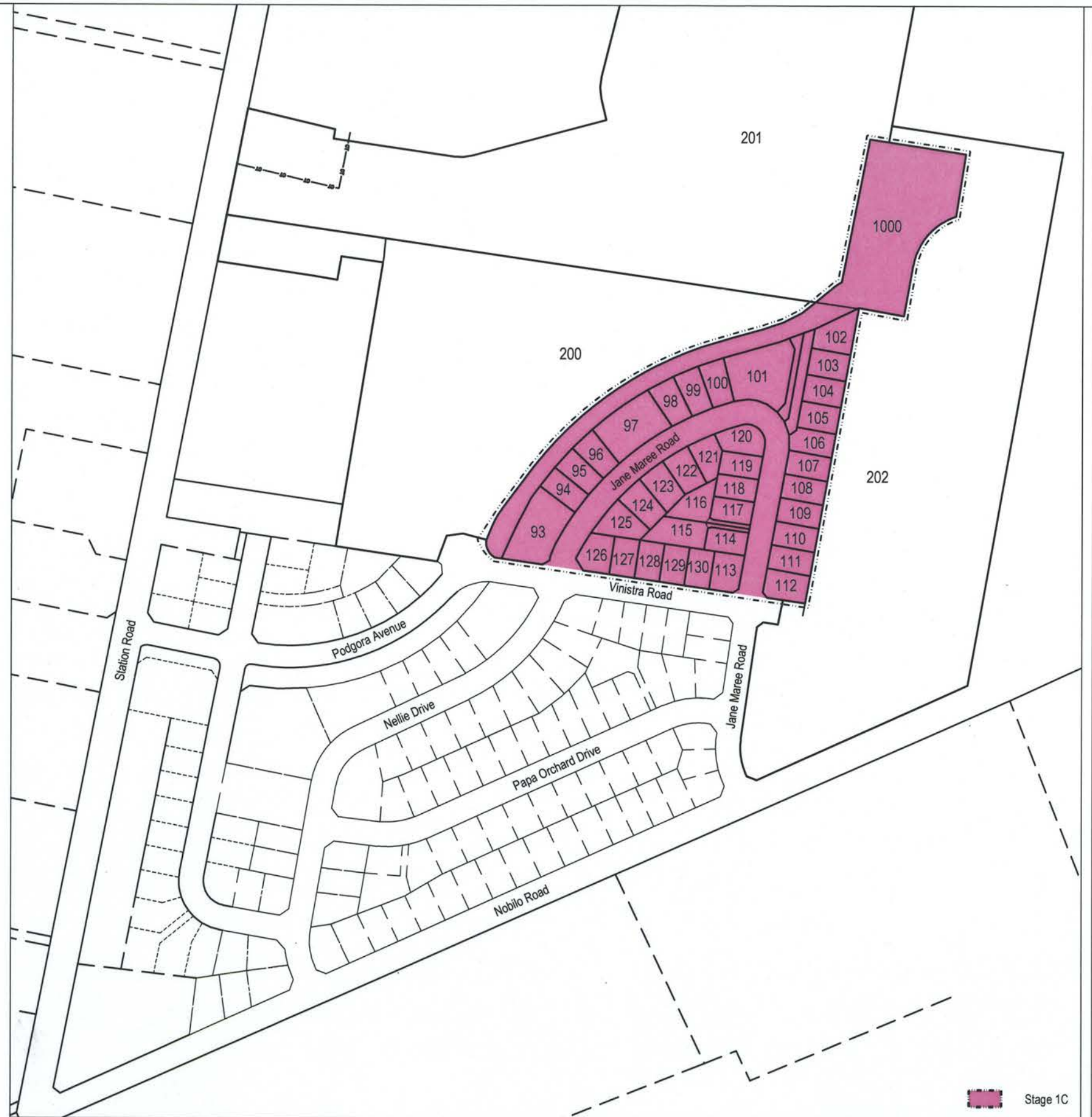


Cabra Developments Ltd Huapai Triangle Sub Precinct A Stage 1C Asbuilt Plans

As Built Plan Set

| | |
|------|--|
| E00 | Cover Sheet |
| E600 | Final Contours & Retaining Walls - Sheet 1 of 4 |
| E601 | Final Contours & Retaining Walls - Sheet 2 of 4 |
| E602 | Final Contours & Retaining Walls - Sheet 3 of 4 |
| E603 | Final Contours & Retaining Walls - Sheet 4 of 4 |
| E604 | Cut Fill - Sheet 1 of 4 |
| E605 | Cut Fill - Sheet 2 of 4 |
| E606 | Cut Fill - Sheet 3 of 4 |
| E607 | Cut Fill - Sheet 4 of 4 |
| E608 | Lots 118-120, 108, 109 & Road undercut and backfilled with certified clay - Sheet 1 of 3 |
| E609 | Lots 118-120, 108, 109 & Road undercut and backfilled with certified clay - Sheet 2 of 3 |
| E610 | Lots 118-120, 108, 109 & Road undercut and backfilled with certified clay - Sheet 3 of 3 |
| E611 | Roading - Sheet 1 of 3 |
| E612 | Roading - Sheet 2 of 3 |
| E613 | Roading - Sheet 3 of 3 |
| E614 | Wastewater Reticulation - Sheet 1 of 3 |
| E615 | Wastewater Reticulation - Sheet 2 of 3 |
| E616 | Wastewater Reticulation - Sheet 3 of 3 |
| E617 | Stormwater Reticulation - Sheet 1 of 4 |
| E618 | Stormwater Reticulation - Sheet 2 of 4 |
| E619 | Stormwater Reticulation - Sheet 3 of 4 |
| E620 | Stormwater Reticulation - Sheet 4 of 4 |
| E621 | Stormwater Attenuation Area A - Sheet 1 of 1 |
| E622 | Water Reticulation - Sheet 1 of 3 |
| E623 | Water Reticulation - Sheet 2 of 3 |
| E624 | Water Reticulation - Sheet 3 of 3 |
| E625 | Retaining Wall Specific Design Plan - Sheet 1 |
| E626 | Drainage Zone of Influence Plan - Sheet 1 |
| E627 | Telecom Network |



LOCATION DIAGRAM

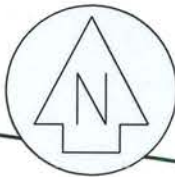
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19 Tamariki Avenue
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Drewa 0946

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As Built Plans - August 2017



Refer to sheet E603 for details

201


Refer to sheet E601 for details

200

202

Refer to sheet E602 for details

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: 
 Licensed Cadastral Surveyor

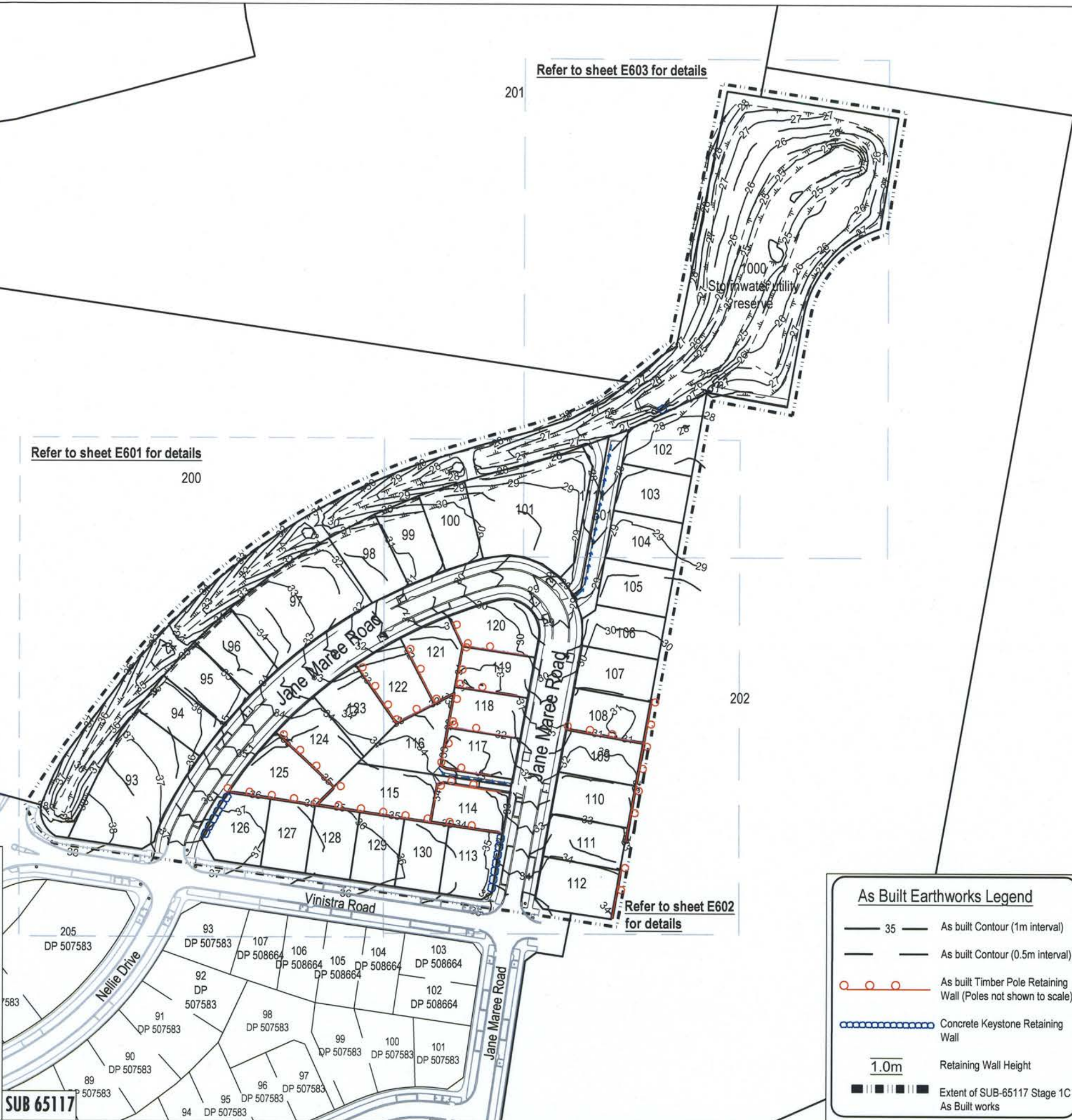
Date: 11/12/17

Name: Michelle Bain







Phone: 09 427 0072

Email: catobolam@catobolam.co.nz

SUB 65117



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 SUB-65117 Stage 1C As Built works

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NOTES

1. Contours are finished ground levels as surveyed at 21/07/2017. Contour interval of 0.5m
2. Levels are in terms of LINZ Datum 1946.
3. Coordinates are in terms of NZTM.
4. All retaining walls over 1.0m high have a pool style fence above the wall.
5. Retaining walls approved and constructed under ABA BC10090856

| REVISION (DESCRIPTIONS) | NAME | DATE |
|-------------------------|------|---------|
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| DESIGNED | | |
| DRAWN | BJ | 07/2017 |
| CHECKED | BM | 07/2017 |
| APPROVED | TL | 07/2017 |



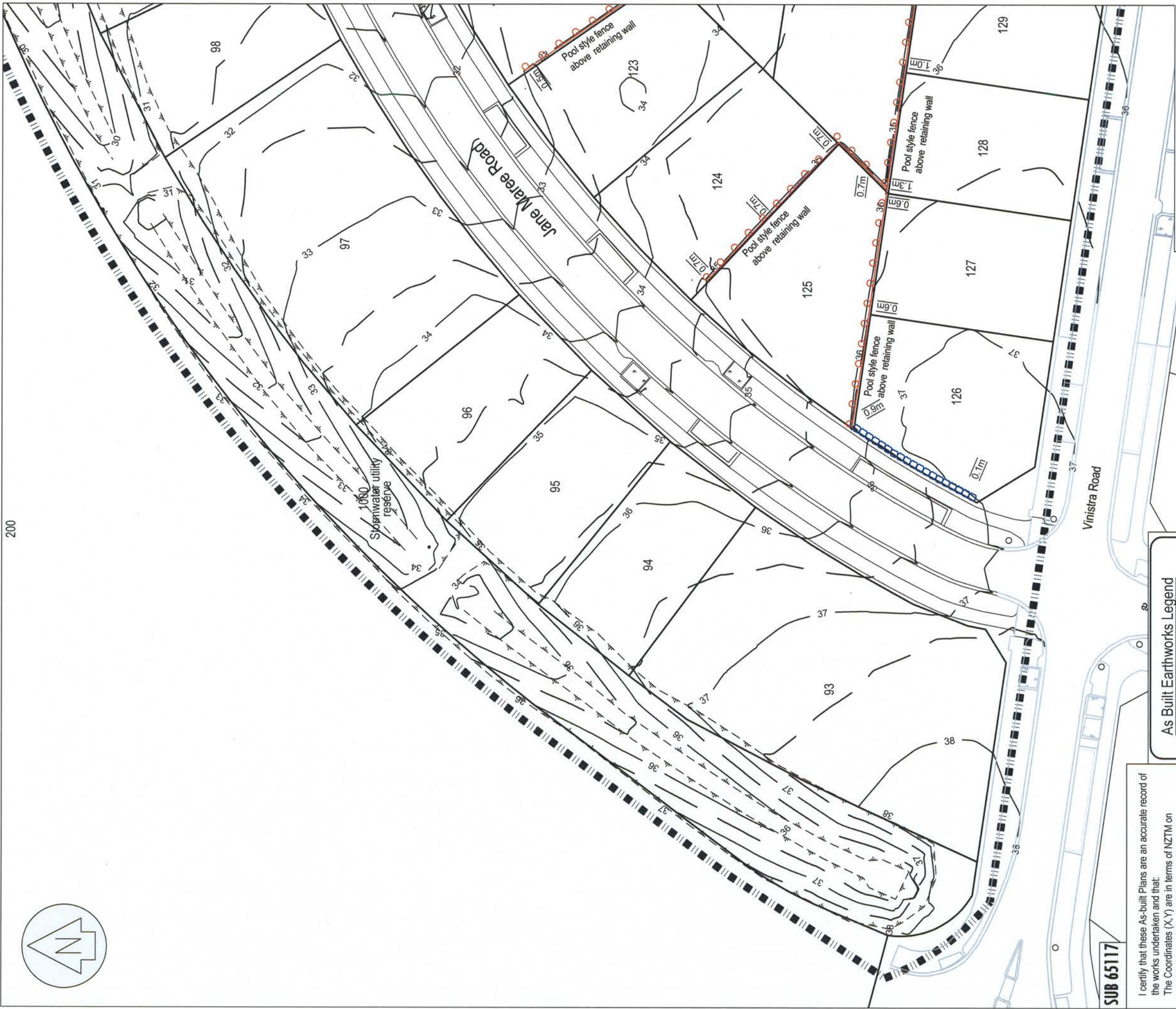
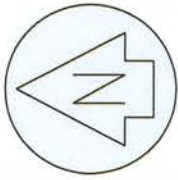
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CLIENT
 Cabra Developments Ltd
 Huapai Triangle Sub Precinct A
 Stage 1C
 Station Road, Huapai


DRAWING TITLE
 Final Contour & Retaining Wall
 As Built Plan
 Sheet 1 of 4

| | | |
|---|------------------------------------|-------------------------|
| ORIGINAL SCALE 1:1500 | ORIGINAL SIZE A3 | REVISION NO |
| DATE 21/07/17 | CAD REFERENCE 34745 E600 - E603 | SHEET NO E600 |
| DIRECTORY Z:\34745\ACAD\As Builts\Stage 1C | | JOB NO 34745 |



SUB 65117

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:  Licensed Cadastral Surveyor
 Date: 11/09/17
 Name: Michelle Bain
 Phone: 09 427 0072
 Email: catobolam@catobolam.co.nz

As Built Earthworks Legend

- 35 — As built Contour (1m interval)
- 36 — As built Contour (0.5m interval)
- 37 — As built Timber Pole Retaining Wall (Poles not shown to scale)
- 38 — Concrete Keystone Retaining Wall
- 39 — Retaining Wall Height
- 40 — Extent of SUB-65117 Stage 1C As Built works

NOTES

1. Contours are finished ground levels as surveyed
2. Levels are in terms of LINZ Datum 1946.
3. Coordinates are in terms of NZTM.
4. All retaining walls over 1.0m high have a pool style fence above the wall.
5. Retaining walls approved and constructed under ABA BC 10090856

Cabra Developments Ltd
Huapai Triangle Sub Precinct A
Stage 1C
Station Road, Huapai

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| DESIGNED | BJ | 07/2017 |
| CHECKED | BM | 07/2017 |
| APPROVED | TL | 07/2017 |

DRAWING TITLE

Final Contour & Retaining Wall
As Built Plan
 Sheet 2 of 4

| ORIGINAL SCALE | ORIGINAL SIZE | REVISION NO |
|---------------------------------|------------------------------|-------------|
| 1:500 | A3 | |
| DATE | CAD REFERENCE | SHEET NO |
| 21/07/2017 | 34745 E600 - E603 Final Cont | E601 |
| DIRECTORY | | JOB NO |
| Z:\34745\ACAD\As-Built\Stage 1C | | 34745 |

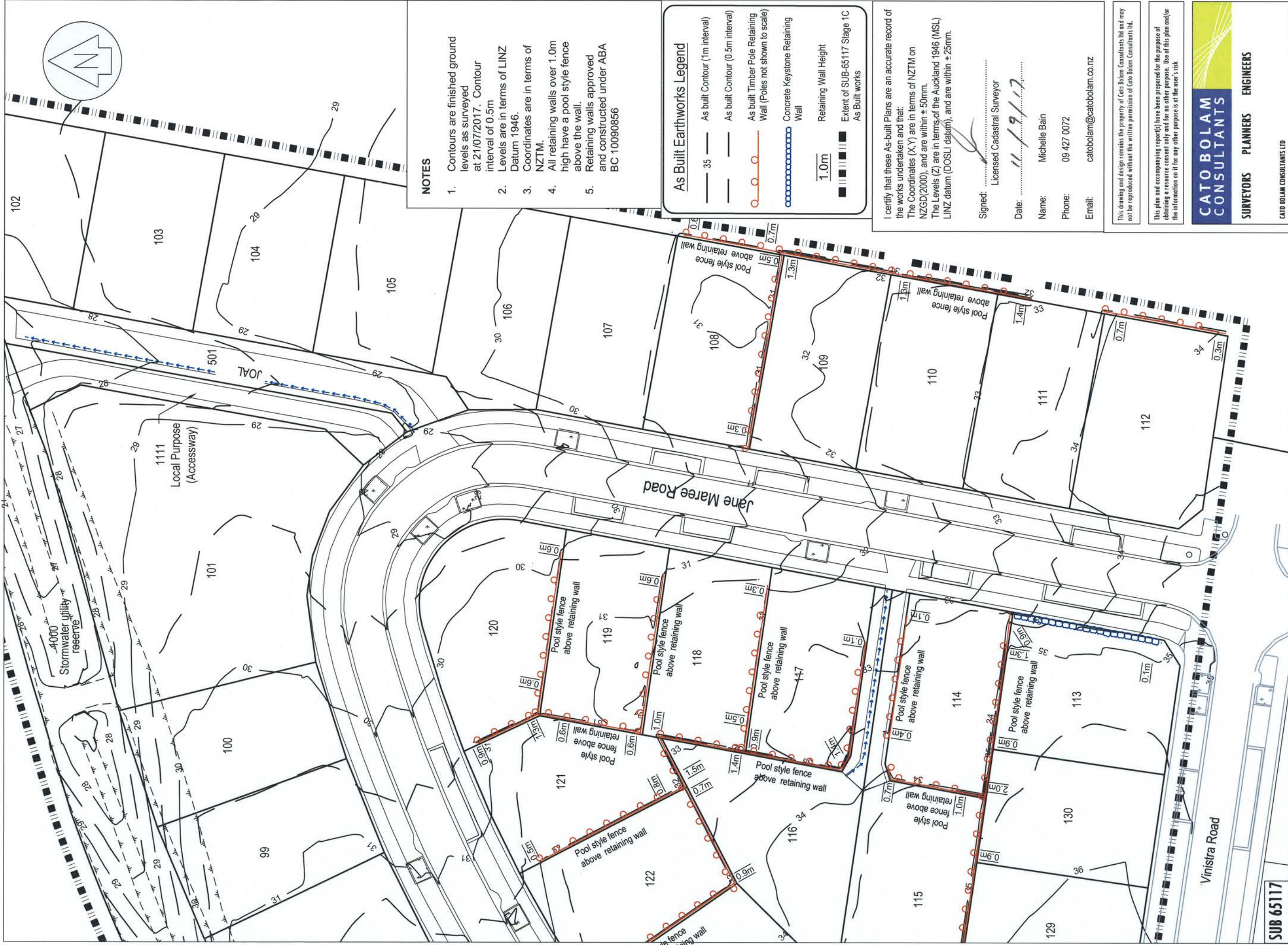
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NOTES

