



ANNEX

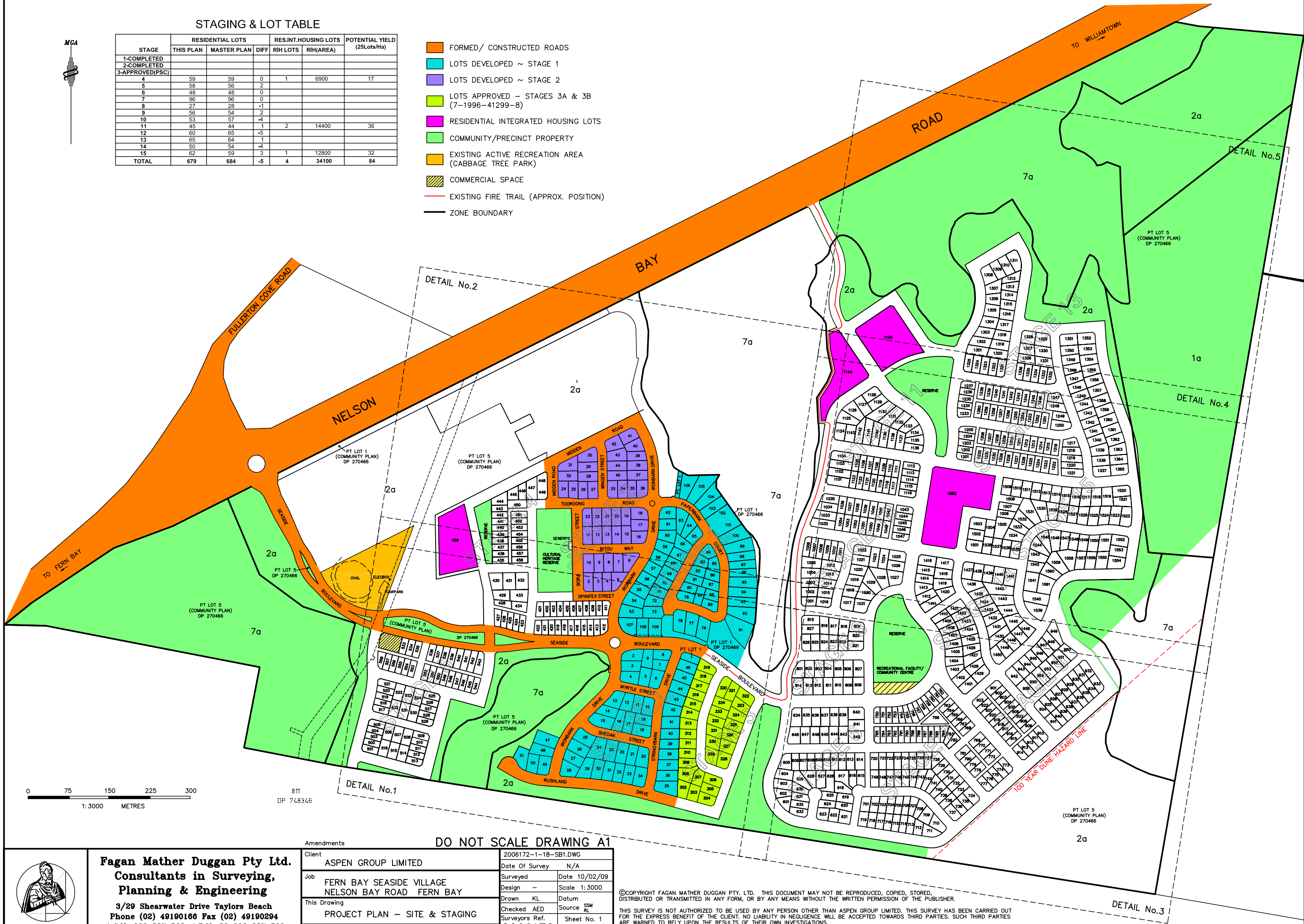
B

**Subdivision
Plans**

STAGING & LOT TABLE

STAGE	RESIDENTIAL LOTS			RES.INT.HOUSING LOTS		POTENTIAL YIELD (25Lots/Ha)
	THIS PLAN	MASTER PLAN	DIFF	RIH LOTS	RIH(AREA)	
1-COMPLETED						
2-COMPLETED						
3-APPROVED(PSC)						
4	59	59	0	1	6900	17
5	58	56	2			
6	48	48	0			
7	96	96	0			
8	27	28	-1			
9	56	54	2			
10	53	57	-4			
11	45	44	1	2	14400	36
12	60	65	-5			
13	65	64	1			
14	50	54	-4			
15	62	59	3	1	12800	32
TOTAL	679	684	-5	4	34100	84

- FORMED/ CONSTRUCTED ROADS
- LOTS DEVELOPED ~ STAGE 1
- LOTS DEVELOPED ~ STAGE 2
- LOTS APPROVED - STAGES 3A & 3B
(7-1996-41299-8)
- RESIDENTIAL INTEGRATED HOUSING LOTS
- COMMUNITY/PRECINCT PROPERTY
- EXISTING ACTIVE RECREATION AREA
(CABBAGE TREE PARK)
- COMMERCIAL SPACE
- EXISTING FIRE TRAIL (APPROX. POSITION)
- ZONE BOUNDARY



DO NOT SCALE DRAWING A1

Amendments

Client	ASPEN GROUP LIMITED	2006172-1-18-SB1.DWG
Job	FERN BAY SEASIDE VILLAGE NELSON BAY ROAD FERN BAY	Date Of Survey N/A
This Drawing	PROJECT PLAN - SITE & STAGING	Surveyed Date 10/02/09
		Design - Scale 1:3000
		Drawn KL Datum
		Checked AED Source SSM
		Surveyors Ref. Sheet No. 1
		Of 18 Sheets
THIS DRAWING FORMS PART OF A REPORT DATED N/A		2006172

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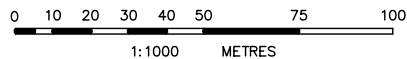


Fagan Mather Duggan Pty Ltd.
**Consultants in Surveying,
 Planning & Engineering**
 3/29 Shearwater Drive Taylors Beach
 Phone (02) 49190166 Fax (02) 49190294
 A.C.N. 003 887 563 A.B.N. 38 003 887 563



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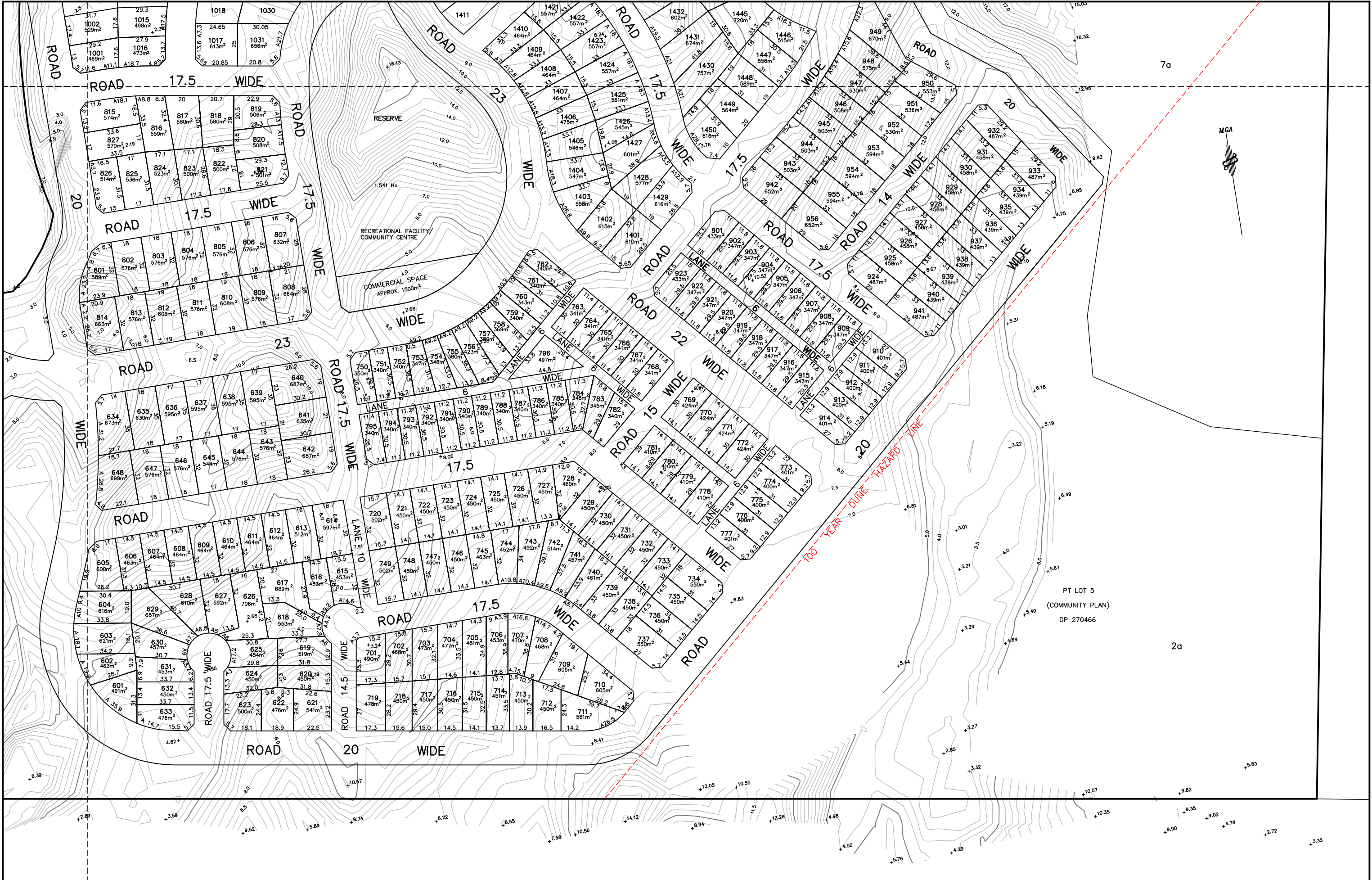
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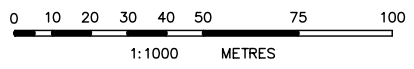
3/29 Shearwater Drive Taylors Beach
Phone (02) 49190166 Fax (02) 49190294
A.C.N. 003 887 563 A.B.N. 38 003 887 563

