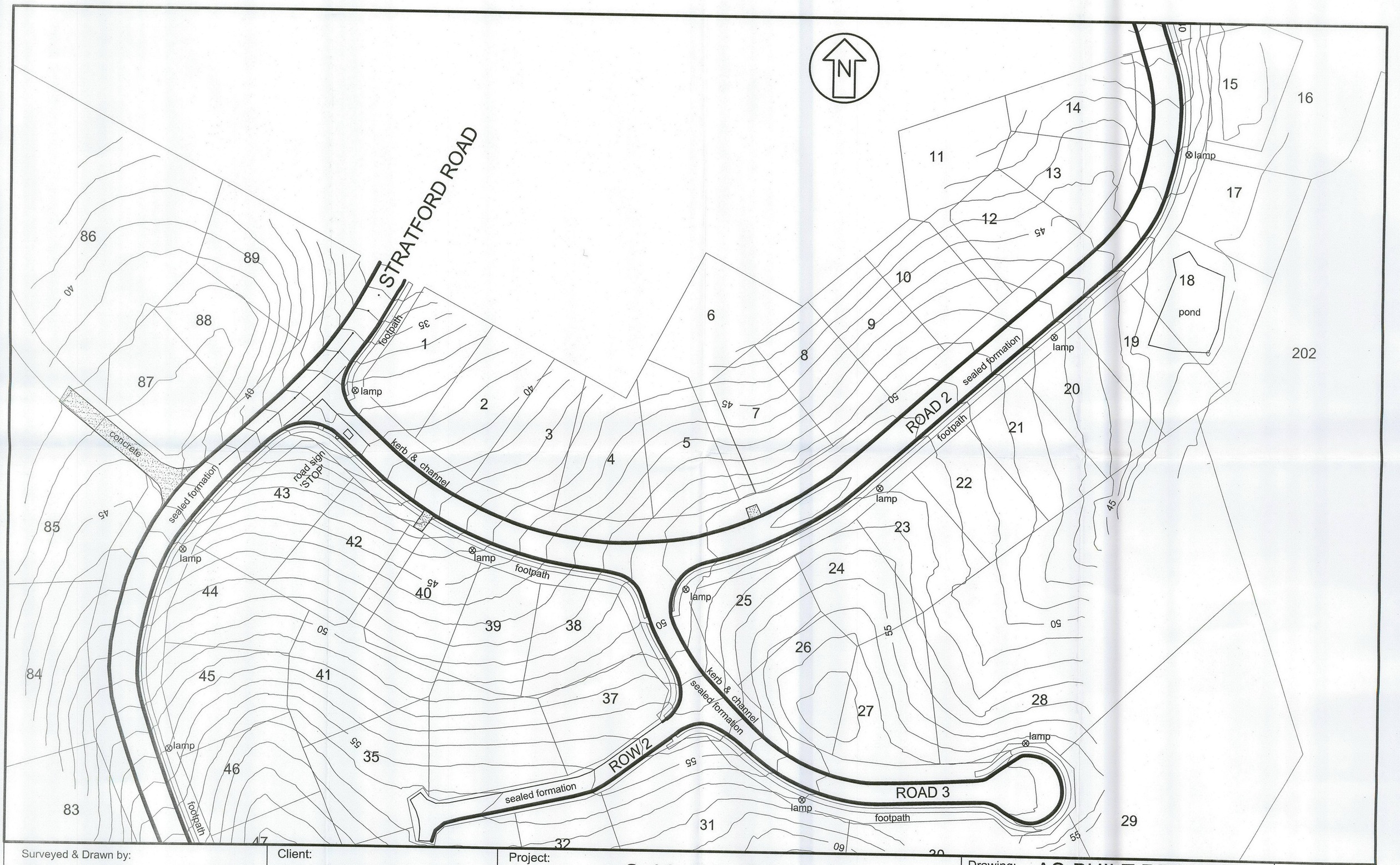


Surveyed & Drawn by:
BOUNDARY HUNTER LTD
Ph. 09 435 5387
Email. bruce@boundaryhunter.co.nz

Client:
FAR NORTH DISTRICT COUNCIL

Project:
Cable Bay Sections
Cable Bay - Doubtless Bay
Constructed by Donovan Drainage

Drawing: AS-BUILT RECORD
Roading & Contours

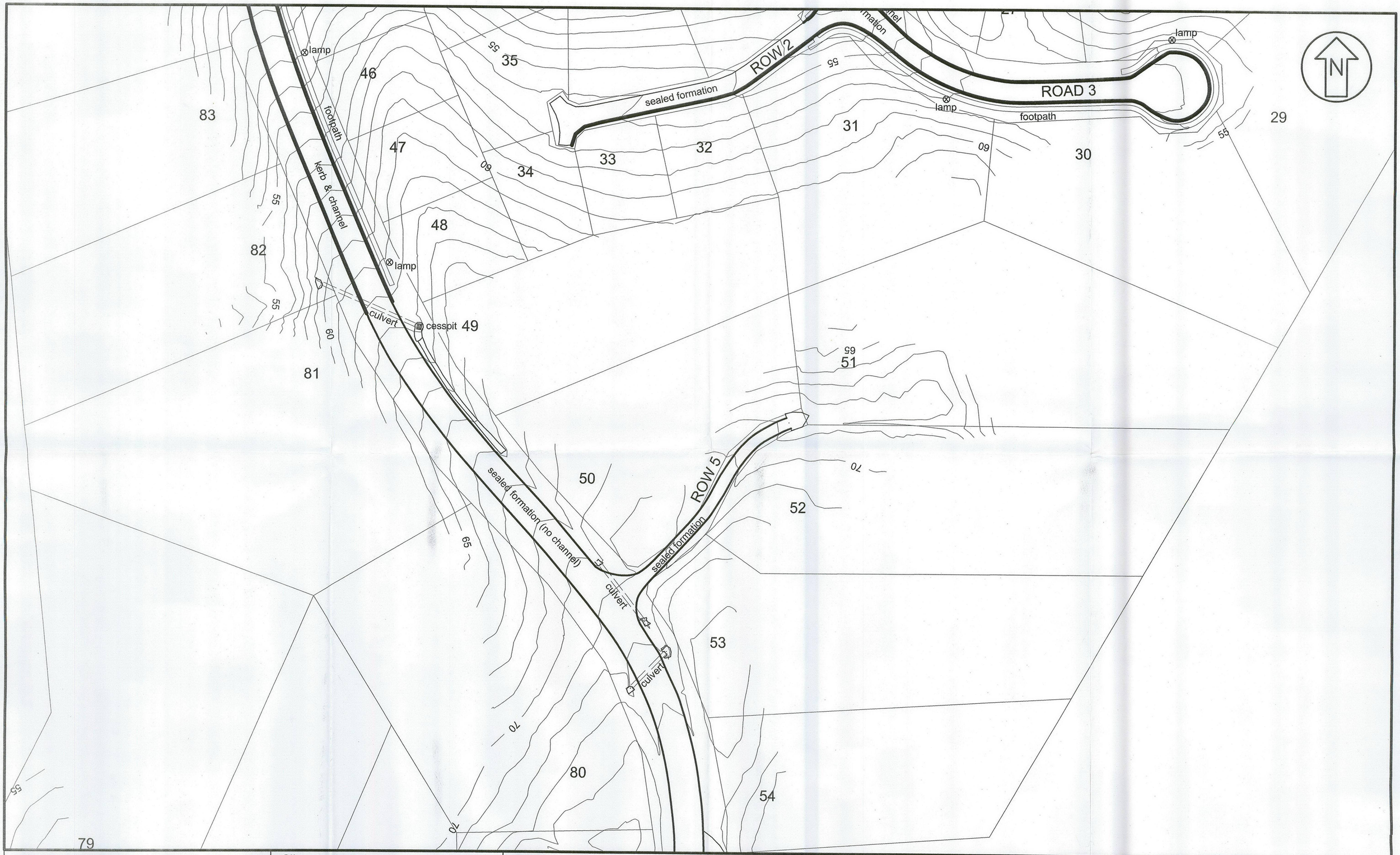
Surveyed & Drawings: BK, SG, BS

Checked: DWK 5.3.07

Original Scale: 1:1000 @ A3

Sheet: 2 of 5

Ref: 1587



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Sheet: 3 of 5

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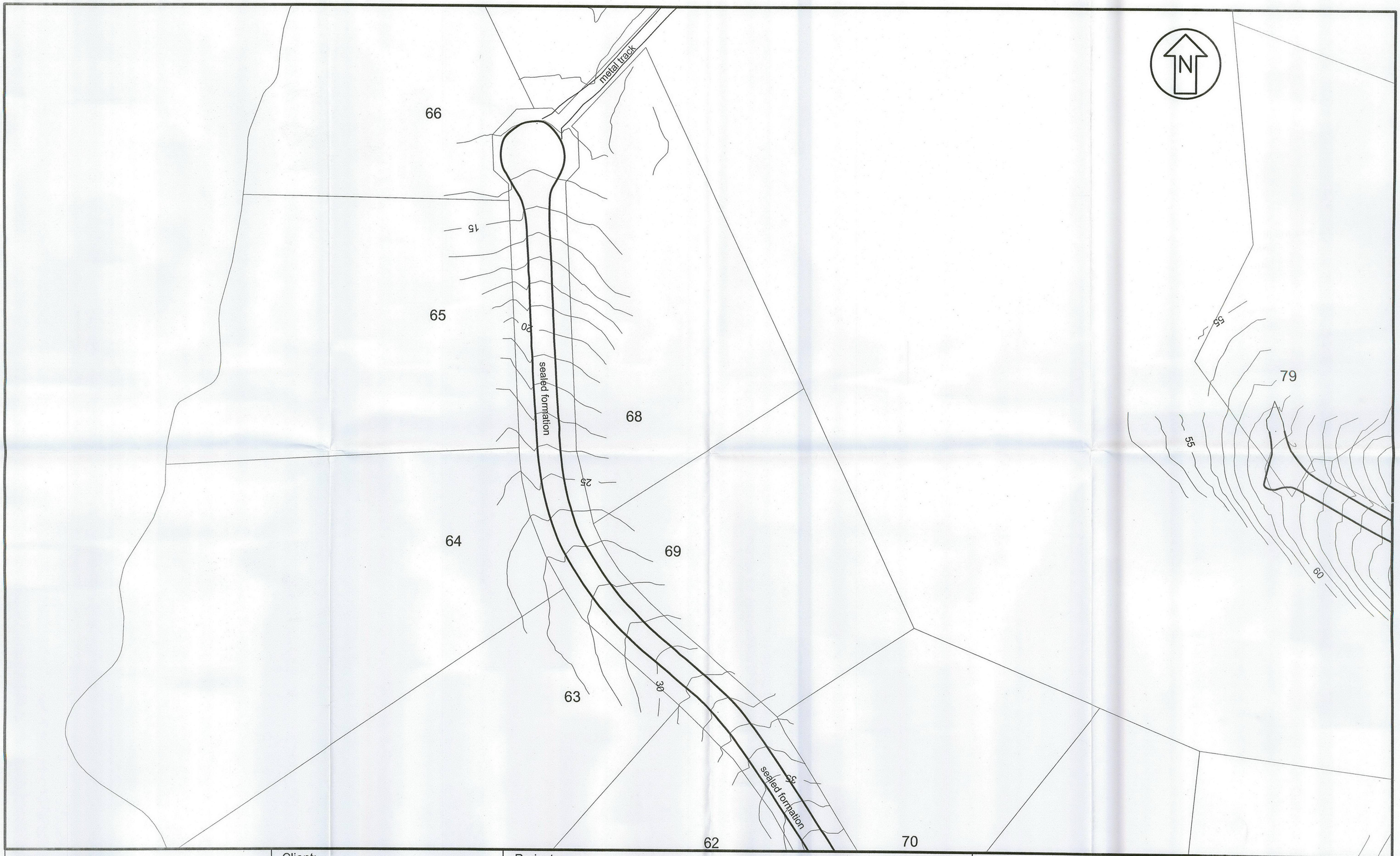

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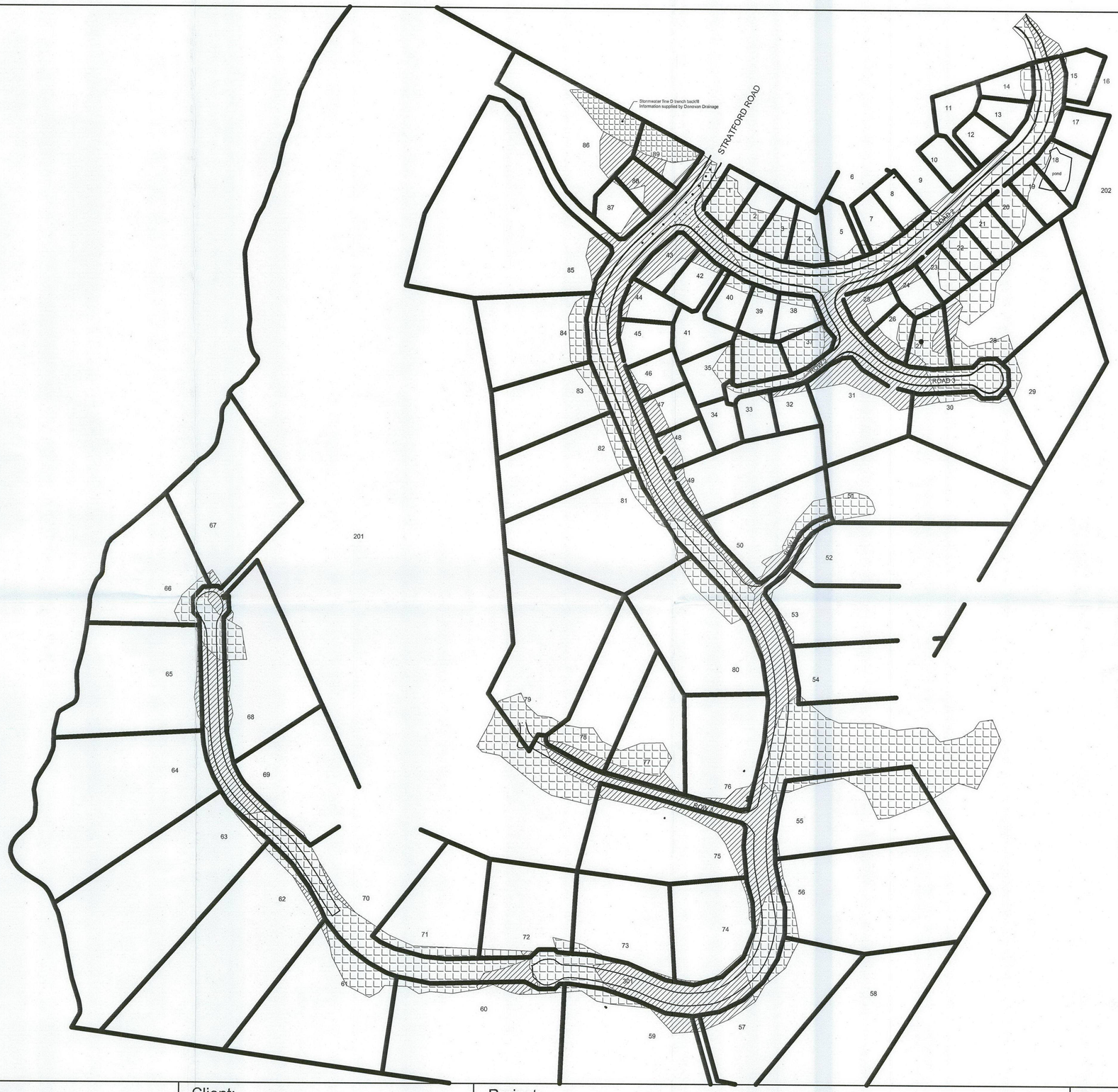

NOTATION

AREA OF CUT

AREA OF FILL

Notes:

Co ordinates are in terms of NZTM2000
Heights are in terms of DOSLI Datum (C89H)
Boundaries are subject to final survey
Disclaimer - Computed using original surface supplied by DWK Ltd.

Surveyed & Drawn by: BOUNDARY HUNTER LTD Ph. 09 435 5387 Email. bruce@boundaryhunter.co.nz	Client: FAR NORTH DISTRICT COUNCIL	Project: Cable Bay Sections Cable Bay - Doubtless Bay Constructed by Donovan Drainage	Drawing: AS-BUILT RECORD Cut & Fill Areas Surveyed & Drawings: BK, SG, BS, BP Checked: DWK 5/3/07 Original Scale: 1:3000 @ A3	Sheet: 1 of 5 Ref: 1587

These plans reduced to A4

NOTATION

AREA OF CUT

AREA OF FILL

–1.5 CUT CONTOUR

1.5 FILL CONTOUR

N

Stormwater line D trench backfill
Information supplied by Donovan Drainage

STRATFORD ROAD

ROAD 2

ROW 2

ROAD 3

pond

Notes:

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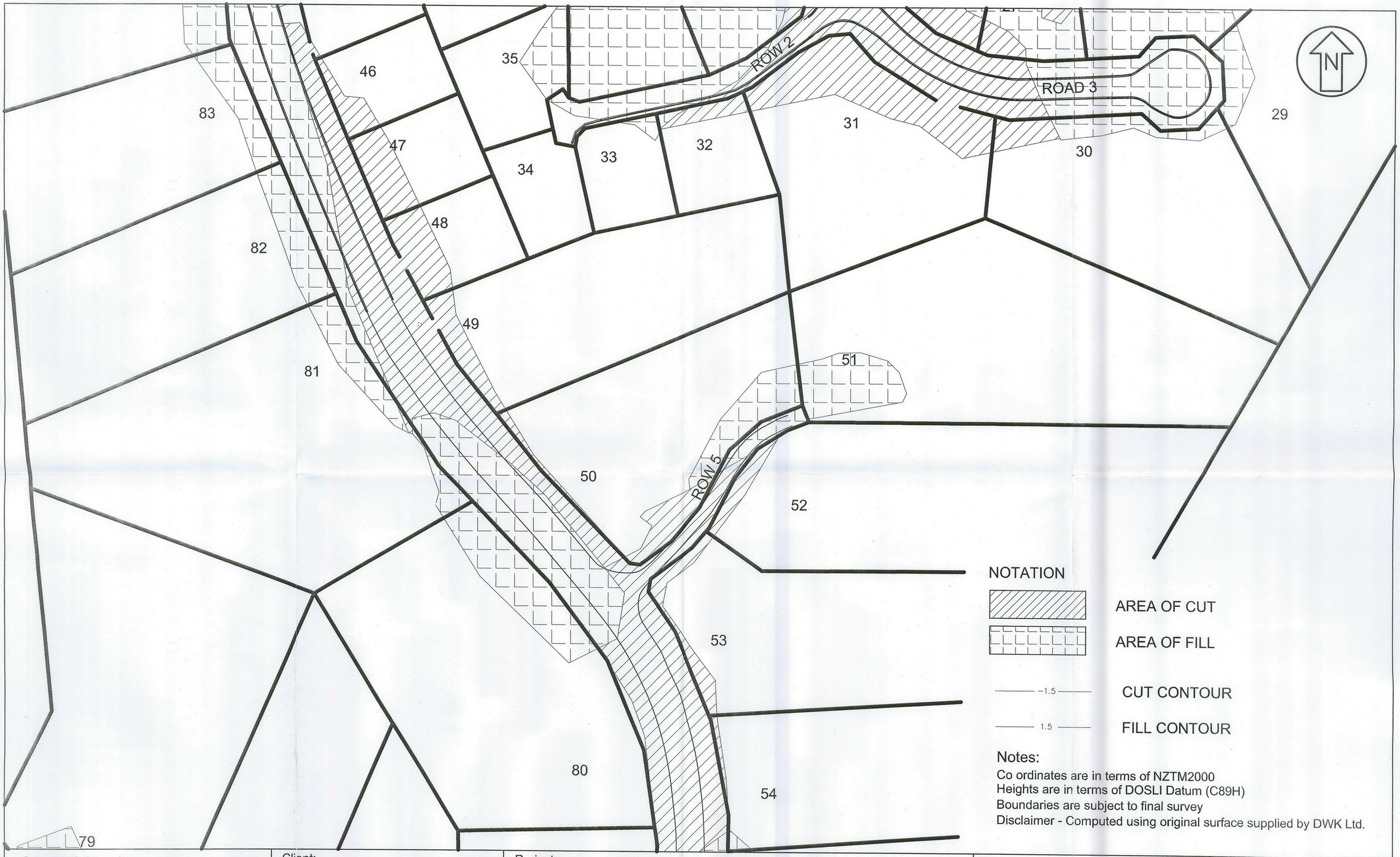

NOTATION

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AREA OF FILL

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1.5 FILL CONTOUR

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Cable Bay Sections
Cable Bay - Doubtless Bay
Constructed by Donovan Drainage

Drawing: AS-BUILT RECORD
Cut & Fill Areas

Surveyed & Drawings: BK, SG, BS, BP

Checked: DWK 5/3/07

Original Scale: 1:1000 @ A3

Sheet: 3 of 5

Ref: 1587

NOTATION

AREA OF CUT

AREA OF FILL

–1.5– CUT CONTOUR

1.5 FILL CONTOUR

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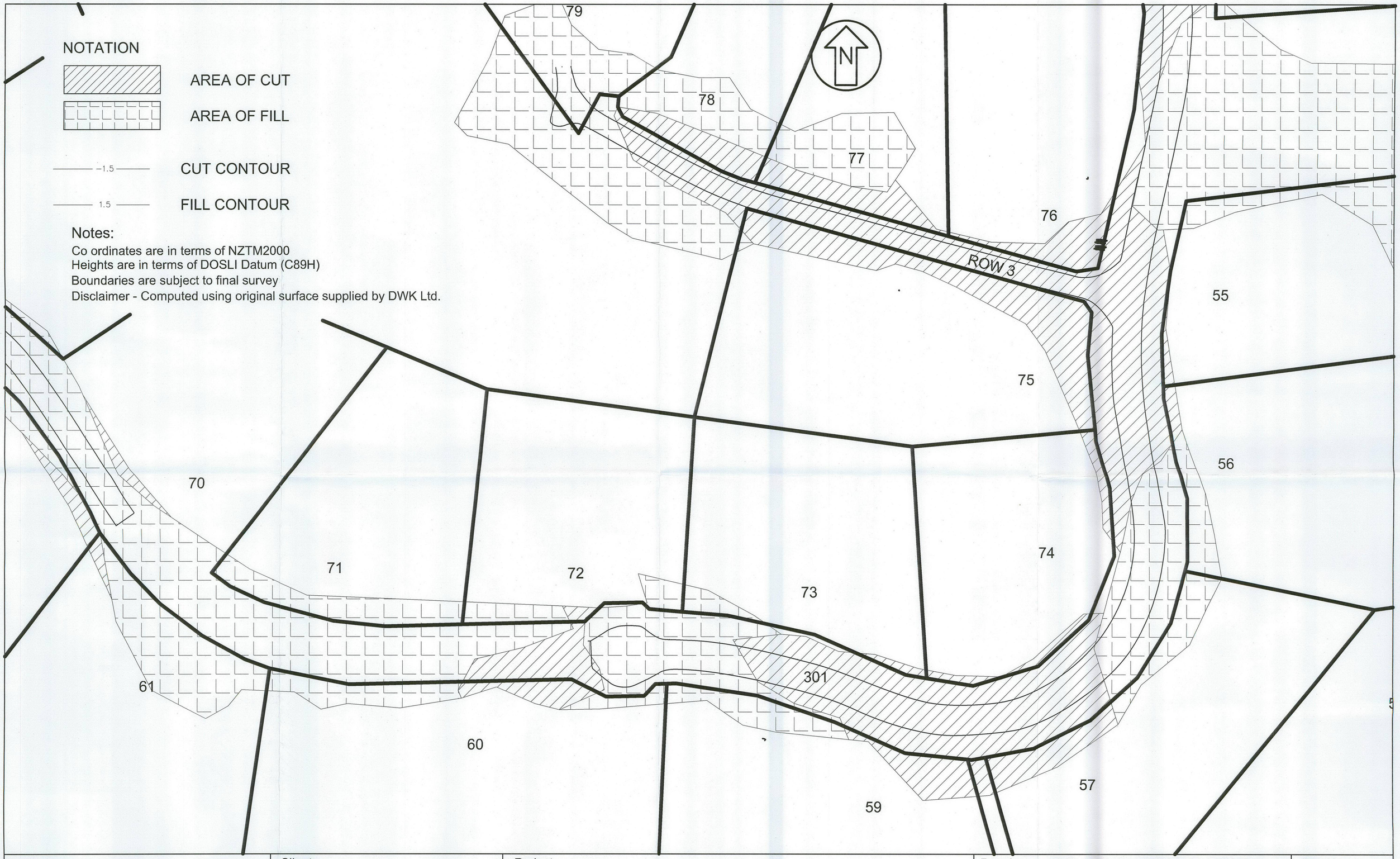

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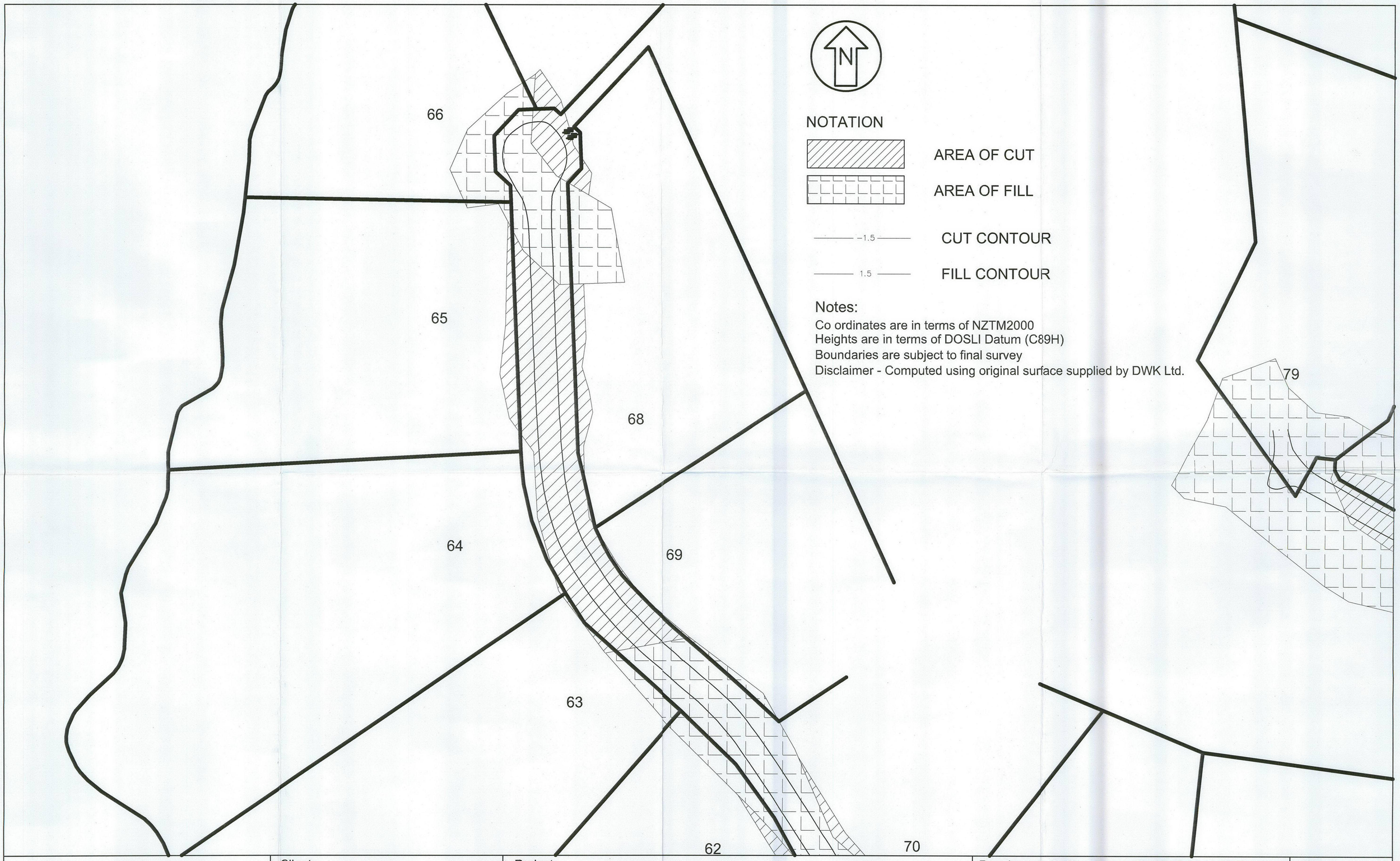

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AREA OF FILL

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1.5 FILL CONTOUR

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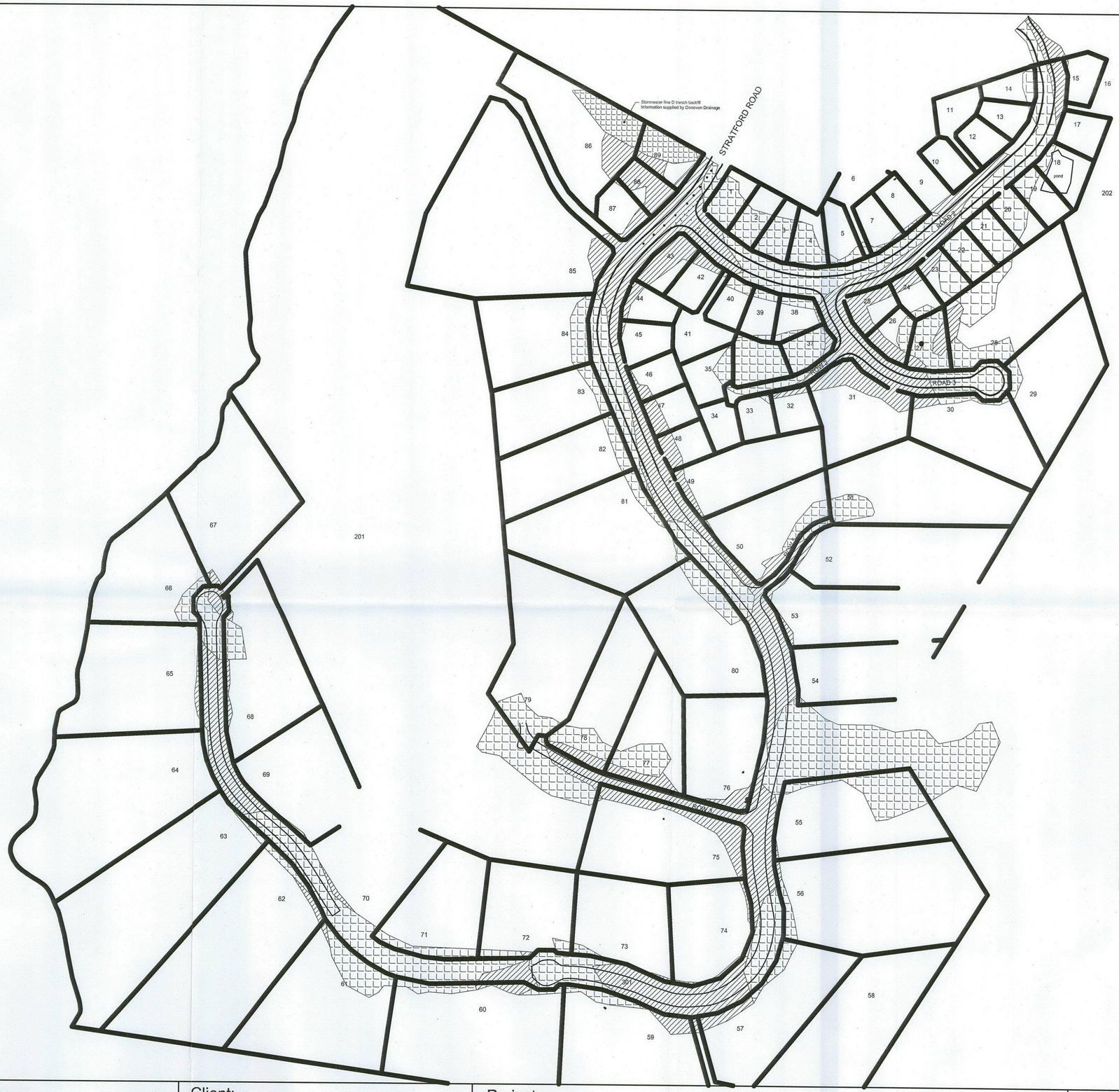

N

NOTATION

AREA OF CUT

AREA OF FILL

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Cable Bay Sections
Cable Bay - Doubtless Bay
Constructed by Donovan Drainage

Drawing: AS-BUILT RECORD
Cut & Fill Areas

Sheet: 1 of 5

Surveyed & Drawings: BK, SG, BS, BP

Checked: DWK 5.3.07

Original Scale: 1:3000 @ A3

Ref: 1587

NOTATION

AREA OF CUT

AREA OF FILL

–1.5 CUT CONTOUR

1.5 FILL CONTOUR

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Stormwater line D trench backfill
Information supplied by Donovan Drainage

STRATFORD ROAD

ROAD 2

ROW 2

ROAD 3

pond

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NOTATION

AREA OF CUT

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Cable Bay - Doubtless Bay
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Drawing: AS-BUILT RECORD
Cut & Fill Areas

Sheet: 3 of 5

Surveyed & Drawings: BK, SG, BS, BP

Checked: DWK 5-3-07

Original Scale: 1:1000 @ A3

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NOTATION

AREA OF CUT

AREA OF FILL

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1.5 FILL CONTOUR

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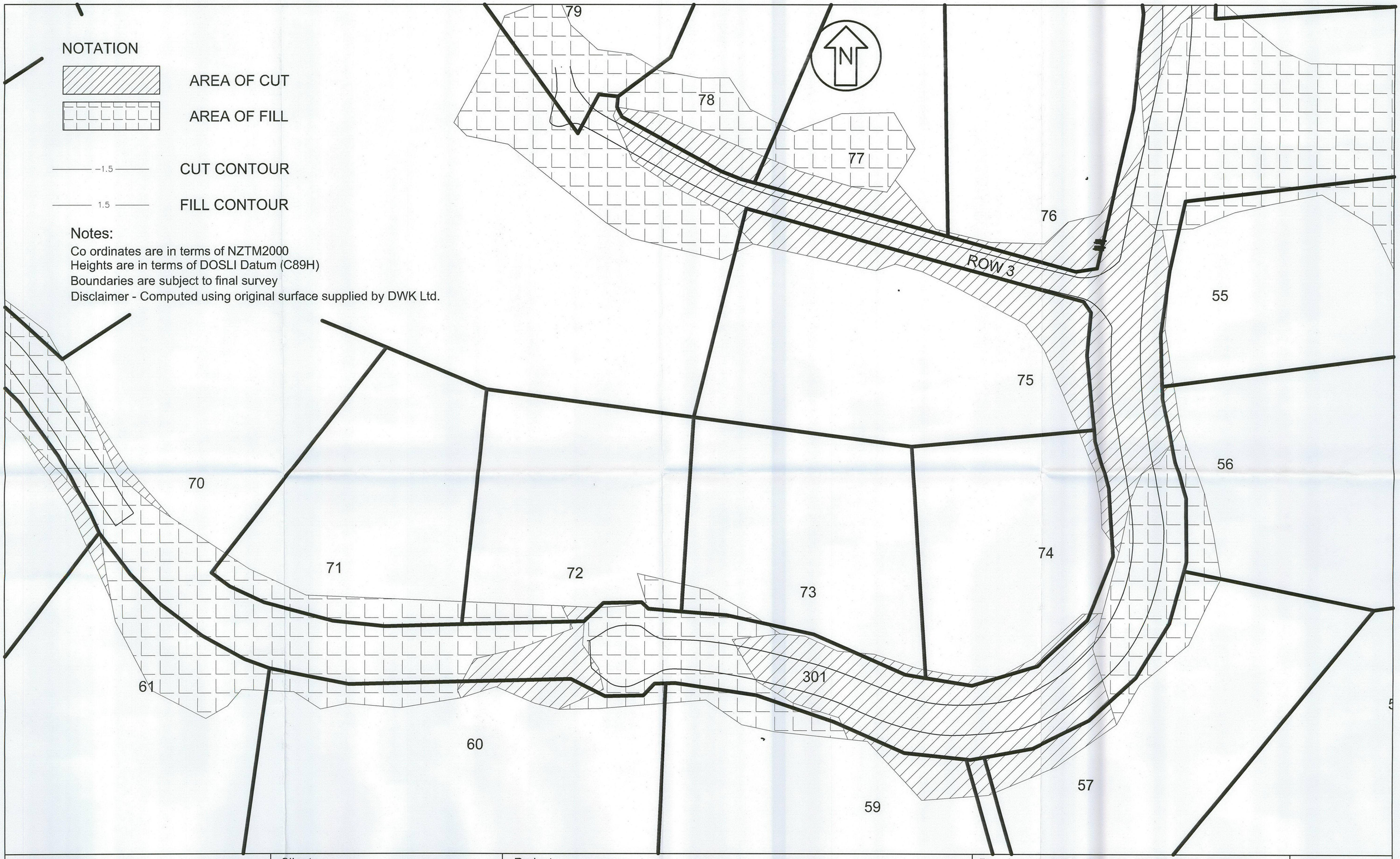

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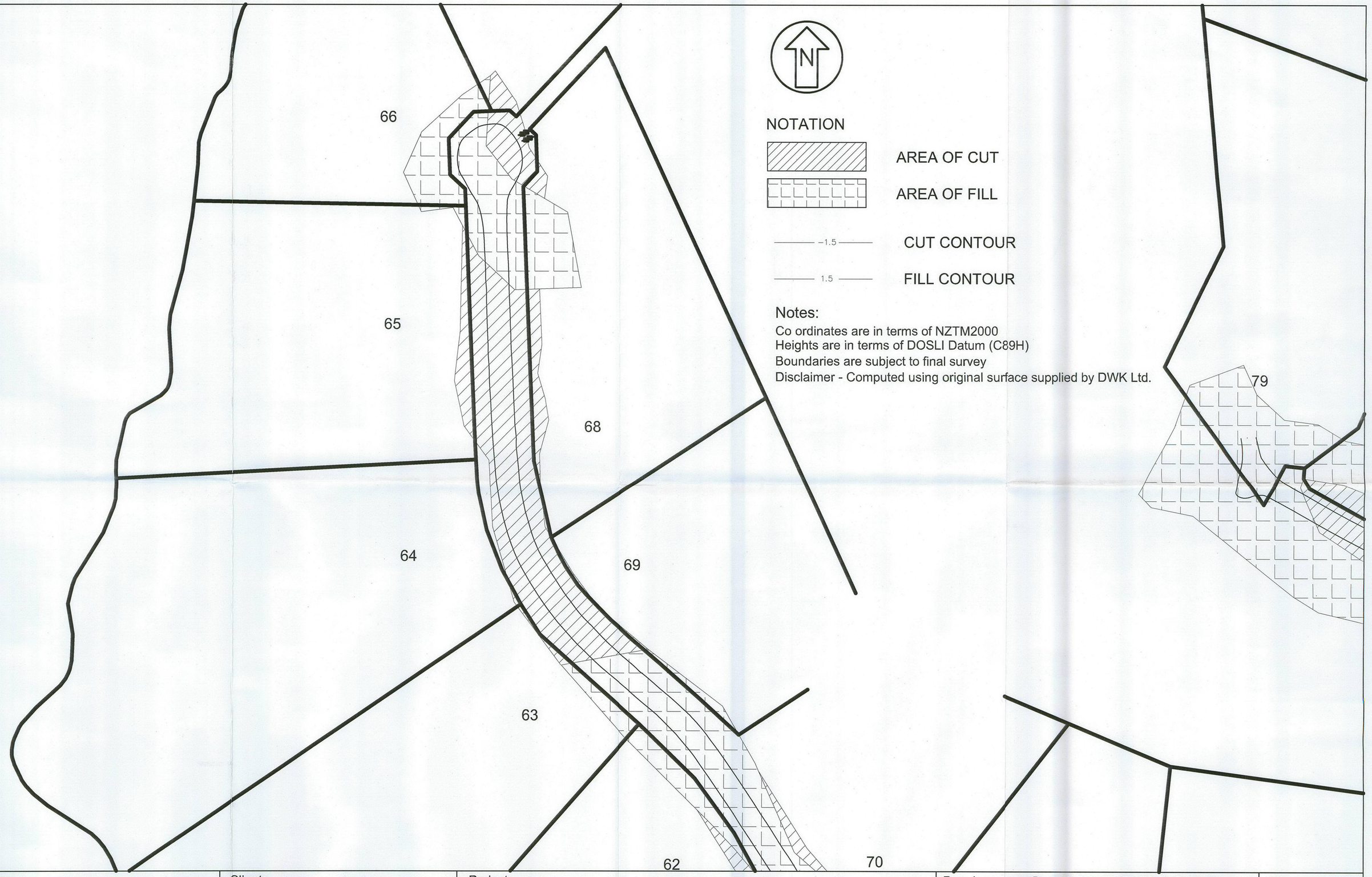

NOTATION

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AREA OF FILL

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Sheet: 5 of 5

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Roading & Contours

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Original Scale: 1:3000 @ A3

Sheet: 1 of 5

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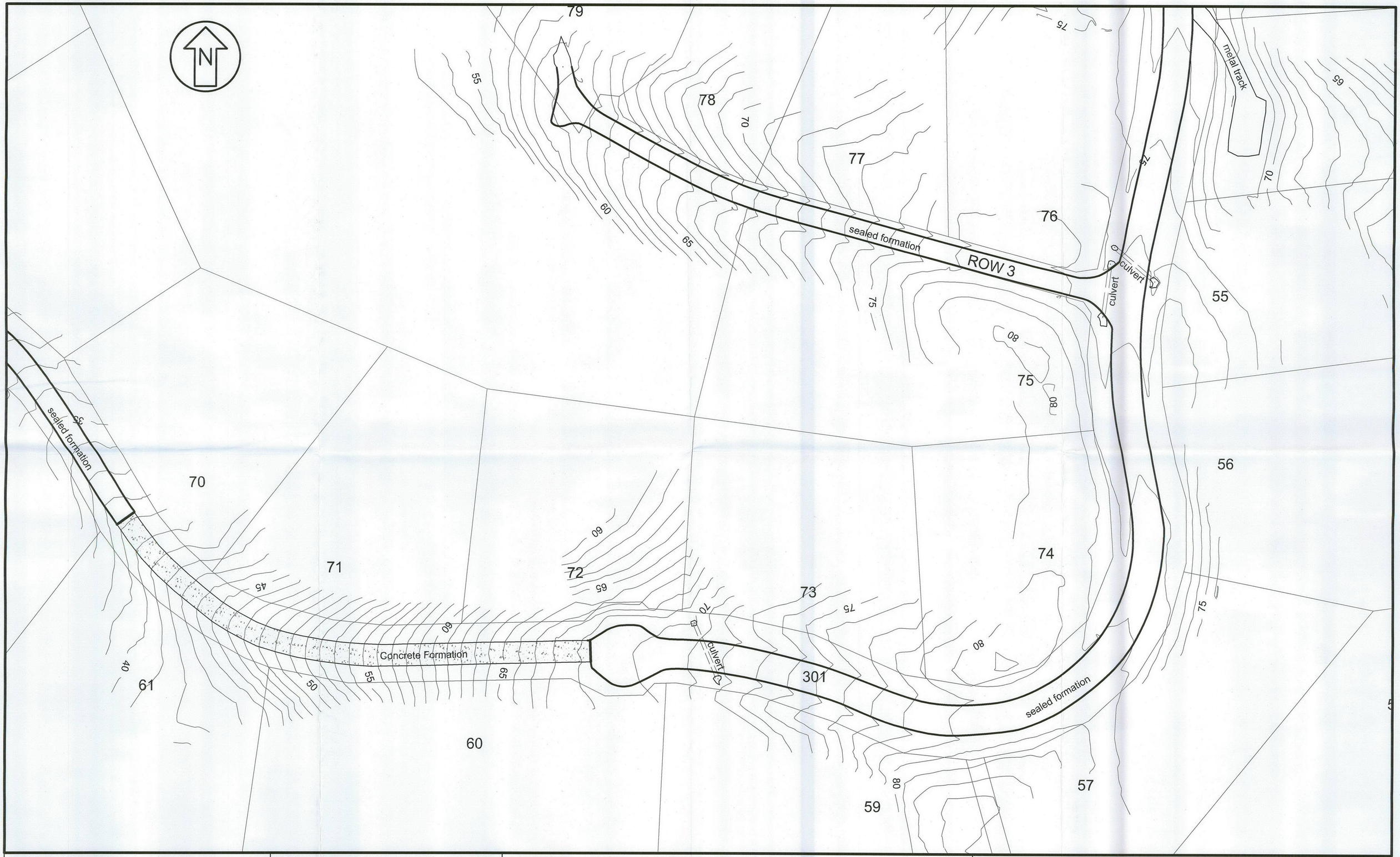

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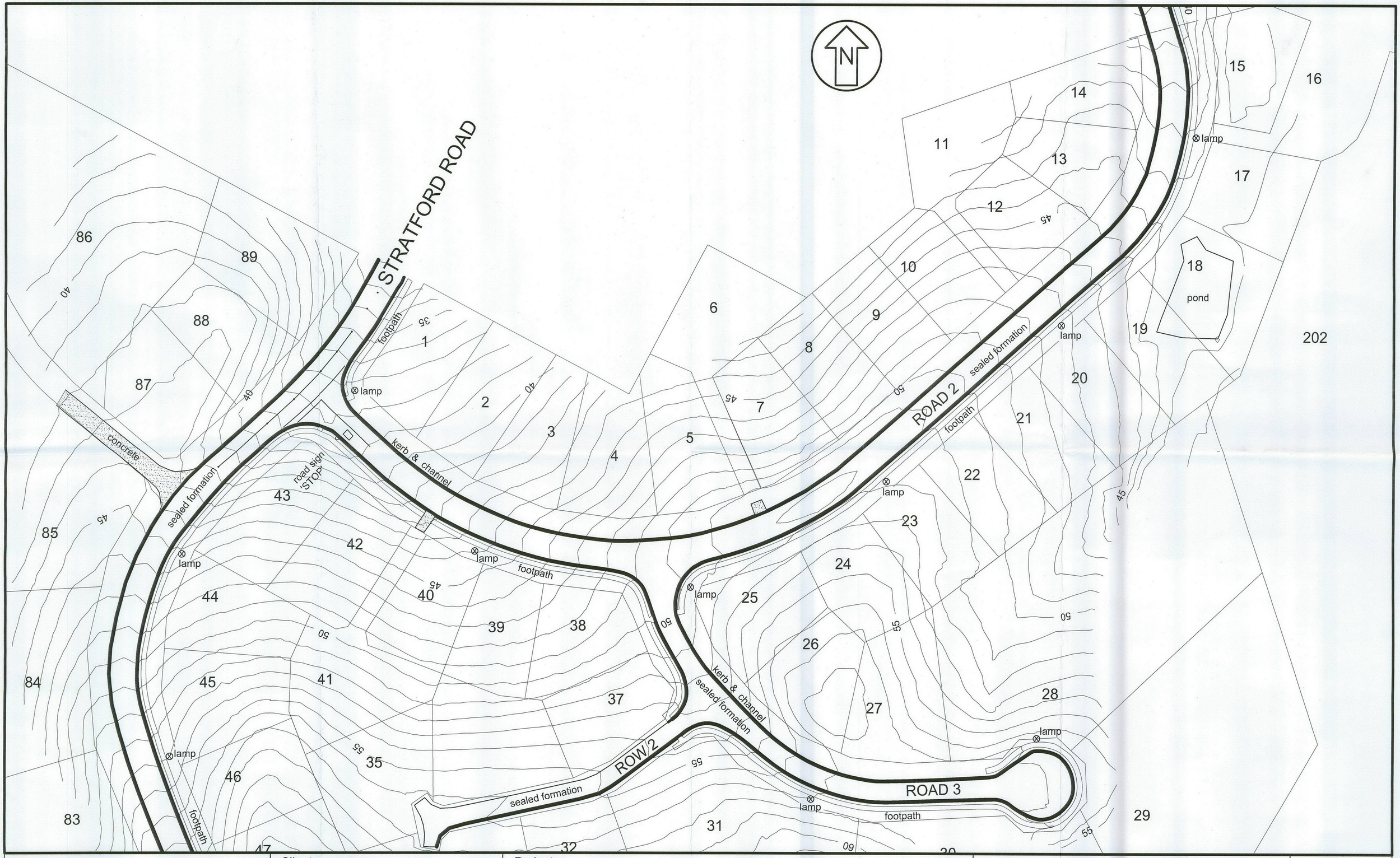

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Original Scale: 1:3000 @ A3

Sheet: 1 of 5

Ref: 1587

reduced to A4

201

2
DP 138134

3
DP 138134

2
DP 138134

5.65 5.50 5.60 5.29 5.33 5.35 5.32 5.34 5.26 5.35 5.44 5.48 5.54 5.81 6.08 7.17 7.48 7.59 7.91 7.96 8.28 9.77 9.73 9.35 9.76 9.19 9.25 9.40 9.91 8.98 9.69 9.18 9.12 11.61 11.68 10.27 10.06 11.69 11.72 CONC. APRON GABION ROCK OUTFALL 9.79 11.01 WALL 9.49 TRACK 10.95 10.95 9.33 10.95 WOODEN RETAINING WALL 10.93 9.33 9.41 10.97 10.99 11.01 10.99 10.99 9.52 10.99 9.58 10.96 10.93 9.65 9.57 10.68 10.70 CONC. O/F 10.69 9.84 9.66 10.95 10.57 9.70 10.95 10.95 9.50 9.41 9.23 9.41 9.31 9.22 9.68 9.37 9.48 9.74 9.81 9.83 9.70 9.97 GABION (ROCK) WALL METALLED TRACK GABION ROCK OUTFALL 4.46 4.12 4.62 4.85 WING WALL 9.37 9.29 CONC. O/F 9.40 9.31 9.66 9.52 9.55 9.34 9.79 9.70 9.46 9.54 10.16 10.29 9.30 9.33 9.41 9.50 10.69 10.82 10.94 10.93 10.98 11.11 11.20 WOODEN RETAINING WALL DIRECTION OF PRIMARY OVERFLOW

POND
3927m2

67

201

14.44 14.33 14.97 15.10 15.34 15.71 16.21 16.20 16.26 16.17

TOPO PLAN – POND
CABLE BAY HEIGHTS

SCALE: 1:400 @A2 | DATE: FEB 2007 | PREPARED FOR: BLUNT

Firm's Name

Blue Wallace Surveyors Ltd.
25 Harwood Street, P O Box 38,
HAMILTON.
Phone (07) 8397799, Fax (07) 8394455

File Reference 06/004

Drawing No. 1

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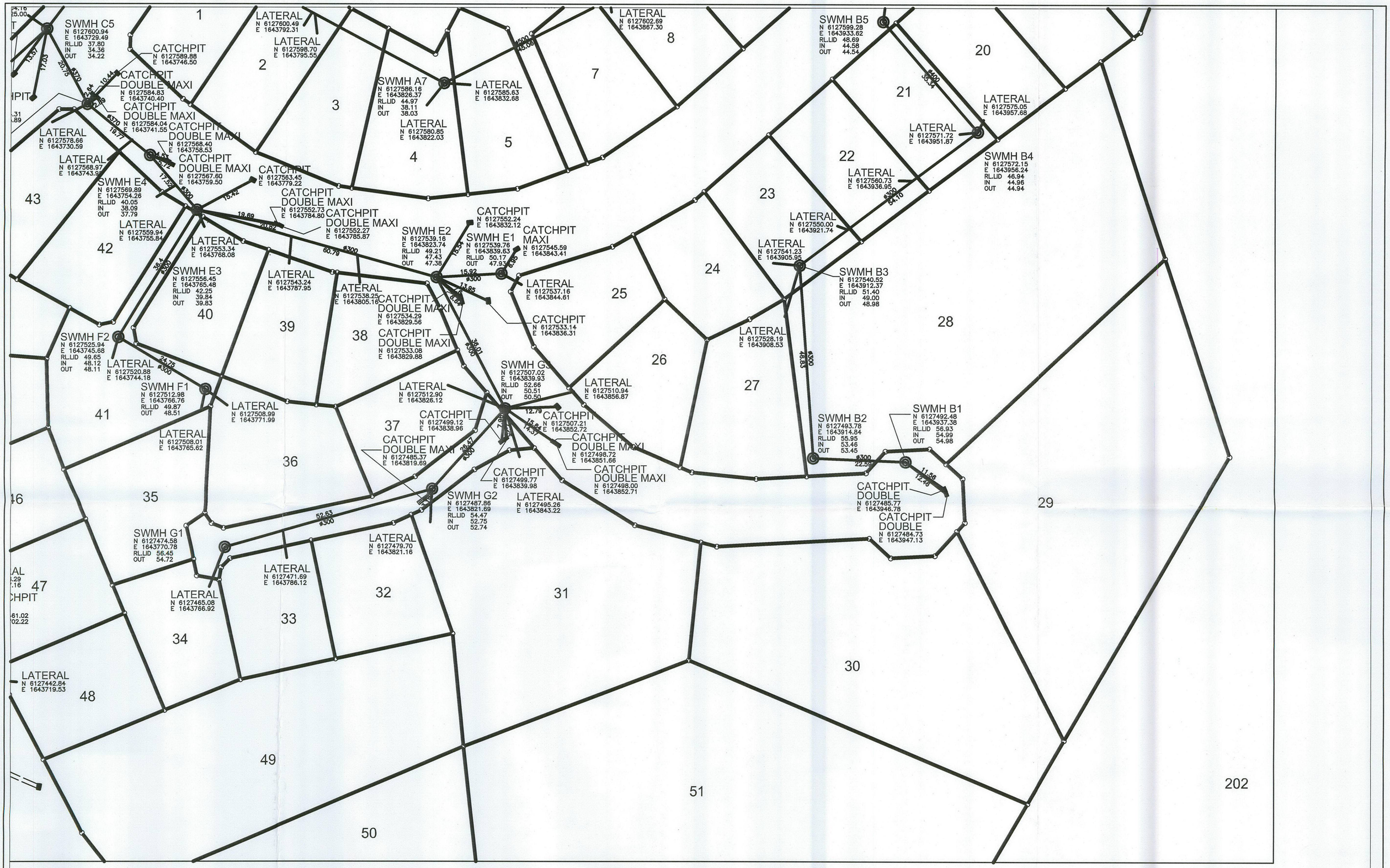
Reduced to A4



Duffill Watts & King Ltd
CONSULTING ENGINEERS
P.O. Box 480, KERIKERI
approved 30-03-07

SCALE: 1:750 @A1	DATE: FEBRUARY 2007

No.	Amendment	Init.	Date.
1	.	.	.
2	.	.	.

S:\2006\06004\ASBUILTS\FINAL ASBUILT – STORMWATER.DWG

Designed. JMB
Drawn. ABI 19 FEBRUARY 2007
File Ref: 06/004
Approved.

ASBUILT PLAN – STORMWATER
CABLE BAY HEIGHTS

Firm's Name
BLUE WALLACE SURVEYORS
25 HARWOOD STREET – PO BOX 38
HAMILTON
PHONE: (07) 839-7799

File Reference
06/004

Drawing No.
4 of 4

SWMH D6
N 6127602.34
E 1643548.22
RL.LID 22.75
IN 21.29
OUT 21.23

Ø900
71.42

SWMH D7
N 6127553.74
E 1643495.93
RL.LID 11.95
IN 10.47
OUT 9.14

85

87

LATERAL
N 6127604.16
E 1643725.00

CATCHPIT
N 6127590.12
E 1643721.32

SWMH C5
N 6127600.94
E 1643729.49
RL.LID 37.80
IN 34.36
OUT 34.22

13.57
17.03
20.75
Ø370
10.44

LATERAL
N 6127589.00
E 1643709.24

CATCHPIT
MAXI
N 6127584.31
E 1643725.89

CATCHPIT
DOUBLE MAXI
N 6127584.83
E 1643740.40

CATCHPIT
DOUBLE MAXI
N 6127584.04
E 1643741.55

54.04
Ø370
19.77

SWMH E5
N 6127582.55
E 1643739.08
RL.LID 38.35
IN 34.72
OUT 34.65

LATERAL
N 6127578.66
E 1643730.59

LATERAL
N 6127568.97
E 1643743.98

SWMH C4
N 6127565.14
E 1643689.05
RL.LID 44.41
IN 42.61
OUT 42.45

CATCHPIT
N 6127560.73
E 1643691.54

3.07
19.21

43

SWMH E4
N 6127569.89
E 1643754.26
RL.LID 40.05
IN 38.09
OUT 37.79

CATCHPIT
MAXI
N 6127556.66
E 1643697.83

LATERAL
N 6127559.94
E 1643755.84

42

LATERAL
N 6127545.89
E 1643701.43

47.08
Ø300

44

SWMH F2
N 6127525.94
E 1643745.68
RL.LID 49.65
IN 48.12
OUT 48.11

LATERAL
N 6127520.88
E 1643744.18

24.73
Ø300

SWMH F1
N 6127512.98
E 1643766.76
RL.LID 49.87
OUT 48.51

SWMH C3
N 6127518.10
E 1643687.47
RL.LID 49.49
IN 48.26
OUT 48.19

14.93
10.43

LATERAL
N 6127514.23
E 1643693.87

CATCHPIT
MAXI
N 6127507.78
E 1643685.99

45

41

CATCHPIT
N 6127506.84
E 1643678.58

84

201

POND

Ⓣ

EASEMENT BOUNDARY

EASEMENT BOUNDARY

Ø300
56.03

LATERAL
N 6127489.19
E 1643700.87

46

35

SWMH G1
N 6127474.58
E 1643770.78
RL.LID 56.45
OUT 54.72

SWMH C2
N 6127464.63
E 1643703.90
RL.LID 56.98
IN 55.52
OUT 55.53

LATERAL
N 6127468.29
E 1643707.16

47

CATCHPIT
MAXI
N 6127461.02
E 1643702.22

10.53
Ø300
22.19

CATCHPIT
N 6127458.30
E 1643695.44

34

83

SWMH C1
N 6127443.78
E 1643711.66
RL.LID 59.93
IN 58.35

LATERAL
N 6127442.84
E 1643719.53

48

82

157.05
Ø300

culvert
Ø450

81

Duffill Watts & King Ltd
CONSULTING ENGINEERS
P.O. Box 480, KERIKERI

approved TWT 20-03-07

SCALE: 1:750 @A1

DATE: FEBRUARY 2007

No.	Amendment	Init.	Date.
1	.	.	.
2	.	.	.

c:\ 2006\ 06004\ ASBUILTS\ FINAL_ASBUILT_STORMWATER.DWG

Designed. JMB
Drawn. ABI 19 FEBRUARY 2007
File Ref: 06/004
Approved.