1. Contours are finished ground levels as surveyed at 21/07/2017. Contour interval of 0.5m
Levels are in terms of LINZ Datum 1946.
2. Coordinates are in terms of NZTM.
3. All retaining walls over 1.0m high have a pool style fence above the wall.
4. Retaining walls approved and constructed under ABA and constructed under ABA BC 10090856

As Built Earthworks Legend

- 35 — As built Contour (1m interval)
- 35 — 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 SUB-65117 Stage 1C
- ■ ■ ■ ■ As Built works

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:  Licensed Cadastral Surveyor
 Date: 11/19/17
 Name: Michelle Bain
 Phone: 09 427 0072
 Email: catobolam@catobolam.co.nz

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|----------------|---------------------------------|---------------|-----------------------------|-------------|-------|
| ORIGINAL SCALE | 1:500 | ORIGINAL SIZE | A3 | REVISION NO | |
| DATE | 21/07/2017 | CAD REFERENCE | 34745 E600 - E603 final.cad | SHEET NO | E602 |
| DIRECTORY | Z:\34745\ACAD\As-Built\Stage 1C | | | JOB NO | 34745 |

SUB 65117

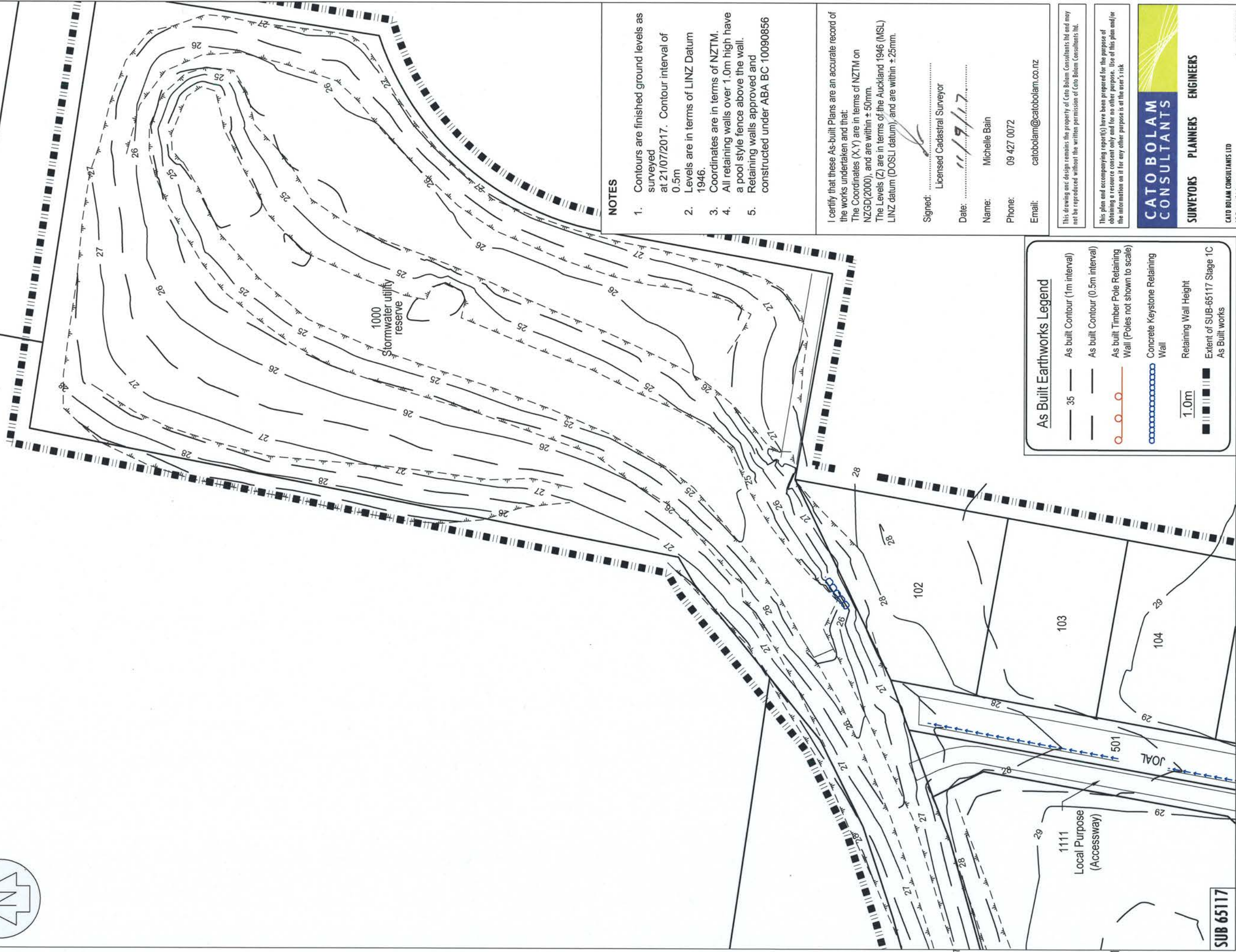
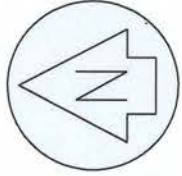
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Cabrab Developments Ltd
Huapai Triangle Sub Precinct A
Stage 1C
Station Road, Huapai

DRAWING TITLE

Final Contour & Retaining Wall
As Built Plan
Sheet 3 of 4

| REVISION (DESCRIPTIONS) | NAME | DATE |
|-------------------------|------|---------|
| SURVEYED | BJ | 07/2017 |
| DESIGNED | BJ | 07/2017 |
| DRAWN | BM | 07/2017 |
| CHECKED | TL | 07/2017 |
| APPROVED | | |



As Built Earthworks Legend

- 35 — As built Contour (1m interval)
- 0.5m — 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 SUB-65117 Stage 1C
- ■ ■ As Built works

1.0m

NOTES

1. Contours are finished ground levels as surveyed at 21/07/2017. Contour interval of 0.5m
2. Levels are in terms of LINZ Datum 1946.
3. Coordinates are in terms of NZTM.
4. All retaining walls over 1.0m high have a pool style fence above the wall.
5. Retaining walls approved and constructed under ABA BC 10090856

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:  Licensed Cadastral Surveyor
 Date: 11/9/17
 Name: Michelle Bain
 Phone: 09 427 0072
 Email: catobolam@catobolam.co.nz

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 email: catobolam@catobolam.co.nz

| | | | | | |
|----------------|---------------------------------|---------------|------------------------------|-------------|-------|
| ORIGINAL SCALE | 1:500 | ORIGINAL SIZE | A3 | REVISION NO | |
| DATE | 21/07/2017 | CAD REFERENCE | 34745 E600 - E603 Final Cont | SHEET NO | E603 |
| DIRECTORY | Z:\34745\ACAD\As Built\Stage 1C | | | JOB NO | 34745 |

DRAWING TITLE

**Final Contour & Retaining Wall
 As Built Plan
 Sheet 4 of 4**

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**Cabra Developments Ltd
 Huapai Triangle Sub Precinct A
 Stage 1C
 Station Road, Huapai**

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Refer to sheet E607 for details

Refer to sheet E605 for details

Refer to sheet E606 for details

Cut to Fill Legend

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

| REVISION (DESCRIPTIONS) | NAME | DATE |
|-------------------------|------|---------|
| SURVEYED | BJ | 07/2017 |
| DESIGNED | | |
| DRAWN | BJ | 07/2017 |
| CHECKED | BM | 07/2017 |
| APPROVED | TL | 07/2017 |

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CLIENT **Cabra Developments Ltd**
Huapai Triangle Sub Precinct A
Stage 1C
Station Road, Huapai

DRAWING TITLE
Cut Fill
As Built Plan
Sheet 1 of 4

- 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, to finished ground level as surveyed on 21/07/2017. Excludes undercuts which are shown on plans E608 - E610

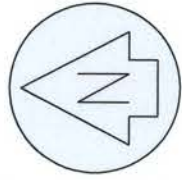
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Signed:
 Licensed Cadastral Surveyor
 Date: 11/9/17
 Name: Michelle Bain
 Phone: 09 427 0072
 Email: catobolam@catobolam.co.nz

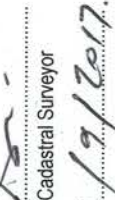


SUB 65117

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|---|------------------------------------|-------------------------|
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| DATE 21/07/17 | CAD REFERENCE 34745 E600 - E603 | SHEET NO E604 |
| DIRECTORY Z:\34745\ACAD\As Builts\Stage 1C | | JOB NO 34745 |









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Signed: 
 Licensed Cadastral Surveyor
 Date: 11/19/2017
 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
-  As built Timber Retaining Wall
-  Concrete Key Stone Retaining Wall
-  Subsoil Drainage & depth (m)

NOTES
GENERAL

1. Levels are in terms of LINZ Datum 1946.
2. Coordinates are in terms of NZTM.
3. All infrastructure is public unless otherwise shown.
4. Cut/fill contours are from the original ground level, to finished ground level as surveyed on 21/07/2017. Excludes undercuts which are shown on plans E608 - E610

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Huapai Triangle Sub Precinct A
Stage 1C
Station Road, Huapai

DRAWING TITLE

Cut Fill
As Built Plan
Sheet 2 of 4

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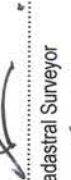


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| ORIGINAL SCALE | 1:500 | ORIGINAL SIZE | A3 | REVISION NO | |
| DATE | 21/07/2017 | CAD REFERENCE | 34745 E608 - E607 cut fill | SHEET NO | E605 |
| DIRECTORY | Z:\34745\ACAD\As-Built\Stage 1C | | | JOB NO | 34745 |

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Signed:  Licensed Cadastral Surveyor
 Date: 11/9/17
 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
- As built Timber Retaining Wall
- Concrete Key Stone Retaining Wall
- Subsoil Drainage & depth (m)

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, to finished ground level as surveyed on 21/07/2017. Excludes undercuts which are shown on plans E608 - E610

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| DATE | 21/07/2017 | CAD REFERENCE | 04/45-E604 - E607 cut fill | SHEET NO | E606 |
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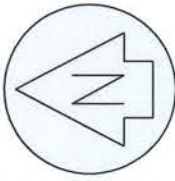
Cut Fill As Built Plan
 Sheet 3 of 4

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Cabra Developments Ltd
 Huapai Triangle Sub Precinct A
 Stage 1C
 Station Road, Huapai

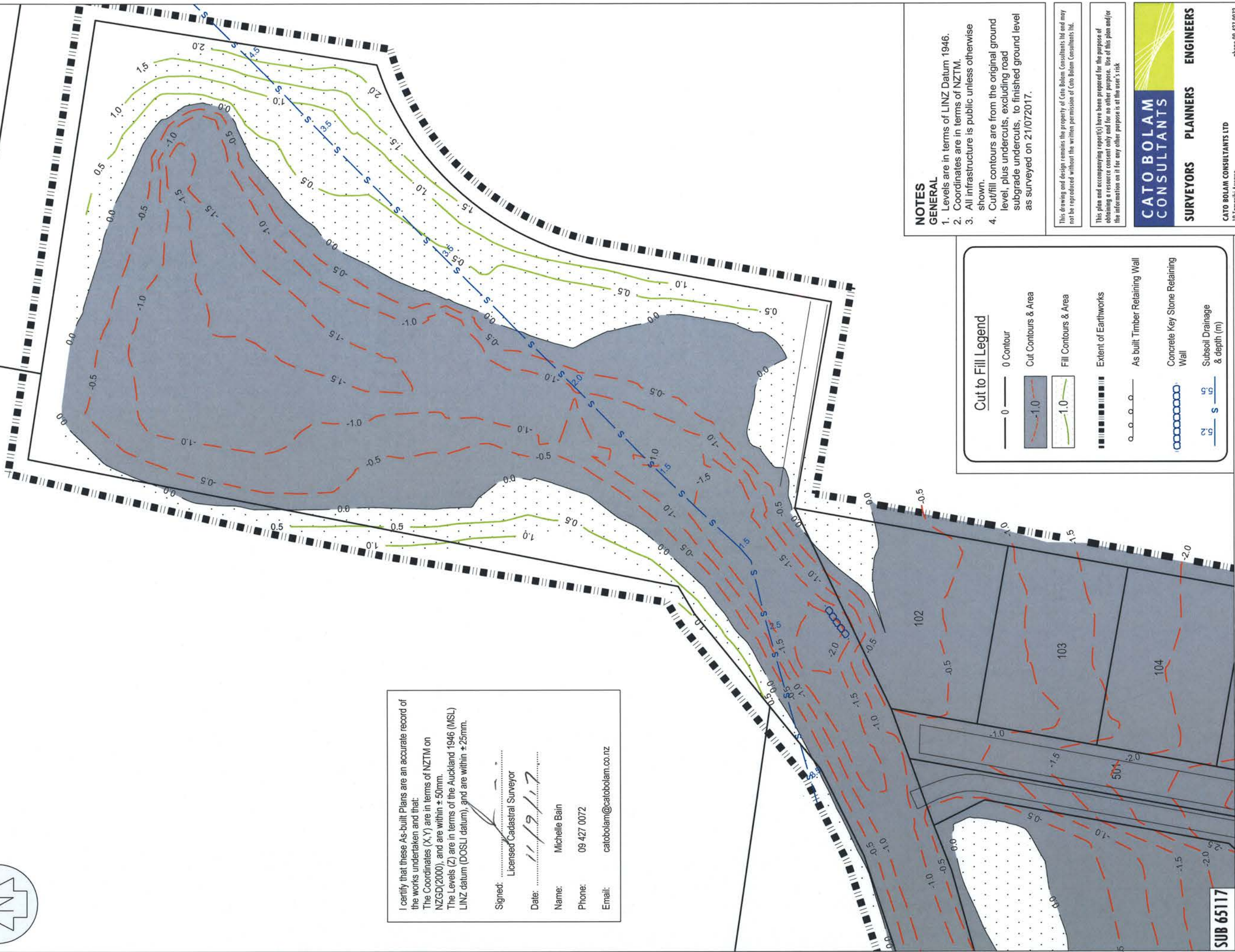
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|-------------------------|------|---------|
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| DESIGNED | BJ | 07/2017 |
| DRAWN | BM | 07/2017 |
| CHECKED | TL | 07/2017 |
| APPROVED | | |

SUB 65117




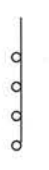




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 The Coordinates (X,Y) are in terms of NZTM on NZGD(2000), and are within ± 50mm.
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Signed: 
 Licensed Cadastral Surveyor
 Date: 11/19/17
 Name: Michelle Bain
 Phone: 09 427 0072
 Email: catobolam@catobolam.co.nz



Cut to Fill Legend

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

NOTES
GENERAL
 1. Levels are in terms of LINZ Datum 1946.
 2. Coordinates are in terms of NZTM.
 3. All infrastructure is public unless otherwise shown.
 4. Cut/fill contours are from the original ground level, plus undercuts, excluding road subgrade undercuts, to finished ground level as surveyed on 21/07/2017.

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| | | | | | |
|----------------|---------------------------------|---------------|----------------------------|-------------|-------|
| ORIGINAL SCALE | 1:500 | ORIGINAL SIZE | A3 | REVISION NO | |
| DATE | 21/07/2017 | CAD REFERENCE | B4745 E604 - E607 Cut Fill | SHEET NO | E607 |
| DIRECTORY | Z:\34745\ACAD\As Built\Stage 1C | | | JOB NO | 34745 |

DRAWING TITLE

**Cut Fill
 As Built Plan
 Sheet 4 of 4**

CLIENT

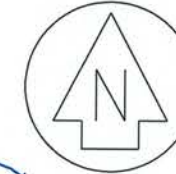
**Cabra Developments Ltd
 Huapai Triangle Sub Precinct A
 Stage 1C
 Station Road, Huapai**

SUB 65117

| REVISION (DESCRIPTIONS) | NAME | DATE |
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Refer to sheet E610 for details

Refer to sheet E609 for details



Cut to Fill Legend

- 0 Contour
- 1.0m Contour
- Extent of Earthworks
- As built Timber Retaining Wall
- Concrete Key Stone Retaining Wall
- Subsoil Drainage & depth (m)

| REVISION (DESCRIPTIONS) | NAME | DATE |
|-------------------------|------|---------|
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| APPROVED | TL | 08/2017 |

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SURVEYORS PLANNERS ENGINEERS

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 fax 09-426 7331
 email catobolam@catobolam.co.nz

CLIENT
Cabra Developments Ltd
 Huapai Triangle Sub Precinct A
 Stage 1C
 Station Road, Huapai

DRAWING TITLE
Lots 94-97, 108,109, 118-120,1000 & Road Undercut Areas
 Sheet 1 of 3

- NOTES GENERAL**
1. Levels are in terms of LINZ Datum 1946.
 2. Coordinates are in terms of NZTM.
 3. All infrastructure is public unless otherwise shown.
 4. Cut/fill contours are from the contractors undercut surface, to finished ground level as surveyed on 21/072017.

