

# Cabra Developments Ltd Huapai Triangle Sub - Precinct B Asbuilt Plans Stage 1A & 3 Huapai

## As Built Plan Set

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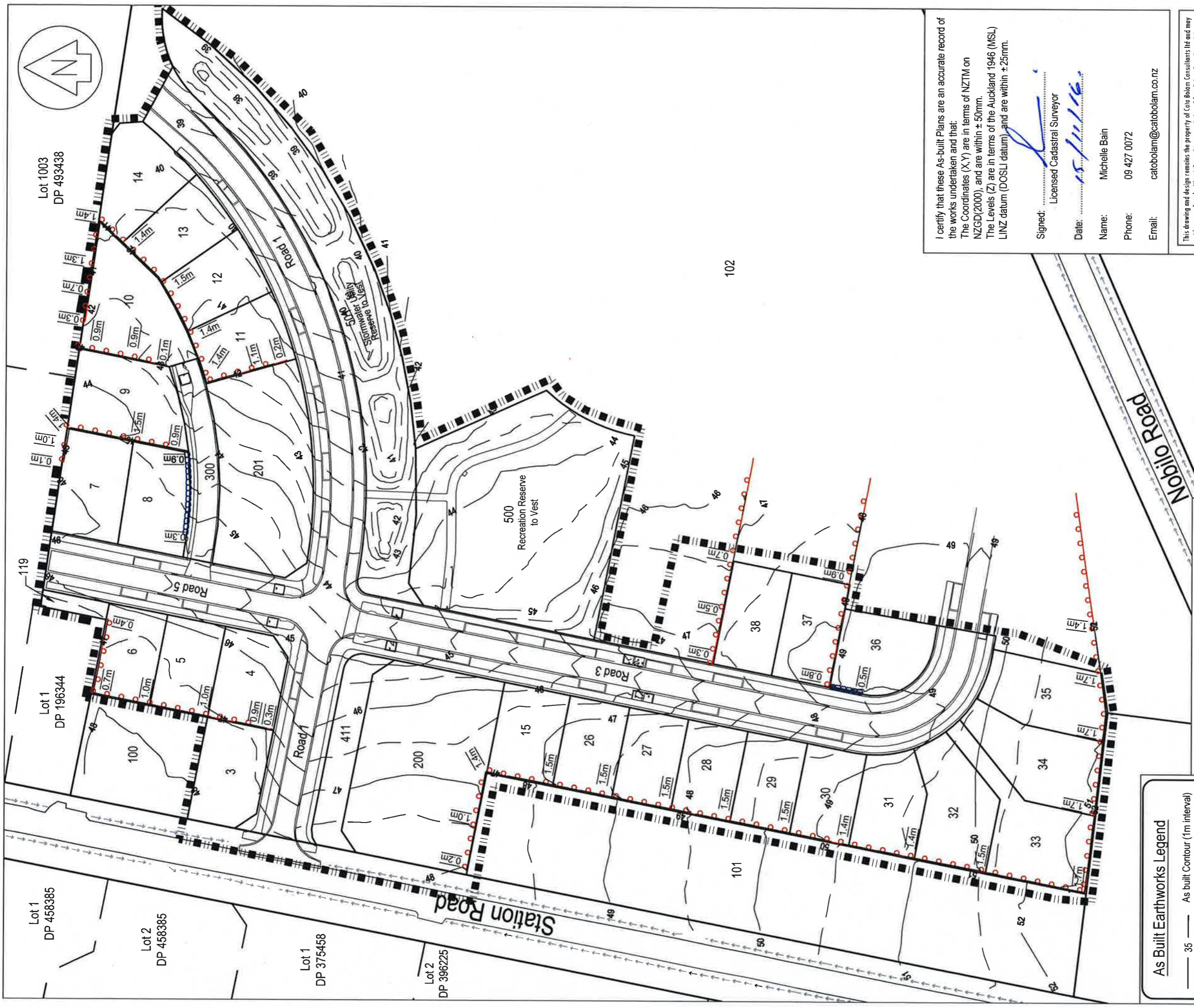
## LOCATION DIAGRAM

**CATO BOLAM CONSULTANTS**

SURVEYORS PLANNERS ENGINEERS

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19 Tamoriki Avenue  
PO Box 157  
Orewa 0946

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fax 09-426 7331  
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102

**As Built Earthworks Legend**

- 35 — As built Contour (1m interval)
- As built Contour (0.5m interval)
- As built Timber Pole Retaining Wall (Poles not shown to scale)
- Concrete Keystone Retaining Wall
- Retaining Wall Height
- 1.0m
- ■ ■ ■ ■ Extent of Stage 1A & 3 As Built works

**NOTES**

1. Contours are finished ground levels as surveyed
2. Contour interval of 0.5m
3. Levels are in terms of LINZ Datum 1946.
4. Retaining wall drain outlets to be connected at house construction stage.
5. All retaining walls over 1.0m high have a pool style fence above the wall.

REVISION (DESCRIPTIONS)	NAME	DATE
SURVEYED	BJ	09/2016
DESIGNED	KM	09/2014
DRAWN	BJ	11/2016
CHECKED	BM	11/2016
APPROVED	TM	11/2016

CLIENT

**Cabra Development Ltd**  
**Huapai Triangle Sub Precinct B**  
**Stage 1A & 3**  
**Huapai**

DRAWING TITLE

**Final Contour & Retaining Wall**  
**As Built Plan**  
**Sheet 1 of 3**

SLC 67086

**CATO BOLAM CONSULTANTS**

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ORIGINAL SCALE	ORIGINAL SIZE	REVISION NO
1:1000	A3	
DATE	CAD REFERENCE	SHEET NO
07/11/16	32522 E600	E600
DIRECTORY	Z:\32522\Acad	JOB NO
		32522

I certify that these As-built Plans are an accurate record of the works undertaken and that:  
 The Coordinates (X,Y) are in terms of NZTM on NZGD(2000), and are within ± 50mm.  
 The Levels (Z) are in terms of the Auckland 1946 (MSL) LINZ datum (DOSLI datum), and are within ± 25mm.

Signed: *[Signature]*  
 Licensed Cadastral Surveyor

Date: *[Signature]*

Name: Michelle Bain  
 Phone: 09 427 0072  
 Email: catobolam@catobolam.co.nz

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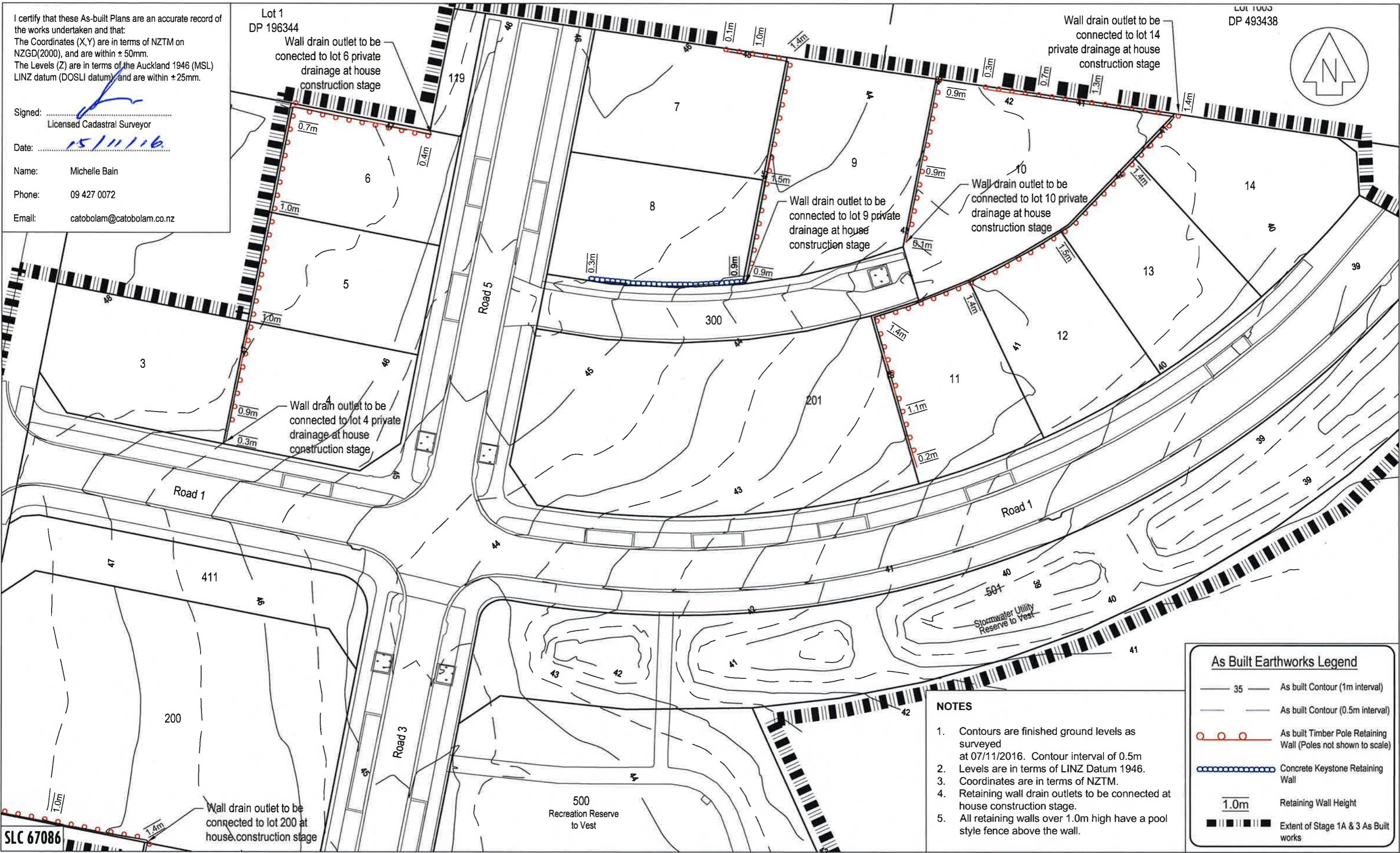
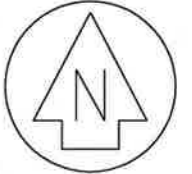
Date: 15/11/16

Name: Michelle Bain







Phone: 09 427 0072

Email: catobolam@catobolam.co.nz

LOT 1003  
 DP 493438



**As Built Earthworks Legend**

-  35 As built Contour (1m interval)
-  As built Contour (0.5m interval)
-  As built Timber Pole Retaining Wall (Poles not shown to scale)
-  Concrete Keystone Retaining Wall
-  1.0m Retaining Wall Height
-  Extent of Stage 1A & 3 As Built works

- NOTES**
- Contours are finished ground levels as surveyed at 07/11/2016. Contour interval of 0.5m
  - Levels are in terms of LINZ Datum 1946.
  - Coordinates are in terms of NZTM.
  - Retaining wall drain outlets to be connected at house construction stage.
  - All retaining walls over 1.0m high have a pool style fence above the wall.

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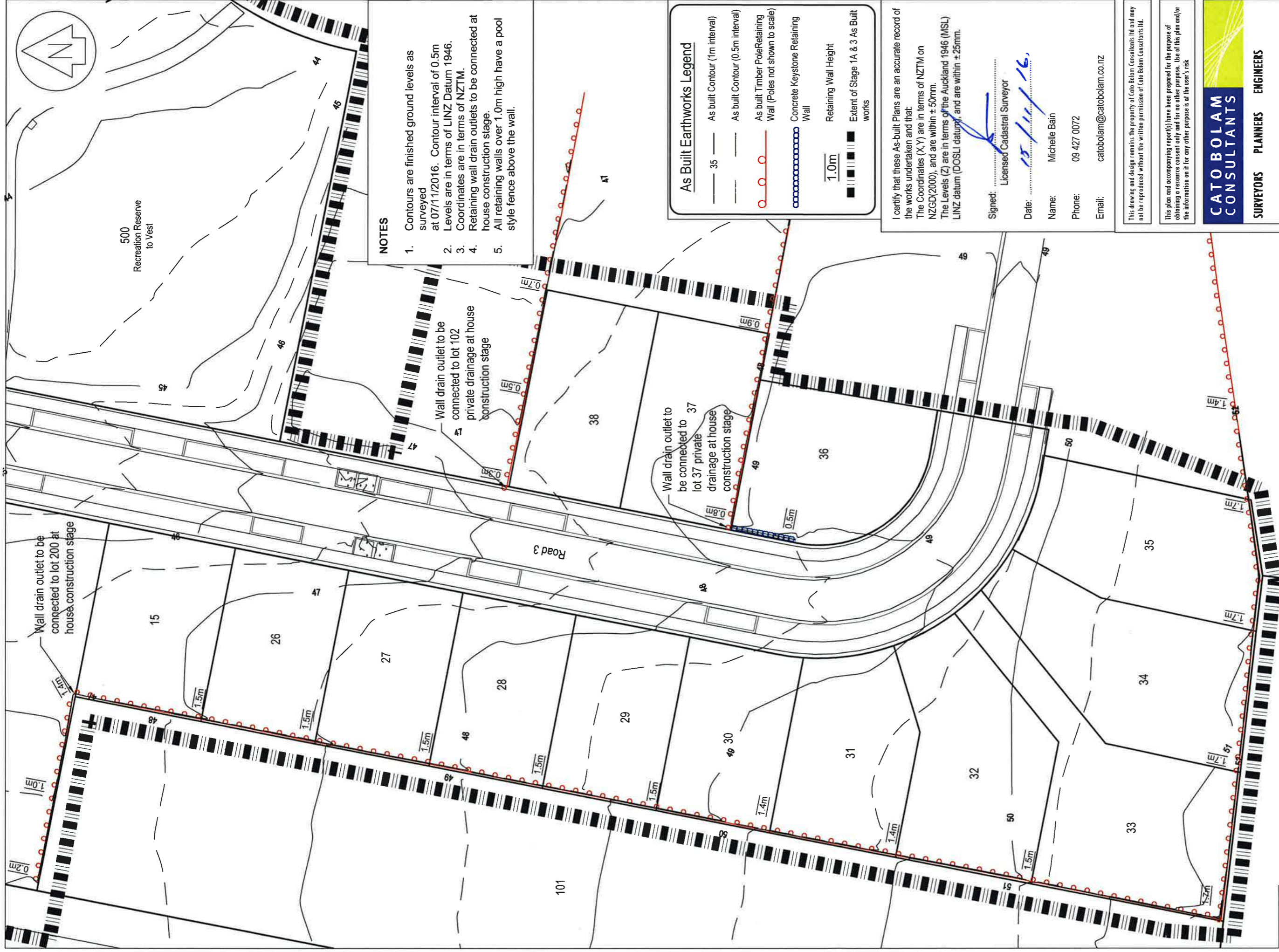
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**Cabra Development Ltd**  
**Huapai Triangle Sub Precinct B**  
**Stage 1A & 3**  
**Huapai**

DRAWING TITLE  
**Final Contour & Retaining Wall**  
**As Built Plan**  
**Sheet 2 of 3**

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ORIGINAL SCALE 1:500	ORIGINAL SIZE A3	REVISION NO
DATE 07/11/16	CAD REFERENCE 32522 E600	SHEET NO E601
DIRECTORY Z:\32522\Acad		JOB NO 32522



- NOTES**
1. Contours are finished ground levels as surveyed at 07/11/2016. Contour interval of 0.5m. Levels are in terms of LINZ Datum 1946.
  2. Coordinates are in terms of NZTM.
  3. Retaining wall drain outlets to be connected at house construction stage.
  4. All retaining walls over 1.0m high have a pool style fence above the wall.

