



**ELLA BAY INTERGRATED RESORT
ACCESS ROAD ENGINEERING
DRAWINGS**

**FROM FLYING FISH POINT
TO ELLA BAY**

FOR
Satori Resorts Ella Bay Pty Ltd

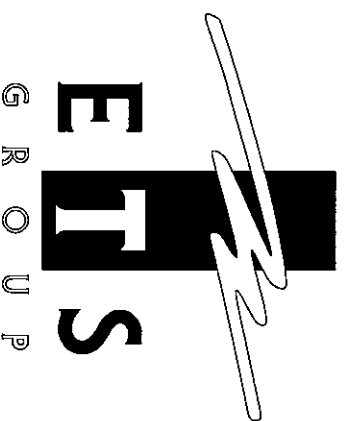
ACCESS ROAD STRATEGY, ELLA BAY

PREFERRED OPTION, CUT AND COVER TUNNEL OPTION D & ELLA BAY ROAD FOR SATORI RESORTS PTY LTD

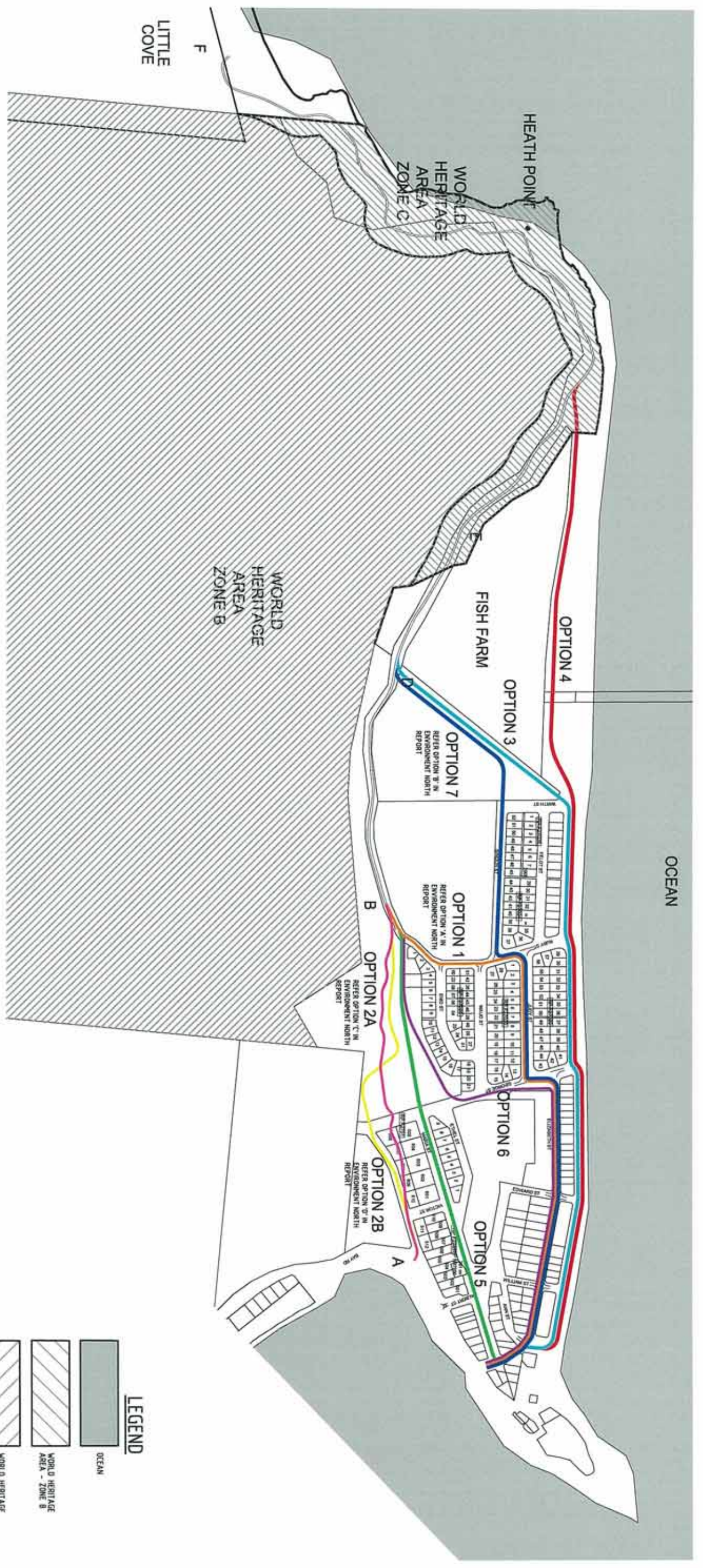
DRAWING INDEX		
DRAWING NUMBER	DESCRIPTION	REVISION
R00	TITLE SHEET	A
X30	THROUGH FLYING FISH POINT ROAD SCHEMATIC	B
R01	ELLA BAY AERIAL WITH OVER CLEARING OVERLAY	A
X03	GENERAL WORKS - OPTION 2A (NO TUNNEL) - SHEET 1 OF 2	B
X04	GENERAL WORKS - OPTION 2A (NO TUNNEL) - SHEET 2 OF 2	B
R02	SETOUT PLAN - 1 OF 9	A
R03	SETOUT PLAN - 2 OF 9	A
R04	SETOUT PLAN - 3 OF 9	A
R05	SETOUT PLAN - 4 OF 9	A
R06	SETOUT PLAN - 5 OF 9	A
R07	SETOUT PLAN - 6 OF 9	A
R08	SETOUT PLAN - 7 OF 9	A
R09	SETOUT PLAN - 8 OF 9	A
R10	SETOUT PLAN - 9 OF 9	A
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R12	GENERAL WORKS - 2 OF 9	A
R13	GENERAL WORKS - 3 OF 9	A
R14	GENERAL WORKS - 4 OF 9	A
R15	GENERAL WORKS - 5 OF 9	A
R16	GENERAL WORKS - 6 OF 9	A
R17	GENERAL WORKS - 7 OF 9	A
R18	OVERALL CLEARING PLAN	A
R19	MITIGATED CLEARING PLAN - PLANT SPECIES OVERLAY - 1 OF 7	A
R20	MITIGATED CLEARING PLAN - PLANT SPECIES OVERLAY - 2 OF 7	A
R21	MITIGATED CLEARING PLAN - PLANT SPECIES OVERLAY - 3 OF 7	A
R22	MITIGATED CLEARING PLAN - PLANT SPECIES OVERLAY - 4 OF 7	A
R23	MITIGATED CLEARING PLAN - PLANT SPECIES OVERLAY - 5 OF 7	A
R24	MITIGATED CLEARING PLAN - PLANT SPECIES OVERLAY - 6 OF 7	A
R25	MITIGATED CLEARING PLAN - PLANT SPECIES OVERLAY - 7 OF 7	A
R26	MITIGATED CLEARING PLAN - PLANT COMMUNITIES OVERLAY - 1 OF 7	A
R27	MITIGATED CLEARING PLAN - PLANT COMMUNITIES OVERLAY - 2 OF 7	A
R28	MITIGATED CLEARING PLAN - PLANT COMMUNITIES OVERLAY - 3 OF 7	A
R29	MITIGATED CLEARING PLAN - PLANT COMMUNITIES OVERLAY - 4 OF 7	A
R30	MITIGATED CLEARING PLAN - PLANT COMMUNITIES OVERLAY - 5 OF 7	A
R31	MITIGATED CLEARING PLAN - PLANT COMMUNITIES OVERLAY - 6 OF 7	A
R32	MITIGATED CLEARING PLAN - PLANT COMMUNITIES OVERLAY - 7 OF 7	A
R33	MITIGATED CLEARING PLAN - ANIMAL SPECIES OVERLAY - 1 OF 7	A
R34	MITIGATED CLEARING PLAN - ANIMAL SPECIES OVERLAY - 2 OF 7	A
R35	MITIGATED CLEARING PLAN - ANIMAL SPECIES OVERLAY - 3 OF 7	A
R36	MITIGATED CLEARING PLAN - ANIMAL SPECIES OVERLAY - 4 OF 7	A
R37	MITIGATED CLEARING PLAN - ANIMAL SPECIES OVERLAY - 5 OF 7	A
R38	MITIGATED CLEARING PLAN - ANIMAL SPECIES OVERLAY - 6 OF 7	A

R39	MITIGATED CLEARING PLAN - ANIMAL SPECIES OVERLAY - 7 OF 7	A
R40	MITIGATED CLEARING PLAN - CASSOWARIES OVERLAY - 1 OF 9	A
R41	MITIGATED CLEARING PLAN - CASSOWARIES OVERLAY - 2 OF 9	A
R42	MITIGATED CLEARING PLAN - CASSOWARIES OVERLAY - 3 OF 9	A
R43	MITIGATED CLEARING PLAN - CASSOWARIES OVERLAY - 4 OF 9	A
R44	MITIGATED CLEARING PLAN - CASSOWARIES OVERLAY - 5 OF 9	A
R45	MITIGATED CLEARING PLAN - CASSOWARIES OVERLAY - 6 OF 9	A
R46	MITIGATED CLEARING PLAN - CASSOWARIES OVERLAY - 7 OF 9	A
R47	TYPICAL RETAINING WALL SECTIONS - 1 OF 2	A
R48	TYPICAL RETAINING WALL SECTIONS - 2 OF 2	A
R49	CUT AND COVER TUNNEL DETAIL	A
R50	MITIGATED ELLA BAY ACCESS ROAD LONG SECTIONS - 1 OF 9	A
R51	MITIGATED ELLA BAY ACCESS ROAD LONG SECTIONS - 2 OF 9	A
R52	MITIGATED ELLA BAY ACCESS ROAD LONG SECTIONS - 3 OF 9	A
R53	MITIGATED ELLA BAY ACCESS ROAD LONG SECTIONS - 4 OF 9	A
R54	MITIGATED ELLA BAY ACCESS ROAD LONG SECTIONS - 5 OF 9	A
R55	MITIGATED ELLA BAY ACCESS ROAD LONG SECTIONS - 6 OF 9	A
R56	MITIGATED ELLA BAY ACCESS ROAD LONG SECTIONS - 7 OF 9	A
R57	MITIGATED ELLA BAY ACCESS ROAD LONG SECTIONS - 8 OF 9	A
R58	MITIGATED ELLA BAY ACCESS ROAD LONG SECTIONS - 9 OF 9	A
R59	MITIGATED ELLA BAY ACCESS RD CROSS SECTIONS - 1 OF 18	A
R60	MITIGATED ELLA BAY ACCESS RD CROSS SECTIONS - 2 OF 18	A
R61	MITIGATED ELLA BAY ACCESS RD CROSS SECTIONS - 3 OF 18	A
R62	MITIGATED ELLA BAY ACCESS RD CROSS SECTIONS - 4 OF 18	A
R63	MITIGATED ELLA BAY ACCESS RD CROSS SECTIONS - 5 OF 18	A
R64	MITIGATED ELLA BAY ACCESS RD CROSS SECTIONS - 6 OF 18	A
R65	MITIGATED ELLA BAY ACCESS RD CROSS SECTIONS - 7 OF 18	A
R66	MITIGATED ELLA BAY ACCESS RD CROSS SECTIONS - 8 OF 18	A
R67	MITIGATED ELLA BAY ACCESS RD CROSS SECTIONS - 9 OF 18	A
R68	MITIGATED ELLA BAY ACCESS RD CROSS SECTIONS - 10 OF 18	A
R69	MITIGATED ELLA BAY ACCESS RD CROSS SECTIONS - 11 OF 18	A
R70	MITIGATED ELLA BAY ACCESS RD CROSS SECTIONS - 12 OF 18	A
R71	MITIGATED ELLA BAY ACCESS RD CROSS SECTIONS - 13 OF 18	A
R72	MITIGATED ELLA BAY ACCESS RD CROSS SECTIONS - 14 OF 18	A
R73	CLEARING QUANTITIES - SHEET 1 OF 2	A
R74	CLEARING QUANTITIES - SHEET 2 OF 2	A

**ROUTE SELECTION AND
OVERALL LAYOUT
PLANS**



ACCESS ROAD STRATEGY, ELLA BAY



PRELIMINARY ONLY

LEGEND

[Blue shaded box]	OCEAN
[Diagonal hatched box]	WORLD HERITAGE AREA - ZONE B
[Diagonal hatched box]	WORLD HERITAGE AREA - ZONE C
[Dashed line]	EDGE OF BATTER
[Dotted line]	KE88B
[Solid line]	CENTRE LINE
[Solid line]	WORLD HERITAGE AREA BOUNDARY
[Red line]	OPTION 1
[Orange line]	OPTION 2A
[Yellow line]	OPTION 2B
[Green line]	OPTION 3
[Cyan line]	OPTION 4
[Blue line]	OPTION 5
[Purple line]	OPTION 6
[Pink line]	OPTION 7

ASSOCIATED CONSULTANTS		CLIENT	
C & B GROUP		SATORI RESORTS ELLA BAY PTY LTD	
PROJECT	TITLE	PROJECT	TITLE
1/2007	WORLD HERITAGE AREA ZONE C	1/2007	WORLD HERITAGE AREA ZONE C
DATE	REVISIONS	DATE	REVISIONS
DESIGNED A.W.S.A.		APPROVED	
DRAWN M.J.M.	DATE	KEITH HOWELL	SPED 7/05
CHECKED	DATE	SCALE	DATE
		1:500 (A1 500)	
DATE AUGUST 2007			
AUSTRALIA 17 KENNEDY STREET, ELLA BAY, QUEENSLAND 4860 TEL: (07) 5522 1111 FAX: (07) 5522 1112 EMAIL: info@ets.com.au			
PAPUA NEW GUINEA 8TH FLOOR GUYARDEN DRIVE PO BOX 609 TEL: (675) 321 1333 FAX: (675) 321 1335 EMAIL: info@ets.com.au			
ARCHITECTS . CIVIL & STRUCTURAL ENGINEERS			
ETS GROUP		WBPREB01	
www.etsgroup.net.au		SHEET NUMBER	
		X30	
		B	
		FORMED BY	
		10/05/07	

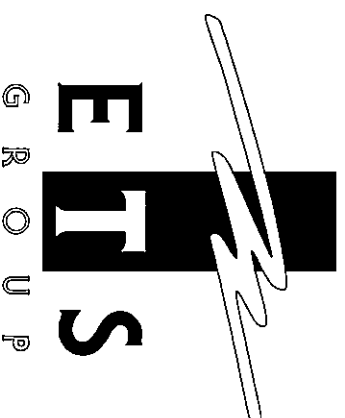


LEGEND

- WATER LEVEL
- CENTRE LINE
- WORLD HERITAGE AREA BOUNDARY
- CLEARING AREA
- WORLD HERITAGE AREA ZONE B
- WORLD HERITAGE AREA ZONE C

ASSOCIATED CONSULTANTS		CLIENT		DESIGNED		APPROVED		DATE	
CONICS		SATORI RESORTS PTY LTD		A.W.S.A		KEITH HOWELLE		17 FEBRUARY 2007	
PRELIMINARY		ELLA BAY ACCESS ROAD STRATEGY		M.J.M		KEITH HOWELLE		17 FEBRUARY 2007	
PROJECT		LOCATION		CHECKED		SCALE		DATE	
ELLA BAY		ELLA BAY		DATE		1:500 (A1 SIZE)		FEBRUARY 2007	
SHEET TITLE		ELLA BAY AERIAL WITH OVERALL CLEARING OVERLAY		DATE		SCALE		DATE	
ELLA BAY AERIAL WITH OVERALL CLEARING OVERLAY		FEBRUARY 2007		1:500 (A1 SIZE)		17 FEBRUARY 2007		17 FEBRUARY 2007	
JOB CODE		WBPREB01		SHEET NUMBER		R01		A	
ARCHITECTS		CIVIL & STRUCTURAL ENGINEERS		DRAWN		M.J.M		DATE	
ARCHITECTS		CIVIL & STRUCTURAL ENGINEERS		CHECKED		M.J.M		DATE	
ARCHITECTS		CIVIL & STRUCTURAL ENGINEERS		DATE		FEBRUARY 2007		DATE	
ARCHITECTS		CIVIL & STRUCTURAL ENGINEERS		DATE		FEBRUARY 2007		DATE	

ROUTE OPTION 2A (OPTION C)















NOTE:
FURTHER DRAWINGS FOR THIS OPTION WERE
SUBMITTED TO ENVIRONMENT AGENCIES AS PART
OF THE DRAFT TO THE SUPPLEMENTARY EIS

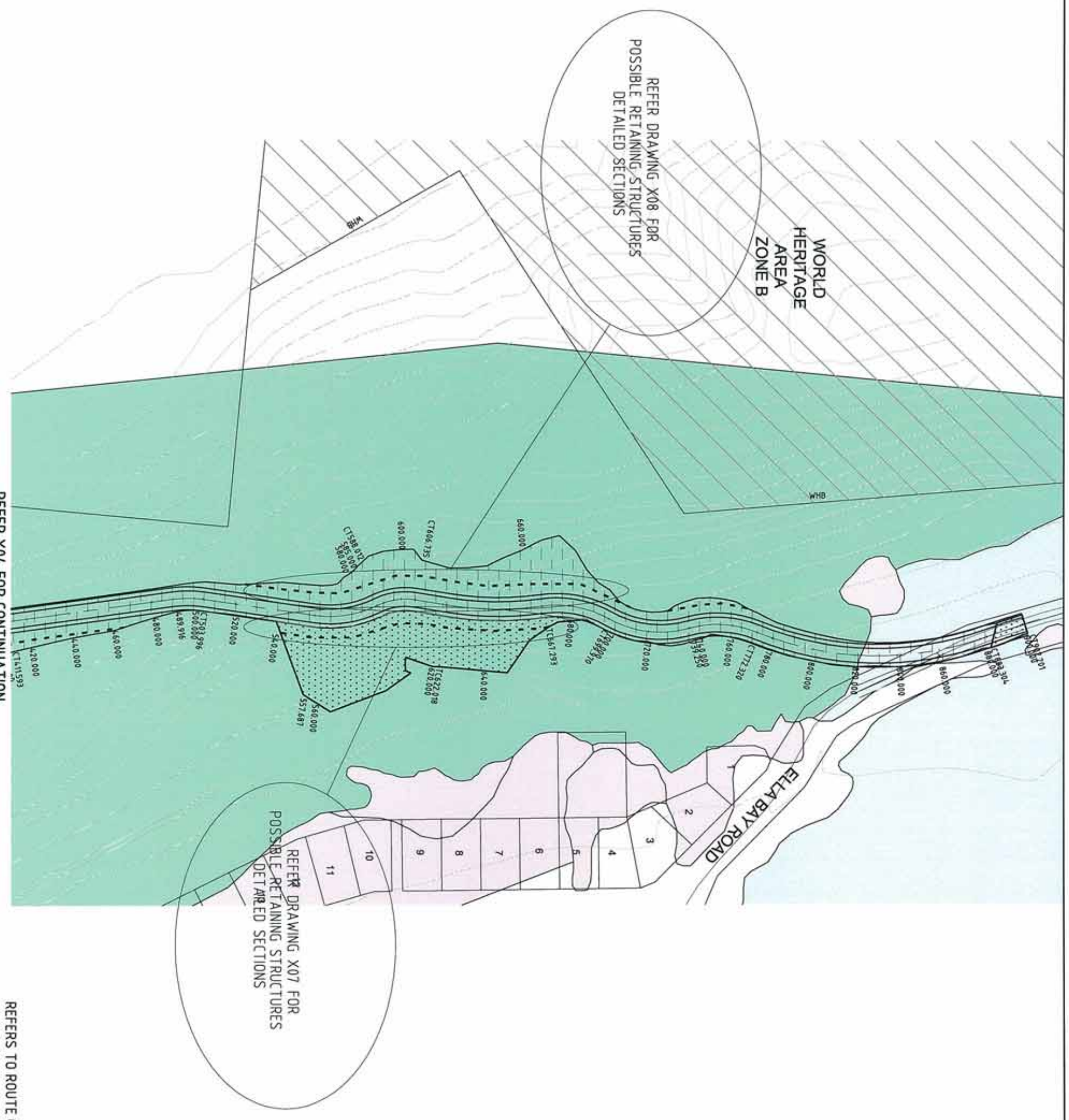
ACCESS ROAD STRATEGY, ELLA BAY



LEGEND

-  FILL AREAS
-  CUT AREAS
-  WORLD HERITAGE AREA - ZONE B
-  EDGE OF BATTER
-  KERB
-  CENTRE LINE
-  WORLD HERITAGE AREA BOUNDARY
-  POSSIBLE CLEARING LINE
-  **COVERAGE A**
CARBONIA PERIDOTELLA (ENDANGERED)
NCAI POLYALTHEA P. (VULNERABLE)
P. (VULNERABLE)
RORUA BRACHYANDRA (RARE NCAI)
-  **COVERAGE B**
APHYLLODICHUS QUEENSLANDICA (RARE NCAI)
PAPERAZIA PLEOCHARIDIOS (VULNERABLE NCAI - EPRL)
ARENGA AUSTRALASICA (VULNERABLE EPRL)
RORUA BRACHYANDRA (RARE NCAI)
CANARUM ACOTIFOLIUM VAR. (VULNERABLE NCAI)
MACRANGA POLYADENIA (RARE NCAI)
PEPER HESTONI (RARE NCAI)
RORUA BRACHYANDRA (RARE NCAI)
-  **COVERAGE C**
MACRANGA POLYADENIA (RARE NCAI)
PEPER HESTONI (RARE NCAI)
-  **COVERAGE D**
UNLIKELY SUITABLE HABITAT

PRELIMINARY ONLY



REFER X04 FOR CONTINUATION

REFERS TO ROUTE OPTION 'C' IN ENVIRONMENT NORTH'S REPORT

ASSOCIATED CONSULTANTS	
C & B GROUP	
DATE	REVISED
1	DESIGN, EEL
2	REVISION

CLIENT	SATORI RESORTS ELLA BAY PTY LTD
PROJECT	FLYING FISH POINT DEVIATION ROAD-OVER RIDGE ROAD OPTION
SHEET TITLE	GENERAL WORKS - SHEET 1 OF 2
OPTION	OPTION 2A - NO TUNNEL

DESIGNED	A.W.S.A.	DATE	
DRAWN	M.J.M.	DATE	
CHECKED		DATE	
DATE	AUGUST 2007		

APPROVED		DATE	
SCALE	1:300		
DATE	AUGUST 2007		

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 17 BUCKINGHAM ROAD, MARLBOROUGH, TASMANIA 7243
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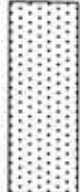











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 E T S
 G R O U P
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JOB CODE: **WBPREB01**
 SHEET NUMBER: **X03**
 REV: **A**
 DATE: **20/08/07**

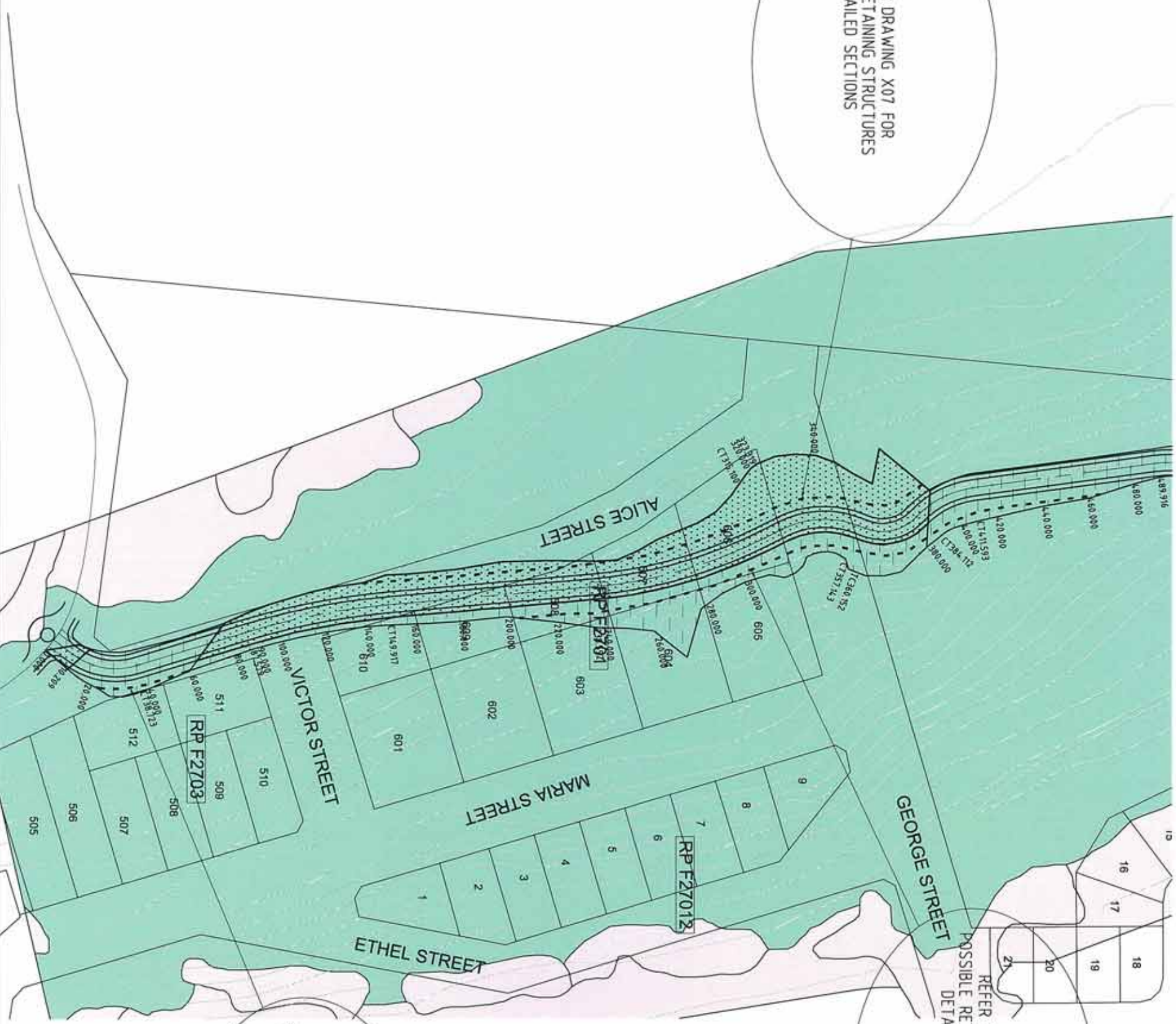


LEGEND

-  FILL AREAS
-  CUT AREAS
-  WORLD HERITAGE AREA - ZONE B
-  EDGE OF BATTER
-  KERB
-  CENTRE LINE
-  WORLD HERITAGE AREA BOUNDARY
-  POSSIBLE CLEARING LINE
-  **COVERAGE A**
CAROLINA PEREGRINATA (ENDANGERED)
NCAI POLYALTHEA P. (VULNER) & P. HTILAND
RIFAZI) ROUREA BRACHYANDRA (IBARE NCAI)
-  **COVERAGE B**
APPTILOCHNIS QUIENSLANDICA
IBARE NCAI HUPERZIA PHELOGAMMOROS
IVULNERABE NCAI - EPBC
ARENGA AUSTRALISCA
IVULNERABE EPBC, ROUREA
BRACHYANDRA (IBARE NCAI)
CANARIN ACOTIFOLIUM VAR.
IVULNERABE NCAI, MACARANGA POLYADENA
IBARE NCAI PEPE WESTONI (IBARE NCAI)
ROUREA BRACHYANDRA (IBARE NCAI)
-  **COVERAGE C**
MACARANGA POLYADENA (IBARE NCAI)
PEPE WESTONI (IBARE NCAI)
-  **COVERAGE D**
UNLIKELY SUITABLE HABITAT

PRELIMINARY ONLY

REFER X03 FOR CONTINUATION



REFER DRAWING X07 FOR
POSSIBLE RETAINING STRUCTURES
DETAILED SECTIONS

REFER DRAWING X08 FOR
POSSIBLE RETAINING STRUCTURES
DETAILED SECTIONS

REFER DRAWING X08 FOR
POSSIBLE RETAINING STRUCTURES
DETAILED SECTIONS

REFERS TO ROUTE OPTION 'C' IN
ENVIRONMENT NORTH'S REPORT

ASSOCIATED CONSULTANTS	
C & B GROUP	
NAME	NO.
DESIGNER	
CHECKED	
DATE	

CLIENT: **SATORI RESORTS ELLA BAY PTY LTD**
PROJECT: **FLYING FISH POINT DEVIATION ROAD-OVER RIDGE ROAD OPTION**
GENERAL WORKS - SHEET 2 OF 2
OPTION 2A - NO TUNNEL

DESIGNED	A.W.S.A.	APPROVED	
DRAWN	M.J.M.	CHECKED	
DATE		DATE	
AUGUST 2007			

SCALE: 1:500
1" = 50M

1 SWANN ROAD TANKA, BRISBANE QLD 4008
PH: 077 3371 7000 FAX: 077 3371 5075
EMAIL: info@etsgrp.com.au

11 MONROE CIRCLE, BRISBANE, AUSTRALIA QLD 4008
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EMAIL: info@etsgrp.com.au

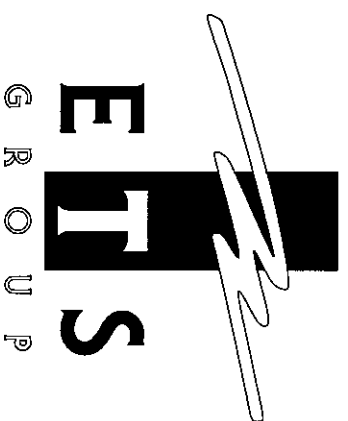
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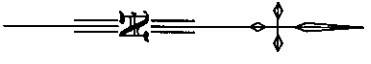
ETS GROUP
WWW.ETSGRP.COM.AU

JOB CODE: **WBPREB01**
SHEET NUMBER: **X04**
REV: **A**

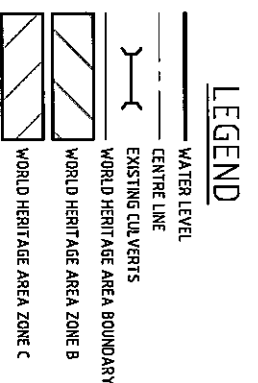
PREFERRED OPTION 2B
AND ELLA BAY ROAD
(OPTION D)



ACCESS ROAD STRATEGY, ELLA BAY



JOIN LINE 1



ASSOCIATED CONSULTANTS	
PRELIMINARY	
DATE	REVISED
1	06/09/07
2	10/09/07
3	10/09/07
4	10/09/07
5	10/09/07
6	10/09/07
7	10/09/07
8	10/09/07
9	10/09/07

CLIENT	SATORI RESORTS PTY LTD
PROJECT	ELLA BAY ACCESS ROAD STRATEGY
LOCATION	ELLA BAY
SHEET TITLE	SETOUT PLAN - SHEET 1 OF 9

DESIGNED	A.W.S.A	APPROVED	DATE
DRAWN	M.J.M	CHECKED	DATE
			15 FEBRUARY 2007
		SCALE	1:1000 (AS SHD)

1 SWANN ROAD, TARENCO, BRISBANE QLD 4068
 PH: (07) 5571 7000 FAX: (07) 5571 6999
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17 MONKING CREEK BLVD, SUNSHINE COAST QLD 4566
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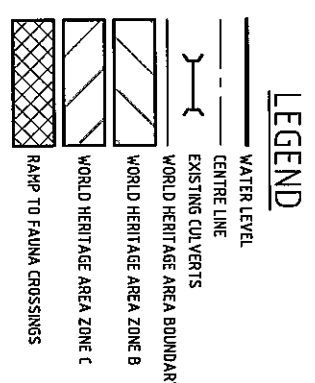
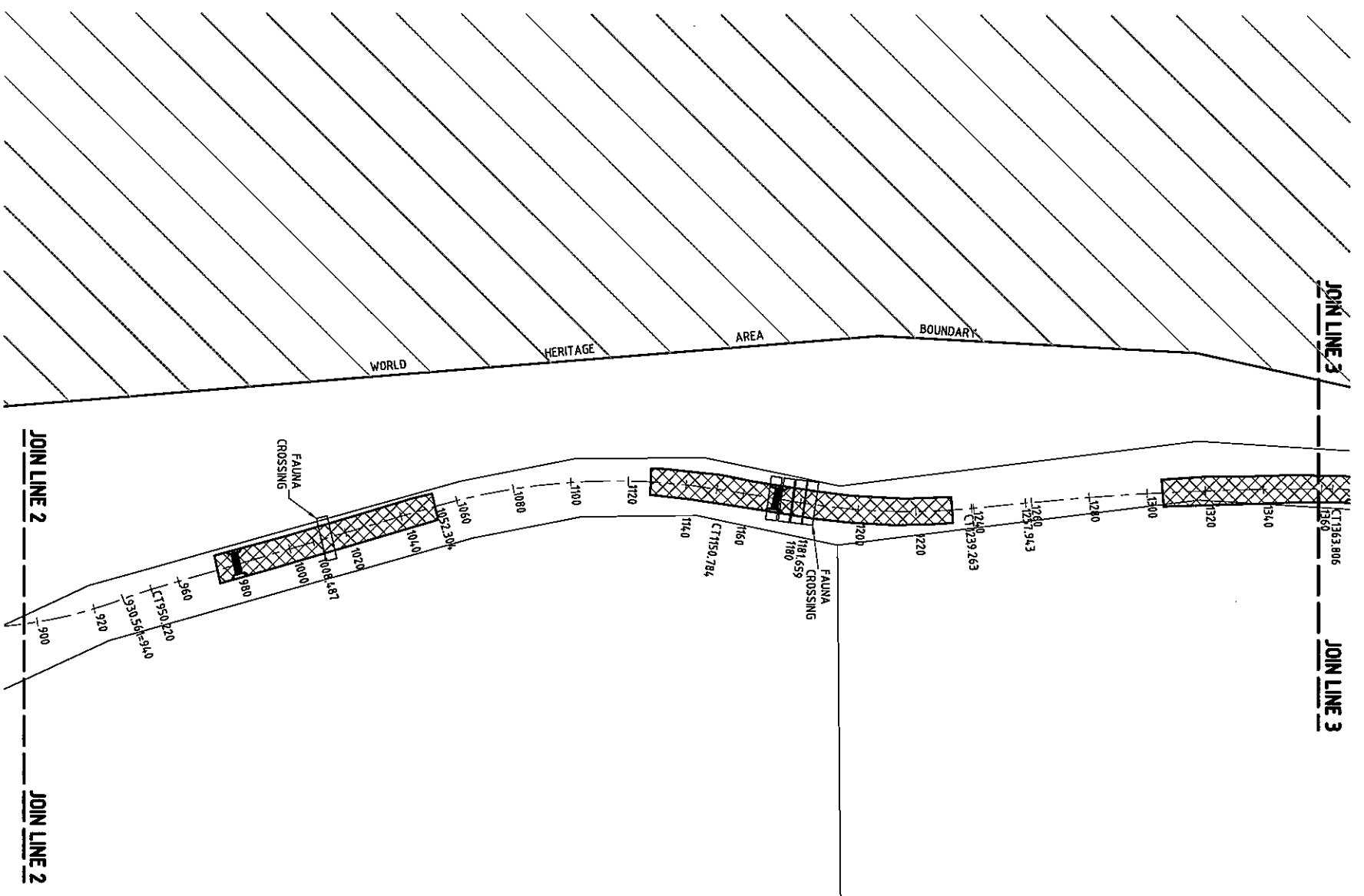
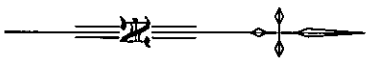
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 SHEET NUMBER: 1 REV: R02 A
 DATE: 10/09/07



LEGEND

	WATER LEVEL
	CENTRE LINE
	EXISTING CULVERTS
	WORLD HERITAGE AREA BOUNDARY
	WORLD HERITAGE AREA ZONE B
	WORLD HERITAGE AREA ZONE C

PRELIMINARY		JOB CODE: WBPREB01
ASSOCIATED CONSULTANTS	CLIENT	JOB CODE:
CONICS	SATORI RESORTS PTY LTD	WBPREB01
DATE: 10/01/2007	PROJECT	SHEET NUMBER: 1 R03
REV: 1	ELLA BAY ACCESS ROAD STRATEGY	REV: A
OPERATIONAL USE	ELLA BAY	DATE: 10/01/2007
OPERATION	SETOUT PLAN - SHEET 2 OF 9	DRAWN: M.J.M.
REGIONS		CHECKED: M.J.M.
		DATE: FEBRUARY 2007
		SCALE: 1:1000 (A4 SIZE)
		DESIGNED: A.W.S.A.
		APPROVED: M.J.M.
		DATE: FEBRUARY 2007
		1 SWANN ROAD, TARENCO, TASMANIA, AUSTRALIA 7345
		PH: (07) 2371 7000 FAX: (07) 2371 6875
		EMAIL: info@disgroup.net.au
		17 MONROE DRIVE, BUENOS AIRES, ARGENTINA 1012
		PH: (07) 4564 4500 FAX: (07) 568 4982
		EMAIL: arg@disgroup.net.au
		5TH FLOOR, GUYERSTON HOUSE, PORT KAITUMA, PAPUA NEW GUINEA
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ARCHITECTS		CIVIL & STRUCTURAL ENGINEERS
ETS GROUP		www.dsgroup.net.au



ASSOCIATED CONSULTANTS	
PRELIMINARY	
DATE	REV
1	ORIGINAL ISSUE
2	REVISIONS
3	APPROVED

CLIENT	SATORI RESORTS PTY LTD
PROJECT	ELLA BAY ACCESS ROAD STRATEGY
LOCATION	ELLA BAY
SHEET TITLE	SETOUT PLAN - SHEET 3 OF 9

DESIGNED	A.W.S.A.	APPROVED	DATE
DRAWN	M.J.M.	DATE	
CHECKED		SCALE	
DATE	FEBRUARY 2007	1:1000 (A1 SIZE)	

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GRUP

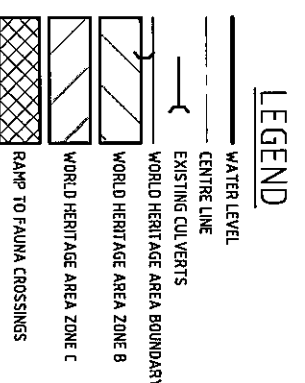
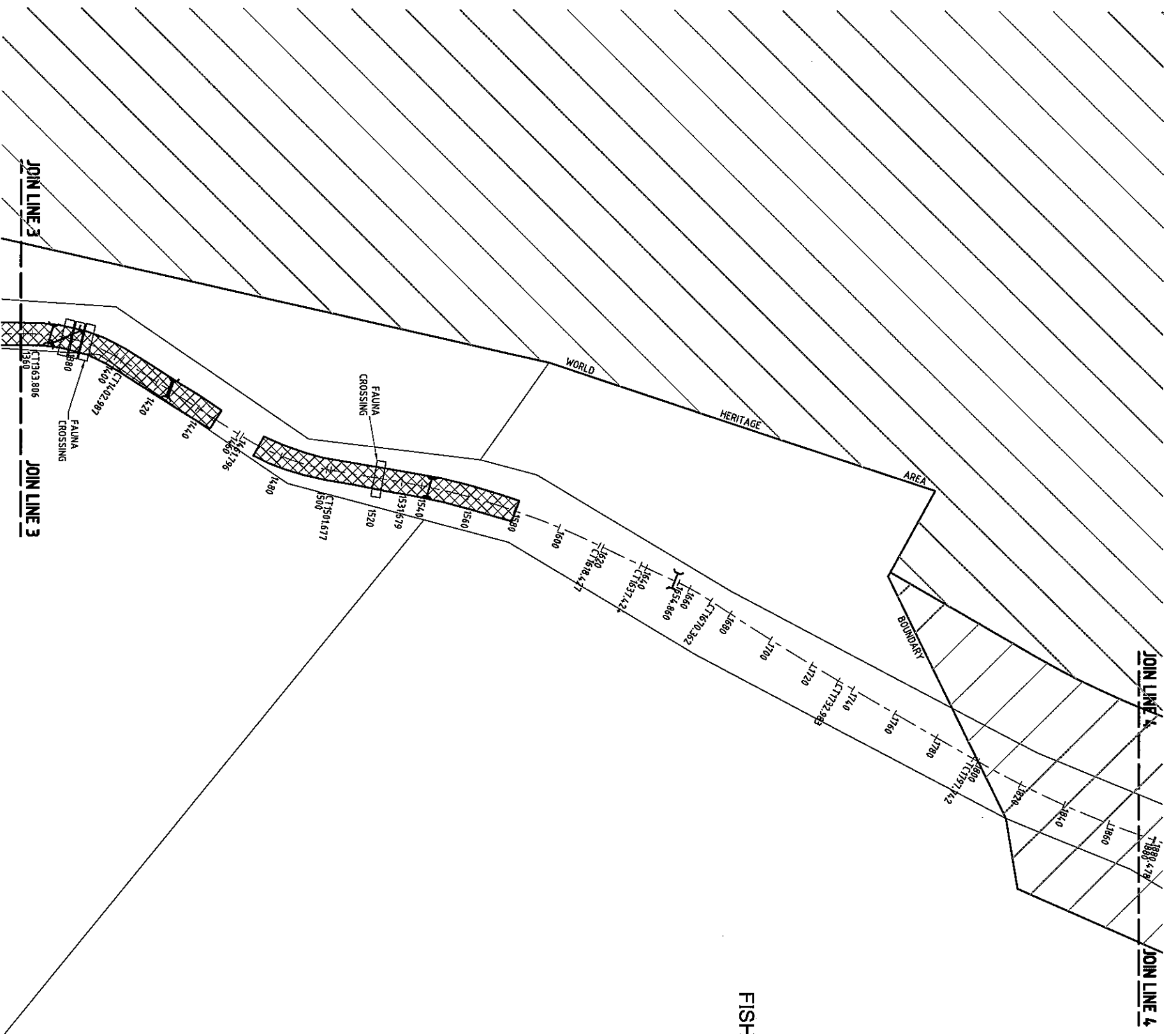
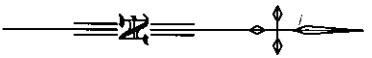
1 SWANN ROAD, TERNICA, BRISBANE QLD 4068
 PH: (07) 5371 7000 FAX: (07) 5371 5078
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 TELEPHONE: (07) 5371 1333 FACSIMILE: (07) 5371 7653
 EMAIL: esep@grup.com.au

WBPREB01

SHEET NUMBER: R04
 REV: A

10 AUG 2007



ASSOCIATED CONSULTANTS	
PRELIMINARY	
DATE	REVISIONS
A	ORIGINAL ISSUE
B	REVISED

CLIENT	SATORI RESORTS PTY LTD
PROJECT	ELLA BAY ACCESS ROAD STRATEGY
LOCATION	ELLA BAY
SHEET TITLE	SETOUT PLAN - SHEET 4 OF 9

DESIGNED	A. W. S. A.	APPROVED	DATE
DRAWN	M. J. M.	SCALE	1 : 300 (A1 SIZE)
CHECKED		DATE	FEBRUARY 2007

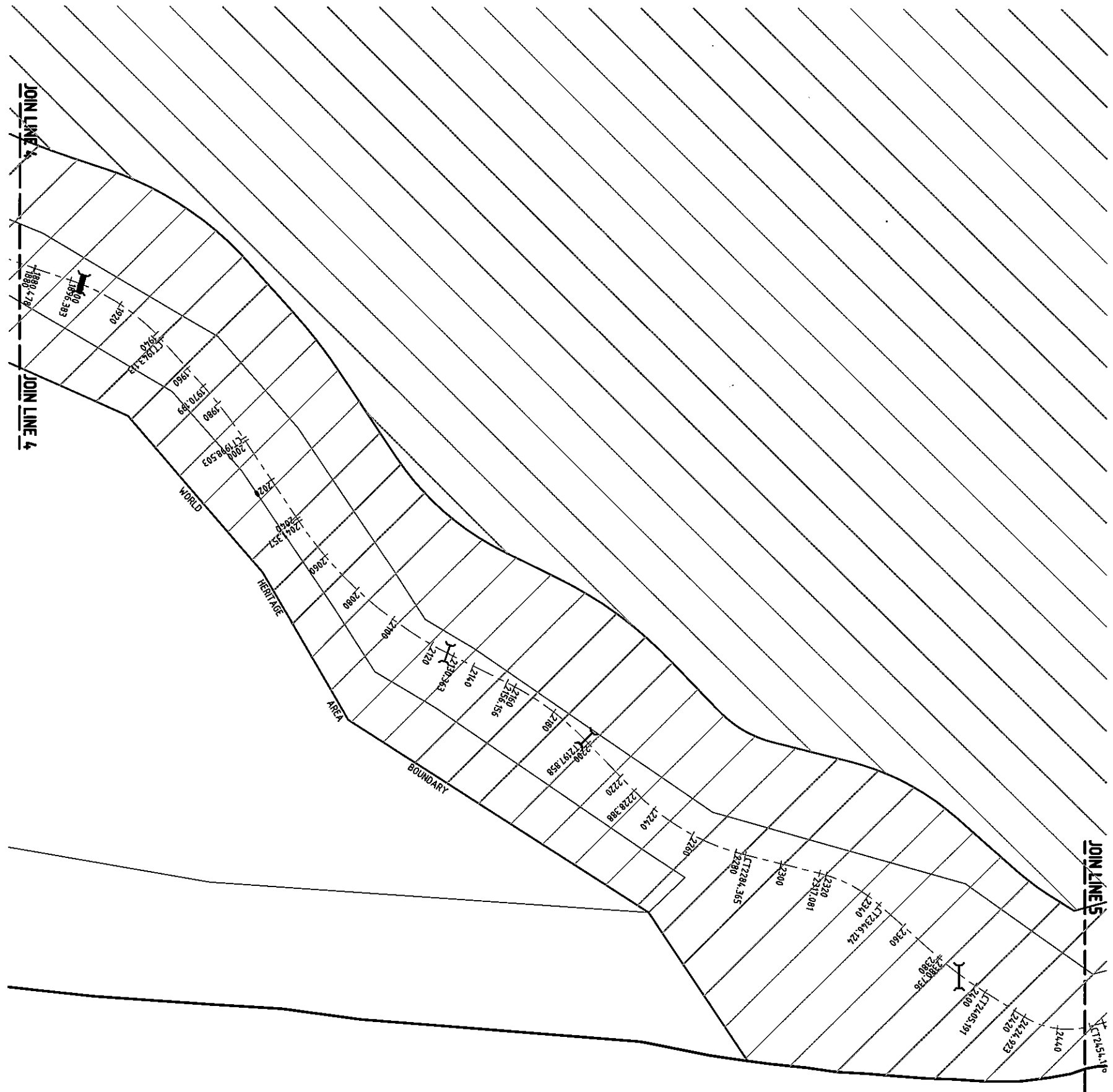
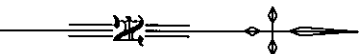
13 SWANN ROAD, TARENNA, BRISBANE QLD 4068
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17 MONKS CREEK, BUDERIM, SUNSHINE COAST QLD 4556
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JOB CODE:	WBPREB01
SHEET NUMBER:	R05
REV:	A
DATE:	10 AUG 2006



LEGEND

	WATER LEVEL
	CENTRE LINE
	EXISTING CULVERTS
	WORLD HERITAGE AREA BOUNDARY
	WORLD HERITAGE AREA ZONE B
	WORLD HERITAGE AREA ZONE C

ASSOCIATED CONSULTANTS	
CONICS	
PRELIMINARY	
DATE	APPROVED
1	
ORIGINAL ISSUE	
REVISIONS	

CLIENT	SATORI RESORTS PTY LTD
PROJECT	ELLA BAY ACCESS ROAD STRATEGY
LOCATION	ELLA BAY
SHEET TITLE	SETOUT PLAN - SHEET 5 OF 9

DESIGNED	A. W. S. A.	APPROVED		DATE	
DRAWN	M. J. M.	CHECKED		DATE	
CHECKED		DATE		DATE	FEBRUARY 2007
SCALE	KETHWELLS	REVISIONS			
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1 : 1000 (AS SHOWN)					

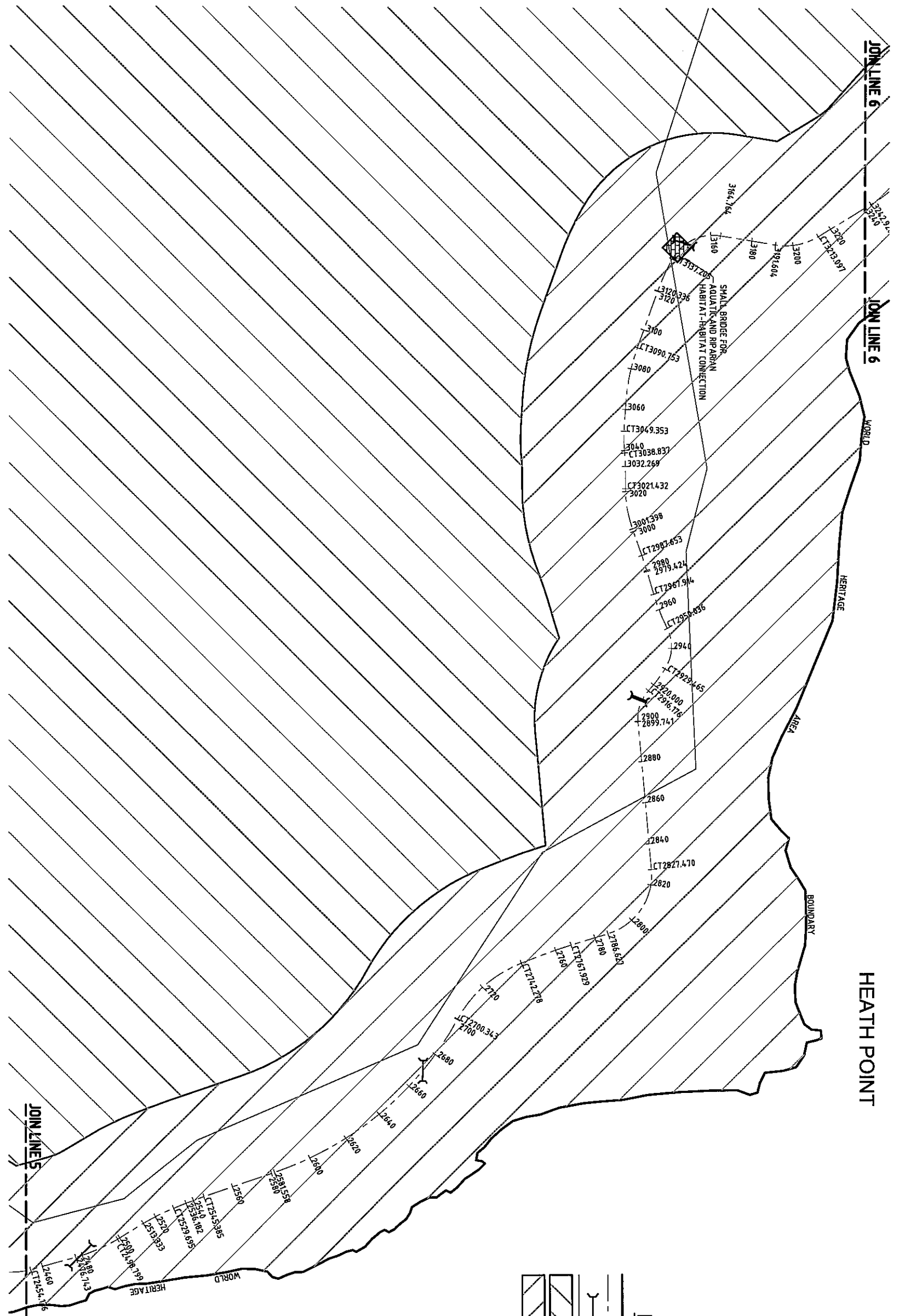
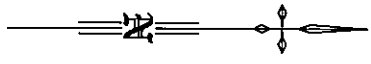
1 SWANSON ROAD TASMANIA, BRISBANE QLD 4068 AUSTRALIA
 PH: (07) 3271 7000 FAX: (07) 3271 9879
 E-MAIL: info@eths.com.au

11 MONKING CREEK RUCERTINA, SUNSHINE COAST QLD 4669 AUSTRALIA
 PH: (07) 5428 4520 FAX: (07) 5428 4522
 E-MAIL: eths@eths.com.au

5TH FLOOR CANTONMENT HOUSE, PORT MORESBY PAPUA NEW GUINEA
 TELEPHONE: (675) 321 1333 FACSIMILE: (675) 321 7433
 E-MAIL: eths@eths.com.au

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JOB CODE:	WBPREB01
SHEET NUMBER:	R06
REV:	A
DATE:	19 AUG 2006



LEGEND

	WATER LEVEL
	CENTRE LINE
	EXISTING CULVERTS
	WORLD HERITAGE AREA BOUNDARY
	WORLD HERITAGE AREA ZONE B
	WORLD HERITAGE AREA ZONE C

ASSOCIATED CONSULTANTS	
CONICS	
PRELIMINARY	
DATE	REVISIONS

CLIENT	SATORI RESORTS PTY LTD
PROJECT	ELLA BAY ACCESS ROAD STRATEGY
LOCATION	ELLA BAY
SHEET TITLE	SETOUT PLAN - SHEET 6 OF 9

DESIGNED	A.W.S.A	APPROVED	DATE
DRAWN	M.J.M	CHECKED	DATE
DATE	FEBRUARY 2007	SCALE	1:500 (A1 SIZE)

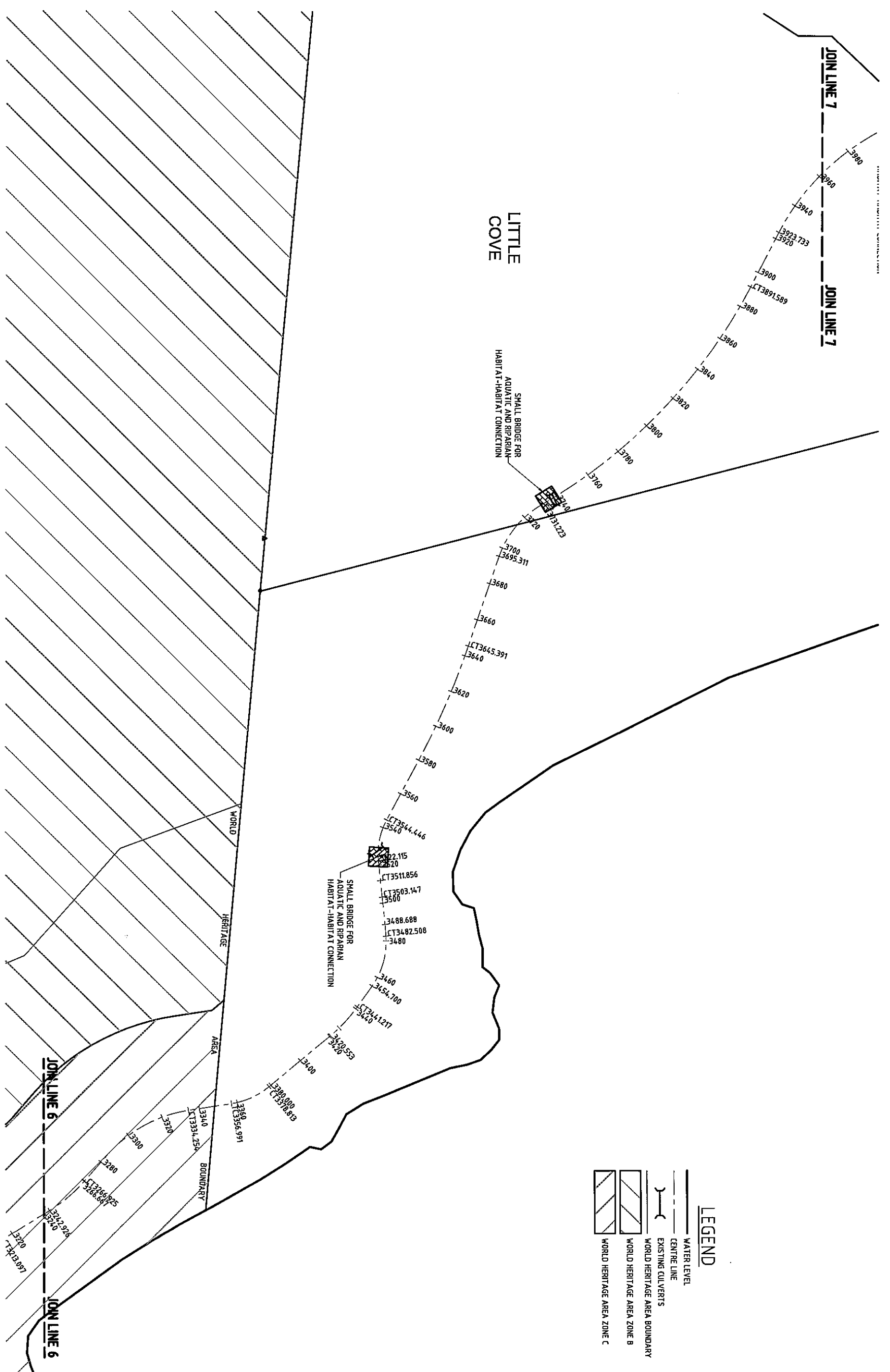
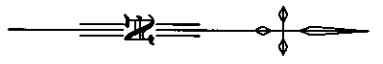
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WBPREB01
SHEET NUMBER: R07
REV: A