ASBUILT PLAN – STORMWATER
CABLE BAY HEIGHTS

Firm's Name
BLUE WALLACE SURVEYORS
25 HARWOOD STREET – PO BOX 38
HAMILTON
PHONE: (07) 839-7799

File Reference
06/004

Drawing No.
3 of 4

LEGEND

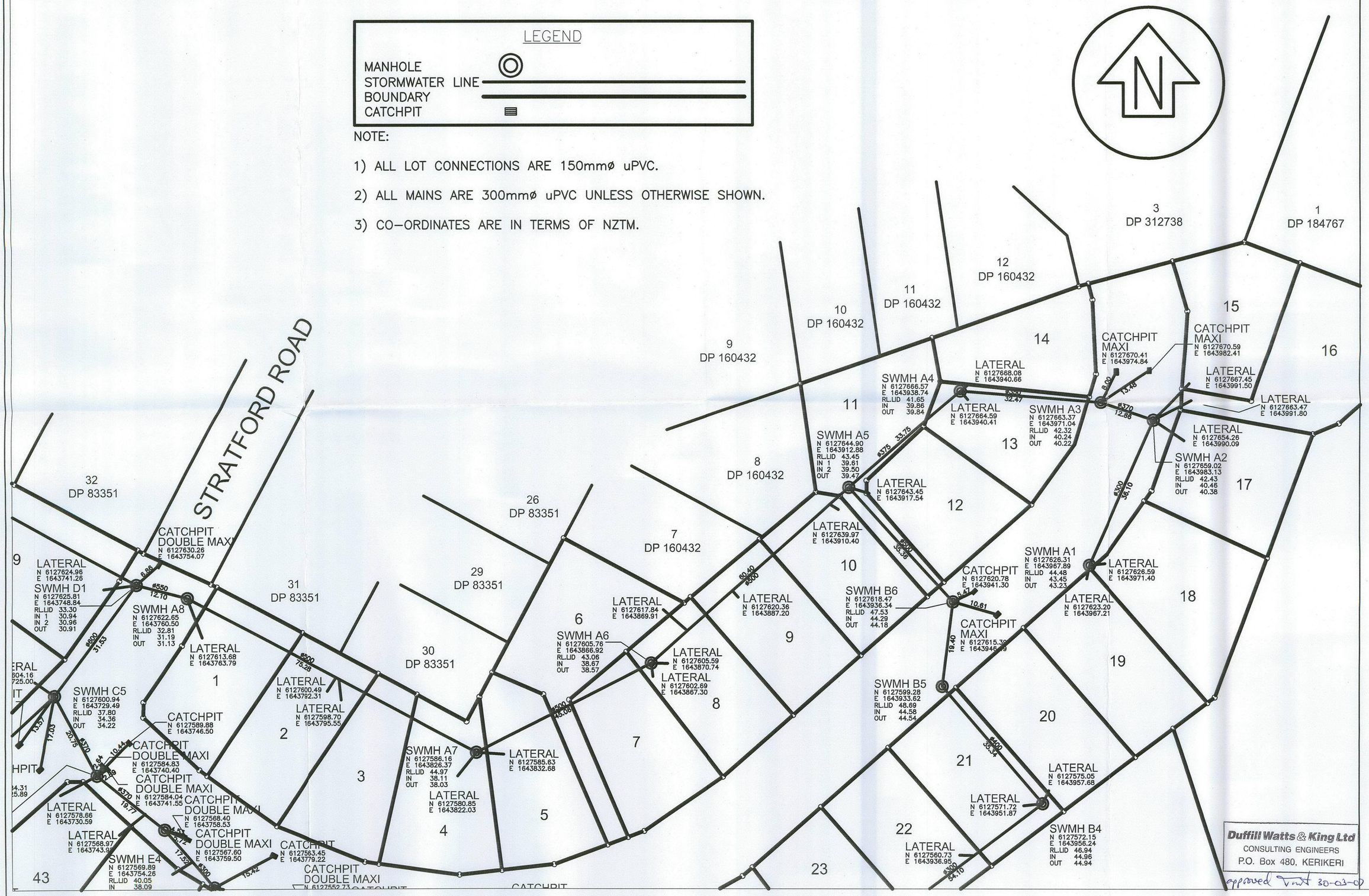
MANHOLE
STORMWATER LINE
BOUNDARY
CATCHPIT

NOTE:

1) ALL LOT CONNECTIONS ARE 150mmø uPVC.

2) ALL MAINS ARE 300mmø uPVC UNLESS OTHERWISE SHOWN.

3) CO-ORDINATES ARE IN TERMS OF NZTM.



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1	.	.	.
2	.	.	.

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Designed. JMB
Drawn. ABI 19 FEBRUARY 2007
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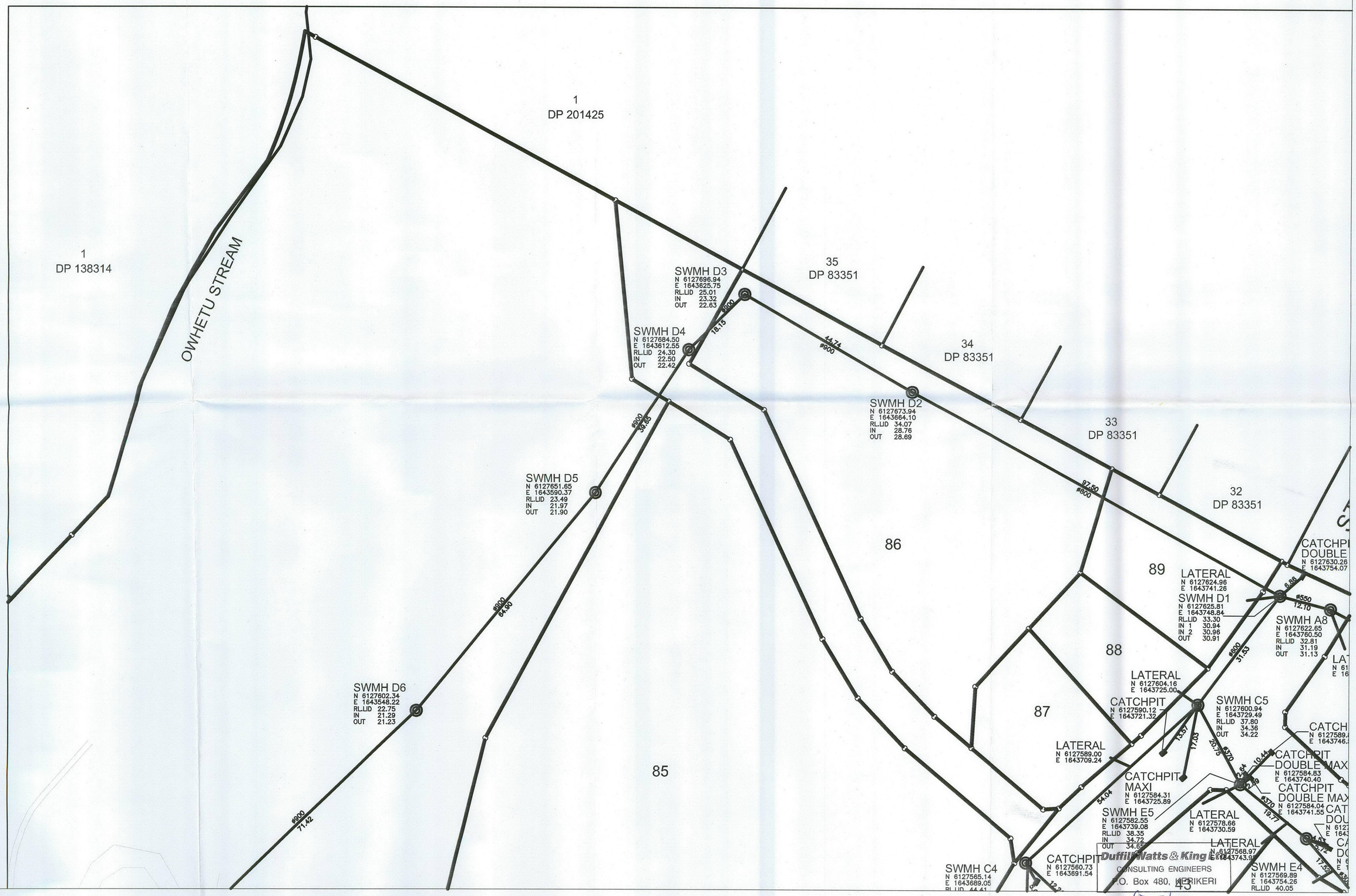
ASBUILT PLAN - STORMWATER
CABLE BAY HEIGHTS

Firm's Name
BLUE WALLACE SURVEYORS
25 HARWOOD STREET - PO BOX 38
HAMILTON
PHONE: (07) 839-7799

File Reference
06/004

Drawing No.
2 of 4



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ASBUILT PLAN - STORMWATER
CABLE BAY SECTIONS

Firm's Name
BLUE WALLACE SURVEYORS
25 HARWOOD STREET - PO BOX 38
HAMILTON
PHONE: (07) 839-7799

File Reference
06/004

Drawing No.
1 of 4

SWMH C5
N 6127600.94
E 1643729.49
RL.LID 37.80
IN 34.36
OUT 34.22

SWMH E4
N 6127569.89
E 1643754.26
RL.LID 40.05
IN 38.09
OUT 37.79

SWMH E3
N 6127556.45
E 1643765.48
RL.LID 42.25
IN 39.84
OUT 39.83

SWMH F2
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RL.LID 49.65
IN 48.12
OUT 48.11

SWMH F1
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E 1643766.76
RL.LID 49.87
OUT 48.51

SWMH G1
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E 1643770.78
RL.LID 56.45
OUT 54.72

SWMH A7
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IN 38.11
OUT 38.03

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SWMH E1
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IN 50.51
OUT 50.50

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IN 52.75
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SWMH B5
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OUT 44.54

SWMH B4
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OUT 54.98

CATCHPIT DOUBLE MAXI
N 6127584.83
E 1643740.40

CATCHPIT DOUBLE MAXI
N 6127584.04
E 1643741.55

CATCHPIT DOUBLE MAXI
N 6127568.40
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CATCHPIT
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LATERAL N 6127528.19 E 1643908.53

1 2 3 4 5 7 8 20 21 22 23 24 25 26 27 28 29 30 31 202 32 33 34 35 36 37 38 39 40 41 42 43 46 47 48 49 50 51

Duffill Watts & King Ltd
CONSULTING ENGINEERS
P.O. Box 480, KERIKERI
approved 30-03-07

SCALE: 1:750 @A1	DATE: FEBRUARY 2007		
No.	Amendment	Init.	Date.
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File Ref: 06/004
Approved.

ASBUILT PLAN – STORMWATER
CABLE BAY HEIGHTS

Firm's Name
BLUE WALLACE SURVEYORS
25 HARWOOD STREET – PO BOX 38
HAMILTON
PHONE: (07) 839-7799

File Reference
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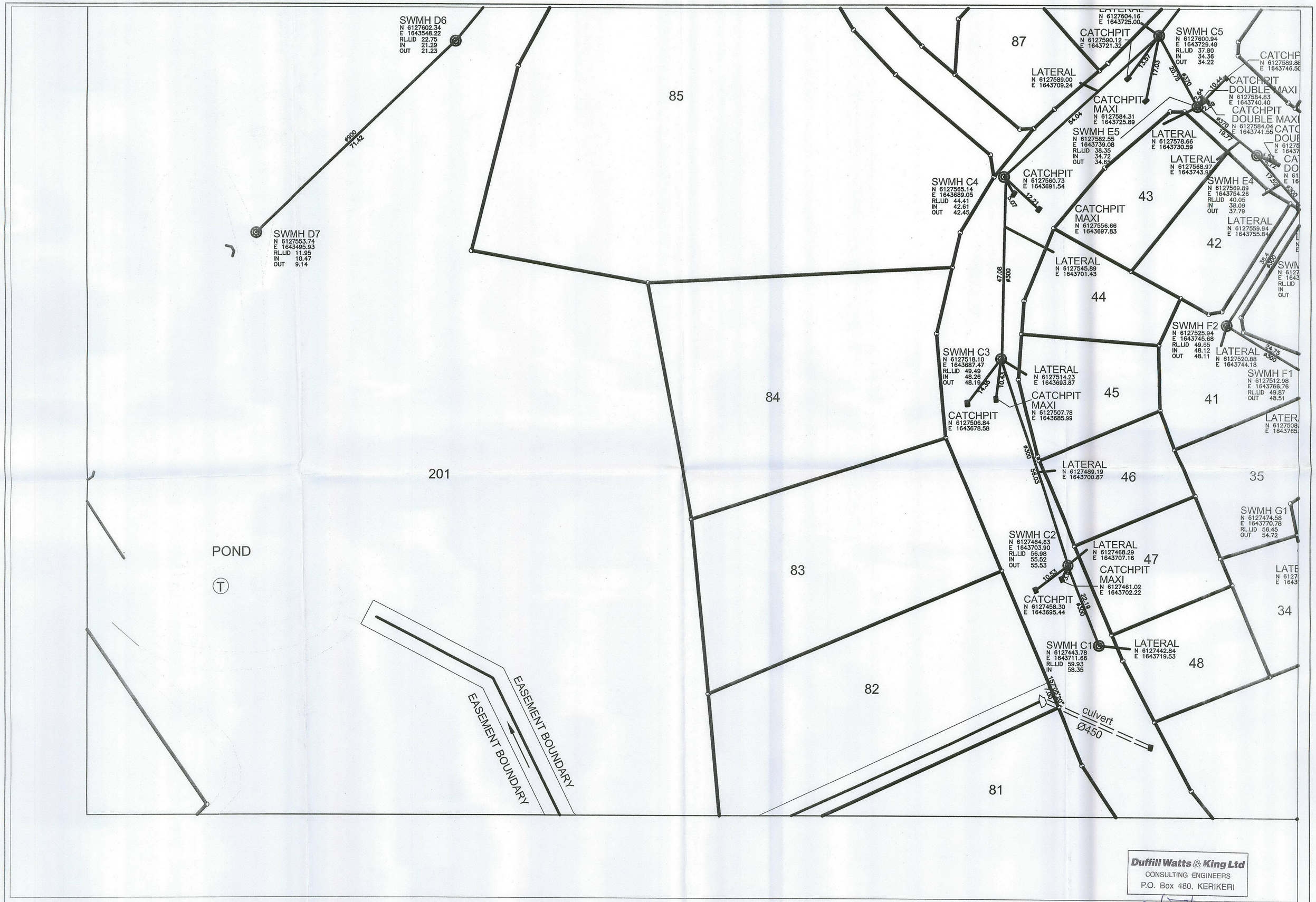
Drawing No.
4 of 4



approved 30-03-07

SCALE: 1:750 @A1		DATE: FEBRUARY 2007		
No.	Amendment	Init.	Date.	Designed. JMB
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2	.	.	.	File Ref: 06/004
				Approved.

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ASBUILT PLAN – STORMWATER
CABLE BAY HEIGHTS

Firm's Name
BLUE WALLACE SURVEYORS
25 HARWOOD STREET – PO BOX 38
HAMILTON
PHONE: (07) 839-7799

File Reference
06/004

Drawing No.
3 of 4

LEGEND

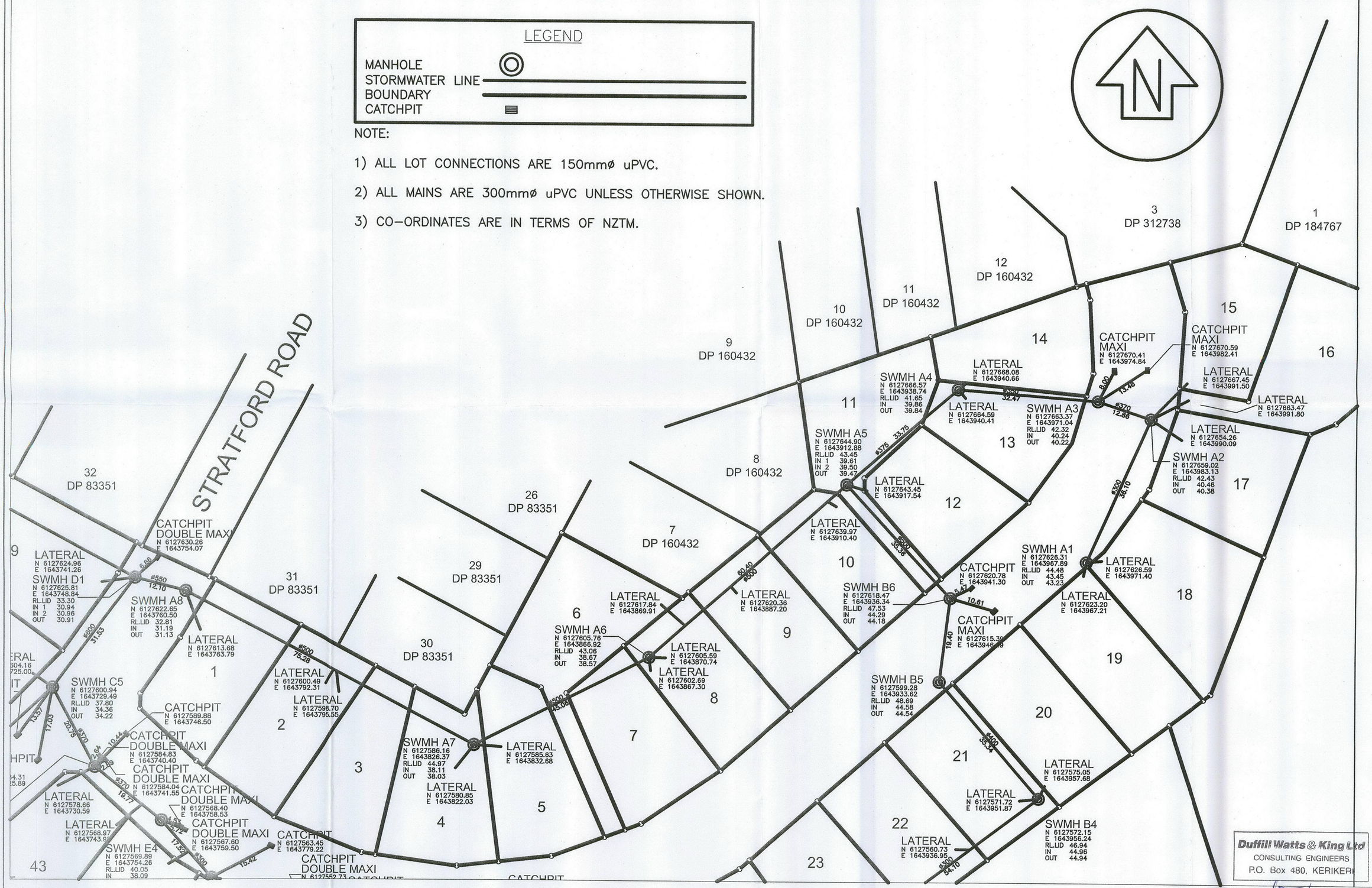
MANHOLE
STORMWATER LINE
BOUNDARY
CATCHPIT

NOTE:

1) ALL LOT CONNECTIONS ARE 150mmø uPVC.

2) ALL MAINS ARE 300mmø uPVC UNLESS OTHERWISE SHOWN.

3) CO-ORDINATES ARE IN TERMS OF NZTM.



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File Ref: 06/004
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ASBUILT PLAN - STORMWATER
CABLE BAY HEIGHTS

Firm's Name
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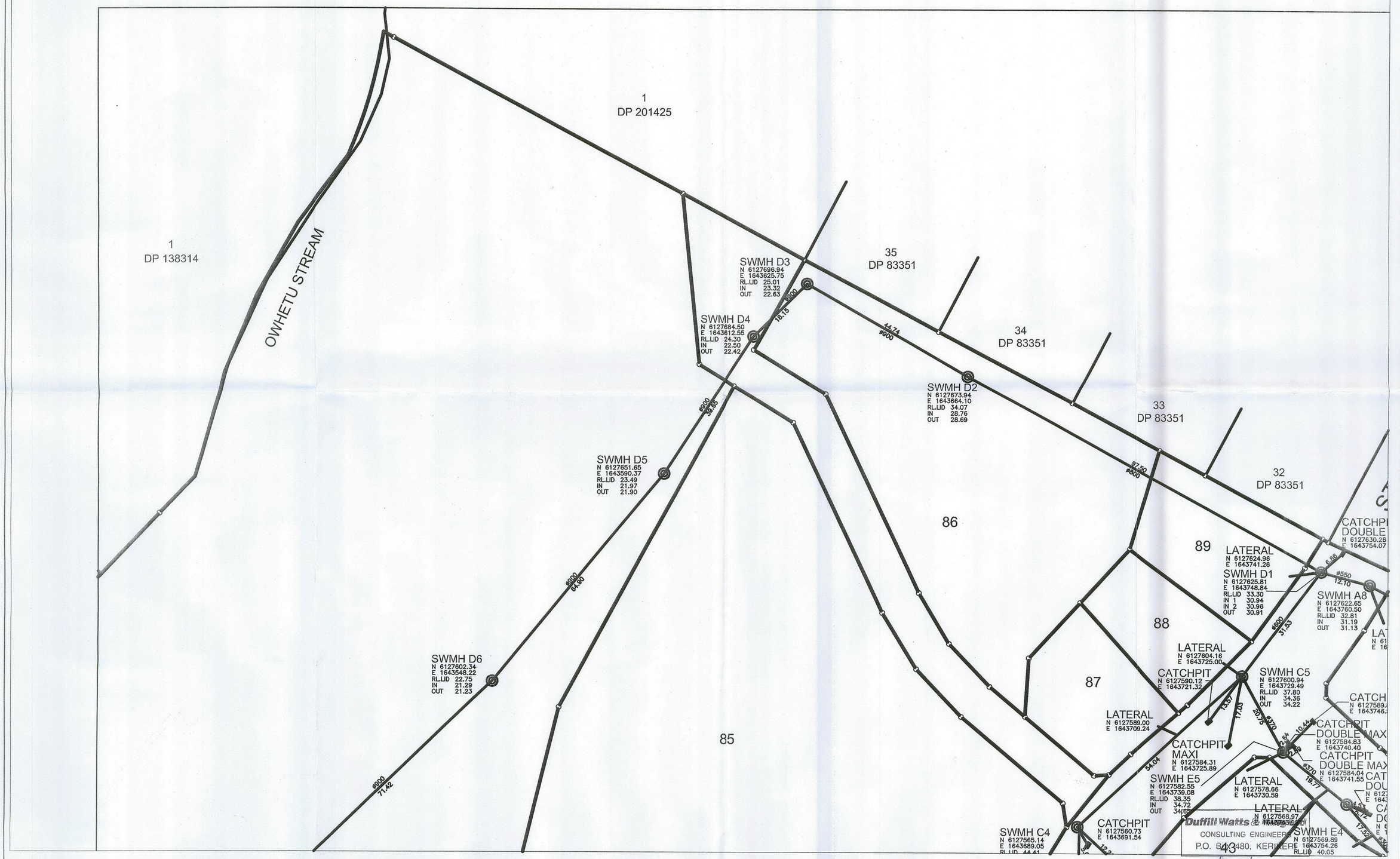
Drawing No.
2 of 4



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No.	Amendment	Init.	Date.
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ASBUILT PLAN - STORMWATER
CABLE BAY SECTIONS

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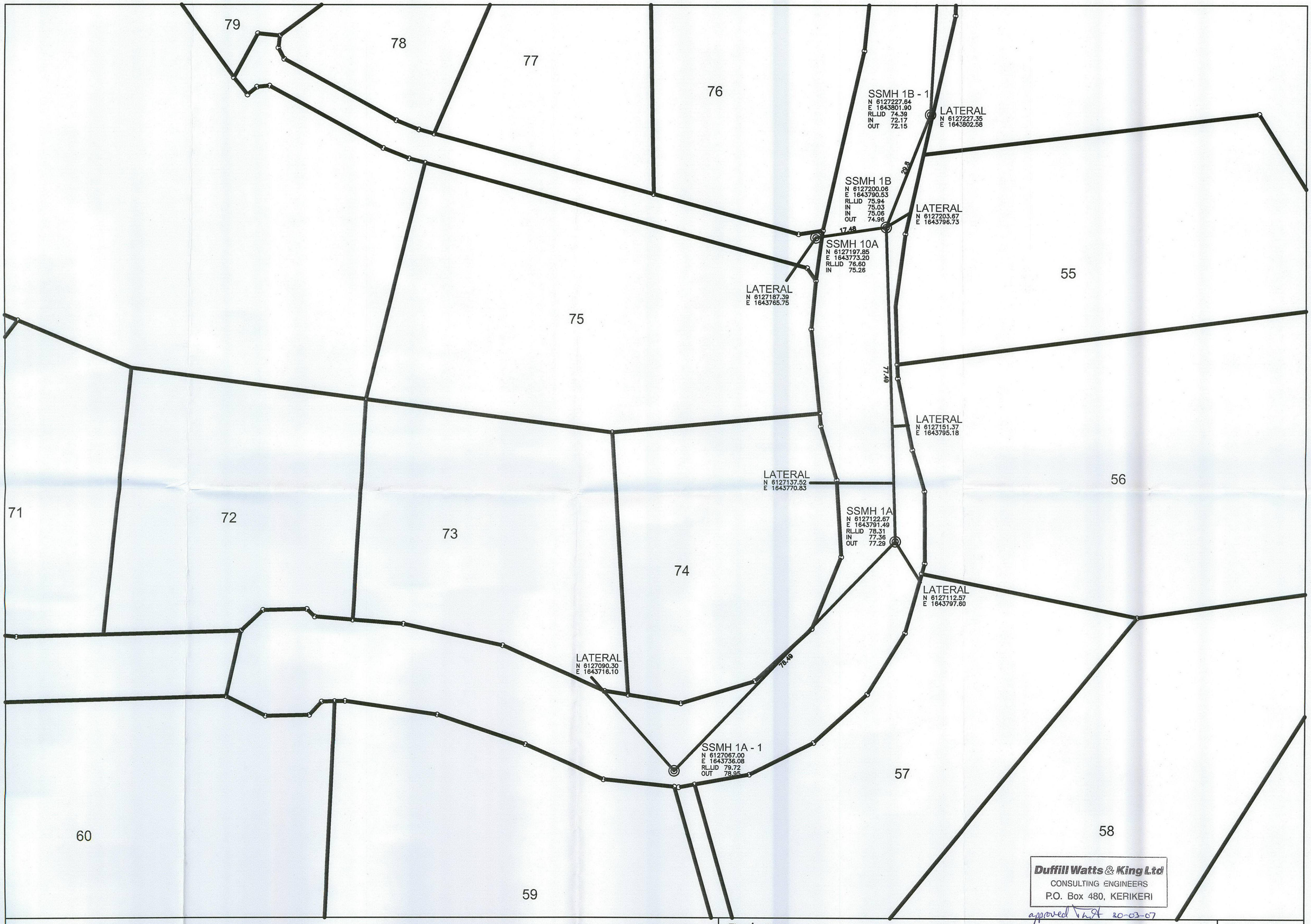
06/004

Drawing No.
1 of 4

These plans reduced to A4



Duffill Watts & King Ltd
CONSULTING ENGINEERS
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approved for RA 30-03-07

ASBUILT PLAN – SANITARY SEWER
CABLE BAY HEIGHTS

SCALE: 1:600 @A2 | DATE: FEB 2007 | PREPARED FOR: BLUNT

Firm's Name

Blue Wallace
Surveyors Ltd.
25 Harwood Street, P O Box 38,
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Phone (07) 8397799, Fax (07) 8394455

File Reference
06/004

Drawing No.
6 OF 6

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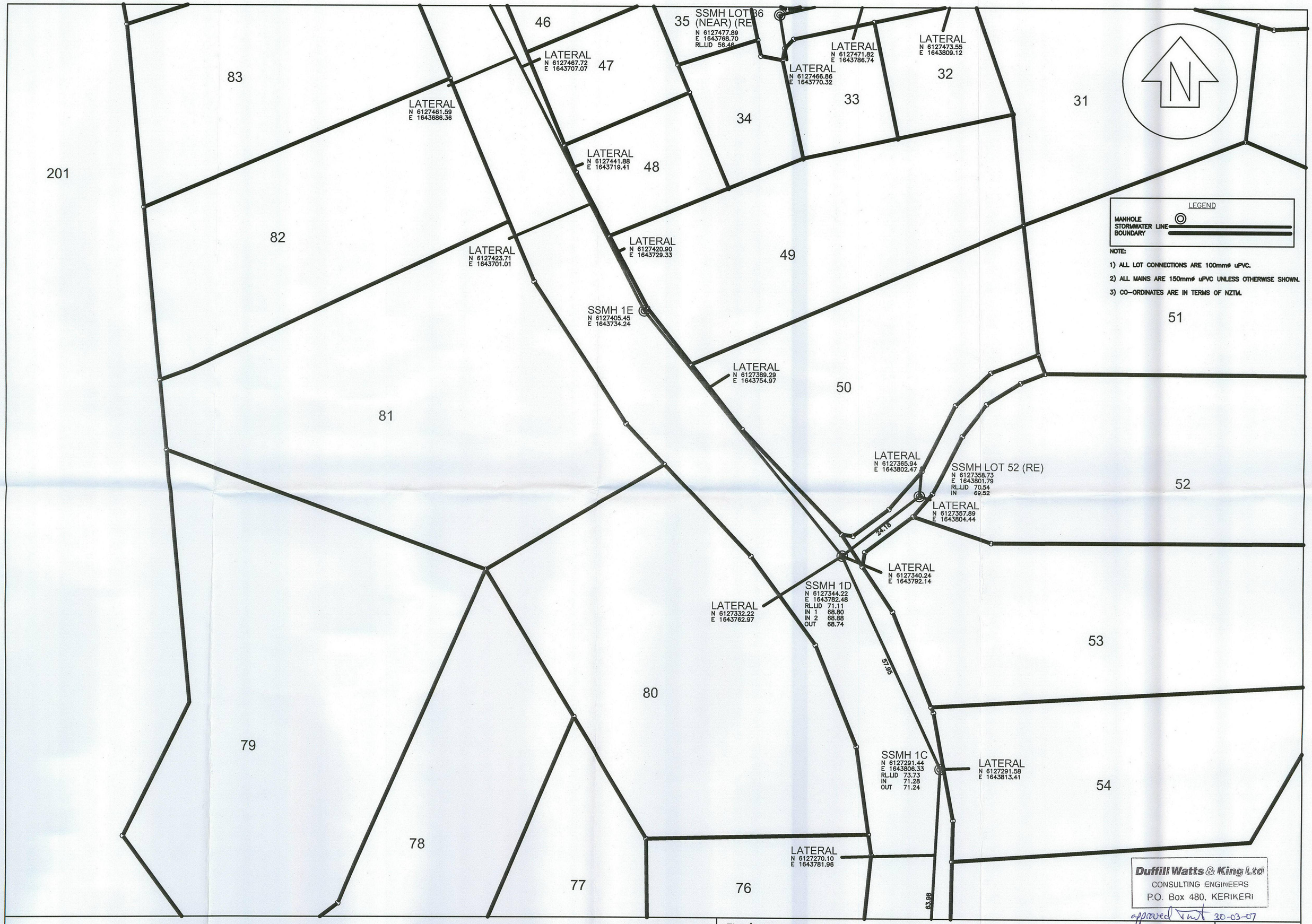

ASBUILT PLAN – SANITARY SEWER
CABLE BAY HEIGHTS

SCALE: 1:600 @A2 | DATE: FEB 2007 | PREPARED FOR: BLUNT

Firm's Name

Blue Wallace
Surveyors Ltd.
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5 OF 6

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CABLE BAY SUBDIVISION

Revegetation & Streamside Planting Plan

Date: July 2006 Sheet: 1 of 2 Scale: 1: 500@ A1

Plant Schedules

Revegetation of areas on lots 201, 87 and 88

(Total of 13805 plants)

Botanical Name	Common Name	Size	Spacing	%	Number
Group A (2710 plants average spacing of 2.6m)					
Coprosma repens	Coprosma	pb2	2m	15	407
Cordyline australis	Cabbage tree	pb3	2.5m	30	813
Croynocarpus laevigatus	Karaka	pb2	4m	15	406
Phormium tenax	Flax	pb3/4	1.5m	20	542
Pittosporum eugenioides	Pitto	pb2	3m	20	542
Group B (2820 plants average spacing of 2.5m)					
Ackama rosaefolia	Makamaka	pb3	2.5m	25	705
Knightia excelsa	Rewarewa	pb3	3m	15	423
Metrosideros 'Springfire'	Small Pohutukawa	pb5	3m	15	423
Phormium tenax	Flax	pb3/4	1.5m	20	564
Pseudopanax arboreus	Five-finger	pb3	2.5m	25	705
Group C (2870 plants average spacing of 2.6m)					
Coprosma robusta	Karamu	pb3	2.5m	20	574
Leptospermum scoparium	Manuka	pb3/4	2m	30	862
Myrsine australis	Maupo	pb3	2m	15	430
Pittosporum crassifolium	Karo	pb2	2.5m	20	574
Podocarpus totara	Totara	pb3	4m	15	430
Group D (2640 plants average spacing of 3m)					
Cordyline australis	Cabbage tree	pb3	2.5m	15	396
Leptospermum scoparium	Manuka	pb3/4	2m	30	792
Metrosideros excelsa	Pohutukawa	pb5	6m	15	396
Phormium tenax	Flax	pb2	1.5m	20	528
Pseudopanax crassifolius	Lancewood	pb2	3m	20	528
Group E (2765 plants average spacing of 2.8m)					
Cordyline australis	Cabbage tree	pb3	2.5m	20	553
Phormium tenax	Flax	pb3/4	1.5m	20	553
Pittosporum eugenioides	Pitto	pb3/4	3m	15	415
Pseudopanax crassifolius	Lancewood	pb2	3m	25	691
Vitex lucens	Puriri	pb3	4m	20	553

NOTE

Refer to the panting implementation and maintenance notes contained on Sheet 2 of 2 - Streetscape Planting Plan.

Compliance with Condition of Consent No. 39

(39) A riparian planting and maintenance plan shall be submitted to the satisfaction of the Far North District Council detailing the proposed revegetation planting for the right bank of the Owhetu Creek and the bare areas within native bush on bush block 201. This revegetation planting shall also extend onto lots 87 and 88 outside of the identified building platforms.

The riparian planting plan shall be implemented within the first planting season following commencement of construction works for the subdivision. Regular maintenance and necessary replacement planting shall be undertaken on an ongoing basis to ensure the establishment of this area of planting to a level where it will continue to grow and establish of its own accord.

Revegetation planting within areas of Lots 201, 87 & 88
(Refer to plant schedule)

Lot 201

Lot 87

Lot 88

Lot 67

Stormwater Pond

Grassed access driveway

Owhetu Streamside Plantings
(Refer to plant schedule)

OWHETU STREAM

NORTH

Owhetu Stream Side Plantings

(Total of 3950 plants)

Botanical Name	Common Name	Size	Spacing	%	Number
Group F (Shrubs - 1000 plants average spacing of 2.5m)					
Ackama rosaefolia	Makamaka	pb3	3m	25	250
Coprosma robusta	Karamu	pb3	2m	20	200
Cordyline australis	Cabbage tree	pb3	2.5m	30	300
Pseudopanax arboreus	Five-finger	pb3	2.5m	25	250
Group G (Sedges - 1110 plants average spacing of 1m)					
Baumea articulata	Jointed twig rush	pb3/4	1m	20	222
Carex secta	Purei	pb2	1m	35	388
Carex virgata	Swamp sedge	pb2	1m	30	333
Juncus pallidus	Rush	pb3/4	1m	15	167
Group H (Flax - 1840 plants average spacing of 1.5m)					
Phormium tenax	Flax	pb3/4	1.5m	100	1840

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NORTH

Strom water Pond

OWHETU STREAM

STRATFORD DRIVE

DUDLEY CRESCENT

Road 2

Road 3

ROW 2

ROW 3

ROW 4

ROW 5

Road 1

Lot 301

Lot 1 Lot 2 Lot 3 Lot 4 Lot 5 Lot 6 Lot 7 Lot 8 Lot 9 Lot 10 Lot 11 Lot 12 Lot 13 Lot 14 Lot 15 Lot 16 Lot 17 Lot 18 Lot 19 Lot 20 Lot 21 Lot 22 Lot 23 Lot 24 Lot 25 Lot 26 Lot 27 Lot 28 Lot 29 Lot 30 Lot 31 Lot 32 Lot 33 Lot 34 Lot 35 Lot 36 Lot 37 Lot 38 Lot 39 Lot 40 Lot 41 Lot 42 Lot 43 Lot 44 Lot 45 Lot 46 Lot 47 Lot 48 Lot 49 Lot 50 Lot 51 Lot 52 Lot 53 Lot 54 Lot 55 Lot 56 Lot 57 Lot 58 Lot 59 Lot 60 Lot 61 Lot 62 Lot 63 Lot 64 Lot 65 Lot 66 Lot 67 Lot 68 Lot 69 Lot 70 Lot 71 Lot 72 Lot 73 Lot 74 Lot 75 Lot 76 Lot 77 Lot 78 Lot 79 Lot 80 Lot 81 Lot 82 Lot 83 Lot 84 Lot 85 Lot 86 Lot 87 Lot 88 Lot 89 Lot 201 Lot 202

Street planting
(Refer to plant schedule)

Cut & Fill Batter Plantings
(Refer to plant schedule)

Revegetation by Manuka seeding of fill area within Lot 202

Implementation of Planting

Planting Method

- The following method of planting is recommended: -
  - Remove existing vegetation and spray the areas to be planted with 'Roundup' three weeks prior to planting so that all weeds and grass has been killed providing an area clear for planting within.
  - Excavate a hole larger than the plant root ball; place the excavated topsoil to one side of the hole for backfilling afterwards.
  - Add a slow release fertiliser tablet and organic manure to each planting hole as per the manufactures specifications. Add a small handful of hydrated 'Liquid Rain Crystals" to the planting hole if planting outside the recommended time. This will aid in retaining moisture, however it is more advisable to plant within the main planting season.
  - Remove the planter bag from around the root ball of the plant and place the plant centrally within the hole; making sure that the soil level of the top of the root ball is level with the surrounding ground level.
  - Backfill around the root ball with the topsoil that was set aside or additional imported (weed free) topsoil if there is not adequate topsoil on site. Firm the soil around the root ball taking care not to bury the plant too deeply. The original potting mix level should be level with the surrounding ground level. The plant should be firmly and centrally placed within the hole.
  - Stake and tie the street specimen Pohutukawa trees with two ground treated pine stakes.
  - To assist with moisture retention during dry periods spread a minimum 100mm layer of mulch around each specimen Pohutukawa tree.

Maintenance Schedule

- Regular maintenance of the plantings will be critical for the success of the plantings. The following maintenance schedule is recommended for the first three years: -
  - Release weeds from around the plants at regular intervals to ensure the plants do not have to compete with weed species. This will be more critical within the first year while plants are small and becoming established. Once weeds are released from contact with the plants they can be sprayed with 'Roundup' following the manufacturer's specifications. All spraying should be done in weather conditions that are calm and when rain is not forecast.
  - Apply to each plant around the root ball a small handful of Blood & Bone organic fertiliser during the growing season, generally around September and March.
  - Re apply mulch as required to maintain a 100mm thickness.
  - Prune plants for shape and health as necessary.
  - During long dry periods check the moisture of the plant root ball, and if very dry hand watering will be necessary.

Plant Schedules

- Streetscape Planting

Botanical Name	Common Name	Size	Spacing	Number
Metrosideros excelsa	Pohutukawa	pb60	30m	102

- Revegetation Of Cut and Fill Batters and Retaining Walls

The total cut and fill area is approximately 22,550m2 as indicated by the shaded area. Total number of plants is 9400 with an average spacing of 2.4m).

Botanical Name	Common Name	Size	Spacing	%	Number
Coprosma repens	Coprosma	r/t	2m	10	940
Coprosma robusta	Coprosma	r/t	2m	10	940
Cordyline australis	Cabbage tree	r/t	2m	5	470
Leptospermum scoparium	Manuka	r/t	1.5m	25	2350
Metrosideros excelsa	Pohutukawa	r/t	6m	10	940
Myrsine australis	Maupo	r/t	2m	5	470
Phormium tenax	Flax	r/t	1.5m	15	1410
Pittosporum crassitolium	Karo	r/t	2.5m	10	940
Pittosporum eugenioides	Pitto	r/t	2.5m	5	470
Pseudopanax arboreus	Five-finger	r/t	2m	5	470

CABLE BAY SUBDIVISION

Streetscape Planting Plan

Date: July 2006 Sheet: 2 of 2 Scale: 1: 1000@ A1

Compliance with Condition of Consent No. 38

(38) A planting plan shall be submitted to the satisfaction of the Far North District Council providing for the revegetation of cut and fill batters and retaining walls with native species. Planting of these areas shall occur in accordance with the approved plan and within the first planting season following completion of the works to which the plan relates.

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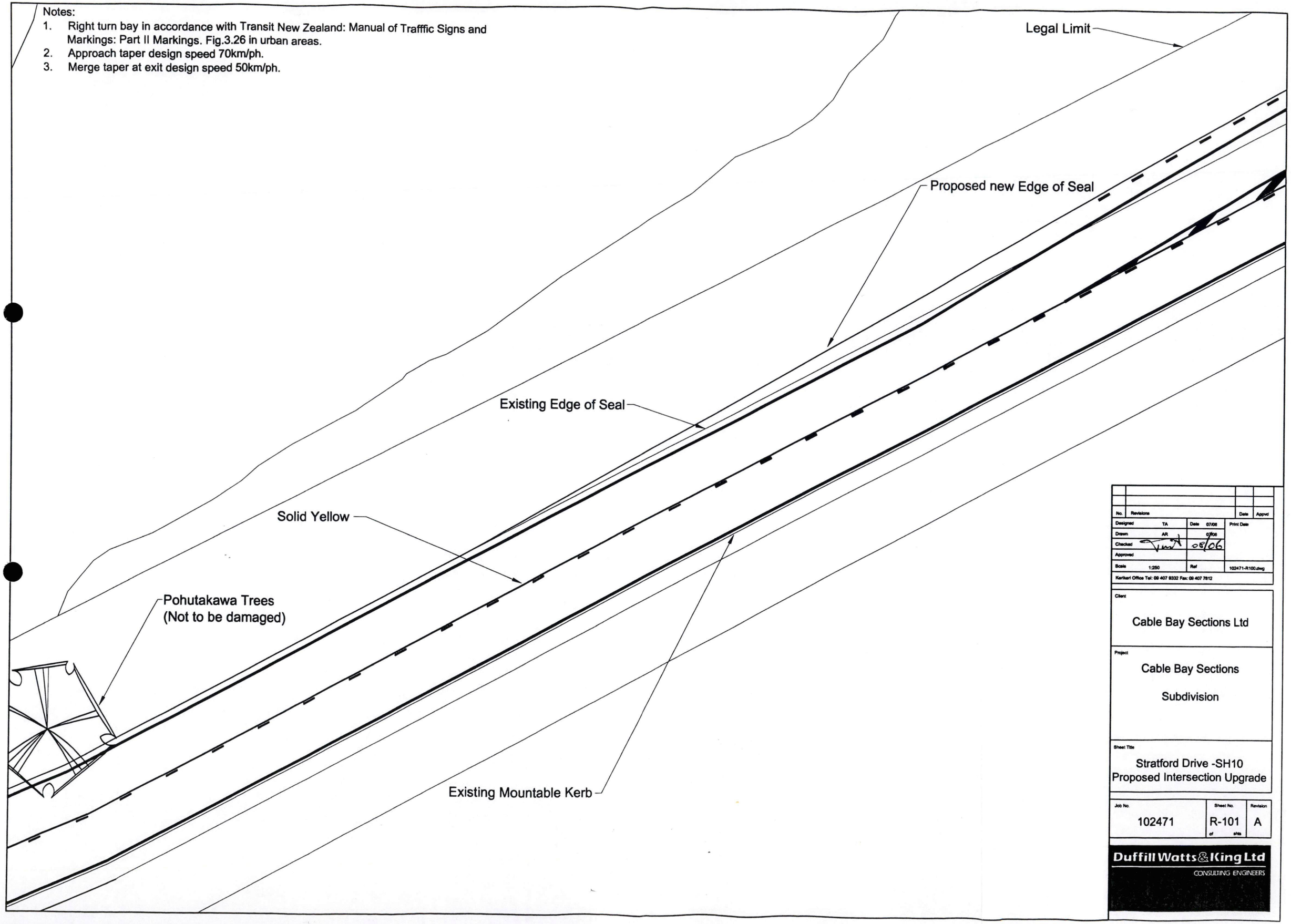
Email: cshawthorn@actrix.gen.nz
Web: www.hawthornlandscapes.co.nz

Notes:

1. Right turn bay in accordance with Transit New Zealand: Manual of Trafffic Signs and Markings: Part II Markings. Fig.3.26 in urban areas.
2. Approach taper design speed 70km/ph.
3. Merge taper at exit design speed 50km/ph.



No.	Revisions	Date	Appvd

Designed	TA	Date 07/06	Print Date
Drawn	AR	07/06	
Checked		08/06	
Approved			
Scale	1:250	Ref	102471-R100.dwg

Kerikeri Office Tel: 09 407 9332 Fax: 09 407 7812

Client

Cable Bay Sections Ltd

Project

Cable Bay Sections

Subdivision

Sheet Title

Stratford Drive -SH10
Proposed Intersection Upgrade

Job No.	Sheet No.	Revision
102471	R-101 of shts	A

Duffill Watts & King Ltd
CONSULTING ENGINEERS

Notes:

1. Right turn bay in accordance with Transit New Zealand: Manual of Trafffic Signs and Markings: Part II Markings. Fig.3.26 in urban areas.
2. Approach taper design speed 70km/ph.
3. Merge taper at exit design speed 50km/ph.

Existing Edge of Seal

Proposed new Edge of Seal

Relocated RG-1 Signs

50
70

Single 200mm reflectorised white holding line (optional)

White continuity line

State Highway 10

Proposed Road Markings

Yellow no-overtaking line

Solid White

50
70

RG-1 Sign

Pram Crossing

RG-6 Give way Sign

Stratford Drive

Pram Crossing

Existing Cesspit

Existing Cesspit

White centreline

Existing Footpath

Existing Mountable Kerb

No.	Revisions		Date	Appvd
Designed	TA	Date 07/06	Print Date	
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Checked		08/06		
Approved				
Scale	1:250	Ref	102471-R100.dwg	

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Client

Cable Bay Sections Ltd

Project

Cable Bay Sections

Subdivision

Sheet Title

Stratford Drive -SH10
Proposed Intersection Upgrade

Job No.	Sheet No.	Revision
102471	R-102 of sht's	A

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2. Approach taper design speed 70km/ph.
3. Merge taper at exit design speed 50km/ph.

Metal Access to beach reserve

Legal Limit

Proposed new Footpath

Start of Boardwalk

Existing Mountable Kerb

Existing Footpath

Proposed new mountable kerb

of Seal

al

State Highway 10

Existing Mountable Kerb

Existing Mountable Kerb

Dashed White

Existing Footpath

Pram Crossing

Stratford Drive

Existing Cesspit

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Drawn	AR	07/06	
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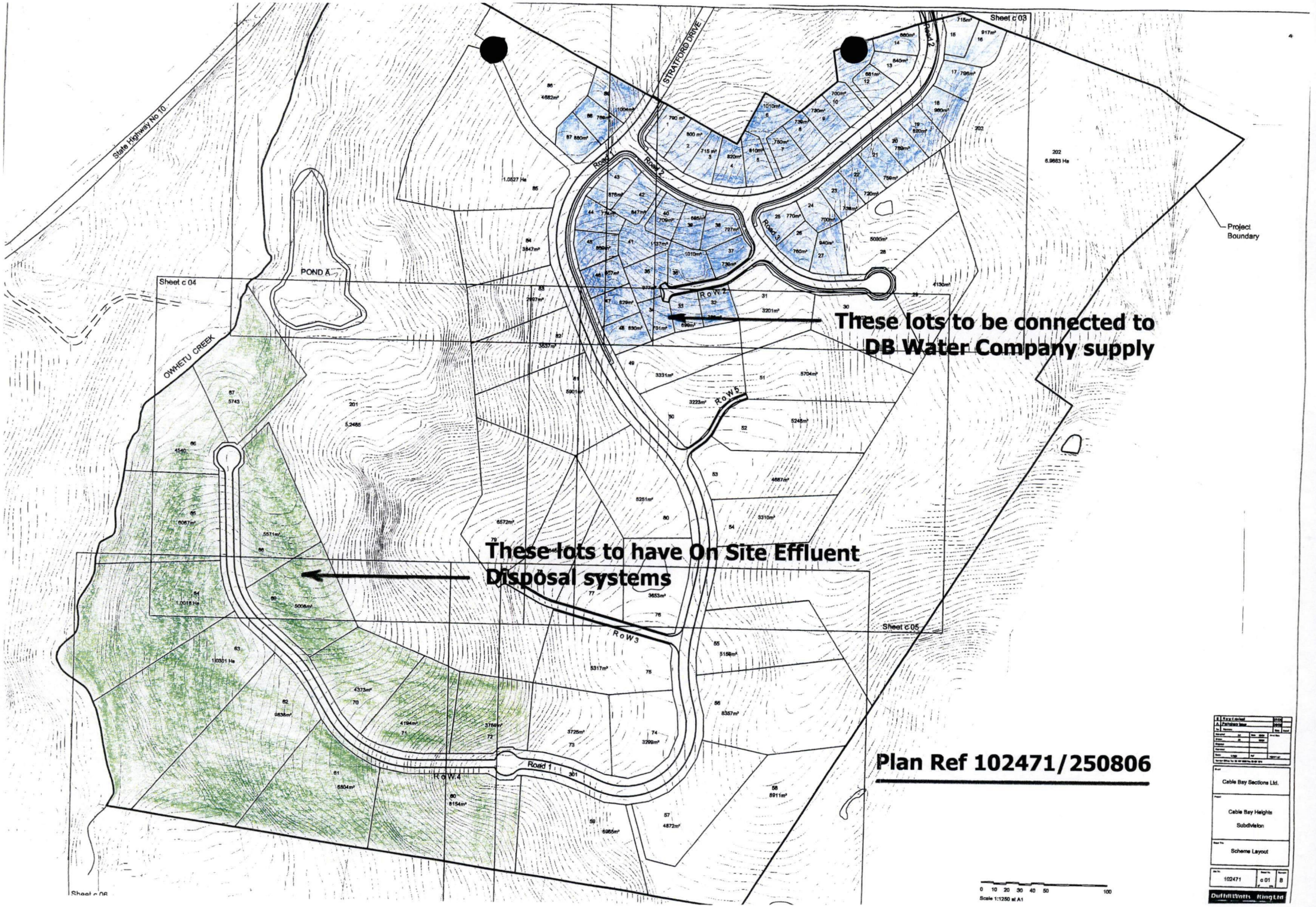
Subdivision

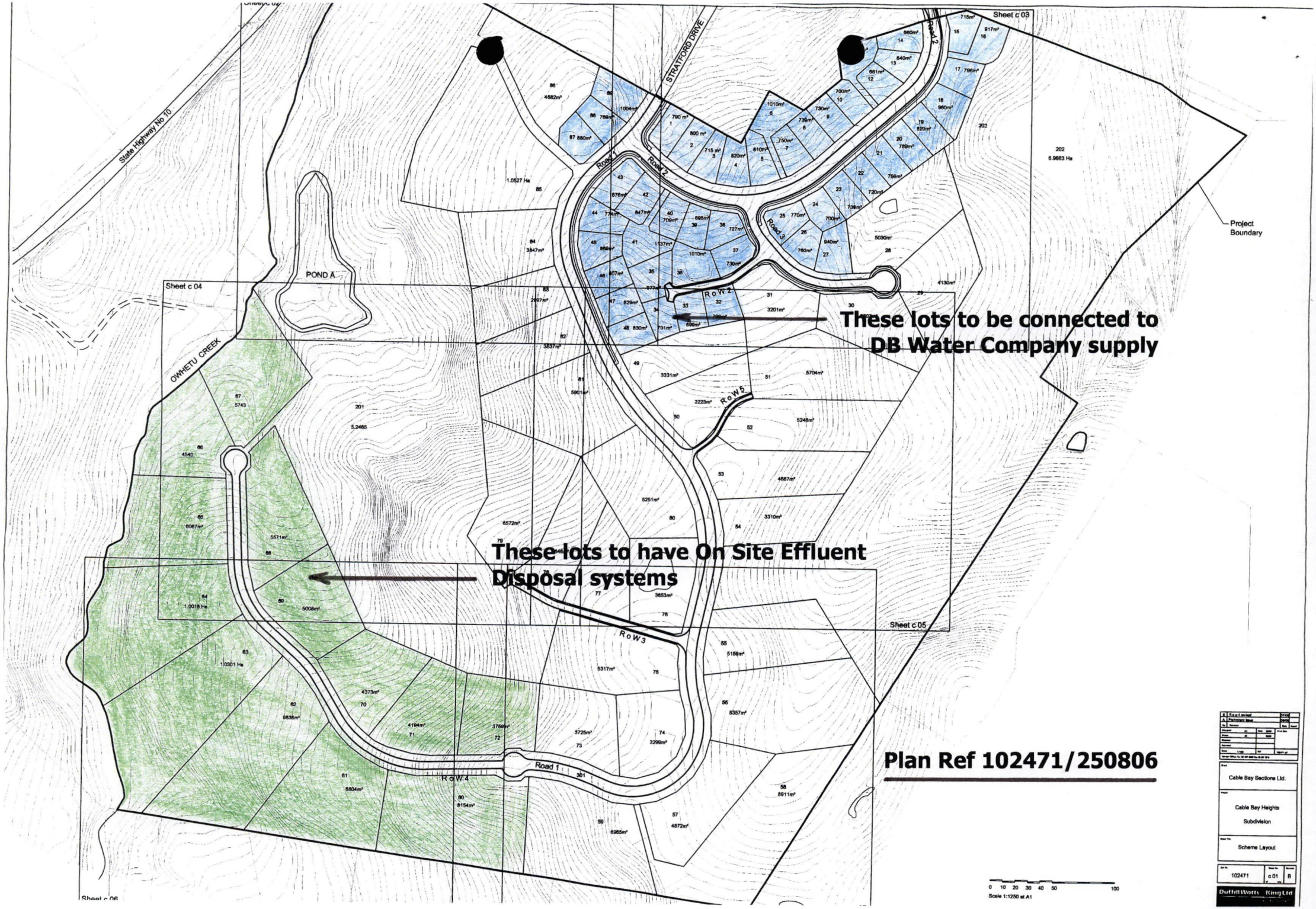
Sheet Title

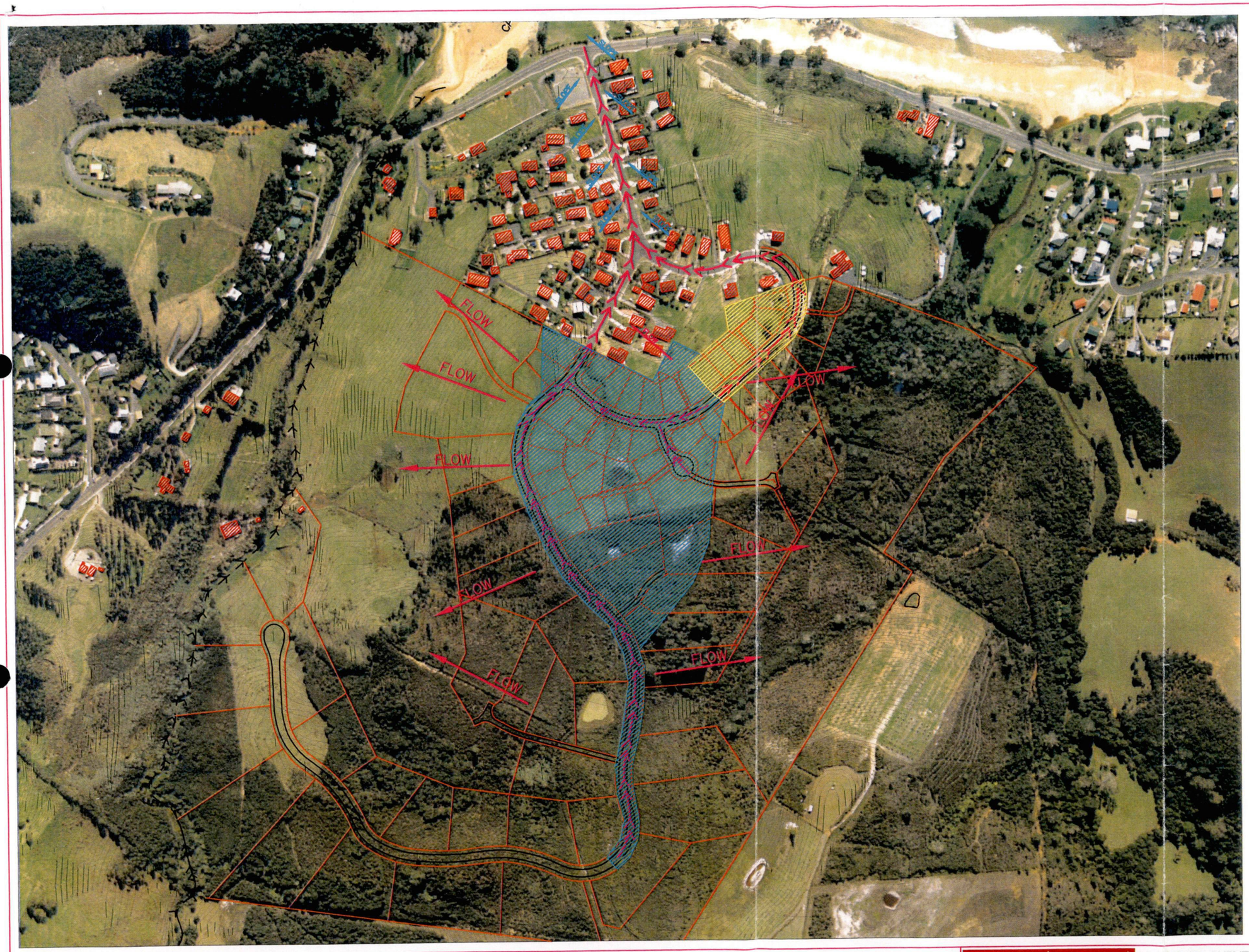
Stratford Drive -SH10
Proposed Intersection Upgrade

Job No.	Sheet No.	Revision
102471	R-103 of shts	A

Duffill Watts & King Ltd
CONSULTING ENGINEERS


State Highway No 10
STRATFORD DRIVE
Road 1
Road 2
Road 3
Road 4
RoW 2
RoW 3
RoW 4
RoW 5
POND A
OWHETU CREEK
Sheet c 03
Sheet c 04
Sheet c 05
Sheet c 06
Project Boundary
These lots to be connected to DB Water Company supply
These lots to have On Site Effluent Disposal systems
Plan Ref 102471/250806
Cable Bay Sections Ltd.
Cable Bay Heights Subdivision
Scheme Layout
102471
c 01
B
Duffill Watts King Ltd
Scale 1:1250 at A1


State Highway No 10
STRATFORD DRIVE
Road 1
Road 2
Road 3
Road 4
Road 5
ROW 1
ROW 2
ROW 3
ROW 4
ROW 5
POND A
OWHETU CREEK
Sheet c 03
Sheet c 04
Sheet c 05
Sheet c 06
Project Boundary
These lots to be connected to DB Water Company supply
These lots to have On Site Effluent Disposal systems
Plan Ref 102471/250806
Cable Bay Sections Ltd.
Cable Bay Heights Subdivision
Scheme Layout
102471
c 01
B
Duffill Watts King Ltd
Scale 1:1250 at A1


FLOW
FLOW
FLOW


SK 02
SK 03
SK 04
SK 05
SK 06
SK 07
QUAIETU CREEK
POOR QUALITY
Cable Bay Sections Ltd.
Cable Bay Heights
Subdivision
Scheme Layout
103471
SK 01
B



NOTES

1. IT CAN BE SEEN FROM THE CONTOUR ON THIS DRAWING THAT STRATFORD ROAD IS SITUATED WELL BELOW ALL OF THE HOUSES ON THE STREET AND THAT OVERLAND FLOW (WHICH WILL ONLY BE SIMILAR TO PRE EXISTING FLOWS) FROM THE DEVELOPMENT ABOVE WILL NOT CAUSE HARM TO PROPERTIES DOWNSTREAM.