Amendments		DO NOT SCALE DRAWING A1	
Client	ASPEN GROUP LIMITED	CAD.DWG	2006172-3-18-SB3
Job	FERN BAY SEASIDE VILLAGE NELSON BAY ROAD FERN BAY	Date Of Survey	N/A
This Drawing	PROJECT PLAN - DETAIL PLAN No.2	Surveyed	Date 10/02/09
		Design	AED Scale 1:1000
		Drawn	DFD/VW Datum
		Checked	AED Source SSM RL
THIS DRAWING FORMS PART OF A REPORT DATED N/A		Surveyors Ref.	Sheet No. 3
		2006172	Of 18 Sheets



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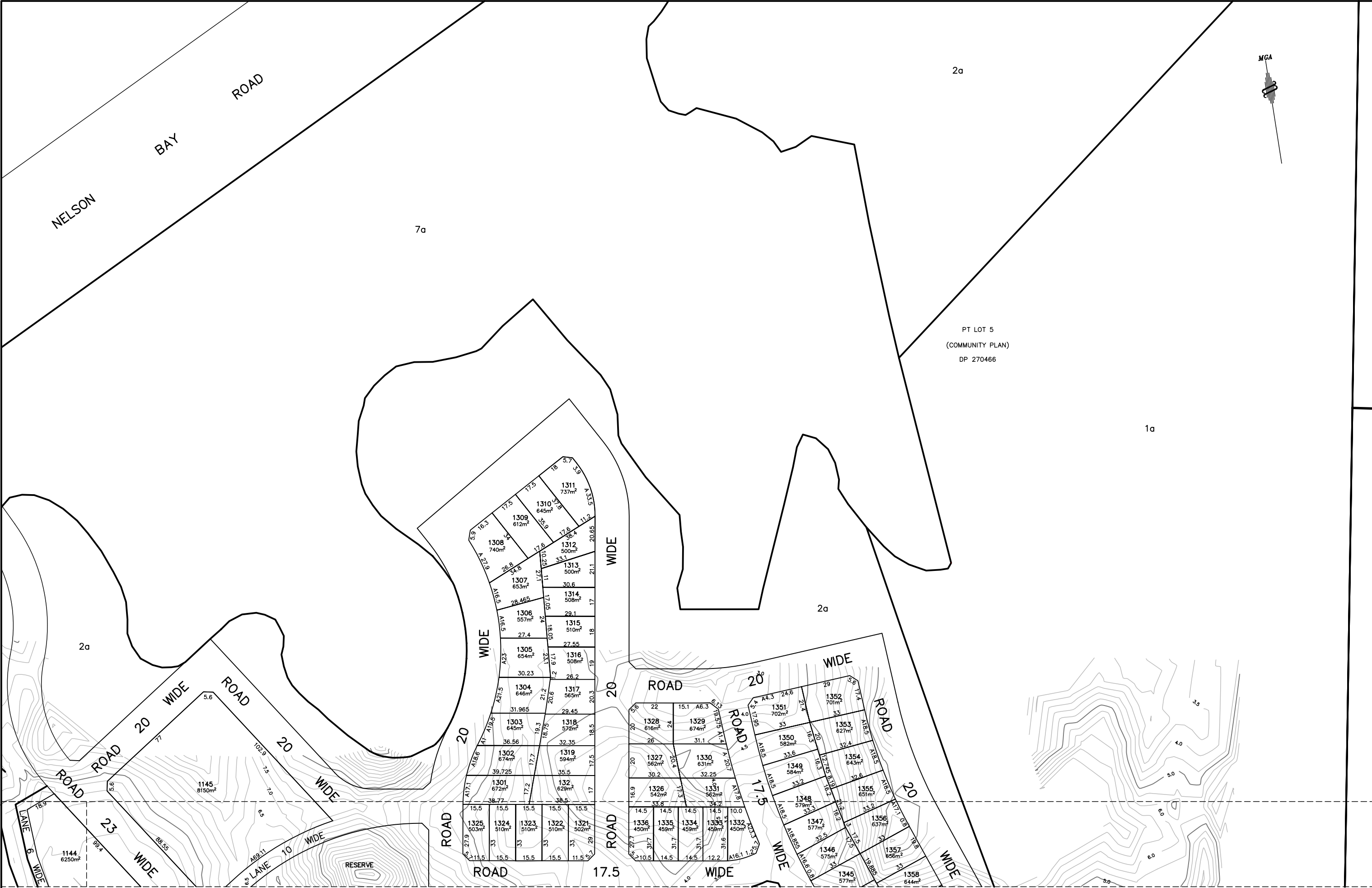
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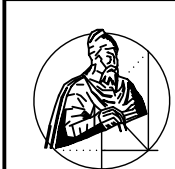
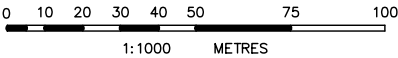
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Client	ASPEN GROUP LIMITED	CAD.DWG 2006172-4-18-SB4	
Job	FERN BAY SEASIDE VILLAGE NELSON BAY ROAD FERN BAY	Date Of Survey	N/A
		Surveyed	Date 10/02/09
This Drawing	PROJECT PLAN – DETAIL PLAN No.3	Design AED	Scale 1:1000
		Drawn DFD/VW	Datum
		Checked AED	Source ^{SSM} _{RL}
THIS DRAWING FORMS PART OF A REPORT DATED N/A		Surveyors Ref.	Sheet No. 4
		2006172 Of 18 Sheets	





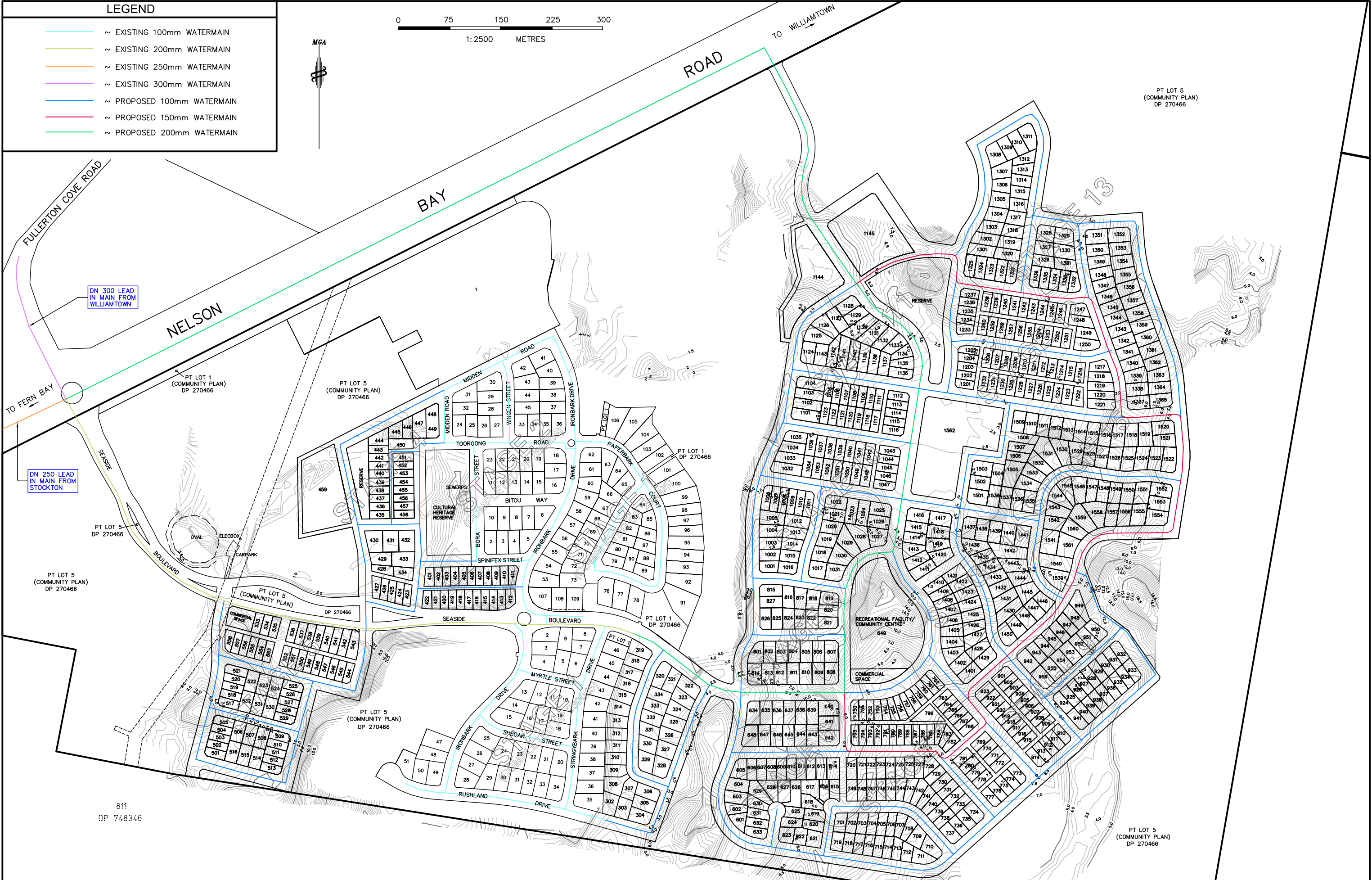
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Amendments				DO NOT SCALE DRAWING	
Client		ASPEN GROUP LIMITED		CAD.DWG 2006172-6-18-SB6	
Job		FERN BAY SEASIDE VILLAGE NELSON BAY ROAD FERN BAY		Date Of Survey N/A	
This Drawing		PROJECT PLAN - DETAIL PLAN No.5		Surveyed	Date 10/02/09
				Design AED	Scale 1:1000
				Drawn DFD	Datum
				Checked AED	Source SSM
				Surveyors Ref.	Sheet No. 6
				THIS DRAWING FORMS PART OF A REPORT DATED N/A	2006172 Of 18 Sheets



LEGEND

~ EXISTING 100mm WATERMAIN

~ EXISTING 200mm WATERMAIN

~ EXISTING 250mm WATERMAIN

~ EXISTING 300mm WATERMAIN

~ PROPOSED 100mm WATERMAIN

~ PROPOSED 150mm WATERMAIN

~ PROPOSED 200mm WATERMAIN

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Amendments

Client

Job

This Drawing

THIS DRAWING FORMS PART OF A REPORT DATED

ASPEN GROUP LIMITED

FERN BAY SEASIDE VILLAGE
NELSON BAY ROAD FERN BAY

INDICATIVE WATERMAIN LAYOUT

N/A

CAD.DWG 2006172-8-18-SW2

Date Of Survey

Surveyed

Design

Drawn

Checked

Surveyors Ref.