**As Built Earthworks Legend**

- 35 — As built Contour (1m interval)
- — — As built Contour (0.5m interval)
- — — — As built Timber Pole Retaining Wall (Poles not shown to scale)
- — — — Concrete Keystone Retaining Wall
- ▬ — — — Retaining Wall Height
- — — — Extent of Stage 1A & 3 As Built works

1.0m

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ORIGINAL SCALE	1:500	ORIGINAL SIZE	A3	REVISION NO	
DATE	07/11/16	CAD REFERENCE	32522 E600	SHEET NO	E602
DIRECTORY	Z:\31506\Acad			JOB NO	32522

SLC 67086

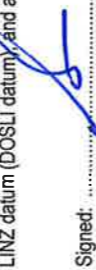
DRAWING TITLE  
**Final Contour & Retaining Wall  
 As Built Plan  
 Sheet 3 of 3**

CLIENT  
**Cabra Development Ltd  
 Huapai Triangle Sub Precinct B  
 Stage 1A & 3  
 Huapai**

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SURVEYED	BT	09/2016
DESIGNED	KM	09/2014
DRAWN	BJ	11/2016
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APPROVED	TM	11/2016










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 Licensed Cadastral Surveyor

Date: 15/11/16

Name: Michelle Bain  
 Phone: 09 427 0072  
 Email: catobolam@catobolam.co.nz

**Cut to Fill Legend**

- 0 Contour
-  Cut Contours & Area
-  Fill Contours & Area
-  Extent of Earthworks
-  Subsoil Drainage & depth (m)
-  As built Timber Retaining Wall
-  Stormwater Manhole
-  Concrete Key Stone Retaining Wall

**NOTES GENERAL**

- Levels are in terms of LINZ Datum 1946.
- Coordinates are in terms of NZTM.
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- Cut/fill contours are from the original ground level, plus undercuts, excluding road subgrade undercuts, to finished ground level as surveyed on 28/10/16.

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ORIGINAL SCALE	ORIGINAL SIZE	REVISION NO
1:1000	A3	
DATE	CAD REFERENCE	SHEET NO
03/11/16	32522 E603	E603
DIRECTORY	Z:\32522\Acad	JOB NO
		32522

**SLC67086**

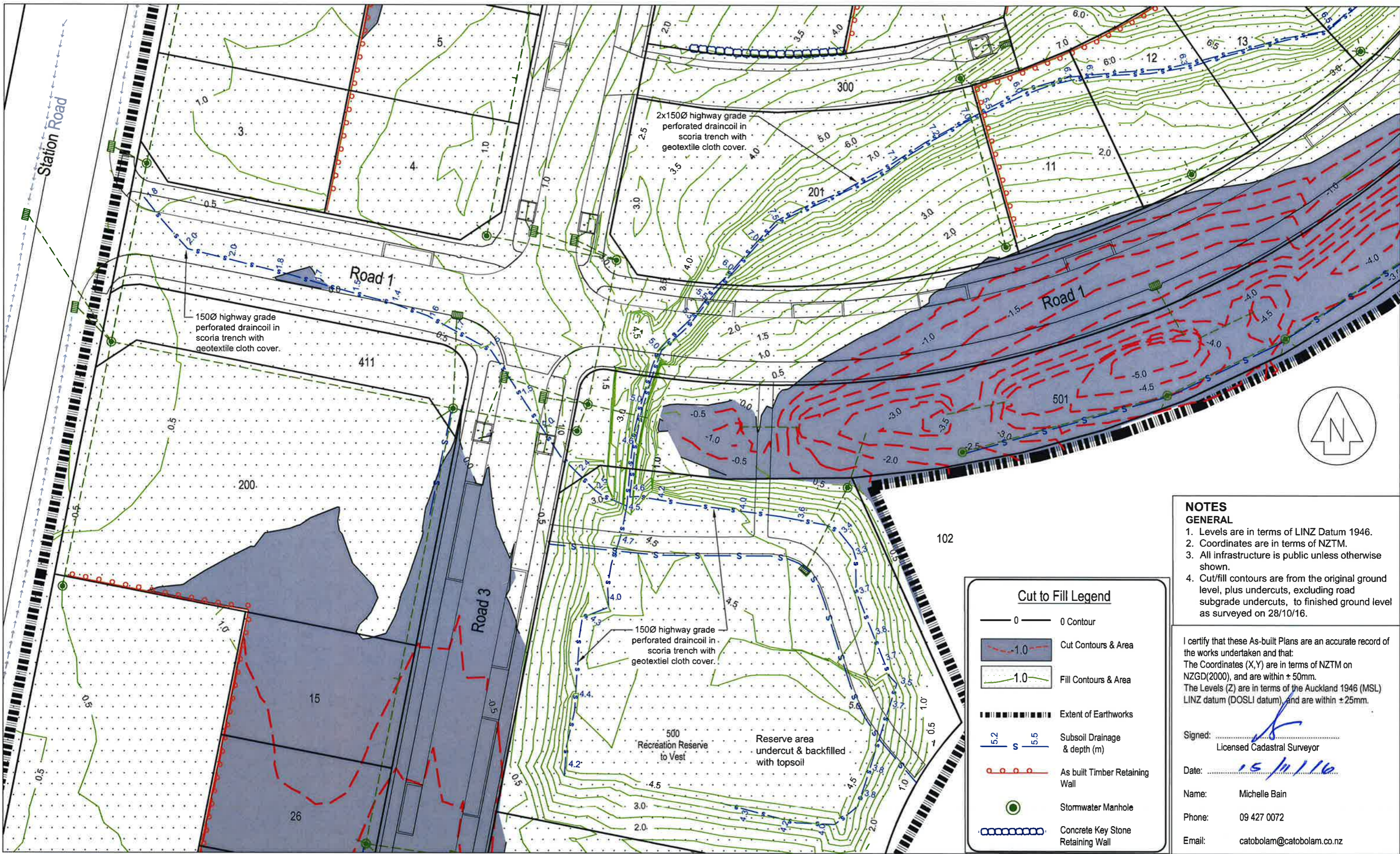
Cut Fill  
 As Built Plan  
 Sheet 1 of 3

DRAWING TITLE

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Cabra Development Ltd  
 Huapai Triangle Sub Precinct B  
 Stage 1A & 3  
 Huapai

REVISION (DESCRIPTIONS)	NAME	DATE
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DESIGNED	KM	09/14
DRAWN	BJ	11/16
CHECKED	BM	11/16
APPROVED	TL	11/16



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**Cut to Fill Legend**

- 0 Contour
- Cut Contours & Area
- Fill Contours & Area
- Extent of Earthworks
- Subsoil Drainage & depth (m)
- As built Timber Retaining Wall
- Stormwater Manhole
- Concrete Key Stone Retaining Wall

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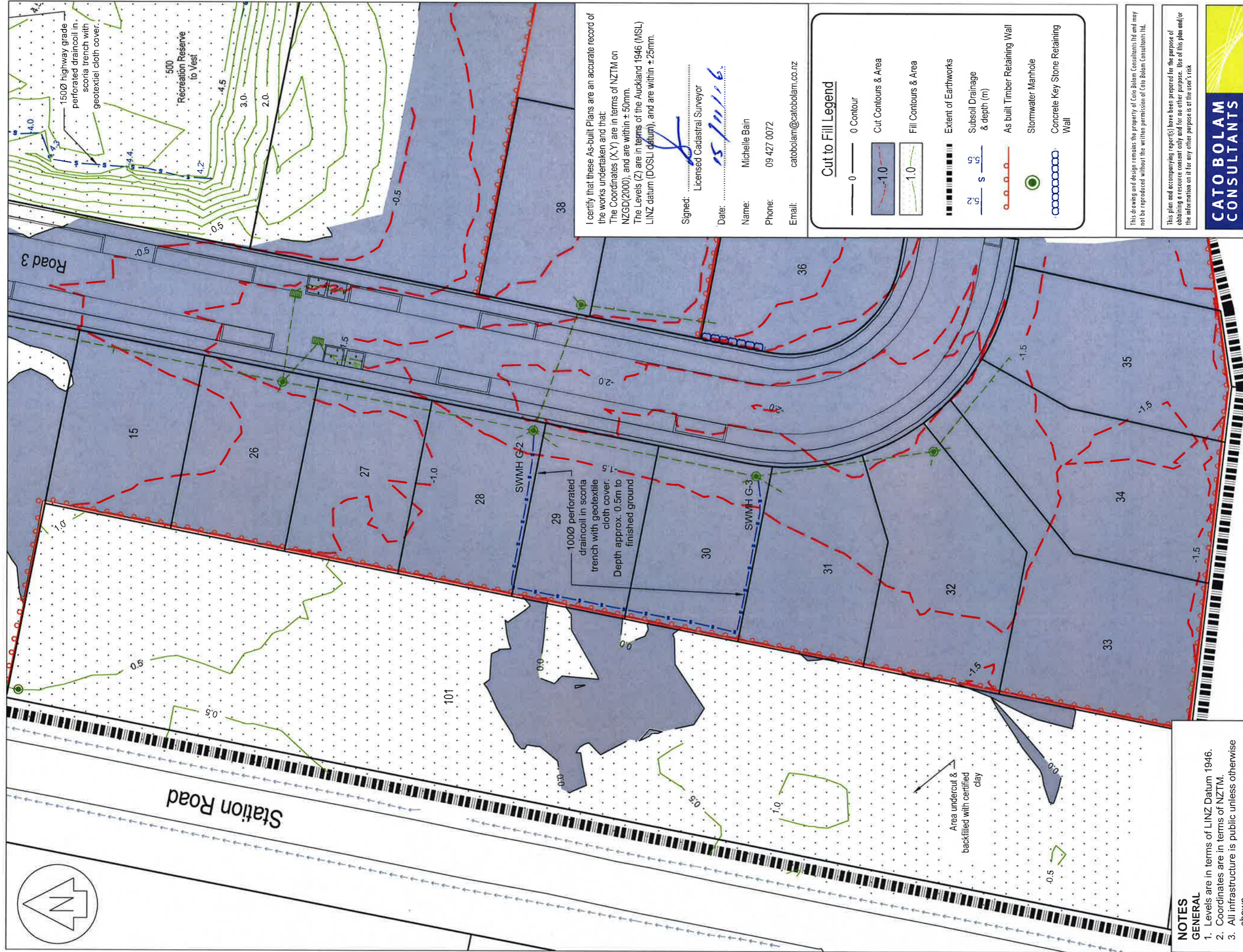
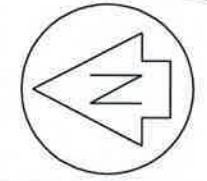
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**Huapai Triangle Sub Precinct B**  
**Stage 1A & 3**  
**Huapai**

DRAWING TITLE  
**Cut Fill**  
**As Built Plan**  
**Sheet 2 of 3**

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ORIGINAL SCALE	ORIGINAL SIZE	REVISION NO
1:500	A3	
DATE	CAD REFERENCE	SHEET NO
03/11/16	32522 E603	<b>E604</b>
DIRECTORY	IMAGE FILE	JOB NO
Z:\32522\Acad		<b>32522</b>



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 Licensed Cadastral Surveyor  
 Date: 15/11/16  
 Name: Michelle Bain  
 Phone: 09 427 0072  
 Email: catobolam@catobolam.co.nz

**Cut to Fill Legend**

- 0 Contour
- 1.0 Cut Contours & Area
- 1.0 Fill Contours & Area
- Extent of Earthworks
- SS Subsoil Drainage & depth (m)
- As built Timber Retaining Wall
- Stormwater Manhole
- Concrete Key Stone Retaining Wall

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ORIGINAL SCALE	ORIGINAL SIZE	REVISION NO
1:500	A3	
DATE	CAD REFERENCE	SHEET NO
03/11/16	32522 E603	E605
DIRECTORY	Z:32522, Acad	JOB NO
		32522

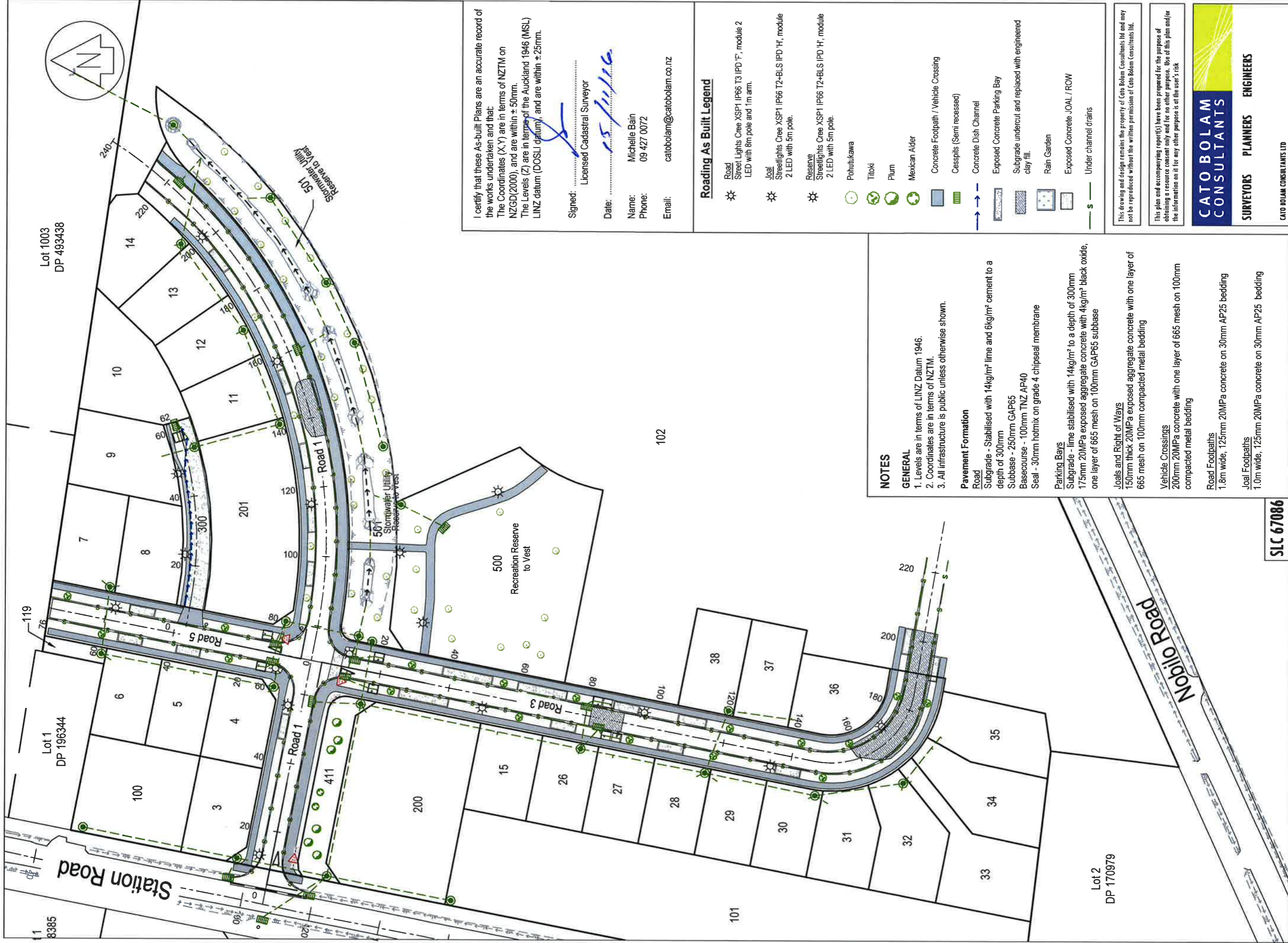
SLC67086

Cut Fill  
 As Built Plan  
 Sheet 3 of 3

CLIENT  
 Cabra Development Ltd  
 Huapai Triangle Sub Precinct B  
 Stage 1A & 3  
 Huapai

- NOTES**  
**GENERAL**
- Levels are in terms of LINZ Datum 1946.
  - Coordinates are in terms of NZTM.
  - All infrastructure is public unless otherwise shown.
  - Cut/fill contours are from the original ground level, plus undercuts, excluding road subgrade undercuts, to finished ground level as surveyed on 28/10/16.