AUSTRALIA
15 SWANSON ROAD, TRARIGNA, BRISBANE QLD 4068
PH: (07) 3271 7000 FAX: (07) 3271 6879
EMAIL: info@ettsgroup.net.au

PAPUA NEW GUINEA
5TH FLOOR OUTRIGGER HOUSE, PORT Moresby
TELEPHONE: (675) 321 1331 FACSIMILE: (675) 321 7483
EMAIL: info@ettsgroup.net.pg



LEGEND

	WATER LEVEL
	CENTRE LINE
	EXISTING CULVERTS
	WORLD HERITAGE AREA BOUNDARY
	WORLD HERITAGE AREA ZONE B
	WORLD HERITAGE AREA ZONE C

ASSOCIATED CONSULTANTS

CLIENT	PRELIMINARY
PROJECT	SATORI RESORTS PTY LTD
LOCATION	ELLA BAY ACCESS ROAD STRATEGY
SHEET TITLE	ELLA BAY SETOUT PLAN - SHEET 8 OF 9
DATE	
NO.	
DESCRIPTION	
REVISIONS	

DESIGNED	A.W.S.A	APPROVED		DATE	
DRAWN	M.J.M	CHECKED		DATE	
DATE		SCALE		DATE	
		KEITH HOWELLS			
		REVISIONS			
		DATE			
		FEBRUARY 2007			

SCALE	1: 800 (A1 STD)
DATE	

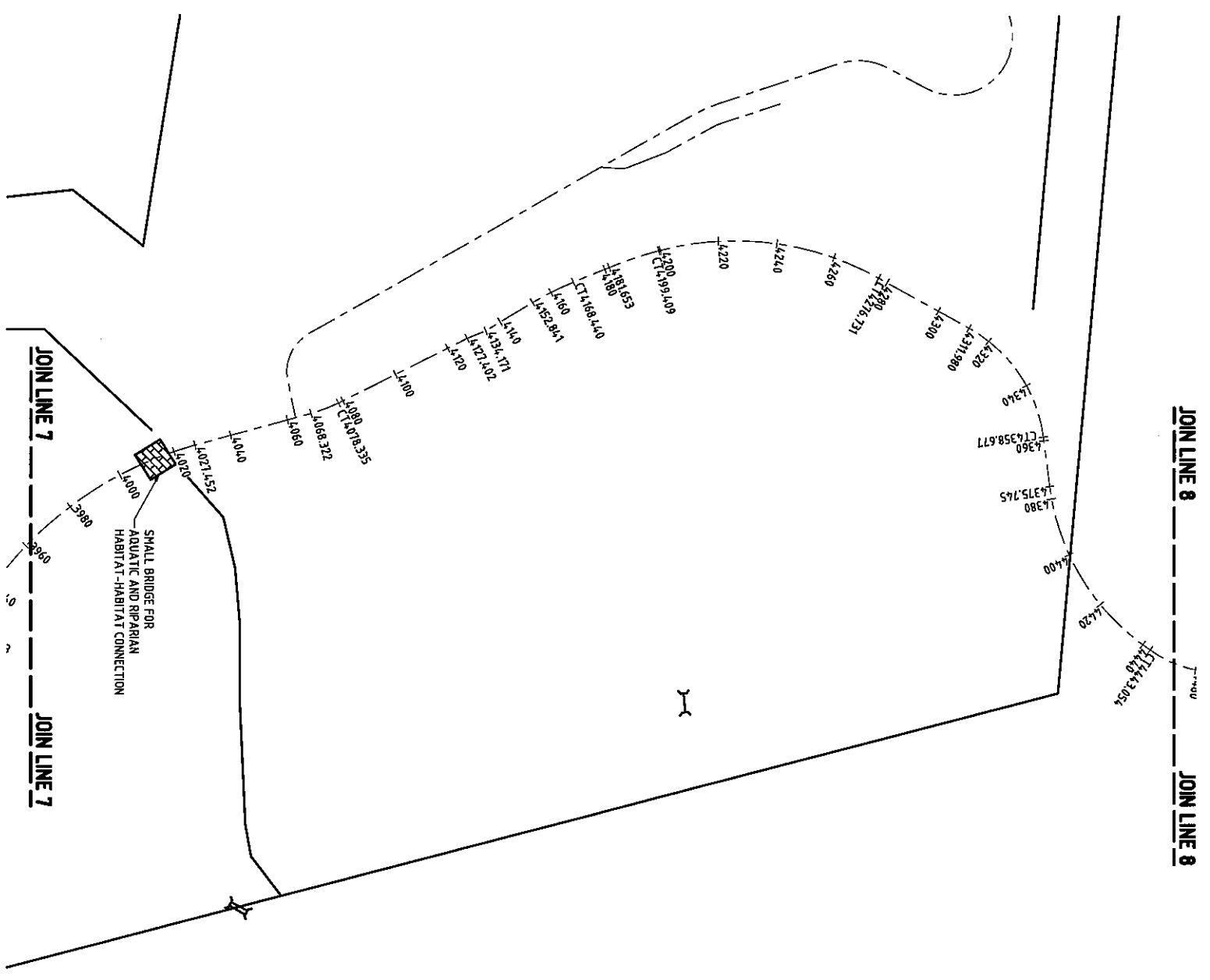
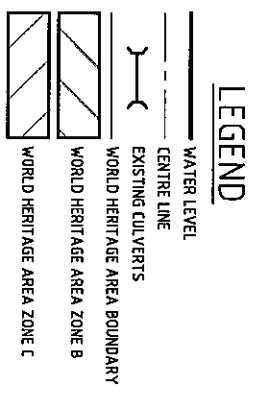
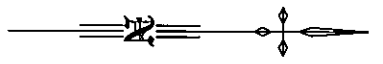
1 SWANN ROAD, TERNUCA, SURREY COAST QLD 4688
 PH: (07) 5471 7000 FAX: (07) 5471 8079
 EMAIL: info@grupp.com

17 MONKS CREEK, BUDERIM, SUNSHINE COAST QLD 4556
 PH: (07) 5458 4550 FAX: (07) 5458 4582
 EMAIL: design@grupp.com

5TH FLOOR, GUYERSTON HOUSE, PORT MONAGHY
 TELEPHONE: (09) 521 1533 FACSIMILE: (09) 521 7033
 EMAIL: design@grupp.com

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JOB CODE:	WBPREB01
SHEET NUMBER:	R08
REV:	A
DATE:	10 AUG 2006



ASSOCIATED CONSULTANTS	
PRELIMINARY	
DATE	REVISIONS
A	ORIGINAL ISSUE
B	DESCRIPTION
C	APPROVED

CLIENT	SATORI RESORTS PTY LTD
PROJECT	ELLA BAY ACCESS ROAD STRATEGY
LOCATION	ELLA BAY
SHEET TITLE	SETOUT PLAN - SHEET 8 OF 9

DESIGNED	A.W.S.A	APPROVED	DATE
DRAWN	M.J.M	CHECKED	DATE
DATE	FEBRUARY 2007	SCALE	1:500 (A1 S2D)

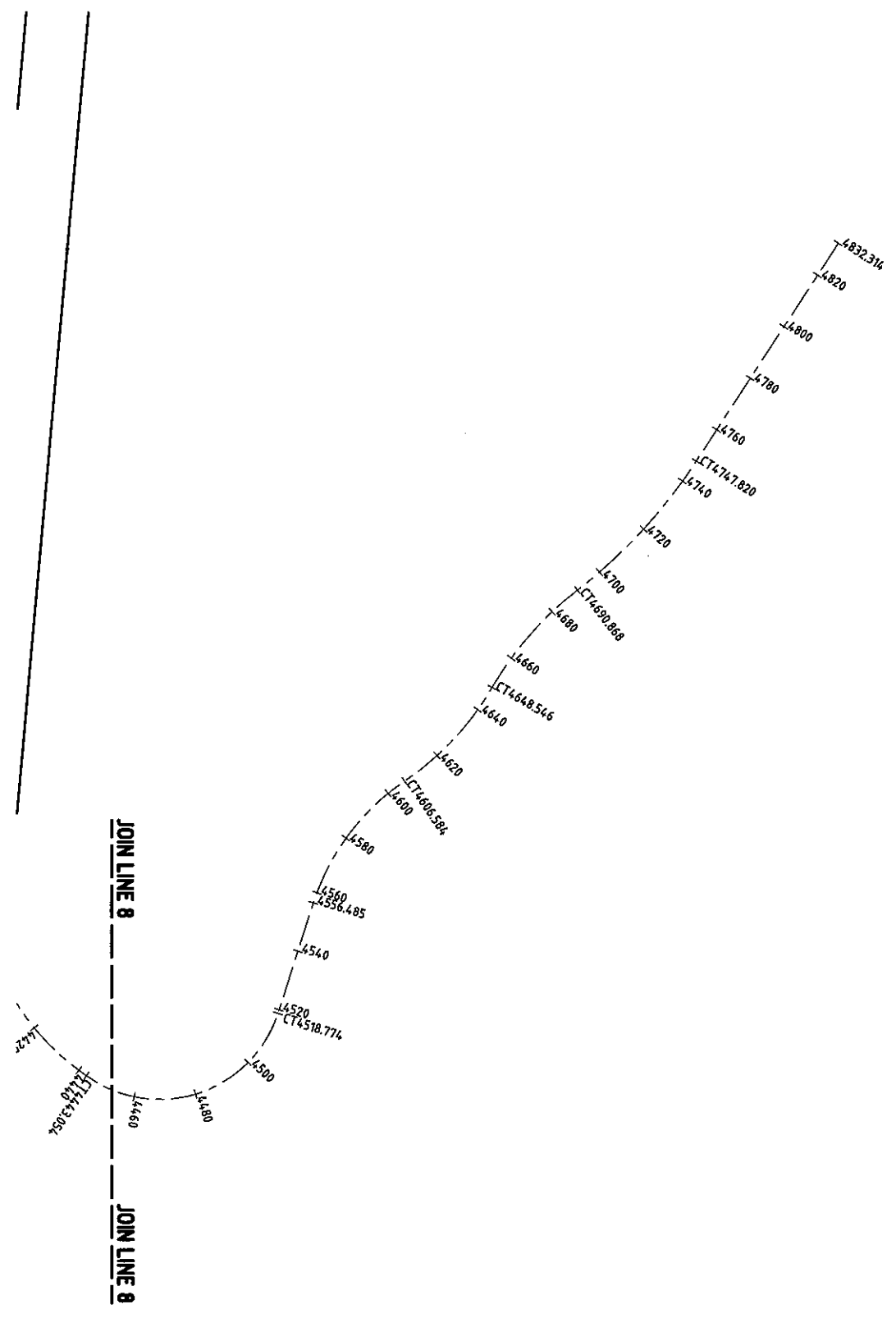
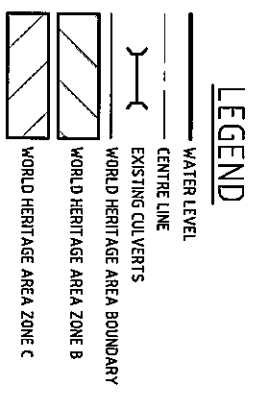
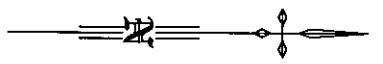
ARCHITECTS · CIVIL & STRUCTURAL ENGINEERS

AUSTRALIA
 17 MONKS CREEK BURENDA SUNSHINE COAST QLD 4558
 PH: (07) 5491 4500 FAX: (07) 5491 4502
 EMAIL: info@group.net.au

PAPUA NEW GUINEA
 5TH FLOOR GUTHRIERSON HOUSE PO BOX 600 PORT MORSBAY
 TELEPHONE: (675) 321 1330 FACSIMILE: (675) 321 1623
 EMAIL: design@group.net.pg

GR O U P
 www.grgroup.net.au

JOB CODE: WBP/REB01
 SHEET NUMBER: R09
 REV: A



ASSOCIATED CONSULTANTS		CLIENT		DESIGNED		APPROVED		DATE	
CONICS		SATORI RESORTS PTY LTD		A. W. S. A.					
PRELIMINARY		PROJECT		DRAWN		CHECKED		DATE	
		ELLA BAY ACCESS ROAD STRATEGY		M. J. M.					
DATE		LOCATION		DATE		SCALE		DATE	
REV		ELLA BAY				1: 800 (A1 SIZE)		FEBRUARY 2007	
DESCRIPTION		SETOUT PLAN - SHEET 9 OF 9							
REVISIONS									
JOB CODE:		JOB CODE:		JOB CODE:		JOB CODE:		JOB CODE:	
WBPREB01		WBPREB01		WBPREB01		WBPREB01		WBPREB01	
SHEET NUMBER:		SHEET NUMBER:		SHEET NUMBER:		SHEET NUMBER:		SHEET NUMBER:	
R10		R10		R10		R10		R10	
REV:		REV:		REV:		REV:		REV:	
A		A		A		A		A	
FORM 1007		FORM 1007		FORM 1007		FORM 1007		FORM 1007	
10 AUG 2006		10 AUG 2006		10 AUG 2006		10 AUG 2006		10 AUG 2006	

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PAULIA NEW GUINEA
5TH FLOOR CHIFFERTSON HOUSE, PORT KORMORANT
TELEPHONE (075) 321 1333 FACSIMILE (075) 321 7553
EMAIL: enquiries@paulia.com.au

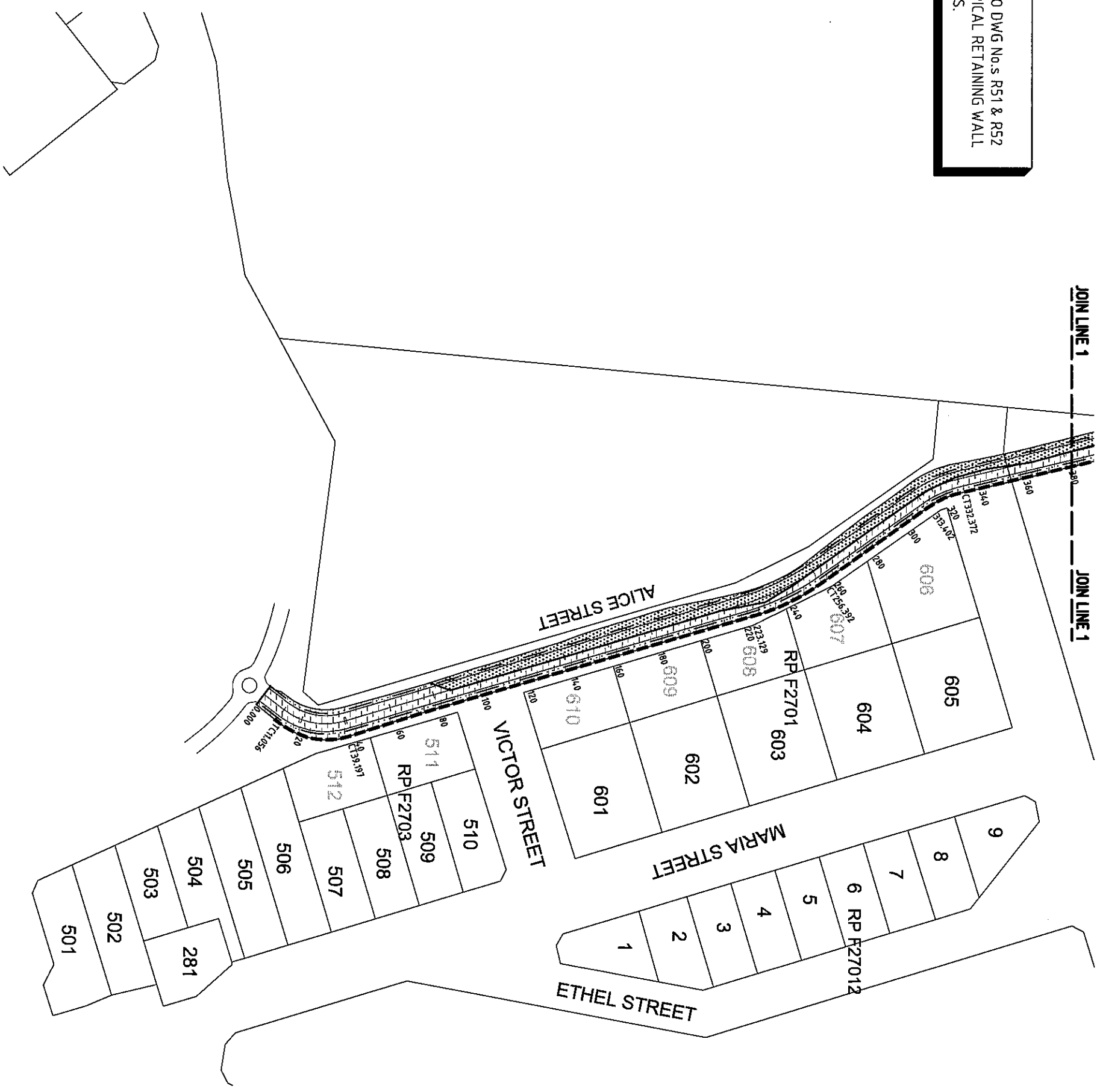
AUSTRALIA
17 MONKS CREEK BLVD, SUNSHINE COAST QLD 4564
PH: (07) 5434 4550 FAX: (07) 5434 4532
EMAIL: enquiries@paulia.com.au

SWAN ROAD, TANGA, SUNSHINE COAST QLD 4556
PH: (07) 5371 7000 FAX: (07) 5371 5079
EMAIL: enquiries@paulia.com.au

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NOTE:
REFER TO DWG No.s R51 & R52
FOR TYPICAL RETAINING WALL
SECTIONS.

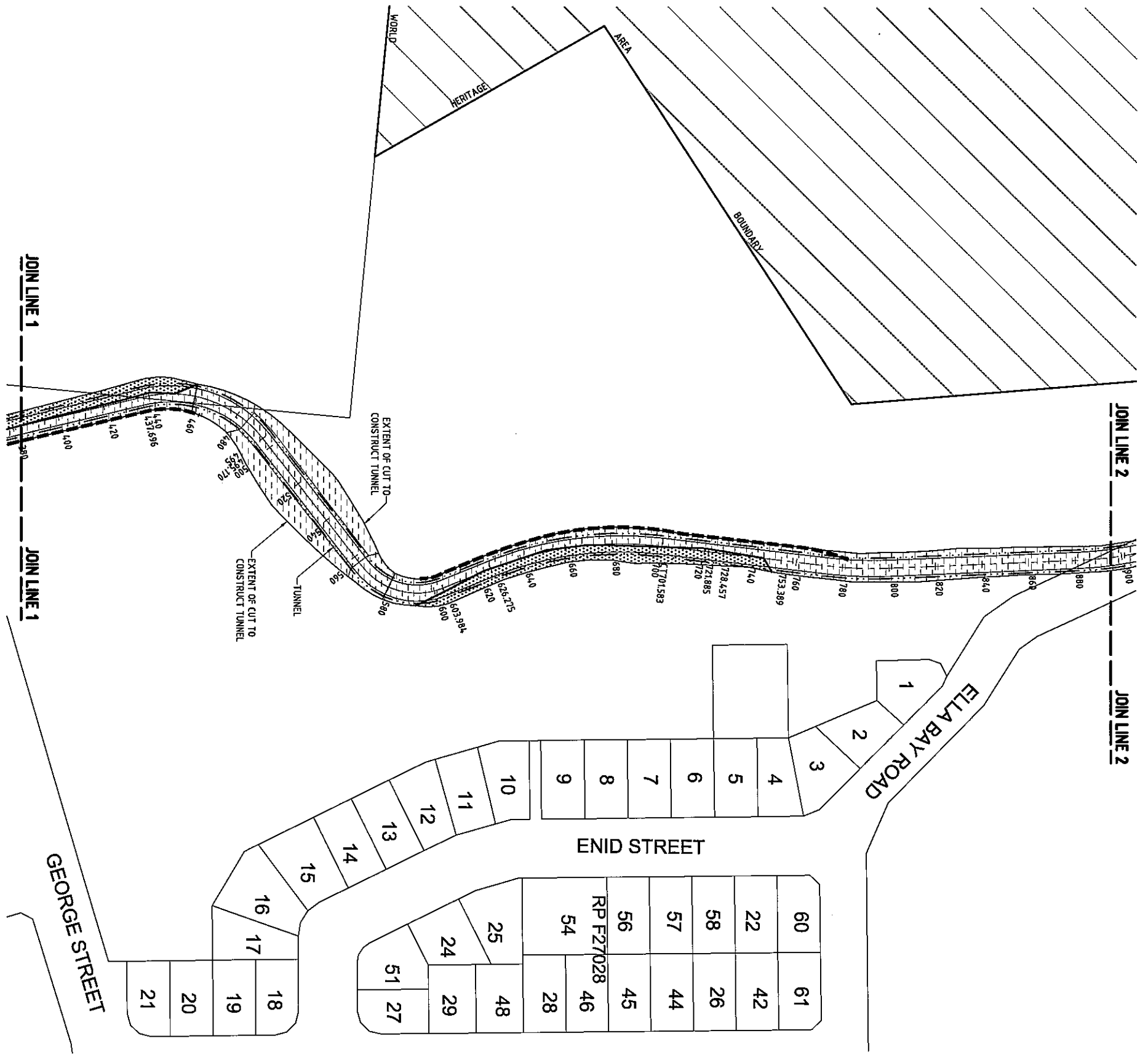
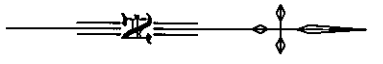


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LEGEND

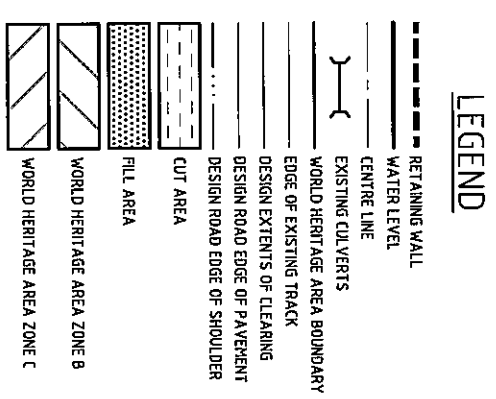
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	WATER LEVEL
	CENTRE LINE
	EXISTING CULVERTS
	WORLD HERITAGE AREA BOUNDARY
	EDGE OF EXISTING TRACK
	DESIGN EXTENTS OF CLEARING
	DESIGN ROAD EDGE OF PAVEMENT
	DESIGN ROAD EDGE OF SHOULDER
	CUT AREA
	FILL AREA
	WORLD HERITAGE AREA ZONE B
	WORLD HERITAGE AREA ZONE C

ASSOCIATED CONSULTANTS		CLIENT	
PRELIMINARY		SATORI RESORTS PTY LTD	
CONICS		PROJECT	
ELLABAY ACCESS ROAD STRATEGY		ELLABAY ACCESS ROAD STRATEGY	
ELLABAY		LOCATION	
GENERAL WORKS - SHEET 1 OF 7		SHEET TITLE	
DATE	REV	DATE	REV
	A		A
	ORIGINAL ISSUE		APPROVED
	REVISIONS		
DESIGNED	A.W.S.A	APPROVED	DATE
DRAWN	K.J.M		
CHECKED		SCALE	
DATE	FEBRUARY 2007	NORTHWARDS	RP20 1285
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AUSTRALIA 1 SWANN ROAD TERNINGA BRISBANE QLD 4288 PH: (07) 3271 7200 FAX: (07) 3271 5070 EMAIL: info@earthgroup.net.au		AUSTRALIA 17 MONKS CROSS BUDERIM SUNSHINE COAST QLD 4558 PH: (07) 5460 4500 FAX: (07) 5460 4502 EMAIL: enquiries@earthgroup.com	
PAPUA NEW GUINEA 5TH FLOOR CATHEDRAL HOUSE PO BOX 908 TELEPHONE (675) 321 1333 FACSIMILE (675) 321 7653 EMAIL: enquiries@earthgroup.com		PAPUA NEW GUINEA POINT MCKENNEY TELEPHONE (675) 321 1333 FACSIMILE (675) 321 7653 EMAIL: enquiries@earthgroup.com	
ARCHITECTS		CIVIL & STRUCTURAL ENGINEERS	
WBPREB01		SHEET NUMBER	
R11		REV	
A		FIGURE	
10 AUG 2006		DATE	



NOTE:
REFER TO DWG No. R53 FOR
CUT AND COVER TUNNEL
DETAIL.

NOTE:
REFER TO DWG No.s R51 & R52
FOR TYPICAL RETAINING WALL
SECTIONS.



ASSOCIATED CONSULTANTS

PRELIMINARY

DATE	REV	DESCRIPTION	REVISIONS
	A	ORIGINAL ISSUE	

CLIENT

SATORI RESORTS PTY LTD

PROJECT

ELLA BAY ACCESS ROAD STRATEGY

LOCATION

ELLA BAY

SHEET TITLE

GENERAL WORKS - SHEET 2 OF 7

DESIGNED

A.W.S.A

CHECKED

M.I.M

DATE

FEBRUARY 2007

APPROVED

KETH HINDLE

DATE

FEBRUARY 2007

SCALE

1:1000 (A1 SIZE)

1 SWANN ROAD TERNARA, BERKHAMPTON QLD 4208 AUSTRALIA

77 MONKING CROSS BUSINESS, SUNSHINE COAST QLD 4568 AUSTRALIA

PAPIA NEW GUINEA CIVIL & STRUCTURAL ENGINEERS

5TH FLOOR GUTHRIERSON HOUSE, PO BOX 908, PORT MORSBURY, PAPUA NEW GUINEA

TELEPHONE: (675) 321 1333, FACSIMILE: (675) 321 7553, EMAIL: info@papiaengineers.com

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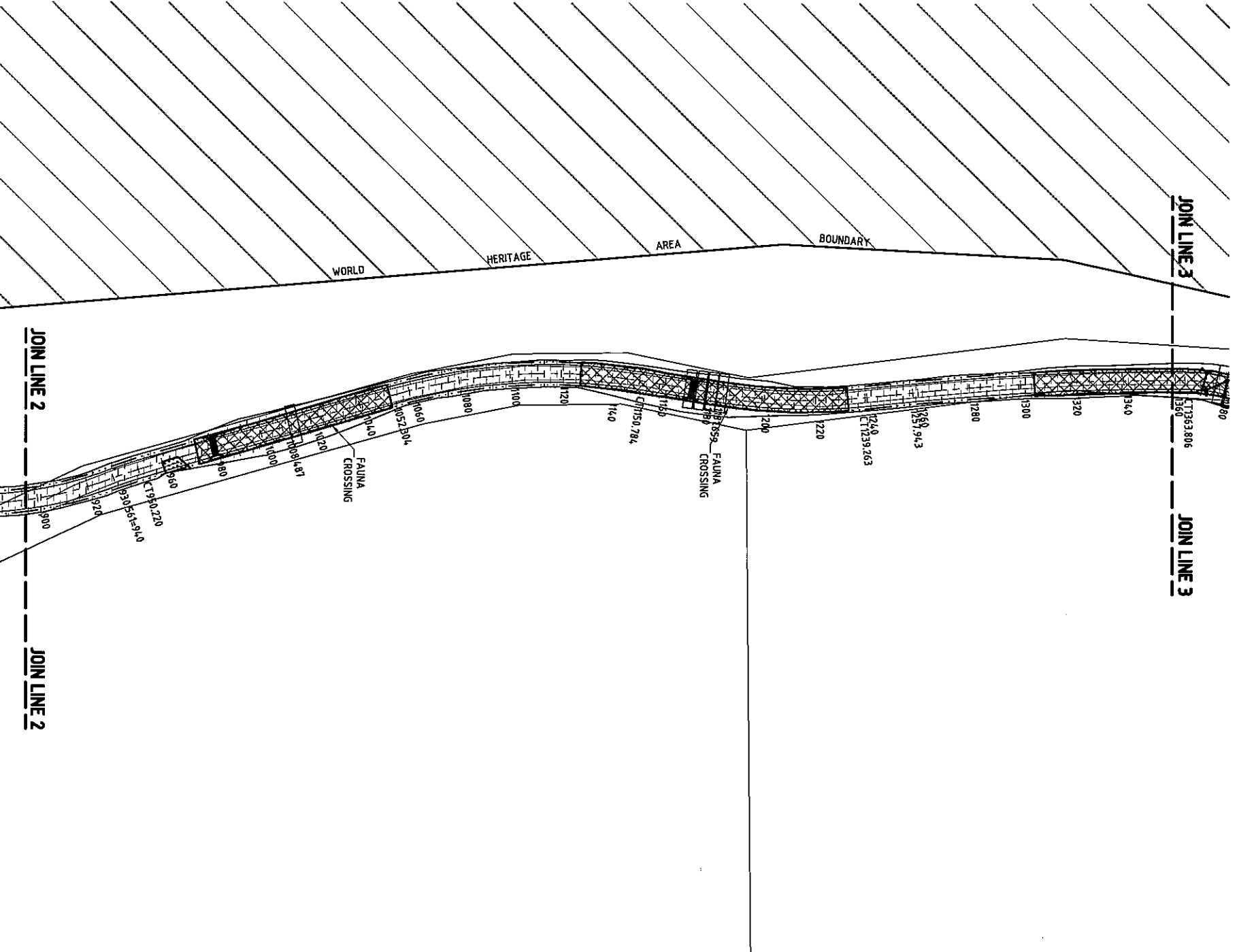
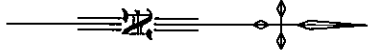
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JOB CODE: **WBPREB01**

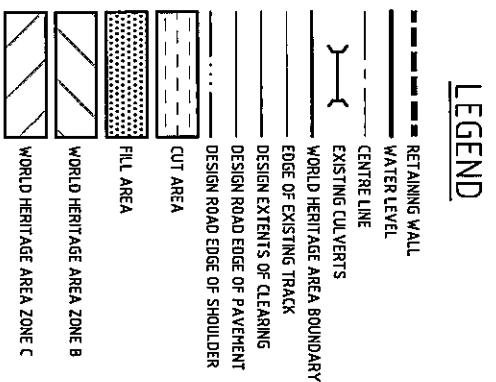
SHEET NUMBER: **R12**

REV: **A**

FORMAL CERT. TO AS/NZS 3845



NOTE:
REFER TO DWG No.s R51 & R52
FOR TYPICAL RETAINING WALL
SECTIONS.



ASSOCIATED CONSULTANTS	
PRELIMINARY	
CONICS	APPROVED
DATE	REV
	DESCRIPTION
	REVISIONS

CLIENT	SATORI RESORTS PTY LTD
PROJECT	ELLA BAY ACCESS ROAD STRATEGY
LOCATION	ELLA BAY
SHEET TITLE	GENERAL WORKS - SHEET 3 OF 7

DESIGNED	A.W.S.A	APPROVED	DATE
DRAWN	M.J.M		
CHECKED			
DATE			
DATE	FEBRUARY 2007		
SCALE			
	1: 800 (AS SHOWN)		

ARCHITECTS • CIVIL & STRUCTURAL ENGINEERS

AUSTRALIA
1 SWANN ROAD TASMANIA BRISBANE QLD 4068
PH: (07) 5477 7000 FAX: (07) 5477 6979
EMAIL: info@sgpaustralia.com

PAPUA NEW GUINEA
5TH FLOOR CATHBERTSON HOUSE P.O. BOX 606
TEL: (675) 321 1233 FAX: (675) 321 7633
EMAIL: design@sgpocn.com

PORT MORESBY
17 MONKS CREEK RIVERINA SUNSHINE COAST QLD 4658
PH: (07) 5468 4800 FAX: (07) 5468 4892
EMAIL: design.asia@sgpocn.com

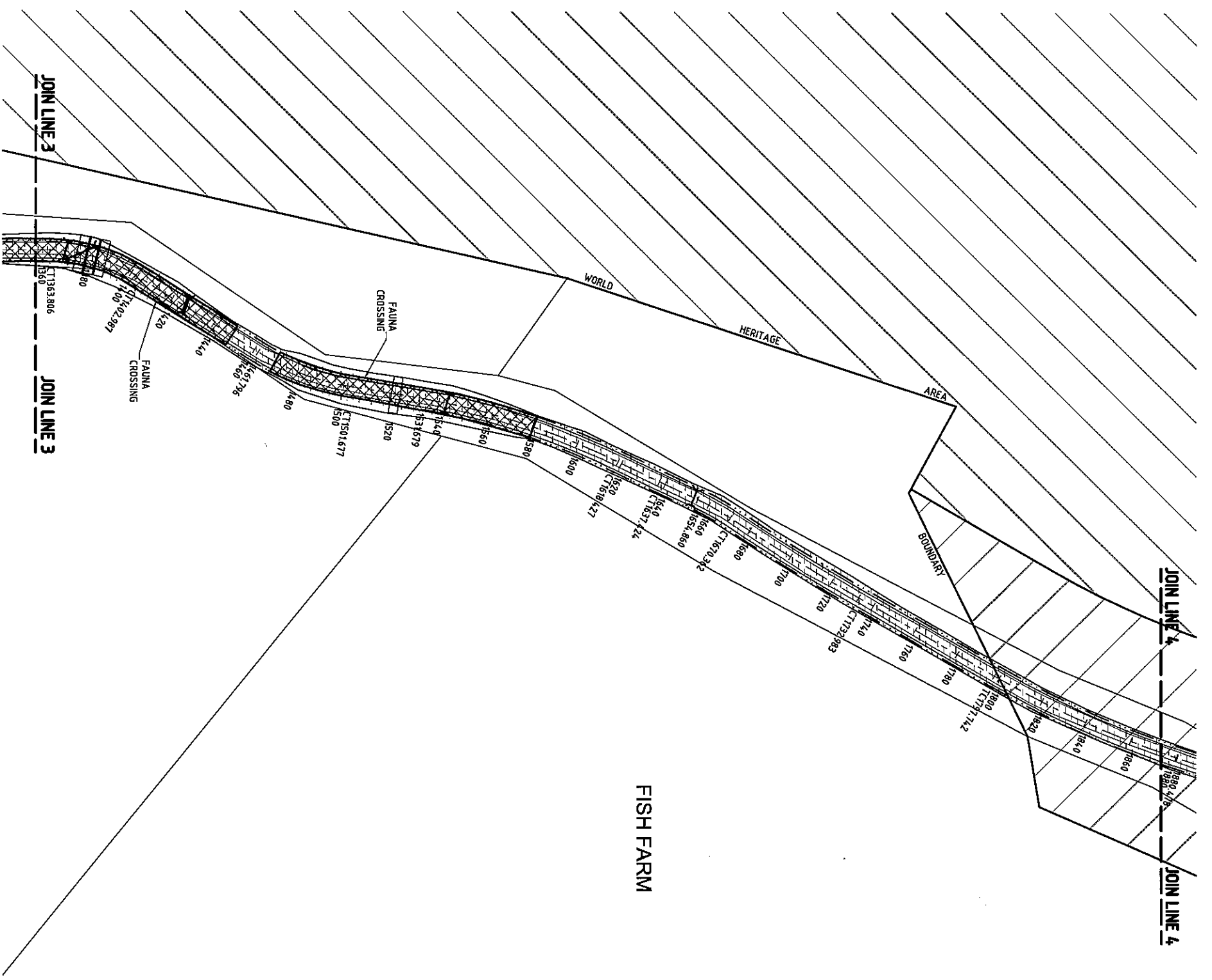
ET S
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JOB CODE: **WBPREB01**

SHEET NUMBER: **R13**

REV: **A**

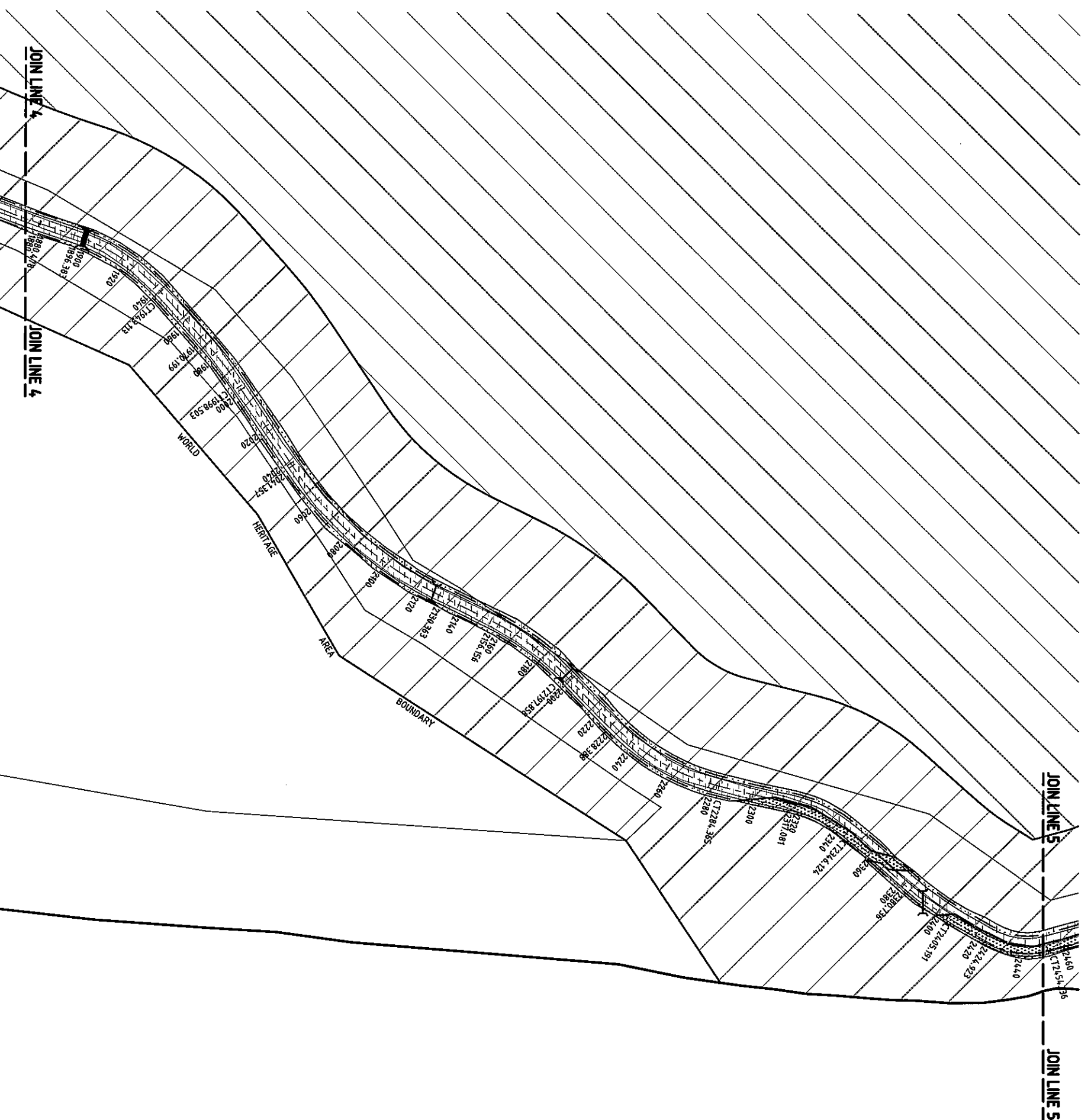
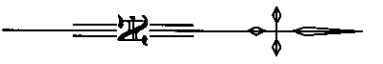
DATE: **15 AUG 2007**



NOTE:
REFER TO DWG No's R51 & R52
FOR TYPICAL RETAINING WALL
SECTIONS.

- LEGEND**
- RETAINING WALL
 - WATER LEVEL
 - CENTRE LINE
 - EXISTING CULVERTS
 - WORLD HERITAGE AREA BOUNDARY
 - EDGE OF EXISTING TRACK
 - DESIGN EXTENTS OF CLEARING
 - DESIGN ROAD EDGE OF PAVEMENT
 - DESIGN ROAD EDGE OF SHOULDER
 - CUT AREA
 - FILL AREA
 - WORLD HERITAGE AREA ZONE B
 - WORLD HERITAGE AREA ZONE C

PRELIMINARY		SATORI RESORTS PTY LTD	
CONICS		ELLA BAY ACCESS ROAD STRATEGY	
ELLA BAY		GENERAL WORKS - SHEET 4 OF 7	
DATE	REVISIONS	SHEET TITLE	JOB CODE
1	ORINAL SIZE	ELLA BAY ACCESS ROAD STRATEGY	WBPREB01
2	DESCRIPTION		SHEET NUMBER
3	APPROVED		R14
4			A
5			FORM 1027
6			13 AUG 2006
DESIGNED		APPROVED	
A.W.S.A		METH HORNFIELD	
M.J.M		BREQ 2361	
CHECKED		DATE	
FEBRUARY 2007		SCALE	
DATE		1:1000 IN SIZE	
<p>ARCHITECTS - CIVIL & STRUCTURAL ENGINEERS</p> <p>ETIS G R O U P www.etisgroup.com.au</p>			
<p>AUSTRALIA 1 SWANN ROAD TERNUKA BRISBANE QLD 4008 PH: 07 552 1237 FAX: 07 552 1238 EMAIL: info@etisgroup.com.au</p> <p>PAPUA NEW GUINEA 5TH FLOOR CUTHBERTSON HOUSE PO BOX 908 PORT MORSBURY TELEPHONE (07) 321 1333 FACSIMILE (07) 321 7583 EMAIL: info@etisgroup.com.au</p>			



JOIN LINE 4
JOIN LINE 5

NOTE:
REFER TO DWG No.s R51 & R52
FOR TYPICAL RETAINING WALL
SECTIONS.

- LEGEND**
- RETAINING WALL
 - WATER LEVEL
 - CENTRE LINE
 - EXISTING CULVERTS
 - WORLD HERITAGE AREA BOUNDARY
 - EDGE OF EXISTING TRACK
 - DESIGN EXTENTS OF CLEARING
 - DESIGN ROAD EDGE OF PAVEMENT
 - DESIGN ROAD EDGE OF SHOULDER
 - CUT AREA
 - FILL AREA
 - WORLD HERITAGE AREA ZONE B
 - WORLD HERITAGE AREA ZONE C

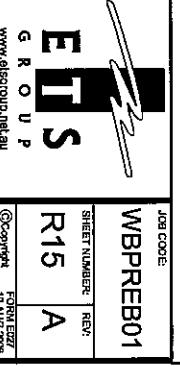
ASSOCIATED CONSULTANTS	
PRELIMINARY	
CONICS	REVISIONS
DATE	APPROVED
REV	DESCRIPTION
A	ORIGINAL ISSUE
B	REVISED

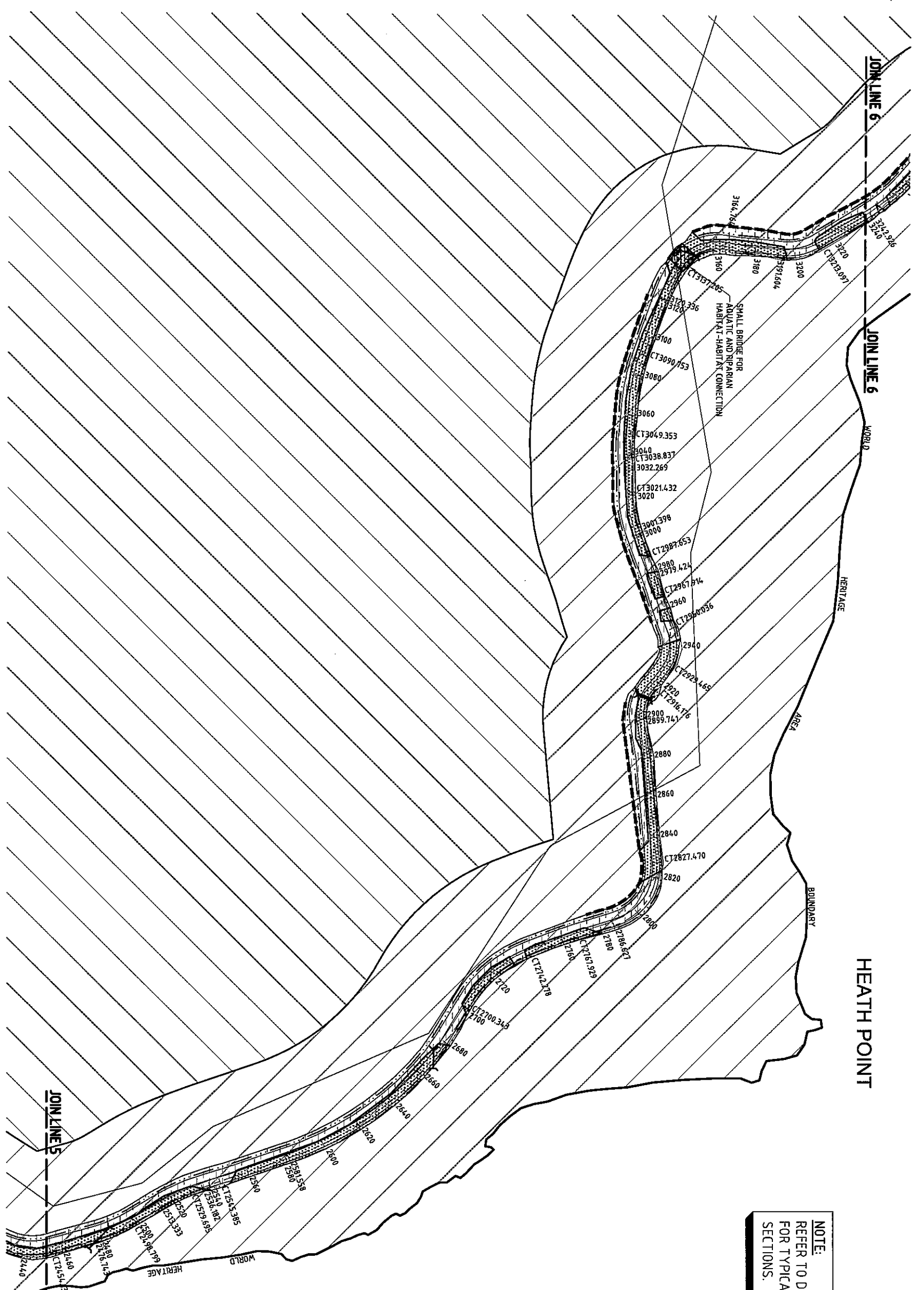
CLIENT	SATORI RESORTS PTY LTD
PROJECT	ELLA BAY ACCESS ROAD STRATEGY
LOCATION	ELLA BAY
SHEET	GENERAL WORKS - SHEET 5 OF 7

DESIGNED	A.W.S.A.	APPROVED	DATE
DRAWN	K.J.M.		
CHECKED			
DATE	FEBRUARY 2007	SCALE	NORTH IS UP
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			1 : 100 (A1 SIZE)

ARCHITECTS · CIVIL & STRUCTURAL ENGINEERS PAPAUA NEW GUINEA 5TH FLOOR CANTERBURY HOUSE, PO BOX 530, PORT MORSBURY TELEPHONE (815) 321 1333 FACSIMILE (815) 321 7833 EMAIL: papua@papaue.com.pg		AUSTRALIA 1 SWANN ROAD, TARRAGONA, BRISBANE QLD 4068 PH: (07) 5571 7000 FAX: (07) 5571 9578 EMAIL: mel@papaue.com.au	
PARUA NEW GUINEA 5TH FLOOR CANTERBURY HOUSE, PO BOX 530, PORT MORSBURY TELEPHONE (815) 321 1333 FACSIMILE (815) 321 7833 EMAIL: papua@papaue.com.pg		AUSTRALIA 1 SWANN ROAD, TARRAGONA, BRISBANE QLD 4068 PH: (07) 5571 7000 FAX: (07) 5571 9578 EMAIL: mel@papaue.com.au	

JOB CODE: **WBPREB01**
 SHEET NUMBER: **R15**
 REV: **A**
 DATE: 10 AUG 2007





JOIN LINE 6

JOIN LINE 6

HEATH POINT

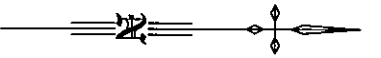
JOIN LINE 5

JOIN LINE 5

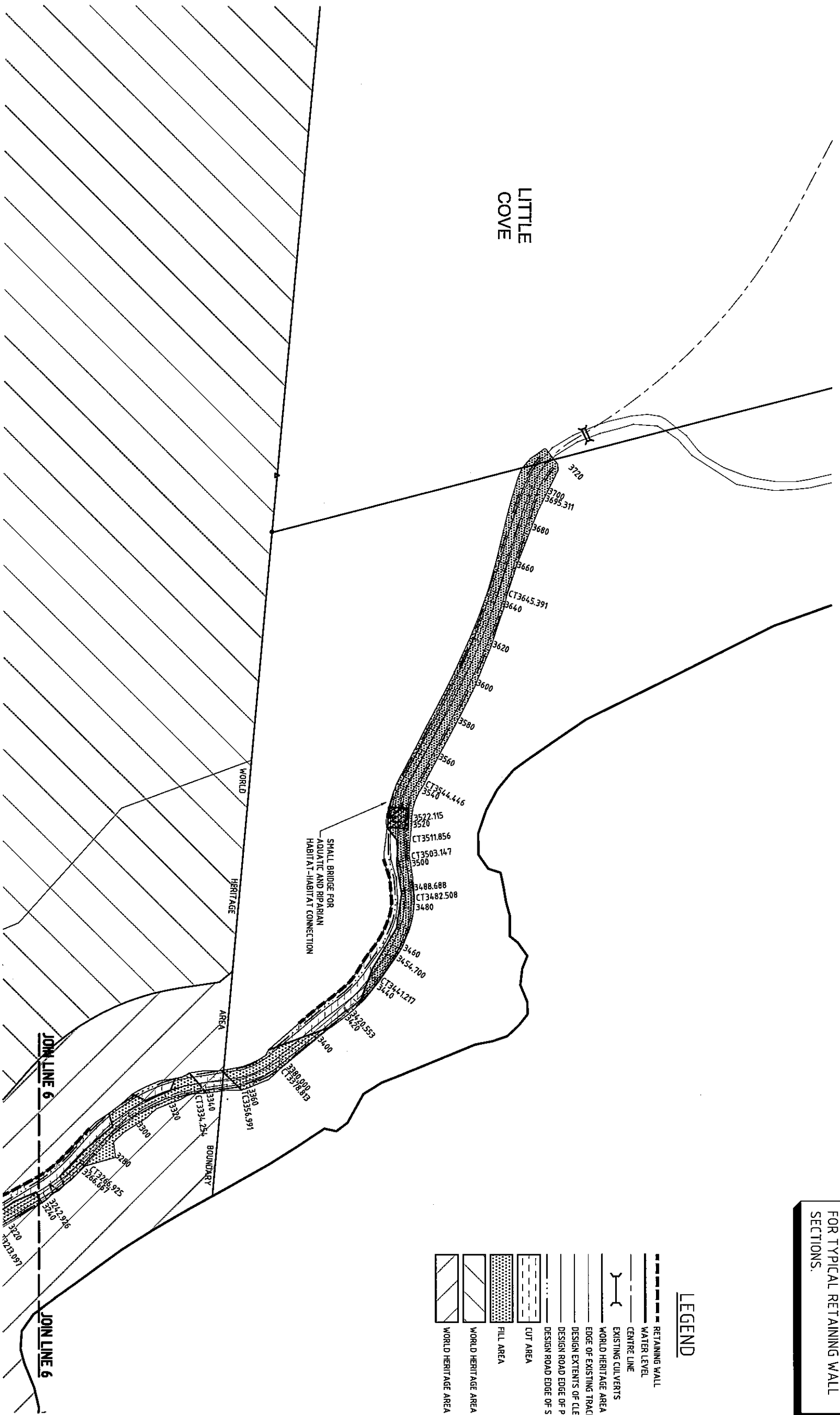
NOTE:
REFER TO DWG No.s R51 & R52
FOR TYPICAL RETAINING WALL
SECTIONS.