N/A

N/A

10/02/09

Scale 1:2500

Datum

SSM

RL

Sheet No. 8

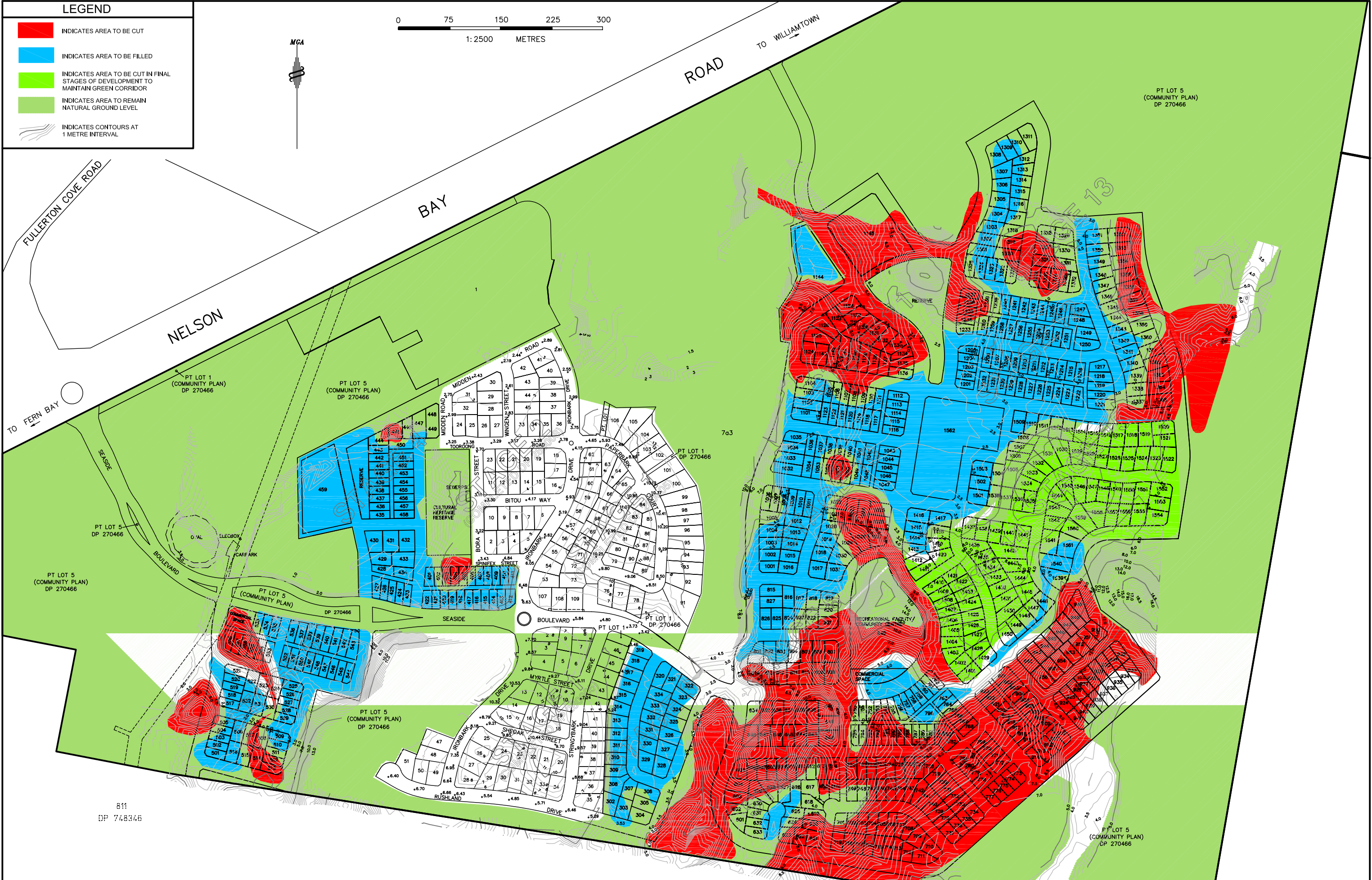
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2006172

DO NOT SCALE DRAWING A1

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Client		ASPEN GROUP LIMITED		CAD.DWG 2006172-9-18-CF1	
Job		FERN BAY SEASIDE VILLAGE NELSON BAY ROAD FERN BAY		Date Of Survey N/A	
This Drawing		INDICATIVE EARTHWORKS-CUT/FILL PLAN		Surveyed Date 10/02/09	
THIS DRAWING FORMS PART OF A REPORT DATED		N/A		Design AED Scale 1:2500	
				Drawn KL Datum	
				Checked AED Source SSM	
				Surveyors Ref. Sheet No. 9	
				2006172 Of 18 Sheets	

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LEGEND

- CATCHMENT DRAINING TO DETENTION AREA 1
- CATCHMENT DRAINING TO DETENTION AREA 2
- CATCHMENT DRAINING TO DETENTION BASIN 3
- CATCHMENT DRAINING TO DETENTION AREA 4
- CATCHMENT DRAINING TO DETENTION BASIN 5
- CATCHMENT DRAINING TO DETENTION BASIN 6
- AREAS OF THE SITE BELOW RL 1.8m (APPROXIMATE ONLY)
- BIOSWALE FLOW DIRECTION

AREAS A-P REFER TO SECTION 6 (FIGURES 13 & 14) OF THE DOCUMENT "WATER CYCLE MANAGEMENT THE PROPOSED URBAN DEVELOPMENT AT FERN BAY" DATED MAY 2007 PREPARED BY URBAN WATER CYCLE SOLUTIONS

NOTE: RL 1.8m IS THE 100 YEAR ARI FLOOD LEVEL FOR THE HUNTER RIVER ACCORDING TO THE LOWER HUNTER FLOOD STUDY BY LAWSON & TRELOAR

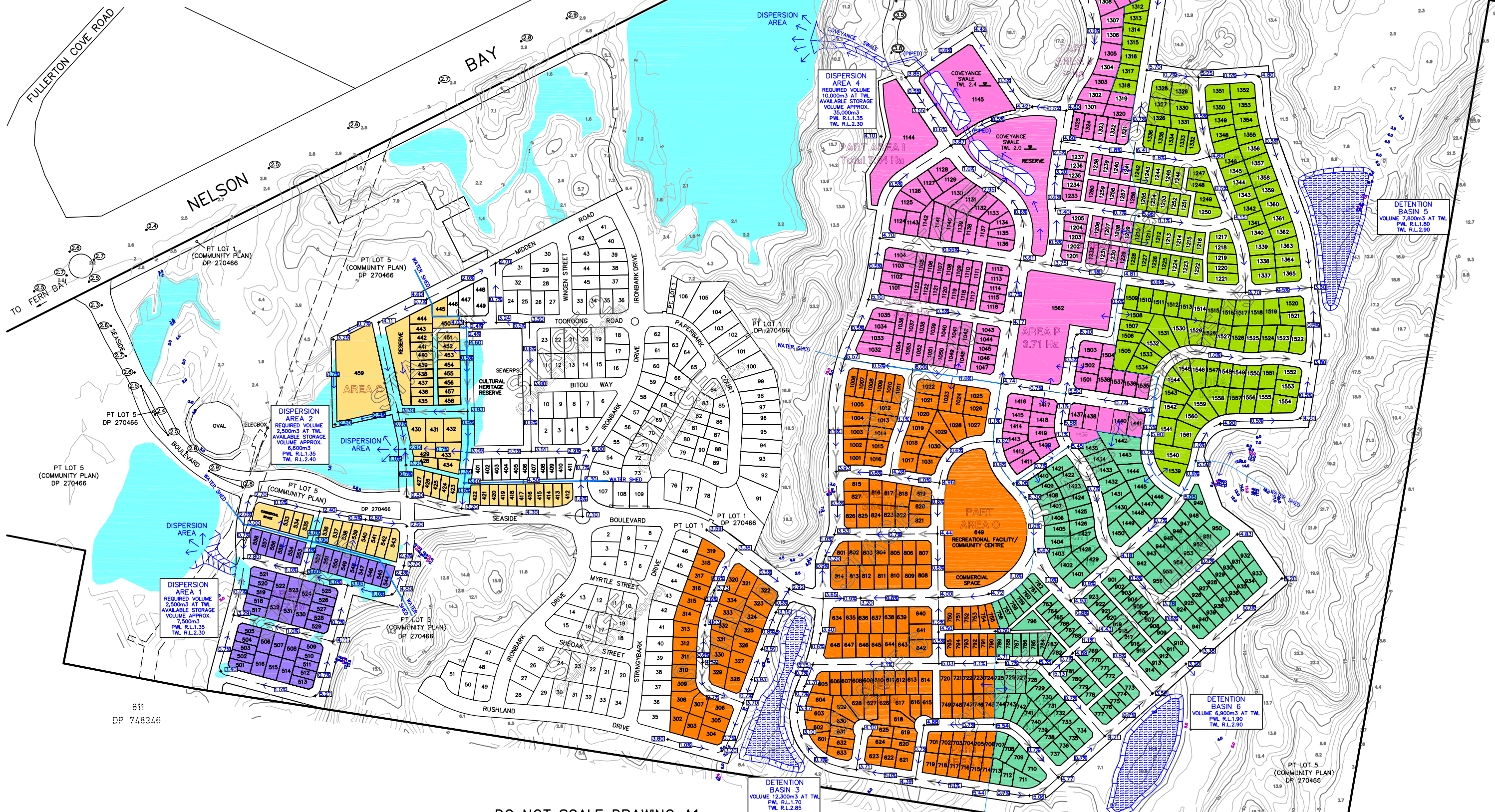
2.7 ~ DENOTES EXISTING ROAD SURFACE LEVEL

2.6 ~ DENOTES EXISTING EXIT ROAD LEVEL (GRAVEL TRACK)

4.10 ~ DENOTES DESIGN ROAD SURFACE LEVEL

0 75 150 225 300

1:2500 METRES (A1 SIZE)



Amendments

DO NOT SCALE DRAWING A1



DMS Survey

Design • Management • Surveying

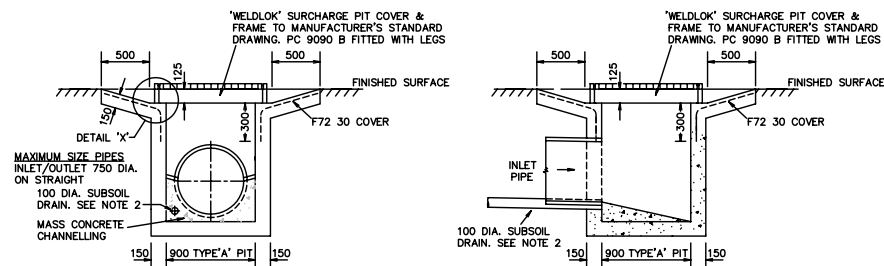
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Client	ASPEN GROUP LIMITED	CAD.DWG 2006172-10-18-WC1
Job	FERN BAY SEASIDE VILLAGE NELSON BAY ROAD FERN BAY	Date Of Survey N/A
This Drawing	TRUNK DRAINAGE CONCEPTUAL PLAN	Surveyed Date 10/02/09
THIS DRAWING FORMS PART OF A REPORT DATED N/A		Design PM Scale 1:2500
		Drawn TS Datum
		Checked PM Source SSM
		Surveyors Ref. Sheet No. 10
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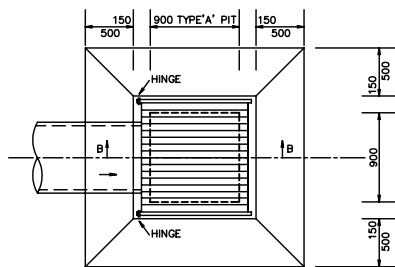
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SURCHARGE PIT – RM11(TYPE A)

