

# CONCEPT CIVIL ENGINEERING DESIGN PLANS FOR PROPOSED RESIDENTIAL SUBDIVISION

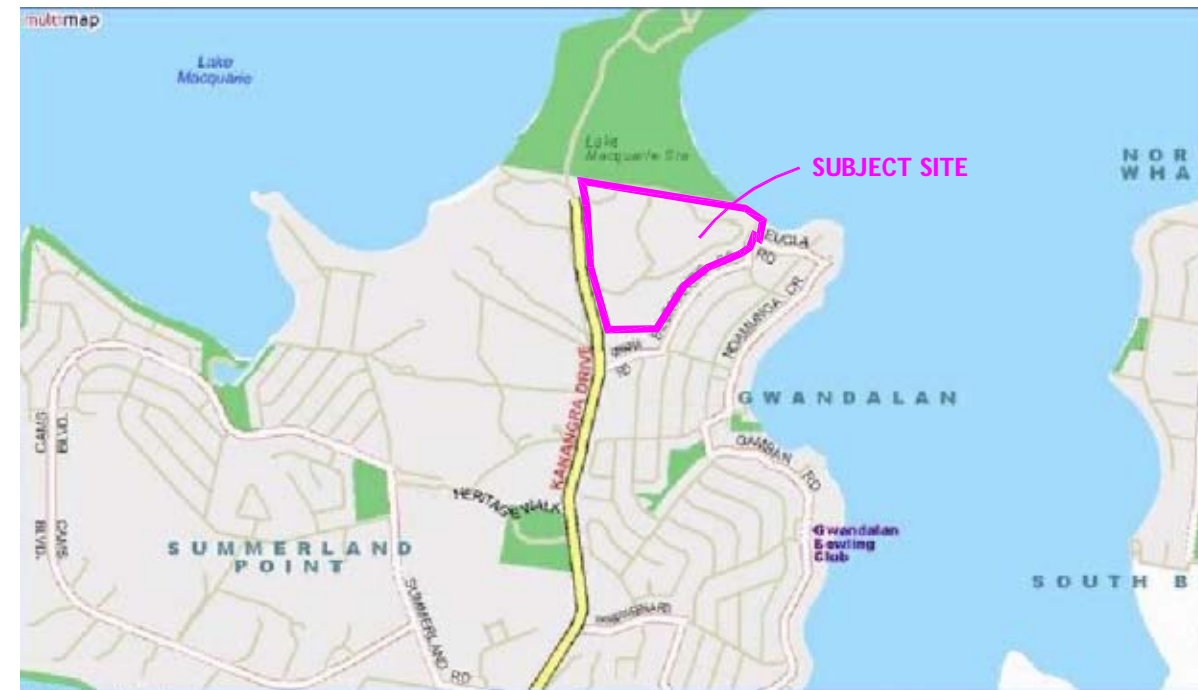
## KANANGRA DRIVE, GWANDALAN WYONG SHIRE COUNCIL

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2 BOUNTY CLOSE  
TUGGERAH 2259  
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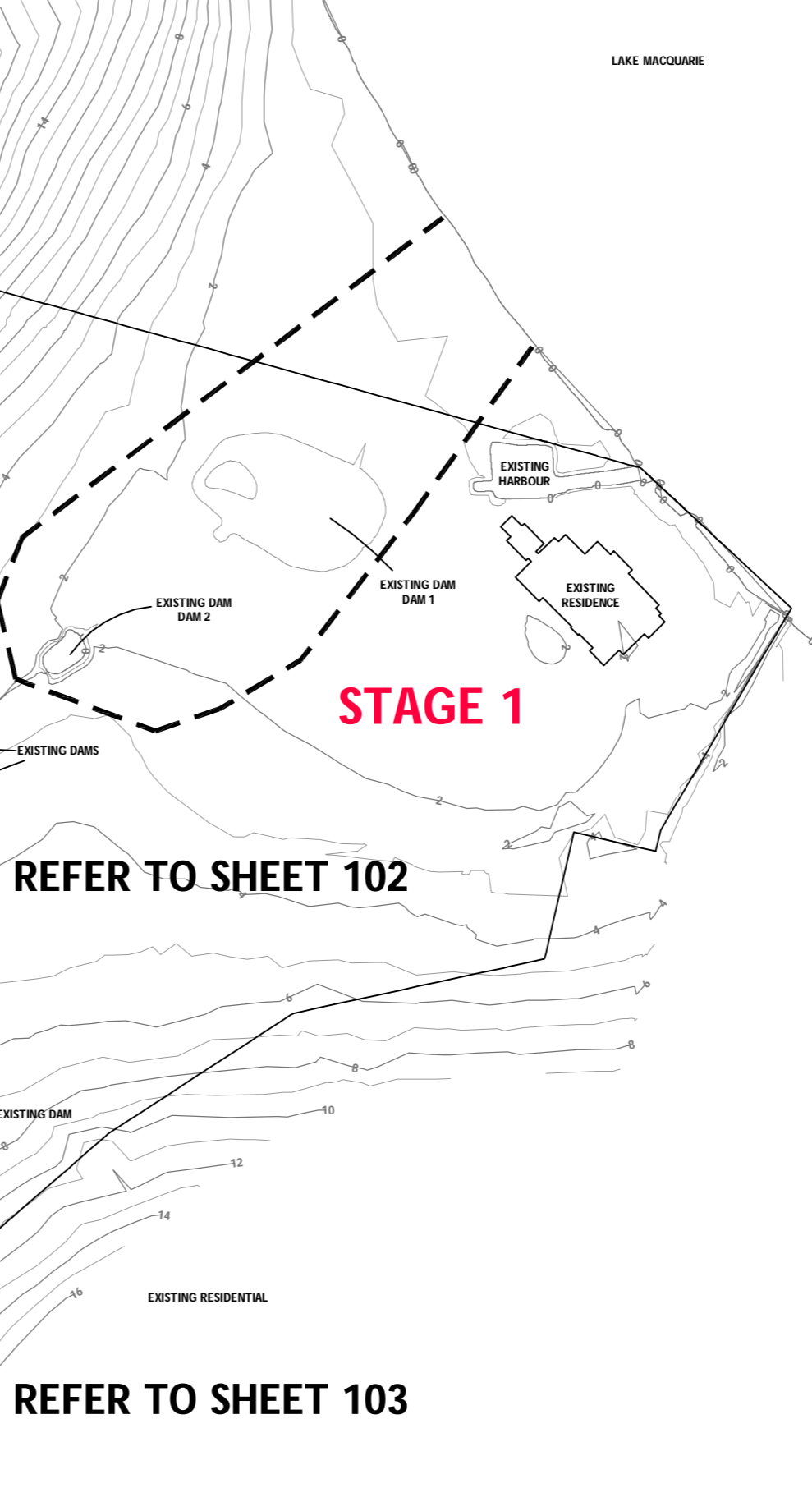
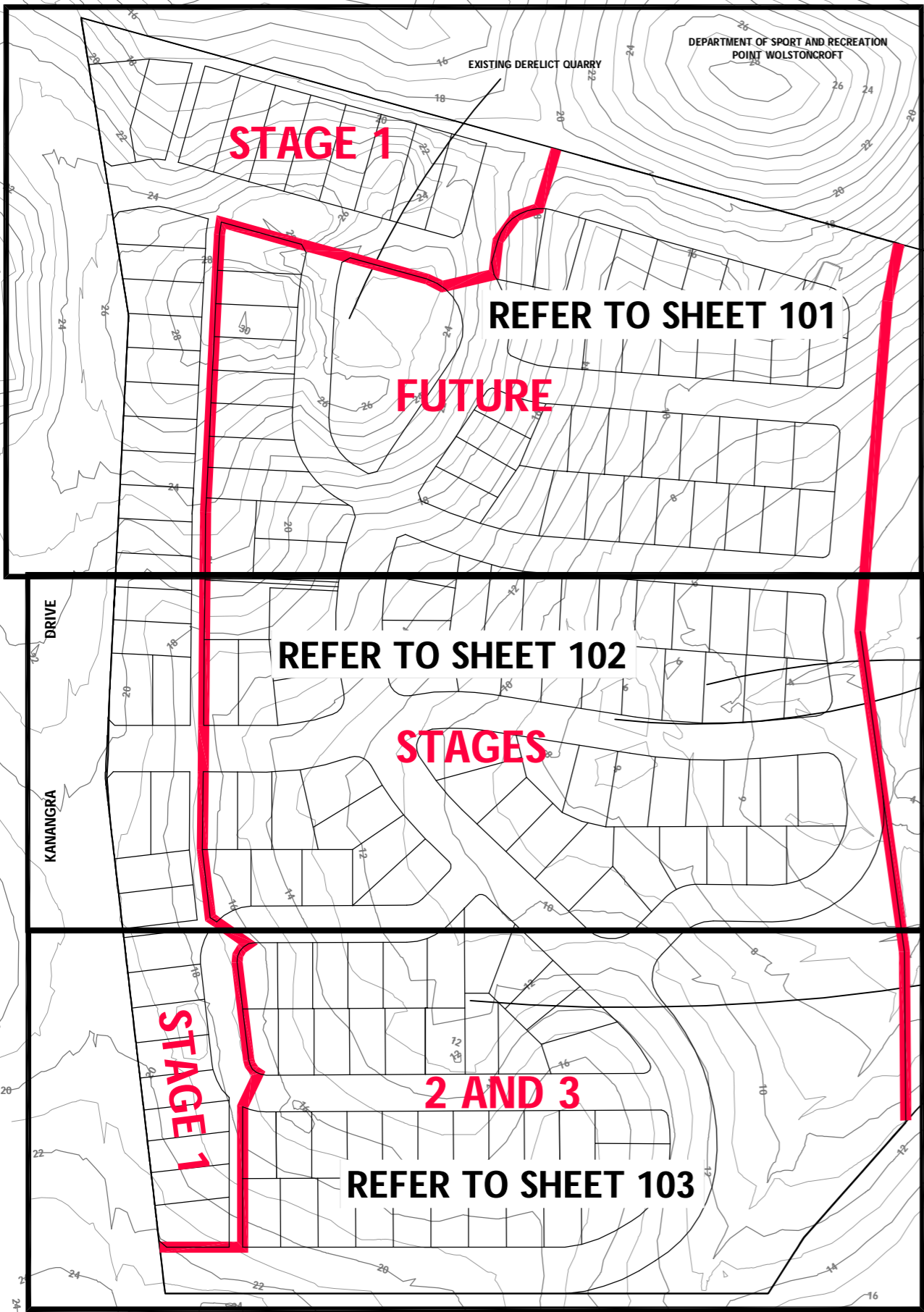
**CLIENT: LAKESIDE LIVING PTY. LTD.**



LOCALITY PLAN  
(FROM MULTIMAP)

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**LEGEND**

	SITE BOUNDARY
	PROPOSED BOUNDARY
	MAJOR NATURAL CONTOUR
	MINOR NATURAL CONTOUR
	WETLAND DEVELOPMENT CONTROL PLAN AREA
	STAGE BOUNDARY

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Ver.	Date	Comment
E	11/2010	Amend Cross sections
D	12/2007	Amend to New Layout
C	08/2007	Amend Road 5
B	07/2007	Project Application
A	06/2007	Initial Release

**LOCATION**

**KANANGRA DRIVE,  
GWANDALAN**

Proposed Subdivision Layout			
Council:	Wyong	Projection:	M.G.A.
Datum:	A.H.D.	North Direction:	Grid
Source:	ADW Survey	Plan By:	MJH
Contour Interval:	1.0m (Nat)	Checklist:	MJH

Version:	E (11/2010)
Client:	Lakeside Living Pty. Ltd.
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Job No:	11778
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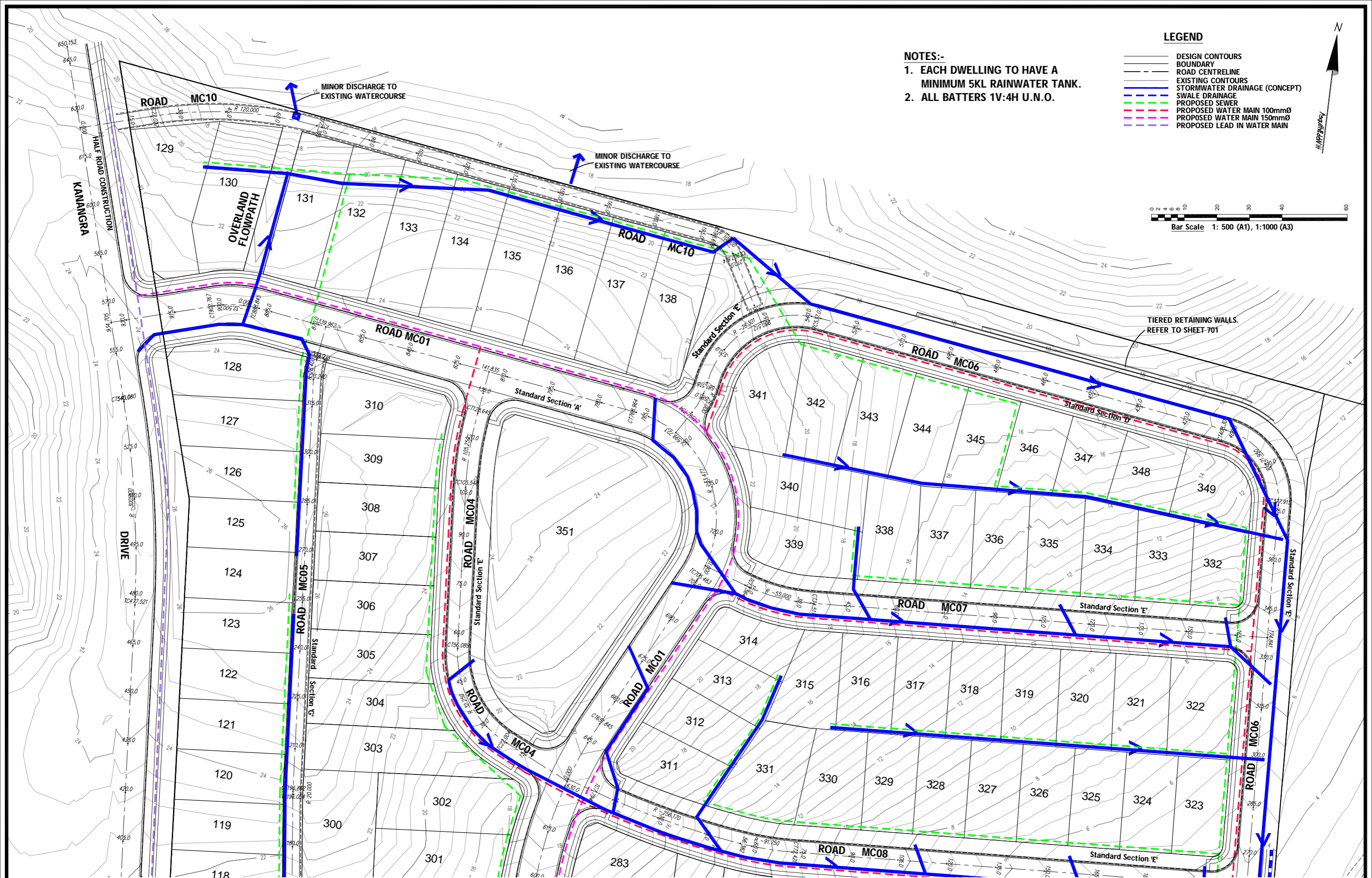
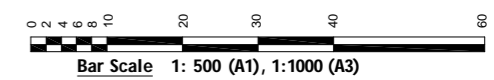
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**LEGEND**

- DESIGN CONTOURS
- BOUNDARY
- ROAD CENTRELINE
- - - EXISTING CONTOURS
- STORMWATER DRAINAGE (CONCEPT)
- SWALE DRAINAGE
- PROPOSED SEWER
- PROPOSED WATER MAIN 100mmØ
- PROPOSED WATER MAIN 150mmØ
- PROPOSED LEAD IN WATER MAIN

- NOTES:-**
1. EACH DWELLING TO HAVE A MINIMUM 5KL RAINWATER TANK.
  2. ALL BATTERS 1V:4H U.N.O.



