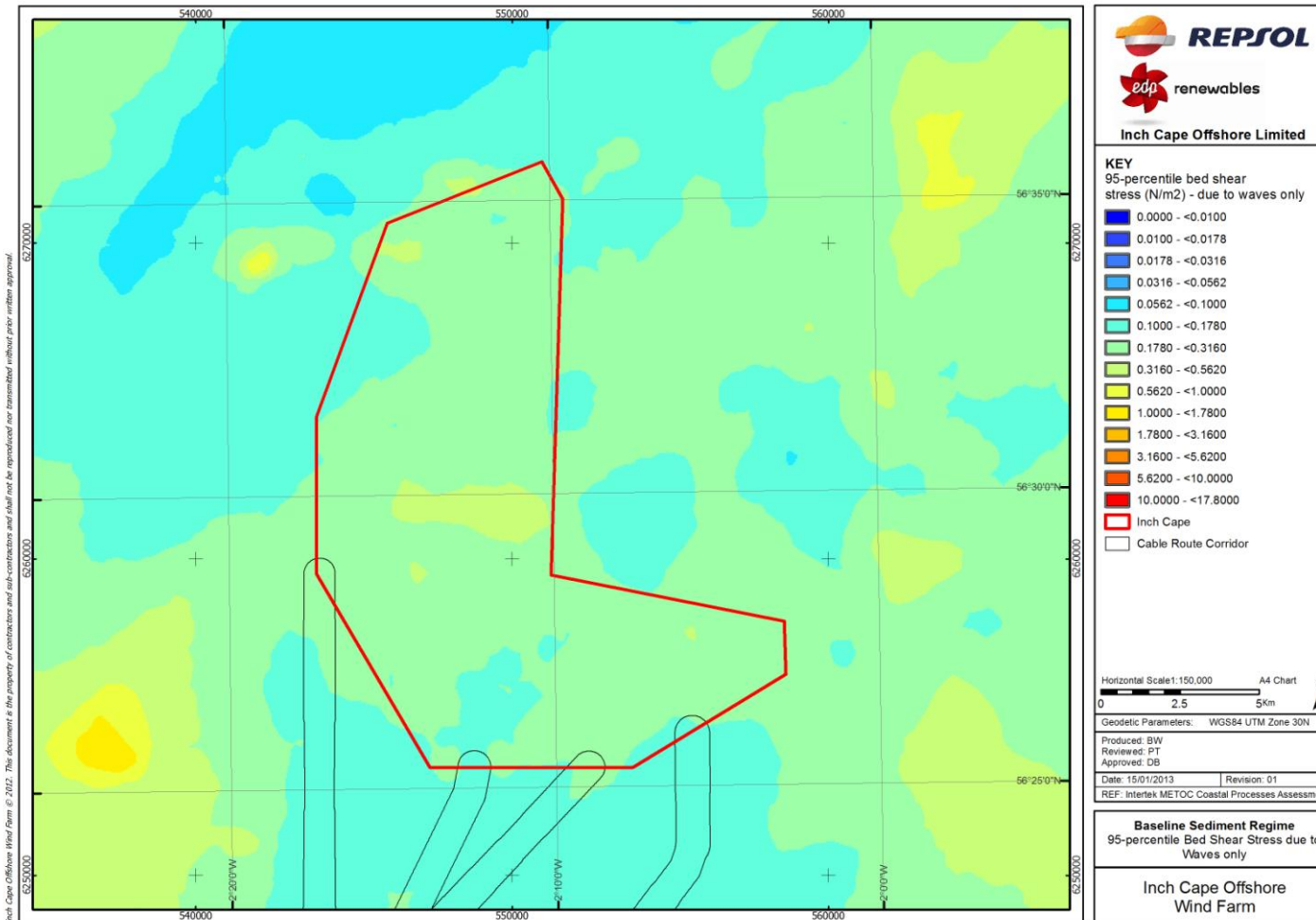


Figure 10A.2.76: 99%ile bed shear stress - due to waves (N/m²) – Inch Cape OWF (near-field) scale

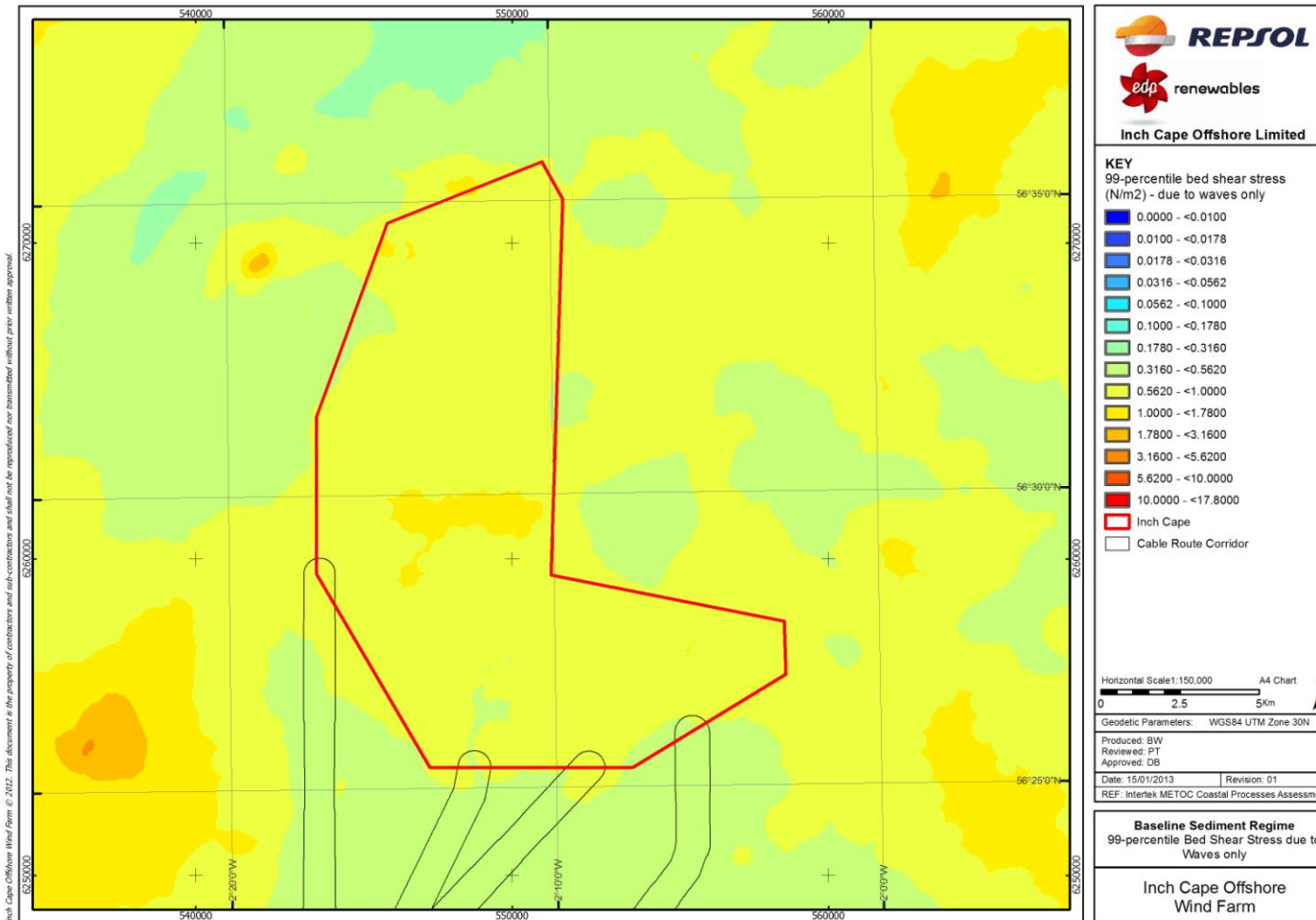


Figure 10A.2.77: 50%ile bed shear stress - due to mean combined current and waves (N/m²) – Inch Cape OWF (near-field) scale