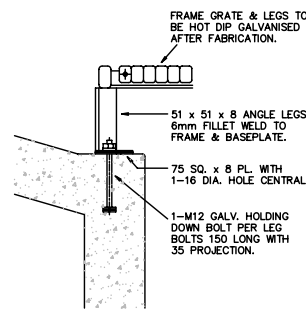


SECTION A-A
NOT TO SCALE

SECTION B-B
NOT TO SCALE



PLAN
NOT TO SCALE

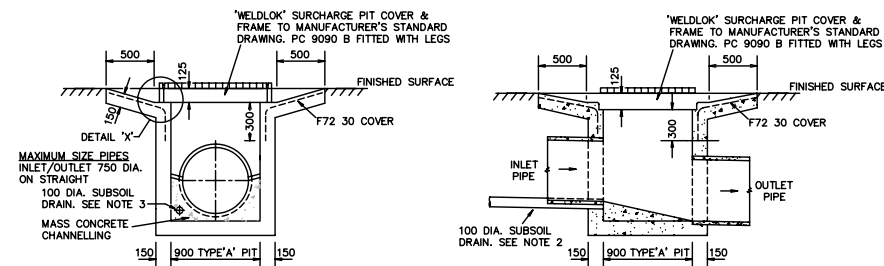


DETAIL 'X'
NOT TO SCALE

NOTES

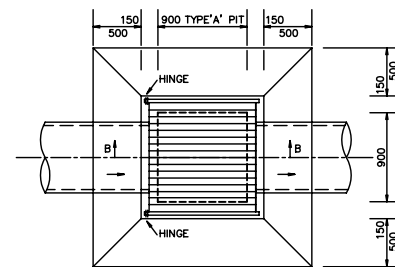
1. COMPRESSIVE STRENGTH OF CONCRETE F_c AT 28 DAYS TO BE 20 MPa.
2. 100 DIA. SUBSOIL DRAINAGE 3000 LONG WRAPPED IN FABRIC COSK TO BE PROVIDED IN PIPE TRENCHES ADJACENT TO INLET PIPES.
3. PROVIDE CLIMB IRONS TO R.M.3 WHERE PIT IS DEEPER THAN 1200.

SURFACE INLET PIT – RM11(TYPE A)

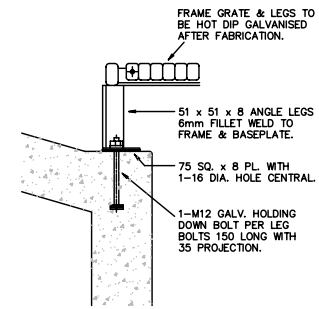


SECTION A-A
NOT TO SCALE

SECTION B-B
NOT TO SCALE



PLAN
NOT TO SCALE



DETAIL 'X'
NOT TO SCALE

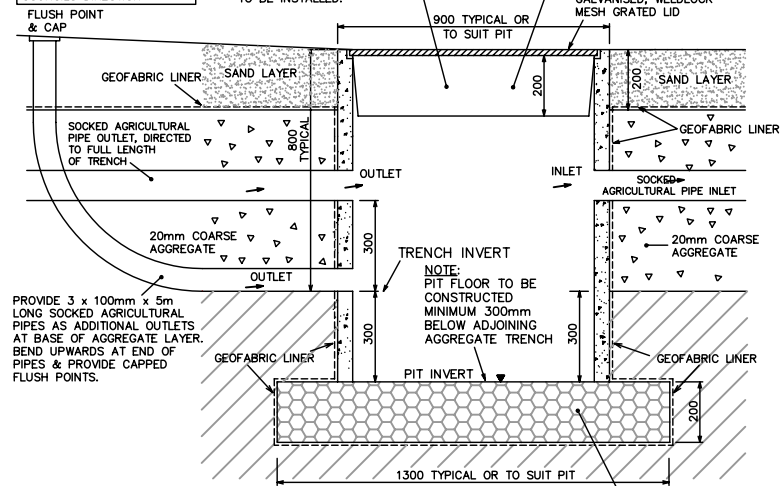
NOT TO SCALE
DENOTED [P]

NOTES

1. COMPRESSIVE STRENGTH OF CONCRETE F_c AT 28 DAYS TO BE 20 MPa.
2. TOP OF BENCHING TO BE 1/2 OF OUTLET PIPE DIAMETER.
3. 100 DIA. SUBSOIL DRAINAGE 3000 LONG WRAPPED IN FABRIC COSK TO BE PROVIDED IN PIPE TRENCHES ADJACENT TO INLET PIPES.
4. PROVIDE CLIMB IRONS TO R.M.3 WHERE PIT IS DEEPER THAN 1200.

NOTE:

"PERMA PAVE" FILTRATION GRATE MAY BE INSTALLED IN LEIU OF WELDMESH GRATE AND TRASH BASKET AT COUNCIL'S DIRECTION

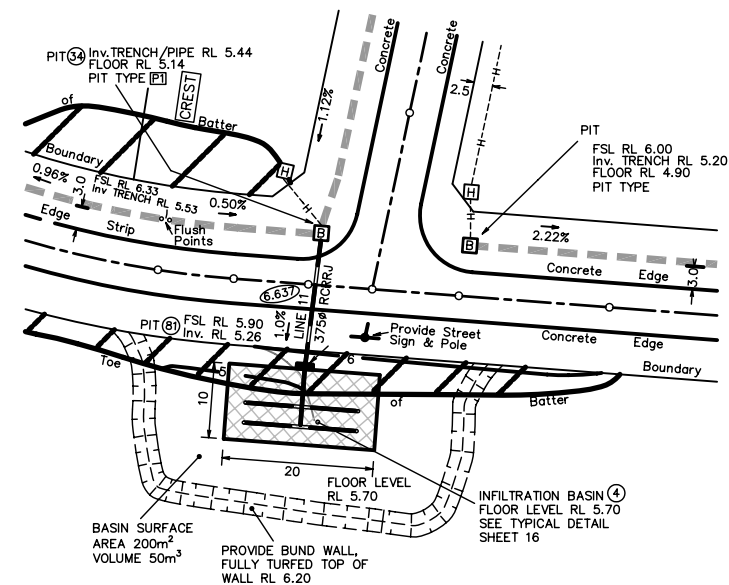


NOTE:

NOMINAL PIT SIZE 900x900x800 DEEP UNLESS OTHERWISE INDICATED.
PIT TYPE [P1] SIZE 1100x1100x800 DEEP (CAPACITY 1.0m³)
PIT TYPE [P2] SIZE 1600x1600x800 DEEP (CAPACITY 2.0m³)

BIO RETENTION SURFACE INLET PIT

NOT TO SCALE



TYPICAL INFILTRATION BASIN

NOT TO SCALE

Amendments

DO NOT SCALE DRAWING A1

Client	ASPEN GROUP LIMITED	CAD.DWG 2006172-11-18-WC2
Job	FERN BAY SEASIDE VILLAGE NELSON BAY ROAD FERN BAY	Date Of Survey N/A
This Drawing	TRUNK DRAINAGE CONCEPTUAL PLAN DETAIL DRAWINGS	Surveyed Date 10/02/09
THIS DRAWING FORMS PART OF A REPORT DATED N/A		Design AED Scale 1:2500
		Drawn KL Datum
		Checked AED Source SSM
		Surveyors Ref. Sheet No. 11
		2006172 Of 18 Sheets

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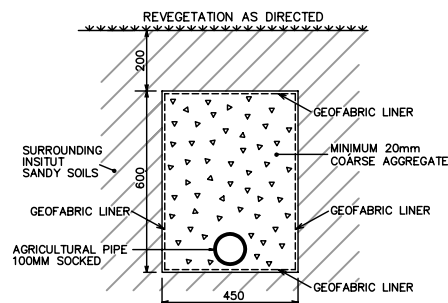
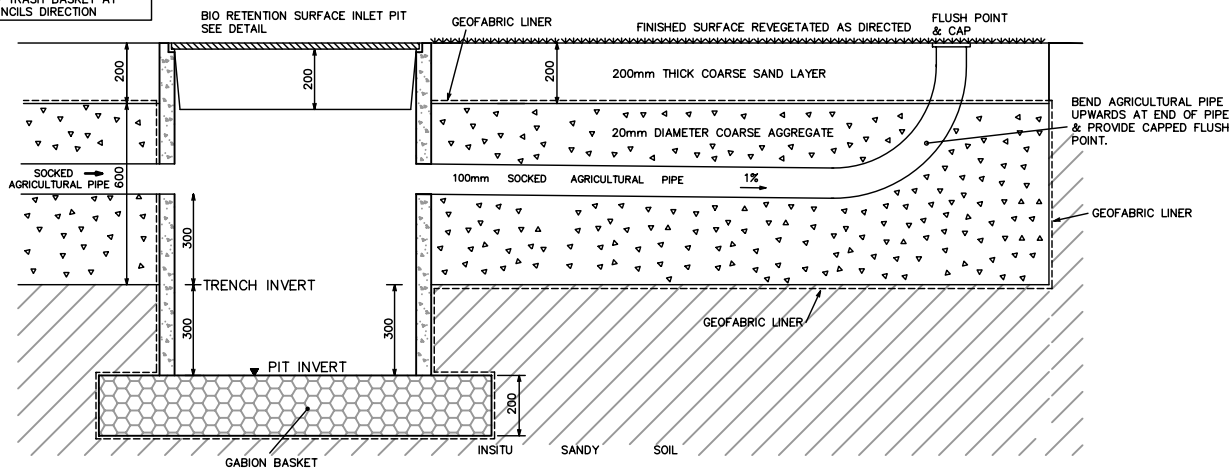