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**LOCATION**

**KANANGRA DRIVE,  
 GWANDALAN**

**Detail Plan 1**

Council:	Wyong	Projection:	M.G.A.
Datum:	A.H.D.	North Direction:	Grid
Source:	ADW Survey	Plan By:	MJH
Contour Interval:	1.0m (Des & Nat)	Checklist:	MJH

Version: E (11/2010)  
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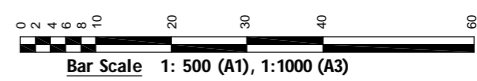


**LEGEND**

- DESIGN CONTOURS
- BOUNDARY
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**LOCATION**

**KANANGRA DRIVE,  
GWANDALAN**

**Detail Plan 2**

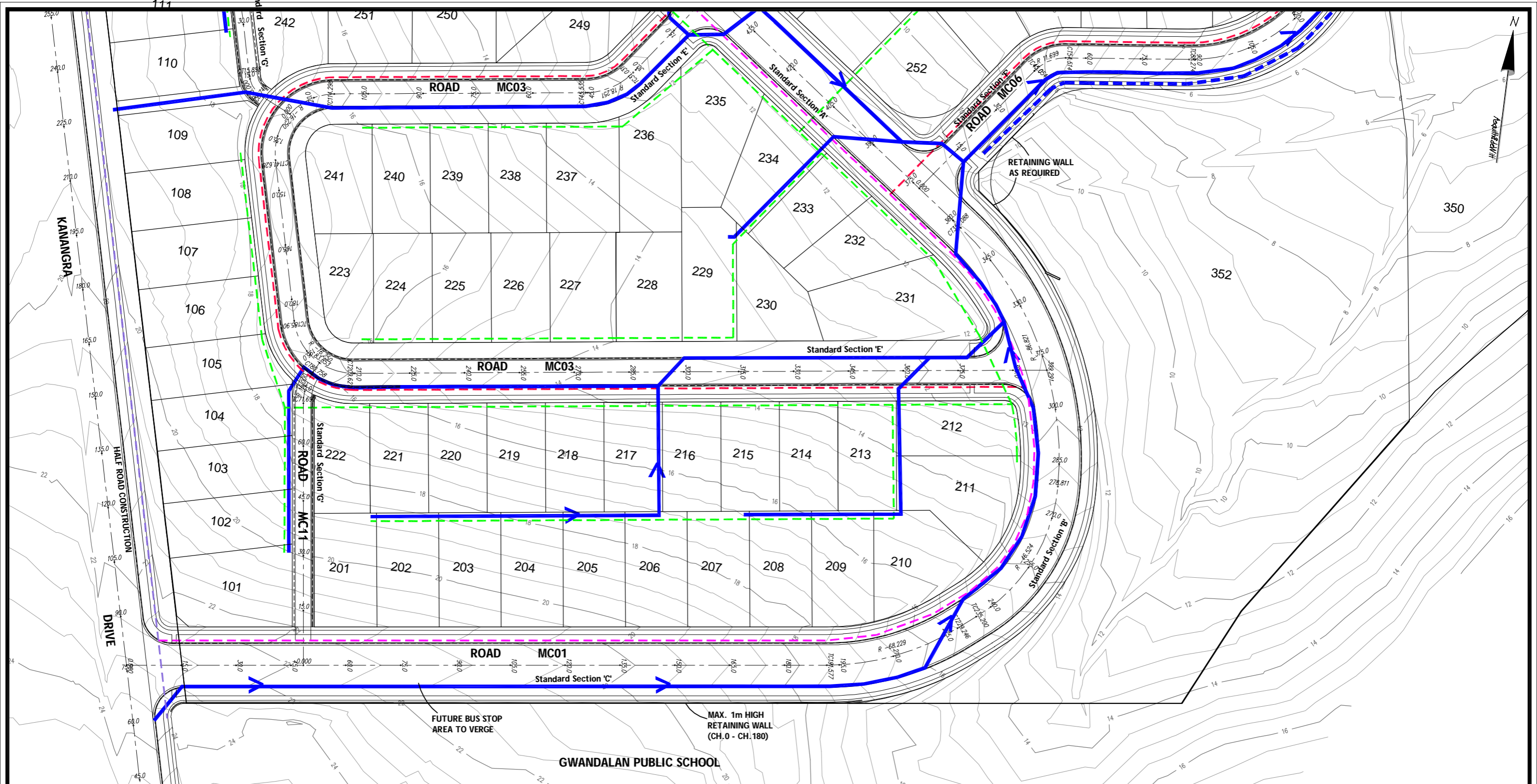
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Datum:	A.H.D.	North Direction:	Grid
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Job No: 11778

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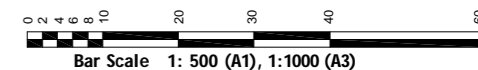


**LEGEND**

- DESIGN CONTOURS
- BOUNDARY
- ROAD CENTRELINE
- EXISTING CONTOURS
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- SWALE DRAINAGE
- PROPOSED SEWER
- PROPOSED WATER MAIN 100mmØ
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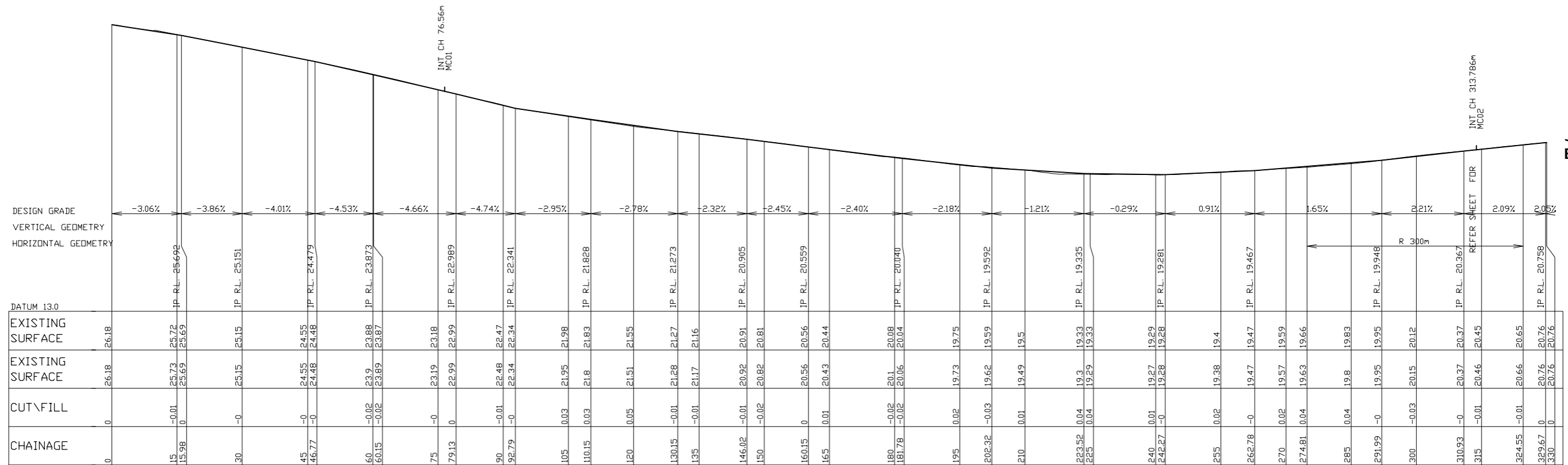
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A	06/2007	Initial Release

**LOCATION**  
**KANANGRA DRIVE,  
GWANDALAN**

Detail Plan 3			
Council:	Wyong	Projection:	M.G.A.
Datum:	A.H.D.	North Direction:	Grid
Source:	ADW Survey	Plan By:	MJH
Contour Interval:	1.0m (Des & Nat)	Checklist:	MJH

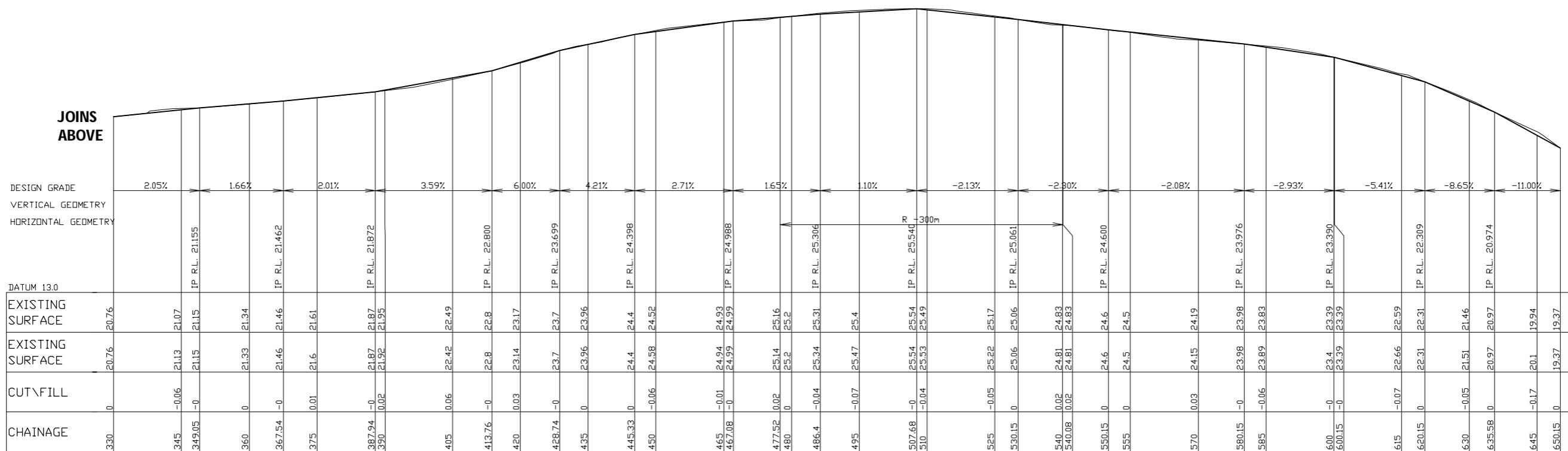
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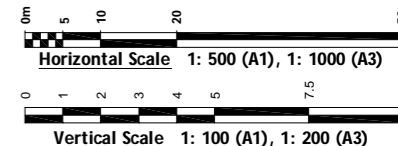
LONGITUDINAL SECTION MC00

HORIZONTAL SCALE 1:500  
VERTICAL SCALE 1:100



LONGITUDINAL SECTION MC00

HORIZONTAL SCALE 1:500  
VERTICAL SCALE 1:100



NOTES:-  
1. HALF ROAD CONSTRUCTION ONLY

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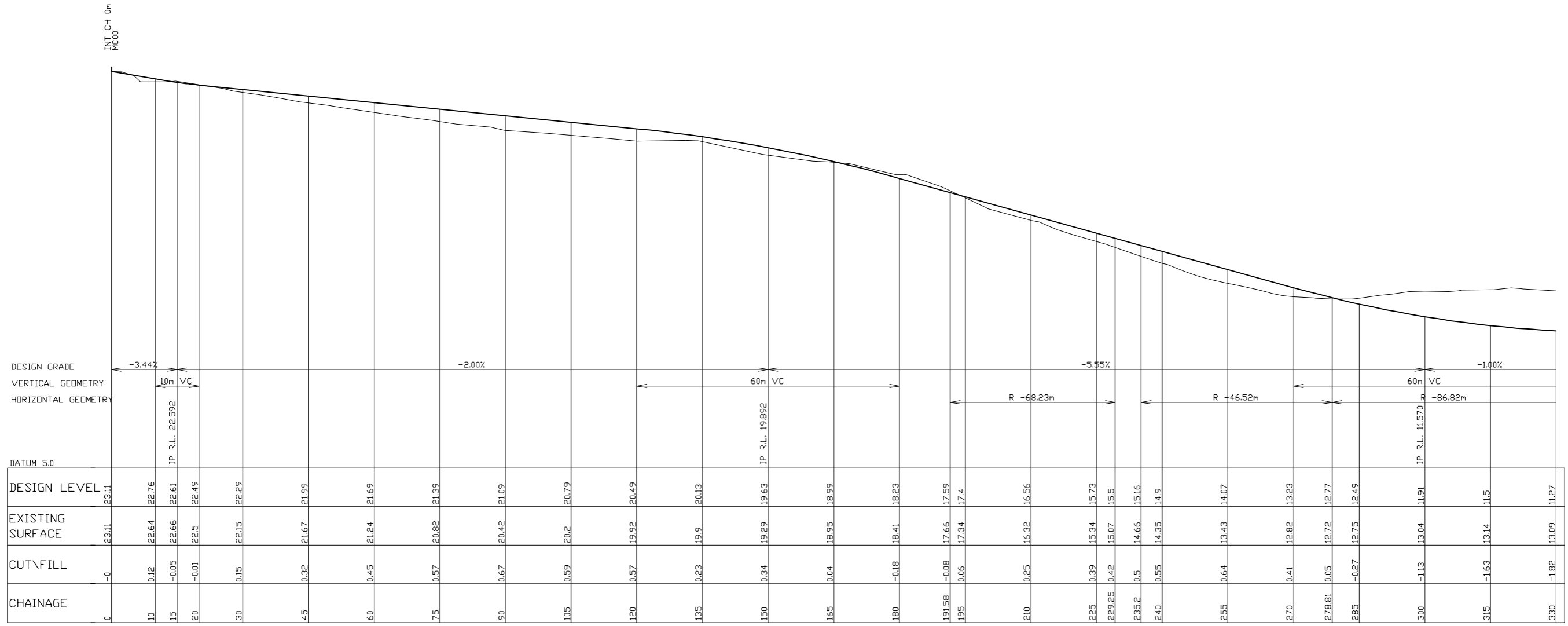
**LOCATION**  
**KANANGRA DRIVE,  
GWANDALAN**

