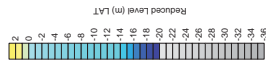


Appendix D

North Port Area

LEGEND

Limits of Investigation



NOTES

GEODETIC INFORMATION
Horizontal Datum: MGA84 SA Zone 55
Vertical Datum: molras LAT

DISCLAIMER
This plan should be read in conjunction with the accompanying report

LOCATION MAP



CLIENT DETAILS

AURECON AUSTRALASIA PTY LTD
aurecon
marine & earth sciences

PORT OF HASTINGS DEVELOPMENT PROJECT
MARINE GEOPHYSICAL AND HYDROGRAPHIC SURVEYS
PORT OF HASTINGS
SEAFLOOR LEVELS CONTOUR PLAN

SCALE 1:10,000 (A1 sheet)



Issue No.	Date	Drawn	Checked	Project Ref
1	14/02/14	BAH	ph	424
2	11/03/14	BAH	ph	
Client Drawing No.	Figure No.	Sheet No.	of	

Line NPA-09 = Start of SBP Line NPA-09 (0.0m)
Historical Borehole Location
G.R.S or D.10
Worley Parsons 2013/2014 Borehole Location
CPTS 10
Worley Parsons 2013/2014 CPT Test Location

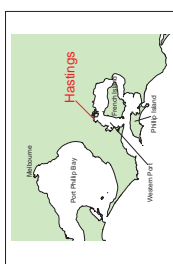
LEGEND

NOTES
Line label indicates start of line

GEODETIC INFORMATION
Horizontal Datum: MGA80DA 84 Zone 55
Vertical Datum: molras LAT

DISCLAIMER
This plan should be read in conjunction with the accompanying report

LOCATION MAP



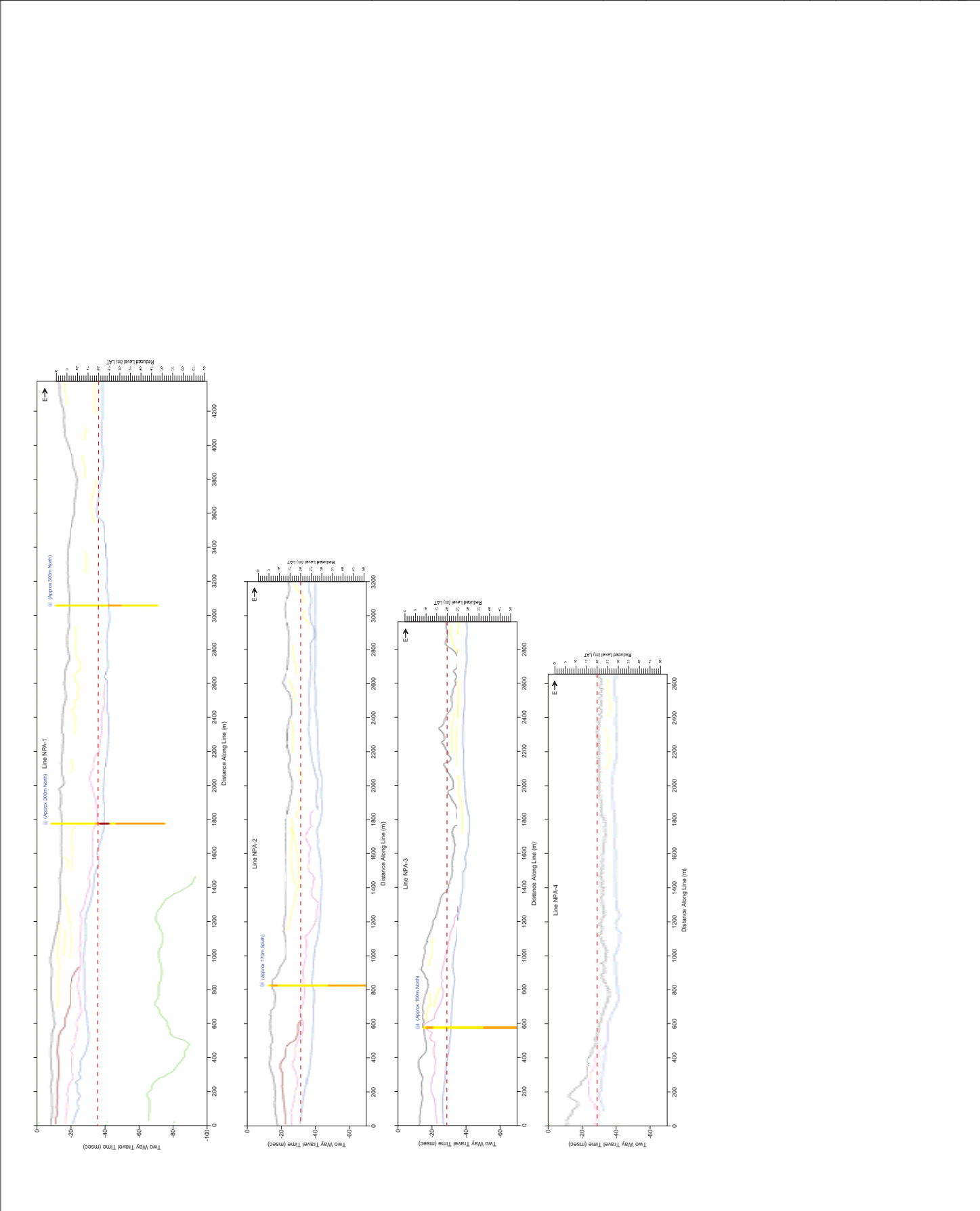
CLIENT DETAILS
AURECON AUSTRALASIA PTY LTD
aurecon
marine & earth sciences