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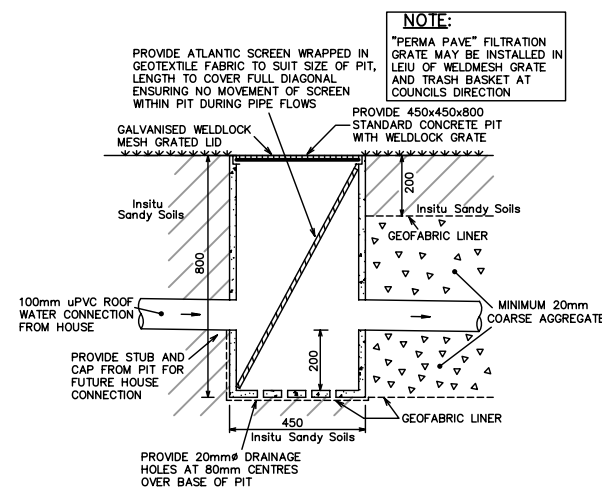
3/29 Shearwater Drive Taylors Beach
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NOTE:

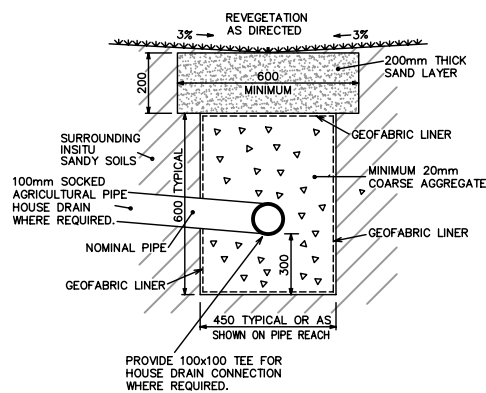
"PERMA PAVE" FILTRATION GRATE MAY BE INSTALLED IN LEIU OF WELDMESH GRATE AND TRASH BASKET AT COUNCIL'S DIRECTION



BIO RETENTION TRENCH HOUSE DRAINS DETAIL
NOT TO SCALE

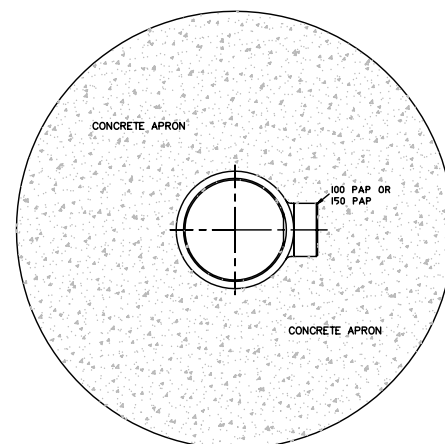


HOUSE DRAINAGE PIT DETAIL
NOT TO SCALE

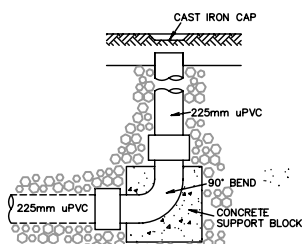


BIO RETENTION SWALE AND TRENCH
NOT TO SCALE

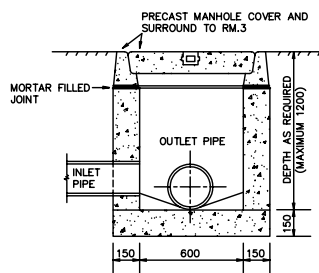
- NOTES:**
1. PITS CONSTRUCTED IN CRESTS TO BE USED FOR FLUSHING 100mm SOCKED AGRICULTURAL PIPE, 100mm AGRICULTURAL PIPE TO BE CLEARLY ACCESSIBLE.
 2. OUTLET OF BIO RETENTION SURFACE PITS TO BE ABLE TO TAKE 100mm SOCKED AGRICULTURAL PIPE OUTLET OR 375mm RCRJ CONCRETE PIPE.
 3. DRAINAGE INSTALLATION AS DIRECTED AND SPECIFICATION TO BE WITH 'STORMWATER MANAGEMENT AT THE PROPOSED STOCKTON BEACH DEVELOPMENT STAGE 2' BY URBAN WATER CYCLE SOLUTIONS, JANUARY, 2005.



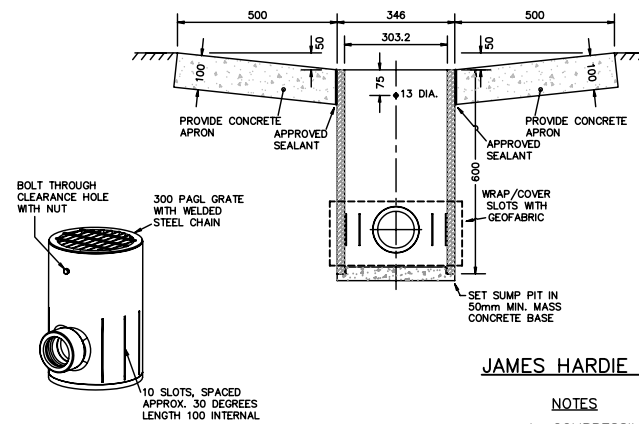
TYPICAL ARRANGEMENT
300mm FRC SUMP PIT BIORETENTION SWALE AND STORMWATER DRAINAGE LINE
NOT TO SCALE



TYPICAL SLOTTED PIPE & FLUSHING POINT
N.T.S.



JUNCTION PIT RM8
NOT TO SCALE



JAMES HARDIE SLOTTED FRC SUMP PIT
NOT TO SCALE

- NOTES**
1. COMPRESSIVE STRENGTH OF CONCRETE Fc AT 28 DAYS TO BE 20 MPa.

Amendments

DO NOT SCALE DRAWING A1

Client	ASPEN GROUP LIMITED	CAD.DWG 2006172-12-18-WC3
Date Of Survey	N/A	
Job	FERN BAY SEASIDE VILLAGE NELSON BAY ROAD FERN BAY	Surveyed Date 10/02/09
		Design AED Scale 1:2500
This Drawing	TRUNK DRAINAGE CONCEPTUAL PLAN DETAIL DRAWINGS	Drawn KL Datum
		Checked AED Source SSM
Surveyors Ref.		Sheet No. 12
THIS DRAWING FORMS PART OF A REPORT DATED	N/A	2006172 Of 18 Sheets

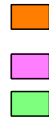


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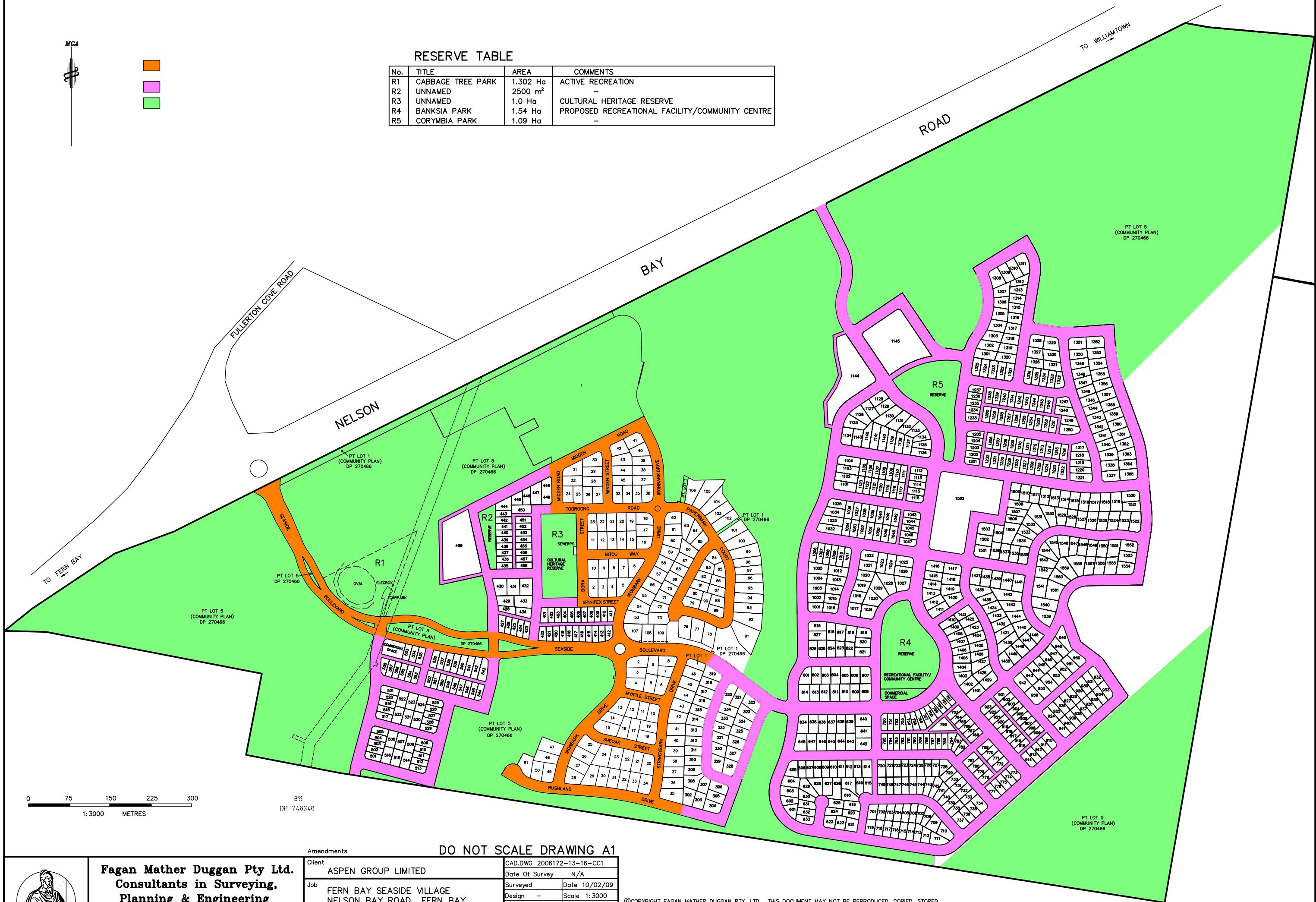
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MCA



RESERVE TABLE

No.	TITLE	AREA	COMMENTS
R1	CABBAGE TREE PARK	1.302 Ha	ACTIVE RECREATION
R2	UNNAMED	2500 m ²	—
R3	UNNAMED	1.0 Ha	CULTURAL HERITAGE RESERVE
R4	BANKSIA PARK	1.54 Ha	PROPOSED RECREATIONAL FACILITY/COMMUNITY CENTRE
R5	CORYMBIA PARK	1.09 Ha	—