- LEGEND**
- RETAINING WALL
 - WATER LEVEL
 - CENTRE LINE
 - EXISTING CULVERTS
 - WORLD HERITAGE AREA BOUNDARY
 - EDGE OF EXISTING TRACK
 - DESIGN EXTENTS OF CLEARING
 - DESIGN ROAD EDGE OF PAVEMENT
 - DESIGN ROAD EDGE OF SHOULDER
 - CUT AREA
 - FILL AREA
 - WORLD HERITAGE AREA ZONE B
 - WORLD HERITAGE AREA ZONE C

ASSOCIATED CONSULTANTS		CLIENT		DATE	
CONICS		SATORI RESORTS PTY LTD		DESIGNED	
PRELIMINARY		ELLA BAY ACCESS ROAD STRATEGY		A.W.S.A	
PROJECT		ELLA BAY		DRAWN	
LOCATION		ELLA BAY		M.J.M	
SHEET		GENERAL WORKS - SHEET 6 OF 7		CHECKED	
TITLE				DATE	
				FEBRUARY 2007	
APPROVED		SCALE		DATE	
KERN HOWELLS		1:100 (A1 SIZE)		29/02/2007	
ARCHITECTS		AUSTRALIA		PAPUA NEW GUINEA	
CIVIL & STRUCTURAL ENGINEERS		17 MONKS CREEK BUDERU SUNSHINE COAST QLD 4559		5TH FLOOR GIBBERNSON HOUSE PO BOX 808 PORT MORSBURY	
G R O U P		PH: (07) 5454 4500 FAX: (07) 5454 4502		TEL: (675) 271 1533 FACSIMILE: (675) 271 7021	
WWW.ABSGROUP.NET.AU		PH: (07) 5454 4500 FAX: (07) 5454 4502		TEL: (675) 271 1533 FACSIMILE: (675) 271 7021	
JOB CODE:		WBPREB01		SHEET NUMBER:	
				R16	
				A	



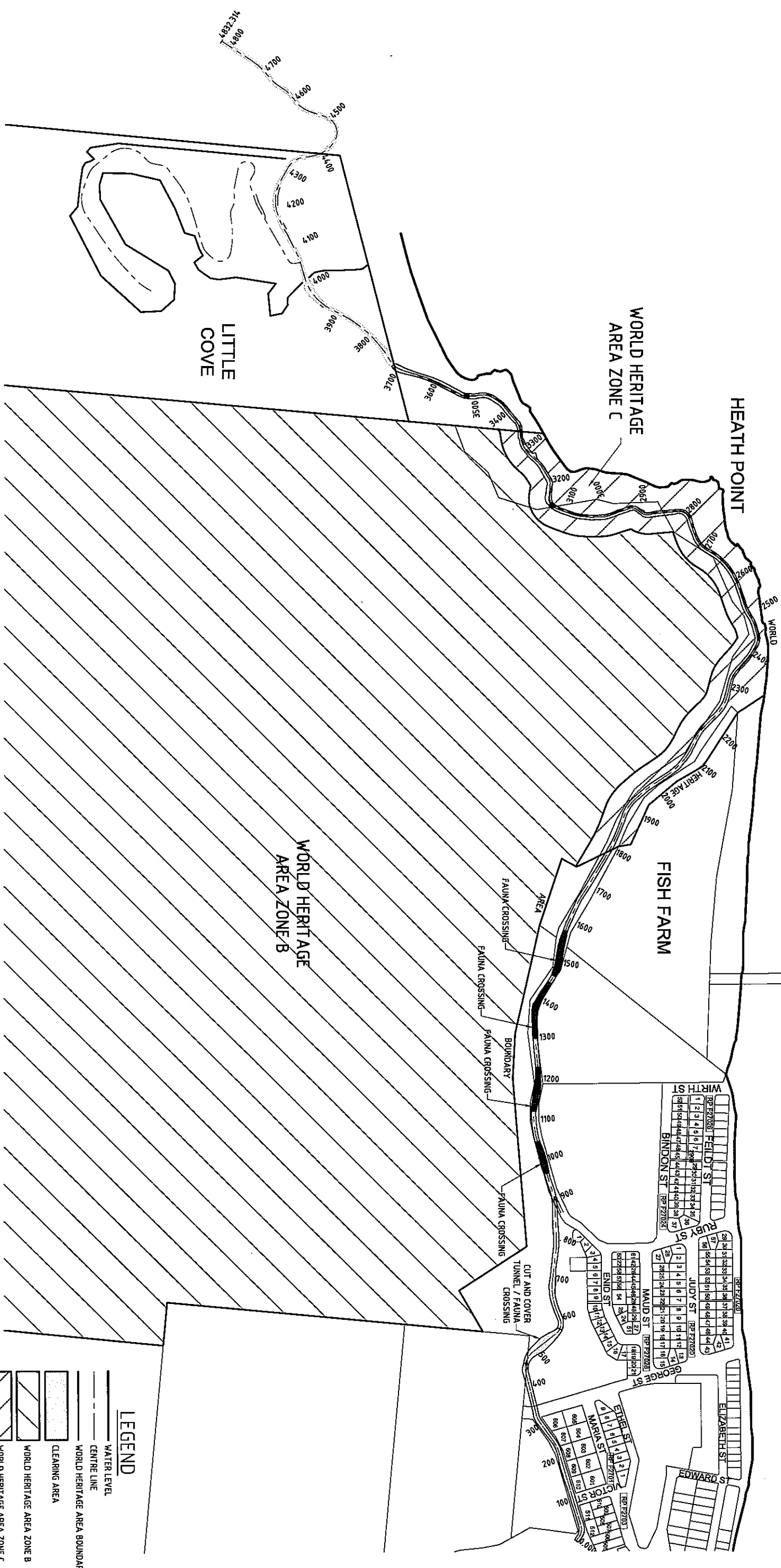
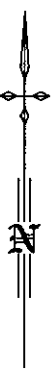
LITTLE
COVE



NOTE:
REFER TO DWG No.s R51 & R52
FOR TYPICAL RETAINING WALL
SECTIONS.

- LEGEND**
- RETAINING WALL
 - WATER LEVEL
 - CENTRE LINE
 - EXISTING CULTIVETS
 - WORLD HERITAGE AREA BOUNDARY
 - EDGE OF EXISTING TRACK
 - DESIGN EXTENTS OF CLEARING
 - DESIGN ROAD EDGE OF PAVEMENT
 - DESIGN ROAD EDGE OF SHOULDER
 - CUT AREA
 - FILL AREA
 - WORLD HERITAGE AREA ZONE B
 - WORLD HERITAGE AREA ZONE C

ASSOCIATED CONSULTANTS		CLIENT		DESIGNED		APPROVED		DATE			
CONICS		PRELIMINARY		A.W.S.A		M.J.M		FEBRUARY 2007			
PROJECT	LOCATION	PROJECT	LOCATION	DESIGNED	CHECKED	APPROVED	CHECKED	DATE	SCALE		
SATORI RESORTS PTY LTD	ELLA BAY ACCESS ROAD STRATEGY	SATORI RESORTS PTY LTD	ELLA BAY ACCESS ROAD STRATEGY	A.W.S.A	M.J.M	M.J.M	M.J.M	FEBRUARY 2007	1: 100 (A1 SIZE)		
GENERAL WORKS - SHEET 7 OF 7											
ARCHITECTS - CIVIL & STRUCTURAL ENGINEERS		ARCHITECTS - CIVIL & STRUCTURAL ENGINEERS		ARCHITECTS - CIVIL & STRUCTURAL ENGINEERS		ARCHITECTS - CIVIL & STRUCTURAL ENGINEERS		ARCHITECTS - CIVIL & STRUCTURAL ENGINEERS			
PAPUA NEW GUINEA		AUSTRALIA		PAPUA NEW GUINEA		AUSTRALIA		PAPUA NEW GUINEA			
5TH FLOOR OUTBERRISON HOUSE P.O. BOX 882 PORT MORSBURY TELEPHONE (09) 321 1333 FACSIMILE (09) 321 7893 EMAIL - info@etsgroup.net.au		1 SWANN ROAD TRARINGA, BRISBANE QLD 4088 PH: (07) 5371 7020 FAX: (07) 5371 5078 EMAIL - marketing@etsgroup.com		5TH FLOOR OUTBERRISON HOUSE P.O. BOX 882 PORT MORSBURY TELEPHONE (09) 321 1333 FACSIMILE (09) 321 7893 EMAIL - info@etsgroup.net.au		1 SWANN ROAD TRARINGA, BRISBANE QLD 4088 PH: (07) 5371 7020 FAX: (07) 5371 5078 EMAIL - marketing@etsgroup.com		5TH FLOOR OUTBERRISON HOUSE P.O. BOX 882 PORT MORSBURY TELEPHONE (09) 321 1333 FACSIMILE (09) 321 7893 EMAIL - info@etsgroup.net.au		5TH FLOOR OUTBERRISON HOUSE P.O. BOX 882 PORT MORSBURY TELEPHONE (09) 321 1333 FACSIMILE (09) 321 7893 EMAIL - info@etsgroup.net.au	
E T S GROUP		E T S GROUP		E T S GROUP		E T S GROUP		E T S GROUP			
www.etsgroup.net.au		www.etsgroup.net.au		www.etsgroup.net.au		www.etsgroup.net.au		www.etsgroup.net.au			
SHEET NUMBER		SHEET NUMBER		SHEET NUMBER		SHEET NUMBER		SHEET NUMBER			
R17		R17		R17		R17		R17			
REV: A		REV: A		REV: A		REV: A		REV: A			
JOB CODE: WBPREB01		JOB CODE: WBPREB01		JOB CODE: WBPREB01		JOB CODE: WBPREB01		JOB CODE: WBPREB01			
DRAWN BY: R17		DRAWN BY: R17		DRAWN BY: R17		DRAWN BY: R17		DRAWN BY: R17			
CHECKED BY: A		CHECKED BY: A		CHECKED BY: A		CHECKED BY: A		CHECKED BY: A			
DATE: 19 AUG 2006		DATE: 19 AUG 2006		DATE: 19 AUG 2006		DATE: 19 AUG 2006		DATE: 19 AUG 2006			



LEGEND

	WATER LEVEL
	CENTRE LINE
	WORLD HERITAGE AREA BOUNDARY
	CLEARING AREA
	WORLD HERITAGE AREA ZONE B
	WORLD HERITAGE AREA ZONE C

PRELIMINARY		ASSOCIATED CONSULTANTS CONICS	
CLIENT SATORI RESORTS PTY LTD		PROJECT ELLA BAY ACCESS ROAD STRATEGY	
LOCATION ELLA BAY		SHEET TITLE OVERALL CLEARING PLAN	
DESIGNED A.W.S.A		APPROVED DATE	
DRAWN M.J.M		CHECKED DATE	
DATE FEBRUARY 2007		SCALE 1:500 (A1 SIZE)	
1 SWAN ROAD, TARENNA, BRISBANE QLD 4068 PH: (07) 3371 7000 FAX: (07) 3371 5979 EMAIL: info@thepapua.com.au		AUSTRALIA 17 MONKS CREEK, BUDERIM, SUNSHINE COAST QLD 4568 PH: (07) 5498 4500 FAX: (07) 5498 4582 EMAIL: enquiries@etps.com.au	
5TH FLOOR, CANTONMENT ROAD, PORT MORESBY TELEPHONE: (675) 321 1333 FACSIMILE: (675) 321 1863 EMAIL: etps@etps.com.au		PAPAUA NEW GUINEA ARCHITECTS • CIVIL & STRUCTURAL ENGINEERS	
		JOB CODE WBPREB01	
www.etps.com.au		SHEET NUMBER R18	
REV.		DATE A	



- LEGEND**
- RETAINING WALL
 - WATER LEVEL
 - CENTRE LINE
 - EXISTING CULVERTS
 - WORLD HERITAGE AREA BOUNDARY
 - EDGE OF EXISTING TRACK
 - EXISTING EXTENTS OF CLEARING
 - DESIGN EXTENTS OF CLEARING
 - DESIGN ROAD EDGE OF PAVEMENT
 - DESIGN ROAD EDGE OF SHOULDER
 - ADDITIONAL CLEARING OF VEGETATION
 - WORLD HERITAGE AREA ZONE B
 - WORLD HERITAGE AREA ZONE C
 - COVERAGE A
 - COVERAGE B
 - COVERAGE C
 - COVERAGE D

ASSOCIATED COMPANY NAME		PRELIMINARY	
CONTRACT NO.	DATE	REVISIONS	BY

CLIENT	SATORI RESORTS PTY LTD
PROJECT	ELLA BAY ACCESS ROAD STRATEGY
LOCATION	ELLA BAY
SHEET TITLE	MITIGATED CLEARING PLAN - PLANT SPECIES OVERLAY - 1 OF 7

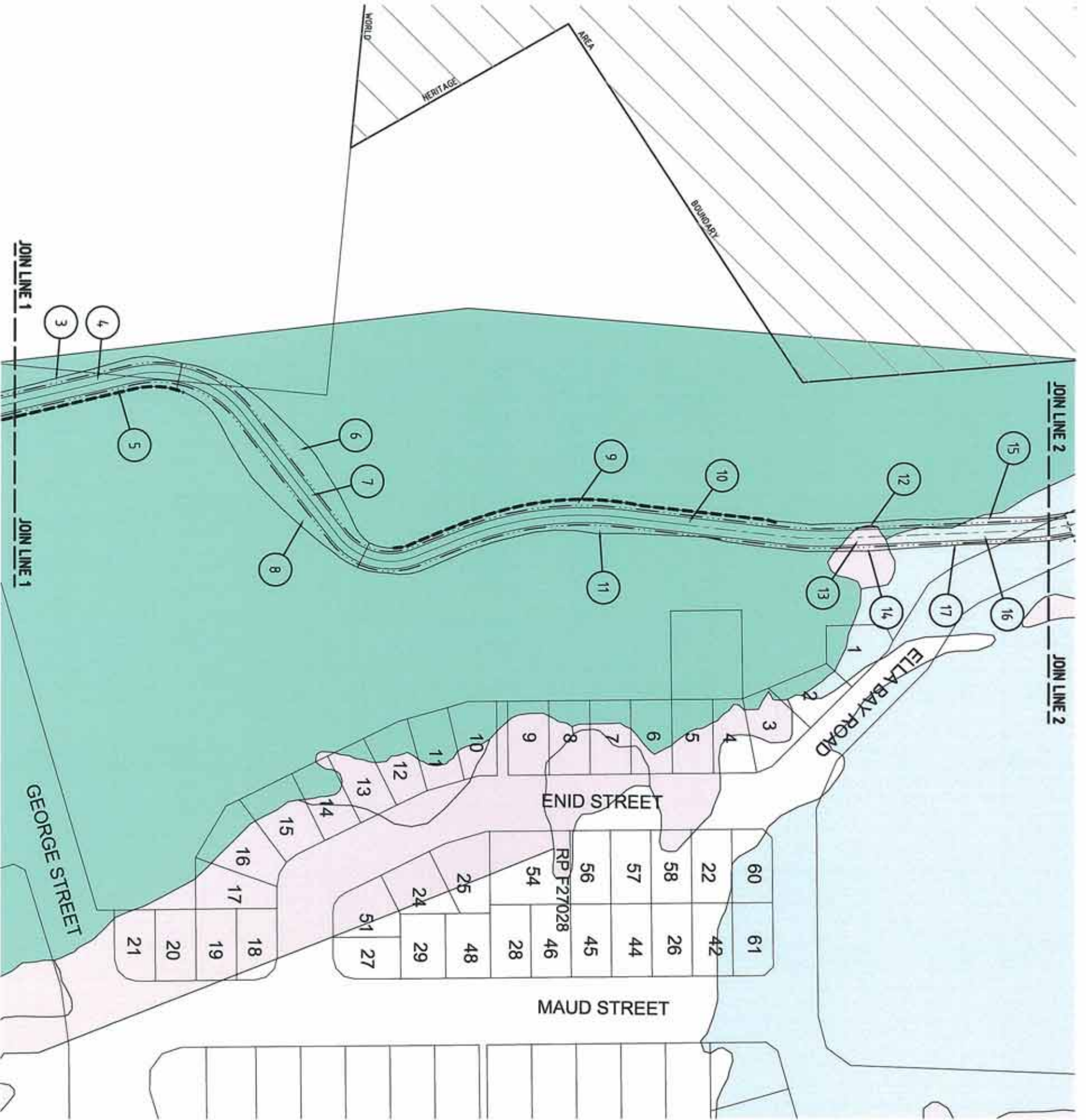
DESIGNED	A. W. S. A.	APPROVED	
DRAWN	M. J. M.	CHECKED	
DATE	FEBRUARY 2007	SCALE	1:1000 (AS SHOWN)

AUSTRALIA
 17 MONK CREEK SUITE 104 RAINBOW COAST QLD 4084
 PH: 07 5454 4000 FAX: 07 5454 4002
 EMAIL: info@groutp.com.au

PAPUA NEW GUINEA
 5TH FLOOR CLIFTONHILL HOUSE PORT KORBOR
 TELEPHONE: (675) 321 1233 FACSIMILE: (675) 321 1933
 EMAIL: info@groutp.com.pg

ARCHITECTS • CIVIL & STRUCTURAL ENGINEERS

JOB CODE	WBPREB01
SHEET NUMBER	R19
REV.	A



LEGEND	
	RETAINING WALL
	WATER LEVEL
	CENTRE LINE
	EXISTING C/L VERTS
	WORLD HERITAGE AREA BOUNDARY
	EDGE OF EXISTING TRACK
	EXISTING EXTENTS OF CLEARING
	DESIGN EXTENTS OF CLEARING
	DESIGN ROAD EDGE OF PAVEMENT
	DESIGN ROAD EDGE OF SHOULDER
	ADDITIONAL CLEARING OF VEGETATION
	WORLD HERITAGE AREA ZONE B
	WORLD HERITAGE AREA ZONE C
	COVERAGE A
	COVERAGE B
	COVERAGE C
	COVERAGE D

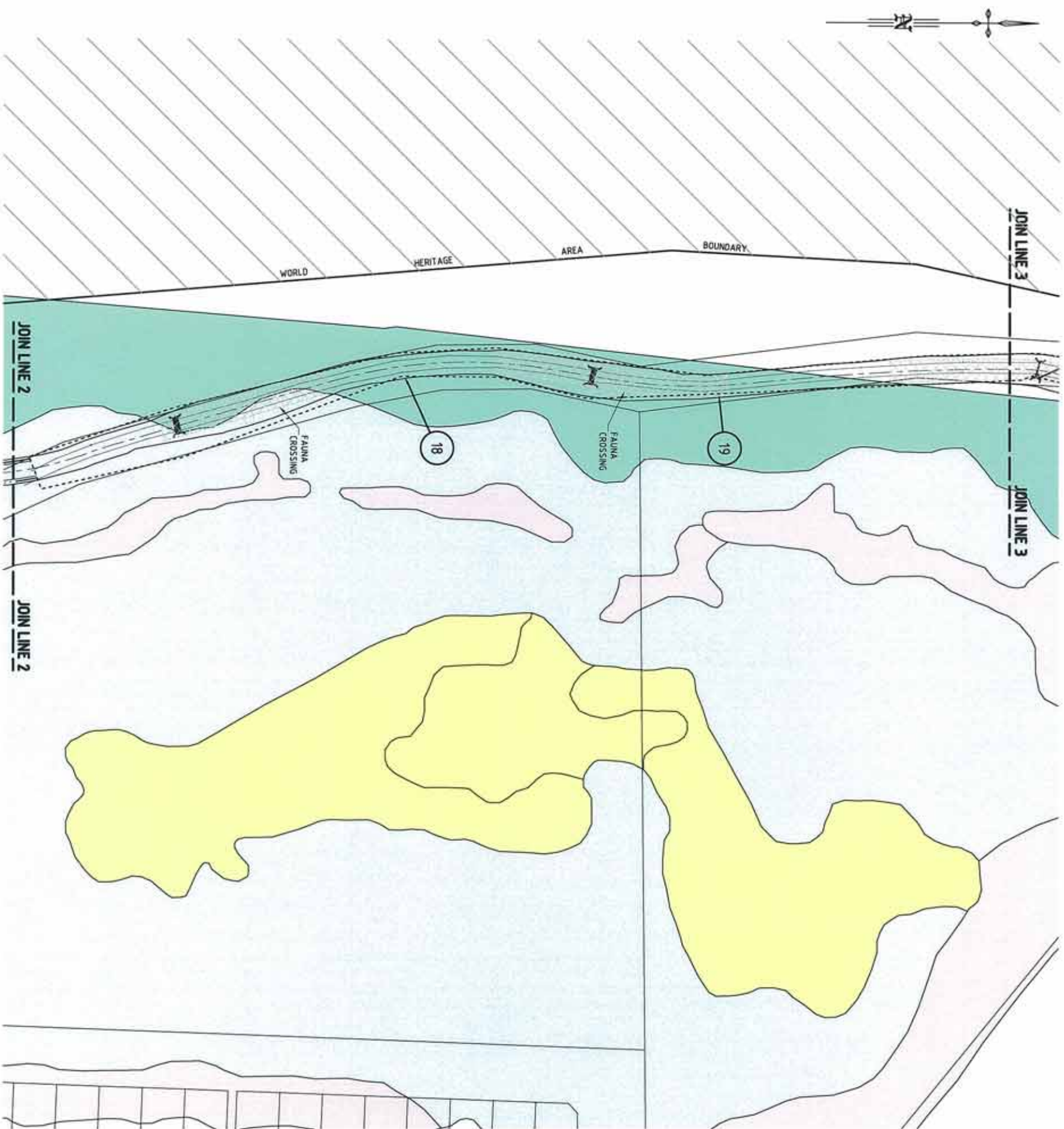
ASSOCIATED CONSULTANTS	PRELIMINARY	
CLIENT	SATORI RESORTS PTY LTD	
PROJECT	ELLA BAY ACCESS ROAD STRATEGY	
LOCATION	ELLA BAY	
TITLE	MITIGATED CLEARING PLAN - PLANT SPECIES OVERLAY - 2 OF 7	
DATE	NO. OF SHEETS	NO. OF SHEETS
	1	7

DESIGNED	A. W. S. A.	APPROVED		DATE	
DRAWN	M. J. M.	CHECKED		DATE	
SCALE		VERTICALS		SPRINT	
	1:100				
DATE	FEBRUARY 2007				

BRANNO ROAD TANGGA	MASSARU OLD 488	AUSTRALIA	17 MONK'S CREEK SUDBURY	MUSKUMINE COAST	OLD 488
PH: (07) 3671 7296	FAX: (07) 3671 3171	PH: (07) 3684 4505	FAX: (07) 3684 4502		
EMAIL: info@brannoroad.com.au		EMAIL: enquiries@muskm.com.au			
PAPUA NEW GUINEA			PORT MORSBY		
5TH FLOOR CITIZENSHIP HOUSE			PO BOX 88		
TELEPHONE: (07) 321 1233			FACSIMILE: (07) 321 1263		
DATE: enquiries@brannoroad.com.au			DATE: enquiries@muskm.com.au		

ARCHITECTS • CIVIL & STRUCTURAL ENGINEERS

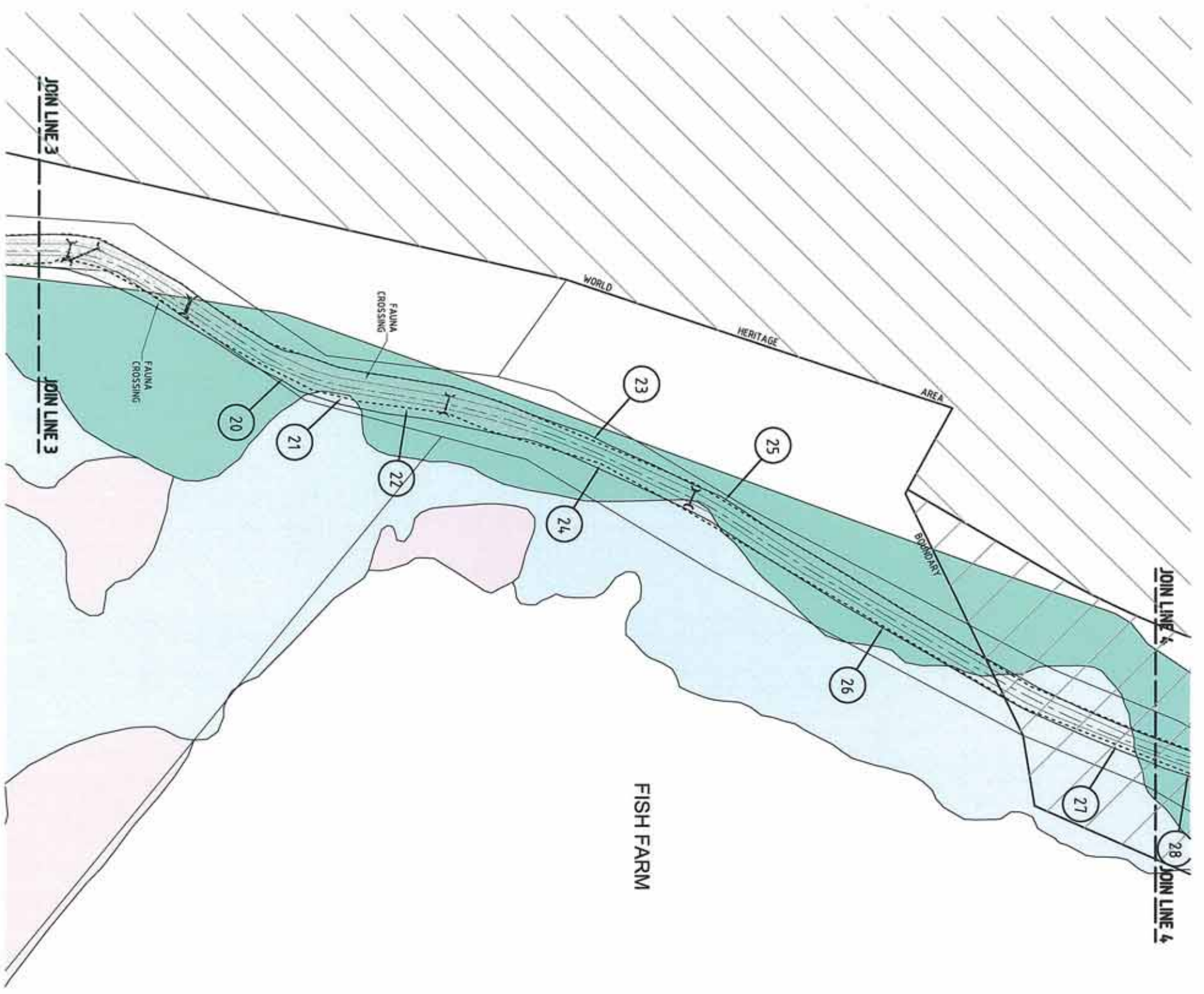
	JOB CODE	WBPREB01
ETIS GROUP	SHEET NUMBER	R20
www.etisgroup.com.au	REV	A
	ISSUE DATE	18 AUG 2006



LEGEND

- RETAINING WALL
- WATER LEVEL
- CENTER LINE
- EXISTING CULVERTS
- WORLD HERITAGE AREA BOUNDARY
- EDGE OF EXISTING TRACK
- EXISTING EXTENTS OF CLEARING
- DESIGN EXTENTS OF CLEARING
- 12 ADDITIONAL CLEARING OF VEGETATION
- ▨ WORLD HERITAGE AREA ZONE B
- ▨ WORLD HERITAGE AREA ZONE C
- ▨ COVERAGE A
- ▨ COVERAGE B
- ▨ COVERAGE C
- ▨ COVERAGE D
- ▨ RAMP TO FAUNA CROSSINGS

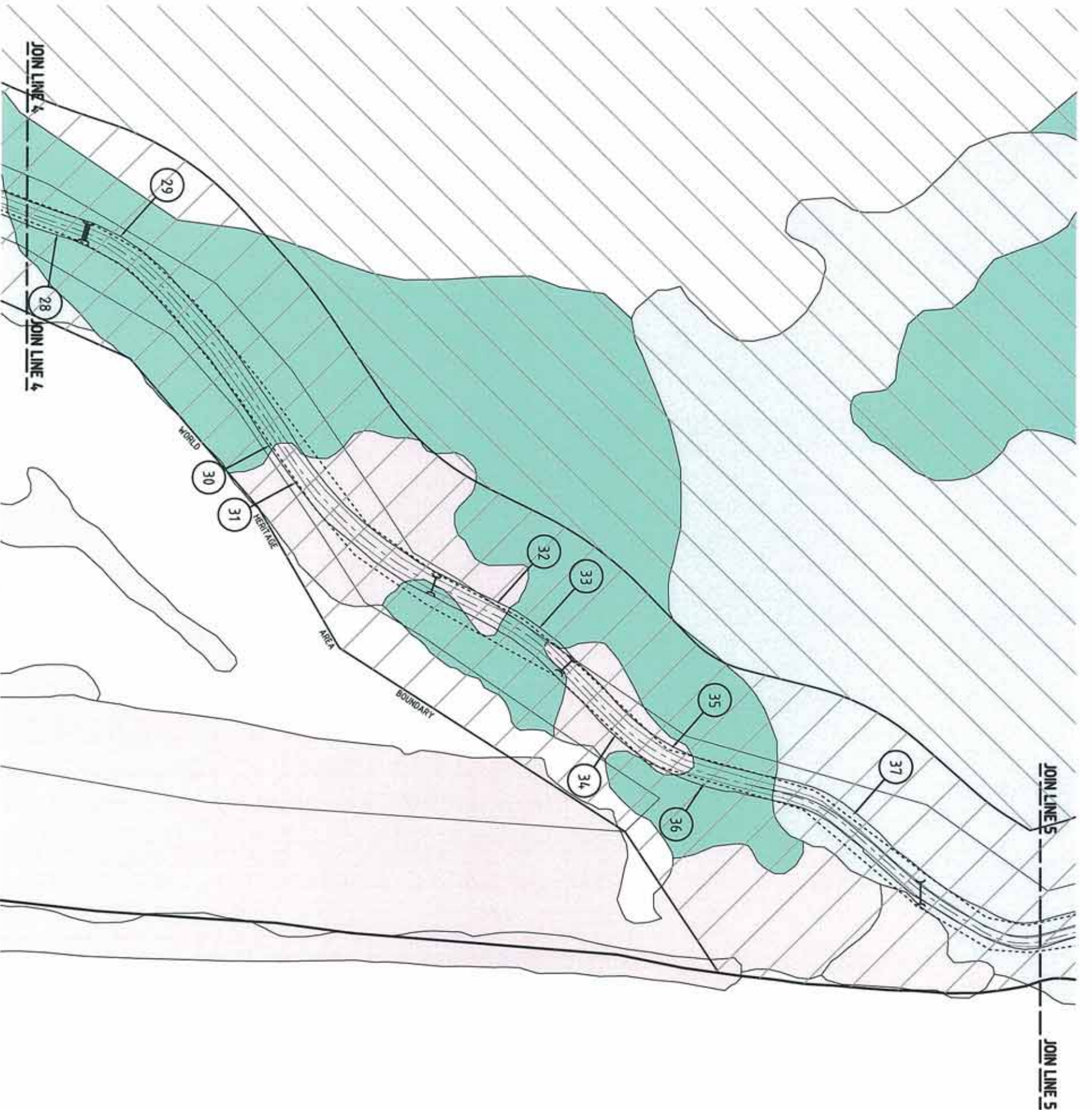
PRELIMINARY		SATORI RESORTS PTY LTD	
CONICS		ELLA BAY ACCESS ROAD STRATEGY	
MITIGATED CLEARING PLAN - PLANT SPECIES OVERLAY - 3 OF 7		ELLA BAY	
CLIENT	PROJECT	DESIGNED BY	APPROVED BY
SATORI RESORTS PTY LTD	ELLA BAY ACCESS ROAD STRATEGY	A. W. S. A.	M. J. M.
LOCATION	DATE	SCALE	DATE
ELLA BAY	FEBRUARY 2007	1:500 (AS SHOWN)	
ARCHITECTS		AUSITALLIA	
CIVIL & STRUCTURAL ENGINEERS		PORT MORESBY	
G. R. O. U. P.		E. T. S.	
JOB CODE: WBPBEB01		SHEET NUMBER: R21	
SHEET TITLE: MITIGATED CLEARING PLAN - PLANT SPECIES OVERLAY - 3 OF 7		DATE: FEBRUARY 2007	



LEGEND

- RETAINING WALL
- WATER LEVEL
- CENTER LINE
- EXISTING CIV. VERTS
- WORLD HERITAGE AREA BOUNDARY
- EDGE OF EXISTING TRACK
- EXISTING EXTENTS OF CLEARING
- DESIGN EXTENTS OF CLEARING
- ADDITIONAL CLEARING OF VEGETATION
- WORLD HERITAGE AREA ZONE B
- WORLD HERITAGE AREA ZONE C
- COVERAGE A
- COVERAGE B
- COVERAGE C
- COVERAGE D
- RAMP TO FAUNA CROSSINGS

ASSOCIATED CONSULTANTS		CLIENT		DESIGNED		APPROVED		DATE	
CONICS		SATORI RESORTS PTY LTD		A. W. S. A.		KETHI HOWELLS		APR 02 2007	
PRELIMINARY		PROJECT		DRAWN		CHECKED		DATE	
		ELLA BAY ACCESS ROAD STRATEGY		M. J. M.				FEBRUARY 2007	
LOCATION		SHEET TITLE		SCALE		DATE			
ELLA BAY		MITIGATED CLEARING PLAN - PLANT SPECIES OVERLAY - 4 OF 7		1:1000 (A1 SIZE)					
ARCHITECTS		CIVIL & STRUCTURAL ENGINEERS		AUSTRALIA		17 MONKS CREEK		AUSTRALIAN ENGINEERING BOARD	
E T S		G R O U P		17 MONKS CREEK		AUSTRALIAN ENGINEERING BOARD		C/O 4/08	
R22		A		WBPREB01		SHEET NUMBER		REV	
A									



LEGEND

-----	RETAINING WALL
-----	WATER LEVEL
-----	CENTRE LINE
-----	EXISTING CULTURETS
-----	WORLD HERITAGE AREA BOUNDARY
-----	EDGE OF EXISTING TRACK
-----	EXISTING EXTENTS OF CLEARING
-----	DESIGN EXTENTS OF CLEARING
-----	ADDITIONAL CLEARING OF VEGETATION
-----	12
-----	WORLD HERITAGE AREA ZONE B
-----	WORLD HERITAGE AREA ZONE C
-----	COVERAGE A
-----	COVERAGE B
-----	COVERAGE C
-----	COVERAGE D

ASSOCIATED CONSULTANTS	
CONICS	
PRELIMINARY	
DATE	REVISIONS

CLIENT	SATORI RESORTS PTY LTD
PROJECT	ELLA BAY ACCESS ROAD STRATEGY
LOCATION	ELLA BAY
SHEET TITLE	MITIGATED CLEARING PLAN - PLANT SPECIES OVERLAY - 5 OF 7

DESIGNED	A. W. S. A.	APPROVED	
DRAWN	M. J. M.	SCALE	1:500 (AS SHOWN)
CHECKED		DATE	FEBRUARY 2007

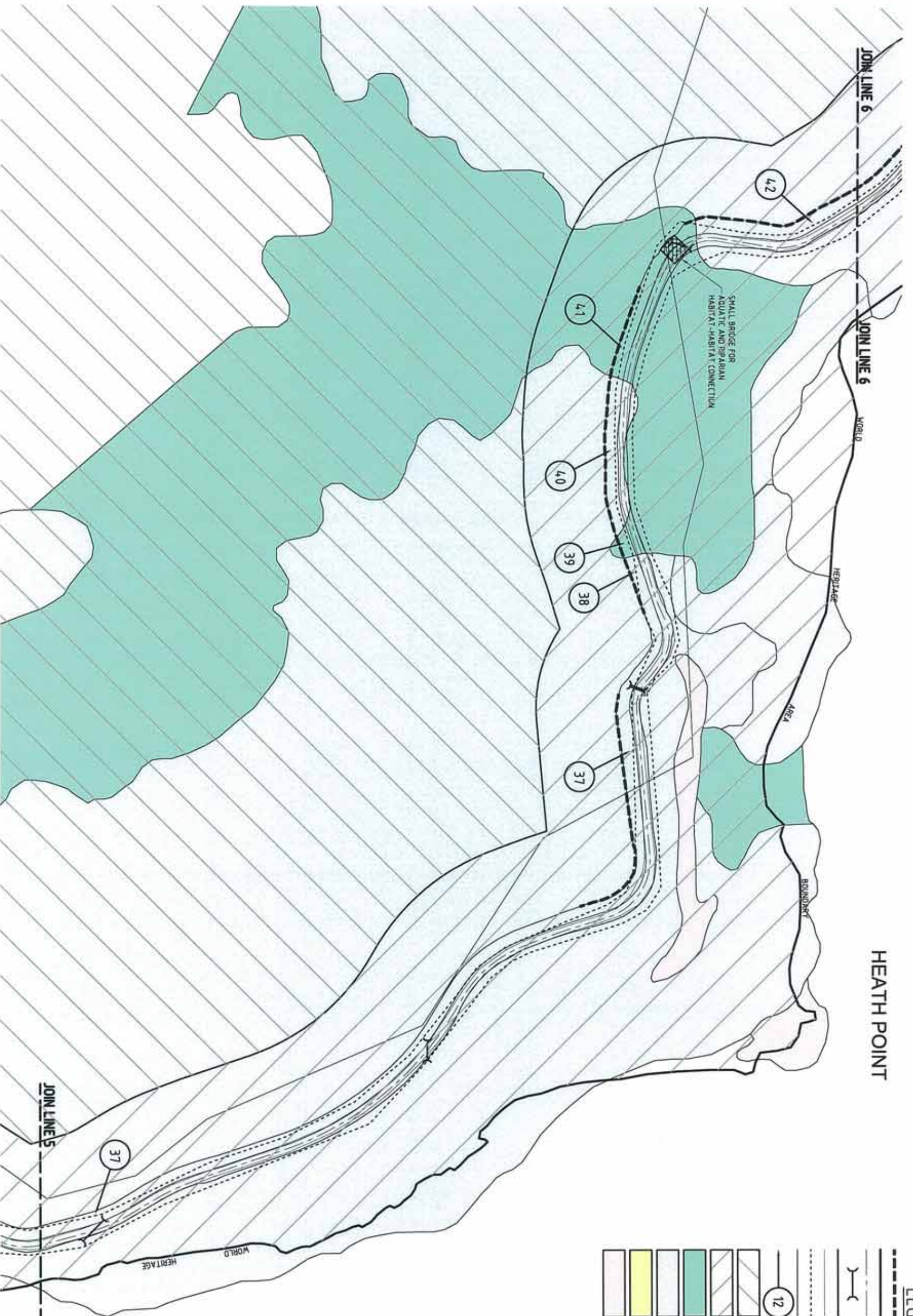
ARCHITECTS · CIVIL & STRUCTURAL ENGINEERS

ETS

WBPREB01

R23 A

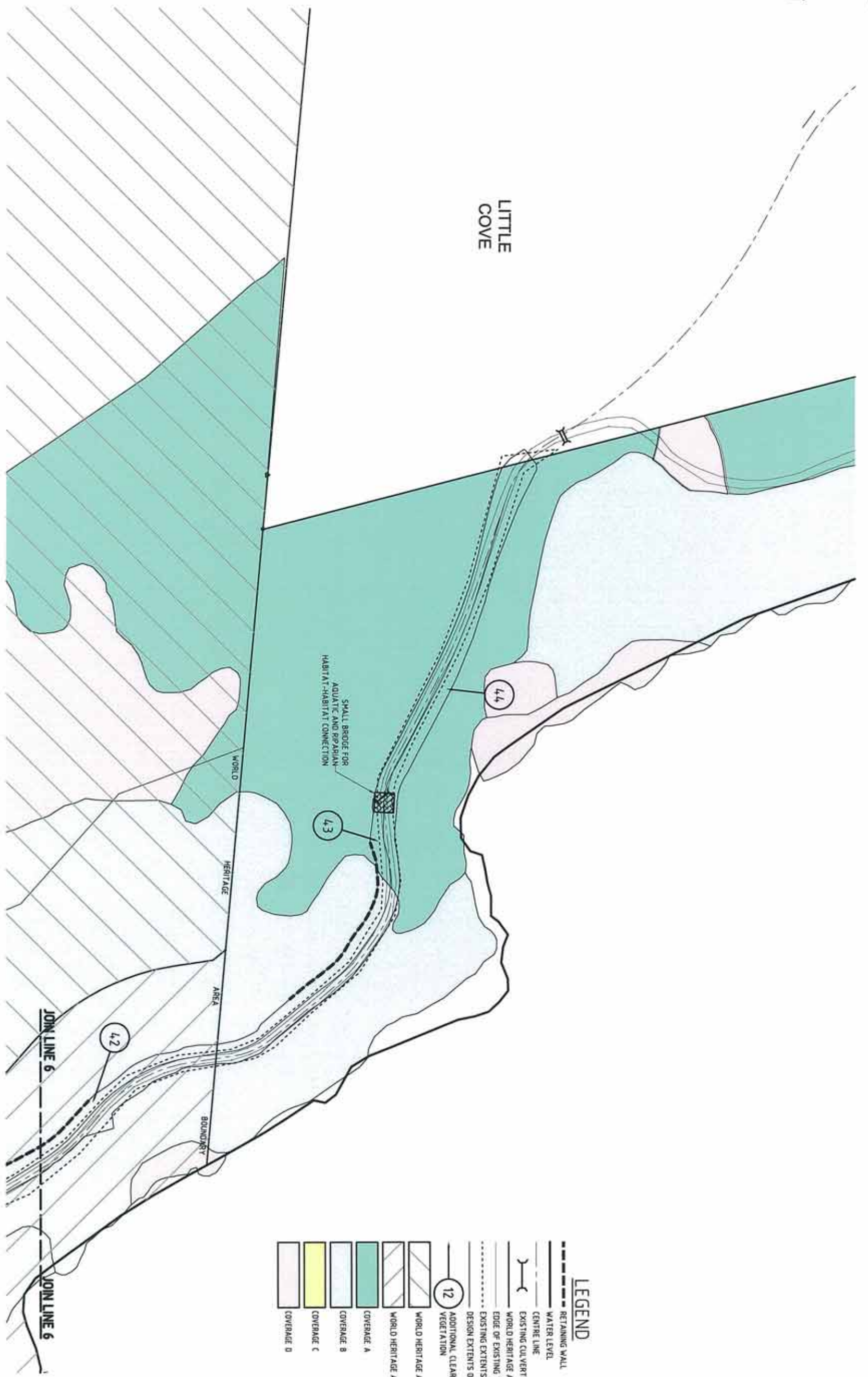
15 JULY 2006



LEGEND

- RETAINING WALL
- WATER LEVEL
- CENTRE LINE
- EXISTING CULVERTS
- WORLD HERITAGE AREA BOUNDARY
- EDGE OF EXISTING TRACK
- EXISTING EXTENTS OF CLEARING
- DESIGN EXTENTS OF CLEARING
- ADDITIONAL CLEARING OF VEGETATION
- 12
- WORLD HERITAGE AREA ZONE B
- WORLD HERITAGE AREA ZONE C
- COVERAGE A
- COVERAGE B
- COVERAGE C
- COVERAGE D

ASSOCIATED CONSULTANTS		CLIENT		DESIGNED		APPROVED		DATE	
CONICS		SATORI RESORTS PTY LTD		A. W. S. A.					
PRELIMINARY		PROJECT		DRAWN		CHECKED		DATE	
		ELLA BAY ACCESS ROAD STRATEGY		M. J. M.					
		LOCATION		SCALE		NORTH		METERS	
		ELLA BAY		1:500		0		50	
		SHEET TITLE		DATE		1:1000 (A3 SIZE)			
		MITIGATED CLEARING PLAN - PLANT SPECIES OVERLAY - 6 OF 7		FEBRUARY 2007					
		ARCHITECTS		AUSTRAALIA		PAPIUA NEW GUINEA			
		CIVIL & STRUCTURAL ENGINEERS		17 MONROE STREET SUDBURY MANUMBEI COAST QLD 4818 PH: (07) 5371 1555 FAX: (07) 5371 1571 EMAIL: info@erets.com.au		PORT HOGGESSARY 5TH FLOOR CLIFTONHILL HOUSE PORT HOGGESSARY TELEPHONE: (875) 521 1333 FACSIMILE: (875) 521 1183 EMAIL: info@erets.com.au			
		ERETS		G R O U P		WBPREB01		JOB CODE	
						R24		SHEET NUMBER	
						A		REV:	
								10 AUG 2007	



LEGEND

- RETAINING WALL
- WATER LEVEL
- CENTRE LINE
- EXISTING CULVERTS
- WORLD HERITAGE AREA BOUNDARY
- EDGE OF EXISTING TRACK
- EXISTING EXTENTS OF CLEARING
- DESIGN EXTENTS OF CLEARING
- ADDITIONAL CLEARING OF VEGETATION
- WORLD HERITAGE AREA ZONE B
- WORLD HERITAGE AREA ZONE C
- COVERAGE A
- COVERAGE B
- COVERAGE C
- COVERAGE D

ASSOCIATED CONSULTANTS		CLIENT	
CONICS		SATORI RESORTS PTY LTD	
PRELIMINARY		PROJECT	
		ELLA BAY ACCESS ROAD STRATEGY	
		LOCATION	
		ELLA BAY	
		SHEET TITLE	
		MITIGATED CLEARING PLAN - PLANT SPECIES OVERLAY - 7 OF 7	
DESIGNED	A. W. S. A.	APPROVED	DATE
DRAWN	M. J. M.		
CHECKED		SCALE	DATE
DATE	FEBRUARY 2007	1:500 (A1 SIZE)	
1 SIMMONS ROAD, TARENANA, NEWCASTLE QLD 4206 PH: (07) 3211 7200 FAX: (07) 3211 9279 EMAIL: info@stjgroup.com.au		AUSTRALIA 17 MONAS CREEK, BUCCHING, SUNSHINE COAST QLD 4506 PH: (07) 5458 4520 FAX: (07) 5458 4522 EMAIL: enquiries@stjgroup.com	
PAPUA NEW GUINEA 5TH FLOOR, CHURCH STREET, HOVOR, PORT MORSBAY TELEPHONE: (675) 321 1533 FACSIMILE: (675) 321 1613 EMAIL: enquiries@stjgroup.com		ARCHITECTS • CIVIL & STRUCTURAL ENGINEERS	
		JOB CODE WBPREB01	
SHEET NUMBER: R25		TITLE: A	
DATE: 16 AUG 2007			



LEGEND

- RETAINING WALL
- WATER LEVEL
- CENTRE LINE
- EXISTING CULVERTS
- WORLD HERITAGE AREA BOUNDARY
- EDGE OF EXISTING TRACK
- EXISTING EXTENTS OF CLEARING
- DESIGN EXTENTS OF CLEARING
- DESIGN ROAD EDGE OF PAVEMENT
- DESIGN ROAD EDGE OF SHOULDER
- ADDITIONAL CLEARING OF VEGETATION
- WORLD HERITAGE AREA ZONE B
- WORLD HERITAGE AREA ZONE C
- COVERAGE A
- COVERAGE B
- COVERAGE C
- COVERAGE D
- COVERAGE E

ASSOCIATED CONSULTANTS	
PRELIMINARY	
CONTRACT NO.	REVISIONS
DATE	BY

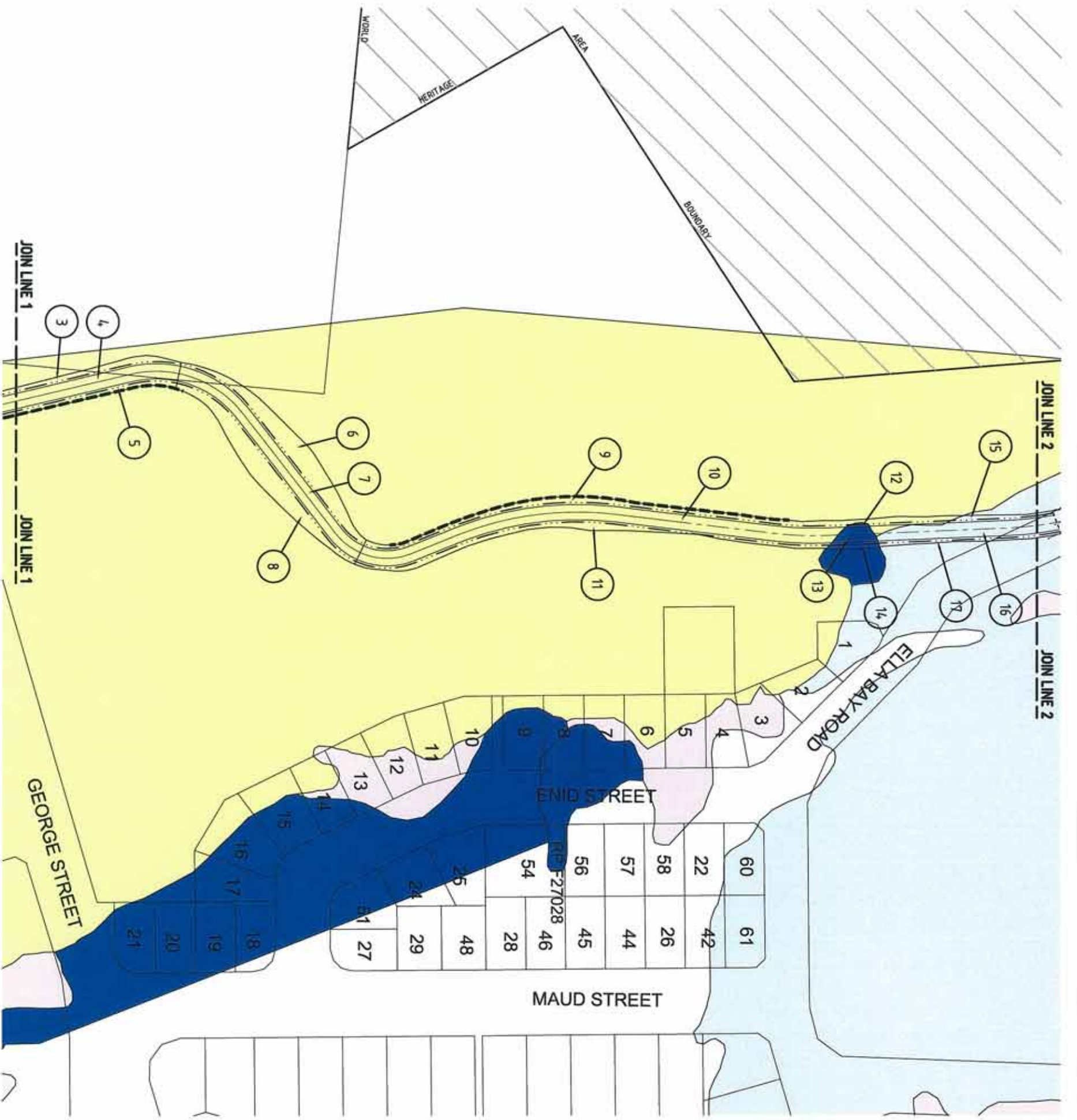
CLIENT	SATORI RESORTS PTY LTD
PROJECT	ELLA BAY ACCESS ROAD STRATEGY
LOCATION	ELLA BAY
SHEET TITLE	MITIGATED CLEARING PLAN - PLANT COMMUNITIES OVERLAY - 1 OF 7

DESIGNED	A. W. S. A.	APPROVED	
DRAWN	M. J. M.	SCALE	AS SHOWN
CHECKED		DATE	FEBRUARY 2007

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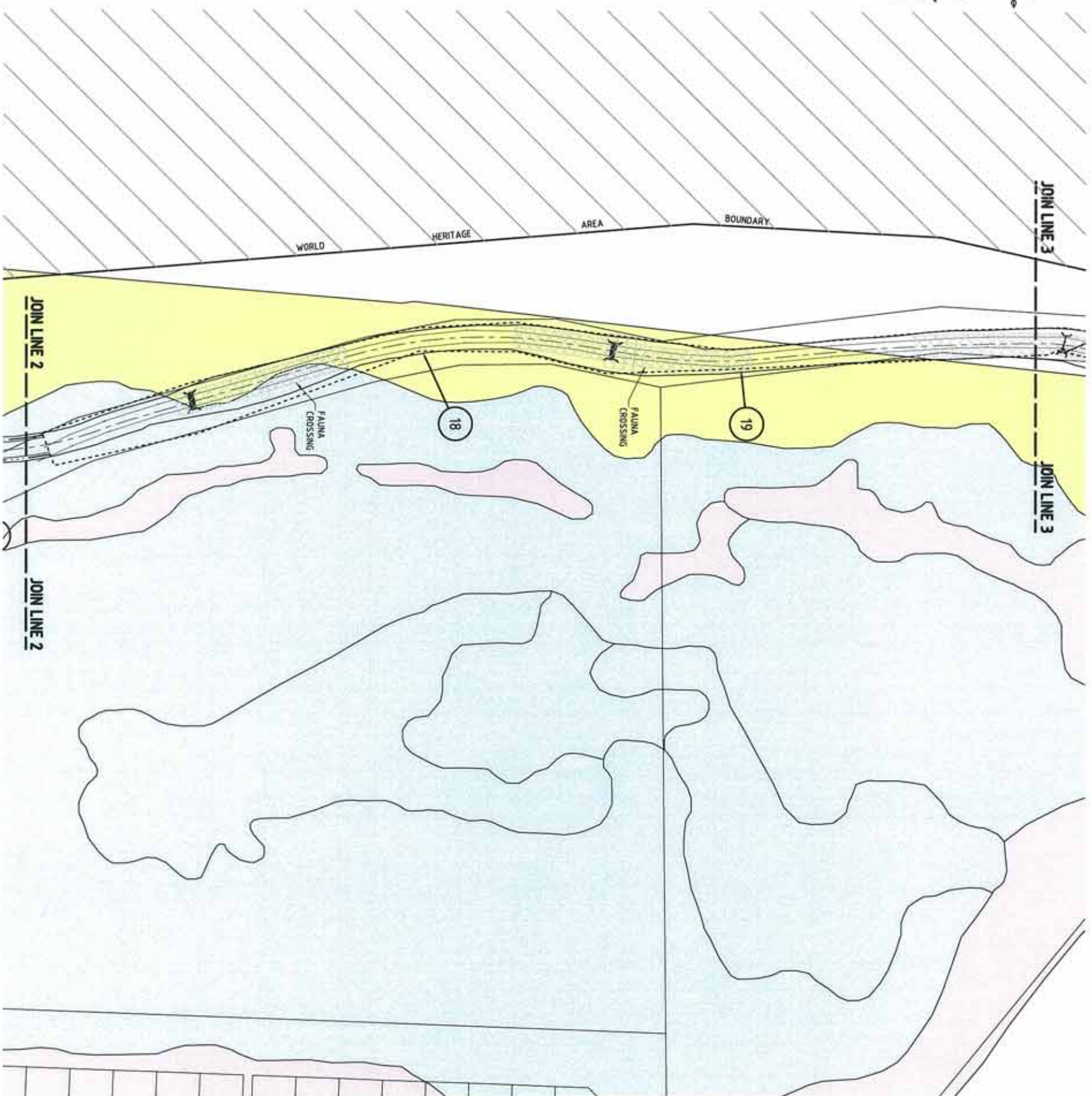
JOB CODE	WBPREB01
SHEET NUMBER	R26
REV.	A



LEGEND

- RETAINING WALL
- WATER LEVEL
- CENTRE LINE
- EXISTING CIVIL VERTS
- WORLD HERITAGE AREA BOUNDARY
- EDGE OF EXISTING TRACK
- EXISTING EXTENTS OF CLEARING
- DESIGN EXTENTS OF CLEARING
- DESIGN ROAD EDGE OF PAVEMENT
- DESIGN ROAD EDGE OF SHOULDER
- ADDITIONAL CLEARING OF VEGETATION
- WORLD HERITAGE AREA ZONE B
- WORLD HERITAGE AREA ZONE C
- COVERAGE A
- COVERAGE B
- COVERAGE C
- COVERAGE D
- COVERAGE E