PORT OF HASTINGS DEVELOPMENT PROJECT
MARINE GEOPHYSICAL AND HYDROGRAPHIC SURVEYS
SUB MOTION TRACKING LINE SURVEY
VMS101 TRACKPLOT

SCALE 1:10,000 (A1 sheet)

0 250 500 750 1000	
Issue No	Date
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3	11/05/14
4	11/05/14
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98	11/05/14
99	11/05/14
100	11/05/14





LEGEND

Sediment Profile

- Silt Sand & Sand
- Clay Silt, Clayey Sand & Sandy Silt
- Silt Clay, Sandy Clay & Clay
- Reflector R1
- Reflector R2
- Internal Discontinuous Reflector
- Interpreted Rock Reflector
- Proposed Design Level
- Approximate Borehole Position

Borehole Log Colour Code

- Clay, Silt, Clayey Sand and Sandy Clay
- Clayey Silt, Clayey Sand and Sandy Silt
- Silt Sand and Sand
- Gravelly Material
- High Amplitude Reflector Possible Indurated Layer
- Rock

NOTES

GEODETIC INFORMATION

Horizontal Datum: MGA84 Zone 56

Vertical Datum: metres LAT

DISCLAIMER

This plan should be read in conjunction with the accompanying report

LOCATION MAP

CLIENT DETAILS

AURECON AUSTRALASIA PTY LTD

marine & earth sciences

PORT OF HASTINGS DEVELOPMENT PROJECT

MARINE GEOPHYSICAL AND HYDROGRAPHIC SURVEYS

NORTH PORT AREA

SUB-BOTTOM PROFILING SURVEY (BOOMER)

INTERPRETATION AND CONCLUSIONS

LINE NPA-1 TO NPA-4

SCALE: H: 10:000 V: 1:800 (A1 sheet)

Issue No.	Date	Discriminator	Drawn	Checked	Approved
1	14/02/14	SEF:RIS	ase	pkc	ase
2	11/03/14	RFR:RIS	ase	pkc	ase

Project Drawing No. _____

Figure No. _____

D3

LEGEND



NOTES

Wide line spacing in this area has not enabled
classification of seabed material. The
zones of sea floor character have been interpolated.

GEODETIC INFORMATION
Horizontal Datum: MGA84/DA Zone 55
Vertical Datum: mean sea level

DISCLAIMER

This plan should be read in conjunction with the accompanying report

LOCATION MAP



CLIENT DETAILS

AURECON AUSTRALASIA PTY LTD



marine & earth sciences

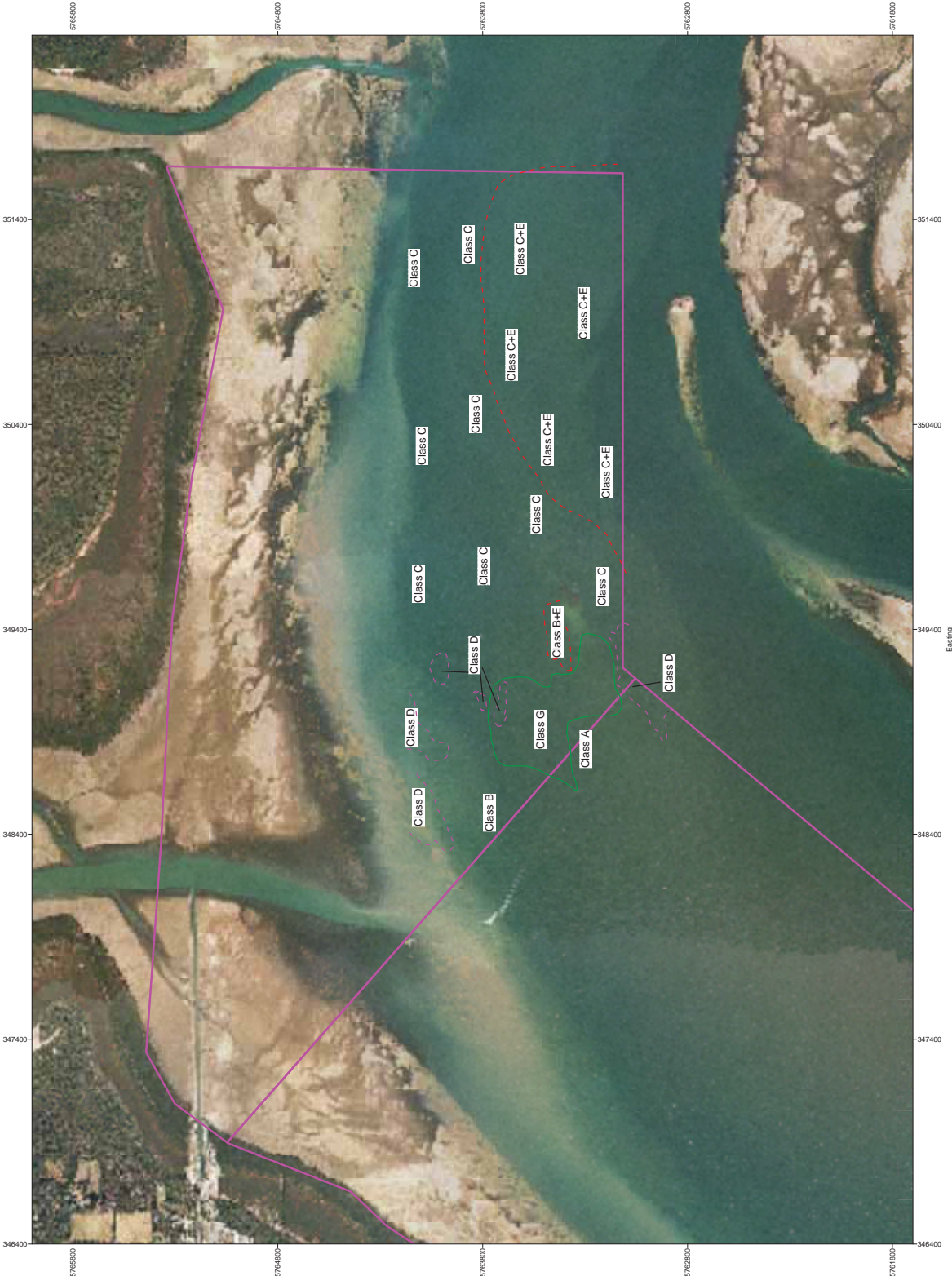
PORT OF HASTINGS DEVELOPMENT PROJECT
MARINE GEOPHYSICAL AND HYDROGRAPHIC SURVEYS
SOUNDING SURVEY
SEAFLOOR CHARACTER INTERPRETATION

