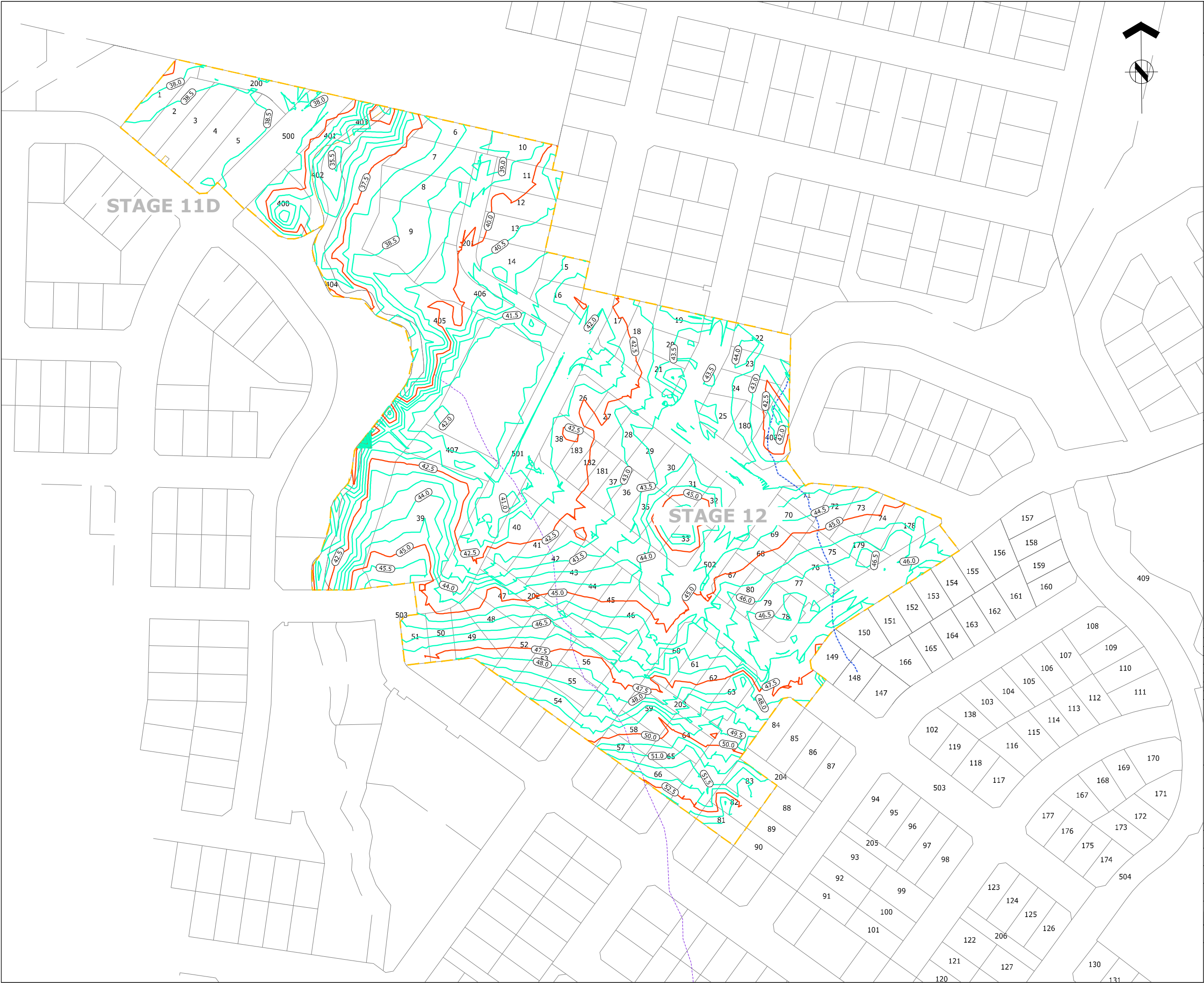




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- NOTES:**
- ORIGIN OF LEVELS
S 66 SO 48643
RL 54.50m
 - ORIGIN OF COORDINATES
S 66 SO 48643
5905356.71mN
1770941.22mE

- LEGEND:**
-  CONTOUR MAJOR
 -  CONTOUR MINOR AT 0.5m INTERVALS
 -  3x EXISTING 150Ø NOVAFLOW
 -  1x 150Ø PERFORATED NOVAFLOW
 -  1x 150Ø NON-PERFORATED NOVAFLOW
 -  EXTENT OF EARTHWORKS

ENGINEERING APPROVAL
ENG-60349136

I CERTIFY THAT THESE ASBUILT PLANS ARE AN ACCURATE RECORD OF THE WORKS UNDERTAKEN AND THAT:

- THE COORDINATES (X,Y) ARE IN TERMS OF NZTM ON NZGD (2000), AND ARE WITHIN ±50mm.
- THE LEVELS (Z) ARE IN TERMS OF THE AUCKLAND 1946 (MSL) LINZ DATUM (DOSLI DATUM), AND ARE WITHIN ±25mm.

Signed:
CHARTERED PROFESSIONAL ENGINEER

Date: **31.08.20**

Name: SHANE JAMES KELLY
Phone: 09-917-5000

Email: s.kelly@harrisingrierson.com



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C	UPDATED SURFACE	SXK	23.09.20
B	EXISTING NOVAFLOW ADDED	DDS	31.08.20
A	DRAFT AS-BUILT	SXK	06.08.20
REF	REVISIONS	BY	DATE

PROJECT:

HUGH GREEN LIMITED
DONEGAL STAGE 11D/12
36 TIR CONAILL AVENUE, FLAT BUSH

TITLE:

FINISHED CONTOURS
AS-BUILT PLAN

ORIGINATOR: DW	DATE: 08.2020	SIGNED:	PLOT BY: SXK
DRAWN: SXK	DATE: 08.2020	SIGNED:	PLOT DATE: 23.09.20
CHECKED: SXK	DATE: 08.2020	SIGNED:	SURVEY BY: DEMPSEY WOOD
APPROVED: SXK	DATE: 08.2020	SIGNED:	SURVEY DATE: 07.2020

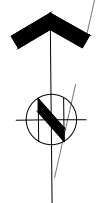
ISSUE STATUS:

AS-BUILT

PROJECT No: 1050-142875-01	SCALES: 1:1000-A1 1:2000-A3	A1
DRAWING No:		REV

142875-12-AB200

C



1. ORIGIN OF LEVELS
S 66 SO 48643
RL 54.50m
2. ORIGIN OF COORDINATES
S 66 SO 48643
5905356.71mN
1770941.22mE
3. EARTHWORKS VOLUMES :
AREA = 109781m²
CUT VOLUME (UNADJUSTED) = 25,722m³
FILL VOLUME (UNADJUSTED) = 25,947m³
NET (UNADJUSTED) = 225m³ FILL

 CUT CONTOURS SHOWN AT 0.5m INTERVALS

 FILL CONTOURS SHOWN AT 0.5m INTERVALS

 EARTHWORK BOUNDARY

I CERTIFY THAT THESE ASBUILT PLANS ARE AN ACCURATE RECORD OF THE WORKS UNDERTAKEN AND THAT:

- THE COORDINATES (X,Y) ARE IN TERMS OF NZTM ON NZGD (2000), AND ARE WITHIN $\pm 50\text{mm}$.
- THE LEVELS (Z) ARE IN TERMS OF THE AUCKLAND 1946 (MSL) LINZ DATUM (DOSLI DATUM), AND ARE WITHIN $\pm 25\text{mm}$.

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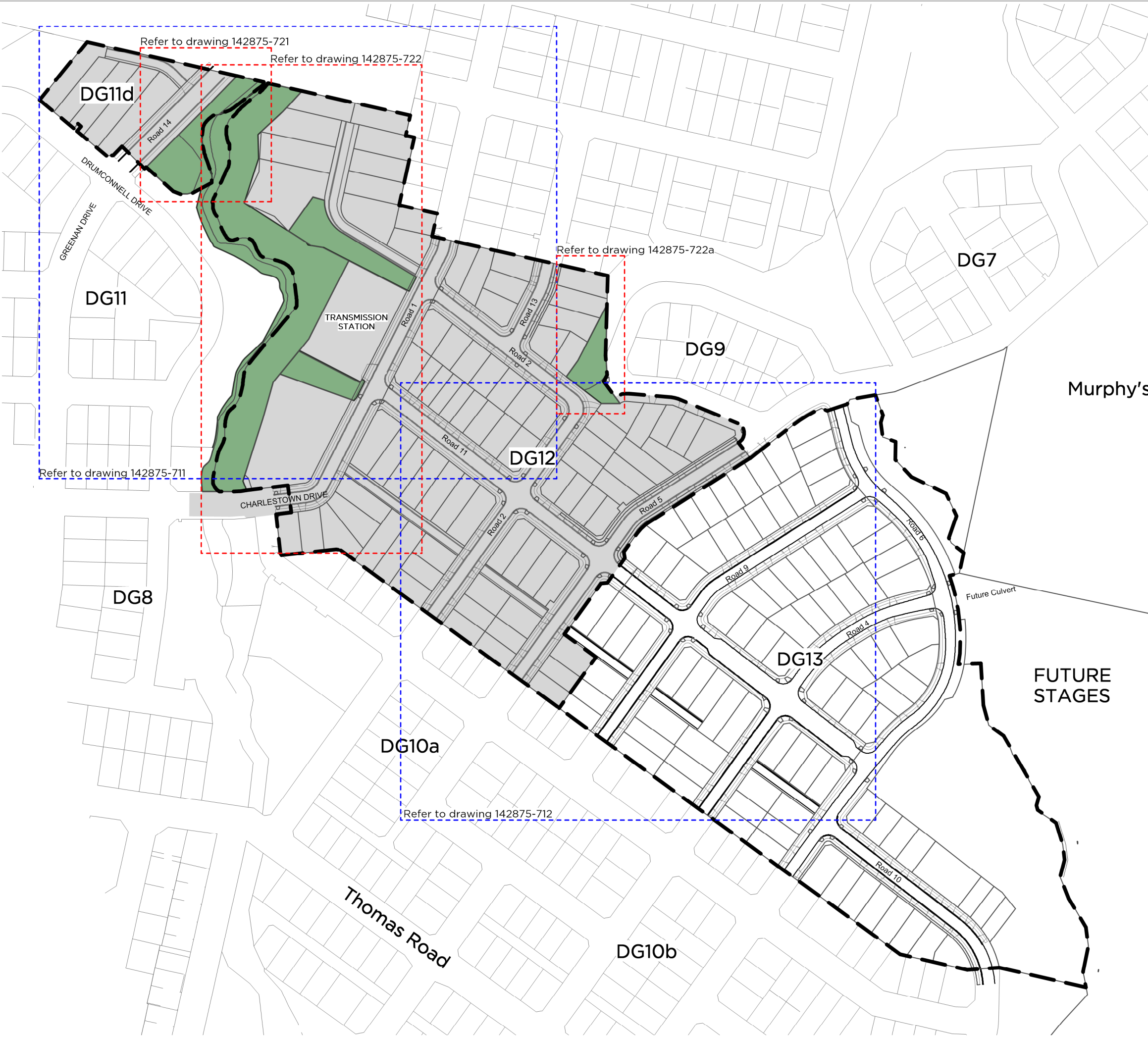
PROJECT:

HUGH GREEN LIMITED
DONEGAL STAGE 11D/12
36 TIR CONAILL AVENUE, FLAT BUSH

ORIGINATOR: DW	DATE: 08.2020	SIGNED:	PLOT BY: SXX
DRAWN: SXX	DATE: 08.2020	SIGNED:	PLOT DATE: 23.09.20
CHECKED: SXX	DATE: 08.2020	SIGNED:	SURVEY BY: DEMPSEY WOOD
APPROVED: SXX	DATE: 08.2020	SIGNED:	SURVEY DATE: 07.2020

PROJECT No: 1050-142875-01	SCALES: 1:1000-A1 1:2000-A3	A1
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DRAWING No:	REV
142875-12-AB220	B



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LANDSCAPE KEY

Scope of street landscape works

Scope of drainage reserve landscape works

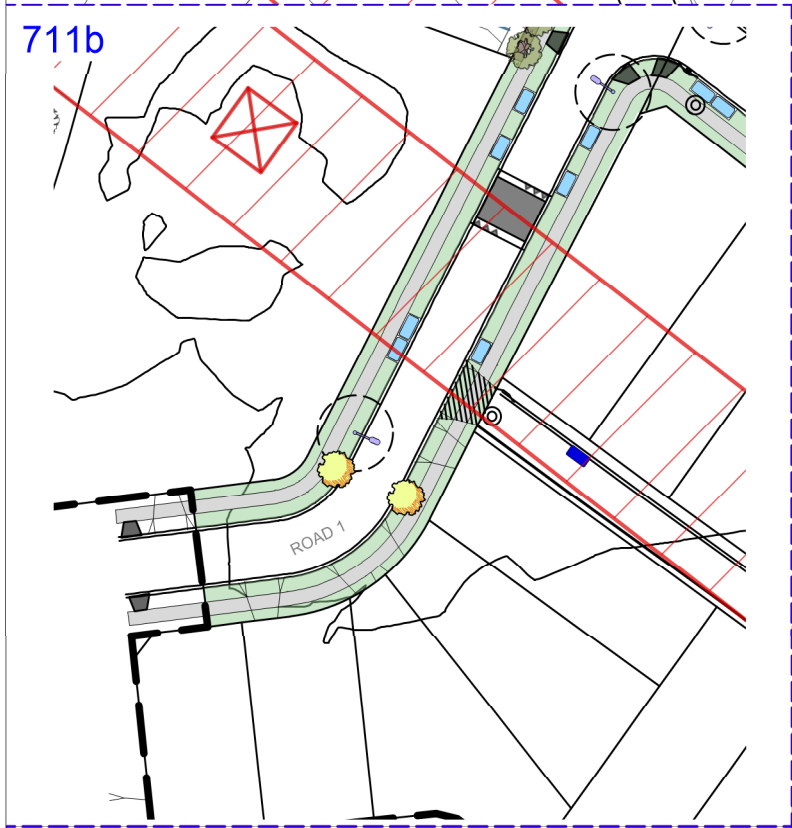
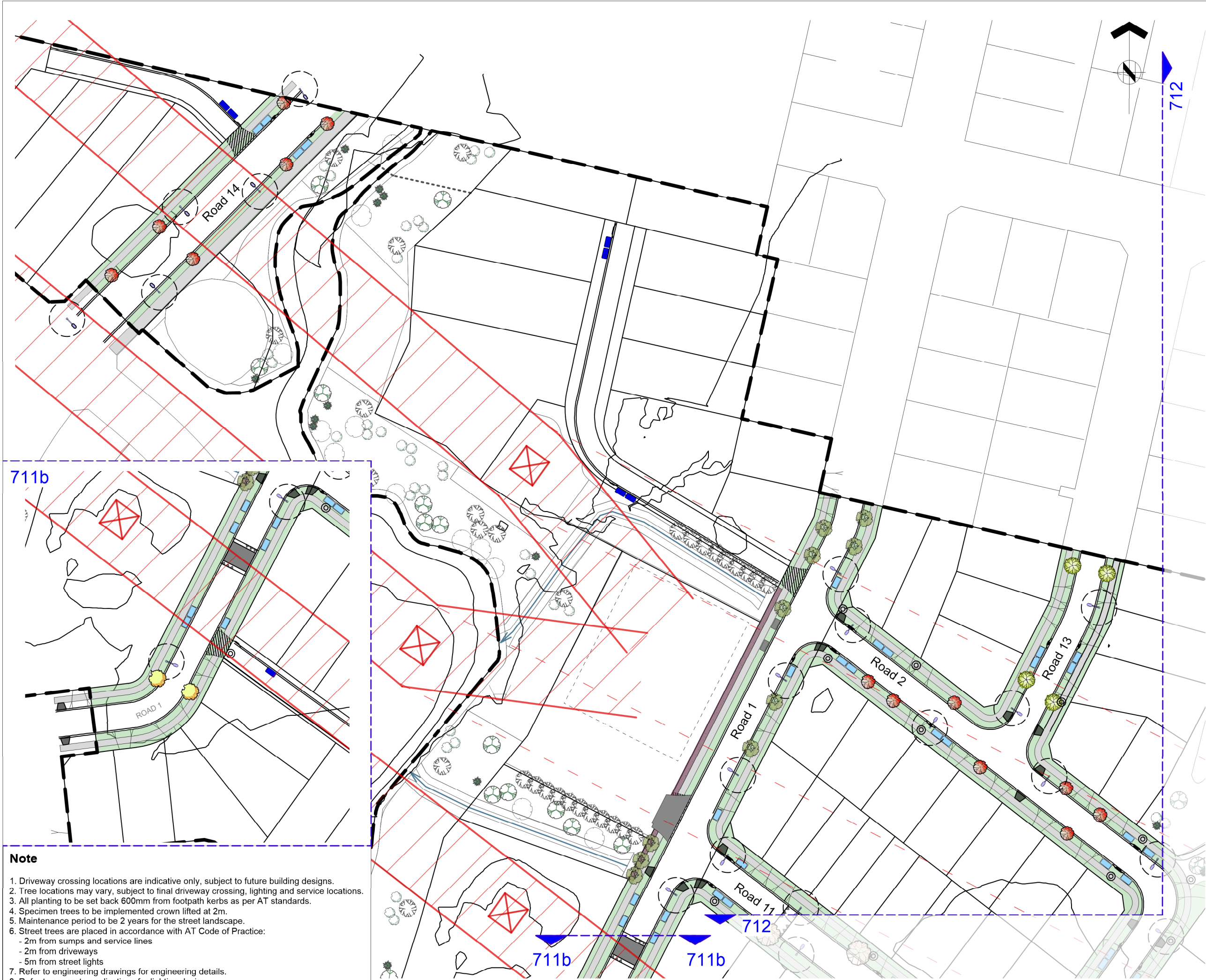
Stage boundary



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AB	FOR EPA	WZD	08/10/20
REF	REVISIONS	BY	DATE
PROJECT:			
HUGH GREEN LIMITED			
DONEGAL STAGE 11D, 12			
36 TIR CONAILL AVENUE, FLAT BUSH			
TITLE:			
LANDSCAPE PLAN			
OVERALL LANDSCAPE PLAN			
ORIGINATOR:	DATE:	SIGNED:	PLOT BY:
WZD	10/02/20		WZD
DRAWN:	DATE:	SIGNED:	PLOT DATE:
WZD	8/10/2020		08/10/20
CHECKED:	DATE:	SIGNED:	SURVEY BY:
BYC	8/10/2020		-
APPROVED:	DATE:	SIGNED:	SURVEY DATE:
			-
ISSUE STATUS:			AS BUILT
PROJECT No:		SCALES:	A3
1050-142875-01		1:2500	REV
DRAWING No:		142875-710 AB	

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Note

1. Driveway crossing locations are indicative only, subject to future building designs.
2. Tree locations may vary, subject to final driveway crossing, lighting and service locations.
3. All planting to be set back 600mm from footpath kerbs as per AT standards.
4. Specimen trees to be implemented crown lifted at 2m.
5. Maintenance period to be 2 years for the street landscape.
6. Street trees are placed in accordance with AT Code of Practice:
 - 2m from sumps and service lines
 - 2m from driveways
 - 5m from street lights
7. Refer to engineering drawings for engineering details.
8. Refer to separate applications for lighting design.



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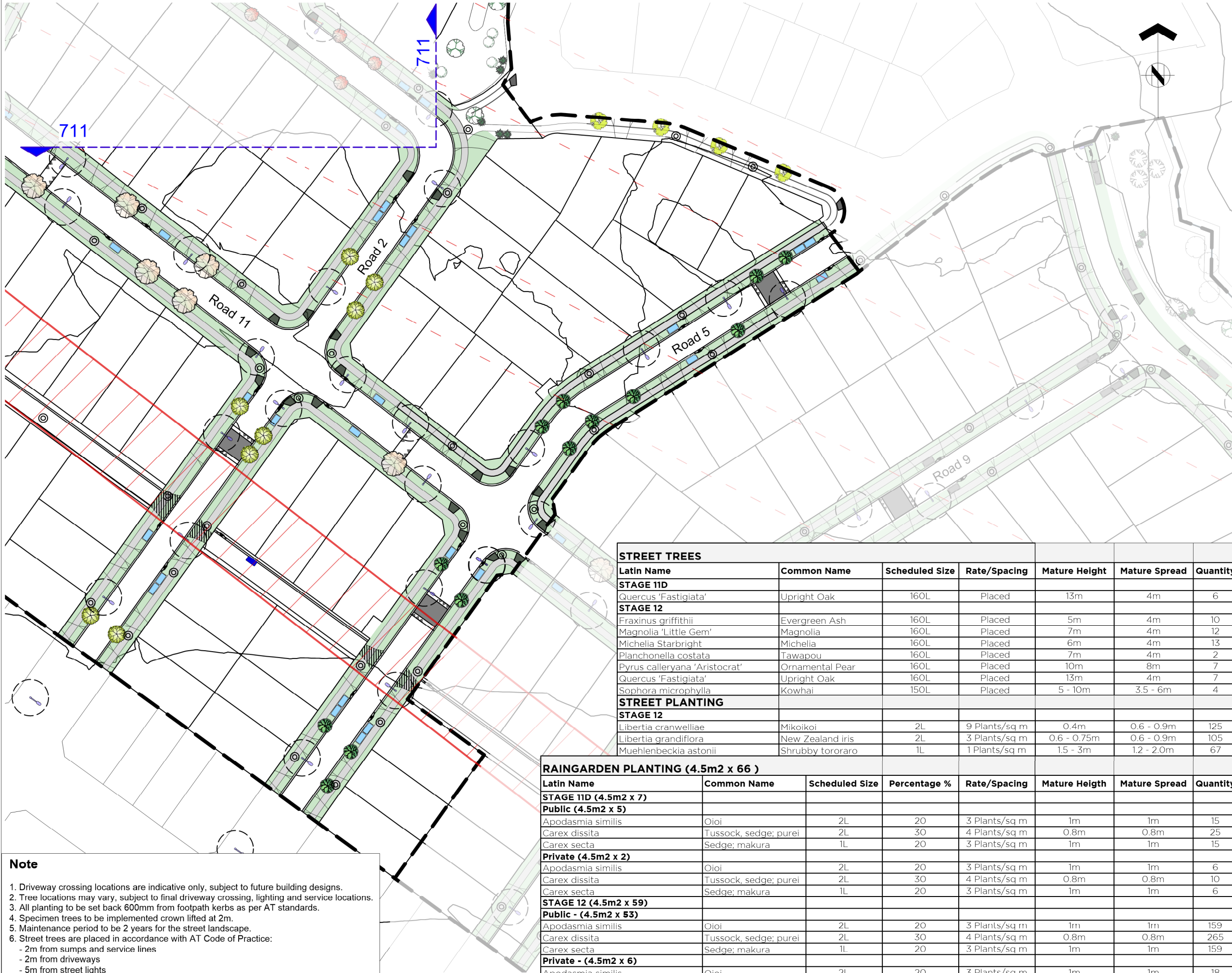
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KEY	
	Fraxinus griffithii
	Magnolia 'Little Gem'
	Michelia Starbright
	Planchonella costata
	Pyrus calleryana 'Aristocrat'
	Quercus 'Fastigiata'
	Sophora microphylla
	Raingarden-Public
	Raingarden-Private
	Grass berm
	Street garden
	Footpath
	Street light
	Indicative driveway crossing
	Stage boundary
	National Grid Yard (to be removed)
	National Grid Yard (retained)
	Pylon



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AB	AS BUILT	WZD	08/10/20
REF	REVISIONS	BY	DATE
PROJECT:			
HUGH GREEN LIMITED			
DONEGAL STAGE 11D, 12			
36 TIR CONAILL AVENUE, FLAT BUSH			
TITLE:			
LANDSCAPE PLAN			
STREET LANDSCAPE			
ORIGINATOR:	DATE:	SIGNED:	PLOT BY:
WZD	10/02/20		WZD
DRAWN:	DATE:	SIGNED:	PLOT DATE:
WZD	8/10/2020		8/10/2020
CHECKED:	DATE:	SIGNED:	SURVEY BY:
BYC	8/10/2020		-
APPROVED:	DATE:	SIGNED:	SURVEY DATE:
			-
ISSUE STATUS:			AS BUILT
PROJECT No:	SCALES:	A3	
1050-142875-01	1:1000@A3	REV	
DRAWING No:	142875-711 AB		



KEY	
	Fraxinus griffithii
	Magnolia 'Little Gem'
	Michelia Starbright
	Planchonella costata
	Pyrus calleryana 'Aristocrat'
	Quercus 'Fastigiata'
	Sophora microphylla
	Raingarden-Public
	Raingarden-Private
	Grass berm
	Footpath
	Street light
	Indicative driveway crossing
	Stage boundary
	National Grid Yard (to be removed)
	National Grid Yard (retained)
	Pylon

STREET TREES						
Latin Name	Common Name	Scheduled Size	Rate/Spacing	Mature Height	Mature Spread	Quantity
STAGE 11D						
Quercus 'Fastigiata'	Upright Oak	160L	Placed	13m	4m	6
STAGE 12						
Fraxinus griffithii	Evergreen Ash	160L	Placed	5m	4m	10
Magnolia 'Little Gem'	Magnolia	160L	Placed	7m	4m	12
Michelia Starbright	Michelia	160L	Placed	6m	4m	13
Planchonella costata	Tawapou	160L	Placed	7m	4m	2
Pyrus calleryana 'Aristocrat'	Ornamental Pear	160L	Placed	10m	8m	7
Quercus 'Fastigiata'	Upright Oak	160L	Placed	13m	4m	7
Sophora microphylla	Kowhai	150L	Placed	5 - 10m	3.5 - 6m	4
STREET PLANTING						
STAGE 12						
Libertia cranwelliae	Mikoikoi	2L	9 Plants/sq m	0.4m	0.6 - 0.9m	125
Libertia grandiflora	New Zealand iris	2L	3 Plants/sq m	0.6 - 0.75m	0.6 - 0.9m	105
Muehlenbeckia astonii	Shrubby tororaro	1L	1 Plants/sq m	1.5 - 3m	1.2 - 2.0m	67

RAINGARDEN PLANTING (4.5m2 x 66)							
Latin Name	Common Name	Scheduled Size	Percentage %	Rate/Spacing	Mature Heighth	Mature Spread	Quantity
STAGE 11D (4.5m2 x 7)							
Public (4.5m2 x 5)							
Apodasmia similis	Oioi	2L	20	3 Plants/sq m	1m	1m	15
Carex dissita	Tussock, sedge; purei	2L	30	4 Plants/sq m	0.8m	0.8m	25
Carex secta	Sedge; makura	1L	20	3 Plants/sq m	1m	1m	15
Private (4.5m2 x 2)							
Apodasmia similis	Oioi	2L	20	3 Plants/sq m	1m	1m	6
Carex dissita	Tussock, sedge; purei	2L	30	4 Plants/sq m	0.8m	0.8m	10
Carex secta	Sedge; makura	1L	20	3 Plants/sq m	1m	1m	6
STAGE 12 (4.5m2 x 59)							
Public - (4.5m2 x 53)							
Apodasmia similis	Oioi	2L	20	3 Plants/sq m	1m	1m	159
Carex dissita	Tussock, sedge; purei	2L	30	4 Plants/sq m	0.8m	0.8m	265
Carex secta	Sedge; makura	1L	20	3 Plants/sq m	1m	1m	159
Private - (4.5m2 x 6)							
Apodasmia similis	Oioi	2L	20	3 Plants/sq m	1m	1m	18
Carex dissita	Tussock, sedge; purei	2L	30	4 Plants/sq m	0.8m	0.8m	30
Carex secta	Sedge; makura	1L	20	3 Plants/sq m	1m	1m	18

- Note**
- Driveway crossing locations are indicative only, subject to future building designs.
 - Tree locations may vary, subject to final driveway crossing, lighting and service locations.
 - All planting to be set back 600mm from footpath kerbs as per AT standards.
 - Specimen trees to be implemented crown lifted at 2m.
 - Maintenance period to be 2 years for the street landscape.
 - Street trees are placed in accordance with AT Code of Practice:
 - 2m from sumps and service lines
 - 2m from driveways
 - 5m from street lights
 - Refer to engineering drawings for engineering details.
 - Refer to separate applications for lighting design.