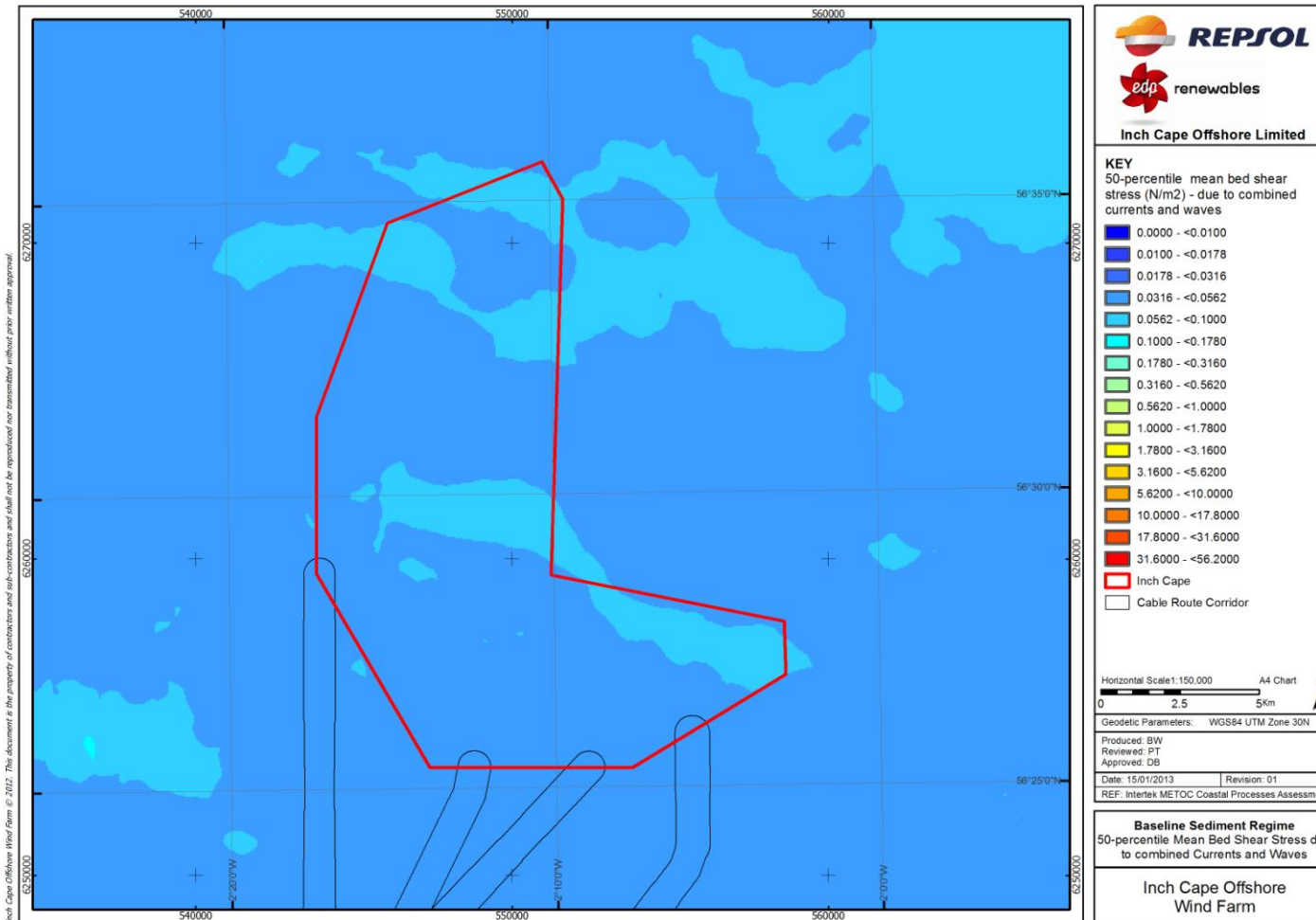


Figure 10A.2.78: 90%ile bed shear stress - due to mean combined current and waves (N/m²) – Inch Cape OWF (near-field) scale

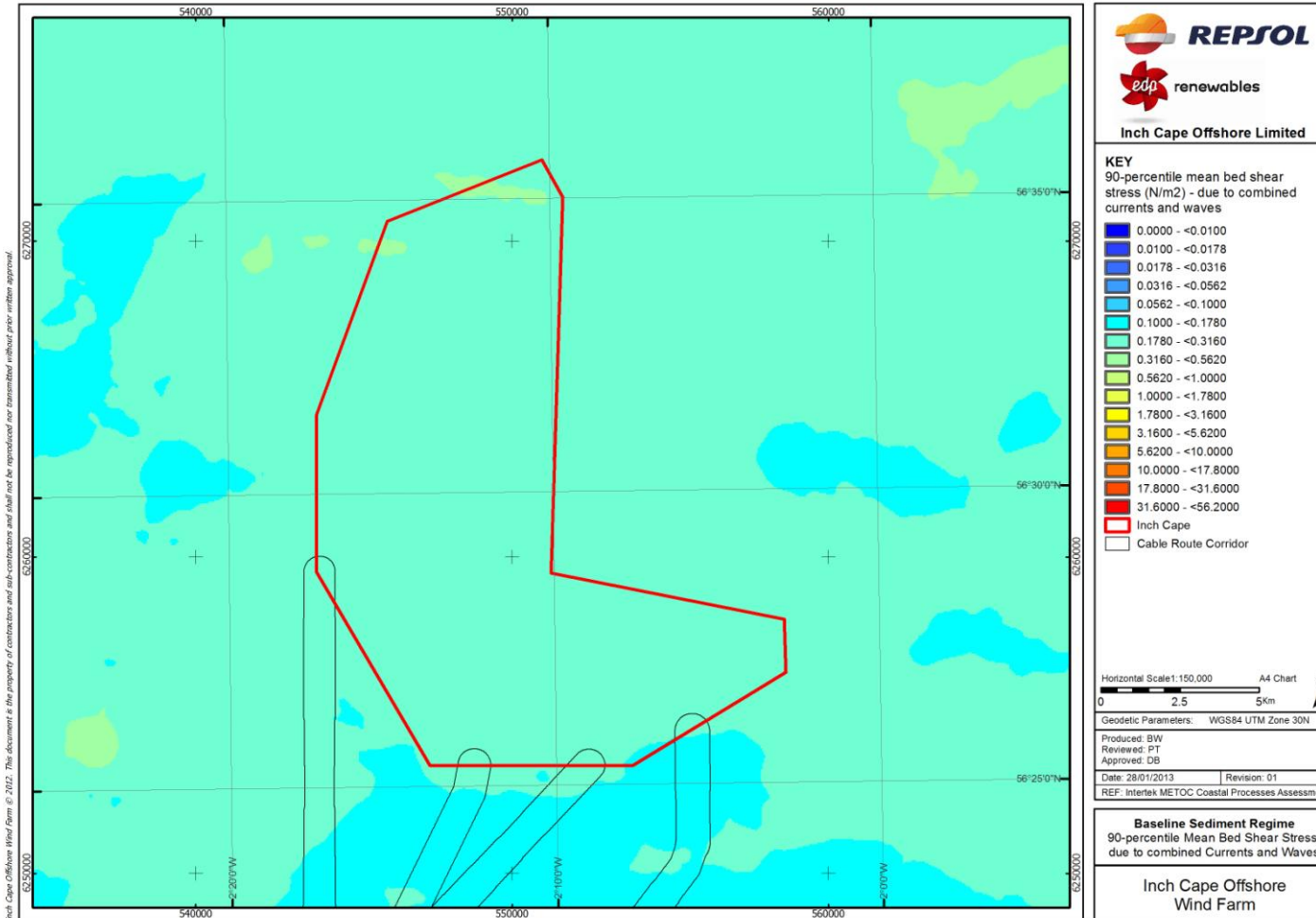


Figure 10A.2.79: 95%ile bed shear stress - due to mean combined current and waves (N/m²) – Inch Cape OWF (near-field) scale