SCALE 1:10,000 (As Isued)



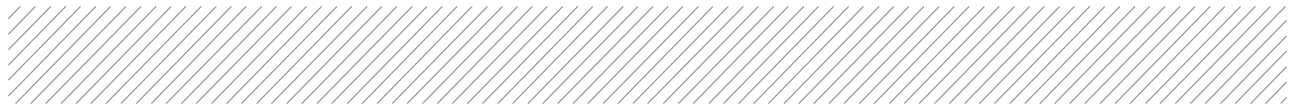
Issue No	Date	Issue	Drawn	Plot
1	14/04/14	ISS	461	141
2	11/05/14	RSS	462	142
Client Drawing No		ISS	462	142
Client Drawing No		RSS	462	142

D4



Seafloor Sounder Acoustic Classification

Class	Acoustic Description	Interpretation
A	Specified moderate acoustic reflectivity	Coarse Sand and Gravel
B	Specified moderate acoustic reflectivity	Coarse Sand and Gravel
C	Specified moderate acoustic reflectivity	Coarse Sand and Gravel
D	Specified moderate acoustic reflectivity	Coarse Sand and Gravel
E	Specified moderate acoustic reflectivity	Coarse Sand and Gravel
F	Specified moderate acoustic reflectivity	Coarse Sand and Gravel
G	Specified moderate acoustic reflectivity	Coarse Sand and Gravel
H	Specified moderate acoustic reflectivity	Coarse Sand and Gravel



Appendix E

Anchorage

LEGEND

Limits of Investigation



NOTES

GENERIC INFORMATION
Horizontal Datum: Indian Datum Zone 55
Vertical Datum: Indian LAT

DISCLAIMER
The plan should be read in conjunction with the accompanying report.

LOCATION MAP



CLIENT DETAILS

AURECON AUSTRALASIA PTY LTD

marine & earth sciences

STATE OF VICTORIA DEPARTMENT OF WATER
MARINE GEOGRAPHICAL AND HYDROGRAPHIC SURVEYS
ANCHORAGE AREA
SEAFLOOR LEVEL CONTOUR PLAN

SCALE 1:15,000 (at issue)

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25	50	75	100	
Scale No.	Date	Drawn	Checked	Project Ref
1	15/05/14	BMH	BMH	1000000
2	15/05/14	BMH	BMH	
3	15/05/14	BMH	BMH	
4	15/05/14	BMH	BMH	
Client Drawing No.	Figure No.	Sheet No.		
	E1	1		

LEGEND

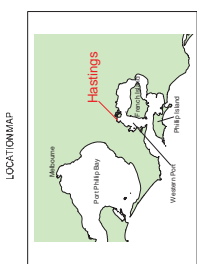
Line A-1 = Start of SBP Line A-1 (0.0m)
BH122 = Historical Borehole Location
A3 = Worley Parsons 2013-2014 Borehole Location

NOTES

Line label indicates start of line

CRUSTAL INFORMATION
Horizontal Datum: Indian Datum Zone 55
Vertical Datum: Indian LAT