REVISION (DESCRIPTIONS)	NAME	DATE
SURVEYED	BJ	09/16
DESIGNED	KM	09/14
DRAWN	BJ	11/16
CHECKED	BM	11/16
APPROVED	TL	11/16



Lot 1003  
DP 493438

Lot 1  
DP 196344

Lot 2  
DP 170979

102

SLC 67086

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Signed: *[Signature]*  
Licensed Cadastral Surveyor

Date: 15/11/16

Name: Michelle Bain  
Phone: 09 427 0072  
Email: catobolam@catobolam.co.nz

**Roading As Built Legend**

- ⊛ Road Street Lights Cree XSP1 IP66 T3 IPD 'F', module 2 LED with 5m pole and 1m arm.
- ⊛ Joal Streetlights Cree XSP1 IP66 T2-BLS IPD 'H', module 2 LED with 5m pole.
- ⊛ Reserve Streetlights Cree XSP1 IP66 T2-BLS IPD 'H', module 2 LED with 5m pole.
- Pohutukawa
- Titoki
- Plum
- Mexican Alder
- ▭ Concrete Footpath / Vehicle Crossing
- ▭ Cesspits (Semi recessed)
- ▭ Concrete Dish Channel
- ▭ Exposed Concrete Parking Bay
- ▭ Subgrade undercut and replaced with engineered clay fill.
- ▭ Rain Garden
- ▭ Exposed Concrete JOAL / ROW
- Under channel drains

**NOTES**

- GENERAL**
- Levels are in terms of LINZ Datum 1946.
  - Coordinates are in terms of NZTM.
  - All infrastructure is public unless otherwise shown.
- Pavement Formation**
- Road**
- Subgrade - Stabilised with 14kg/m<sup>2</sup> lime and 6kg/m<sup>2</sup> cement to a depth of 300mm
  - Subbase - 250mm GAP65
  - Basecourse - 100mm TNZ AP40
  - Seal - 30mm hotmix on grade 4 chipseal membrane
- Parking Bays**
- Subgrade - lime stabilised with 14kg/m<sup>2</sup> to a depth of 300mm
  - 175mm 20MPa exposed aggregate concrete with 4kg/m<sup>2</sup> black oxide, one layer of 665 mesh on 100mm GAP65 subbase
- Joals and Right of Ways**
- 150mm thick 20MPa exposed aggregate concrete with one layer of 665 mesh on 100mm compacted metal bedding
- Vehicle Crossings**
- 200mm 20MPa concrete with one layer of 665 mesh on 100mm compacted metal bedding
- Road Footpaths**
- 1.8m wide, 125mm 20MPa concrete on 30mm AP25 bedding
- Joal Footpaths**
- 1.0m wide, 125mm 20MPa concrete on 30mm AP25 bedding

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ORIGINAL SCALE	1:1000	ORIGINAL SIZE	A3	REVISION NO	
DATE	03/11/2016	CAD REFERENCE	32522 E606	SHEET NO	E606
DIRECTORY	Z:\32522_Aud			JOB NO	32522

**Road As Built Plan Sheet 1 of 3**

**Cabra Development Ltd**  
**Huapai Triangle Sub Precinct B**  
**Stage 1A & 3**  
**Huapai**

REVISION (DESCRIPTIONS)	NAME	DATE
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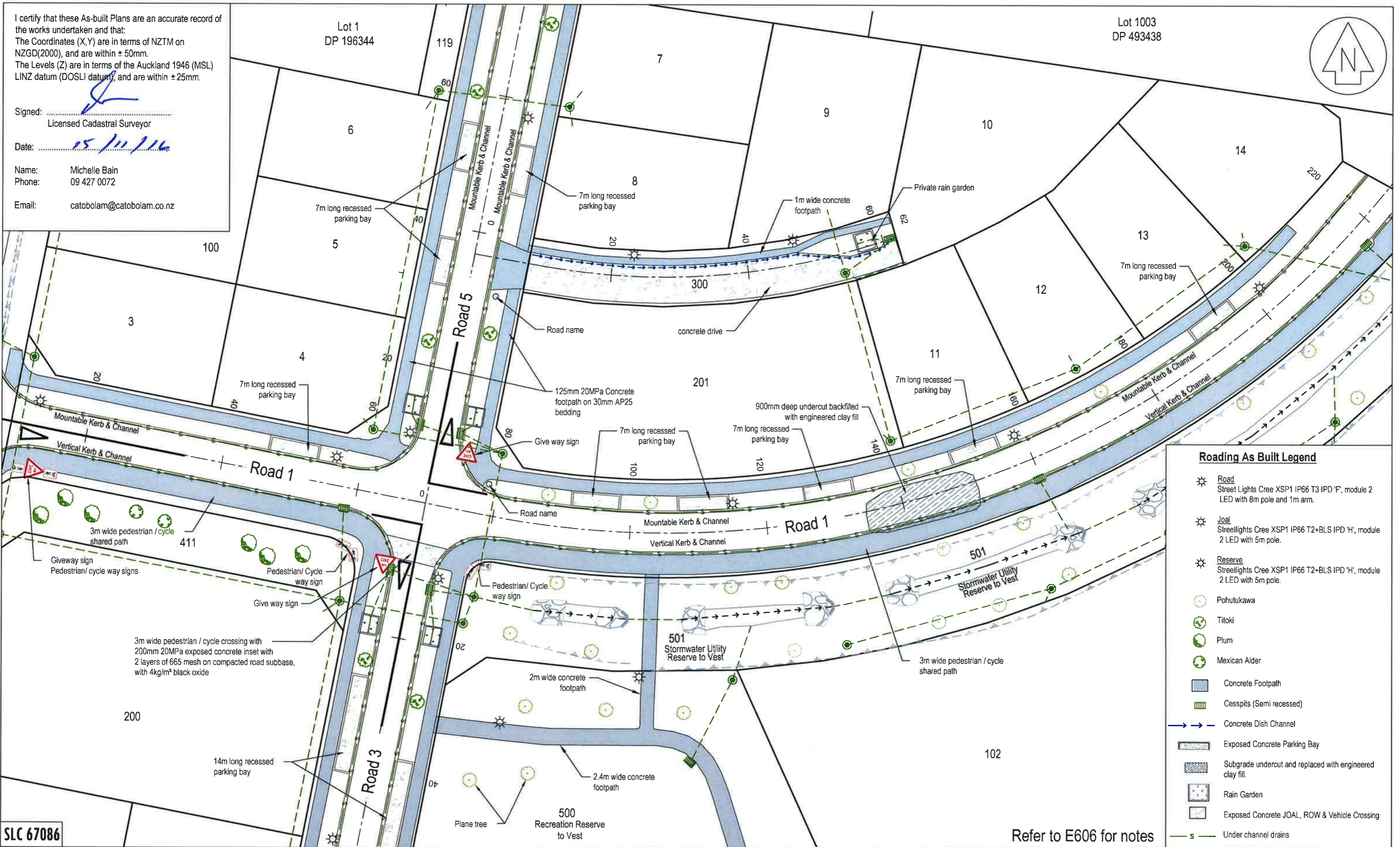
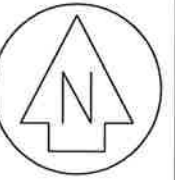
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 Licensed Cadastral Surveyor

Date: 15/11/16

Name: Michelle Bain  
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 Email: catobolam@catobolam.co.nz

Lot 1003  
 DP 493438



### Roading As Built Legend

- Road Street Lights Cree XSP1 IP66 T3 IPD 'F', module 2 LED with 8m pole and 1m arm.
- Joal Streetlights Cree XSP1 IP66 T2+BLS IPD 'H', module 2 LED with 5m pole.
- Reserve Streetlights Cree XSP1 IP66 T2+BLS IPD 'H', module 2 LED with 5m pole.
- Pohutukawa
- Titoki
- Plum
- Mexican Alder
- Concrete Footpath
- Cesspits (Semi recessed)
- Concrete Dish Channel
- Exposed Concrete Parking Bay
- Subgrade undercut and replaced with engineered clay fill.
- Rain Garden
- Exposed Concrete JOAL, ROW & Vehicle Crossing
- Under channel drains

SLC 67086

Refer to E606 for notes

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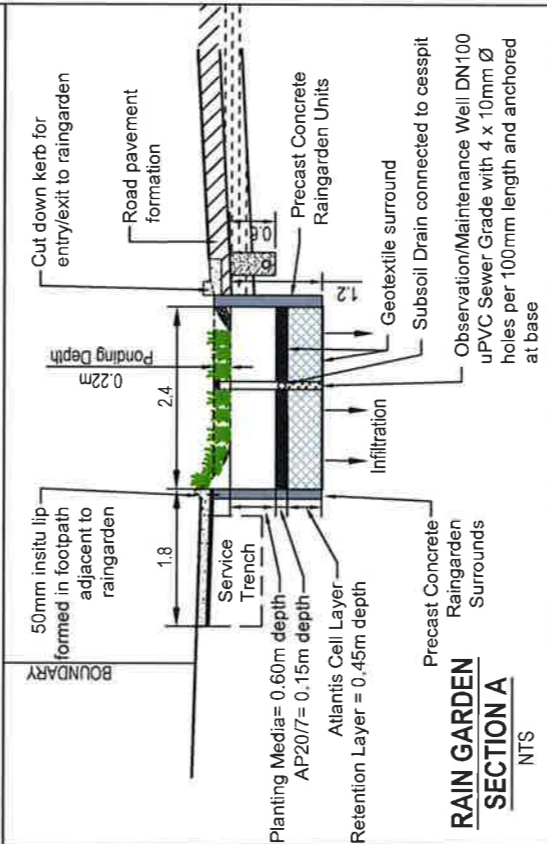
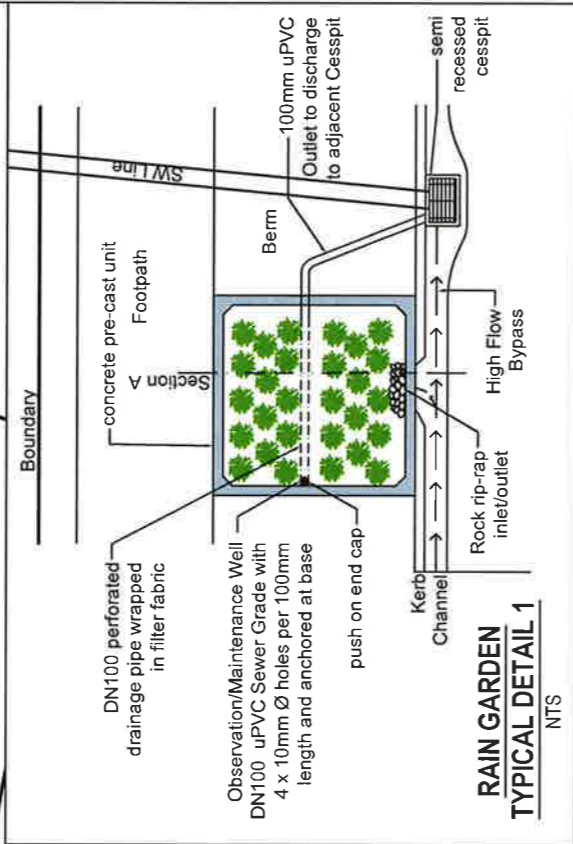
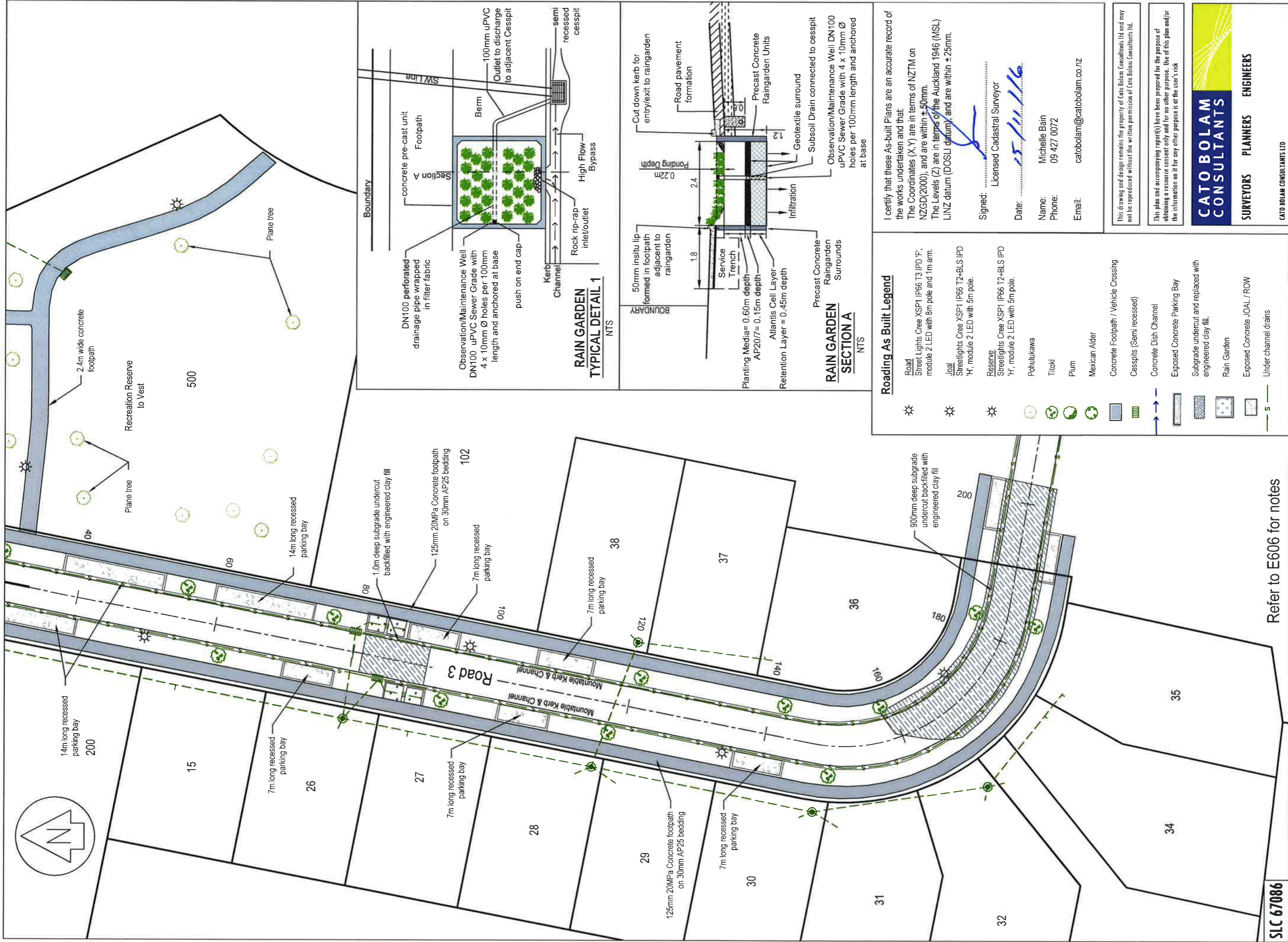
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**Huapai Triangle Sub Precinct B**  
**Stage 1A & 3**  
**Huapai**

DRAWING TITLE  
**Road**  
**As Built Plan**  
**Sheet 2 of 3**

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ORIGINAL SCALE 1:500	ORIGINAL SIZE A3	REVISION NO
DATE 03/11/16	CAD REFERENCE 32522 E606	SHEET NO <b>E607</b>
DIRECTORY 2\32522\Acad	IMAGE FILE	JOB NO <b>32522</b>



**Roading As Built Legend**

Road Street Lights Cree XSP1 IP66 T3 IPD 'F', module 2 LED with 8m pole and 1m arm.