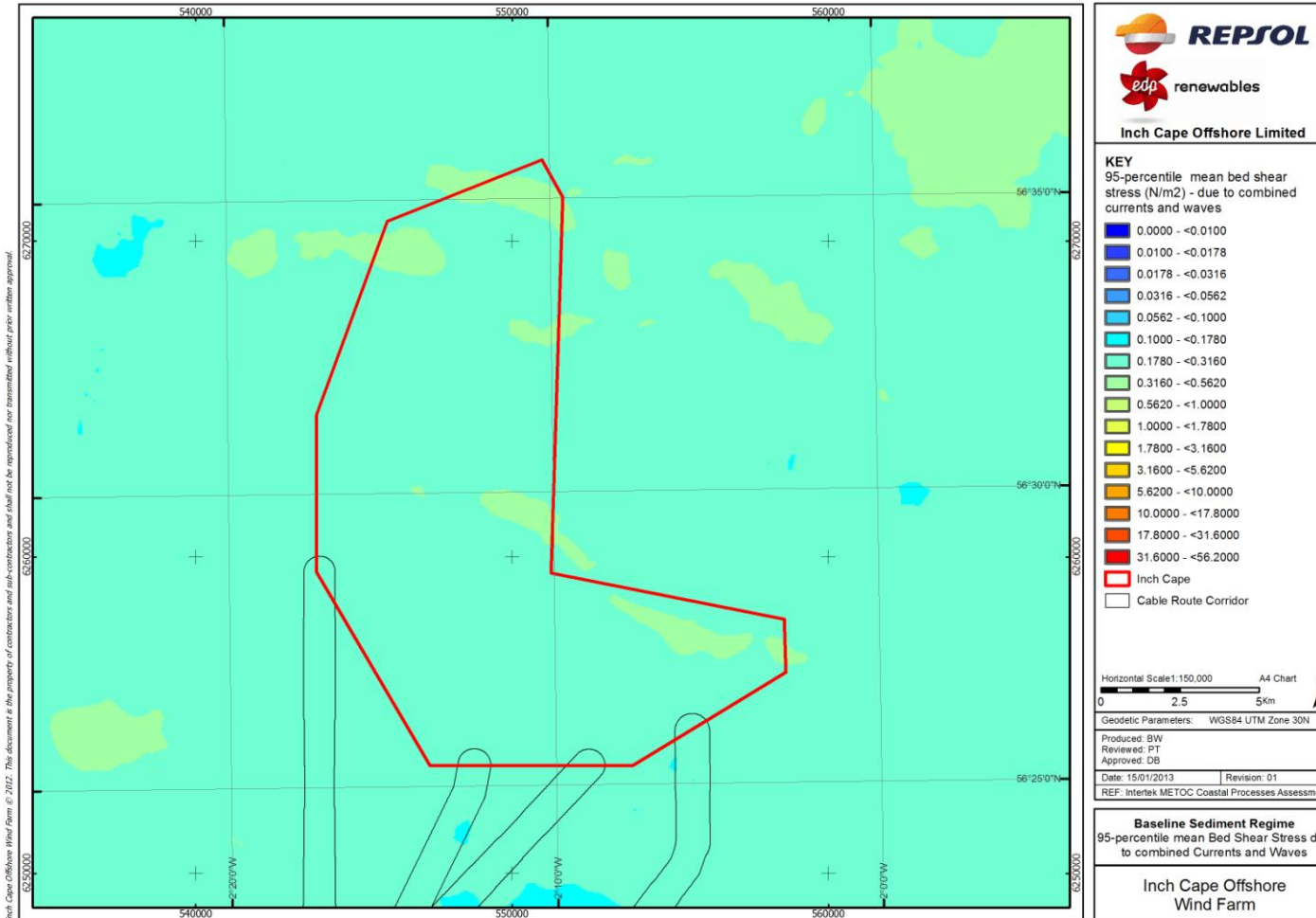


Figure 10A.2.80: 99%ile bed shear stress - due to mean combined current and waves (N/m²) – Inch Cape OWF (near-field) scale

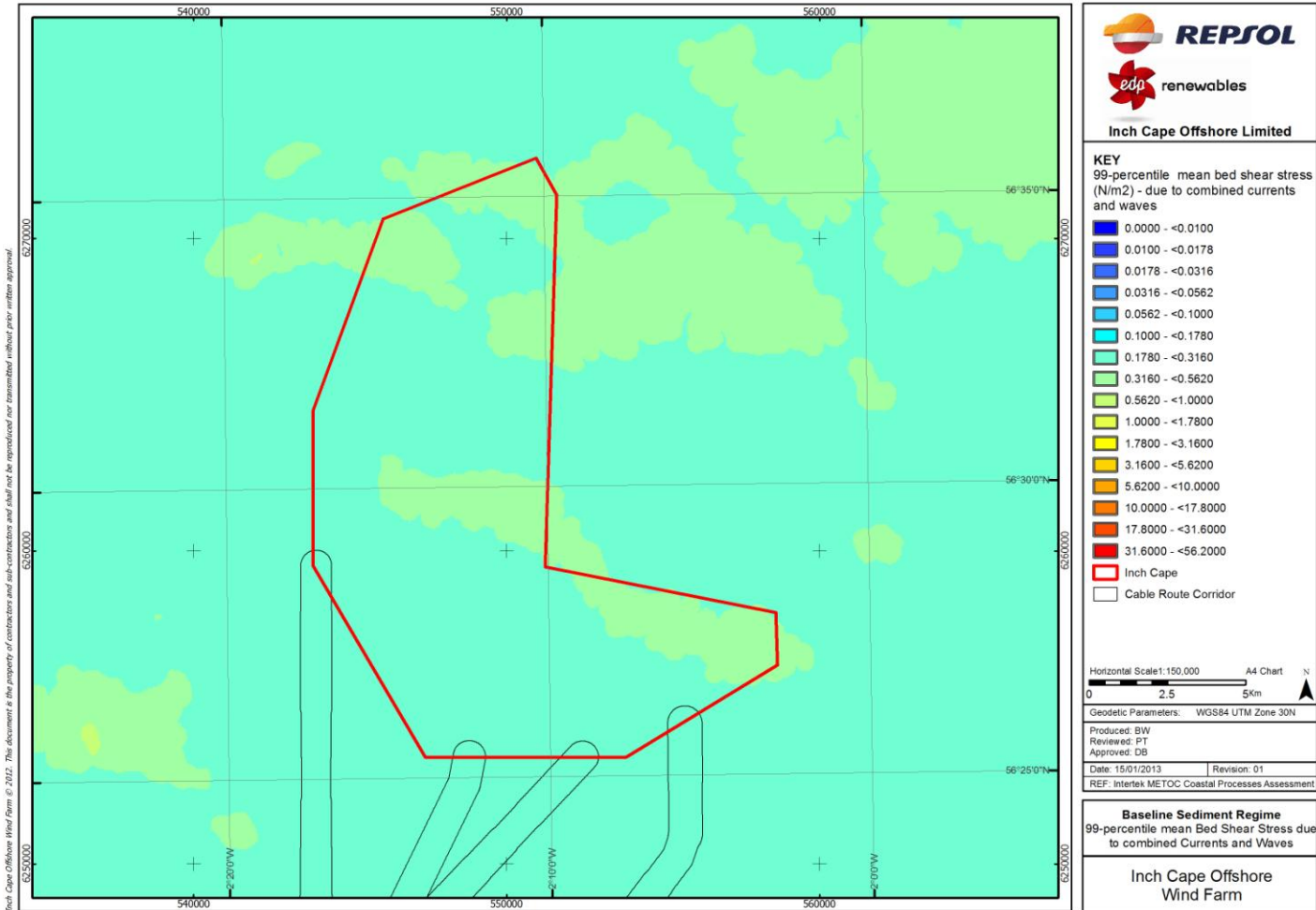


Figure 10A.2.81: 50%ile bed shear stress - due to maximum combined current and waves (N/m²) – Inch Cape OWF (near-field) scale

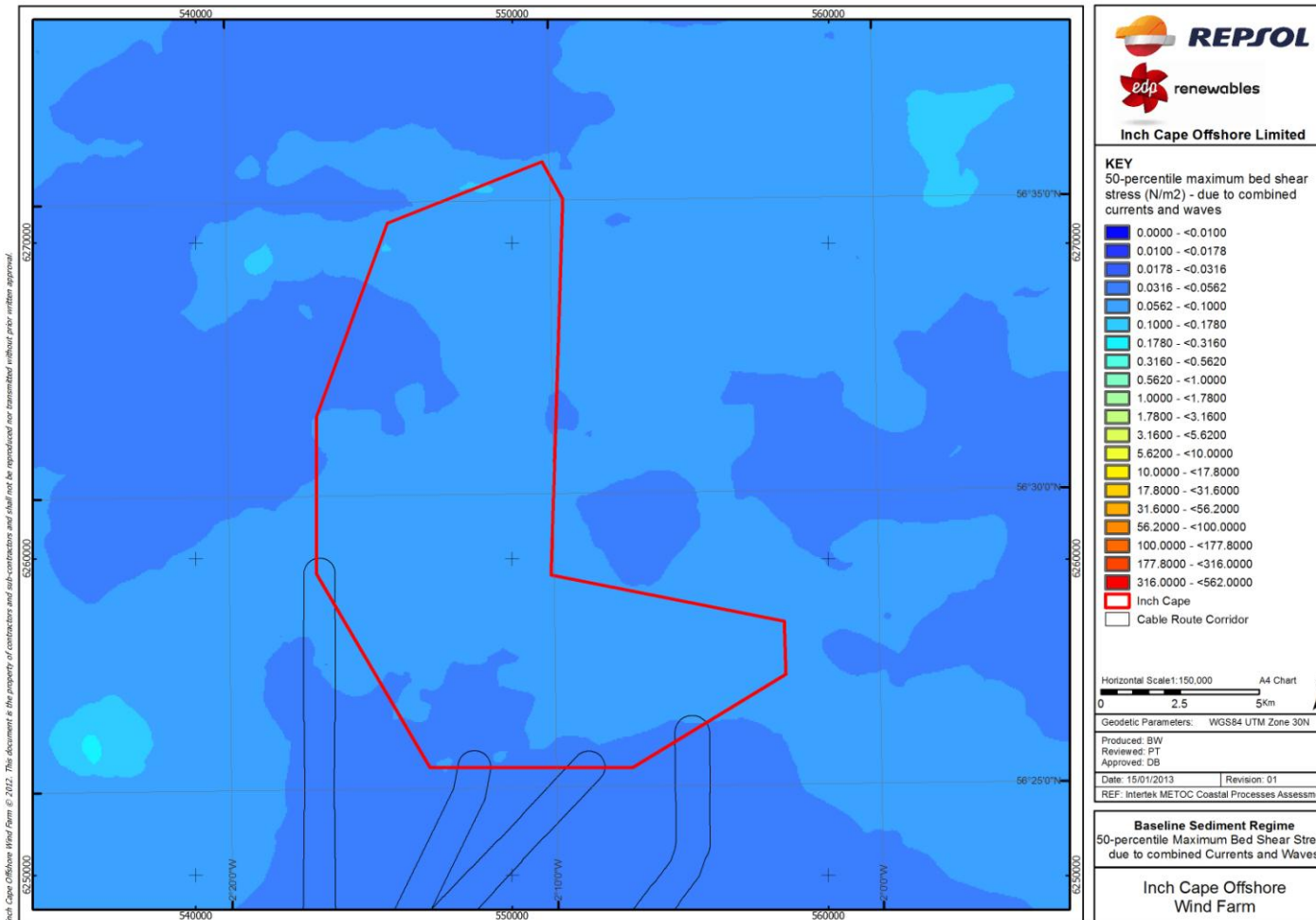


Figure 10A.2.82: 90%ile bed shear stress - due to maximum combined current and waves (N/m²) – Inch Cape OWF (near-field) scale