DISCLAIMER
This plan should be read in conjunction with the accompanying report



CLIENT DETAILS
AURECON AUSTRALASIA PTY LTD
aurecon
marine & earth sciences

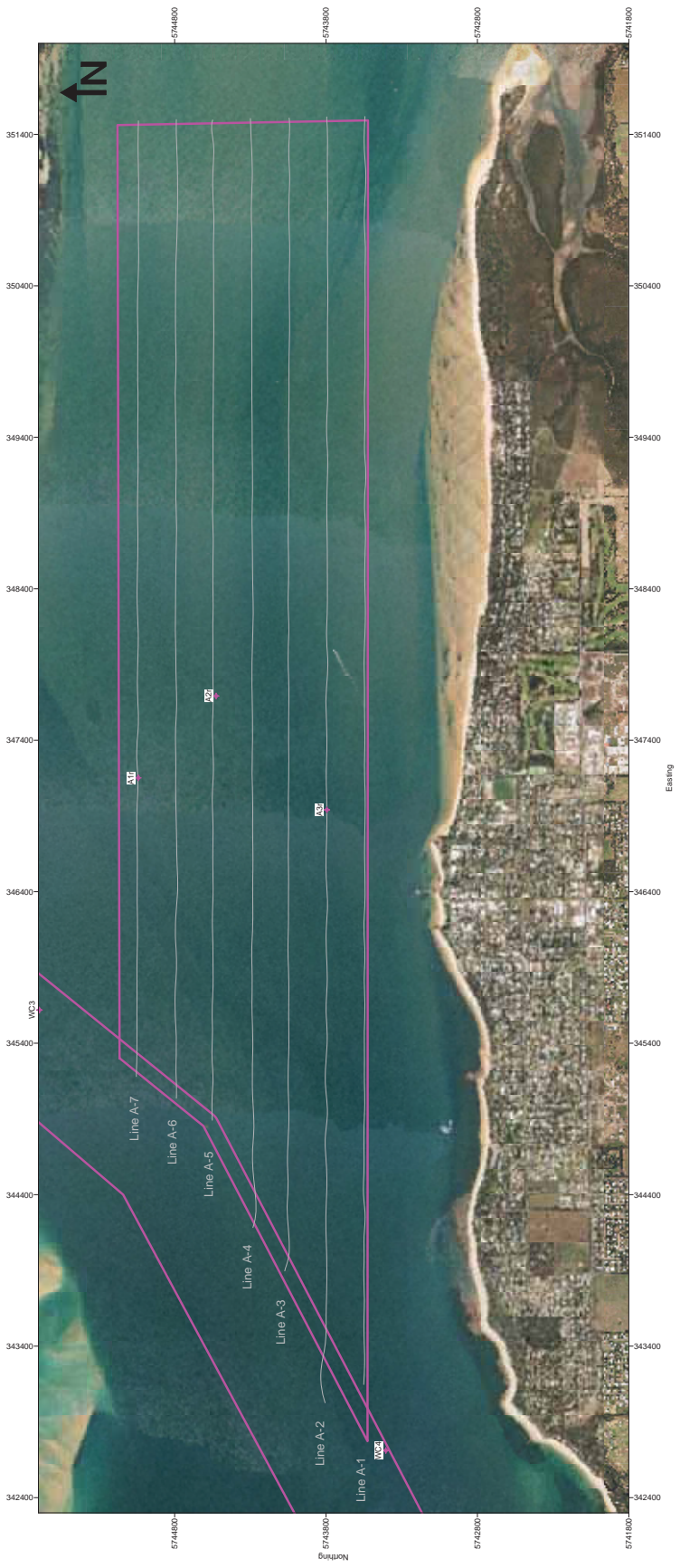
STATE OF TASMANIA DEPARTMENT OF CORRECTION
MARINE GEOGRAPHICAL AND HYDROGRAPHIC SURVEYS
ANCHORAGE AREA
SUB-BOTTOM PROFILING SURVEY
VESSEL TRACKPLOTS

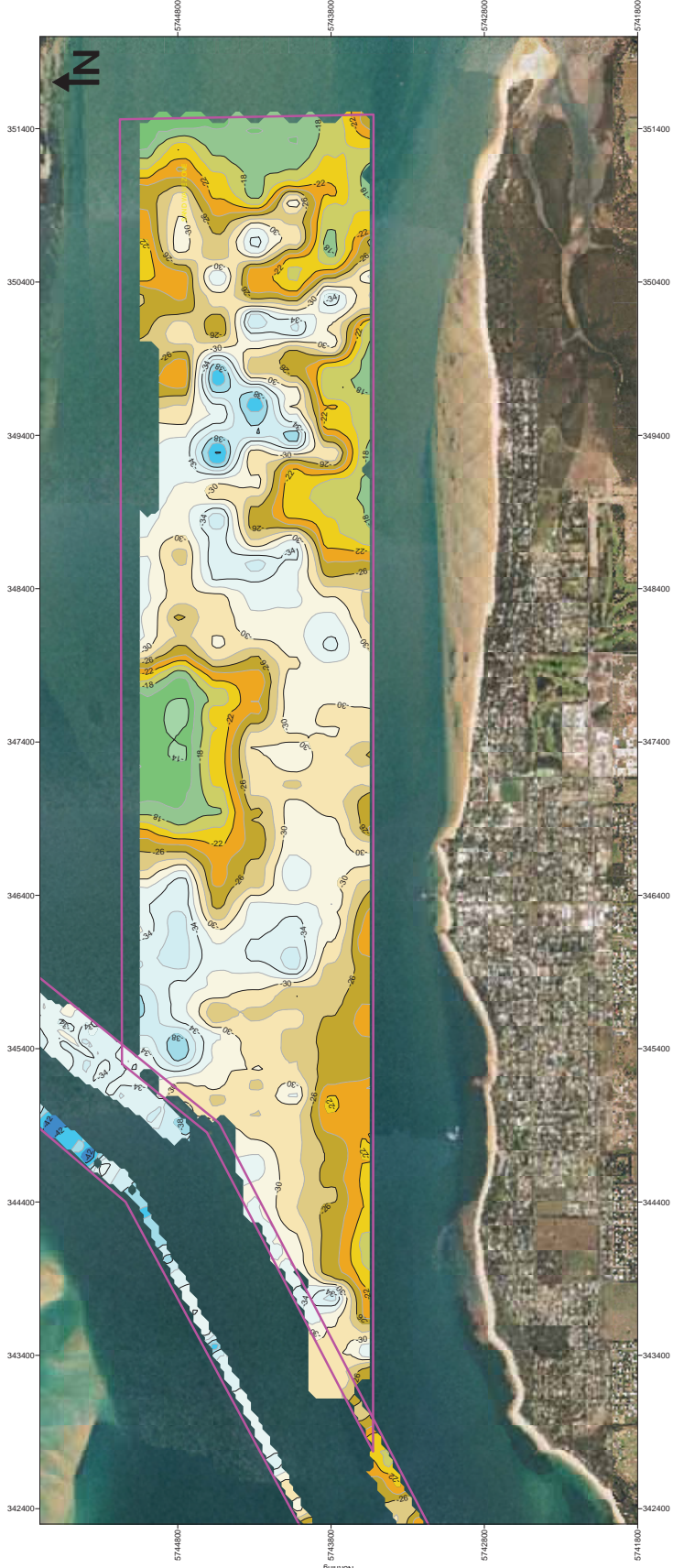
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0	25	50	75	100
Metres				