Joal Streetlights Cree XSP1 IP66 T2+BLS IPD 'H', module 2 LED with 5m pole.

Resene Streetlights Cree XSP1 IP66 T2+BLS IPD 'H', module 2 LED with 5m pole.

Pohutukawa

Tiaki

Plum

Mexican Alder

Concrete Footpath / Vehicle Crossing

Cesspits (Semi recessed)

Concrete Dish Channel

Exposed Concrete Parking Bay

Subgrade undercut and replaced with engineered clay fill.

Rain Garden

Exposed Concrete JOAL / ROW

Under channel drains

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The Levels (Z) are in terms of the Auckland 1946 (MSL) LINZ datum (DOSLI datum), and are within ± 25mm.

Signed: *[Signature]*  
Licensed Cadastral Surveyor

Date: 15/11/16

Name: Michelle Bain  
Phone: 09 427 0072  
Email: catobolam@catobolam.co.nz

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ORIGINAL SCALE	ORIGINAL SIZE	REVISION NO
1:500	A3	
DATE	CAD REFERENCE	SHEET NO
03/11/2016	32522 E606	E608
DIRECTORY		JOB NO
Z:\32522_Acad		32522

**Road As Built Plan Sheet 3 of 3**

DRAWING TITLE

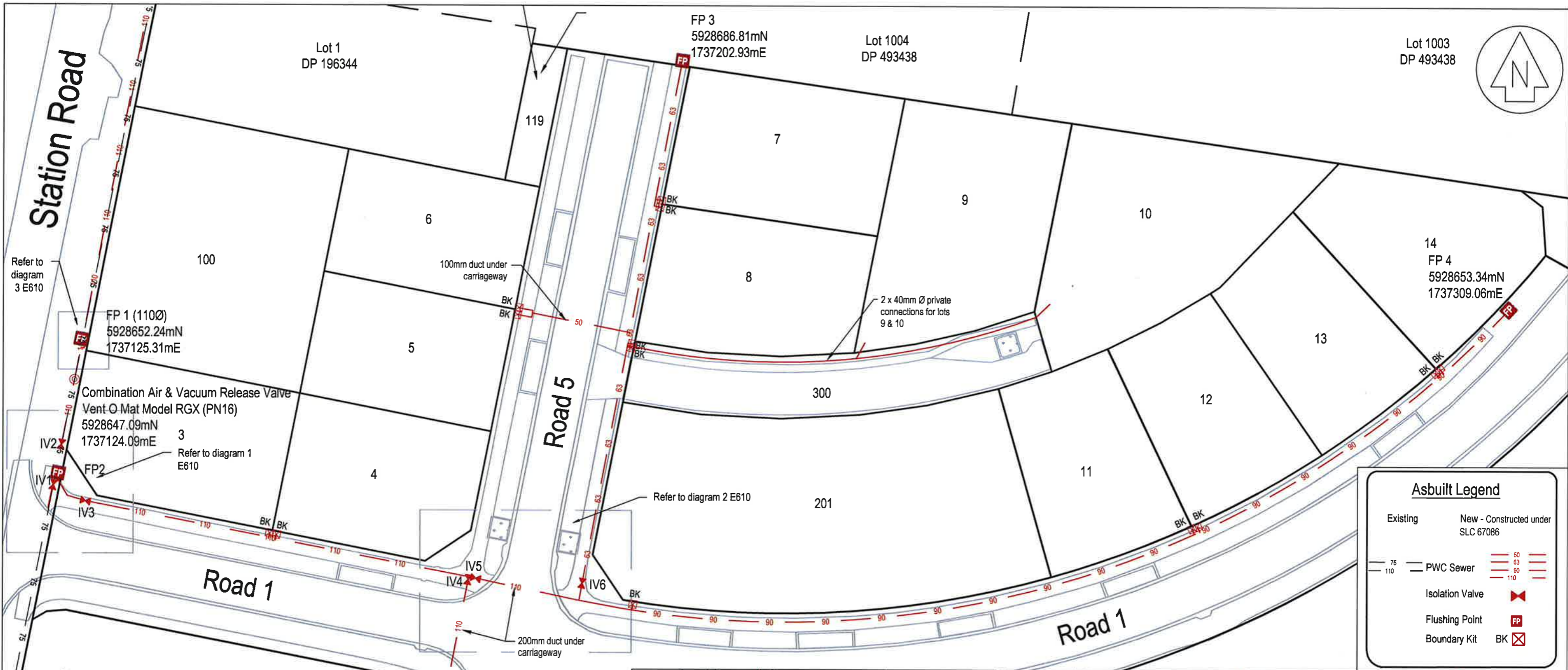
**Cabra Development Ltd**  
**Huapai Triangle Sub Precinct B**  
**Stage 1A & 3**  
**Huapai**

CLIENT

REVISION (DESCRIPTIONS)	NAME	DATE
SURVEYED	BJ	09/2016
DESIGNED	KM	10/2014
DRAWN	BJ	11/2016
CHECKED	BM	11/2016
APPROVED	TL	11/2016

**SLC 67086**





**Asbuilt Legend**

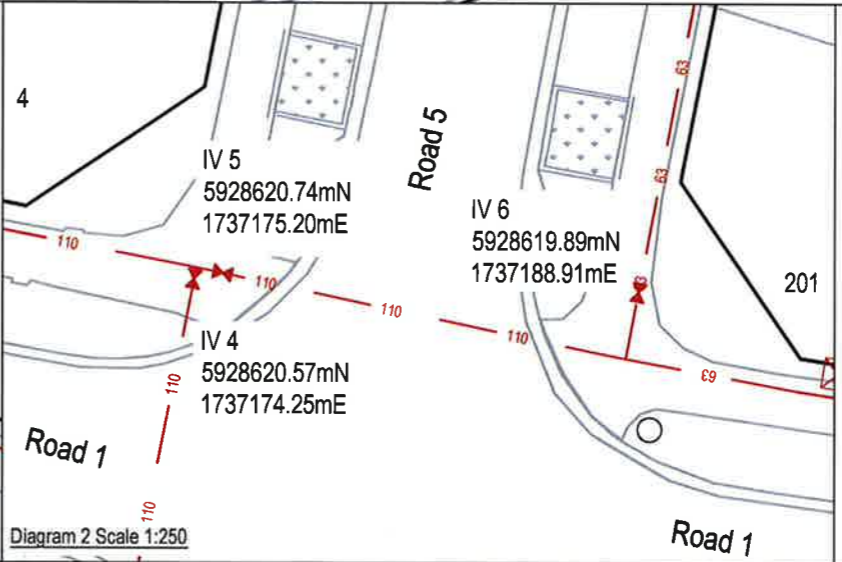
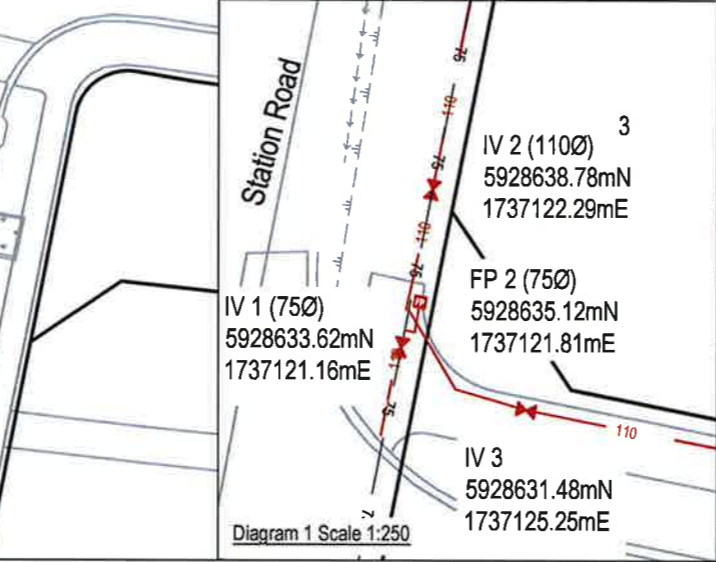
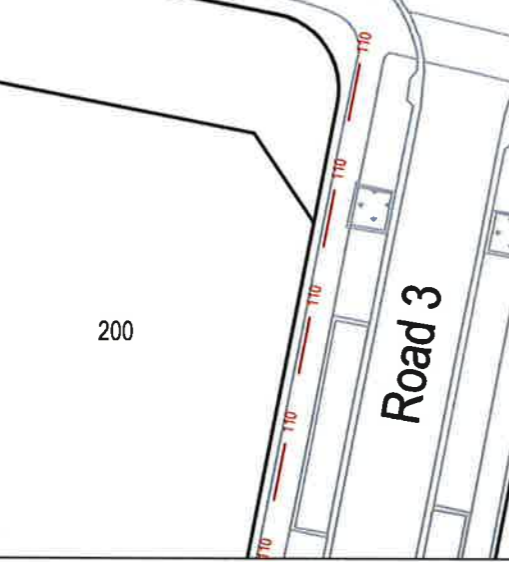
Existing	New - Constructed under SLC 67086
75 110	50 63 90 110
Isolation Valve	IV
Flushing Point	FP
Boundary Kit	BK

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DRAWN	BJ	11/16
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APPROVED	TL	11/16

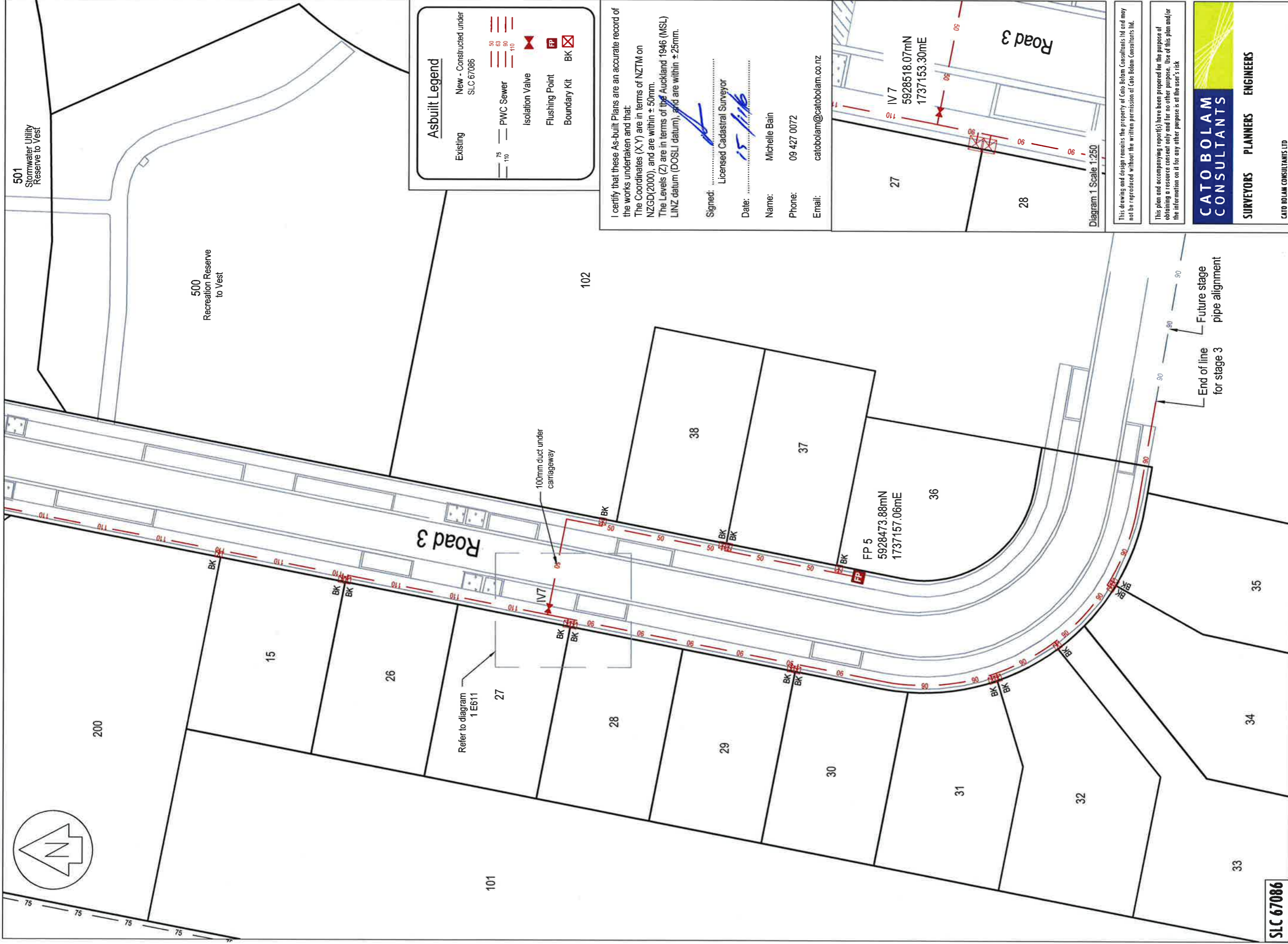
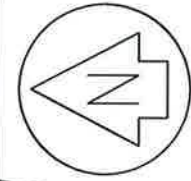
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**Cabra Development Ltd  
 Huapai Triangle Sub Precinct B  
 Stage 1A & 3  
 Huapai**

DRAWING TITLE  
**Wastewater Reticulation  
 As Built Plan  
 Sheet 2 of 3**

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ORIGINAL SCALE	ORIGINAL SIZE	REVISION NO
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DATE	CAD REFERENCE	SHEET NO
03/11/16	32522 E609	E610
DIRECTORY	IMAGE FILE	JOB NO
Z:\32522\Acad		32522

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501

500  
Recreation Reserve  
to Vest

102

Road 3

Road 3

Diagram 1 Scale 1:250

**Asbuilt Legend**

- |                                   |    |     |    |    |    |     |                 |                |              |
|-----------------------------------|----|-----|----|----|----|-----|-----------------|----------------|--------------|
| Existing                          | 75 | 110 | 50 | 63 | 90 | 110 | Isolation Valve | Flushing Point | Boundary Kit |
| New - Constructed under SLC 67086 | 75 | 110 | 50 | 63 | 90 | 110 | Isolation Valve | Flushing Point | Boundary Kit |

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**SLC 67086**

REVISION (DESCRIPTIONS)	NAME	DATE
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DESIGNED	KM	09/14
DRAWN	BJ	11/16
CHECKED	BM	11/16
APPROVED	TL	11/16

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**Huapai Triangle Sub Precinct B**  
**Stage 1A & 3**  
**Huapai**