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:
 Licensed Cadastral Surveyor
 Date: 11/9/17
 Name: Michelle Bain
 Phone: 09 427 0072
 Email: catobolam@catobolam.co.nz

SUB 65117

| | | |
|---|--------------------------------------|-------------------------|
| ORIGINAL SCALE 1:1500 | ORIGINAL SIZE A3 | REVISION NO |
| DATE 02/08/17 | CAD REFERENCE 34745 E608- E610 UC | SHEET NO E608 |
| DIRECTORY Z:\34745\ACAD\As Builts\Stage 1C | | JOB NO 34745 |



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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: 11/12/17

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

Cut to Fill Legend

- 0 Contour
- 1.0 Contour
- Fill Contours from undercut surface to finished ground level.
- █ Extent of Earthworks
- As built Timber Retaining Wall
- Concrete Key Stone Retaining Wall
- S Subsoil Drainage & depth (m)

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 contractors undercut surface, to finished ground level as surveyed on 21/072017.

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| | | | | | |
|----------------|---------------------------------|---------------|---------------------|-------------|-------|
| ORIGINAL SCALE | 1:500 | ORIGINAL SIZE | A3 | REVISION NO | |
| DATE | 02/08/17 | CAD REFERENCE | 34745 E608- E610 UC | SHEET NO | E609 |
| DIRECTORY | Z:\34745\ACAD\As Built\Stage 1C | | | JOB NO | 34745 |

DRAWING TITLE

Lots 94-97, 108,109, 118-120,1000 & Road Undercut Areas
 Sheet 2 of 3

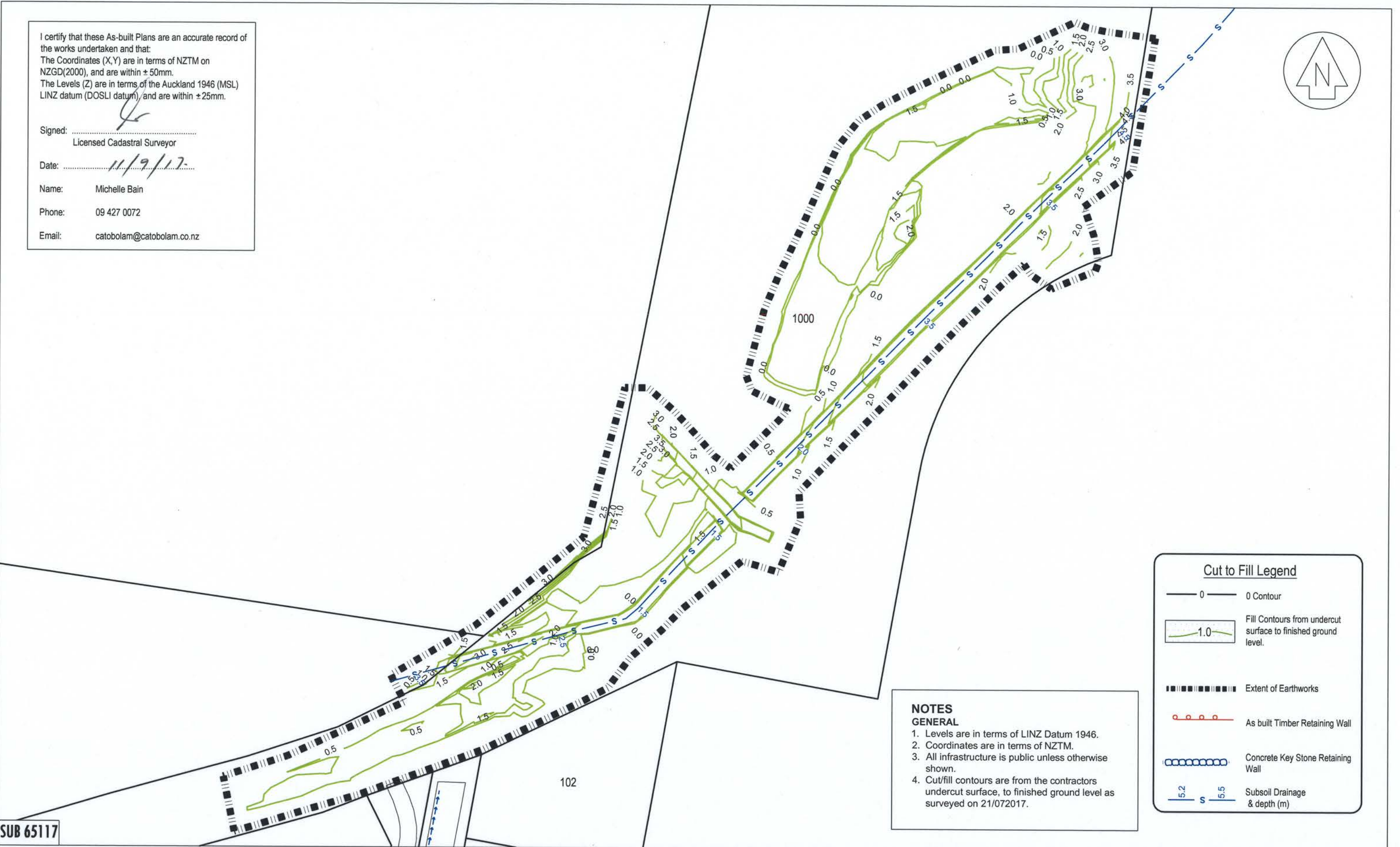
CLIENT

Cabra Developments Ltd
Huapai Triangle Sub Precinct A
Stage 1C
Station Road, Huapai




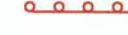


| REVISION (DESCRIPTIONS) | NAME | DATE |
|-------------------------|------|---------|
| SURVEYED | BJ | 08/2017 |
| DESIGNED | BJ | 08/2017 |
| CHECKED | BM | 08/2017 |
| APPROVED | TL | 08/2017 |

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

Signed: 
 Licensed Cadastral Surveyor
 Date: 11/9/17
 Name: Michelle Bain
 Phone: 09 427 0072
 Email: catobolam@catobolam.co.nz



Cut to Fill Legend

-  0 Contour
-  Fill Contours from undercut surface to finished ground level.
-  Extent of Earthworks
-  As built Timber Retaining Wall
-  Concrete Key Stone Retaining Wall
-  Subsoil Drainage & depth (m)

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 contractors undercut surface, to finished ground level as surveyed on 21/072017.

SUB 65117

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 Orewa 0946 email catobolam@catobolam.co.nz

| REVISION (DESCRIPTIONS) | NAME | DATE |
|-------------------------|------|-------|
| SURVEYED | BJ | 08/17 |
| DESIGNED | | |
| DRAWN | BJ | 08/17 |
| CHECKED | BM | 08/17 |
| APPROVED | TL | 08/17 |

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CLIENT
Cabra Developments Ltd
 Huapai Triangle Sub Precinct A
 Stage 1C
 Station Road, Huapai

DRAWING TITLE
Lots 94-97, 108,109, 118-120,1000
& Road Undercut Areas
 Sheet 3 of 3

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| | | |
|---|--------------------------------------|-------------------------|
| ORIGINAL SCALE 1:500 | ORIGINAL SIZE A3 | REVISION NO |
| DATE 02/08/17 | CAD REFERENCE 34745 E608- E610 UC | SHEET NO E610 |
| DIRECTORY Z:\34745\ACAD\As Builts\Stage 1C | | JOB NO 34745 |

NOTES

GENERAL

1. Levels are in terms of LINZ Datum 1946.
2. Coordinates are in terms of NZTM.
3. All infrastructure is public unless otherwise shown.

Pavement Formation

Road
 Subgrade - Stabilised with 14kg/m² lime to a depth of 250mm
 Subbase - 250mm GAP65
 Basecourse - 100mm TNZ AP40
 Seal - 30mm DG10 hotmix on grade 4 chipseal membrane

Kerb & channel

machine laid low profile mountable kerb

Parking Bays

Subgrade - lime stabilised with 14kg/m² to a depth of 250mm
 175mm 20MPa exposed aggregate concrete with 4kg/m² black oxide, one layer of 665 mesh on 100mm GAP65 subbase

Footpaths

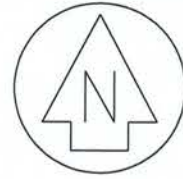
1.8m - 2.5m wide, 125mm 20MPa concrete on 50mm AP25 bedding

Vehicle Crossings

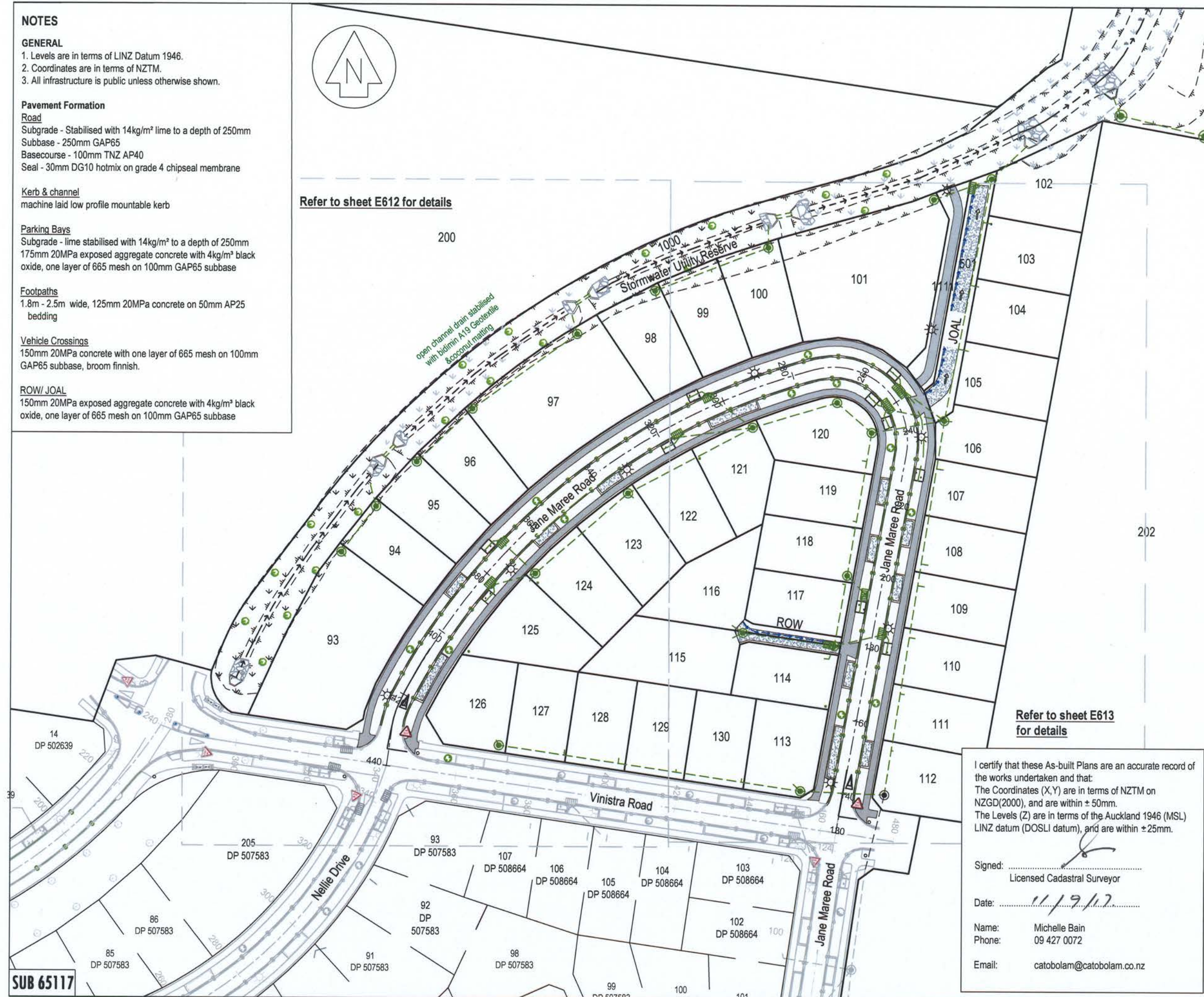
150mm 20MPa concrete with one layer of 665 mesh on 100mm GAP65 subbase, broom finish.

ROW/JOAL

150mm 20MPa exposed aggregate concrete with 4kg/m² black oxide, one layer of 665 mesh on 100mm GAP65 subbase



Refer to sheet E612 for details



Refer to sheet E613 for details

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Signed: _____
 Licensed Cadastral Surveyor

Date: 11/9/17

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

SUB 65117

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Roading As Built Legend

- Jane Maree Road
Street Lights Cree XSP1 IP66 T3ME 29W system 4000K on vicpole round tapered 8m pole and 1m arm 0 degree tilt. (700mm setback) (G=80 Candela=282)
- Lot 1111 Pedestrian Access Way
Street lights Cree XSP1 IP66 T210 22W system 4000K on Vicpole round tapered 5m pole and no arm degree tilt (set back behind footpath) (G=80 Candela=317)
- Pukatea (Green finger reserve)
- Spire Ash (Jane Maree Road)
- Concrete Footpath / Vehicle Crossing
- Cesspits (Semi recessed)
- Exposed Concrete Parking Bay
- Rain Garden (RG)
- Under channel drains
- Overland Flowpath

| REVISION (DESCRIPTIONS) | NAME | DATE |
|-------------------------|------|-------|
| SURVEYED | BJ | 08/17 |
| DESIGNED | | |
| DRAWN | BJ | 08/17 |
| CHECKED | BM | 08/17 |
| APPROVED | TL | 08/17 |

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SURVEYORS PLANNERS ENGINEERS

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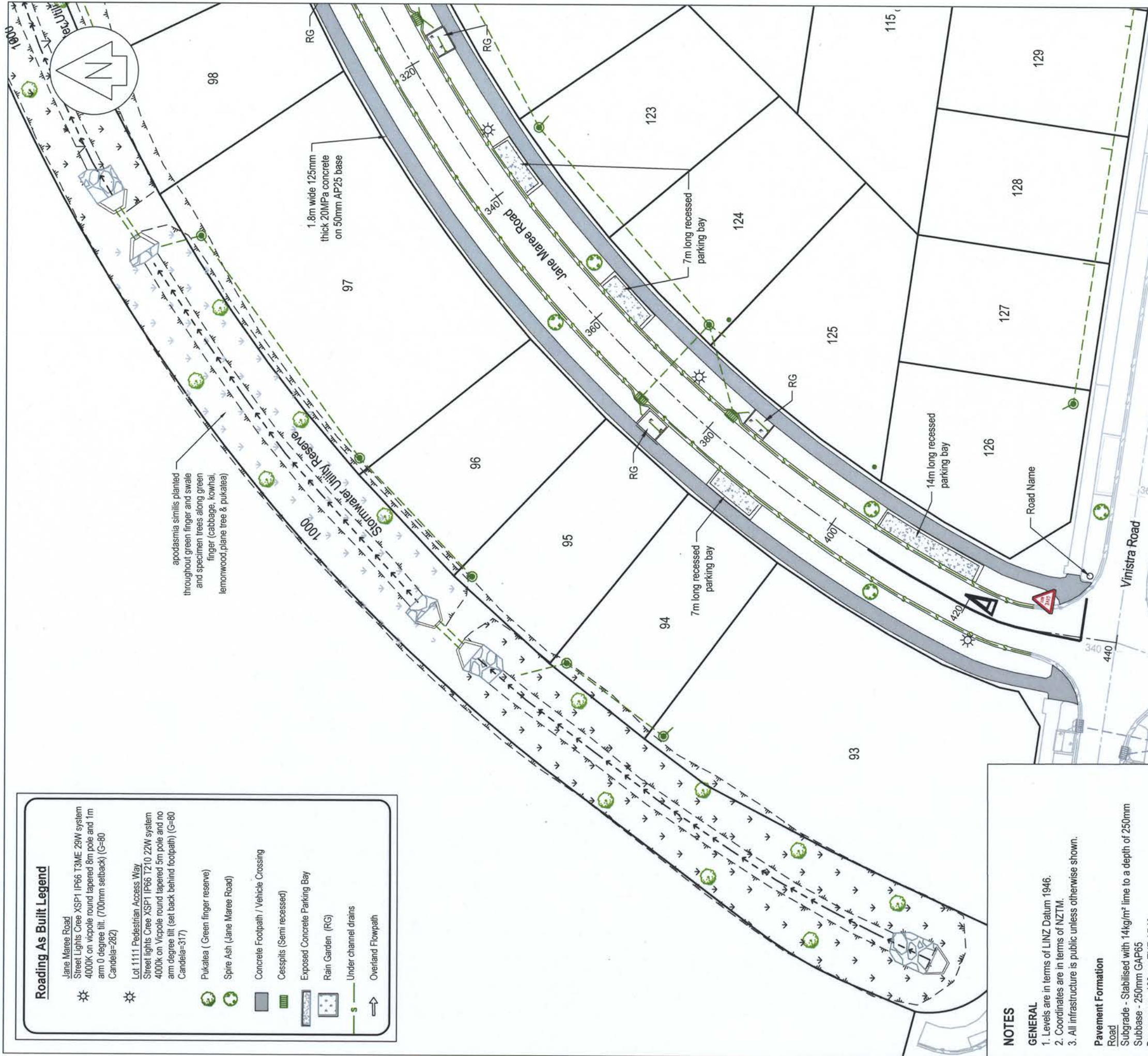
CLIENT **Cabra Development Ltd**
Huapai Triangle Sub Precinct A
Stage 1C
Station Road Huapai

DRAWING TITLE
Road
As Built Plan
 Sheet 1 of 3

| | | |
|----------------------------------|-------------------------|-------------|
| ORIGINAL SCALE | ORIGINAL SIZE | REVISION NO |
| 1:1000 | A3 | |
| DATE | CAD REFERENCE | SHEET NO |
| 03/08/2017 | 34745 E611-E613 Roading | E611 |
| DIRECTORY | | JOB NO |
| Z:\34745\ACAD\As Builts\Stage 1C | | 34745 |

Roading As Built Legend

- Jane Maree Road
Street Lights Cree XSP1 IP66 T3ME 29W system
4000K on vicolpole round tapered 8m pole and 1m arm 0 degree tilt. (700mm setback) (G=80)
Candela=282
- Lot 1111 Pedestrian Access Way
Street lights Cree XSP1 IP66 T210 22W system
4000k on vicolpole round tapered 5m pole and no arm degree tilt (set back behind footpath) (G=80)
Candela=317
- Pukatea (Green finger reserve)
- Spire Ash (Jane Maree Road)
- Concrete Footpath / Vehicle Crossing
- Cesspits (Semi recessed)
- Exposed Concrete Parking Bay
- Rain Garden (RG)
- Under channel drains
- Overland Flowpath



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 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 (DOSU datum), and are within ± 25mm.

Signed:
 Licensed Cadastral Surveyor

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

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/m³ lime to a depth of 250mm
 Subbase - 250mm GAP65
 Basecourse - 100mm TNZ AP40
 Seal - 30mm DG10 hotmix on grade 4 chipseal membrane

Kerb & channel
 machine laid low profile mountable kerb

Parking Bays
 Subgrade - lime stabilised with 14kg/m³ to a depth of 250mm
 175mm 20MPa exposed aggregate concrete with 4kg/m³ black oxide, one layer of 665 mesh on 100mm GAP65 subbase

Footpaths
 1.8m - 2.5m wide, 125mm 20MPa concrete on 50mm AP25 bedding

Vehicle Crossings
 150mm 20MPa concrete with one layer of 665 mesh on 100mm GAP65 subbase, broom finish.