Sheet No.	Drawn	Checked	Project Ref
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2	08/05/14	15/4	1000000000
3	20/05/14	15/4	1000000000
4	20/05/14	15/4	1000000000

Client Drawing No. Figure No. **E2** Sheet No.

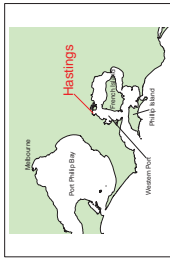




NOTES

GEODETTIC INFORMATION
Horizontal Datum: MGA/GDA 94 Zone 55
Vertical Datum: metres LAT

DISCLAIMER
This plan should be read in conjunction with the accompanying report



CLIENT DETAILS

AURECON AUSTRALASIA PTY LTD

marine & earth sciences

PORT OF HASTINGS DEVELOPMENT PROJECT
MARINE GEOPHYSICAL AND HYDROGRAPHIC SURVEYS
ANCHORAGE AREA

SUB-BOTTOM PROFILING SURVEY
INTERPRETED ROCK LEVELS CONTOUR PLAN



Issue No.		Date	Discrepancy	Sunr	Interp	Drawn	Aspr
1	110514		ERP rock	dash	dash	dash	
2	160514		ERP rock	dash	dash	dash	
3	101014		ERP rock	dash	dash	dash	

Client Drawing No. **E4** Figure No. **E4** Sheet No. **41**

Survey Date: JAN-FEB 14 Project Ref: 424

LEGEND

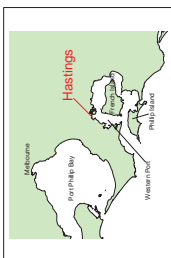
- Sand Wave Zone
- Zone Boundary
- Sea Grass Zone

NOTES

GEODETIC INFORMATION
Horizontal Datum: Indian Datum Zone 55
Vertical Datum: Indian LAT