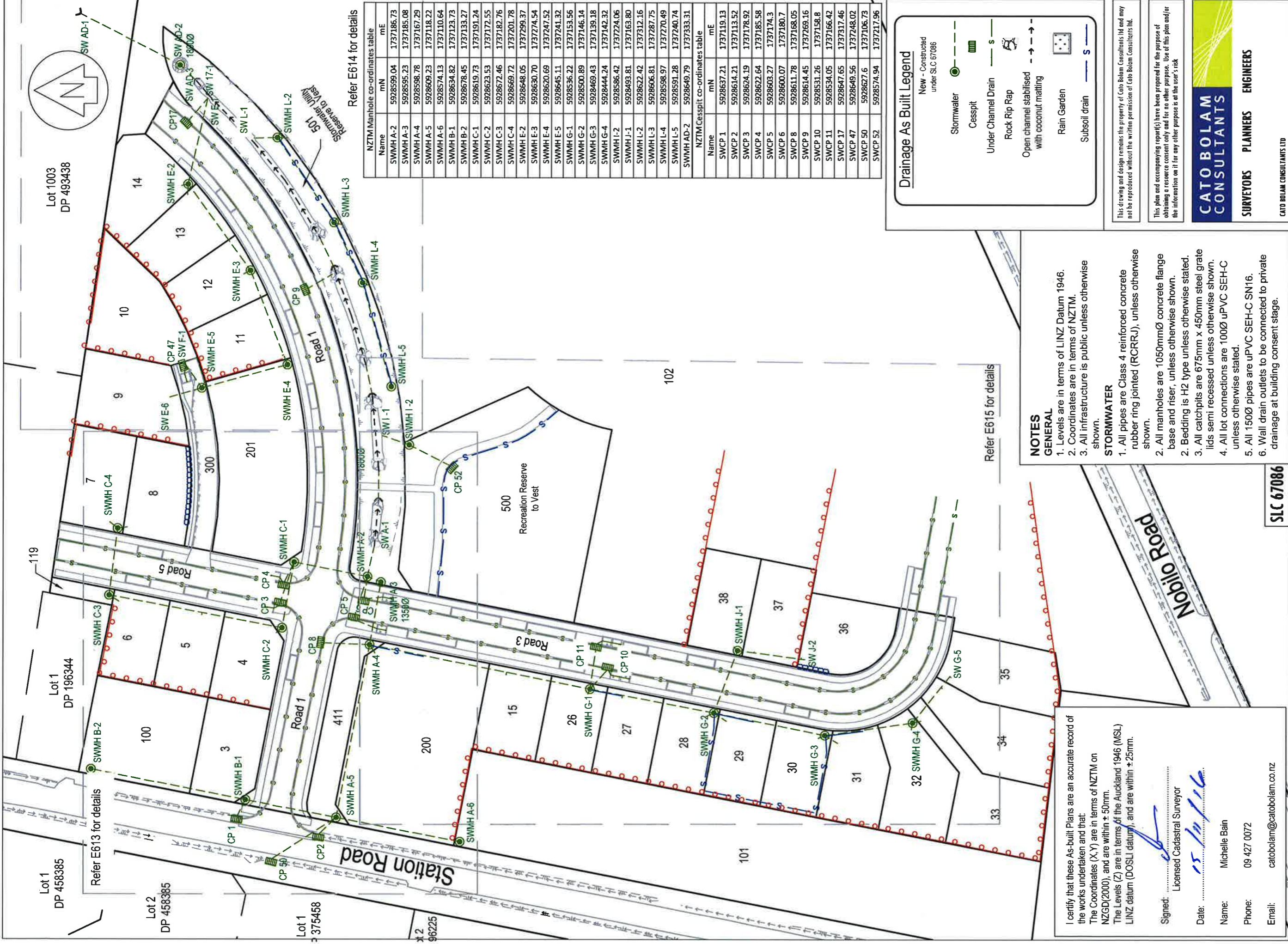
DRAWING TITLE  
**Wastewater Reticulation**  
**As Built Plan**  
**Sheet 3 of 3**

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ORIGINAL SCALE	1:500	ORIGINAL SIZE	A3	REVISION NO	
DATE	03/11/16	CAD REFERENCE	32522 E609	SHEET NO	E611
DIRECTORY	Z:\32522_Aeod			JOB NO	32522

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Refer E614 for details

NZTM Manhole co-ordinates table	
Name	mE
SWMH A-2	5928599.04 1737186.73
SWMH A-3	5928595.23 1737185.08
SWMH A-4	5928598.78 1737167.29
SWMH A-5	5928609.23 1737118.22
SWMH A-6	5928574.13 1737110.64
SWMH B-1	5928634.82 1737123.73
SWMH B-2	5928678.45 1737133.27
SWMH C-1	5928619.73 1737191.24
SWMH C-2	5928623.53 1737172.55
SWMH C-3	5928672.46 1737182.76
SWMH C-4	5928669.72 1737201.78
SWMH E-2	5928648.05 1737299.37
SWMH E-3	5928630.70 1737274.54
SWMH E-4	5928620.69 1737247.52
SWMH E-5	5928645.11 1737241.32
SWMH G-1	5928536.22 1737153.56
SWMH G-2	5928500.89 1737146.14
SWMH G-3	5928469.43 1737139.18
SWMH G-4	5928444.24 1737142.32
SWMH L-2	5928586.42 1737224.06
SWMH J-1	5928493.81 1737163.80
SWMH L-2	5928622.42 1737312.16
SWMH L-3	5928606.81 1737287.75
SWMH L-4	5928598.97 1737270.49
SWMH L-5	5928591.28 1737240.74
SWMH AD-2	5928649.79 1737333.31

NZTM Cesspit co-ordinates table	
Name	mE
SWCP 1	5928637.21 1737119.13
SWCP 2	5928614.21 1737113.52
SWCP 3	5928624.19 1737178.92
SWCP 4	5928622.64 1737185.58
SWCP 5	5928603.27 1737174.3
SWCP 6	5928600.07 1737180.7
SWCP 8	5928611.78 1737168.05
SWCP 9	5928614.45 1737269.16
SWCP 10	5928531.26 1737158.8
SWCP 11	5928534.05 1737166.42
SWCP 17	5928647.65 1737317.46
SWCP 47	5928649.56 1737248.02
SWCP 50	5928627.6 1737106.73
SWCP 52	5928574.94 1737217.96

**Drainage As Built Legend**

New - Constructed under SLC 67086

- Stormwater
- Cesspit
- Under Channel Drain
- Rock Rip Rap
- Open channel stabilised with coconut matting
- Rain Garden
- Subsoil drain

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ORIGINAL SCALE	1:1000	ORIGINAL SIZE	A3	REVISION NO	
DATE	03/11/16	CAD REFERENCE	32522 E612	SHEET NO	E612
DIRECTORY	ZA:32522_A.ecd			JOB NO	32522

- NOTES**
- GENERAL**
- Levels are in terms of LINZ Datum 1946.
  - Coordinates are in terms of NZTM.
  - All infrastructure is public unless otherwise shown.
- STORMWATER**
- All pipes are Class 4 reinforced concrete rubber ring jointed (RCRRJ), unless otherwise shown.
  - All manholes are 1050mmØ concrete flange base and riser, unless otherwise shown.
  - Bedding is H2 type unless otherwise stated.
  - All catchpits are 675mm x 450mm steel grate lids semi recessed unless otherwise shown.
  - All lot connections are 100Ø uPVC SEH-C unless otherwise stated.
  - All 150Ø pipes are uPVC SEH-C SN16.
  - Wall drain outlets to be connected to private drainage at building consent stage.

Refer E615 for details

SLC 67086

**Cabra Development Ltd**  
**Huapai Triangle Sub Precinct B**  
**Stage 1A & 3**  
**Huapai**

CLIENT

**Stormwater Reticulation**  
**As Built Plan**  
**Sheet 1 of 4**

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REVISION (DESCRIPTIONS)	NAME	DATE
SURVEYED	BJ	09/16
DESIGNED	KM	09/14
DRAWN	BJ	11/16
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APPROVED	IL	11/16

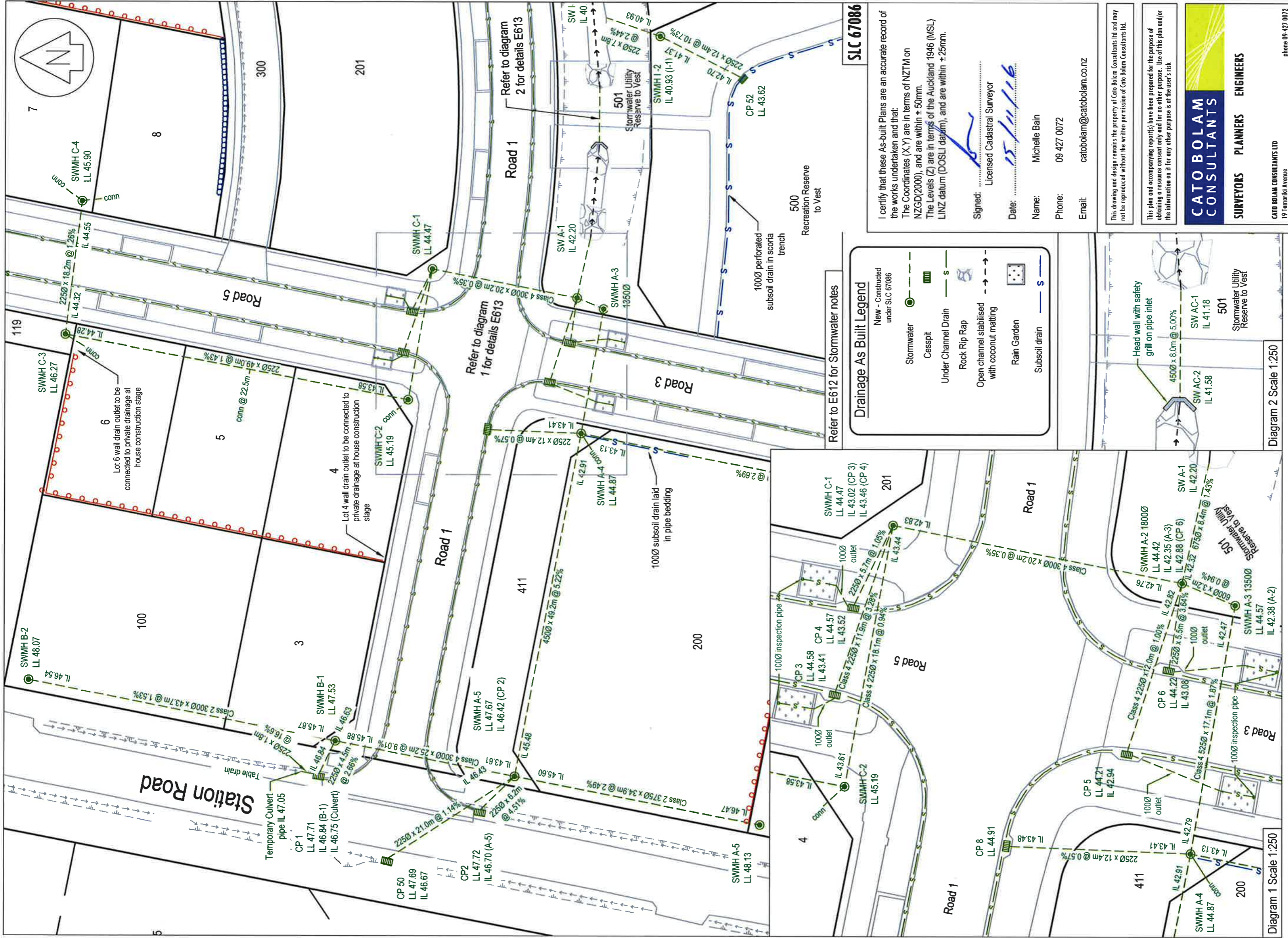


Diagram 1 Scale 1:250

Diagram 2 Scale 1:250


**Drainage As Built Legend**

- New - Constructed under SLC 67086
- Stormwater
  - Cesspit
  - Under Channel Drain
  - Rock Rip Rap
  - Open channel stabilised with coconut matting
  - Rain Garden
  - Subsoil drain

Refer to E612 for Stormwater notes

SLC 67086

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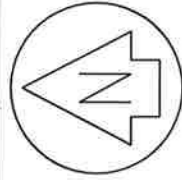
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ORIGINAL SCALE	ORIGINAL SIZE	REVISION NO
1:500	A3	
DATE	CAD REFERENCE	SHEET NO
03/11/16	32522 E612	E613
DIRECTORY		JOB NO
Z:\32522\Acad		32522

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**Huapai Triangle Sub Precinct B**  
**Stage 1A & 3**  
**Huapai**

REVISION (DESCRIPTIONS)	NAME	DATE
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DESIGNED	KM	09/11/16
DRAWN	BJ	11/11/16
CHECKED	BM	11/11/16
APPROVED	TL	11/11/16

DRAWING TITLE  
**Stormwater Reticulation**  
**As Built Plan**  
**Sheet 2 of 4**



Lot 1004  
DP 493438

Lot 1003  
DP 493438

SW AD-1  
IL 36.38

9000 x 31.5m @ 0.48%  
SW AD-2  
IL 36.53  
18000 with low  
profile scruffy dome  
Refer to diagram  
3 for details E614

Lot 14 wall drain outlet to be connected  
to private drainage at house construction  
stage

14

Lot 10 wall drain outlet to be connected  
to private drainage at house construction  
stage

10

Lot 9 wall drain outlet to be  
connected to private drainage  
at house construction stage

9

Refer to diagram  
4 for details E614

12

Lot 11 wall drain outlet to be  
connected to private drainage  
at house construction stage

11

Refer to diagram  
2 for details E614

13

Refer to diagram  
1 for details E614

501

1000 subssoil drain laid  
in pipe bedding

102

Refer to E612 for Stormwater notes

### Drainage As Built Legend

New - Constructed  
under SLC 67086

- Stormwater
- Cesspit
- Under Channel Drain
- Rock Rip Rap
- Open channel stabilised  
with coconut matting
- Rain Garden
- Subsoil drain

SLC 67086

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ORIGINAL SCALE	ORIGINAL SIZE	REVISION NO
1:500	A3	
DATE	CAD REFERENCE	SHEET NO
03/11/16	32522 E612	E614
DIRECTORY		JOB NO
Z:\32522\Acad		32522

DRAWING TITLE

**Stormwater Reticulation  
As Built Plan  
Sheet 3 of 4**

CLIENT

**Cabra Development Ltd  
Huapai Triangle Sub Precinct B  
Stage 1A & 3  
Huapai**

REVISION (DESCRIPTIONS)	NAME	DATE
SURVEYED	BJ	09/16
DESIGNED	KM	09/14
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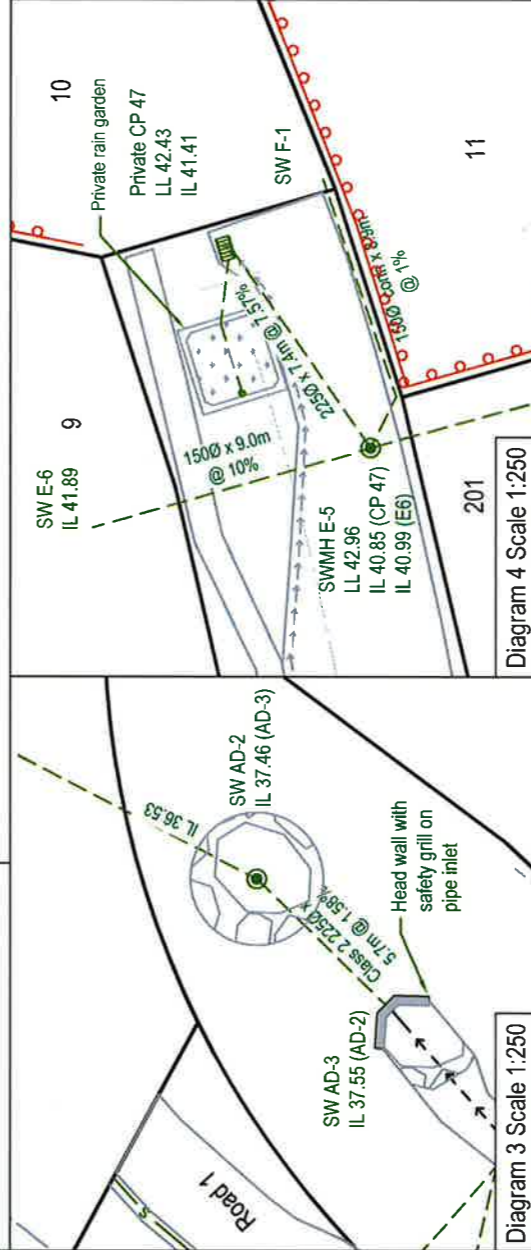