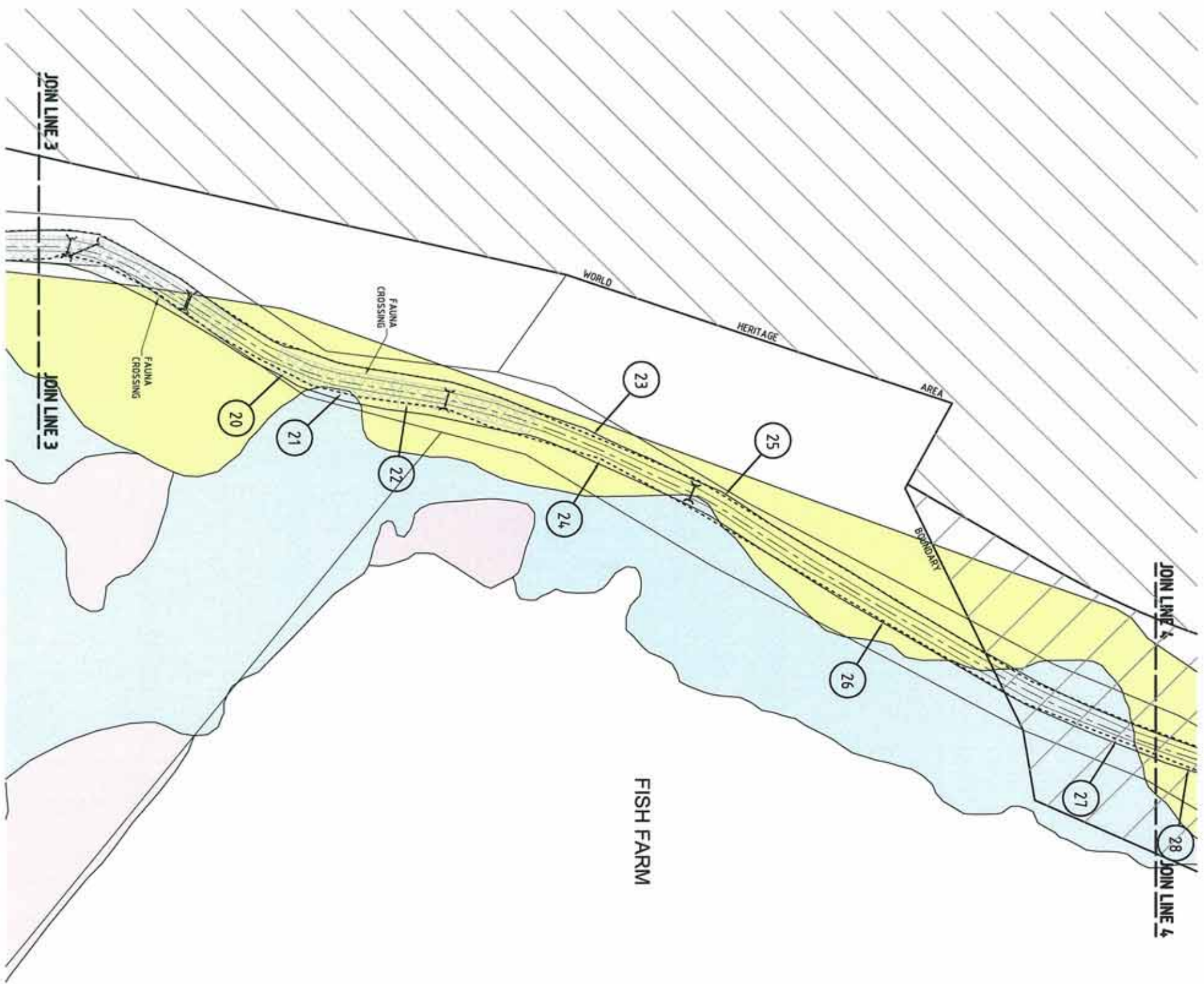
ASSOCIATED CONSULTANTS		CLIENT		DESIGNED		APPROVED		DATE	
CONICS		SATORI RESORTS PTY LTD		A. W. S. A.					
PRELIMINARY		PROJECT		DRAWN		CHECKED		DATE	
		ELLA BAY ACCESS ROAD STRATEGY		M. J. M.					
		LOCATION		SCALE		KETHI INDICATES		NPDZ ZONE	
		ELLA BAY		1: 250 1: 500 1: 1000 1: 2000 1: 4000 1: 8000		1: 500 (A1 SIZE)			
		MITIGATED CLEARING PLAN - PLANT COMMUNITIES OVERLAY - 2 OF 7		DATE		DATE			
				FEBRUARY 2007					
				AUSTRALIA		17 MONK CREEK ROAD, SUNSHINE COAST QLD 4508		PH (07) 5448 6888 FAX (07) 5448 6888	
				PARUVA NIEVO QUINERA		PORT MACDONALD		PH (07) 5448 6888 FAX (07) 5448 6888	
				ARCHITECTS		CIVIL & STRUCTURAL ENGINEERS		www.kstgroup.com.au	
				JOB CODE		WBPREB01		SHEET NUMBER	
				G R O U P		R27		A	



LEGEND

- RETAINING WALL
- WATER LEVEL
- CENTRE LINE
- EXISTING CULVERTS
- WORLD HERITAGE AREA BOUNDARY
- EDGE OF EXISTING TRACK
- EXISTING EXTENTS OF CLEARING
- DESIGN EXTENTS OF CLEARING
- DESIGN ROAD EDGE OF PAVEMENT
- DESIGN ROAD EDGE OF SHOULDER
- ADDITIONAL CLEARING OF VEGETATION
- WORLD HERITAGE AREA ZONE B
- WORLD HERITAGE AREA ZONE C
- WORLD HERITAGE AREA ZONE A
- COVERAGE A
- COVERAGE B
- COVERAGE C
- COVERAGE D
- COVERAGE E
- RAMP TO FAUNA CROSSINGS

ASSOCIATED CONSULTANTS		CLIENT		DESIGNED		APPROVED		DATE	
COMICS		SATORI RESORTS PTY LTD		A.W.S.A					
PRELIMINARY		PROJECT		DRAWN		SCALE			
		ELLA BAY ACCESS ROAD STRATEGY		M.J.M		KETH HONNELL		1:500 (A1 SIZE)	
		LOCATION		CHECKED		DATE			
		ELLA BAY		M.J.M		FEBRUARY 2007			
		SHEET TITLE		DATE		SCALE			
		MITIGATED CLEARING PLAN - PLANT COMMUNITIES OVERLAY - 3 OF 7		FEBRUARY 2007		1:500 (A1 SIZE)			
		ARCHITECTS		AUSTRALIA		PORT KOWSBAY			
		CIVIL & STRUCTURAL ENGINEERS		PANTUA NEW GUINEA		PORT KOWSBAY			
		G R O U P		E T S		R28		A	
		JOB CODE		WBPREB01		SHEET NUMBER		REV	
						R28		A	



LEGEND

- RETAINING WALL
- WATER LEVEL
- CENTRE LINE
- EXISTING CULTIVETS
- WORLD HERITAGE AREA BOUNDARY
- EDGE OF EXISTING TRACK
- EXISTING EXTENTS OF CLEARING
- DESIGN EXTENTS OF CLEARING
- ADDITIONAL CLEARING OF VEGETATION
- WORLD HERITAGE AREA ZONE B
- WORLD HERITAGE AREA ZONE C
- COVERAGE A
- COVERAGE B
- COVERAGE C
- COVERAGE D
- COVERAGE E
- RAMP TO FAUNA CROSSINGS

ASSOCIATED CONSULTANTS

PRELIMINARY

DATE	NO.	DESCRIPTION

CLIENT

SATORI RESORTS PTY LTD

PROJECT

ELLA BAY ACCESS ROAD STRATEGY

LOCATION

ELLA BAY

SHEET TITLE

MITIGATED CLEARING PLAN - PLANT COMMUNITIES OVERLAY - 4 OF 7

DESIGNED

A.W.S.A

APPROVED

DATE

DRAWN

M.J.M

CHECKED

DATE

SCALE

NORTH

1:500 (A1 SIZE)

1:1000 (A1 SIZE)

ARCHITECTS

CIVIL & STRUCTURAL ENGINEERS

AUSTRALIA

11 MONROE CREEK BOULEVARD, SUNSHINE COAST QLD 4568

PH: (07) 5448 4400 FAX: (07) 5448 4402

EMAIL: enquiries@ets.com.au

PAPUA NEW GUINEA

PO BOX 909, PORT MORSBURY

5TH FLOOR, CONSTITUTION ROAD, PO BOX 909, PORT MORSBURY

TELEPHONE: (675) 321 1232 FACSIMILE: (675) 321 1233

EMAIL: enquiries@ets.com.pg

ETS GROUP

www.etsgroup.net.au

JOB CODE

WBPREB01

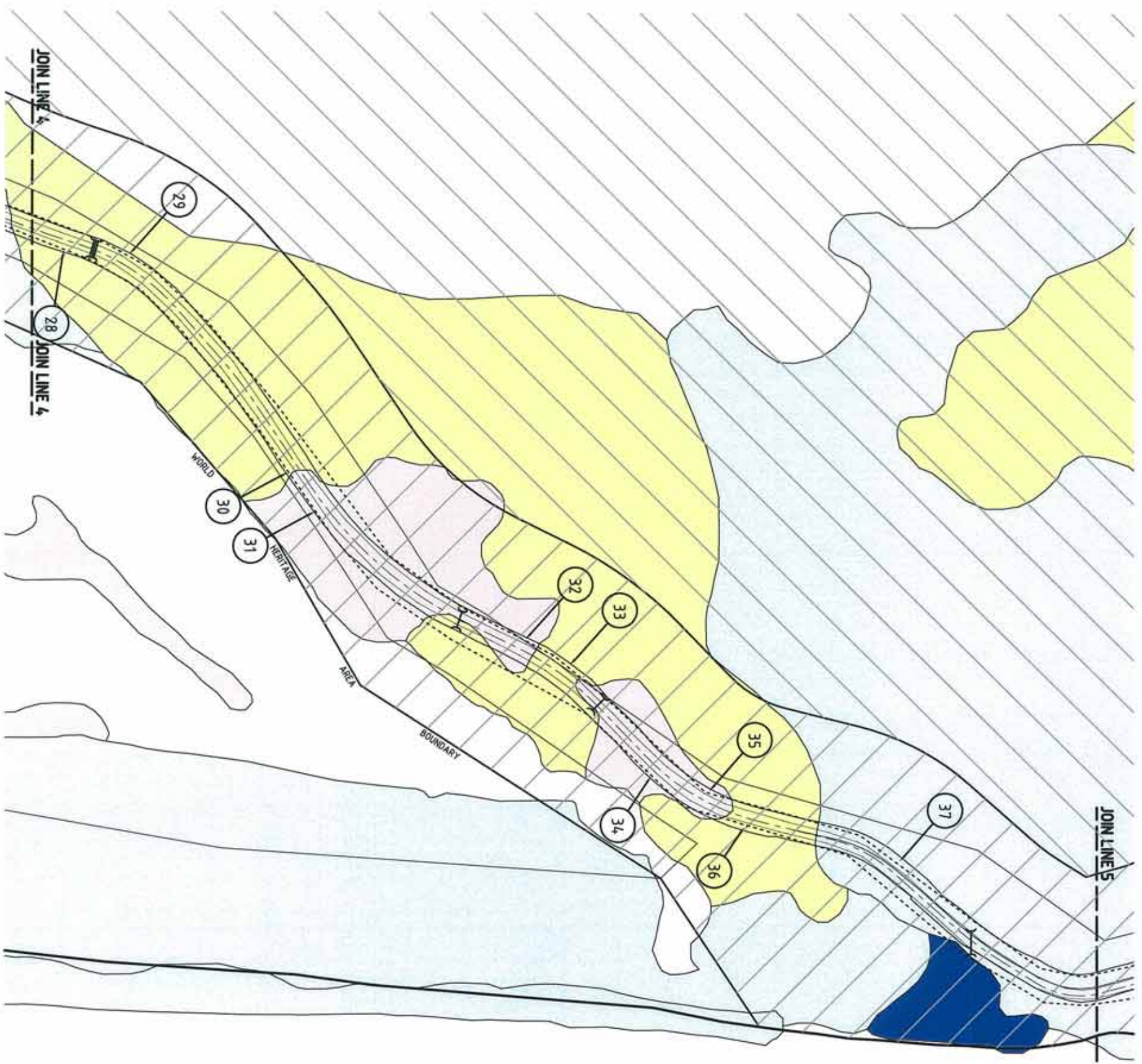
SHEET NUMBER

R29

REV

A

14 JULY 2008



LEGEND

- RETAINING WALL
- WATER LEVEL
- CENTRE LINE
- EXISTING CULVERTS
- WORLD HERITAGE AREA BOUNDARY
- EDGE OF EXISTING TRACK
- DESIGN EXTENTS OF CLEARING
- ADDITIONAL CLEARING OF VEGETATION
- 12
- WORLD HERITAGE AREA ZONE B
- WORLD HERITAGE AREA ZONE C
- COVERAGE A
- COVERAGE B
- COVERAGE C
- COVERAGE D
- COVERAGE E

ASSOCIATED CONSULTANTS

PRELIMINARY

DATE	NO.	DESCRIPTION	BY	APPROVED
	1	ISSUE FOR CONSTRUCTION		

CLIENT

SATORI RESORTS PTY LTD

PROJECT

ELLA BAY ACCESS ROAD STRATEGY

LOCATION

ELLA BAY

MITIGATED CLEARING PLAN - PLANT COMMUNITIES OVERLAY - 5 OF 7

DESIGNED

A.W.S.A

APPROVED

M.J.M

DATE

FEBRUARY 2007

SCALE

1:500 (A1 SIZE)

DATE

FEBRUARY 2007

AUSTRALIA

17 MONKING CREEK SUCCESSEUR BUSINESS COAST QLD 4806

PH (07) 5458 4200 FAX (07) 5458 4202

EMAIL: info@groutp.com.au

PAPUA NEW GUINEA

5111 HILTON CUMBERBURN HOUSE PORT KORBOR

TELEPHONE (675) 321 1233 FACSIMILE (675) 321 1233

EMAIL: info@groutp.com.pg

ARCHITECTS • CIVIL & STRUCTURAL ENGINEERS

GR O U P

ETS

www.groutp.com.au

SHEET NUMBER

R30

REV

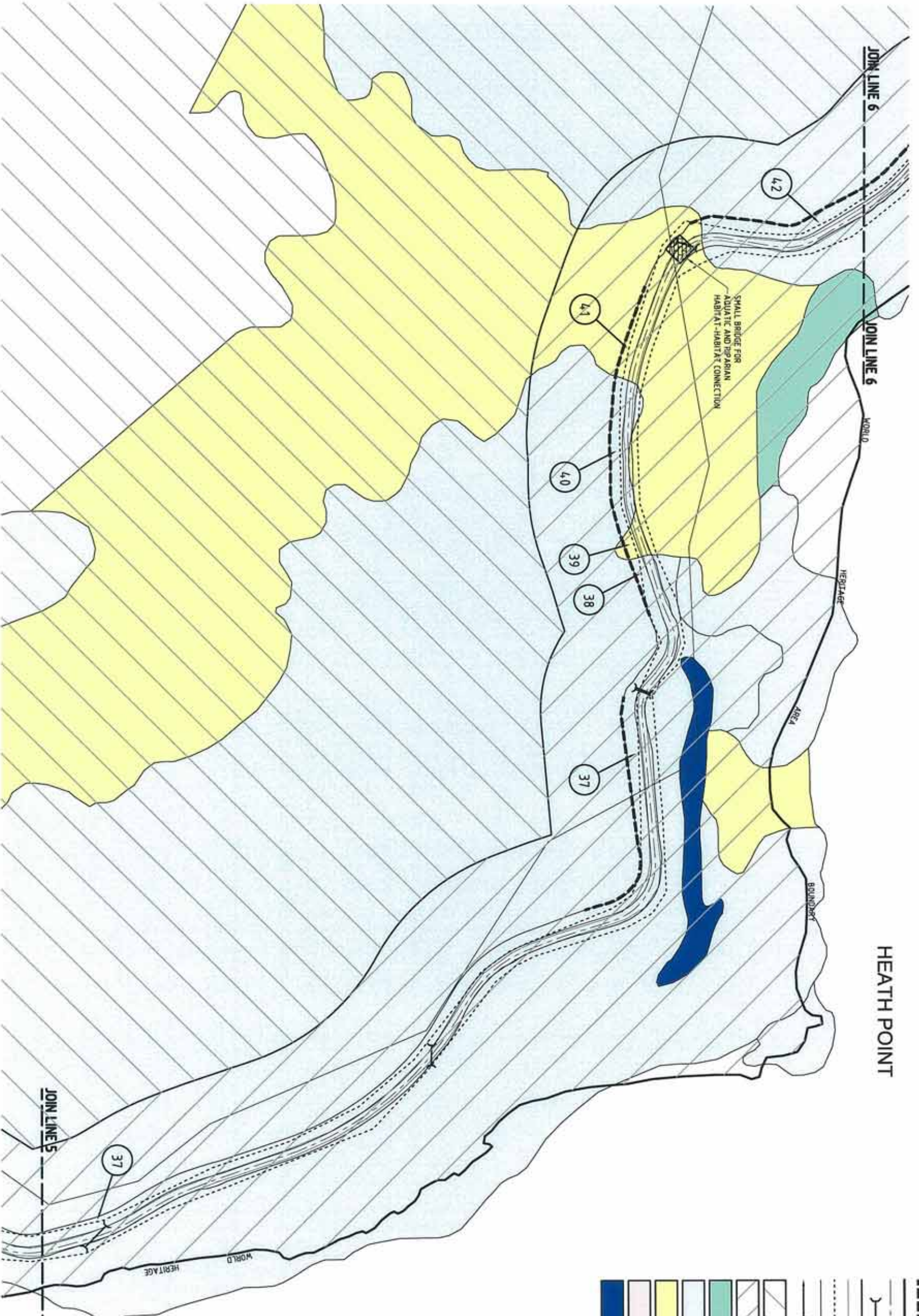
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DATE

19 JULY 2006

JOB CODE

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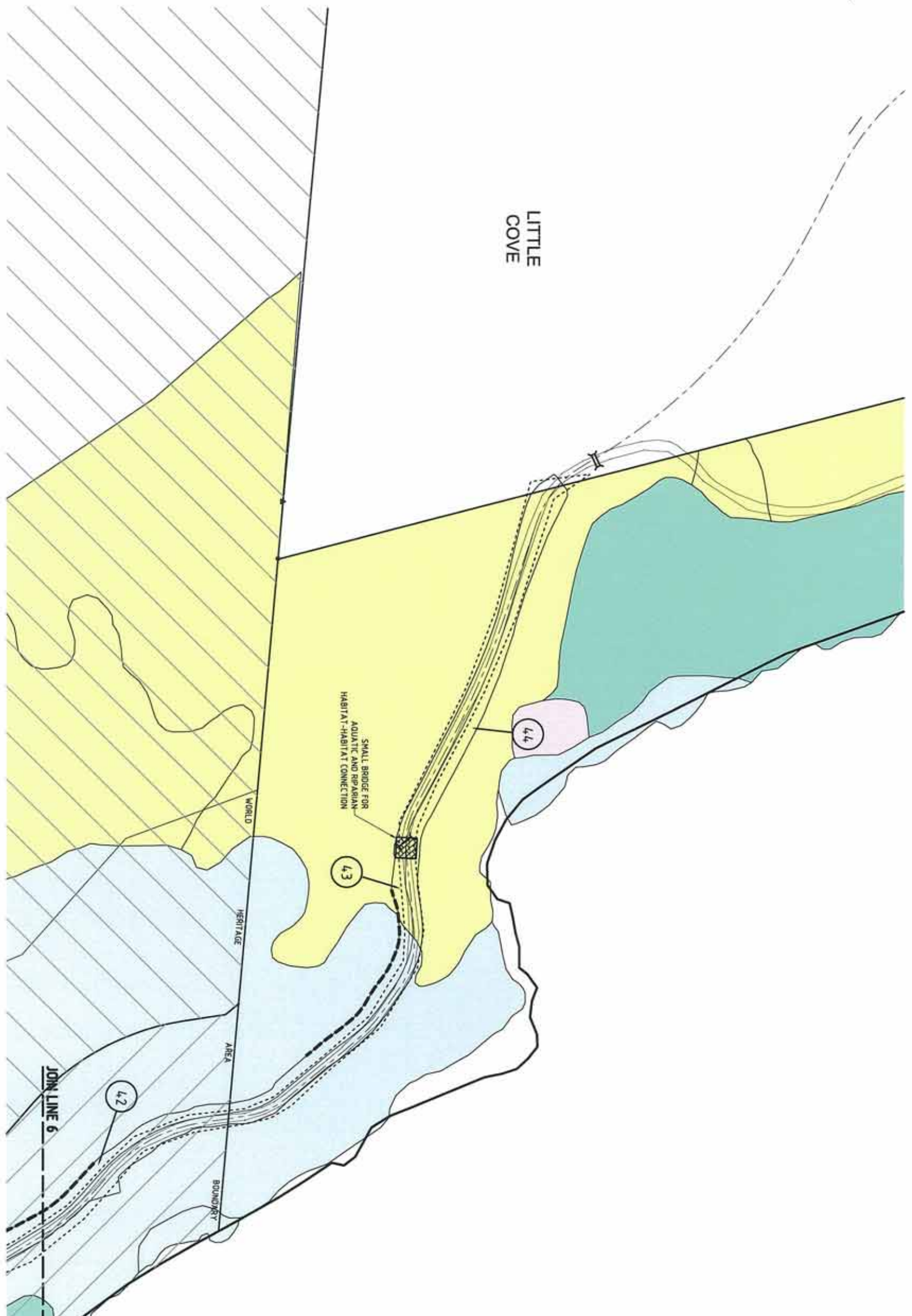


HEATH POINT

LEGEND

- RETAINING WALL
- WATER LEVEL
- CENTRE LINE
- EXISTING CULVERTS
- WORLD HERITAGE AREA BOUNDARY
- EDGE OF EXISTING TRACK
- EXISTING EXTENTS OF CLEARING
- DESIGN EXTENTS OF CLEARING
- ADDITIONAL CLEARING OF VEGETATION
- WORLD HERITAGE AREA ZONE B
- WORLD HERITAGE AREA ZONE C
- COVERAGE A
- COVERAGE B
- COVERAGE C
- COVERAGE D
- COVERAGE E
- COVERAGE F

ASSOCIATED CONSULTANTS CONICS PRELIMINARY		CLIENT SATORI RESORTS PTY LTD ELLA BAY ACCESS ROAD STRATEGY ELLA BAY MITIGATED CLEARING PLAN - PLANT COMMUNITIES OVERLAY - 6 OF 7	
PROJECT ELLA BAY ACCESS ROAD STRATEGY LOCATION ELLA BAY SHEET MITIGATED CLEARING PLAN - PLANT COMMUNITIES OVERLAY - 6 OF 7	DESIGNED A. W. S. A. CHECKED M. J. M. DATE FEBRUARY 2007	APPROVED WITH AMENDMENTS DATE FEBRUARY 2007	SCALE 1:500 AT SCALE
AUSTRALIA 11 MCKENZIE STREET, WOODSIDE, VICTORIA 3139 PHONE: (03) 9498 4808 FAX: (03) 9498 4802 EMAIL: info@ets.com.au		PARUA NEW GUINEA PO BOX 806 TELEPHONE: (675) 321 1232 FAX: (675) 321 1233 EMAIL: info@ets.com.au	
ARCHITECTS · CIVIL & STRUCTURAL ENGINEERS		 ETS GROUP www.etsgroup.net.au	
JOB CODE WBPREB01		SHEET NUMBER R31 REV A	



LEGEND

- RETAINING WALL
- WATER LEVEL
- CENTRE LINE
- EXISTING CULVERTS
- WORLD HERITAGE AREA BOUNDARY
- EDGE OF EXISTING TRACK
- EXISTING EXTENTS OF CLEARING
- DESIGN EXTENTS OF CLEARING
- ADDITIONAL CLEARING OF VEGETATION
- 12
- WORLD HERITAGE AREA ZONE B
- WORLD HERITAGE AREA ZONE C
- COVERAGE A
- COVERAGE B
- COVERAGE C
- COVERAGE D
- COVERAGE E
- COVERAGE F

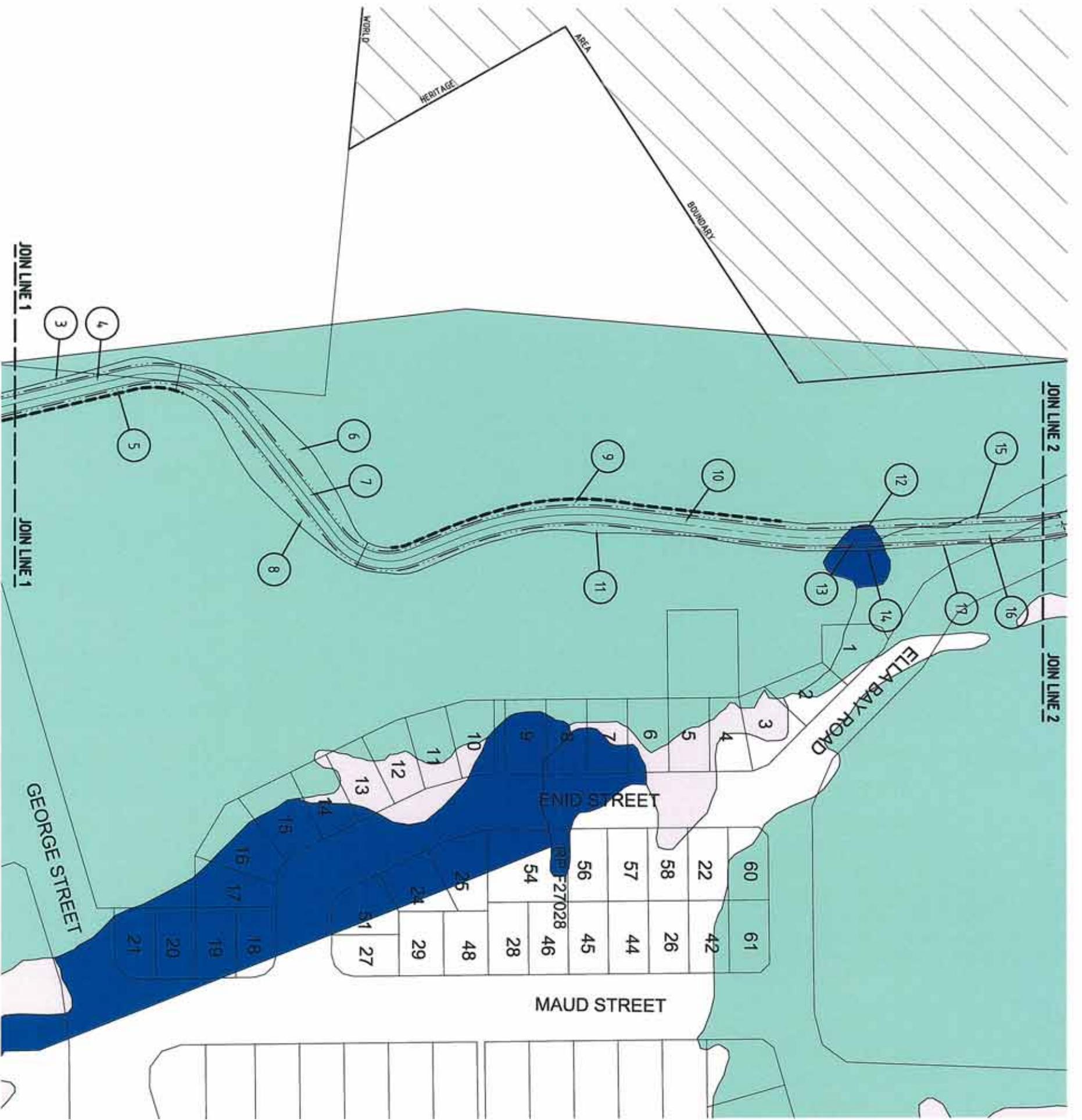
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CONICS		WBPREB01	
PRELIMINARY		SHEET NUMBER: R32	
PROJECT: SATORI RESORTS PTY LTD		TITLE: A	
LOCATION: ELLA BAY ACCESS ROAD STRATEGY		DATE: 18 AUG 2007	
SHEET TITLE: ELLA BAY		DRAWN: A.W.S.A.	
MITIGATED CLEARING PLAN - PLANT COMMUNITIES OVERLAY - 7 OF 7		CHECKED: M.J.M.	
DATE: FEBRUARY 2007		DATE: FEBRUARY 2007	
SCALE: 1:1000 (AS SHOWN)		SCALE: 1:1000 (AS SHOWN)	
ARCHITECTS: CIVIL & STRUCTURAL ENGINEERS		ARCHITECTS: CIVIL & STRUCTURAL ENGINEERS	
AUSTRALIA 17 MONKS CREEK SUITE 101 MONSIEUR COAST QLD 4008 TEL: 07 5498 4000 FAX: 07 5498 4002 EMAIL: enquiries@ets.com.au		AUSTRALIA 17 MONKS CREEK SUITE 101 MONSIEUR COAST QLD 4008 TEL: 07 5498 4000 FAX: 07 5498 4002 EMAIL: enquiries@ets.com.au	
PAPUA NEW GUINEA 5TH FLOOR CLINTONSON ROAD PO BOX 99 TEL: 675 321 1111 FAX: 675 321 1111 EMAIL: enquiries@ets.com.au		PAPUA NEW GUINEA 5TH FLOOR CLINTONSON ROAD PO BOX 99 TEL: 675 321 1111 FAX: 675 321 1111 EMAIL: enquiries@ets.com.au	



LEGEND

- RETAINING WALL
- WATER LEVEL
- CENTRE LINE
- EXISTING CULVERTS
- WORLD HERITAGE AREA BOUNDARY
- EDGE OF EXISTING TRACK
- EXISTING EXTENTS OF CLEARING
- DESIGN EXTENTS OF CLEARING
- DESIGN ROAD EDGE OF PAVEMENT
- DESIGN ROAD EDGE OF SHOULDER
- ADDITIONAL CLEARING OF VEGETATION
- 12
- WORLD HERITAGE AREA ZONE B
- WORLD HERITAGE AREA ZONE C
- COVERAGE A
- COVERAGE C
- COVERAGE D
- COVERAGE E

ASSOCIATED CONSULTANTS		PRELIMINARY	
CONICIS		SATORI RESORTS PTY LTD	
PROJECT		ELLA BAY ACCESS ROAD STRATEGY	
LOCATION		ELLA BAY	
SHEET TITLE		MITIGATED CLEARING PLAN - ANIMAL SPECIES OVERLAY - 1 OF 7	
DATE	DRAWN	APPROVED	DATE
	M.J.M.	A.W.S.A.	
DATE	CHECKED	SCALE	DATE
FEBRUARY 2007	M.J.M.	1:800 (A1 SIZE)	
AUSTRALIA 17 KOKONIC CIRCLE SUDBURY SUNSHINE COAST QLD 4008 PH (07) 5518 4400 FAX (07) 5518 4402 EMAIL: info@groutp.com.au		AUSTRALIA 17 KOKONIC CIRCLE SUDBURY SUNSHINE COAST QLD 4008 PH (07) 5518 4400 FAX (07) 5518 4402 EMAIL: info@groutp.com.au	
ARCHITECTS CIVIL & STRUCTURAL ENGINEERS		ARCHITECTS CIVIL & STRUCTURAL ENGINEERS	
SHEET NUMBER: R33		SHEET NUMBER: R33	
REV: A		REV: A	

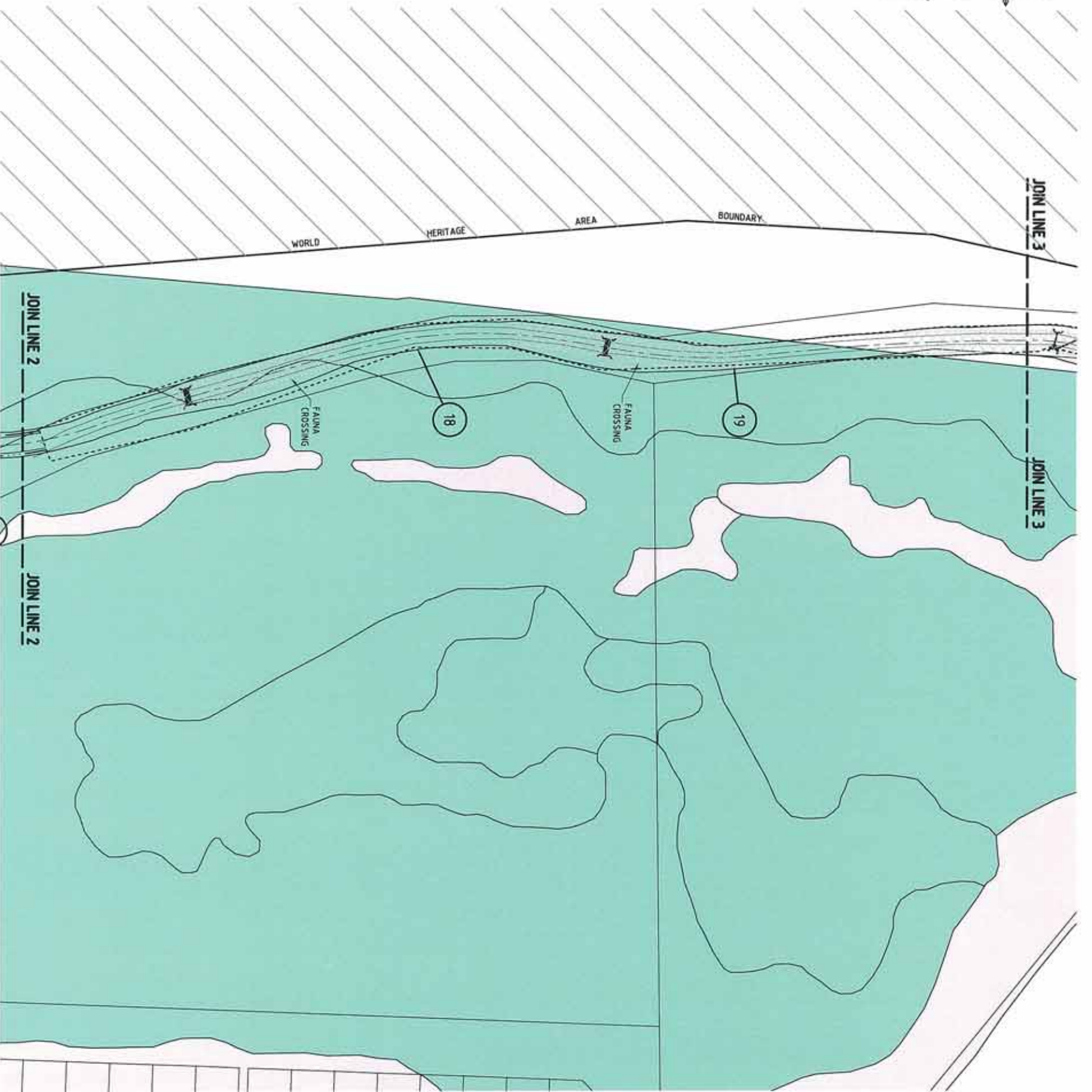


LEGEND

- RETAINING WALL
- WATER LEVEL
- CENTRE LINE
- EXISTING CULVERTS
- WORLD HERITAGE AREA BOUNDARY
- EDGE OF EXISTING TRACK
- EXISTING EXTENTS OF CLEARING
- DESIGN EXTENTS OF CLEARING
- DESIGN ROAD EDGE OF PAVEMENT
- DESIGN ROAD EDGE OF SHOULDER
- ADDITIONAL CLEARING OF VEGETATION
- WORLD HERITAGE AREA ZONE B
- WORLD HERITAGE AREA ZONE C
- COVERAGE A
- COVERAGE C
- COVERAGE D
- COVERAGE E

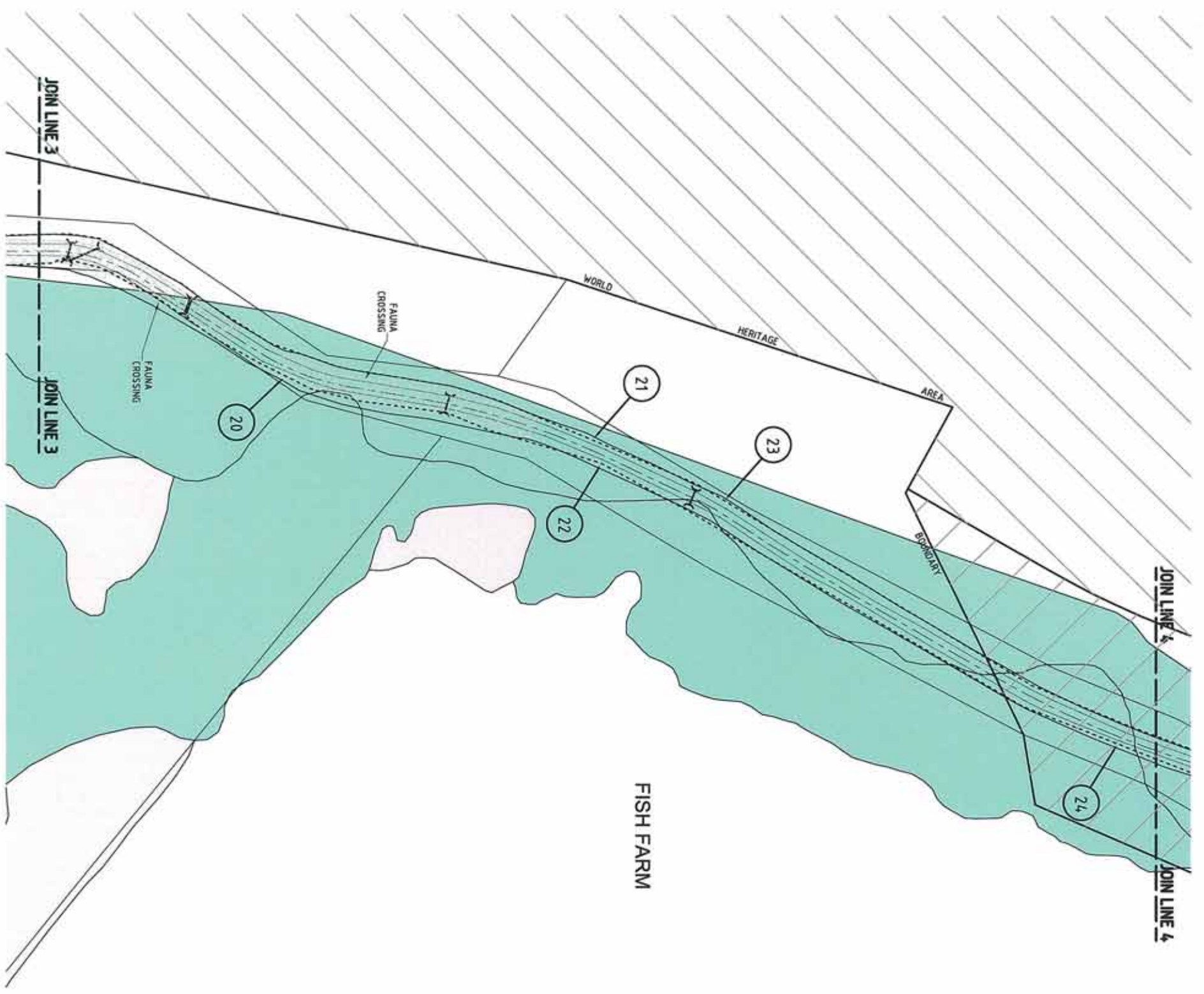
ASSOCIATED CONSULTANTS		CLIENT		DESIGNED		APPROVED		DATE	
CONICS		SATORI RESORTS PTY LTD		A. W.S.A		KEITH HORNELLE		APR 2007	
PRELIMINARY		PROJECT		CHECKED		SCALE			
		ELLA BAY ACCESS ROAD STRATEGY		M.J.M		1:500 (AS SHOWN)			
DATE		LOCATION		DATE		SCALE			
1		ELLA BAY		FEBRUARY 2007		1:500 (AS SHOWN)			
SHEET		MITIGATED CLEARING PLAN - ANIMAL SPECIES OVERLAY - 2 OF 7		DATE		SCALE			
R34				FEBRUARY 2007		1:500 (AS SHOWN)			
REV				DATE		SCALE			
A									
JOB CODE		ARCHITECTS		AUSTRALIA		PORT HOBART		17 MONROE CIRCLE SUITE 101A, BURNING TREE ROAD QLD 4009	
WBPREB01		CIVIL & STRUCTURAL ENGINEERS		PANTULA HEV QUINIA		PORT HOBART		17 MONROE CIRCLE SUITE 101A, BURNING TREE ROAD QLD 4009	
SHEET NUMBER		R34		PANTULA HEV QUINIA		PORT HOBART		17 MONROE CIRCLE SUITE 101A, BURNING TREE ROAD QLD 4009	
REV		A		PANTULA HEV QUINIA		PORT HOBART		17 MONROE CIRCLE SUITE 101A, BURNING TREE ROAD QLD 4009	
DATE		15 JULY 2006		PANTULA HEV QUINIA		PORT HOBART		17 MONROE CIRCLE SUITE 101A, BURNING TREE ROAD QLD 4009	
				PANTULA HEV QUINIA		PORT HOBART		17 MONROE CIRCLE SUITE 101A, BURNING TREE ROAD QLD 4009	





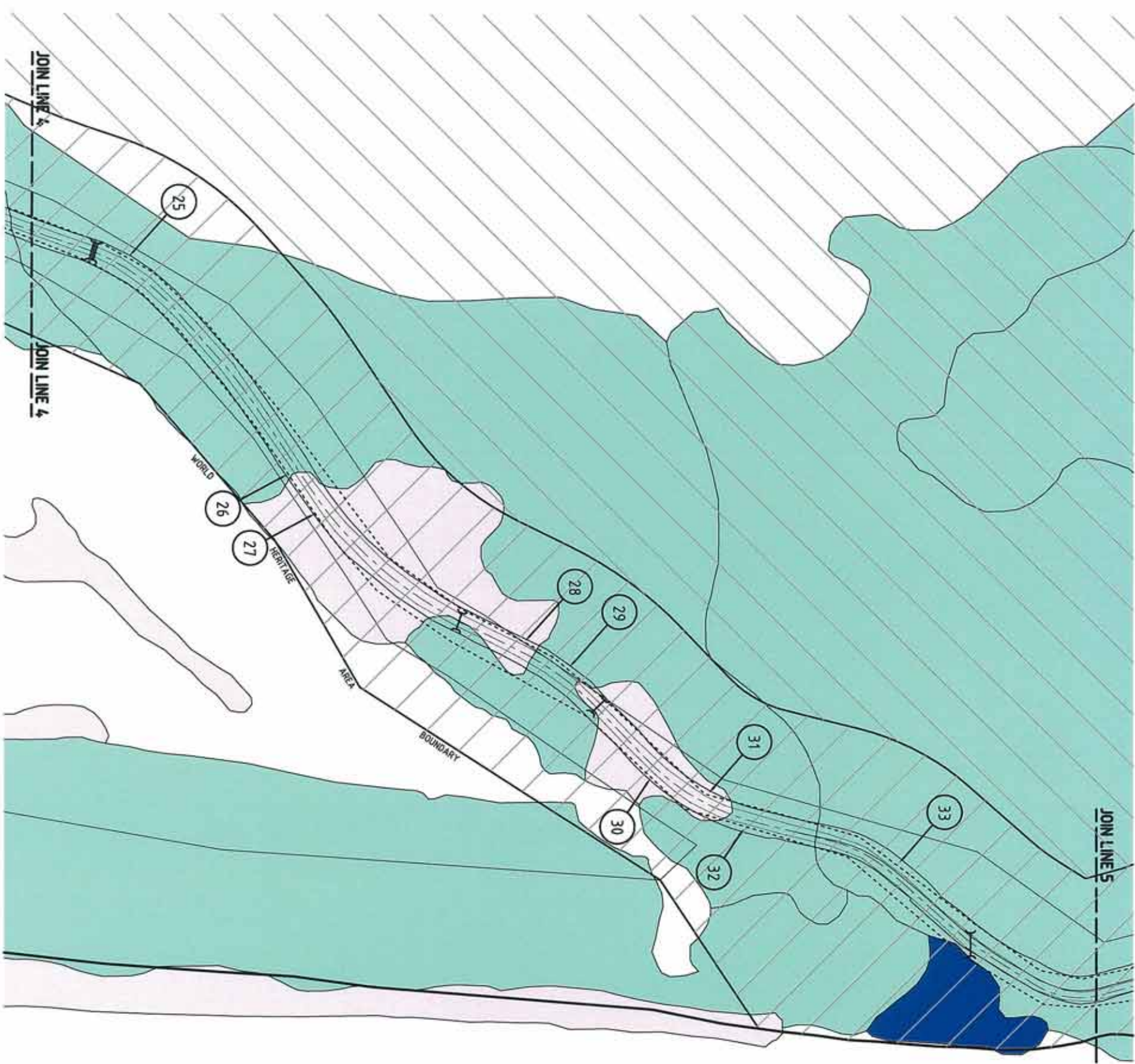
- LEGEND**
- RETAINING WALL
 - WATER LEVEL
 - CENTRE LINE
 - EXISTING CULVERTS
 - WORLD HERITAGE AREA BOUNDARY
 - EDGE OF EXISTING TRACK
 - EXISTING EXTENTS OF CLEARING
 - DESIGN EXTENTS OF CLEARING
 - ADDITIONAL CLEARING OF VEGETATION
 - 12 WORLD HERITAGE AREA ZONE B
 - World Heritage Area Zone B
 - World Heritage Area Zone C
 - Coverage A
 - Coverage C
 - Coverage D
 - Coverage E
 - RAMP TO FAUNA CROSSINGS

ASSOCIATED CONSULTANTS		CLIENT		DESIGNED		APPROVED		DATE	
CONICS		SATORI RESORTS PTY LTD		A. W. S. A.					
PRELIMINARY		PROJECT		DRAWN		SCALE			
		ELLA BAY ACCESS ROAD STRATEGY		M. J. M.		1:1,000 (A3 SIZE)			
SHEET		LOCATION		CHECKED		DATE			
R35		ELLA BAY				FEBRUARY 2007			
TITLE		MITIGATED CLEARING PLAN - ANIMAL SPECIES OVERLAY - 3 OF 7							
<p>ARCHITECTS • CIVIL & STRUCTURAL ENGINEERS</p> <p>ETS GROUP</p> <p>17 MONK'S CREEK BLVD, SUNSHINE COAST QLD 4568 PH: 071 337 1700 FAX: 071 337 5075 EMAIL: info@etsgroup.net.au</p> <p>37th FLOOR, CITICORP CENTRE, PO BOX 99 TELEPHONE: 0675 321 133 FACSIMILE: 0675 321 163 EMAIL: info@etsgroup.com.au</p>									
JOB CODE		WBPREB01							
SHEET NUMBER		R35							
TRIP		A							
DATE		15 AUG 2007							



- LEGEND**
- RETAINING WALL
 - WATER LEVEL
 - CENTRE LINE
 - EXISTING CULVERTS
 - WORLD HERITAGE AREA BOUNDARY
 - EDGE OF EXISTING TRACK
 - EXISTING EXTENTS OF CLEARING
 - DESIGN EXTENTS OF CLEARING
 - ADDITIONAL CLEARING OF VEGETATION
 - WORLD HERITAGE AREA ZONE B
 - WORLD HERITAGE AREA ZONE C
 - COVERAGE A
 - COVERAGE C
 - COVERAGE D
 - COVERAGE E
 - RAMP TO FAUNA CROSSINGS

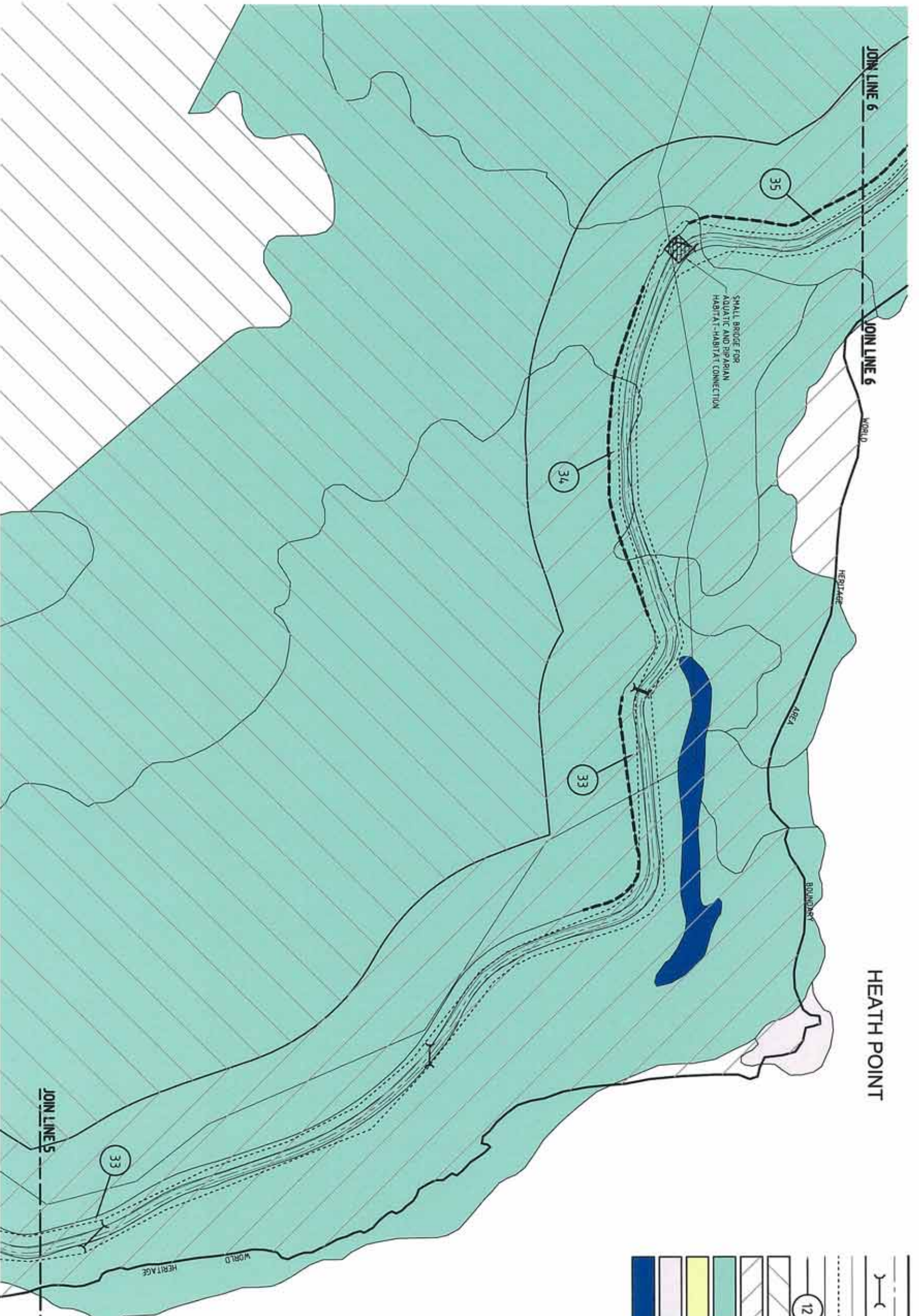
ASSOCIATED CONSULTANTS		PRELIMINARY	
CONICS		SATORI RESORTS PTY LTD	
PROJECT		ELLA BAY ACCESS ROAD STRATEGY	
LOCATION		ELLA BAY	
SHEET TITLE		MITIGATED CLEARING PLAN - ANIMAL SPECIES OVERLAY - 4 OF 7	
DESIGNED		A. W. S. A.	
CHECKED		M. J. M.	
DATE		FEBRUARY 2007	
SCALE		1:1,000 (A3 SIZE)	
DRAWN		A. W. S. A.	
DATE		FEBRUARY 2007	
APPROVED		DATE	
WESTERN WELLS		ARCHITECTS	
1 SHAWAN ROAD TARENCO		AUSTRALIA	
PH: (07) 3371 1000 FAX: (07) 3371 1079		17 MONROE CREEK BURECKHAM	
EMAIL: enquiries@westernwells.com		OLD 4008	
PAPUA NEW GUINEA		PH: (07) 5481 4558 FAX: (07) 5481 4552	
5TH FLOOR CONVENTION HOUSE, PO BOX 998		EMAIL: enquiries@westernwells.com	
TELEPHONE: (09) 327 1333 FACSIMILE: (09) 327 1333		PORT MORESBY	
EMAIL: enquiries@westernwells.com		CIVIL & STRUCTURAL ENGINEERS	
ARCHITECTS		G R O U P	
www.designgroup.net.au		JOB CODE	
WBPREB01		SHEET NUMBER	
R36		REV	
A		DATE	
15 JAN 2007		SCALE	
1:1,000		DRAWN BY	
A		CHECKED BY	
A		DESIGNED BY	
A		APPROVED BY	



LEGEND

- RETAINING WALL
- WATER LEVEL
- CENTRE LINE
- EXISTING CULTURETS
- WORLD HERITAGE AREA BOUNDARY
- EDGE OF EXISTING TRACK
- EXISTING HERITAGE AREA BOUNDARY
- DESIGN EXTENTS OF CLEARING
- ADDITIONAL CLEARING OF VEGETATION
- 12
- WORLD HERITAGE AREA ZONE B
- WORLD HERITAGE AREA ZONE C
- COVERPAGE A
- COVERPAGE C
- COVERPAGE B
- COVERPAGE D
- COVERPAGE E

ASSOCIATED CONSULTANTS		CLIENT		DESIGNED		APPROVED		DATE	
CONICS		SATORI RESORTS PTY LTD		A. W. S. A.					
PRELIMINARY		PROJECT		CHECKED		SCALE			
		ELLA BAY ACCESS ROAD STRATEGY		M. J. M.		1:500 (A1 SIZE)			
LOCATION		SHEET TITLE		DATE		SHEET NUMBER		JOB CODE	
ELLA BAY		MITIGATED CLEARING PLAN - ANIMAL SPECIES OVERLAY - 5 OF 7		FEBRUARY 2007		R37		WBPREB01	
ARCHITECTS		CIVIL & STRUCTURAL ENGINEERS		E T S		SHEET NUMBER		REV.	
G R O U P		A		www.etsgroup.com.au		R37		A	



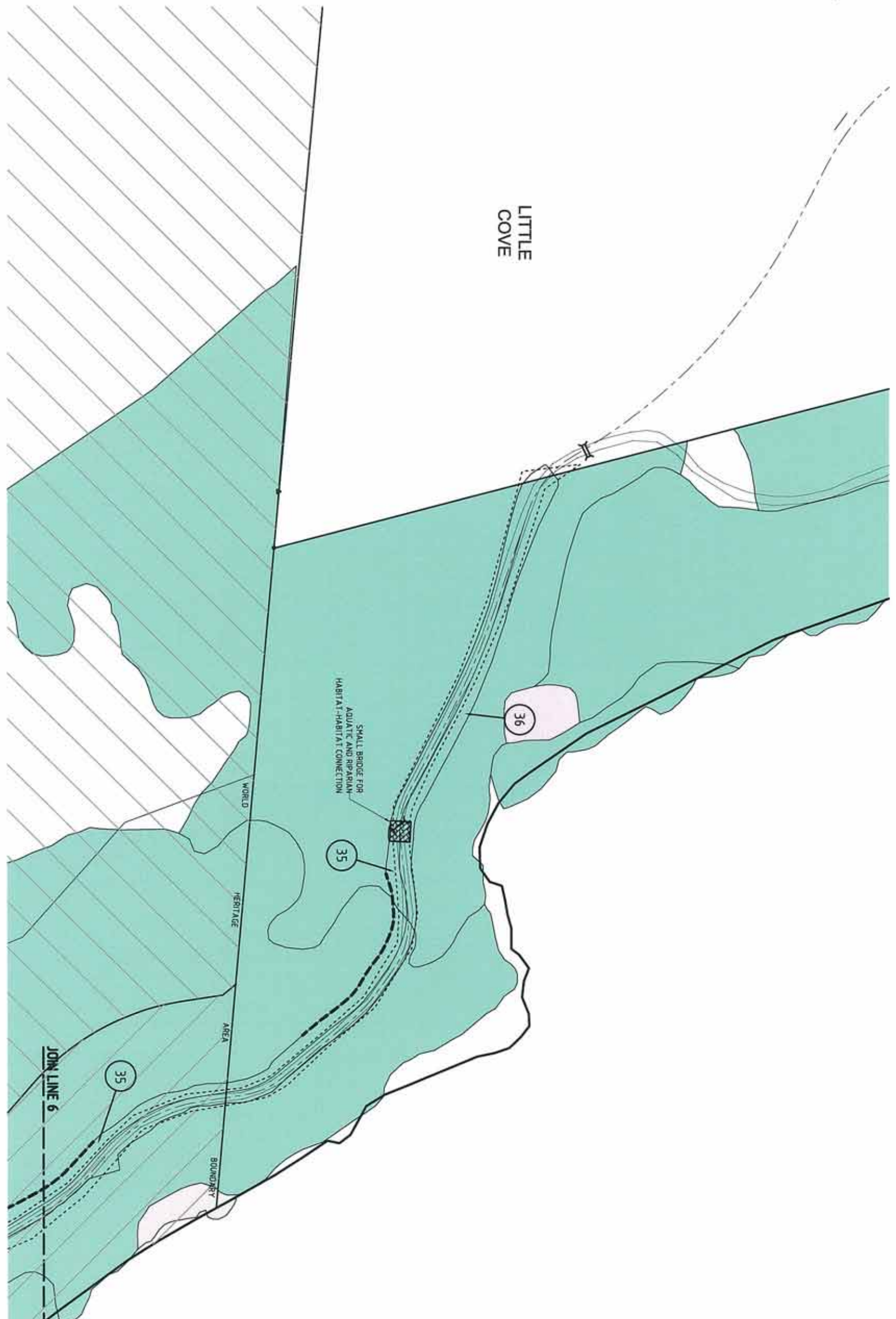
HEATH POINT

- LEGEND**
- RETAINING WALL
 - WATER LEVEL
 - CENTRE LINE
 - EXISTING CULTURTS
 - WORLD HERITAGE AREA BOUNDARY
 - EDGE OF EXISTING TRACK
 - DESIGN EXTENTS OF CLEARING
 - ADDITIONAL CLEARING OF VEGETATION
 - 12
 - WORLD HERITAGE AREA ZONE B
 - WORLD HERITAGE AREA ZONE C
 - COVERAGE A
 - COVERAGE B
 - COVERAGE C
 - COVERAGE D
 - COVERAGE E