DISCLAIMER
The plan should be read in conjunction with the accompanying report

LOCATION MAP

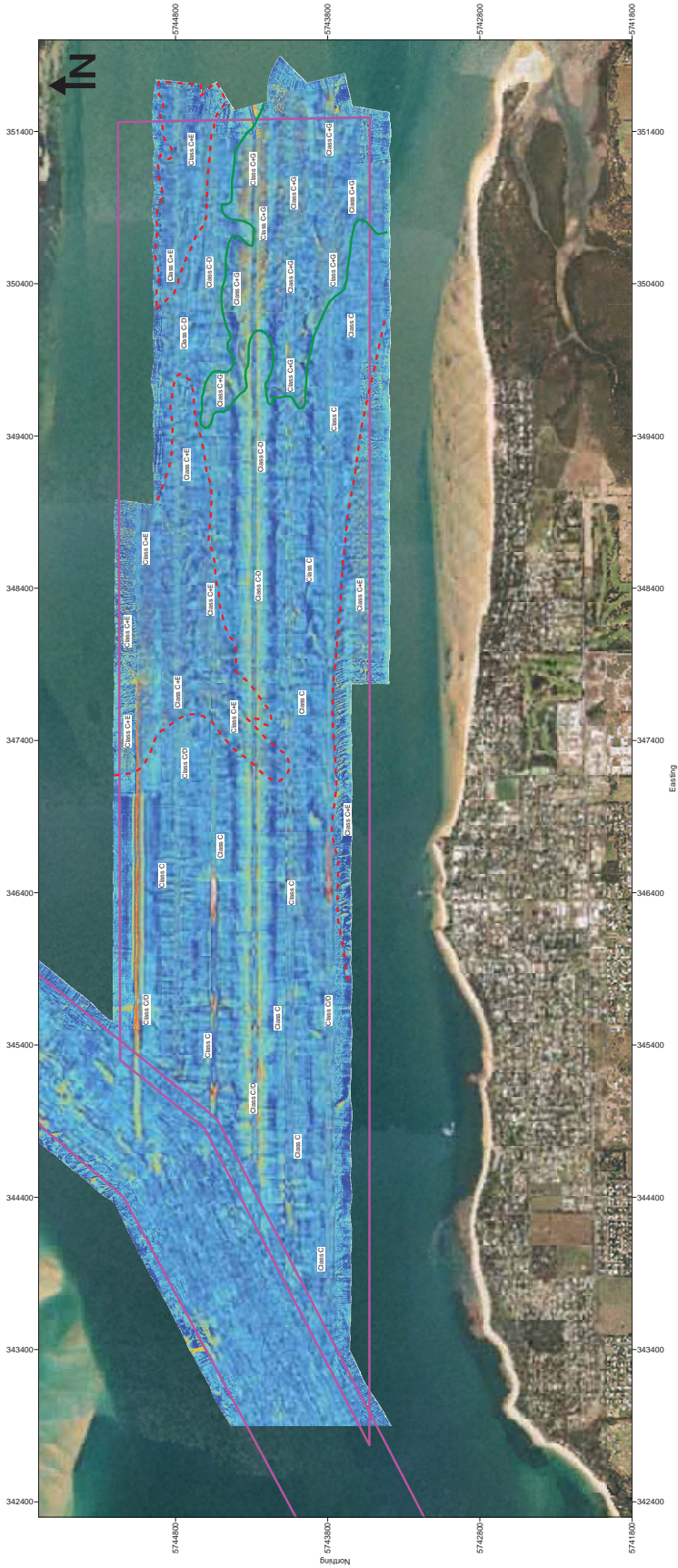


CLIENT DETAILS
AURECON AUSTRALASIA PTY LTD
aurecon
marine & earth sciences

STATE OF VICTORIA DEPARTMENT OF WATER
MARINE GEOGRAPHICAL AND HYDROGRAPHIC SURVEYS
ANCHORAGE AREA
SIDE SCAN SONAR SURVEY
SONAR MOSAIC AND SEAFLOOR MAPPING

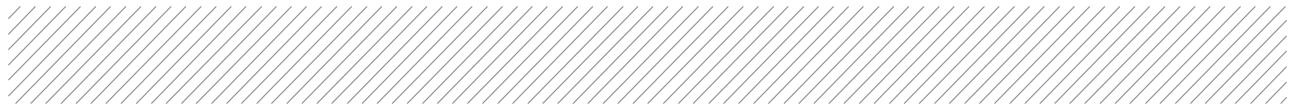
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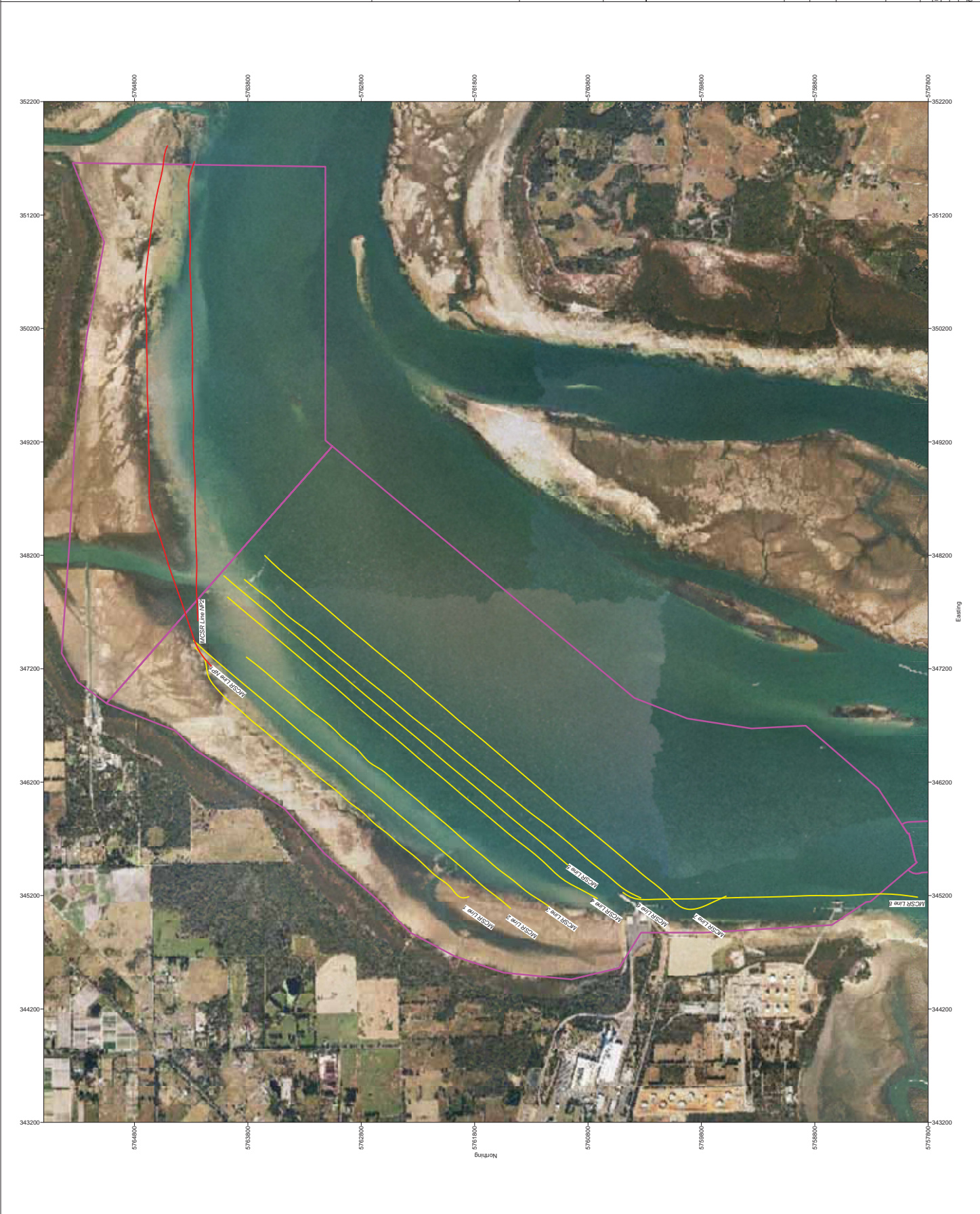
Side Scan Sonar Acoustic Classification