Diagram 3 Scale 1:250

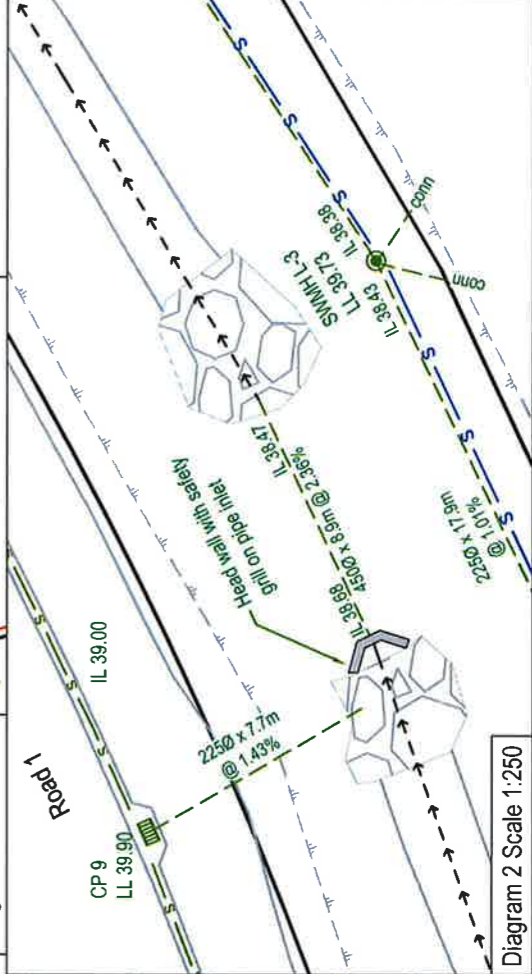


Diagram 4 Scale 1:250

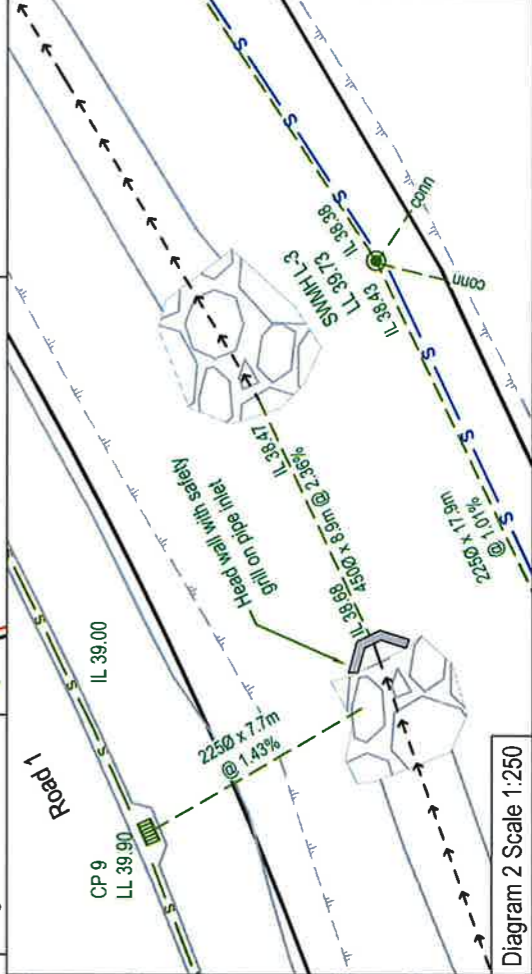
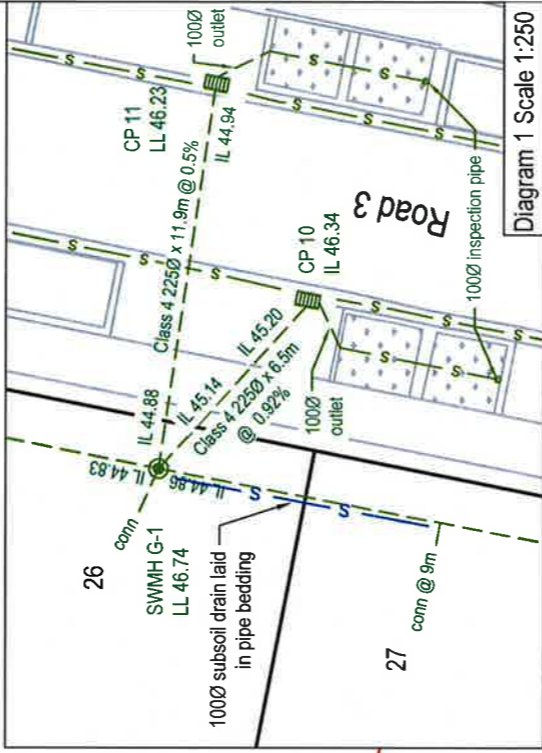
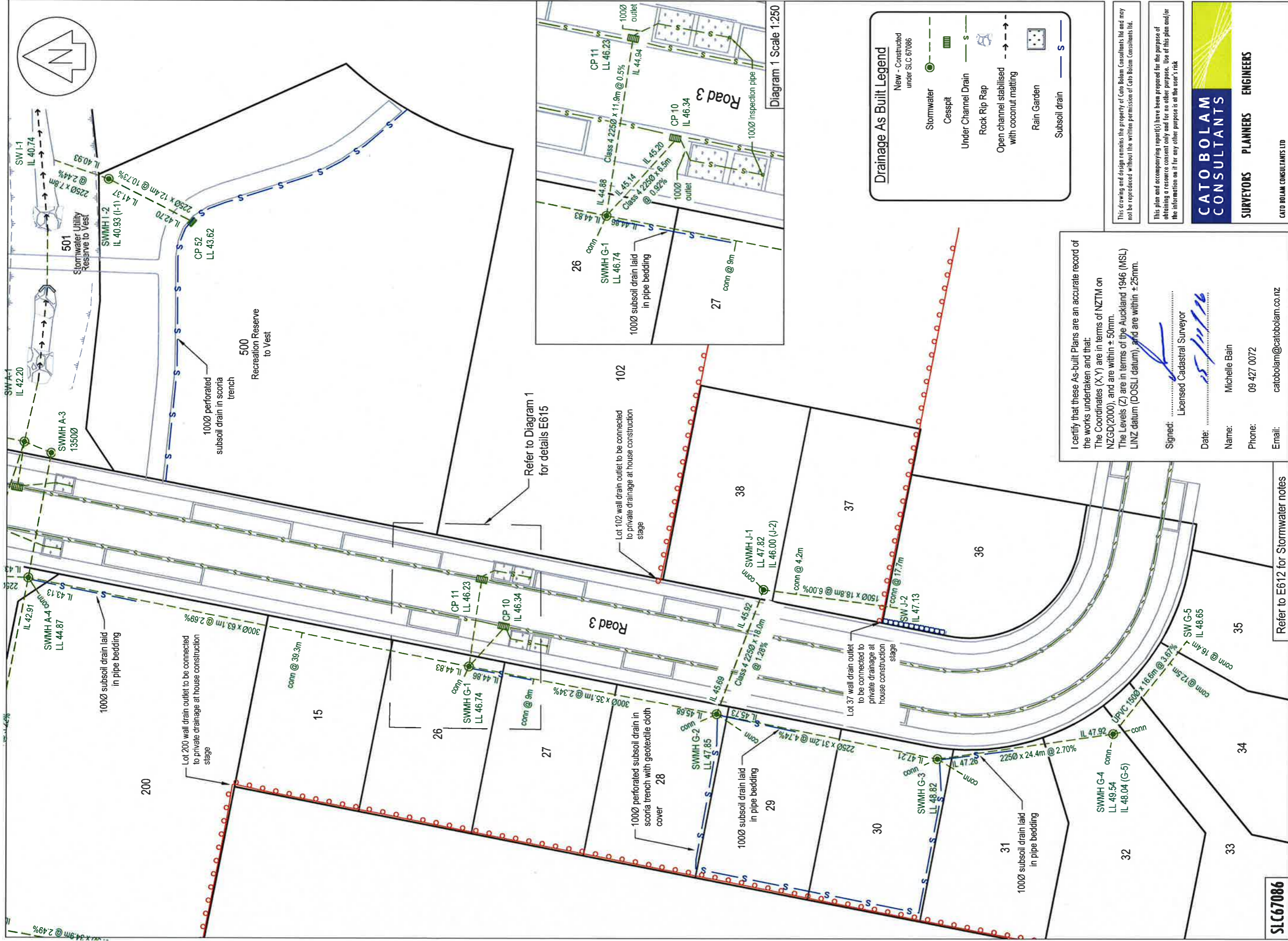


Diagram 2 Scale 1:250





**Drainage As Built Legend**

New - Constructed under SLC 67086

- Stormwater
- Cesspit
- Under Channel Drain
- Rock Rip Rap
- Open channel stabilised with coconut matting
- Rain Garden
- Subsoil drain

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ORIGINAL SCALE	1:500	ORIGINAL SIZE	A3	REVISION NO	
DATE	03/11/16	CAD REFERENCE	32522 E612	SHEET NO	E615
DIRECTORY	Z:\32522_Acad			JOB NO	32522

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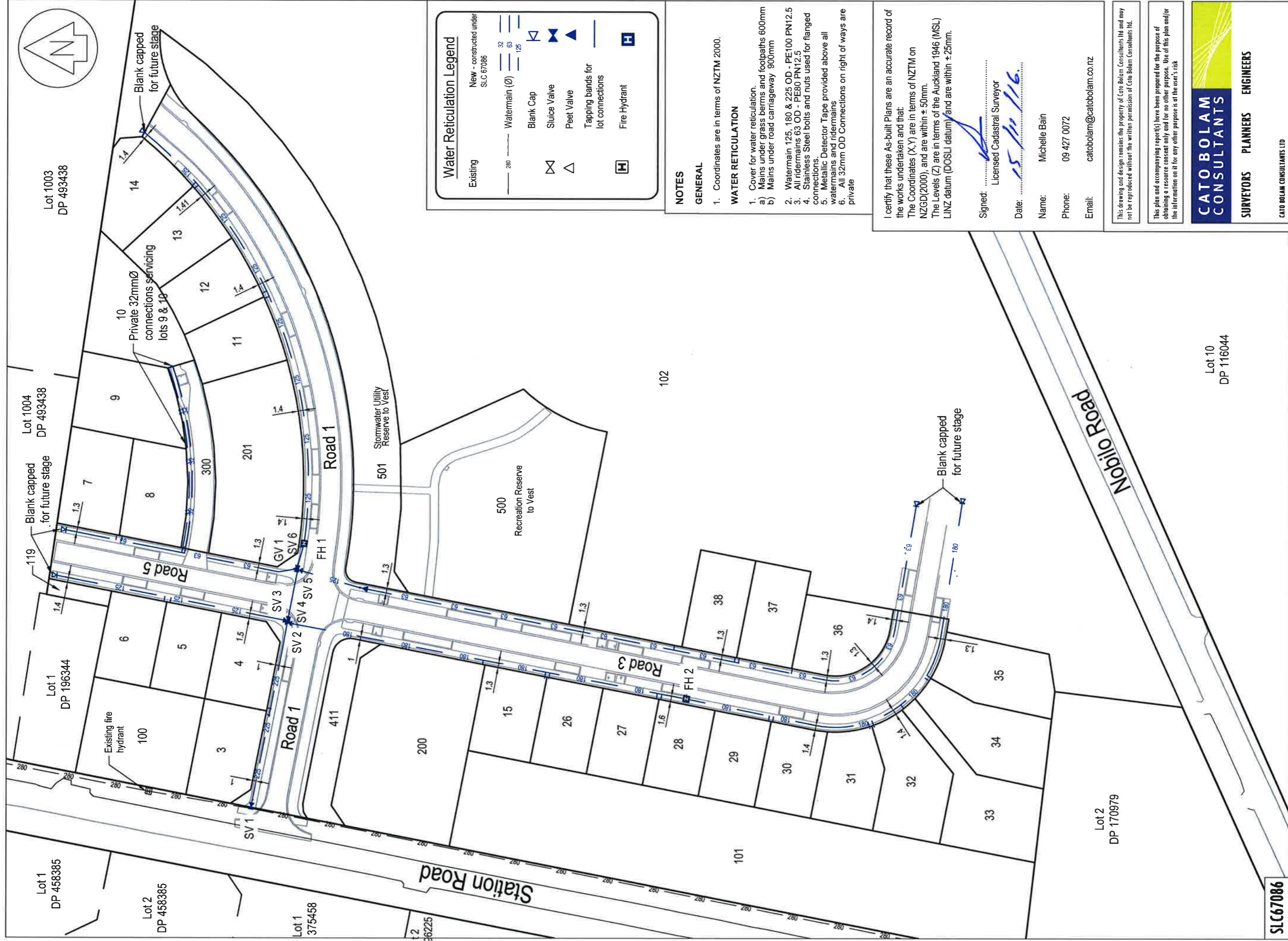
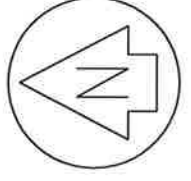
**Stormwater Reticulation As Built Plan Sheet 4 of 4**

**Cabra Development Ltd**  
**Huapai Triangle Sub Precinct B**  
**Stage 1A & 3**  
**Huapai**

Refer to E612 for Stormwater notes

REVISION (DESCRIPTIONS)	NAME	DATE
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DRAWN	BJ	11/16
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APPROVED	TL	11/16

**SLC67086**



**Water Reticulation Legend**

Existing	— 280	Watermain (Ø)	— 32 63 125
New - constructed under SLC 67086	— 280	Blank Cap	⊠
		Sluice Valve	⊞
		Peet Valve	⊟
		Tapping bands for lot connections	—
		Fire Hydrant	H

**NOTES**

**GENERAL**

- Coordinates are in terms of NZTM 2000.