0 75 150 225 300
1:3000 METRES

811
DP 748346

Amendments

DO NOT SCALE DRAWING A1

Client	ASPEN GROUP LIMITED	CAD.DWG 2006172-13-16-CC1
Job	FERN BAY SEASIDE VILLAGE NELSON BAY ROAD FERN BAY	Date Of Survey N/A
This Drawing	COUNCIL/COMMUNITY LAND	Surveyed Date 10/02/09
THIS DRAWING FORMS PART OF A REPORT DATED N/A	2006172	Design — Scale 1:3000
		Drawn KL Datum
		Checked AED Source SSM
		Surveyors Ref. Sheet No. 13
		Of 16 Sheets

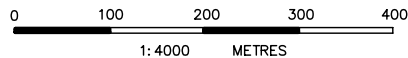
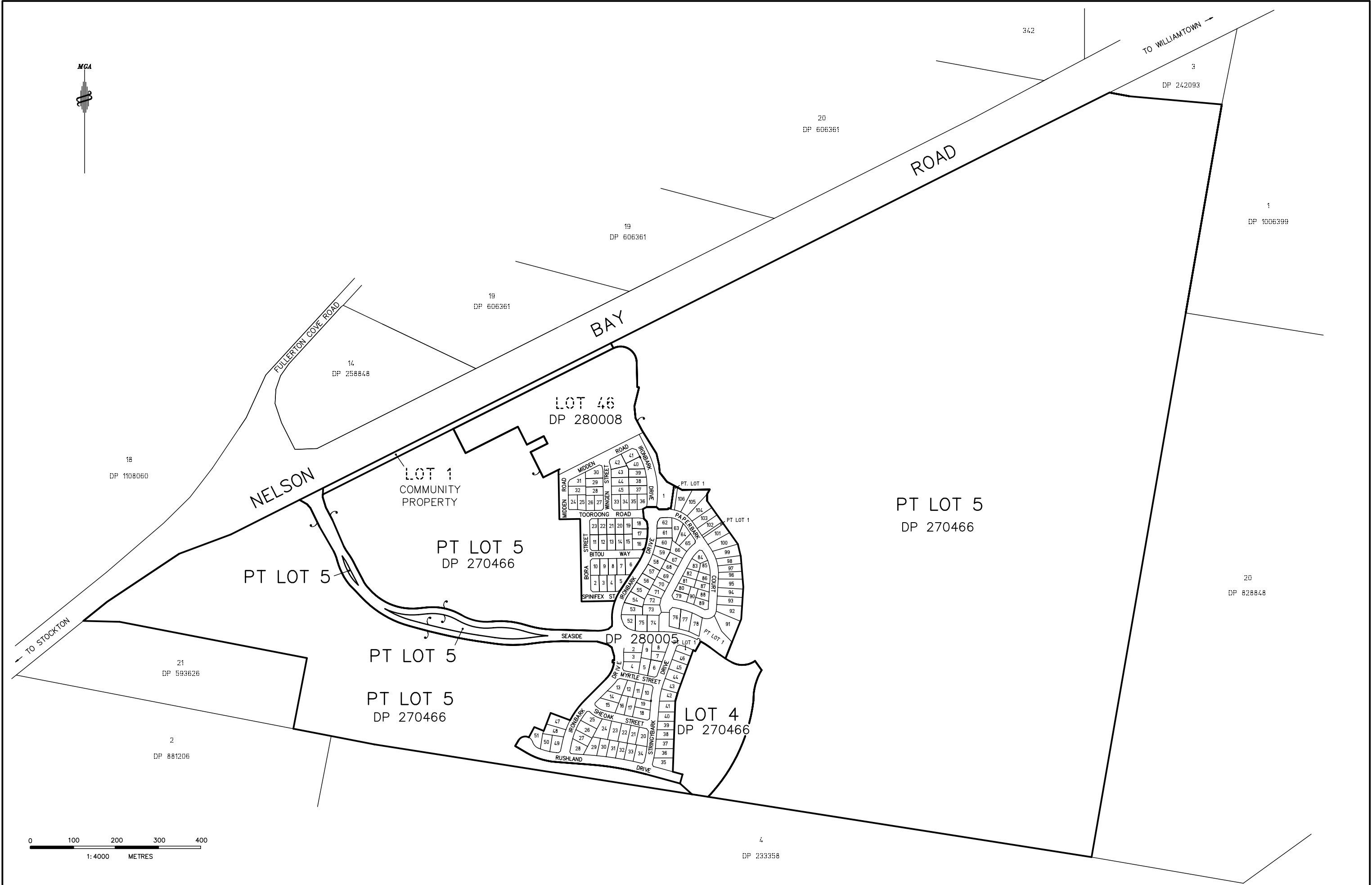
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Amendments		DO NOT SCALE DRAWING A1	
Client	ASPEN GROUP LIMITED	CAD.DWG 2006172-14-16-AT1	
		Date Of Survey	N/A
Job	FERN BAY SEASIDE VILLAGE NELSON BAY ROAD FERN BAY	Surveyed	Date 10/02/09
		Design AED	Scale 1:4000
This Drawing	SUBJECT & ADJOINING TITLE DETAILS	Drawn KL	Datum
		Checked AED	Source
THIS DRAWING FORMS PART OF A REPORT DATED N/A		Surveyors Ref.	Sheet No. 14
		2006172 Of 16 Sheets	

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MGA

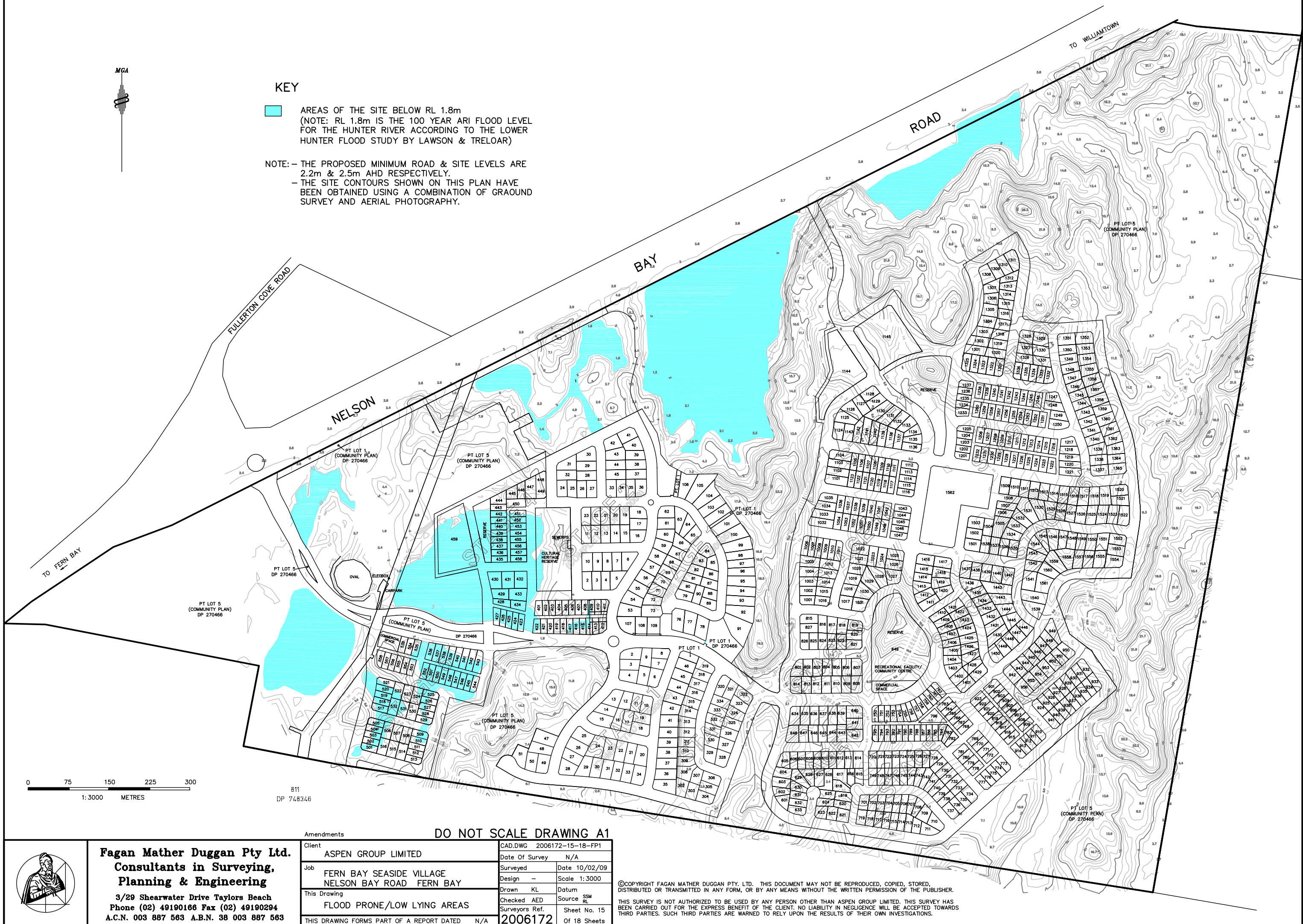


KEY



AREAS OF THE SITE BELOW RL 1.8m
(NOTE: RL 1.8m IS THE 100 YEAR ARI FLOOD LEVEL
FOR THE HUNTER RIVER ACCORDING TO THE LOWER
HUNTER FLOOD STUDY BY LAWSON & TRELOAR)

NOTE:— THE PROPOSED MINIMUM ROAD & SITE LEVELS ARE
2.2m & 2.5m AHD RESPECTIVELY.
— THE SITE CONTOURS SHOWN ON THIS PLAN HAVE
BEEN OBTAINED USING A COMBINATION OF GRAOUND
SURVEY AND AERIAL PHOTOGRAPHY.