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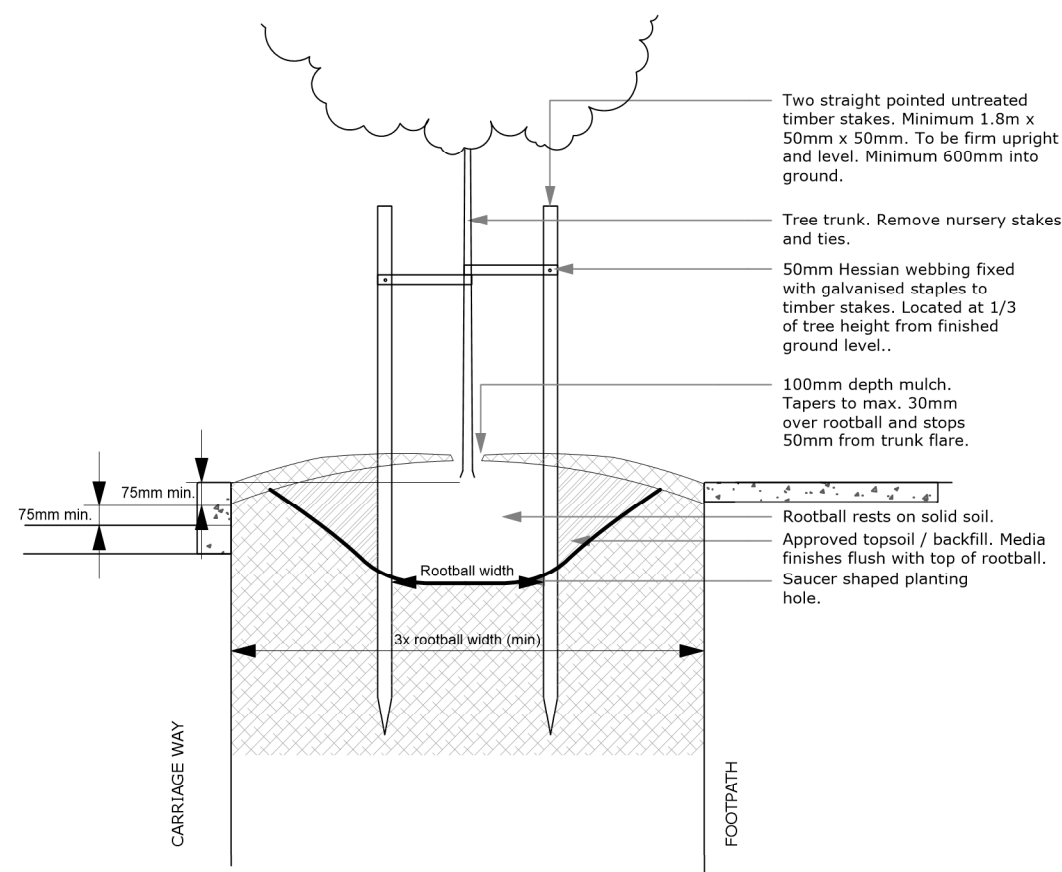
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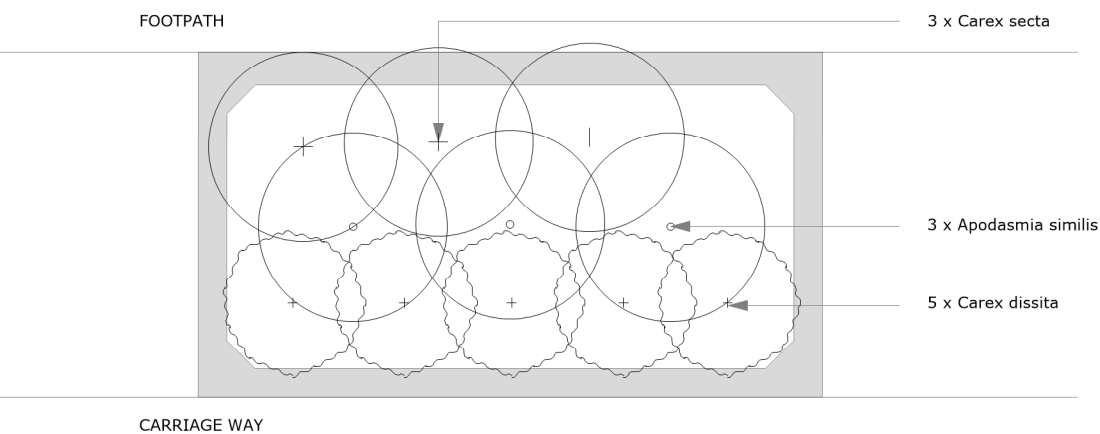
AB	AS BUILT	08/10/20
REF	REVISIONS	BY DATE
PROJECT:		
HUGH GREEN LIMITED		
DONEGAL STAGE 11D, 12		
36 TIR CONAILL AVENUE, FLAT BUSH		
TITLE:		
LANDSCAPE PLAN		
STREET LANDSCAPE		
ORIGINATOR:	DATE:	SIGNED:
WZD	19/02/20	
DRAWN:	DATE:	SIGNED:
WZD	12/08/20	
CHECKED:	DATE:	SIGNED:
BYC	12/08/20	
APPROVED:	DATE:	SIGNED:
ISSUE STATUS:		
AS BUILT		
PROJECT No:	SCALE:	A3
1050-142875-01	1:1000	
DRAWING No:		REV
142875-712 AB		

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Typical tree pit detail 1:40@A3



Typical raingarden detail 1:40@A3





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AB	AS BUILT	08/10/20
REF	REVISIONS	BY DATE
PROJECT:		
HUGH GREEN LIMITED DONEGAL STAGE 11D, 12 36 TIR CONAILL AVENUE, FLAT BUSH		
TITLE:		
LANDSCAPE PLAN STREET LANDSCAPE TYPICAL DETAILS		
ORIGINATOR:	DATE:	SIGNED:
WZD	19/02/20	
DRAWN:	DATE:	SIGNED:
WZD	1/10/20	
CHECKED:	DATE:	SIGNED:
BYC	1/10/20	
APPROVED:	DATE:	SIGNED:
ISSUE STATUS:		
AS BUILT		
PROJECT No:		SCALES:
1050-142875-01		1:40
DRAWING No:		REV
142875-715		AB

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STAGE 11D WALKWAY PLANTING (207m2)					
Latin Name	Common Name	Scheduled Size	Percentage %	Rate/Spacing	Quantity
11-WW-1 (17m2)					
Carex virgata	Swamp sedge; pukio	1L	20	2 Plants/sq m	7
Chionochoa flavicans	Dwarf toe toe	1L	20	2 Plants/sq m	7
Coprosma 'Poor Knights'	Coprosma poor knights; taupata	1L	20	2 Plants/sq m	7
Dianella nigra	Turutu	1L	10	3 Plants/sq m	5
Libertia grandiflora	New Zealand iris	2L	10	3 Plants/sq m	5
Muehlenbeckia axillaris	Creeping wire vine	1L	20	2 Plants/sq m	7
11-WW-2 (190m2)					
Carex virgata	Swamp sedge; pukio	1L	20	2 Plants/sq m	76
Chionochoa flavicans	Dwarf toe toe	1L	20	2 Plants/sq m	76
Coprosma 'Poor Knights'	Coprosma poor knights; taupata	1L	20	2 Plants/sq m	76
Dianella nigra	Turutu	1L	10	3 Plants/sq m	57
Libertia grandiflora	New Zealand iris	2L	10	3 Plants/sq m	57
Muehlenbeckia axillaris	Creeping wire vine	1L	20	2 Plants/sq m	76
STAGE 11D WATER MARGIN PLANTING (296m2)					
Latin Name	Common Name	Scheduled Size	Percentage %	Rate/Spacing	Quantity
11-SM-1 (296m2)					
Carex lambertiana	Forest Sedge	1L	15	2 Plants/sq m	89
Carex lessoniana	Spreading swamp sedge; rautahi	1L	15	2 Plants/sq m	89
Carex secta	Sedge; makura	1L	10	2 Plants/sq m	59
Carex virgata	Swamp sedge; pukio	1L	15	2 Plants/sq m	89
Carpodetus serratus	Marbleleaf; putaputaweta	5L	15	2 Plants/sq m	89
Eleocharis acuta	Sharp spike sedge	1L	15	2 Plants/sq m	89
Juncus articulatus	Jointed rush	1L	15	2 Plants/sq m	89

STAGE 11D GENERAL LOW REVEGETATION (268m2)					
Latin Name	Common Name	Scheduled Size	Percentage %	Rate/Spacing	Quantity
11-LR-1 (268m2)					
Coprosma robusta	Karamu	1L	15	2 Plants/sq m	80
Hebe stricta	Koromiko	1L	5	1 Plants/sq m	13
Phormium tenax	New Zealand Flax	1L	10	1 Plants/sq m	27
Phormium cookianum	NZ mountain flax	1L	10	2 Plants/sq m	54
Austroderia fulvida	Toe toe; kakaho	1L	10	1 Plants/sq m	27
Leptospermum scoparium	Red tea tree; manuka	5L	15	1 Plants/sq m	40
Pseudopanax arboreus	Five-finger; whauwhaupaku	1L	5	1 Plants/sq m	13
Melicytus ramiflorus	Whiteywood; mahoe	5L	10	1 Plants/sq m	27
Dodonaea viscosa	Giant Hop Bush	1L	5	1 Plants/sq m	13
Muehlenbeckia astonii	Shrubby tororaro	1L	15	2 Plants/sq m	80
STAGE 11D GENERAL REVEGETATION (381m2)					
Latin Name	Common Name	Scheduled Size	Percentage %	Rate/Spacing	Quantity
11-GR-1 (104m2)					
Austroderia fulvida	Toe toe; kakaho	1L	5	1 Plants/sq m	5
Coprosma robusta	Karamu	1L	10	2 Plants/sq m	21
Hebe stricta	Koromiko	1L	5	1 Plants/sq m	5
Hoheria populnea	Lacebark; houhere	5L	5	1 Plants/sq m	5
Kunzea ericoides	White tea tree; kanuka	5L	5	1 Plants/sq m	5
Leptospermum scoparium	Red tea tree; manuka	5L	5	1 Plants/sq m	5
Melicytus ramiflorus	Whiteywood; mahoe	5L	10	1 Plants/sq m	10
Myrsine australis	Red matipo; mapou	5L	5	1 Plants/sq m	5
Olearia paniculata	Golden akeake; akiraho	5L	5	1 Plants/sq m	5
Phormium cookianum	NZ mountain flax	1L	10	2 Plants/sq m	21
Phormium tenax	New Zealand Flax	1L	5	1 Plants/sq m	5
Plagianthus regius	Ribbonwood; manatu	5L	5	1 Plants/sq m	5
Podocarpus totara-1	Totara	5L	5	1 Plants/sq m	5
Pseudopanax arboreus	Five-finger; whauwhaupaku	1L	5	1 Plants/sq m	5
Pseudopanax crassifolius	Lancewood; horoeka	1L	5	1 Plants/sq m	5
Rhopalostylis sapida	Nikau	5L	5	1 Plants/sq m	5
Sophora microphylla-1	Kowhai	5L	5	1 Plants/sq m	5
GR-2 (277m2)					
Austroderia fulvida	Toe toe; kakaho	1L	5	1 Plants/sq m	14
Coprosma robusta	Karamu	1L	10	2 Plants/sq m	55
Hebe stricta	Koromiko	1L	5	1 Plants/sq m	14
Hoheria populnea	Lacebark; houhere	5L	5	1 Plants/sq m	14
Kunzea ericoides	White tea tree; kanuka	5L	5	1 Plants/sq m	14
Leptospermum scoparium	Red tea tree; manuka	5L	5	1 Plants/sq m	14
Melicytus ramiflorus	Whiteywood; mahoe	5L	10	1 Plants/sq m	28
Myrsine australis	Red matipo; mapou	5L	5	1 Plants/sq m	14
Olearia paniculata	Golden akeake; akiraho	5L	5	1 Plants/sq m	14
Phormium cookianum	NZ mountain flax	1L	10	2 Plants/sq m	55
Phormium tenax	New Zealand Flax	1L	5	1 Plants/sq m	14
Plagianthus regius	Ribbonwood; manatu	5L	5	1 Plants/sq m	14
Podocarpus totara-1	Totara	5L	5	1 Plants/sq m	14
Pseudopanax arboreus	Five-finger; whauwhaupaku	1L	5	1 Plants/sq m	14
Pseudopanax crassifolius	Lancewood; horoeka	1L	5	1 Plants/sq m	14
Rhopalostylis sapida	Nikau	5L	5	1 Plants/sq m	14
Sophora microphylla-1	Kowhai	5L	5	1 Plants/sq m	14

NOTES:

- 1. Weed removal for revegetation areas is required prior to planting.
- 2. All planting to be offset 0.6m from path edges as per AT Code of Standards
- 3. The maintenance period of revegetation areas shall be for a period of two years.
- 4. 100% biodegradable weed mat (minimum 750gsm) is to be placed around all planted areas.
- 5. This drawing to be read in conjunction with engineering plans.



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KEY

Alectryon excelsus

Cordylina australis

Corynocarpus laevigatus

Dacrycarpus dacrydioides

Laurelia novae-zelandiae

Vitex lucens

General revegetation planting

Low revegetation planting <5m maturity height to allow for overheads

Water margin planting (2m from each side of stream)

Walkway amenity planting

Proposed stream course

Service ways

Stage boundary

National Grid Yard (to be removed)

National Grid Yard (retained)

Pylon

AB

AS BUILT

REF

REVISIONS

PROJECT:

HUGH GREEN LIMITED

DONEGAL STAGE 11D, 12

36 TIR CONAILL AVENUE, FLAT BUSH

TITLE:

LANDSCAPE PLAN

DG11D DRAINAGE RESERVE

PLANTING PLAN AND SCHEDULE

ORIGINATOR:

W7D

DATE:

10/02/20

SIGNED:

PLOT BY:

WZD

DRAWN:

WZD

DATE:

1/10/2020

SIGNED:

PLOT DATE:

1/10/20

CHECKED:

BYC

DATE:

1/10/2020

SIGNED:

SURVEY BY:

-

APPROVED:

DATE:

SIGNED:

SURVEY DATE:

-

ISSUC STATUS:

AS BUILT

PROJECT No:

1050-142875-01

SCALES:

1:1000

A3

DRAWING No:

REV

142875-721

AB

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STAGE 12 WALKWAY PLANTING (207m2)					
Latin Name	Common Name	Scheduled Size	Percentage %	Rate/Spacing	Quantity
12-WW-1 (51m2)					
Carex virgata	Swamp sedge; pukio	1L	20	2 Plants/sq m	20
Chionochloa flavicans	Dwarf toe toe	1L	20	2 Plants/sq m	20
Coprosma 'Poor Knights'	Coprosma poor knights; taupata	1L	20	2 Plants/sq m	20
Muehlenbeckia axillaris	Creeping wire vine	1L	20	2 Plants/sq m	20
Dianella nigra	Turutu	1L	10	3 Plants/sq m	15
Libertia grandiflora	New Zealand iris	2L	10	3 Plants/sq m	15
12-WW-2 (95m2)					
Carex virgata	Swamp sedge; pukio	1L	20	2 Plants/sq m	38
Chionochloa flavicans	Dwarf toe toe	1L	20	2 Plants/sq m	38
Coprosma 'Poor Knights'	Coprosma poor knights; taupata	1L	20	2 Plants/sq m	38
Muehlenbeckia axillaris	Creeping wire vine	1L	20	2 Plants/sq m	38
Dianella nigra	Turutu	1L	10	3 Plants/sq m	29
Libertia grandiflora	New Zealand iris	2L	10	3 Plants/sq m	29
12-WW-3 (51m2)					
Carex virgata	Swamp sedge; pukio	1L	20	2 Plants/sq m	21
Chionochloa flavicans	Dwarf toe toe	1L	20	2 Plants/sq m	21
Coprosma 'Poor Knights'	Coprosma poor knights; taupata	1L	20	2 Plants/sq m	21
Muehlenbeckia axillaris	Creeping wire vine	1L	20	2 Plants/sq m	21
Dianella nigra	Turutu	1L	10	3 Plants/sq m	15
Libertia grandiflora	New Zealand iris	2L	10	3 Plants/sq m	15
12-WW-4 (10m2)					
Coprosma 'Poor Knights'	Coprosma poor knights; taupata	1L	60	2 Plants/sq m	12
Dianella nigra	Turutu	1L	20	3 Plants/sq m	6
Libertia grandiflora	New Zealand iris	2L	20	3 Plants/sq m	6
STAGE 12 WATER MARGIN PLANTING (818m2)					
Latin Name	Common Name	Scheduled Size	Percentage %	Rate/Spacing	Quantity
12-SM-1 (682m2)					
Carex lambertiana	Forest Sedge	1L	15	2 Plants/sq m	205
Carex lessoniana	Spreading swamp sedge; rautahi	1L	15	2 Plants/sq m	205
Carex secta	Sedge; makura	1L	10	2 Plants/sq m	137
Carex virgata	Swamp sedge; pukio	1L	15	2 Plants/sq m	205
Carpodetus serratus	Marbleleaf; putaputaweta	5L	15	2 Plants/sq m	205
Eleocharis acuta	Sharp spike sedge	1L	15	2 Plants/sq m	205
Juncus articulatus	Jointed rush	1L	15	2 Plants/sq m	205
12-SM-2 (136m2)					
Carex lambertiana	Forest Sedge	1L	15	2 Plants/sq m	41
Carex lessoniana	Spreading swamp sedge; rautahi	1L	15	2 Plants/sq m	41
Carex secta	Sedge; makura	1L	10	2 Plants/sq m	27
Carex virgata	Swamp sedge; pukio	1L	15	2 Plants/sq m	41
Carpodetus serratus	Marbleleaf; putaputaweta	5L	15	2 Plants/sq m	41
Eleocharis acuta	Sharp spike sedge	1L	15	2 Plants/sq m	41
Juncus articulatus	Jointed rush	1L	15	2 Plants/sq m	41
STAGE 12 FLOOD ZONE MARGIN PLANTING (686m2)					
Latin Name	Common Name	Scheduled Size	Percentage %	Rate/Spacing	Quantity
12-FM-1 (386m2)					
Carex secta	Sedge; makura	1L	20	2 Plants/sq m	156
Carex virgata	Swamp sedge; pukio	1L	20	2 Plants/sq m	156
Cyperus ustulatus	Giant umbrella sedge	1L	20	2 Plants/sq m	156
Austroderia fulvida	Toe toe; kakaho	1L	20	2 Plants/sq m	156
Phormium cookianum	NZ mountain flax	1L	20	2 Plants/sq m	156
12-FM-2 (300m2)					
Austroderia fulvida	Toe toe; kakaho	1L	20	2 Plants/sq m	120
Carex secta	Sedge; makura	1L	20	2 Plants/sq m	120
Carex virgata	Swamp sedge; pukio	1L	20	2 Plants/sq m	120
Cyperus ustulatus	Giant umbrella sedge	1L	20	2 Plants/sq m	120
Phormium cookianum	NZ mountain flax	1L	20	2 Plants/sq m	120

Schedule continues on page 723

NOTES:

1. Weed removal for revegetation areas is required prior to planting.
2. All planting to be offset 0.6m from path edges as per AT Code of Standards
3. The maintenance period of revegetation areas shall be for a period of two years.
4. 100% biodegradable weed mat (minimum 750gsm) is to be placed around all planted areas.
5. This drawing to be read in conjunction with engineering plans.