ROW/ JOAL
 150mm 20MPa exposed aggregate concrete with 4kg/m³ black oxide, one layer of 665 mesh on 100mm GAP65 subbase

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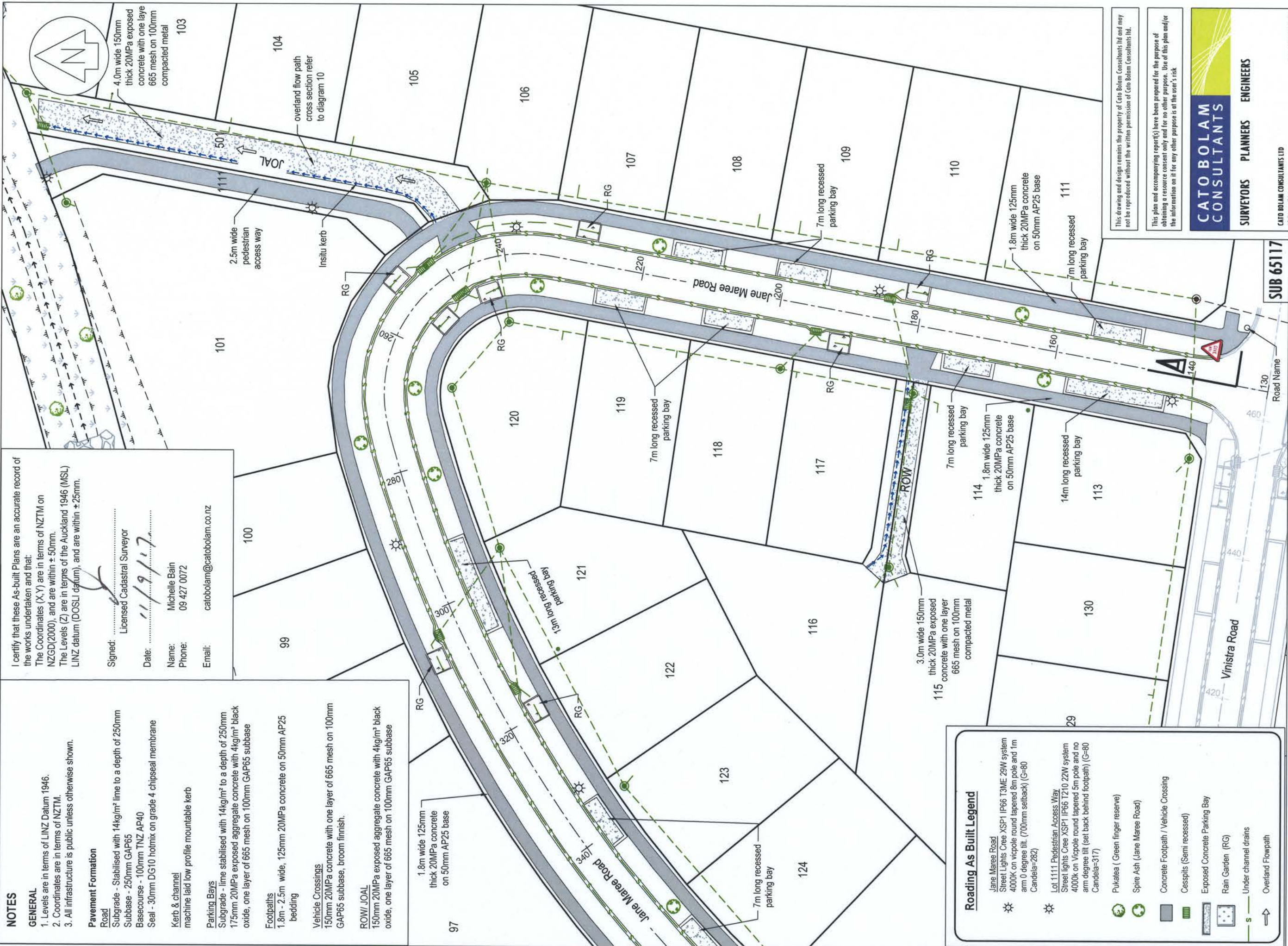
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 phone 09-427 0072
 fax 09-426 7331
 email catobolam@catobolam.co.nz

| | | | | | |
|----------------|---------------------------------|---------------|--------------------------|-------------|-------|
| ORIGINAL SCALE | 1:500 | ORIGINAL SIZE | A3 | REVISION NO | |
| DATE | 3/08/2017 | CAD REFERENCE | 34745 E611-E613 Rounding | SHEET NO | E612 |
| DIRECTORY | Z:\34745\ACAD\As Built\Stage 1C | | | JOB NO | 34745 |

Road
As Built Plan
 Sheet 2 of 3

Cabra Developments Ltd
Huapai Triangle Sub Precinct A
Stage 1C
Station Road, Huapai

| REVISION (DESCRIPTIONS) | NAME | DATE |
|-------------------------|------|-------|
| SURVEYED | BJ | 08/17 |
| DESIGNED | BJ | 08/17 |
| DRAWN | BJ | 08/17 |
| CHECKED | BA | 08/17 |
| APPROVED | TL | 08/17 |



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/m² lime to a depth of 250mm
 Subbase - 250mm GAP65
 Basecourse - 100mm TNZ AP40
 Seal - 30mm DG10 hotmix on grade 4 chipseal membrane

Kerb & channel
 machine laid low profile mountable kerb

Parking Bays
 Subgrade - lime stabilised with 14kg/m² to a depth of 250mm
 175mm 20MPa exposed aggregate concrete with 4kg/m³ black oxide, one layer of 665 mesh on 100mm GAP65 subbase

Footpaths
 1.8m - 2.5m wide, 125mm 20MPa concrete on 50mm AP25 bedding

Vehicle Crossings
 150mm 20MPa concrete with one layer of 665 mesh on 100mm GAP65 subbase, broom finish.

ROW/ JOAL
 150mm 20MPa exposed aggregate concrete with 4kg/m³ black oxide, one layer of 665 mesh on 100mm GAP65 subbase

1.8m wide 125mm thick 20MPa concrete on 50mm AP25 base

7m long recessed parking bay

3.0m wide 150mm thick 20MPa concrete exposed with one layer 665 mesh on 100mm compacted metal

1.8m wide 125mm thick 20MPa concrete on 50mm AP25 base

14m long recessed parking bay

7m long recessed parking bay

7m long recessed parking bay

7m long recessed parking bay

7m long recessed parking bay

7m long recessed parking bay

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7m long recessed parking bay

7m long recessed parking bay

7m long recessed parking bay

Roading As Built Legend

- Jane Maree Road
- Street Lights Cree XSP1 IP66 T3ME 29W system
- 4000K on vicpole round tapered 8m pole and 1m arm 0 degree tilt. (700mm setback) (G=80 Candela=282)
- Lot 1111 Pedestrian Access Way
- Street Lights Cree XSP1 IP66 T210 22W system
- 4000K on Vicpole round tapered 5m pole and no arm degree tilt (set back behind footpath) (G=80 Candela=317)
- Pukalea (Green finger reserve)
- Spire Ash (Jane Maree Road)
- Concrete Footpath / Vehicle Crossing
- Cesspits (Semi recessed)
- Exposed Concrete Parking Bay
- Rain Garden (RG)
- Under channel drains
- Overland Footpath

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Signed:
 Licensed Cadastral Surveyor
 Date: 11/9/17
 Name: Michelle Bain
 Phone: 09 427 0072
 Email: catobolam@catobolam.co.nz

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 email catobolam@catobolam.co.nz

| | | | | | |
|----------------|---------------------------------|---------------|-------------------------|-------------|-------|
| ORIGINAL SCALE | 1:500 | ORIGINAL SIZE | A3 | REVISION NO | |
| DATE | 03/08/2017 | CAD REFERENCE | 34745 E611-E613 Roading | SHEET NO | E613 |
| DIRECTORY | Z:\34745\ACAD\As Built\Stage 1C | | | JOB NO | 34745 |

DRAWING TITLE

Road
 As Built Plan
 Sheet 3 of 3

CLIENT

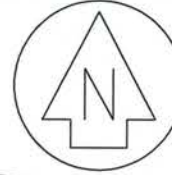
Cabra Developments Ltd
 Hupapai Triangle Sub Precinct A
 Stage 1C
 Station Road, Hupapai

| REVISION (DESCRIPTIONS) | NAME | DATE |
|-------------------------|------|-------|
| SURVEYED | BJ | 08/17 |
| DESIGNED | BJ | 08/17 |
| CHECKED | EM | 08/17 |
| APPROVED | TL | 08/17 |

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Signed: 
 Licensed Cadastral Surveyor
 Date: 11/9/17
 Name: Michelle Bain
 Phone: 09 427 0072
 Email: catobolam@catobolam.co.nz













Refer to sheet E615 for details



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Asbuilt Legend

- | | |
|---|---|
| Existing | New - Constructed under SUB 65117 Stage 1C |
|   |     |
|  |  |
|  |  |
|  |  |

- NOTE**
- Levels are in terms of LINZ Datum.
 - Coordinates are in terms of NZTM.
 - All pipework is PE100 PN16 with SAP7 bedding.
 - Depth of lines are approximately 0.6m below finished ground level and berms. 0.9m under carriageways.

| REVISION (DESCRIPTIONS) | NAME | DATE |
|-------------------------|------|---------|
| SURVEYED | BJ | 07/2017 |
| DESIGNED | | |
| DRAWN | BJ | 08/2017 |
| CHECKED | BM | 08/2017 |
| APPROVED | TL | 08/2017 |

CATO BOLAM CONSULTANTS

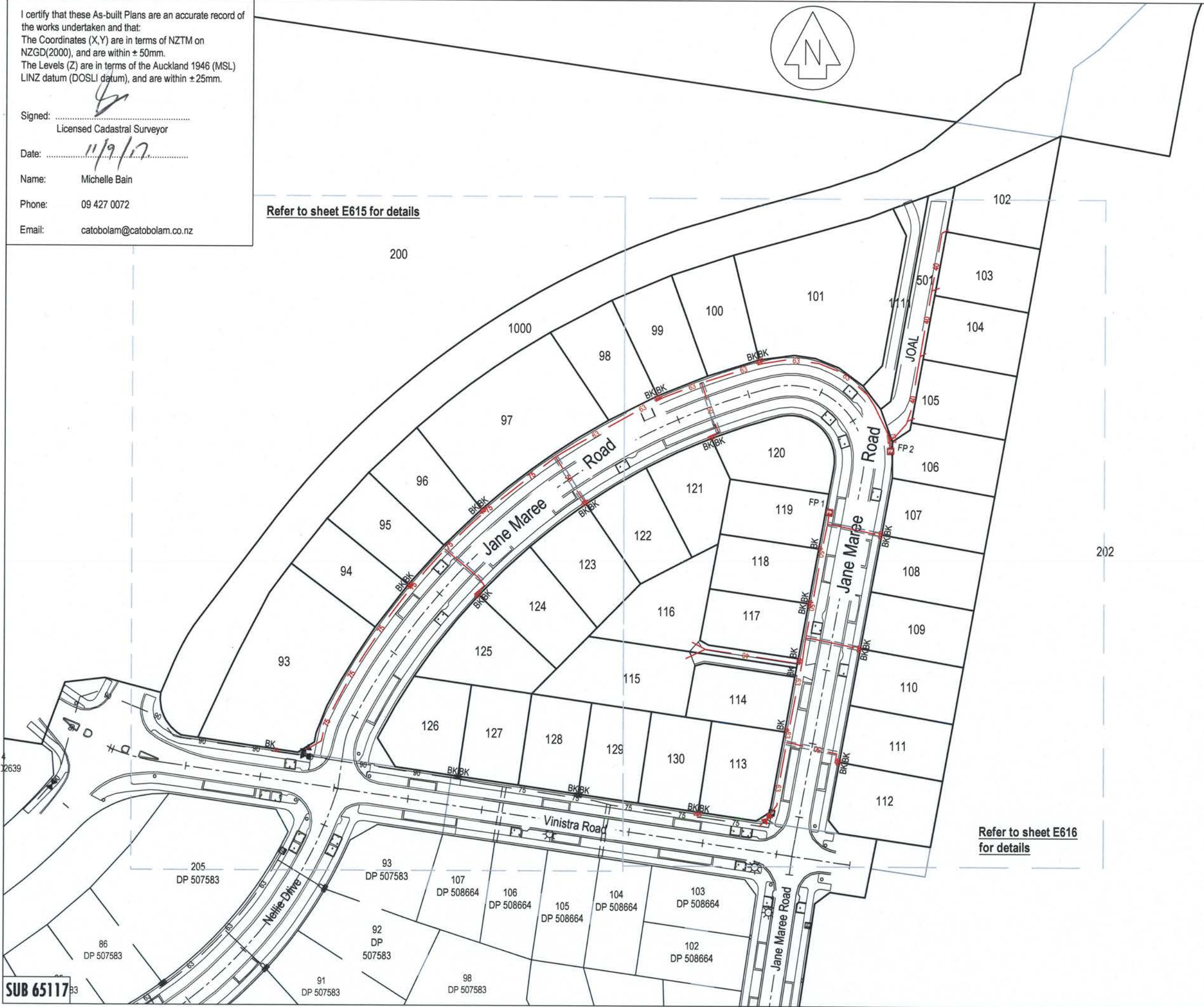
SURVEYORS PLANNERS ENGINEERS

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 phone 09-427 0072
 fax 09-426 7331
 email catobolam@catobolam.co.nz

CLIENT **Cabra Development Ltd**
Huapai Triangle Sub Precinct A
Stage 1C
Station Road, Huapai

DRAWING TITLE
Wastewater Reticulation
As Built Plan
Sheet 1 of 3

| | | |
|---|--|-------------------------|
| ORIGINAL SCALE 1:1000 | ORIGINAL SIZE A3 | REVISION NO |
| DATE 04/07/2017 | CAD REFERENCE 34745 E614 - E616 LPS | SHEET NO E614 |
| DIRECTORY Z:\34745\ACAD\As Builts\Stage 1C | | JOB NO 34745 |



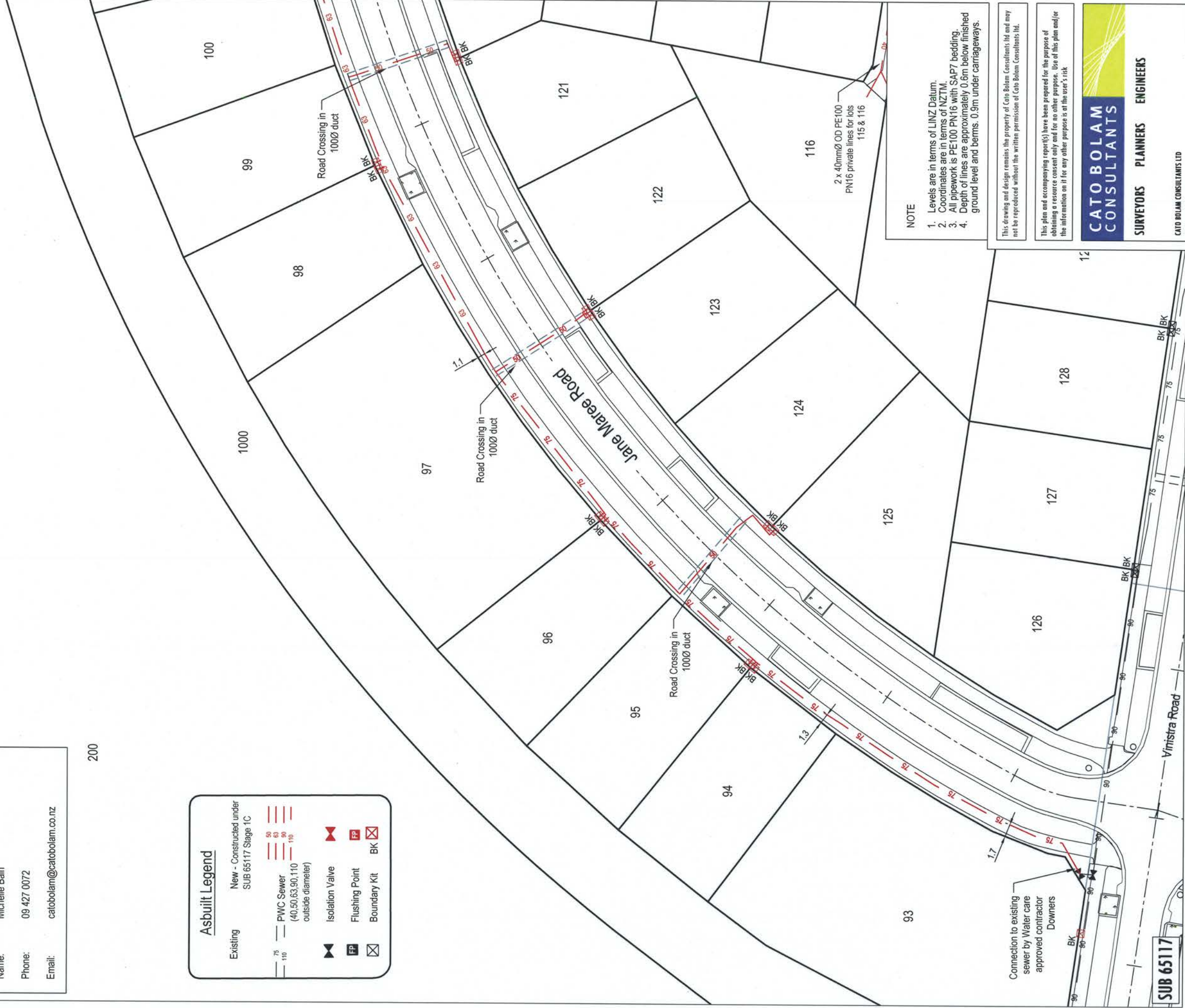
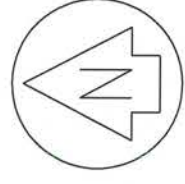
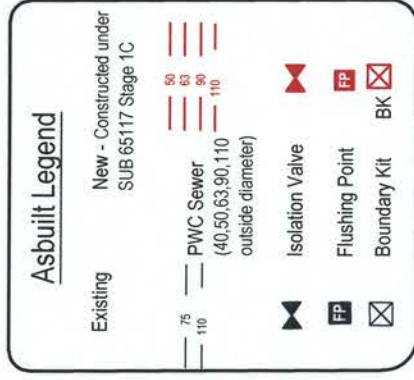
Refer to sheet E616 for details

SUB 65117 B3

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Signed: 
 Licensed Cadastral Surveyor
 Date: 11/17/17
 Name: Michelle Bain
 Phone: 09 427 0072
 Email: catobolam@catobolam.co.nz

200



NOTE

1. Levels are in terms of LINZ Datum.
2. Coordinates are in terms of NZTM.
3. All pipework is PE100 PN16 with SAP7 bedding.
4. Depth of lines are approximately 0.6m below finished ground level and berms. 0.9m under carriageways.