**WATER RETICULATION**

- Cover for water reticulation.
  - Mains under grass berms and footpaths 600mm
  - Mains under road carriageway 900mm
- Watermain 125, 180 & 225 OD - PE100 PN12.5
- All ridermains 63 OD - PE80 PN12.5
- Stainless Steel bolts and nuts used for flanged connections.
- Metallic Detector Tape provided above all watermains and ridermains
- All 32mm OD Connections on right of ways are private

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ORIGINAL SCALE	1:1000	ORIGINAL SIZE	A3	REVISION NO	
DATE	03/11/16	CAD REFERENCE	32522 E616	SHEET NO	E616
DIRECTORY	Z:\32522_Arad			JOB NO	32522

**Water Reticulation As Built Plan Sheet 1 of 3**

DRAWING TITLE

**Cabra Development Ltd**  
**Huapai Triangle Sub Precinct B**  
**Stage 1A & 3**  
**Huapai**

CLIENT

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APPROVED	TL	11/16

SLC67086

Lot 10  
 DP 116044

Lot 2  
 DP 170979

Station Road

Nobilo Road

Road 1

Road 5

Road 3

Road 1

Road 1

Lot 1003  
 DP 493438

Lot 1004  
 DP 493438

Lot 1  
 DP 196344

Lot 1  
 DP 458385

Lot 2  
 DP 458385

Lot 1  
 375458

Lot 2  
 36225

102

101

501  
 Stormwater Utility Reserve to Vest

500  
 Recreation Reserve to Vest

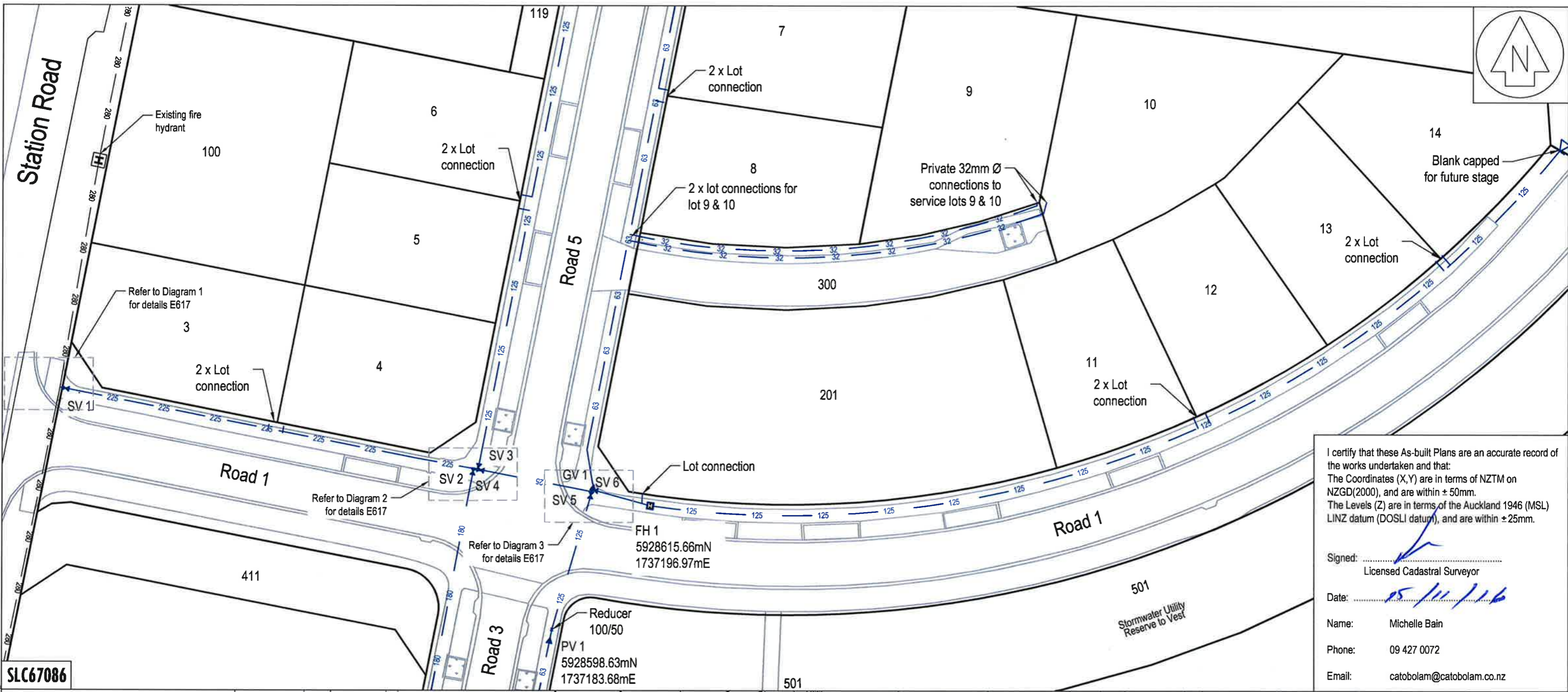
Private 32mmØ connections servicing lots 9 & 10

Existing fire hydrant

Blank capped for future stage

Blank capped for future stage

Blank capped for future stage

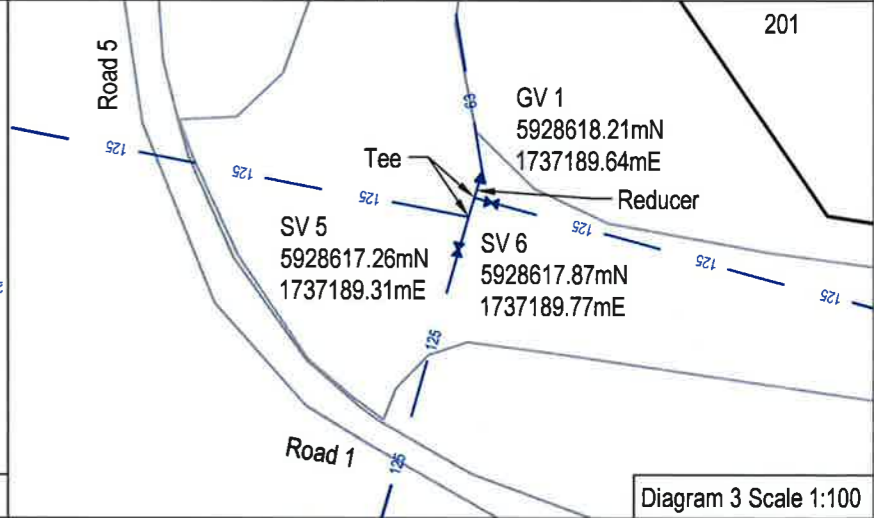
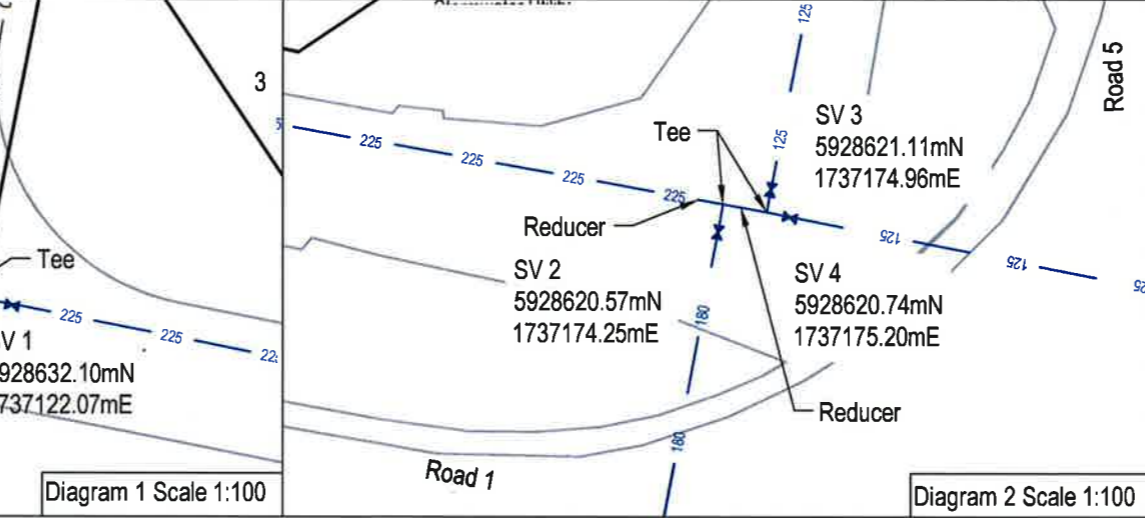
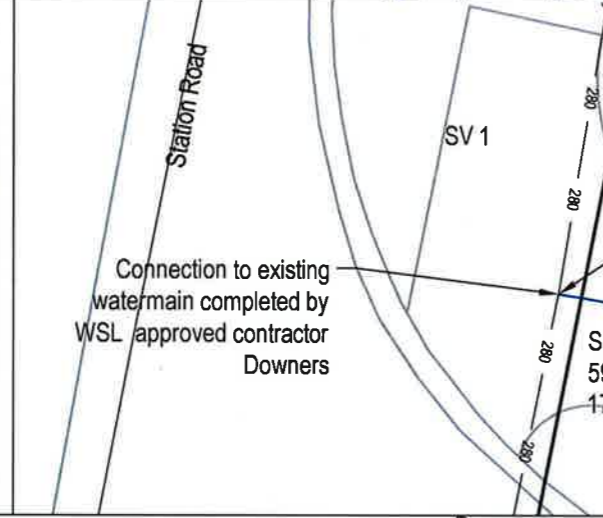
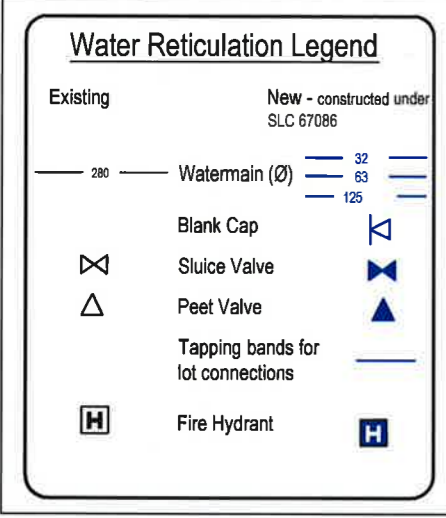


I certify that these As-built Plans are an accurate record of the works undertaken and that:  
 The Coordinates (X,Y) are in terms of NZTM on NZGD(2000), and are within ± 50mm.  
 The Levels (Z) are in terms of the Auckland 1946 (MSL) LINZ datum (DOSLI datum), and are within ± 25mm.

Signed: *[Signature]*  
 Licensed Cadastral Surveyor

Date: *05/11/16*

Name: Michelle Bain  
 Phone: 09 427 0072  
 Email: catobolam@catobolam.co.nz



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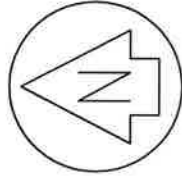
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**Huapai Triangle Sub Precinct B**  
**Stage 1A & 3**  
**Huapai**


DRAWING TITLE  
**Water Reticulation**  
**As Built Plan**  
**Sheet 2 of 3**

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ORIGINAL SCALE	ORIGINAL SIZE	REVISION NO
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DATE	CAD REFERENCE	SHEET NO
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DIRECTORY		JOB NO
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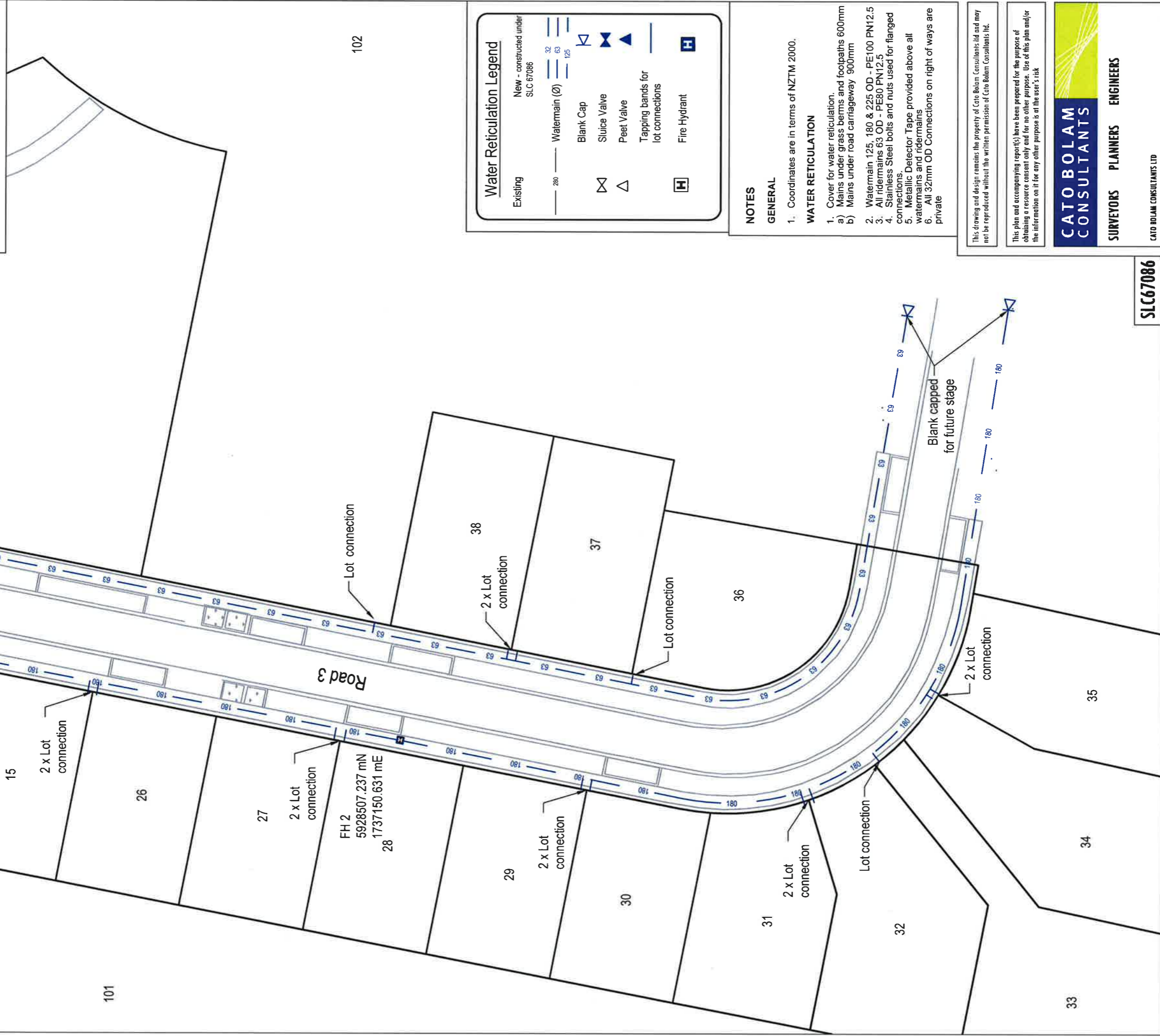


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Signed:   
 Licensed Cadastral Surveyor

Date: 15/11/16

Name: Michelle Bain  
 Phone: 09 427 0072  
 Email: catobolam@catobolam.co.nz



**Water Reticulation Legend**

Existing	280	Watermain (Ø)	32	Blank Cap	△
New - constructed under SLC 67086	125		63	Sluice Valve	▽
			125	Peet Valve	□
				Tapping bands for lot connections	—
				Fire Hydrant	⊞

**NOTES**

**GENERAL**

1. Coordinates are in terms of NZTM 2000.

**WATER RETICULATION**

1. Cover for water reticulation.  
 a) Mains under grass berms and footpaths 600mm  
 b) Mains under road carriageway 900mm

2. Watermain 125, 180 & 225 OD - PE100 PN12.5  
 3. All riders 63 OD - PE80 PN12.5  
 4. Stainless Steel bolts and nuts used for flanged connections.  
 5. Metallic Detector Tape provided above all watermains and riders  
 6. All 32mm OD Connections on right of ways are private

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**SLC67086**

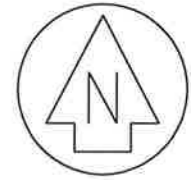
**Water Reticulation As Built Plan Sheet 3 of 3**