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KEY	
	Alectryon excelsus
	Cordylina australis
	Corynocarpus laevigatus
	Dacrycarpus dacrydioides
	Laurelia novae-zelandiae
	Vitex lucens
	General revegetation planting
	Low revegetation planting <5m maturity height to allow for overheads
	Overland flow revegetation planting
	Floodzone margin planting
	Water margin planting (2m from each side of stream)
	Walkway amenity planting
	Proposed stream course
	Service ways
	Overland flow gravel channel
	Stage boundary
	National Grid Yard (to be removed)
	National Grid Yard (retained)
	Pylon



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AB	AS BUILT	09/10/20
REF	REVISIONS	BY DATE
PROJECT:		
HUGH GREEN LIMITED		
DONEGAL STAGE 11D, 12		
36 TIR CONAILL AVENUE, FLAT BUSH		
TITLE:		
LANDSCAPE PLAN		
DG12 DRAINAGE RESERVE		
PLANTING PLAN AND SCHEDULE 1/2		
ORIGINATOR:	DATE:	SIGNED:
WZD	10/02/20	
DRAWN:	DATE:	SIGNED:
WZD	1/10/20	
CHECKED:	DATE:	SIGNED:
BYC	1/10/20	
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ISSUE STATUS:		
AS BUILT		
PROJECT No:	SCALES:	A3
1050-142875-01	1:1000	
DRAWING No:		REV
142875-722 AB		

STAGE 11D MASTER PLANT SCHEDULE					
Latin Name	Common Name	Mature Height	Mature Spread	Scheduled Size	Quantity
SPECIMEN TREES					
Alectryon excelsus	NZ oak; Titoki	5 - 10m	2.0 - 3.5m	160L	2
Cordyline australis	Cabbage tree/ Ti kouka	10m	2m	45L	2
Corynocarpus laevigatus	Karaka	5 - 10m	3.5 - 6m	160L	2
Dacrycarpus dacrydioides	White pine; kahikatea	10 - 15m	3.5 - 6m	160L	2
Laurelia novae-zelandiae	Pukatea	20 - 25m	2.0 - 3.5m	45L	2
Vitex lucens	Puriri	10-20m	8-10m	45L	2
TOTAL					12
SMALL TREES/ SHRUBS/ GROUNDCOVERS/ GRASSES					
Austroderia fulvida	Toe toe; kakaho	1.5 - 3m	1.2 - 2.0m	1L	46
Carex lambertiana	Forest Sedge	0.8m	1m	1L	89
Carex lessoniana	Spreading swamp sedge; rautahi	0.75 - 0.9m	0.6 - 0.9m	1L	89
Carex secta	Sedge; makura	1m	1m	1L	59
Carex virgata	Swamp sedge; pukio	0.9 - 1.5m	0.6 - 0.9m	1L	172
Carpodetus serratus	Marbleleaf; putaputaweta	3 - 5m	2.0 - 3.5m	5L	89
Chionochloa flavicans	Dwarf toe toe	0.75 - 0.9m	0.9 - 1.2m	1L	83
Coprosma 'Poor Knights'	Coprosma poor knights; taupata	0.45 - 0.6m	0.9 - 1.2m	1L	83
Coprosma robusta	Karamu	1.5 - 3m	0.9 - 1.2m	1L	156
Dianella nigra	Turutu	0.5m	0.5m	1L	62
Dodonaea viscosa	Giant Hop Bush	3 - 5m	2.0 - 3.5m	1L	13
Eleocharis acuta	Sharp spike sedge	0.9 - 1.5m	1.2 - 2.0m	1L	89
Hebe stricta	Koromiko	2.5m	1.5m	1L	32
Hoheria populnea	Lacebark; houhere	3 - 5m	1.2 - 2.0m	5L	19
Juncus articulatus	Jointed rush	1m	1m	1L	89
Kunzea ericoides	White tea tree; kanuka	3 - 5m	2.0 - 3.5m	5L	19
Leptospermum scoparium	Red tea tree; manuka	1.5 - 3m	1.2 - 2.0m	5L	59
Libertia grandiflora	New Zealand iris	0.6 - 0.75m	0.6 - 0.9m	2L	62
Melicytus ramiflorus	Whiteywood; mahoe	3 - 5m	3.5 - 6m	5L	65
Muehlenbeckia astonii	Shrubby tororaro	1.5 - 3m	1.2 - 2.0m	1L	80
Muehlenbeckia axillaris	Creeping wire vine	0.2m	1m	1L	83
Myrsine australis	Red matipo; mapou	3 - 5m	1.2 - 2.0m	5L	19
Olearia paniculata	Golden akeake; akiraho	3 - 5m	1.2 - 2.0m	5L	19
Phormium cookianum	NZ mountain flax	1.5m	1.5m	1L	130
Phormium tenax	New Zealand Flax	3m	2m	1L	46
Plagianthus regius	Ribbonwood; manatu	5 - 10m	2.0 - 3.5m	5L	19
Podocarpus totara-1	Totara	10 - 15m	3.5 - 6m	5L	19
Pseudopanax arboreus	Five-finger; whauwhaupaku	3 - 5m	2.0 - 3.5m	1L	32
Pseudopanax crassifolius	Lancewood; horoeka	5 - 10m	3.5 - 6m	1L	19
Rhopalostylis sapida	Nikau	10m	2m	5L	19
Sophora microphylla-1	Kowhai	5 - 10m	3.5 - 6m	5L	19
TOTAL					1879

STAGE 12 MASTER PLANTING SCHEDULE					
Latin Name	Common Name	Mature Height	Mature Spread	Scheduled Size	Quantity
SPECIMEN TREES					
Alectryon excelsus	NZ oak; Titoki	5 - 10m	2.0 - 3.5m	160L	33
Cordyline australis	Cabbage tree/ Ti kouka	10m	2m	45L	20
Corynocarpus laevigatus	Karaka	5 - 10m	3.5 - 6m	160L	15
Dacrycarpus dacrydioides	White pine; kahikatea	10 - 15m	3.5 - 6m	160L	15
Laurelia novae-zelandiae	Pukatea	20 - 25m	2.0 - 3.5m	45L	15
Vitex lucens	Puriri	10-20m	8-10m	45L	27
TOTAL					125
SMALL TREES/ SHRUBS/ GROUNDCOVERS/ GRASSES					
Austroderia fulvida	Toe toe; kakaho	1.5 - 3m	1.2 - 2.0m	1L	709
Carex lambertiana	Forest Sedge	0.8m	1m	1L	246
Carex lessoniana	Spreading swamp sedge; rautahi	0.75 - 0.9m	0.6 - 0.9m	1L	246
Carex secta	Sedge; makura	1m	1m	1L	440
Carex virgata	Swamp sedge; pukio	0.9 - 1.5m	0.6 - 0.9m	1L	601
Carpodetus serratus	Marbleleaf; putaputaweta	3 - 5m	2.0 - 3.5m	5L	246
Chionochloa flavicans	Dwarf toe toe	0.75 - 0.9m	0.9 - 1.2m	1L	79
Coprosma 'Poor Knights'	Coprosma poor knights; taupata	0.45 - 0.6m	0.9 - 1.2m	1L	91
Coprosma robusta	Karamu	1.5 - 3m	0.9 - 1.2m	1L	1610
Cyperus ustulatus	Giant umbrella sedge	0.75 - 0.9m	0.6 - 0.9m	1L	276
Dianella nigra	Turutu	0.5m	0.5m	1L	65
Dodonaea viscosa	Giant Hop Bush	3 - 5m	2.0 - 3.5m	1L	107
Eleocharis acuta	Sharp spike sedge	0.9 - 1.5m	1.2 - 2.0m	1L	246
Hebe stricta	Koromiko	2.5m	1.5m	1L	493
Hoheria populnea	Lacebark; houhere	3 - 5m	1.2 - 2.0m	5L	305
Juncus articulatus	Jointed rush	1m	1m	1L	246
Kunzea ericoides	White tea tree; kanuka	3 - 5m	2.0 - 3.5m	5L	344
Leptospermum scoparium	Red tea tree; manuka	1.5 - 3m	1.2 - 2.0m	5L	663
Libertia grandiflora	New Zealand iris	0.6 - 0.75m	0.6 - 0.9m	2L	65
Melicytus ramiflorus	Whiteywood; mahoe	3 - 5m	3.5 - 6m	5L	698
Muehlenbeckia astonii	Shrubby tororaro	1.5 - 3m	1.2 - 2.0m	1L	638
Muehlenbeckia axillaris	Creeping wire vine	0.2m	1m	1L	79
Myrsine australis	Red matipo; mapou	3 - 5m	1.2 - 2.0m	5L	263
Olearia paniculata	Golden akeake; akiraho	3 - 5m	1.2 - 2.0m	5L	221
Phormium cookianum	NZ mountain flax	1.5m	1.5m	1L	1589
Phormium tenax	New Zealand Flax	3m	2m	1L	598
Plagianthus regius	Ribbonwood; manatu	5 - 10m	2.0 - 3.5m	5L	263
Podocarpus totara-1	Totara	10 - 15m	3.5 - 6m	5L	221
Pseudopanax arboreus	Five-finger; whauwhaupaku	3 - 5m	2.0 - 3.5m	1L	370
Pseudopanax crassifolius	Lancewood; horoeka	5 - 10m	3.5 - 6m	1L	263
Rhopalostylis sapida	Nikau	10m	2m	5L	263
Sophora microphylla-1	Kowhai	5 - 10m	3.5 - 6m	5L	221
TOTAL					12765



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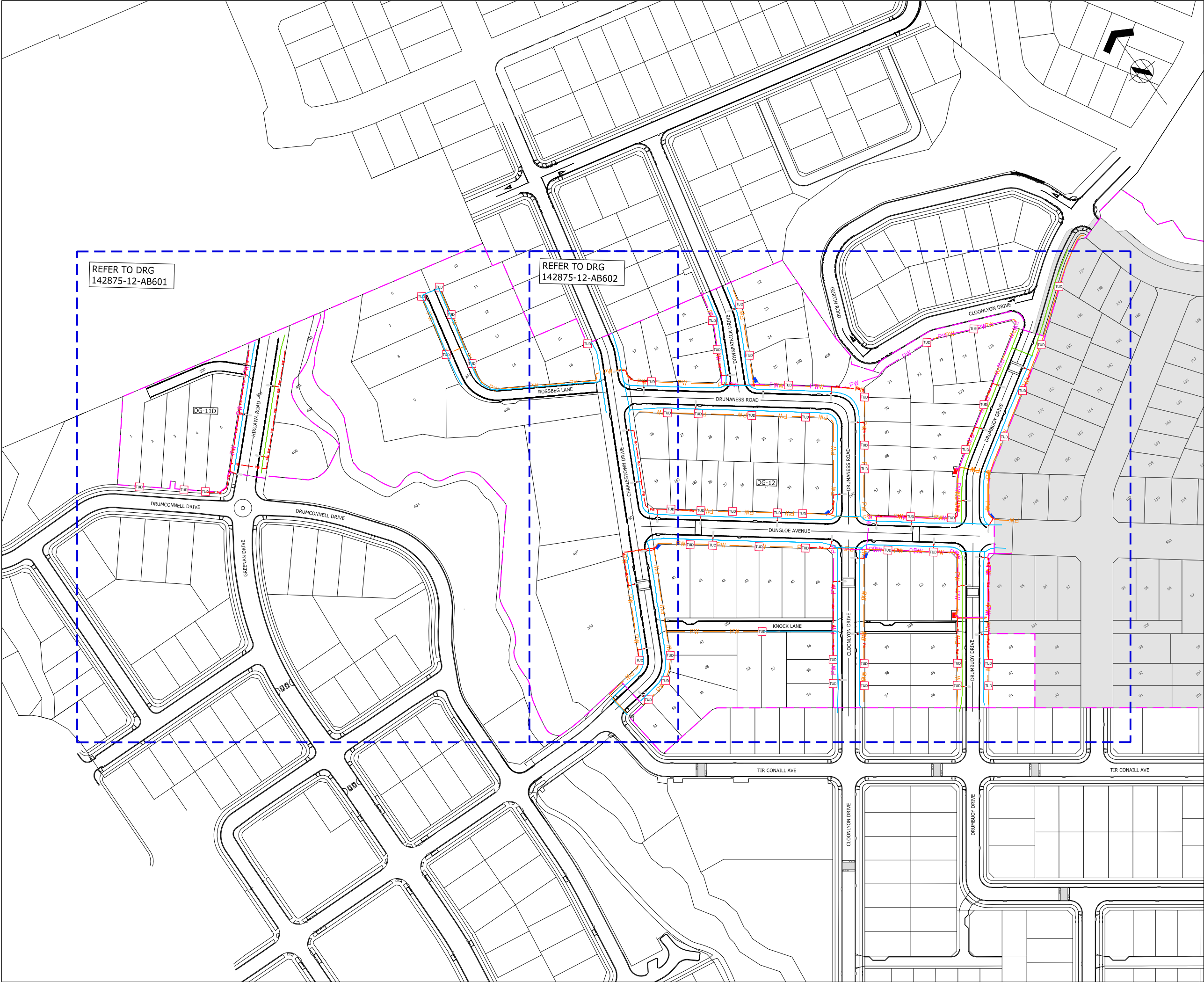
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PROJECT:			
HUGH GREEN LIMITED			
DONEGAL STAGE 11D, 12			
36 TIR CONAILL AVENUE, FLAT BUSH			
TITLE:			
LANDSCAPE PLAN			
DRAINAGE RESERVE			
MASTER PLANT SCHEDULE			
ORIGINATOR:	DATE:	SIGNED:	PLOT BY:
WZD	10/02/20		WZD
DRAWN:	DATE:	SIGNED:	PLOT DATE:
WZD	12/08/20		12/08/20
CHECKED:	DATE:	SIGNED:	SURVEY BY:
BYC	12/08/20		-
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PROJECT No: 1050-142875-01			A3
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NOTES:

- ORIGIN OF LEVELS
S 66 SO 48643
RL 54.50m
- ORIGIN OF COORDINATES
S 66 SO 48643
5905356.71mN
1770941.22mE

LEGEND

- STAGE BOUNDARY
- NEW GAS 150 PVC PIPE
- NEW GAS 100 PVC PIPE
- NEW LV POWER
- NEW HV POWER
- NEW STREETLIGHT CABLE
- NEW POWER TUD
- NEW STREETLIGHT
- LINK PILLAR
- SUBSTATION

ENGINEERING APPROVAL
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- THE LEVELS (Z) ARE IN TERMS OF THE AUCKLAND 1946 (MSL) LINZ DATUM (DOSLI DATUM), AND ARE WITHIN ±25mm.

Signed: _____
CHARTERED PROFESSIONAL ENGINEER

Date: 19/10/2020

Name: SHANE JAMES KELLY

Phone: 09-917-5000

Email: s.kelly@harrisongrierson.com



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REF	REVISIONS	BY	DATE
A	AS-BUILT	DDS	19.10.20

PROJECT: HUGH GREEN LIMITED
DONEGAL STAGE 11D AND 12
36 TIR CONAILL AVE, FLATBUSH

TITLE: OVERALL POWER AND GAS SERVICES AS-BUILT PLAN

ORIGINATOR:	DATE:	SIGNED:	PLOT BY:
DDS	08.2020		DDS
DRAWN:	DATE:	SIGNED:	PLOT DATE:
DDS	09.2020		20.10.20
CHECKED:	DATE:	SIGNED:	SURVEY BY:
SXK	10.2020		DEMPSEY WOOD
APPROVED:	DATE:	SIGNED:	SURVEY DATE:
SXK	10.2020		08.2020

ISSUE STATUS: AS-BUILT

PROJECT No:	SCALES:	A1
1050-142875-01	1:1000-A1 1:2000-A3	
DRAWING No:		REV
142875-12-AB600		A





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5905356.71mN
1770941.22mE

LEGEND
--- STAGE BOUNDARY
--- NEW GAS 150 PVC PIPE
--- NEW GAS 100 PVC PIPE
--- PW NEW LV POWER
--- PW NEW HV POWER
--- NEW STREETLIGHT CABLE
TUD NEW POWER TUD
NEW STREETLIGHT
LINK PILLAR
SUBSTATION

ENGINEERING APPROVAL
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(2000), AND ARE WITHIN ±50mm.
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Signed:
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Date: 19/10/2020
Name: SHANE JAMES KELLY
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REF	REVISIONS	BY	DATE
A	AS-BUILT	DDS	19.10.20

PROJECT:
**HUGH GREEN LIMITED
DONEGAL STAGE 11D AND 12
36 TIR CONAILL AVE, FLATBUSH**

TITLE:
**POWER AND GAS
SERVICES AS-BUILT PLAN
SHEET 1 OF 2**

ORIGINATOR:	DATE:	SIGNED:	PLOT BY:
DDS	08.2020		DDS
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DDS	09.2020		20.10.20
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1050-142875-01	1:500-A1 1:1000-A3	
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- ORIGIN OF COORDINATES
S 66 SO 48643
5905356.71mN
1770941.22mE

LEGEND

- STAGE BOUNDARY
- NEW GAS 150 PVC PIPE
- NEW GAS 100 PVC PIPE
- NEW LV POWER
- NEW HV POWER
- NEW STREETLIGHT CABLE
- NEW POWER TUD
- NEW STREETLIGHT
- LINK PILLAR
- SUBSTATION

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REF	REVISIONS	BY	DATE
A	AS-BUILT	DDS	19.10.20

PROJECT:

HUGH GREEN LIMITED
DONEGAL STAGE 11D AND 12
36 TIR CONAILL AVE, FLATBUSH

TITLE:

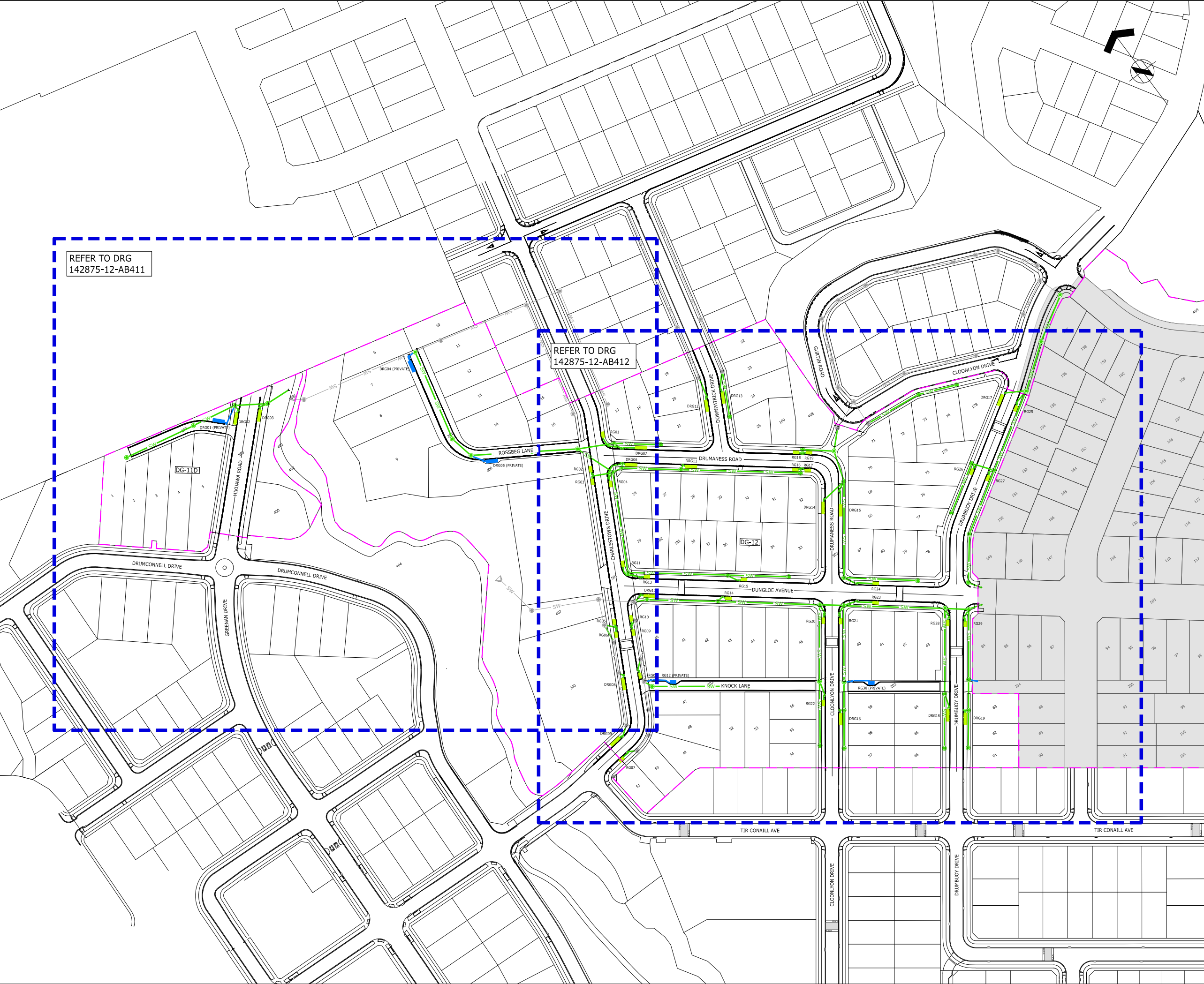
POWER AND GAS
SERVICES AS-BUILT PLAN
SHEET 2 OF 2

ORIGINATOR:	DATE:	SIGNED:	PLOT BY:
DDS	08.2020		DDS
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DDS	09.2020		20.10.20
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SXX	10.2020		DEMPSEY WOOD
APPROVED:	DATE:	SIGNED:	SURVEY DATE:
SXX	10.2020		08.2020

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AS-BUILT

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1050-142875-01	1:500-A1 1:1000-A3	A1
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S 66 SO 48643
RL 54.50m
- ORIGIN OF COORDINATES
S 66 SO 48643
5905356.71mN
1770941.22mE

LEGEND

- STAGE BOUNDARY
- NEW PUBLIC STORMWATER LINE
- NEW PUBLIC RAINGARDEN
- NEW PRIVATE RAINGARDEN
- NEW PUBLIC MANHOLE
- NEW PUBLIC CATCHPIT
- NEW PRIVATE CATCHPIT

ENGINEERING APPROVAL
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Date: 16/10/2020

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REF	REVISIONS	BY	DATE
A	AS-BUILT	DDS	19.10.20

HUGH GREEN LIMITED
DONEGAL STAGE 11D AND 12
36 TIR CONAILL AVENUE, FLATBUSH

TITLE:
OVERALL RAINGARDEN
AS-BUILT PLAN

ORIGINATOR:	DATE:	SIGNED:	PLOT BY:
DDS	08.2020		DDS
DRAWN:	DATE:	SIGNED:	PLOT DATE:
DDS	09.2020		20.10.20
CHECKED:	DATE:	SIGNED:	SURVEY BY:
SXX	10.2020		DEMPSEY WOOD
APPROVED:	DATE:	SIGNED:	SURVEY DATE:
SXX	10.2020		08.2020

ISSUE STATUS:

AS-BUILT

PROJECT No:	SCALES:	A1
1050-142875-01	1:1000-A1 1:2000-A3	
DRAWING No:	REV	
142875-12-AB410	A	





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ENGINEERS NEW ZEALAND

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QUALITY
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NOTES:

- ORIGIN OF LEVELS
S 66 SO 48643
RL 54.50m
- ORIGIN OF COORDINATES
S 66 SO 48643
5905356.71mN
1770941.22mE

LEGEND

- STAGE BOUNDARY
- SW NEW PUBLIC STORMWATER LINE
- NEW PUBLIC RAINGARDEN
- NEW PRIVATE RAINGARDEN
- NEW PUBLIC MANHOLE
- NEW PUBLIC CATCHPIT
- NEW PRIVATE CATCHPIT

ENGINEERING APPROVAL
ENG-60349136

I CERTIFY THAT THESE ASBUILT PLANS ARE AN ACCURATE RECORD OF THE WORKS UNDERTAKEN AND THAT:

- THE COORDINATES (X,Y) ARE IN TERMS OF NZTM ON NZGD (2000), AND ARE WITHIN ±50mm.
- THE LEVELS (Z) ARE IN TERMS OF THE AUCKLAND 1946 (MSL) LINZ DATUM (DOSLI DATUM), AND ARE WITHIN ±25mm.

Signed: _____
CHARTERED PROFESSIONAL ENGINEER

Date: 16/10/2020

Name: SHANE JAMES KELLY

Phone: 09-917-5000

Email: s.kelly@harrissongrierson.com



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PARNELL AUCKLAND 1052
T +64 9 917 5000
W www.harrissongrierson.com

A	AS-BUILT	DDS	19.10.20
REF	REVISIONS	BY	DATE

PROJECT:

HUGH GREEN LIMITED
DONEGAL STAGE 11D AND 12
36 TIR CONAILL AVENUE, FLATBUSH

TITLE:

RAINGARDEN
AS-BUILT PLAN
SHEET 1 OF 2

ORIGINATOR:	DATE:	SIGNED:	PLOT BY:
DDS	08.2020		DDS
DRAWN:	DATE:	SIGNED:	PLOT DATE:
DDS	09.2020		20.10.20
CHECKED:	DATE:	SIGNED:	SURVEY BY:
SXK	10.2020		DEMPSEY WOOD
APPROVED:	DATE:	SIGNED:	SURVEY DATE:
SXK	10.2020		08.2020