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| | | | | | |
|----------------|----------------------------------|---------------|-----------------------|-------------|-------|
| ORIGINAL SCALE | 1:500 | ORIGINAL SIZE | A3 | REVISION NO | |
| DATE | 04/08/2017 | CAD REFERENCE | 34745/E614 - E616 LPS | SHEET NO | E615 |
| DIRECTORY | Z:\34745\ACAD\As Builts\Stage 1C | | | JOB NO | 34745 |

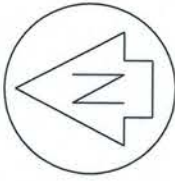
CLIENT

Cabra Developments Ltd
Huapai Triangle Sub Precinct A
Stage 1C
Station Road, Huapai

DRAWING TITLE

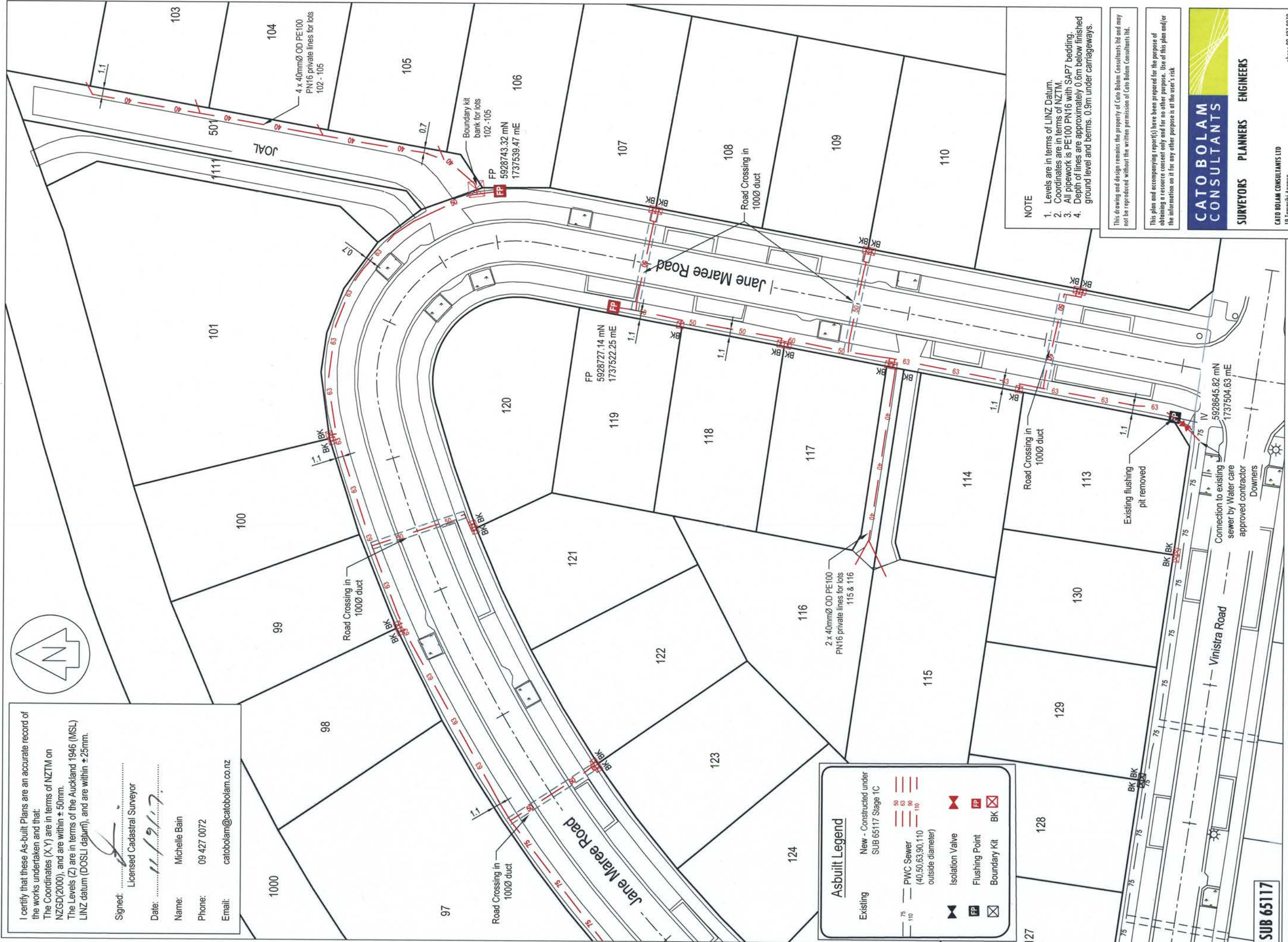
Wastewater Reticulation
As Built Plan
Sheet 2 of 3

| REVISION (DESCRIPTIONS) | NAME | DATE |
|-------------------------|------|---------|
| SURVEYED | BJ | 07/2017 |
| DESIGNED | BJ | 08/2017 |
| DRAWN | BM | 08/2017 |
| CHECKED | TL | 08/2017 |
| APPROVED | | |



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:  Licensed Cadastral Surveyor
 Date: 11/09/17
 Name: Michelle Bain
 Phone: 09 427 0072
 Email: catobolam@catobolam.co.nz



Asbuilt Legend

| | | | | | | | | | |
|--|----|-----|----|----|----|-----|-----------------|----------------|--------------|
| Existing | 75 | 110 | 50 | 63 | 90 | 110 | Isolation Valve | Flushing Point | Boundary Kit |
| New - Constructed under SUB 65117 Stage 1C | 75 | 110 | 50 | 63 | 90 | 110 | Isolation Valve | Flushing Point | Boundary Kit |
| | 75 | 110 | 50 | 63 | 90 | 110 | Isolation Valve | Flushing Point | Boundary Kit |

PWC Sewer (40,50,63,90,110 outside diameter)
 Isolation Valve
 Flushing Point
 Boundary Kit

NOTE

- Levels are in terms of LINZ Datum.
- Coordinates are in terms of NZTM.
- All pipework is PE100 PN16 with SAP7 bedding.
- Depth of lines are approximately 0.6m below finished ground level and berms. 0.9m under carriageways.

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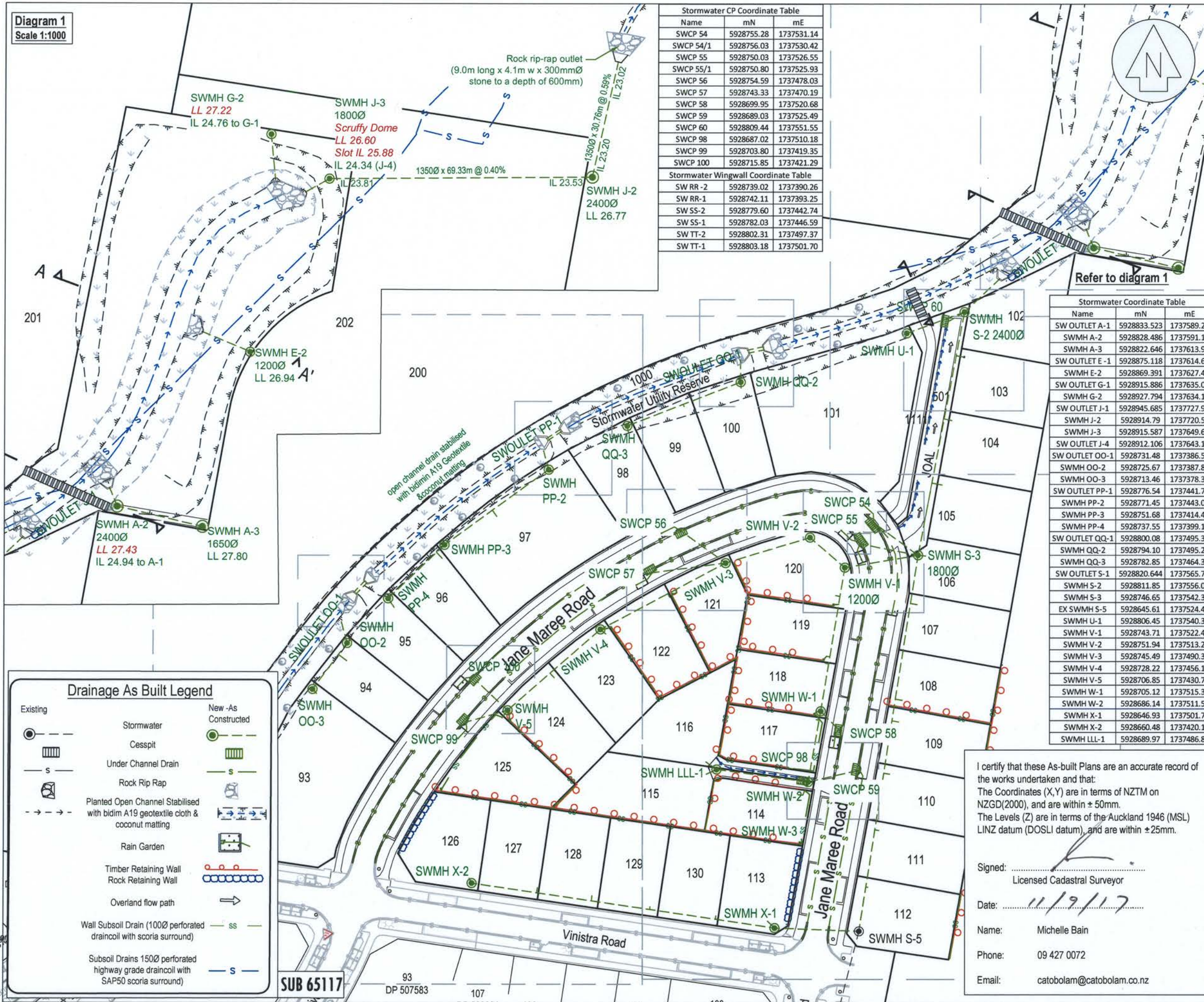
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| ORIGINAL SCALE | 1:500 | ORIGINAL SIZE | A3 | REVISION NO | |
| DATE | 04/08/2017 | CAD REFERENCE | 34745-614 - 616 LPS | SHEET NO | E616 |
| DIRECTORY | Z:\34745\ACAD\AS Builts\Stage 1C | | | JOB NO | 34745 |

Wastewater Reticulation
As Built Plan
Sheet 3 of 3

Cabra Developments Ltd
Huapai Triangle Sub Precinct A
Stage 1C
Station Road, Huapai

| REVISION (DESCRIPTIONS) | NAME | DATE |
|-------------------------|------|---------|
| SURVEYED | BJ | 07/2017 |
| DESIGNED | BJ | 08/2017 |
| CHECKED | BM | 08/2017 |
| APPROVED | TL | 08/2017 |

Diagram 1
Scale 1:1000



Stormwater CP Coordinate Table

| Name | mN | mE |
|-----------|------------|------------|
| SWCP 54 | 5928755.28 | 1737531.14 |
| SWCP 54/1 | 5928756.03 | 1737530.42 |
| SWCP 55 | 5928750.03 | 1737526.55 |
| SWCP 55/1 | 5928750.80 | 1737525.93 |
| SWCP 56 | 5928754.59 | 1737478.03 |
| SWCP 57 | 5928743.33 | 1737470.19 |
| SWCP 58 | 5928699.95 | 1737520.68 |
| SWCP 59 | 5928689.03 | 1737525.49 |
| SWCP 60 | 5928809.44 | 1737551.55 |
| SWCP 98 | 5928687.02 | 1737510.18 |
| SWCP 99 | 5928703.80 | 1737419.35 |
| SWCP 100 | 5928715.85 | 1737421.29 |

Stormwater Wingwall Coordinate Table

| Name | mN | mE |
|---------|------------|------------|
| SW RR-2 | 5928739.02 | 1737390.26 |
| SW RR-1 | 5928742.11 | 1737393.25 |
| SW SS-2 | 5928779.60 | 1737442.74 |
| SW SS-1 | 5928782.03 | 1737446.59 |
| SW TT-2 | 5928802.31 | 1737497.37 |
| SW TT-1 | 5928803.18 | 1737501.70 |

Stormwater Coordinate Table

| Name | mN | mE |
|----------------|-------------|------------|
| SW OUTLET A-1 | 5928833.523 | 1737589.22 |
| SWMH A-2 | 5928828.486 | 1737591.17 |
| SWMH A-3 | 5928822.646 | 1737613.92 |
| SW OUTLET E-1 | 5928875.118 | 1737614.62 |
| SWMH E-2 | 5928869.391 | 1737627.49 |
| SW OUTLET G-1 | 5928915.886 | 1737635.01 |
| SWMH G-2 | 5928927.794 | 1737634.10 |
| SW OUTLET J-1 | 5928945.685 | 1737727.97 |
| SWMH J-2 | 5928914.79 | 1737720.52 |
| SWMH J-3 | 5928915.587 | 1737649.64 |
| SW OUTLET J-4 | 5928912.106 | 1737643.16 |
| SW OUTLET OO-1 | 5928731.48 | 1737386.51 |
| SWMH OO-2 | 5928725.67 | 1737387.89 |
| SWMH OO-3 | 5928713.46 | 1737378.39 |
| SW OUTLET PP-1 | 5928776.54 | 1737441.73 |
| SWMH PP-2 | 5928771.45 | 1737443.03 |
| SWMH PP-3 | 5928751.68 | 1737414.42 |
| SWMH PP-4 | 5928737.55 | 1737399.10 |
| SW OUTLET QQ-1 | 5928800.08 | 1737495.34 |
| SWMH QQ-2 | 5928794.10 | 1737495.28 |
| SWMH QQ-3 | 5928782.85 | 1737464.37 |
| SW OUTLET S-1 | 5928820.644 | 1737565.73 |
| SWMH S-2 | 5928811.85 | 1737556.01 |
| SWMH S-3 | 5928746.65 | 1737542.30 |
| EX SWMH S-5 | 5928645.61 | 1737524.45 |
| SWMH U-1 | 5928806.45 | 1737540.30 |
| SWMH V-1 | 5928743.71 | 1737522.47 |
| SWMH V-2 | 5928751.94 | 1737513.24 |
| SWMH V-3 | 5928745.49 | 1737490.35 |
| SWMH V-4 | 5928728.22 | 1737456.18 |
| SWMH V-5 | 5928706.85 | 1737430.79 |
| SWMH W-1 | 5928705.12 | 1737515.30 |
| SWMH W-2 | 5928686.14 | 1737511.54 |
| SWMH X-1 | 5928646.93 | 1737501.75 |
| SWMH X-2 | 5928660.48 | 1737420.15 |
| SWMH LLL-1 | 5928689.97 | 1737486.86 |

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- 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 SN16 unless otherwise stated.
 - All 100Ø - 150Ø pipes are uPVC SN16.
 - Wall drain cesspits and outlet pipes are private.
 - Information shown in red italics are design levels and subject to change

| REVISION (DESCRIPTIONS) | NAME | DATE |
|-------------------------|------|------|
| | | |
| | | |

| | NAME | DATE |
|----------|------|-------|
| SURVEYED | BJ | 07/17 |
| DESIGNED | KM | 08/16 |
| DRAWN | BJ | 07/17 |
| CHECKED | BM | 07/17 |
| APPROVED | TL | 07/17 |

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CLIENT **Cabra Development Ltd**
Huapai Triangle Sub Precinct A
Stage 1C
Station Road, Huapai

DRAWING TITLE
Stormwater Reticulation
As Built Plan
Sheet 1 of 4

| ORIGINAL SCALE | ORIGINAL SIZE | REVISION NO |
|----------------------------------|--------------------------|-------------|
| 1:1000 | A3 | |
| DATE | CAD REFERENCE | SHEET NO |
| 04/07/17 | 34745 E617-E621 SW RETIC | E617 |
| DIRECTORY | JOB NO | |
| Z:\34745\ACAD\As Builts\Stage 1C | 34745 | |

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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: _____
Licensed Cadastral Surveyor

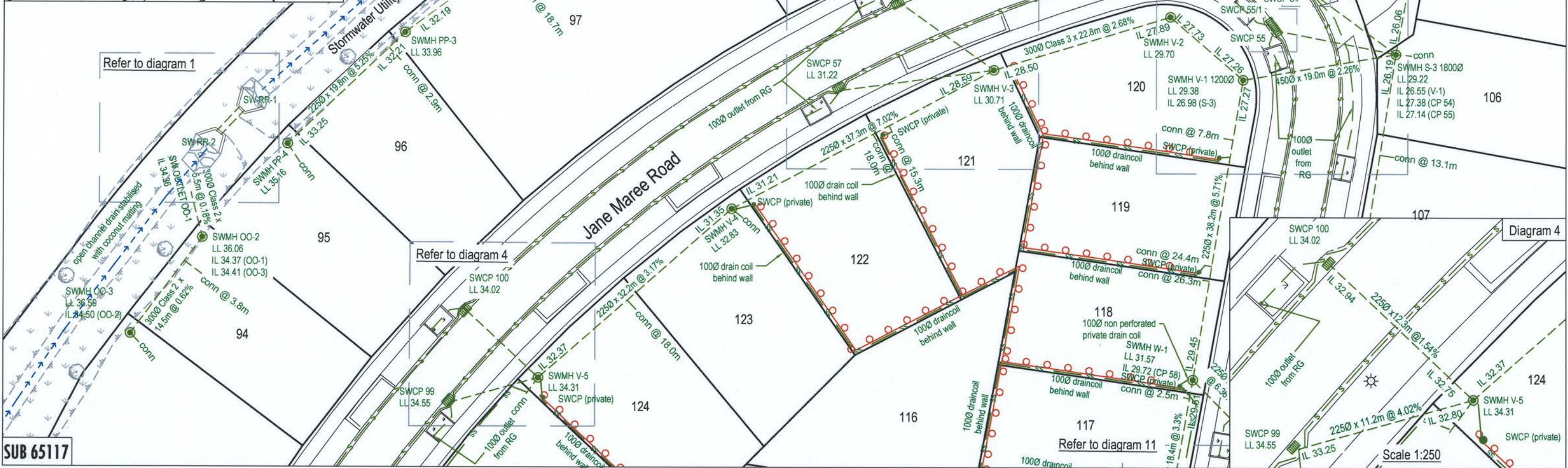
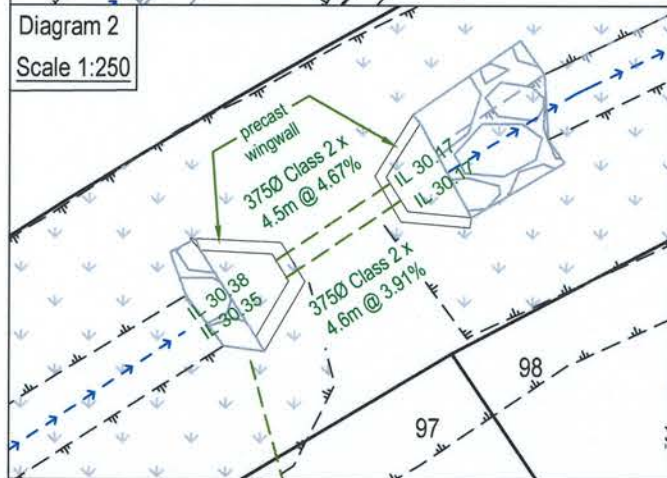
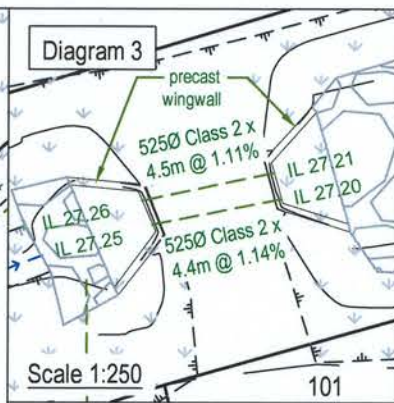
Date: 11/9/17