Longitudinal Section - Kanangra Drive (MC00)			
Council:	Wyong	Projection:	M.G.A.
Datum:	A.H.D.	North Direction:	Grid
Source:	ADW Survey	Plan By:	MJH
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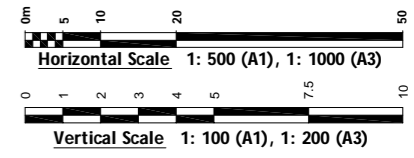
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**201**



LONGITUDINAL SECTION MC01  
HORIZONTAL SCALE 1:500  
VERTICAL SCALE 1:100



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**LOCATION**

**KANANGRA DRIVE,  
GWANDALAN**

**Longitudinal Section - Road 1  
Ch.0 - Ch.330**

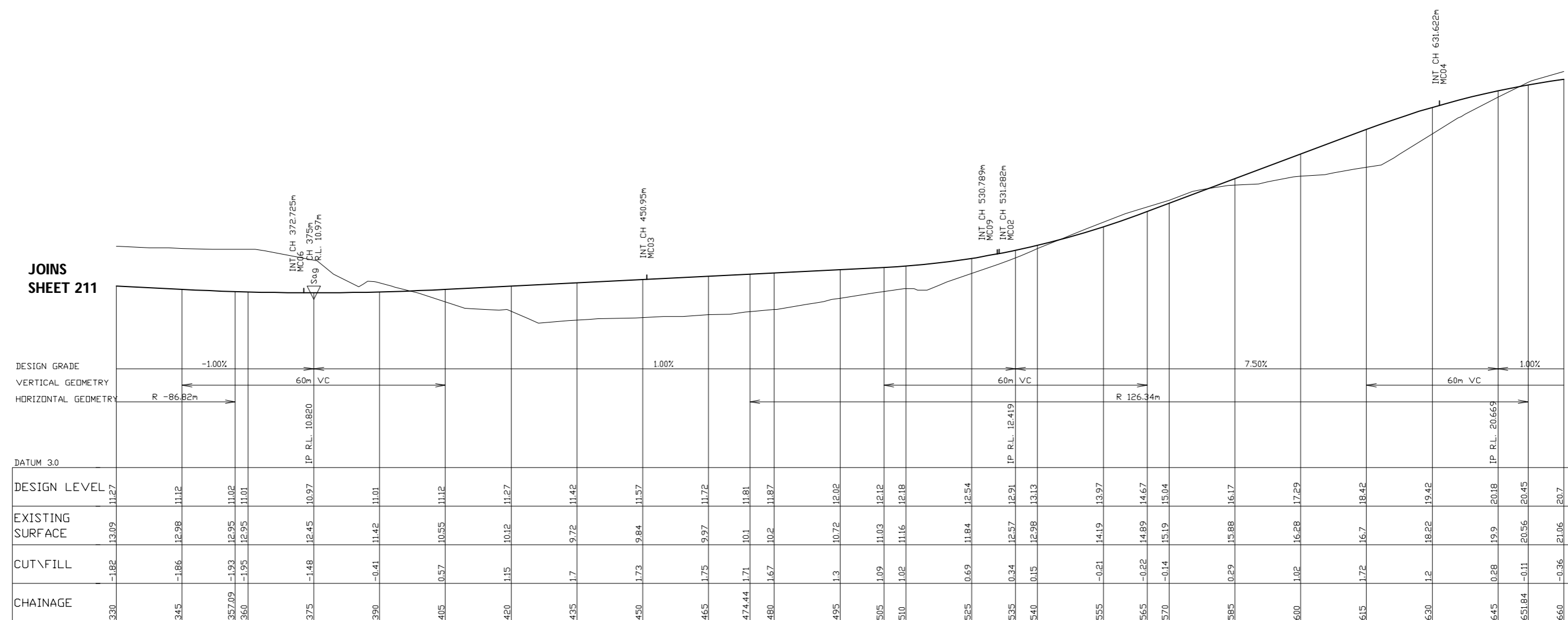
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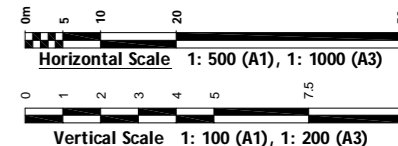
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LONGITUDINAL SECTION MC01

HORIZONTAL SCALE 1:500  
VERTICAL SCALE 1:100



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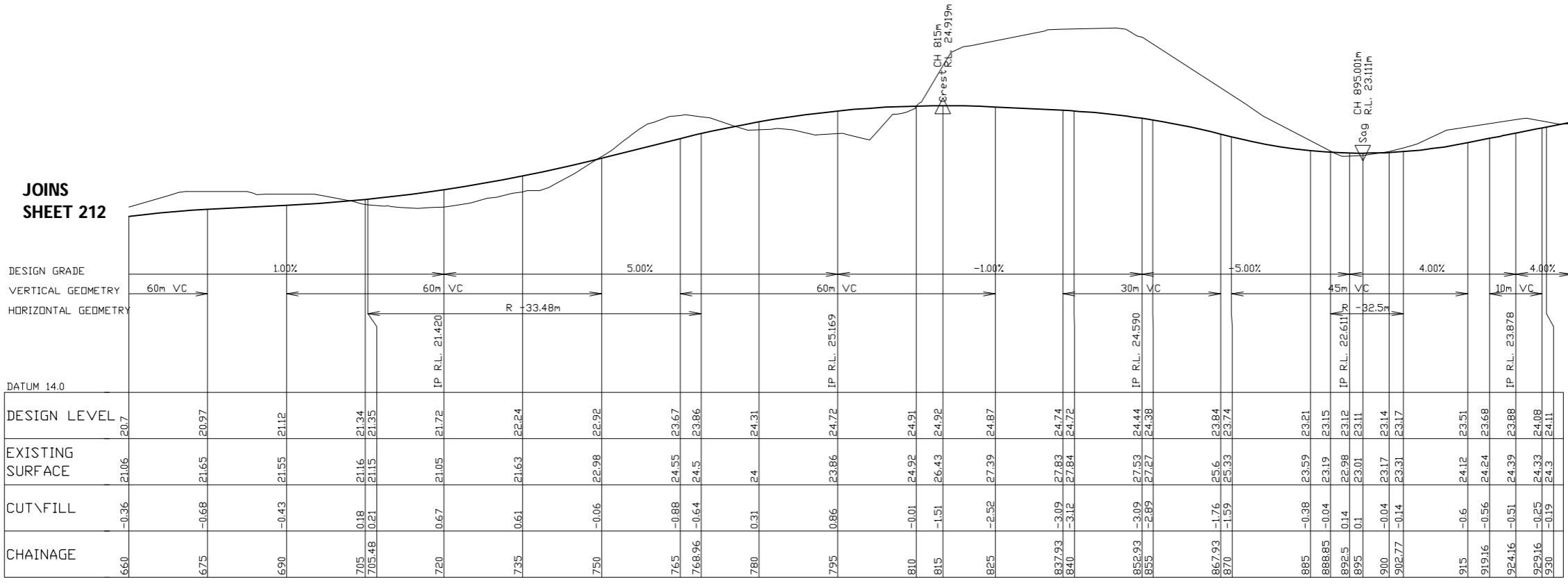
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Datum:	A.H.D.	North Direction:	Grid
Source:	ADW Survey	Plan By:	MJH
Contour Interval:	N/A	Checklist:	MJH

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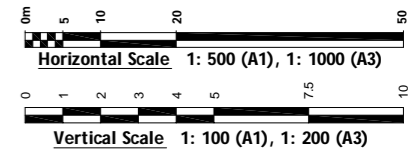
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Sheet  
**212**

**JOINS SHEET 212**



**LONGITUDINAL SECTION MC01**  
 HORIZONTAL SCALE 1:500  
 VERTICAL SCALE 1:100



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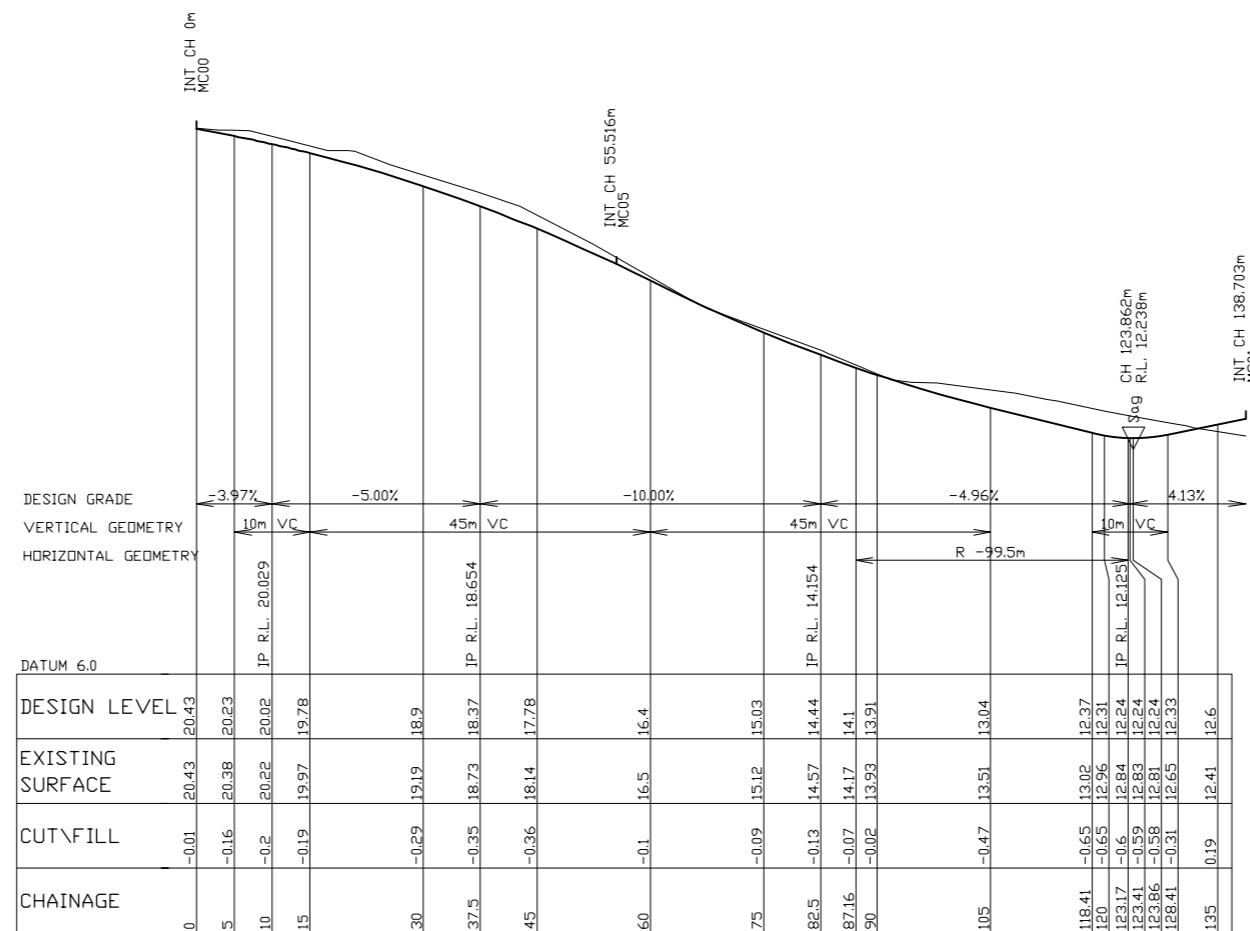
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Longitudinal Section - Road 1 Ch.660 - Ch.930			
Council:	Wyong	Projection:	M.G.A.
Datum:	A.H.D.	North Direction:	Grid
Source:	ADW Survey	Plan By:	MJH
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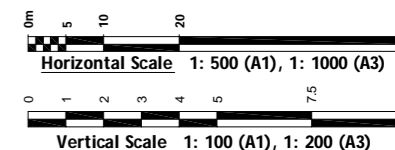
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Sheet  
**213**



LONGITUDINAL SECTION MC02  
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 VERTICAL SCALE 1:100



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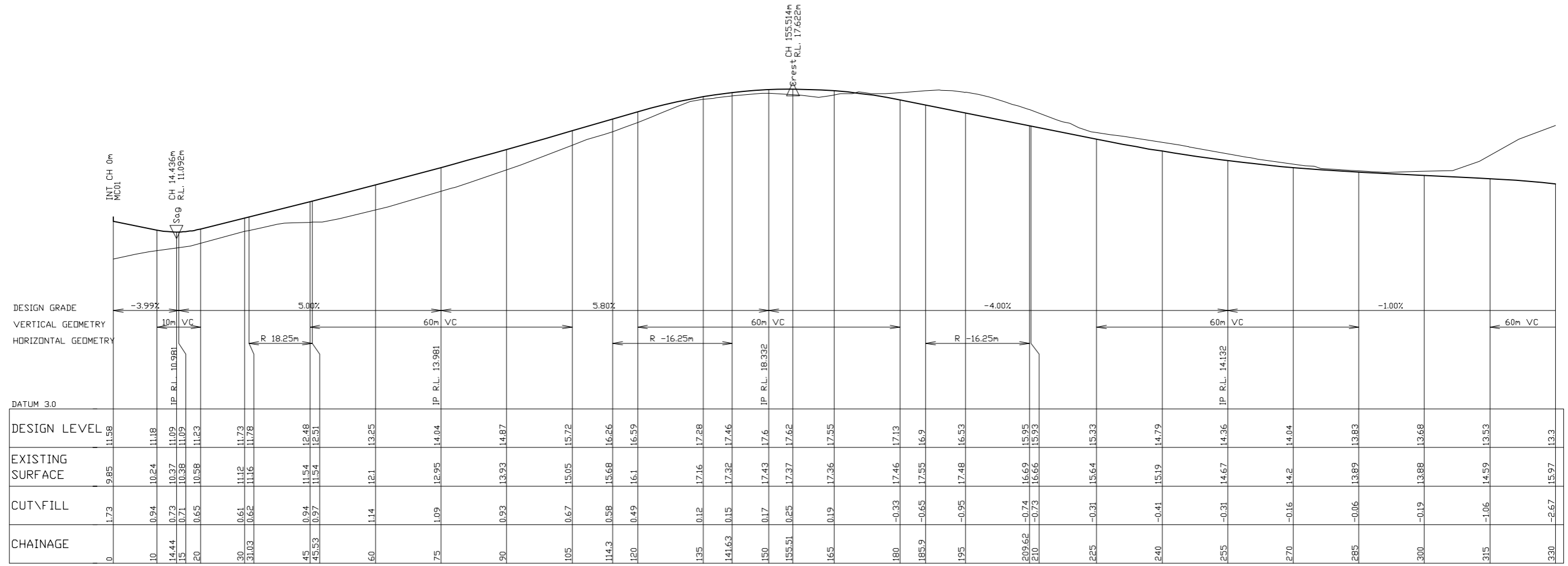
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**KANANGRA DRIVE,  
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Longitudinal Section - Road 2			
Council:	Wyong	Projection:	M.G.A.
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 Job No: 11778