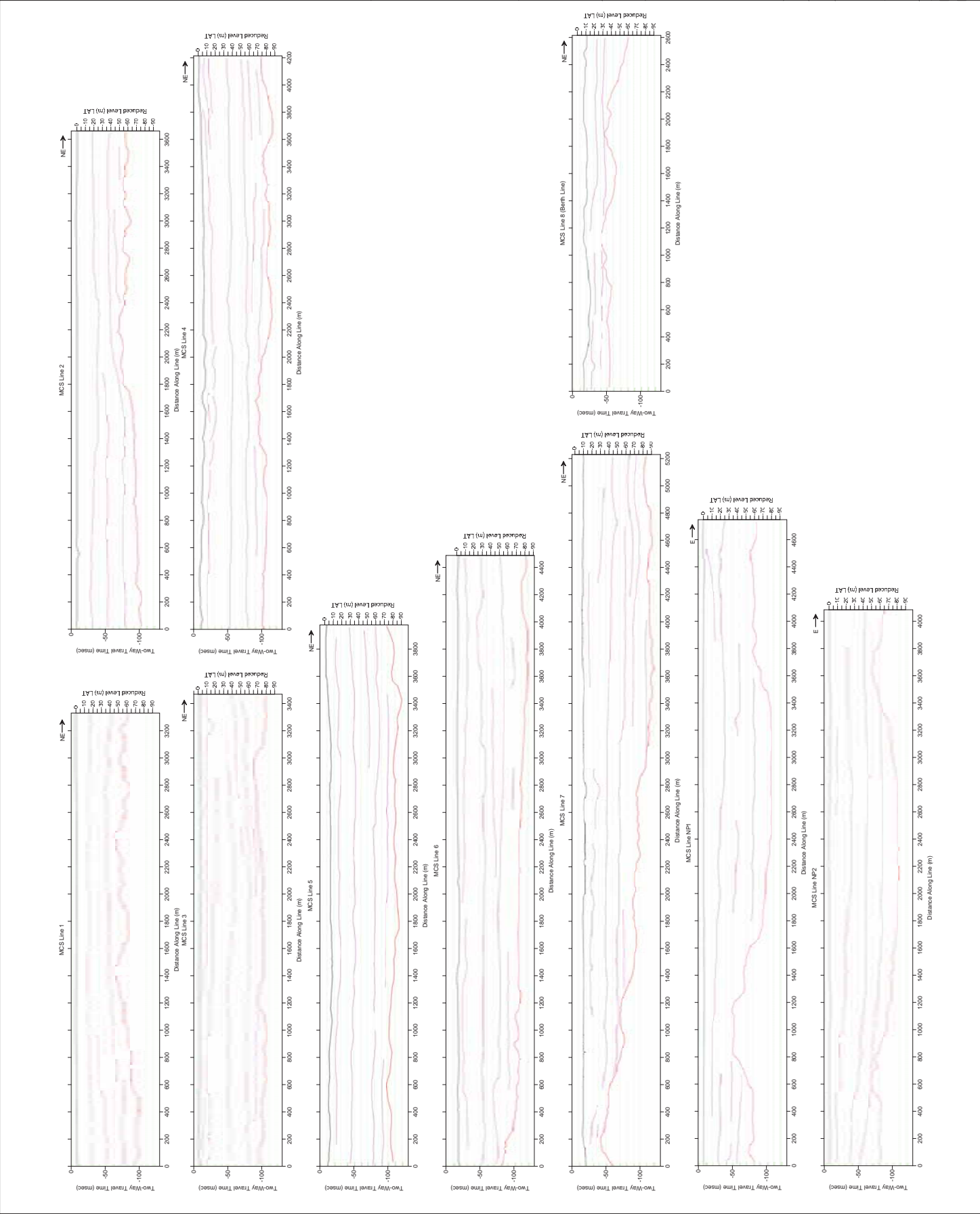
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SU	Specular	Specular
SV		



Appendix F

Multi-Channel Seismic Reflection





LEGEND

- Sea Floor Level
- Interpreted Seismic Reflector
- Interpreted Fault Reflector

NOTES

GEOLOGIC INFORMATION
Horizontal Datum: MGAGD54 Zone EE
Vertical Datum: MGA84 LAT

DISCLAIMER
This plan should be read in conjunction with the accompanying report

LOCATION MAP

CLIENT DETAILS
AURECON AUSTRALASIA PTY LTD
aurecon
marine & earth sciences

PORT OF HASTINGS DEVELOPMENT PROJECT
MARINE SURVEILLANCE AND SEISMIC SURVEYS
MULTI-CHANNEL SEISMIC REFLECTION SURVEY
INTERPRETED SEISMIC REFLECTION SECTIONS

SCALE 1:12,500 (A1 Sheet)

Survey Date: JAN/FEB 14	Project Ref: 424
Drawn: [Name]	Interp: [Name]
Checked: [Name]	Approved: [Name]
2	3
Client Drawing No	Figure No
	Sheet No

LEGEND



NOTES

GEODETIC INFORMATION
Horizontal Datum: MAGDA 84 Zone 55
Vertical Datum: molras LAT

DISCLAIMER
This plan should be read in conjunction with the accompanying report

LOCATION MAP



CLIENT DETAILS

AURECON AUSTRALASIA PTY LTD

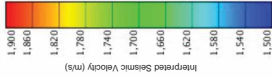
marine & earth sciences

PORT OF HASTINGS DEVELOPMENT AND MEST
MARINE GEOPHYSICAL AND HYDROGRAPHIC SURVEYS
PORTLAND AND NORTH PORT AREA
MULTI-CHANNEL SURVEY
INTERPRETED ROCK LEVELS CONTOUR PLAN