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

Drainage As Built Legend

| | | |
|----------|------------|---------------------|
| Existing | Stormwater | New -As Constructed |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

SUB 65117



I certify that these As-built Plans are an accurate record of the works undertaken and that:
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 Licensed Cadastral Surveyor

Date: 11/19/17

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 Phone: 09 427 0072
 Email: catobolam@catobolam.co.nz

SUB 65117

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| DRAWN | BJ | 07/17 |
| CHECKED | BM | 07/17 |
| APPROVED | TL | 07/17 |

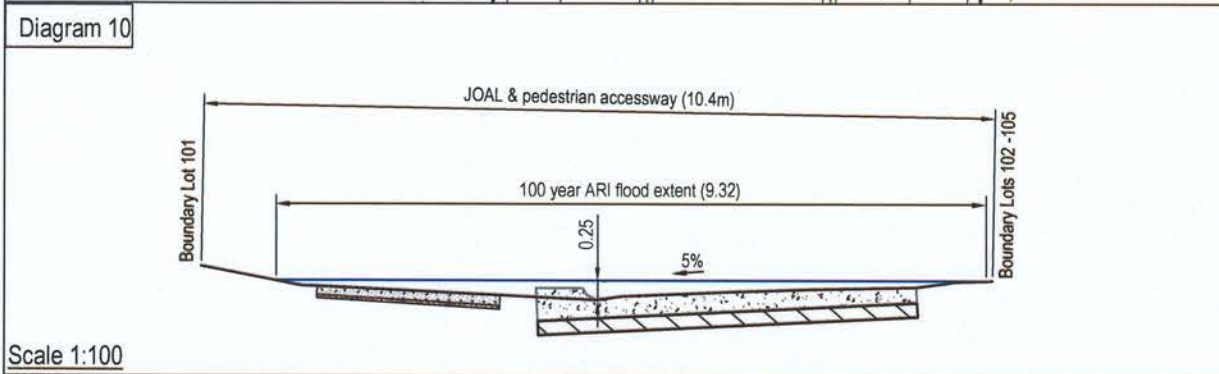
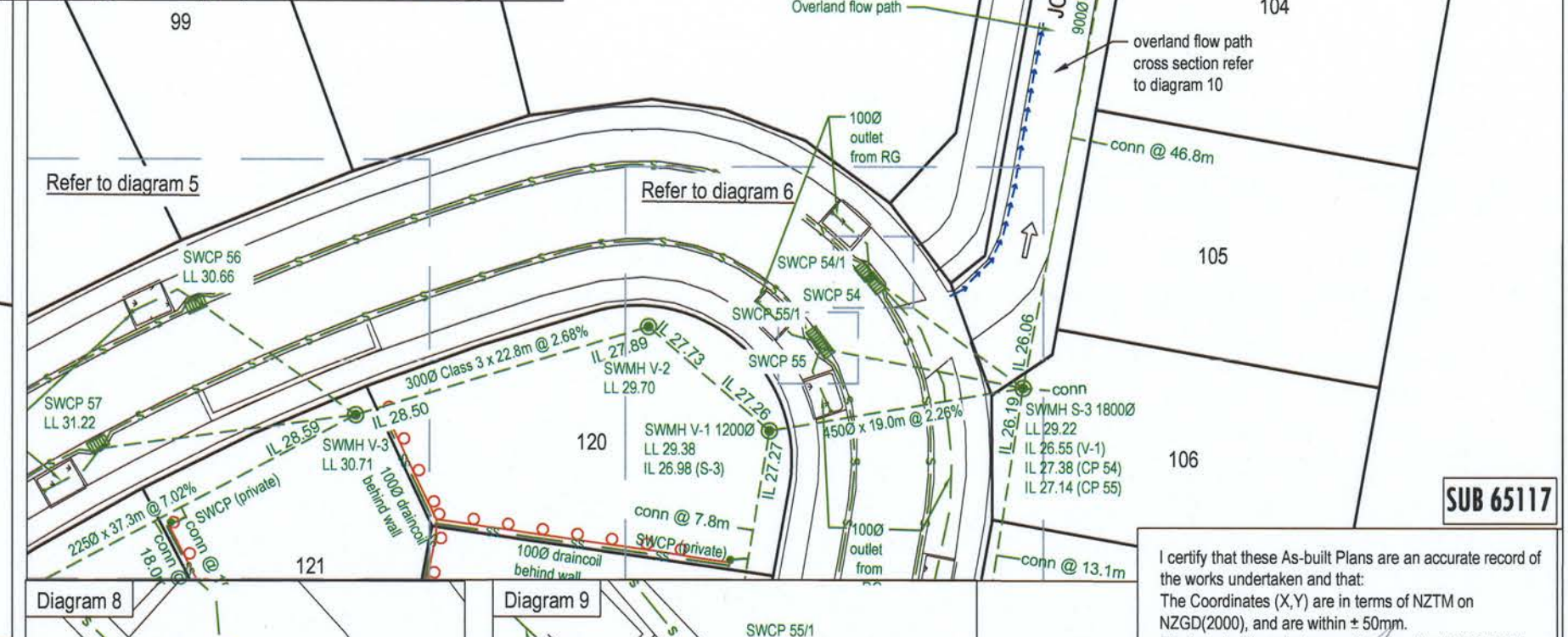
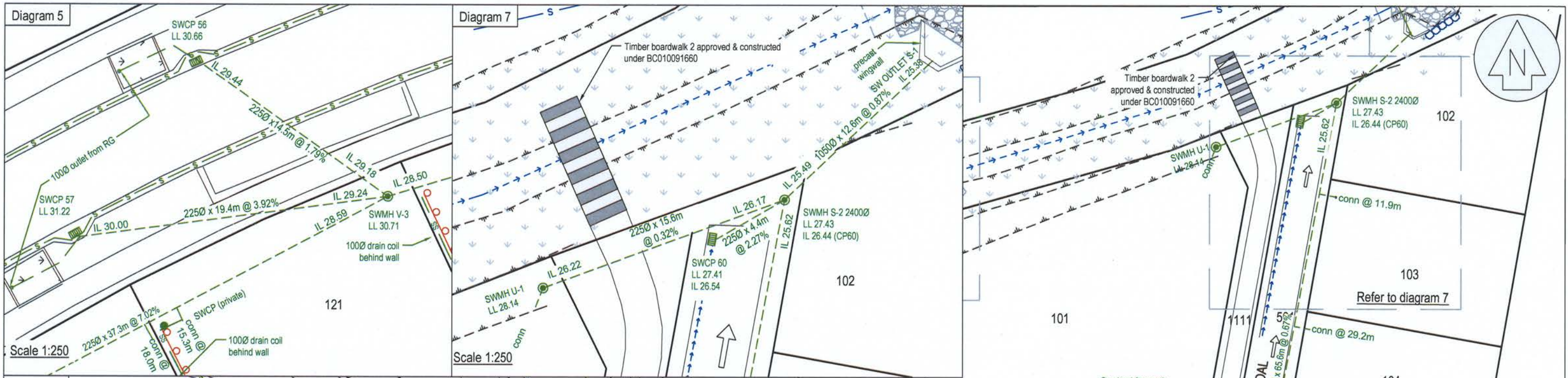
Refer to E617 for legend & notes

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Stage 1C
Station Road, Huapai

DRAWING TITLE
Stormwater Reticulation
As Built Plan
Sheet 2 of 4

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| DATE | CAD REFERENCE | SHEET NO |
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| DIRECTORY | JOB NO | |
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Signed: _____
 Licensed Cadastral Surveyor

Date: 11/12/17

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|-------------------------|------|-------|
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| DESIGNED | KM | 08/16 |
| DRAWN | BJ | 07/17 |
| CHECKED | BM | 07/17 |
| APPROVED | TL | 07/17 |

Refer to E617 for legend and notes

CLIENT
Cabra Development Ltd
Huapai Triangle Sub Precinct A
Stage 1C
Station Road, Huapai

DRAWING TITLE
Stormwater Reticulation
As Built Plan
Sheet 3 of 4

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| DATE | CAD REFERENCE | SHEET NO |
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| DIRECTORY | JOB NO | |
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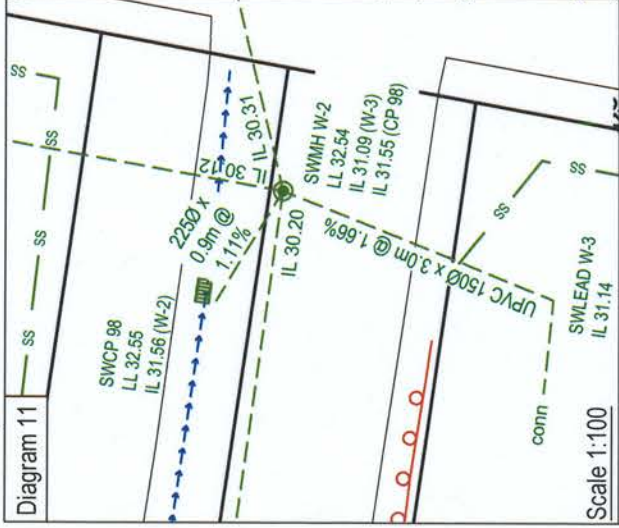
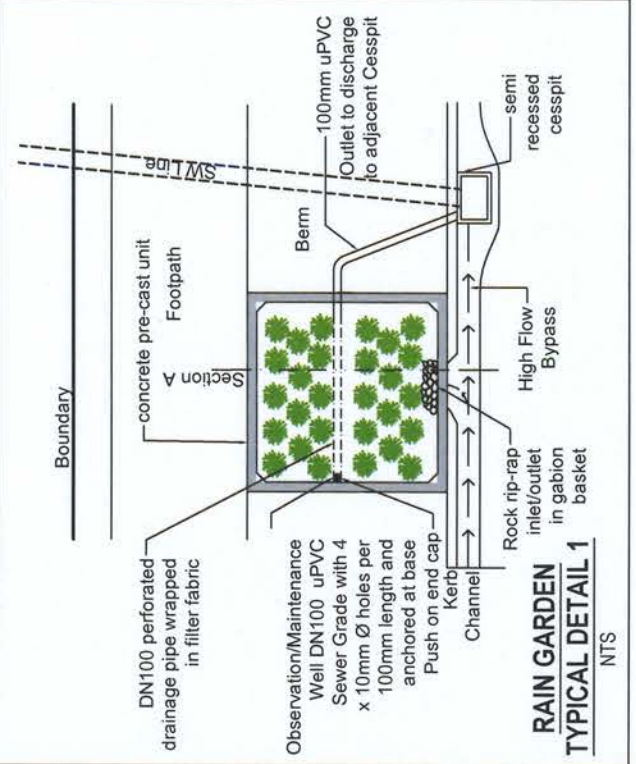


Diagram 11
 Scale 1:100

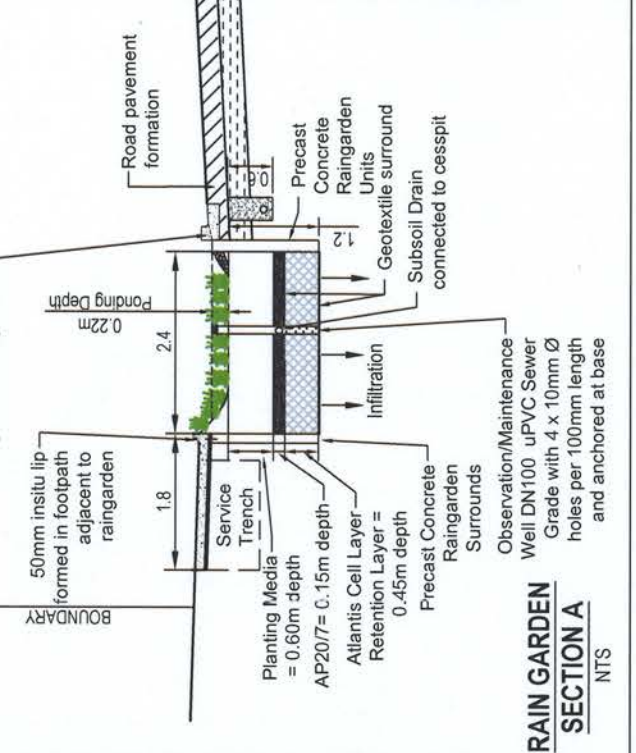
NOTES GENERAL
 1. Levels are in terms of LINZ Datum 1946.
 2. Coordinates are in terms of NZTM.
 3. All infrastructure is public unless otherwise shown.

STORMWATER
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 2. All manholes are 1050mmØ concrete flange base and riser, unless otherwise shown.
 2. Bedding is H2 type unless otherwise stated.
 3. All catchpits are 675mm x 450mm steel grate lids semi recessed unless otherwise shown.
 4. All lot connections are 100Ø uPVC SN16 unless otherwise stated.
 5. All 100Ø - 150Ø pipes are uPVC SN16.
 6. Wall drain cesspits and outlet pipes are private.

Refer to E617 for Legend



Refer to E617 for Legend



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

Signed:
 Licensed Cadastral Surveyor
 Date: 11/9/17
 Name: Michelle Bain
 Phone: 09 427 0072
 Email: catobolam@catobolam.co.nz

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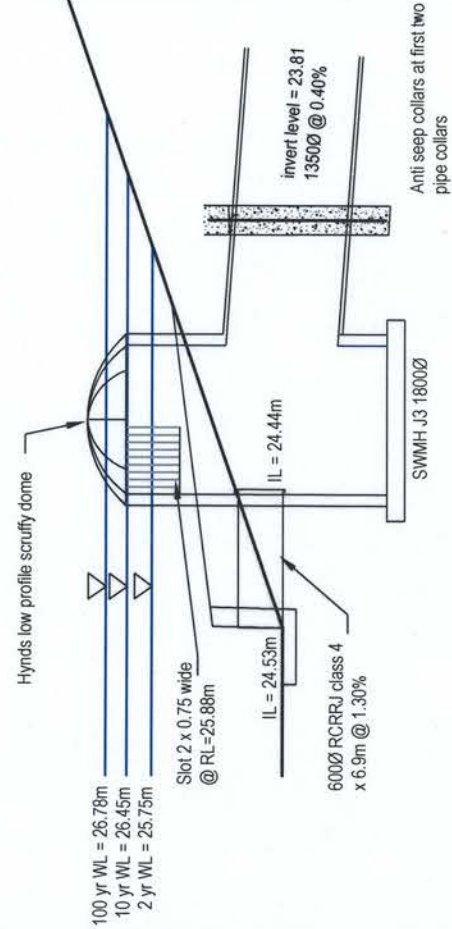
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| DATE | 04/07/17 | CAD REFERENCE | B0745 E617 E621 SW RETIC | SHEET NO | E620 |
| DIRECTORY | Z:\34745\ACD\As-Built\Stage 1C | | | JOB NO | 34745 |

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 Huapai Triangle Sub Precinct A
 Stage 1C
 Station Road, Huapai


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| DESIGNED | KM | 08/16 |
| DRAWN | BJ | 07/17 |
| CHECKED | BM | 07/17 |
| APPROVED | TL | 07/17 |

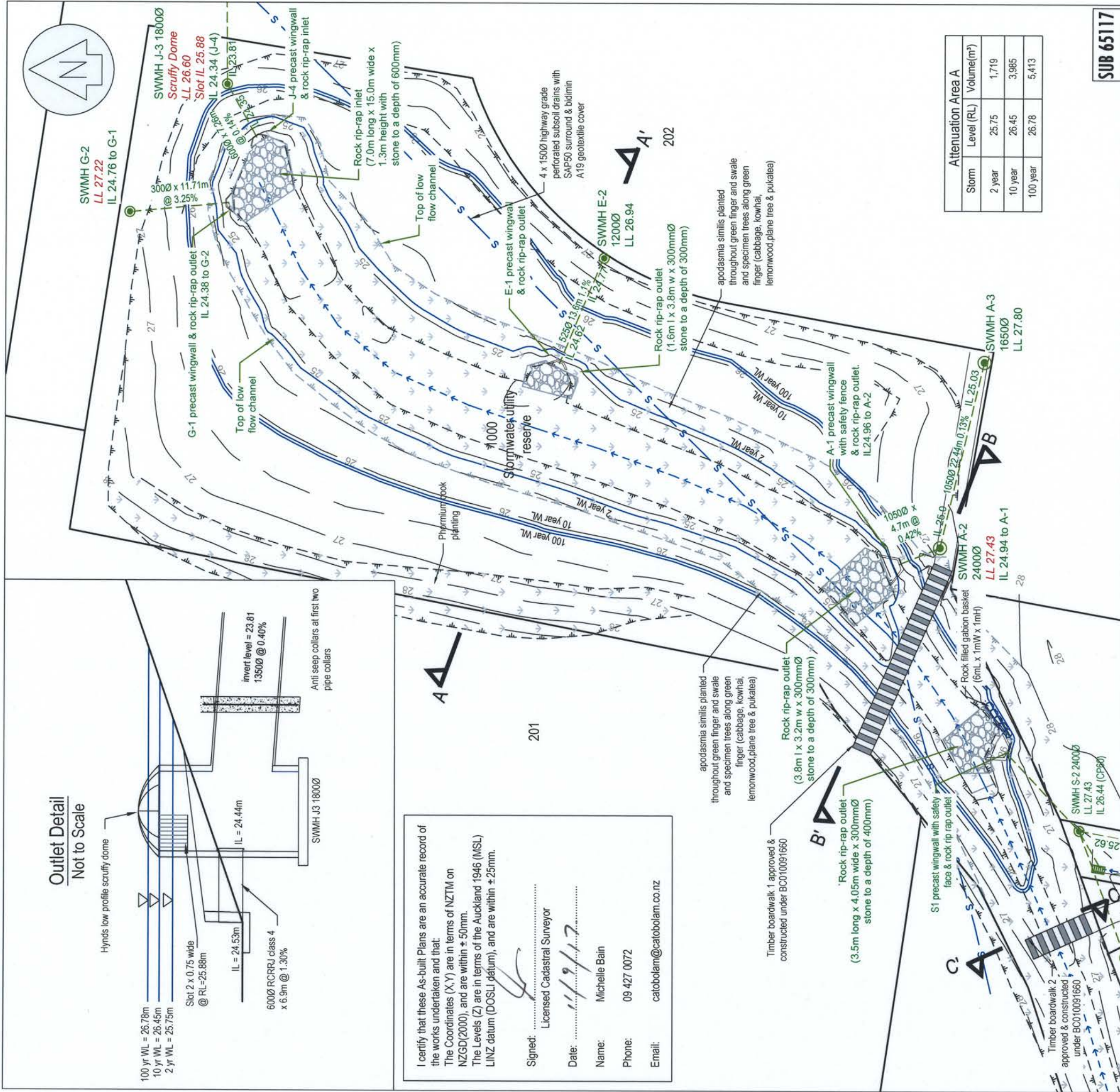
DRAWING TITLE
 Stormwater Reticulation
 As Built Plan
 Sheet 4 of 4