LEGEND

EXISTING CONTOURS — 5.0

OVERLAND FLOW DIRECTION — FLOW

SLOPE OF PROPERTIES — SLOPE

REVISIONS:	DATE	NAME	Client:

CABLE BAY SUBDIVISION

STRATFORD ROAD OVERLAND FLOWPATHS

FAR NORTH DISTRICT COUNCIL

WOOD AND PARTNERS

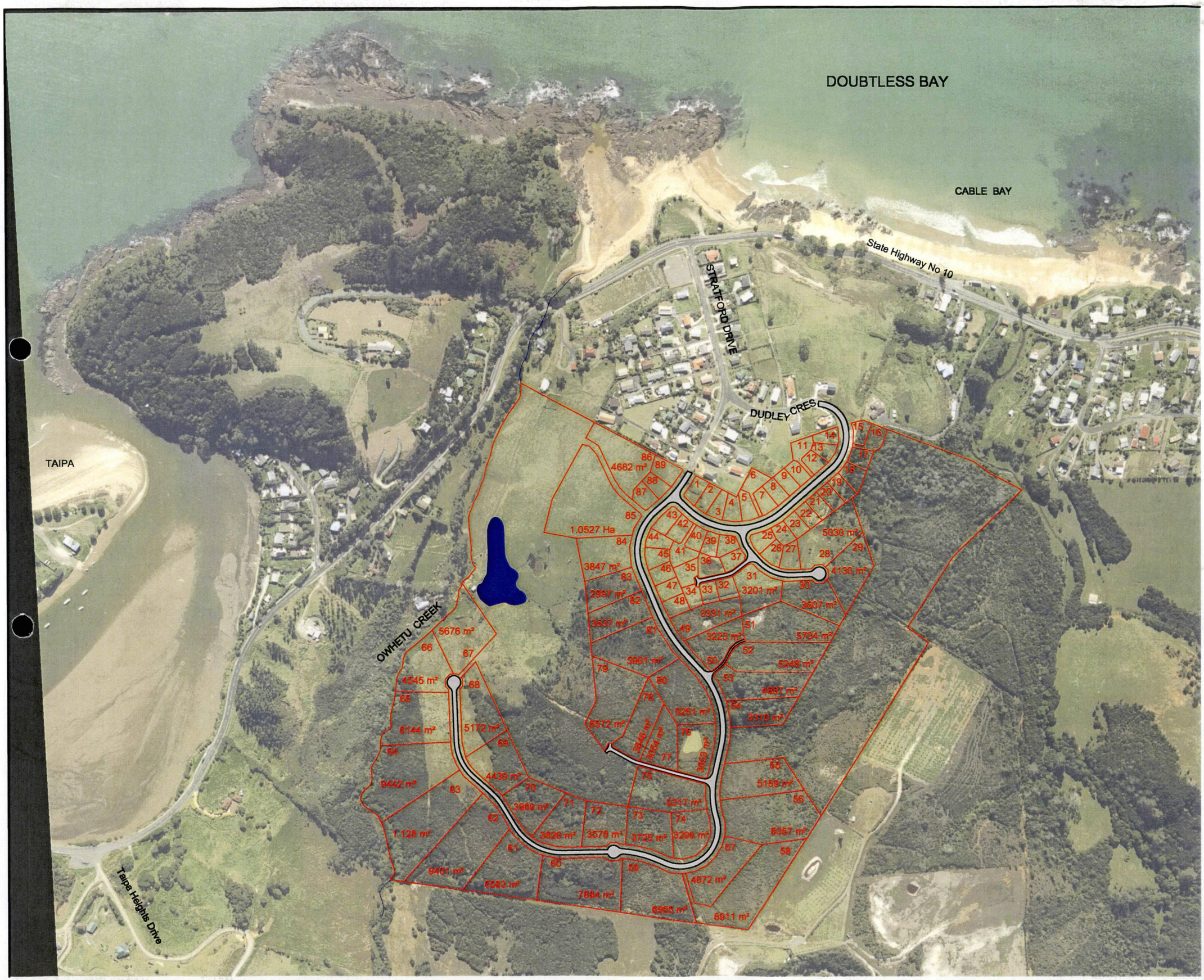
REGISTERED SURVEYORS
CONSULTING ENGINEERS
TOWN & RESOURCE PLANNERS

Level 4 Building 3
666 Great South Road
PO Box 6752 Auckland

Ph 09 571 2470
Fax 09 571 3405

DESIGNED:	JFG
DRAWN:	JFG
CHECKED:	
CAD REF:	102-DESIGN CONTOURS
APPROVED:	
ISSUED:	12-01-05

SCALE:	1:1500 @A1 1:3000 @A3
JOB NO:	55247
DRAWING NO:	801



No.	Revisions	Date	Appvd
B	Road layout revised	07/06	

Designed		Date 05/06	Print Date
Drawn	J C	05/06	
Checked			
Approved			
Scale	NTS	Ref	

Kerikeri Office Tel: 09 407 9332 Fax: 09 407 7812

Client

Cable Bay Section Ltd.

Project

Cable Bay Heights

Subdivisions

Sheet Title

Scheme Layout

Job No.	Sheet No.	Revision
102471	Sk 100 of shts	B

Duffill Watts & King Ltd

CONSULTING ENGINEERS

Sheet c 02

Sheet c 03

Sheet c 04

Sheet c 05

Sheet c 06

Sheet c 07

State Highway No 10

STRATFORD DRIVE

Road 1

Road 2

Road 3

ROW 2

ROW 3

ROW 4

ROW 5

POND A

OWHETU CREEK

Project Boundary

1.0527 Ha

6.9883 Ha

1.0018 Ha

1.0301 Ha

5.2465

| | | |



B	R o w 4 revised		07/06	
No.	Revisions		Date	Apprvd
Designed	AH	Date 05/06	Print Date	
Drawn	LC	05/06		
Checked				
Approved				
Scale	1:1000	Ref	102471 C01	

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Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights

Subdivisions

Sheet Title

Scheme Layout

Job No.	Sheet No.	Revision
102471	C02 of ahts	B

Duffill Watts & King Ltd

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No.	Revisions	Date	Appvd
B	R o w 4 revised	07/06	

Designed	AH	Date 05/06	Print Date
Drawn	LC	05/06	
Checked			
Approved			
Scale	1:1000	Ref	

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Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights

Subdivisions

Sheet Title

Scheme Layout

Job No.	Sheet No.	Revision
102471	C03 of shts	B

Duffill Watts & King Ltd

CONSULTING ENGINEERS

OWHETU CREEK

67
5743

201
5.2465

66
4540

65
6087m²

64
1.0018 Ha

5571m²
68

69
5008m²

83
2997m²

82
3537m²

81
5901n

6572m²
79

3646m²
78

B	R o w 4 revised		07/06
No.	Revisions		Date / Appvd

Designed	AH	Date 05/06	Print Date
Drawn	LC	05/06	
Checked			
Approved			
Scale	1:1000	Ref	

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Client
Cable Bay Section Ltd.

Project
Cable Bay Heights
Subdivisions

Sheet Title
Scheme Layout

Job No.	Sheet No.	Revision
102471	C04 of shts	B

Duffill Watts & King Ltd
CONSULTING ENGINEERS

83
997m²
47
829m²
977m²
RoW 2
34
33
32
799m²
699m²
31
3201m²
29
30
3607m²
48
830m²
701m²
82
3537m²
49
3331m²
81
5901m²
RoW 5
3223m²
51
5704m²
50
52
5248m²
53
4687m²
5251m²
80
54
3310m²
3646m²
78
3054m²
77
3653m²
76

B	R o w 4 revised	07/06	
No.	Revisions	Date	Appvd

Designed	AH	Date 05/06	Print Date
Drawn	LC	05/06	
Checked			
Approved			
Scale	1:1000	Ref	

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Client
Cable Bay Section Ltd.

Project
Cable Bay Heights
Subdivisions

Sheet Title
Scheme Layout

Job No.	Sheet No.	Revision
102471	C05 of ahts	B

Duffill Watts & King Ltd
CONSULTING ENGINEERS

64
1.0018 Ha

69
5008m²

63
1.0301 Ha

4373m²
70

62
9838m²

4194m²
71

3759m
72

61
6804m²

RoW4

DETAILS IN ABEYANCE
60
8154m²

B	Row 4 revised	07/06	
No.	Revisions	Date	Appvd

Designed	AH	Date 05/06	Print Date
Drawn	LC	05/06	
Checked			
Approved			
Scale 1:1000		Ref	

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Client
Cable Bay Section Ltd.

Project
Cable Bay Heights
Subdivisions

Sheet Title
Scheme Layout

Job No.	Sheet No.	Revision
102471	C06 of shts	B

Duffill Watts & King Ltd
CONSULTING ENGINEERS



B	Row 4 revised		07/06
No.	Revisions		Date Apprvd
Designed	AH	Date 05/06	Print Date
Drawn	LC	05/06	
Checked			
Approved			
Scale	1:1000	Ref	

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Client

Cable Bay Section Ltd.

Project

Cable Bay Heights

Subdivisions

Sheet Title

Scheme Layout

Job No.	Sheet No.	Revision
102471	C07 of shts	B

Duffill Watts & King Ltd

CONSULTING ENGINEERS

R 02

R 03

R 04

R 05

R 06

R 07

STRATFORD ROAD

Road 1		
Ch 0	E 1828666.58	N 9083391.48
TP 9.293	E 1828663.39	N 9083383.57
TP 99.194	E 1828663.12	N 9083347.91
TP 74.341	E 1828636.36	N 9083350.02
TP 199.707	E 1828619.30	N 9083250.06
TP 228.031	E 1828641.82	N 9083197.38
Ch 350	E 1828652.13	N 9081175.73
TP 305.646	E 1828660.06	N 9081131.06
TP 330.126	E 1828701.66	N 9081113.36
TP 446.411	E 1828732.13	N 9080933.82
TP 660.016	E 1828722.66	N 9080883.31
TP 648.946	E 1828734.76	N 9081606.09
TP 840.786	E 1828720.36	N 9081803.31
TP 888.883	E 1828864.81	N 9081836.09
TP 881.226	E 1828844.01	N 9081843.73
TP 743.026	E 1828864.66	N 9081866.46
Ch 757.017	E 1828866.66	N 9081866.12

Road 2		
Ch 0	E 1828904.27	N 9084488.56
TP 6.480	E 1828906.80	N 9084482.30
TP 87.806	E 1828860.10	N 9084384.64
TP 188.084	E 1828830.34	N 9084336.39
TP 306.089	E 1828864.20	N 9084336.30
Ch 326.026	E 1828841.31	N 9083366.82

Road 3		
Ch 0	E 1827762.94	N 9083111.83
TP 8.880	E 1827763.20	N 9083103.16
TP 33.822	E 1827772.87	N 9083080.39
TP 52.476	E 1827783.01	N 9083066.38
TP 157.192	E 1828833.86	N 9083045.91
Ch 183.800	E 1828860.39	N 9083045.15

RoW 2		
Ch 0	E 1827778.80	N 9082272.39
TP 34.880	E 1827752.10	N 9082251.12
TP 66.107	E 1827760.18	N 9082245.82
Ch 91.880	E 1828897.86	N 9082296.80

RoW 3		
Ch 0	E 1827721.05	N 9081953.08
TP 113.802	E 1828811.26	N 9081953.03
TP 130.714	E 1828804.86	N 9081866.80
Ch 186.889	E 1828921.46	N 9080203.71

RoW 4		
Ch 0	E 1828868.88	N 9078805.13
TP 80.417	E 1828808.82	N 9078805.76
TP 144.021	E 1828438.44	N 9078802.04
TP 178.897	E 1828421.38	N 9078271.83
TP 202.874	E 1828409.77	N 9078140.13
TP 226.157	E 1828380.81	N 9078191.89
TP 285.080	E 1828366.88	N 9078011.96
Ch 366.707	E 1828363.41	N 9081104.80

RoW 5		
Ch 0	E 1827711.36	N 9081102.18
TP 23.981	E 1827750.26	N 9081116.25
TP 57.366	E 1827758.10	N 9081126.71
TP 92.803	E 1827744.88	N 9081137.82
TP 71.417	E 1827761.49	N 9081161.88
Ch 77.918	E 1827766.51	N 9081164.32

B	R.o.w 4 revised		27/4/06
No.	Revisions		Date Appvd

Designed	Date	First Date
Drawn		
Checked		
Approved		
Scale	Ref	

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Client
Cable Bay Sections Ltd.

Project
Cable Bay Heights Subdivisioon
Roading

Sheet Title
Scheme Layout

Job No.	Sheet No.	Revision
102471	R01 of xxx	B

Duffill Watts King Ltd



Road 1		
Ch 0	E 182688.09	N 908391.48
TP 9.253	E 182683.29	N 908383.57
TP 56.154	E 182653.12	N 908347.91
TP 74.341	E 182639.36	N 908336.02
TP 168.707	E 182619.30	N 908250.06
TP 226.037	E 182641.62	N 908197.26
Ch 250	E 182652.13	N 908175.73
TP 305.646	E 182685.06	N 908131.06
TP 330.128	E 182701.96	N 908113.35
TP 448.411	E 182732.13	N 908003.87
TP 490.019	E 182722.88	N 907963.31
TP 548.949	E 182724.76	N 907905.05
TP 550.765	E 182725.28	N 907903.31
TP 669.663	E 182654.61	N 907839.09
TP 681.236	E 182644.01	N 907843.73
TP 742.025	E 182584.85	N 907855.45
Ch 757.017	E 182569.86	N 907855.12

No.	Revisions	Date	Appvd
B	R o w 4 revised	07/06	

Designed	Date	Print Date
Drawn		
Checked		
Approved		
Scale	Ref	

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Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights
Subdivisions

Roading

Sheet Title

Scheme Layout

Job No.	Sheet No.	Revision
102471	R02 of shts	B

Duffill Watts & King Ltd
CONSULTING ENGINEERS



Road 2		
Ch 0	E 182904.27	N 908458.55
TP 6.460	E 182905.93	N 908452.30
TP 67.508	E 182889.10	N 908396.84
TP 159.064	E 182820.34	N 908336.39
TP 306.080	E 182686.23	N 908338.25
Ch 336.008	E 182664.31	N 908358.62

Road 3		
Ch 0	E 182762.54	N 908311.83
TP 8.680	E 182763.25	N 908303.18
TP 33.922	E 182772.87	N 908280.29
TP 52.478	E 182785.01	N 908266.26
TP 107.192	E 182833.65	N 908245.61
Ch 153.900	E 182880.29	N 908248.15

No.	Revisions	Date	Appvd
B	R o w 4 revised	07/06	

Designed	AH	Date 05/06	Print Date
Drawn	JC	05/06	
Checked			
Approved			
Scale	1:1000 (A3)	Ref	102471 R01

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Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights
Subdivisions

Roading

Sheet Title

Scheme Layout

Job No.	Sheet No.	Revision
102471	R03 of shts	B

Duffill Watts & King Ltd
CONSULTING ENGINEERS

R 03

R 04

RoW 2		
Ch 0	E 182779.80	N 908272.28
TP 34.860	E 182752.10	N 908251.12
TP 48.107	E 182740.16	N 908245.62
Ch 91.683	E 182697.55	N 908236.50

RoW 3		
Ch 0	E 182721.03	N 907953.06
TP 113.800	E 182611.25	N 907983.03
TP 120.714	E 182604.85	N 907985.60
Ch 158.699	E 182571.46	N 908003.71

83

82

81

CP 1/10
Cess Pit

67

201

66

385.707

380

RoW 4

360

340

65

320

300

PT = 293.090

R70 m

280

64

260

240

PC = 236.137

69

68

79

78

158.699

RoW 3

140

120

PT = 120.714

R30 m

PC = 113.800

100

B	R o w 4 revised		07/06
No.	Revisions		Date Appvd

Designed	Date	Print Date
Drawn		
Checked		
Approved		
Scale	Ref	

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Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights
Subdivisions

Roading

Sheet Title

Scheme Layout

Job No.	Sheet No.	Revision
102471	R04 of shts	B

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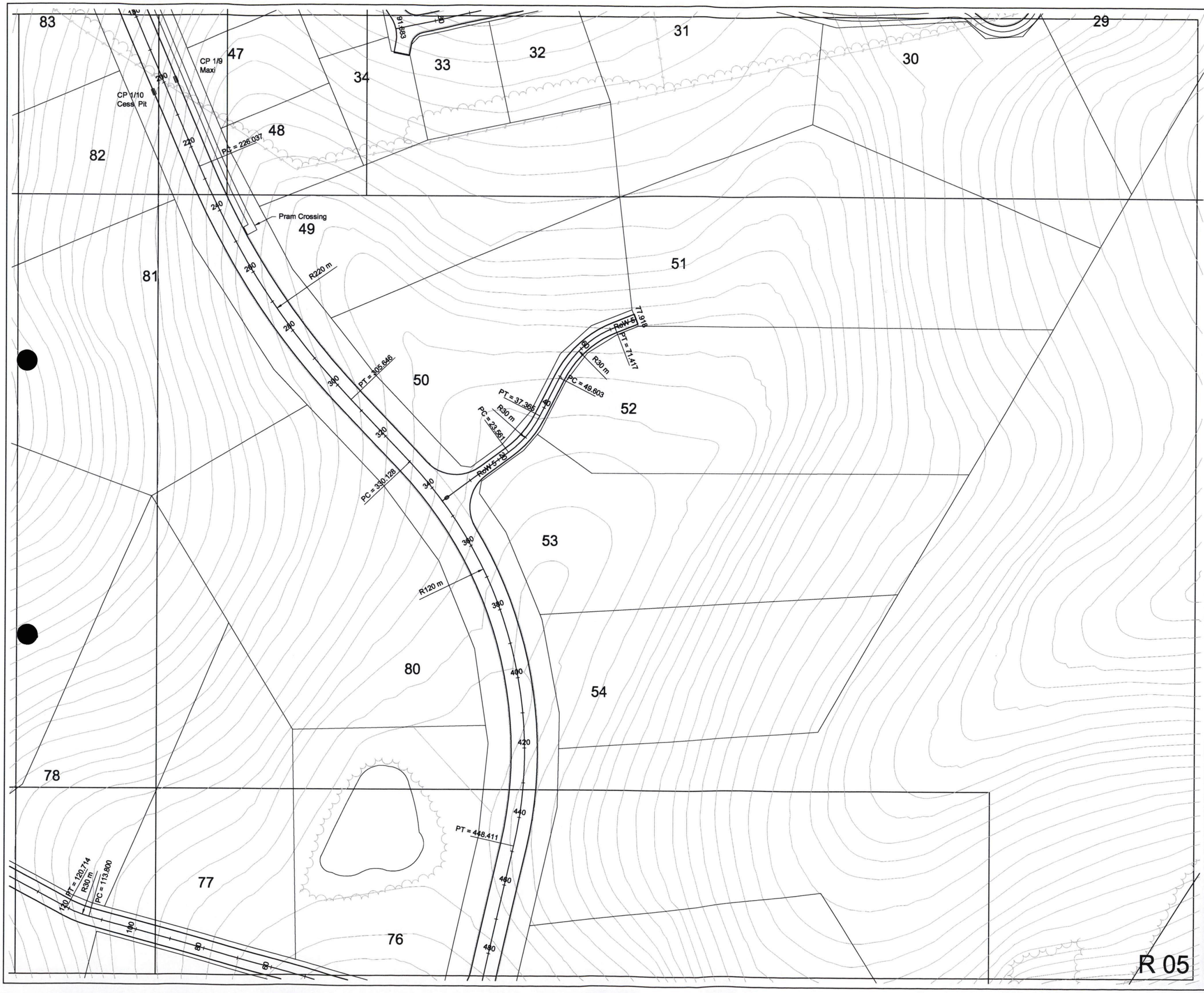
CONSULTING ENGINEERS



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TP 60.417	E 182509.52	N 907853.78
TP 144.021	E 182439.44	N 907892.04
TP 178.697	E 182421.36	N 907921.63
TP 202.974	E 182405.77	N 907940.12
TP 236.137	E 182380.81	N 907961.96
TP 293.090	E 182356.96	N 908011.96
Ch 385.707	E 182353.41	N 908104.50

RoW 5		
Ch 0	E 182711.38	N 908102.18
TP 23.561	E 182730.28	N 908116.25
TP 37.365	E 182739.10	N 908126.71
TP 49.603	E 182744.65	N 908137.62
TP 71.417	E 182760.45	N 908151.95
Ch 77.918	E 182766.51	N 908154.32

No.	Revisions	Date	Appvd
B	R o w 4 revised	07/06	

Designed	Date	Print Date
Drawn		
Checked		
Approved		
Scale	Ref	

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Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights
Subdivisions

Roading

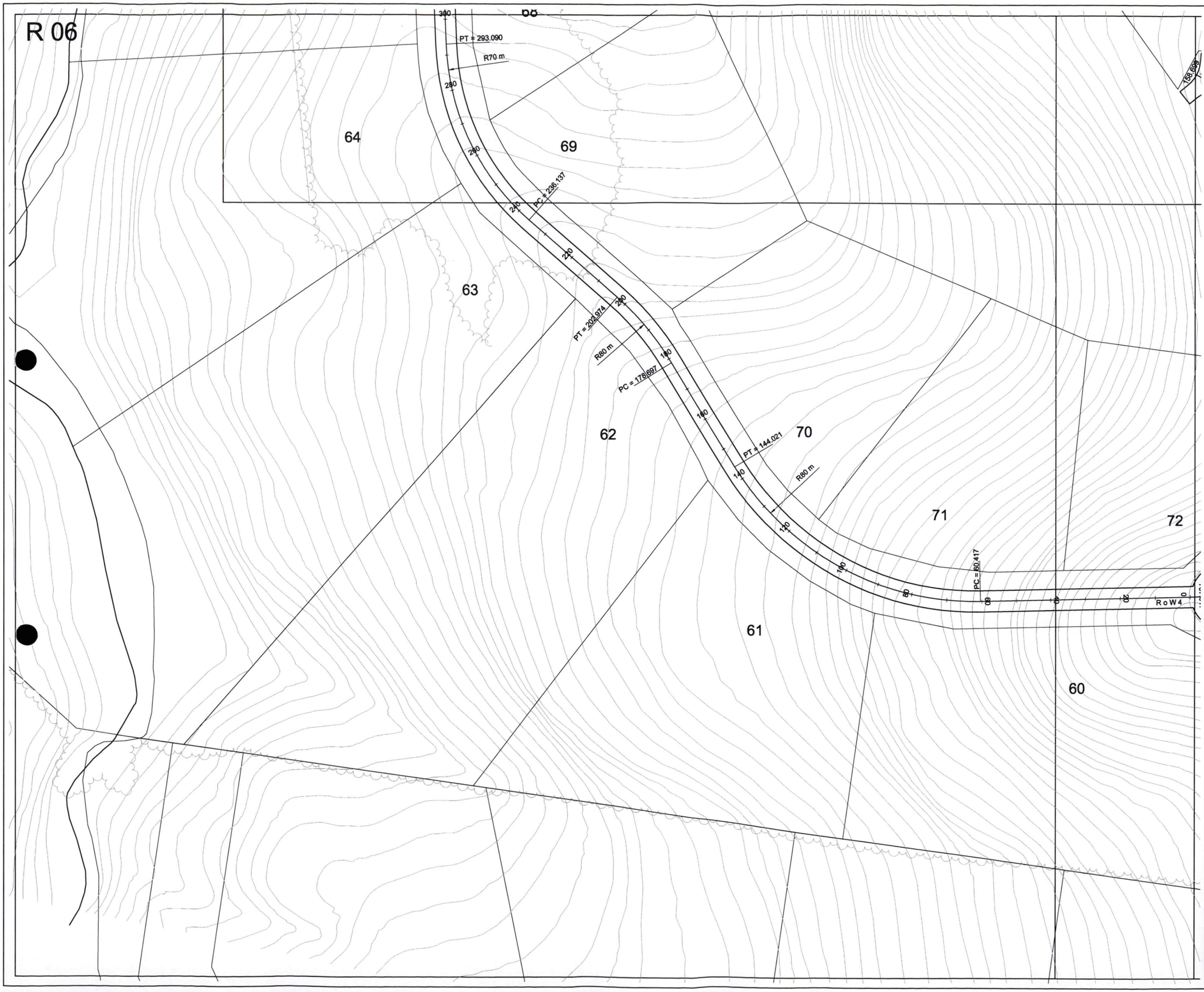
Sheet Title

Scheme Layout

Job No.	Sheet No.	Revision
102471	R05 of shts	B

Duffill Watts & King Ltd
CONSULTING ENGINEERS

R 05



No.	Revisions	Date	Appvd
B	R o w 4 revised	07/06	

Designed	Date	Print Date
Drawn		
Checked		
Approved		
Scale	Ref	

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Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights Subdivisions

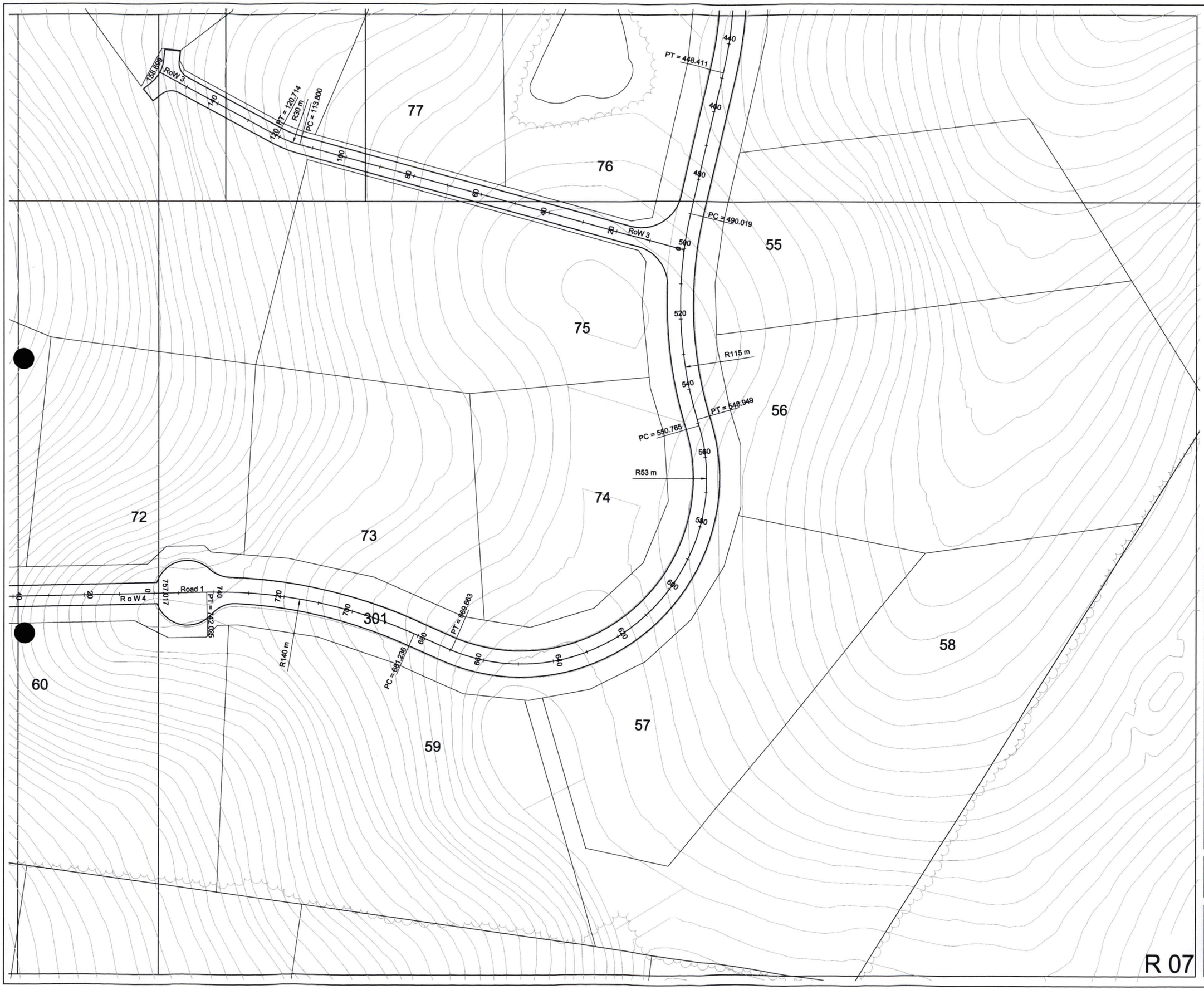
Roading

Sheet Title

Scheme Layout

Job No.	Sheet No.	Revision
102471	R06 of shts	B

Duffill Watts & King Ltd
CONSULTING ENGINEERS



B	Row 4 revised	07/06	
No.	Revisions	Date	Appvd

Designed	Date	Print Date
Drawn		
Checked		
Approved		
Scale	Ref	

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Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights Subdivisions

Roading

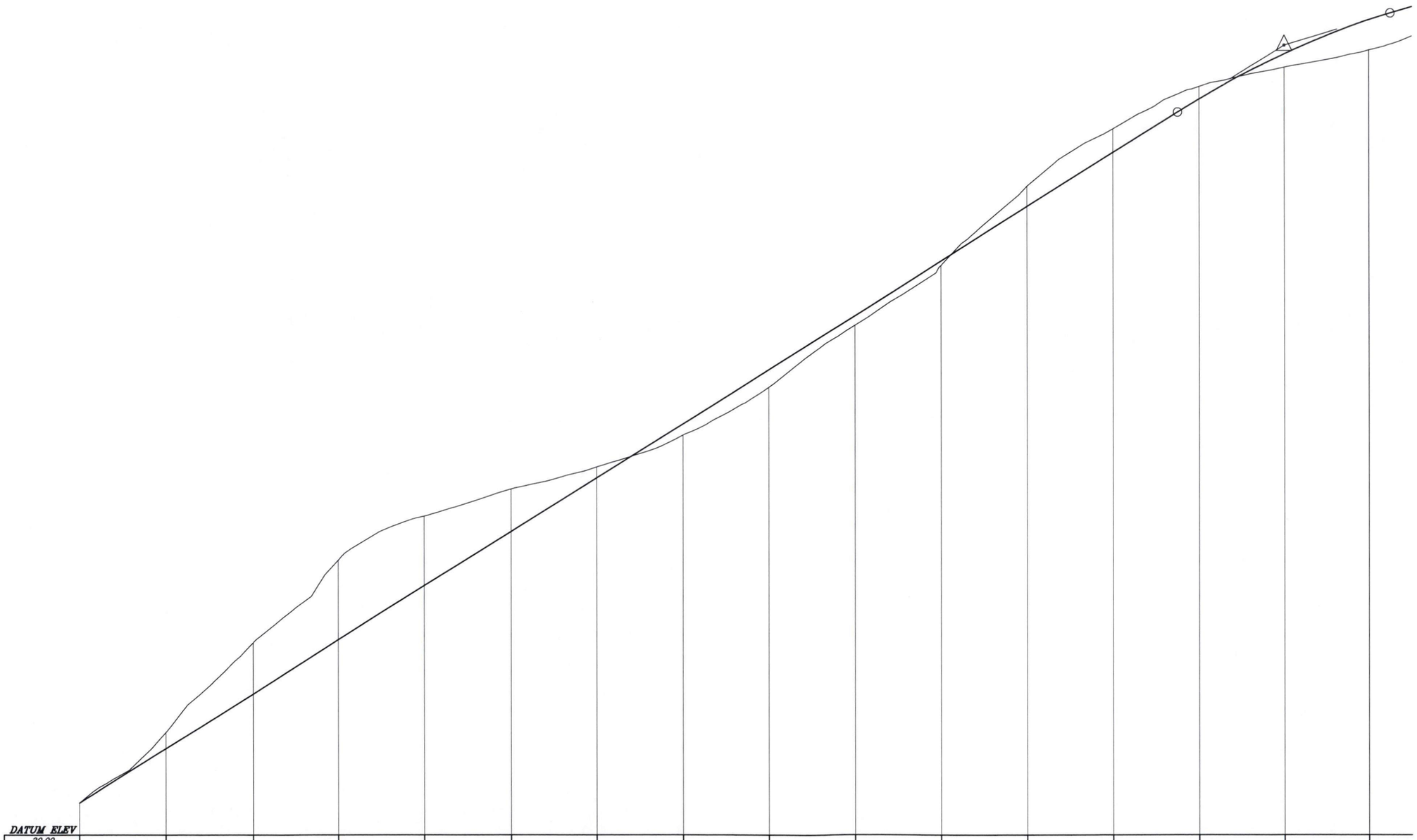
Sheet Title

Scheme Layout

Job No.	Sheet No.	Revision
102471	R07 of shts	B

Duffill Watts & King Ltd

CONSULTING ENGINEERS



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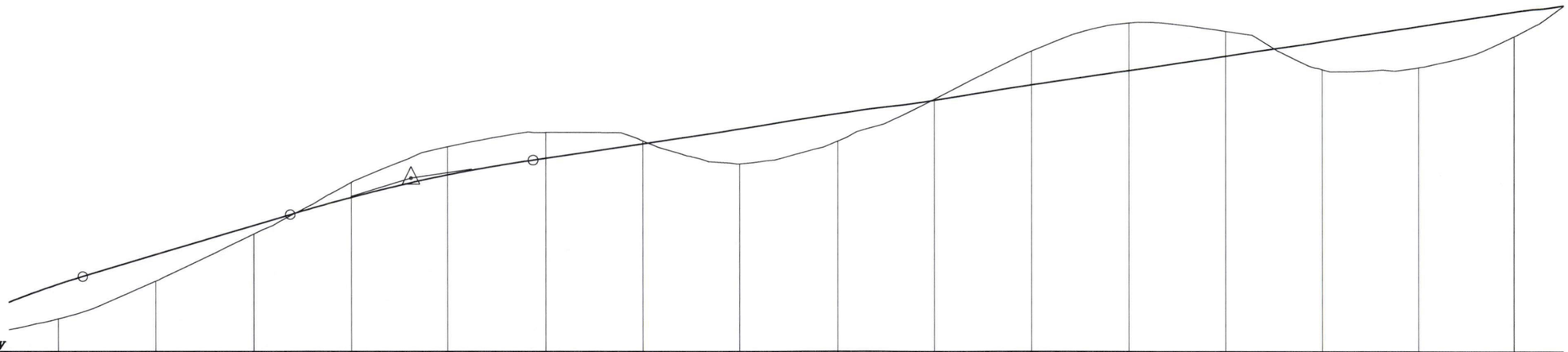

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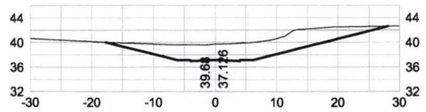

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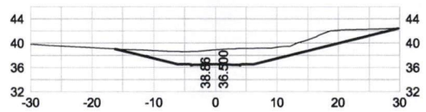

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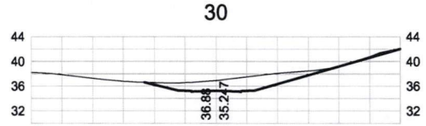

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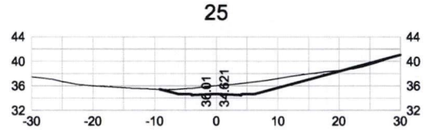

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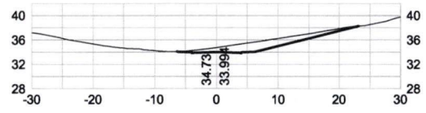

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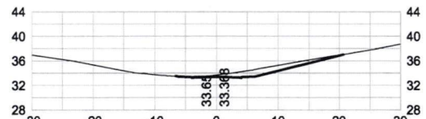

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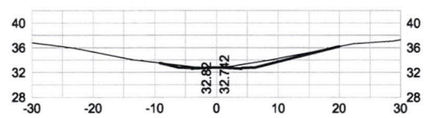

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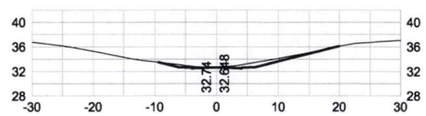

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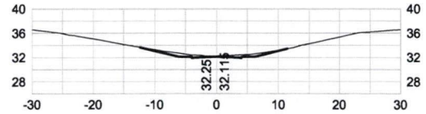

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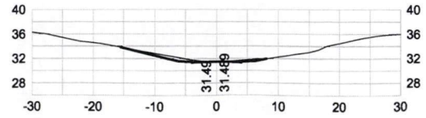

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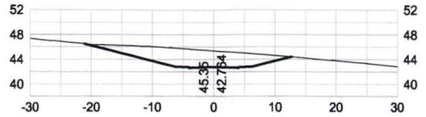

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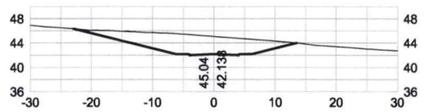

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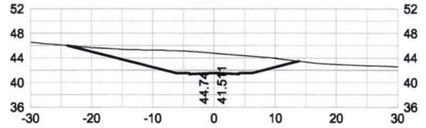

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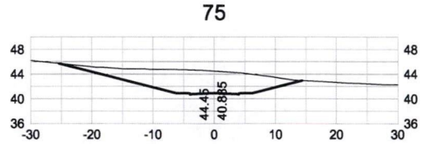

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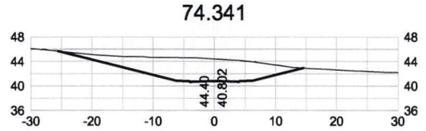

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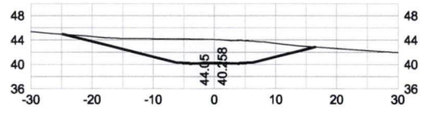

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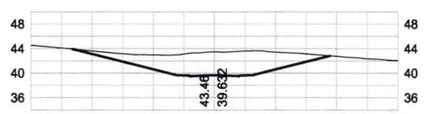

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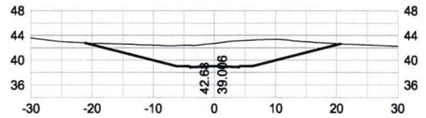

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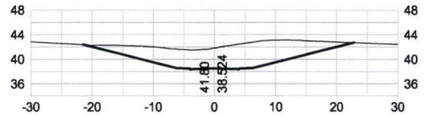

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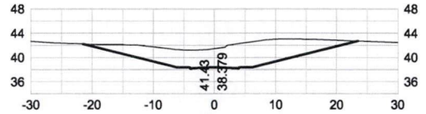

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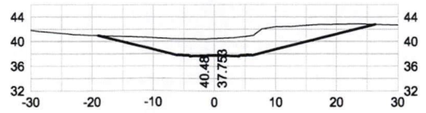

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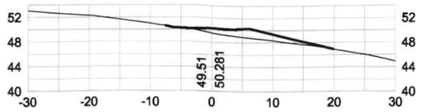

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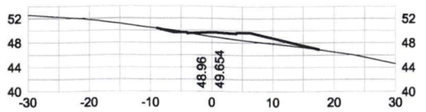

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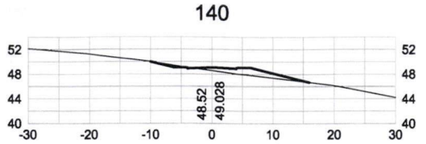

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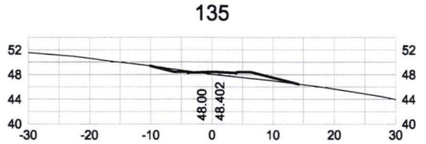

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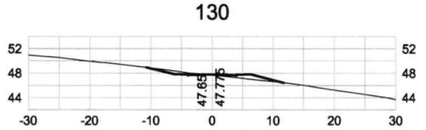

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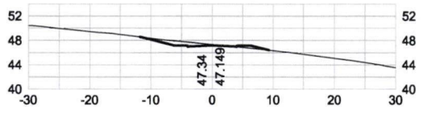

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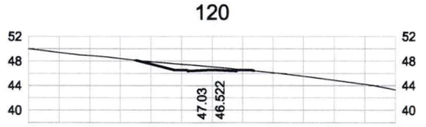

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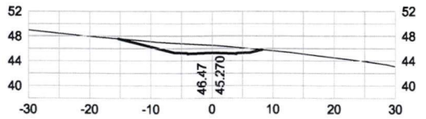

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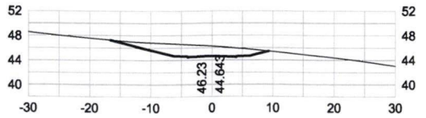

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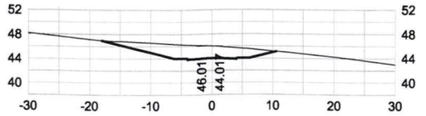

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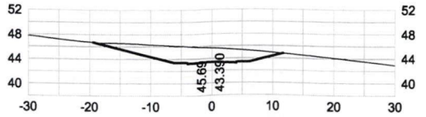

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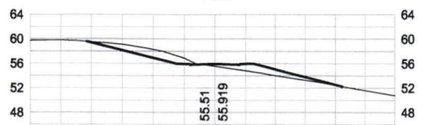

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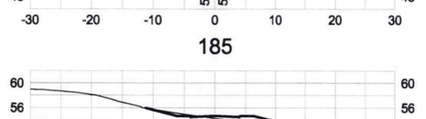

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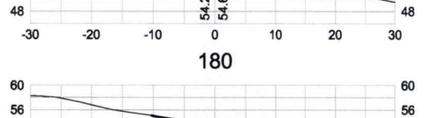

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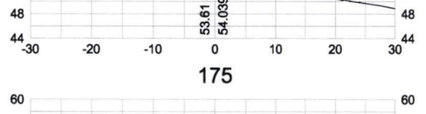

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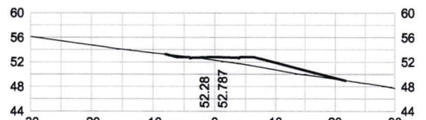

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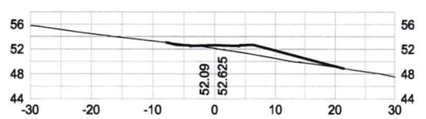

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No.	Revisions		Date	Apprvd
Designed	AH	Date 05/06	Print Date	
Drawn	CM	05/06		
Checked				
Approved				
Scale	1:1000	Ref	102471 R 10	

Kerikeri Office Tel: 09 407 9332 Fax: 09 407 7812

Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights

Subdivisions

Sheet Title

Road 1 Cross Sections
Sheet 1 of 4

Job No.	Sheet No.	Revision
102471	R 12 of shts	A

Duffill Watts & King Ltd
CONSULTING ENGINEERS

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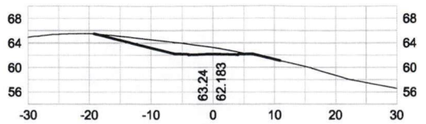

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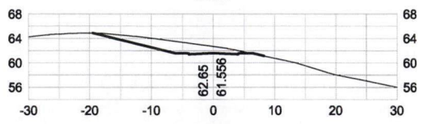

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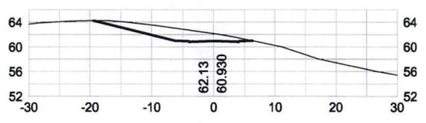

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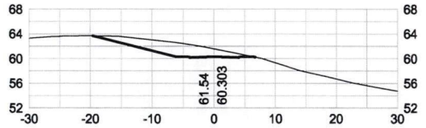

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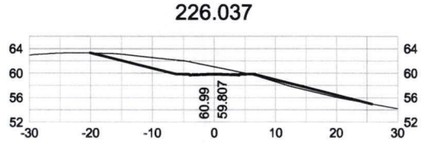

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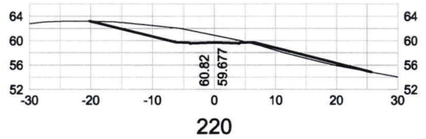

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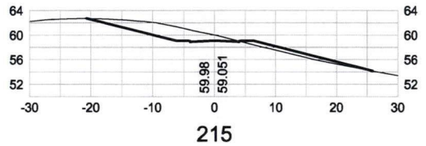

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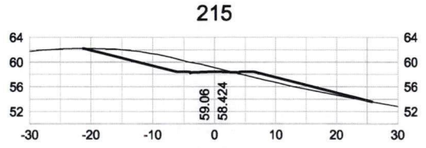

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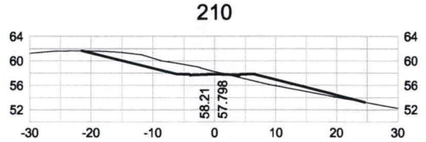

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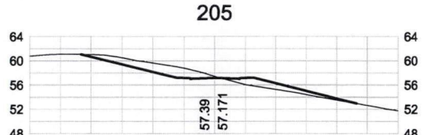

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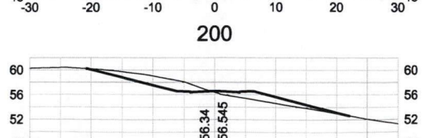

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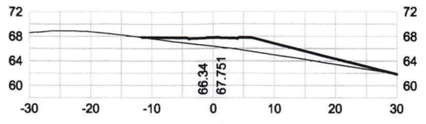

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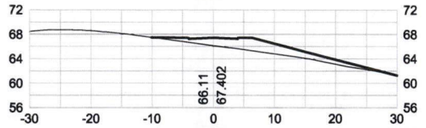

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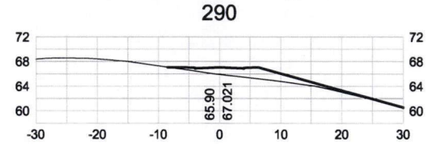

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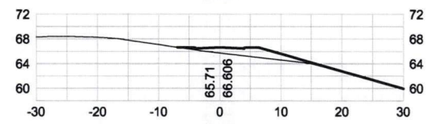

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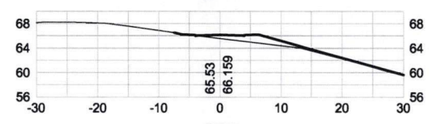

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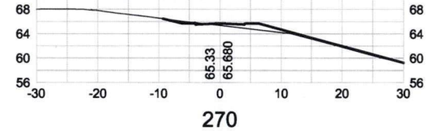

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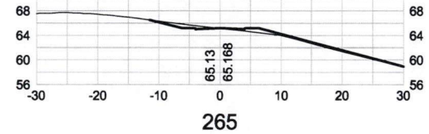

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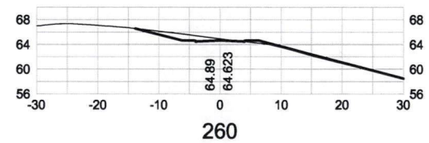

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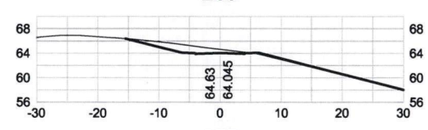

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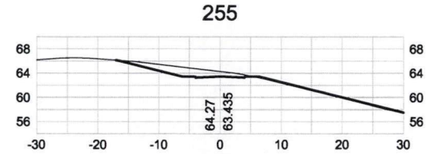

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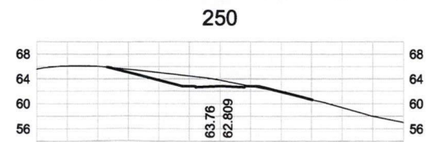

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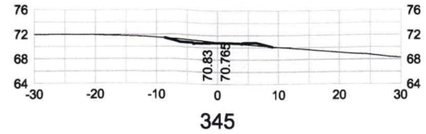

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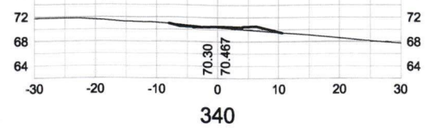

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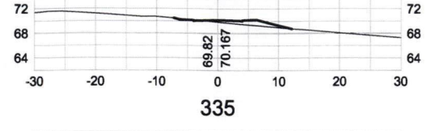

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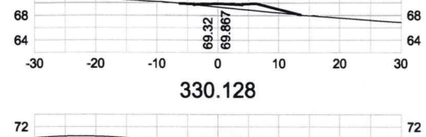

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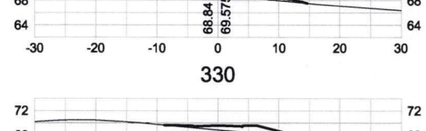

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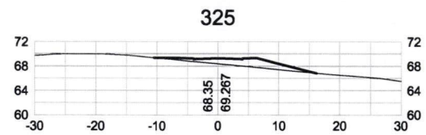

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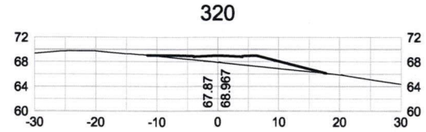

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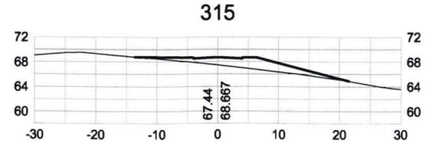

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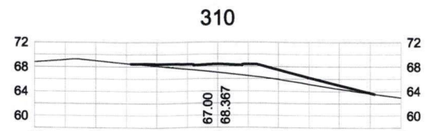

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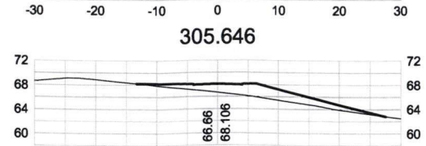

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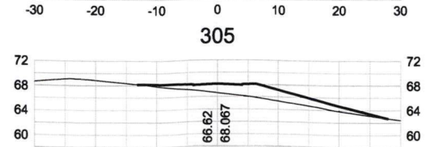

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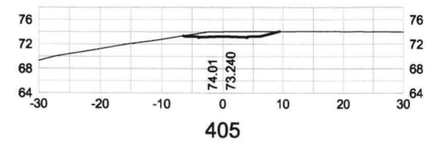

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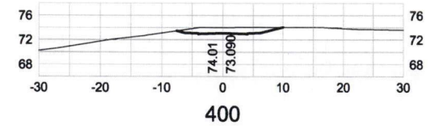

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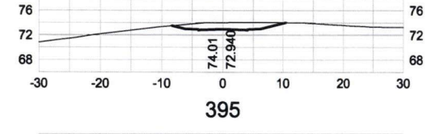

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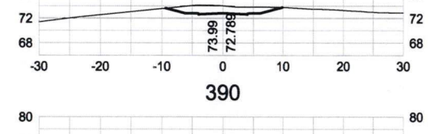

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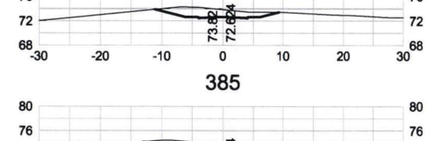

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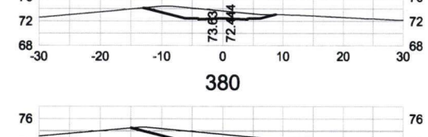

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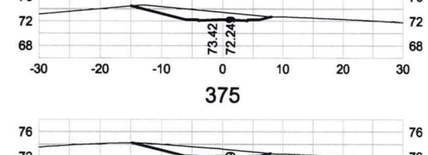

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No.	Revisions		Date	Appvd

Designed	AH	Date 05/06	Print Date
Drawn	CM	05/06	
Checked			
Approved			
Scale 1:1000		Ref	102471 R100

Kerikeri Office Tel: 09 407 9332 Fax: 09 407 7812

Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights

Subdivisions

Sheet Title

Road 1 Cross Sections
Sheet 2 of 4

Job No.	Sheet No.	Revision
102471	R 13 of shts	A

Duffill Watts & King Ltd
CONSULTING ENGINEERS

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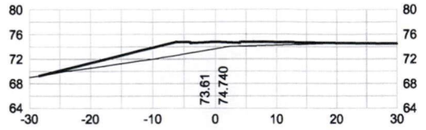