ASSOCIATED CONSULTANTS		CLIENT		DATE	
PRELIMINARY		SATORI RESORTS PTY LTD		DRAWN A.W.S.A	
CONICS		ELLA BAY ACCESS ROAD STRATEGY		CHECKED M.J.M	
PROJECT		ELLA BAY		SCALE	
SHEET		MITIGATED CLEARING PLAN - ANIMAL SPECIES OVERLAY - 6 OF 7		1:500 (A3 SIZE)	
DATE		APPROVED		DATE	
FEBRUARY 2007		DATE		DATE	
ARCHITECTS		AUSTRALIA		PORT HOBSON	
CIVIL & STRUCTURAL ENGINEERS		17 MONKHO CREEK WOODLAND SUNSHINE COAST QLD 4008		17 MONKHO CREEK WOODLAND SUNSHINE COAST QLD 4008	
ETS GROUP		PH (07) 5498 4500 FAX (07) 5498 4502		PH (07) 5498 4500 FAX (07) 5498 4502	
www.etsgroup.net.au		EMAIL - info@etsgroup.net.au		EMAIL - info@etsgroup.net.au	
SHEET NUMBER		JOB CODE		DATE	
R38		WBPREB01		19 JULY 2006	
A					



LITTLE
COVE



LEGEND

- RETAINING WALL
- WATER LEVEL
- CENTRE LINE
- EXISTING CULVERTS
- WORLD HERITAGE AREA BOUNDARY
- EDGE OF EXISTING TRACK
- EXISTING EXTENTS OF CLEARING
- DESIGN EXTENTS OF CLEARING
- ADDITIONAL CLEARING OF VEGETATION
- 12
- WORLD HERITAGE AREA ZONE B
- WORLD HERITAGE AREA ZONE C
- WORLD HERITAGE AREA ZONE D
- COVERAGE A
- COVERAGE C
- COVERAGE D
- COVERAGE E

ASSOCIATED CONSULTANTS		CLIENT		DESIGNED		APPROVED		DATE	
COMICS		SATORI RESORTS PTY LTD		A. W. S. A.					
PRELIMINARY		PROJECT		DRAWN		CHECKED		DATE	
		ELLA BAY ACCESS ROAD STRATEGY		M. J. M.					
		LOCATION		SCALE		NORTHWARDS		APPROX. DATE	
		ELLA BAY		1:500		1:500 (AS SHOWN)			
		SHEET TITLE		DATE					
		MITIGATED CLEARING PLAN - ANIMAL SPECIES OVERLAY - 7 OF 7		FEBRUARY 2007					
		ARCHITECTS		PAPIUA NEW GUINEA		AUSTRALIA			
		CIVIL & STRUCTURAL ENGINEERS		P. M. H. & S. J. M.		P. M. H. & S. J. M.			
		E T S GROUP		R39		A			



LEGEND

- RETAINING WALL
- WATER LEVEL
- CENTRE LINE
- EXISTING CULTVERTS
- WORLD HERITAGE AREA BOUNDARY
- EDGE OF EXISTING TRACK
- EXISTING EXTENTS OF CLEARING
- DESIGN EXTENTS OF CLEARING
- DESIGN ROAD EDGE OF PAVEMENT
- DESIGN ROAD EDGE OF SHOULDER
- ADDITIONAL CLEARING OF VEGETATION
- WORLD HERITAGE AREA ZONE B
- WORLD HERITAGE AREA ZONE C
- COVERAGE A
- COVERAGE B
- COVERAGE C

ASSOCIATED CONSULTANTS	
PRELIMINARY	
DATE	REVISED

CLIENT	SATORI RESORTS PTY LTD
PROJECT	ELLA BAY ACCESS ROAD STRATEGY
LOCATION	ELLA BAY
SHEET TITLE	MITIGATED CLEARING PLAN - CASSOWARIES OVERLAY - 1 OF 7

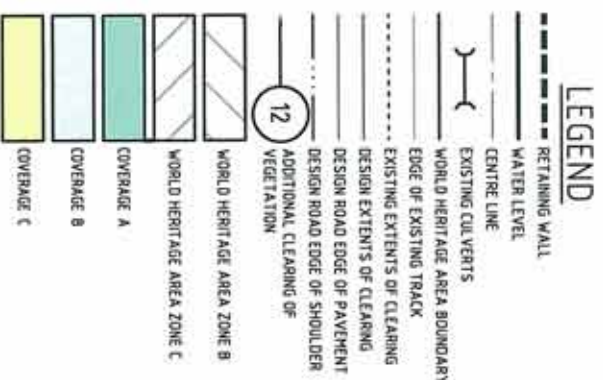
DESIGNED	A. W. S. A.	APPROVED	DATE
DRAWN	M. J. M.	CHECKED	DATE
DATE	FEBRUARY 2007	DATE	

AUSTRALIA
 1 SWANN ROAD, TANKA, BRISBANE QLD 4008
 PH (07) 2371 7000 FAX (07) 2371 5078
 EMAIL: info@etsgroup.net.au

PARUA NEW GUINEA
 5TH FLOOR, CONVENTION HOUSE, PO BOX 604
 TELEPHONE (077) 271 1533 FACSIMILE (077) 271 7000
 EMAIL: info@etsgroup.net.au

ARCHITECTS · CIVIL & STRUCTURAL ENGINEERS

SHEET NUMBER: **WBPREB01**
 SHEET NUMBER: **R40**
 REV: **A**



APPROVED CONTRACT		
PRELIMINARY		
CONTRACT NO.	DATE	SCALE

CLIENT	
SATORI RESORTS PTY LTD	
PROJECT	ELLA BAY ACCESS ROAD STRATEGY
LOCATION	ELLA BAY
SHEET TITLE	MITIGATED CLEARING PLAN - CASSOWARIES OVERLAY - 2 OF 7

DESIGNED	A. W. S. A.	DATE	
DRAWN	M. J. M.	DATE	
CHECKED		DATE	
DATE	FEBRUARY 2007	SCALE	1:500 (A1 SIZE)

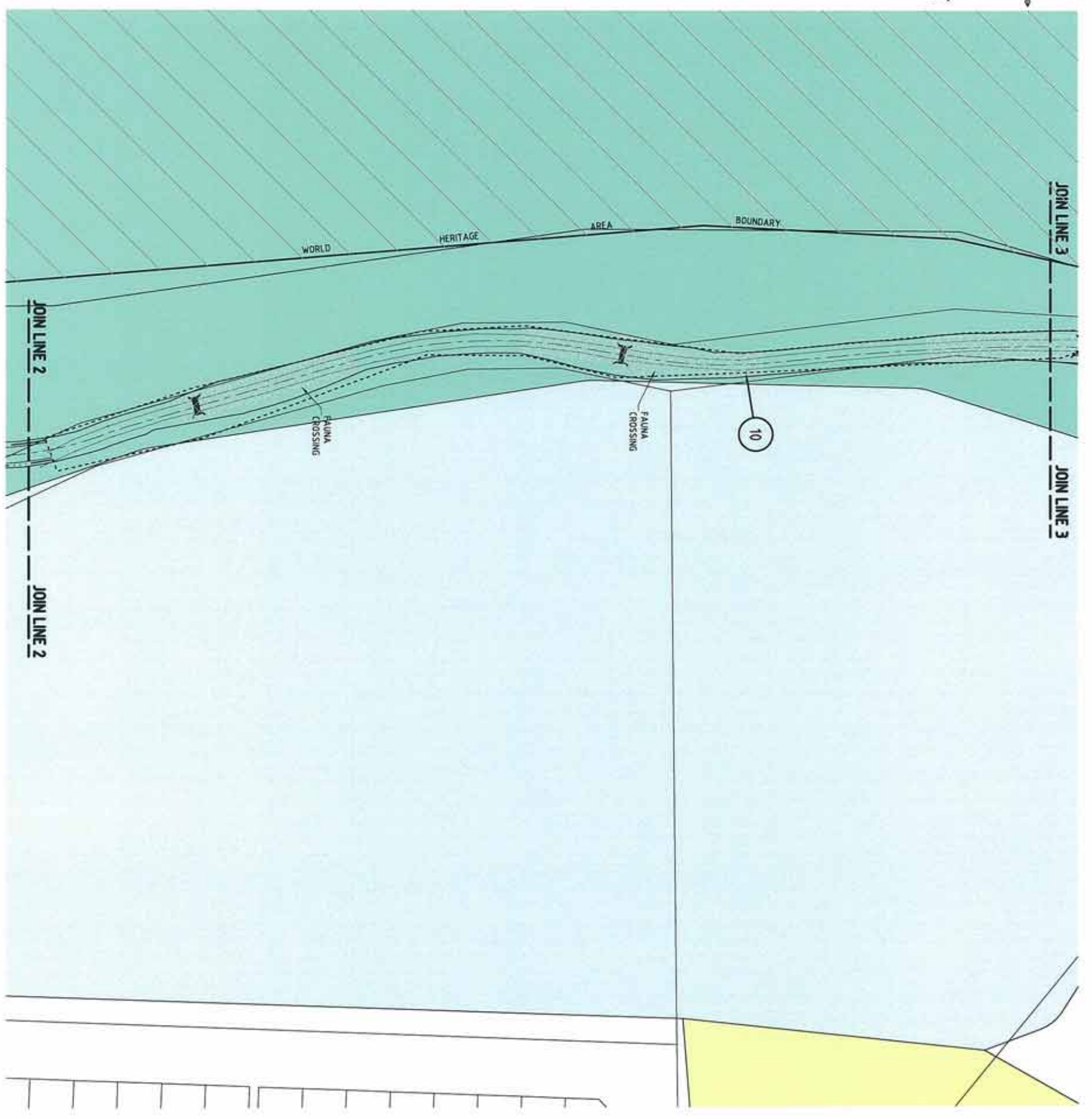
AUSTRALIA
 11 MONA DRIVE SUTHERLAND SUBURB QUEENSLAND QLD 4004
 PHONE 07 5581 4000 FAX 07 5581 9676
 EMAIL: info@papua.com.au

PAPUA NEW GUINEA
 P.O. BOX 908
 TELEPHONE 6753 3213 FAX 6753 3213
 EMAIL: info@papua.com.au

ARCHITECTS · **CIVIL & STRUCTURAL ENGINEERS**

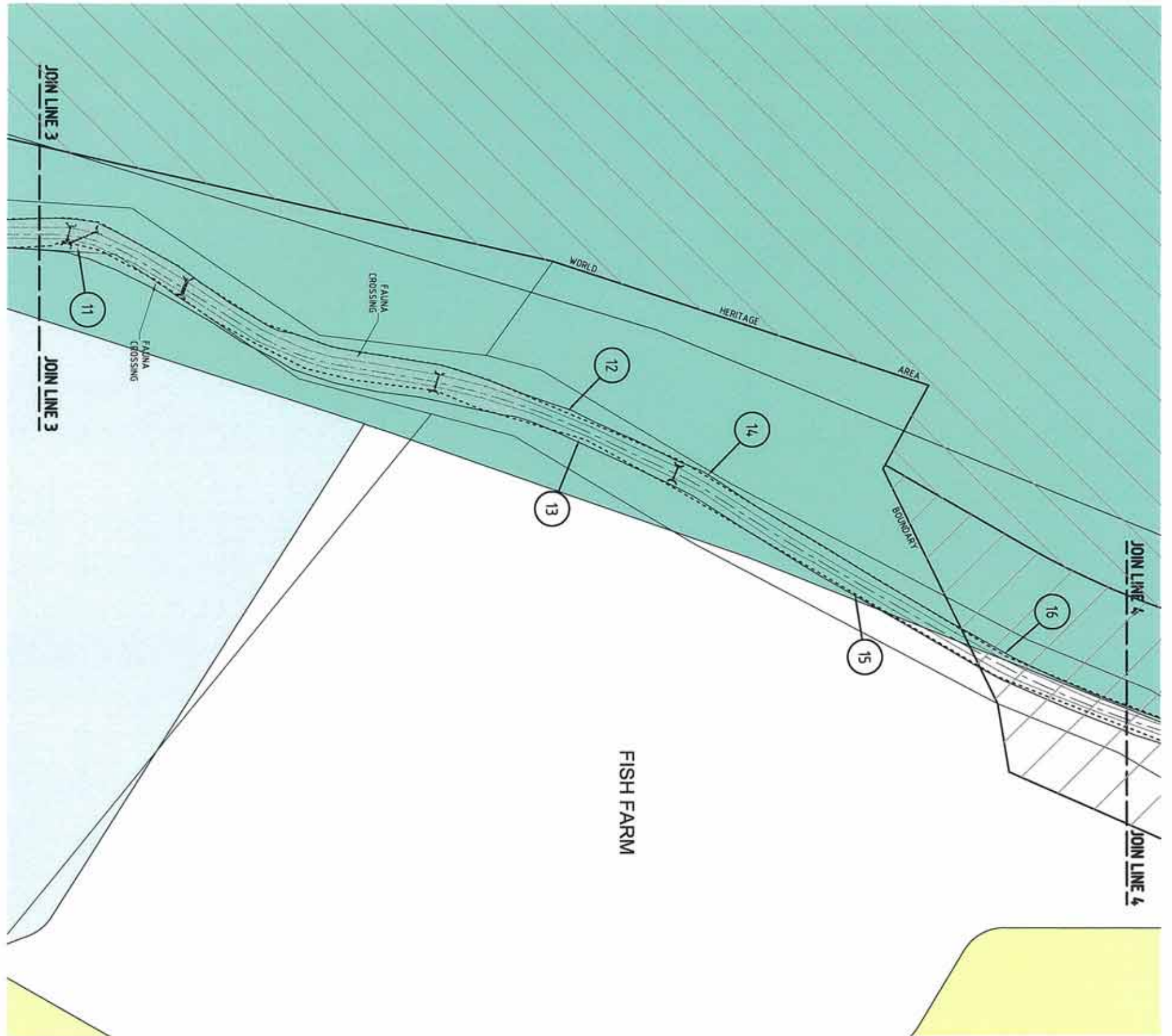
ETS GROUP
 www.etsgroup.net.au

JOB CODE: **WBPREB01**
 SHEET NUMBER: **R41**
 REVISION: **A**



- LEGEND**
- RETAINING WALL
 - WATER LEVEL
 - CENTRE LINE
 - |-| EXISTING CULVERTS
 - WORLD HERITAGE AREA BOUNDARY
 - EDGE OF EXISTING TRACK
 - EXISTING EXTENTS OF CLEARING
 - DESIGN EXTENTS OF CLEARING
 - ADDITIONAL CLEARING OF VEGETATION
 - 12
 - WORLD HERITAGE AREA ZONE B
 - WORLD HERITAGE AREA ZONE C
 - COVERAGE A
 - COVERAGE B
 - COVERAGE C
 - RAMP TO FALUNA CROSSINGS

ASSOCIATED CONSULTANTS CONICS		CLIENT SATORI RESORTS PTY LTD		DESIGNED A.W.S.A		APPROVED M.J.M		DATE FEBRUARY 2007	
PRELIMINARY		PROJECT ELLA BAY ACCESS ROAD STRATEGY		CHECKED M.J.M		SCALE 1:500 (AS SHOWN)		DATE FEBRUARY 2007	
SHEET R42		LOCATION ELLA BAY		DRAWN M.J.M		SHEET NUMBER WBPREB01		JOB CODE WBPREB01	
MITIGATED CLEARING PLAN - CASSOWARIES OVERLAY - 3 OF 7		ARCHITECTS CIVIL & STRUCTURAL ENGINEERS		AUSTRALIA PT (07) 3261 5500 FAX (07) 3261 5510 EMAIL - info@cs-engineers.com.au		PAPUA NEW GUINEA PT (675) 548 4800 FAX (675) 548 4802 EMAIL - info@cs-engineers.com.pg		G R O U P www.grgroup.net.au	



LEGEND

- RETAINING WALL
- WATER LEVEL
- CENTRE LINE
- EXISTING CL.VERTS
- WORLD HERITAGE AREA BOUNDARY
- EDGE OF EXISTING TRACK
- EXISTING EXTENTS OF CLEARING
- DESIGN EXTENTS OF CLEARING
- ADDITIONAL CLEARING OF VEGETATION
- 12
- WORLD HERITAGE AREA ZONE B
- WORLD HERITAGE AREA ZONE C
- COVERAGE A
- COVERAGE B
- COVERAGE C
- RAMP TO FAUNA CROSSINGS

ASSOCIATED DOCUMENTS

CONICS	PRELIMINARY	
DATE	REV	DESCRIPTION
	1	ISSUE FOR PERMIT

CLIENT

SATORI RESORTS PTY LTD

PROJECT

ELLA BAY ACCESS ROAD STRATEGY

LOCATION

ELLA BAY

SHEET TITLE

MITIGATED CLEARING PLAN - CASSOWARIES OVERLAY - 4 OF 7

DESIGNED

A.W.S.A

APPROVED

M.J.M

DATE

FEBRUARY 2007

SCALE

1:500 (AS 220)

AUSTRALIA

17 MONAS DRIVE, BUNNINGBURY VIC 3083

PH (07) 545 4000 FAX (07) 545 4002

EMAIL - info@grups.com.au

PAPUA NEW GUINEA

5TH FLOOR, OUTREACH HOUSE, PO BOX 608

TELEPHONE (675) 321 1233 FACSIMILE (675) 321 1232

EMAIL - enquiries@grups.com.au

ARCHITECTS

CIVIL & STRUCTURAL ENGINEERS

JOB CODE

WBPREB01

SHEET NUMBER

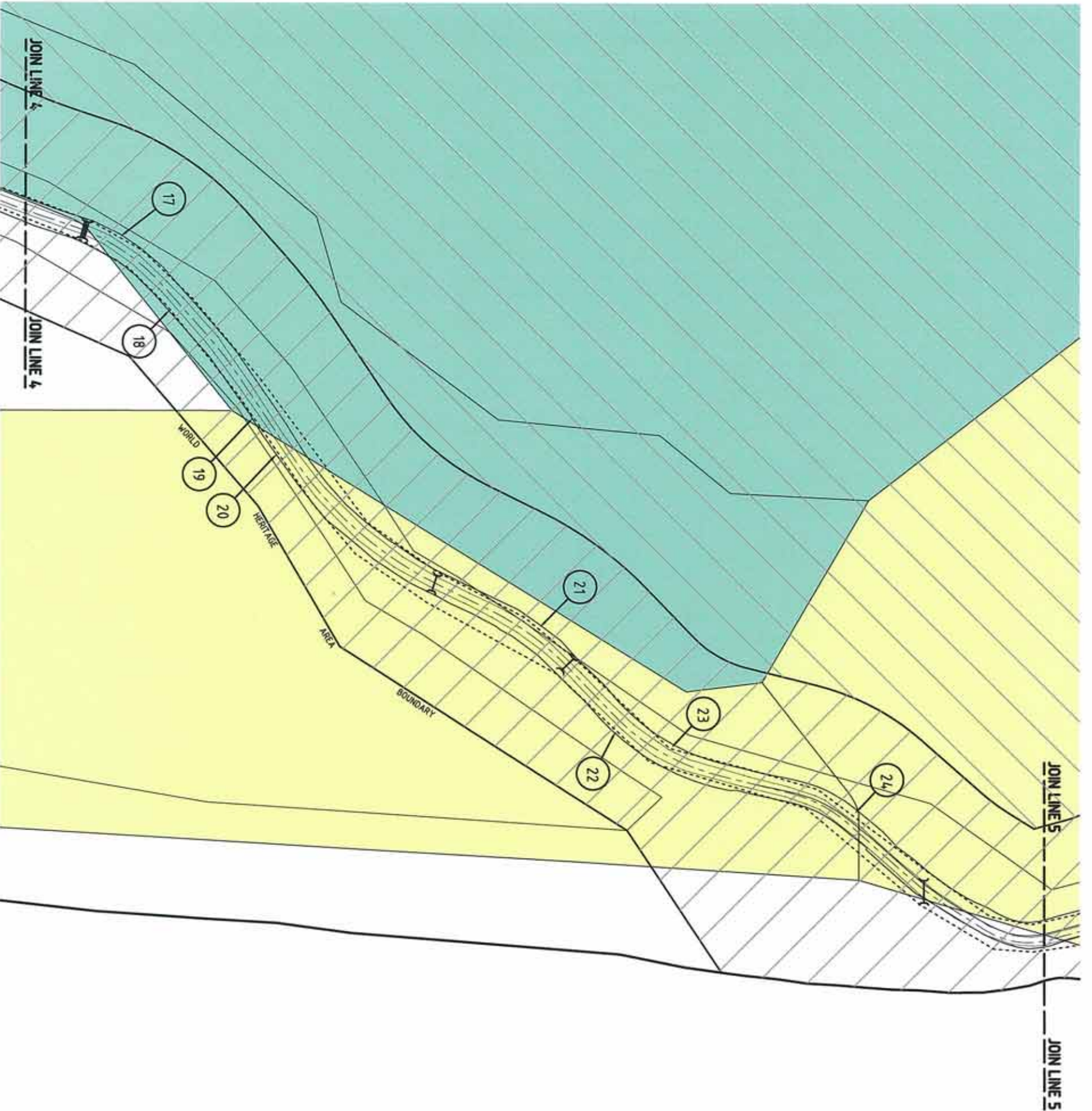
R43

REV

A

DATE

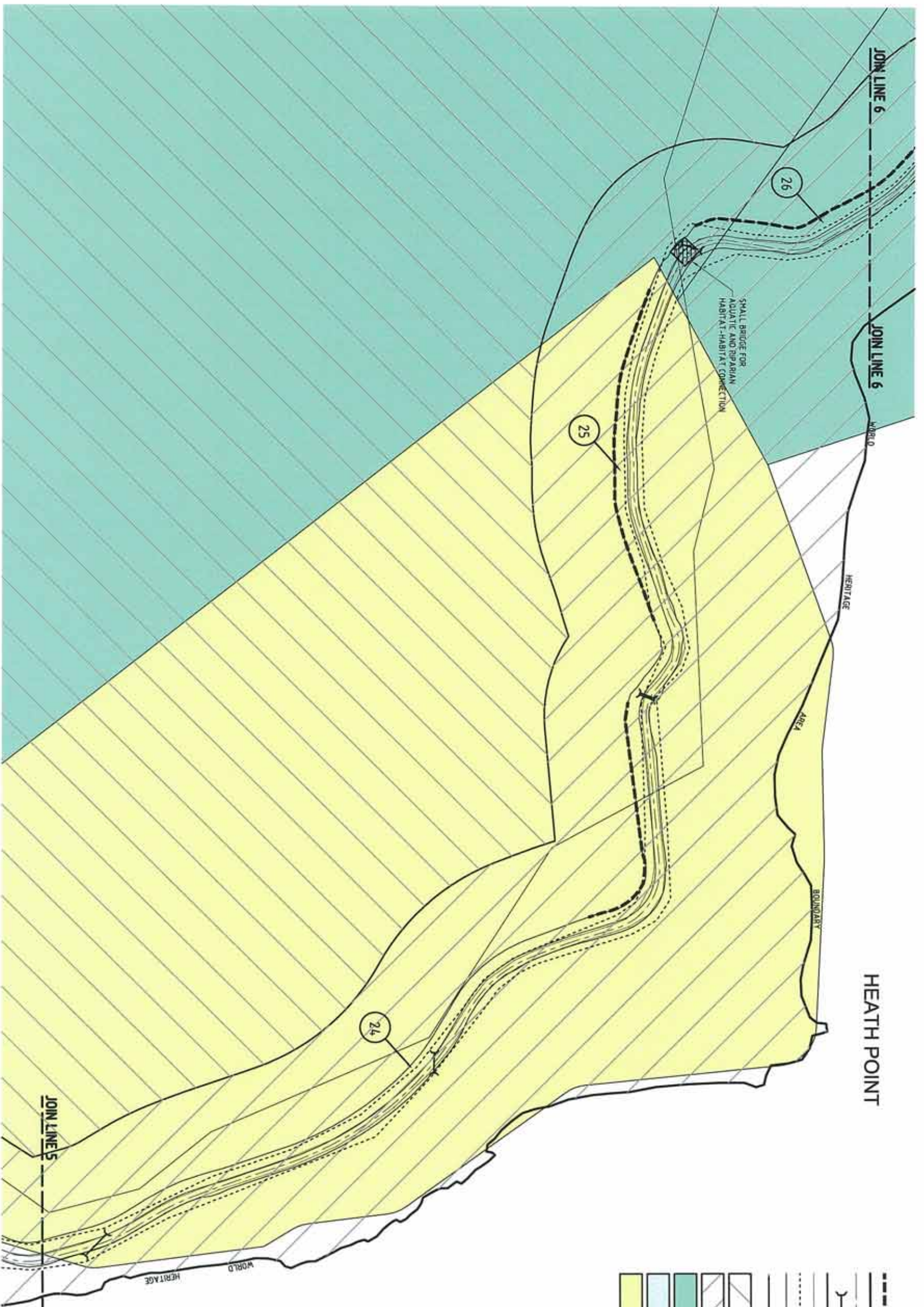
15 AUG 2006



LEGEND

- RETAINING WALL
- WATER LEVEL
- CENTRE LINE
- EXISTING CULVERTS
- WORLD HERITAGE AREA BOUNDARY
- EDGE OF EXISTING TRACK
- EXISTING EXTENTS OF CLEARING
- DESIGN EXTENTS OF CLEARING
- ADDITIONAL CLEARING OF VEGETATION
- 12 WORLD HERITAGE AREA ZONE B
- World Heritage Area Zone B
- World Heritage Area Zone C
- Coverage A
- Coverage B
- Coverage C

ASSOCIATED DOCUMENTS		CLIENT		DESIGNED		APPROVED		DATE	
CONICS		SATORI RESORTS PTY LTD		A. W. S. A.					
PRELIMINARY		PROJECT		DRAWN		CHECKED		DATE	
		ELLA BAY ACCESS ROAD STRATEGY		N. J. M.					
		LOCATION		SCALE		METRE MARKERS		MPS TO 200	
		ELLA BAY		1:1000		0 10 20 30 40 50m			
		MITIGATED CLEARING PLAN - CASSOWARIES OVERLAY - 5 OF 7		DATE		DATE			
				FEBRUARY 2007					
				AUSTRALIA		PORT MORESBY			
				PAPUA NEW GUINEA		PORT MORESBY			
				ARCHITECTS		CIVIL & STRUCTURAL ENGINEERS			
				E T S		G R O U P			
				JOB CODE		SHEET NUMBER		DATE	
				WBPREB01		R44		19 AUG 2006	



LEGEND

- RETAINING WALL
- WATER LEVEL
- CENTRE LINE
- EXISTING CULTVERTS
- WORLD HERITAGE AREA BOUNDARY
- EDGE OF EXISTING TRACK
- EXISTING EXTENTS OF CLEARING
- DESIGN EXTENTS OF CLEARING
- ADDITIONAL CLEARING OF VEGETATION
- 12 WORLD HERITAGE AREA ZONE B
- WORLD HERITAGE AREA ZONE C
- COVERAGE A
- COVERAGE B
- COVERAGE C

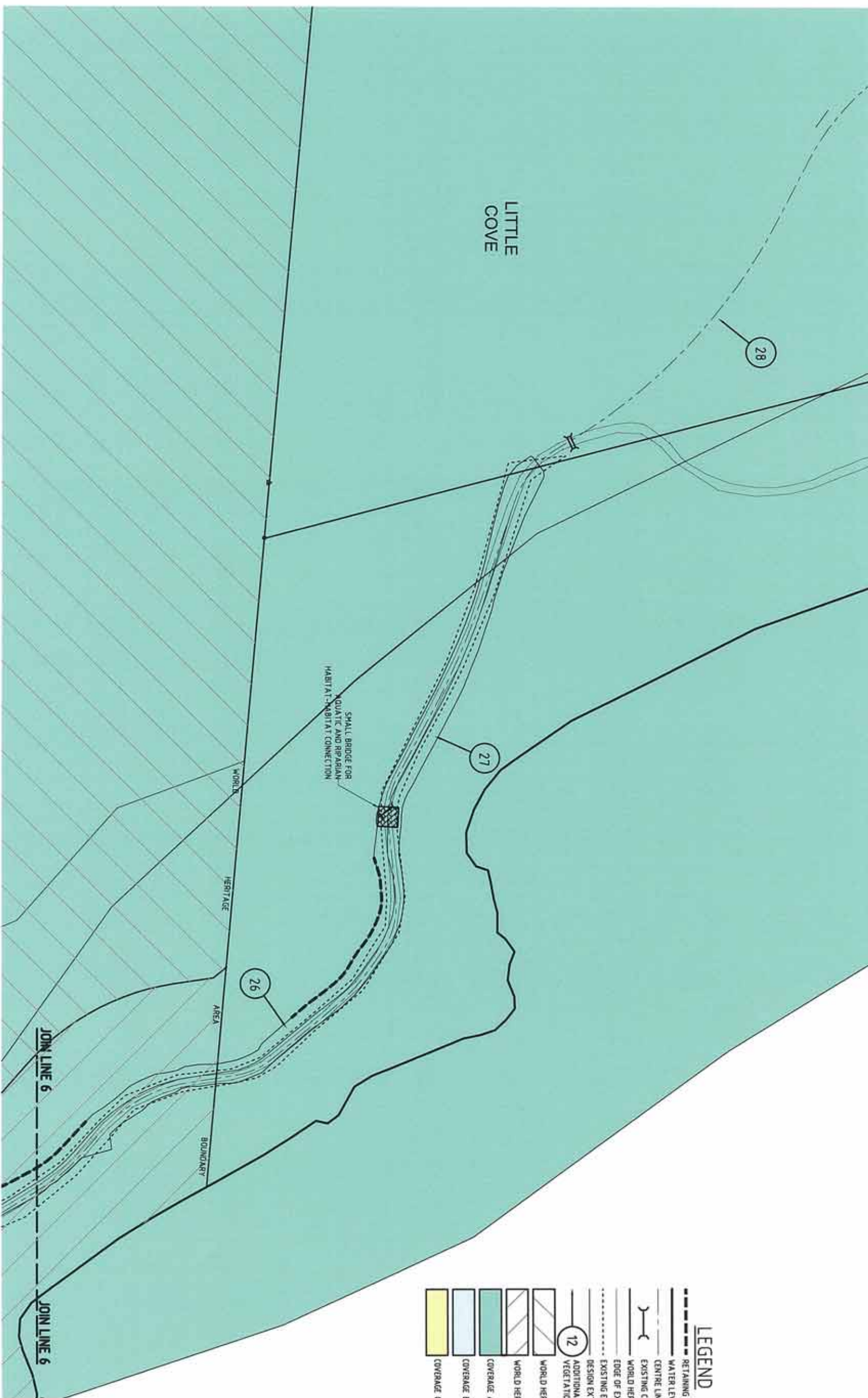
APPROVED CONSULTANTS		CLIENT		DRAWN		APPROVED		DATE	
CONICS		SATORI RESORTS PTY LTD		A. W. S. A.		KETH ANDREWS		APRIL 2007	
PRELIMINARY		PROJECT		CHECKED		SCALE			
		ELLA BAY ACCESS ROAD STRATEGY		M. J. M.		1:500 (AS SHOWN)			
DATE		LOCATION		DATE		DATE			
18/02/2007		ELLA BAY		FEBRUARY 2007		DATE			
SHEET		MITIGATED CLEARING PLAN - CASSOWARIES OVERLAY - 6 OF 7		ARCHITECTS		CIVIL & STRUCTURAL ENGINEERS			
JOB CODE		WBPREB01		SHEET NUMBER		R45		A	
DRAWN		APPROVED		DATE		DATE			
M. J. M.		KETH ANDREWS		APRIL 2007		DATE			

1 SHAWAN ROAD, TANNAMULA, NEWCASTLE QLD 4208
 TEL: (07) 5571 7000 FAX: (07) 5571 0878
 EMAIL: info@etsgroup.com.au

17 KOKOLO CRES, BENTLEY, MURUMBidgeE COAST QLD 4208
 TEL: (07) 5571 4000 FAX: (07) 5571 0878
 EMAIL: info@etsgroup.com.au

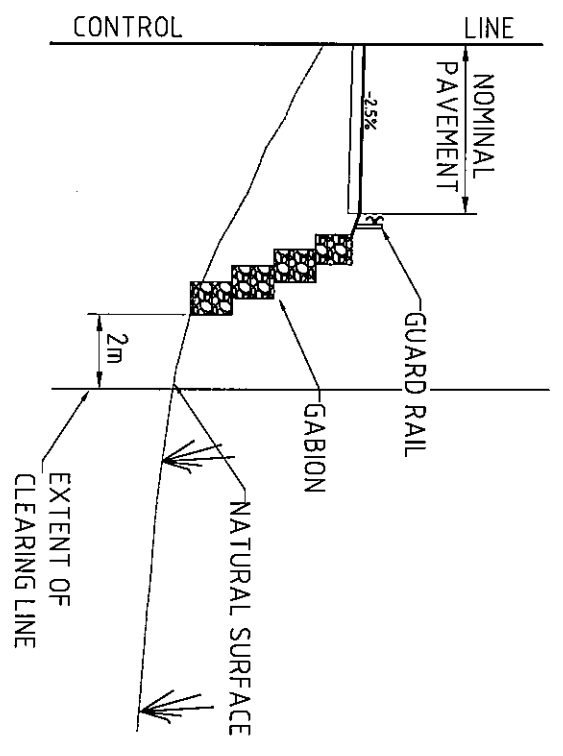
PAPUA NEW GUINEA
 5TH FLOOR, CANTONMENT ROAD, PORT KOKOBA
 TELEPHONE: (675) 321 1533 FACSIMILE: (675) 321 7531
 EMAIL: info@etsgroup.com.pg

ETS
 GROUP
 www.etsgroup.com.au

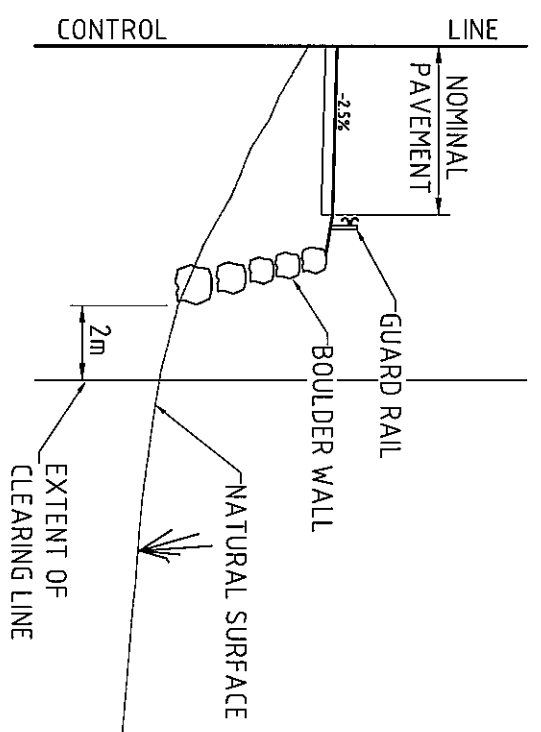


- LEGEND**
- RETAINING WALL
 - WATER LEVEL
 - CENTRE LINE
 - EXISTING CULVERTS
 - WORLD HERITAGE AREA BOUNDARY
 - EDGE OF EXISTING TRACK
 - EXISTING EXTENTS OF CLEARING
 - DESIGN EXTENTS OF CLEARING
 - ADDITIONAL CLEARING OF VEGETATION
 - 12
 - WORLD HERITAGE AREA ZONE B
 - WORLD HERITAGE AREA ZONE C
 - COVERAGE A
 - COVERAGE B
 - COVERAGE C

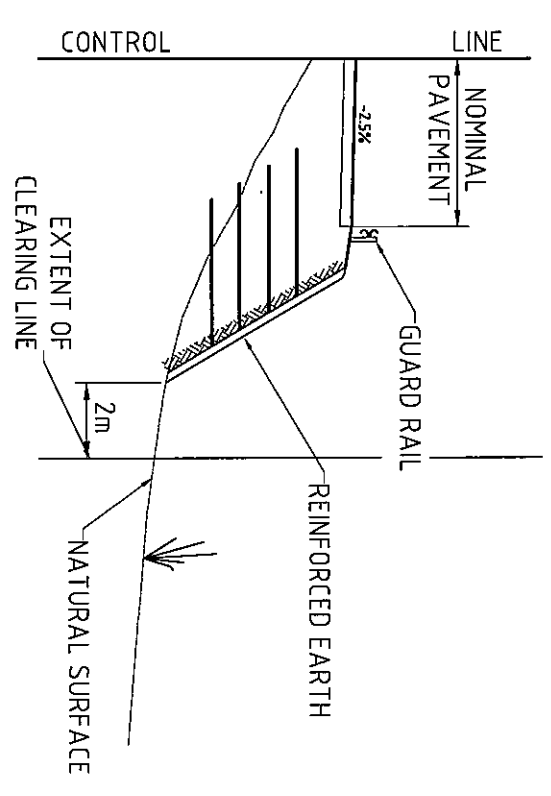
ASSOCIATED DOCUMENTS CONICS PRELIMINARY		CLIENT SATORI RESORTS PTY LTD		DESIGNED A.W.S.A		APPROVED M.J.M		DATE FEBRUARY 2007	
PROJECT ELLA BAY ACCESS ROAD STRATEGY		LOCATION ELLA BAY		DRAWN M.J.M		CHECKED M.J.M		SCALE METRE/INCHES 1:500 A1 SIZE	
SHEET TITLE MITIGATED CLEARING PLAN - CASSOWARIES OVERLAY - 7 OF 7		SATORI RESORTS PTY LTD 17 KOKO CRES SUCCIA KUNSHINE COAST QLD 408		AUSTRALIA 17 KOKO CRES SUCCIA KUNSHINE COAST QLD 408		PAPER NEW GUINEA 5TH FLOOR CANTONMENT HOUSE PO BOX 981 TELEPHONE (675) 271 1232 FACSIMILE (675) 271 7818		PAPER NEW GUINEA 5TH FLOOR CANTONMENT HOUSE PO BOX 981 TELEPHONE (675) 271 1232 FACSIMILE (675) 271 7818	
JOB CODE WBPREB01		SHEET NUMBER R46		ARCHITECTS CIVIL & STRUCTURAL ENGINEERS		E T S GROUP www.etsgroup.net.au		SHEET NUMBER R46	



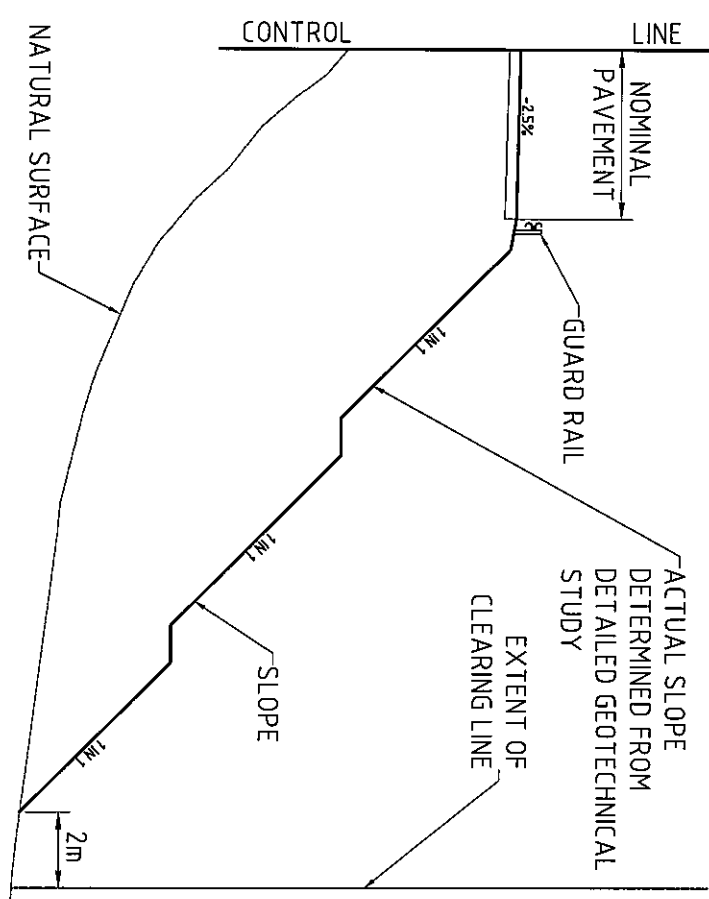
OPTION 2 - GABION



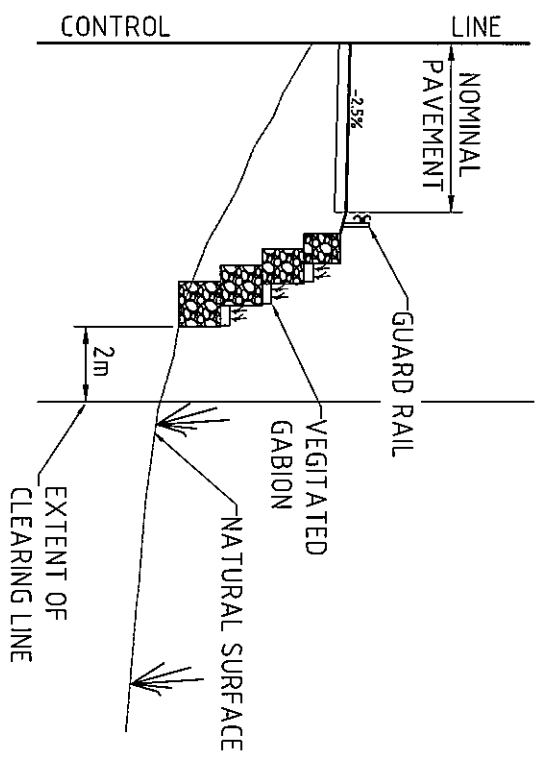
OPTION 4 - BOULDER RETAINING WALL



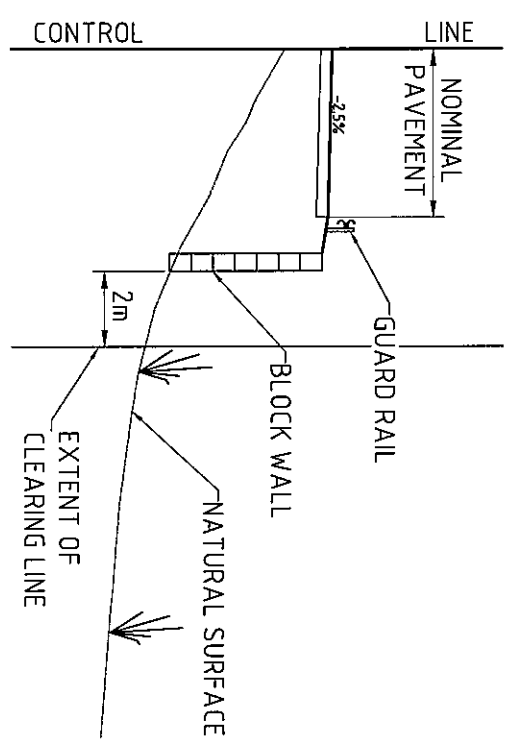
OPTION 6 - REINFORCED EARTH WALL



OPTION 1 - SLOPE

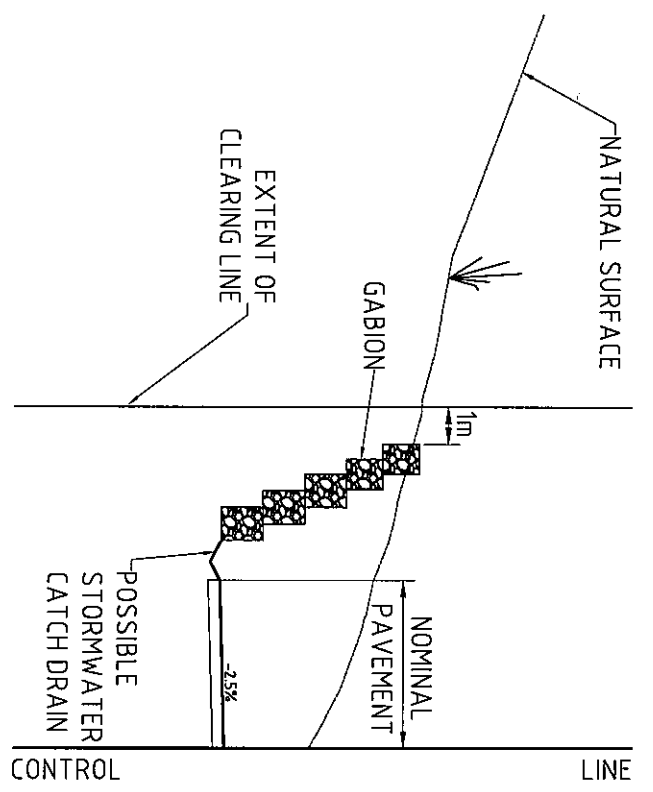


OPTION 3 - VEGETATED GABION

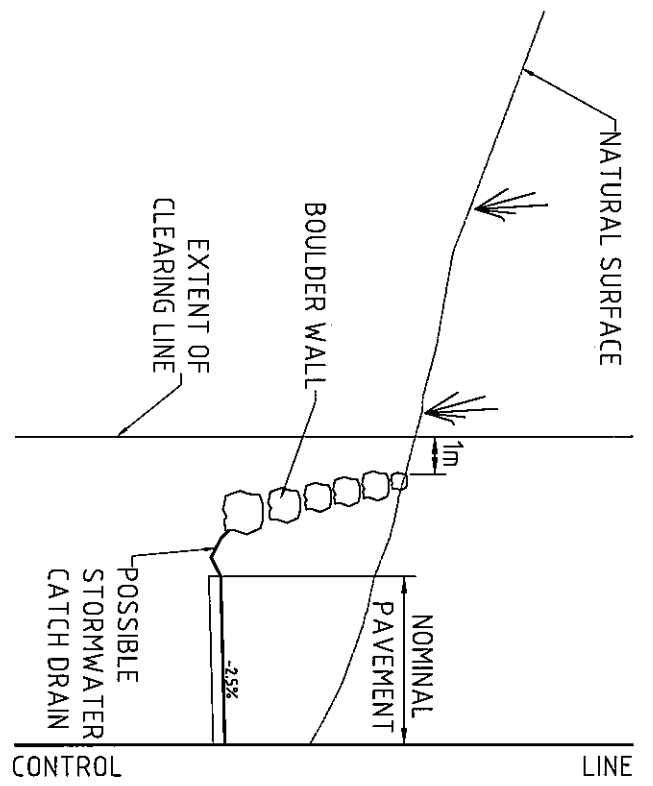


OPTION 5 - BLOCK WALL

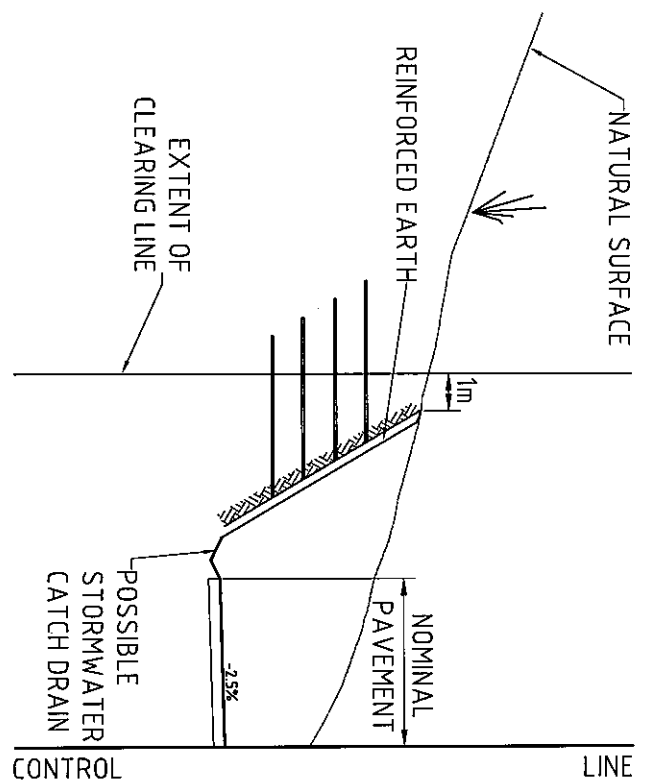
ASSOCIATED CONSULTANTS CONICS PRELIMINARY		CLIENT SATORI RESORTS PTY LTD	
PRODUCT ELLA BAY ACCESS ROAD STRATEGY		DESIGNED A.W.S.A.	
LOCATION ELLA BAY		CHECKED M.J.M.	
TYPICAL RETAINING WALL SECTIONS - 1 OF 2		DATE FEBRUARY 2007	
APPROVED 		DATE 	
ARCHITECTS CIVIL & STRUCTURAL ENGINEERS		AUSTRALIA 17 MONKING CREEK BLVD, SUNSHINE COAST QLD 4558 PH: (07) 5459 4550 FAX: (07) 5458 4582 EMAIL: engineering@cseng.com.au	
ARCHITECTS CIVIL & STRUCTURAL ENGINEERS		PAPUA NEW GUINEA 5TH FLOOR CITICORP CENTRE, PORT MORSBAY TELEPHONE: (059) 321 1333 FACSIMILE: (059) 321 1753 EMAIL: elp@cseng.net.pg	
		JOB CODE: WBPREB01	
SHEET NUMBER: R47		REVISION: A	
DATE: 10 AUG 2007			



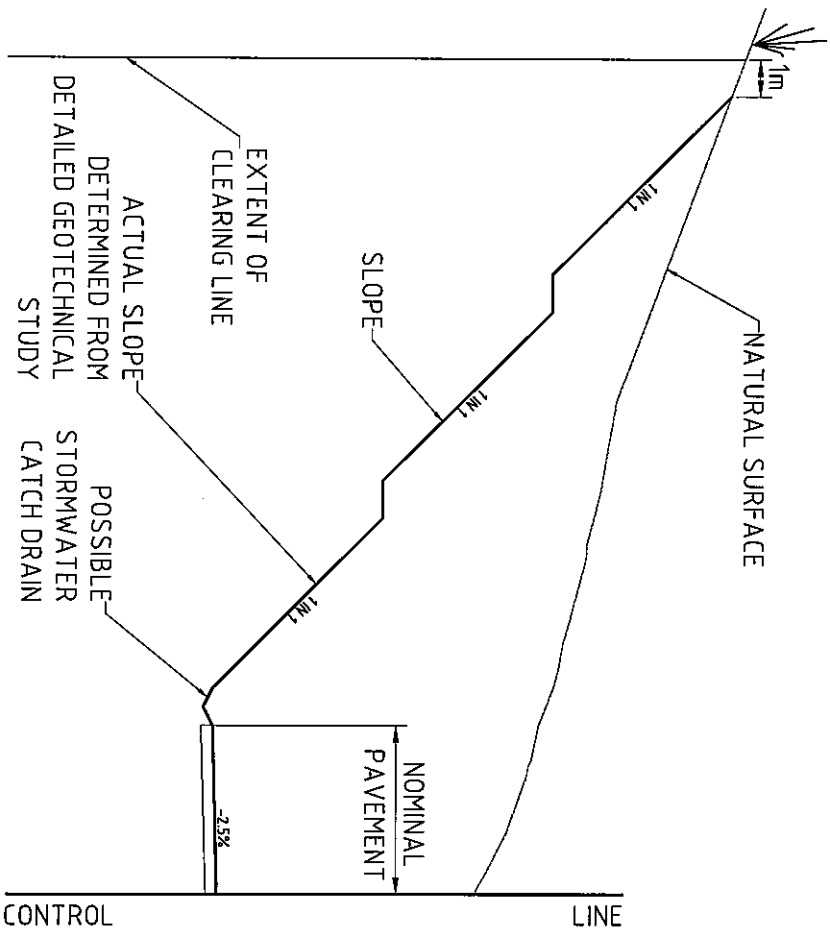
OPTION 2 - GABION



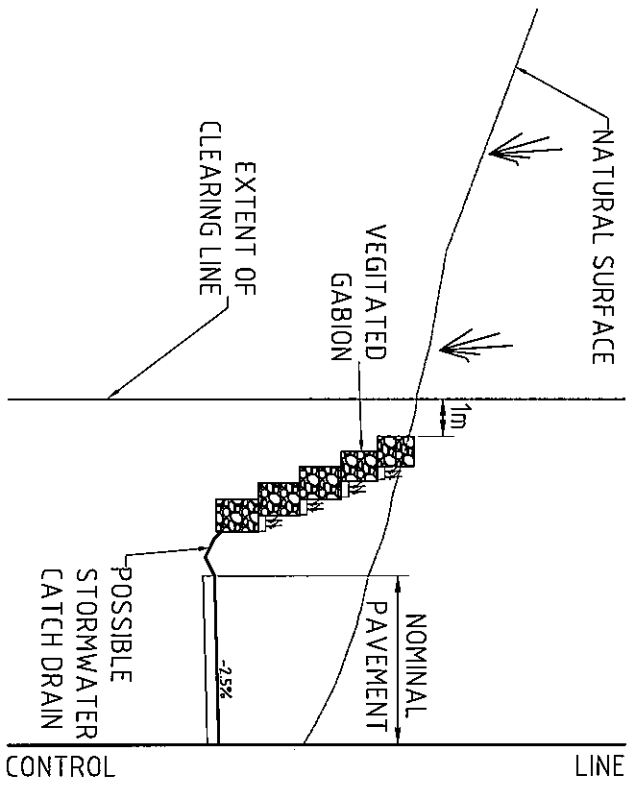
OPTION 4 - BOULDER RETAINING WALL



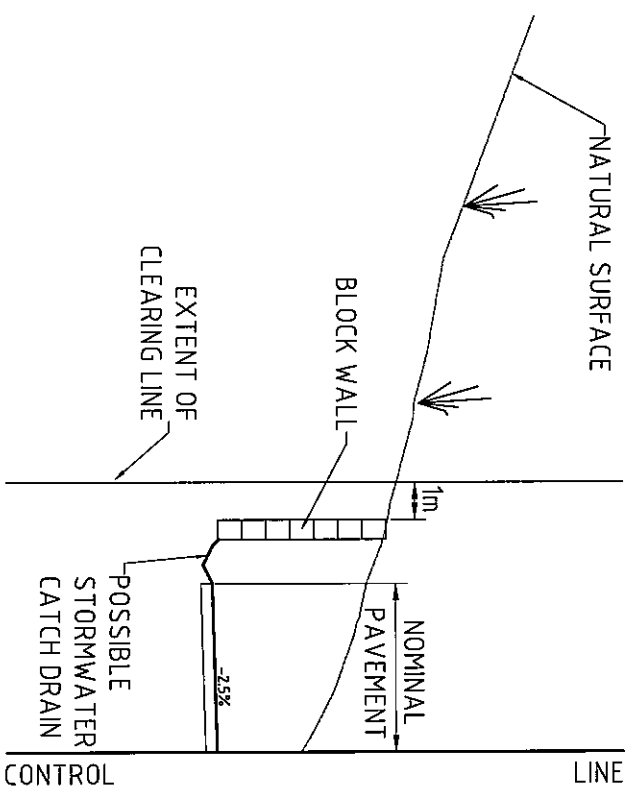
OPTION 6 - REINFORCED EARTH WALL



OPTION 1 - SLOPE

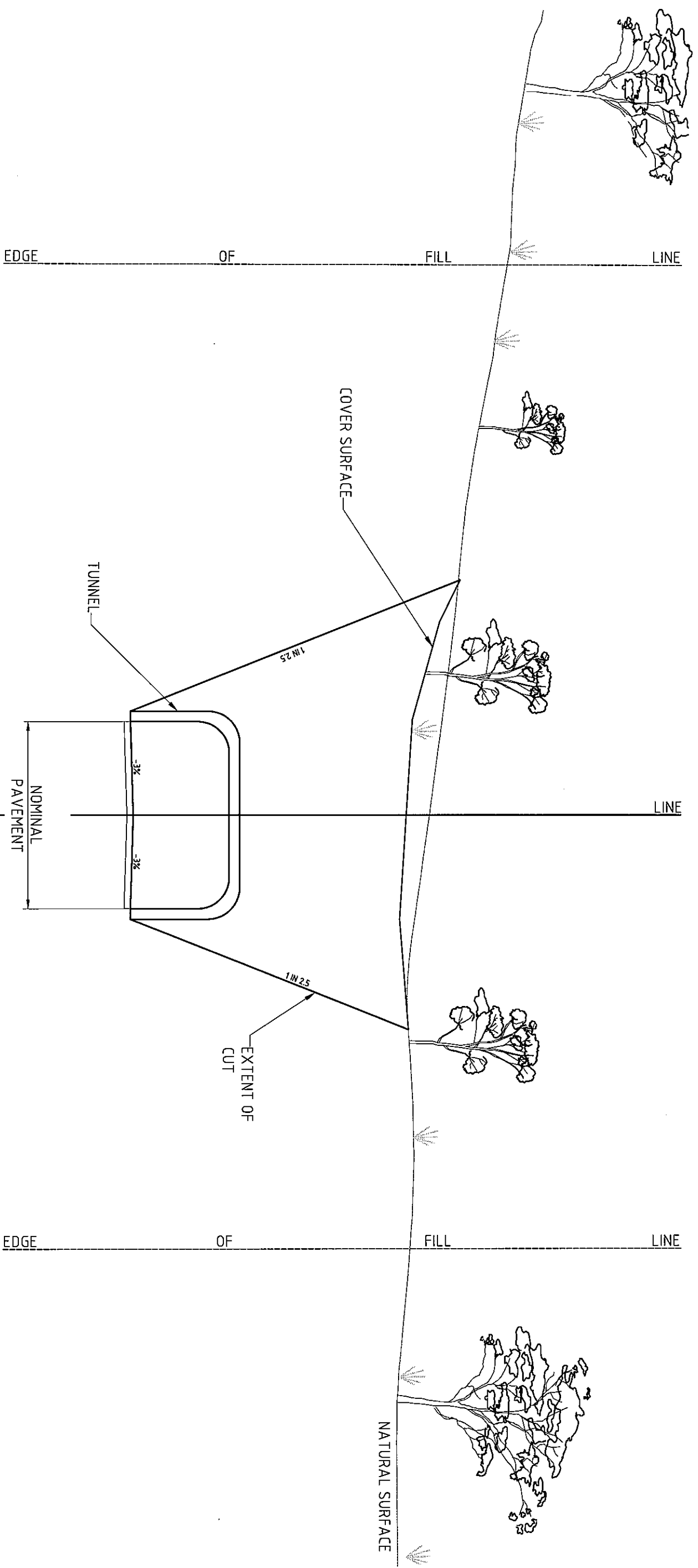


OPTION 3 - VEGETATED GABION



OPTION 5 - BLOCK WALL

ASSOCIATED CONSULTANTS		CLIENT	
PRELIMINARY		SATORI RESORTS PTY LTD	
CONICS		PROJECT	
ELLA BAY ACCESS ROAD STRATEGY		LOCATION	
ELLA BAY		TYPICAL RETAINING WALL SECTIONS - 2 OF 2	
DATE	REV	DESCRIPTION	REVISIONS
	A	ORIG. ISSUE	
		DISCONTINUED	
		REVISIONS	
DESIGNED	A.W.S.A.	APPROVED	DATE
DRAWN	M.J.M.	REVISIONS	
CHECKED		SCALE	
DATE	FEBRUARY 2007	1: 100 (A1 SIZE)	
1 SWANN ROAD TRARNGA, BRISBANE QLD 4089		AUSTRALIA	
PH: (07) 3371 7000 FAX: (07) 3371 5878		17 MONKS CREEK BLVD, SUNSHINE COAST QLD 4568	
EMAIL: m.j.m@grups.com.au		PH: (07) 5458 4500 FAX: (07) 5458 4502	
5TH FLOOR CLITHERSON HOUSE, PORT MORESBY		PAPUA NEW GUINEA	
TELEPHONE: (675) 321 1333 FACSIMILE: (675) 321 7000		PH: (675) 321 1333 FAX: (675) 321 7000	
ARCHITECTS - CIVIL & STRUCTURAL ENGINEERS		G R O U P	
www.grup.com.au		WBPREB01	
SHEET NUMBER		REV.	
R48		A	
DATE		10 AUG 2007	