Outlet Detail
Not to Scale



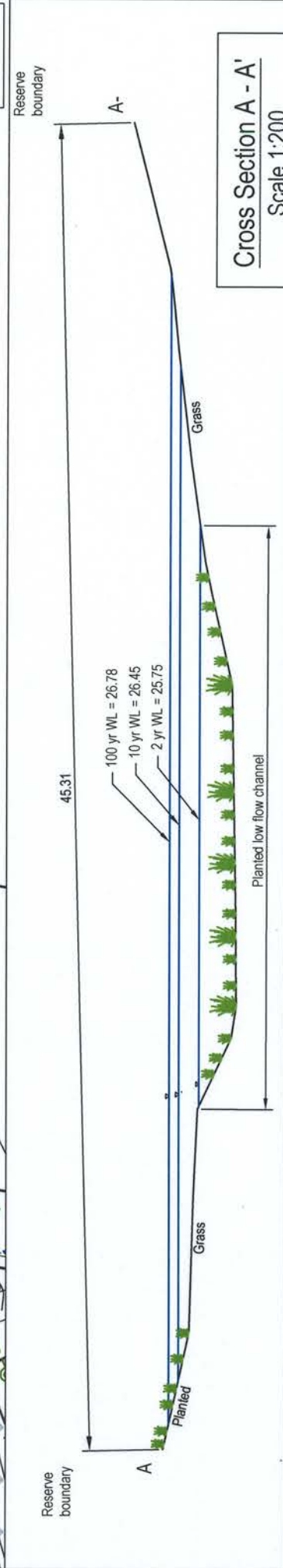
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Signed: 
Licensed Cadastral Surveyor
Date: 11/07/17
Name: Michelle Bain
Phone: 09 427 0072
Email: catobolam@catobolam.co.nz

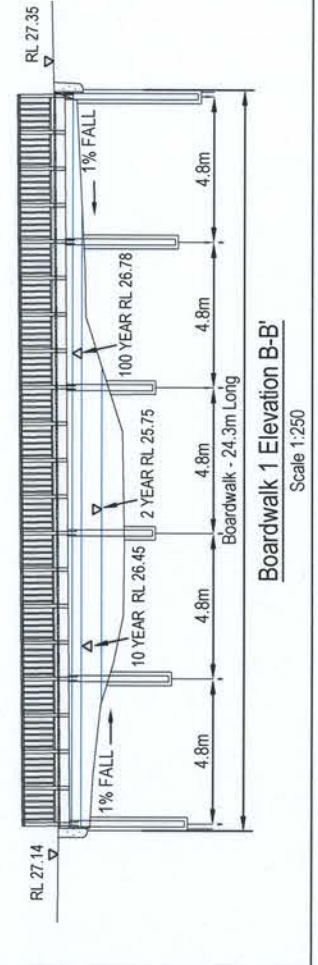


| Attenuation Area A | | |
|--------------------|------------|------------|
| Storm | Level (RL) | Volume(m³) |
| Storm | 25.75 | 1,719 |
| 2 year | 26.45 | 3,985 |
| 10 year | 26.78 | 5,413 |

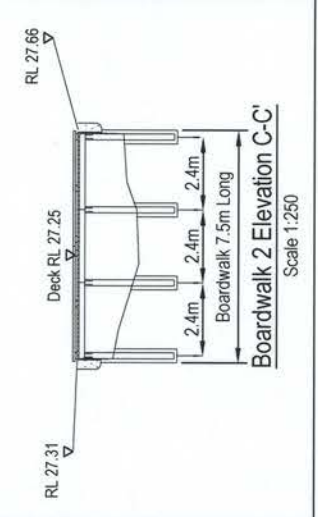
SUB 65117



Cross Section A - A'
Scale 1:200



Boardwalk 1 Elevation B-B'
Scale 1:250



Boardwalk 2 Elevation C-C'
Scale 1:250

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|-------------------------|------|-------|
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| DESIGNED | KM | 08/16 |
| DRAWN | BJ | 07/17 |
| CHECKED | BM | 07/17 |
| APPROVED | TL | 07/17 |

CLIENT
Cabra Development Ltd
Stage 1C
45 Station Road Huapai

DRAWING TITLE
Stormwater Attenuation Area A
As Built Plan

| ORIGINAL SCALE | ORIGINAL SIZE | REVISION NO |
|---------------------------------|--------------------------|-------------|
| 1:500 | A3 | |
| DATE | CAD REFERENCE | SHEET NO |
| 04/07/17 | 34745-1617-1621 SW RETIC | E621 |
| DIRECTORY | | JOB NO |
| Z:\34745\ACAD\As BUILT\Stage 1C | | 34745 |

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

Signed: 
 Licensed Cadastral Surveyor

Date: 11/9/12

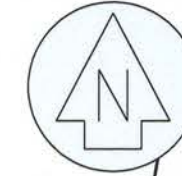
Name: Michelle Bain

Phone: 09 427 0072

Email: catobolam@catobolam.co.nz

Refer to E622 for details

Refer to E623 for details



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Water Reticulation Legend

| Existing | New - constructed under SUB 65117 |
|-----------------------------|-----------------------------------|
| — 32 — — 63 — — 125 — | — 32 — — 63 — — 125 — |
| ⊗ | ⊗ |
| △ | ▲ |
| | — |
| ⊠ | ⊠ |

Sluice Valve
 Peet Valve
 Tapping bands for lot connections
 Fire Hydrant

| REVISION (DESCRIPTIONS) | NAME | DATE |
|-------------------------|------|-------|
| SURVEYED | BJ | 07/17 |
| DESIGNED | KM | 08/16 |
| DRAWN | BJ | 07/17 |
| CHECKED | BM | 07/17 |
| APPROVED | TL | 07/17 |

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CLIENT **Cabra Developments Ltd**
Huapai Triangle Sub Precinct A
Stage 1C
Station Road, Huapai

DRAWING TITLE
Water Reticulation
As Built Plan
Sheet 1 of 3

| ORIGINAL SCALE | ORIGINAL SIZE | REVISION NO |
|----------------------------------|---------------------------|--------------|
| 1:1000 | A3 | |
| DATE | CAD REFERENCE | SHEET NO |
| 10/07/2017 | 34745 E622-E624 Water ASB | E622 |
| DIRECTORY | | JOB NO |
| Z:\34745\ACAD\As Builts\Stage 1C | | 34745 |

SUB 65117

NOTES

GENERAL

1. 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 25mm OD Connections on right of ways are private

2639

202

320

340

340

340

340

340

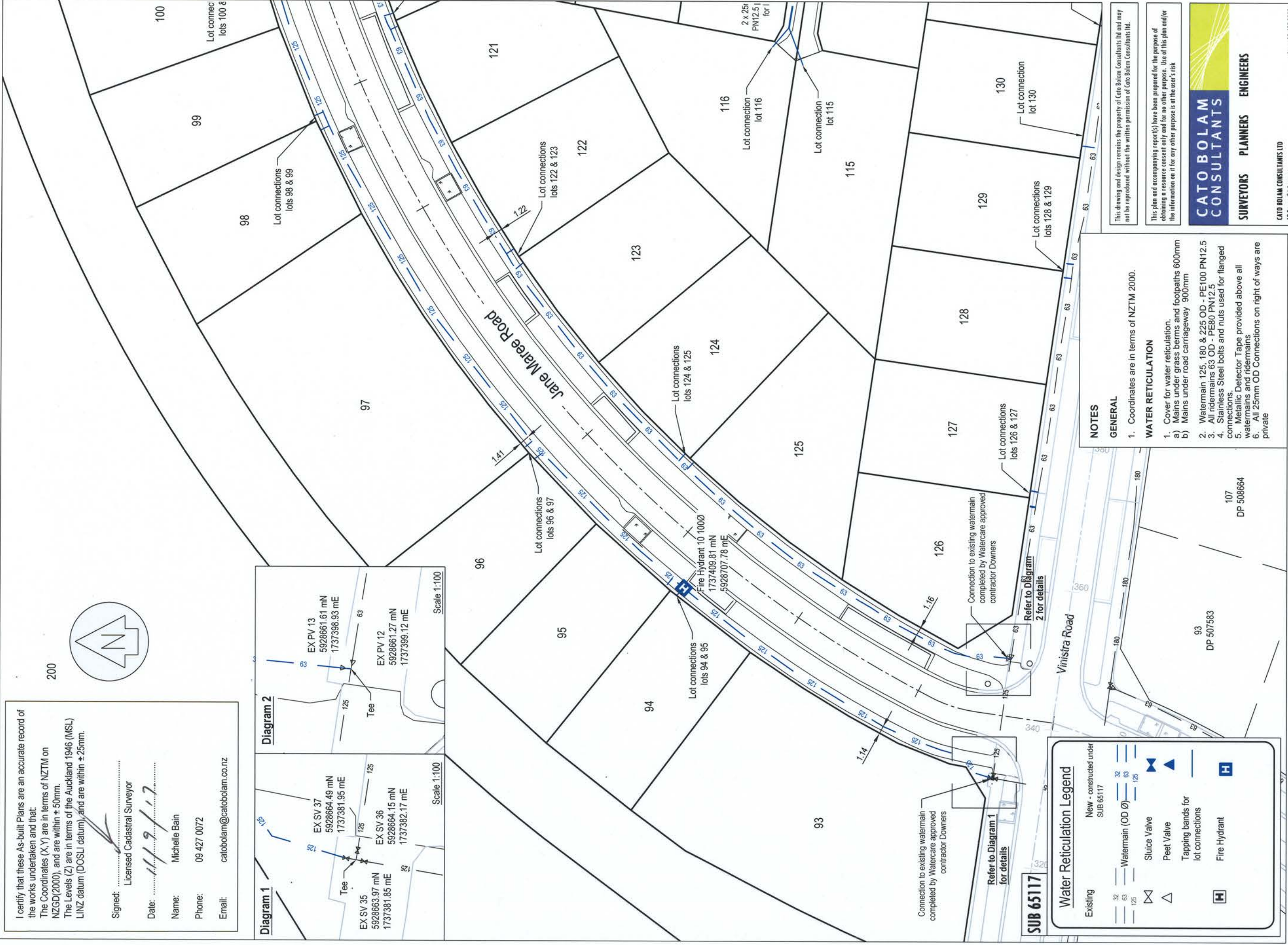
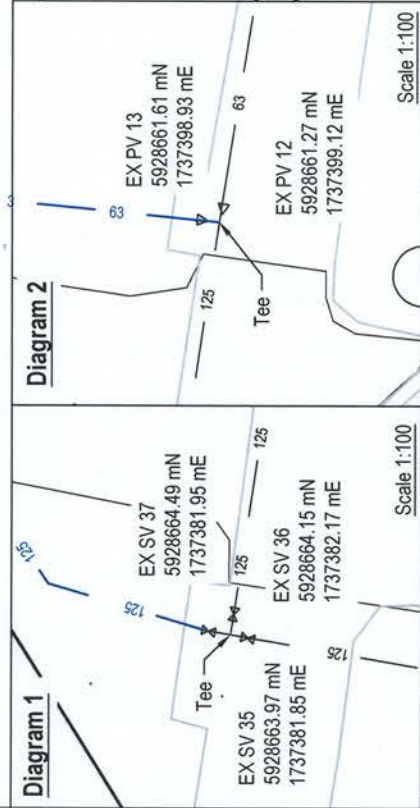
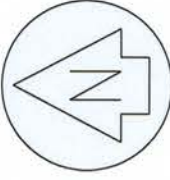
340

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Signed: _____
 Licensed Cadastral Surveyor

Date: 11/19/17

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



Water Reticulation Legend

| | | | |
|-----------------------------------|--------|----|-----|
| Existing | 32 | 63 | 125 |
| New - constructed under SUB 65117 | 32 | 63 | 125 |
| Watermain (OD Ø) | 32 | 63 | 125 |
| Sluice Valve | Symbol | | |
| Peet Valve | Symbol | | |
| Tapping bands for lot connections | Symbol | | |
| Fire Hydrant | Symbol | | |

- 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 risermains 63 OD - PE80 PN12.5
 - Stainless Steel bolts and nuts used for flanged connections.
 - Metallic Detector Tape provided above all watermains and risermains
 - All 25mm OD Connections on right of ways are private

| REVISION (DESCRIPTIONS) | NAME | DATE |
|-------------------------|------|-------|
| SURVEYED | BJ | 07/17 |
| DESIGNED | KM | 08/16 |
| DRAWN | BJ | 07/17 |
| CHECKED | BM | 07/17 |
| APPROVED | TL | 07/17 |

CLIENT

Cabra Developments Ltd
 Stage 1C
 45 Station Road Huapai

DRAWING TITLE

Water Reticulation
 As Built Plan
 Sheet 2 of 3

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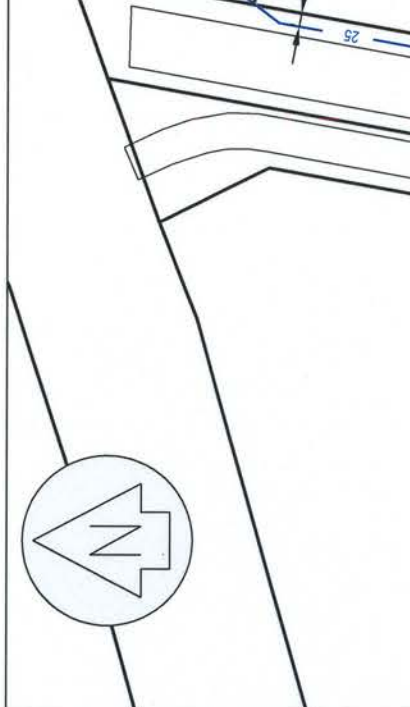
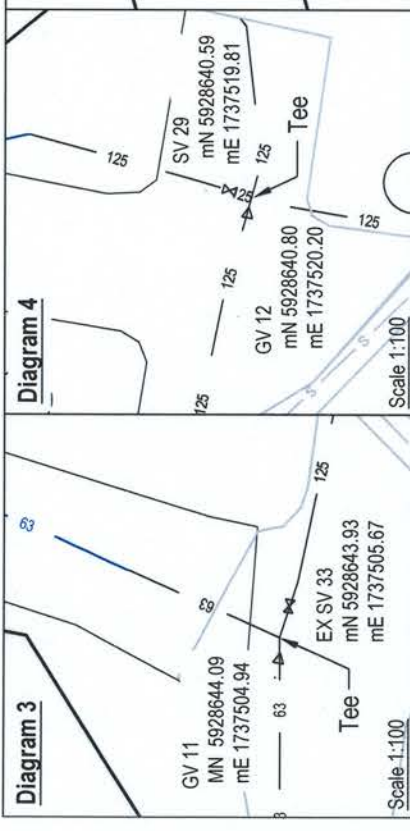
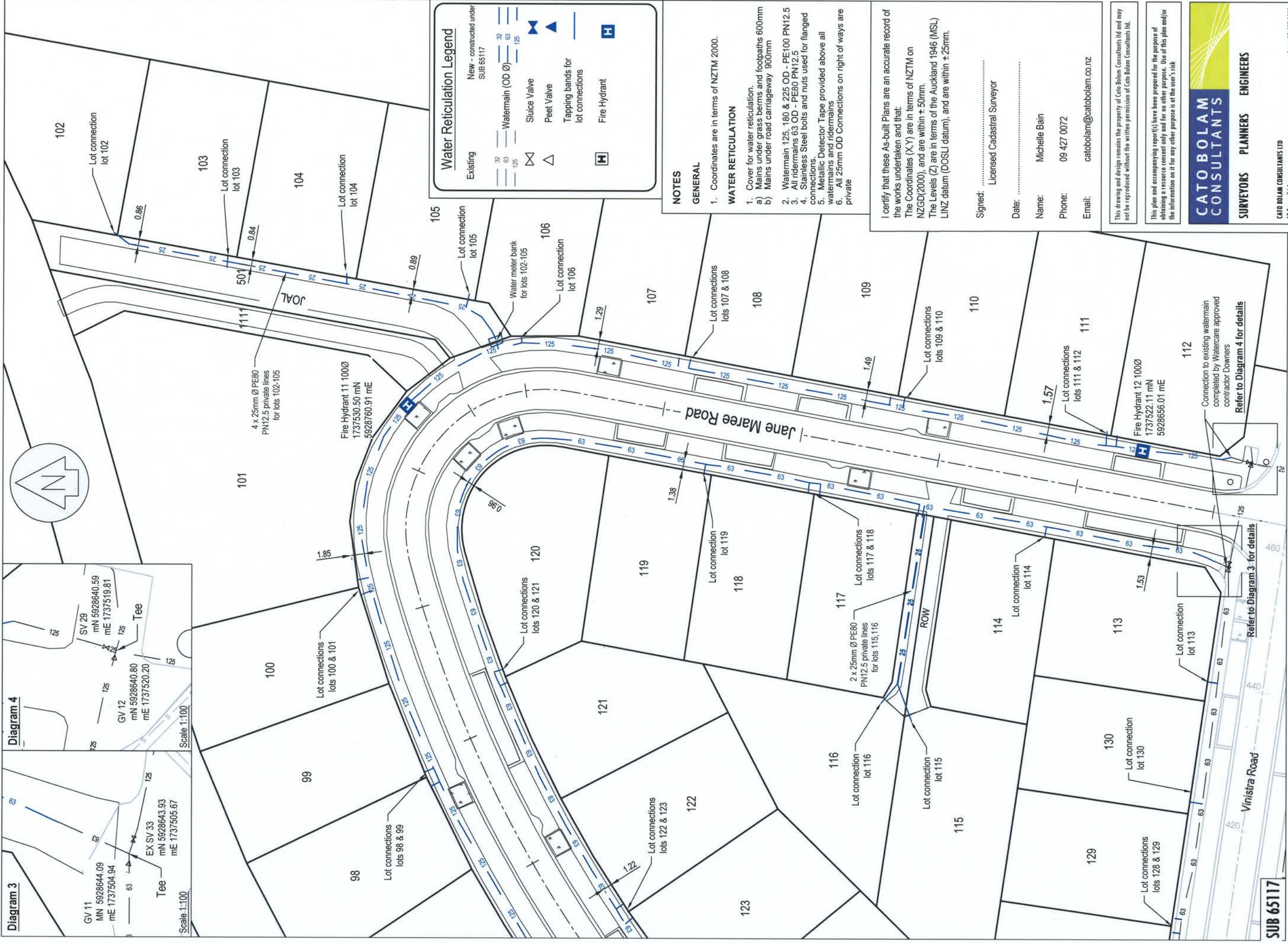
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|----------------|---------------------------------|---------------|---------------------------|-------------|-------|
| ORIGINAL SCALE | 1:500 | ORIGINAL SIZE | A3 | REVISION NO | |
| DATE | 10/07/2017 | CAD REFERENCE | 34745 E622-E624 Water ASB | SHEET NO | E623 |
| DIRECTORY | Z:\34745\ACAD\As Bults\Stage 1C | | | JOB NO | 34745 |