Amendments

DO NOT SCALE DRAWING A1

Client	ASPEN GROUP LIMITED	CAD.DWG	2006172-15-18-FP1
Job	FERN BAY SEASIDE VILLAGE NELSON BAY ROAD FERN BAY	Date Of Survey	N/A
This Drawing	FLOOD PRONE/LOW LYING AREAS	Surveyed	Date 10/02/09
		Design	Scale 1:3000
		Drawn	KL
		Checked	AED
		Surveyors Ref.	Sheet No. 15
			Of 18 Sheets
			2006172

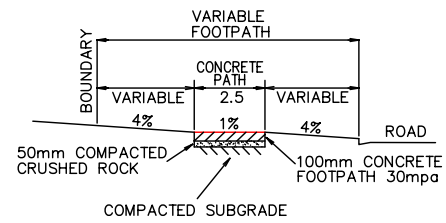
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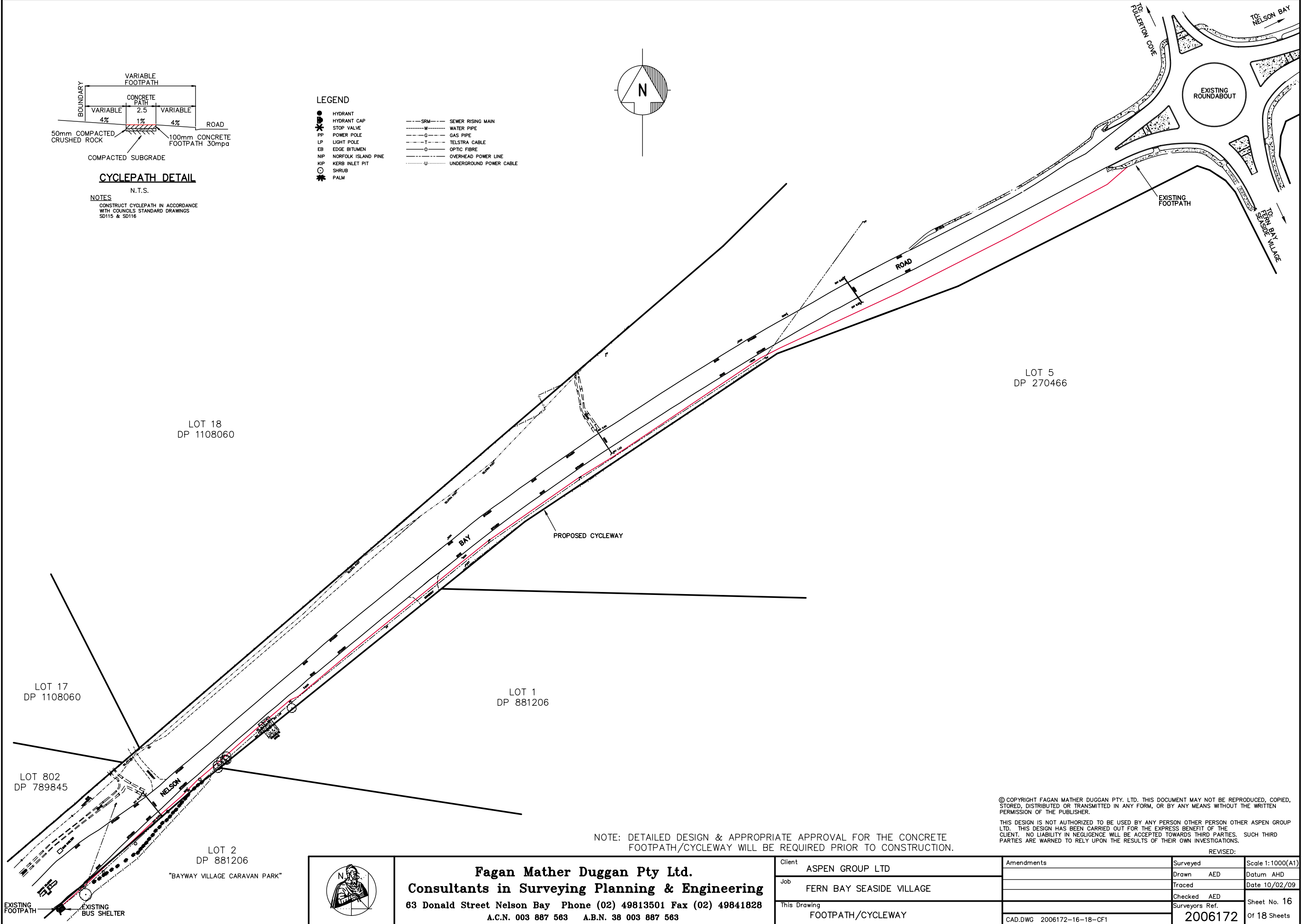
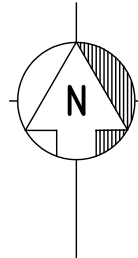
CYCLEPATH DETAIL

N.T.S.

NOTES
CONSTRUCT CYCLEPATH IN ACCORDANCE
WITH COUNCILS STANDARD DRAWINGS
SD115 & SD116

LEGEND

- | | | | | |
|-----|---------------------|-----|-----|-------------------------|
| ● | HYDRANT | --- | SRM | SEWER RISING MAIN |
| ○ | HYDRANT CAP | --- | W | WATER PIPE |
| ✱ | STOP VALVE | --- | G | GAS PIPE |
| PP | POWER POLE | --- | T | TELSTRA CABLE |
| LP | LIGHT POLE | --- | O | OPTIC FIBRE |
| EB | EDGE BITUMEN | --- | --- | OVERHEAD POWER LINE |
| NIP | NORFOLK ISLAND PINE | --- | U | UNDERGROUND POWER CABLE |
| KIP | KERB INLET PIT | | | |
| ○ | SHRUB | | | |
| ✱ | PALM | | | |



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NOTE: DETAILED DESIGN & APPROPRIATE APPROVAL FOR THE CONCRETE FOOTPATH/CYCLEWAY WILL BE REQUIRED PRIOR TO CONSTRUCTION.

REVISED:

Client	ASPEN GROUP LTD	Amendments	Surveyed	Scale 1:1000(A1)
Job	FERN BAY SEASIDE VILLAGE		Drawn AED	Datum AHD
This Drawing	FOOTPATH/CYCLEWAY		Traced	Date 10/02/09
			Checked AED	Sheet No. 16
			Surveyors Ref.	Of 18 Sheets
		CAD.DWG 2006172-16-18-CF1	2006172	

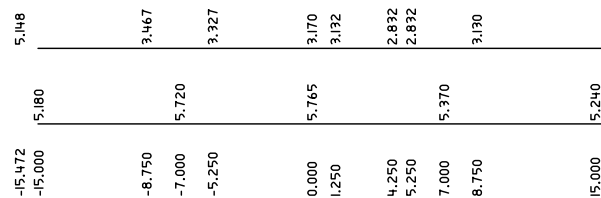
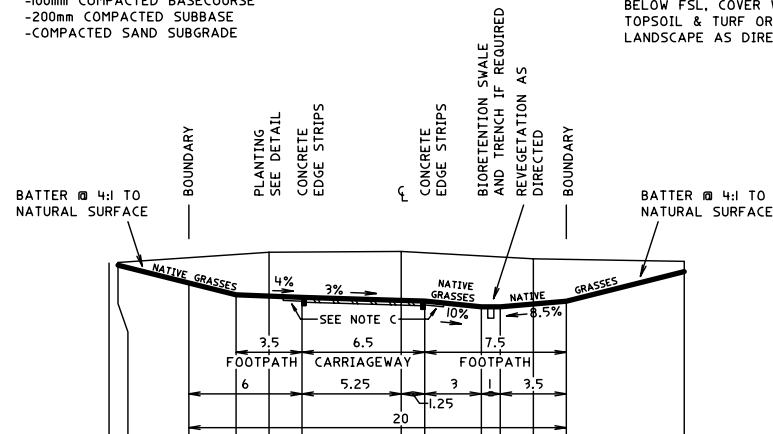


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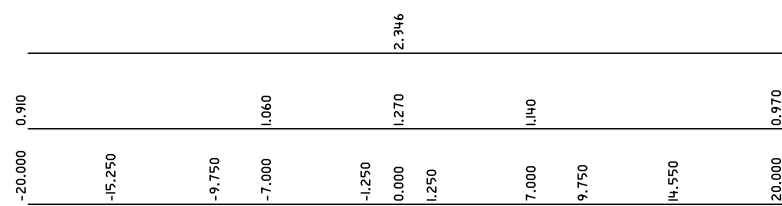
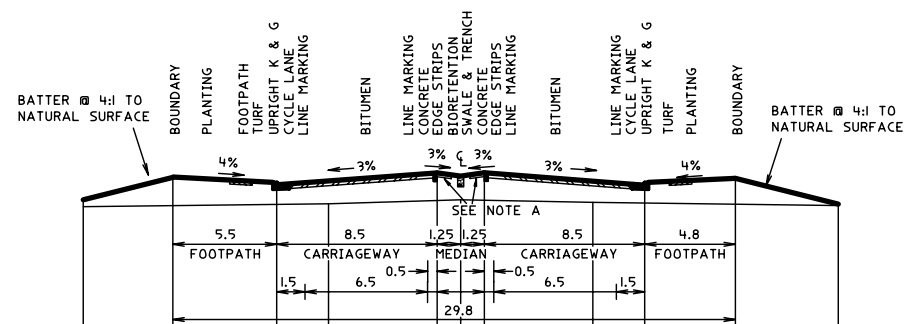
- * REFER TO GEOTECHNICAL REPORT FOR PAVEMENT DETAILS AND GEOTECHNICAL ADVICE.
- * SUBGRADE TO BE OF CLEAN SAND TO DEPTH OF 500mm. WHERE EXISTING MATERIAL IS CONSIDERED UNSUITABLE, REFER TO SUBGRADE PREPARATION ADVICE IN GEOTECHNICAL REPORT.
- * IF WET CLAY MATERIAL IS ENCOUNTERED IN SUBGRADE THEN SUBGRADE SUITABILITY IS TO BE ASSESSED BY CONSULTANT GEOTECHNICAL ENGINEERS.
- * IN AREAS OF GRADE OF GREATER THAN 10%, CONSULTANT GEOTECHNICAL ENGINEER IS TO ASSESS SUITABILITY OF MATERIAL AND VERIFY SUBBASE THICKNESS.