CUT AND COVER TUNNEL SECTION

ASSOCIATED CONSULTANTS	
CONICS	
PRELIMINARY	
DATE	REVISIONS
REV	DESCRIPTION
1	ORIGINAL ISSUE

CLIENT	SATORI RESORTS PTY LTD
PROJECT	ELLA BAY ACCESS ROAD STRATEGY
LOCATION	ELLA BAY
SHEET TITLE	CUT AND COVER DETAIL

DESIGNED	A. W. S. A.	APPROVED	
DRAWN	M. J. M.	DATE	
CHECKED		SCALE	1: 100 (A4 SIZE)
DATE	FEBRUARY 2007		

1 SWANN ROAD TARRAGONA, BRISBANE QLD 4088
 PH: (07) 5371 7000 FAX: (07) 5371 5070
 EMAIL: info@group.net.au

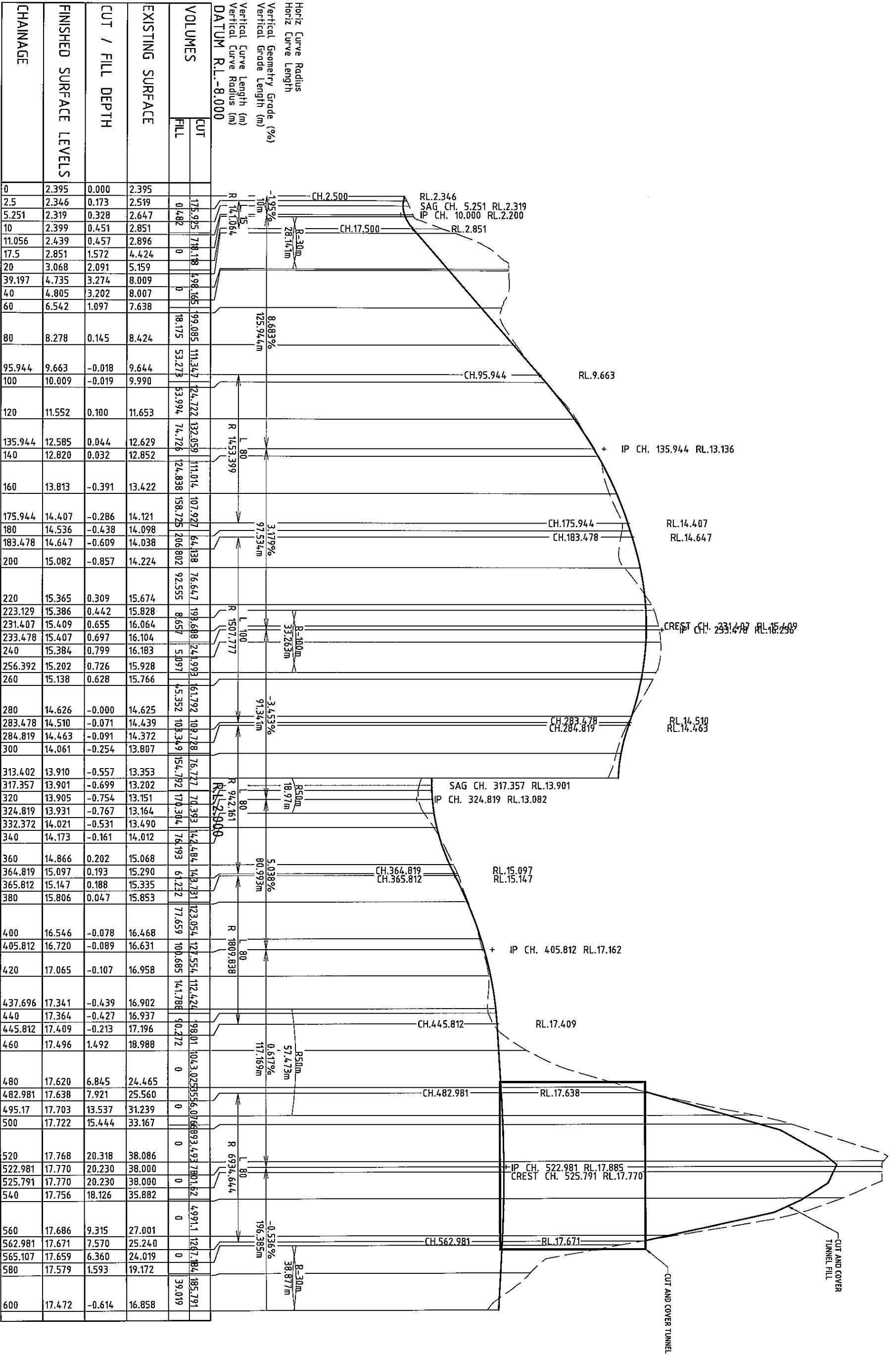
AUSTRALIA
 17 MONKES CREEK, BUDERIM, SUNSHINE COAST QLD 4559
 PH: (07) 5468 4500 FAX: (07) 5468 4502
 EMAIL: design@group.net.au

PAPUA NEW GUINEA
 5TH FLOOR CITICORP HOUSE, PO BOX 608, PORT MORSBURY
 TELEPHONE: (675) 321 1330 FACSIMILE: (675) 321 7851
 EMAIL: aspp@group.net.pg

ARCHITECTS • CIVIL & STRUCTURAL ENGINEERS

139 CODE	WBPREB01
SHEET NUMBER	R49
REV	A
DATE	19 AUG 2006





CHAINAGE	FINISHED SURFACE LEVELS		EXISTING SURFACE	CUT / FILL DEPTH	VOLUMES	
	CUT	FILL			CUT	FILL
0	2.395	0.000	2.395			
2.5	2.346	0.173	2.519			
5.251	2.319	0.328	2.647			
10	2.399	0.451	2.851			
11.056	2.439	0.457	2.896			
17.5	2.851	1.572	4.424			
20	3.068	2.091	5.159			
39.197	4.735	3.274	8.009			
40	4.805	3.202	8.007			
60	6.542	1.097	7.638			
80	8.278	0.145	8.424			
95.944	9.663	-0.018	9.644			
100	10.009	-0.019	9.990			
120	11.552	0.100	11.653			
135.944	12.585	0.044	12.629			
140	12.820	0.032	12.852			
160	13.813	-0.391	13.422			
175.944	14.407	-0.286	14.121			
180	14.536	-0.438	14.098			
183.478	14.647	-0.609	14.038			
200	15.082	-0.857	14.224			
220	15.365	0.309	15.674			
223.129	15.386	0.442	15.828			
231.407	15.409	0.655	16.064			
233.478	15.407	0.697	16.104			
240	15.384	0.799	16.183			
256.392	15.202	0.726	15.928			
260	15.138	0.628	15.766			
280	14.626	-0.000	14.625			
283.478	14.510	-0.071	14.439			
284.819	14.463	-0.091	14.372			
300	14.061	-0.254	13.807			
313.402	13.910	-0.557	13.353			
317.357	13.901	-0.699	13.202			
320	13.905	-0.754	13.151			
324.819	13.931	-0.767	13.164			
332.372	14.021	-0.531	13.490			
340	14.173	-0.161	14.012			
360	14.866	0.202	15.068			
364.819	15.097	0.193	15.290			
365.812	15.147	0.188	15.335			
380	15.806	0.047	15.853			
400	16.546	-0.078	16.468			
405.812	16.720	-0.089	16.631			
420	17.065	-0.107	16.958			
437.696	17.341	-0.439	16.902			
440	17.364	-0.427	16.937			
445.812	17.409	-0.213	17.196			
460	17.496	1.492	18.988			
480	17.620	6.845	24.465			
482.981	17.638	7.921	25.560			
495.17	17.703	13.537	31.239			
500	17.722	15.444	33.167			
520	17.768	20.318	38.086			
522.981	17.770	20.230	38.000			
525.791	17.770	20.230	38.000			
540	17.756	18.126	35.882			
560	17.686	9.315	27.001			
562.981	17.671	7.570	25.240			
565.107	17.659	6.360	24.019			
580	17.579	1.593	19.172			
600	17.472	-0.614	16.858			

ASSOCIATED CONSULTANTS
PRELIMINARY
 CLIENT: SATORI RESORTS PTY LTD
 PROJECT: ELLA BAY ACCESS ROAD STRATEGY
 LOCATION: ELLA BAY
 SHEET TITLE: MITIGATED ELLA BAY ACCESS ROAD LONG SECTIONS - 1 OF 9

DESIGNED: A.W.S.A.
 CHECKED: H.J.M.
 DATE: FEBRUARY 2008

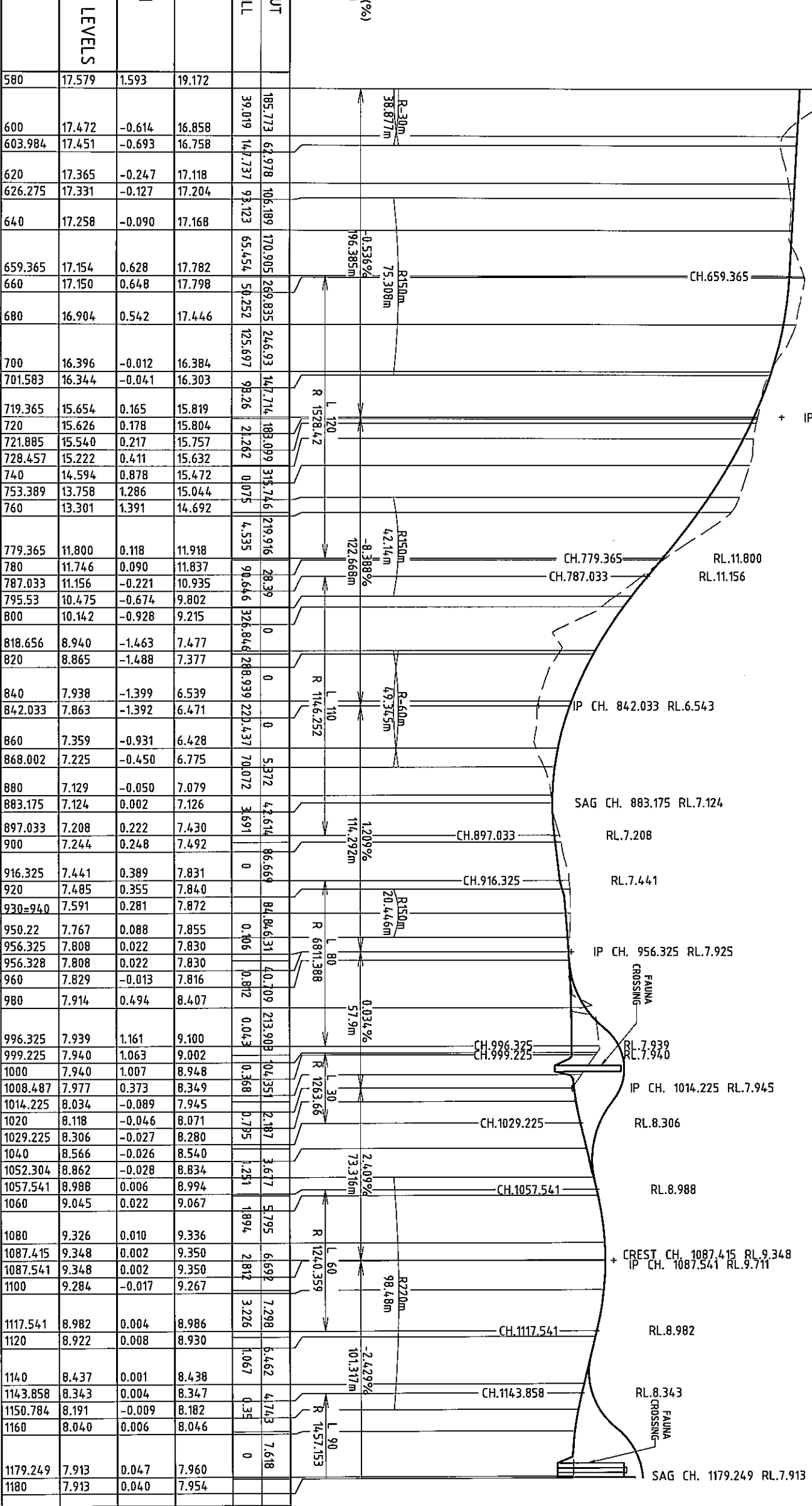
SCALE: 1:100 (H), 1:100 (V)
 HORIZ. 0 10 20 30 40 50m
 VERT. 0 1 2 3 4 5m

ARCHITECTS: CIVIL & STRUCTURAL ENGINEERS
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 www.egrp.com.au

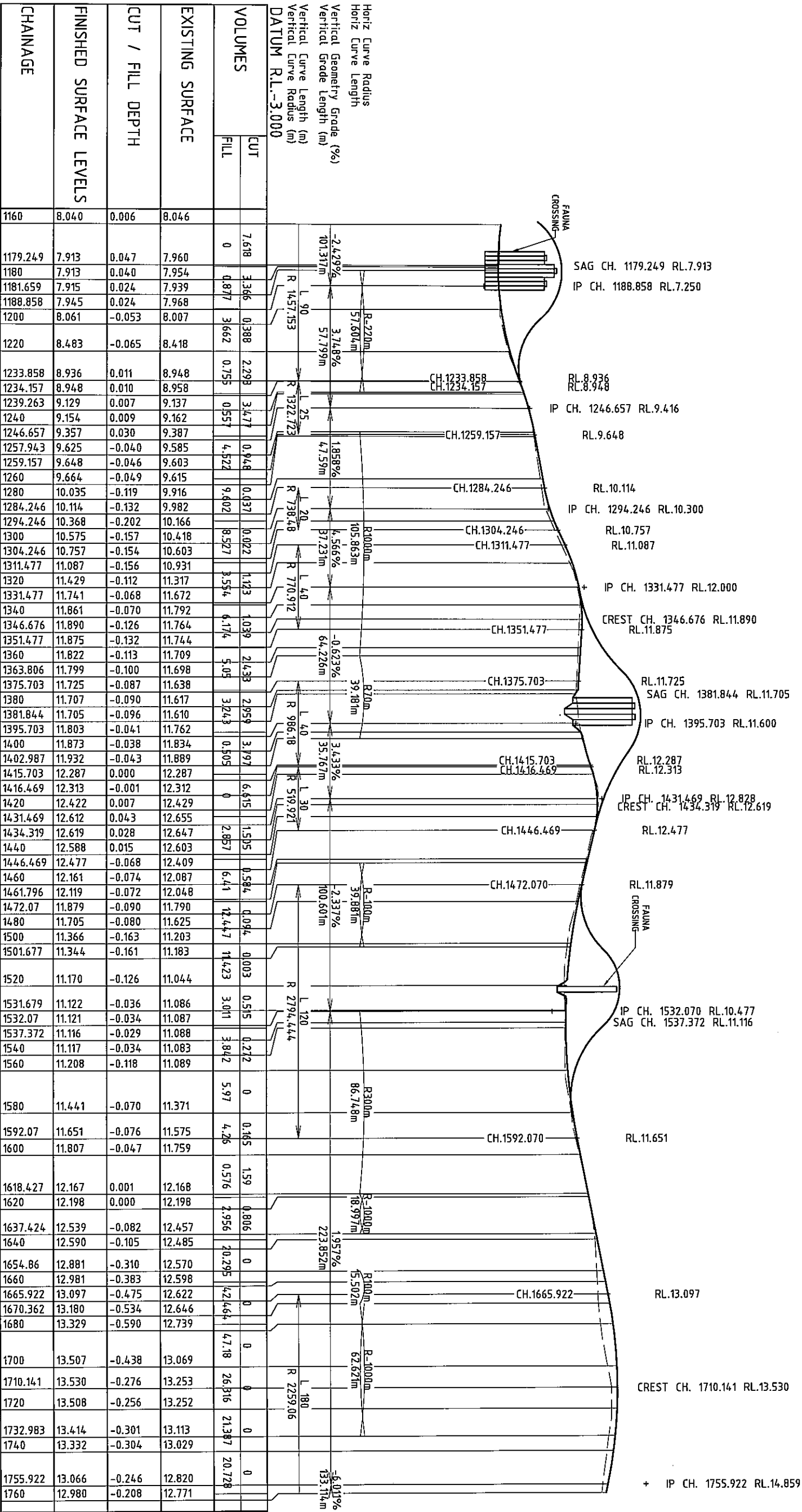
JOB CODE: WBP01
 SHEET NUMBER: R50
 DATE: 15 AUG 2008

CHAINAGE	FINISHED SURFACE LEVELS			EXISTING SURFACE	VOLUMES	CUT / FILL DEPTH
	FINISHED SURFACE LEVELS	CUT	FILL			
580	17.579	1.593	19.172			
600	17.472	-0.614	16.858			
603.984	17.451	-0.693	16.758			
620	17.365	-0.247	17.118			
626.275	17.331	-0.127	17.204			
640	17.258	-0.090	17.168			
659.365	17.154	0.628	17.782			
660	17.150	0.648	17.798			
680	16.904	0.542	17.446			
700	16.396	-0.012	16.384			
701.583	16.344	-0.041	16.303			
719.365	15.654	0.165	15.819			
720	15.626	0.178	15.804			
721.885	15.540	0.217	15.757			
728.457	15.222	0.411	15.632			
740	14.594	0.878	15.472			
753.389	13.758	1.286	15.044			
760	13.301	1.391	14.692			
779.365	11.800	0.118	11.918			
780	11.746	0.090	11.837			
787.033	11.156	-0.221	10.935			
795.53	10.475	-0.674	9.802			
800	10.142	-0.928	9.215			
818.656	8.940	-1.463	7.477			
820	8.865	-1.488	7.377			
840	7.938	-1.399	6.539			
842.033	7.863	-1.392	6.471			
860	7.359	-0.931	6.428			
868.002	7.225	-0.450	6.775			
880	7.129	-0.050	7.079			
883.175	7.124	0.002	7.126			
897.033	7.208	0.222	7.430			
900	7.244	0.248	7.492			
916.325	7.441	0.389	7.831			
920	7.485	0.355	7.840			
930=940	7.591	0.281	7.872			
950.22	7.767	0.088	7.855			
956.325	7.808	0.022	7.830			
956.328	7.808	0.022	7.830			
960	7.829	-0.013	7.816			
980	7.914	0.494	8.407			
996.325	7.939	1.161	9.100			
999.225	7.940	1.063	9.002			
1000	7.940	1.007	8.948			
1008.487	7.977	0.373	8.349			
1014.225	8.034	-0.089	7.945			
1020	8.118	-0.046	8.071			
1029.225	8.306	-0.027	8.280			
1040	8.566	-0.026	8.540			
1052.304	8.862	-0.028	8.834			
1057.541	8.988	0.006	8.994			
1060	9.045	0.022	9.067			
1080	9.326	0.010	9.336			
1087.415	9.348	0.002	9.350			
1087.541	9.348	0.002	9.350			
1100	9.284	-0.017	9.267			
1117.541	8.982	0.004	8.986			
1120	8.922	0.008	8.930			
1140	8.437	0.001	8.438			
1143.858	8.343	0.004	8.347			
1150.784	8.191	-0.009	8.182			
1160	8.040	0.006	8.046			
1179.249	7.913	0.047	7.960			
1180	7.913	0.040	7.954			

Horiz Curve Radius
 Horiz Curve Length
 Vertical Curve Length (m)
 Vertical Curve Radius (m)
 Vertical Curve Length (m)
 Vertical Curve Radius (m)
 DATUM R.L.=4.000



ASSOCIATED CONSULTANTS CONICS PRELIMINARY		CLIENT SATORI RESORTS PTY LTD	
PROJECT ELLA BAY ACCESS ROAD STRATEGY		LOCATION ELLA BAY	
SHEET TITLE MITIGATED ELLA BAY ACCESS ROAD LONG SECTIONS - 2 OF 9		DESIGNER A.W.S.A.	
DATE FEBRUARY 2008		DRAWN M.J.M.	
CHECKED KETH HENNELLS		DATE 11 FEBRUARY 2008	
SCALE HORIZ. 1:100 (H), 1:100 (V) VERT. 0 10 20 30 40 50m		APPROVED KETH HENNELLS	
ARCHITECTS CIVIL & STRUCTURAL ENGINEERS		DATE 11 FEBRUARY 2008	
1 SWANN ROAD TARENCO, BRISBANE QLD 4068 PH: (07) 3211 7000 FAX: (07) 3211 8078 EMAIL: info@conics.com.au		AUSTRALIA 11 MONKING CREEK BLVD. RAINBOW COAST QLD 4068 PH: (07) 5498 4800 FAX: (07) 5498 4828 EMAIL: info@conics.com.au	
5TH FLOOR GUTTENBERG HOUSE PO BOX 608 TELEPHONE: (07) 321 1333 FACSIMILE: (07) 321 1760 EMAIL: info@conics.com.au		PAPUA NEW GUINEA POINT MORGENTHAU TELEPHONE: (675) 321 1333 FACSIMILE: (675) 321 1760 EMAIL: info@conics.com.au	
JOB CODE: WBPREB01		SHEET NUMBER: R51	
SHEET NUMBER: A		DATE: 17 AUGUST 2008	



CHAINAGE	FINISHED SURFACE LEVELS		EXISTING SURFACE	VOLUMES	
	CUT	FILL		CUT	FILL
1160	8.040	0.006	8.046	7.618	0
1179.249	7.913	0.047	7.960	3.366	0.877
1180	7.913	0.040	7.954	0.388	0.362
1181.659	7.915	0.024	7.939	2.298	0.755
1188.858	7.945	0.024	7.968	3.477	0.557
1200	8.061	-0.053	8.007	0.948	4.522
1220	8.483	-0.065	8.418	0.937	9.402
1233.858	8.936	0.011	8.948	0.022	8.527
1234.157	8.948	0.010	8.958	1.123	3.554
1239.263	9.129	0.007	9.137	1.039	6.174
1240	9.154	0.009	9.162	2.438	5.05
1246.657	9.357	0.030	9.387	2.959	3.243
1257.943	9.625	-0.040	9.585	3.197	6.415
1259.157	9.648	-0.046	9.603	6.415	1.505
1260	9.664	-0.049	9.615	0.584	6.41
1280	10.035	-0.119	9.916	1.094	12.447
1284.246	10.114	-0.132	9.982	0.003	11.423
1294.246	10.368	-0.202	10.166	0.515	3.011
1300	10.575	-0.157	10.418	0.272	3.842
1304.246	10.757	-0.154	10.603	5.97	4.26
1311.477	11.087	-0.156	10.931	0.576	0.576
1320	11.429	-0.112	11.317	0.806	2.956
1331.477	11.741	-0.068	11.672	0	20.295
1340	11.861	-0.070	11.792	0	4.2464
1346.676	11.890	-0.126	11.764	0	4.718
1351.477	11.875	-0.132	11.744	0	26.316
1360	11.822	-0.113	11.709	0	21.387
1363.806	11.799	-0.100	11.698	0	20.728
1375.703	11.725	-0.087	11.638	0	0
1380	11.707	-0.090	11.617	0	0
1381.844	11.705	-0.096	11.610	0	0
1395.703	11.803	-0.041	11.762	0	0
1400	11.873	-0.038	11.834	0	0
1402.987	11.932	-0.043	11.889	0	0
1415.703	12.287	0.000	12.287	0	0
1416.469	12.313	-0.001	12.312	0	0
1420	12.422	0.007	12.429	0	0
1431.469	12.612	0.043	12.655	0	0
1434.319	12.619	0.028	12.647	0	0
1440	12.588	0.015	12.603	0	0
1446.469	12.477	-0.068	12.409	0	0
1460	12.161	-0.074	12.087	0	0
1461.796	12.119	-0.072	12.048	0	0
1472.07	11.879	-0.090	11.790	0	0
1480	11.705	-0.080	11.625	0	0
1500	11.366	-0.163	11.203	0	0
1501.677	11.344	-0.161	11.183	0	0
1520	11.170	-0.126	11.044	0	0
1531.679	11.122	-0.036	11.086	0	0
1532.07	11.121	-0.034	11.087	0	0
1537.372	11.116	-0.029	11.088	0	0
1540	11.117	-0.034	11.083	0	0
1560	11.208	-0.118	11.089	0	0
1580	11.441	-0.070	11.371	0	0
1592.07	11.651	-0.076	11.575	0	0
1600	11.807	-0.047	11.759	0	0
1618.427	12.167	0.001	12.168	0	0
1620	12.198	0.000	12.198	0	0
1637.424	12.539	-0.082	12.457	0	0
1640	12.590	-0.105	12.485	0	0
1654.86	12.881	-0.310	12.570	0	0
1660	12.981	-0.383	12.598	0	0
1665.922	13.097	-0.475	12.622	0	0
1670.362	13.180	-0.534	12.646	0	0
1680	13.329	-0.590	12.739	0	0
1700	13.507	-0.438	13.069	0	0
1710.141	13.530	-0.276	13.253	0	0
1720	13.508	-0.256	13.252	0	0
1732.983	13.414	-0.301	13.113	0	0
1740	13.332	-0.304	13.029	0	0
1755.922	13.066	-0.246	12.820	0	0
1760	12.980	-0.208	12.771	0	0

ASSOCIATED CONSULTANTS
PRELIMINARY
 CLIENT: SATORI RESORTS PTY LTD
 PROJECT: ELLA BAY ACCESS ROAD STRATEGY
 LOCATION: ELLA BAY
 SHEET TITLE: MITIGATED ELLA BAY ACCESS ROAD LONG SECTIONS - 3 OF 9

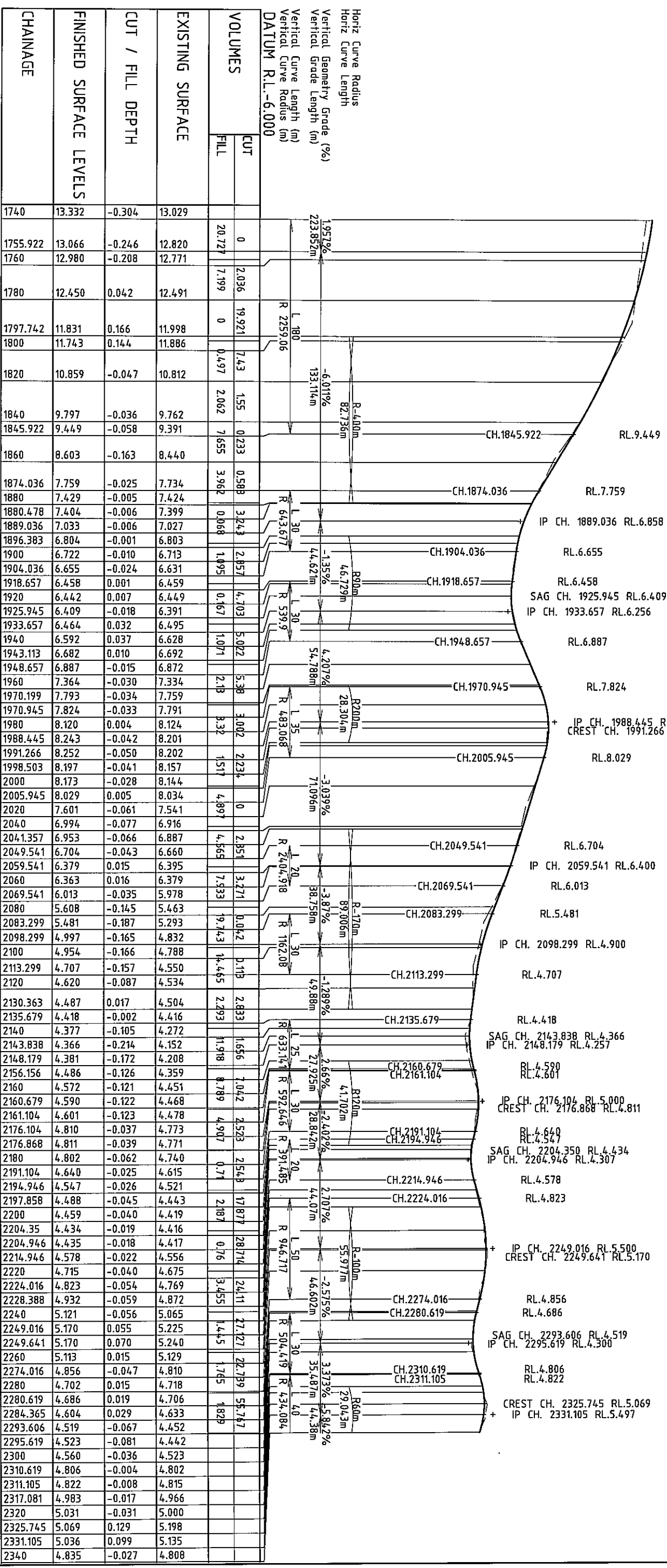
DESIGNED: A.W.S.A.
 DRAWN: M.J.M.
 CHECKED: M.J.M.
 DATE: FEBRUARY 2008

SCALE: 1:1000 (H), 1:100 (V)
 HORIZ: 0 10 20 30 40 50m
 VERT: 0 1 2 3 4 5m

ARCHITECTS: CIVIL & STRUCTURAL ENGINEERS
 ELLA BAY ACCESS ROAD STRATEGY
 5TH FLOOR CLIFTON HILL HOUSE, 10000 ROAD, PORT MORESBY
 TELEPHONE: (09) 321 1333 FAX: (09) 321 1333
 EMAIL: ds@csa.com.au

JOB CODE: WBPB01
 SHEET NUMBER: R52
 REV: A

+ IP CH. 1755.922 RL.14.859



CHAINAGE	FINISHED SURFACE LEVELS	CUT / FILL DEPTH	EXISTING SURFACE	VOLUMES	
				CUT	FILL
1740	13.332	-0.304	13.029	0	20.727
1755.922	13.066	-0.246	12.820	2.036	7.199
1760	12.980	-0.208	12.771	19.921	0
1780	12.450	0.042	12.491	7.43	0.497
1797.742	11.831	0.166	11.998	1.55	2.062
1800	11.743	0.144	11.886	0.233	7.555
1820	10.859	-0.047	10.812	0.588	3.962
1840	9.797	-0.036	9.762	3.243	0.068
1845.922	9.449	-0.058	9.391	2.957	1.995
1860	8.603	-0.163	8.440	4.703	0.167
1874.036	7.759	-0.025	7.734	5.022	1.071
1880	7.429	-0.005	7.424	5.38	2.18
1880.478	7.404	-0.006	7.399	3.002	3.32
1889.036	7.033	-0.006	7.027	2.234	1.57
1896.383	6.804	-0.001	6.803	0	4.897
1900	6.722	-0.010	6.713	4.565	7.533
1904.036	6.655	-0.024	6.631	0.42	19.243
1918.657	6.458	0.001	6.459	0.119	4.45
1920	6.442	0.007	6.449	2.833	2.293
1925.945	6.409	-0.018	6.391	1.656	7.042
1933.657	6.464	0.032	6.495	7.042	2.523
1940	6.592	0.037	6.628	2.543	17.87
1943.113	6.682	0.010	6.692	1.714	28.714
1948.657	6.887	-0.015	6.872	0.76	3.455
1960	7.364	-0.030	7.334	2.187	27.27
1970.199	7.793	-0.034	7.759	1.87	22.799
1970.945	7.824	-0.033	7.791	28.714	24.11
1980	8.120	0.004	8.124	0.76	3.455
1988.445	8.243	-0.042	8.201	1.445	7.65
1991.266	8.252	-0.050	8.202	2.187	27.27
1998.503	8.197	-0.041	8.157	1.87	22.799
2000	8.173	-0.028	8.144	0.76	3.455
2005.945	8.029	0.005	8.034	2.187	27.27
2020	7.601	-0.061	7.541	1.87	22.799
2040	6.994	-0.077	6.916	0.76	3.455
2041.357	6.953	-0.066	6.887	2.187	27.27
2049.541	6.704	-0.043	6.660	1.87	22.799
2059.541	6.379	0.015	6.395	0.76	3.455
2060	6.363	0.016	6.379	2.187	27.27
2069.541	6.013	-0.035	5.978	1.87	22.799
2080	5.608	-0.145	5.463	0.76	3.455
2083.299	5.481	-0.187	5.293	2.187	27.27
2098.299	4.997	-0.165	4.832	1.87	22.799
2100	4.954	-0.166	4.788	0.76	3.455
2113.299	4.707	-0.157	4.550	2.187	27.27
2120	4.620	-0.087	4.534	1.87	22.799
2130.363	4.487	0.017	4.504	0.76	3.455
2135.679	4.418	-0.002	4.416	2.187	27.27
2140	4.377	-0.105	4.272	1.87	22.799
2143.838	4.366	-0.214	4.152	0.76	3.455
2148.179	4.381	-0.172	4.208	2.187	27.27
2156.156	4.486	-0.126	4.359	1.87	22.799
2160	4.572	-0.121	4.451	0.76	3.455
2160.679	4.590	-0.122	4.468	2.187	27.27
2161.104	4.601	-0.123	4.478	1.87	22.799
2176.104	4.810	-0.037	4.773	0.76	3.455
2176.868	4.811	-0.039	4.771	2.187	27.27
2180	4.802	-0.062	4.740	1.87	22.799
2191.104	4.640	-0.025	4.615	0.76	3.455
2194.946	4.547	-0.026	4.521	2.187	27.27
2197.858	4.488	-0.045	4.443	1.87	22.799
2200	4.459	-0.040	4.419	0.76	3.455
2204.35	4.434	-0.019	4.416	2.187	27.27
2204.946	4.435	-0.018	4.417	1.87	22.799
2214.946	4.578	-0.022	4.556	0.76	3.455
2220	4.715	-0.040	4.675	2.187	27.27
2224.016	4.823	-0.054	4.769	1.87	22.799
2228.388	4.932	-0.059	4.872	0.76	3.455
2240	5.121	-0.056	5.065	2.187	27.27
2249.016	5.170	0.055	5.225	1.87	22.799
2249.641	5.170	0.070	5.240	0.76	3.455
2260	5.113	0.015	5.129	2.187	27.27
2274.016	4.856	-0.047	4.810	1.87	22.799
2280	4.702	0.015	4.718	0.76	3.455
2280.619	4.686	0.019	4.706	2.187	27.27
2284.365	4.604	0.029	4.633	1.87	22.799
2293.606	4.519	-0.067	4.452	0.76	3.455
2295.619	4.523	-0.081	4.442	2.187	27.27
2300	4.560	-0.036	4.523	1.87	22.799
2310.619	4.806	-0.004	4.802	0.76	3.455
2311.105	4.822	-0.008	4.815	2.187	27.27
2317.081	4.983	-0.017	4.966	1.87	22.799
2320	5.031	-0.031	5.000	0.76	3.455
2325.745	5.069	0.129	5.198	2.187	27.27
2331.105	5.036	0.099	5.135	1.87	22.799
2340	4.835	-0.027	4.808	0.76	3.455

PRELIMINARY

ASSOCIATED CONSULTANTS: CONICS

CLIENT: SATORI RESORTS PTY LTD

PROJECT: ELLA BAY ACCESS ROAD STRATEGY

LOCATION: ELLA BAY

MITIGATED ELLA BAY ACCESS ROAD LONG SECTIONS - 4 OF 9

DESIGNED: A.W.S.A.

DRAWN: K.J.M.

CHECKED: DATE

DATE: FEBRUARY 2008

APPROVED: DATE

SCALE: 1:1000 (H), 1:100 (V)

HORIZ. 0 10 20 30 40 50m

VERT. 0 1 2 3 4 5m

1 SWANN ROAD TARANGA, BRISBANE QLD 4088

17 MONKING CREEK BLVD, SUNSHINE COAST QLD 4560

PAPIUA NEW GUINEA

5TH FLOOR CITIBANKER HOUSE, PORT KORBERRY

ARCHITECTS - CIVIL & STRUCTURAL ENGINEERS

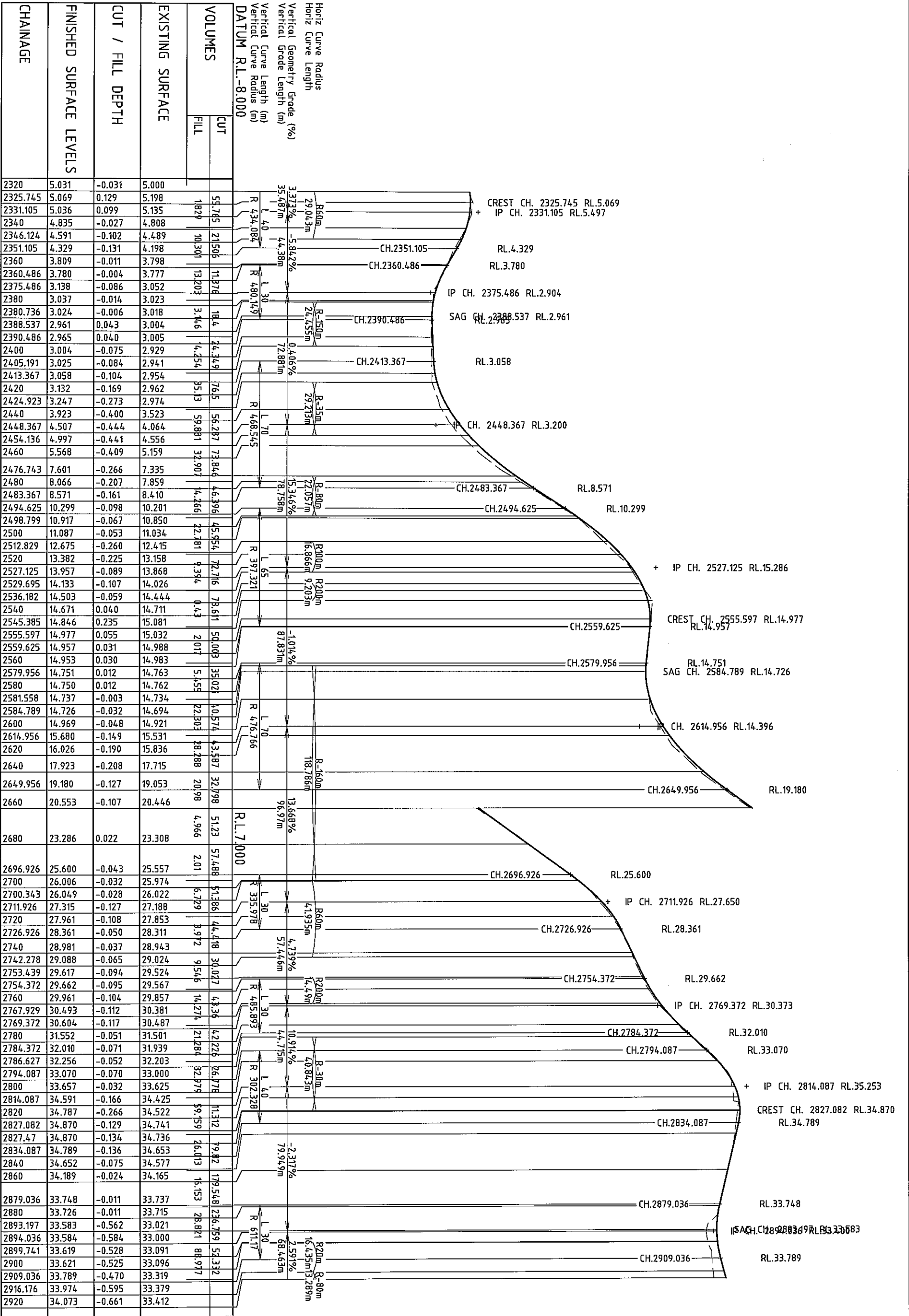
G R O U P

WBPREB01

SHEET NUMBER: R53

REV: A

DATE: 10/06/2008

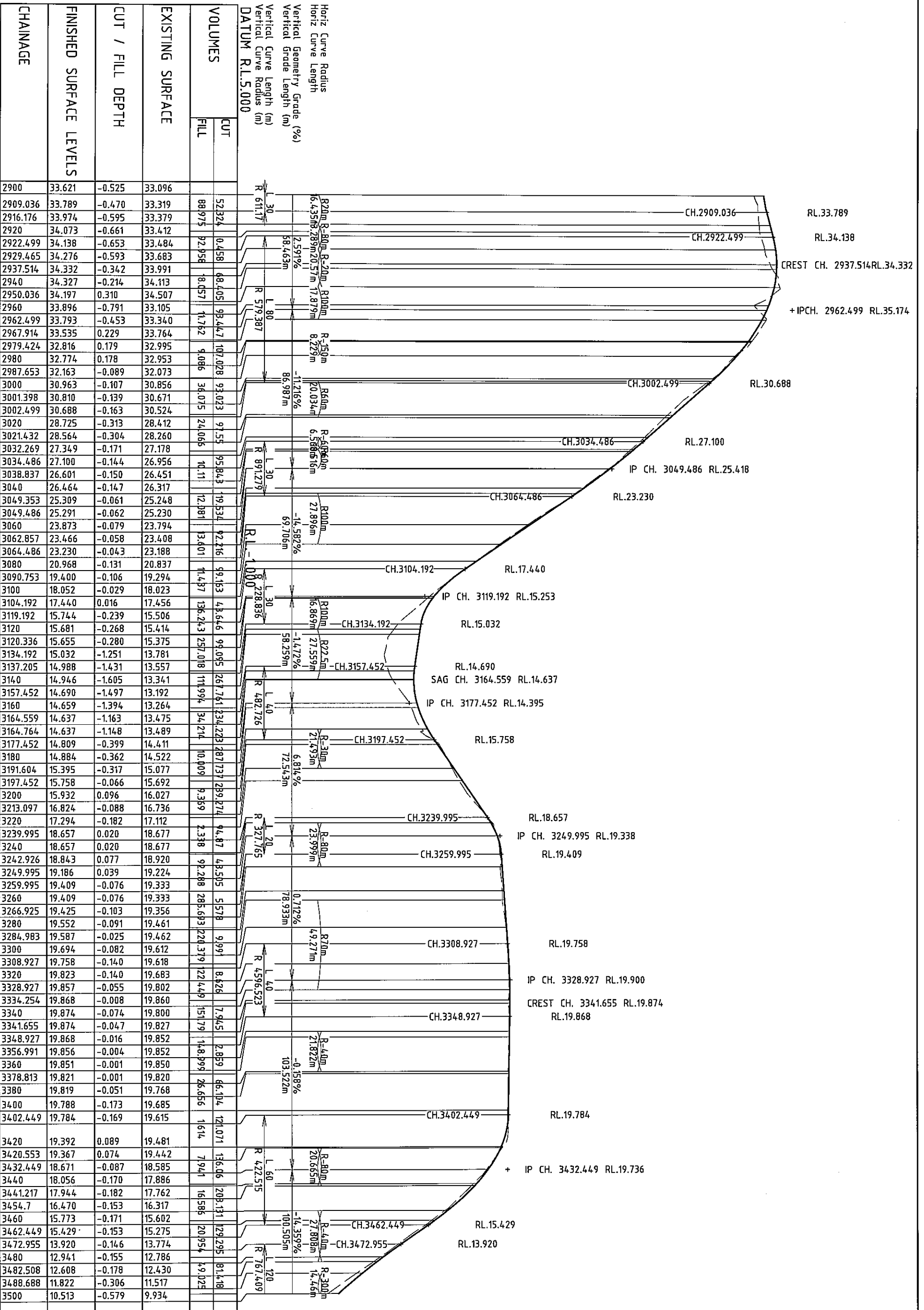


ASSOCIATED CONSULTANTS
PRELIMINARY
 CLIENT: SATORI RESORTS PTY LTD
 PROJECT: ELLA BAY ACCESS ROAD STRATEGY
 LOCATION: ELLA BAY
 SHEET TITLE: MITIGATED ELLA BAY ACCESS ROAD LONG SECTIONS - 5 OF 9

DESIGNED: A.W.S.A.
 CHECKED: M.J.M.
 DATE: FEBRUARY 2008
 SCALE: 1:1000 (H), 1:100 (V)
 HORIZ: 0 10 20 30 40 50m
 VERT: 0 1 2 3 4 5m

ARCHITECTS: CIVIL & STRUCTURAL ENGINEERS
 G R O U P
 www.grgroup.net.au

JOB CODE: WBP/REB01
 SHEET NUMBER: R54
 REV: A



CHAINAGE	FINISHED SURFACE LEVELS	CUT / FILL DEPTH	EXISTING SURFACE	VOLUMES	
				CUT	FILL
2900	33.621	-0.525	33.096		
2909.036	33.789	-0.470	33.319	52324	88975
2916.176	33.974	-0.595	33.379	0.458	92958
2920	34.073	-0.661	33.412	88405	184571
2922.499	34.138	-0.653	33.484	98447	11752
2929.465	34.276	-0.593	33.683	107028	9086
2937.514	34.332	-0.342	33.991	93023	36075
2940	34.327	-0.214	34.113	9155	24066
2950.036	34.197	0.310	34.507	95843	1011
2960	33.896	-0.791	33.105	19534	12081
2962.499	33.793	-0.453	33.340	92216	3401
2967.914	33.535	-0.229	33.764	9153	11487
2979.424	32.816	0.179	32.995	48646	136243
2980	32.774	0.178	32.953	99095	261761
2987.653	32.163	-0.089	32.073	134223	287737
3000	30.963	-0.107	30.856	239274	299274
3001.398	30.810	-0.139	30.671	9487	4487
3002.499	30.688	-0.163	30.524	2338	2338
3020	28.725	-0.313	28.412	48505	48505
3021.432	28.564	-0.304	28.260	48505	48505
3032.269	27.349	-0.171	27.178	48505	48505
3034.486	27.100	-0.144	26.956	48505	48505
3038.837	26.601	-0.150	26.451	48505	48505
3040	26.464	-0.147	26.317	48505	48505
3049.353	25.309	-0.061	25.248	48505	48505
3049.486	25.291	-0.062	25.230	48505	48505
3060	23.873	-0.079	23.794	48505	48505
3062.857	23.466	-0.058	23.408	48505	48505
3064.486	23.230	-0.043	23.188	48505	48505
3080	20.968	-0.131	20.837	48505	48505
3090.753	19.400	-0.106	19.294	48505	48505
3100	18.052	-0.029	18.023	48505	48505
3104.192	17.440	0.016	17.456	48505	48505
3119.192	15.744	-0.239	15.506	48505	48505
3120	15.681	-0.268	15.414	48505	48505
3120.336	15.655	-0.280	15.375	48505	48505
3134.192	15.032	-1.251	13.781	48505	48505
3137.205	14.988	-1.431	13.557	48505	48505
3140	14.946	-1.605	13.341	48505	48505
3157.452	14.690	-1.497	13.192	48505	48505
3160	14.659	-1.394	13.264	48505	48505
3164.559	14.637	-1.163	13.475	48505	48505
3164.764	14.637	-1.148	13.489	48505	48505
3177.452	14.809	-0.399	14.411	48505	48505
3180	14.884	-0.362	14.522	48505	48505
3191.604	15.395	-0.317	15.077	48505	48505
3197.452	15.758	-0.066	15.692	48505	48505
3200	15.932	0.096	16.027	48505	48505
3213.097	16.824	-0.088	16.736	48505	48505
3220	17.294	-0.182	17.112	48505	48505
3239.995	18.657	0.020	18.677	48505	48505
3240	18.657	0.020	18.677	48505	48505
3242.926	18.843	0.077	18.920	48505	48505
3249.995	19.186	0.039	19.224	48505	48505
3259.995	19.409	-0.076	19.333	48505	48505
3260	19.409	-0.076	19.333	48505	48505
3266.925	19.425	-0.103	19.356	48505	48505
3280	19.552	-0.091	19.461	48505	48505
3284.983	19.587	-0.025	19.462	48505	48505
3300	19.694	-0.082	19.612	48505	48505
3308.927	19.758	-0.140	19.618	48505	48505
3320	19.823	-0.140	19.683	48505	48505
3328.927	19.857	-0.055	19.802	48505	48505
3334.254	19.868	-0.008	19.860	48505	48505
3340	19.874	-0.074	19.800	48505	48505
3348.927	19.874	-0.016	19.852	48505	48505
3356.991	19.856	-0.004	19.852	48505	48505
3360	19.851	-0.001	19.850	48505	48505
3378.813	19.821	-0.001	19.820	48505	48505
3380	19.819	-0.051	19.768	48505	48505
3400	19.788	-0.173	19.685	48505	48505
3402.449	19.784	-0.169	19.615	48505	48505
3420	19.392	0.089	19.481	48505	48505
3420.553	19.367	0.074	19.442	48505	48505
3432.449	18.671	-0.087	18.585	48505	48505
3440	18.056	-0.170	17.886	48505	48505
3441.217	17.944	-0.182	17.762	48505	48505
3454.7	16.470	-0.153	16.317	48505	48505
3460	15.773	-0.171	15.602	48505	48505
3462.449	15.429	-0.153	15.275	48505	48505
3472.955	13.920	-0.146	13.774	48505	48505
3480	12.941	-0.155	12.786	48505	48505
3482.508	12.608	-0.178	12.430	48505	48505
3488.688	11.822	-0.306	11.517	48505	48505
3500	10.513	-0.579	9.934	48505	48505

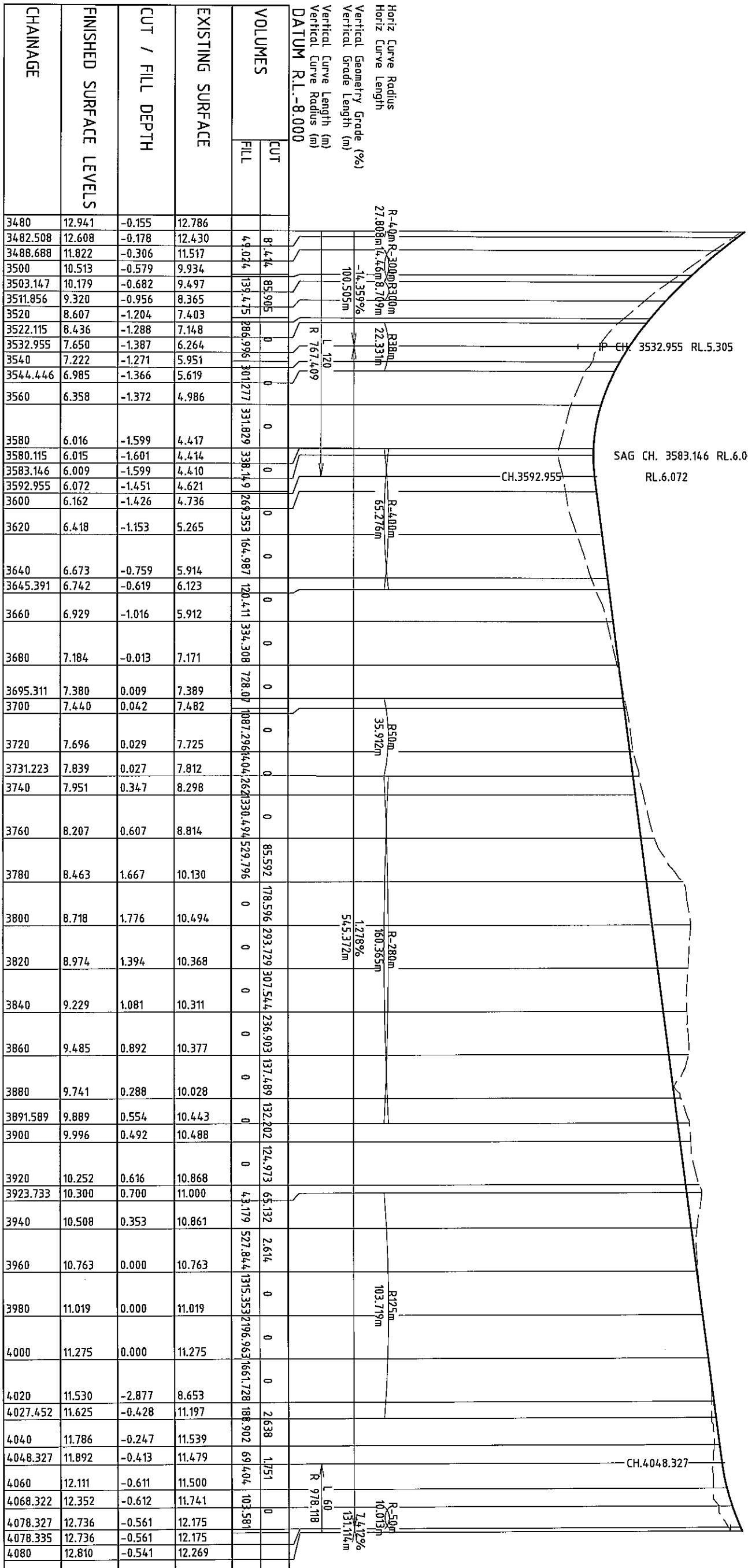
ASSOCIATED CONSULTANTS
PRELIMINARY
 CLIENT: SATORI RESORTS PTY LTD
 PROJECT: ELLA BAY ACCESS ROAD STRATEGY
 LOCATION: ELLA BAY
 SHEET TITLE: MITIGATED ELLA BAY ACCESS ROAD LONG SECTIONS - 6 OF 9