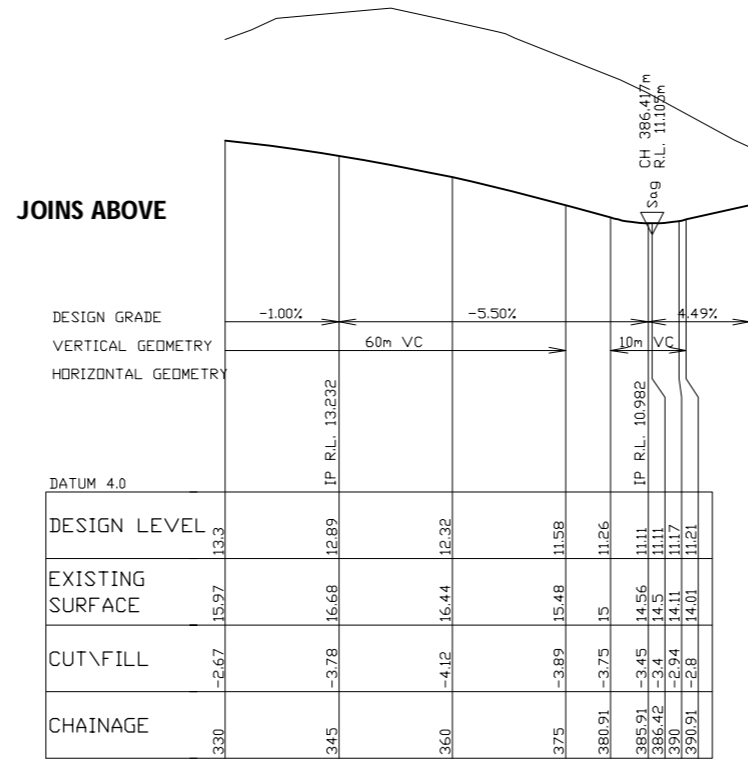
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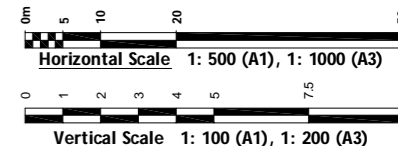
LONGITUDINAL SECTION MC03

HORIZONTAL SCALE 1:500  
VERTICAL SCALE 1:100



LONGITUDINAL SECTION MC03

HORIZONTAL SCALE 1:500  
VERTICAL SCALE 1:100



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E	11/2010	Amend Cross sections
D	12/2007	Amend to New Layout
C	08/2007	Amend Road 5
B	07/2007	Project Application
A	06/2007	Initial Release

**LOCATION**

**KANANGRA DRIVE,  
GWANDALAN**

**Longitudinal Section - Road 3**

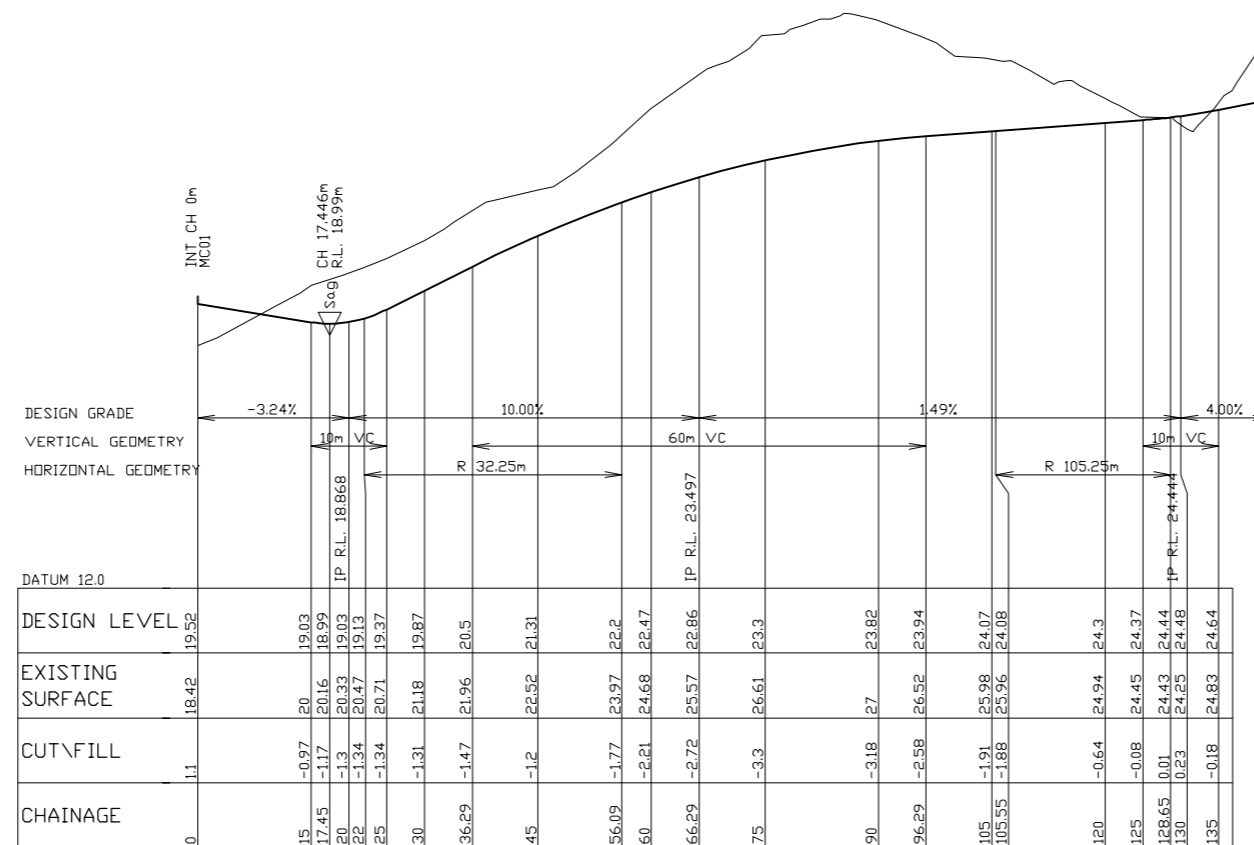
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Version: E (11/2010)  
Client: Lakeside Living Pty. Ltd.  
AutoCAD Ref: n:\11778\dwg\eng\11778eng-3e  
Job No: 11778

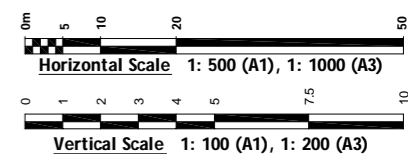
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LONGITUDINAL SECTION MC04  
 HORIZONTAL SCALE 1:500  
 VERTICAL SCALE 1:100



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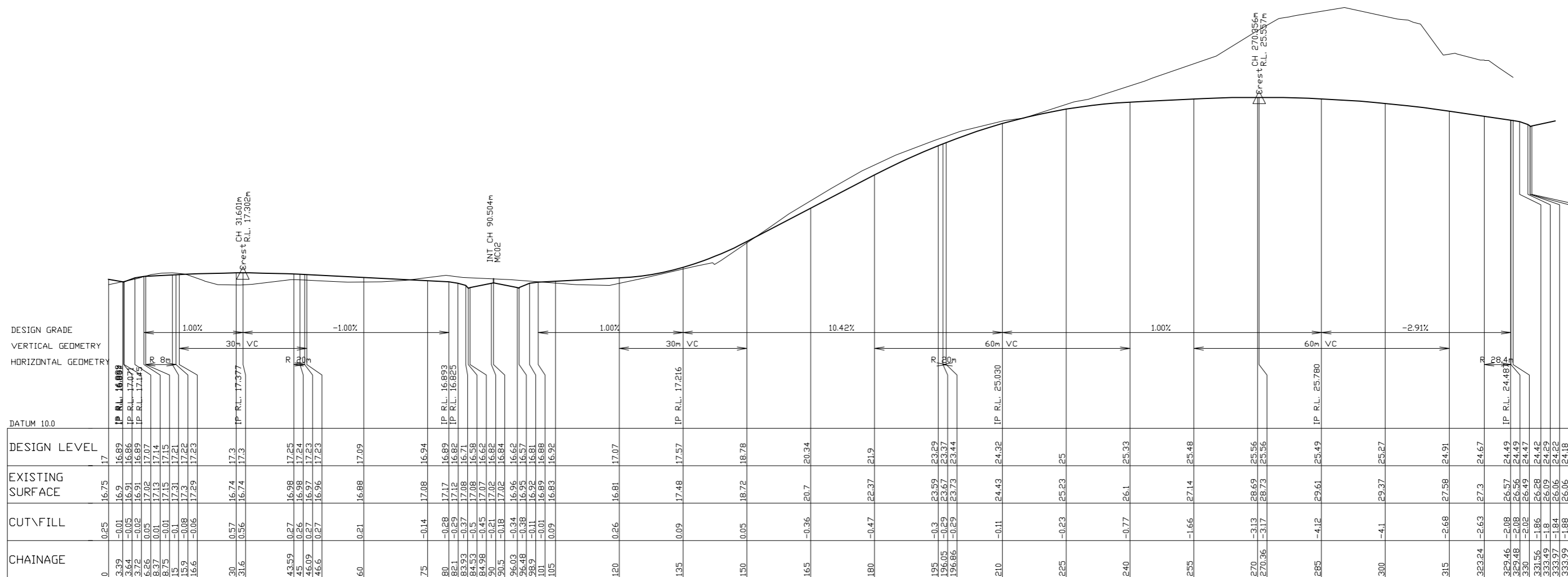
Ver.	Date	Comment
E	11/2010	Amend Cross sections
D	12/2007	Amend to New Layout
C	08/2007	Amend Road 5
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A	06/2007	Initial Release

**LOCATION**  
**KANANGRA DRIVE,  
 GWANDALAN**

Longitudinal Section - Road 4			
Council:	Wyong	Projection:	M.G.A.
Datum:	A.H.D.	North Direction:	Grid
Source:	ADW Survey	Plan By:	MJH
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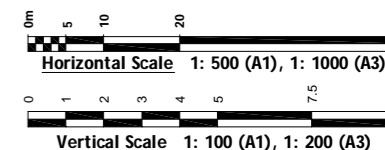
Version:	E (11/2010)
Client:	Lakeside Living Pty. Ltd.
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Job No:	11778
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**A1**  
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LONGITUDINAL SECTION MC05

HORIZONTAL SCALE 1:500  
VERTICAL SCALE 1:100



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333.97	-1.84	26.06	24.22
333.99	-1.88	26.06	24.18
334.44	-1.81	26.03	24.22

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C	08/2007	Amend Road 5
B	07/2007	Project Application
A	06/2007	Initial Release

**LOCATION**

**KANANGRA DRIVE,  
GWANDALAN**

**Longitudinal Section - Road 5**

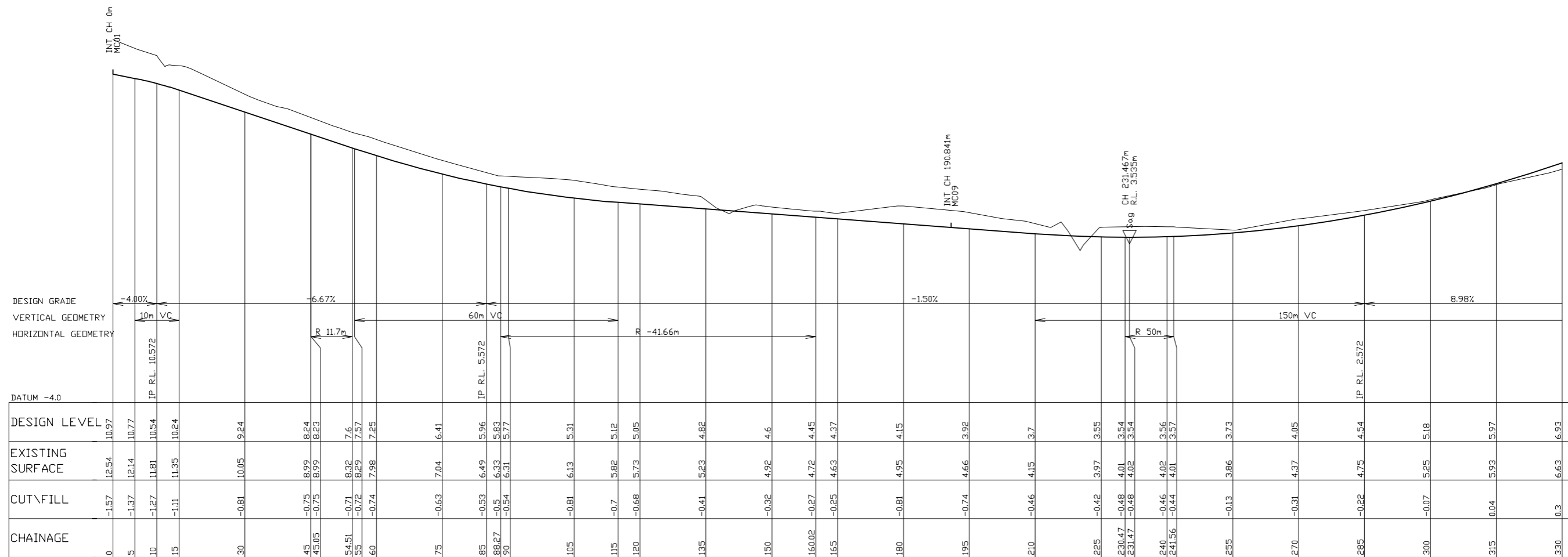
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Datum:	A.H.D.	North Direction:	Grid
Source:	ADW Survey	Plan By:	MJH
Contour Interval:	N/A	Checklist:	MJH