ROAD No.1
-PRIME 7mm COAT & 25mm AC RESIDENTIAL MIX
-100mm COMPACTED BASECOURSE
-200mm COMPACTED SUBBASE
-COMPACTED SAND SUBGRADE

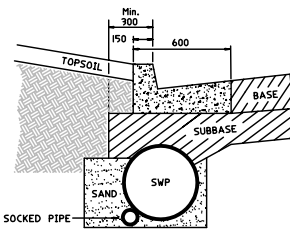
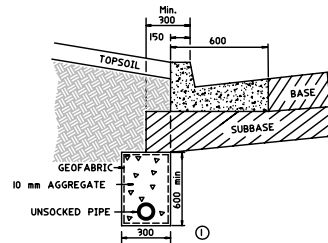
NOTE C
PROVIDE 1.0m WIDE
100mm THICK CRUSHER
DUST LAYER, AT 60mm
BELOW FSL, COVER WITH
TOPSOIL & TURF OR
LANDSCAPE AS DIRECTED



Chainage 87.290
Datum -4.000
TYPICAL CROSS SECTION - SINGLE CARRIAGEWAY



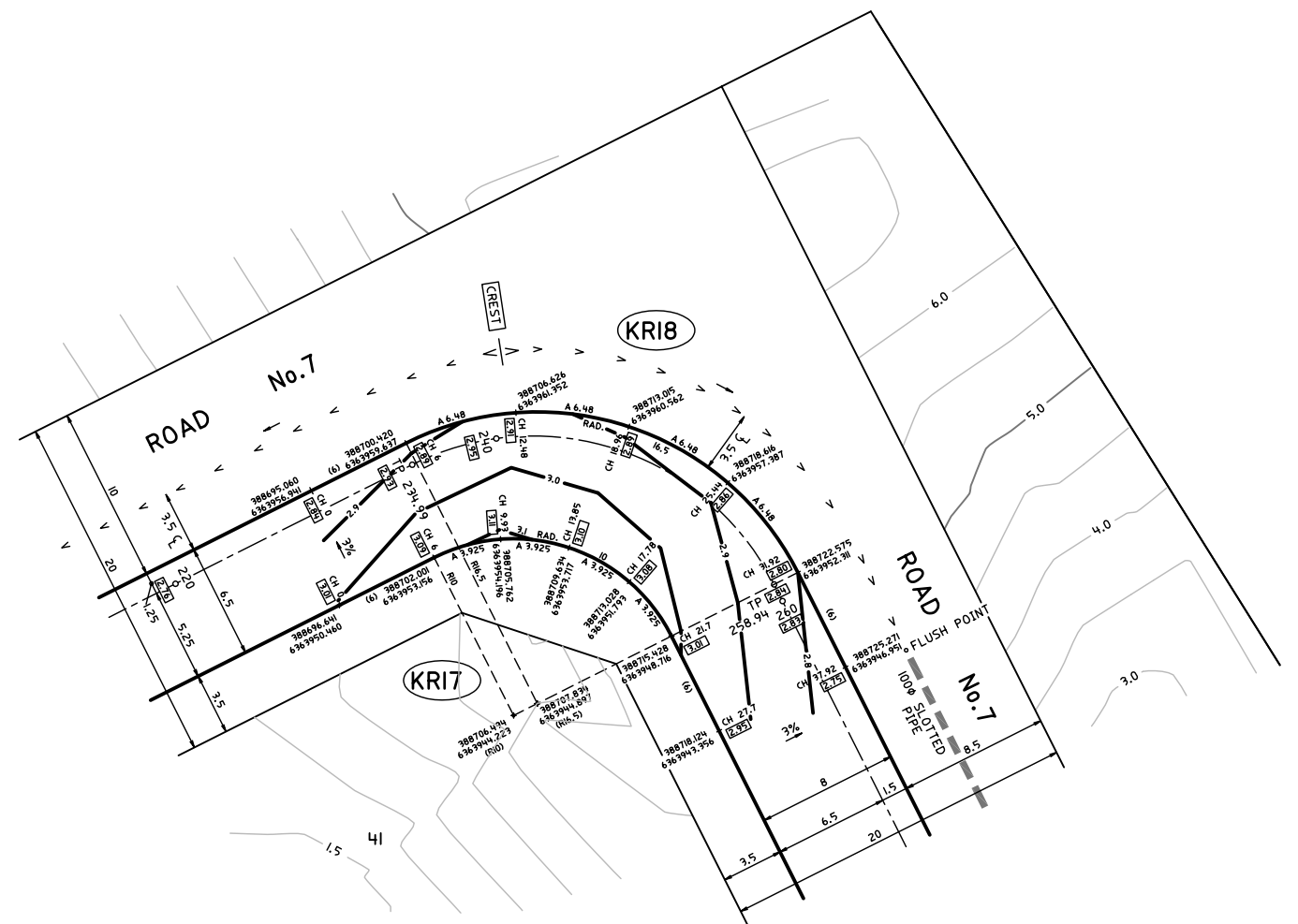
Chainage 60.000
Datum -5.000
TYPICAL CROSS SECTION - DUAL CARRIAGEWAY



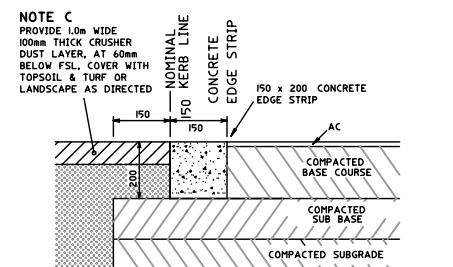
TYPICAL SUBSOIL
DRAINAGE DETAIL

NOTE:-GEOFABRIC IN ALL SUBSOIL DRAINS TO BE PLACED ON TOP AND BOTH SIDES AS DETAILED.

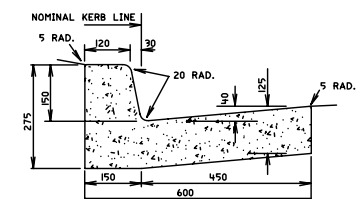
-SUBSOIL DRAINS TO BE CONSTRUCTED IN ACCORDANCE WITH PORT STEPHENS COUNCIL'S STANDARD DRAWING D4, SEE PORT STEPHENS COUNCIL'S SUBDIVISION CODE - PART 2.



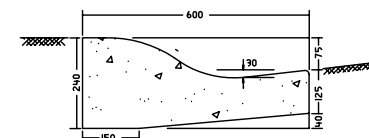
TYPICAL INTERSECTION DETAIL
SCALE 1:200



TYPICAL CONCRETE EDGE STRIP DETAIL
N.T.S.



TYPICAL 150mm KERB & GUTTER
N.T.S.



TYPICAL ROLL KERB & GUTTER
N.T.S.

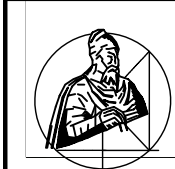
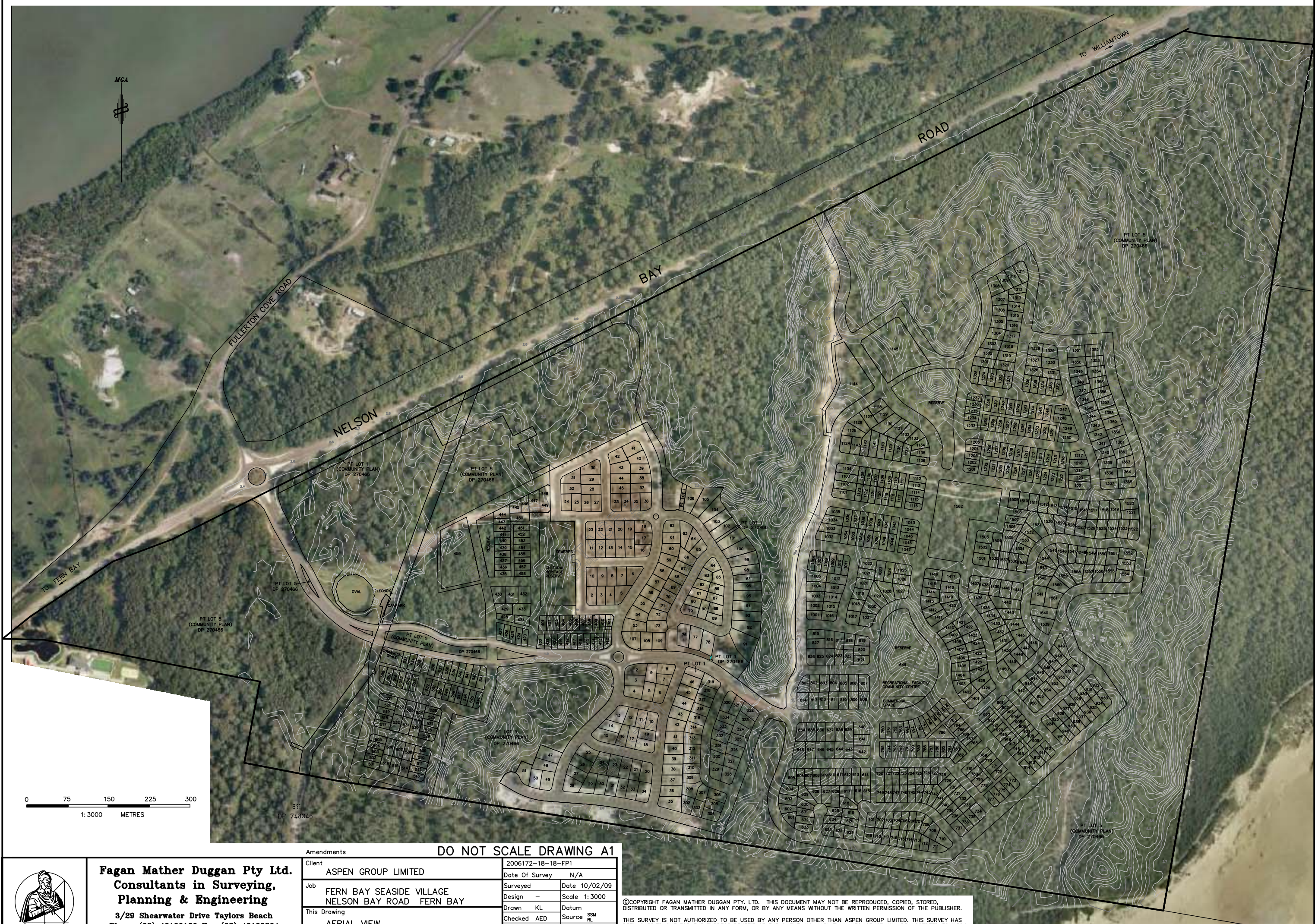


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Amendments		DO NOT SCALE DRAWING AI	
Client ASPEN GROUP LIMITED		CAD.DWG 2006172-17-18-RTI	
		Date Of Survey	N/A
Job FERN BAY SEASIDE VILLAGE NELSON BAY ROAD FERN BAY		Surveyed	Date 10/02/09
		Design AED	Scale N/A
This Drawing TYPICAL ROAD DETAILS		Drawn KL	Datum
		Checked AED	Source SSM RL
THIS DRAWING FORMS PART OF A REPORT DATED N/A		Surveyors Ref.	Sheet No. 17
		2006172	Of 18 Sheets

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Amendments		DO NOT SCALE DRAWING A1	
Client	ASPEN GROUP LIMITED	2006172-18-18-FP1	
Job	FERN BAY SEASIDE VILLAGE NELSON BAY ROAD FERN BAY	Date Of Survey	N/A
This Drawing	AERIAL VIEW	Surveyed	Date 10/02/09
THIS DRAWING FORMS PART OF A REPORT DATED N/A		Design	Scale 1:3000
		Drawn KL	Datum
		Checked AED	Source SSM RL
		Surveyors Ref.	Sheet No. 18 Of 18 Sheets
		2006172	

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