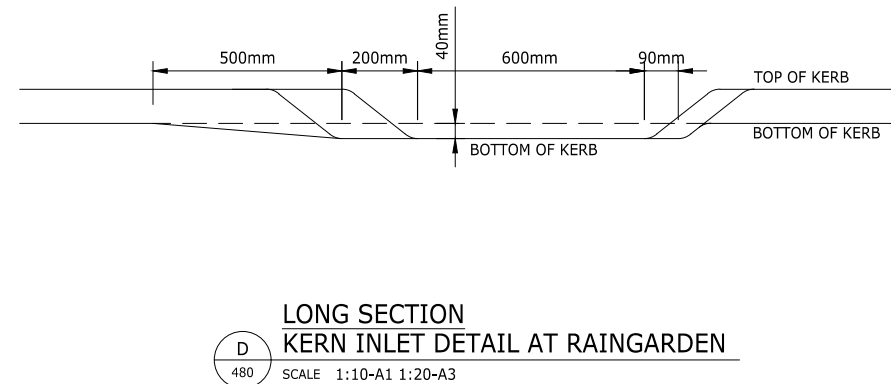
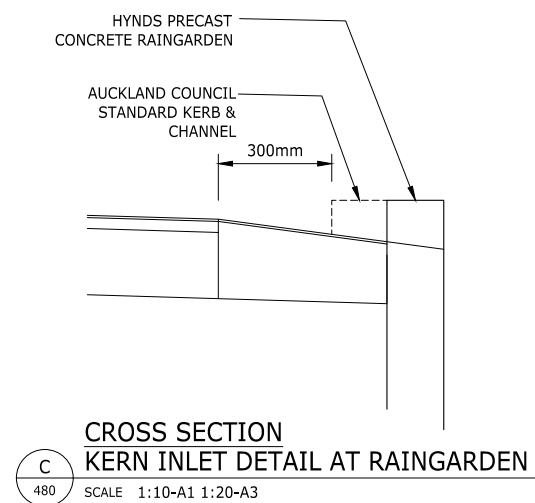
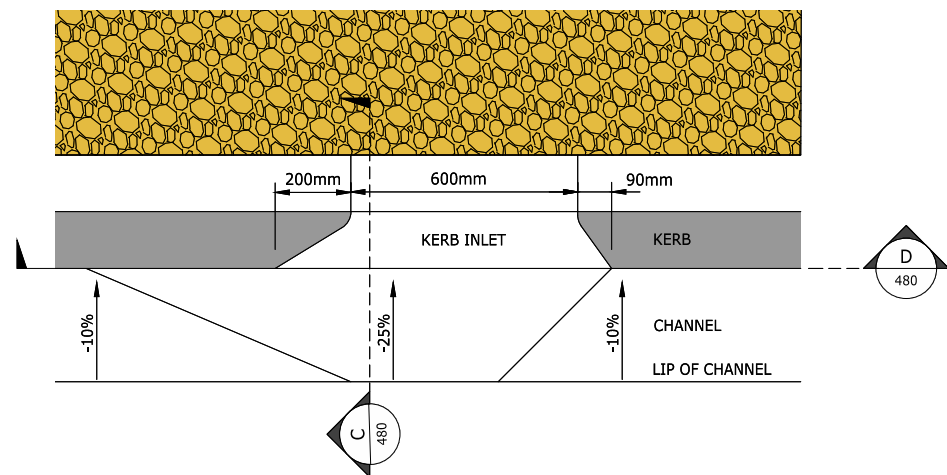
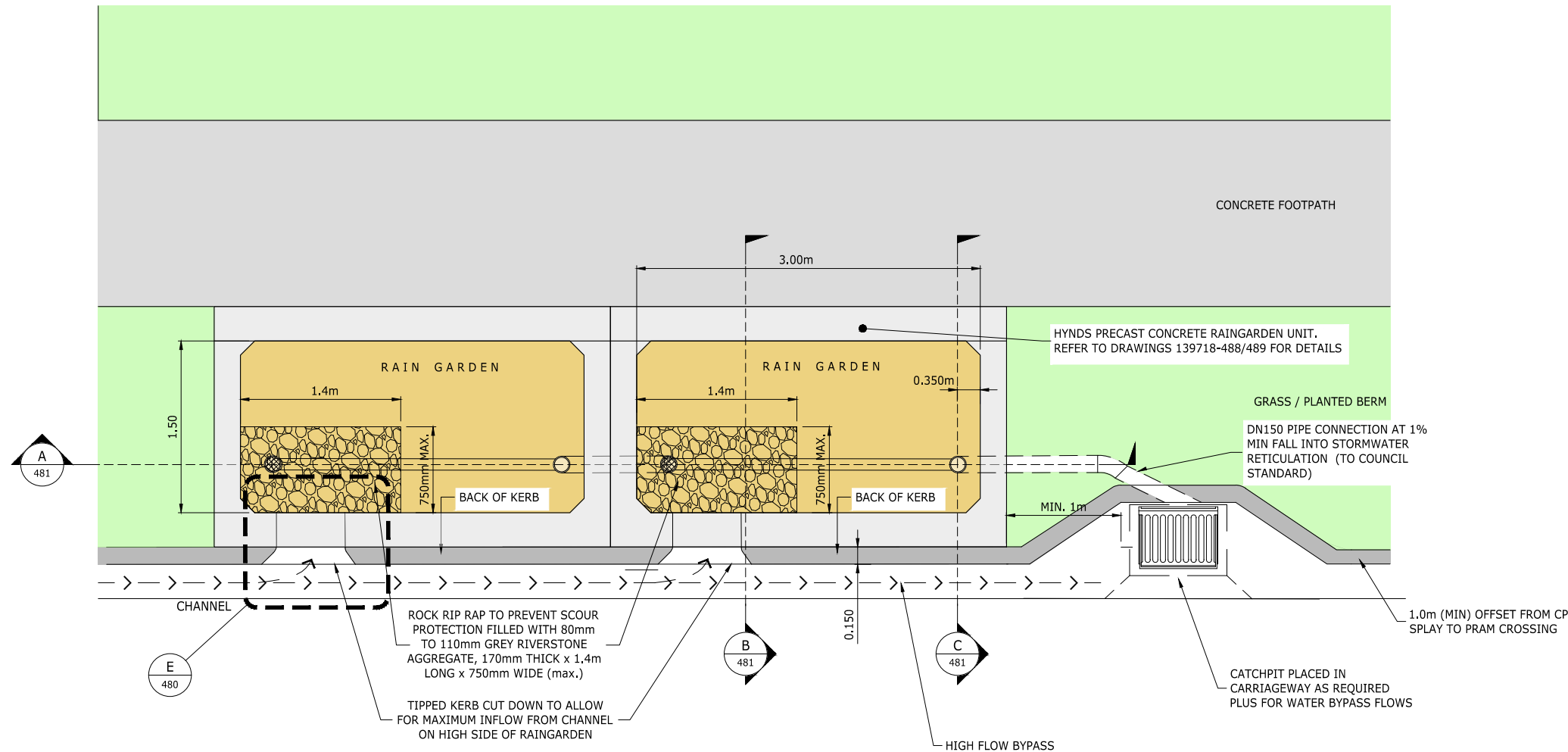
ISSUE STATUS:

AS-BUILT

PROJECT No:	SCALES:	A1
1050-142875-01	1:500-A1 1:1000-A3	
DRAWING No:		REV
142875-12-AB411		A

SCHEDULE OF COORDINATES		
RG No.	mE	mN
DRG01 (PRIVATE)	1770050.05	5905785.53
DRG02	1770059.69	5905780.75
DRG03	1770070.29	5905775.24
DRG04 (PRIVATE)	1770157.13	5905745.04
DRG05 (PRIVATE)	1770160.84	5905676.11
DRG06	1770222.41	5905627.04
DRG07	1770231.71	5905630.23
DRG08	1770144.87	5905529.82
DRG09	1770121.10	5905506.34
DRG10	1770186.18	5905561.70
DRG11	1770248.75	5905606.00
DRG12	1770276.60	5905627.26
DRG13	1770285.41	5905626.11
DRG14	1770294.49	5905541.66
DRG15	1770300.28	1770300.28
DRG16	1770229.59	5905441.20
DRG17	1770410.77	5905530.02
DRG18	1770280.44	5905405.70
DRG19	1770285.94	5905399.30
RG01	1770218.60	5905650.05
RG02	1770202.77	5905637.94
RG03	1770199.37	5905631.58
RG04	1770205.39	5905625.17
RG05	1770161.66	5905560.97
RG06	1770158.27	5905554.60
RG07	1770117.63	5905497.60
RG08	1770153.76	5905528.58
RG09	1770165.37	5905550.42
RG10	1770169.15	5905557.63
RG11	1770183.89	5905585.05
RG12 (PRIVATE)	1770166.64	5905513.68
RG13	1770190.56	5905570.03
RG14	1770221.02	5905533.94
RG15	1770233.41	5905535.90
RG16	1770294.73	5905569.25
RG17	1770300.13	5905564.81
RG18	1770300.03	5905575.62
RG19	1770305.72	5905571.10
RG20	1770256.30	5905490.68
RG21	1770262.78	5905485.49
RG22	1770228.43	5905453.52
RG23	1770285.88	5905482.05
RG24	1770291.54	5905489.60
RG25	1770414.05	5905522.30
RG26	1770373.48	5905507.37
RG27	1770377.88	5905500.39
RG28	1770311.67	5905447.38
RG29	1770318.03	5905442.01
RG30 (PRIVATE)	1770250.11	5905451.53

	ASSOCIATION OF CONSULTING ENGINEERS NEW ZEALAND	ISO 9001 QUALITY ASSURED	
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NOTES: 1. ORIGIN OF LEVELS S 66 SO 48643 RL 54.50m 2. ORIGIN OF COORDINATES S 66 SO 48643 5905356.71mN 1770941.22mE			
ENGINEERING APPROVAL ENG-60349136			
I CERTIFY THAT THESE ASBUILT PLANS ARE AN ACCURATE RECORD OF THE WORKS UNDERTAKEN AND THAT: - THE COORDINATES (X,Y) ARE IN TERMS OF NZTM ON NZGD (2000), AND ARE WITHIN ±50mm. - THE LEVELS (Z) ARE IN TERMS OF THE AUCKLAND 1946 (MSL) LINZ DATUM (DOSLI DATUM), AND ARE WITHIN ±25mm.  Signed: CHARTERED PROFESSIONAL ENGINEER Date: 16/10/2020 Name: SHANE JAMES KELLY Phone: 09-917-5000 Email: s.kelly@harrisongrierson.com			
 AUCKLAND OFFICE LEVEL 4, 96 ST GEORGES BAY ROAD PARNELL AUCKLAND 1052 T +64 9 917 5000 W www.harrisongrierson.com			
A	AS-BUILT	DDS 19.10.20	
REF	REVISIONS	BY DATE	
PROJECT:			
HUGH GREEN LIMITED DONEGAL STAGE 11D AND 12 36 TIR CONAILL AVENUE, FLATBUSH			
TITLE:			
RAINGARDEN AS-BUILT SCHEDULE OF COORDINATES			
ORIGINATOR: DDS	DATE: 08.2020	SIGNED:	PLOT BY: DDS
DRAWN: DDS	DATE: 09.2020	SIGNED:	PLOT DATE: 20.10.20
CHECKED: SXX	DATE: 10.2020	SIGNED:	SURVEY BY: DEMPSEY WOOD
APPROVED: SXX	DATE: 10.2020	SIGNED:	SURVEY DATE: 08.2020
ISSUE STATUS:			
AS-BUILT			
PROJECT No: 1050-142875-01		SCALES: NOT TO SCALE	A1
DRAWING No:			REV
142875-12-AB413			A



ENGINEERING APPROVAL
ENG-60349136

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- THE LEVELS (Z) ARE IN TERMS OF THE AUCKLAND 1946 (MSL) LINZ DATUM (DOSLI DATUM), AND ARE WITHIN ± 25 mm.

Signed: 
CHARTERED PROFESSIONAL ENGINEER

Date: 16/10/2020

Name: SHANE JAMES KELLY

Phone: 09-917-5000

Email: s.kelly@harrisonsgrimson.com

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W www.harrisonsgrimson.com

A	AS-BUILT	DDS	19.10.20
REF	REVISIONS	BY	DATE

PROJECT:

HUGH GREEN LIMITED
DONEGAL STAGE 11D AND 12
36 TIR CONAILL AVENUE, FLAT BUSH

TITLE:

RAINGARDEN
TYPICAL PLAN DETAILS
AS-BUILT

ORIGINATOR:	DATE:	SIGNED:	PLOT BY:
MNP	08.2020		DDS
DRAWN:	DATE:	SIGNED:	PLOT DATE:
MNP	08.2020		20.10.20
CHECKED:	DATE:	SIGNED:	SURVEY BY:
SXX	10.2020		
APPROVED:	DATE:	SIGNED:	SURVEY DATE:
SXX	10.2020		

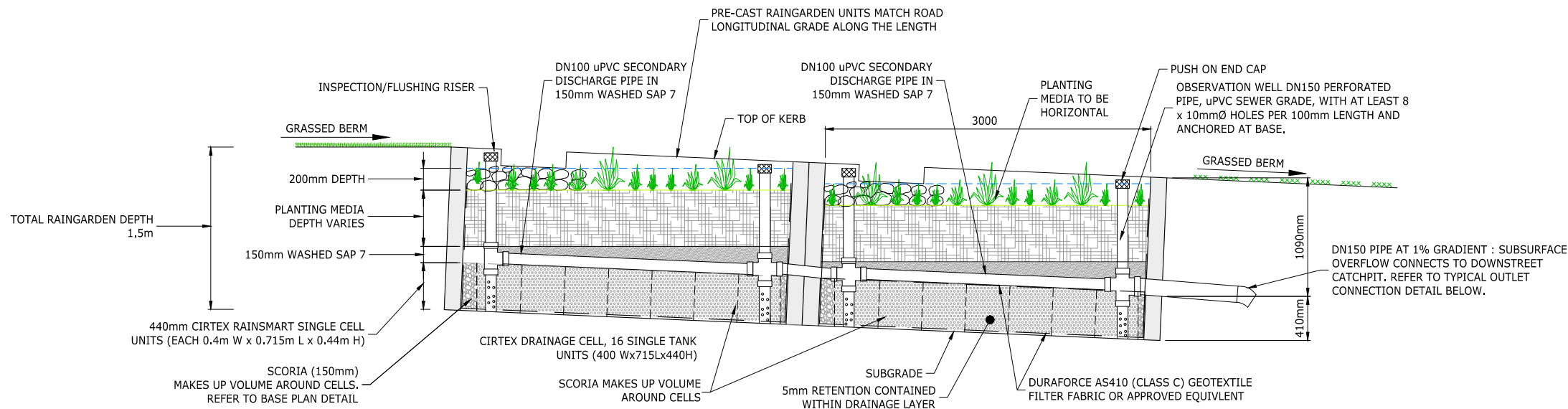
ISSUE STATUS:

AS-BUILT

PROJECT No:	SCALES:	AS SHOWN	A1
DRAWING No:			REV

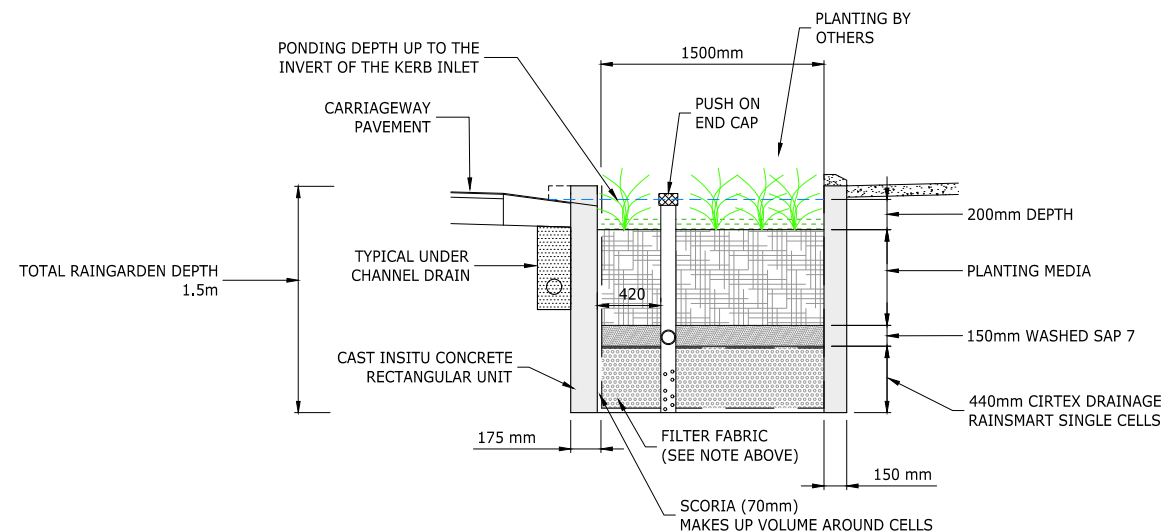
142875-12-AB-480

A



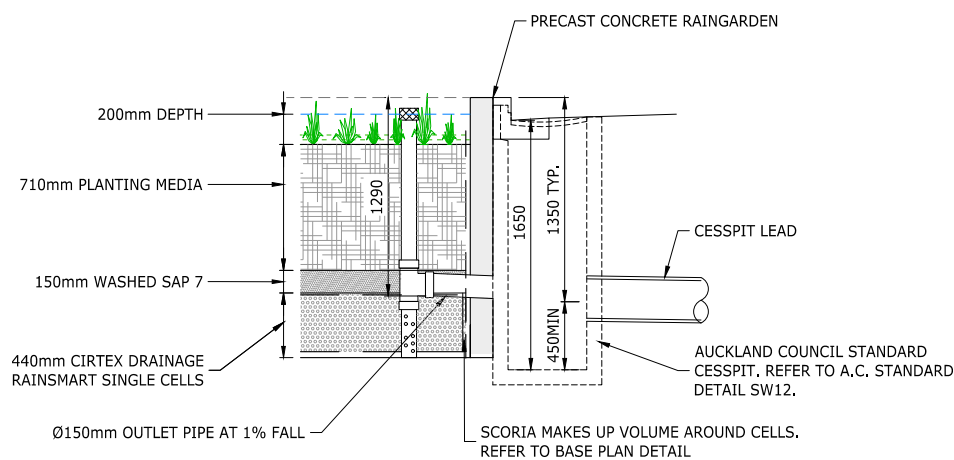
LONGITUDINAL SECTION
TYPICAL BIORETENTION DETAIL FOR ROADS

A
480
SCALE 1:25 - A1
1:50 - A3



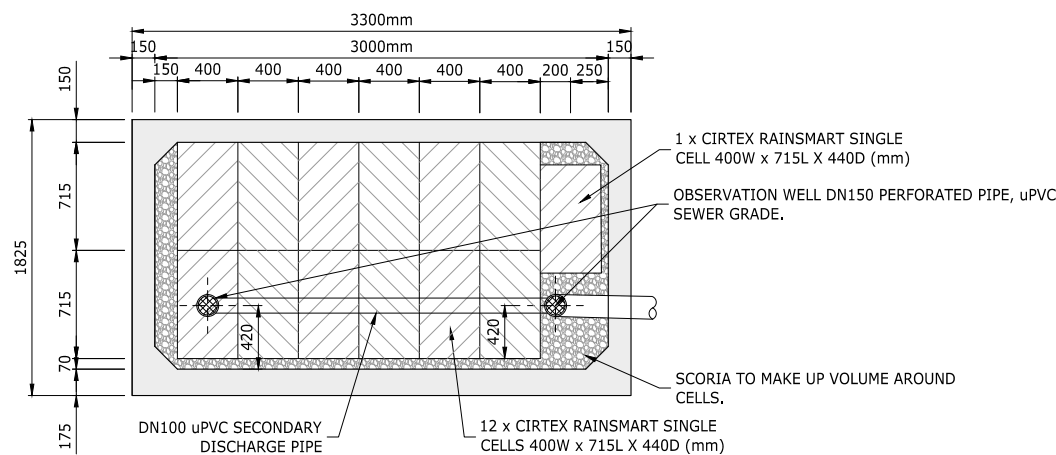
TYPICAL RAINGARDEN DETAIL

B
480
SCALE 1:25 - A1
1:50 - A3



RAINGARDEN OUTLET TYPICAL SECTION

C
480
SCALE 1:25 - A1
1:50 - A3



PLAN
RAINGARDEN

SCALE: 1:25 - A1
1:50 - A3

ENGINEERING APPROVAL
ENG-60349136

I CERTIFY THAT THESE ASBUILT PLANS ARE AN ACCURATE RECORD OF THE WORKS UNDERTAKEN AND THAT:

- THE COORDINATES (X,Y) ARE IN TERMS OF NZTM ON NZGD (2000), AND ARE WITHIN ± 50 mm.
- THE LEVELS (Z) ARE IN TERMS OF THE AUCKLAND 1946 (MSL) LINZ DATUM (DOSLI DATUM), AND ARE WITHIN ± 25 mm.

Signed:
CHARTERED PROFESSIONAL ENGINEER

Date: 16/10/2020

Name: SHANE JAMES KELLY

Phone: 09-917-5000

Email: s.kelly@harrisongrierson.com

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LEVEL 4, 96 ST GEORGES BAY ROAD
PARNELL AUCKLAND 1052
T +64 9 917 5000
W www.harrisongrierson.com

A	AS-BUILT	DDS	19.10.20
REF	REVISIONS	BY	DATE

PROJECT:

HUGH GREEN LIMITED
DONEGAL STAGE 11D AND 12
36 TIR CONAILL AVENUE, FLAT BUSH

TITLE:
RAINGARDEN
TYPICAL SECTION DETAILS
AS-BUILT

ORIGINATOR: MNP	DATE: 08.2020	SIGNED:	PLOT BY: DDS
DRAWN: MNP	DATE: 08.2020	SIGNED:	PLOT DATE: 20.10.20
CHECKED: SXX	DATE: 10.2020	SIGNED:	SURVEY BY:
APPROVED: SXX	DATE: 10.2020	SIGNED:	SURVEY DATE:

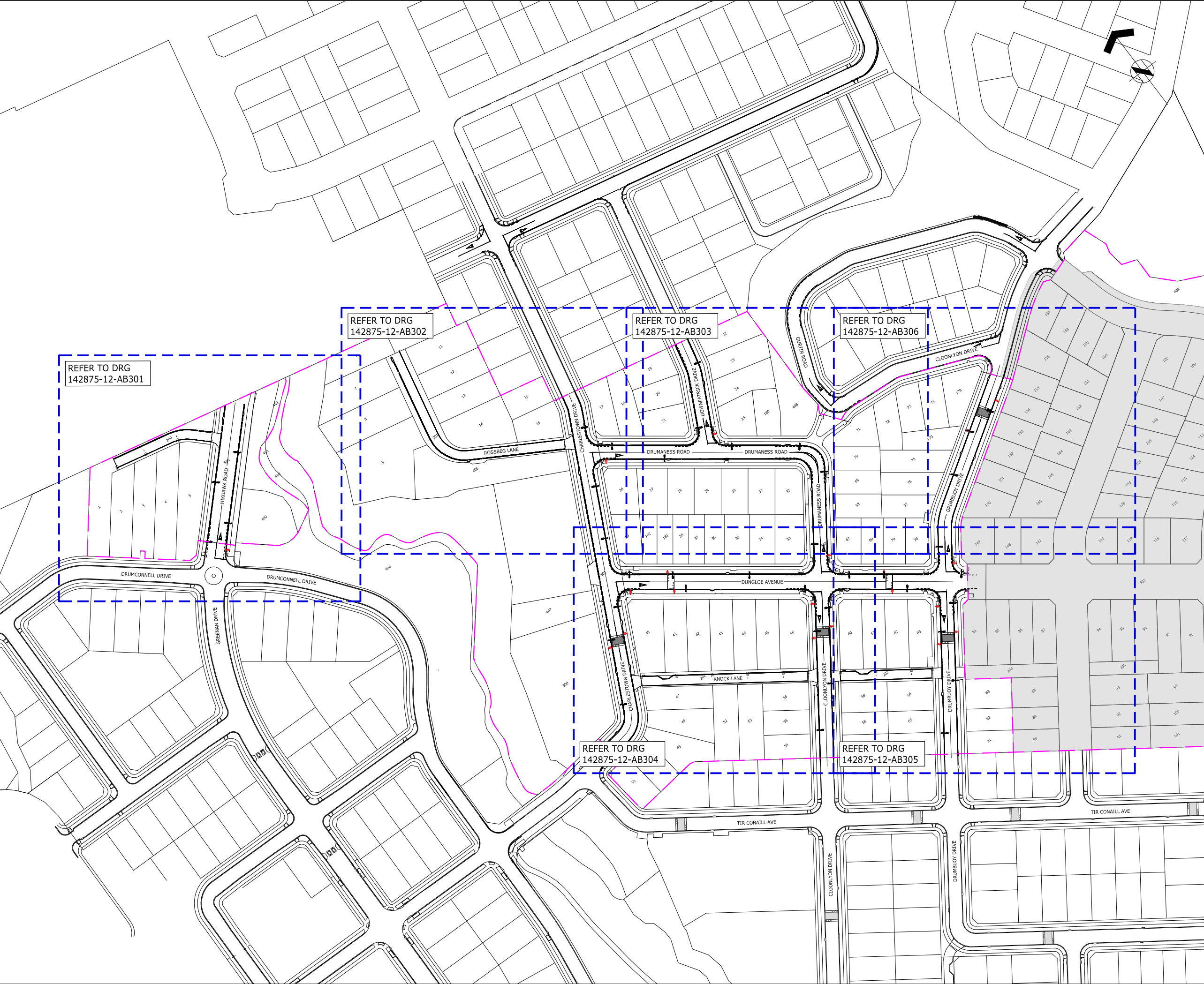
ISSUE STATUS:

AS-BUILT

PROJECT No: 1050-142875-01	SCALES: AS SHOWN	A1
DRAWING No:		REV

142875-12-AB-481

A





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NOTES

1. ORIGIN OF LEVELS
S 66 SO 48643
RL 54.50m

2. ORIGIN OF COORDINATES
S 66 SO 48643
5905356.71mN
1770941.22mE

3. ALL PRAM CROSSINGS HAVE TACTILE GROUND
SURFACE INDICATORS (TGS1) INSTALLED AS PER AT
STANDARD DRAWING FP009 REV 5.

LEGEND:

 STAGE BOUNDARY

 NO STOPPING LINEWORK

 NO PASSING LINEWORK

 ROAD SIGN

 STREETLIGHT

 STREET NAME SIGN

 NEW SPEED TABLE
(TCO03)

 NEW SPEED HUMP
(TCO01)

ENGINEERING APPROVAL
ENG-60349136

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THE WORKS UNDERTAKEN AND THAT:
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(2000), AND ARE WITHIN ±50mm.
• THE LEVELS (Z) ARE IN TERMS OF THE AUCKLAND 1946 (MSL)
LINZ DATUM (DOSLI DATUM), AND ARE WITHIN ±25mm.