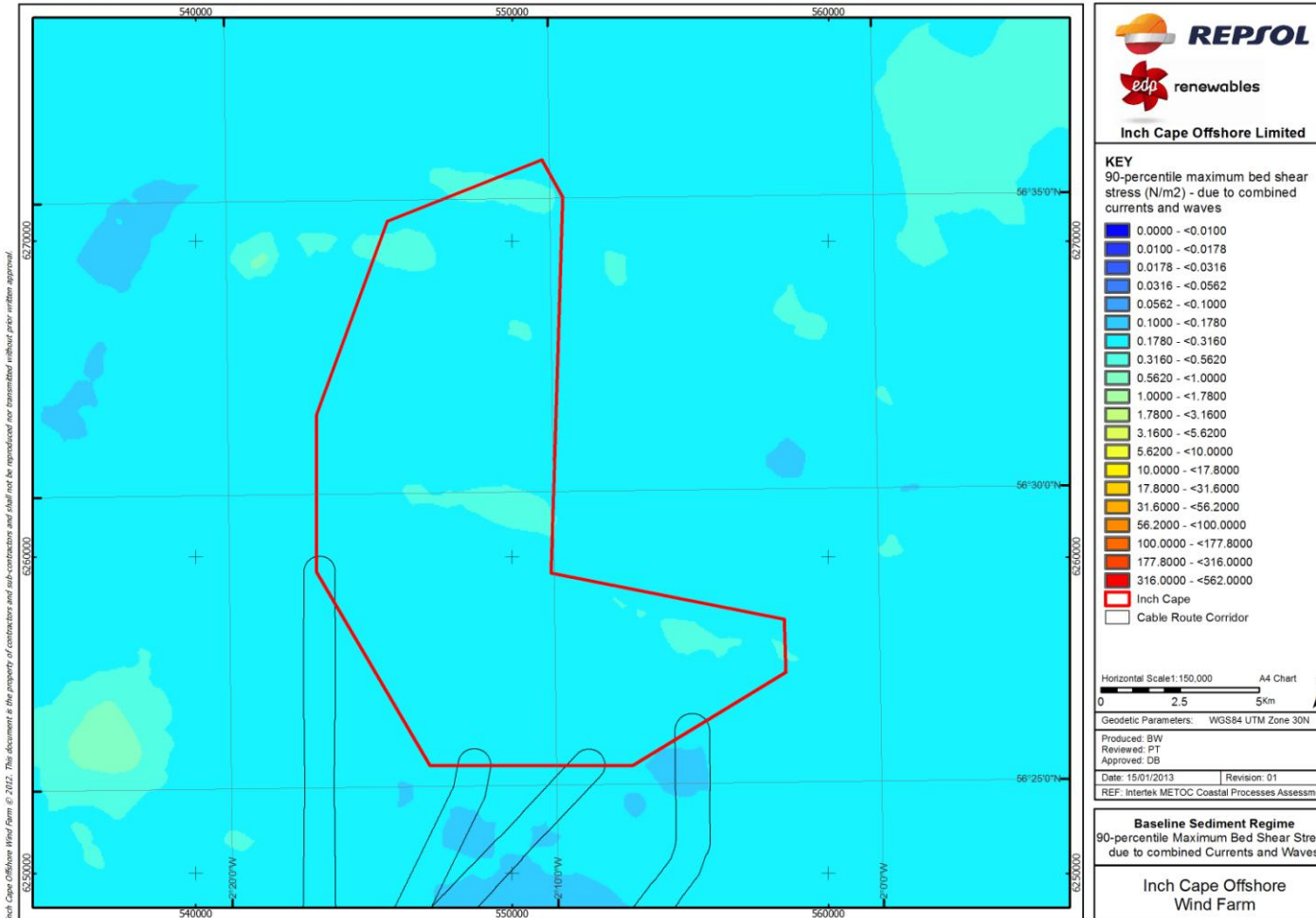


Figure 10A.2.83: 95%ile bed shear stress - due to maximum combined current and waves (N/m²) – Inch Cape OWF (near-field) scale

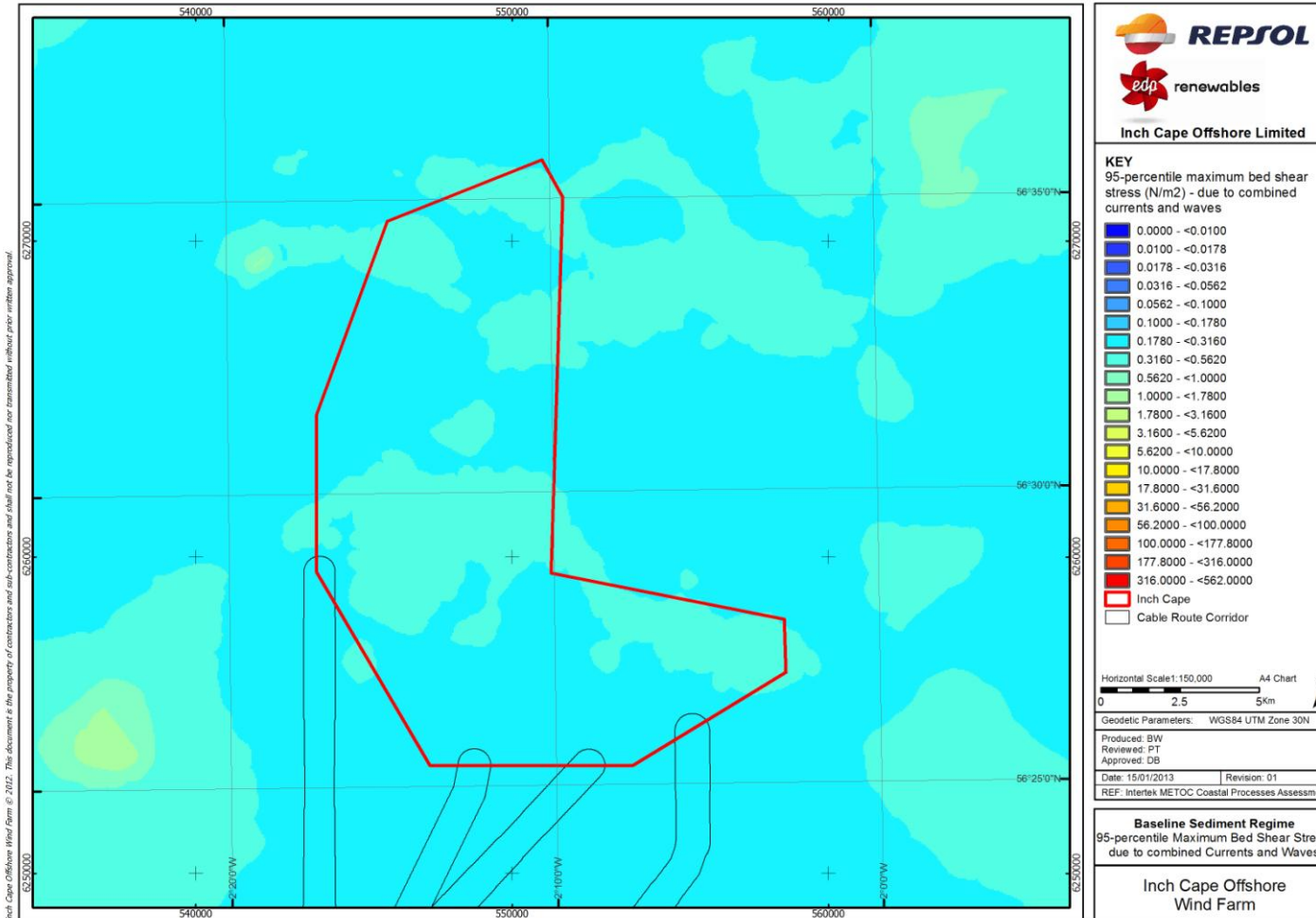


Figure 10A.2.84: 99%ile bed shear stress - due to maximum combined current and waves (N/m²) – Inch Cape OWF (near-field) scale