DESIGNED: A.W.S.A.
 CHECKED: M.J.M.
 DATE: FEBRUARY 2008

SCALE: 1:1000 (H), 1:100 (V)
 HORIZ. 0 10 20 30 40 50m
 VERT. 0 1 2 3 4 5m

ARCHITECTS: CIVIL & STRUCTURAL ENGINEERS

JOB CODE: WBP/REB01
 SHEET NUMBER: R55
 REV: A



CHAINAGE	FINISHED SURFACE LEVELS		CUT / FILL DEPTH	EXISTING SURFACE	VOLUMES	
	CUT	FILL			CUT	FILL
3480	12.941	-0.155	12.786	81.44	85.905	
3482.508	12.608	-0.178	12.430	49.074	139.475	
3488.688	11.822	-0.306	11.517	286.996	301.277	
3500	10.513	-0.579	9.934	0	0	
3503.147	10.179	-0.682	9.497	0	0	
3511.856	9.320	-0.956	8.365	0	0	
3520	8.607	-1.204	7.403	0	0	
3522.115	8.436	-1.288	7.148	0	0	
3532.955	7.650	-1.387	6.264	0	0	
3540	7.222	-1.271	5.951	0	0	
3544.446	6.985	-1.366	5.619	0	0	
3560	6.358	-1.372	4.986	0	0	
3580	6.016	-1.599	4.417	0	0	
3580.115	6.015	-1.601	4.414	0	0	
3583.146	6.009	-1.599	4.410	0	0	
3592.955	6.072	-1.451	4.621	0	0	
3600	6.162	-1.426	4.736	0	0	
3620	6.418	-1.153	5.265	0	0	
3640	6.673	-0.759	5.914	0	0	
3645.391	6.742	-0.619	6.123	0	0	
3660	6.929	-1.016	5.912	0	0	
3680	7.184	-0.013	7.171	0	0	
3695.311	7.380	0.009	7.389	0	0	
3700	7.440	0.042	7.482	0	0	
3720	7.696	0.029	7.725	0	0	
3731.223	7.839	0.027	7.812	0	0	
3740	7.951	0.347	8.298	0	0	
3760	8.207	0.607	8.814	85.592	178.596	
3780	8.463	1.667	10.130	293.729	307.544	
3800	8.718	1.776	10.494	0	0	
3820	8.974	1.394	10.368	0	0	
3840	9.229	1.081	10.311	0	0	
3860	9.485	0.892	10.377	0	0	
3880	9.741	0.288	10.028	0	0	
3891.589	9.889	0.554	10.443	0	0	
3900	9.996	0.492	10.488	0	0	
3920	10.252	0.616	10.868	4.3179	527.844	
3923.733	10.300	0.700	11.000	1315.353	2196.963	
3940	10.508	0.353	10.861	0	0	
3960	10.763	0.000	10.763	0	0	
3980	11.019	0.000	11.019	0	0	
4000	11.275	0.000	11.275	0	0	
4020	11.530	-2.877	8.653	188.902	69.404	
4027.452	11.625	-0.428	11.197	2.638	1.951	
4040	11.786	-0.247	11.539	0	0	
4048.327	11.892	-0.413	11.479	103.581	103.581	
4060	12.111	-0.611	11.500	0	0	
4068.322	12.352	-0.612	11.741	0	0	
4078.327	12.736	-0.561	12.175	0	0	
4078.335	12.736	-0.561	12.175	0	0	
4080	12.810	-0.541	12.269	0	0	

ASSOCIATED CONSULTANTS
PRELIMINARY
 CLIENT: SATORI RESORTS PTY LTD
 PROJECT: ELLA BAY ACCESS ROAD STRATEGY
 LOCATION: ELLA BAY
 SHEET TITLE: MITIGATED ELLA BAY ACCESS ROAD LONG SECTIONS - 7 OF 9

DESIGNED: A.W.S.A.
 DRAWN: M.J.M.
 CHECKED: M.J.M.
 DATE: FEBRUARY 2008

APPROVED: KETH HONDELLS
 DATE: FEBRUARY 2008

SCALE: 1:1000 (H), 1:100 (V)
 HORIZ. 0 10 20 30 40 50m
 VERT. 0 1 2 3 4 5m

1 SWANN ROAD TARONGA, BRISBANE QLD 4008
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 EMAIL: info@engr.com.au

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JOB CODE: WBP01
 SHEET NUMBER: R56
 REV: A

ASSOCIATED CONSULTANTS
PRELIMINARY
 CONICS

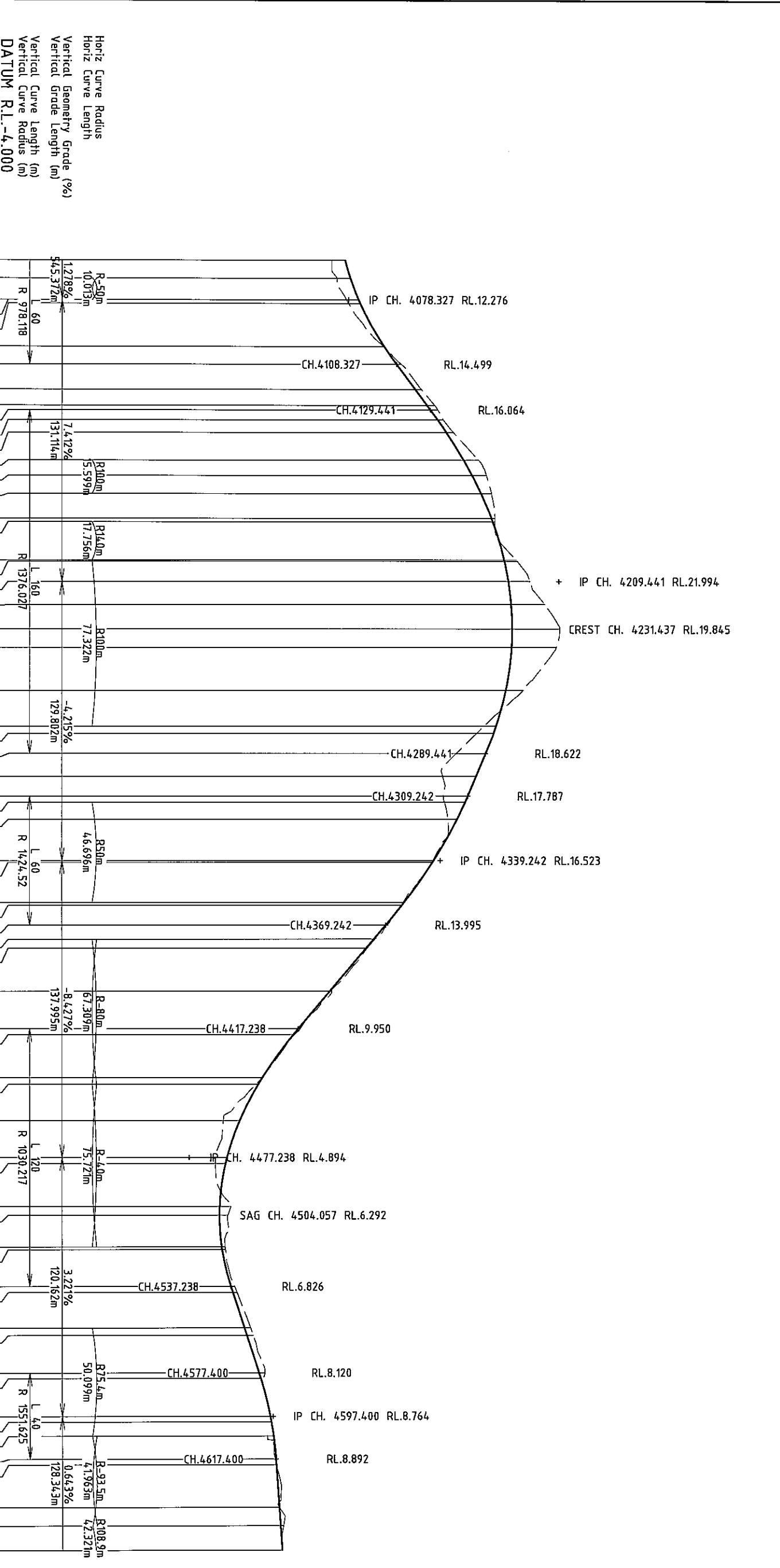
CLIENT
SATORI RESORTS PTY LTD
 PROJECT
ELLA BAY ACCESS ROAD STRATEGY
 LOCATION
ELLA BAY
 SHEET TITLE
MITIGATED ELLA BAY ACCESS ROAD LONG SECTIONS - 8 OF 9

DESIGNED
A.W.S.A.
 DRAWN
M.J.M.
 CHECKED
M.J.M.
 DATE
FEBRUARY 2008

APPROVED
KETH HENDRICKS
 DATE
FEBRUARY 2008
 SCALE
1:1000 (H), 1:100 (V)
 HORIZ. 0 10 20 30 40 50m
 VERT. 0 1 2 3 4 5m

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 1 SWANN ROAD TARONGA BRISBANE QLD 4088
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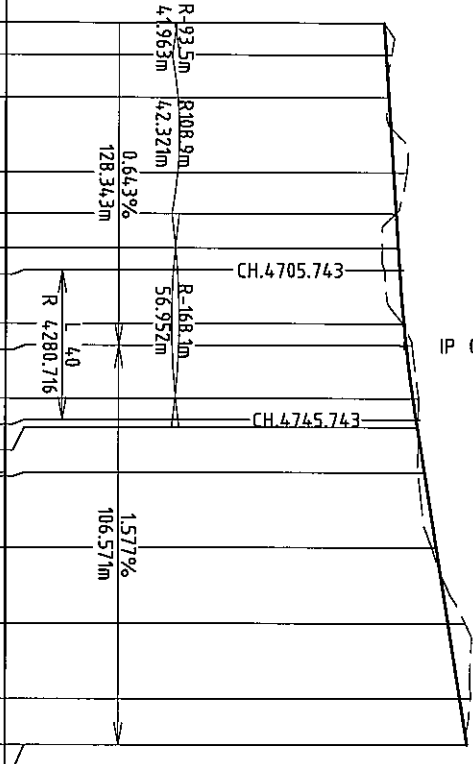
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				CUT	FILL												
4060	12.111	-0.611	11.500														
4068.322	12.352	-0.612	11.741														
4078.327	12.736	-0.561	12.175														
4078.335	12.736	-0.561	12.175														
4080	12.810	-0.541	12.269														
4100	13.918	-0.003	13.914														
4108.327	14.499	0.217	14.716														
4120	15.365	0.278	15.643														
4127.402	15.913	0.351	16.265														
4129.441	16.064	0.334	16.399														
4134.171	16.407	0.249	16.656														
4140	16.807	0.323	17.129														
4152.841	17.600	0.693	18.293														
4160	17.990	0.666	18.656														
4168.44	18.403	0.481	18.883														
4180	18.883	0.155	19.039														
4181.653	18.944	0.102	19.046														
4199.409	19.472	0.552	20.024														
4200	19.486	0.588	20.074														
4209.441	19.669	1.003	20.671														
4220	19.797	1.551	21.348														
4231.437	19.845	2.196	22.040														
4240	19.818	2.059	21.877														
4260	19.548	0.804	20.352														
4276.731	19.099	-0.532	18.567														
4280	18.988	-0.779	18.209														
4289.441	18.622	-1.368	17.254														
4300	18.177	-1.545	16.632														
4309.242	17.787	-1.123	16.664														
4311.98	17.669	-0.953	16.716														
4320	17.293	-0.415	16.878														
4339.242	16.207	-0.039	16.167														
4340	16.159	-0.030	16.129														
4358.677	14.846	-0.042	14.804														
4360	14.744	-0.018	14.725														
4369.242	13.995	0.043	14.037														
4375.745	13.447	0.046	13.493														
4380	13.088	0.055	13.143														
4400	11.403	0.097	11.500														
4417.238	9.950	0.096	10.046														
4420	9.721	0.061	9.781														
4440	8.283	-0.023	8.260														
4443.054	8.098	-0.087	8.011														
4460	7.234	-0.765	6.468														
4477.238	6.641	-0.537	6.104														
4480	6.573	-0.471	6.101														
4500	6.300	0.524	6.824														
4504.057	6.292	0.377	6.669														
4518.774	6.397	0.155	6.552														
4520	6.415	0.160	6.575														
4537.238	6.826	0.167	6.993														
4540	6.915	0.185	7.100														
4556.485	7.446	0.282	7.728														
4560	7.559	0.293	7.852														
4577.4	8.120	0.277	8.397														
4580	8.201																
4597.4	8.635																
4600	8.683																
4606.584	8.785	-0.285	8.500														
4617.4	8.892	-0.050	8.843														
4620	8.909	-0.015	8.894														
4640	9.038	0.001	9.038														
4648.546	9.093	0.136	9.229														
4660	9.166	-0.008	9.158														



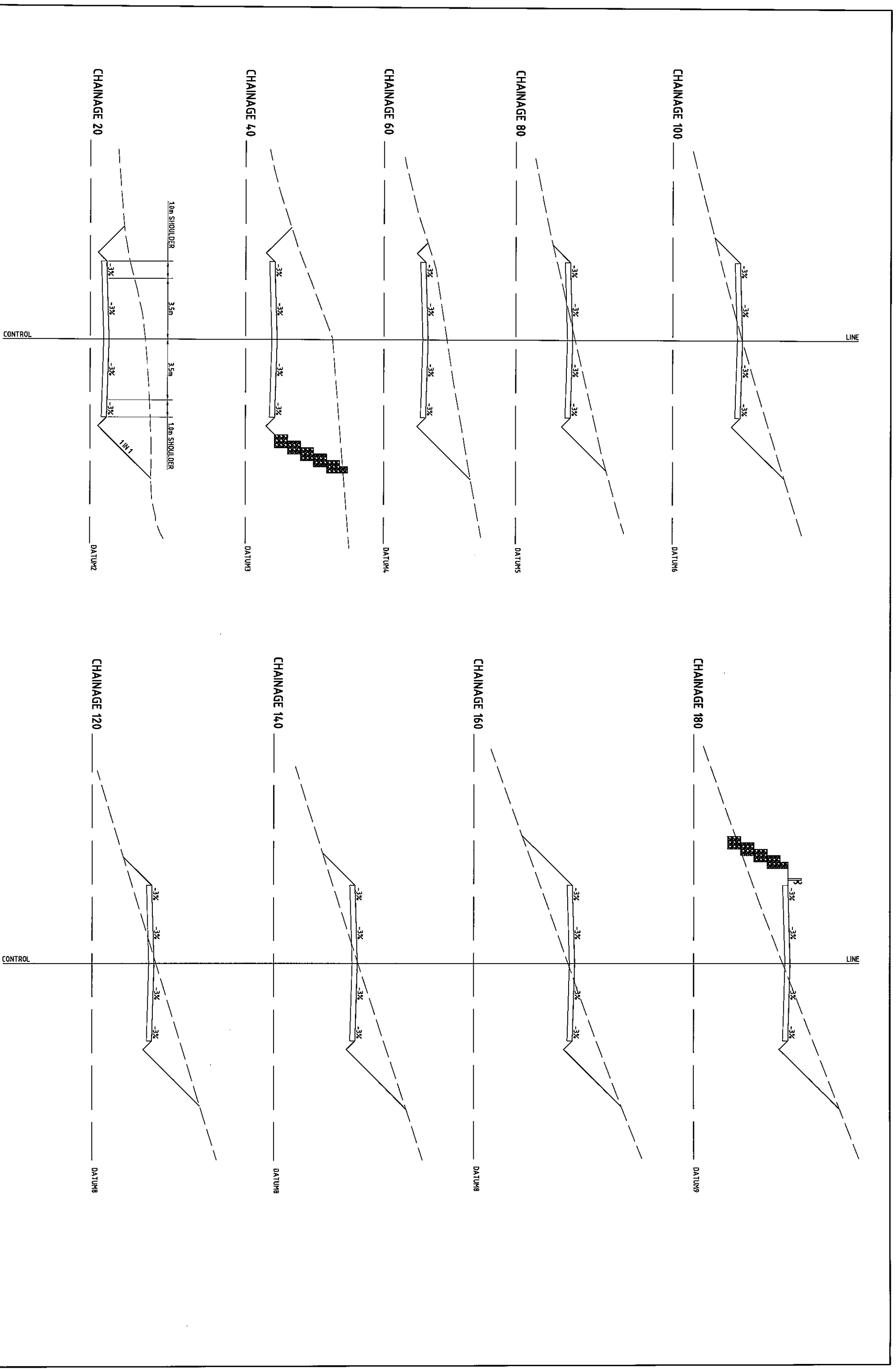
JOB CODE
WBPB01
 SHEET NUMBER
R57
 REV
A

CHAINAGE	FINISHED SURFACE LEVELS		CUT / FILL DEPTH	EXISTING SURFACE	VOLUMES	CUT		FILL	
	FINISHED	PROPOSED				CUT	FILL	CUT	FILL
4640	9.038	0.001	9.038	115.205	124.396	61.164	3.725	71.902	44.818
4648.546	9.093	0.136	9.229	26.632	13.872	45.443	26.636	0.275	24.25
4660	9.166	-0.008	9.158	4680	4690.868	9.365	-0.024	9.341	4700
4680	9.295	0.348	9.643	4700	4705.743	9.460	-0.411	9.049	4720
4690.868	9.365	-0.024	9.341	4720	4725.743	9.636	0.152	9.787	4740
4700	9.423	-0.423	9.000	4725.743	4740	9.818	0.153	9.971	4745.743
4705.743	9.460	-0.411	9.049	4740	4745.743	9.904	0.061	9.966	4747.82
4720	9.576	-0.040	9.536	4745.743	4747.82	9.937	0.028	9.965	4760
4725.743	9.636	0.152	9.787	4747.82	4760	10.129	-0.167	9.962	4780
4740	9.818	0.153	9.971	4760	4780	10.445	-0.112	10.332	4800
4745.743	9.904	0.061	9.966	4780	4800	10.760	0.460	11.220	4820
4747.82	9.937	0.028	9.965	4800	4820	11.076	0.287	11.362	4832.314
4760	10.129	-0.167	9.962	4820	4832.314	11.270	-0.000	11.270	4832.314
4780	10.445	-0.112	10.332	4832.314	4832.314	11.270	-0.000	11.270	

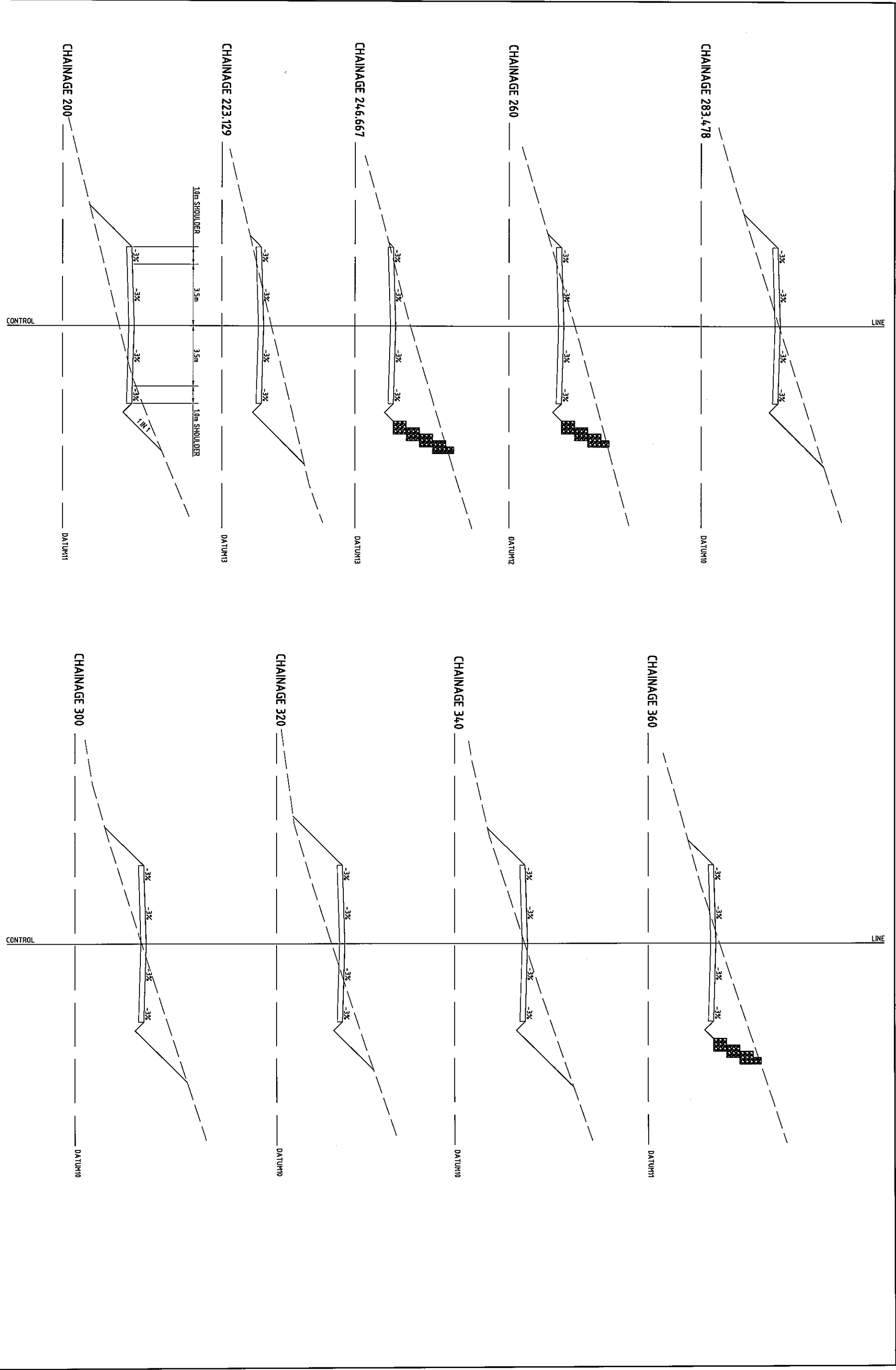
Horizontal Curve Radius
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 Vertical Geometry Grade (%)
 Vertical Curve Length (m)
 Vertical Curve Radius (m)
 DATUM R.L. -1.000



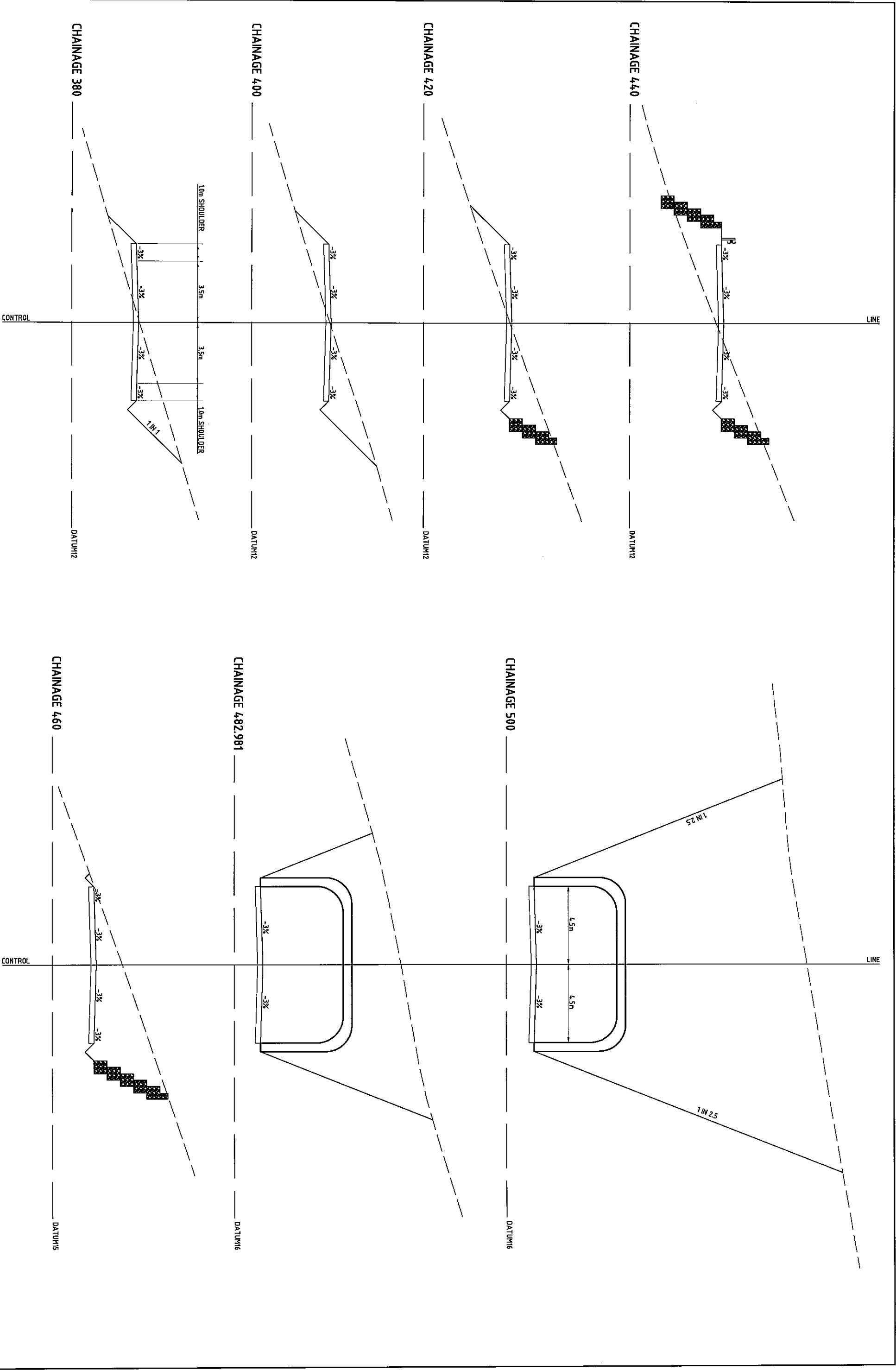
RL.9.460
 IP CH. 4725.743 RL.9.589
 RL.9.904



ASSOCIATED CONSULTANTS		PRELIMINARY		CLIENT	
CONICS		SATORI RESORTS PTY LTD		PROJECT	
		ELLA BAY ACCESS ROAD STRATEGY		LOCATION	
		ELLA BAY		MITIGATED ELLA BAY ACCESS ROAD CROSS SECTIONS - 1 OF 8	
DATE		DESIGNED		APPROVED	
REV		A. W. S. A.		DATE	
DESCRIPTION		G. S.		SCALE	
REVISIONS		DATE		1: 100 (A1 SIZE)	
		FEBRUARY 2008		DATE	
		NORTH		DATE	
		KATH HORNELL		17 FEB 2008	
		IPRED 788			
		AUSTRALIA			
		1 SWANN ROAD TARANGA, BRISBANE QLD 4068			
		TEL: (07) 5371 7000 FAX: (07) 5371 5070			
		EMAIL: ma@enggroup.com.au			
		PAPUA NEW GUINEA			
		5TH FLOOR CANTONMENT HOUSE POSTBOX 600			
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		128 CODE			
		WBPREB01			
		SHEET NUMBER			
		R59			
		REV:			
		A			
		15 FEB 2008			
		16 AUG 2008			



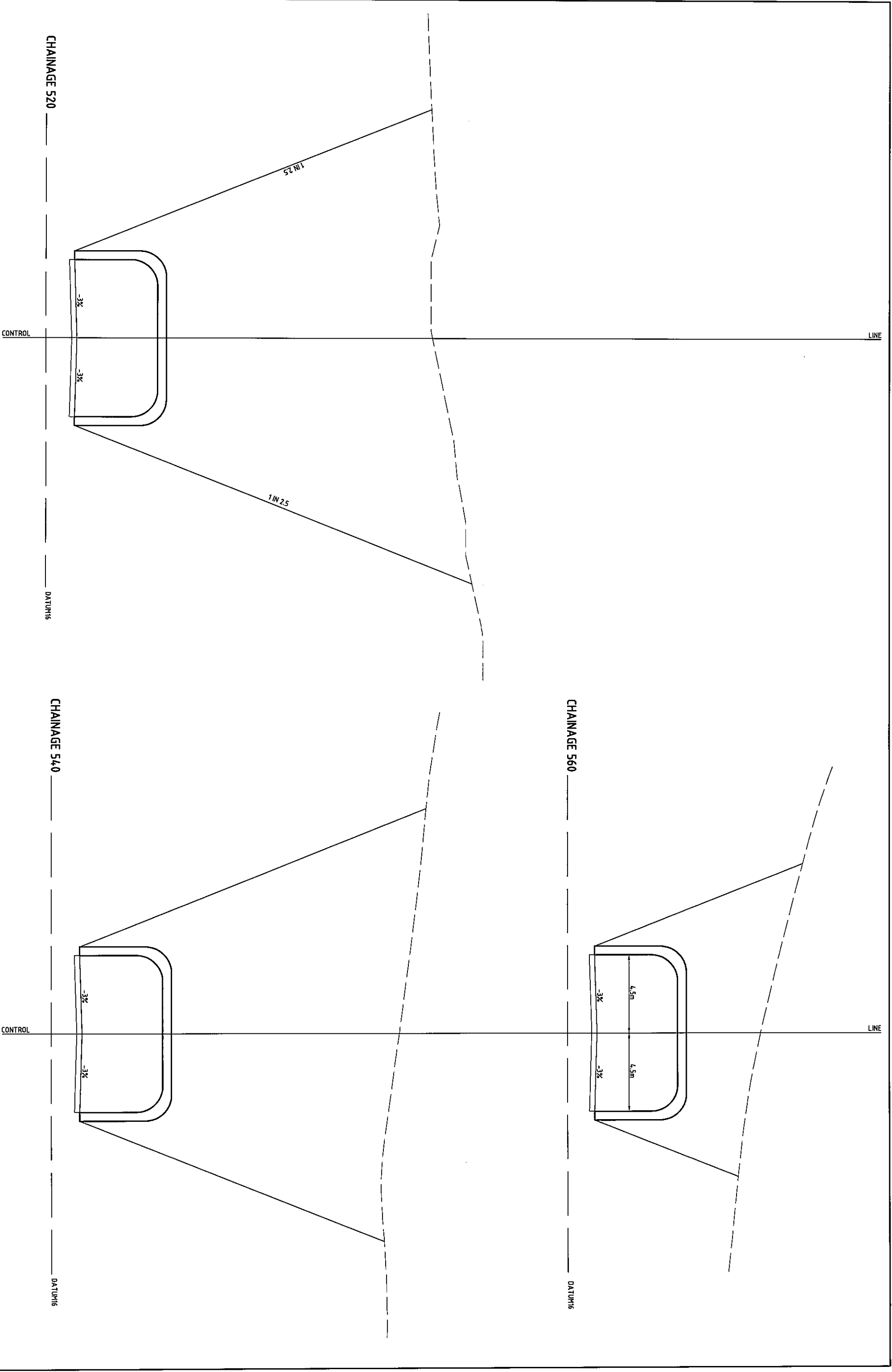
ASSOCIATED CONSULTANTS PRELIMINARY		CLIENT SATORI RESORTS PTY LTD	
CONICS		PROJECT ELLA BAY ACCESS ROAD STRATEGY	
DATE: _____ NO: _____ DESCRIPTION: _____ REVISIONS: _____		LOCATION ELLA BAY MITIGATED ELLA BAY ACCESS ROAD CROSS SECTIONS - 2 OF 8	
SHEET TITLE		DESIGNED A. W. S. A.	
DATE: _____		CHECKED C. S.	
DATE: _____		DATE: _____	
APPROVED		SCALE 1:100 (AS SHD)	
DATE: _____		NORTHING REFD 728	
ARCHITECTS CIVIL & STRUCTURAL ENGINEERS		AUSTRALIA 17 MONKS CREEK BLVD BUNNINGBURY QLD 4556 PH: (07) 5498 4550 FAX: (07) 5498 4542 EMAIL: engineering@cspe.com.au	
PAPUA NEW GUINEA 5TH FLOOR CIPHERSTON HOUSE PORT MORSBAY TELEPHONE: (675) 321 1333 FAX: (675) 321 7753 EMAIL: engineering@cspe.com.au		SWANAN ROAD YARRAGA BRISBANE QLD 4308 PH: (07) 5371 7000 FAX: (07) 5371 5979 EMAIL: engineering@cspe.com.au	
JOB CODE: WBPREB01		SHEET NUMBER: R60 REV: A	
G R O U P ETS www.etsgroup.net.au		DATE: _____	



ASSOCIATED CONSULTANTS
PRELIMINARY
 CLIENT: SATORI RESORTS PTY LTD
 PROJECT: ELLA BAY ACCESS ROAD STRATEGY
 LOCATION: ELLA BAY
 MITIGATED ELLA BAY ACCESS ROAD CROSS SECTIONS - 3 OF 8

DESIGNED: A.W.S.A.
 DRAWN: C.S.
 CHECKED: DATE
 DATE: FEBRUARY 2008
 APPROVED: KEITH HOWE
 DATE: FEBRUARY 2008
 SCALE: 1:100 (A1 STD)

ARCHITECTS • CIVIL & STRUCTURAL ENGINEERS
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 JOB CODE: WBP/REB01
 SHEET NUMBER: R61
 REV: A
 DATE: 15 AUG 2008



ASSOCIATED CONSULTANTS	
PRELIMINARY	
DATE	REVISIONS
NO	DESCRIPTION
1	ISSUE
2	REVISED

CLIENT: SATORI RESORTS PTY LTD
 PROJECT: ELLA BAY ACCESS ROAD STRATEGY
 LOCATION: ELLA BAY
 SHEET TITLE: MITIGATED ELLA BAY ACCESS ROAD CROSS SECTIONS - 4 OF 8

DESIGNED	A.W.S.A.	APPROVED	DATE
DRAWN	C.S.	KEITH HOWEELS	REVISIONS
CHECKED	DATE	SCALE	DATE
DATE	1 FEBRUARY 2008	1:100 (A1 SIZE)	

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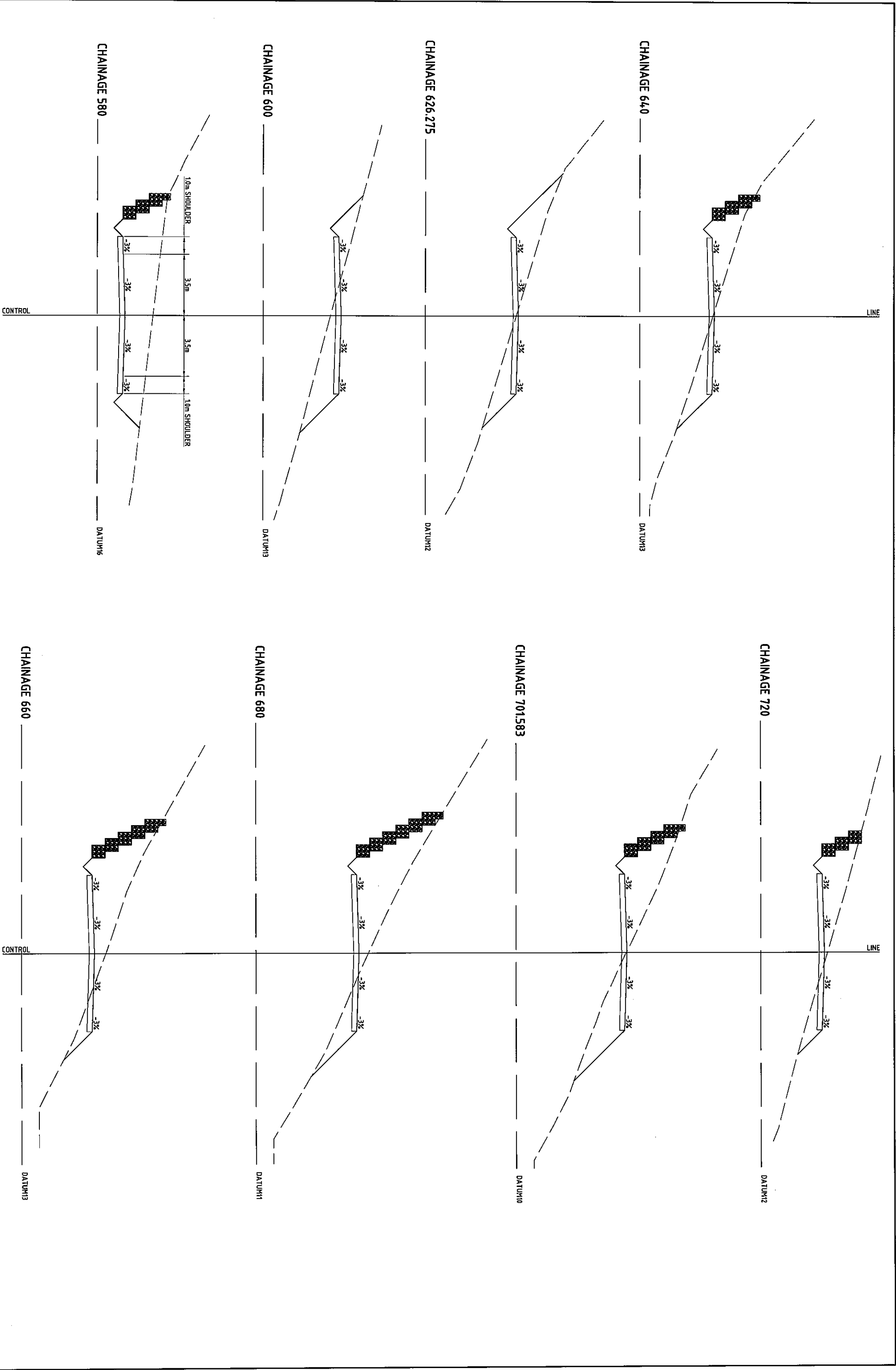
1 SWANN ROAD, TARENNA, BRISBANE QLD 4088
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 EMAIL: info@abgroup.net.au

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 EMAIL: abeng@shkel.com

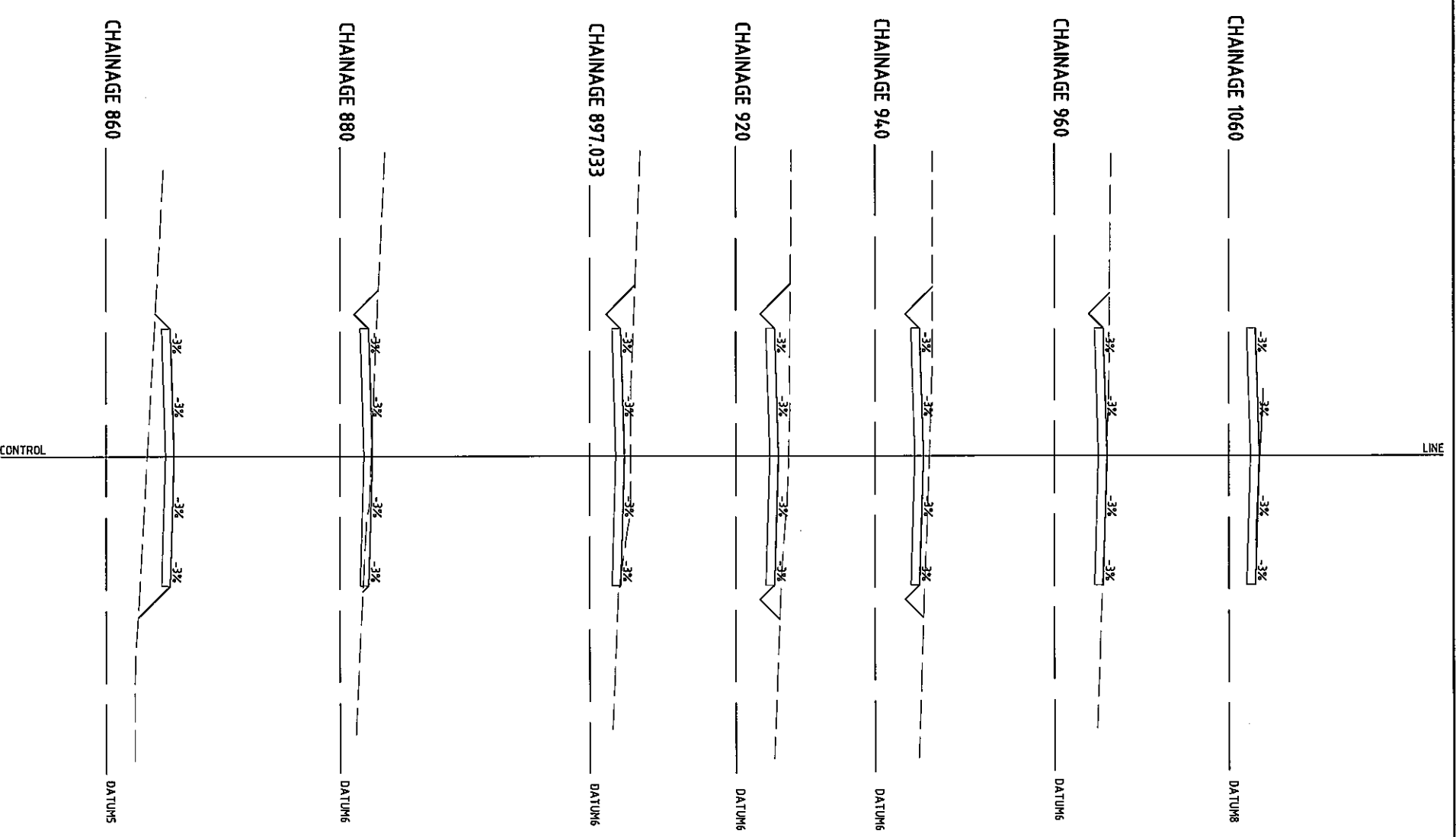
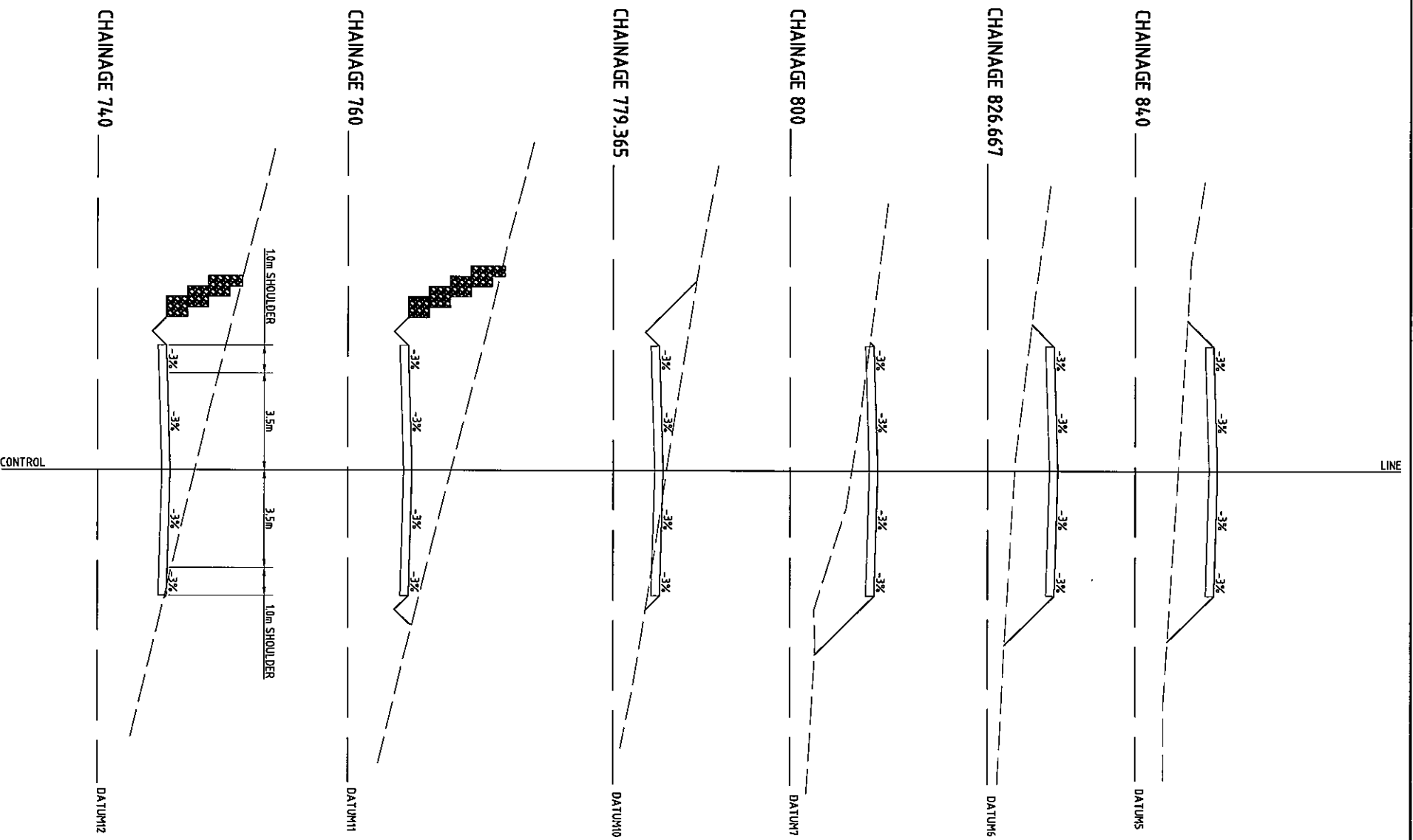
AUSTRALIA 17 MONKING CREEK, BUDERUPE, SUNSHINE COAST QLD 4568
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JOB CODE: WBP/REB01
 SHEET NUMBER: R62
 REV: A
 DATE: 10 AUG 2008



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CONICS		PROJECT ELLA BAY ACCESS ROAD STRATEGY	
DATE: _____ DRAWN: _____ CHECKED: _____ DATE: _____		LOCATION ELLA BAY MITIGATED ELLA BAY ACCESS ROAD CROSS SECTIONS - 5 OF 8	
DESIGNED A. W. S. A.		APPROVED KEITH HOWE	
DATE: _____		DATE: _____	
SCALE 1:500 (AS SHD)		DATE: _____	
ARCHITECTS CIVIL & STRUCTURAL ENGINEERS		AUSTRALIA 17 MONKS CREEK BLVD SUNSHINE COAST QLD 4558 PH: (07) 549 4550 FAX: (07) 549 4552 EMAIL: info@cseng.com.au	
PARUA NEW GUINEA 5TH FLOOR CIPHERSTON HOUSE PORT KORMORANT TELEPHONE (675) 321 1333 FAX (675) 321 7850 EMAIL: info@cseng.com.au		SHEET NUMBER WBPREB01	
E T S GROUP www.etsgroup.net.au		SHEET NUMBER R63	
JOB CODE WBPREB01		REV A	
DATE 10 AUG 2008			



ASSOCIATED CONSULTANTS
CONICS
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CLIENT: **SATORI RESORTS PTY LTD**
 PROJECT: **ELLA BAY ACCESS ROAD STRATEGY**
 LOCATION: **ELLA BAY**
 SHEET TITLE: **MITIGATED ELLA BAY ACCESS ROAD CROSS SECTIONS - 6 OF 8**

DESIGNED: **A. W. S. A.**
 DRAWN: **C. S.**
 CHECKED: **C. S.**
 DATE: **FEBRUARY 2008**

APPROVED: **KEITH HONVELLS**
 DATE: **APRIL 2008**
 SCALE: **1:100 (A1 SIZE)**

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 1 SWANN ROAD, TRAVINGA, BRISBANE QLD 4088
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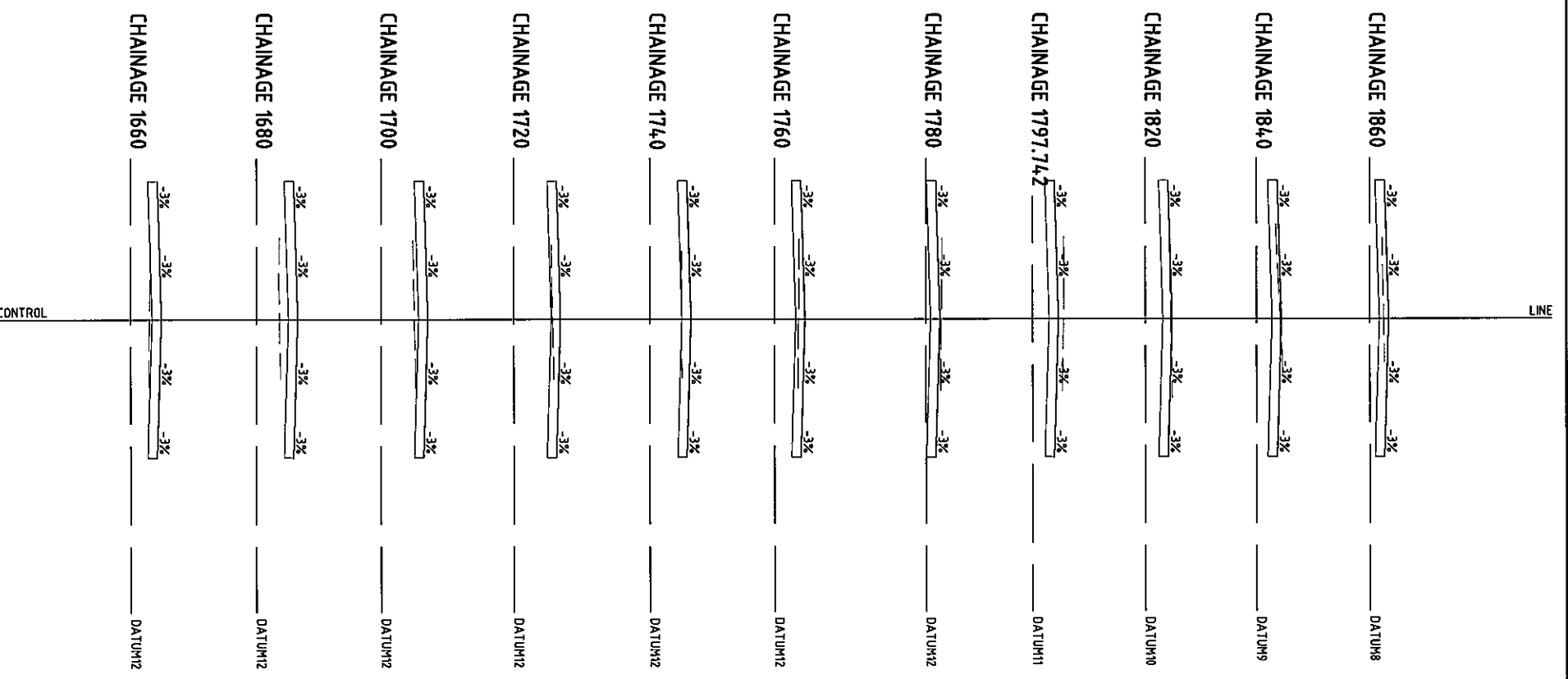
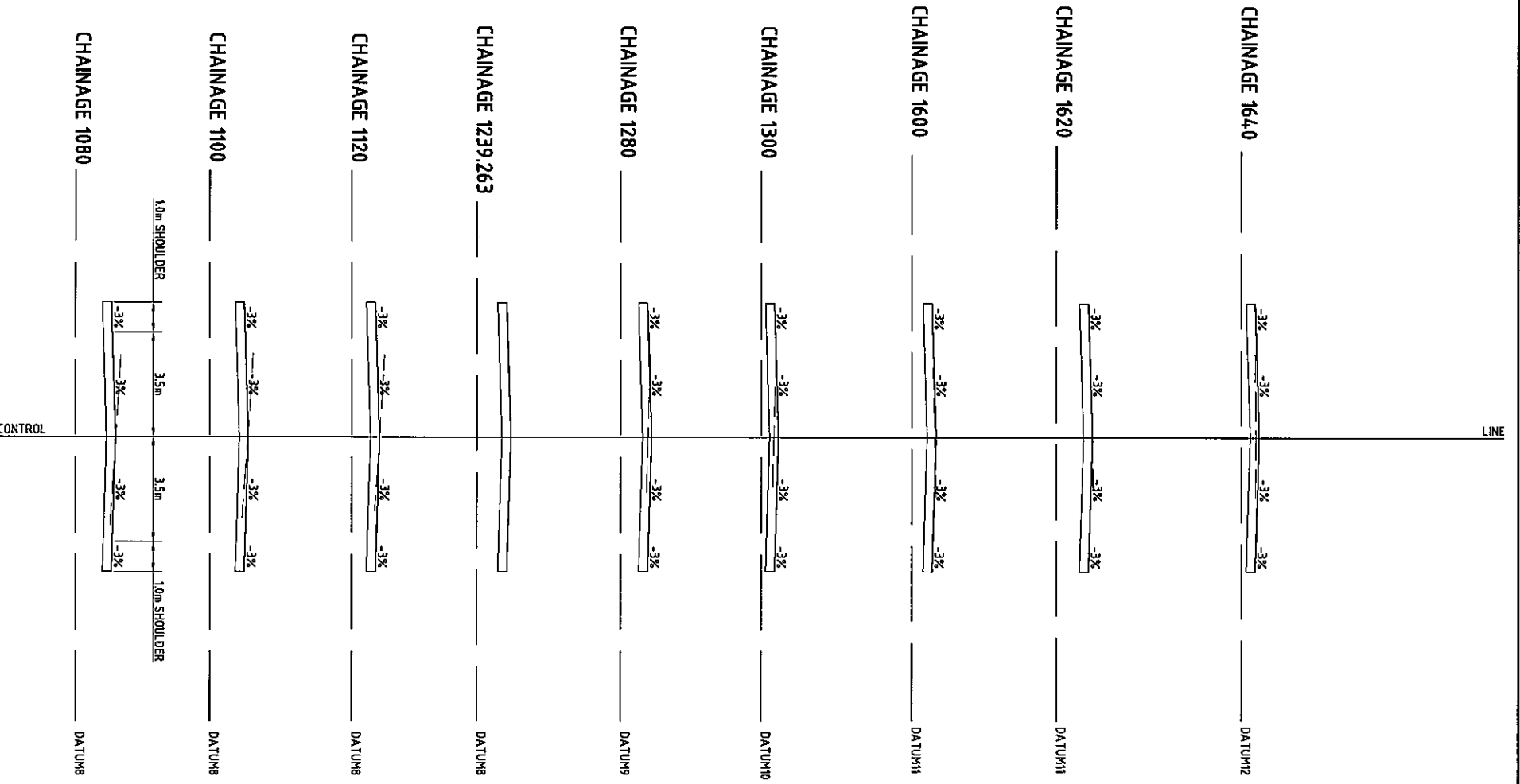
PARUA NEW GUINEA
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 EMAIL: es@enggroup.net.au