Signed: 
CHARTERED PROFESSIONAL ENGINEER

Date: 16/10/2020

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Phone: 09-917-5000

Email: s.kelly@harrisongrierson.com



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W www.harrisongrierson.com

A	AS-BUILT	DDS	19.10.20
REF	REVISIONS	BY	DATE

PROJECT:

HUGH GREEN LIMITED
DONEGAL STAGE 11D AND 12
36 TIR CONAILL AVENUE, FLAT BUSH

TITLE:

OVERALL ROADING & ROAD MARKING
AS-BUILT LAYOUT PLAN

ORIGINATOR:	DATE:	SIGNED:	PLOT BY:
DDS	08.2020		DDS
DRAWN:	DATE:	SIGNED:	PLOT DATE:
DDS	09.2020		20.10.20
CHECKED:	DATE:	SIGNED:	SURVEY BY:
SXK	10.2020		DEMSEY WOOD
APPROVED:	DATE:	SIGNED:	SURVEY DATE:
SXK	10.2020		07.2020

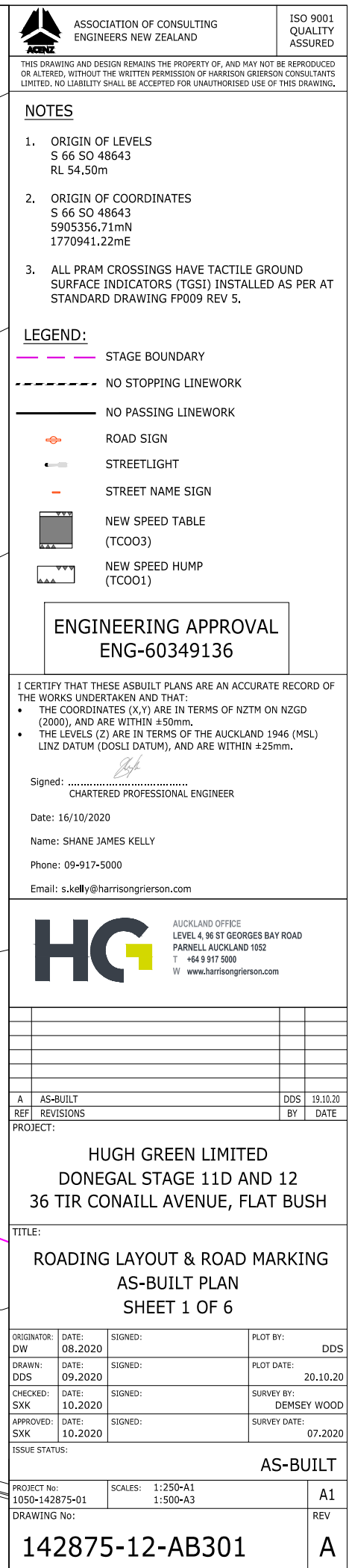
ISSUE STATUS:

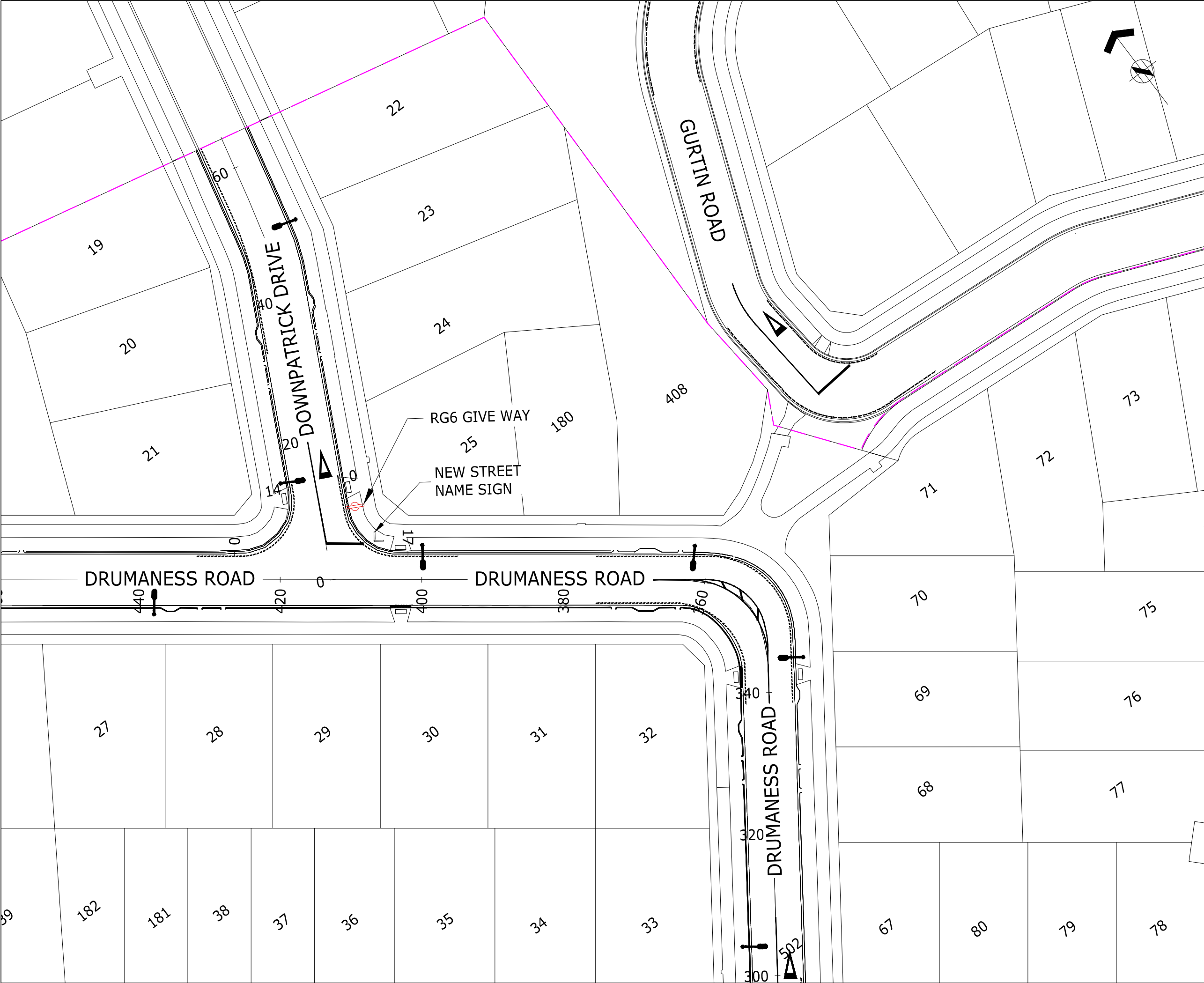
AS-BUILT

PROJECT No:	1050-142875-01	SCALES:	1:1000-A1 1:2000-A3	A1
DRAWING No:				REV

142875-12-AB300

A







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NOTES

1. ORIGIN OF LEVELS
S 66 SO 48643
RL 54.50m

2. ORIGIN OF COORDINATES
S 66 SO 48643
5905356.71mN
1770941.22mE

3. ALL PRAM CROSSINGS HAVE TACTILE GROUND
SURFACE INDICATORS (TGSI) INSTALLED AS PER AT
STANDARD DRAWING FP009 REV 5.

LEGEND:

STAGE BOUNDARY

NO STOPPING LINEWORK

NO PASSING LINEWORK

ROAD SIGN

STREETLIGHT

STREET NAME SIGN

NEW SPEED TABLE
(TCO03)

NEW SPEED HUMPS
(TCO01)

ENGINEERING APPROVAL
ENG-60349136

I CERTIFY THAT THESE AS-BUILT PLANS ARE AN ACCURATE RECORD OF
THE WORKS UNDERTAKEN AND THAT:
• THE COORDINATES (X,Y) ARE IN TERMS OF NZTM ON NZGD
(2000), AND ARE WITHIN ±50mm.
• THE LEVELS (Z) ARE IN TERMS OF THE AUCKLAND 1946 (MSL)
LINZ DATUM (DOSLI DATUM), AND ARE WITHIN ±25mm.

Signed:
CHARTERED PROFESSIONAL ENGINEER

Date: 16/10/2020

Name: SHANE JAMES KELLY

Phone: 09-917-5000

Email: s.kelly@harrisongrierson.com

HC

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PARNELL AUCKLAND 1052
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W www.harrisongrierson.com

A	AS-BUILT	DDS	19.10.20
REF	REVISIONS	BY	DATE

PROJECT:

HUGH GREEN LIMITED
DONEGAL STAGE 11D AND 12
36 TIR CONAILL AVENUE, FLAT BUSH

TITLE:

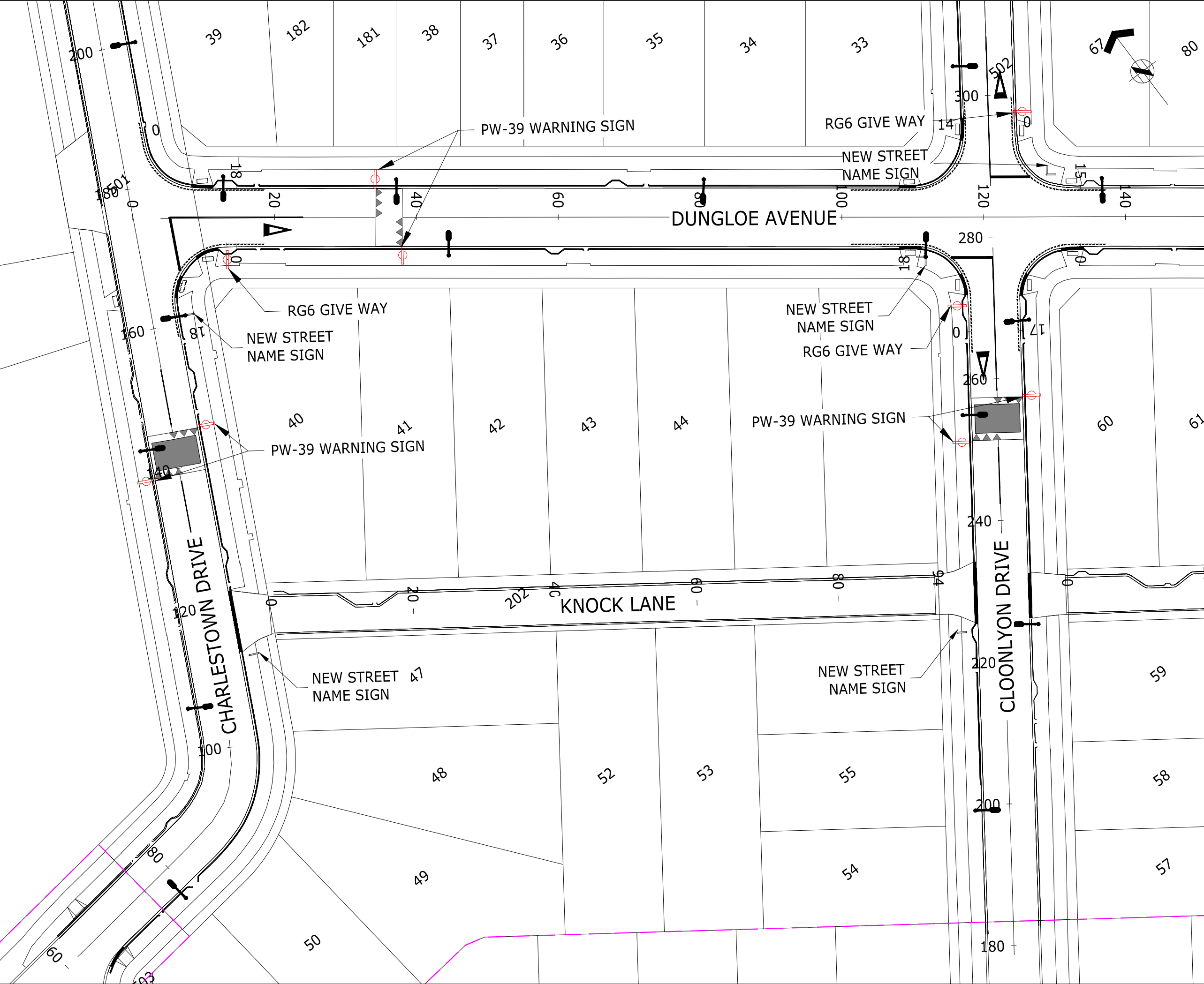
ROADING LAYOUT & ROAD MARKING
AS-BUILT PLAN
SHEET 3 OF 6

ORIGINATOR:	DATE:	SIGNED:	PLOT BY:
DDS	08.2020		DDS
DRAWN:	DATE:	SIGNED:	PLOT DATE:
DDS	09.2020		20.10.20
CHECKED:	DATE:	SIGNED:	SURVEY BY:
SXX	10.2020		DEMSEY WOOD
APPROVED:	DATE:	SIGNED:	SURVEY DATE:
SXX	10.2020		07.2020

ISSUE STATUS:

AS-BUILT

PROJECT No:	SCALES:	A1
1050-142875-01	1:250-A1 1:500-A3	
DRAWING No:	REV	
142875-12-AB303	A	





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NOTES

- ORIGIN OF LEVELS
S 66 SO 48643
RL 54.50m
- ORIGIN OF COORDINATES
S 66 SO 48643
5905356.71mN
1770941.22mE
- ALL PRAM CROSSINGS HAVE TACTILE GROUND SURFACE INDICATORS (TGSi) INSTALLED AS PER AT STANDARD DRAWING FP009 REV 5.

LEGEND:

- STAGE BOUNDARY
- NO STOPPING LINEWORK
- NO PASSING LINEWORK
- ROAD SIGN
- STREETLIGHT
- STREET NAME SIGN
- NEW SPEED TABLE (TCO03)
- NEW SPEED HUMP (TCO01)

ENGINEERING APPROVAL
ENG-60349136

I CERTIFY THAT THESE ASBUILT PLANS ARE AN ACCURATE RECORD OF THE WORKS UNDERTAKEN AND THAT:

- THE COORDINATES (X,Y) ARE IN TERMS OF NZTM ON NZGD (2000), AND ARE WITHIN ±50mm.
- THE LEVELS (Z) ARE IN TERMS OF THE AUCKLAND 1946 (MSL) LINZ DATUM (DOSLI DATUM), AND ARE WITHIN ±25mm.

Signed: _____
CHARTERED PROFESSIONAL ENGINEER

Date: 16/10/2020

Name: SHANE JAMES KELLY

Phone: 09-917-5000

Email: s.kelly@harrisongrierson.com



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W www.harrisongrierson.com

A	AS-BUILT		DDS	19.10.20	
REF	REVISIONS		BY	DATE	
PROJECT:					
HUGH GREEN LIMITED					
DONEGAL STAGE 11D AND 12					
36 TIR CONAILL AVENUE, FLAT BUSH					
TITLE:					
ROADING LAYOUT & ROAD MARKING					
AS-BUILT PLAN					
SHEET 4 OF 6					
ORIGINATOR:	DATE:	SIGNED:	PLOT BY:		
DDS	08.2020		DDS		
DRAWN:	DATE:	SIGNED:	PLOT DATE:		
DDS	09.2020		20.10.20		
CHECKED:	DATE:	SIGNED:	SURVEY BY:		
SXK	10.2020		DEMSEY WOOD		
APPROVED:	DATE:	SIGNED:	SURVEY DATE:		
SXK	10.2020		07.2020		
ISSUE STATUS:					
AS-BUILT					
PROJECT No:		SCALES:		A1	
1050-142875-01		1:250-A1 1:500-A3			
DRAWING No:					REV
142875-12-AB304					A





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NOTES

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S 66 SO 48643
RL 54.50m
- ORIGIN OF COORDINATES
S 66 SO 48643
5905356.71mN
1770941.22mE
- ALL PRAM CROSSINGS HAVE TACTILE GROUND SURFACE INDICATORS (TGSi) INSTALLED AS PER AT STANDARD DRAWING FP009 REV 5.

LEGEND:

- STAGE BOUNDARY
- NO STOPPING LINEWORK
- NO PASSING LINEWORK
- ROAD SIGN
- STREETLIGHT
- STREET NAME SIGN
- NEW SPEED TABLE (TCO03)
- NEW SPEED HUMPS (TCO01)

ENGINEERING APPROVAL
ENG-60349136

I CERTIFY THAT THESE ASBUILT PLANS ARE AN ACCURATE RECORD OF THE WORKS UNDERTAKEN AND THAT:

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- THE LEVELS (Z) ARE IN TERMS OF THE AUCKLAND 1946 (MSL) LINZ DATUM (DOSLI DATUM), AND ARE WITHIN ±25mm.

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W www.harrisongrierson.com

A	AS-BUILT	DDS	19.10.20
REF	REVISIONS	BY	DATE

PROJECT:

HUGH GREEN LIMITED
DONEGAL STAGE 11D AND 12
36 TIR CONAILL AVENUE, FLAT BUSH

TITLE:

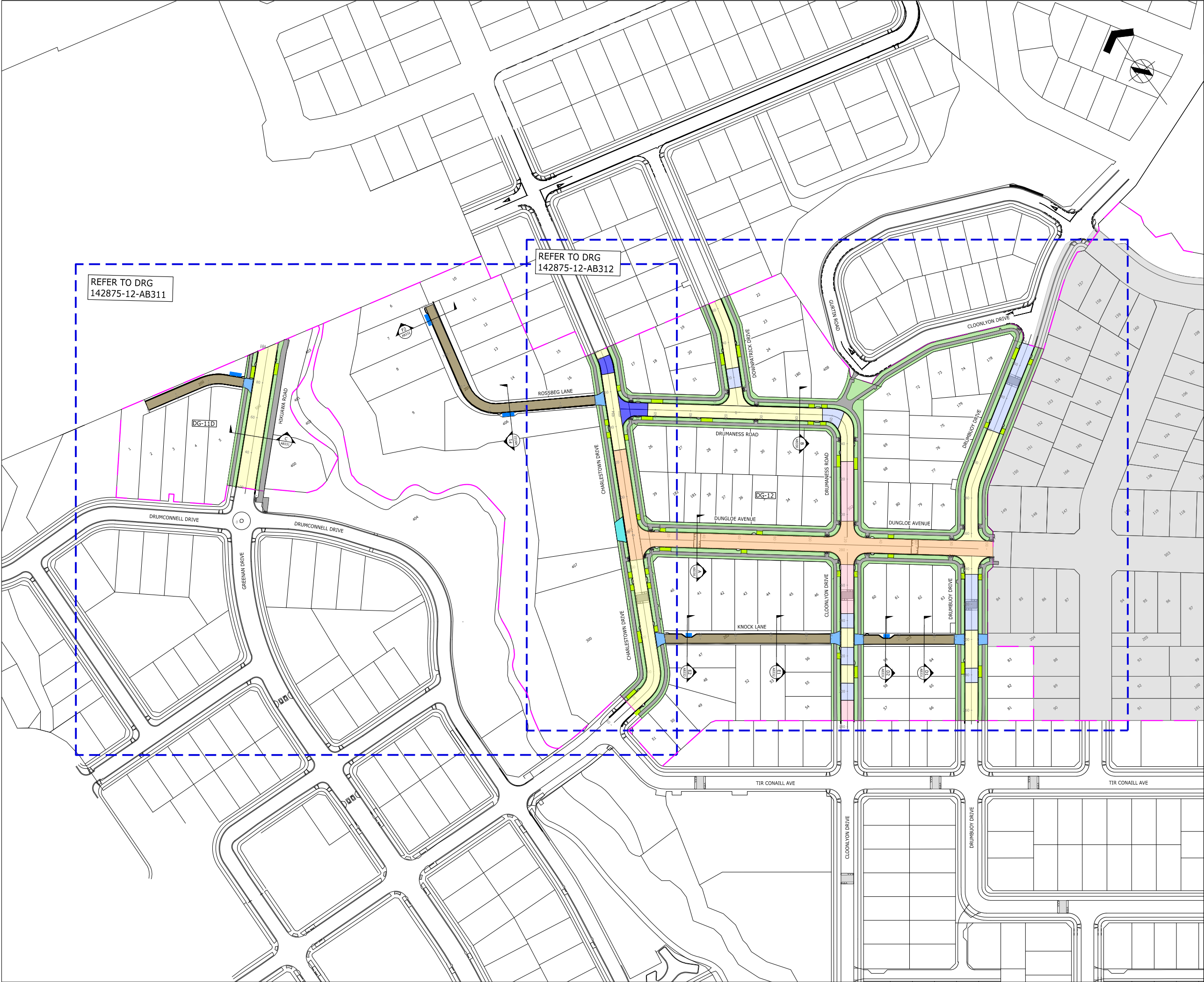
ROADING LAYOUT & ROAD MARKING
AS-BUILT PLAN
SHEET 5 OF 6

ORIGINATOR:	DATE:	SIGNED:	PLOT BY:
DDS	08.2020		DDS
DRAWN:	DATE:	SIGNED:	PLOT DATE:
DDS	09.2020		20.10.20
CHECKED:	DATE:	SIGNED:	SURVEY BY:
SXK	10.2020		DEMSEY WOOD
APPROVED:	DATE:	SIGNED:	SURVEY DATE:
SXK	10.2020		07.2020

ISSUE STATUS:

AS-BUILT

PROJECT No:	SCALES:	A1
1050-142875-01	1:250-A1 1:500-A3	
DRAWING No:		REV
142875-12-AB305		A





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ENGINEERS NEW ZEALAND

ISO 9001
QUALITY
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NOTES:

- ORIGIN OF LEVELS
S 66 SO 48643
RL 54.50m
- ORIGIN OF COORDINATES
S 66 SO 48643
5905356.71mN
1770941.22mE
- ALL PAVEMENT COVERED IN 40mm HOTMIX (MIX 10)

LEGEND:

	300mm BLACK SAND (UNDERCUT)
	200 AP 65 (SUBBASE)
	150mm AP 40 (BASE)
	200 AP 65 (SUBBASE)
	150mm AP 40 (BASE)
	300mm AP 65 (UNDERCUT & SUBBASE)
	150mm AP 40 (BASE)
	350mm AP 65 (UNDERCUT & SUBBASE)
	150mm AP 40 (BASE)
	500mm AP 65 (UNDERCUT & SUBBASE)
	150mm AP 40 (BASE)
	CONCRETE JOAL
	175mm (30 MPa) CONCRETE
	150mm AP 40 (BASE)
	COMMERCIAL VEHICLE CROSSING
	200mm (20MPa) CONCRETE
	100mm AP40 (BASE)
	GRASS BERM
	MANARC RESIDENTIAL VEHICLE CROSSING
	FOOTPATH
	RAINGARDEN (PUBLIC / PRIVATE)

ENGINEERING APPROVAL

ENG-60349136

I CERTIFY THAT THESE ASBUILT PLANS ARE AN ACCURATE RECORD OF THE WORKS UNDERTAKEN AND THAT:

- THE COORDINATES (X,Y) ARE IN TERMS OF NZTM ON NZGD (2000), AND ARE WITHIN ±50mm.
- THE LEVELS (Z) ARE IN TERMS OF THE AUCKLAND 1946 (MSL) LINZ DATUM (DOSLI DATUM), AND ARE WITHIN ±25mm.

Signed: 
CHARTERED PROFESSIONAL ENGINEER

Date: 16/10/2020

Name: SHANE JAMES KELLY

Phone: 09-917-5000

Email: s.kelly@harrisonsgrierson.com



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PARNELL AUCKLAND 1052
T +64 9 917 5000
W www.harrisonsgrierson.com

A	AS-BUILT	DDS	19.10.20
REF	REVISIONS	BY	DATE

PROJECT:

HUGH GREEN LIMITED
DONEGAL STAGE 11D AND 12
36 TIR CONAILL AVE, FLAT BUSH

TITLE:

OVERALL PAVEMENT AS-BUILT PLAN

ORIGINATOR:	DATE:	SIGNED:	PLOT BY:
DDS	09.2020		DDS
DRAWN:	DATE:	SIGNED:	PLOT DATE:
DDS	09.2020		20.10.20
CHECKED:	DATE:	SIGNED:	SURVEY BY:
SXX	10.2020		DEMPSEY WOOD
APPROVED:	DATE:	SIGNED:	SURVEY DATE:
SXX	10.2020		08.2020

ISSUE STATUS:

AS-BUILT

PROJECT No:	1050-142875-01	SCALES:	1:1000-A1 1:2000-A3	A1
DRAWING No:				REV

142875-12-AB310

A





ASSOCIATION OF CONSULTING
ENGINEERS NEW ZEALAND

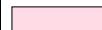
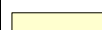
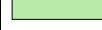
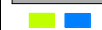
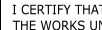
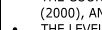
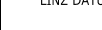
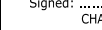
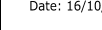
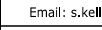
ISO 9001
QUALITY
ASSURED

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NOTES:

- ORIGIN OF LEVELS
S 66 SO 48643
RL 54.50m
- ORIGIN OF COORDINATES
S 66 SO 48643
5905356.71mN
1770941.22mE
- ALL PAVEMENT COVERED IN 40mm HOTMIX (MIX 10)

LEGEND:

	300mm BLACK SAND (UNDERCUT)
	200 AP 65 (SUBBASE)
	150mm AP 40 (BASE)
	200 AP 65 (SUBBASE)
	150mm AP 40 (BASE)
	300mm AP 65 (UNDERCUT & SUBBASE)
	150mm AP 40 (BASE)
	350mm AP 65 (UNDERCUT & SUBBASE)
	150mm AP 40 (BASE)
	500mm AP 65 (UNDERCUT & SUBBASE)
	150mm AP 40 (BASE)
	CONCRETE JOAL
	175mm (30 MPa) CONCRETE
	150mm AP 40 (BASE)
	COMMERCIAL VEHICLE CROSSING
	200mm (20MPa) CONCRETE
	100mm AP40 (BASE)
	GRASS BERM
	MANARC RESIDENTIAL VEHICLE CROSSING
	FOOTPATH
	RAINGARDEN (PUBLIC / PRIVATE)

ENGINEERING APPROVAL
ENG-60349136

I CERTIFY THAT THESE ASBUILT PLANS ARE AN ACCURATE RECORD OF THE WORKS UNDERTAKEN AND THAT:

- THE COORDINATES (X,Y) ARE IN TERMS OF NZTM ON NZGD (2000), AND ARE WITHIN ±50mm.
- THE LEVELS (Z) ARE IN TERMS OF THE AUCKLAND 1946 (MSL) LINZ DATUM (DOSLI DATUM), AND ARE WITHIN ±25mm.