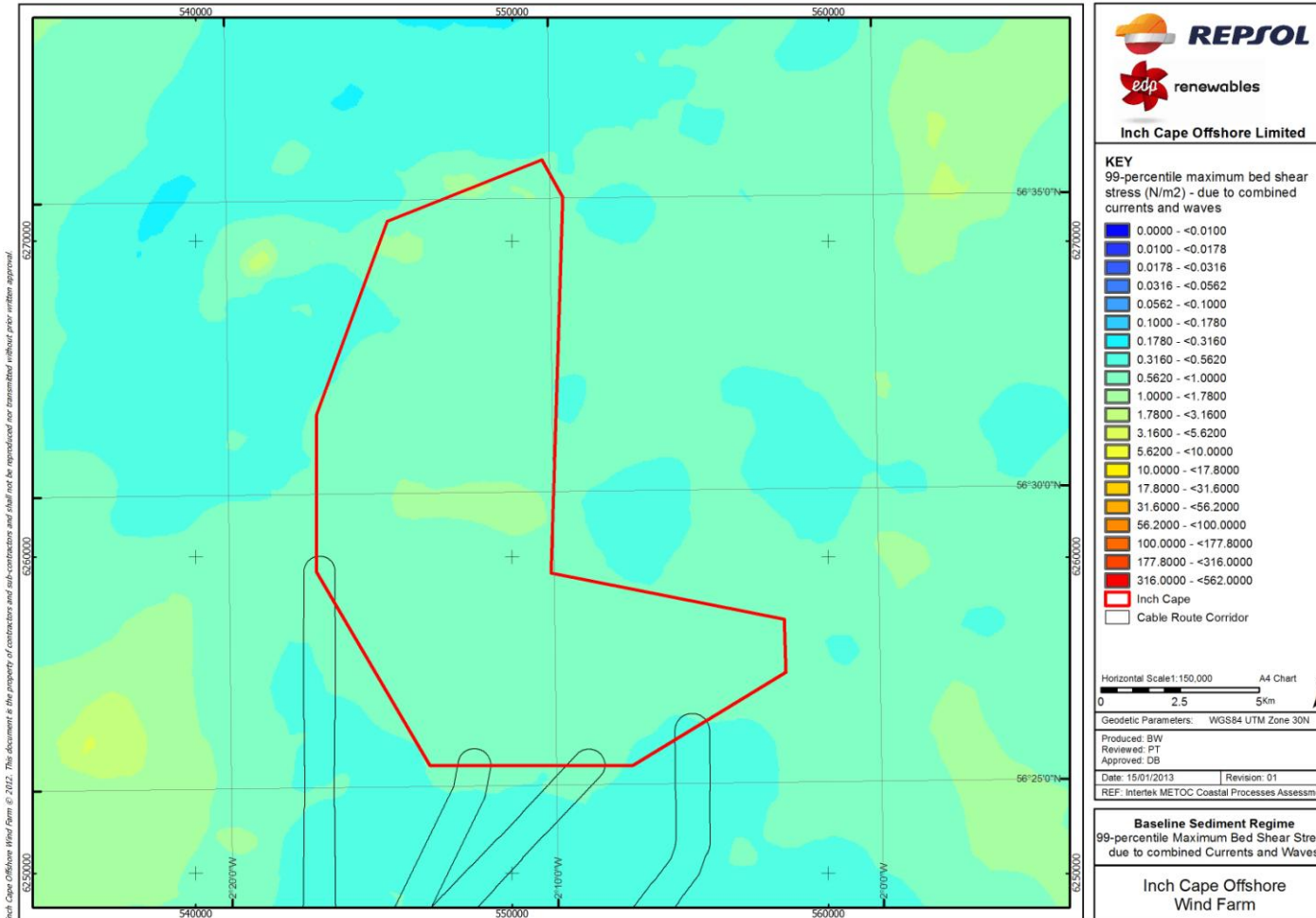


Figure 10A.2.85: Exceedance of the critical shear stress for entrainment due to mean combined bed shear stress – Inch Cape OWF (near-field) scale

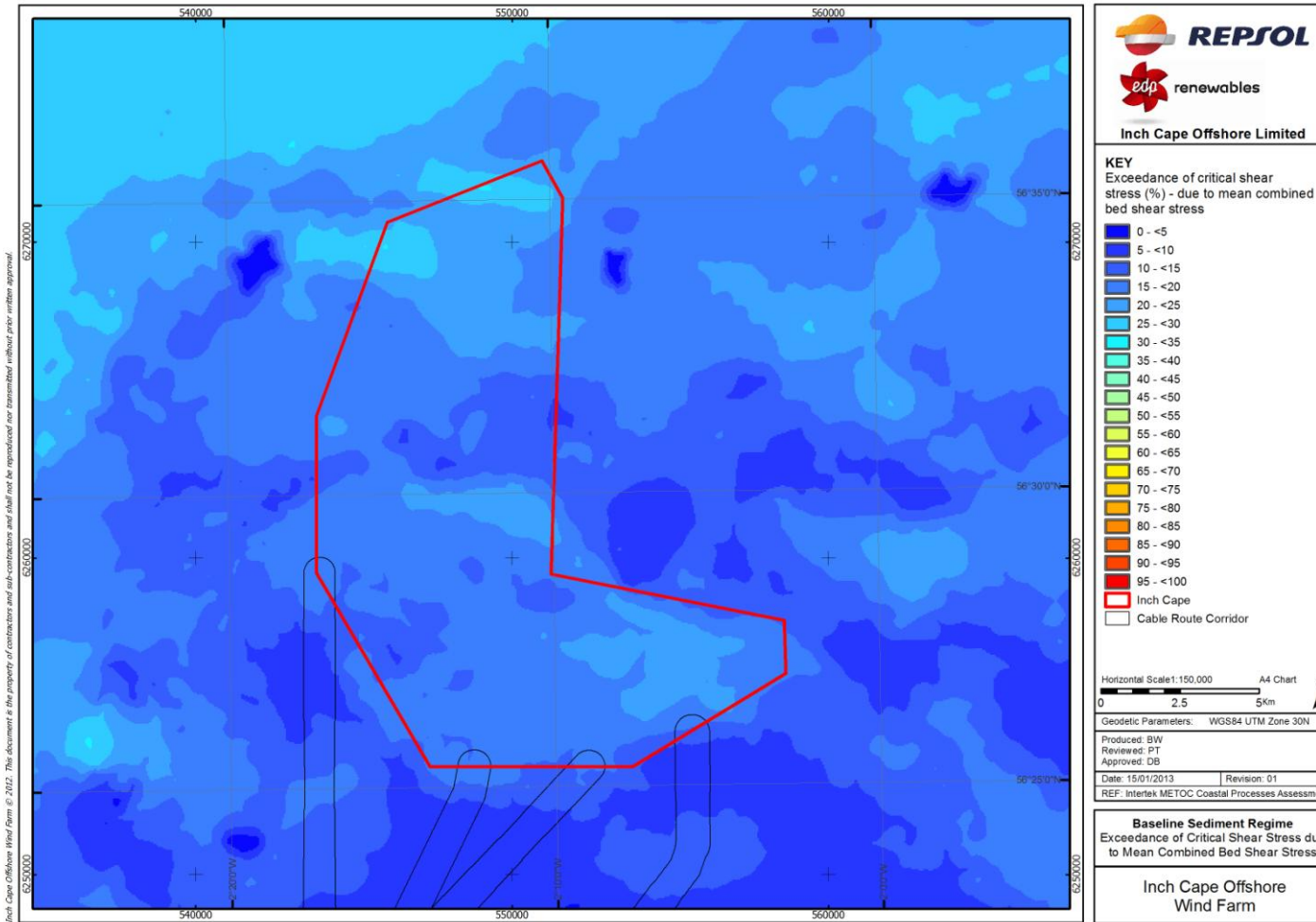
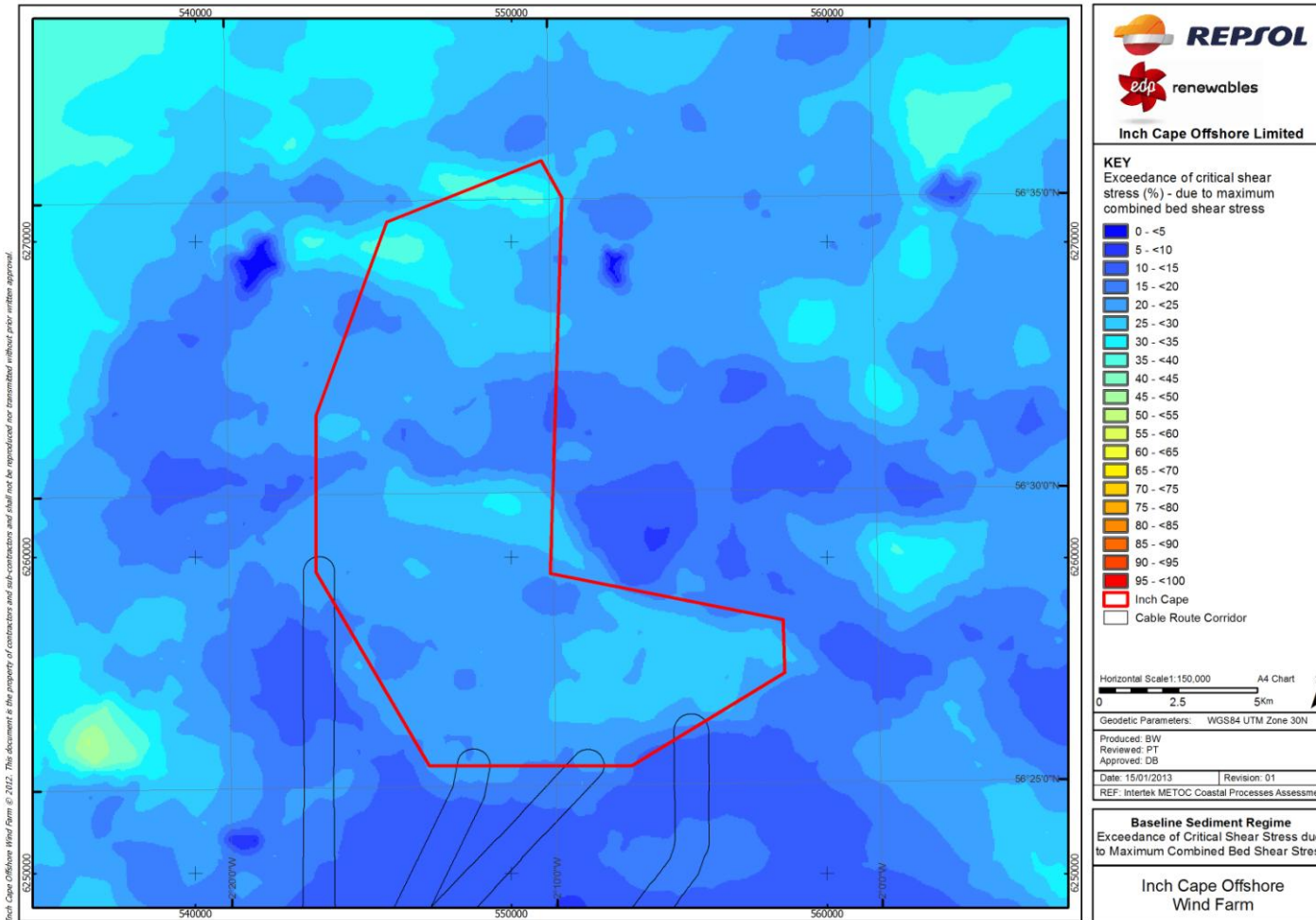