Version: E (11/2010)  
Client: Lakeside Living Pty. Ltd.  
AutoCAD Ref: n:\11778\dwg\eng\11778eng-3e  
Job No: 11778

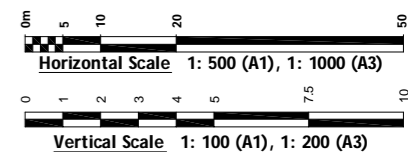
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Sheet  
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LONGITUDINAL SECTION MC06  
HORIZONTAL SCALE 1:500  
VERTICAL SCALE 1:100



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C	08/2007	Amend Road 5
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A	06/2007	Initial Release

LOCATION  
**KANANGRA DRIVE,  
GWANDALAN**

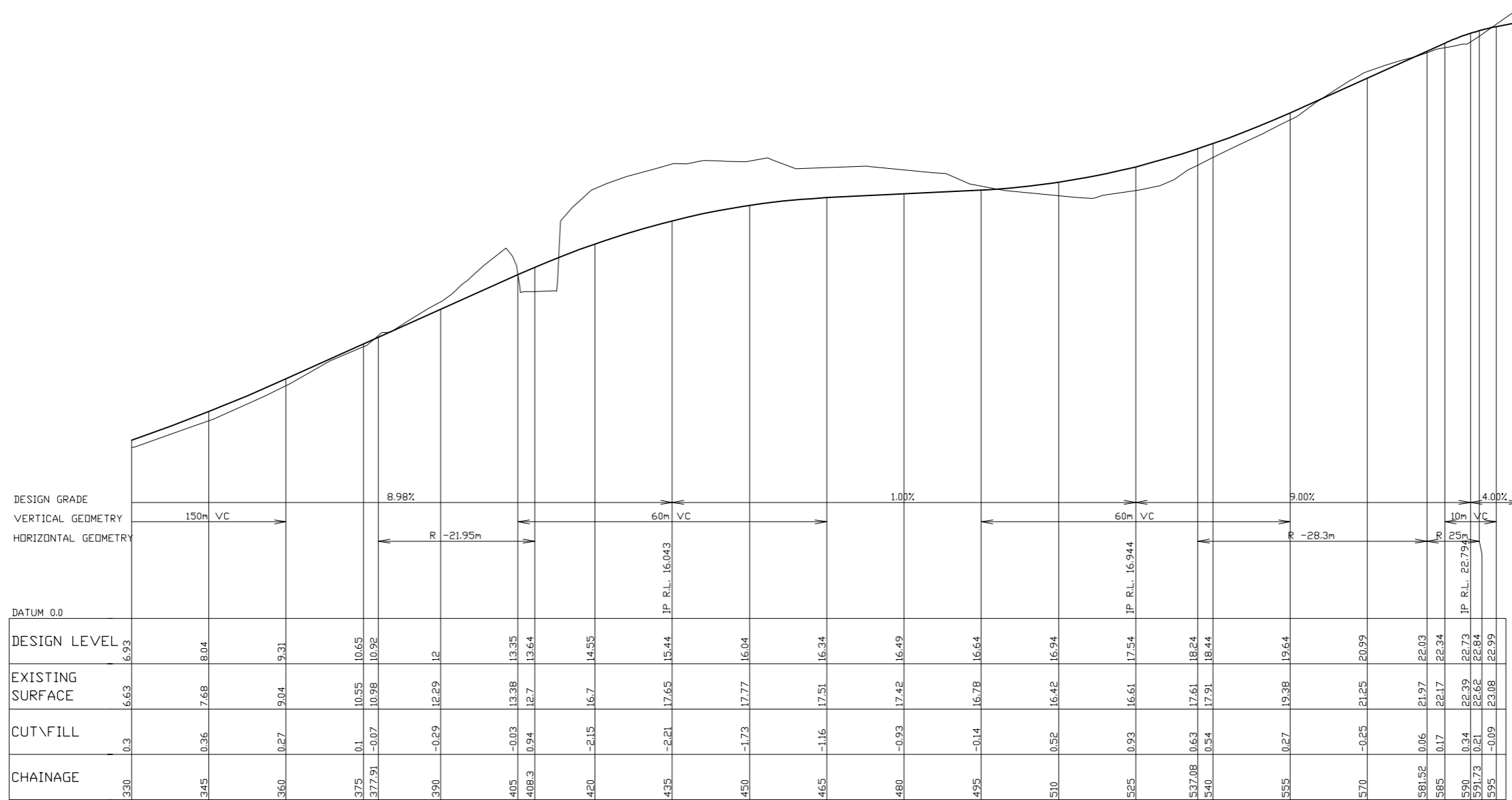
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Client: Lakeside Living Pty. Ltd.  
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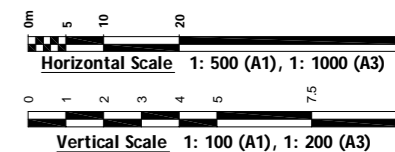
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LONGITUDINAL SECTION MC06

HORIZONTAL SCALE 1:500  
VERTICAL SCALE 1:100



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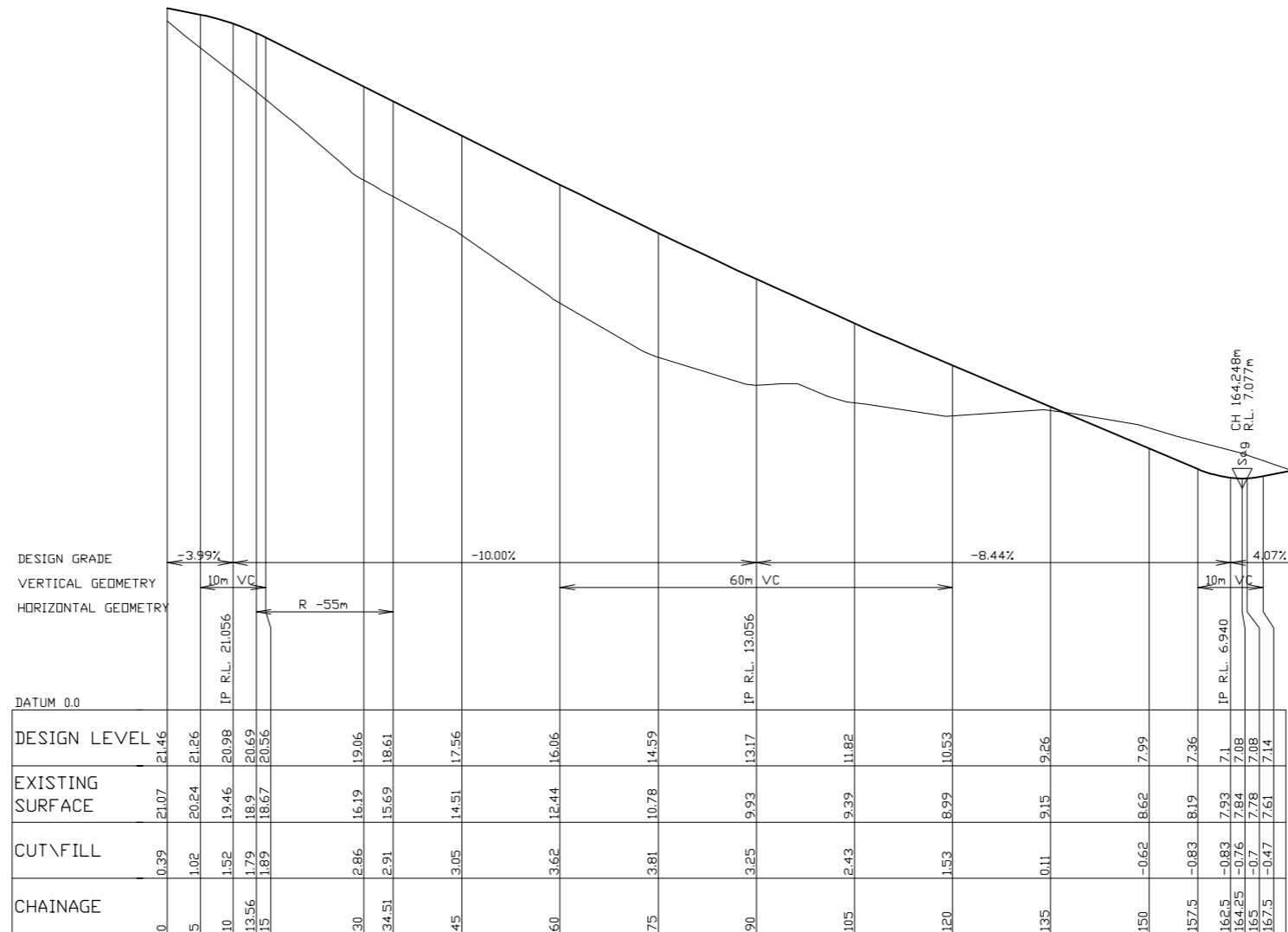
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D	12/2007	Amend to New Layout
C	08/2007	Amend Road 5
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**LOCATION**  
**KANANGRA DRIVE,  
GWANDALAN**

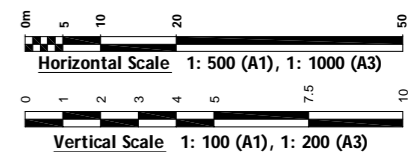
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Client:	Lakeside Living Pty. Ltd.
AutoCAD Ref:	n:\11778\dwg\eng\11778eng-3e
Job No:	11778
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LONGITUDINAL SECTION MC07  
HORIZONTAL SCALE 1:500  
VERTICAL SCALE 1:100



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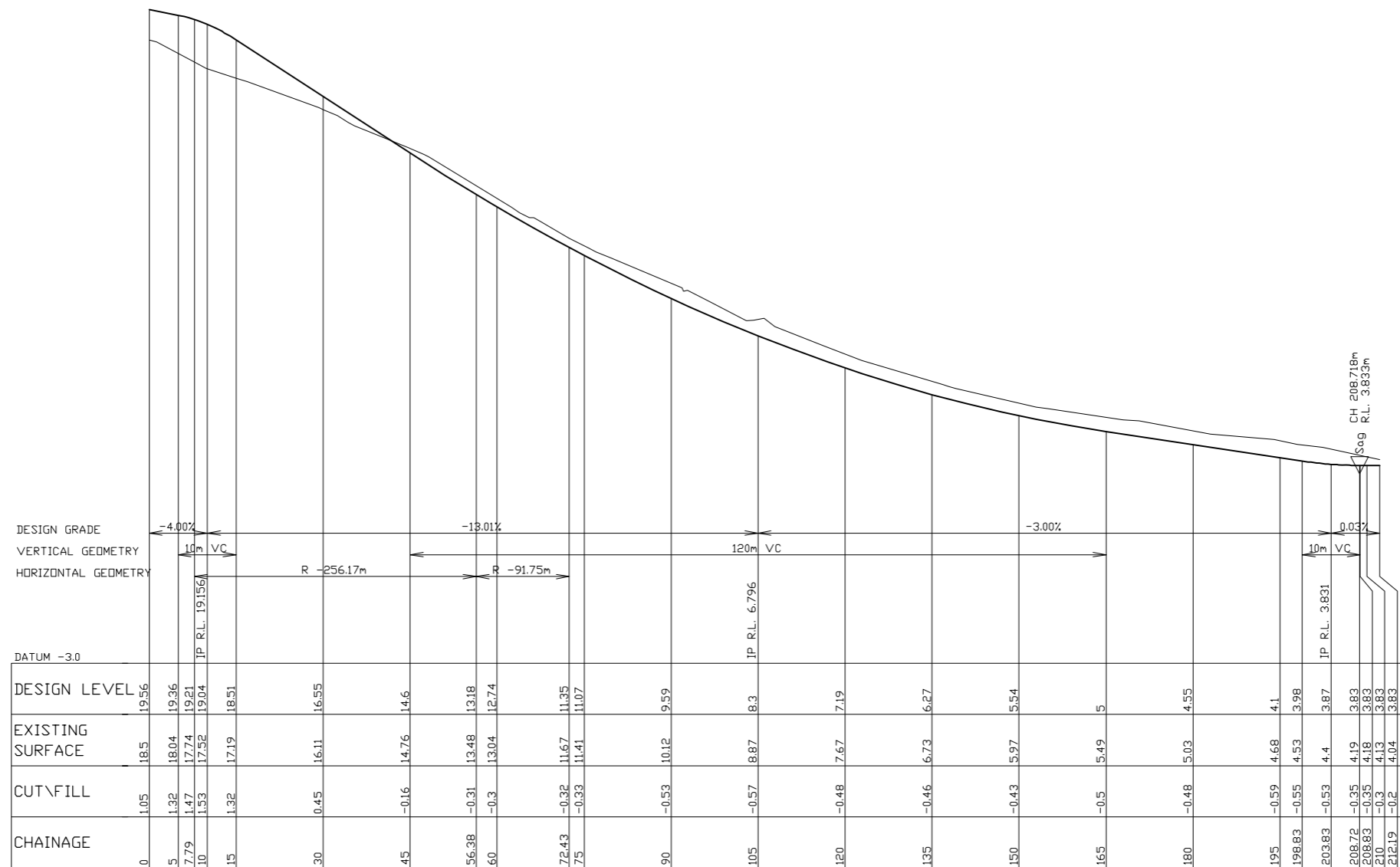
Ver.	Date	Comment
E	11/2010	Amend Cross sections
D	12/2007	Amend to New Layout
C	08/2007	Amend Road 5
B	07/2007	Project Application
A	06/2007	Initial Release

LOCATION  
**KANANGRA DRIVE,  
GWANDALAN**

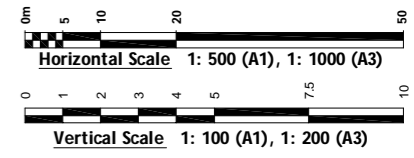
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Client:	Lakeside Living Pty. Ltd.
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**271**



LONGITUDINAL SECTION MC08  
 HORIZONTAL SCALE 1:500  
 VERTICAL SCALE 1:100



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E	11/2010	Amend Cross sections
D	12/2007	Amend to New Layout
C	08/2007	Amend Road 5
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A	06/2007	Initial Release