Signed: 
CHARTERED PROFESSIONAL ENGINEER

Date: 16/10/2020

Name: SHANE JAMES KELLY

Phone: 09-917-5000

Email: s.kelly@harrisonsgrimson.com



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PARNELL AUCKLAND 1052
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W www.harrisonsgrimson.com

A	AS-BUILT	DDS	19.10.20
REF	REVISIONS	BY	DATE

PROJECT:

HUGH GREEN LIMITED
DONEGAL STAGE 11D AND 12
36 TIR CONAILL AVE, FLAT BUSH

TITLE:

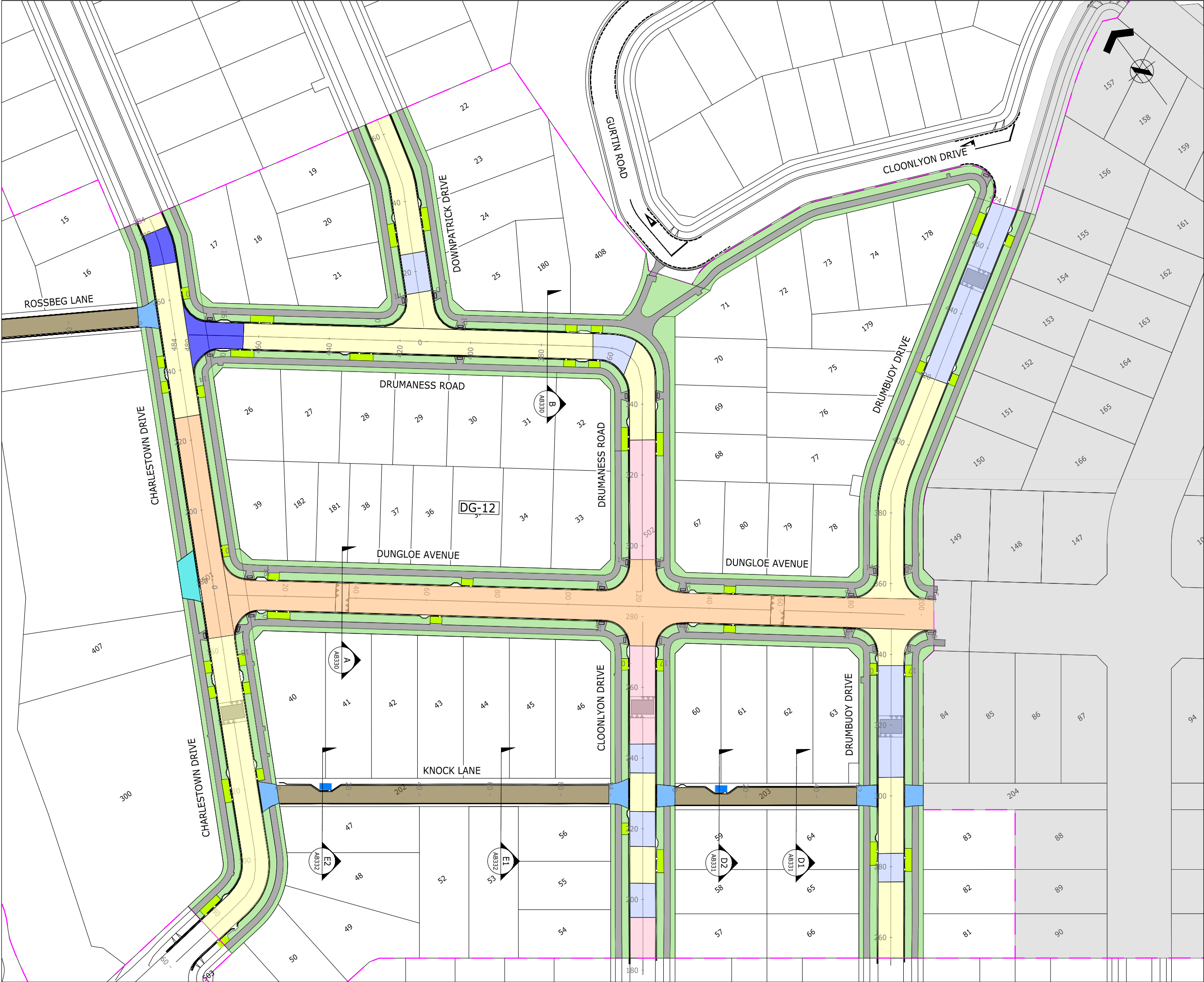
PAVEMENT AS-BUILT PLAN
SHEET 1 OF 2

ORIGINATOR:	DATE:	SIGNED:	PLOT BY:
DDS	09.2020		DDS
DRAWN:	DATE:	SIGNED:	PLOT DATE:
DDS	09.2020		20.10.20
CHECKED:	DATE:	SIGNED:	SURVEY BY:
SXX	10.2020		DEMPSEY WOOD
APPROVED:	DATE:	SIGNED:	SURVEY DATE:
SXX	10.2020		08.2020

ISSUE STATUS:

AS-BUILT

PROJECT No:	SCALES:	A1
1050-142875-01	1:500-A1 1:1000-A3	
DRAWING No:		REV
142875-12-AB311		A





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NOTES:

- ORIGIN OF LEVELS
S 66 SO 48643
RL 54.50m
- ORIGIN OF COORDINATES
S 66 SO 48643
5905356.71mN
1770941.22mE
- ALL PAVEMENT COVERED IN 40mm HOTMIX (MIX 10)

LEGEND:

	300mm BLACK SAND (UNDERCUT)
	200 AP 65 (SUBBASE)
	150mm AP 40 (BASE)
	200 AP 65 (SUBBASE)
	150mm AP 40 (BASE)
	300mm AP 65 (UNDERCUT & SUBBASE)
	150mm AP 40 (BASE)
	350mm AP 65 (UNDERCUT & SUBBASE)
	150mm AP 40 (BASE)
	500mm AP 65 (UNDERCUT & SUBBASE)
	150mm AP 40 (BASE)
	CONCRETE JOAL
	175mm (30 MPa) CONCRETE
	150mm AP 40 (BASE)
	COMMERCIAL VEHICLE CROSSING
	200mm (20MPa) CONCRETE
	100mm AP40 (BASE)
	GRASS BERM
	MANARC RESIDENTIAL VEHICLE CROSSING
	FOOTPATH
	RAINGARDEN (PUBLIC / PRIVATE)

ENGINEERING APPROVAL
ENG-60349136

I CERTIFY THAT THESE ASBUILT PLANS ARE AN ACCURATE RECORD OF THE WORKS UNDERTAKEN AND THAT:

- THE COORDINATES (X,Y) ARE IN TERMS OF NZTM ON NZGD (2000), AND ARE WITHIN ±50mm.
- THE LEVELS (Z) ARE IN TERMS OF THE AUCKLAND 1946 (MSL) LINZ DATUM (DOSLI DATUM), AND ARE WITHIN ±25mm.

Signed: 
CHARTERED PROFESSIONAL ENGINEER

Date: 16/10/2020

Name: SHANE JAMES KELLY

Phone: 09-917-5000

Email: s.kelly@harrisonsgrimson.com



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T +64 9 917 5000
W www.harrisonsgrimson.com

A	AS-BUILT	DDS	19.10.20
REF	REVISIONS	BY	DATE
PROJECT:			
HUGH GREEN LIMITED DONEGAL STAGE 11D AND 12 36 TIR CONAILL AVE, FLAT BUSH			
TITLE: PAVEMENT AS-BUILT PLAN SHEET 2 OF 2			
ORIGINATOR: DDS	DATE: 09.2020	SIGNED:	PLOT BY: DDS
DRAWN: DDS	DATE: 09.2020	SIGNED:	PLOT DATE: 20.10.20
CHECKED: SXX	DATE: 10.2020	SIGNED:	SURVEY BY: DEMPSEY WOOD
APPROVED: SXX	DATE: 10.2020	SIGNED:	SURVEY DATE: 08.2020
ISSUE STATUS:			
AS-BUILT			
PROJECT No: 1050-142875-01	SCALES: 1:500-A1 1:1000-A3	A1	
DRAWING No:			REV
142875-12-AB312			A



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NOTES:

1. ORIGIN OF LEVELS
S 66 SO 48643
RL 54.50m
2. ORIGIN OF COORDINATES
S 66 SO 48643
5905356.71mN
1770941.22mE

LEGEND:

- STAGE BOUNDARY
- NEW CESSPIT LEAD
- NEW STORMWATER MANHOLE
- NEW CESSPIT
- NEW POWER TUD
- NEW TELECOM PLINTH
- LINK PILLAR
- SUBSTATION
- NEW STREETLIGHT
- NEW SIGNAGE
- NEW FIRE HYDRANT
- NEW SLUICE VALVE
- NEW PEET VALVE
- NEW RAINGARDEN (PUBLIC)
- NEW RAINGARDEN (PRIVATE)

ENGINEERING APPROVAL
ENG-60349136

I CERTIFY THAT THESE ASBUILT PLANS ARE AN ACCURATE RECORD OF
THE WORKS UNDERTAKEN AND THAT:
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(2000), AND ARE WITHIN ±50mm.
• THE LEVELS (Z) ARE IN TERMS OF THE AUCKLAND 1946 (MSL)
LINZ DATUM (DOSLI DATUM), AND ARE WITHIN ±25mm.

Signed:
CHARTERED PROFESSIONAL ENGINEER

Date: 16/10/2020

Name: SHANE JAMES KELLY

Phone: 09-917-5000

Email: s.kelly@harrisongrierson.com



AUCKLAND OFFICE
LEVEL 4, 96 ST GEORGES BAY ROAD
PARNELL AUCKLAND 1052
T +64 9 917 5000
W www.harrisongrierson.com

A	AS-BUILT	DDS	19.10.20
REF	REVISIONS	BY	DATE

PROJECT:

HUGH GREEN LIMITED
DONEGAL STAGE 11D AND 12
36 TIR CONAILL AVE, FLATBUSH

TITLE:

OVERALL ROADING AS-BUILT PLAN

ORIGINATOR:	DATE:	SIGNED:	PLOT BY:
DDS	08.2020		DDS
DRAWN:	DATE:	SIGNED:	PLOT DATE:
DDS	09.2020		20.10.20
CHECKED:	DATE:	SIGNED:	SURVEY BY:
SXK	10.2020		DEMPSEY WOOD
APPROVED:	DATE:	SIGNED:	SURVEY DATE:
SXK	10.2020		08.2020

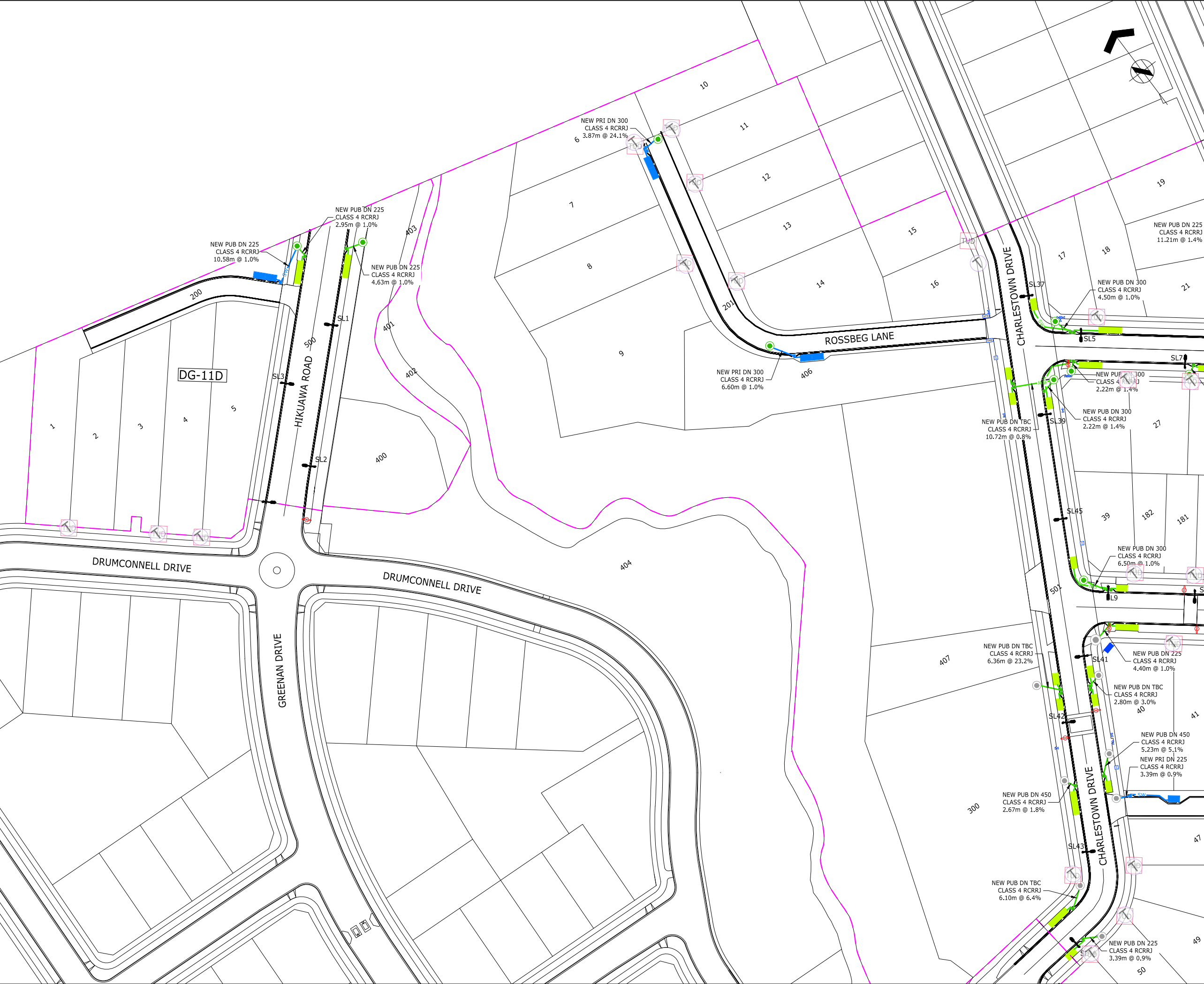
ISSUE STATUS:

AS-BUILT

PROJECT No:	1050-142875-01	SCALES:	1:1000-A1 1:2000-A3	A1
DRAWING No:				REV

142875-12-AB320

A





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NOTES:

- ORIGIN OF LEVELS
S 66 SO 48643
RL 54.50m
- ORIGIN OF COORDINATES
S 66 SO 48643
5905356.71mN
1770941.22mE

LEGEND:

STAGE BOUNDARY

NEW CESSPIT LEAD

NEW STORMWATER MANHOLE

NEW CESSPIT

NEW POWER TUD

NEW TELECOM PLINTH

LINK PILLAR

SUBSTATION

NEW STREETLIGHT

NEW SIGNAGE

NEW FIRE HYDRANT

NEW SLUICE VALVE

NEW PEET VALVE

NEW RAINGARDEN (PUBLIC)

NEW RAINGARDEN (PRIVATE)

ENGINEERING APPROVAL
ENG-60349136

I CERTIFY THAT THESE ASBUILT PLANS ARE AN ACCURATE RECORD OF THE WORKS UNDERTAKEN AND THAT:

- THE COORDINATES (X,Y) ARE IN TERMS OF NZTM ON NZGD (2000), AND ARE WITHIN ±50mm.
- THE LEVELS (Z) ARE IN TERMS OF THE AUCKLAND 1946 (MSL) LINZ DATUM (DOSLI DATUM), AND ARE WITHIN ±25mm.

Signed: 
CHARTERED PROFESSIONAL ENGINEER

Date: 16/10/2020

Name: SHANE JAMES KELLY

Phone: 09-917-5000

Email: s.kelly@harrisongrierson.com



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PARNELL AUCKLAND 1052
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W www.harrisongrierson.com

A	AS-BUILT	DDS	19.10.20
REF	REVISIONS	BY	DATE

PROJECT:

HUGH GREEN LIMITED
DONEGAL STAGE 11D & 12
36 TIR CONAILL AVE, FLATBUSH

TITLE:

ROADING AS-BUILT PLAN
SHEET 1 OF 2

ORIGINATOR:	DATE:	SIGNED:	PLOT BY:
DDS	08.2020		DDS
DRAWN:	DATE:	SIGNED:	PLOT DATE:
DDS	09.2020		20.10.20
CHECKED:	DATE:	SIGNED:	SURVEY BY:
SXK	10.2020		DEMPSEY WOOD
APPROVED:	DATE:	SIGNED:	SURVEY DATE:
SXK	10.2020		08.2020

ISSUE STATUS:

AS-BUILT

PROJECT No:	SCALES:	A1
1050-142875-01	1:500-A1 1:1000-A3	
DRAWING No:	REV	
142875-12-AB321	A	





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NOTES:
1. ORIGIN OF LEVELS
S 66 SO 48643
RL 54.50m
2. ORIGIN OF COORDINATES
S 66 SO 48643
5905356.71mN
1770941.22mE

LEGEND:
STAGE BOUNDARY
NEW CESSPIT LEAD
NEW STORMWATER MANHOLE
NEW CESSPIT
NEW POWER TUD
NEW TELECOM PLINTH
LINK PILLAR
SUBSTATION
NEW STREETLIGHT
NEW SIGNAGE
NEW FIRE HYDRANT
NEW SLUICE VALVE
NEW PEET VALVE
NEW RAINGARDEN (PUBLIC)
NEW RAINGARDEN (PRIVATE)

ENGINEERING APPROVAL
ENG-60349136

I CERTIFY THAT THESE ASBUILT PLANS ARE AN ACCURATE RECORD OF
THE WORKS UNDERTAKEN AND THAT:
• THE COORDINATES (X,Y) ARE IN TERMS OF NZTM ON NZGD
(2000), AND ARE WITHIN ±50mm.
• THE LEVELS (Z) ARE IN TERMS OF THE AUCKLAND 1946 (MSL)
LINZ DATUM (DOSLI DATUM), AND ARE WITHIN ±25mm.

Signed: _____
CHARTERED PROFESSIONAL ENGINEER

Date: 16/10/2020

Name: SHANE JAMES KELLY

Phone: 09-917-5000

Email: s.kelly@harrisongrierson.com



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LEVEL 4, 96 ST GEORGES BAY ROAD
PARNELL AUCKLAND 1052
T +64 9 917 5000
W www.harrisongrierson.com

A	AS-BUILT	DDS	19.10.20
REF	REVISIONS	BY	DATE

PROJECT:
HUGH GREEN LIMITED
DONEGAL STAGE 11D & 12
36 TIR CONAILL AVE, FLATBUSH

TITLE:
ROADING AS-BUILT PLAN
SHEET 2 OF 2

ORIGINATOR:	DATE:	SIGNED:	PLOT BY:
DDS	08.2020		DDS
DRAWN:	DATE:	SIGNED:	PLOT DATE:
DDS	09.2020		20.10.20
CHECKED:	DATE:	SIGNED:	SURVEY BY:
SXX	10.2020		DEMPSEY WOOD
APPROVED:	DATE:	SIGNED:	SURVEY DATE:
SXX	10.2020		08.2020

ISSUE STATUS:
AS-BUILT

PROJECT No:	SCALES:	A1
1050-142875-01	1:500-A1 1:1000-A3	
DRAWING No:		REV
142875-12-AB322		A

			 ASSOCIATION OF CONSULTING ENGINEERS NEW ZEALAND ISO 9001 QUALITY ASSURED	
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NOTES: 1. ORIGIN OF LEVELS S 66 SO 48643 RL 54.50m 2. ORIGIN OF COORDINATES S 66 SO 48643 5905356.71mN 1770941.22mE				
ENGINEERING APPROVAL ENG-60349136				
I CERTIFY THAT THESE ASBUILT PLANS ARE AN ACCURATE RECORD OF THE WORKS UNDERTAKEN AND THAT: • THE COORDINATES (X,Y) ARE IN TERMS OF NZTM ON NZGD (2000), AND ARE WITHIN ±50mm. • THE LEVELS (Z) ARE IN TERMS OF THE AUCKLAND 1946 (MSL) LINZ DATUM (DOSLI DATUM), AND ARE WITHIN ±25mm. Signed:  CHARTERED PROFESSIONAL ENGINEER Date: 16/10/2020 Name: SHANE JAMES KELLY Phone: 09-917-5000 Email: s.kelly@harrisongrierson.com				
HC AUCKLAND OFFICE LEVEL 4, 96 ST GEORGES BAY ROAD PARNELL AUCKLAND 1052 T +64 9 917 5000 W www.harrisongrierson.com				
A	AS-BUILT		DDS	19.10.20
REF	REVISIONS		BY	DATE
PROJECT:				
HUGH GREEN LIMITED DONEGAL STage 11D & 12 36 TIR CONAILL AVE, FLATBUSH				
TITLE:				
STREETLIGHTS AS-BUILT SCHEDULE OF COORDINATES				
ORIGINATOR:	DATE:	SIGNED:	PLOT BY:	
DDS	08.2020		DDS	
DRAWN:	DATE:	SIGNED:	PLOT DATE:	
DDS	09.2020		20.10.20	
CHECKED:	DATE:	SIGNED:	SURVEY BY:	
SXK	10.2020		DEMPSEY WOOD	
APPROVED:	DATE:	SIGNED:	SURVEY DATE:	
SXK	10.2020		08.2020	
ISSUE STATUS:				
AS-BUILT				
PROJECT No:		SCALES:		
1050-142875-01		NOT TO SCALE		A1
DRAWING No:				REV
142875-12-AB323				A

ENGINEERING APPROVAL
ENG-60349136

I CERTIFY THAT THESE ASBUILT PLANS ARE AN ACCURATE RECORD OF THE WORKS UNDERTAKEN AND THAT:

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- THE LEVELS (Z) ARE IN TERMS OF THE AUCKLAND 1946 (MSL) LINZ DATUM (DOSLI DATUM), AND ARE WITHIN ±25mm.

Signed: 
CHARTERED PROFESSIONAL ENGINEER

Date: 16/10/2020

Name: SHANE JAMES KELLY

Phone: 09-917-5000

Email: s.kelly@harrisongrierson.com

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LEVEL 4, 96 ST GEORGES BAY ROAD
PARNELL AUCKLAND 1052
T +64 9 917 5000
W www.harrisongrierson.com

A	AS-BUILT	DDS	19.10.20
REF	REVISIONS	BY	DATE

PROJECT:

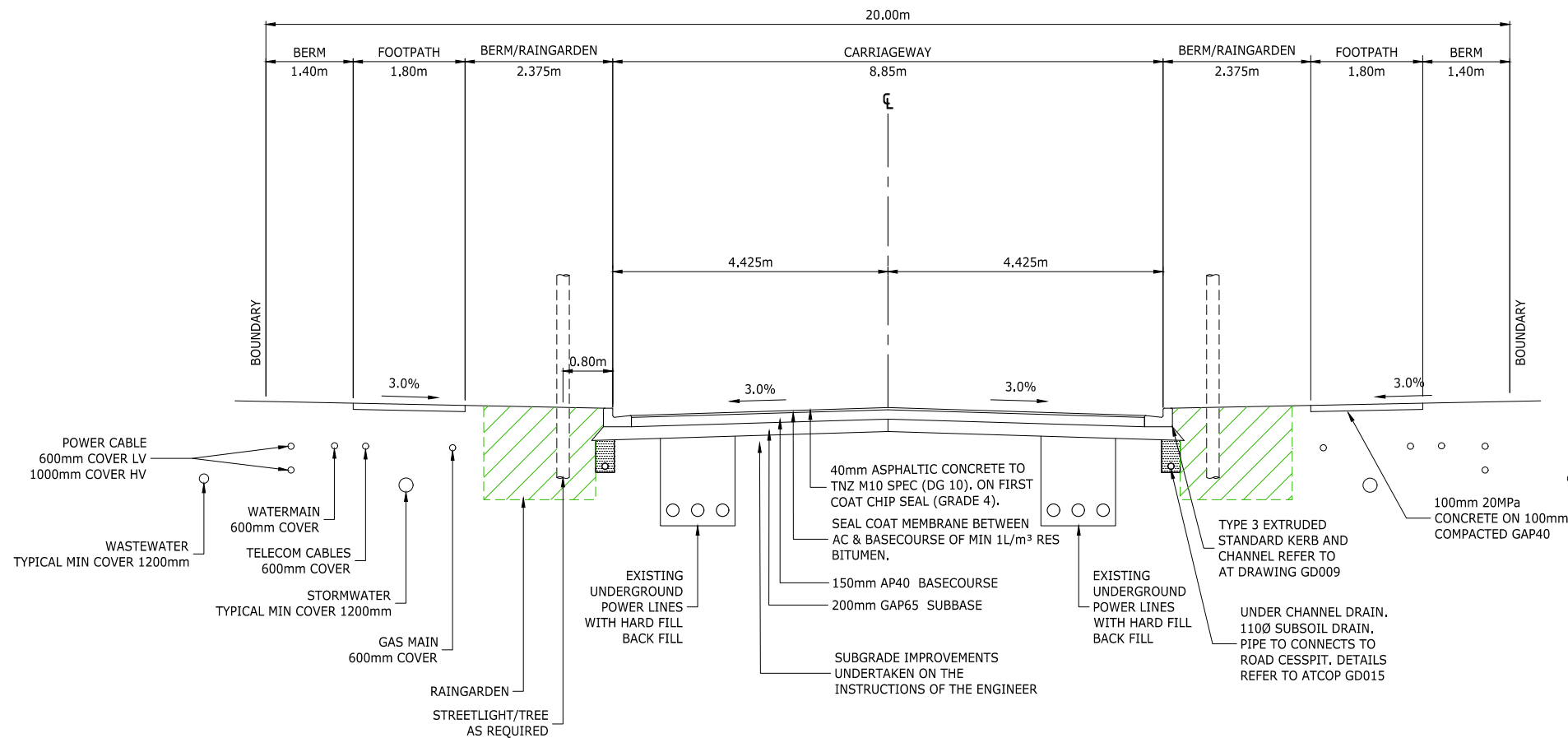
HUGH GREEN LIMITED
DONEGAL STAGE 11D AND 12
36 TIR CONAILL AVENUE, FLAT BUSH

TITLE:

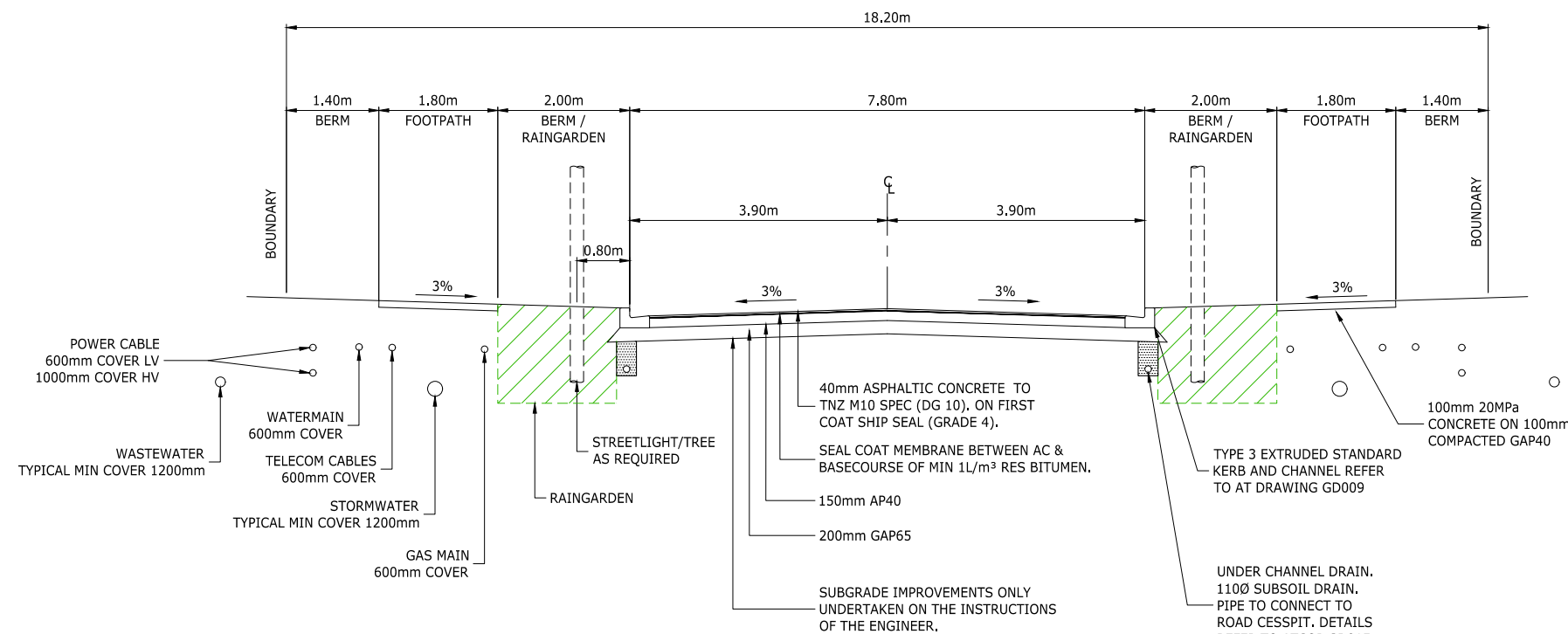
TYPICAL ROAD CROSS-SECTIONS
SHEET 1 OF 3
AS-BUILT

ORIGINATOR:	DATE:	SIGNED:	PLOT BY:
MNP	08.2020		DDS
DRAWN:	DATE:	SIGNED:	PLOT DATE:
DDS	10.2020		20.10.20
CHECKED:	DATE:	SIGNED:	SURVEY BY:
SXX	10.2020		
APPROVED:	DATE:	SIGNED:	SURVEY DATE:
SXX	10.2020		

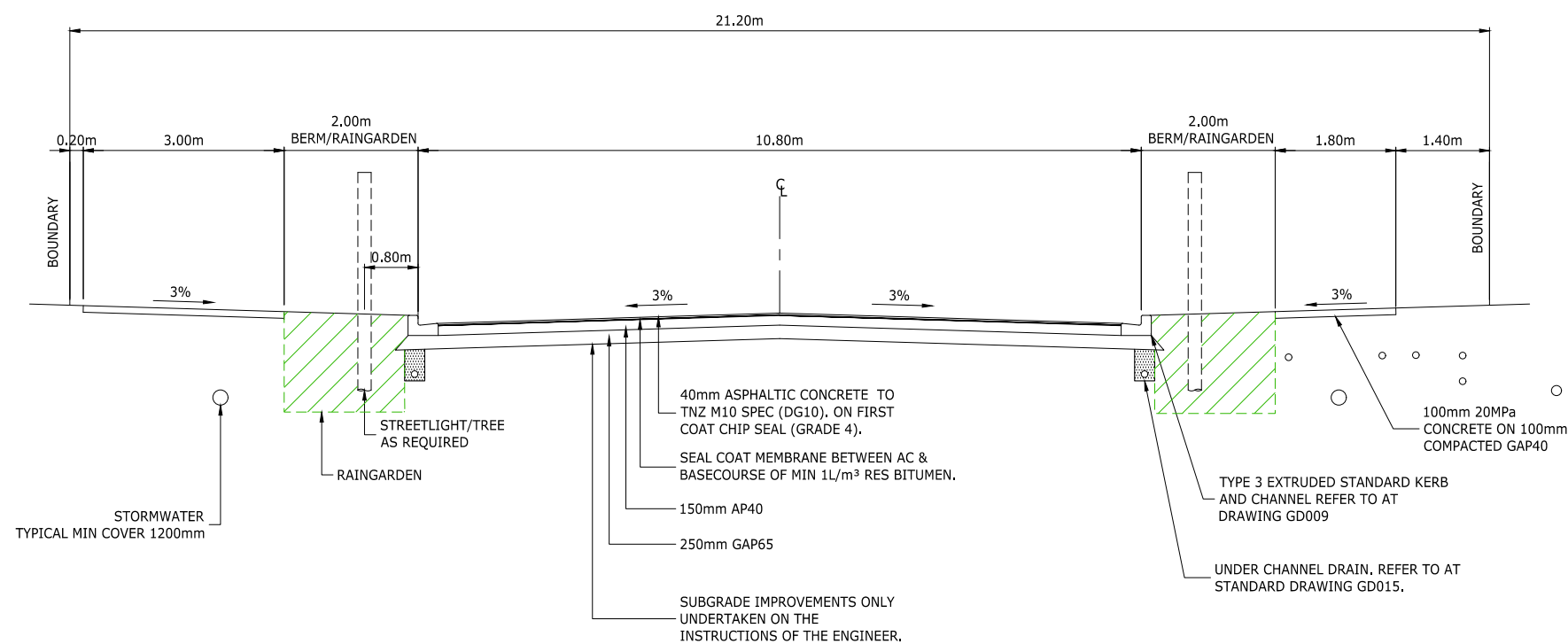
ISSUE STATUS:			AS-BUILT
PROJECT No: 1050-142875-01	SCALES: AS SHOWN		A1
DRAWING No: 142875-12-AB330			REV A



A TYPICAL CROSS SECTION (LOCAL ROAD)
312 SCALE 1:50 -A1
1:100 -A3 DUNGLOE AVENUE - ROAD 11 (CH 0.0 - CH 282.8)

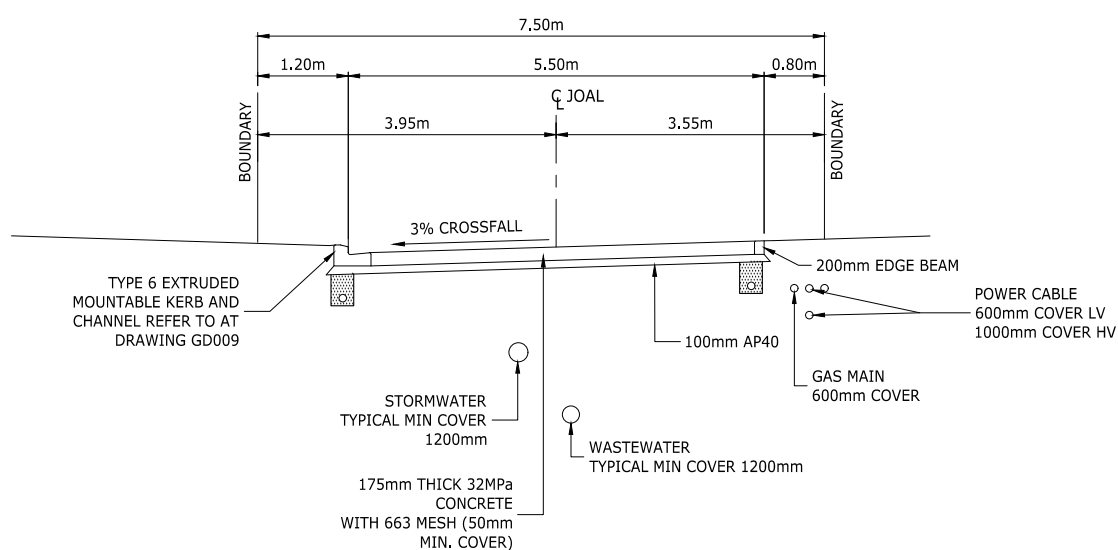


B TYPICAL CROSS SECTION (LOCAL ROAD)
312 SCALE 1:50 -A1
1:100 -A3 CHARLESTONE DRIVE - ROAD 1 (CH 75.4 - CH 284.0)
DRUMANESS ROAD - ROAD 2 (CH 0.0 - CH 202.2)
CLOONLYON DRIVE - ROAD 2 (CH 182.2 - CH 281.7)
DOWNPATRICK DRIVE - ROAD 13 (CH 0.0 - CH 64.5)
DRUMBUEY DRIVE - ROAD 5 (CH 256.2 - CH 472.8)



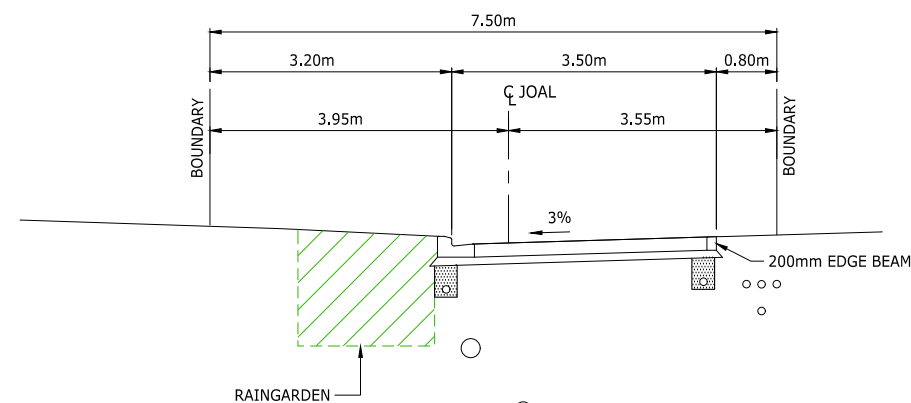
C TYPICAL CROSS SECTION (COLLECTOR ROAD)

311 SCALE 1:50-A1 1:100-A3 HIKUAWA ROAD - ROAD 14 (CH 0.0 - CH 101.0)



D1 TYPICAL CROSS SECTION (JOAL)

312 SCALE 1:50-A1 1:100-A3 JOAL 3 (CH 0.0 - CH 6.7, CH 17.8 - CH 52.0)



D2 TYPICAL CROSS SECTION (JOAL WITH RAINGARDEN)

312 SCALE 1:50-A1 1:100-A3 JOAL 3 (CH 6.7 - CH 17.8)

ENGINEERING APPROVAL
ENG-60349136

I CERTIFY THAT THESE ASBUILT PLANS ARE AN ACCURATE RECORD OF THE WORKS UNDERTAKEN AND THAT:

- THE COORDINATES (X,Y) ARE IN TERMS OF NZTM ON NZGD (2000), AND ARE WITHIN ±50mm.
- THE LEVELS (Z) ARE IN TERMS OF THE AUCKLAND 1946 (MSL) LINZ DATUM (DOSLI DATUM), AND ARE WITHIN ±25mm.

Signed:
CHARTERED PROFESSIONAL ENGINEER

Date: 16/10/2020

Name: SHANE JAMES KELLY

Phone: 09-917-5000

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T +64 9 917 5000
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A	AS-BUILT	DDS	19.10.20
REF	REVISIONS	BY	DATE

PROJECT:

HUGH GREEN LIMITED
DONEGAL 11D AND 12
36 TIR CONAILL AVENUE, FLAT BUSH

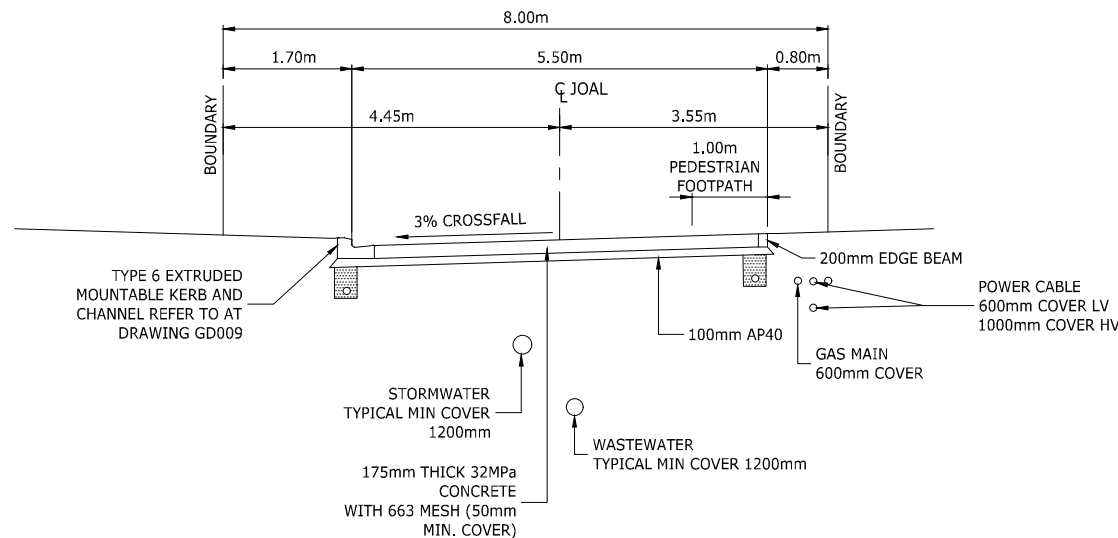
TITLE:
TYPICAL ROAD CROSS-SECTIONS
SHEET 2 OF 3
AS-BUILT

ORIGINATOR:	DATE:	SIGNED:	PLOT BY:
MNP	08.2020		DDS
DRAWN:	DATE:	SIGNED:	PLOT DATE:
DDS	10.2020		20.10.20
CHECKED:	DATE:	SIGNED:	SURVEY BY:
SXK	10.2020		
APPROVED:	DATE:	SIGNED:	SURVEY DATE:
SXK	10.2020		

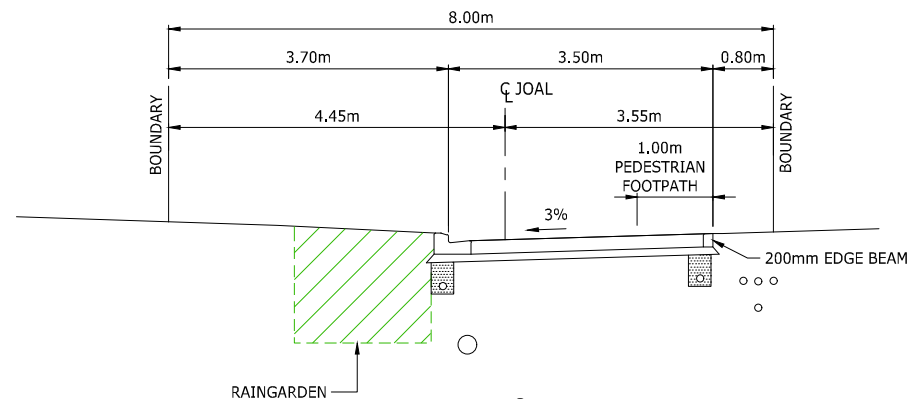
ISSUE STATUS:
AS-BUILT

PROJECT No: 1050-142875-01 SCALES: AS SHOWN A1

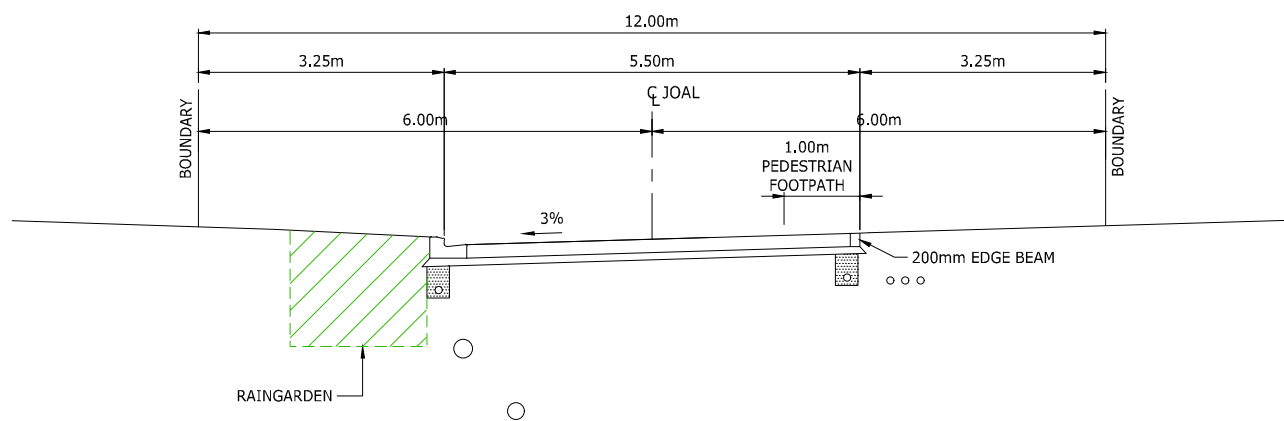
DRAWING No: 142875-12-AB331 REV A



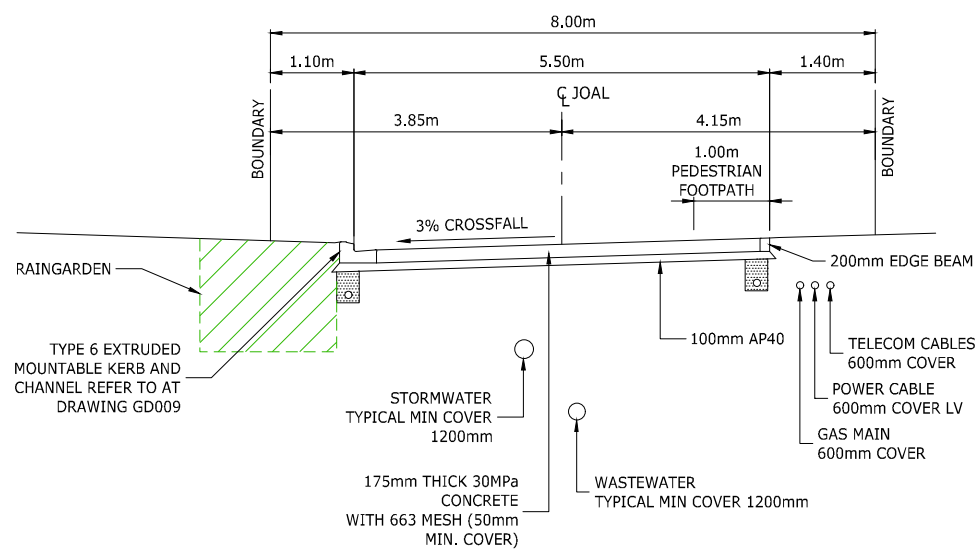
E1 **TYPICAL CROSS SECTION (JOAL)**
312 SCALE 1:50-A1 1:100-A3 KNOCK LANE - JOAL 1 (CH 0.0 - CH 9.2, CH 17.9 - CH 94.0)



E2 **TYPICAL CROSS SECTION (JOAL WITH RAINGARDEN)**
312 SCALE 1:50-A1 1:100-A3 KNOCK LANE - JOAL 1 (CH 9.2 - CH 17.9)



F1 **TYPICAL CROSS SECTION (JOAL WITH RAINGARDEN)**
311 SCALE 1:50-A1 1:100-A3 ROSSBEG LANE - JOAL 2 (CH 0.0 - CH 70.0)



F2 **TYPICAL CROSS SECTION (JOAL WITH RAINGARDEN)**
311 SCALE 1:50-A1 1:100-A3 ROSSBEG LANE - JOAL 2 (CH 70.0 - CH 130.0)

ENGINEERING APPROVAL
ENG-60349136

I CERTIFY THAT THESE ASBUILT PLANS ARE AN ACCURATE RECORD OF THE WORKS UNDERTAKEN AND THAT:

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Signed: 
CHARTERED PROFESSIONAL ENGINEER

Date: 16/10/2020

Name: SHANE JAMES KELLY

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A	AS-BUILT	DDS	19.10.20
REF	REVISIONS	BY	DATE

PROJECT:

HUGH GREEN LIMITED
DONEGAL STAGE 11D AND 12
36 TIR CONAILL AVENUE, FLAT BUSH

TITLE:

TYPICAL ROAD CROSS-SECTIONS
SHEET 3 OF 3
AS-BUILT

ORIGINATOR:	DATE:	SIGNED:	PLOT BY:
MNP	08.2020		DDS
DRAWN:	DATE:	SIGNED:	PLOT DATE:
DDS	10.2020		20.10.20
CHECKED:	DATE:	SIGNED:	SURVEY BY:
SXK	10.2020		
APPROVED:	DATE:	SIGNED:	SURVEY DATE:
SXK	10.2020		

ISSUE STATUS:

AS-BUILT

PROJECT No:	SCALES:	AS SHOWN	A1
1050-142875-01			

DRAWING No:	REV

142875-12-AB332

A

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NOTES:

1. ORIGIN OF LEVELS
S 66 SO 48643
RL 54.50m
2. ORIGIN OF COORDINATES
S 66 SO 48643
5905356.71mN
1770941.22mE
3. ALL CONNECTIONS ARE DN 100 uPVC. CHAINAGE FOR CONNECTIONS ARE FROM DOWNSTREAM MANHOLE CENTRE.
4. ALL STORMWATER LINES ARE RCRRJ CLASS 2 UNLESS SHOWN OTHERWISE.
5. ALL CESSPIT LEADS ARE RCRRJ CLASS 4.
6. ALL NEW MANHOLES ARE DN 1050 RC UNLESS SHOWN OTHERWISE.

LEGEND

- SW —

NEW PUBLIC STORMWATER LINE
- NEW PUBLIC MANHOLE
- NEW PUBLIC CESSPIT
- NEW LOT CONNECTION
- EXISTING LOT CONNECTION
- ⊕ SW

EXISTING SW LINE, MH AND CP
- NEW RAINGARDEN (PUBLIC)
- NEW RAINGARDEN (PRIVATE)
- EXISTING RAINGARDEN
- STAGE BOUNDARY
- EXISTING STREAM

ENGINEERING APPROVAL
ENG-60349136

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Date: 16/10/2020

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W www.harrissongrierson.com

C	AS-BUILT	DDS	05.11.20
B	AS-BUILT	DDS	22.10.20
A	AS-BUILT	DDS	19.10.20
REF	REVISIONS	BY	DATE

HUGH GREEN LIMITED
DONEGAL STAGE 11D AND 12
36 TIR CONAILL AVENUE, FLATBUSH

TITLE:

OVERALL STORMWATER
AS-BUILT PLAN

ORIGINATOR: DDS	DATE: 08.2020	SIGNED:	PLOT BY: DDS
DRAWN: DDS	DATE: 09.2020	SIGNED:	PLOT DATE: 06.11.20
CHECKED: SKX	DATE: 10.2020	SIGNED:	SURVEY BY: DEMPSEY WOOD
APPROVED: SKX	DATE: 10.2020	SIGNED:	SURVEY DATE: 08.2020

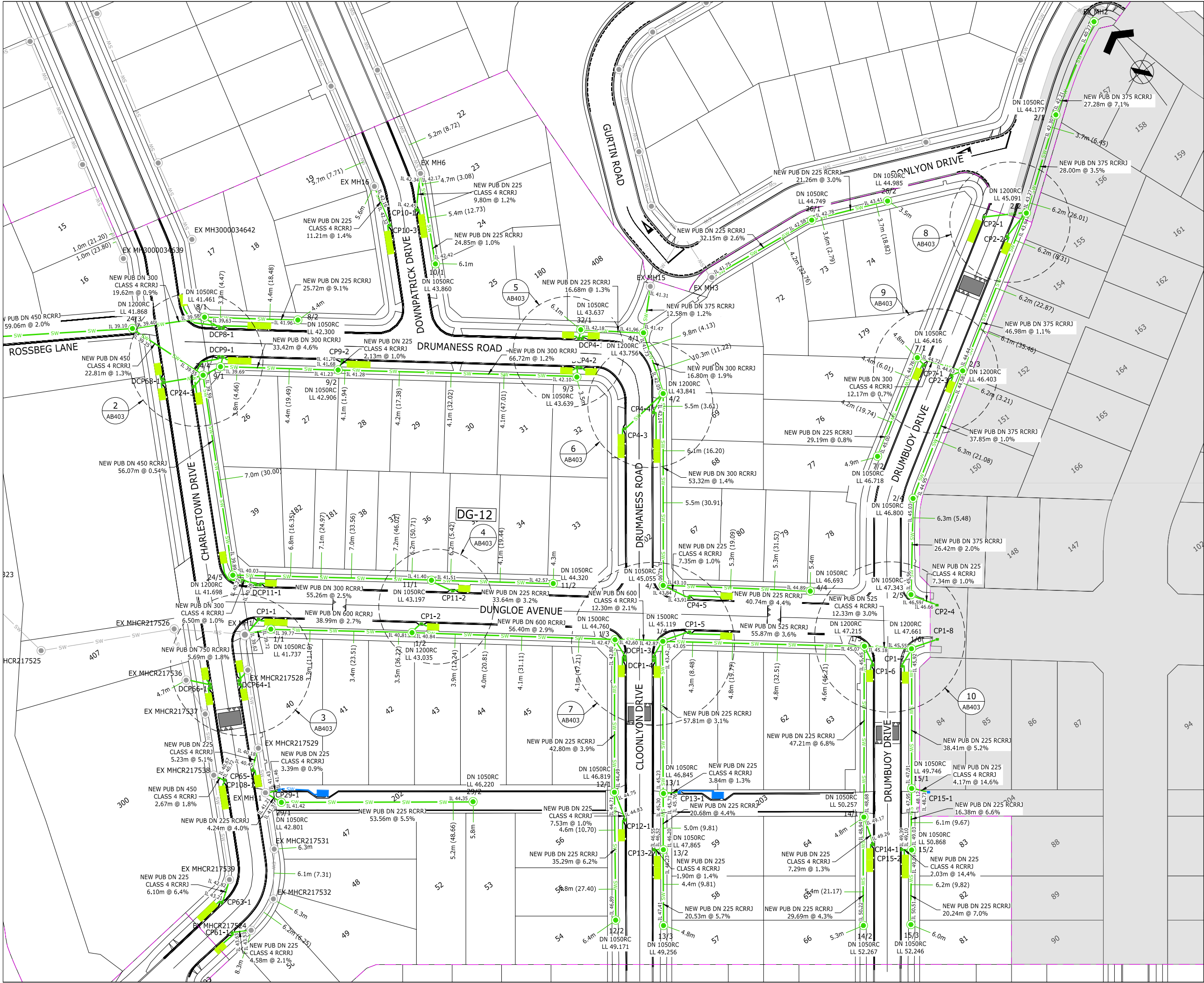
ISSUE STATUS:

AS-BUILT

PROJECT No: 1050-142875-01	SCALES: 1:1000-A1 1:2000-A3	A1
DRAWING No:		REV

142875-12-AB400

C





ASSOCIATION OF CONSULTING
ENGINEERS NEW ZEALAND

ISO 9001
QUALITY
ASSURED

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NOTES:

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S 66 SO 48643
RL 54.50m
- ORIGIN OF COORDINATES
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5905356.71mN
1770941.22mE
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CONNECTIONS ARE FROM DOWNSTREAM MANHOLE
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- ALL STORMWATER LINES ARE RCRRJ CLASS 2 UNLESS
SHOWN OTHERWISE.
- ALL CESSPIT LEADS ARE RCRRJ CLASS 4.
- ALL NEW MANHOLES ARE DN 1050 RC UNLESS
SHOWN OTHERWISE.