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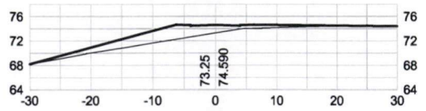

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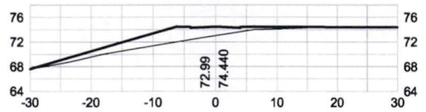

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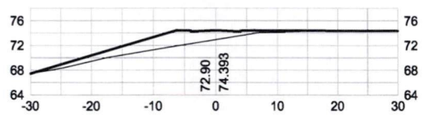

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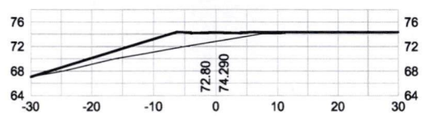

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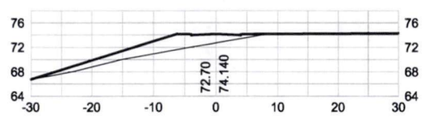

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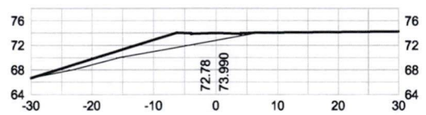

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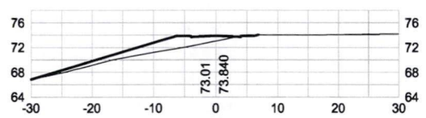

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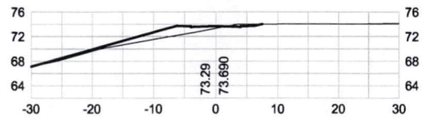

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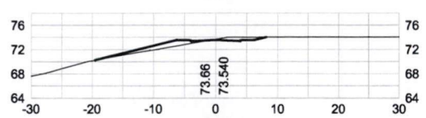

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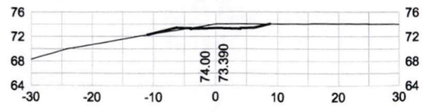

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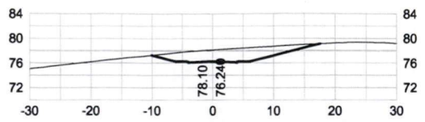

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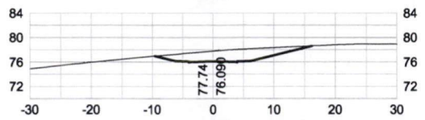

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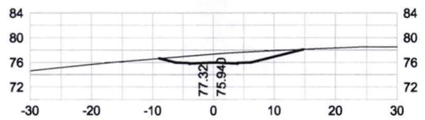

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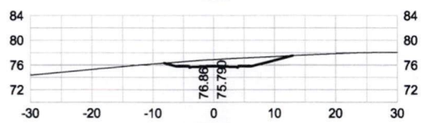

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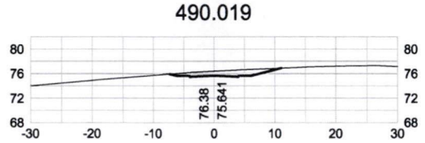

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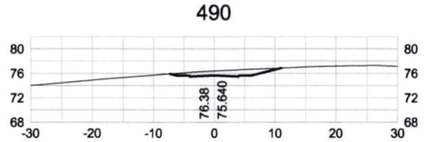

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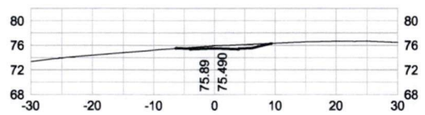

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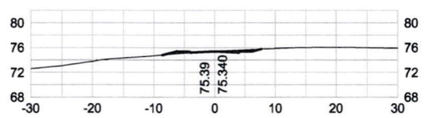

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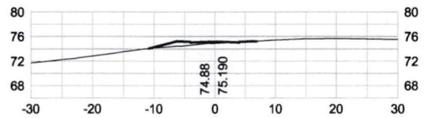

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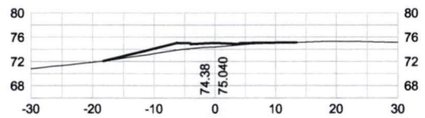

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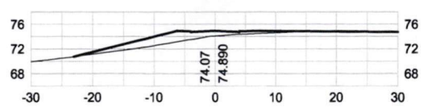

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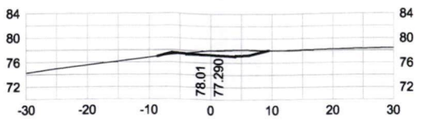

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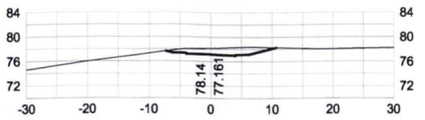

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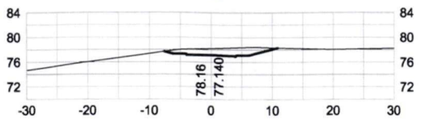

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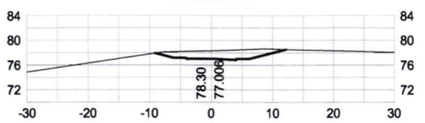

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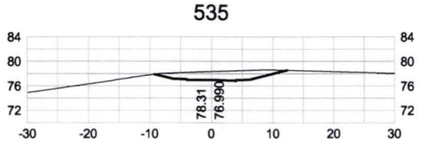

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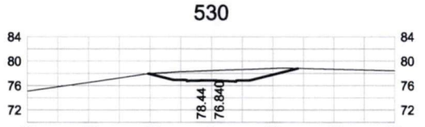

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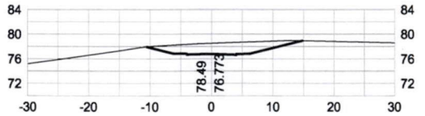

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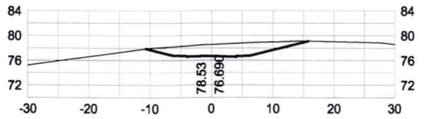

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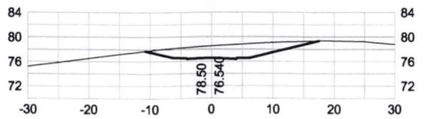

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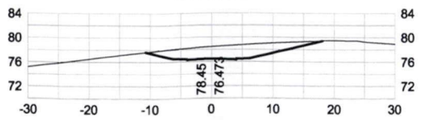

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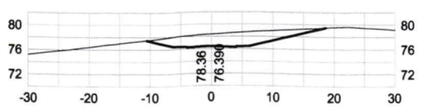

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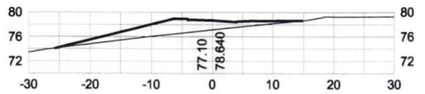

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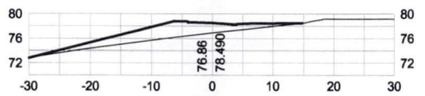

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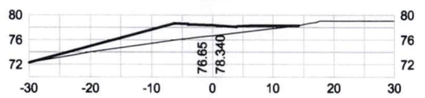

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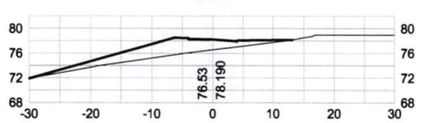

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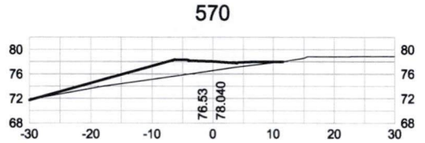

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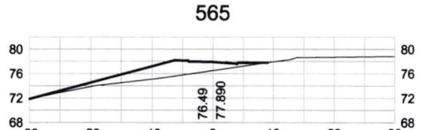

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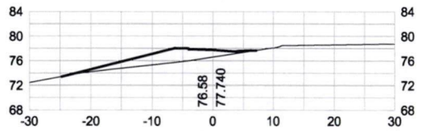

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No.	Revisions	Date	Appvd

Designed	AH	Date 05/06	Print Date
Drawn	CM	05/06	
Checked			
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Kerikeri Office Tel: 09 407 9332 Fax: 09 407 7812

Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights

Subdivisions

Sheet Title

Road 1 Cross Sections
Sheet 3 of 4

Job No.	Sheet No.	Revision
102471	R 14 of shts	A

Duffill Watts & King Ltd
CONSULTING ENGINEERS

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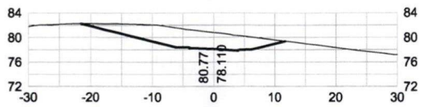

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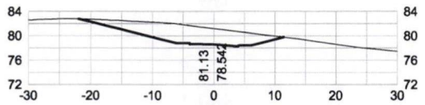

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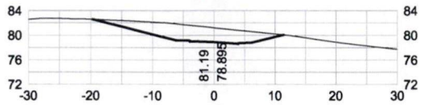

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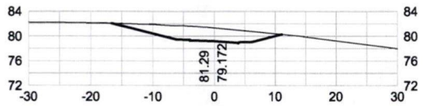

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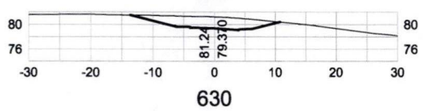

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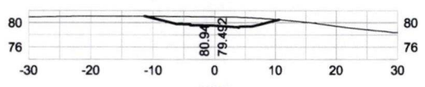

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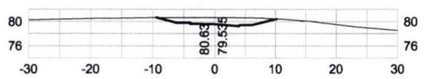

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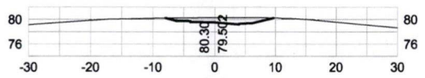

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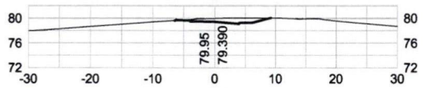

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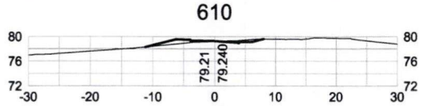

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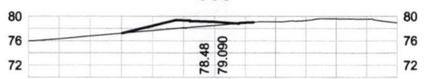

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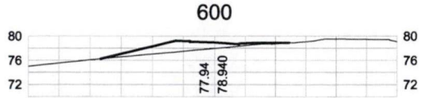

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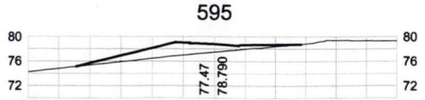

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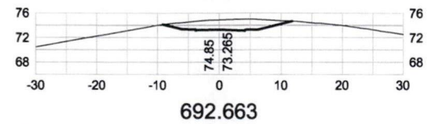

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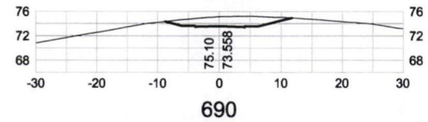

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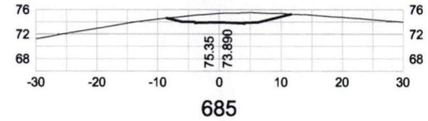

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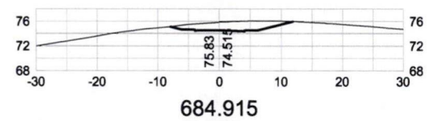

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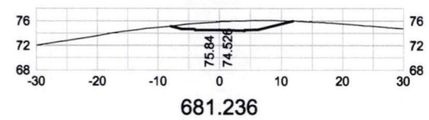

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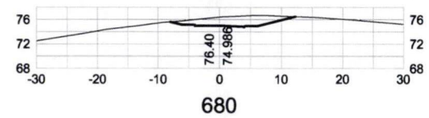

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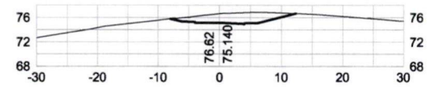

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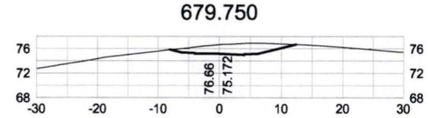

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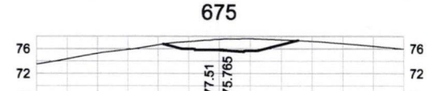

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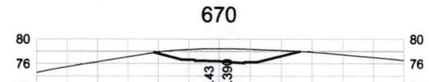

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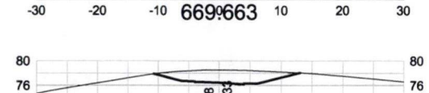

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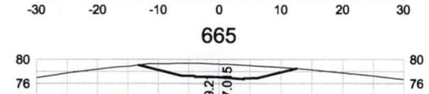

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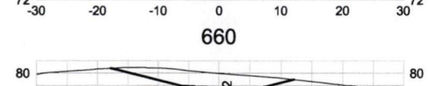

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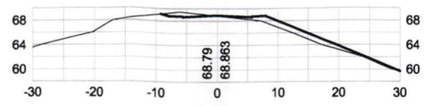

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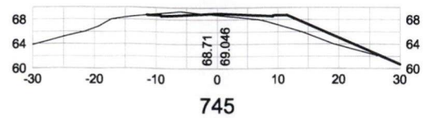

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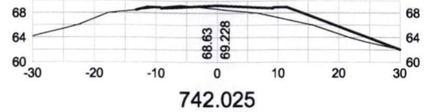

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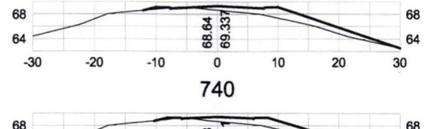

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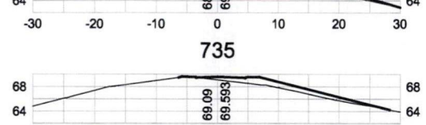

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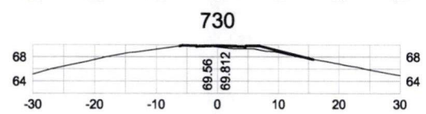

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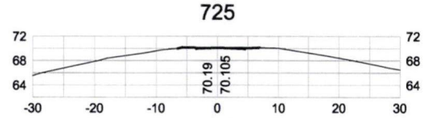

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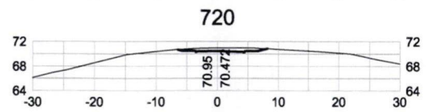

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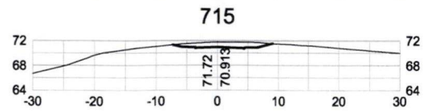

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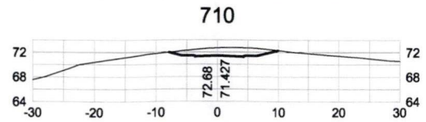

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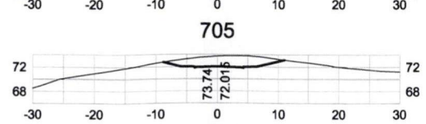

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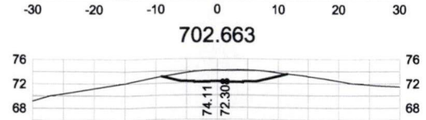

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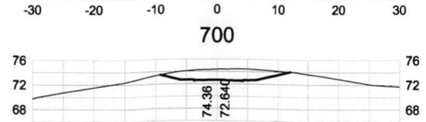

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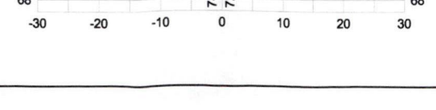

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No.	Revisions	Date	Appvd

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Approved			
Scale	1:1000	Ref	102471 R 10

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Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights

Subdivisions

Sheet Title

Road 1 Cross Sections
Sheet 4 of 4

Job No.	Sheet No.	Revision
102471	R 15 of shts	A

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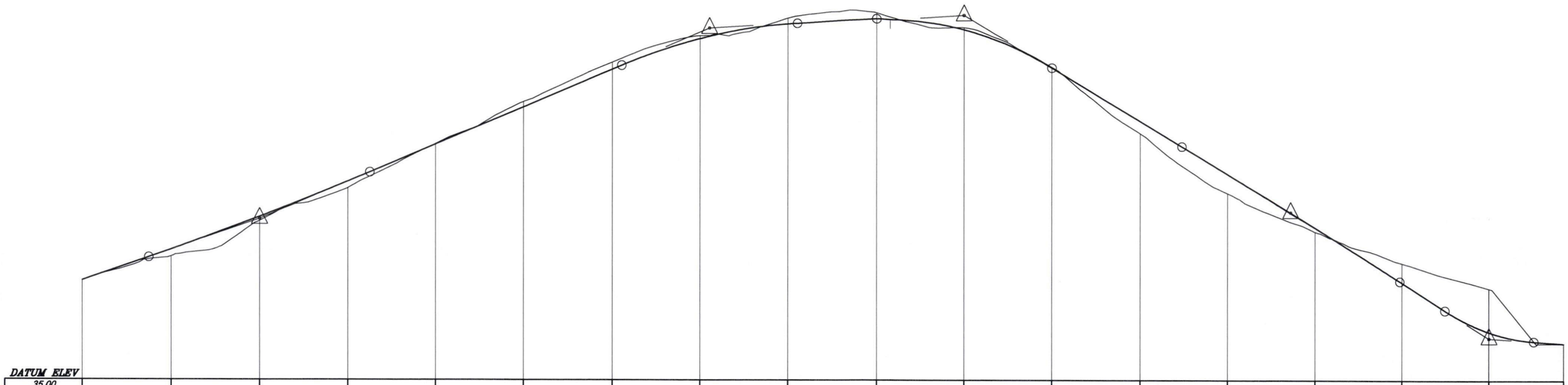

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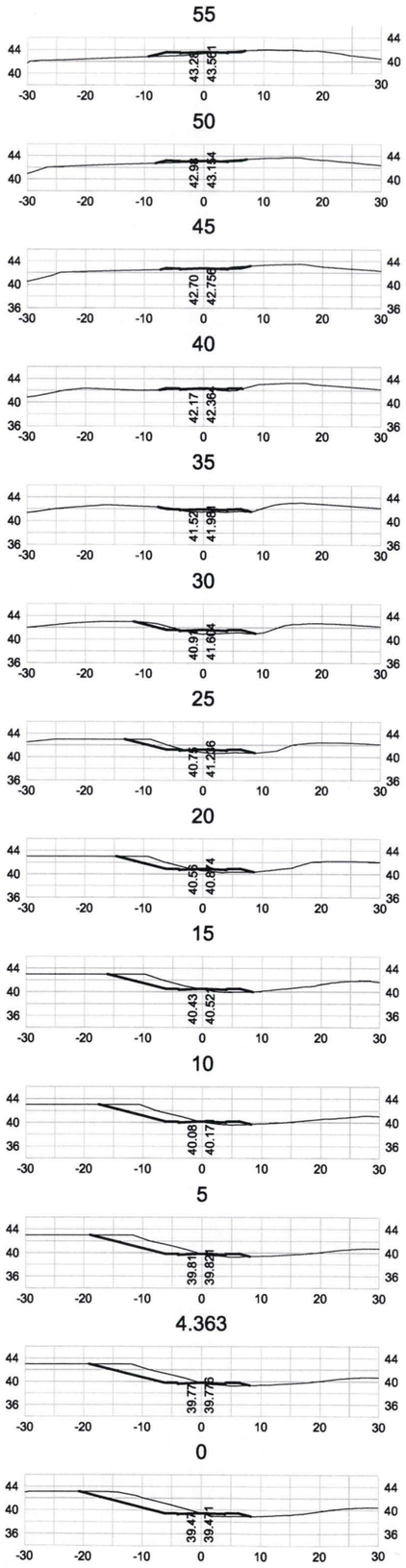

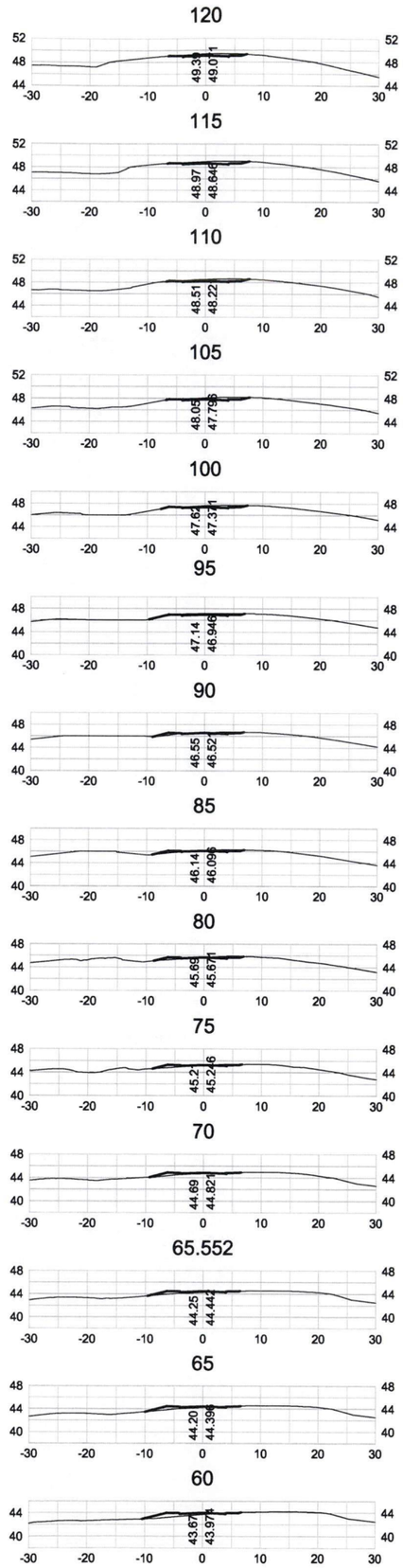

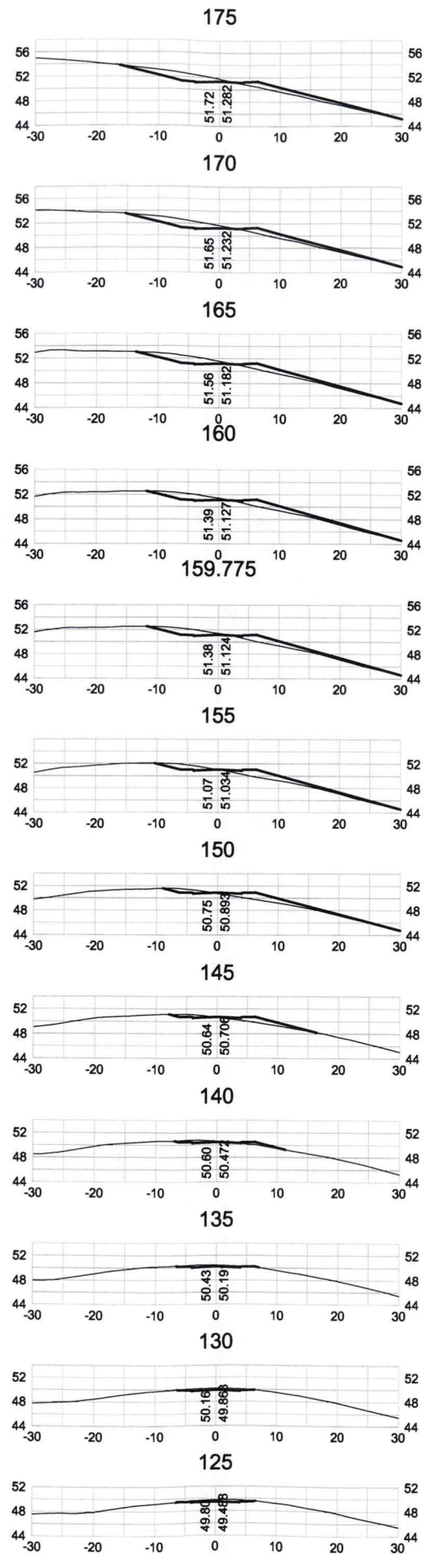

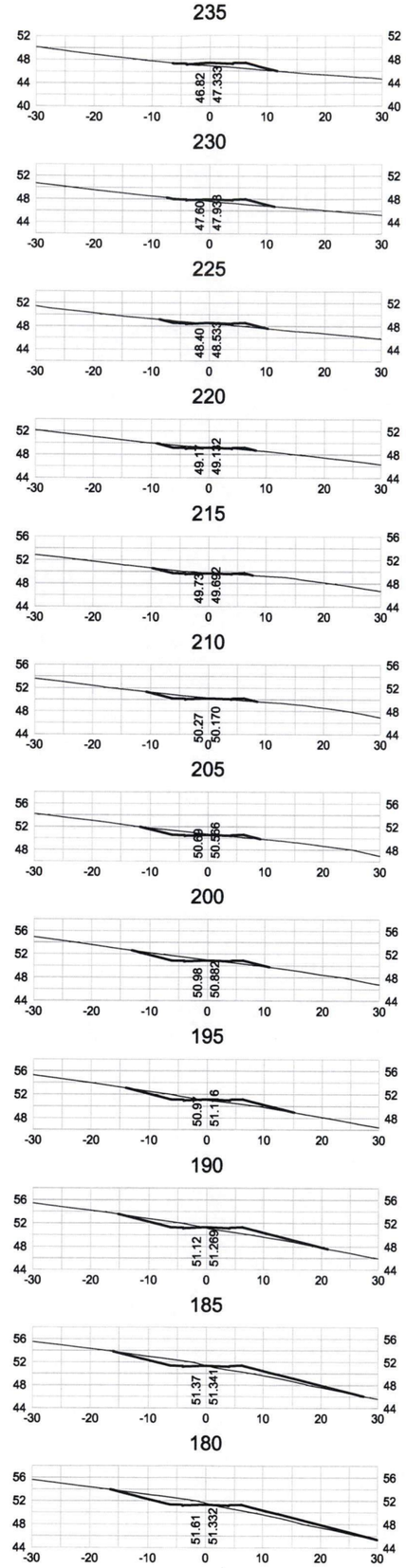

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Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights

Subdivisions

Sheet Title

Road 2 Cross Sections
Sheet 1 of 2

Job No.	Sheet No.	Revision
102471	R 21 of shts	A

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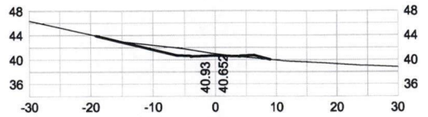
290



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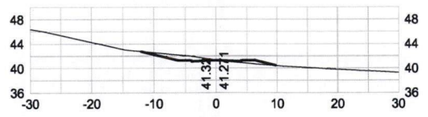

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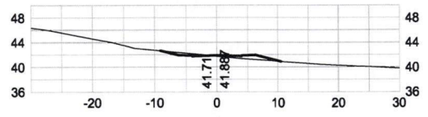

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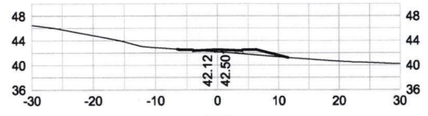

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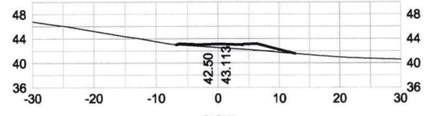

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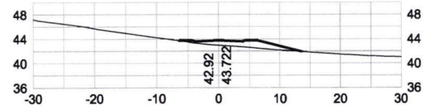

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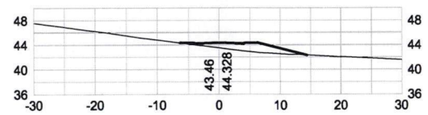

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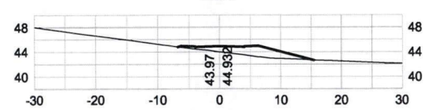

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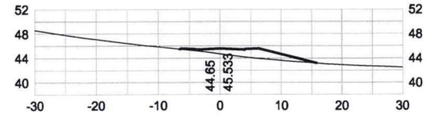

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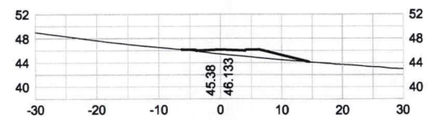

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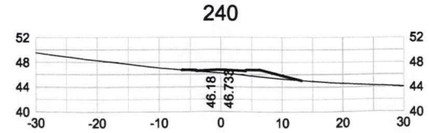

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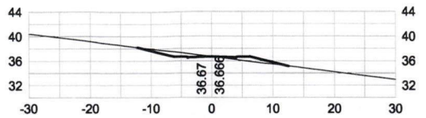

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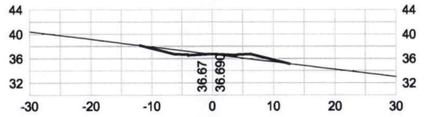

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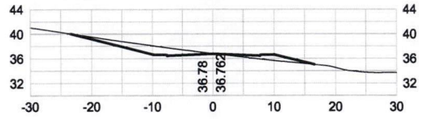

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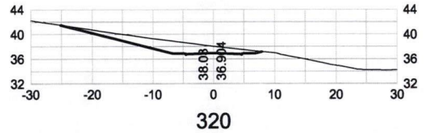

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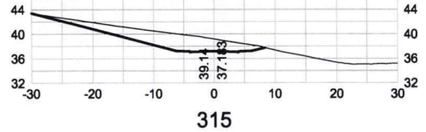

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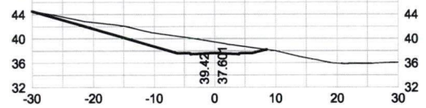

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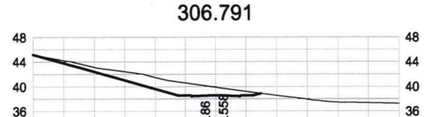

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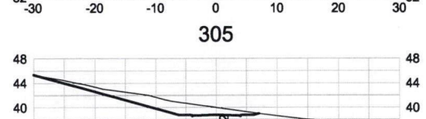

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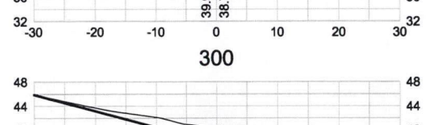

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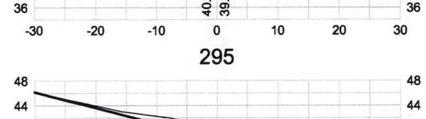

No.	Revisions	Date	Appvd

Designed	AH	Date 05/06	Print Date
Drawn	CM	05/06	
Checked			
Approved			
Scale 1:1000		Ref	102471 R 10

Kerikeri Office Tel: 09 407 9332 Fax: 09 407 7812

Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights

Subdivisions

Sheet Title

Road 2 Cross Sections
Sheet 2 of 2

Job No.	Sheet No.	Revision
102471	R 22 of shts	A

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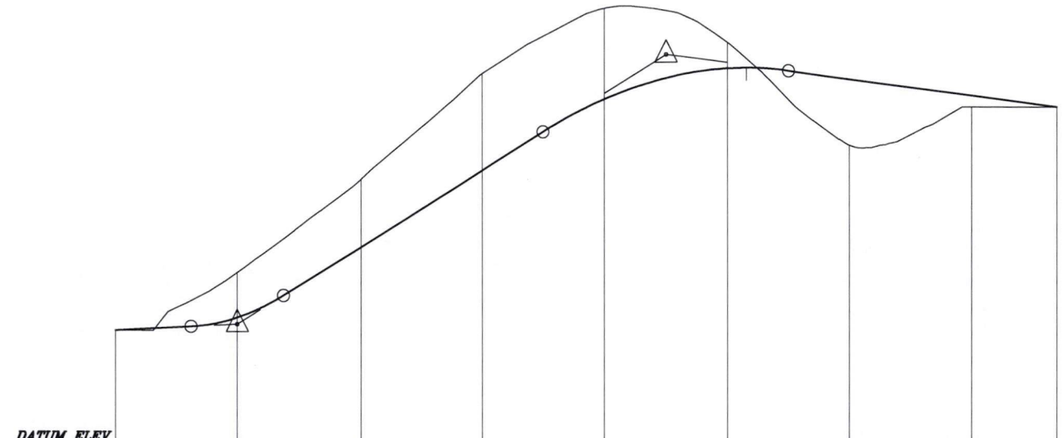

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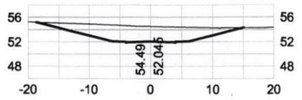

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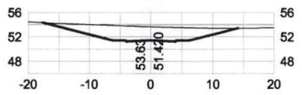

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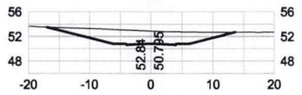

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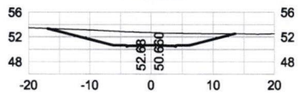

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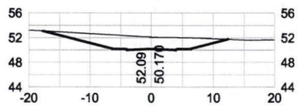

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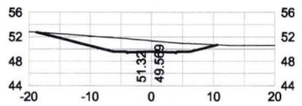

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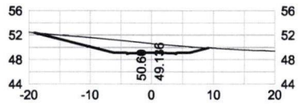

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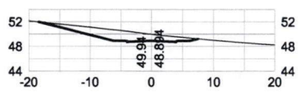

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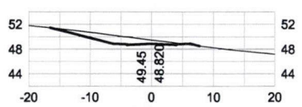

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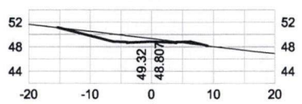

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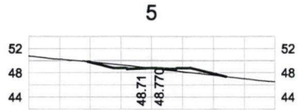

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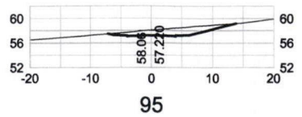

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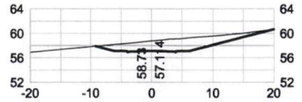

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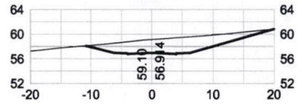

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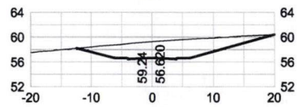

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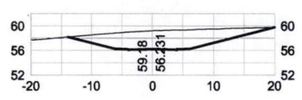

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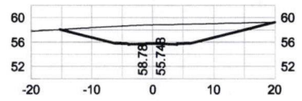

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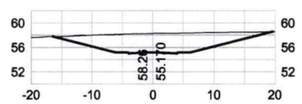

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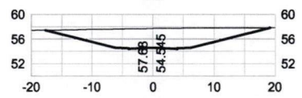

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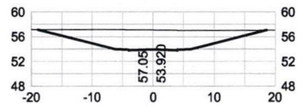

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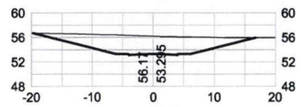

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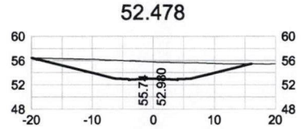

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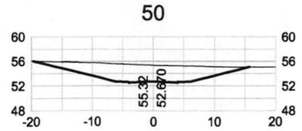

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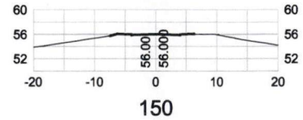

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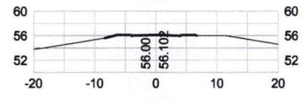

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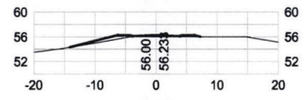

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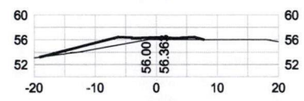

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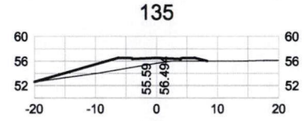

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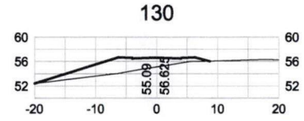

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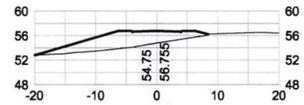

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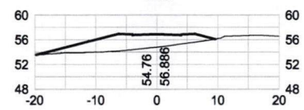

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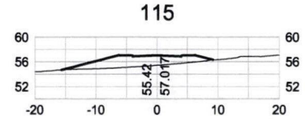

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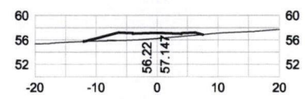

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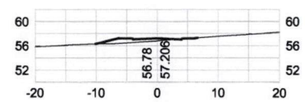

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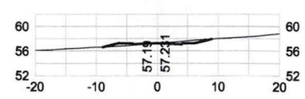

No.	Revisions	Date	Appvd
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Approved			
Scale	1:1000	Ref	102471 R 10

Kerikeri Office Tel: 09 407 9332 Fax: 09 407 7812

Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights

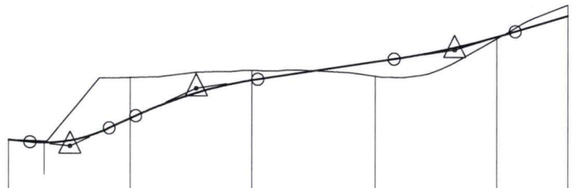
Subdivisions

Sheet Title

Road 3
Cross Sections

Job No.	Sheet No.	Revision
102471	R 31 of shts	A

Duffill Watts & King Ltd
CONSULTING ENGINEERS



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Vert	-2.00%	13.00m Vertical curve K = 1.18				9.04%	20.00m Vertical curve K = 3.31			3.00%			20.00m Vertical curve K = 6.67				6.00%	
Chainage	0	3.500	5.854		10	16.500	20	20.926	30.926	40	40.926		60	63.057	73.057	80	83.057	

R.O.W 2 - Long Section

1:1000 Horizontal
1:200 Vertical

No.	Revisions	Date	Appvd

Designed	AH	Date	05/06	Print Date
Drawn	CM		05/06	
Checked				
Approved				
Scale	As shown	Ref		102471 R 10

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Project

Cable Bay Heights

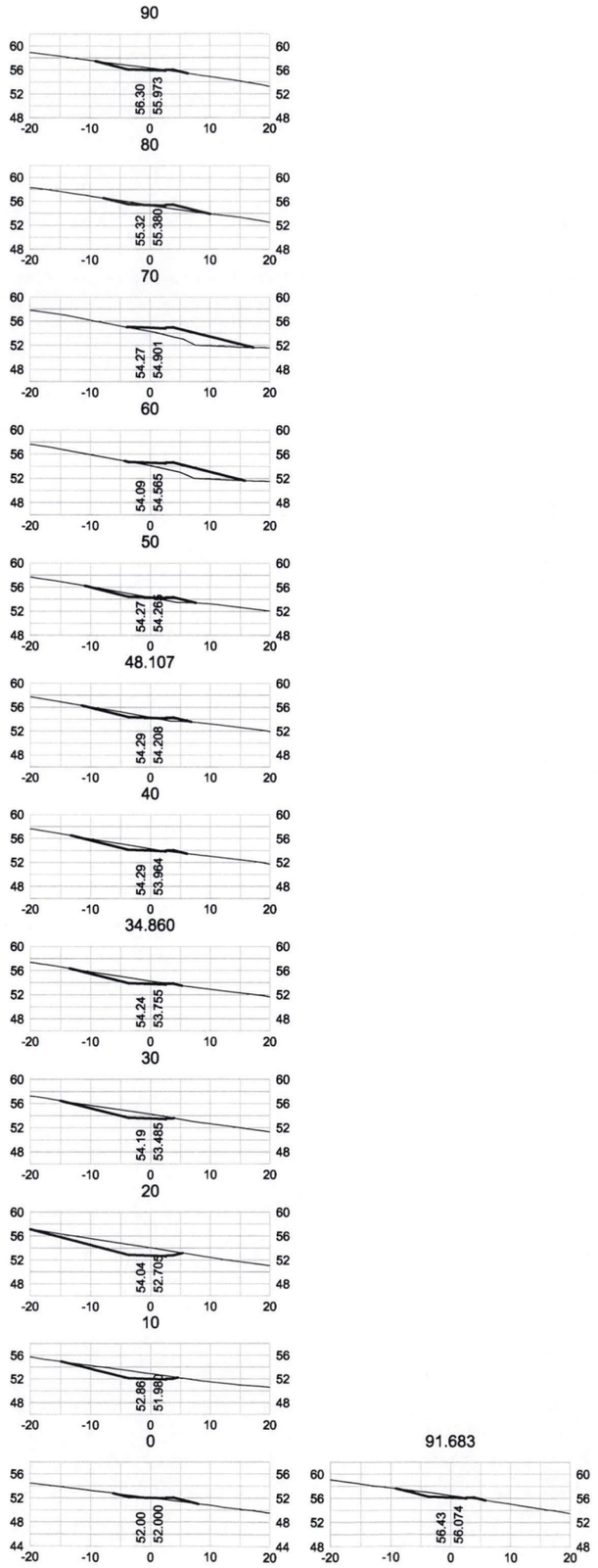
Subdivisions

Sheet Title

R.O.W 2
Long Section

Job No.	Sheet No.	Revision
102471	R 50 of shts	A

Duffill Watts & King Ltd
CONSULTING ENGINEERS



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Drawn	CM	05/06		
Checked				
Approved				
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Kerikeri Office Tel: 09 407 9332 Fax: 09 407 7812				

Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights

Subdivisions

Sheet Title

R.O.W 2
Cross Sections

Job No.	Sheet No.	Revision
102471	R 51 of shts	A

Duffill Watts & King Ltd
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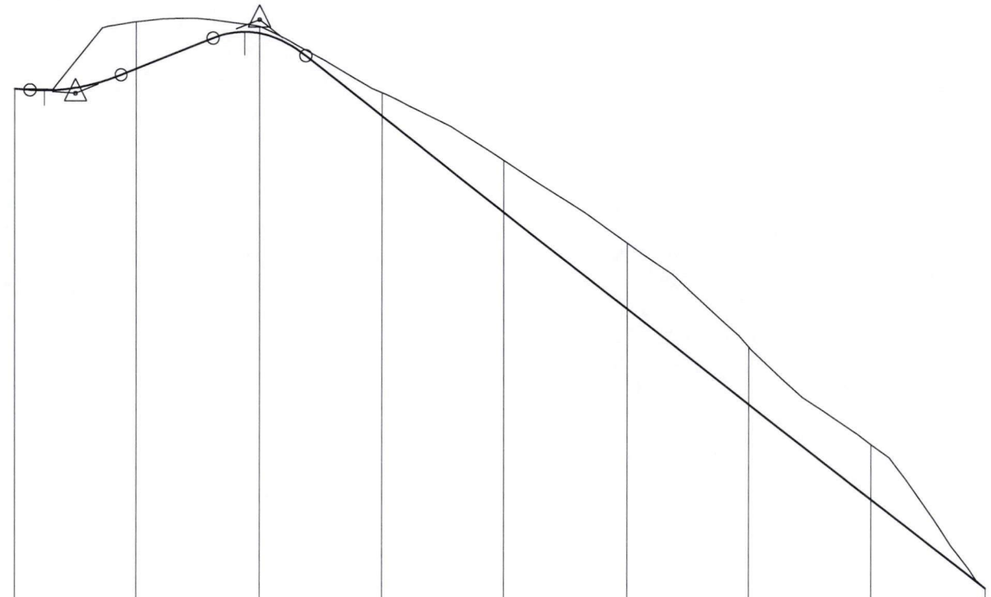

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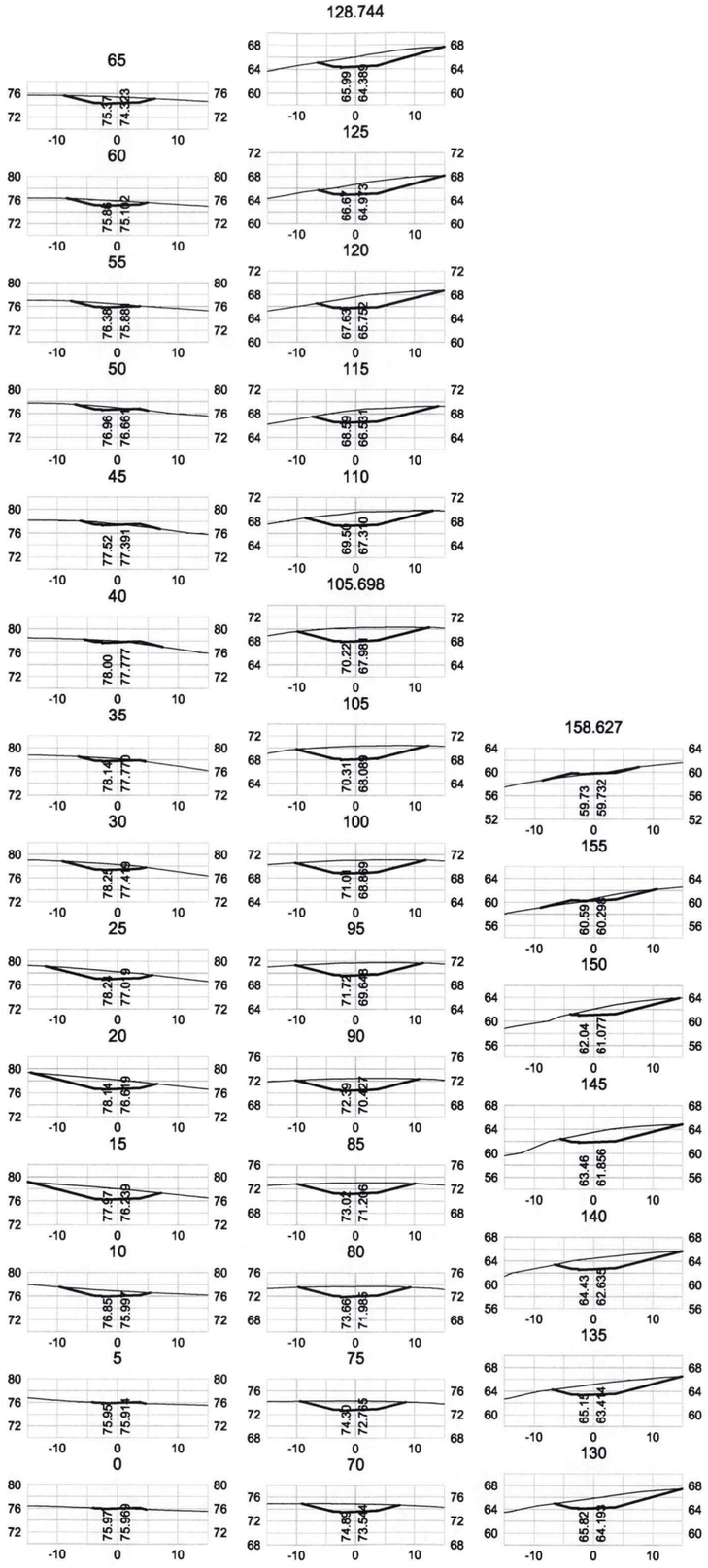

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Cable Bay Sections Ltd.

Project

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Subdivisions

Sheet Title

R.O.W 3
Cross Sections

Job No.	Sheet No.	Revision
102471	R 61 of shts	A

Duffill Watts & King Ltd
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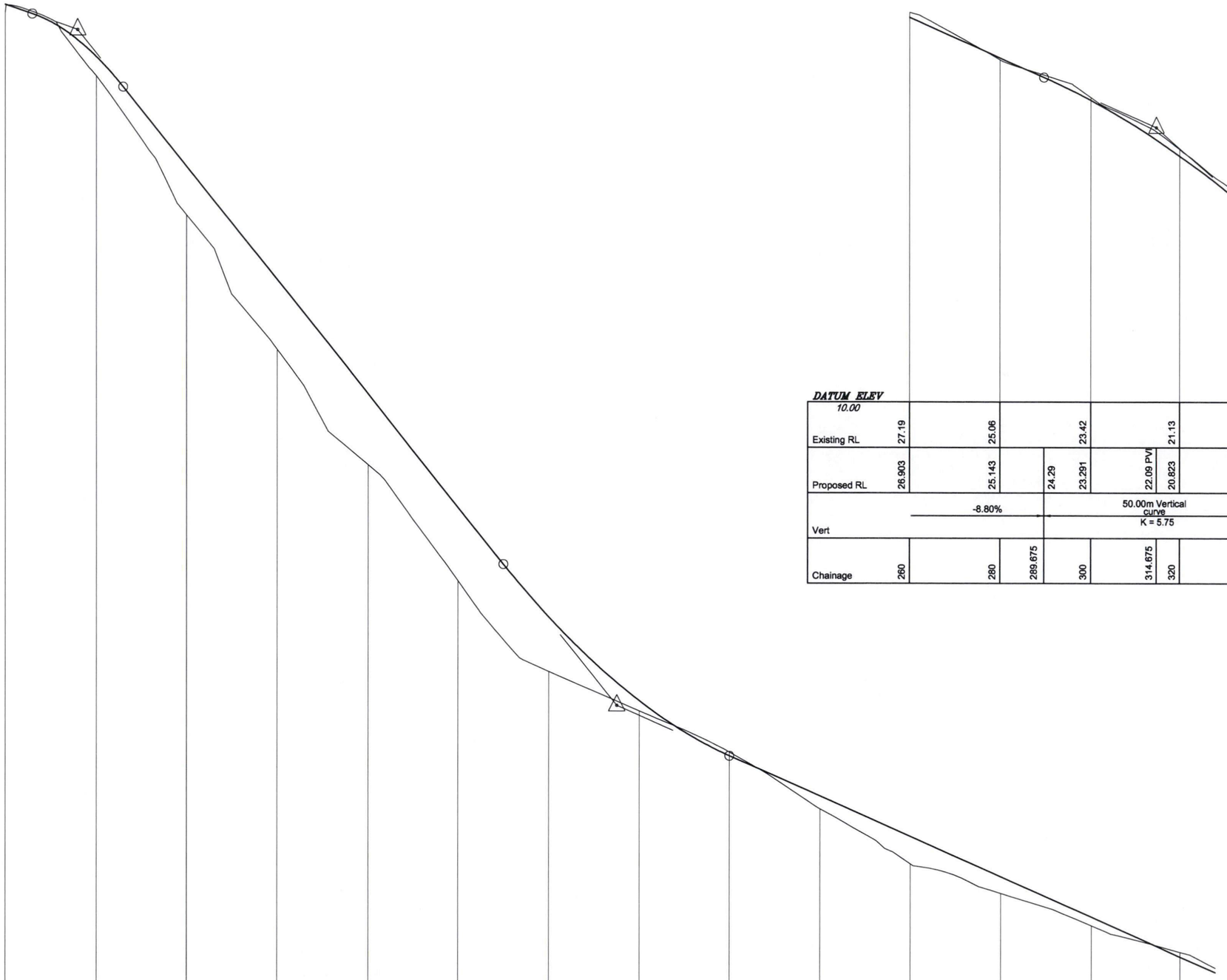

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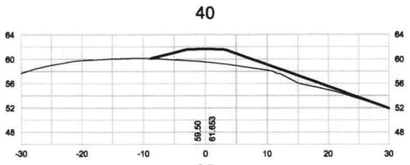

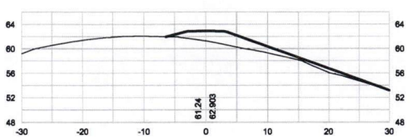

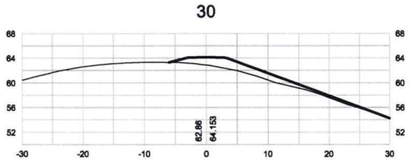

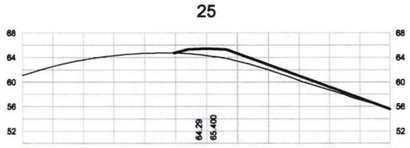

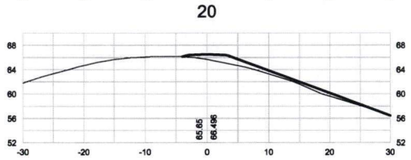

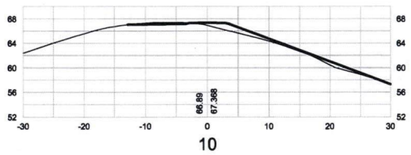

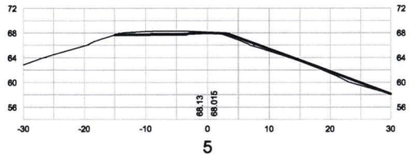

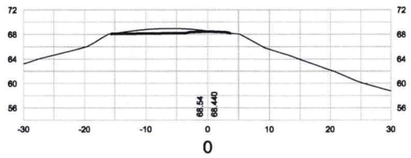

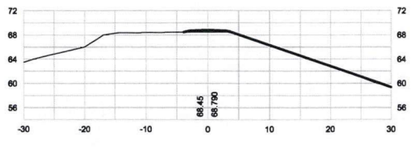

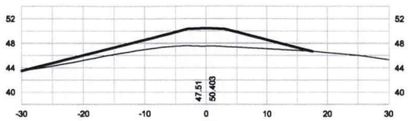

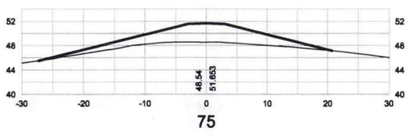

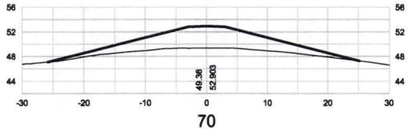

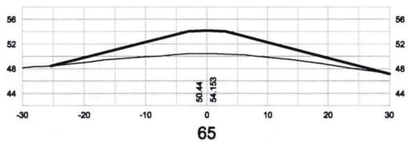

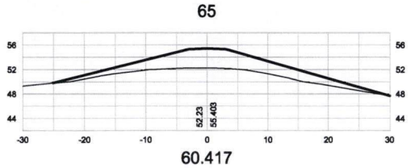

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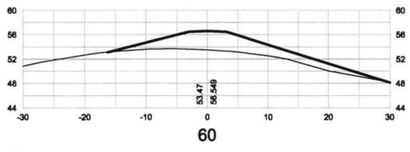

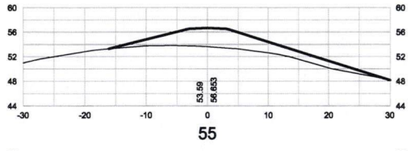

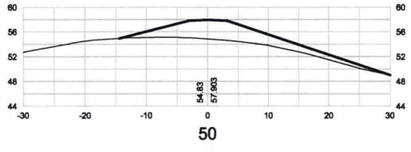

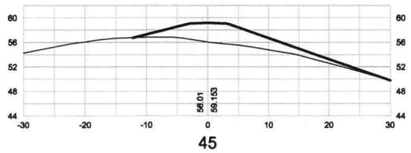

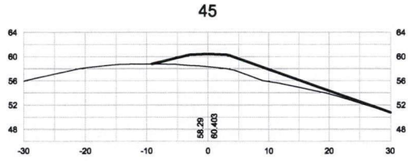

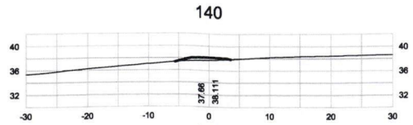

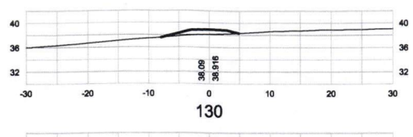

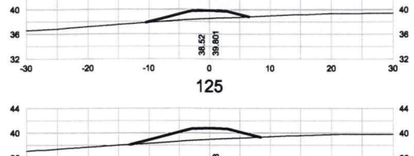

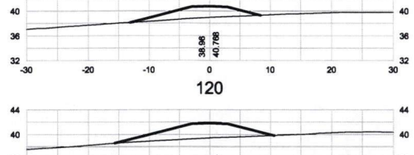

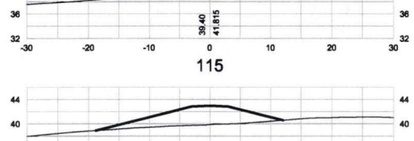

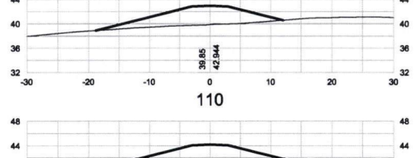

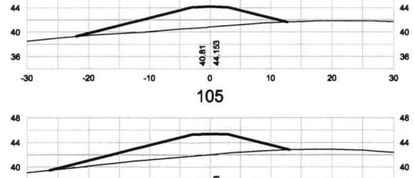

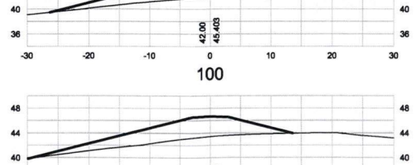

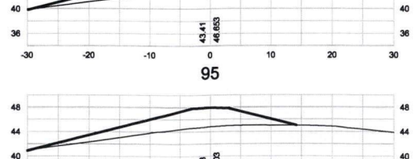

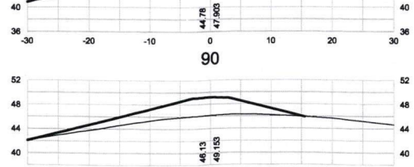

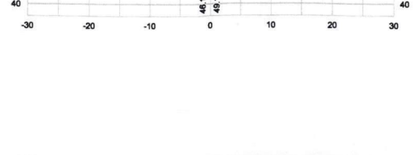

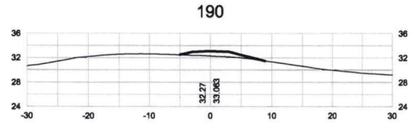

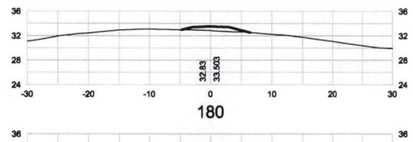

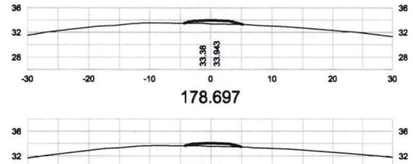

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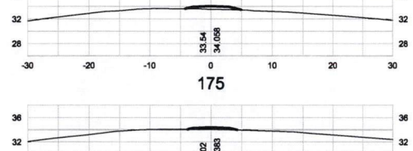