**LOCATION**

**KANANGRA DRIVE,  
 GWANDALAN**

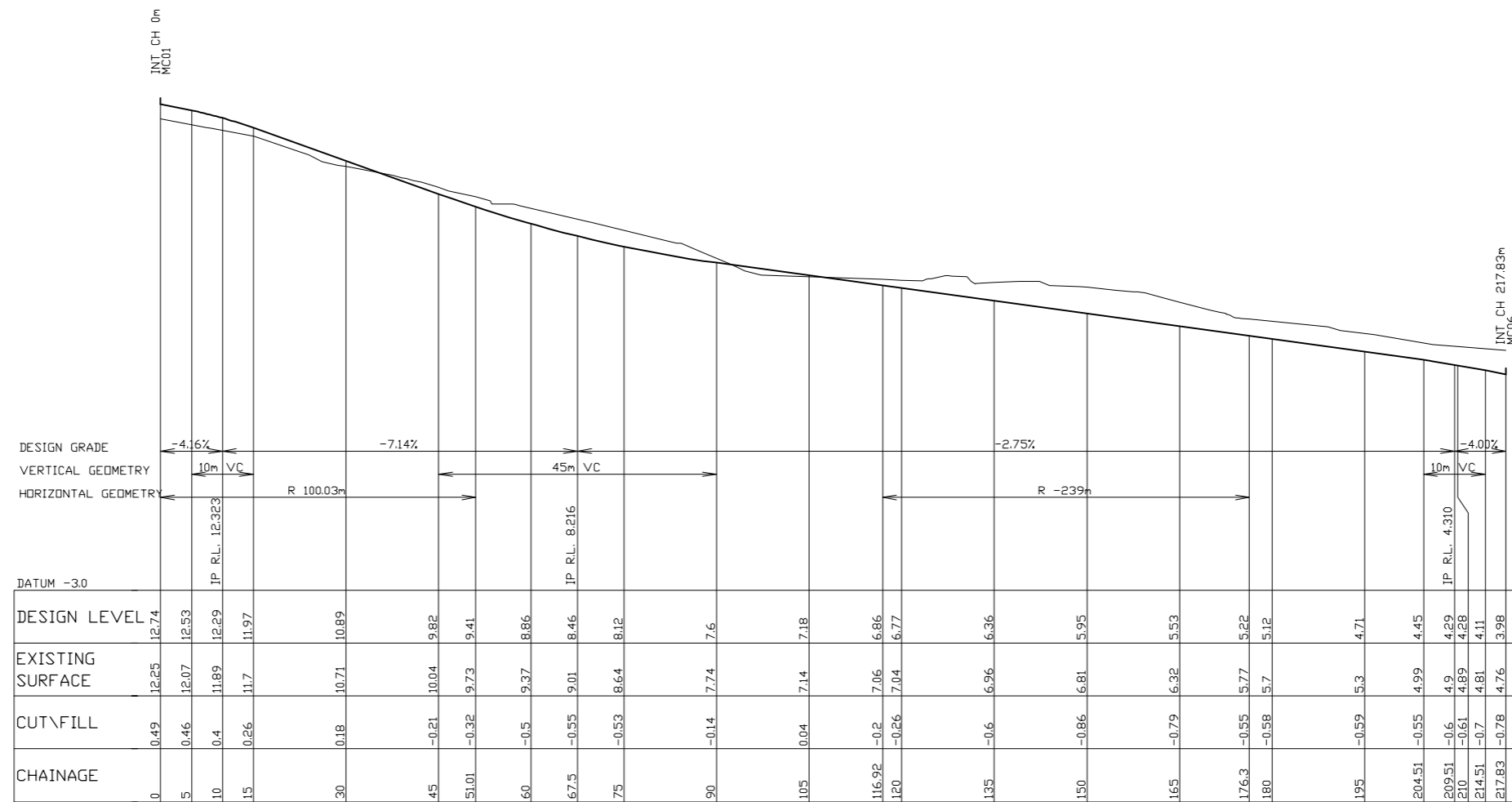
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Version: E (11/2010)  
 Client: Lakeside Living Pty. Ltd.  
 AutoCAD Ref: n:\11778\dwg\eng\11778eng-3e  
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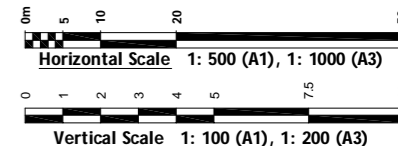
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**281**



LONGITUDINAL SECTION MC09  
 HORIZONTAL SCALE 1:500  
 VERTICAL SCALE 1:100



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E	11/2010	Amend Cross sections
D	12/2007	Amend to New Layout
C	08/2007	Amend Road 5
B	07/2007	Project Application
A	06/2007	Initial Release

**LOCATION**

**KANANGRA DRIVE,  
 GWANDALAN**

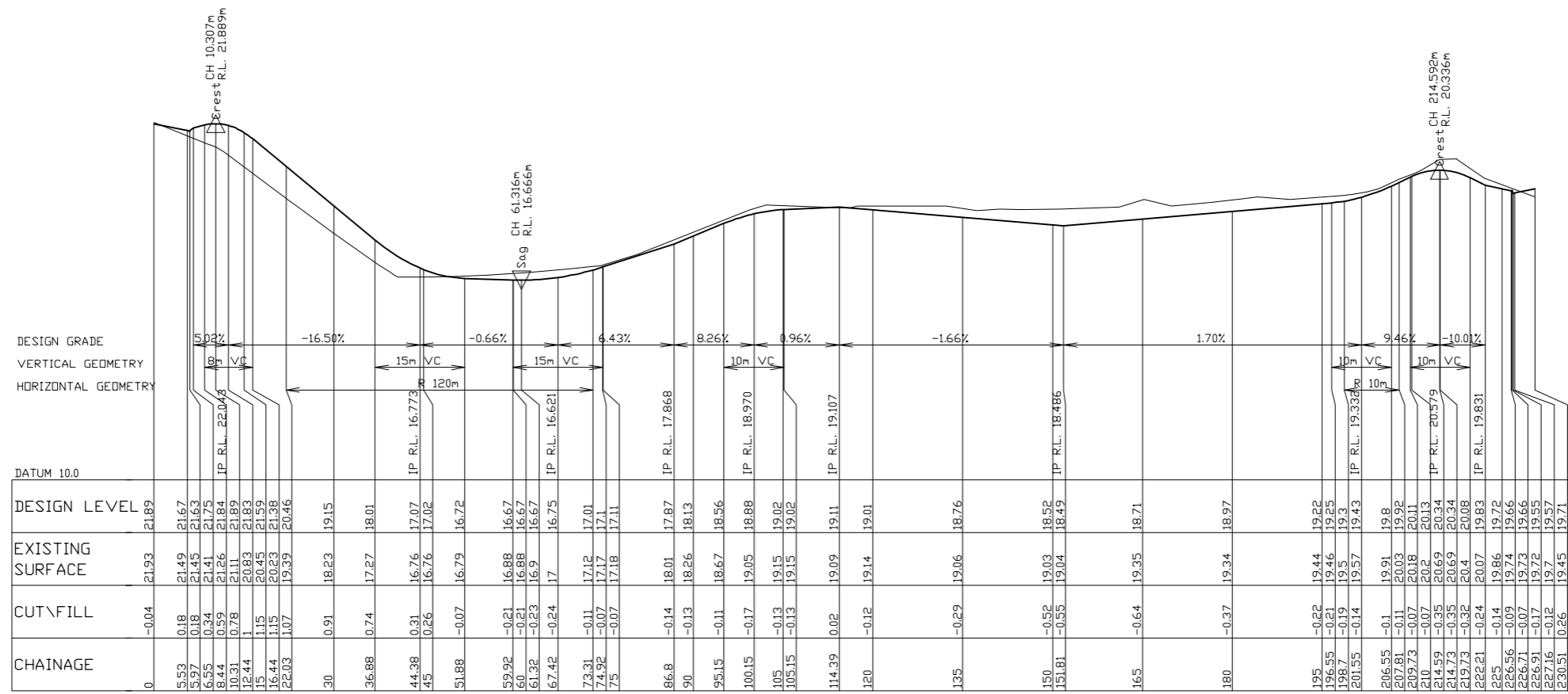
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**Client:** Lakeside Living Pty. Ltd.  
**AutoCAD Ref:** n:\11778\dwg\eng\11778eng-3e  
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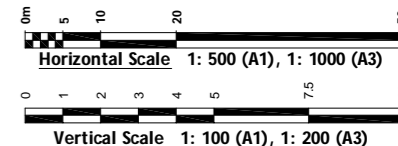
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LONGITUDINAL SECTION MC10  
 HORIZONTAL SCALE 1:500  
 VERTICAL SCALE 1:100



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A	06/2007	Initial Release

**LOCATION**

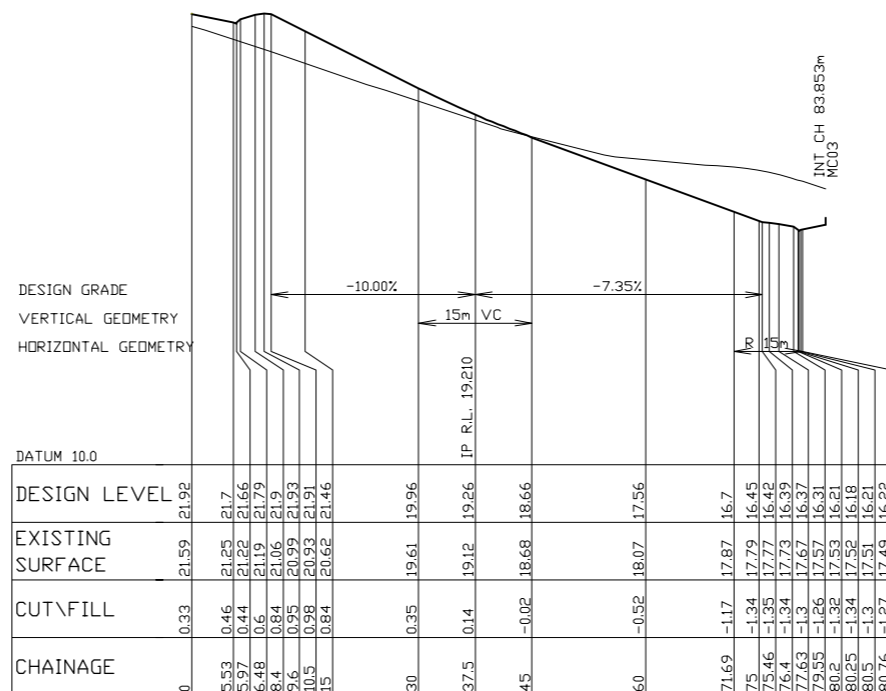
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 GWANDALAN**

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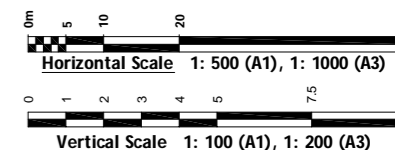
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Client:	Lakeside Living Pty. Ltd.
AutoCAD Ref:	n:\11778\dwg\eng\11778eng-3e
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**298**



LONGITUDINAL SECTION MC11  
HORIZONTAL SCALE 1:500  
VERTICAL SCALE 1:100



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e-mail: hunter@adwjohnson.com.au

Ver.	Date	Comment
E	11/2010	Amend Cross sections
D	12/2007	Amend to New Layout
C	08/2007	Amend Road 5
B	07/2007	Project Application
A	06/2007	Initial Release

LOCATION  
**KANANGRA DRIVE,  
GWANDALAN**

Longitudinal Section - Road 11

Council:	Wyong	Projection:	M.G.A.
Datum:	A.H.D.	North Direction:	Grid
Source:	ADW Survey	Plan By:	MJH
Contour Interval:	N/A	Checklist:	MJH

Version:	E (11/2010)
Client:	Lakeside Living Pty. Ltd.
AutoCAD Ref:	n:\11778\dwg\eng\11778eng-3e
Job No:	11778

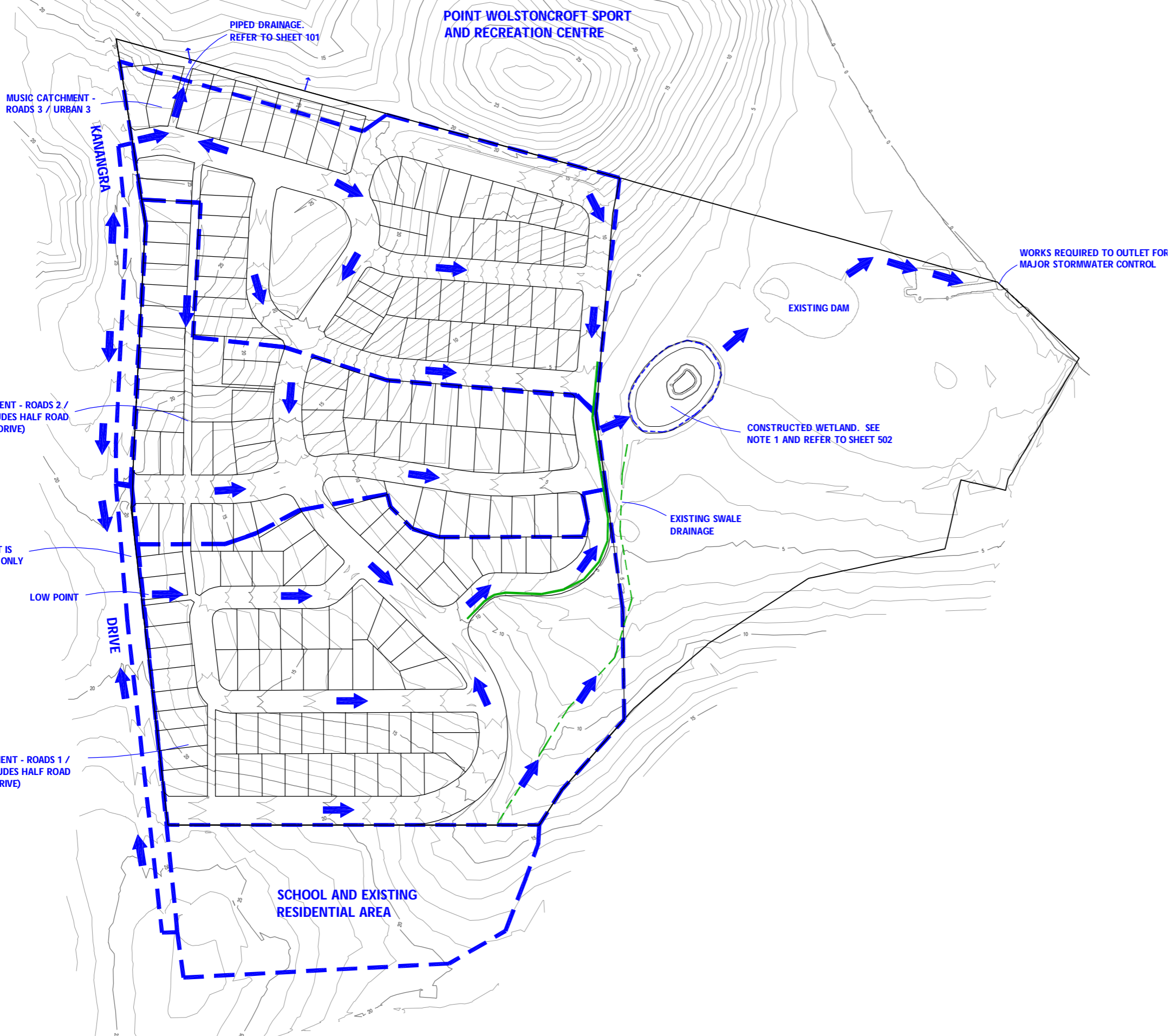
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ANYTHING OTHER THAN THAT PURPOSE