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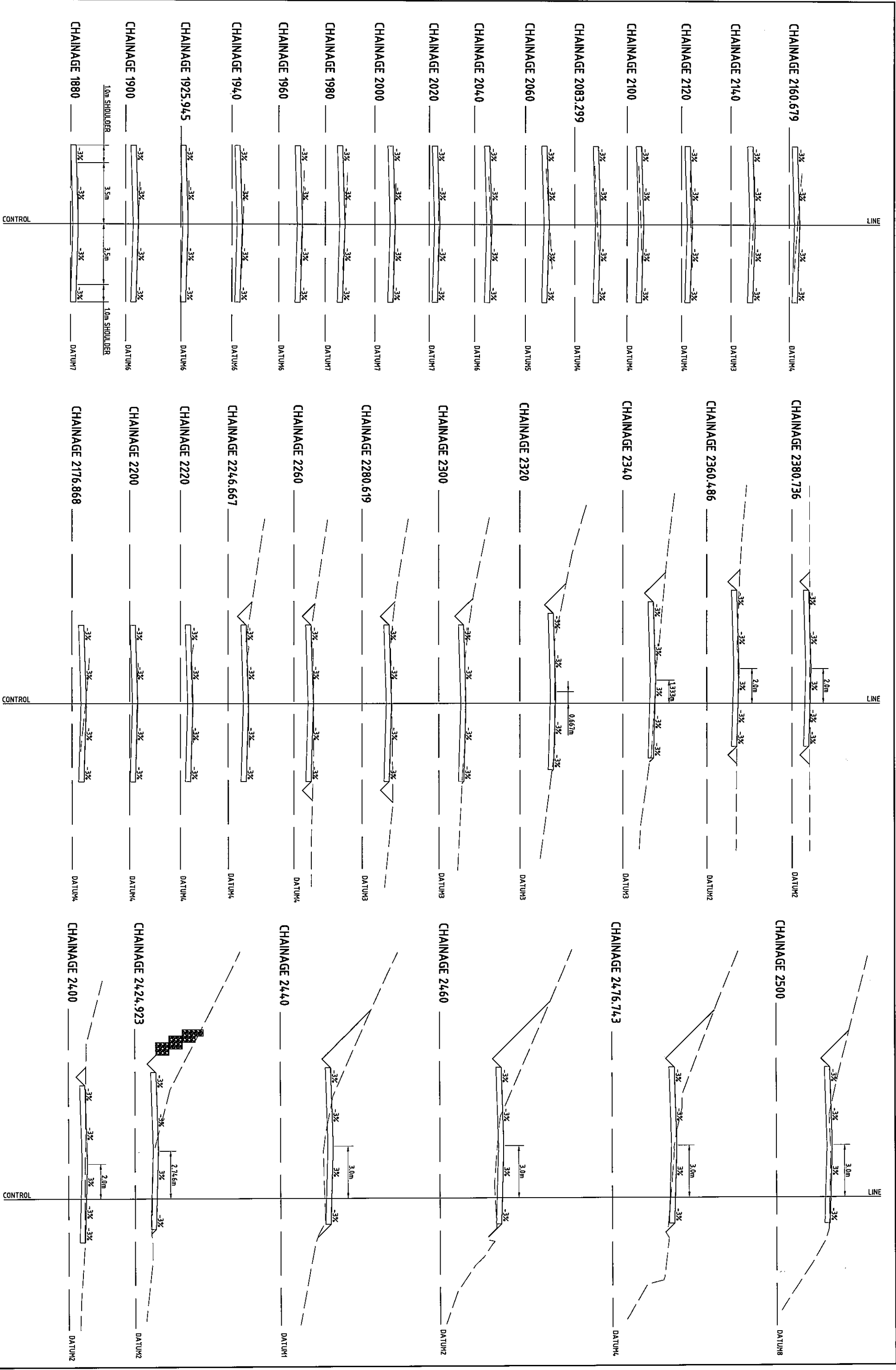
JOB CODE: **WBPREB01**
 SHEET NUMBER: **R64**
 REV: **A**

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 10 AUGUST 2008



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CONICS		SATORI RESORTS PTY LTD		A. W. S. A.		DATE		AUSTRALIA		WBPREB01	
PRELIMINARY		PROJECT		DRAWN		DATE		17 MONKS CREEK BUREAU, BUNNINGHIE COAST QLD 4558		SHEET NUMBER	
ELLABAY ACCESS ROAD STRATEGY		G.S.		C.S.		REVISIONS		PH: (07) 5511 1000 FAX: (07) 5511 1070		R65	
ELLABAY		CHECKED		DATE		SCALE		PH: (07) 5468 4550 FAX: (07) 5468 4562		REV: A	
MITIGATED ELLA BAY ACCESS ROAD CROSS SECTIONS - 7 OF 8		DATE		DATE		1: 100 (AS 500)		EMAIL: mte@conics.com.au		G R O U P	
		FEBRUARY 2008						PARUA NEW GUINEA		www.etsgroup.net.au	
								5TH FLOOR CURTHERSON HOUSE PO BOX 908		© Copyright 1987	
								TELEPHONE (07) 5511 1333 FAX/SIMILE (07) 5511 7850		18 AUG 2008	
								EMAIL: ahp@conics.com.au			
								ARCHITECTS • CIVIL & STRUCTURAL ENGINEERS			



ASSOCIATED CONSULTANTS
CONICS
PRELIMINARY

CLIENT
SATORI RESORTS PTY LTD
 PROJECT
ELLA BAY ACCESS ROAD STRATEGY
 LOCATION
ELLA BAY
 SHEET TITLE
MITIGATED ELLA BAY ACCESS ROAD CROSS SECTIONS - 8 OF 18

DESIGNED BY
A. W. S. A.
 CHECKED BY
C. S.
 DATE
FEBRUARY 2008

APPROVED
KEITH HOWE
 REVISIONS
1: 100 (A1 SIZE)

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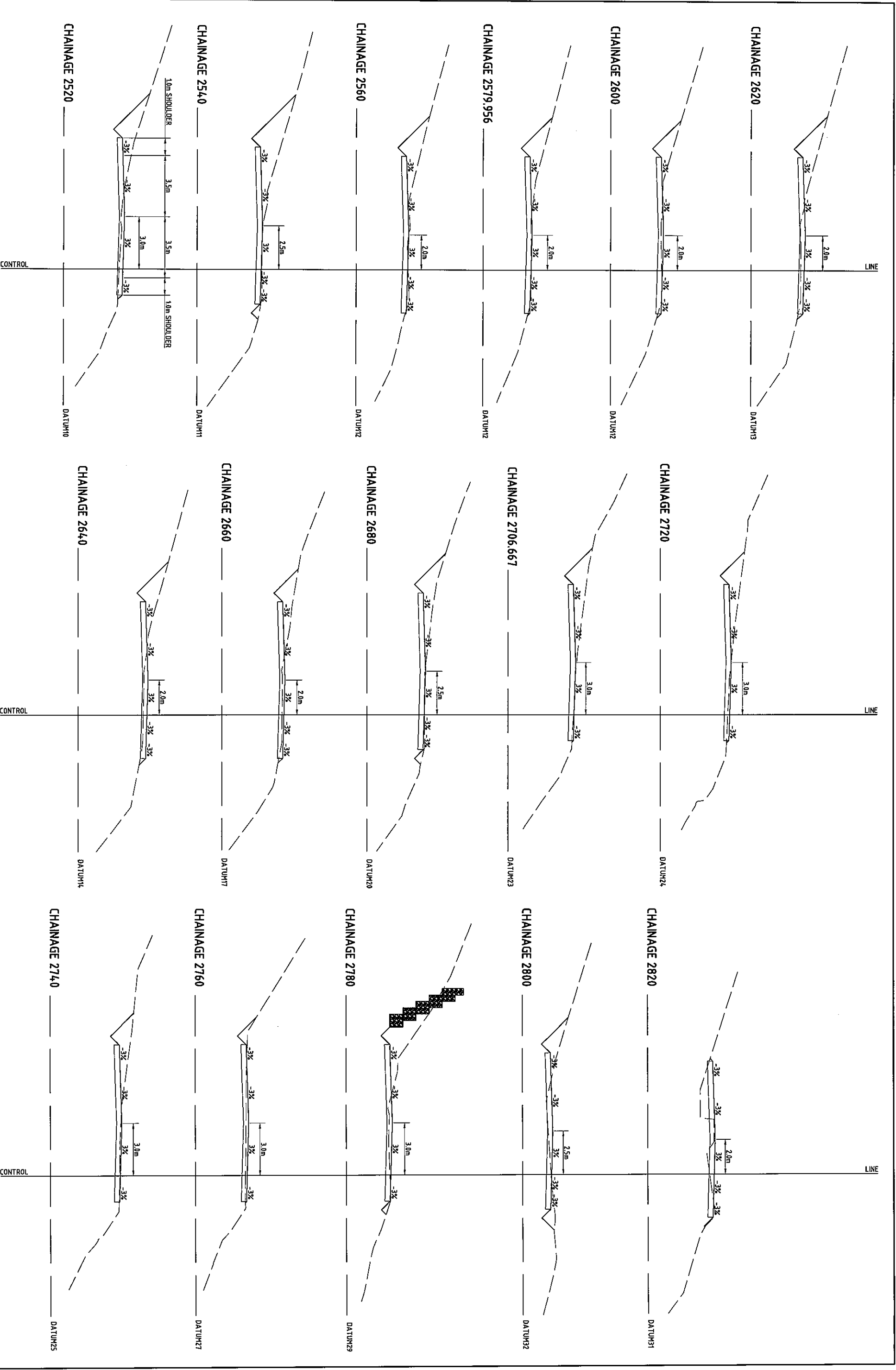
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JOB CODE:
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SHEET NUMBER:
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REV:
A

DATE:
10 APRIL 2008



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PRELIMINARY
 CONICS

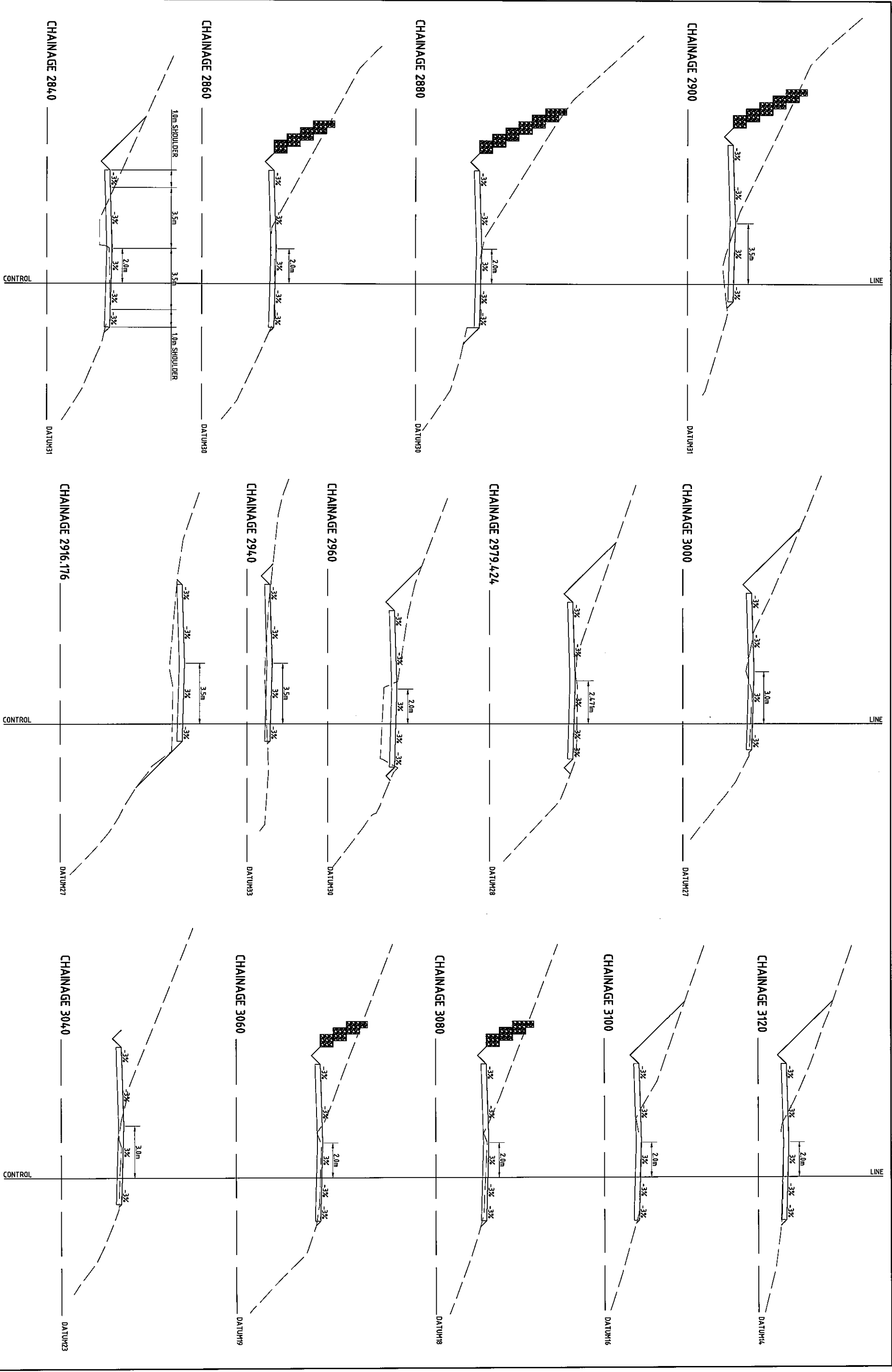
CLIENT: SATORI RESORTS PTY LTD
 PROJECT: ELLA BAY ACCESS ROAD STRATEGY
 LOCATION: ELLA BAY
 TITLE: MITIGATED ELLA BAY ACCESS ROAD CROSS SECTIONS - 9 OF 18

DESIGNED: A.W.S.A.
 DRAWN: C.S.
 CHECKED: DATE
 DATE: FEBRUARY 2008
 APPROVED: KEITH HOWE
 SCALE: 1:100 (AS SHOWN)
 DATE: 10/02/08

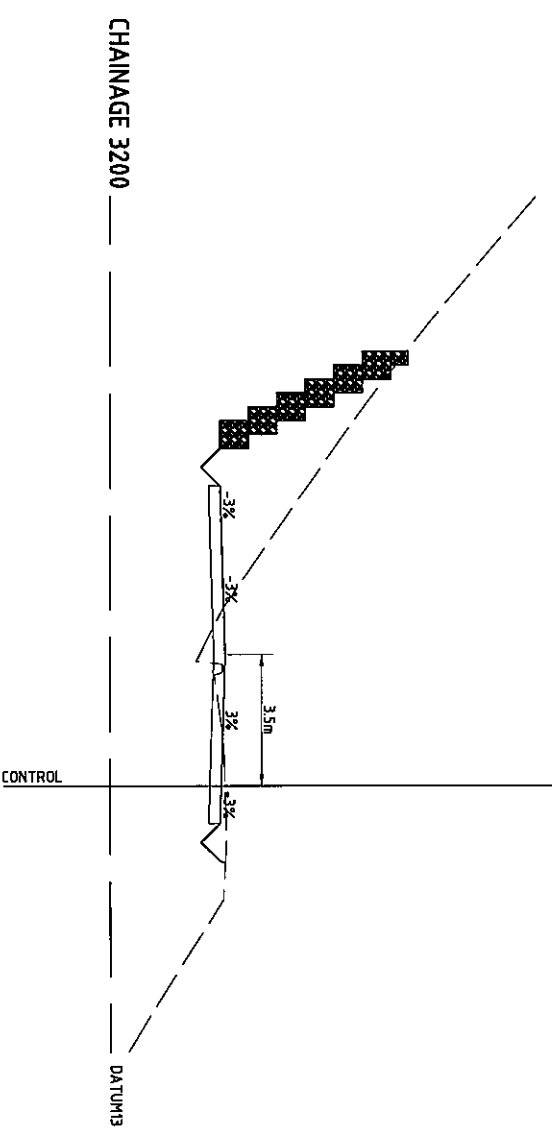
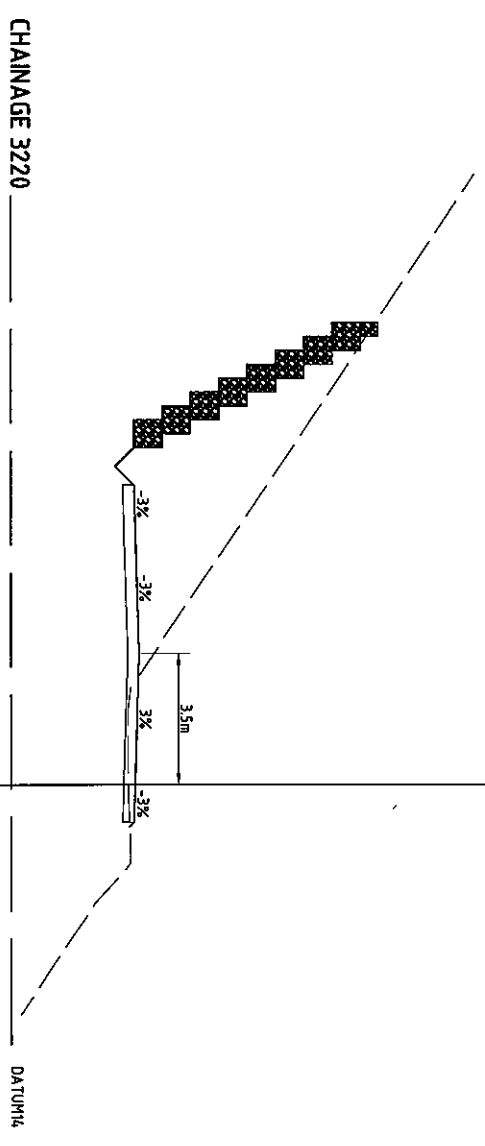
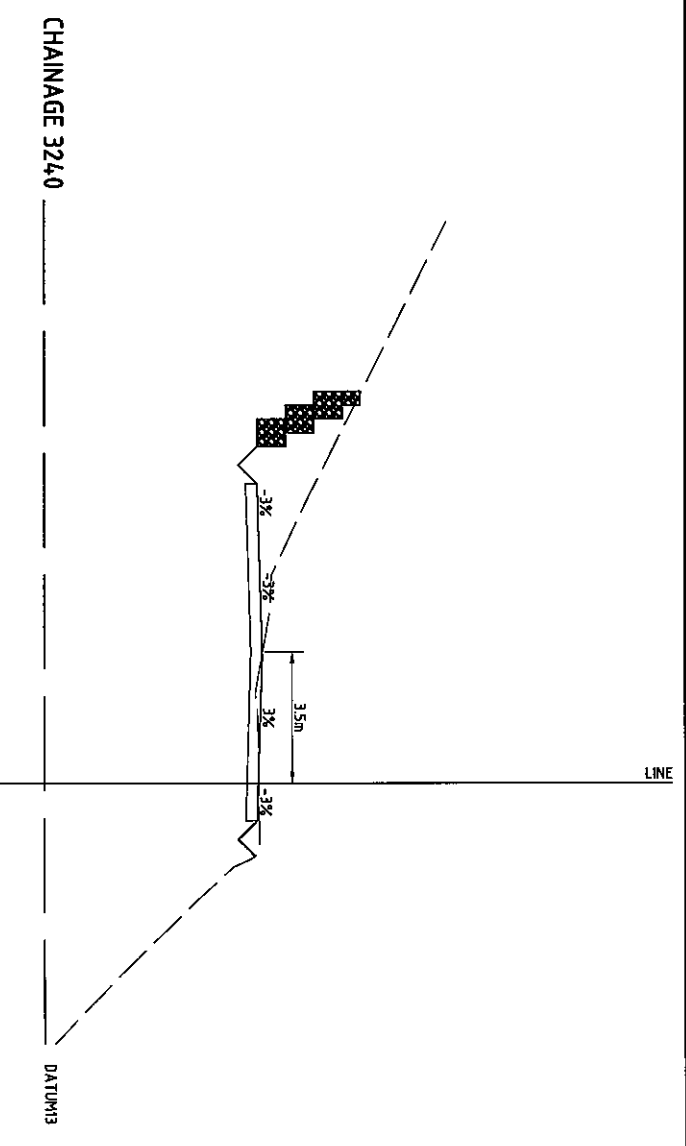
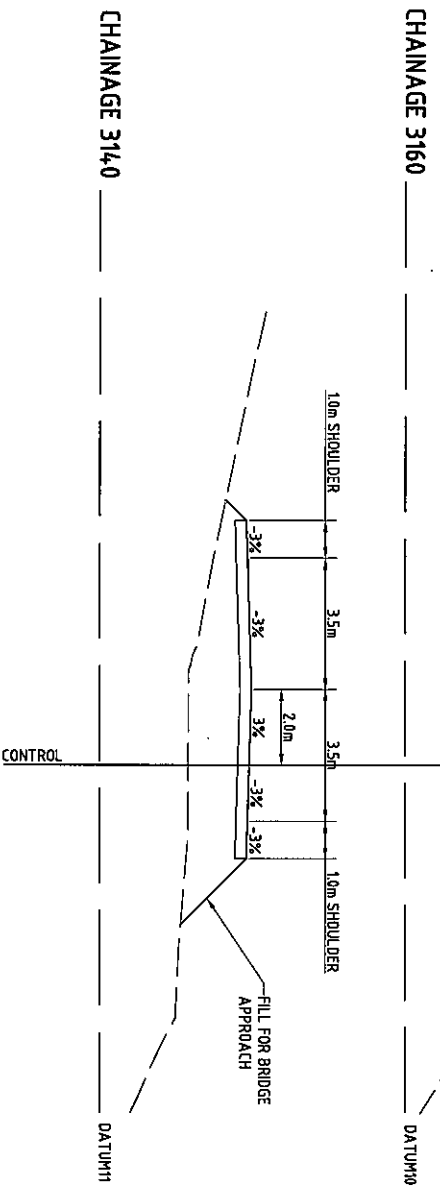
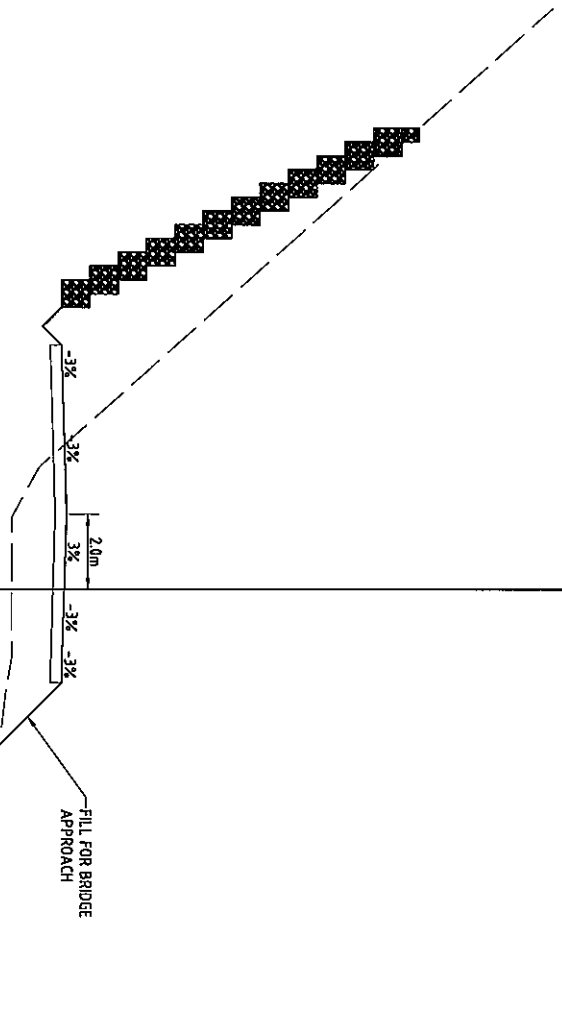
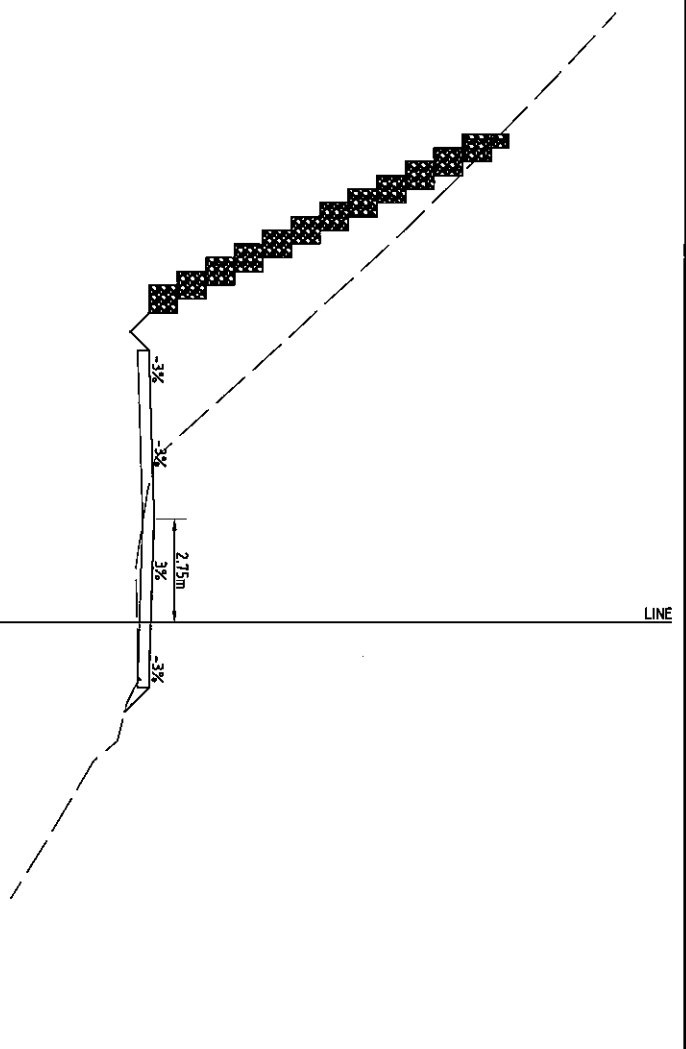
AUSTRALIA: 1 SWANN ROAD, TARRAGONA, BRISBANE QLD 4069
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 EMAIL: m.h@siggroup.net.au
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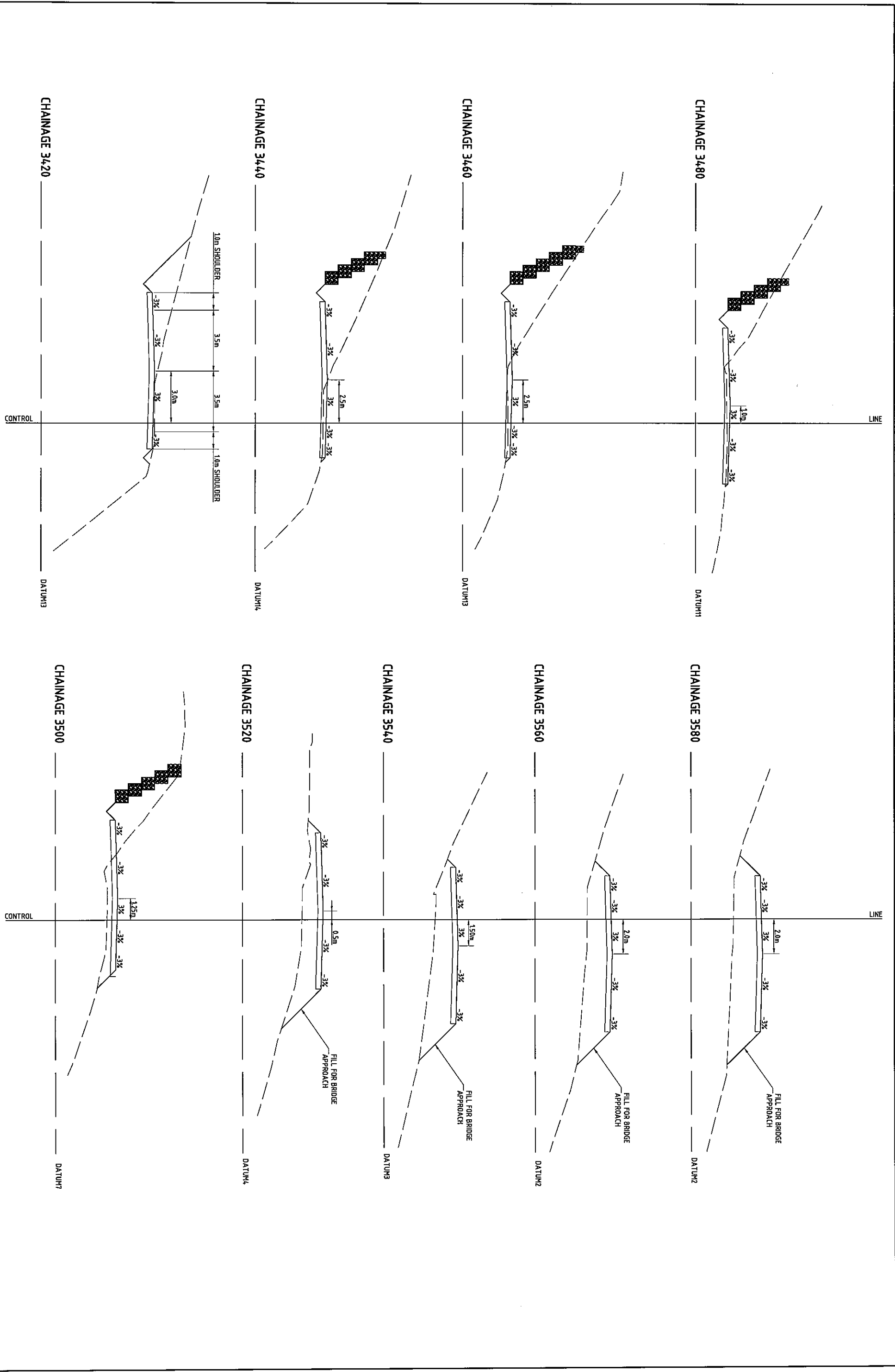
JOB CODE: WBP/REB01
 SHEET NUMBER: R67
 REV: A
 DATE: 10/02/08



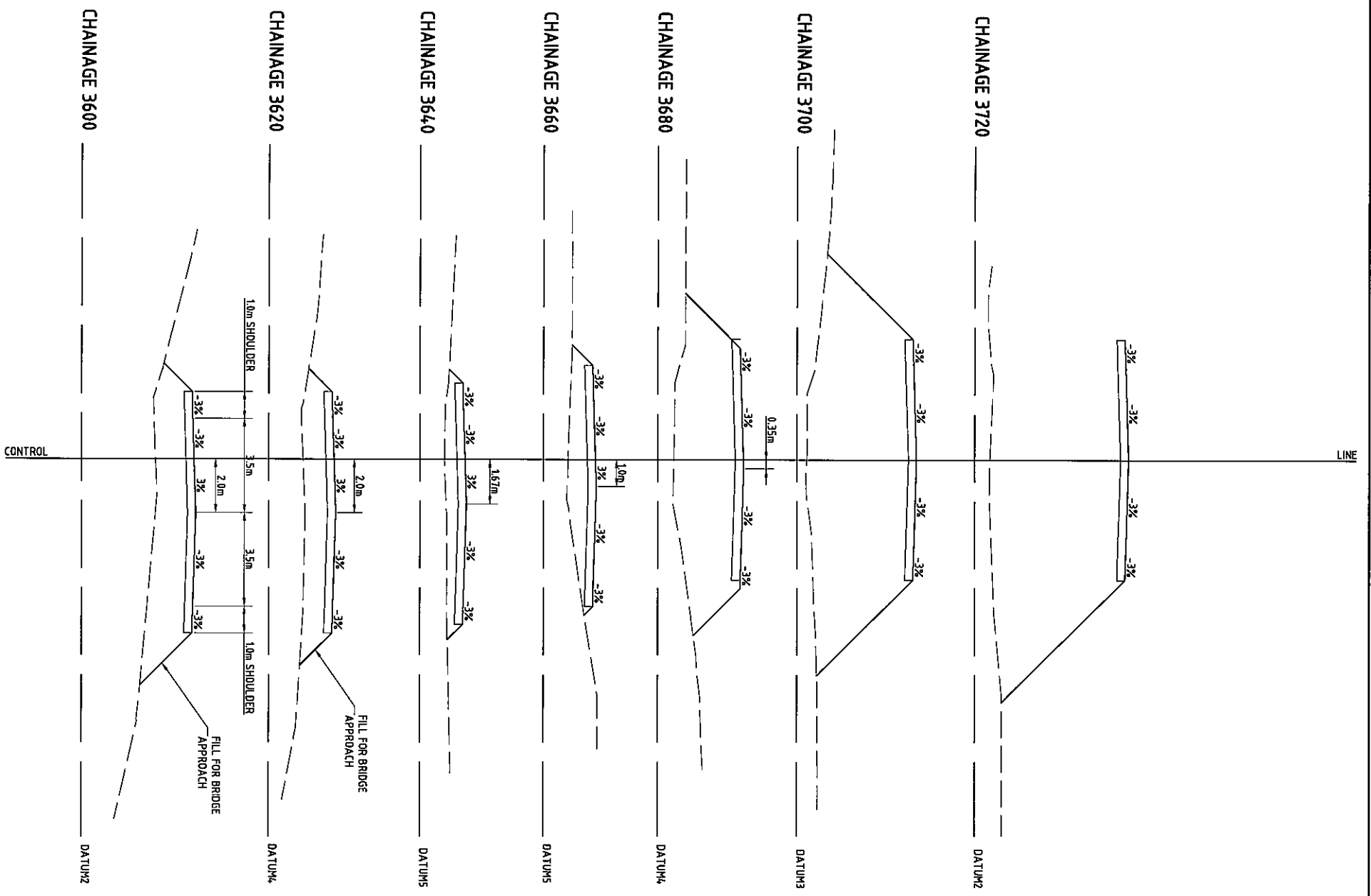
ASSOCIATED CONSULTANTS PRELIMINARY		CLIENT SATORI RESORTS PTY LTD	
CONICS		PROJECT ELLA BAY ACCESS ROAD STRATEGY	
DATE: _____ REV: _____ DESCRIPTION: _____ REVISIONS: _____		LOCATION ELLA BAY MITIGATED ELLA BAY ACCESS ROAD CROSS SECTIONS - 10 OF 18	
DESIGNED A. W. S. A.		APPROVED KETH HONNELLS	
DRAWN G. S.		DATE FEBRUARY 2008	
CHECKED G. S.		SCALE 1 : 100 (A1 SIZE)	
DATE FEBRUARY 2008		DATE FEBRUARY 2008	
ARCHITECTS CIVIL & STRUCTURAL ENGINEERS		AUSTRALIA 17 MONKS CREEK BUREAU, SUNSHINE COAST QLD 4559 PH: (07) 5464 4500 FAX: (07) 5464 4242 EMAIL: info@cseng.com.au	
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SHEET NUMBER R68		SHEET NUMBER A	
JOB CODE WBPREB01		DATE 10 AUG 2008	



ASSOCIATED CONSULTANTS		CLIENT		DESIGNED		APPROVED		DATE	
CONICS		SATORI RESORTS PTY LTD		A. W. S. A.		NETH HONELLIS		RPE0796	
PRELIMINARY		ELLA BAY ACCESS ROAD STRATEGY		C. S.		1: 100 (M. S.D.)		5/6	
PROJECT		LOCATION		CHECKED		SCALE		DATE	
ELLA BAY		MITIGATED ELLA BAY ACCESS ROAD CROSS SECTIONS - 11 OF 18		DATE		1: 100 (M. S.D.)		FEBRUARY 2008	
SHEET TITLE		SHEET		DATE		SCALE		DATE	
REVISIONS		NO.		DESCRIPTION		DATE		DATE	
A		1		REVISIONS		DATE		DATE	
PH		APPROVED		DATE		DATE		DATE	
KAYOUDA		DATE		DATE		DATE		DATE	
ARCHITECTS		CIVIL & STRUCTURAL ENGINEERS		AUSTRALIA		PARUA NEW GUINEA		POINT MORESBY	
1 SWANN ROAD TARANGA, BRISBANE QLD 4088		17 MONKS CRES BUDEBUI, SUNSHINE COAST QLD 4559		TEL: (07) 5571 7000 FAX: (07) 5571 5078		TEL: (07) 5408 4500 FAX: (07) 5495 4932		TEL: (07) 5408 4500 FAX: (07) 5495 4932	
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5TH FLOOR GUMBERBURN HOUSE PO BOX 608		5TH FLOOR GUMBERBURN HOUSE PO BOX 608		5TH FLOOR GUMBERBURN HOUSE PO BOX 608		5TH FLOOR GUMBERBURN HOUSE PO BOX 608		5TH FLOOR GUMBERBURN HOUSE PO BOX 608	
TELEPHONE: (082) 221 1332 FACSIMILE: (082) 221 7833		TELEPHONE: (082) 221 1332 FACSIMILE: (082) 221 7833		TELEPHONE: (082) 221 1332 FACSIMILE: (082) 221 7833		TELEPHONE: (082) 221 1332 FACSIMILE: (082) 221 7833		TELEPHONE: (082) 221 1332 FACSIMILE: (082) 221 7833	
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JOB CODE: WBPRES01		JOB CODE: WBPRES01		JOB CODE: WBPRES01		JOB CODE: WBPRES01		JOB CODE: WBPRES01	
SHEET NUMBER: R69		SHEET NUMBER: R69		SHEET NUMBER: R69		SHEET NUMBER: R69		SHEET NUMBER: R69	
REV: A		REV: A		REV: A		REV: A		REV: A	
G R O U P		G R O U P		G R O U P		G R O U P		G R O U P	
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<p>ASSOCIATED CONSULTANTS</p> <p>PRELIMINARY</p> <p>CLIENT: SATORI RESORTS PTY LTD</p> <p>PROJECT: ELLA BAY ACCESS ROAD STRATEGY</p> <p>LOCATION: ELLA BAY</p> <p>MITIGATED ELLA BAY ACCESS ROAD CROSS SECTIONS - 13 OF 18</p>	<p>DESIGNED: A. W. S. A.</p> <p>CHECKED: G. S.</p> <p>DATE: FEBRUARY 2008</p> <p>APPROVED: KETHIHWILLS</p> <p>SCALE: 1:100 (A1 SIZE)</p> <p>DATE: REVISIONS</p>
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ASSOCIATED CONSULTANTS	
CONICS	
PRELIMINARY	
DATE	REV
ORIGINAL ISSUE	APPROVED
DESCRIPTION	REVISIONS

CLIENT	SATORI RESORTS PTY LTD
PROJECT	ELLA BAY ACCESS ROAD STRATEGY
LOCATION	ELLA BAY
SHEET TITLE	MITIGATED ELLA BAY ACCESS ROAD CROSS SECTIONS - 14 OF 18

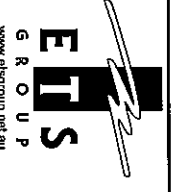
DESIGNED	A.W.S.A.	APPROVED	DATE
DRAWN	C.S.	SCALE	
CHECKED		1:100 (A1 SIZE)	
DATE			

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JOB CODE	WBPREB01
SHEET NUMBER	R72
REV.	A
DATE	19 JULY 2008



ELLA BAY ROAD UPGRADE
CLEARING AREA CALCULATIONS

Mitigated Plant Species Clearing Area Calcs. Ella Bay Road Upgrade Set Drawing's EB59-EB63			Mitigated Plant Communities Clearing Area Calcs. Ella Bay Road Upgrade Set Drawing's EB69-EB73			Mitigated Animals Clearing Area Calcs. Ella Bay Road Upgrade Set Drawing's EB44-EB48			Mitigated Cassowaries Clearing Area Calcs. Ella Bay Road Upgrade Set Drawing's EB74-EB78			Unmitigated Animals Clearing Area Calcs. Ella Bay Road Upgrade Set Drawing's EB44-EB48			Unmitigated Plant Communities Clearing Area Calcs. Ella Bay Road Upgrade Set Drawing's EB49-EB53			Unmitigated Animals Clearing Area Calcs. Ella Bay Road Upgrade Set Drawing's EB44-EB48			Unmitigated Cassowaries Clearing Area Calcs. Ella Bay Road Upgrade Set Drawing's EB54-EB58		
No.	Area (m ²)	Category of Coverage	No.	Area (m ²)	Category of Coverage	No.	Area (m ²)	Category of Coverage	No.	Area (m ²)	Category of Coverage	No.	Area (m ²)	Category of Coverage	No.	Area (m ²)	Category of Coverage	No.	Area (m ²)	Category of Coverage	No.	Area (m ²)	Category of Coverage
1	291.48	D	1	291.48	D	1	291.48	D	1	151.15	A	1	291.48	D	1	291.48	D	1	291.48	D	1	151.15	A
2	390.75	B	2	390.75	B	2	390.75	B	2	420.86	B	2	390.75	B	2	390.75	B	2	390.75	B	2	420.86	B
3	715.29	D	3	715.29	D	3	715.29	D	3	171.26	A	3	715.29	D	3	715.29	D	3	715.29	D	3	171.26	A
4	883.2	B	4	883.2	B	4	883.2	B	4	243.75	A	4	883.2	B	4	883.2	B	4	883.2	B	4	243.75	A
5	291.48	B	5	291.48	B	5	291.48	B	5	151.15	A	5	291.48	B	5	291.48	B	5	291.48	B	5	151.15	A
6	291.48	D	6	291.48	D	6	291.48	D	6	151.15	A	6	291.48	D	6	291.48	D	6	291.48	D	6	151.15	A
7	291.48	D	7	291.48	D	7	291.48	D	7	151.15	A	7	291.48	D	7	291.48	D	7	291.48	D	7	151.15	A
8	291.48	D	8	291.48	D	8	291.48	D	8	151.15	A	8	291.48	D	8	291.48	D	8	291.48	D	8	151.15	A
9	291.48	D	9	291.48	D	9	291.48	D	9	151.15	A	9	291.48	D	9	291.48	D	9	291.48	D	9	151.15	A
10	291.48	D	10	291.48	D	10	291.48	D	10	151.15	A	10	291.48	D	10	291.48	D	10	291.48	D	10	151.15	A
11	291.48	D	11	291.48	D	11	291.48	D	11	151.15	A	11	291.48	D	11	291.48	D	11	291.48	D	11	151.15	A
12	291.48	D	12	291.48	D	12	291.48	D	12	151.15	A	12	291.48	D	12	291.48	D	12	291.48	D	12	151.15	A
13	291.48	D	13	291.48	D	13	291.48	D	13	151.15	A	13	291.48	D	13	291.48	D	13	291.48	D	13	151.15	A
14	291.48	D	14	291.48	D	14	291.48	D	14	151.15	A	14	291.48	D	14	291.48	D	14	291.48	D	14	151.15	A
15	291.48	D	15	291.48	D	15	291.48	D	15	151.15	A	15	291.48	D	15	291.48	D	15	291.48	D	15	151.15	A
16	291.48	D	16	291.48	D	16	291.48	D	16	151.15	A	16	291.48	D	16	291.48	D	16	291.48	D	16	151.15	A
17	291.48	D	17	291.48	D	17	291.48	D	17	151.15	A	17	291.48	D	17	291.48	D	17	291.48	D	17	151.15	A
18	291.48	D	18	291.48	D	18	291.48	D	18	151.15	A	18	291.48	D	18	291.48	D	18	291.48	D	18	151.15	A
19	291.48	D	19	291.48	D	19	291.48	D	19	151.15	A	19	291.48	D	19	291.48	D	19	291.48	D	19	151.15	A
20	291.48	D	20	291.48	D	20	291.48	D	20	151.15	A	20	291.48	D	20	291.48	D	20	291.48	D	20	151.15	A
21	291.48	D	21	291.48	D	21	291.48	D	21	151.15	A	21	291.48	D	21	291.48	D	21	291.48	D	21	151.15	A
22	291.48	D	22	291.48	D	22	291.48	D	22	151.15	A	22	291.48	D	22	291.48	D	22	291.48	D	22	151.15	A
23	291.48	D	23	291.48	D	23	291.48	D	23	151.15	A	23	291.48	D	23	291.48	D	23	291.48	D	23	151.15	A
24	291.48	D	24	291.48	D	24	291.48	D	24	151.15	A	24	291.48	D	24	291.48	D	24	291.48	D	24	151.15	A
25	291.48	D	25	291.48	D	25	291.48	D	25	151.15	A	25	291.48	D	25	291.48	D	25	291.48	D	25	151.15	A
26	291.48	D	26	291.48	D	26	291.48	D	26	151.15	A	26	291.48	D	26	291.48	D	26	291.48	D	26	151.15	A
27	291.48	D	27	291.48	D	27	291.48	D	27	151.15	A	27	291.48	D	27	291.48	D	27	291.48	D	27	151.15	A
28	291.48	D	28	291.48	D	28	291.48	D	28	151.15	A	28	291.48	D	28	291.48	D	28	291.48	D	28	151.15	A
29	291.48	D	29	291.48	D	29	291.48	D	29	151.15	A	29	291.48	D	29	291.48	D	29	291.48	D	29	151.15	A
30	291.48	D	30	291.48	D	30	291.48	D	30	151.15	A	30	291.48	D	30	291.48	D	30	291.48	D	30	151.15	A
31	291.48	D	31	291.48	D	31	291.48	D	31	151.15	A	31	291.48	D	31	291.48	D	31	291.48	D	31	151.15	A
32	291.48	D	32	291.48	D	32	291.48	D	32	151.15	A	32	291.48	D	32	291.48	D	32	291.48	D	32	151.15	A
33	291.48	D	33	291.48	D	33	291.48	D	33	151.15	A	33	291.48	D	33	291.48	D	33	291.48	D	33	151.15	A
34	291.48	D	34	291.48	D	34	291.48	D	34	151.15	A	34	291.48	D	34	291.48	D	34	291.48	D	34	151.15	A
35	291.48	D	35	291.48	D	35	291.48	D	35	151.15	A	35	291.48	D	35	291.48	D	35	291.48	D	35	151.15	A
36	291.48	D	36	291.48	D	36	291.48	D	36	151.15	A	36	291.48	D	36	291.48	D	36	291.48	D	36	151.15	A
37	291.48	D	37	291.48	D	37	291.48	D	37	151.15	A	37	291.48	D	37	291.48	D	37	291.48	D	37	151.15	A
38	291.48	D	38	291.48	D	38	291.48	D	38	151.15	A	38	291.48	D	38	291.48	D	38	291.48	D	38	151.15	A
39	291.48	D	39	291.48	D	39	291.48	D	39	151.15	A	39	291.48	D	39	291.48	D	39	291.48	D	39	151.15	A
40	291.48	D	40	291.48	D	40	291.48	D	40	151.15	A	40	291.48	D	40	291.48	D	40	291.48	D	40	151.15	A
41	291.48	D	41	291.48	D	41	291.48	D	41	151.15	A	41	291.48	D	41	291.48	D	41	291.48	D	41	151.15	A

ASSOCIATED CONSULTANTS		CLIENT	
CONICS		SATORI RESORTS PTY LTD	
PRELIMINARY		PROJECT	
ELLA BAY ACCESS ROAD STRATEGY		LOCATION	
CLEARING AREA CALCULATIONS - SHEET 1 OF 2		SHEET	
REVISIONS		DATE	
APPROVED		DATE	
DRAWN		SCALE	
CHECKED		DATE	
DATE		JOB CODE	
ARCHITECTS		WBPREB01	
CIVIL & STRUCTURAL ENGINEERS		SHEET NUMBER	
R73		REV:	
A		10/10/2024	

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CUT AND COVER TUNNEL - OPTION 2B (OPTION C)
INDICATIVE CLEARING AREA CALCULATIONS

PREFERRED OPTION
CLEARING AREA CALCULATIONS

Mitigated Plant Species Area Calcs.
Deviation Road - Cut and Cover Option 2B
Drawing's X35-X36

No.	Area (m ²)	Category of Coverage
1	107.1	B
2	715.35	B
3	76.98	B
4	1004.28	A
5	2644.01	A
6	785.89	A
7	1998.67	A
8	962.42	A
9	1880.69	A
10	1923.05	A
11	4205.86	A
12	1717.35	A

Unmitigated Plant Species Area Calcs.
Deviation Road - Cut and Cover Option
Drawing's X01-X02

No.	Area (m ²)	Category of Coverage
1	105.64	B
2	716.38	B
3	74.66	B
4	1560.77	A
5	2552.07	A
6	1311.65	A
7	2015.60	A
8	963.75	A
9	1897.95	A
10	2321.79	A
11	4222.65	A
12	1743.04	A

Mitigated Plant Communities Area Calcs.
Deviation Road - Cut and Cover Option 2B
Drawing's X39-X40

No.	Area (m ²)	Category of Coverage
1	107.1	B
2	715.39	B
3	76.98	B
4	1004.28	C
5	2644.01	C
6	785.89	C
7	1998.67	C
8	962.42	C
9	1880.69	C
10	1923.05	C
11	4205.86	C
12	1717.35	C

Unmitigated Plant Communities Area Calcs.
Deviation Road - Cut and Cover Option 2B
Drawing's X31-X32

No.	Area (m ²)	Category of Coverage
1	105.64	B
2	716.38	B
3	74.66	B
4	1560.77	C
5	2552.07	C
6	1311.65	C
7	2015.60	C
8	963.75	C
9	1897.95	C
10	2321.79	C
11	4222.65	C
12	1743.04	C

Mitigated Cassowaries Species Area Calcs.
Deviation Road - Cut and Cover Option 2B
Drawing's X41-X42

No.	Area (m ²)	Category of Coverage
1	1111.38	A
2	3359.4	A
3	1017.37	A
4	1998.67	A
5	862.42	A
6	1880.69	A
7	1923.05	A
8	4205.86	A
9	1717.35	A

Unmitigated Cassowaries Species Area Calcs.
Deviation Road - Cut and Cover Option 2B
Drawing's X33-X34

No.	Area (m ²)	Category of Coverage
1	1666.41	A
2	3368.63	A
3	2840.84	A
4	2002.23	A
5	978.56	A
6	1976.65	A
7	2503.41	A
8	4198.01	A
9	1794.13	A

Mitigated Animal Species Area Calcs.
Deviation Road - Cut and Cover Option 2B
Drawing's X37-X38

No.	Area (m ²)	Category of Coverage
1	1111.38	A
2	3359.4	A
3	1017.37	A
4	1998.67	A
5	862.42	A
6	1880.69	A
7	1923.05	A
8	4205.86	A
9	1717.35	A

Unmitigated Animal Species Area Calcs.
Deviation Road - Cut and Cover Option 2B
Drawing's X29-X30

No.	Area (m ²)	Category of Coverage
1	1666.41	A
2	3368.63	A
3	2840.84	A
4	2002.23	A
5	978.56	A
6	1976.65	A
7	2503.41	A
8	4198.01	A
9	1794.13	A

Mitigated Animal Species Clearing Area Calcs.
Access Rd Strategy, Preferred Option Set
Ella Bay Rd & Cut and Cover Option 2B
Drawing's X10-X16

No.	Area (m ²)	Category of Coverage
1	1923.05	A
2	4205.86	A
3	1717.35	A
4	1998.67	A
5	962.42	A
6	1880.69	A
7	1111.38	A
8	3359.4	A
9	1017.37	A
10	231.48	A
11	23.65	D
12	28.82	D
13	18.38	D
14	84.25	A
15	16.72	A
16	28.35	D
17	287.56	A
18	150.48	A
19	58.59	A
20	46.70	A
21	169.76	A
22	12.82	D
23	187.92	D
24	138.52	D
25	19.20	D
26	37.32	A
27	438.28	A
28	97.45	A
29	194.42	A
30	30.59	A
31	87.39	A
32	62.09	A
33	23.10	E
34	12.39	E
35	185.65	A
36	23.93	A
37	53.09	A
38	421.35	A
39	105.87	A
40	409.09	A
41	406.14	A

Mitigated Cassowaries Clearing Area Calcs.
Ella Bay Access Rd, Preferred Option Set
Ella Bay Rd & Cut and Cover Option 2B
Drawing's X24-X30

No.	Area (m ²)	Category of Coverage
1	1923.05	A
2	4205.86	A
3	1717.35	A
4	1998.67	A
5	962.42	A
6	1880.69	A
7	1111.38	A
8	3359.4	A
9	1017.37	A
10	243.75	A
11	151.15	A
12	19.96	A
13	34.70	A
14	168.10	A
15	171.26	A
16	21.75	A
17	20.88	A
18	830.15	A
19	17.10	A
20	435.64	A
21	219.78	A
22	289.93	C
23	11.68	C
24	391.03	C
25	30.35	C
26	107.98	C
27	66.79	C
28	20.79	C
29	198.45	C
30	42.02	C
31	67.56	C
32	105.62	C
33	420.26	C
34	409.09	C
35	28.15	C
36	136.21	C
37	398.10	C
38	107.10	C
39	1691.31	A
40	64.48	A
41	597.59	A

Mitigated Plant Communities Clearing Area Calcs.
Ella Bay Access Rd, Preferred Option Set
Ella Bay Rd & Cut and Cover Option 2B
Drawing's X17-X23

No.	Area (m ²)	Category of Coverage
1	1923.05	C
2	4205.86	C
3	1717.35	C
4	1998.67	C
5	962.42	C
6	1880.69	C
7	1004.28	C
8	2644.01	C
9	785.89	C
10	107.1	B
11	715.39	B
12	76.98	B
13	231.48	B
14	23.65	D
15	28.82	D
16	18.38	D
17	84.25	B
18	16.72	B
19	28.35	D
20	287.56	B
21	150.48	A
22	58.59	C
23	58.59	C
24	16.95	B
25	46.70	B
26	152.81	A
27	12.82	D
28	187.92	D
29	19.20	D
30	37.32	B
31	438.28	B
32	97.45	B
33	194.42	D
34	30.59	D
35	154.42	D
36	87.39	D
37	12.14	A
38	49.95	D
39	23.10	D
40	165.05	B
41	23.93	B

Mitigated Plant Species Clearing Area Calcs.
Ella Bay Access Rd, Preferred Option Set
Ella Bay Rd & Cut and Cover Option 2B
Drawing's X03-X09

No.	Area (m ²)	Category of Coverage
1	1923.05	A
2	4205.86	A
3	1717.35	A
4	1998.67	A
5	962.42	A
6	1880.69	A
7	1004.28	A
8	2644.01	A
9	785.89	A
10	107.1	B
11	715.39	B
12	76.98	B
13	231.48	B
14	23.65	D
15	28.82	D
16	18.38	D
17	84.25	B
18	16.72	B
19	28.35	D
20	287.56	B
21	150.48	A
22	58.59	C
23	58.59	C
24	16.95	B
25	46.70	B
26	152.81	A
27	12.82	D
28	187.92	D
29	19.20	D
30	37.32	B
31	438.28	B
32	97.45	B
33	194.42	D
34	30.59	D
35	154.42	D
36	87.39	D
37	12.14	A
38	49.95	D
39	23.10	D
40	165.05	B
41	23.93	B

ASSOCIATED CONSULTANTS
PRELIMINARY

CLIENT: SATORI RESORTS PTY LTD
PROJECT: ELLA BAY ACCESS ROAD STRATEGY
LOCATION: ELLA BAY
CLEARING AREA CALCULATIONS - SHEET 2 OF 2

DESIGNED: -
DRAWN: -
CHECKED: -
DATE: -

APPROVED: KEITH HOWELLS
SCALE: 1:
DATE: -

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REV: A

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