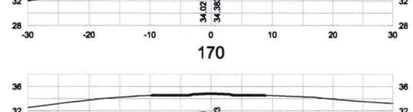

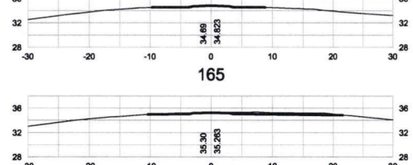

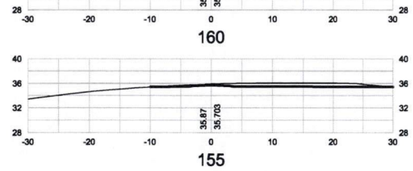

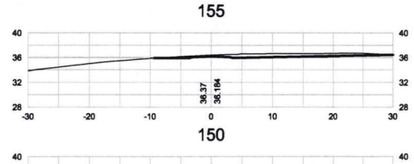

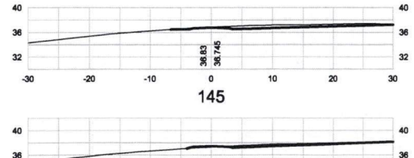

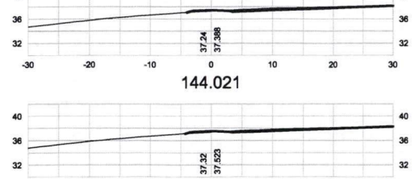

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No.	Revisions		Date Appvd
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Drawn	CM	05/06	
Checked			
Approved			
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Kerikeri Office Tel: 09 407 9332 Fax: 09 407 7812

Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights

Subdivisions

Sheet Title

R.O.W 4
Cross Sections

Job No.	Sheet No.	Revision
102471	R 71 of shts	B

Duffill Watts & King Ltd
CONSULTING ENGINEERS

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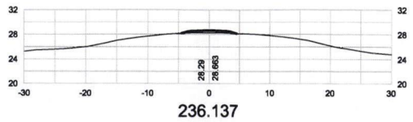

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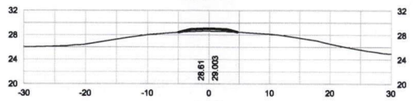

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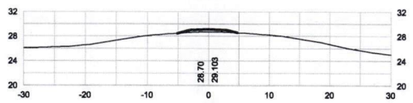

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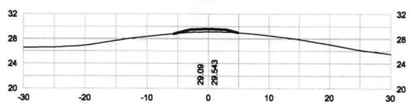

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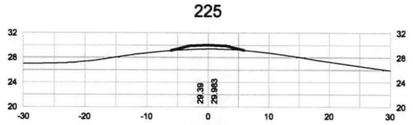

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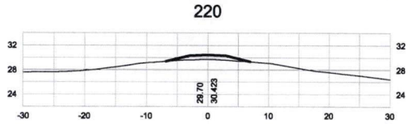

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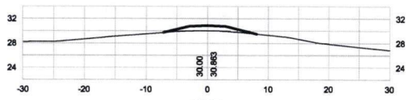

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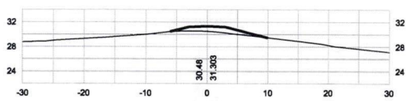

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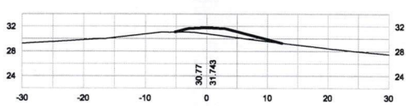

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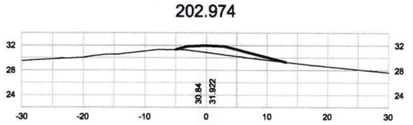

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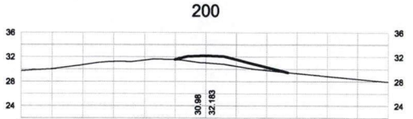

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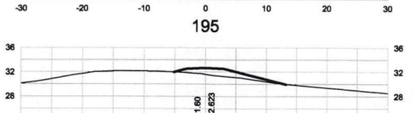

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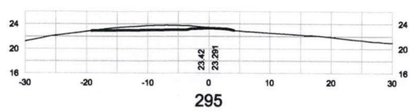

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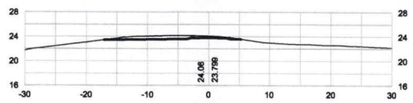

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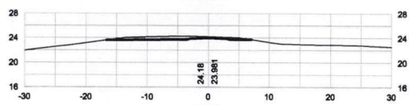

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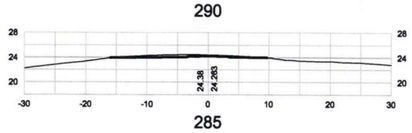

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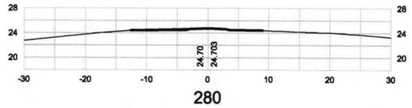

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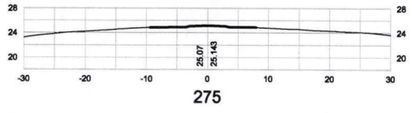

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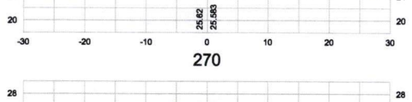

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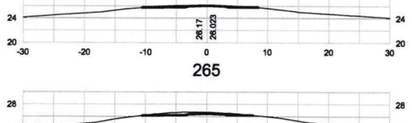

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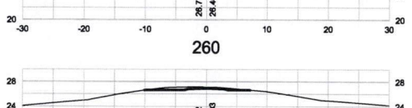

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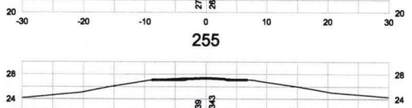

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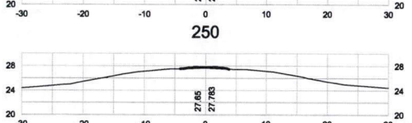

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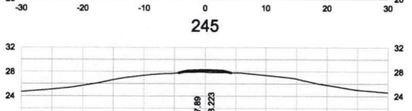

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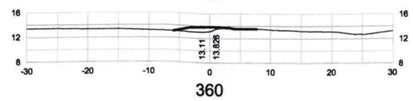

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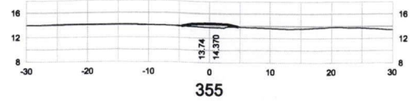

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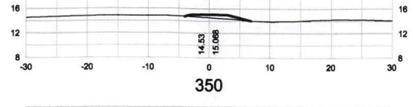

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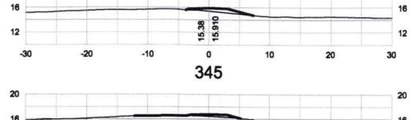

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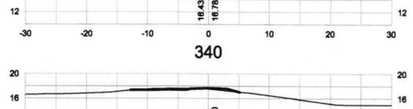

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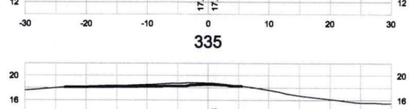

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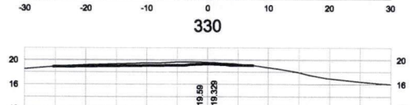

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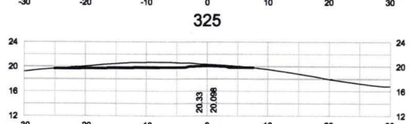

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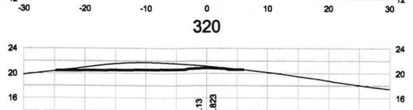

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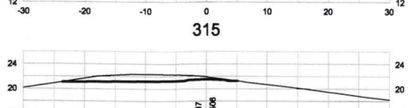

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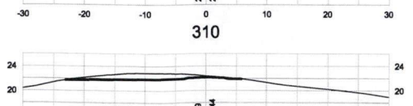

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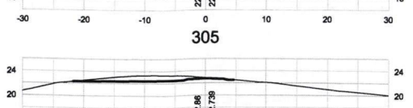

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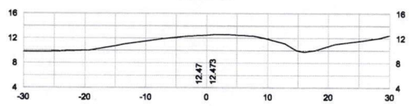

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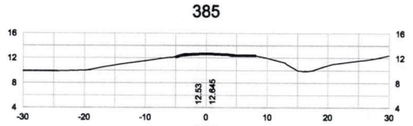

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No.	Revisions		Date	Appvd
Designed	AH	Date 05/06	Print Date	
Drawn	CM	05/06		
Checked				
Approved				
Scale	1:1000	Ref	102471 R 10	

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Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights

Subdivisions

Sheet Title

R.O.W 4
Cross Sections

Job No.	Sheet No.	Revision
102471	R 72 of shts	B

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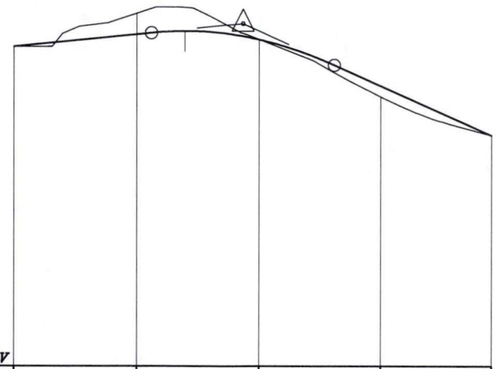
CONSULTING ENGINEERS



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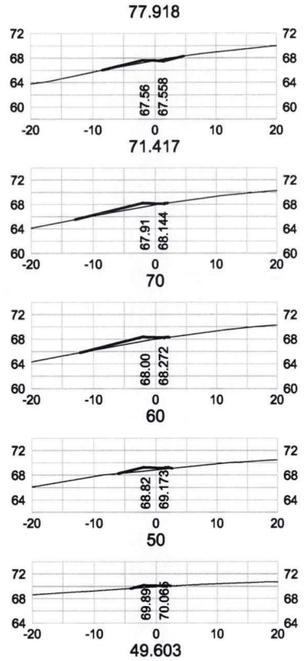

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Drawn	CM	05/06	
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Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights

Subdivisions

Sheet Title

R.O.W 5
Cross Sections

Job No.	Sheet No.	Revision
102471	R 81 of shts	A

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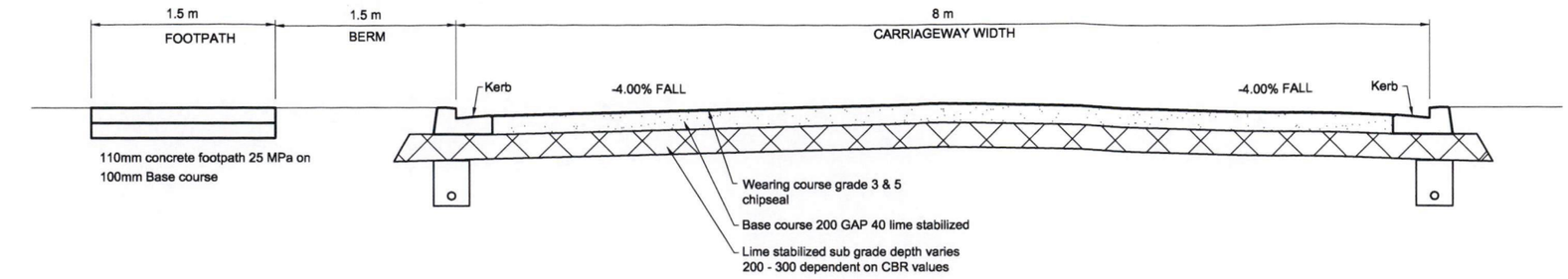

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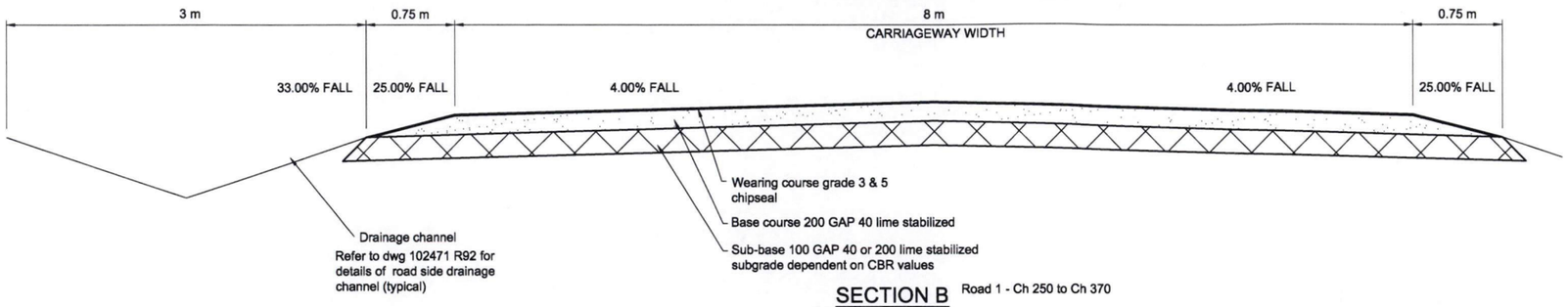
Road 2



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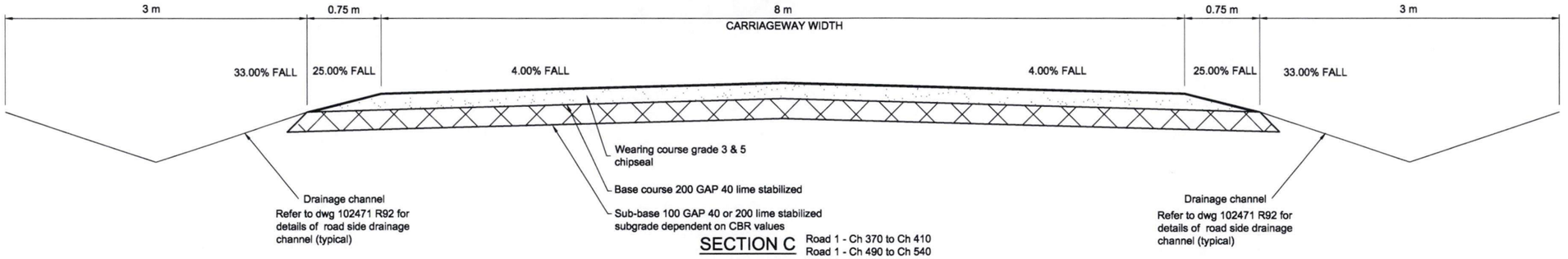

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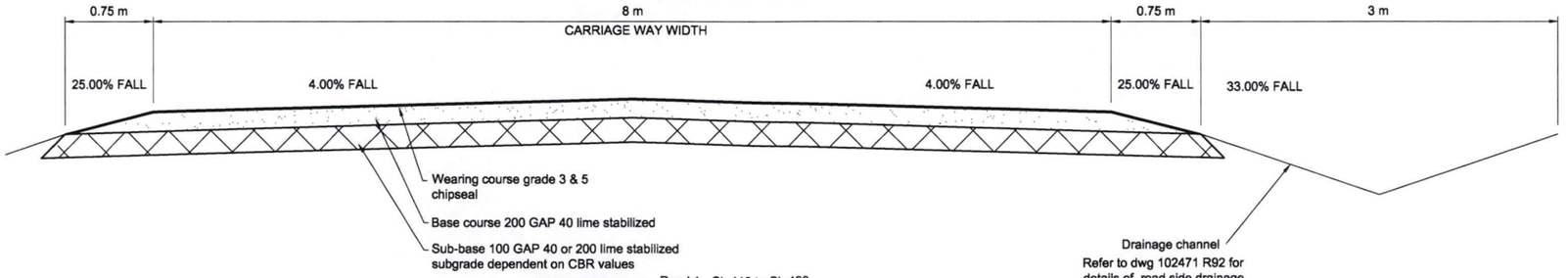
Road 1 - Ch 490 to Ch 540
Road 1 - Ch 625 to Ch 720



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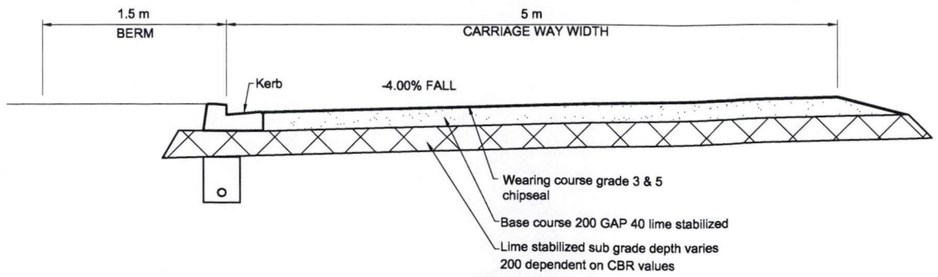

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No.	Revisions		Date	Appvd
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Drawn	CM	07/06		
Checked				
Approved				
Scale	1:50	Ref		

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Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights

Roading

Sheet Title

Typical Sections
Sheet 1 of 3

Job No.	Sheet No.	Revision
102471	R90 of shts	A

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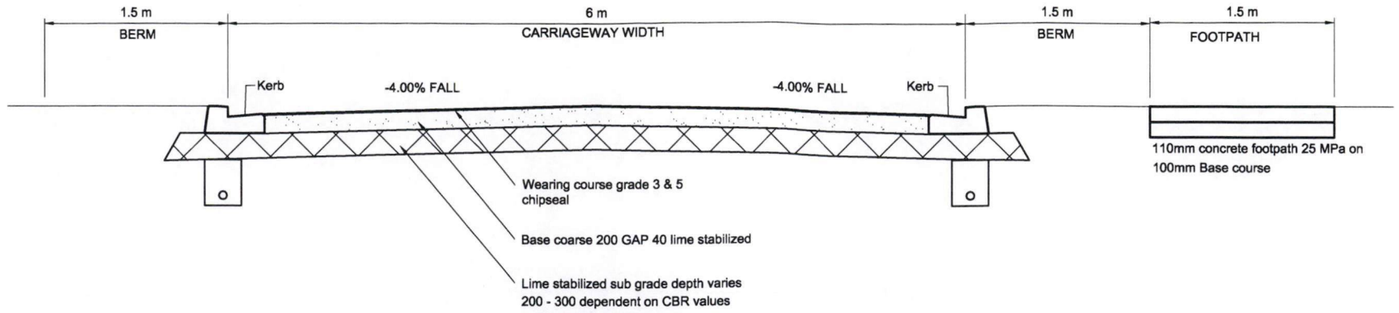
CONSULTING ENGINEERS



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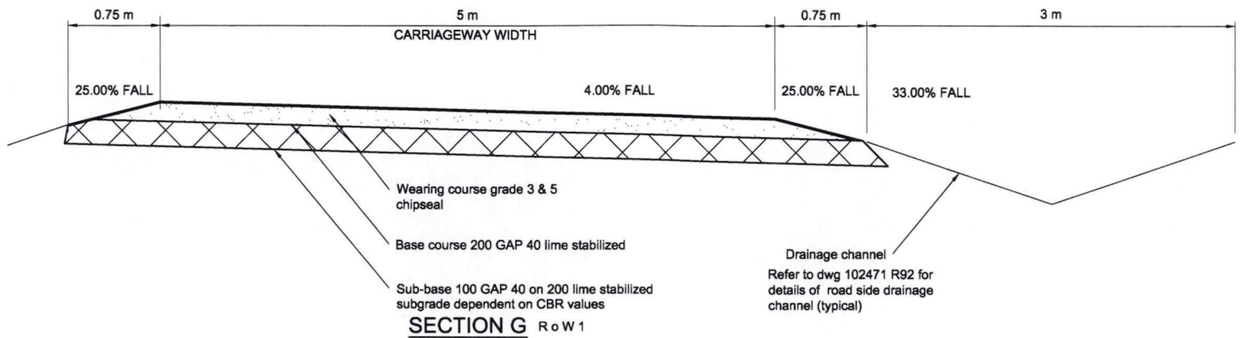

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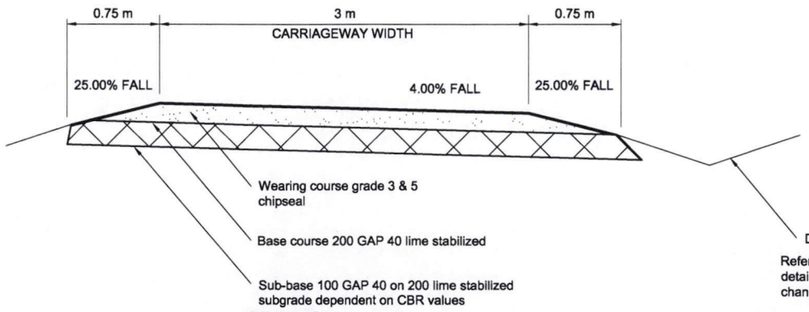
SECTION H RoW 3



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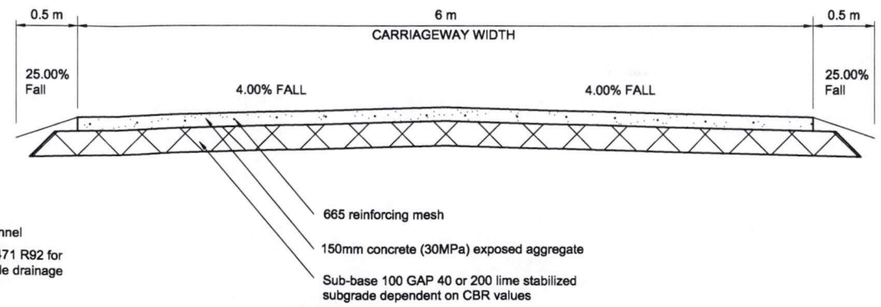

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No.	Revisions		Date	Appvd
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Drawn	CM	07/06		
Checked				
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Scale	1:50	Ref		

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Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights

Roading

Sheet Title

Typical Sections
Sheet 2 of 3

Job No.	Sheet No.	Revision
102471	R91 of shts	A

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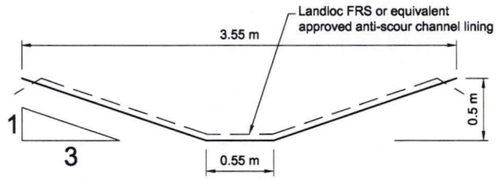
CONSULTING ENGINEERS



CHANNEL A
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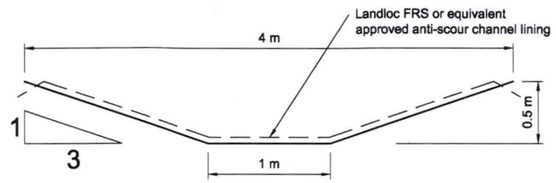
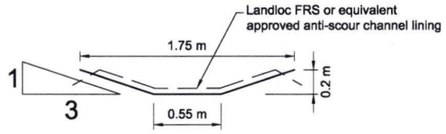


CHANNEL D
Armoring & revegitation necessary



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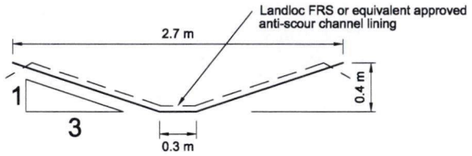

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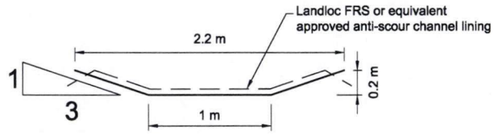

CHANNEL C
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No.	Revisions		Date	Appvd
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Drawn	CM	07/06		
Checked				
Approved				
Scale	1:50	Ref		

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Client
Cable Bay Sections Ltd.

Project
Cable Bay Heights
Channel Sections

Sheet Title
Channel Sections
Seet 3 0f 3

Job No.	Sheet No.	Revision
102471	R92 of shts	A

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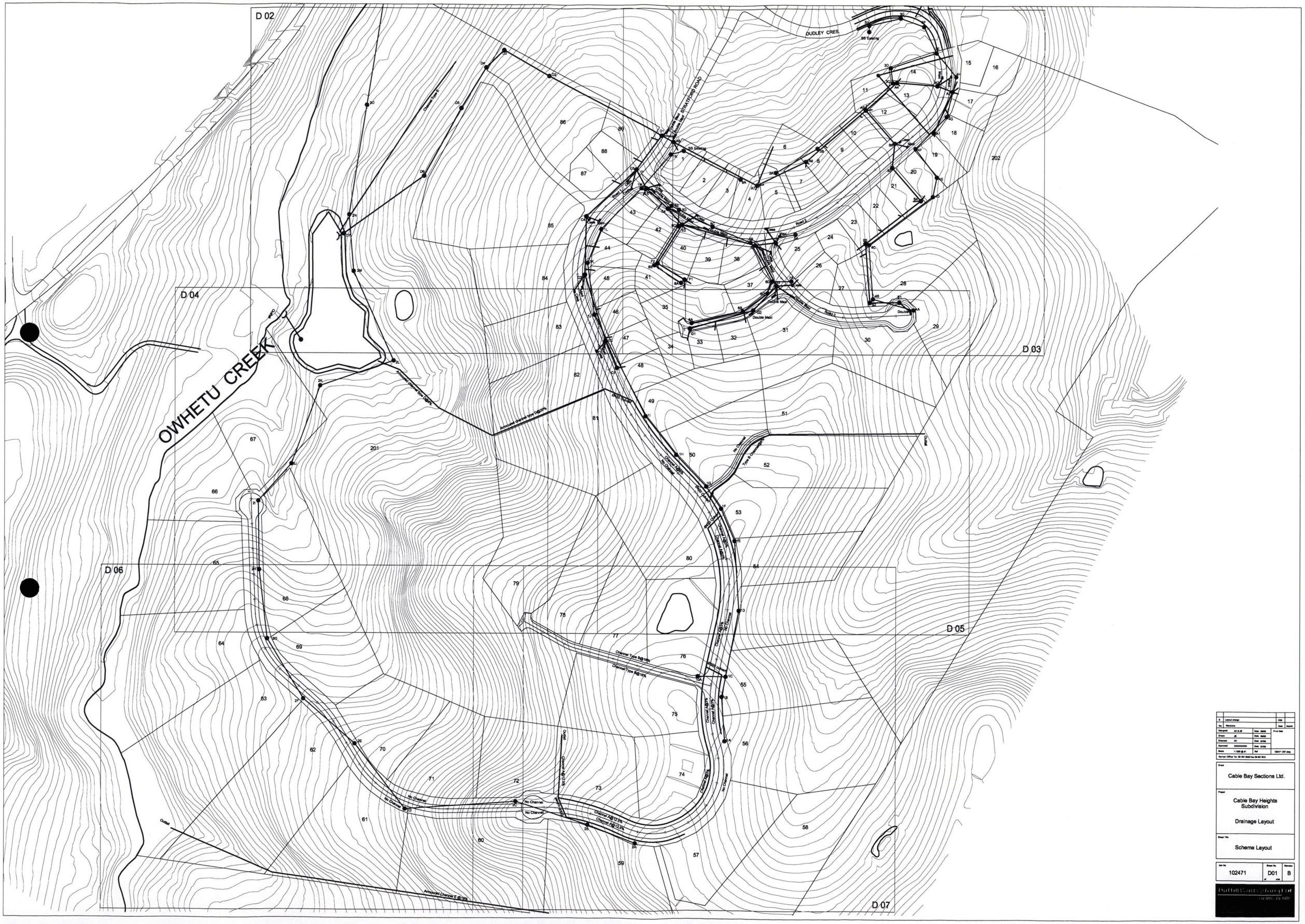

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Drawn	JB	Date 03/05	
Checked	AH	Date 03/05	
Approved	XXXXXXXXX	Date 03/05	
Scale	1:1000 @ A1	Ref	102471 D01.dwg

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Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights Subdivision

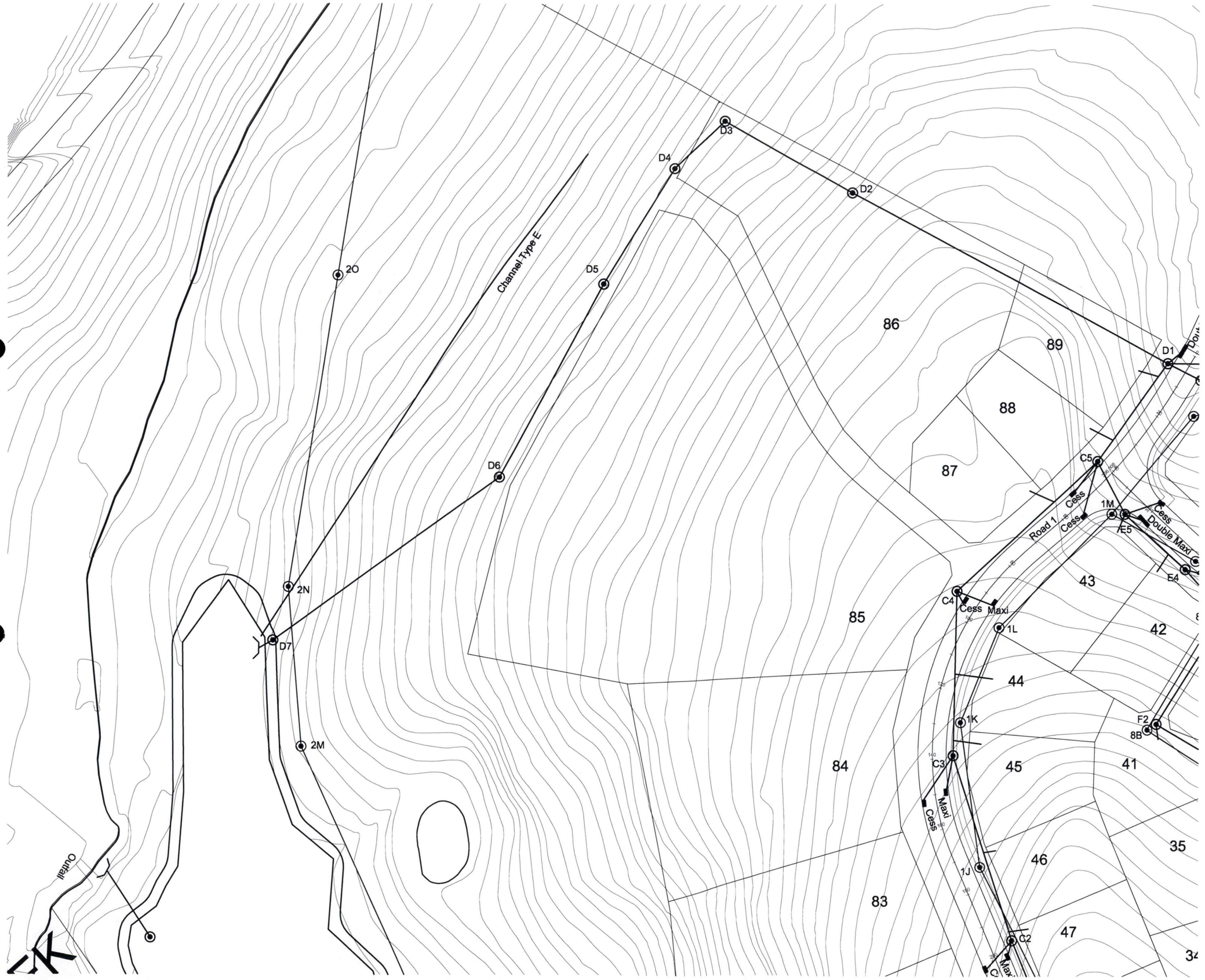
Drainage Layout

Sheet Title

Scheme Layout

Job No.	Sheet No.	Revision
102471	D01 of 016	B

Duffill Watts & King Ltd



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No.	Revisions		Date Appvd
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Checked	AH	Date 07/06	
Approved	XXXXXXXXX	Date 07/06	
Scale	1:1000 @ A3	Ref	102471 D01.dwg

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Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights Subdivision

Drainage Layout

Sheet Title

Scheme Layout

Job No.	Sheet No.	Revision
102471	D02 of shts	B

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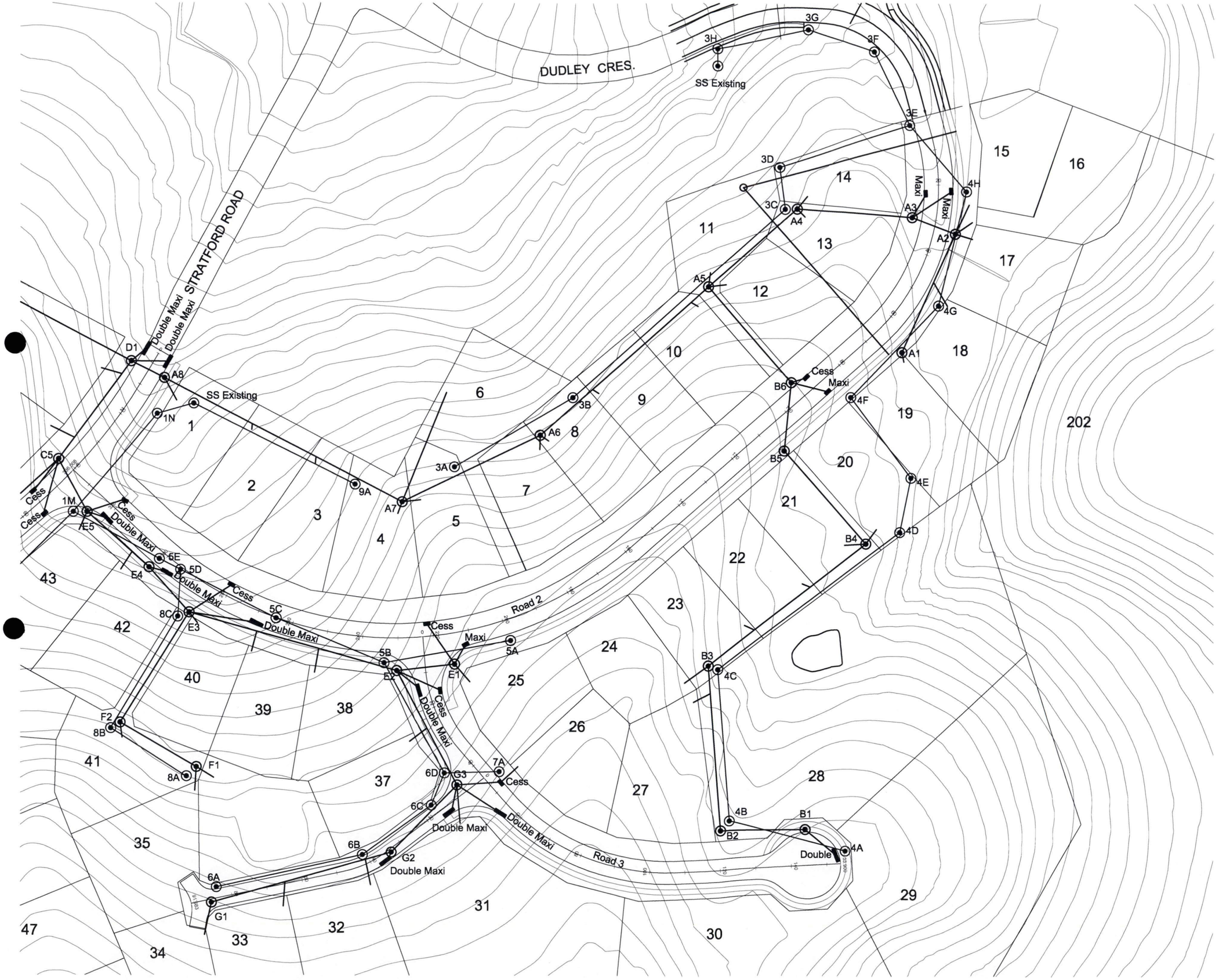

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Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights Subdivision

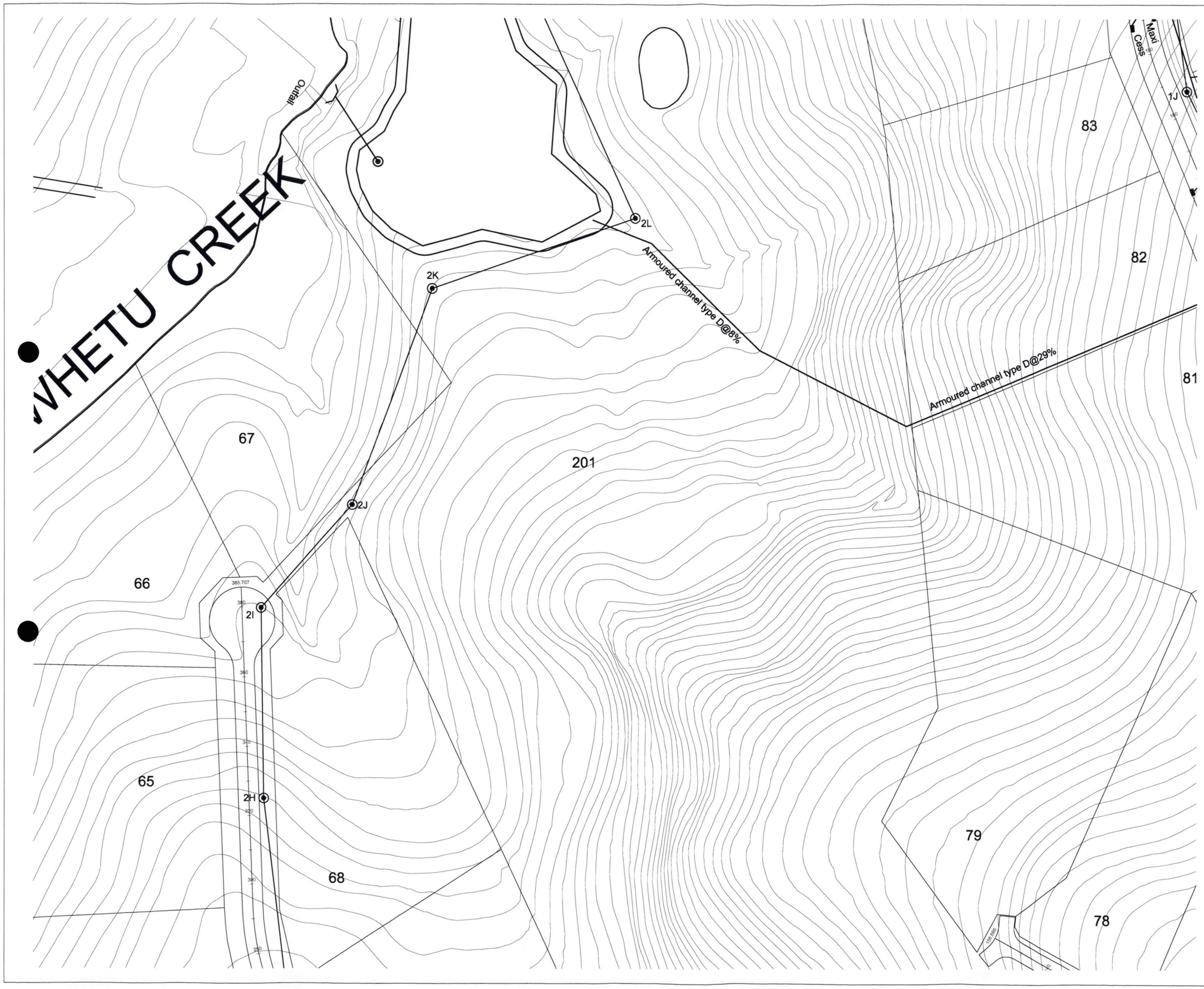
Drainage Layout

Sheet Title

Scheme Layout

Job No.	Sheet No.	Revision
102471	D03 of shts	B

Duffill Watts & King Ltd
CONSULTING ENGINEERS



B	Layout change	7/06	
No.	Revisions	Date	Appvd

Designed	AH & JS	Date 06/06	Print Date
Drawn	JS	Date 06/06	
Checked	AH	Date 07/06	
Approved	XXXXXXXXX	Date 07/06	
Scale	1:1000 @ A3	Ref	102471 D01.dwg

Kerikeri Office Tel: 09 407 9332 Fax: 09 407 7812

Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights Subdivision

Drainage Layout

Sheet Title

Scheme Layout

Job No.	Sheet No.	Revision
102471	D04 of shts	B

Duffill Watts & King Ltd
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B	Layout change		7/06
No.	Revisions		Date Appvd
Designed	AH & JS	Date 06/06	Print Date
Drawn	JS	Date 06/06	
Checked	AH	Date 07/06	
Approved	XXXXXXXXX	Date 07/06	
Scale	1:1000 @ A3	Ref	102471 D01.dwg

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Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights Subdivision

Drainage Layout

Sheet Title

Scheme Layout

Job No.	Sheet No.	Revision
102471	D05 of shts	B

Duffill Watts & King Ltd
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B	Layout change		7/06	
No.	Revisions		Date	Appvd
Designed	AH & JS	Date 06/06	Print Date	
Drawn	JS	Date 06/06		
Checked	AH	Date 07/06		
Approved	XXXXXXXXX	Date 07/06		
Scale	1:1000 @ A3	Ref	102471 D01.dwg	

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Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights Subdivision

Drainage Layout

Sheet Title

Scheme Layout

Job No.	Sheet No.	Revision
102471	D06 of shts	B

Duffill Watts & King Ltd

CONSULTING ENGINEERS

79
78
77
76
75
74
73
72
60
59
58
57
56
55
Channel Type B@16%
Channel Type B@16%
Channel A@3%
No Channel
Ø300 culvert
Channel A@3%
Channel A@3%
Outfall
Channel A@12.5%
No Channel
Channel A@12.5%
Channel A@12.5%
No Channel
Ø300 culvert
No Channel
1D
1C
10A
1B
1A
2C
2B
2A

B	Layout change		7/06	
No.	Revisions		Date	Appvd
Designed	AH & JS	Date 06/06	Print Date	
Drawn	JS	Date 06/06		
Checked	AH	Date 07/06		
Approved	XXXXXXXXX	Date 07/06		
Scale	1:1000 @ A3	Ref	102471 D01.dwg	

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Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights Subdivision

Drainage Layout

Sheet Title

Scheme Layout

Job No.	Sheet No.	Revision
102471	D07 of shts	B

Duffill Watts & King Ltd
CONSULTING ENGINEERS

Notes:

1) Existing manhole invert levels to be confirmed by the contractor prior to commencement of drainage.

2) Concrete bulkheads and / or trench stops in accordance with NZS 4404 : 2004 detail cm-003 are to be installed on all pipelines with grade exceeding 12.5%. Bulkheads to be spaced 100/grade(%)metres.

3) All lines under carrigeways to be back filled with compacted hard fill.



| | | |

Notes:

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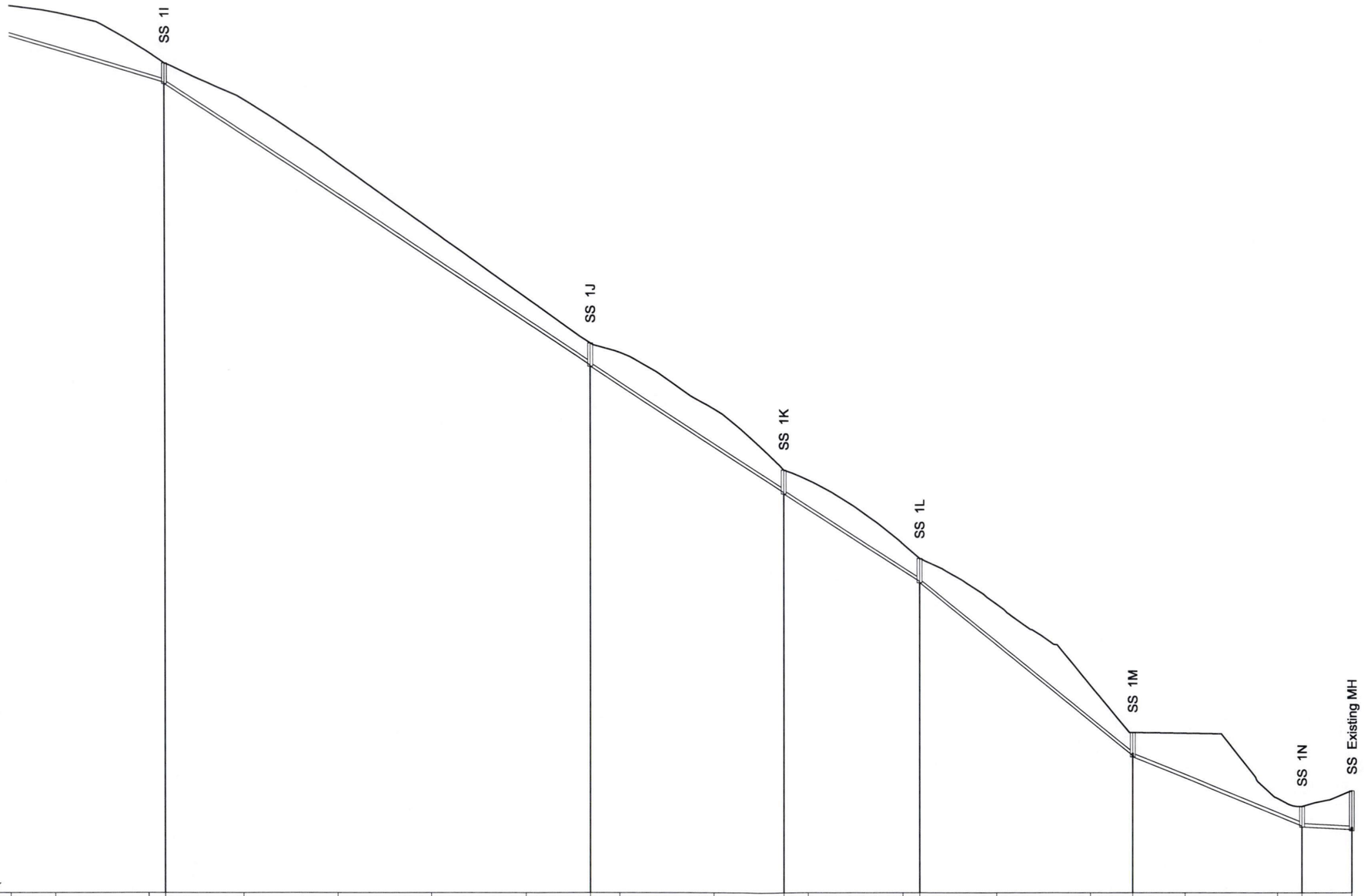

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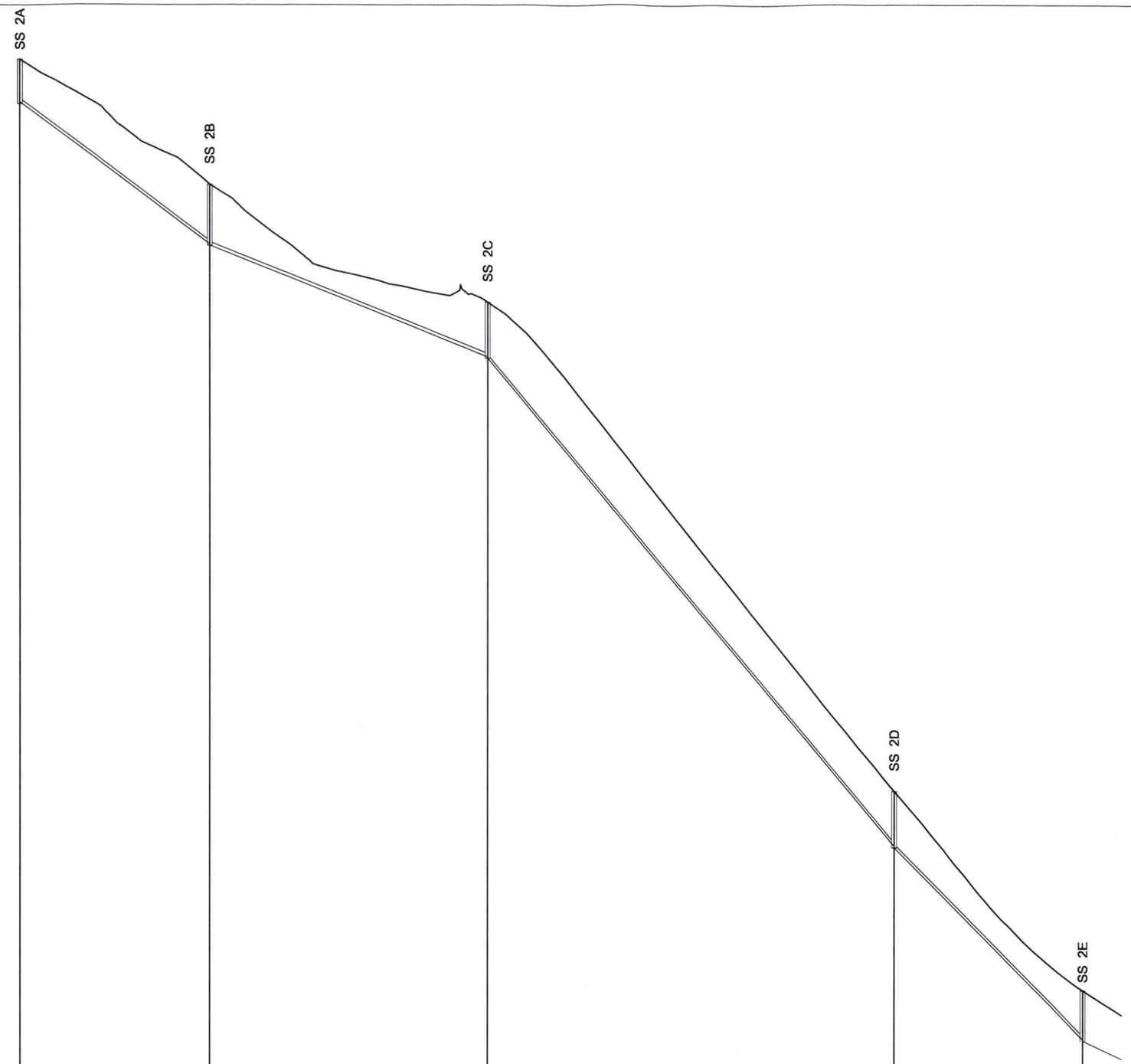
SS 2A
SS 2B
SS 2C
SS 2D
SS 2E

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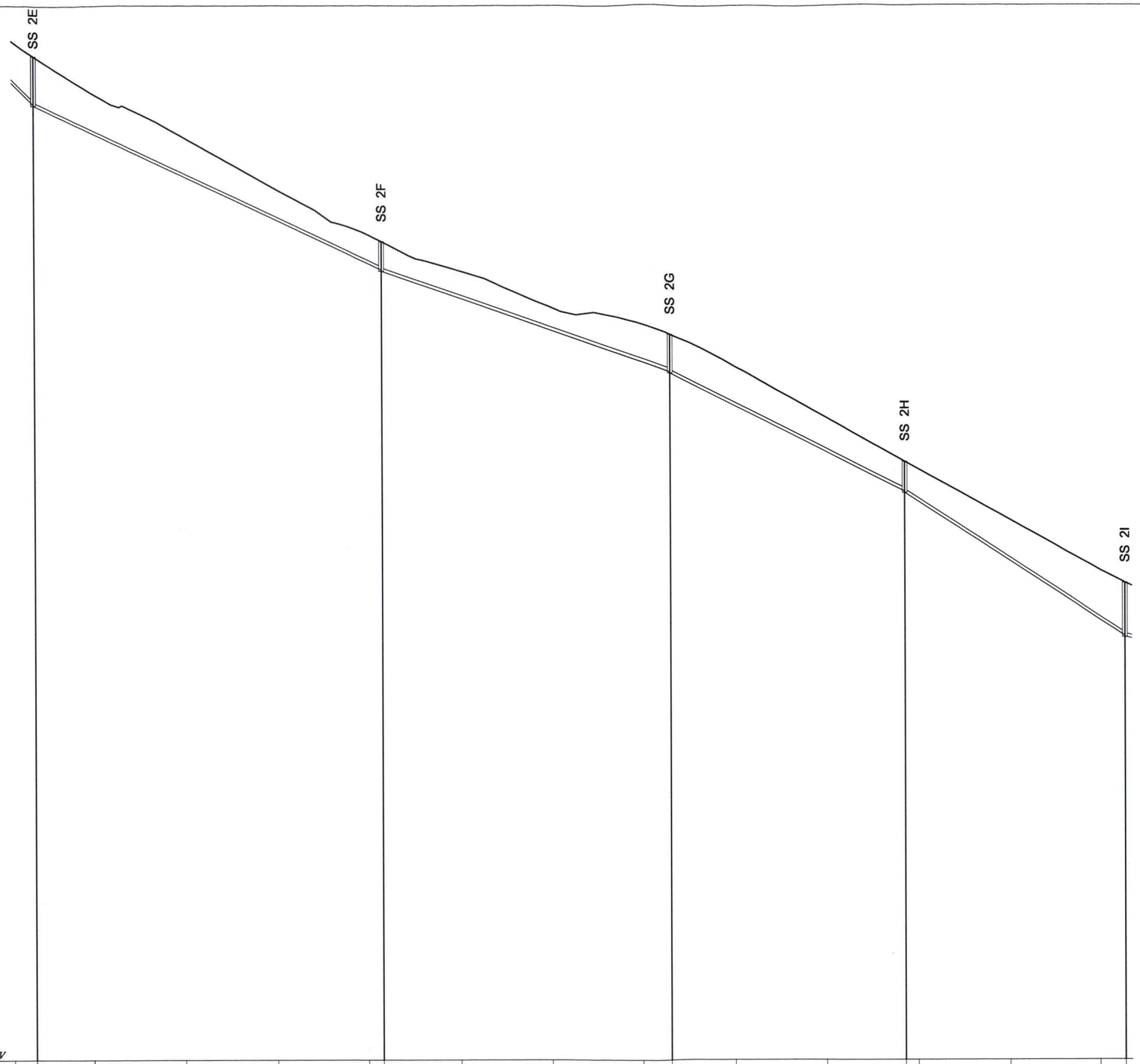

DATUM ELEV
-5.00

RL Proposed	38.74	37.14		45.21	32.93	30.94	30.62	29.20	27.72	27.00	26.54	25.19	22.97	21.06	20.75	18.54	16.34	15.78	
Invert Level	IL 36.64	OL 36.59					IL 29.38	OL 29.33			IL 24.93	OL 24.88		IL 19.77	OL 19.72			IL 13.45	OL 13.40
Run Details		150Ø uPVC @ -9.50% Length 76.26						150Ø uPVC @ -7.00% Length 63.09				150Ø uPVC @ -10.00% Length 51.36			150Ø uPVC @ -13.00% Length 48.63				
Chainage	227.30	240		260	280	300	303.21	320	340	360	366.14	380	400	417.25	420	440	460	465.47	

Sanitary Sewer Line 2 - Long section, Part 2

1:1000 Horizontal
1:200 Vertical

Notes:

1) Existing manhole invert levels to be confirmed by the contractor prior to commencement of drainage.

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3) All lines under carrigeways to be back filled with compacted hard fill.

No.	Revisions	Date	Appvd

Designed	AH & JS	Date 06/06	Print Date
Drawn	JS	Date 06/06	
Checked	AH	Date 07/06	
Approved	XXXXXXXXX	Date 07/06	
Scale	1:1000 @ A3	Ref	102471 D01.dwg

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Cable Bay Sections Ltd.

Project

Cable Bay Heights Subdivision

Drainage Layout

Sheet Title

SS Line 2, Part 2 of 4

Job No.	Sheet No.	Revision
102471	D11 of shts	

Duffill Watts & King Ltd
CONSULTING ENGINEERS

Notes:

1) Existing manhole invert levels to be confirmed by the contractor prior to commencement of drainage.