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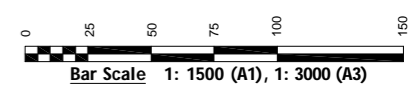


**LEGEND**

- BOUNDARIES
- CATCHMENT BOUNDARIES (USED IN MUSIC MODEL)
- SWALE DRAINAGE (LOW FLOWS / ROAD ONLY)
- EXISTING SWALE DRAINAGE
- FLOW DIRECTION



**NOTES:-**  
 1. THE CONSTRUCTED WETLAND IS THE FINAL CONTROL FOR STORMWATER REQUIREMENTS OF RUNOFF QUALITY AND QUANTITY FROM THE DEVELOPMENT



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**LOCATION**

**KANANGRA DRIVE,  
 GWANDALAN**

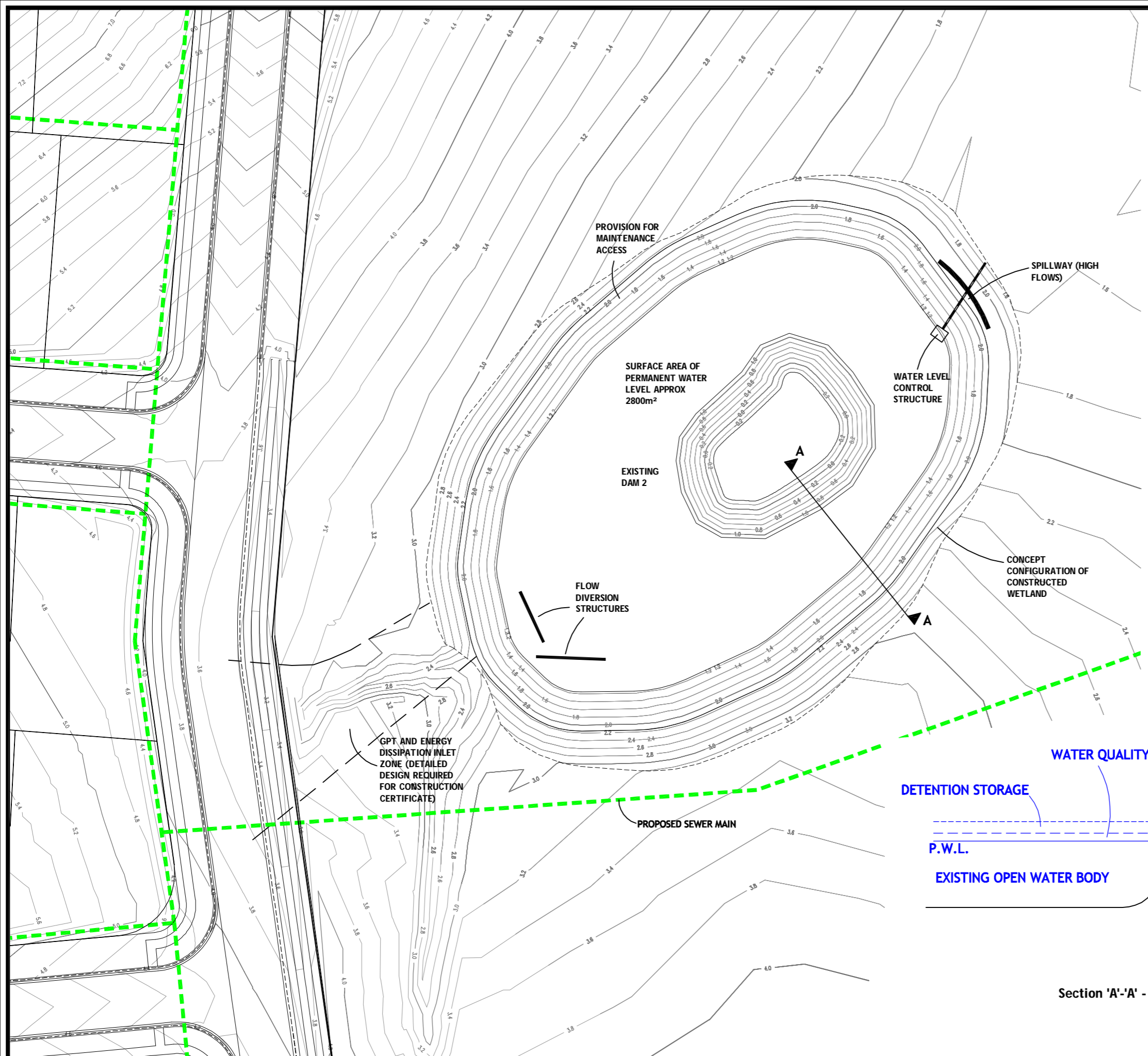
Stormwater Catchments			
Council:	Wyong	Projection:	M.G.A.
Datum:	A.H.D.	North Direction:	Grid
Source:	ADW Survey	Plan By:	MJH
Contour Interval:	1.0m (Des & Nat)	Checklist:	MJH

Version: E (11/2010)  
 Client: Lakeside Living Pty. Ltd.  
 AutoCAD Ref: n:\11778\dwg\eng\11778eng-3e  
 Job No: 11778

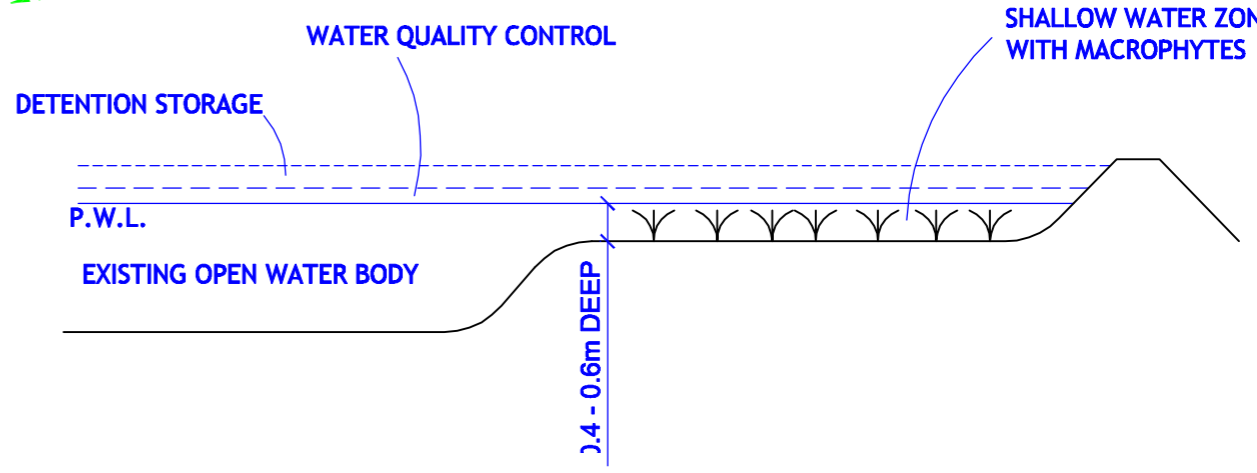
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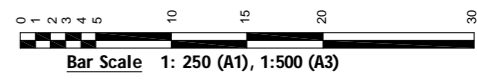
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NOTES:-  
 1. THIS IS A CONCEPT DESIGN ONLY. DETAILED DESIGN IS REQUIRED FOR ALL CONSTRUCTED WETLAND COMPONENTS FOR CONSTRUCTION CERTIFICATE.



Section 'A'-A' - Typical Section Through Constructed Wetland  
 Not To Scale



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**LOCATION**  
**KANANGRA DRIVE,  
 GWANDALAN**

Constructed Wetland (Concept)			
Council:	Wyong	Projection:	M.G.A.
Datum:	A.H.D.	North Direction:	Grid
Source:	ADW Survey	Plan By:	MJH
Contour Interval:	1.0m (Des & Nat)	Checklist:	MJH

Version: E (11/2010)  
 Client: Lakeside Living Pty. Ltd.  
 AutoCAD Ref: n:\11778\dwg\eng\11778eng-3e  
 Job No: 11778

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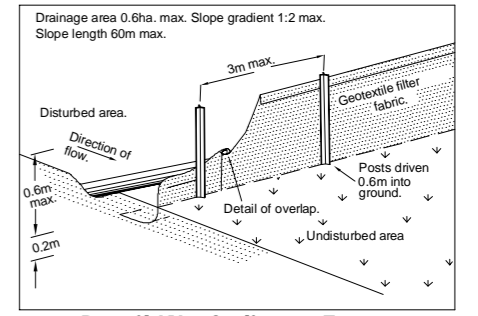
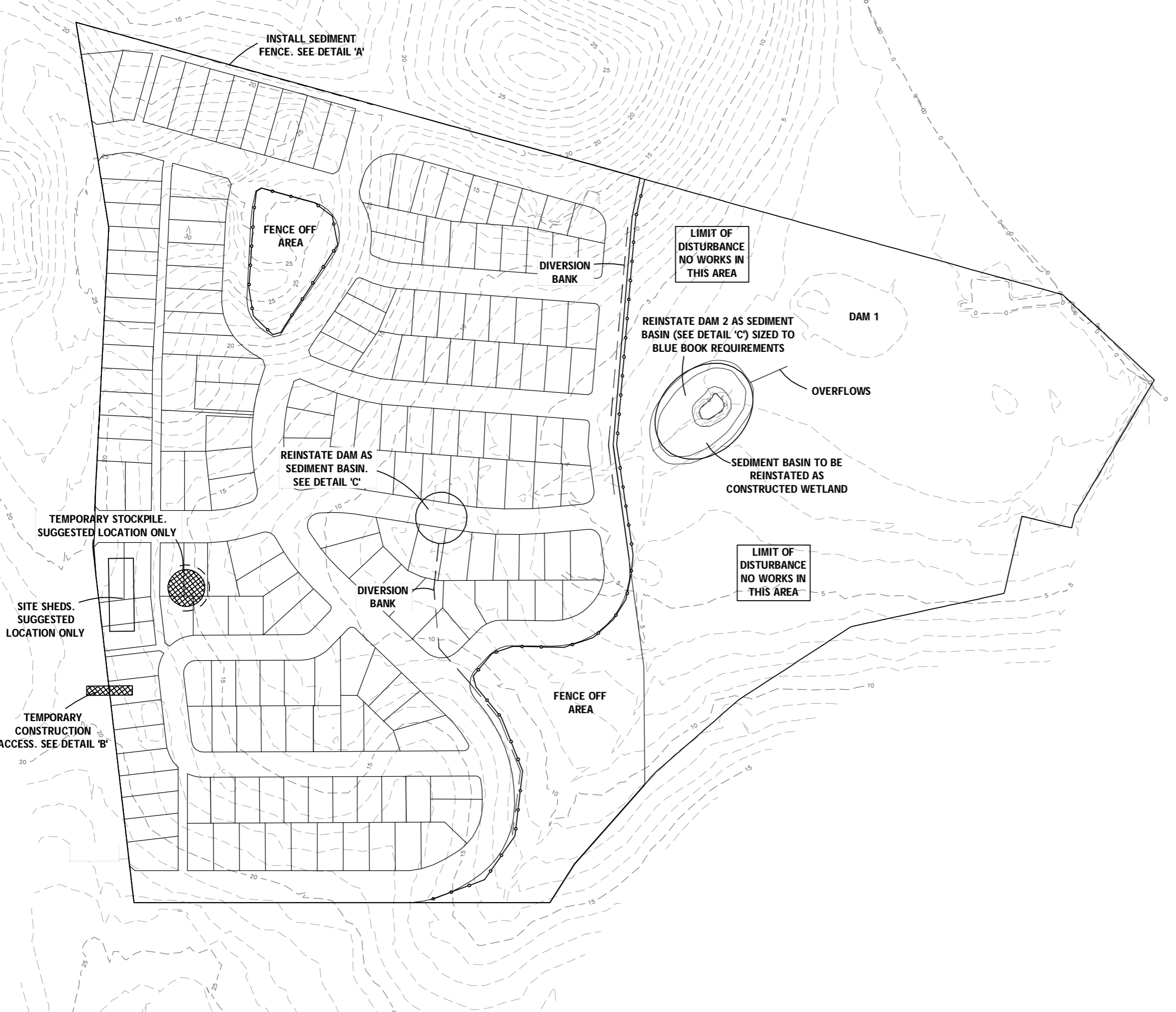
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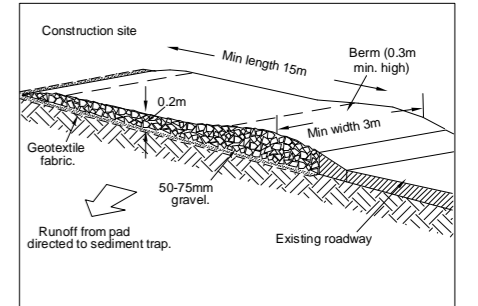


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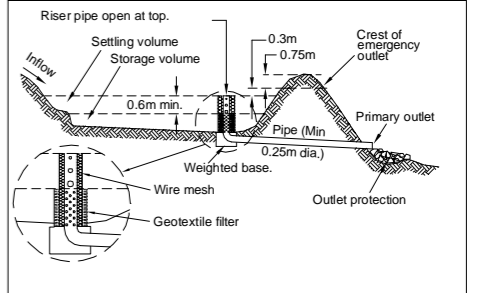
	BARRIER FENCING
	SITE BOUNDARY
	PROPOSED BOUNDARY
	MAJOR NATURAL CONTOUR
	MINOR NATURAL CONTOUR