Water Reticulation Legend

| Existing | New - constructed under SUB 65117 |
|-----------------------------------|-----------------------------------|
| Watermain (OD Ø) | Watermain (OD Ø) |
| Sluice Valve | Sluice Valve |
| Peet Valve | Peet Valve |
| Tapping bands for lot connections | Tapping bands for lot connections |
| Fire Hydrant | Fire Hydrant |

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 25mm OD Connections on right of ways are private

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:
 Licensed Cadastral Surveyor

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

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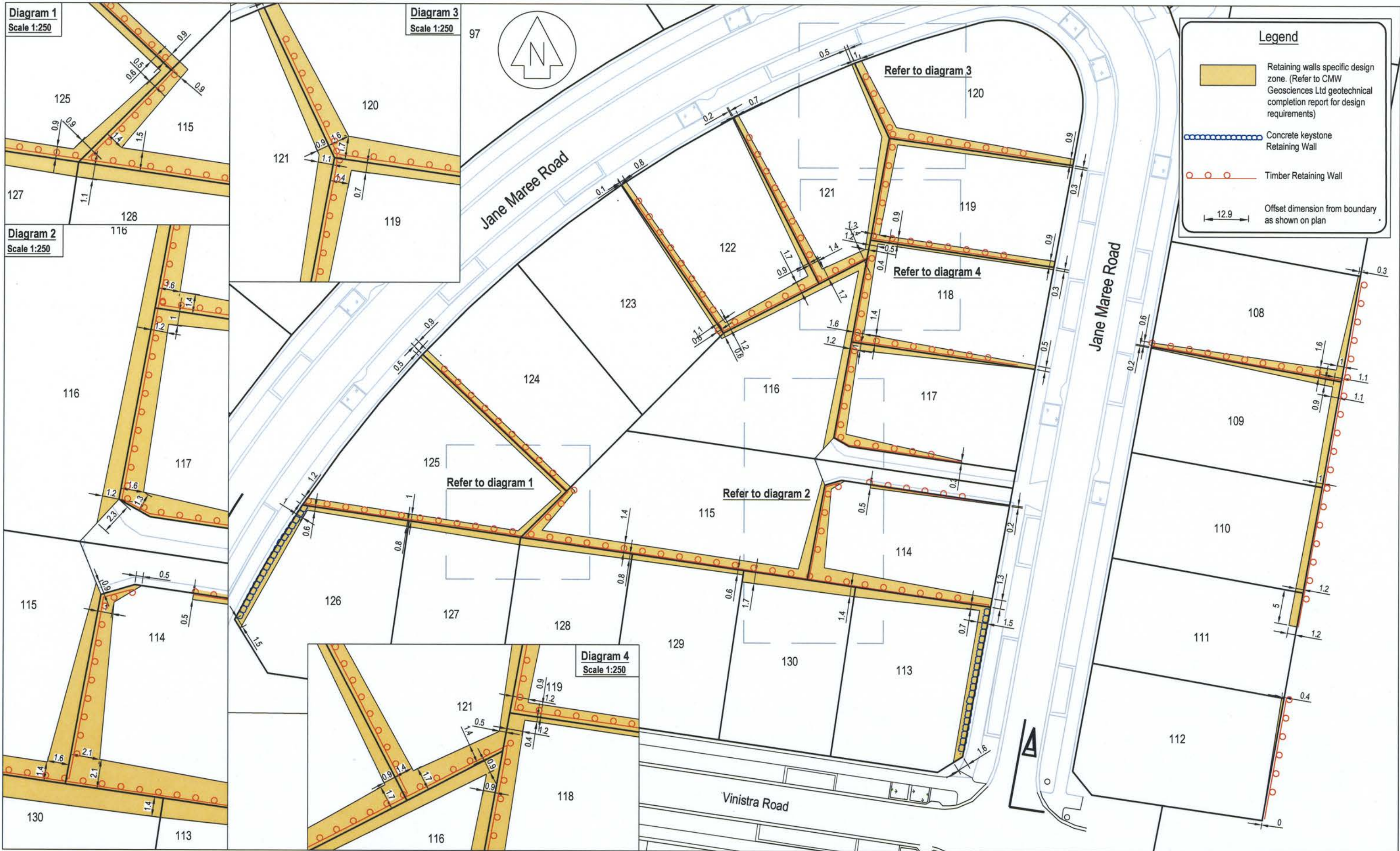
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| ORIGINAL SCALE | 1:500 | ORIGINAL SIZE | A3 | REVISION NO | |
| DATE | 10/07/2017 | CAD REFERENCE | 34745 E624 Water ASB | SHEET NO | E624 |
| DIRECTORY | Z:\34745\ACAD\As-Built\Stage 1C | | | JOB NO | 34745 |

Water Reticulation As Built Plan Sheet 3 of 3

Cabra Developments Ltd Stage 1C 45 Station Road Huapai

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|-------------------------|------|-------|
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| DRAWN | BJ | 07/17 |
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| APPROVED | TL | 07/17 |

SUB 65117



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| DRAWN | BJ | 08/17 |
| CHECKED | BM | 08/17 |
| APPROVED | YL | 08/17 |

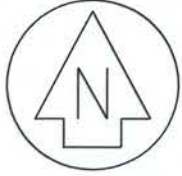
CLIENT
Cabra Developments Ltd
Huapai Triangle Sub Precinct A
Stage 1C
Station Road, Huapai

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DRAWING TITLE
Retaining Wall
Specific Design Plan

| | | |
|--|---|-------------------------|
| ORIGINAL SCALE 1:500 | ORIGINAL SIZE A3 | REVISION NO |
| DATE 04/08/2017 | CAD REFERENCE 34745 E625 Specific Design | SHEET NO E625 |
| DIRECTORY Z:\34745\ACAD\As Built\Stage 1C | | JOB NO 34745 |




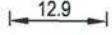
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As Built Earthworks Legend

-  Pipeline 45° Zone of Influence Area from invert
-  Catchpits
-  Stormwater
-  Offset dimension from boundary as shown on plan



| REVISION (DESCRIPTIONS) | NAME | DATE |
|-------------------------|------|------|
| | | |
| | | |
| | | |

| | NAME | DATE |
|----------|------|-------|
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| DRAWN | BJ | 08/17 |
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| APPROVED | TL | 08/17 |

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CLIENT **Cabra Development Ltd**
Huapai Triangle Sub Precinct A
Stage 1C
Station Road, Huapai

DRAWING TITLE
Drainage Zone of Influence Plan

| | | |
|-------------------------------------|-------------------------------------|-------------------------|
| ORIGINAL SCALE 1:1000 | ORIGINAL SIZE A3 | REVISION NO |
| DATE 04/08/17 | CAD REFERENCE 34745 E626 SW ZONE | SHEET NO E626 |
| DIRECTORY Z:\34745\Acad\As built | | JOB NO 34745 |

SUB 65117

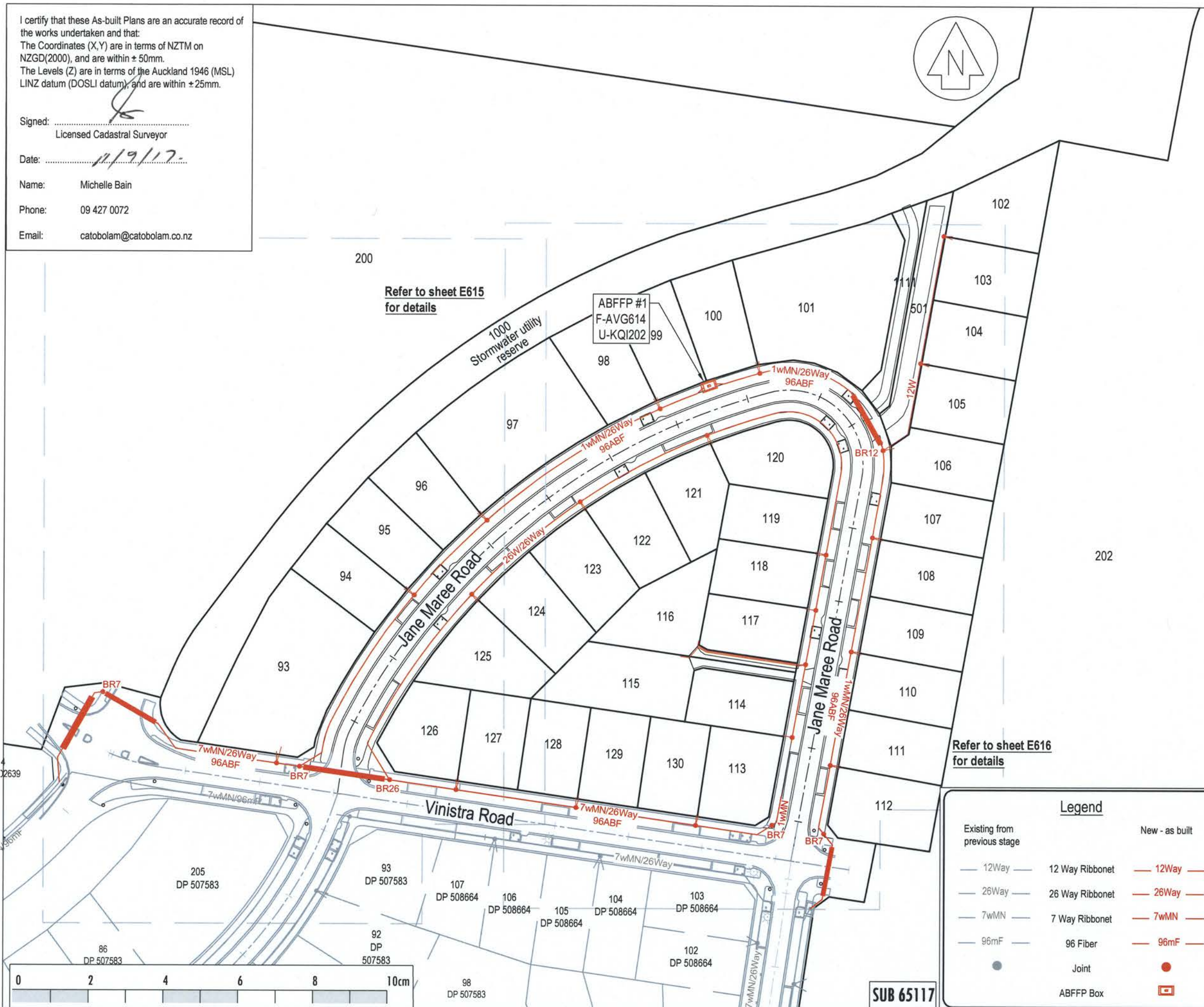
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Signed: 
 Licensed Cadastral Surveyor
 Date: 11/9/17
 Name: Michelle Bain
 Phone: 09 427 0072
 Email: catobolam@catobolam.co.nz



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Refer to sheet E615 for details

ABFFP #1
 F-AVG614
 U-KQI202 99

Refer to sheet E616 for details

| Legend | | |
|------------------------------|-----------------|----------------|
| Existing from previous stage | | New - as built |
| — 12Way — | 12 Way Ribbonet | — 12Way — |
| — 26Way — | 26 Way Ribbonet | — 26Way — |
| — 7wMN — | 7 Way Ribbonet | — 7wMN — |
| — 96mF — | 96 Fiber | — 96mF — |
| ● | Joint | ● |
| □ | ABFFP Box | □ |

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|-------------------------|------|---------|
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| DESIGNED | | |
| DRAWN | BJ | 08/2017 |
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Huapai Triangle Sub Precinct A
Stage 1C
Station Road, Huapai

DRAWING TITLE
Telecom
As Built Plan
 Sheet 1 of 3

| | | |
|--|-------------------------------------|-------------------------|
| ORIGINAL SCALE 1:1000 | ORIGINAL SIZE A3 | REVISION NO |
| DATE 04/07/2017 | CAD REFERENCE 34745 E626 Telecom | SHEET NO E629 |
| DIRECTORY Z:\34745\ACAD\As Built\Stage 1C | | JOB NO 34745 |

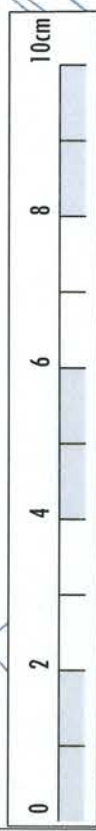
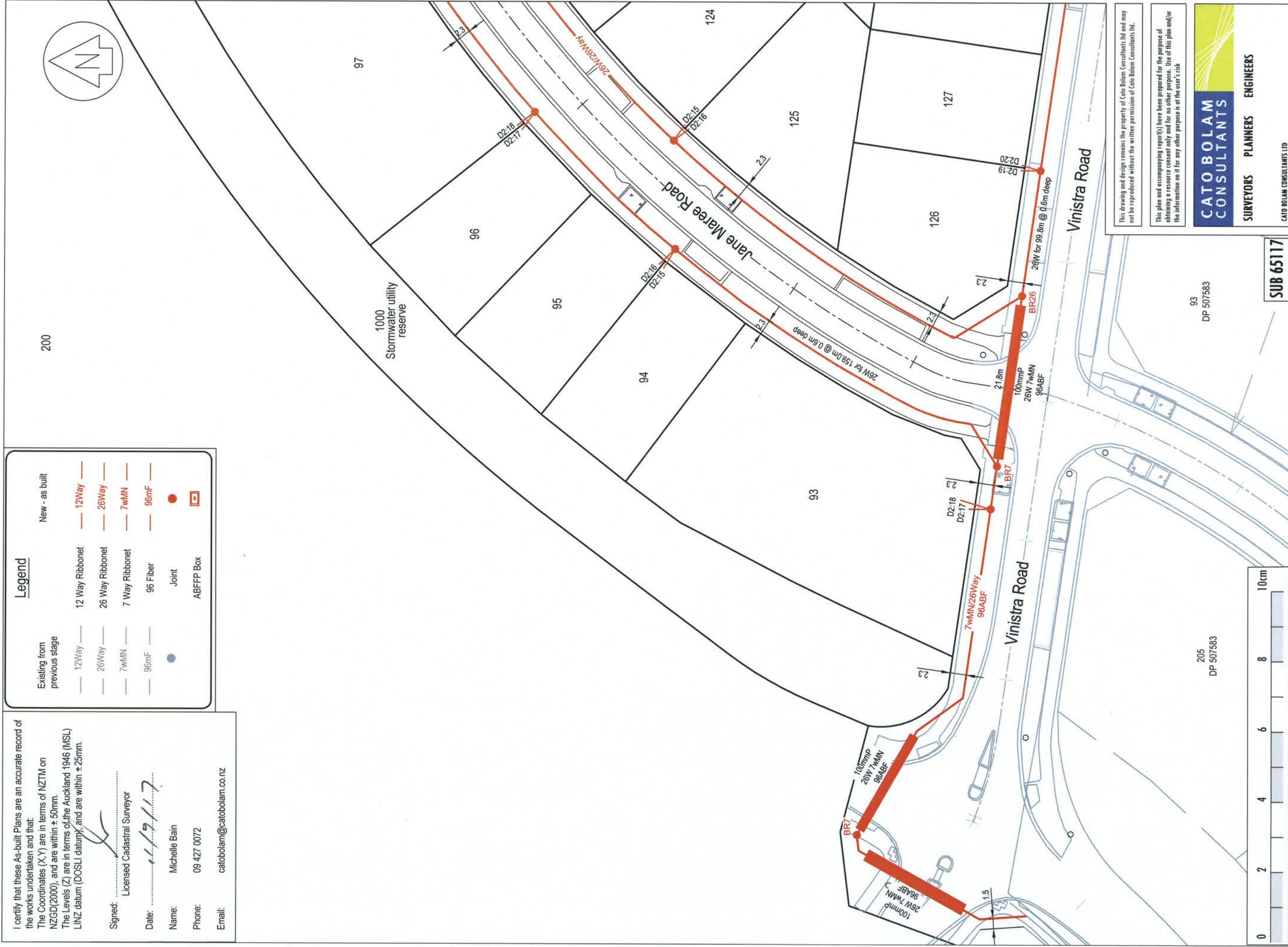
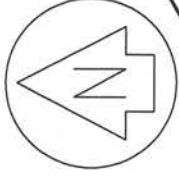
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Signed: 
 Licensed Cadastral Surveyor
 Date: 
 Name: Michelle Bain
 Phone: 09 427 0072
 Email: catobolam@catobolam.co.nz

Legend

| Existing from previous stage | New - as built |
|------------------------------|----------------|
| 12Way | 12Way |
| 26Way | 26Way |
| 7wMN | 7wMN |
| 96mF | 96mF |
| ● | ● |
| | Joint |
| | ABFFP Box |

200



93 DP-507583

205 DP-507583

SUB 65117

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| ORIGINAL SCALE | 1:500 | ORIGINAL SIZE | A3 | REVISION NO | |
| DATE | 04/08/2017 | CAD REFERENCE | 34745 626 telecom | SHEET NO | E630 |
| DIRECTORY | Z:\34745\KCAD\As Built\Stage 1C | | | JOB NO | 34745 |

DRAWING TITLE

Telecom
 As Built Plan
 Sheet 2 of 3

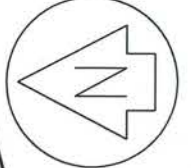
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 Huapai Triangle Sub Precinct A
 Stage 1C
 Station Road, Huapai

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| CHECKED | BM | 08/2017 |
| APPROVED | TL | 08/2017 |

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

Signed:  Licensed Cadastral Surveyor
 Date: 11/9/17
 Name: Michelle Bain
 Phone: 09 427 0072
 Email: catobolam@catobolam.co.nz



Legend

| | | |
|------------------------------|-------|------------------|
| Existing from previous stage | 12Way | 12 Way Ribbonnet |
| | 26Way | 26 Way Ribbonnet |
| | 7wMN | 7 Way Ribbonnet |
| | 96mF | 96 Fiber |
| | | Joint |
| | | ABFFP Box |
| New - as built | 12Way | 12 Way Ribbonnet |
| | 26Way | 26 Way Ribbonnet |
| | 7wMN | 7 Way Ribbonnet |
| | 96mF | 96 Fiber |
| | | Joint |
| | | ABFFP Box |

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|----------------|---------------------------------|---------------|-------------------|-------------|-------|
| ORIGINAL SCALE | 1:500 | ORIGINAL SIZE | A3 | REVISION NO | |
| DATE | 04/08/2017 | CAD REFERENCE | 34745 626 telecom | SHEET NO | E631 |
| DIRECTORY | Z:\34745\ACAD\As Built\Stage 1C | | | JOB NO | 34745 |

Telecom
 As Built Plan
 Sheet 3 of 3



Cabra Developments Ltd
 Huapai Triangle Sub Precinct A
 Stage 1C
 Station Road, Huapai

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