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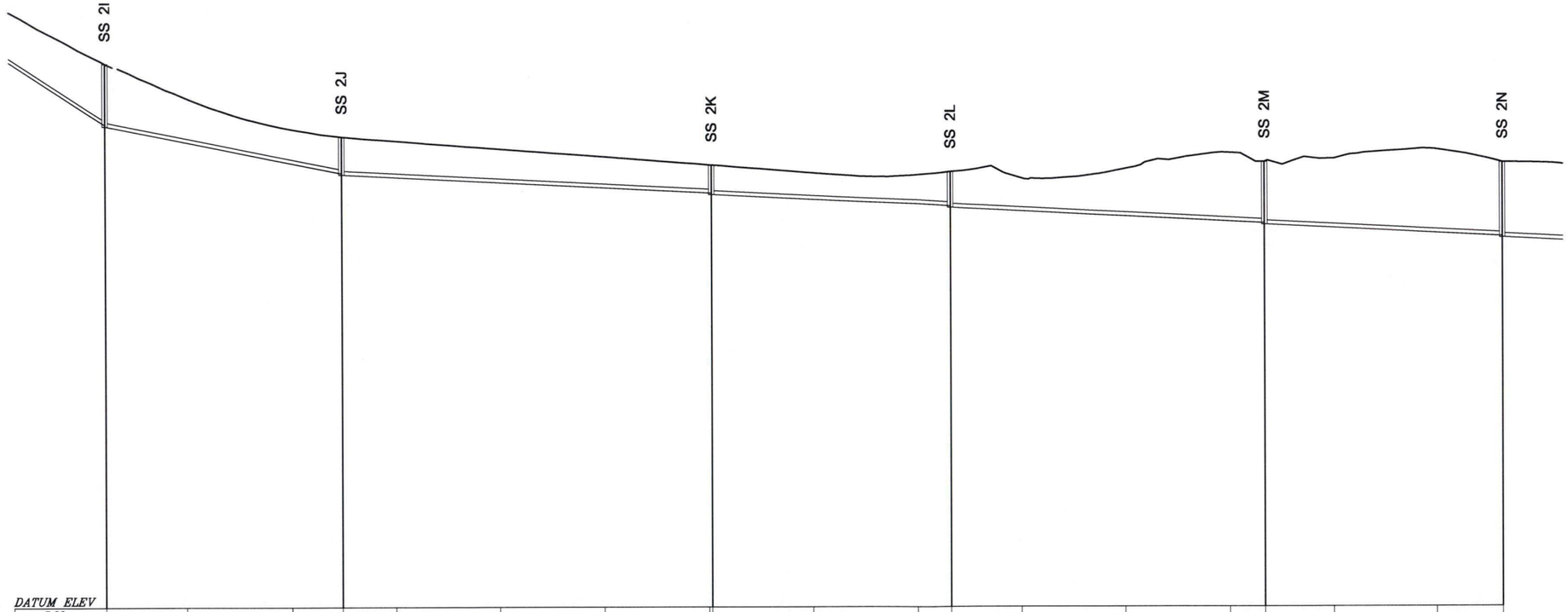

DATUM ELEV -5.00																					
RL Proposed	15.78	14.50	13.30	13.02	12.85	12.55	12.24	11.95	11.94	11.63	11.52	11.66	11.42	11.76	12.36	12.03	12.14	12.49	12.00		
Invert Level	IL 13.45	OL 13.40			IL 11.63	OL 11.58			IL 10.87	OL 10.82			IL 10.36	OL 10.31			IL 9.71	OL 9.66			IL 9.20	OL 9.15
Run Details		150Ø uPVC @ -4.00% Length 44.28				150Ø uPVC @ -1.00% Length 70.86				150Ø uPVC @ -1.00% Length 45.81				150Ø uPVC @ -1.00% Length 60.32				150Ø uPVC @ -1.00% Length 45.94			
Chainage	465.47	480	500	509.71	520	540	560	580	580.57	600	620	626.37	640	660	680	686.69	700	720	732.63		

Sanitary Sewer Line 2 - Long section, Part 3

1:1000 Horizontal
1:200 Vertical

No.	Revisions		Date	Appvd
Designed	AH & JS	Date 06/06	Print Date	
Drawn	JS	Date 06/06		
Checked	AH	Date 07/06		
Approved	XXXXXXXXX	Date 07/06		
Scale	1:1000 @ A3	Ref	102471 D01.dwg	

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Client
Cable Bay Sections Ltd.

Project
Cable Bay Heights Subdivision

Drainage Layout

Sheet Title
SS Line 2, Part 3 of 4

Job No.	Sheet No.	Revision
102471	D12 of shts	

Duffill Watts & King Ltd
CONSULTING ENGINEERS

Notes:

1) Existing manhole invert levels to be confirmed by the contractor prior to commencement of drainage.

2) Concrete bulkheads and / or trench stops in accordance with NZS 4404 : 2004 detail cm-003 are to be installed on all pipelines with grade exceeding 12.5%. Bulkheads to be spaced 100/grade(%)metres.

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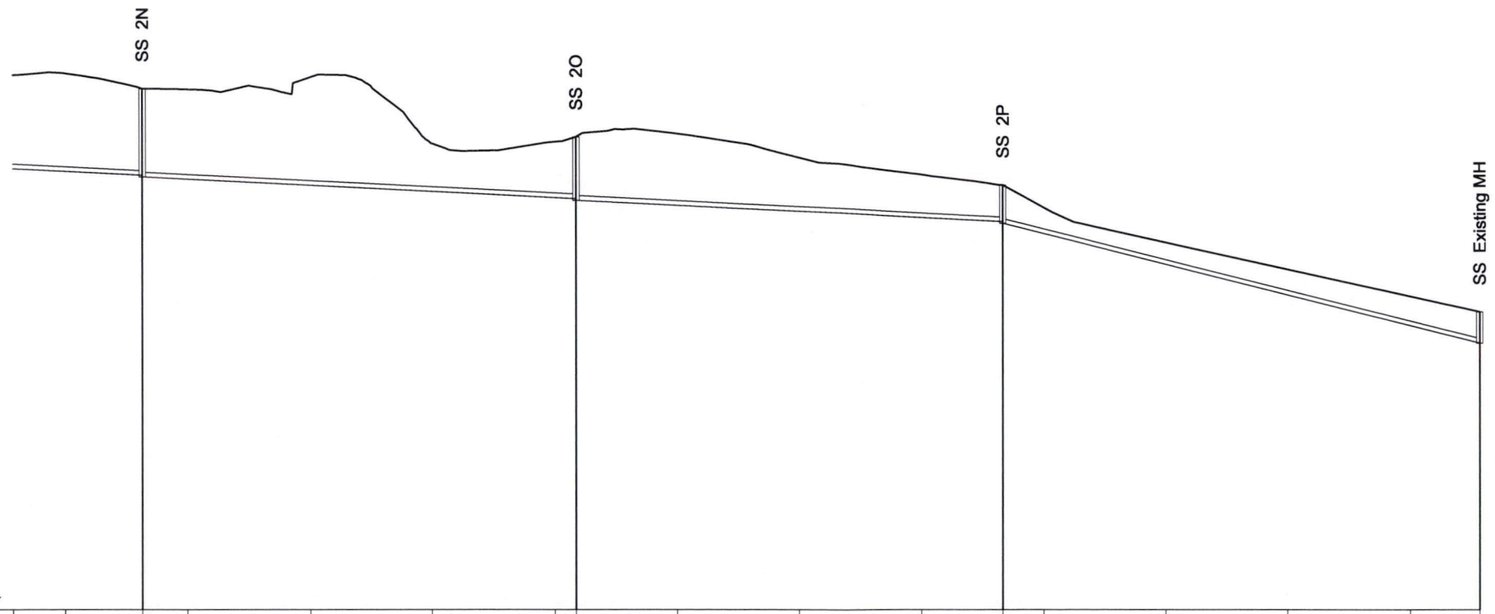

DATUM ELEV															
-5.00 RL Proposed	12.49	12.00	11.98	12.37	10.23	10.28	10.44	10.54	9.76	9.22	8.88	8.15	5.41	2.06	2.44	4.76
Invert Level		IL 9.20	OL 9.15				IL 8.44	OL 8.39			IL 7.69	OL 7.64				IL 3.73
Run Details			150Ø uPVC @ -1.00% Length 70.83					150Ø uPVC @ -1.00% Length 69.81				150Ø uPVC @ -5.00% Length 78.32				
Chainage	720	732.63	740	760	780	800	803.46	820	840	860	873.26	880	900	920	940	951.48

Sanitary Sewer Line 2 - Long section, Part 4

1:1000 Horizontal
1:200 Vertical

No.	Revisions		Date	Appvd
Designed	AH & JS	Date 06/06	Print Date	
Drawn	JS	Date 06/06		
Checked	AH	Date 07/06		
Approved	XXXXXXXXX	Date 07/06		
Scale	1:1000 @ A3	Ref	102471 D01.dwg	

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Client
Cable Bay Sections Ltd.

Project
Cable Bay Heights Subdivision

Drainage Layout

Sheet Title
SS Line 2, Part 4 of 4

Job No.	Sheet No.	Revision
102471	D13 of shts	

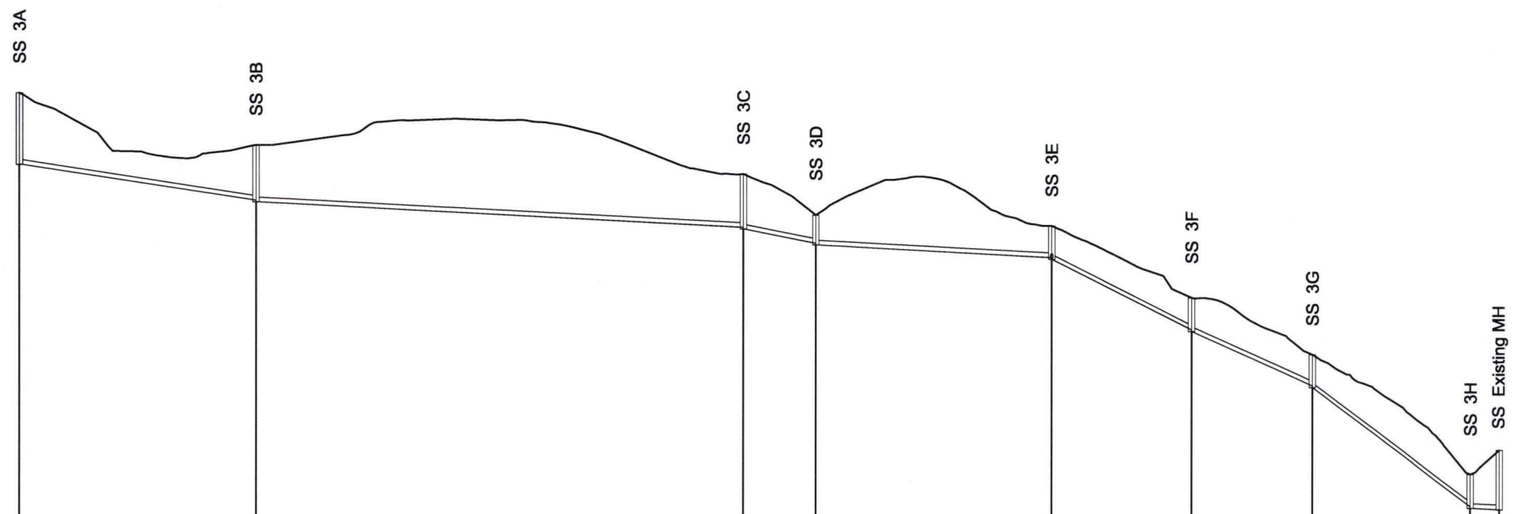
Duffill Watts & King Ltd
CONSULTING ENGINEERS

Notes:

1) Existing manhole invert levels to be confirmed by the contractor prior to commencement of drainage.

2) Concrete bulkheads and / or trench stops in accordance with NZS 4404 : 2004 detail cm-003 are to be installed on all pipelines with grade exceeding 12.5%. Bulkheads to be spaced 100/grade(%)metres.

3) All lines under carrigeways to be back filled with compacted hard fill.



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Notes:

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| | | |

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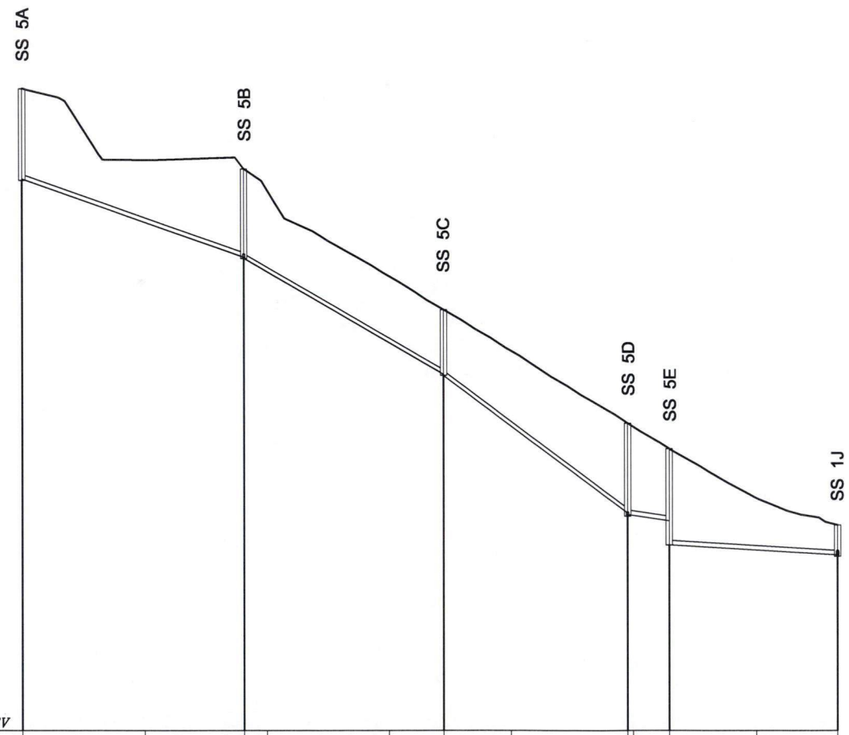

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Notes:

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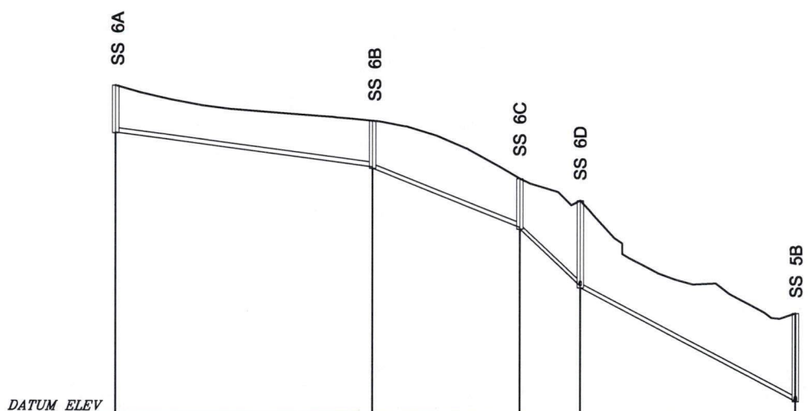

DATUM ELEV 45.00										
RL Proposed	55.74	54.95	54.63	54.59	53.39	52.72	52.00	51.08	48.99	48.33
Invert Level	OL 54.21		IL 53.09	OL 53.04		IL 51.12	OL 51.07 IL 49.20	IL 49.21 OL 49.15		IL 45.46 IL 45.44 OL 45.43
Run Details	150Ø uPVC @ -2.66% Length 41.93			150Ø uPVC @ -8.00% Length 24.11			150Ø uPVC @ -19.00% Length 10.04		150Ø uPVC @ -10.50% Length 35.47	
Chainage	0.00	20	40	41.92	60	65.95	75.82	80	100	111.10

Sanitary Sewer Line 6 - Long section

1:1000 Horizontal
1:200 Vertical

No.	Revisions		Date	Appvd
Designed	AH & JS	Date 06/06	Print Date	
Drawn	JS	Date 06/06		
Checked	AH	Date 07/06		
Approved	XXXXXXXXX	Date 07/06		
Scale	1:1000 @ A3	Ref	102471 D01.dwg	

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Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights Subdivision

Drainage Layout

Sheet Title

SS Line 6

Job No.	Sheet No.	Revision
102471	D17 of shts	

Duffill Watts & King Ltd
CONSULTING ENGINEERS

Notes:

1) Existing manhole invert levels to be confirmed by the contractor prior to commencement of drainage.

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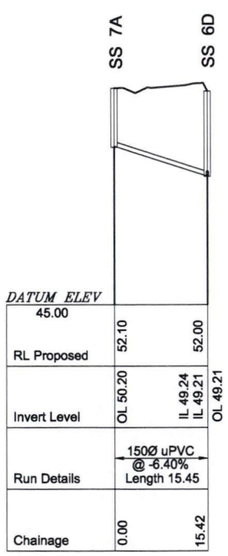
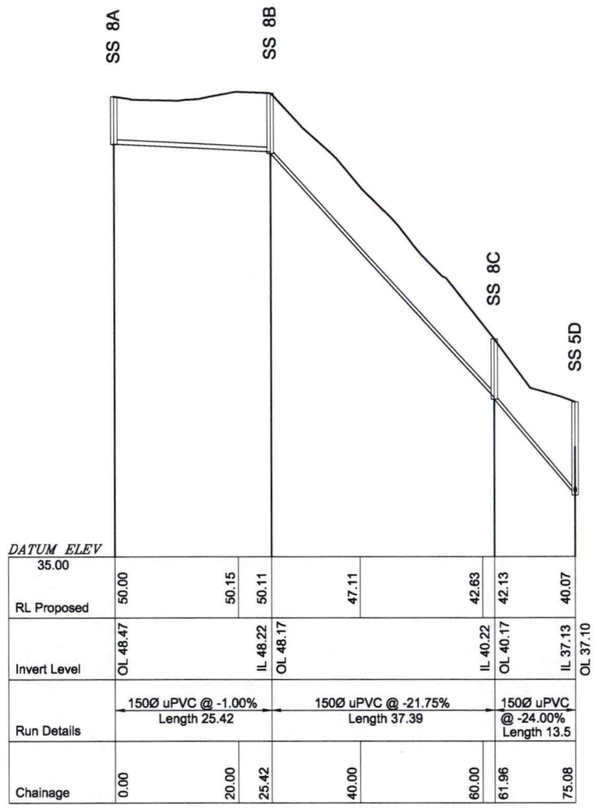


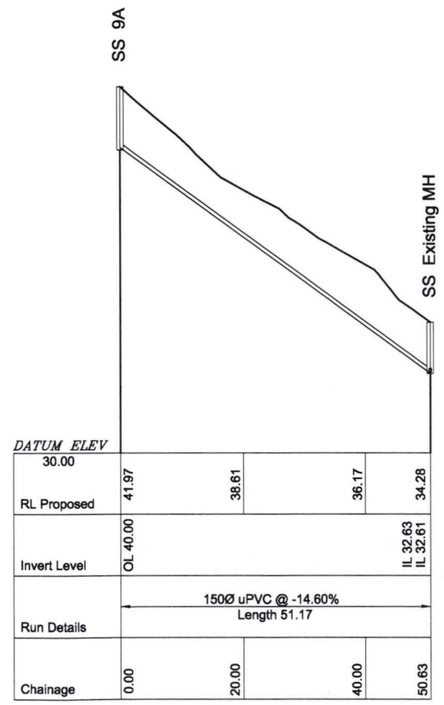
Sanitary Sewer Line 7 - Long section

1:1000 Horizontal
1:200 Vertical



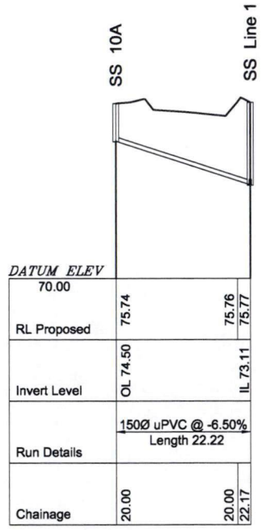
Sanitary Sewer Line 8 - Long section

1:1000 Horizontal
1:200 Vertical



Sanitary Sewer Line 9 - Long section

1:1000 Horizontal
1:200 Vertical



Sanitary Sewer Line 10 - Long section

1:1000 Horizontal
1:200 Vertical

No.	Revisions		Date	Appvd
Designed	AH & JS	Date 06/06	Print Date	
Drawn	JS	Date 06/06		
Checked	AH	Date 07/06		
Approved	XXXXXXXXX	Date 07/06		
Scale	1:1000 @ A3	Ref	102471 D01.dwg	

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Client
Cable Bay Sections Ltd.

Project
Cable Bay Heights Subdivision

Drainage Layout

Sheet Title
SS Line 7,8,9,10

Job No.	Sheet No.	Revision
102471	D18 of shts	

Duffill Watts & King Ltd
CONSULTING ENGINEERS

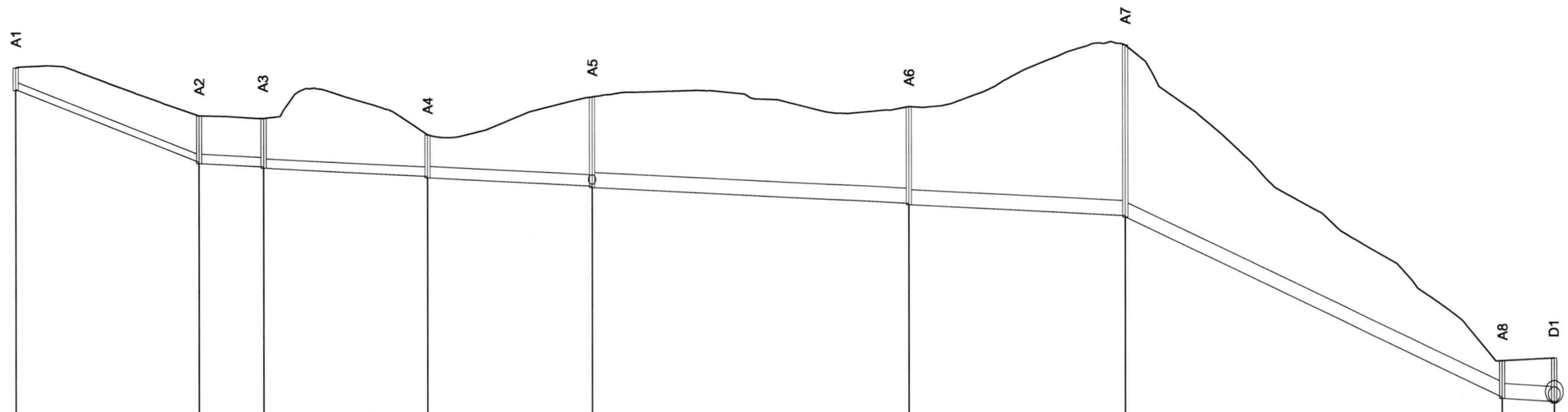
Notes:

1) Existing manhole invert levels to be confirmed by the contractor prior to commencement of drainage.

2) Concrete bulkheads and / or trench stops in accordance with NZS 4404 : 2004 detail cm-003 are to be installed on all pipelines with grade exceeding 12.5%. Bulkheads to be spaced 100/grade(%)metres.

3) All lines under carrigeways to be back filled with compacted hard fill.

4) All SW pipes to be Twin Walled Polyproprylene SN16 RRJ. "StormBoss" or similar equivalant, Unless otherwise specified.



	A1			A2	A3		A4			A5				A6			A7					A8	D1
DATUM ELEV 25.00																							
RL Proposed	43.73	43.00	41.84	41.83	41.74	42.90	41.34	41.09	41.81	42.59	42.74	42.81	42.08	42.21	42.20	43.56	44.70	44.64	41.20	40.15	34.98	32.11	32.15	32.22
Invert Level	OL 42.88		IL 40.00	OL 39.95	IL 39.82	OL 39.77	IL 39.44	OL 39.39		IL 39.06 IL 39.01	OL 39.01			IL 38.38	OL 38.33		IL 37.90	OL 37.85				IL 30.65	OL 30.60	IL 30.47 IL 30.47	OL 30.42
Run Details	300Ø SN16 RRJ @ -7.94% Length 36.28			375Ø SN16 RRJ @ -1.00% Length 12.98	375Ø SN16 RRJ @ -1.00% Length 32.57			450Ø SN16 RRJ @ -1.00% Length 33.14			600Ø HDPE @ -1.00% Length 63.13				600Ø HDPE @ -1.00% Length 43.19			600Ø HDPE @ -9.55% Length 75.43					600Ø HDPE @ -1.20% Length 10.45	
Chainage	00.00	20.00	36.28	40.00	49.26	60.00	80.00	81.83	100.00	114.97	120.00	140.00	160.00	178.10	180.00	200.00	220.00	221.29	240.00	260.00	280.00	296.72	300.00	307.17

Storm Water Line A - Long section

1:1000 Horizontal
1:200 Vertical

No.	Revisions		Date	Appvd
Designed	AH & JS	Date 06/06	Print Date	
Drawn	JS	Date 06/06		
Checked	AH	Date 07/06		
Approved	XXXXXXXXX	Date 07/06		
Scale	1:1000 @ A3	Ref	102471 D01.dwg	

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Client: Cable Bay Sections Ltd.

Project: Cable Bay Heights Subdivision

Drainage Layout

Sheet Title: SW Line A

Job No.	Sheet No.	Revision
102471	D19 of shts	

Duffill Watts & King Ltd
CONSULTING ENGINEERS

Notes:

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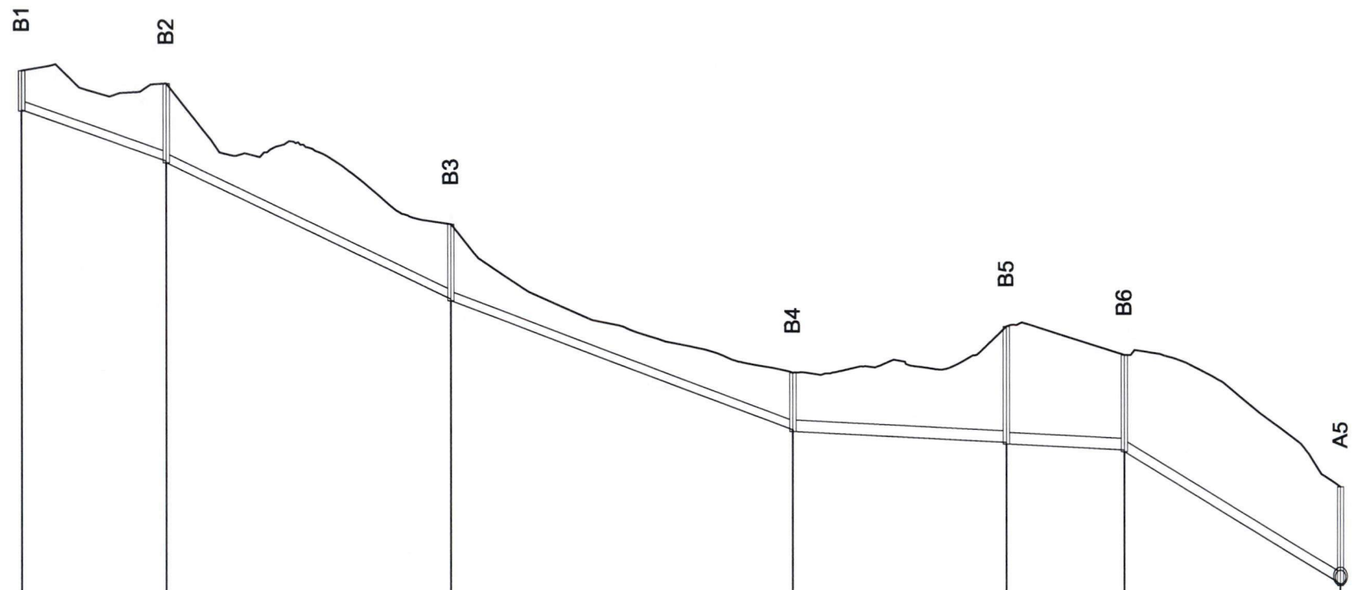
3) All lines under carrigeways to be back filled with compacted hard fill.

4) All SW pipes to be Twin Walled Polyproprylene SN16 RRJ. "StormBoss" or similar equivalant, Unless otherwise specified.



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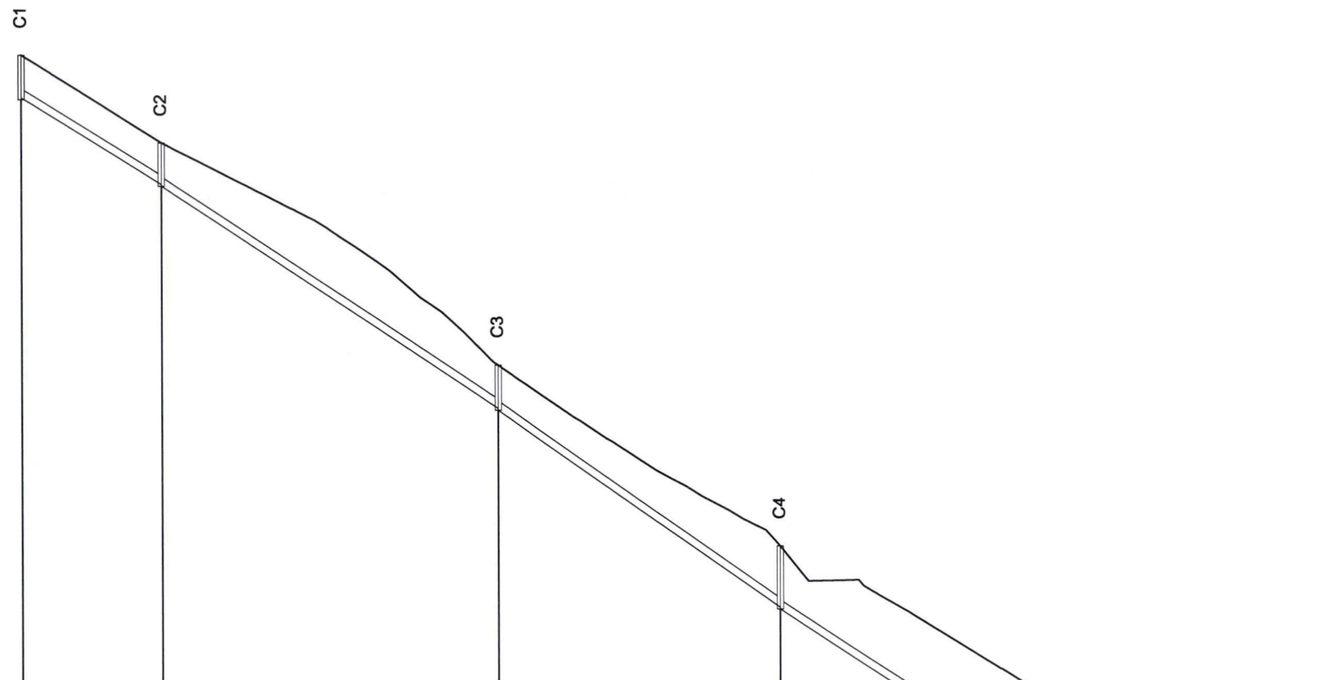
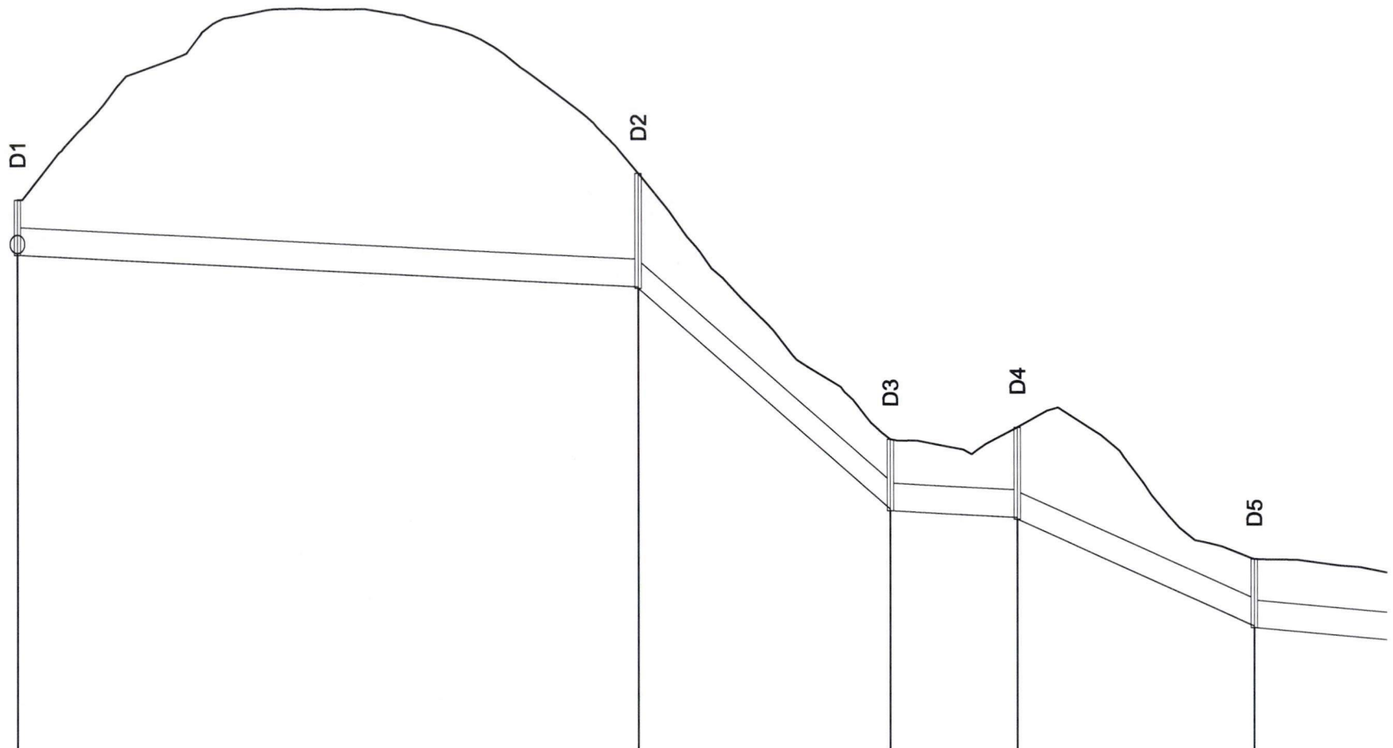

C1
C2
C3
C4
C5
D1

| | | |


D1
D2
D3
D4
D5

| | | |

Notes:

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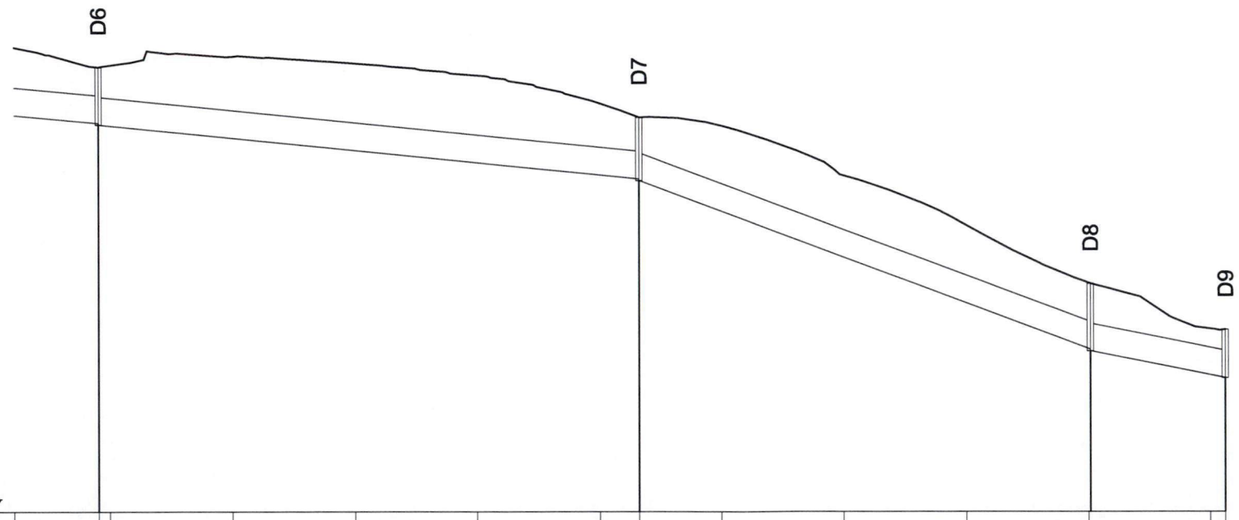

DATUM ELEV 5.00												
RL Proposed	19.51	19.51	19.88	19.63	19.24	18.34	17.88	17.59	15.97	14.36	12.45	10.96	10.94
Invert Level	IL 17.69	OL 17.64					IL 15.88	OL 15.83			IL 10.29	OL 10.24	IL 9.35
Run Details		900Ø HDPE @ -2.00% Length 88.31						900Ø HDPE @ -7.50% Length 73.82				900Ø HDPE @ -4.00% Length 22.19	
Chainage	238.14	240.00	260.00	280.00	300.00	320.00	326.44	340.00	360.00	380.00	400.00	420.00	422.46

Storm Water Line D - Long section, Part 2

1:1000 Horizontal
1:200 Vertical

No.	Revisions		Date	Appvd
Designed	AH & JS	Date 06/06	Print Date	
Drawn	JS	Date 06/06		
Checked	AH	Date 07/06		
Approved	XXXXXXXXX	Date 07/06		
Scale	1:1000 @ A3	Ref	102471 D01.dwg	

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Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights Subdivision

Drainage Layout

Sheet Title

SW Line D, Part 2 of 2

Job No.	Sheet No.	Revision
102471	D23 of shts	

Duffill Watts & King Ltd
CONSULTING ENGINEERS

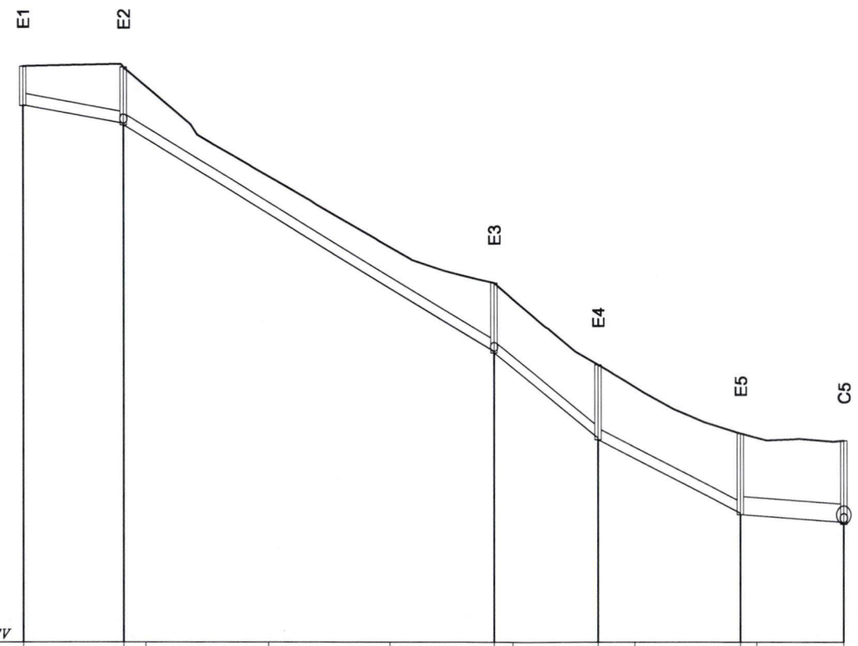
Notes:

1) Existing manhole invert levels to be confirmed by the contractor prior to commencement of drainage.

2) Concrete bulkheads and / or trench stops in accordance with NZS 4404 : 2004 detail cm-003 are to be installed on all pipelines with grade exceeding 12.5%. Bulkheads to be spaced 100/grade(%)metres.

3) All lines under carrigeways to be back filled with compacted hard fill.

4) All SW pipes to be Twin Walled Polypropryiene SN16 RRJ. "StormBoss" or similar equivalant, Unless otherwise specified.



| | | |

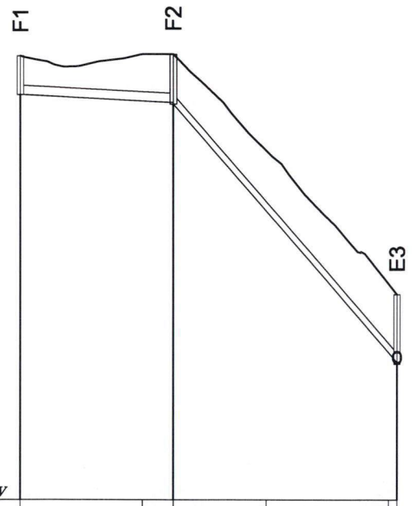
Notes:

1) Existing manhole invert levels to be confirmed by the contractor prior to commencement of drainage.

2) Concrete bulkheads and / or trench stops in accordance with NZS 4404 : 2004 detail cm-003 are to be installed on all pipelines with grade exceeding 12.5%. Bulkheads to be spaced 100/grade(%)metres.

3) All lines under carrigeways to be back filled with compacted hard fill.

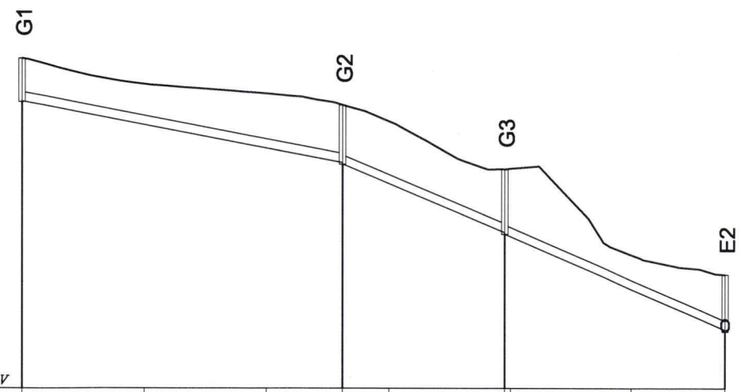
4) All SW pipes to be Twin Walled Polypropryiene SN16 RRJ. "StormBoss" or similar equivalant, Unless otherwise specified.



DATUM ELEV							
RL Proposed	35.00	49.50	49.57	49.57	46.44	42.09	41.73
Invert Level		OL 48.25		IL 48.00	OL 47.95	IL 39.50 IL 39.50	OL 39.45
Run Details		300Ø SN16 RRJ @ -1.00% Length 24.97			300Ø SN16 RRJ @ -23.20% Length 36.43		
Chainage		00.00	20.00	24.97	40.00	60.00	61.40

Storm Water Line F - Long section

1:1000 Horizontal
1:200 Vertical



DATUM ELEV									
RL Proposed	45.00	55.79	54.97	54.66	54.29	53.75	52.18	52.18	49.37	48.72
Invert Level		OL 54.40			IL 52.40 OL 52.35		IL 50.10 OL 50.05		IL 46.90 IL 46.90	OL 46.85
Run Details		300Ø SN16 RRJ @ -3.82% Length 52.40				300Ø SN16 RRJ @ -8.44% Length 26.65		300Ø SN16 RRJ @ -8.67% Length 36.33		
Chainage		00.00	20.00	40.00	52.40	60.00	79.05	80.00	100.00	115.38

Storm Water Line G - Long section

1:1000 Horizontal
1:200 Vertical

No.	Revisions		Date	Appvd
Designed	AH & JS	Date 06/06	Print Date	
Drawn	JS	Date 06/06		
Checked	AH	Date 07/06		
Approved	XXXXXXXXX	Date 07/06		
Scale	1:1000 @ A3	Ref	102471 D01.dwg	

Kerikeri Office Tel: 09 407 9332 Fax: 09 407 7812

Client

Cable Bay Sections Ltd.

Project

Cable Bay Heights Subdivision

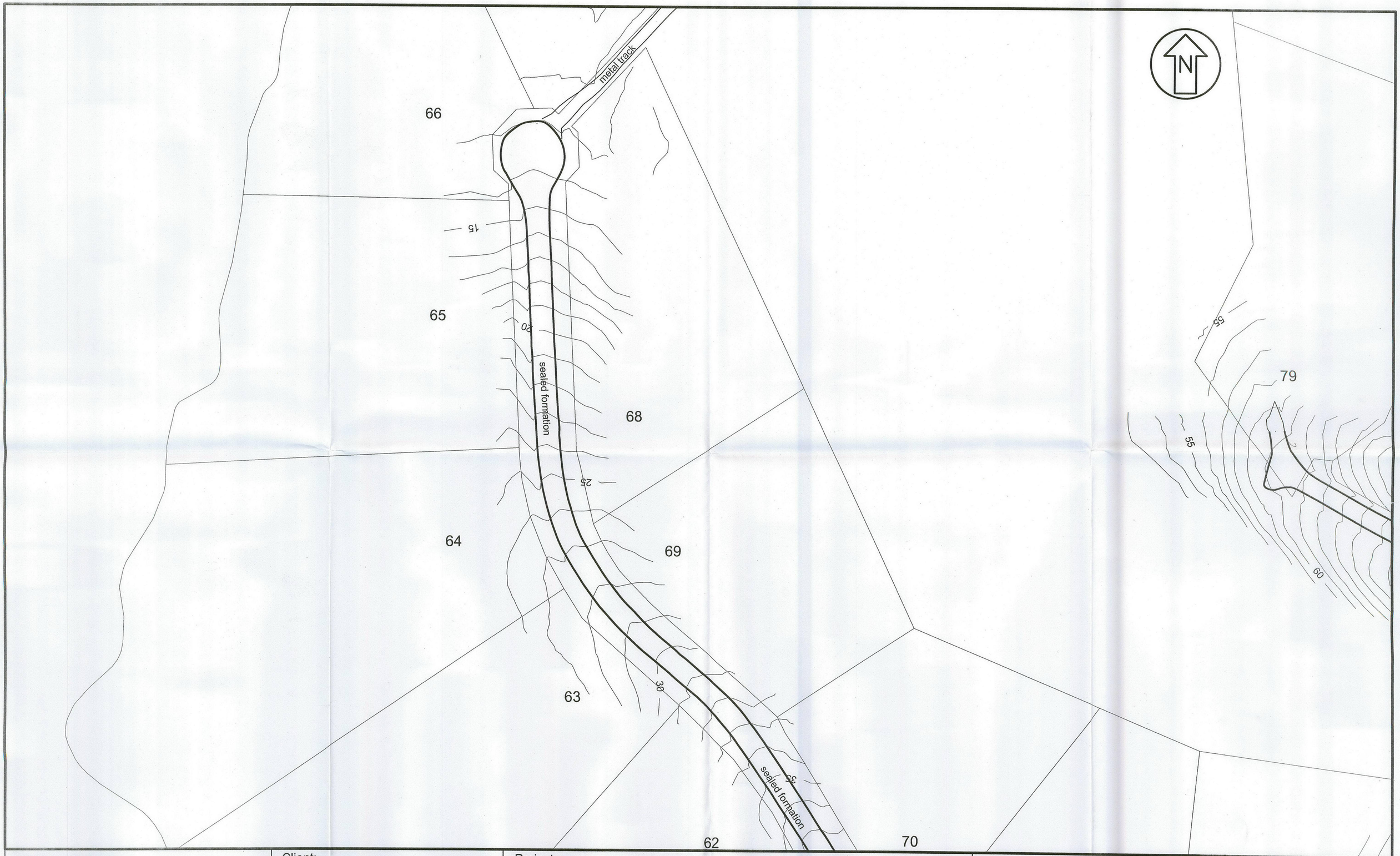
Drainage Layout

Sheet Title

SW Line F, G

Job No.	Sheet No.	Revision
102471	D25 of shts	

Duffill Watts & King Ltd
CONSULTING ENGINEERS



Surveyed & Drawn by:
BOUNDARY HUNTER LTD
Ph. 09 435 5387
Email. bruce@boundaryhunter.co.nz

Client:
FAR NORTH DISTRICT COUNCIL

Project:
Cable Bay Sections
Cable Bay - Doubtless Bay
Constructed by Donovan Drainage

Drawing: AS-BUILT RECORD
Roading & Contours

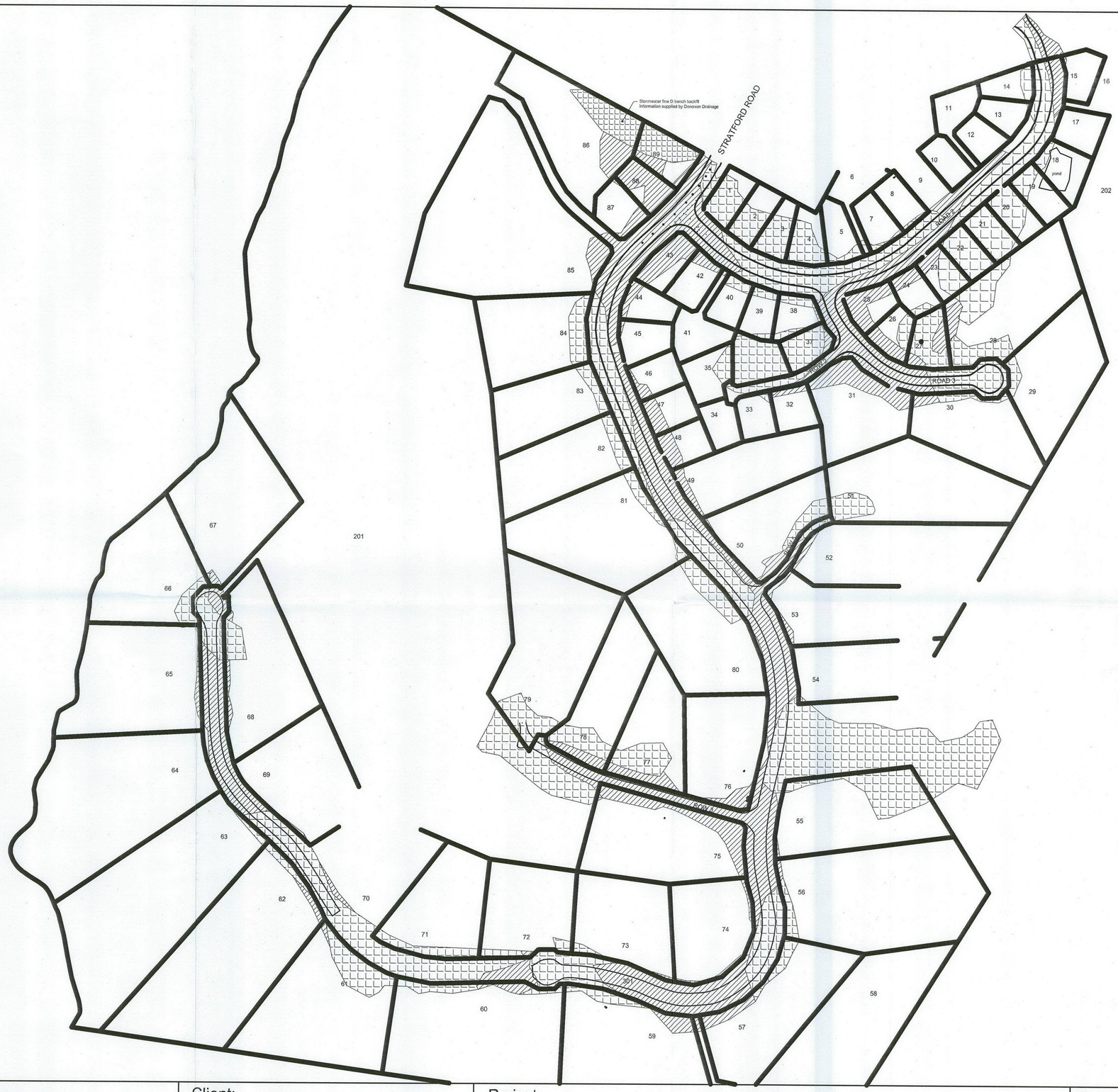
Surveyed & Drawings: BK, SG, BS

Checked: DWK

Original Scale: 1:1000 @ A3

Sheet: 5 of 5

Ref: 1587



NOTATION

AREA OF CUT

AREA OF FILL

Notes:

Co ordinates are in terms of NZTM2000
Heights are in terms of DOSLI Datum (C89H)
Boundaries are subject to final survey
Disclaimer - Computed using original surface supplied by DWK Ltd.