Figure 10A.2.86: Exceedance of the critical shear stress for entrainment due to maximum combined bed shear stress – Inch Cape OWF (near-field) scale



Section 4: Summary of Model Performance

Figure 10A.2.87: Inch Cape ADCP Spring Modelled Tidal Elevations against Predicted Field Data

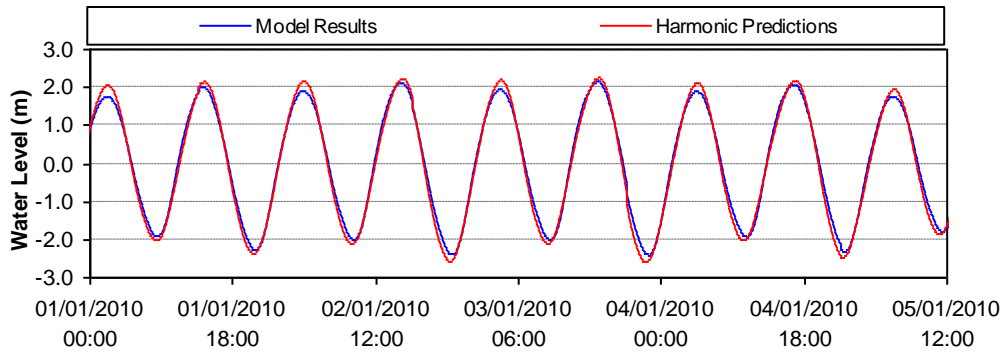


Figure 10A.2.88: Inch Cape ADCP Spring Modelled Tidal Currents Speed (ms⁻¹) and Current Direction (deg T) against Predicted Field Data

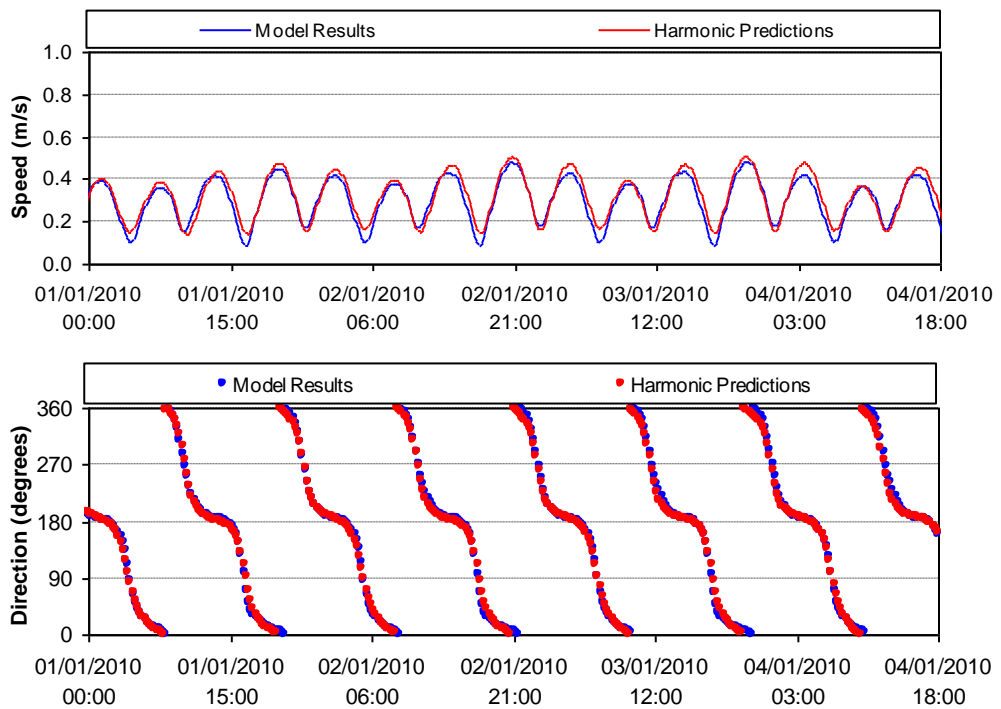


Figure 10A.2.89: Inch Cape ADCP Neap Modelled Tidal Elevations against Predicted Field Data

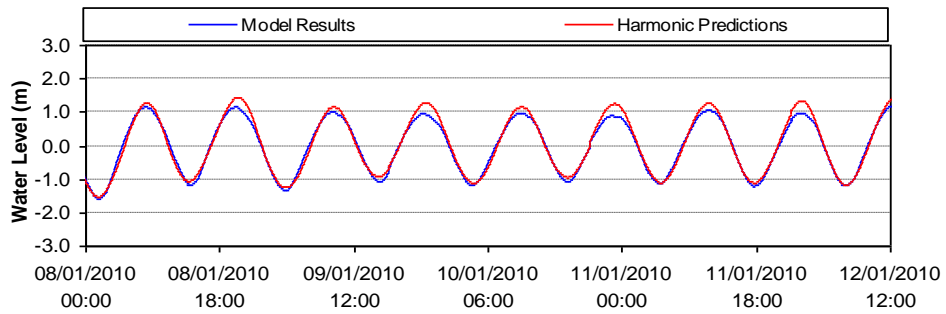


Figure 10A.2.90: Inch Cape ADCP Neap Modelled Tidal Currents Speed (ms⁻¹) and Current Direction (deg T) against Predicted Field Data