DRAWING TITLE

**CLIENT**

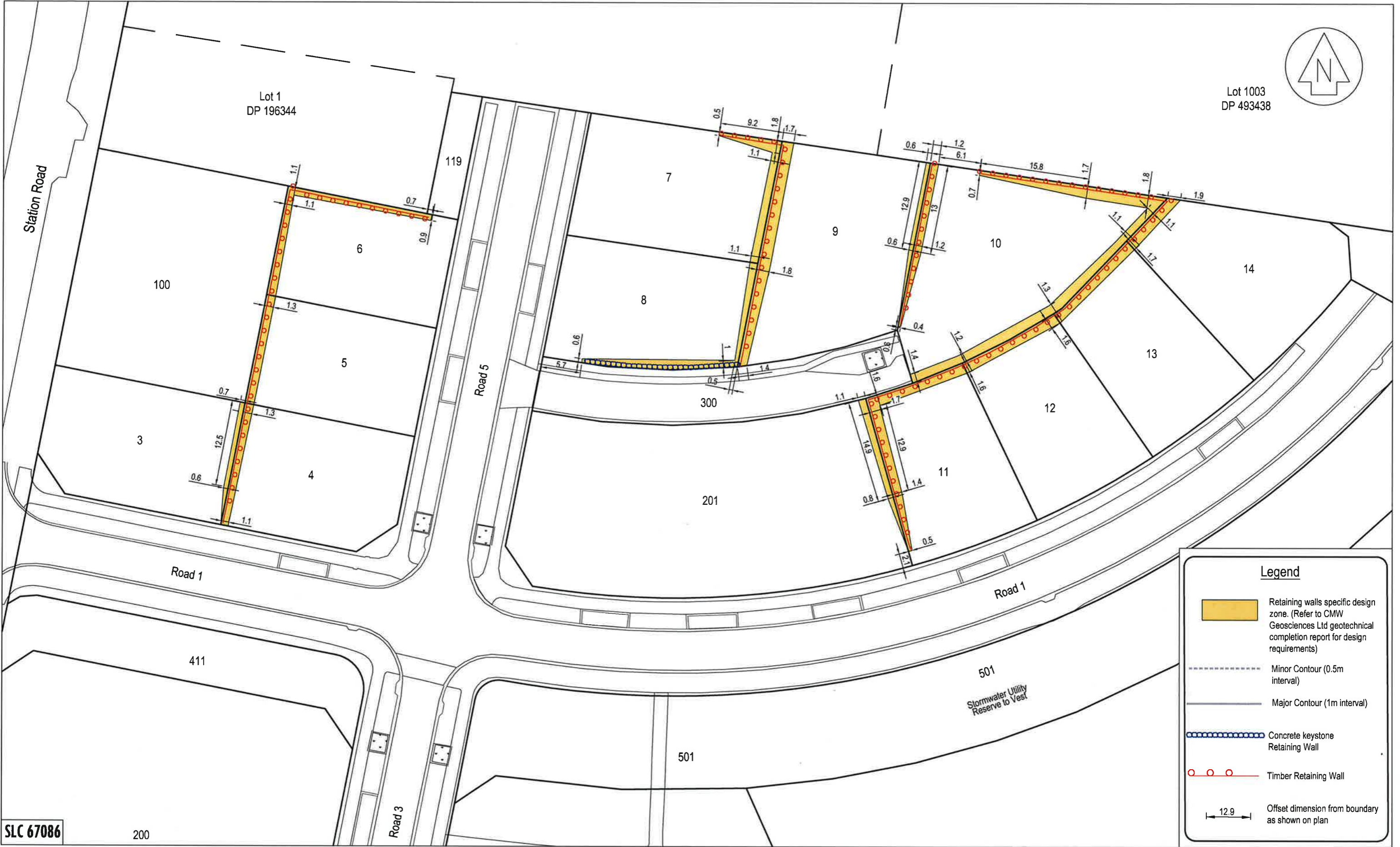
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**Stage 1A & 3**  
**Huapai**

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Lot 1  
DP 196344

Lot 1003  
DP 493438



**Legend**

- Retaining walls specific design zone. (Refer to CMW Geosciences Ltd geotechnical completion report for design requirements)
- Minor Contour (0.5m interval)
- Major Contour (1m interval)
- Concrete keystone Retaining Wall
- Timber Retaining Wall
- Timber Retaining Wall
- 12.9 Offset dimension from boundary as shown on plan

SLC 67086 200

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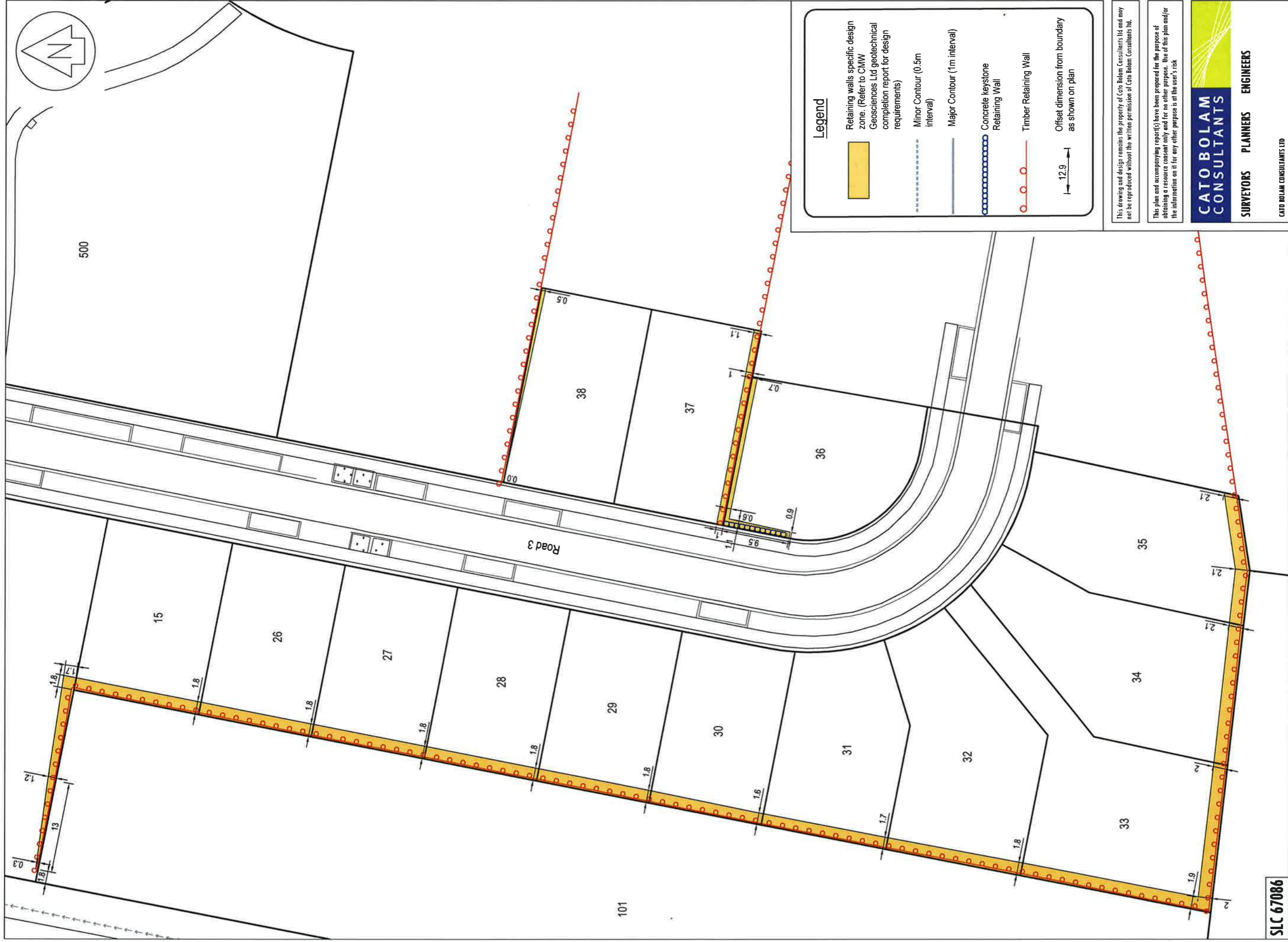
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Stage 1A & 3  
Huapai**

DRAWING TITLE  
**Retaining Wall  
Specific Design Plan  
Sheet 1 of 2**






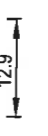
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DIRECTORY		JOB NO
Z:\32522\Acad		<b>32522</b>



**SLC 67086**

**Legend**

-  Retaining walls specific design zone. (Refer to CMW Geosciences Ltd geotechnical completion report for design requirements)
-  Minor Contour (0.5m interval)
-  Major Contour (1m interval)
-  Concrete keystone Retaining Wall
-  Timber Retaining Wall
-  Offset dimension from boundary as shown on plan

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**Stage 1A & 3**  
**Huapai**

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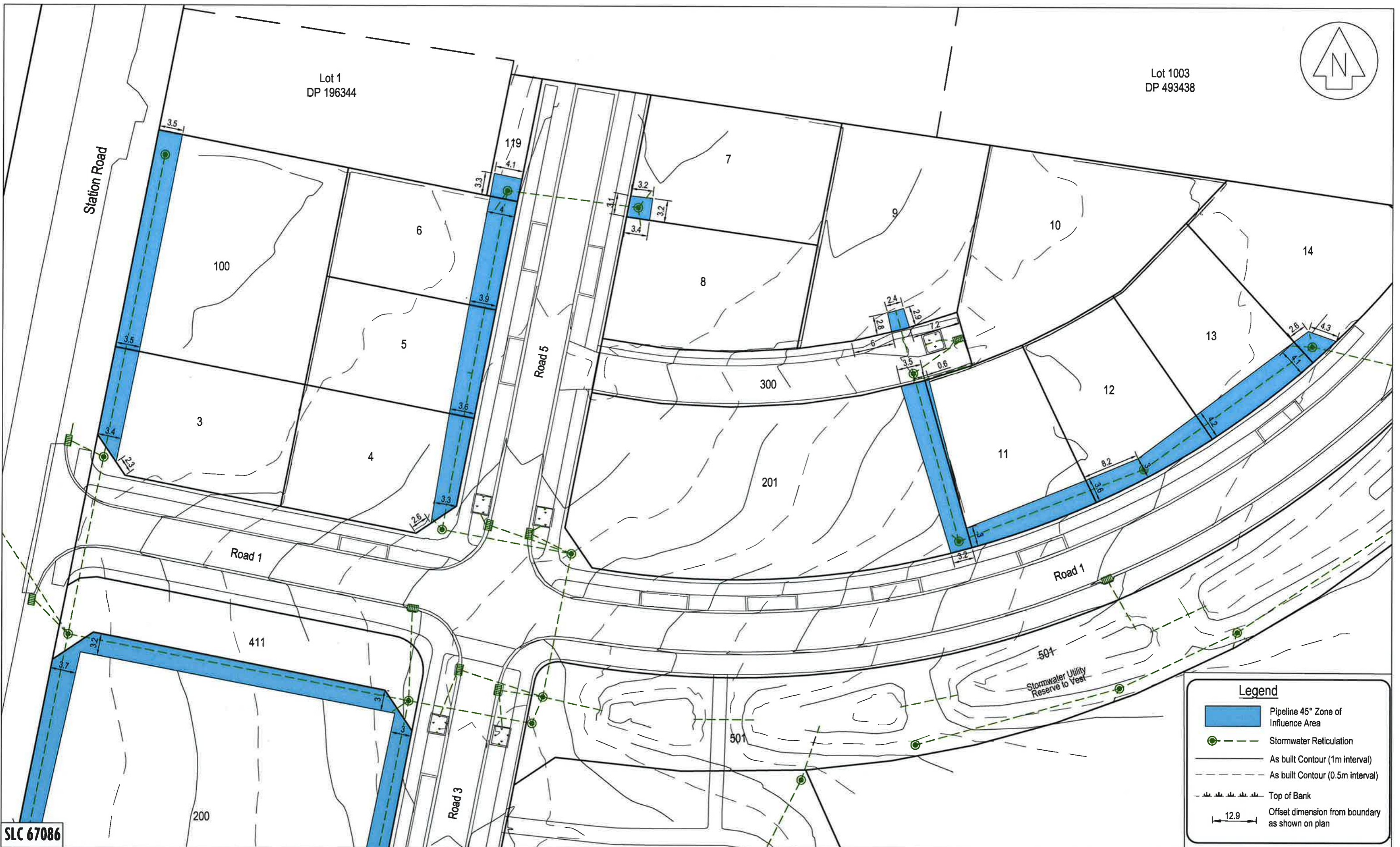
**DRAWING TITLE**

**Retaining Wall**  
**Specific Design Plan**  
**Sheet 2 of 2**



Lot 1  
DP 196344

Lot 1003  
DP 493438



SLC 67086

**Legend**

- Pipeline 45° Zone of Influence Area
- Stormwater Reticulation
- As built Contour (1m interval)
- As built Contour (0.5m interval)
- Top of Bank
- Offset dimension from boundary as shown on plan

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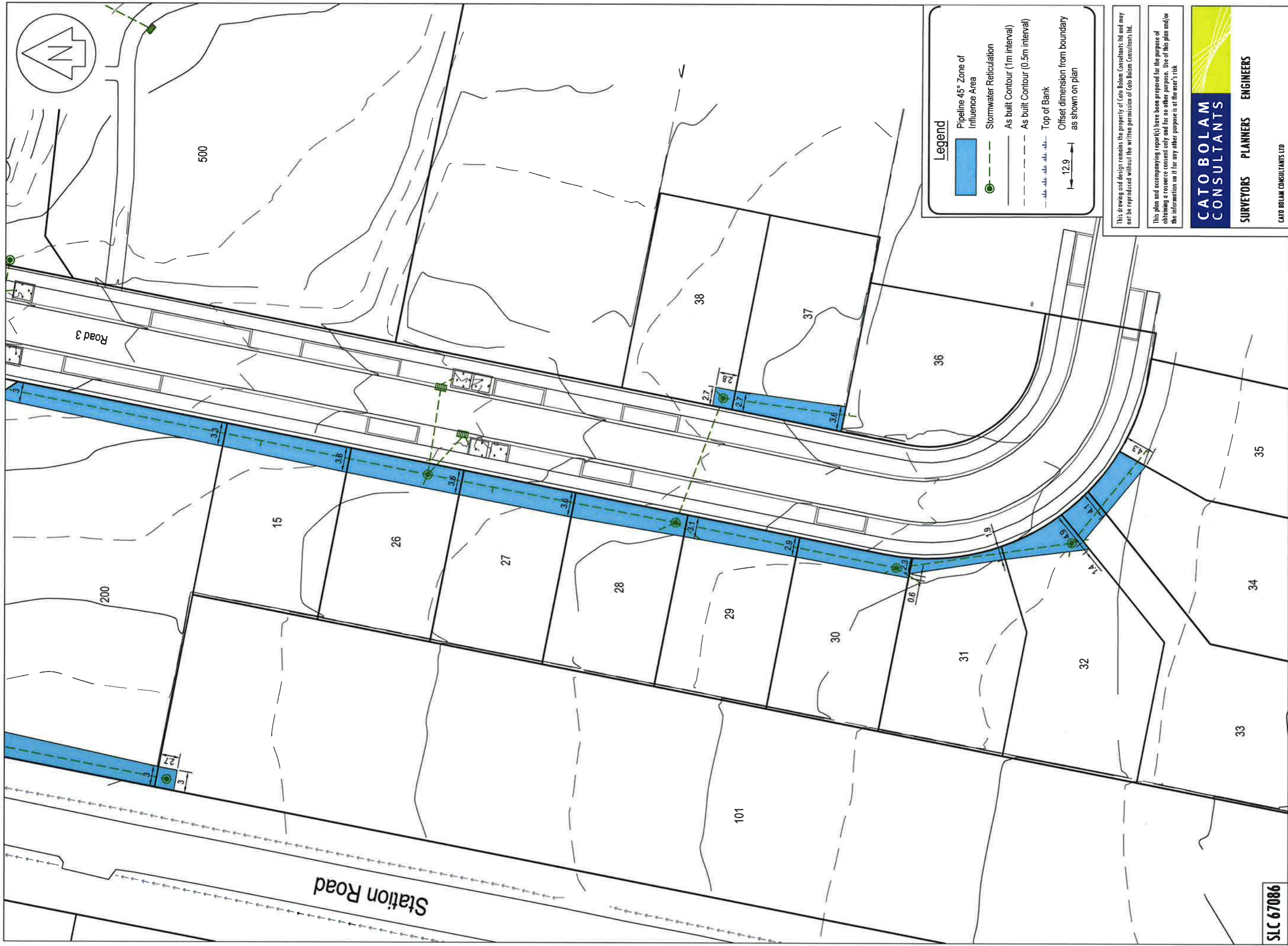
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**Stage 1A & 3**  
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DRAWING TITLE

**Drainage Zone of Influence Plan**  
**Sheet 1 of 2**

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**Stage 1A & 3**  
**Huapai**

DRAWING TITLE  
**Drainage Zone of Influence Plan**  
**Sheet 2 of 2**

ORIGINAL SCALE	1:500	ORIGINAL SIZE	A3	REVISION NO	
DATE	15/11/16	CAD REFERENCE	32522 E621-622	SHEET NO	<b>E622</b>
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**Legend**

- Pipeline 45° Zone of Influence Area
- Stormwater Reticulation
- As built Contour (1m interval)
- As built Contour (0.5m interval)
- Top of Bank
- Offset dimension from boundary as shown on plan

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