Surveyed & Drawn by: BOUNDARY HUNTER LTD Ph. 09 435 5387 Email. bruce@boundaryhunter.co.nz	Client: FAR NORTH DISTRICT COUNCIL	Project: Cable Bay Sections Cable Bay - Doubtless Bay Constructed by Donovan Drainage	Drawing: AS-BUILT RECORD Cut & Fill Areas Surveyed & Drawings: BK, SG, BS, BP Checked: DWK 5/3/07 Original Scale: 1:3000 @ A3	Sheet: 1 of 5 Ref: 1587

These plans reduced to A4

NOTATION

AREA OF CUT

AREA OF FILL

–1.5 CUT CONTOUR

1.5 FILL CONTOUR

N

Stormwater line D trench backfill
Information supplied by Donovan Drainage

STRATFORD ROAD

ROAD 2

ROW 2

ROAD 3

pond

Notes:

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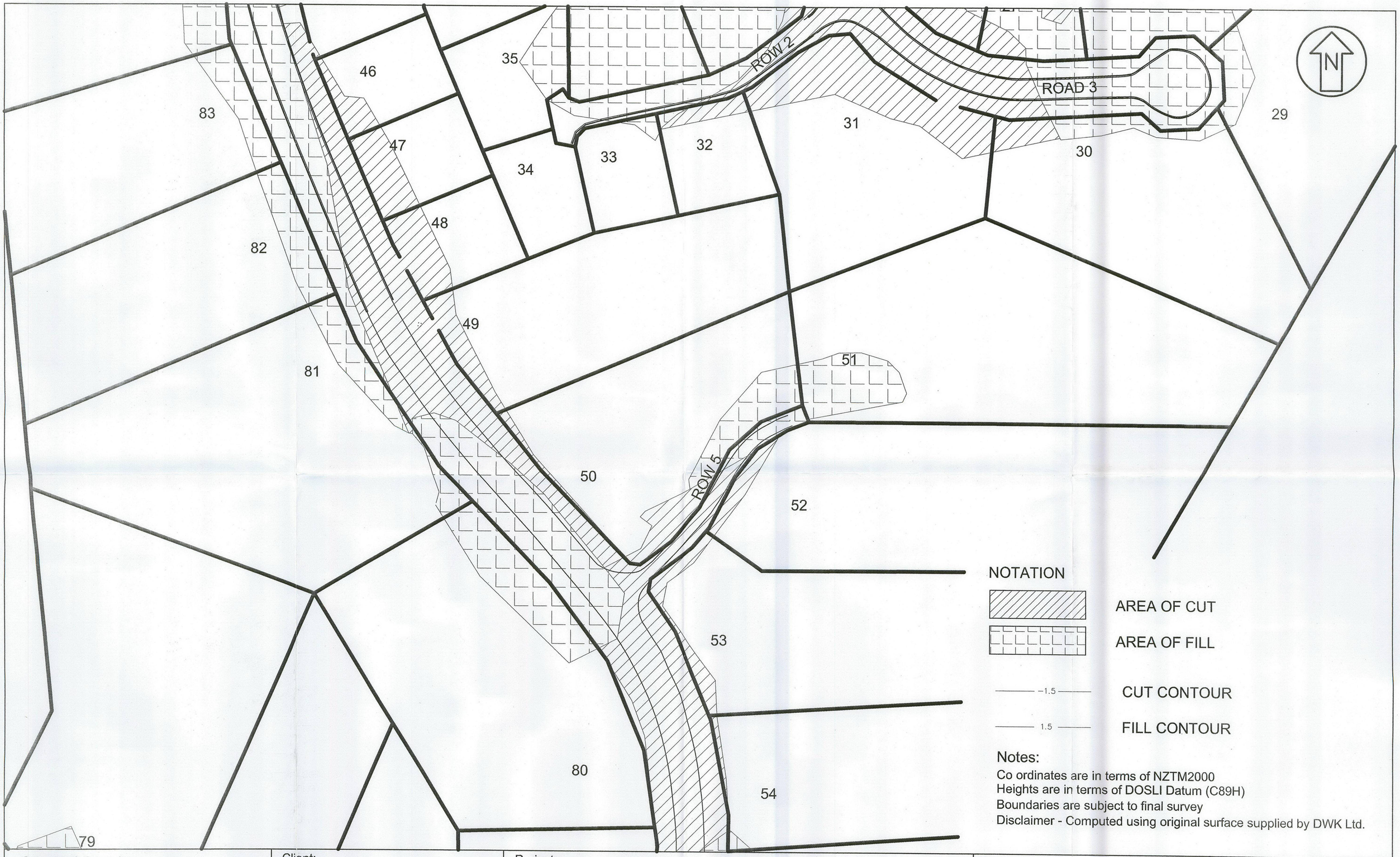

NOTATION

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1.5 FILL CONTOUR

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Cut & Fill Areas

Surveyed & Drawings: BK, SG, BS, BP

Checked: DWK 5/3/07

Original Scale: 1:1000 @ A3

Sheet: 3 of 5

Ref: 1587

NOTATION

AREA OF CUT

AREA OF FILL

–1.5– CUT CONTOUR

1.5 FILL CONTOUR

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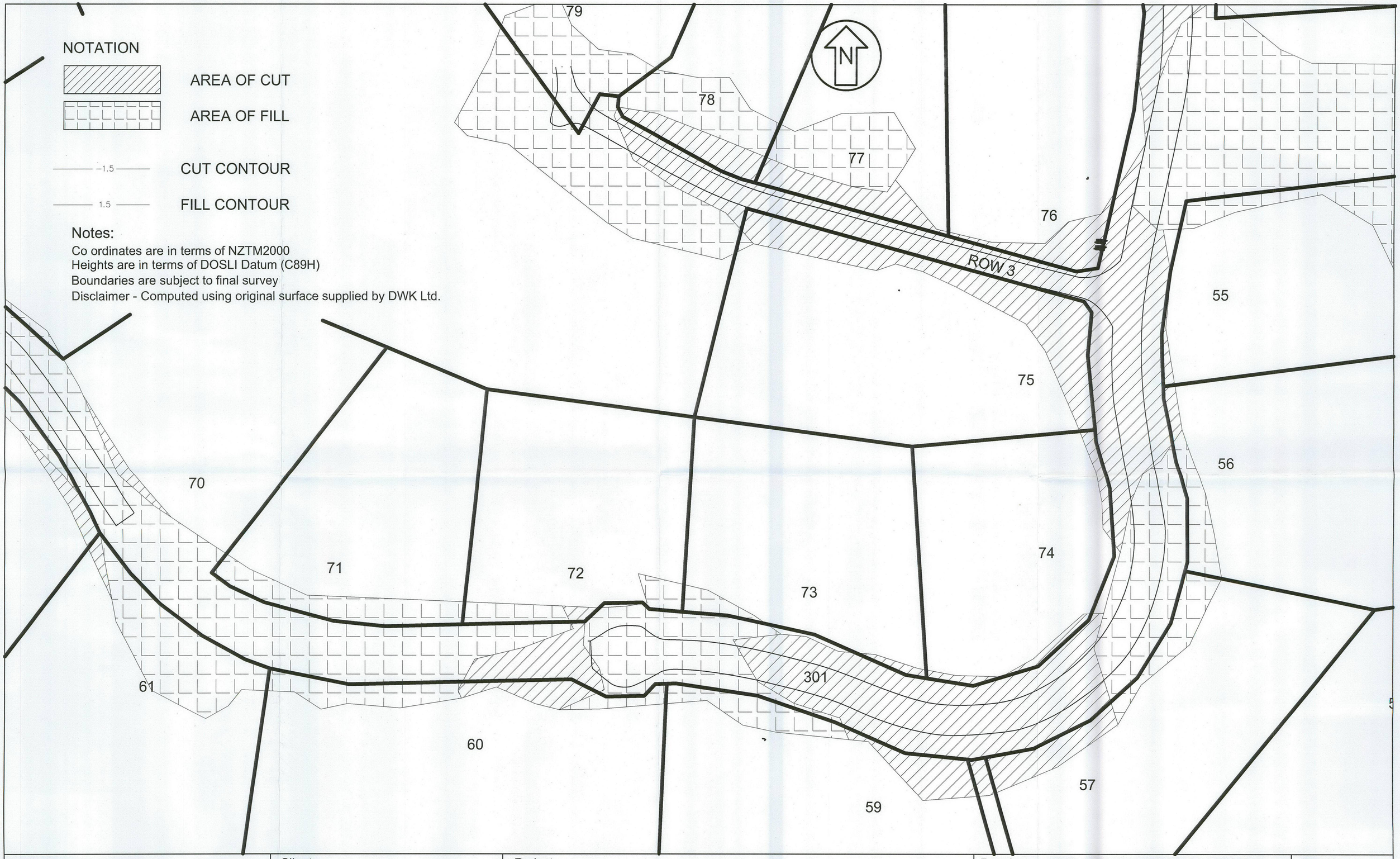

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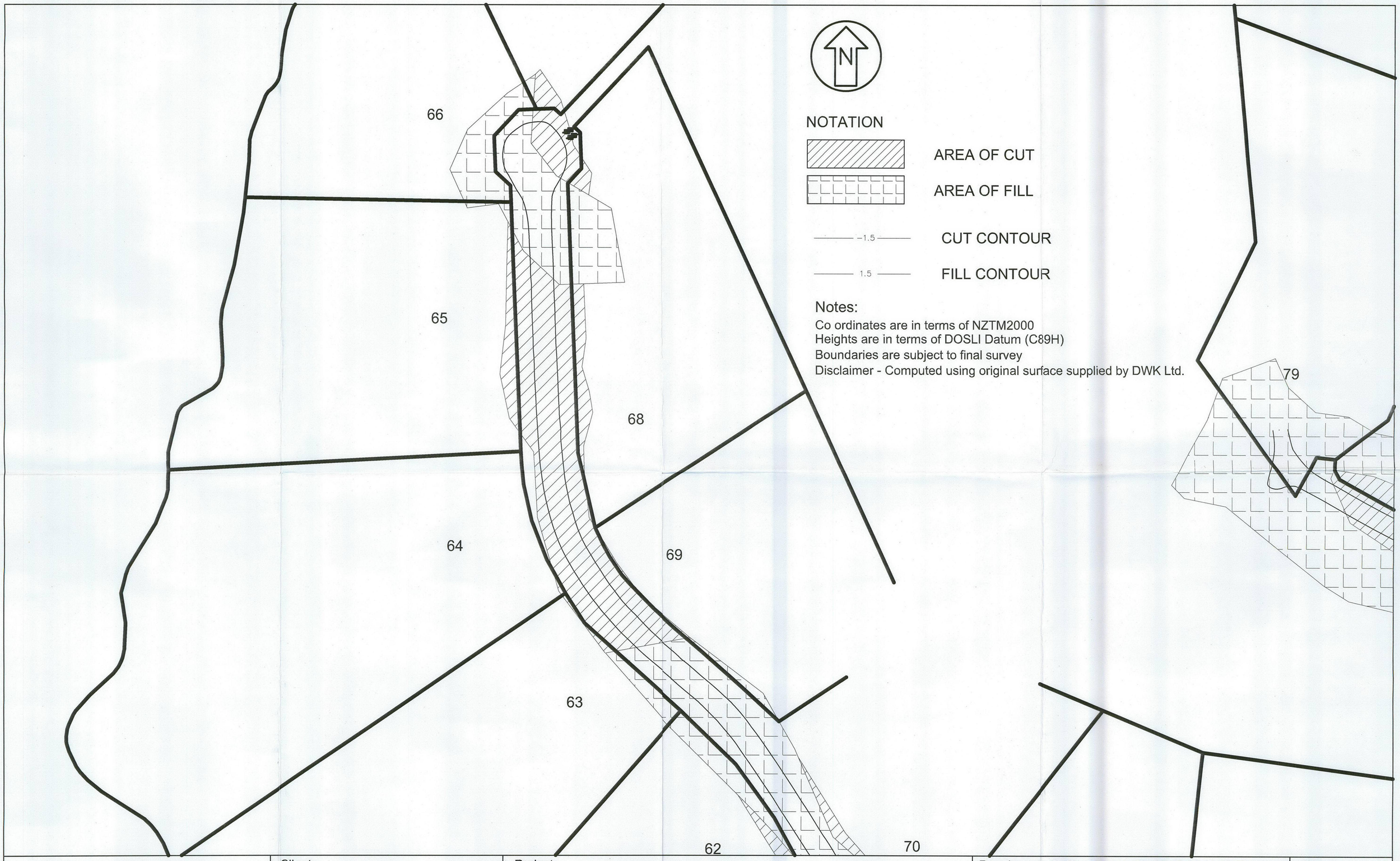

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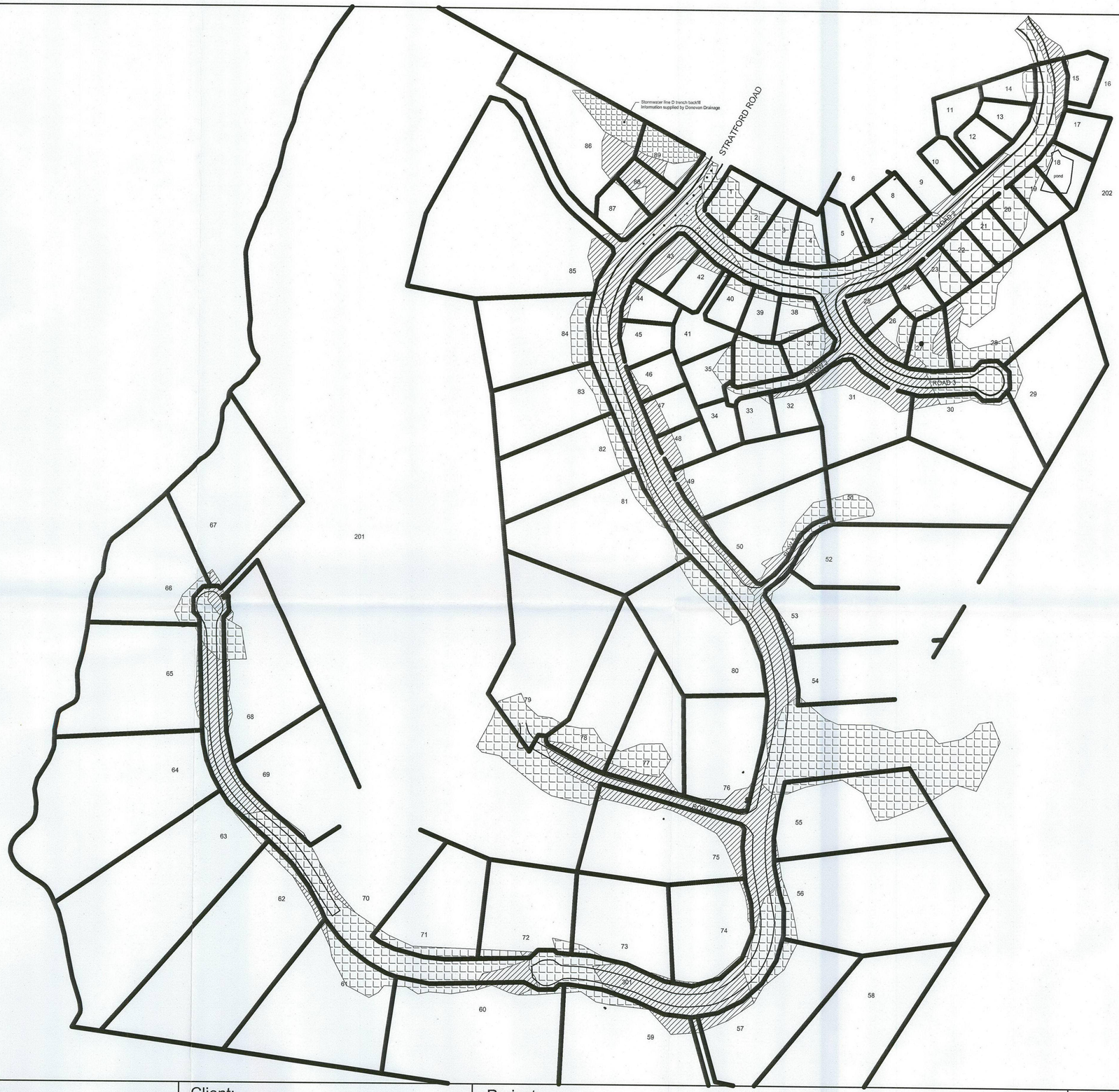

N

NOTATION

AREA OF CUT

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Cut & Fill Areas

Sheet: 1 of 5

Surveyed & Drawings: BK, SG, BS, BP

Checked: DWK 5.3.07

Original Scale: 1:3000 @ A3

Ref: 1587

NOTATION

AREA OF CUT

AREA OF FILL

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1.5 FILL CONTOUR

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Stormwater line D trench backfill
Information supplied by Donovan Drainage

STRATFORD ROAD

ROAD 2

ROW 2

ROAD 3

pond

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NOTATION

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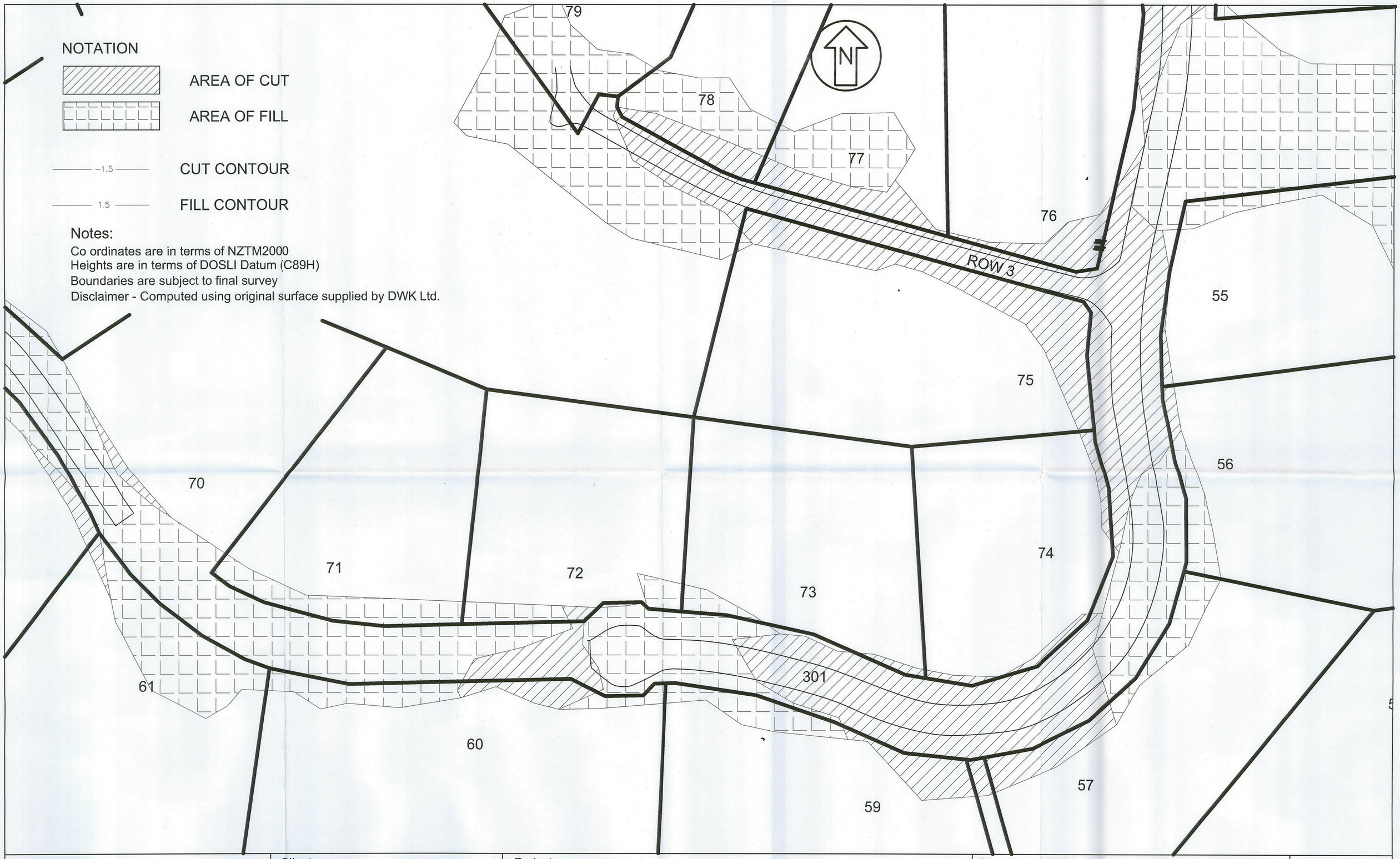

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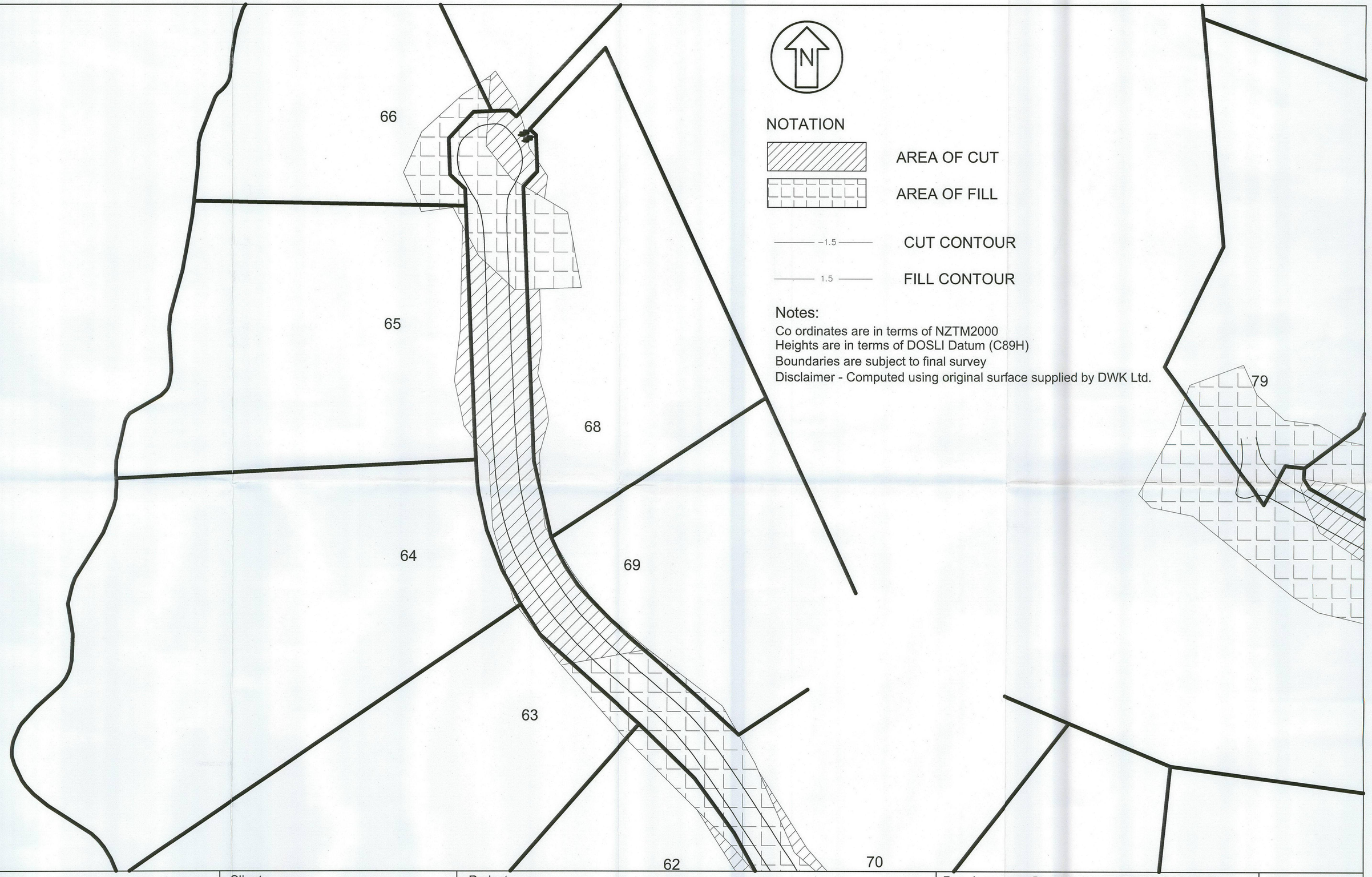

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Cut & Fill Areas

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Sheet: 5 of 5

Ref: 1587



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Cable Bay - Doubtless Bay
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Drawing: AS-BUILT RECORD
Roading & Contours

Surveyed & Drawings: BK, SG, BS

Checked: DWK 5.8.07

Original Scale: 1:3000 @ A3

Sheet: 1 of 5

Ref: 1587



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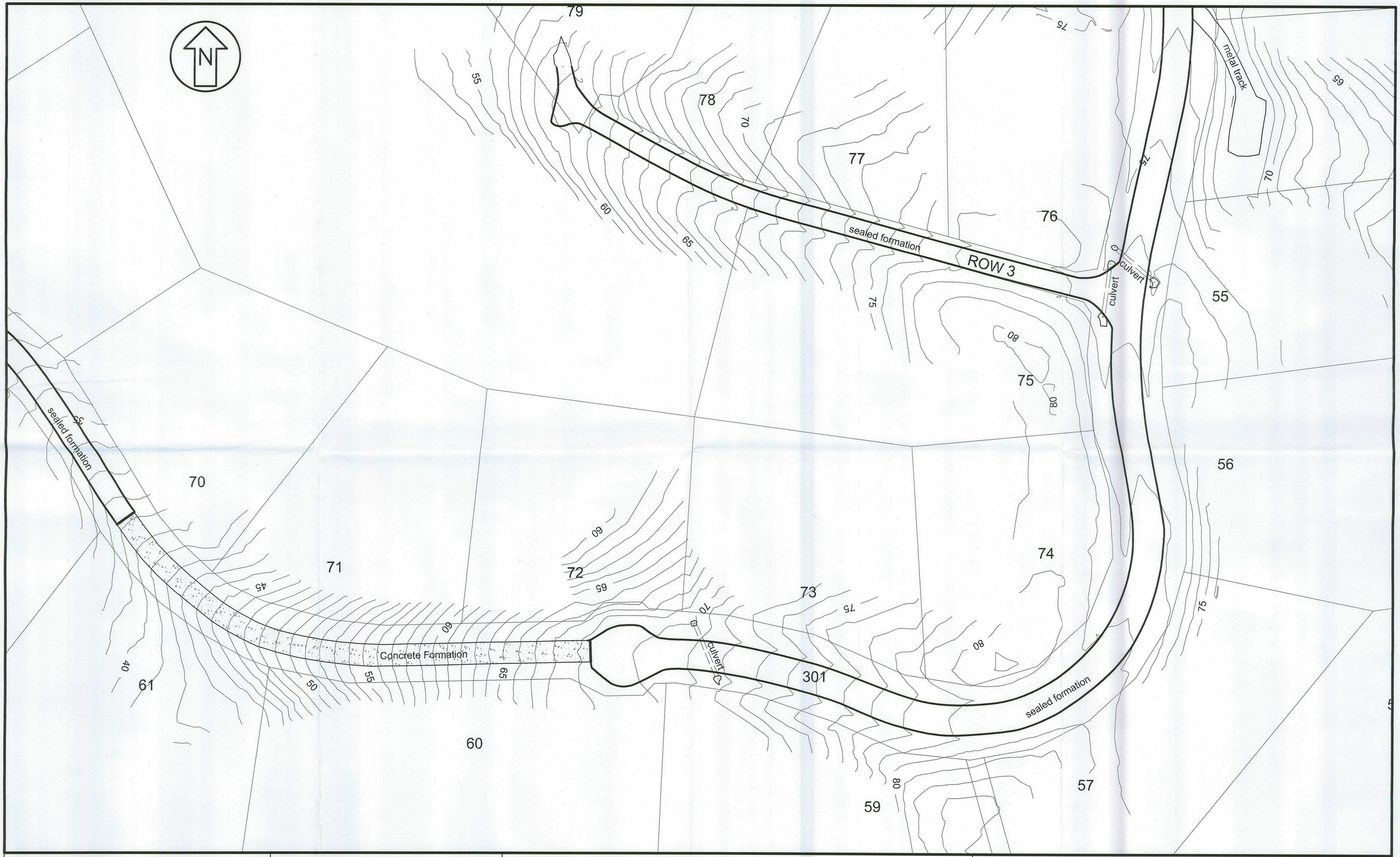
Sheet: 5 of 5

Ref: 1587



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Cable Bay - Doubtless Bay
Constructed by Donovan Drainage

Drawing: AS-BUILT RECORD
Roading & Contours

Surveyed & Drawings: BK, SG, BS

Checked: DWK 5.3.07

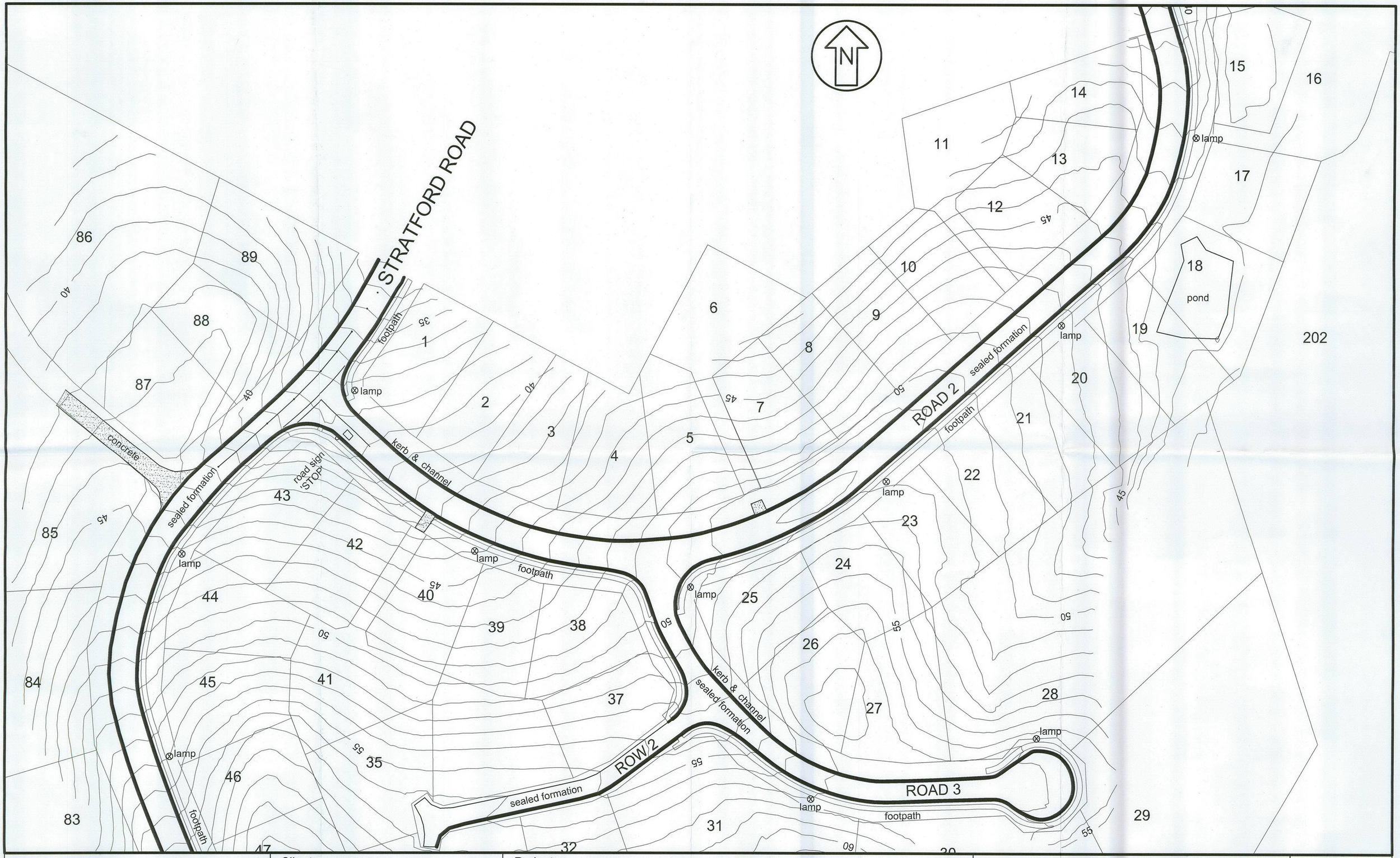
Original Scale: 1:1000 @ A3

Sheet: 4 of 5

Ref: 1587



Surveyed & Drawn by: BOUNDARY HUNTER LTD Ph. 09 435 5387 Email. bruce@boundaryhunter.co.nz	Client: FAR NORTH DISTRICT COUNCIL	Project: Cable Bay Sections Cable Bay - Doubtless Bay Constructed by Donovan Drainage	Drawing: AS-BUILT RECORD Roading & Contours Surveyed & Drawings: BK, SG, BS Checked: DWK 5.3.07 Original Scale: 1:1000 @ A3	Sheet: 3 of 5 Ref: 1587



Surveyed & Drawn by: BOUNDARY HUNTER LTD Ph. 09 435 5387 Email. bruce@boundaryhunter.co.nz	Client: FAR NORTH DISTRICT COUNCIL	Project: Cable Bay Sections Cable Bay - Doubtless Bay Constructed by Donovan Drainage	Drawing: AS-BUILT RECORD Roading & Contours Surveyed & Drawings: BK, SG, BS Checked: DWK 5.3.07 Original Scale: 1:1000 @ A3	Sheet: 2 of 5 Ref: 1587



Notes:

Co ordinates are in terms of NZTM2000
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FAR NORTH DISTRICT COUNCIL

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Cable Bay Sections
Cable Bay - Doubtless Bay
Constructed by Donovan Drainage

Drawing: AS-BUILT RECORD
Roading & Contours

Surveyed & Drawings: BK, SG, BS

Checked: DWK 5.3.07

Original Scale: 1:3000 @ A3

Sheet: 1 of 5

Ref: 1587

reduced to A4

201

2
DP 138134

3
DP 138134

2
DP 138134

5.65 5.50 5.60 5.29 5.33 5.35 5.32 5.34 5.26 5.35 5.44 5.48 5.54 5.81 6.08 7.17 7.48 7.59 7.91 7.96 8.28 9.77 9.73 9.35 9.76 9.19 9.25 9.40 9.91 8.98 9.69 9.18 9.12 11.61 11.68 10.27 10.06 11.69 11.72 CONC. APRON GABION ROCK OUTFALL 9.79 11.01 WALL 9.49 TRACK 10.95 10.95 9.33 10.95 WOODEN RETAINING WALL 10.93 9.33 9.41 10.97 10.99 11.01 10.99 10.99 9.52 10.99 9.58 10.96 10.93 9.65 9.57 10.68 10.70 CONC. O/F 10.69 9.84 9.66 10.95 10.57 9.70 10.95 10.95 9.50 9.41 9.23 9.41 9.31 9.22 9.68 9.37 9.48 9.74 9.81 9.83 9.70 9.97 GABION (ROCK) WALL METALLED TRACK GABION ROCK OUTFALL 4.46 4.12 4.62 4.85 WING WALL 9.37 9.29 CONC. O/F 9.40 9.31 9.66 9.52 9.55 9.34 9.79 9.70 9.46 9.54 10.16 10.29 9.30 9.33 9.41 9.50 10.69 10.82 10.94 10.93 10.98 11.11 11.20 WOODEN RETAINING WALL DIRECTION OF PRIMARY OVERFLOW

POND
3927m2

67

201

14.44 14.33 14.97 15.10 15.34 15.71 16.21 16.20 16.26 16.17

TOPO PLAN – POND
CABLE BAY HEIGHTS

SCALE: 1:400 @A2 | DATE: FEB 2007 | PREPARED FOR: BLUNT

Firm's Name

Blue Wallace Surveyors Ltd.
25 Harwood Street, P O Box 38,
HAMILTON.
Phone (07) 8397799, Fax (07) 8394455

File Reference 06/004

Drawing No. 1

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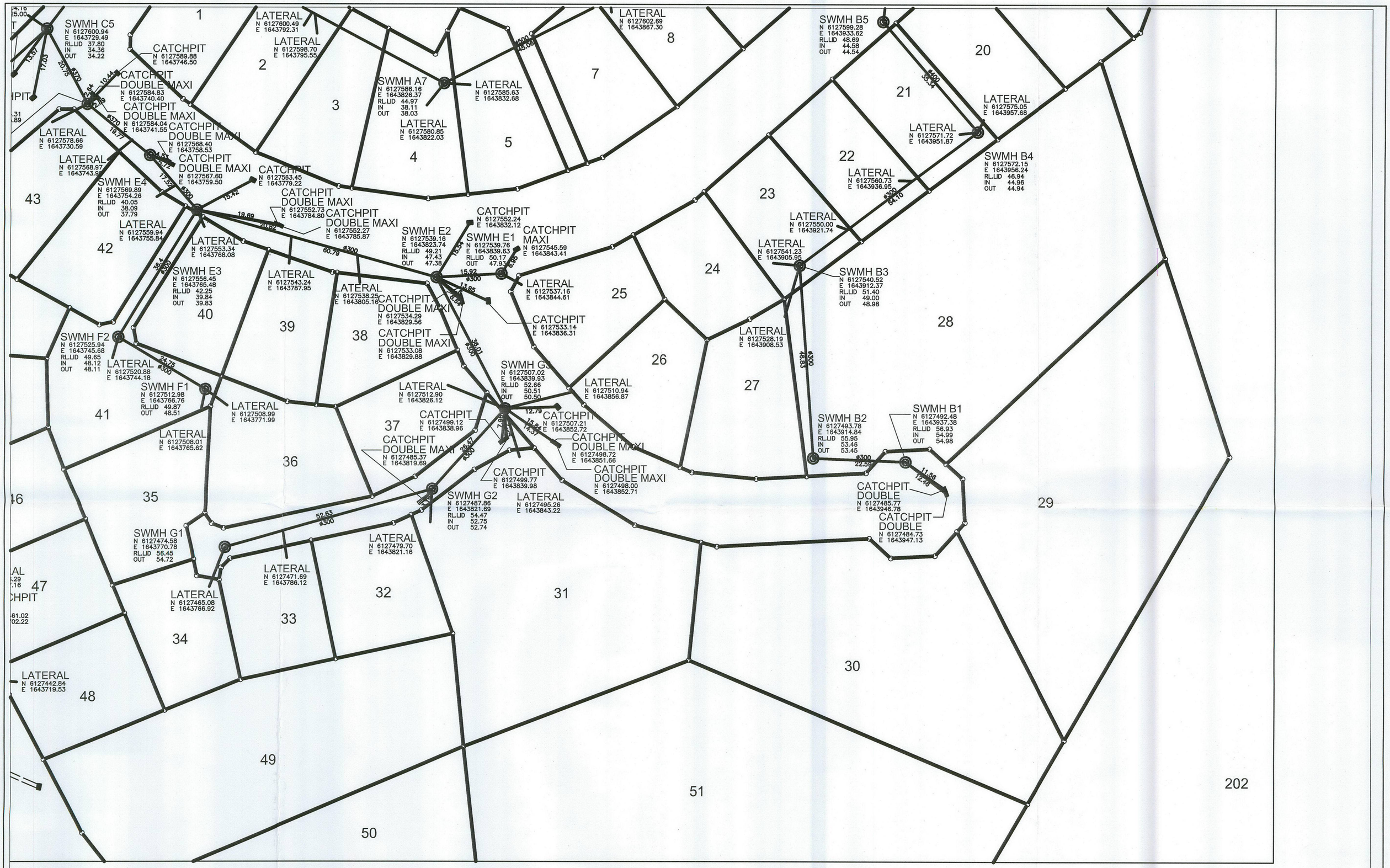
Reduced to A4



Duffill Watts & King Ltd
CONSULTING ENGINEERS
P.O. Box 480, KERIKERI
approved 30-03-07

SCALE: 1:750 @A1	DATE: FEBRUARY 2007

No.	Amendment	Init.	Date.
1	.	.	.
2	.	.	.

S:\2006\06004\ASBUILTS\FINAL ASBUILT – STORMWATER.DWG

Designed. JMB
Drawn. ABI 19 FEBRUARY 2007
File Ref: 06/004
Approved.

ASBUILT PLAN – STORMWATER
CABLE BAY HEIGHTS

Firm's Name
BLUE WALLACE SURVEYORS
25 HARWOOD STREET – PO BOX 38
HAMILTON
PHONE: (07) 839-7799

File Reference
06/004

Drawing No.
4 of 4

SWMH D6
N 6127602.34
E 1643548.22
RL.LID 22.75
IN 21.29
OUT 21.23

Ø900
71.42

SWMH D7
N 6127553.74
E 1643495.93
RL.LID 11.95
IN 10.47
OUT 9.14

85

87

LATERAL
N 6127604.16
E 1643725.00

CATCHPIT
N 6127590.12
E 1643721.32

SWMH C5
N 6127600.94
E 1643729.49
RL.LID 37.80
IN 34.36
OUT 34.22

13.57
17.03
20.75
Ø370
10.44

LATERAL
N 6127589.00
E 1643709.24

CATCHPIT
MAXI
N 6127584.31
E 1643725.89

CATCHPIT
DOUBLE MAXI
N 6127584.83
E 1643740.40

CATCHPIT
DOUBLE MAXI
N 6127584.04
E 1643741.55

54.04
Ø370
19.77

SWMH E5
N 6127582.55
E 1643739.08
RL.LID 38.35
IN 34.72
OUT 34.65

LATERAL
N 6127578.66
E 1643730.59

LATERAL
N 6127568.97
E 1643743.98

SWMH C4
N 6127565.14
E 1643689.05
RL.LID 44.41
IN 42.61
OUT 42.45

CATCHPIT
N 6127560.73
E 1643691.54

3.07
19.21

43

SWMH E4
N 6127569.89
E 1643754.26
RL.LID 40.05
IN 38.09
OUT 37.79

CATCHPIT
MAXI
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E 1643697.83

LATERAL
N 6127559.94
E 1643755.84

42

LATERAL
N 6127545.89
E 1643701.43

47.08
Ø300

44

SWMH F2
N 6127525.94
E 1643745.68
RL.LID 49.65
IN 48.12
OUT 48.11

LATERAL
N 6127520.88
E 1643744.18

24.73
Ø300

SWMH F1
N 6127512.98
E 1643766.76
RL.LID 49.87
OUT 48.51

SWMH C3
N 6127518.10
E 1643687.47
RL.LID 49.49
IN 48.26
OUT 48.19

14.93
10.43

LATERAL
N 6127514.23
E 1643693.87

CATCHPIT
MAXI
N 6127507.78
E 1643685.99

45

41

CATCHPIT
N 6127506.84
E 1643678.58

84

201

POND

Ⓣ

EASEMENT BOUNDARY

EASEMENT BOUNDARY

Ø300
56.03

LATERAL
N 6127489.19
E 1643700.87

46

35

SWMH G1
N 6127474.58
E 1643770.78
RL.LID 56.45
OUT 54.72

SWMH C2
N 6127464.63
E 1643703.90
RL.LID 56.98
IN 55.52
OUT 55.53

LATERAL
N 6127468.29
E 1643707.16

47

CATCHPIT
MAXI
N 6127461.02
E 1643702.22

10.53
Ø300
22.19

CATCHPIT
N 6127458.30
E 1643695.44

34

83

SWMH C1
N 6127443.78
E 1643711.66
RL.LID 59.93
IN 58.35

LATERAL
N 6127442.84
E 1643719.53

48

82

157.05
Ø300

culvert
Ø450

81

Duffill Watts & King Ltd
CONSULTING ENGINEERS
P.O. Box 480, KERIKERI

approved TWT 20-03-07

SCALE: 1:750 @A1

DATE: FEBRUARY 2007

No.	Amendment	Init.	Date.
1	.	.	.
2	.	.	.

c:\ 2006\ 06004\ ASBUILTS\ FINAL_ASBUILT_STORMWATER.DWG

Designed. JMB
Drawn. ABI 19 FEBRUARY 2007
File Ref: 06/004
Approved.

ASBUILT PLAN – STORMWATER
CABLE BAY HEIGHTS

Firm's Name
BLUE WALLACE SURVEYORS
25 HARWOOD STREET – PO BOX 38
HAMILTON
PHONE: (07) 839-7799

File Reference
06/004

Drawing No.
3 of 4

LEGEND

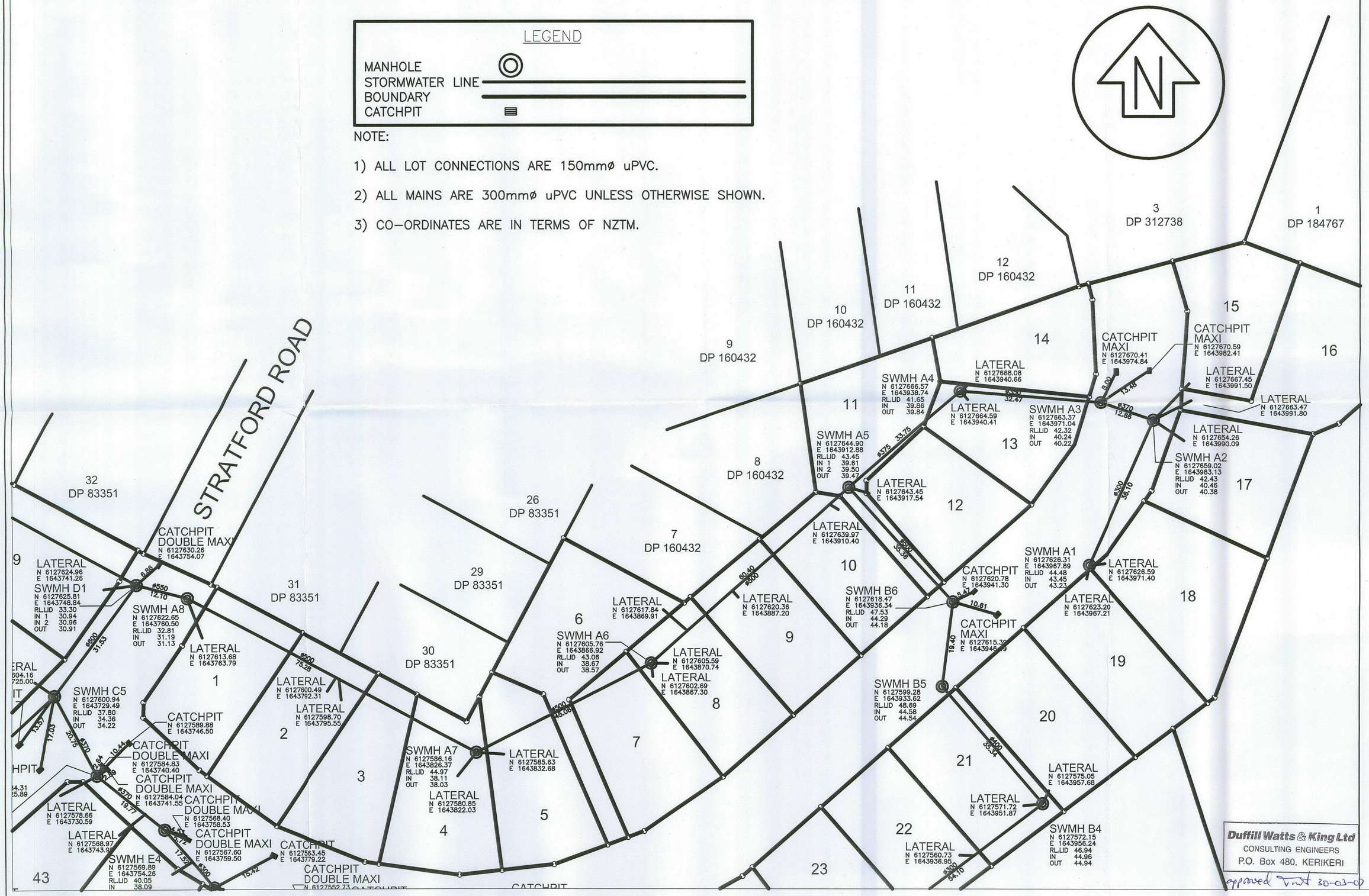
MANHOLE
STORMWATER LINE
BOUNDARY
CATCHPIT

NOTE:

1) ALL LOT CONNECTIONS ARE 150mmø uPVC.

2) ALL MAINS ARE 300mmø uPVC UNLESS OTHERWISE SHOWN.

3) CO-ORDINATES ARE IN TERMS OF NZTM.



Duffill Watts & King Ltd
CONSULTING ENGINEERS
P.O. Box 480, KERIKERI

approved TWT 30-03-07

SCALE: 1:750 @A1	DATE: FEBRUARY 2007

No.	Amendment	Init.	Date.
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2	.	.	.

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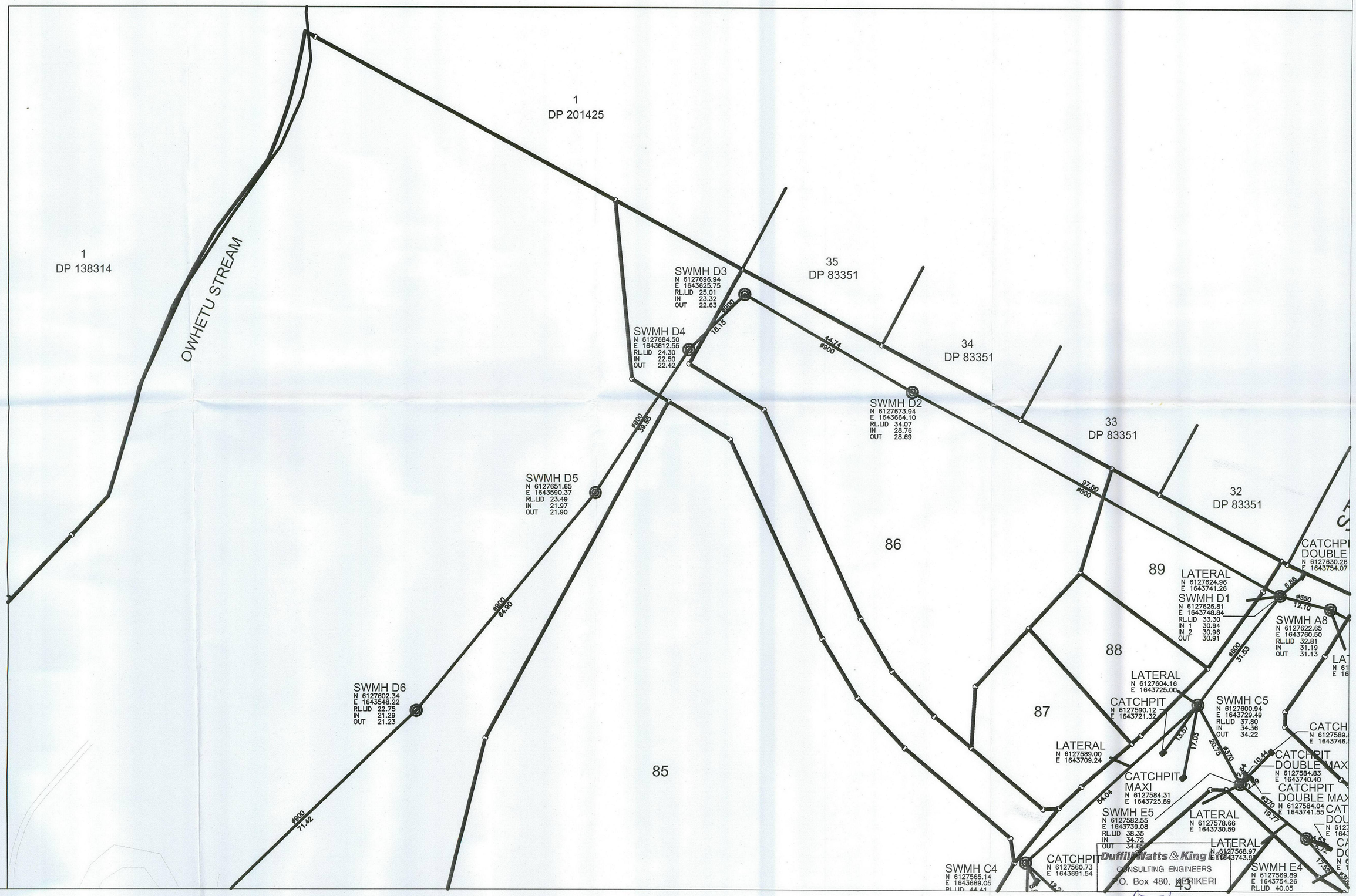
Designed. JMB
Drawn. ABI 19 FEBRUARY 2007
File Ref: 06/004
Approved.

ASBUILT PLAN - STORMWATER
CABLE BAY HEIGHTS

Firm's Name
BLUE WALLACE SURVEYORS
25 HARWOOD STREET - PO BOX 38
HAMILTON
PHONE: (07) 839-7799

File Reference
06/004

Drawing No.
2 of 4



SCALE: 1:750 @A1 | DATE: FEBRUARY 2007

No.	Amendment	Init.	Date.
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2	.	.	.

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Designed. JMB
Drawn. ABI 19 FEBRUARY 2007
File Ref: 06/004
Approved.

ASBUILT PLAN - STORMWATER
CABLE BAY SECTIONS

Firm's Name
BLUE WALLACE SURVEYORS
25 HARWOOD STREET - PO BOX 38
HAMILTON
PHONE: (07) 839-7799

File Reference
06/004

Drawing No.
1 of 4

SWMH C5
N 6127600.94
E 1643729.49
RL.LID 37.80
IN 34.36
OUT 34.22

SWMH E4
N 6127569.89
E 1643754.26
RL.LID 40.05
IN 38.09
OUT 37.79

SWMH E3
N 6127556.45
E 1643765.48
RL.LID 42.25
IN 39.84
OUT 39.83

SWMH F2
N 6127525.94
E 1643745.68
RL.LID 49.65
IN 48.12
OUT 48.11

SWMH F1
N 6127512.98
E 1643766.76
RL.LID 49.87
OUT 48.51

SWMH G1
N 6127474.58
E 1643770.78
RL.LID 56.45
OUT 54.72

SWMH A7
N 6127586.16
E 1643826.37
RL.LID 44.97
IN 38.11
OUT 38.03

SWMH E2
N 6127539.16
E 1643823.74
RL.LID 49.21
IN 47.43
OUT 47.38

SWMH E1
N 6127539.76
E 1643839.63
RL.LID 50.17
OUT 47.93

SWMH G3
N 6127507.02
E 1643839.93
RL.LID 52.66
IN 50.51
OUT 50.50

SWMH G2
N 6127487.86
E 1643821.69
RL.LID 54.47
IN 52.75
OUT 52.74

SWMH B5
N 6127599.28
E 1643933.62
RL.LID 48.69
IN 44.58
OUT 44.54

SWMH B4
N 6127572.15
E 1643956.24
RL.LID 46.94
IN 44.96
OUT 44.94

SWMH B3
N 6127540.52
E 1643912.37
RL.LID 51.40
IN 49.00
OUT 48.98

SWMH B2
N 6127493.78
E 1643914.84
RL.LID 55.95
IN 53.46
OUT 53.45

SWMH B1
N 6127492.48
E 1643937.38
RL.LID 56.93
IN 54.99
OUT 54.98

CATCHPIT DOUBLE MAXI
N 6127584.83
E 1643740.40

CATCHPIT DOUBLE MAXI
N 6127584.04
E 1643741.55

CATCHPIT DOUBLE MAXI
N 6127568.40
E 1643758.53

CATCHPIT DOUBLE MAXI
N 6127567.60
E 1643759.50

CATCHPIT
N 6127563.45
E 1643779.22

CATCHPIT DOUBLE MAXI
N 6127552.73
E 1643784.80

CATCHPIT DOUBLE MAXI
N 6127552.27
E 1643785.87

CATCHPIT
N 6127552.24
E 1643832.12

CATCHPIT MAXI
N 6127545.59
E 1643843.41

CATCHPIT
N 6127533.14
E 1643836.31

CATCHPIT DOUBLE MAXI
N 6127534.29
E 1643829.56

CATCHPIT DOUBLE MAXI
N 6127533.08
E 1643829.88

CATCHPIT
N 6127499.12
E 1643838.96

CATCHPIT
N 6127507.21
E 1643852.72

CATCHPIT DOUBLE MAXI
N 6127485.37
E 1643819.69

CATCHPIT DOUBLE MAXI
N 6127498.72
E 1643851.66

CATCHPIT DOUBLE MAXI
N 6127498.00
E 1643852.71

CATCHPIT
N 6127499.77
E 1643839.98

CATCHPIT DOUBLE
N 6127485.77
E 1643946.78

CATCHPIT DOUBLE
N 6127484.73
E 1643947.13

LATERAL N 6127600.49 E 1643792.31
LATERAL N 6127598.70 E 1643795.55
LATERAL N 6127602.69 E 1643867.30
LATERAL N 6127585.63 E 1643832.68
LATERAL N 6127580.85 E 1643822.03
LATERAL N 6127578.66 E 1643730.59
LATERAL N 6127568.97 E 1643743.39
LATERAL N 6127559.94 E 1643755.84
LATERAL N 6127553.34 E 1643768.08
LATERAL N 6127543.24 E 1643787.95
LATERAL N 6127538.25 E 1643805.16
LATERAL N 6127537.16 E 1643844.61
LATERAL N 6127512.90 E 1643826.12
LATERAL N 6127510.94 E 1643856.87
LATERAL N 6127508.99 E 1643771.99
LATERAL N 6127520.88 E 1643744.18
LATERAL N 6127508.01 E 1643765.62
LATERAL N 6127495.26 E 1643843.22
LATERAL N 6127479.70 E 1643821.16
LATERAL N 6127471.69 E 1643786.12
LATERAL N 6127465.08 E 1643766.92
LATERAL N 6127442.84 E 1643719.53
LATERAL N 6127575.05 E 1643957.68
LATERAL N 6127571.72 E 1643951.87
LATERAL N 6127560.73 E 1643936.95
LATERAL N 6127550.00 E 1643921.74
LATERAL N 6127541.23 E 1643905.95
LATERAL N 6127528.19 E 1643908.53

1 2 3 4 5 7 8 20 21 22 23 24 25 26 27 28 29 30 31 202 32 33 34 35 36 37 38 39 40 41 42 43 46 47 48 49 50 51

Duffill Watts & King Ltd
CONSULTING ENGINEERS
P.O. Box 480, KERIKERI
approved 30-03-07

SCALE: 1:750 @A1	DATE: FEBRUARY 2007		
No.	Amendment	Init.	Date.
1	.	.	.
2	.	.	.
S:\2006\06004\ASBUILTS\FINAL ASBUILT – STORMWATER.DWG			

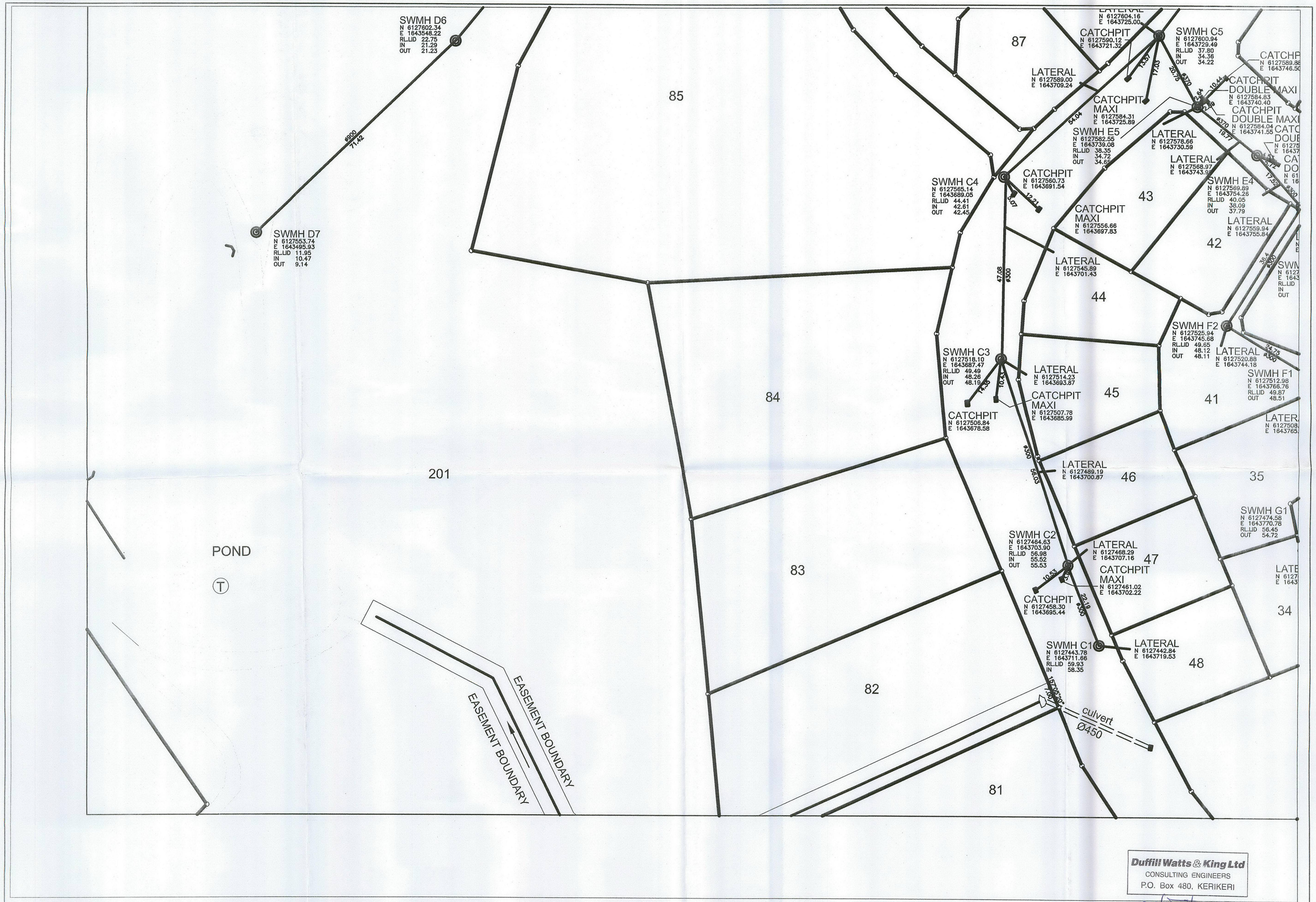
Designed. JMB
Drawn. ABI 19 FEBRUARY 2007
File Ref: 06/004
Approved.