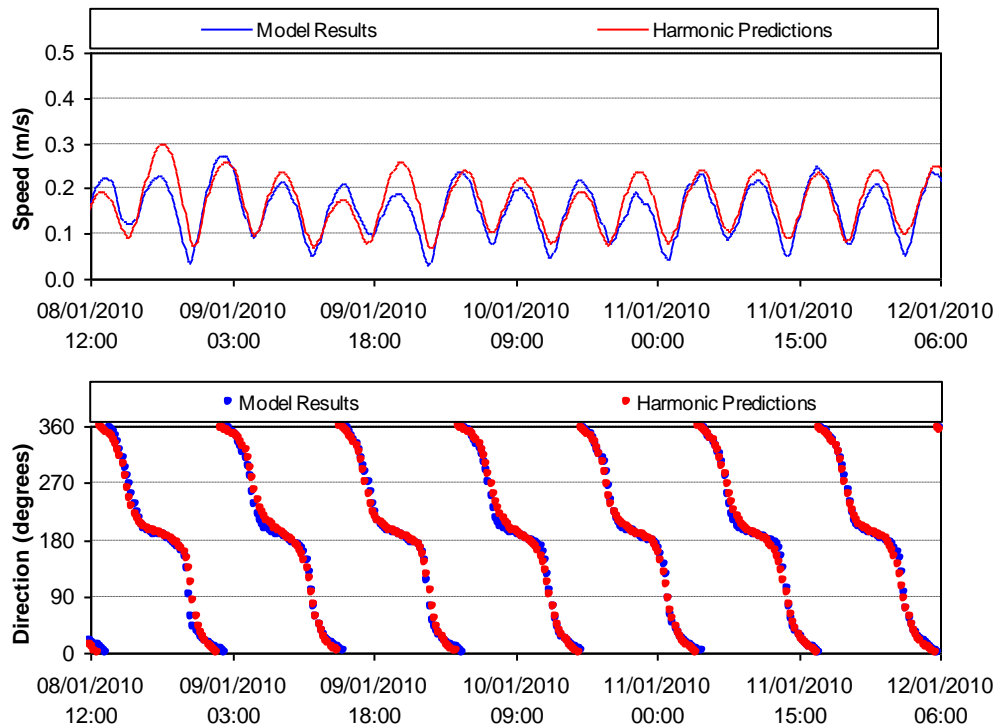


Figure 10A.2.91: Easterly Storm Event - Inch Cape, Waverider Buoy Modelled Hs (m), Tp (s) and Wave Direction (deg T) against Measured Field Data

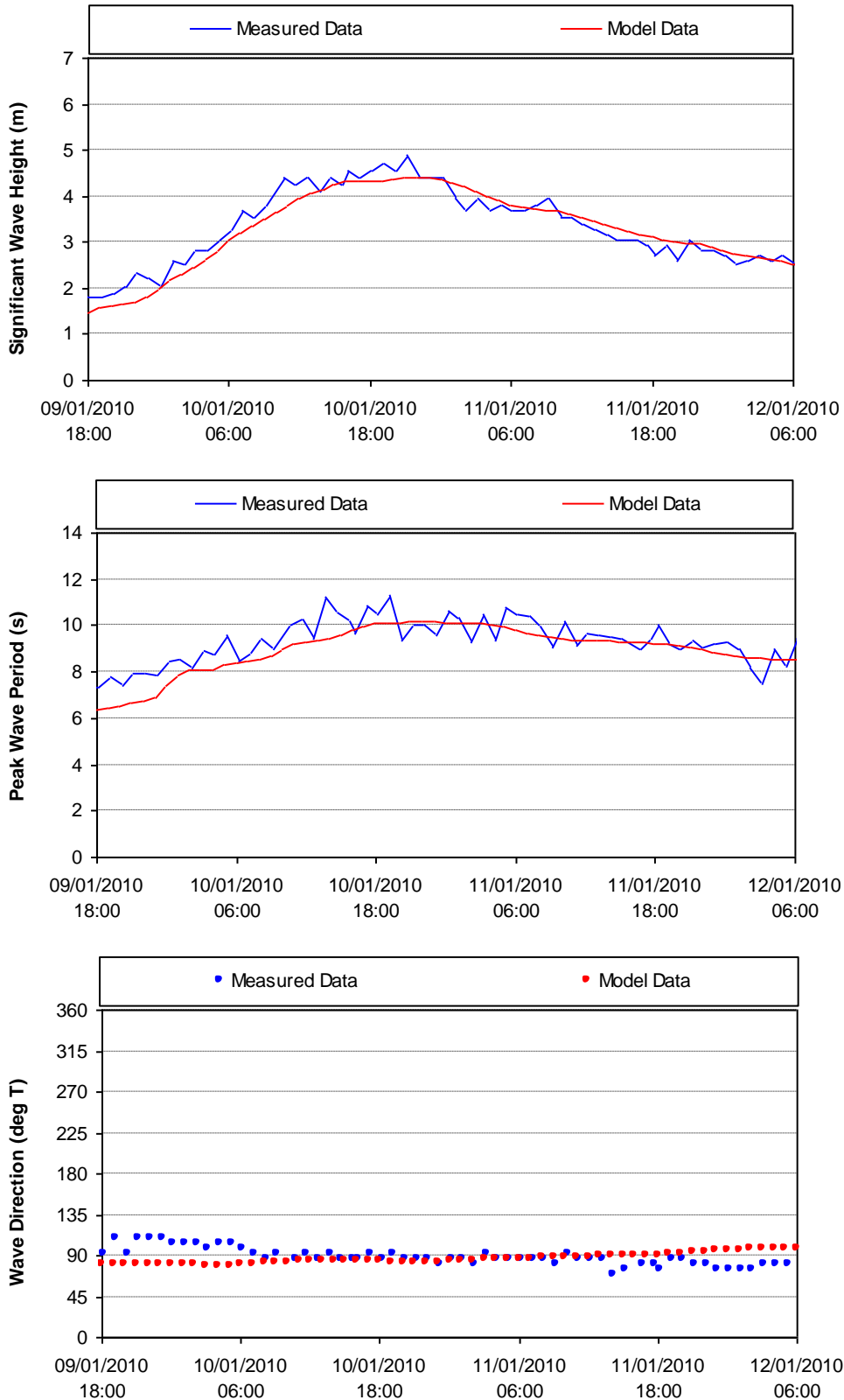


Figure 10A.2.92: Offshore Wind Event – Inch Cape, Waverider Buoy Modelled H_s (m), T_p (s) and Wave Direction (deg T) against Measured Field Data

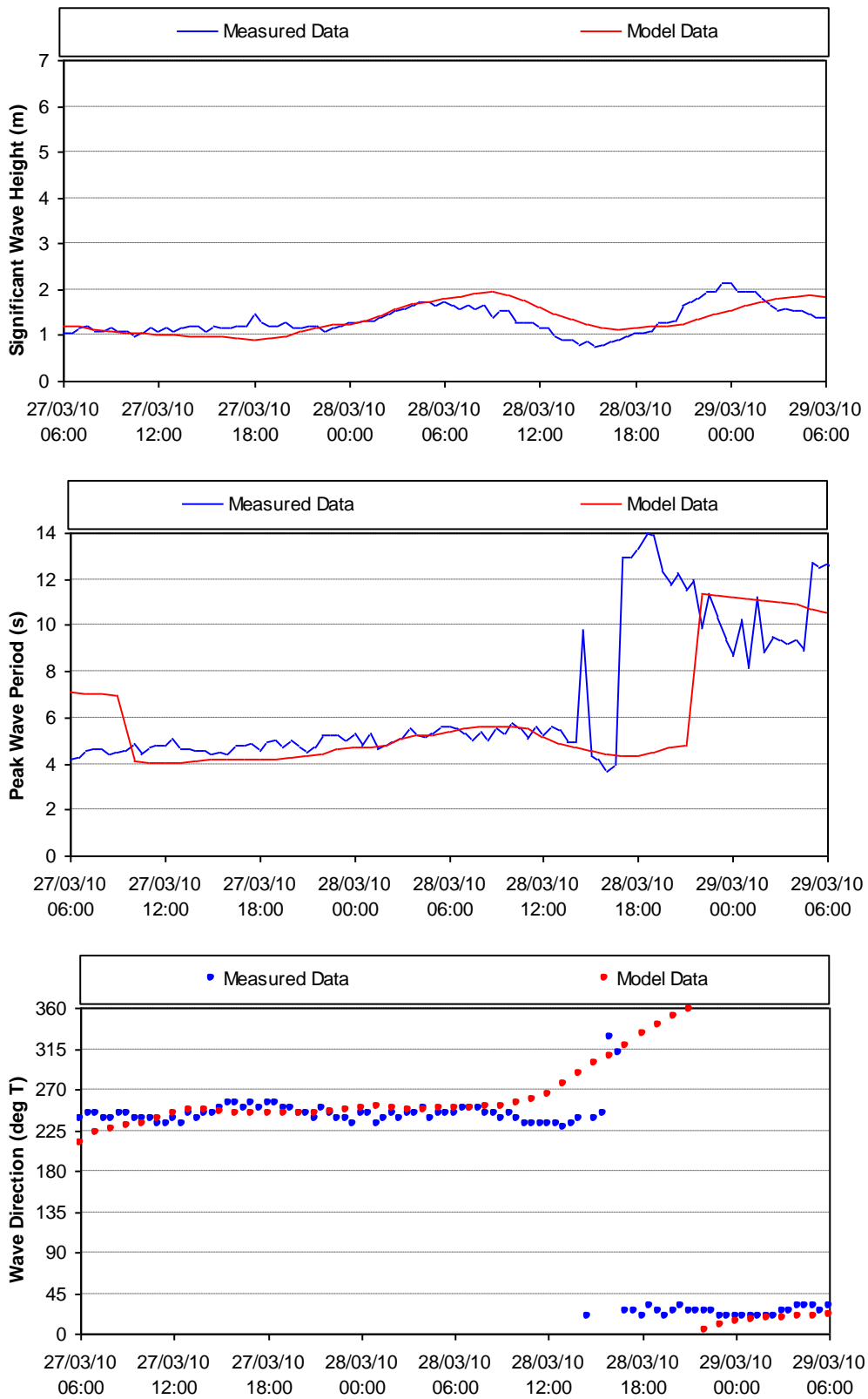


Figure 10A.2.93: Northerly Storm Event – Inch Cape, Waverider Buoy Modelled H_s (m), T_p (s) and Wave Direction (deg T) against Measured Field Data