SCALE 1:15,000 (at sheet)

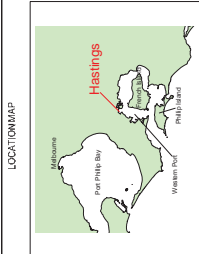


Issue No.	Date	Description	Drawn	Checked	Drawn	Proj
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2	06/11/04	MDS Rock Lis	404	404	404	
3	03/04/04	MDS Rock Lis	404	404	404	
Client Drawing No.	Figure No.	Sheet No.				
	F3					



GEODETIC INFORMATION
Horizontal Datum: MGAD64/84 Zone: EE
Vertical Datum: Mean Sea Level

DSC-0438/F
This plan should be read in conjunction with the accompanying report

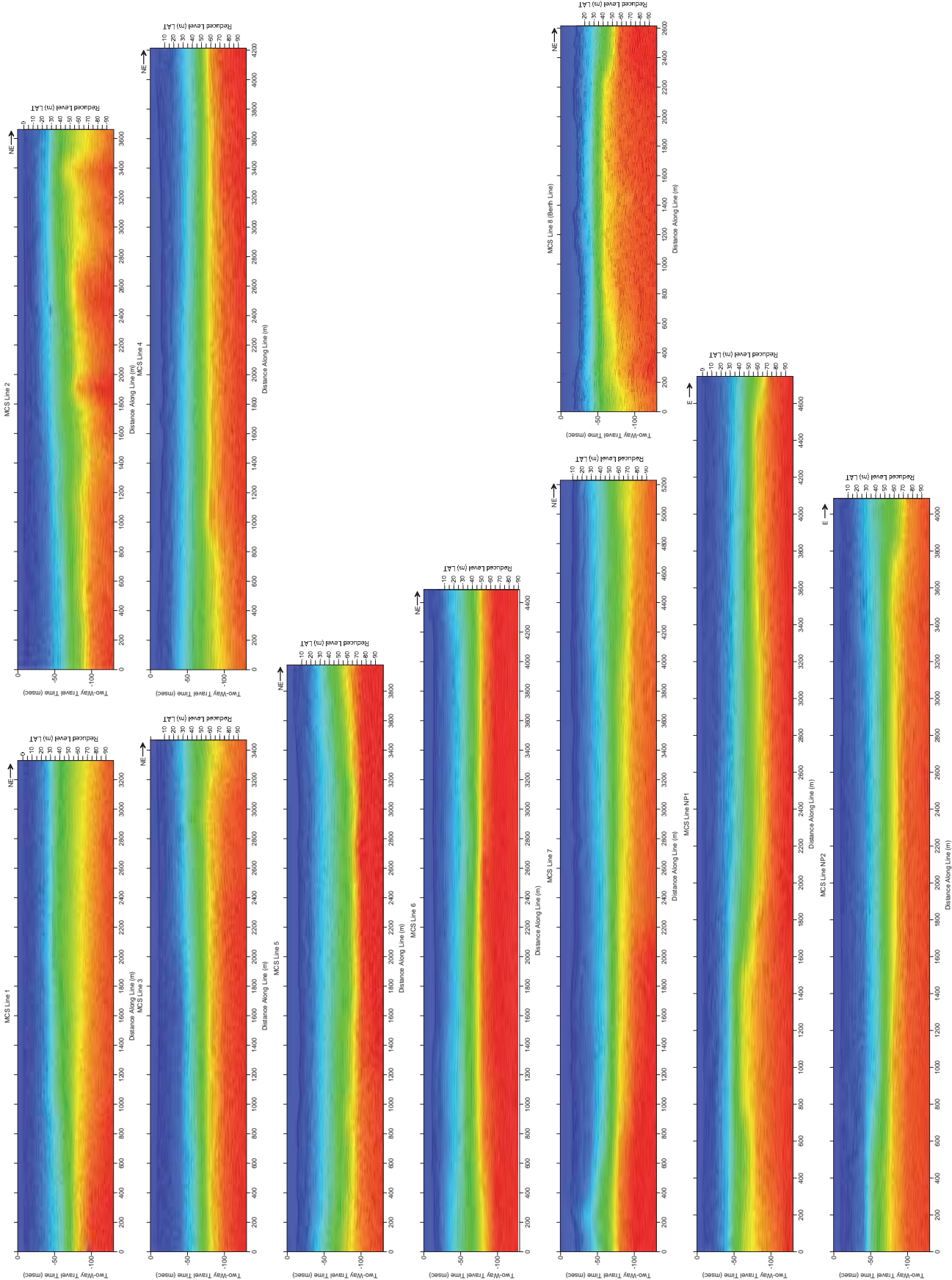


marine & earth sciences

PORT OF HASTINGS DEVELOPMENT PROJECT
MARINE SUBSURFACE INVESTIGATION SURVEYS
MULTI-CHANNEL SEISMIC REFLECTION SURVEY
VELOCITY ANALYSIS

SCALE: M1:2,500 (1:2500 (A4 sheet))

Survey Date: JAN/FEB 14		Project Ref: 424	
Sheet No.	Date	Drawn	Asp
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2	06/01/14	06/01/14	06/01/14
3	06/01/14	06/01/14	06/01/14
Client Drawing No.		Figure No.	FA
		Sheet No.	





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