ASBUILT PLAN – STORMWATER
CABLE BAY HEIGHTS

Firm's Name
BLUE WALLACE SURVEYORS
25 HARWOOD STREET – PO BOX 38
HAMILTON
PHONE: (07) 839-7799

File Reference
06/004

Drawing No.
4 of 4



approved 30-03-07

SCALE: 1:750 @A1		DATE: FEBRUARY 2007		
No.	Amendment	Init.	Date.	Designed. JMB
1	.	.	.	Drawn. ABI 19 FEBRUARY 2007
2	.	.	.	File Ref: 06/004
				Approved.

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ASBUILT PLAN – STORMWATER
CABLE BAY HEIGHTS

Firm's Name
BLUE WALLACE SURVEYORS
25 HARWOOD STREET – PO BOX 38
HAMILTON
PHONE: (07) 839-7799

File Reference
06/004

Drawing No.
3 of 4

LEGEND

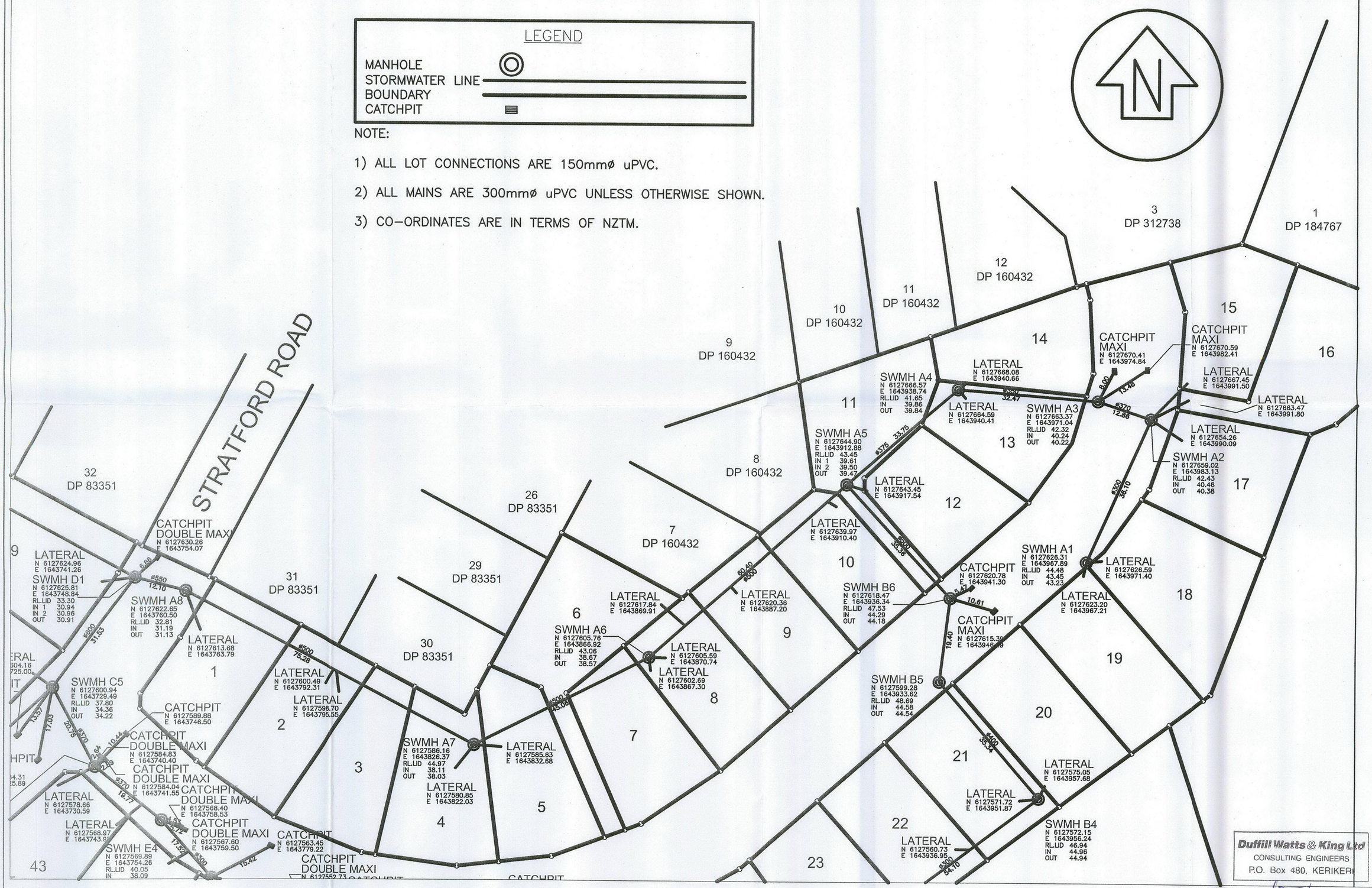
MANHOLE
STORMWATER LINE
BOUNDARY
CATCHPIT

NOTE:

1) ALL LOT CONNECTIONS ARE 150mmø uPVC.

2) ALL MAINS ARE 300mmø uPVC UNLESS OTHERWISE SHOWN.

3) CO-ORDINATES ARE IN TERMS OF NZTM.



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CONSULTING ENGINEERS
P.O. Box 480, KERIKERI

approved 30-03-07

SCALE: 1:750 @A1	DATE: FEBRUARY 2007

No.	Amendment	Init.	Date.
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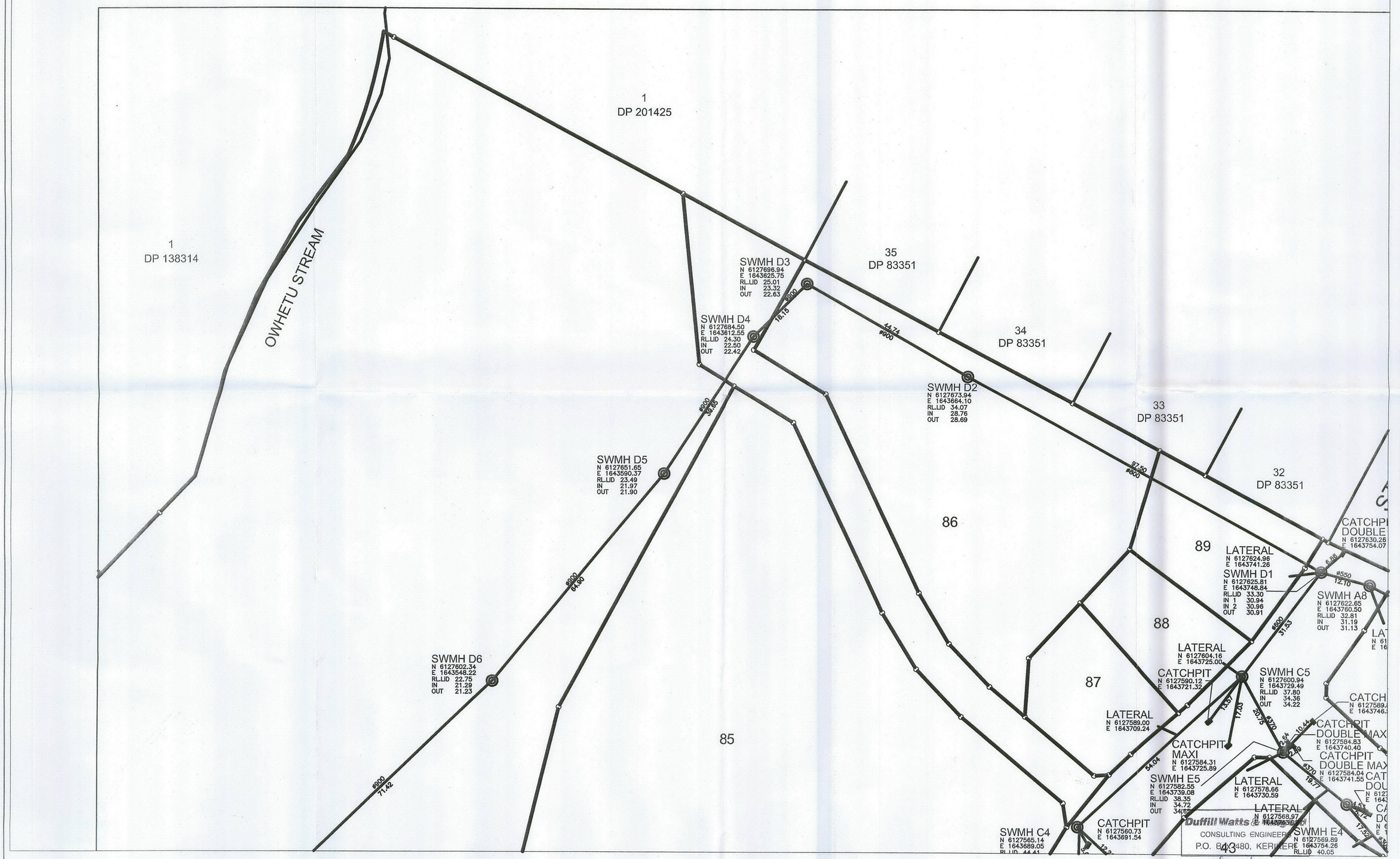
Designed. JMB
Drawn. ABI 19 FEBRUARY 2007
File Ref: 06/004
Approved.

ASBUILT PLAN - STORMWATER
CABLE BAY HEIGHTS

Firm's Name
BLUE WALLACE SURVEYORS
25 HARWOOD STREET - PO BOX 38
HAMILTON
PHONE: (07) 839-7799

File Reference
06/004

Drawing No.
2 of 4



Duffill Watts & King
CONSULTING ENGINEERS
P.O. Box 480, KERIKERI

approved [illegible] 30-03-07

SCALE: 1:750 @A1	DATE: FEBRUARY 2007

No.	Amendment	Init.	Date.
1	.	.	.
2	.	.	.

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Designed. JMB
Drawn. ABI 19 FEBRUARY 2007
File Ref: 06/004
Approved.

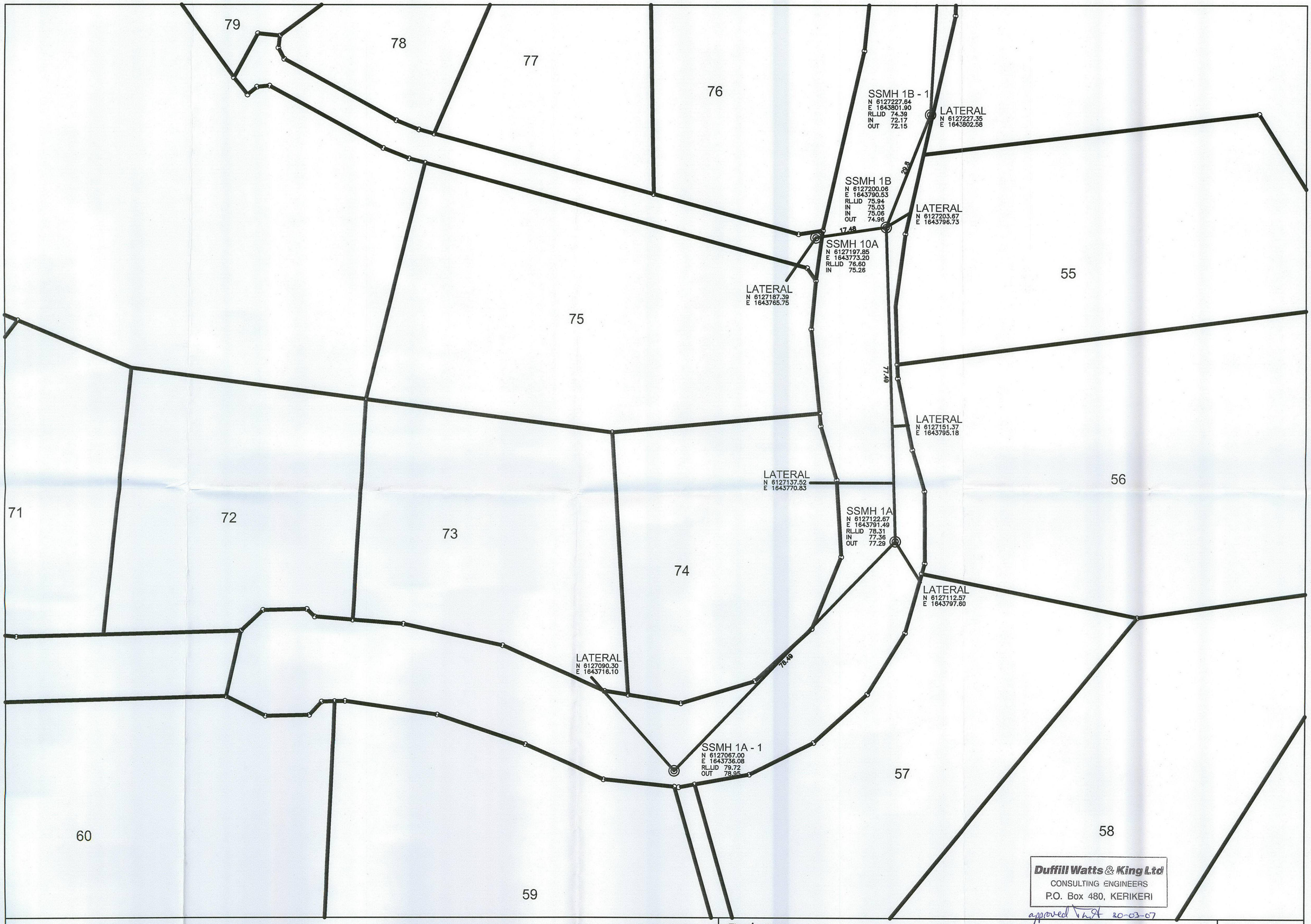
ASBUILT PLAN - STORMWATER
CABLE BAY SECTIONS

Firm's Name
BLUE WALLACE SURVEYORS
25 HARWOOD STREET - PO BOX 38
HAMILTON
PHONE: (07) 839-7799

File Reference
06/004

Drawing No.
1 of 4

These plans reduced to A4



Duffill Watts & King Ltd
CONSULTING ENGINEERS
P.O. Box 480, KERIKERI

approved for RA 30-03-07

ASBUILT PLAN – SANITARY SEWER
CABLE BAY HEIGHTS

SCALE: 1:600 @A2 | DATE: FEB 2007 | PREPARED FOR: BLUNT

Firm's Name

Blue Wallace
Surveyors Ltd.
25 Harwood Street, P O Box 38,
HAMILTON.
Phone (07) 8397799, Fax (07) 8394455

File Reference
06/004

Drawing No.
6 OF 6

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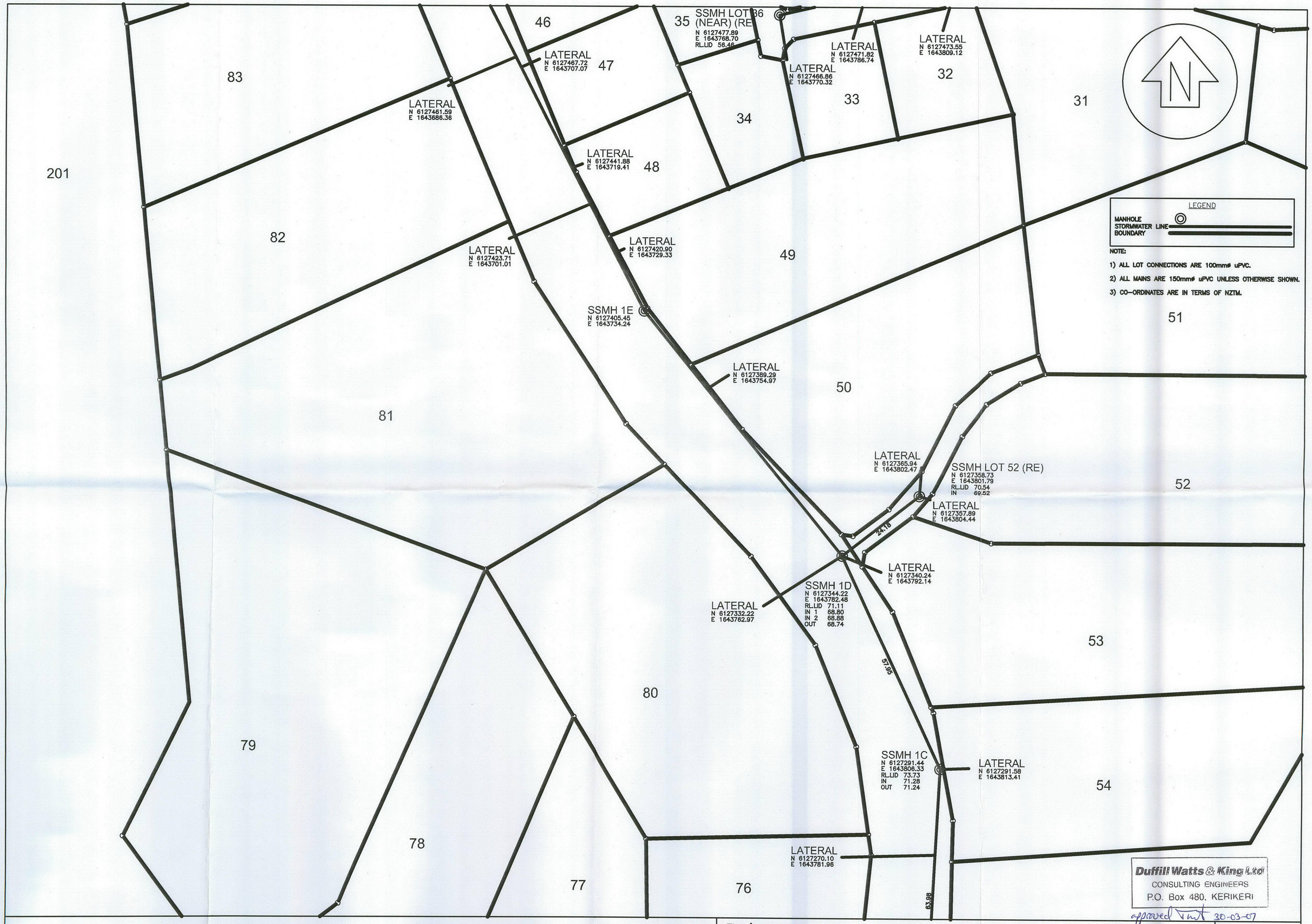

ASBUILT PLAN – SANITARY SEWER
CABLE BAY HEIGHTS

SCALE: 1:600 @A2 | DATE: FEB 2007 | PREPARED FOR: BLUNT

Firm's Name

Blue Wallace
Surveyors Ltd.
25 Harwood Street, P O Box 38,
HAMILTON.
Phone (07) 8397799, Fax (07) 8394455

File Reference
06/004

Drawing No.
5 OF 6

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RATFORD RD

29
DP 83351

30
DP 83351

7
DP 160432

LATERAL
N 6127638.45
E 1643902.30

79.62

LATERAL
N 6127626.71
E 1643888.40

LATERAL
N 6127616.65
E 1643870.70

SSMH 3B
N 6127615.38
E 1643874.65
RL.LID 42.13
IN 40.02
OUT 39.98

39.97

LATERAL
N 6127614.39
E 1643873.38

LATERAL
N 6127600.00
E 1643862.70

LATERAL
N 6127595.26
E 1643839.76

ERAL
27597.73
43797.47

SSMH RE
(LOT 5)
N 6127594.94
E 1643840.33
RL.LID 43.95
IN 41.37

LATERAL
N 6127586.40
E 1643814.99

SSMH 4F
N 6127613.24
E 1643953.46
RL.LID 46.32
IN 43.86
OUT 43.84

36.11

LATERAL
N 6127635.89
E 1643978.82

27.75

SSMH 4E
N 6127590.72
E 1643969.72
RL.LID 45.40
IN 44.16
OUT 44.14

LATERAL
N 6127591.99
E 1643972.02

LATERAL
N 6127589.06
E 1643968.49

15.68

LATERAL
N 6127571.25
E 1643950.62

SSMH 4D
N 6127576.39
E 1643963.42
RL.LID 45.92
IN 44.35
OUT 44.32

LATERAL
N 6127559.79
E 1643935.78

61.82

LATERAL
N 6127548.68
E 1643921.07

SSMH 6D
N 6127540.96
E 1643819.74
RL.LID 48.56
IN 46.54
OUT 46.56

SSMH 4C
N 6127538.02
E 1643914.99
RL.LID 50.88
IN 49.02
OUT 48.98

LATERAL
N 6127540.44
E 1643905.82

LATERAL
N 6127536.47
E 1643915.15

LATERAL
N 6127535.64
E 1643844.25

LATERAL
N 6127528.61
E 1643908.68

42.7

34.6

SSMH 6C
N 6127510.35
E 1643835.84
RL.LID 52.46
IN 50.36
OUT 50.39

LATERAL
N 6127510.54
E 1643828.92

LATERAL
N 6127510.43
E 1643857.25

SSMH 6B
N 6127501.32
E 1643832.86
RL.LID 53.44
IN 51.54
OUT 51.59

9.52

SSMH 4B
N 6127495.39
E 1643916.97
RL.LID 55.55
IN 52.83
OUT 52.79

SSMH 6A
N 6127487.44
E 1643813.41
RL.LID 55.10
IN 53.83
OUT 53.81

23.89

LATERAL
N 6127491.96
E 1643835.97

32.33

LATERAL
N 6127488.55
E 1643954.87

SSMH LOT 29 (RE)
N 6127488.23
E 1643948.48
RL.LID 58.81

LATERAL
N 6127473.55
E 1643809.12

LATERAL
N 6127469.13
E 1643919.44

4 5 6 7 8 9 10 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 37 38

Duffill Watts & King Ltd
CONSULTING ENGINEERS
P.O. Box 480, KERIKERI

Approved 30-03-07

SCALE: 1:600 @A1

DATE: FEBRUARY 2007

No.	Amendment	Init.	Date.
1	.	.	.
2	.	.	.

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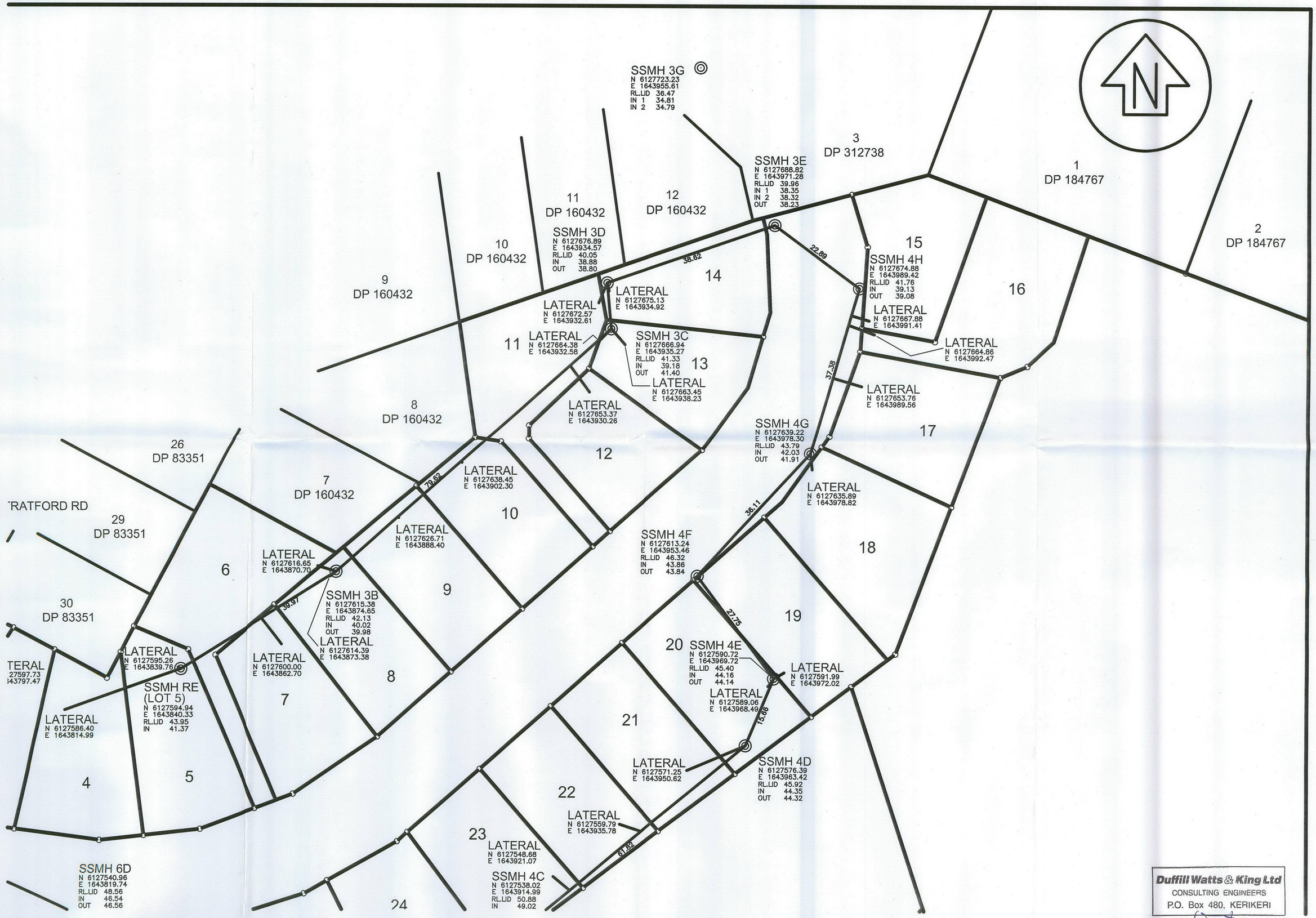
Designed. JMB
Drawn. ABI 19 FEBRUARY 2007
File Ref: 06/004
Approved.

ASBUILT PLAN - SANITARY SEWER
CABLE BAY SECTIONS

Firm's Name
BLUE WALLACE SURVEYORS
25 HARWOOD STREET - PO BOX 38
HAMILTON
PHONE: (07) 839-7799

File Reference
06/004

Drawing No.
3 of 6



Duffill Watts & King Ltd
CONSULTING ENGINEERS
P.O. Box 480, KERIKERI

approved 30-03-07

SCALE: 1:600 @A1	DATE: FEBRUARY 2007		
No.	Amendment	Init.	Date.
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2	.	.	.
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Designed. JMB
Drawn. ABI 19 FEBRUARY 2007
File Ref: 06/004
Approved.

ASBUILT PLAN – SANITARY SEWER CABLE BAY SECTIONS

Firm's Name
BLUE WALLACE SURVEYORS
25 HARWOOD STREET – PO BOX 38
HAMILTON
PHONE: (07) 839-7799

File Reference
06/004

Drawing No.
2 of 6

LEGEND

MANHOLE
STORMWATER LINE
BOUNDARY

NOTE:

1) ALL LOT CONNECTIONS ARE 100mmø uPVC.
2) ALL MAINS ARE 150mmø uPVC UNLESS OTHERWISE SHOWN.
3) CO-ORDINATES ARE IN TERMS OF NZTM.

35
DP 83351

34
DP 83351

33
DP 83351

32
DP 83351

STRATFORD ROAD

9
DP 160432

8
DP 160432

7
DP 160432

26
DP 83351

29
DP 83351

31
DP 83351

30
DP 83351

86

89

88

87

1

2

3

4

5

6

7

8

43

42

SSMH EXISTING - STRATFORD RD
N 6127616.98
E 1643765.77
RL.LID 34.69
IN 1 33.18
IN 2 33.15
INVERT 33.13

LATERAL
N 6127623.61
E 1643741.21

LATERAL
N 6127609.50
E 1643729.95

SSMH 1K
N 6127612.65
E 1643757.38
RL.LID 34.60
IN 33.44
OUT 33.41

LATERAL
N 6127612.83
E 1643764.86

LATERAL
N 6127606.56
E 1643782.09

SSMH 9A
N 6127603.32
E 1643793.61
RL.LID 38.70
IN 37.49
OUT 37.45

LATERAL
N 6127597.73
E 1643797.47

LATERAL
N 6127595.26
E 1643839.76

SSMH RE
(LOT 5)
N 6127594.94
E 1643840.33
RL.LID 43.95
IN 41.37

LATERAL
N 6127600.00
E 1643862.70

LATERAL
N 6127616.65
E 1643870.70

SSMH 3B
N 6127615.38
E 1643874.65
RL.LID 42.13
IN 40.02
OUT 39.98

LATERAL
N 6127614.39
E 1643873.38

LATERA
N 6127626.7
E 1643888.4

SSMH 1J
N 6127598.34
E 1643745.16
RL.LID 36.92
IN 1 35.29
IN 2 35.21
OUT 35.25

SSMH 1I
N 6127585.16
E 1643731.73
RL.LID 38.64
IN 36.97
OUT 36.89

LATERAL
N 6127586.62
E 1643705.13

LATERAL
N 6127586.40
E 1643814.99

SSMH 6E
N 6127568.33
E 1643763.18
RL.LID 40.85
IN 1 39.14
IN 2 39.20
OUT 39.15

LATERAL
N 6127568.87
E 1643686.63

LATERAL
N 6127569.68
E 1643744.05

SSMH 1H
N 6127553.31
E 1643700.57
RL.LID 44.86
IN 43.44
OUT 43.40

LATERAL
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E 1643755.42

SSMH 5B
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E 1643762.62

LATERAL
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SSMH 6D
N 6127540.96
E 1643819.74
RL.LID 48.56
IN 46.54

9.45
31.02
18.83
18.91
35.02
44.49
12.9
62.87
39.57
79.62

Duffill Watts & King Ltd
CONSULTING ENGINEERS
P.O. Box 480, KERIKERI
approved 30/03/07

SCALE: 1:600 @A1	DATE: FEBRUARY 2007

No.	Amendment	Init.	Date.
1	.	.	.
2	.	.	.

S:\2006\06004\ASBUILT - SEWER.DWG

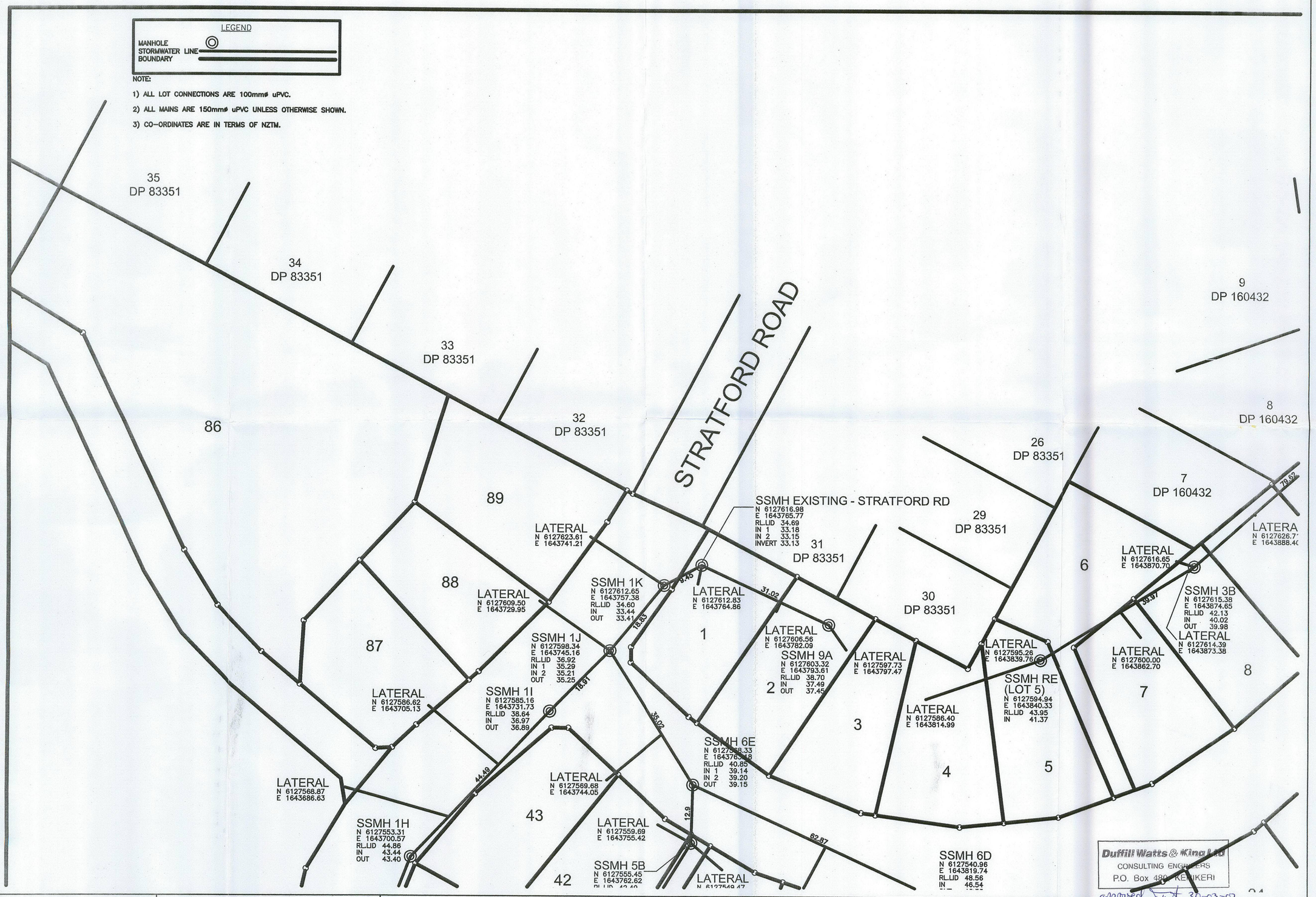
Designed. JMB
Drawn. ABI 19 FEBRUARY 2007
File Ref: 06/004
Approved.

ASBUILT PLAN - SANITARY SEWER
CABLE BAY SECTIONS

Firm's Name
BLUE WALLACE SURVEYORS
25 HARWOOD STREET - PO BOX 38
HAMILTON
PHONE: (07) 839-7799

File Reference
06/004

Drawing No.
1 of 6



SCALE: 1:600 @A1

DATE: FEBRUARY 2007

No.	Amendment	Init.	Date.
1	.	.	.
2	.	.	.

Designed. JMB
Drawn. ABI 19 FEBRUARY 2007
File Ref: 06/004
Approved.

S:\2006\06004\ASBUILT - SEWER.DWG

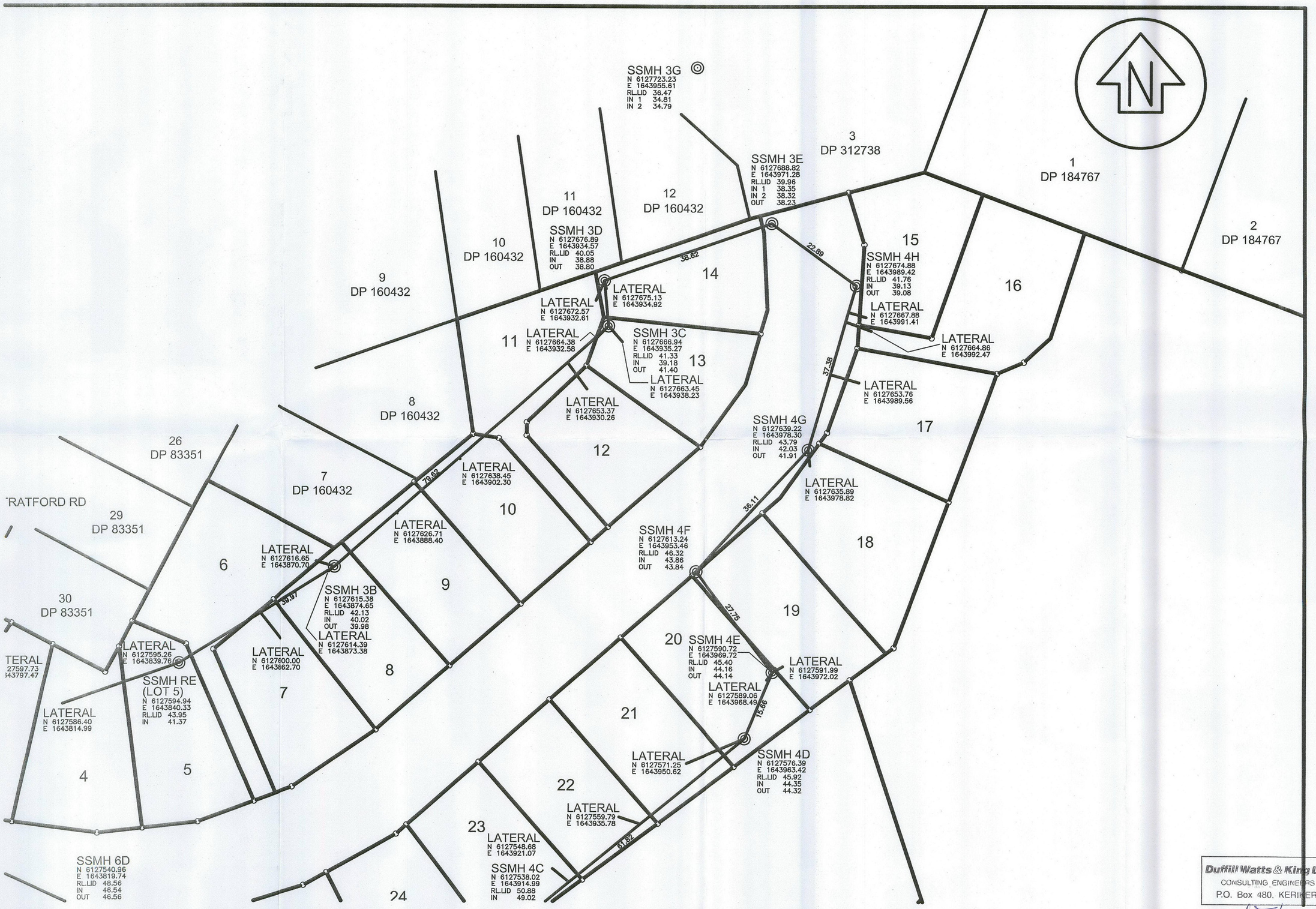
ASBUILT PLAN - SANITARY SEWER CABLE BAY SECTIONS

Firm's Name
BLUE WALLACE SURVEYORS
25 HARWOOD STREET - PO BOX 38
HAMILTON
PHONE: (07) 839-7799

File Reference
06/004

Drawing No.
1 of 6

These plans reduced to A4



Duffill Watts & King Ltd
CONSULTING ENGINEERS
P.O. Box 480, KERIKERI

approved 30-03-07

SCALE: 1:600 @A1	DATE: FEBRUARY 2007		
No.	Amendment	Init.	Date.
1	.	.	.
2	.	.	.
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Approved.

ASBUILT PLAN – SANITARY SEWER CABLE BAY SECTIONS

Firm's Name
BLUE WALLACE SURVEYORS
25 HARWOOD STREET – PO BOX 38
HAMILTON
PHONE: (07) 839–7799

File Reference 06/004

Drawing No. 2 of 6

RATFORD RD

29
DP 83351

30
DP 83351

7
DP 160432

LATERAL
N 6127638.45
E 1643902.30

79.62

LATERAL
N 6127626.71
E 1643888.40

LATERAL
N 6127616.65
E 1643870.70

SSMH 3B
N 6127615.38
E 1643874.65
RL.LID 42.13
IN 40.02
OUT 39.98

39.57

LATERAL
N 6127614.39
E 1643873.38

LATERAL
N 6127600.00
E 1643862.70

LATERAL
N 6127595.26
E 1643839.76

SSMH RE
(LOT 5)
N 6127594.94
E 1643840.33
RL.LID 43.95
IN 41.37

LATERAL
N 6127586.40
E 1643814.99

LATERAL
N 6127635.89
E 1643978.82

36.11

SSMH 4F
N 6127613.24
E 1643953.46
RL.LID 46.32
IN 43.86
OUT 43.84

27.75

SSMH 4E
N 6127590.72
E 1643969.72
RL.LID 45.40
IN 44.16
OUT 44.14

LATERAL
N 6127591.99
E 1643972.02

LATERAL
N 6127589.06
E 1643968.49

15.66

LATERAL
N 6127571.25
E 1643950.62

SSMH 4D
N 6127576.39
E 1643963.42
RL.LID 45.92
IN 44.35
OUT 44.32

LATERAL
N 6127559.79
E 1643935.78

61.82

LATERAL
N 6127548.68
E 1643921.07

SSMH 4C
N 6127538.02
E 1643914.99
RL.LID 50.88
IN 49.02
OUT 48.98

LATERAL
N 6127540.44
E 1643905.82

LATERAL
N 6127536.47
E 1643915.15

SSMH 6D
N 6127540.96
E 1643819.74
RL.LID 48.56
IN 46.54
OUT 46.56

LATERAL
N 6127535.64
E 1643844.25

LATERAL
N 6127528.61
E 1643908.68

42.7

34.6

SSMH 6C
N 6127510.35
E 1643835.84
RL.LID 52.46
IN 50.36
OUT 50.39

LATERAL
N 6127510.54
E 1643828.92

LATERAL
N 6127510.43
E 1643857.25

SSMH 6B
N 6127501.32
E 1643832.86
RL.LID 53.44
IN 51.54
OUT 51.59

9.52

SSMH 4B
N 6127495.39
E 1643916.97
RL.LID 55.55
IN 52.83
OUT 52.79

32.33

LATERAL
N 6127488.55
E 1643954.87

SSMH LOT 29 (RE)
N 6127488.23
E 1643948.48
RL.LID 58.81

SSMH 6A
N 6127487.44
E 1643813.41
RL.LID 55.10
IN 53.83
OUT 53.81

23.89

LATERAL
N 6127491.96
E 1643835.97

LATERAL
N 6127473.55
E 1643809.12

LATERAL
N 6127469.13
E 1643919.44

1 2 3 4 5 6 7 8 9 10 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 37 38

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CONSULTING ENGINEERS
P.O. Box 480, KERIKERI
approved Print 30-03-07

SCALE: 1:600 @A1

DATE: FEBRUARY 2007

No.	Amendment	Init.	Date.
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2	.	.	.

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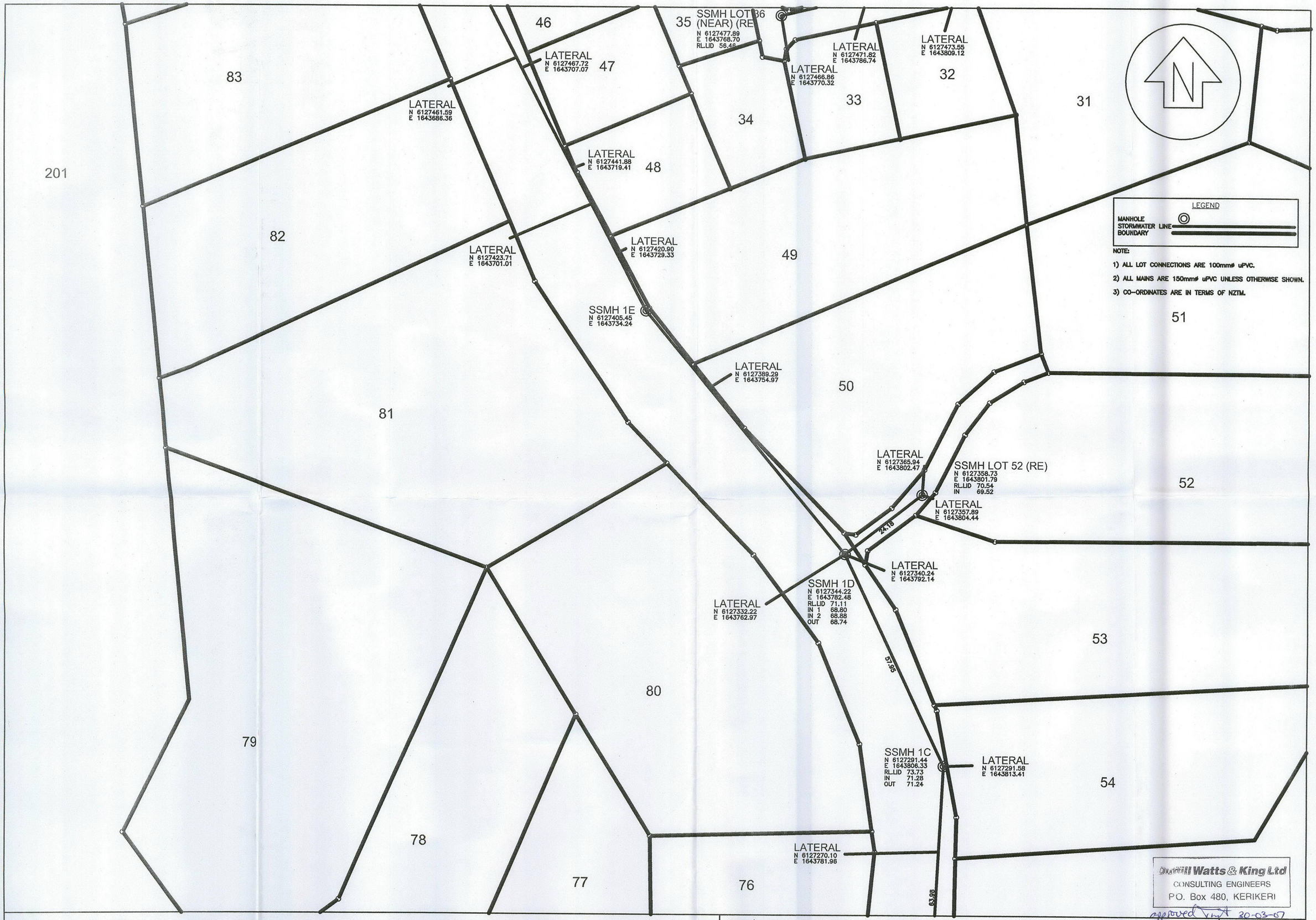
Designed. JMB
Drawn. ABI 19 FEBRUARY 2007
File Ref: 06/004
Approved.

ASBUILT PLAN - SANITARY SEWER
CABLE BAY SECTIONS

Firm's Name
BLUE WALLACE SURVEYORS
25 HARWOOD STREET - PO BOX 38
HAMILTON
PHONE: (07) 839-7799

File Reference
06/004

Drawing No.
3 of 6



Duthie Watts & King Ltd
CONSULTING ENGINEERS
P.O. Box 480, KERIKERI

approved 30-03-07

ASBUILT PLAN – SANITARY SEWER
CABLE BAY HEIGHTS

SCALE: 1:600 @A2 | DATE: FEB 2007 | PREPARED FOR: BLUNT

Firm's Name

Blue Wallace
Surveyors Ltd.
25 Harwood Street, P O Box 38,
HAMILTON.
Phone (07) 8397799, Fax (07) 8394455

File Reference
06/004

Drawing No.
5 OF 6

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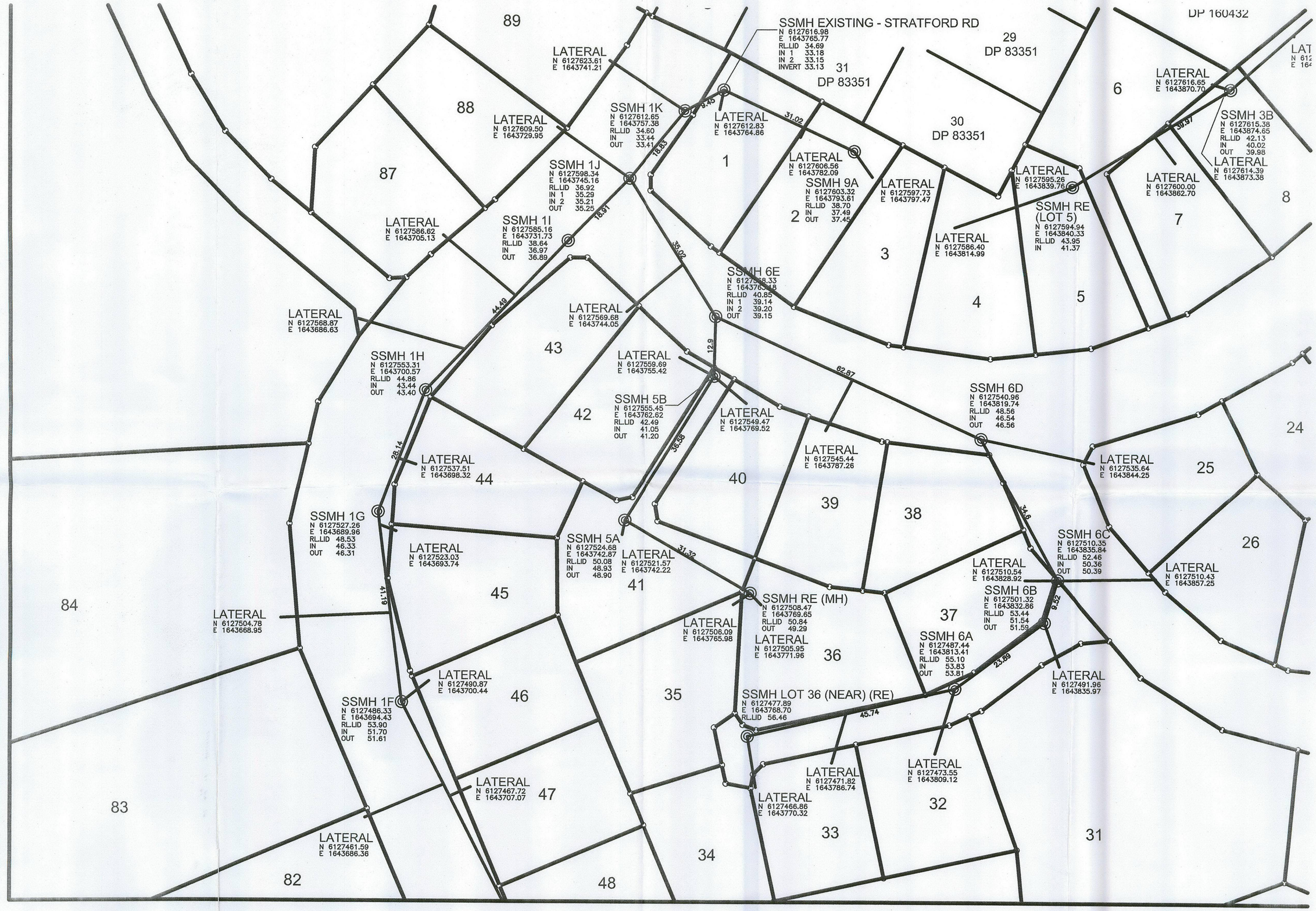

Duffill Watts & King Ltd
CONSULTING ENGINEERS
P.O. Box 480, KERIKERI

approved [signature] 30-03-07

SCALE: 1:600 @A1		DATE: FEBRUARY 2007		
No.	Amendment	Init.	Date.	Designed. JMB
1	.	.	.	Drawn. ABI 19 FEBRUARY 2007
2	.	.	.	File Ref: 06/004
				Approved.

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ASBUILT PLAN - SANITARY SEWER CABLE BAY SECTIONS

Firm's Name
BLUE WALLACE SURVEYORS
25 HARWOOD STREET - PO BOX 38
HAMILTON
PHONE: (07) 839-7799

File Reference
06/004

Drawing No.
4 of 6

79
78
77
76
75
55
56
71
72
73
74
57
60
59
58

SSMH 1B - 1
N 6127227.64
E 1643801.90
RL.LID 74.39
IN 72.17
OUT 72.15

LATERAL
N 6127227.35
E 1643802.58

29.8

SSMH 1B
N 6127200.06
E 1643790.53
RL.LID 75.94
IN 75.03
IN 75.06
OUT 74.96

LATERAL
N 6127203.67
E 1643796.73

17.48

SSMH 10A
N 6127197.85
E 1643773.20
RL.LID 76.60
IN 75.26

LATERAL
N 6127187.39
E 1643765.75

77.49

LATERAL
N 6127151.37
E 1643795.18

LATERAL
N 6127137.52
E 1643770.83

SSMH 1A
N 6127122.67
E 1643791.49
RL.LID 78.31
IN 77.36
OUT 77.29

LATERAL
N 6127112.57
E 1643797.60

78.49

LATERAL
N 6127090.30
E 1643716.10

SSMH 1A - 1
N 6127067.00
E 1643736.08
RL.LID 79.72
OUT 78.85

Duffill Watts & King Ltd
CONSULTING ENGINEERS
PO Box 480, KERIKERI
approved 30-03-07

ASBUILT PLAN – SANITARY SEWER
CABLE BAY HEIGHTS

SCALE: 1:600 @A2 | DATE: FEB 2007 | PREPARED FOR: BLUNT

Firm's Name

Blue Wallace
Surveyors Ltd.
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HAMILTON.
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File Reference
06/004

Drawing No.
6 OF 6

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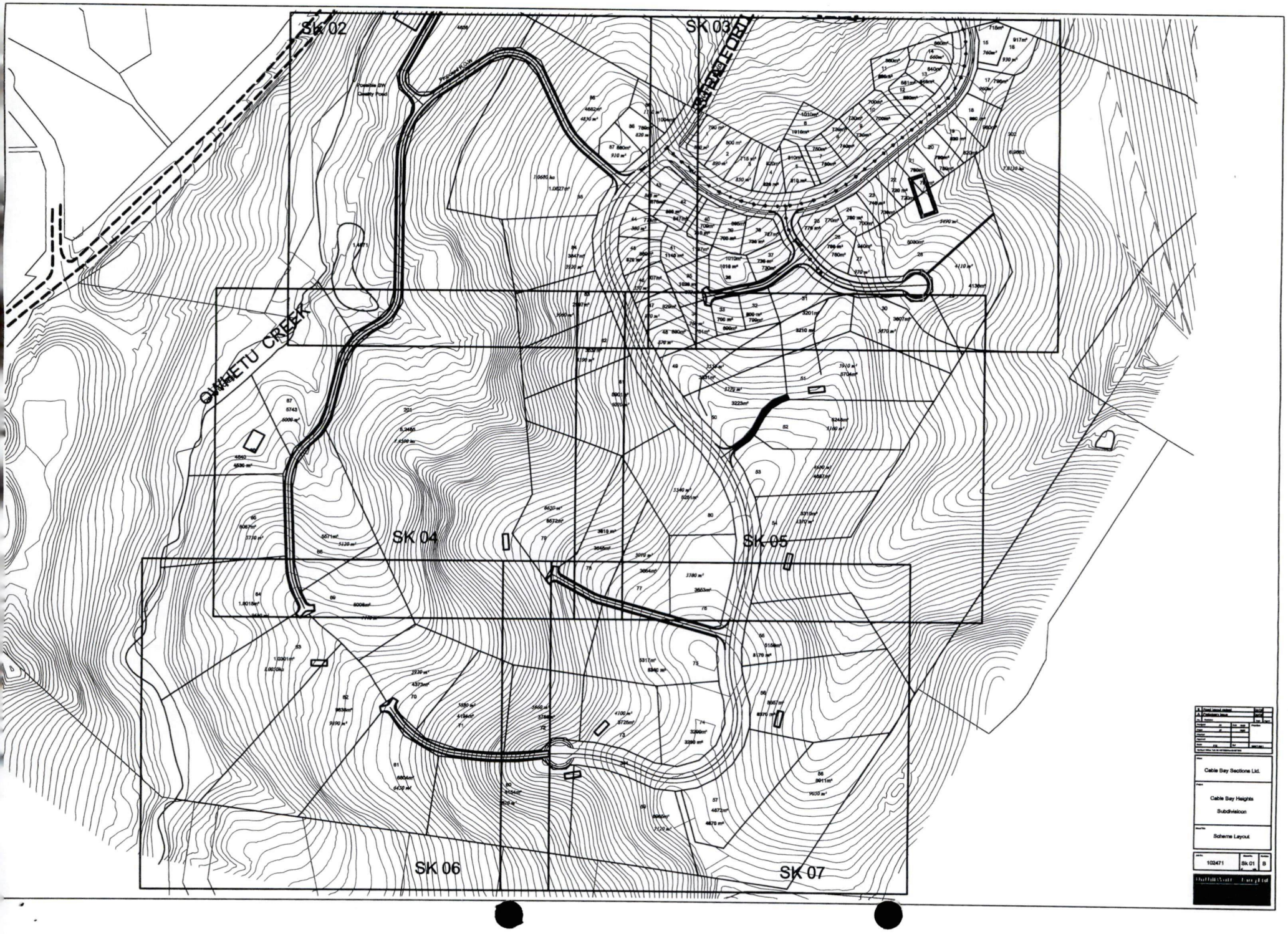
SK 02
SK 03
SK 04
SK 05
SK 06
SK 07
OWHETU CREEK
Cable Bay Sections Ltd.
Cable Bay Heights
Subdivisicon
Scheme Layout
102471
Sk 01
B