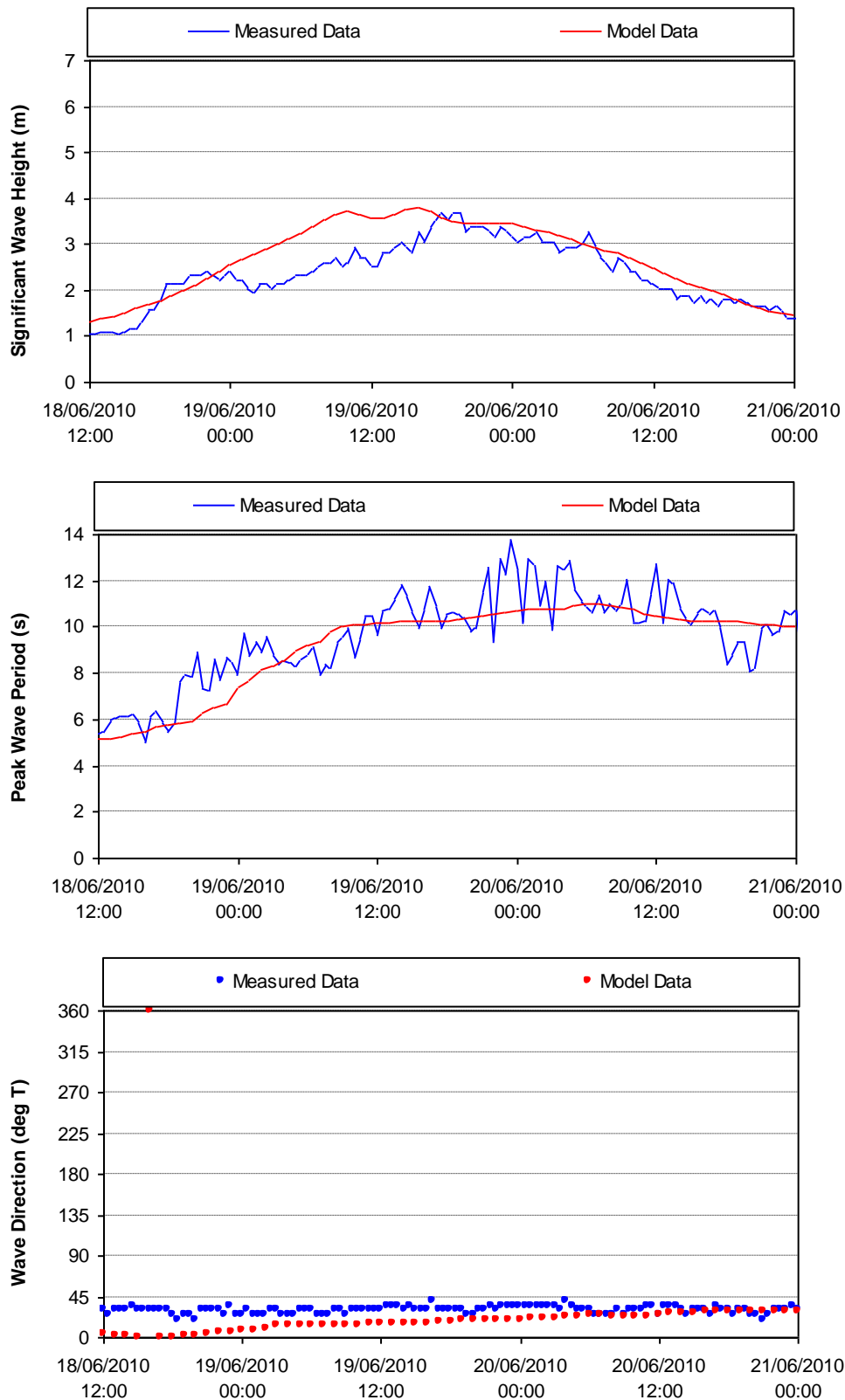


Figure 10A.2.94: Southeasterly Storm Event – Inch Cape, Waverider Buoy Modelled Hs (m), Tp (s) and Wave Direction (deg T) against Measured Field Data

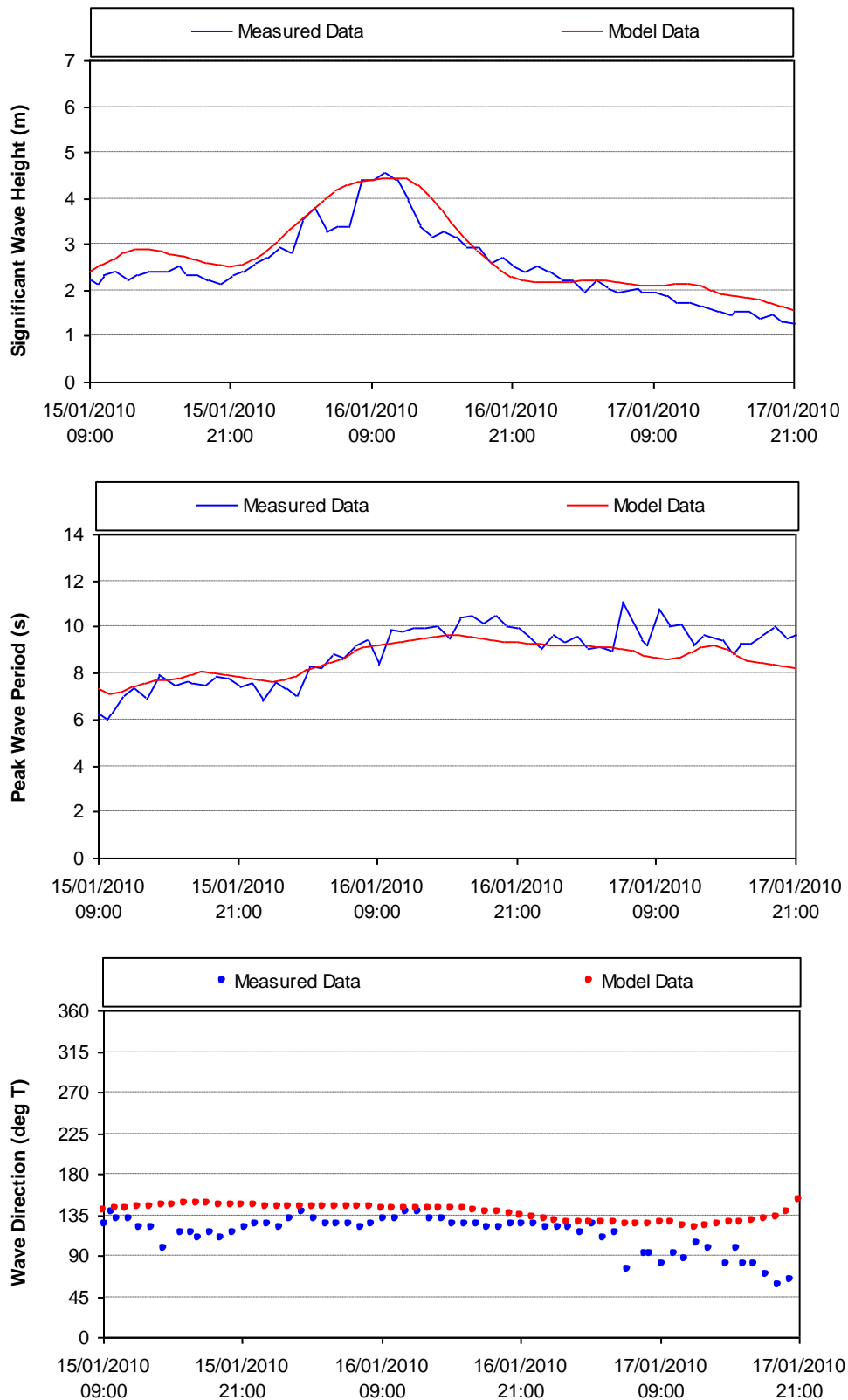


Figure 10A.2.95: Offshore Wind Event – Inch Cape, Waverider Buoy Modelled H_s (m), T_p (s) and Wave Direction (deg T) against Measured Field Data