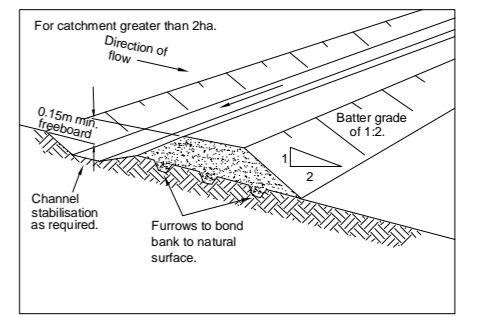
**Detail 'A' - Sediment Fence**



**Detail 'B' - Temporary Construction Access**



**Detail 'C' - Typical Sediment Basin Section**



**Detail 'D' - Diversion Drain**

THIS SHEET IS NOT TO SCALE

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**LOCATION**

**KANANGRA DRIVE,  
GWANDALAN**

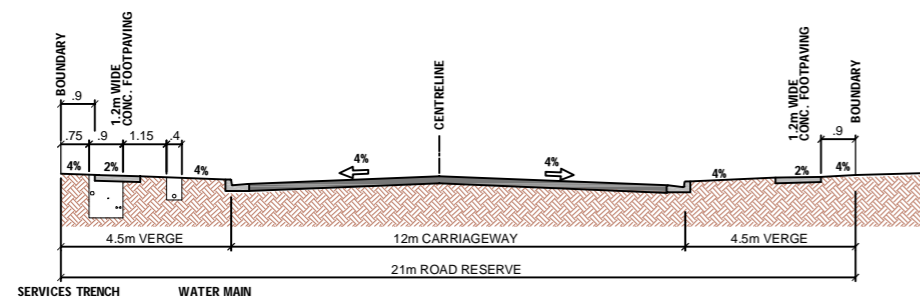
**Soil and Water Management**

Council:	Wyong	Projection:	M.G.A.
Datum:	A.H.D.	North Direction:	Grid
Source:	ADW Survey	Plan By:	MJH
Contour Interval:	1.0m (Nat)	Checklist:	MJH

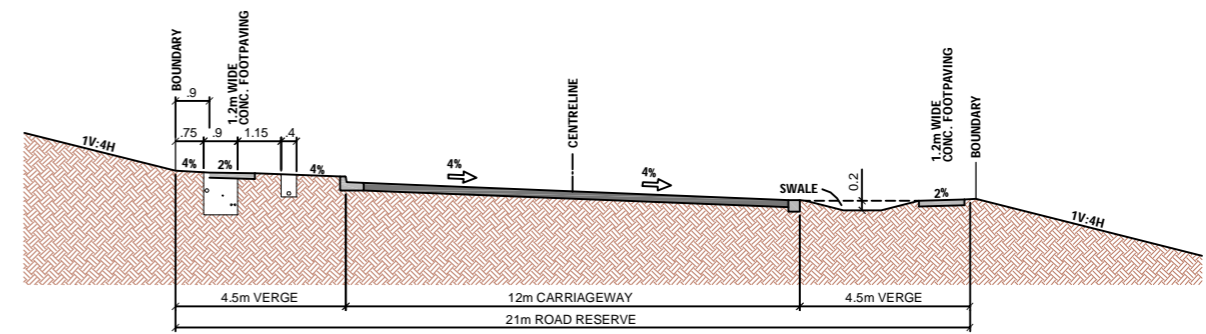
Version:	E (11/2010)
Client:	Lakeside Living Pty. Ltd.
AutoCAD Ref:	n:\11778\dwg\eng\11778eng-3e
Job No:	11778
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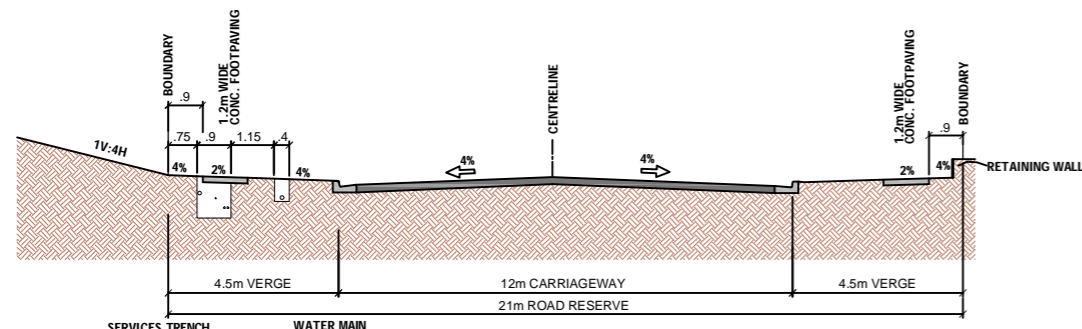
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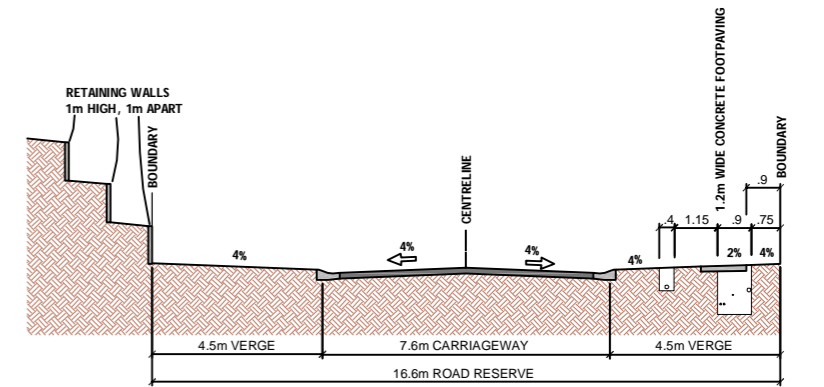
**Standard Section 'A' - 21m Road Reserve No Swale Drain**



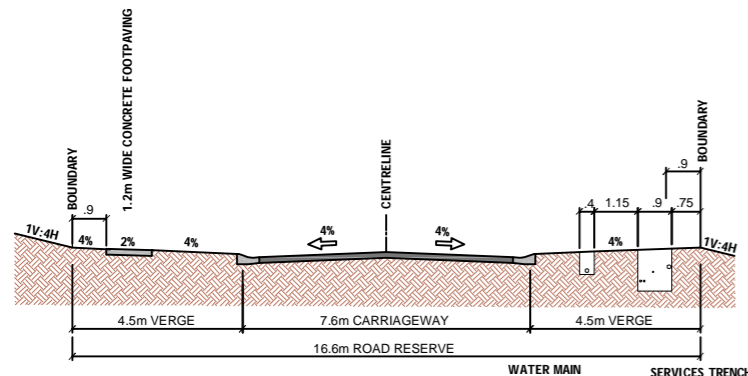
**Standard Section 'B' - 21m Road Reserve With Swale Drain**



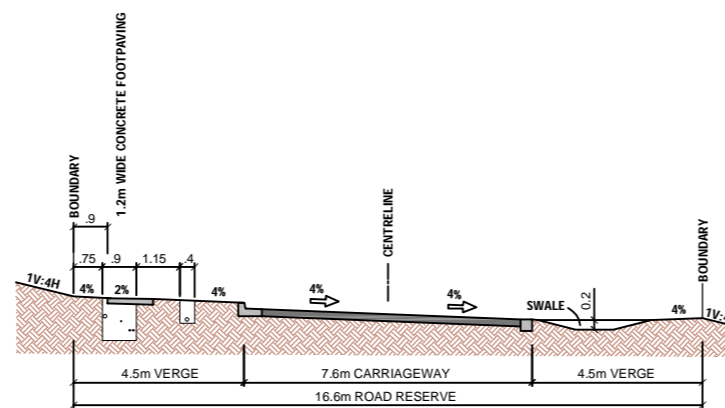
**Standard Section 'C' - 21m Road Reserve Retaining Wall**



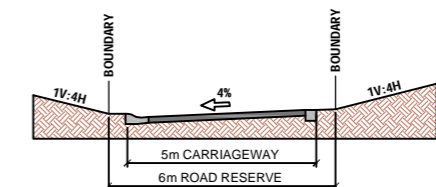
**Standard Section 'D' - 16.6m Road Reserve Tiered Retaining Walls**



**Standard Section 'E' - 16.6m Road Reserve**

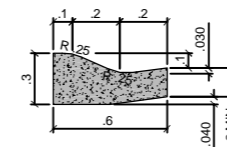


**Standard Section 'F' - 16.6m Road Reserve With Swale Drain**

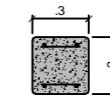


**Standard Section 'G' - 6m Road Reserve Lane Way**

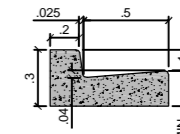
LOTS ACCESSED FROM LANE WAY WILL BE SERVICED FROM KANANGRA DRIVE



**Roll Kerb NTS**

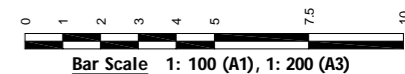


**Edge Restraint NTS**



**Upright Kerb NTS**

- NOTES:-**
1. SWALE DRAINS FOR ROAD FLOWS ONLY, LIMITED TO LONGITUDINAL GRADES <5%
  2. PAVEMENT DESIGN TO BE COMPLETED BY GEOTECHNICAL ENGINEER.



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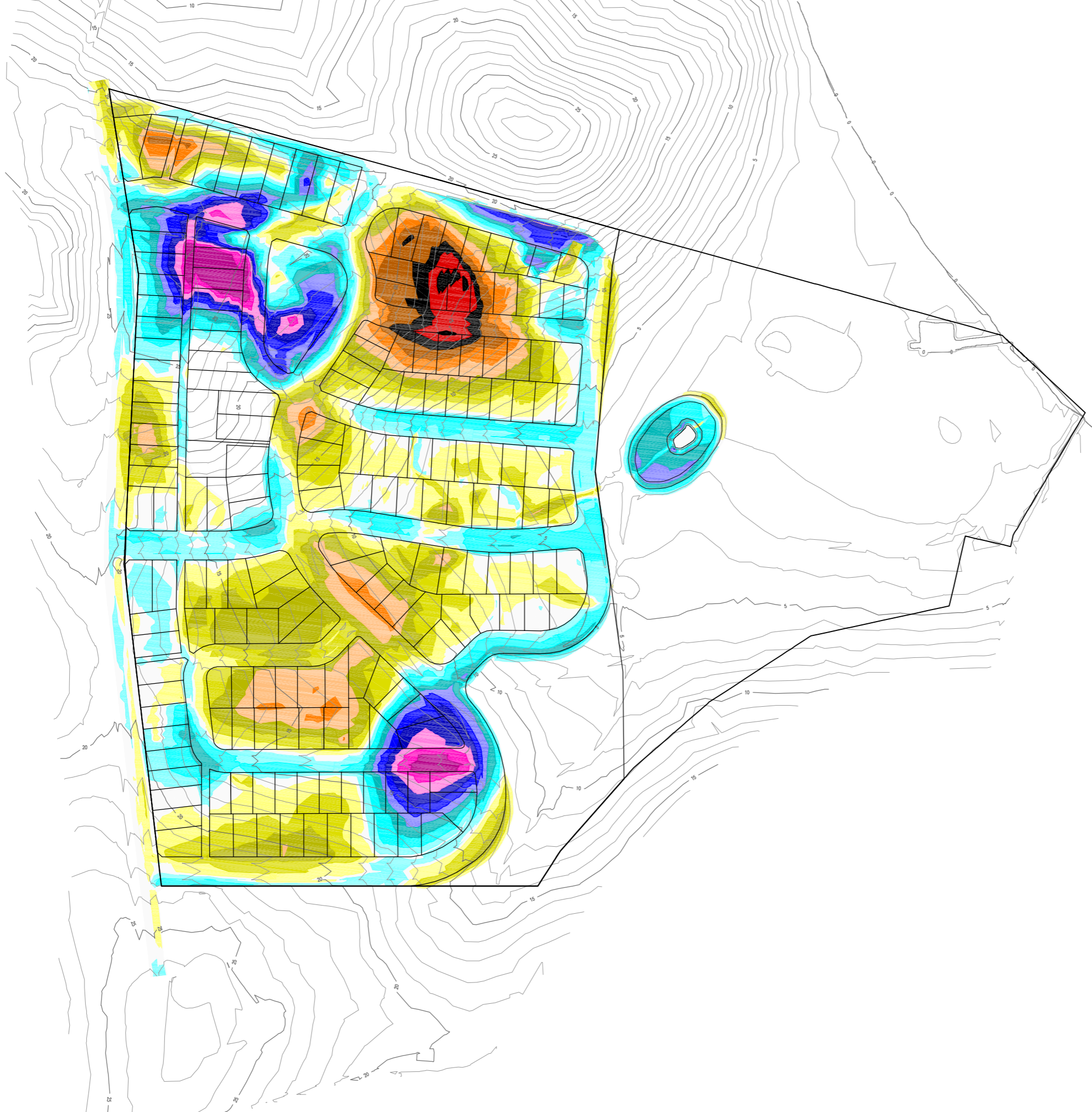
**LOCATION**  
**KANANGRA DRIVE, GWANDALAN**

Typical Sections			
Council:	Wyong	Projection:	M.G.A.
Datum:	A.H.D.	North Direction:	Grid
Source:	ADW Survey	Plan By:	MJH
Contour Interval:		Checklist:	MJH

Version:	E (11/2010)
Client:	Lakeside Living Pty. Ltd.
AutoCAD Ref:	n:\11778\dwg\eng\11778eng-3e
Job No:	11778
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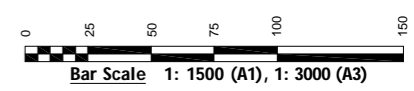
Original Size  
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**LEGEND**

LEGEND (+ FILL - CUT)			Colour	
Lower_value	Upper_value			
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4	to	3.5	m	Red
3.5	to	3	m	Black
3	to	2.5	m	Brown
2.5	to	2	m	Orange
2	to	1.5	m	Light Orange
1.5	to	1	m	Yellow-Green
1	to	0.5	m	Yellow
0.5	to	0.1	m	Light Yellow
0.1	to	0	m	White
0	to	-0.1	m	White
-0.1	to	-0.5	m	Cyan
-0.5	to	-1	m	Light Blue
-1	to	-1.5	m	Teal
-1.5	to	-2	m	Blue
-2	to	-2.5	m	Dark Blue
-2.5	to	-3	m	Dark Blue
-3	to	-3.5	m	Pink
-3.5	to	-4	m	Magenta
-4	to	-20	m	Dark Purple



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**LOCATION**

**KANANGRA DRIVE,  
GWANDALAN**

Bulk Earthworks			
Council:	Wyong	Projection:	M.G.A.
Datum:	A.H.D.	North Direction:	Grid
Source:	ADW Survey	Plan By:	MJH
Contour Interval:	1.0m (Des & Nat)	Checklist:	MJH

Version:	E (11/2010)
Client:	Lakeside Living Pty. Ltd.
AutoCAD Ref:	n:\11778\dwg\eng\11778eng-3e
Job No:	11778
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