LEGEND

- SW NEW PUBLIC STORMWATER LINE
- NEW PUBLIC MANHOLE
- NEW PUBLIC CESSPIT
- NEW LOT CONNECTION
- EXISTING LOT CONNECTION
- EXISTING SW LINE, MH AND CP
- NEW RAINGARDEN (PUBLIC)
- NEW RAINGARDEN (PRIVATE)
- EXISTING RAINGARDEN
- STAGE BOUNDARY
- EXISTING STREAM

ENGINEERING APPROVAL
ENG-60349136

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Signed: 
CHARTERED PROFESSIONAL ENGINEER

Date: 16/10/2020

Name: SHANE JAMES KELLY

Phone: 09-917-5000

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C	AS-BUILT	DDS	05.11.20
B	AS-BUILT	DDS	22.10.20
A	AS-BUILT	DDS	19.10.20
REF	REVISIONS	BY	DATE

PROJECT:

HUGH GREEN LIMITED
DONEGAL STAGE 11D AND 12
36 TIR CONAILL AVENUE, FLATBUSH

TITLE:

STORMWATER
AS-BUILT PLAN
SHEET 2 OF 2

ORIGINATOR: DDS	DATE: 08.2020	SIGNED:	PLOT BY: DDS
DRAWN: DDS	DATE: 09.2020	SIGNED:	PLOT DATE: 06.11.20
CHECKED: SKK	DATE: 10.2020	SIGNED:	SURVEY BY: DEMPSEY WOOD
APPROVED: SKK	DATE: 10.2020	SIGNED:	SURVEY DATE: 08.2020

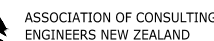
ISSUE STATUS:

AS-BUILT

PROJECT No: 1050-142875-01	SCALES: 1:500-A1 1:1000-A3	A1
DRAWING No:		REV

142875-12-AB402

C



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QUALITY
ASSURED

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S 66 SO 48643
RL 54.50m
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5. ALL CESSPIT LEADS ARE RCRRJ CLASS 4.
6. ALL NEW MANHOLES ARE DN 1050 RC UNLESS SHOWN OTHERWISE.

 NEW PUBLIC STORMWATER LINE
 NEW PUBLIC MANHOLE
 NEW PUBLIC CESSPIT
 NEW LOT CONNECTION
 EXISTING LOT CONNECTION
 EXISTING SW LINE, MH AND CP
 NEW RAINGARDEN (PUBLIC)
 NEW RAINGARDEN (PRIVATE)
 EXISTING RAINGARDEN

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Signed:
CHARTERED PROFESSIONAL ENGINEER

Date: 16/10/2020

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W www.harrisonsgrrierson.com

C	AS-BUILT	DDS	05.11.2017
B	AS-BUILT	DDS	22.10.2017
A	AS-BUILT	DDS	19.10.2017
REF	REVISIONS	BY	DAT

REF	REVISIONS	BY	DATE
PROJECT:			

HUGH GREEN LIMITED
DONEGAL STAGE 11D AND 12
36 TIR CONAILL AVENUE, FLATBUSH

TITLE: _____

STORMWATER DETAILS AS-BUILTS

ORIGINATOR: DDS	DATE: 08.2020	SIGNED:	PLOT BY:
DRAWN: DDS	DATE: 09.2020	SIGNED:	PLOT DATE: 06.11.
CHECKED: SXX	DATE: 10.2020	SIGNED:	SURVEY BY: DEMPSEY WOOD
APPROVED: SXX	DATE: 10.2020	SIGNED:	SURVEY DATE: 08.20

DATE	10/10/20	00/00
ISSUE STATUS:		

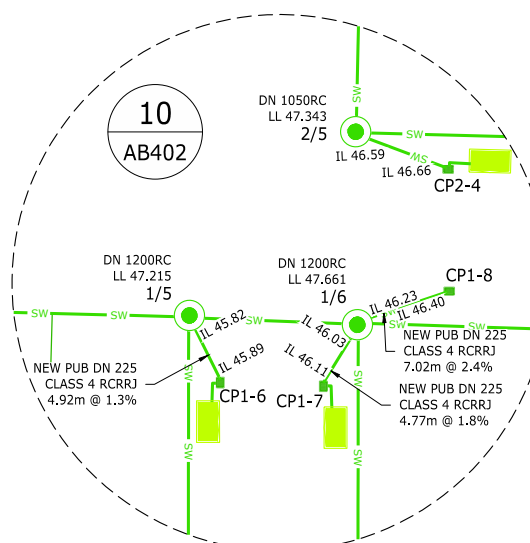
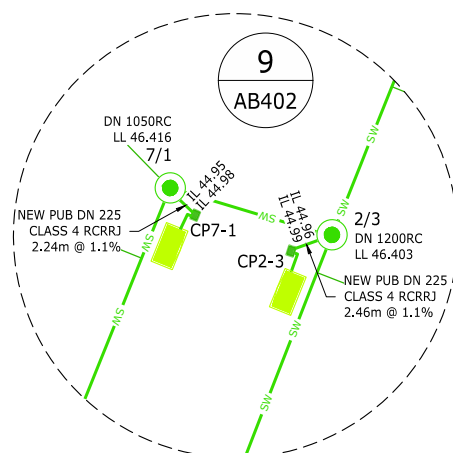
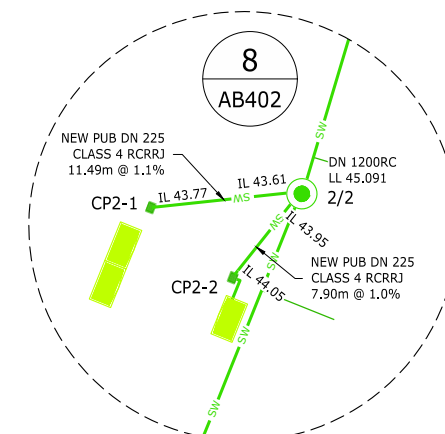
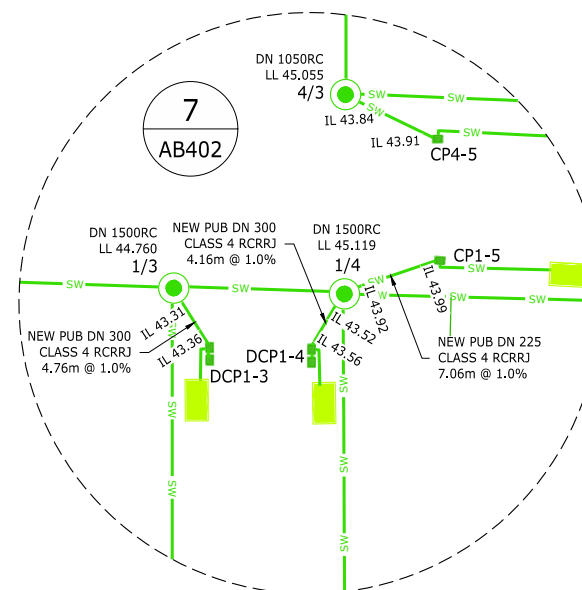
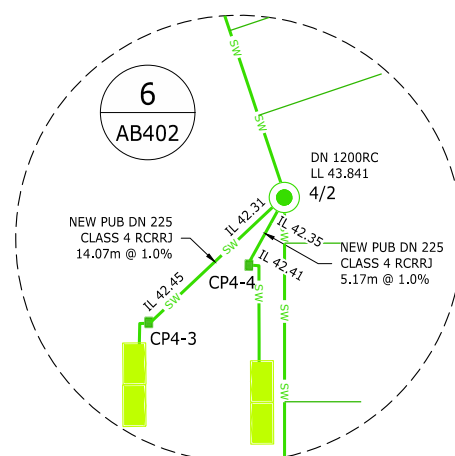
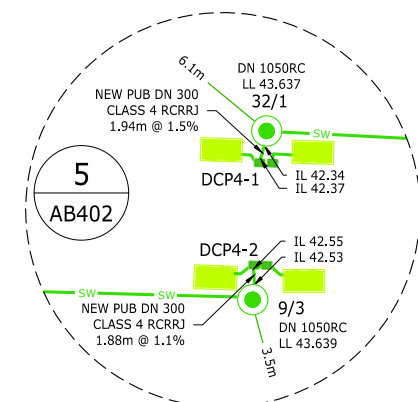
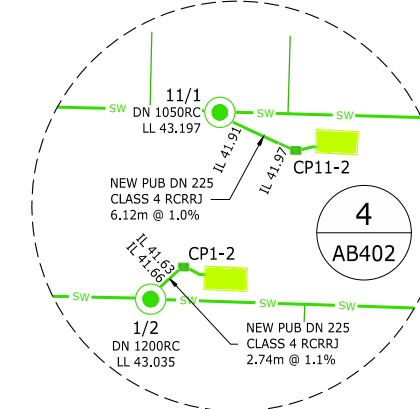
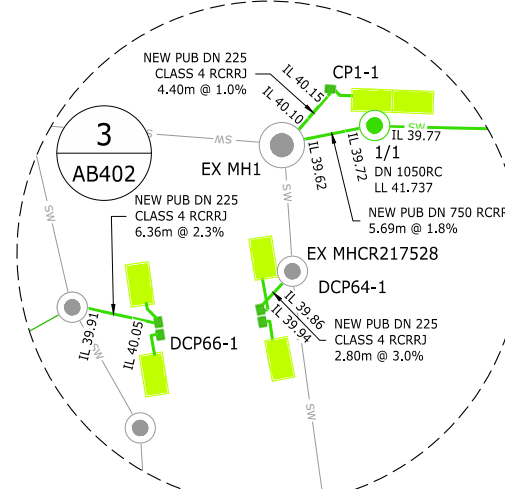
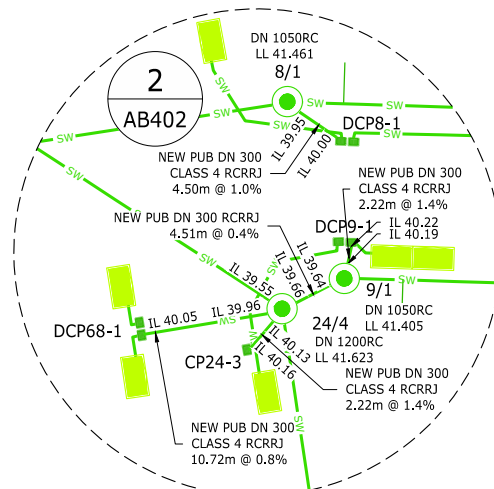
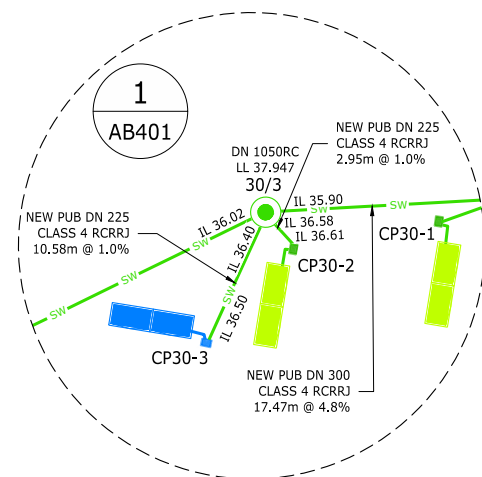
AS-BUILT

AS BUILT	
PERMITS	NOT TO SCALE

PROJECT No: 1050-142875-01	SCALES: NOT TO SCALE	A1
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1030 142075 01		
DRAWING No:		REV

142875-12-AB403	C
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NOTES:

1. ORIGIN OF LEVELS
S 66 SO 48643
RL 54.50m
2. ORIGIN OF COORDINATES
S 66 SO 48643
5905356.71mN
1770941.22mE

I CERTIFY THAT THESE ASBUILT PLANS ARE AN ACCURATE RECORD OF THE WORKS UNDERTAKEN AND THAT:

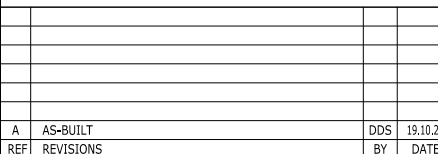
- THE COORDINATES (X,Y) ARE IN TERMS OF NZTM ON NZGD (2000), AND ARE WITHIN $\pm 50\text{mm}$.
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Date: 16/10/2020

Name: SHANE JAMES KELLY

Phone: 09-917-5000

Email: s.kelly@harrisingrierson.com

PROJECT:

TITLE:

STORMWATER AS-BUILT
SCHEDULE OF COORDINATES

ISSUE STATUS: AS-BUILT

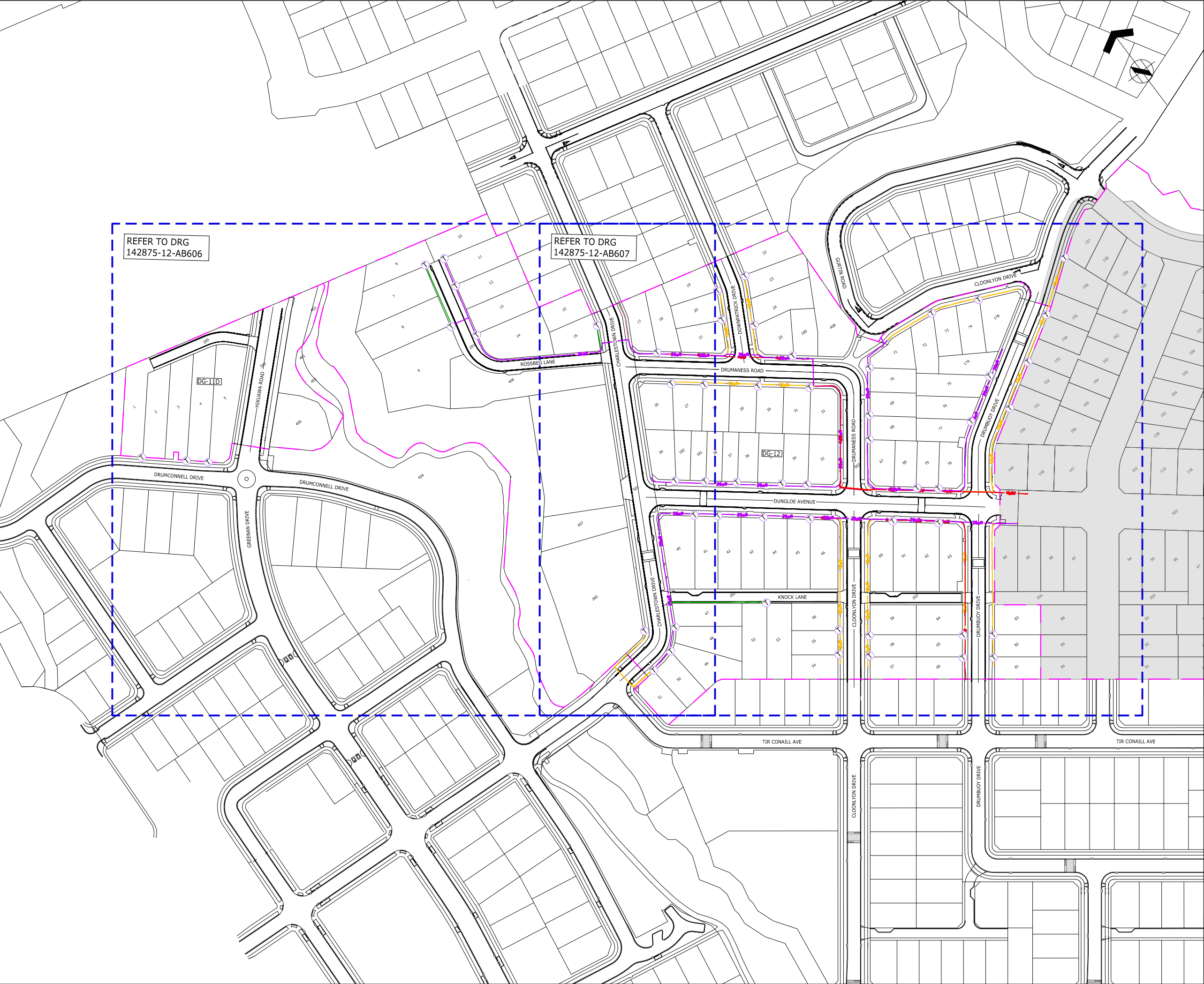
PROJECT No: 1050-142875-01	SCALES: NOT TO SCALE	A1
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DRAWING No:	REV
-------------	-----

REV

A

COORDINATE SCHEDULE						
CP No.	mE	mN	LL	IL (OUT)	IL (BASE)	SIZE (mm)
CP1-1	1770182.05	5905564.52	41.413	40.164	39.763	675 x 450
CP1-2	1770218.13	5905535.75	42.908	41.662	41.258	675 x 450
DCP1-3	1770258.65	5905494.12	44.630	43.355	42.980	675 x 450
DCP1-4	1770265.51	5905488.80	44.630	43.560	42.980	675 x 450
CP1-5	1770277.46	5905488.27	45.376	43.992	43.726	675 x 450
CP1-6	1770313.36	5905450.04	47.280	45.887	45.630	675 x 450
CP1-7	1770320.20	5905444.49	47.298	46.110	45.648	675 x 450
CP1-8	1770332.29	5905444.46	47.653	46.404	46.003	675 x 450
CP2-1	1770414.68	5905532.57	45.185	43.773	43.535	675 x 450
CP2-2	1770416.85	5905523.70	45.305	44.046	43.655	675 x 450
CP2-3	1770380.67	5905501.80	46.225	44.988	44.575	675 x 450
CP2-4	1770338.39	5905452.73	47.640	46.659	45.990	675 x 450
DCP4-1	1770302.59	5905573.92	43.435	42.365	41.785	675 x 450
DCP4-2	1770296.99	5905567.23	43.435	42.553	41.785	675 x 450
CP4-3	1770297.38	5905545.65	43.734	42.451	42.084	675 x 450
CP4-4	1770306.94	5905544.13	43.690	42.405	42.040	675 x 450
CP4-5	1770283.48	5905496.55	45.356	43.910	43.706	675 x 450
CP7-1	1770375.97	5905509.15	46.228	44.976	44.578	675 x 450
DCP8-1	1770223.03	5905637.36	41.200	39.995	39.550	675 x 450
DCP9-1	1770218.50	5905629.97	41.200	40.219	39.550	675 x 450
CP9-2	1770244.97	5905608.80	42.762	41.698	41.112	675 x 450
CP10-1	1770287.88	5905630.20	43.553	42.454	41.903	675 x 450
CP10-3	1770278.71	5905631.59	43.574	42.319	41.924	675 x 450
DCP11-1	1770187.72	5905573.00	41.409	40.280	39.759	675 x 450
CP11-2	1770231.17	5905538.25	43.190	41.966	41.540	675 x 450
CP12-1	1770230.85	5905457.08	47.124	44.826	45.474	675 x 450
CP13-1	1770248.23	5905454.20	47.082	45.758	45.432	675 x 450
CP13-2	1770232.80	5905445.13	47.678	46.546	46.028	675 x 450
CP14-1	1770282.89	5905409.37	50.545	49.259	48.895	675 x 450
CP15-1	1770304.71	5905411.86	50.026	48.731	48.376	675 x 450
CP15-2	1770288.36	5905401.91	50.586	49.389	48.936	675 x 450
DCP24-1	1770158.09	5905750.85	38.930	37.462	37.280	675 x 450
CP24-2	1770156.44	5905678.43	40.597	39.352	38.947	675 x 450
CP24-3	1770207.21	5905628.24	41.377	40.161	39.818	675 x 450
CP29-1	1770158.02	5905522.67	42.696	41.462	41.046	675 x 450
CP30-1	1770073.87	5905778.53	37.736	36.422	36.086	675 x 450
CP30-2	1770062.90	5905784.17	37.765	36.608	36.115	675 x 450
CP30-3	1770053.34	5905782.34	38.102	36.502	36.115	675 x 450
PREVIOUSLY APPROVED UNDER EPA # ENG60310923						
CP61-1	1770122.99	5905497.86	41.489	43.625	39.839	675 x 450
CP63-1	1770125.70	5905507.05	44.614	43.206	42.964	675 x 450
DCP64-1	1770167.58	5905553.95	41.156	39.942	39.506	675 x 450
CP65-1	1770155.47	5905531.34	41.899	40.449	40.249	675 x 450
DCP66-1	1770159.96	5905558.27	41.176	40.052	39.526	675 x 450
DCP68-1	1770200.69	5905634.46	41.489	40.050	39.839	675 x 450
CP108-1	1770147.06	5905534.12	41.948	40.716	40.298	675 x 450





ASSOCIATION OF CONSULTING
ENGINEERS NEW ZEALAND

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QUALITY
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NOTES:

1. ORIGIN OF LEVELS
S 66 SO 48643
RL 54.50m

2. ORIGIN OF COORDINATES
S 66 SO 48643
5905356.71mN
1770941.22mE

LEGEND

STAGE BOUNDARY

NEW TELECOMMUNICATIONS
(26WAY RIBBONET)

NEW TELECOMMUNICATIONS
(12WAY RIBBONET)

NEW TELECOMMUNICATIONS
(4 WAY MICRONET DUCT)

NEW TELECOMMUNICATIONS
(1 WAY MICRONET DUCT)

NEW TELECOMMUNICATIONS
(50 mmP MICRONET DUCT)

EXISTING TELECOMMUNICATION

Ⓣ

NEW TELECOM PLINTH

ENGINEERING APPROVAL
ENG-60349136

I CERTIFY THAT THESE ASBUILT PLANS ARE AN ACCURATE RECORD OF THE WORKS UNDERTAKEN AND THAT:

- THE COORDINATES (X,Y) ARE IN TERMS OF NZTM ON NZGD (2000), AND ARE WITHIN ±50mm.
- THE LEVELS (Z) ARE IN TERMS OF THE AUCKLAND 1946 (MSL) LINZ DATUM (DOSLI DATUM), AND ARE WITHIN ±25mm.

Signed: _____
CHARTERED PROFESSIONAL ENGINEER

Date: 16/10/2020

Name: SHANE JAMES KELLY

Phone: 09-917-5000

Email: s.kelly@harrisonsgrierson.com



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LEVEL 4, 96 ST GEORGES BAY ROAD
PARNELL AUCKLAND 1052
T +64 9 917 5000
W www.harrisonsgrierson.com

A	AS-BUILT	DDS	19.10.20
REF	REVISIONS	BY	DATE

PROJECT:

HUGH GREEN LIMITED
DONEGAL STAGE 11D AND 12
36 TIR CONAILL AVE, FLATBUSH

TITLE:

OVERALL TELECOMMUNICATION
SERVICES AS-BUILT PLAN

ORIGINATOR: DDS	DATE: 09.2020	SIGNED:	PLOT BY: DDS
DRAWN: DDS	DATE: 10.2020	SIGNED:	PLOT DATE: 20.10.20
CHECKED: SXX	DATE: 10.2020	SIGNED:	SURVEY BY: DEMPSEY WOOD
APPROVED: SXX	DATE: 10.2020	SIGNED:	SURVEY DATE: 08.2020

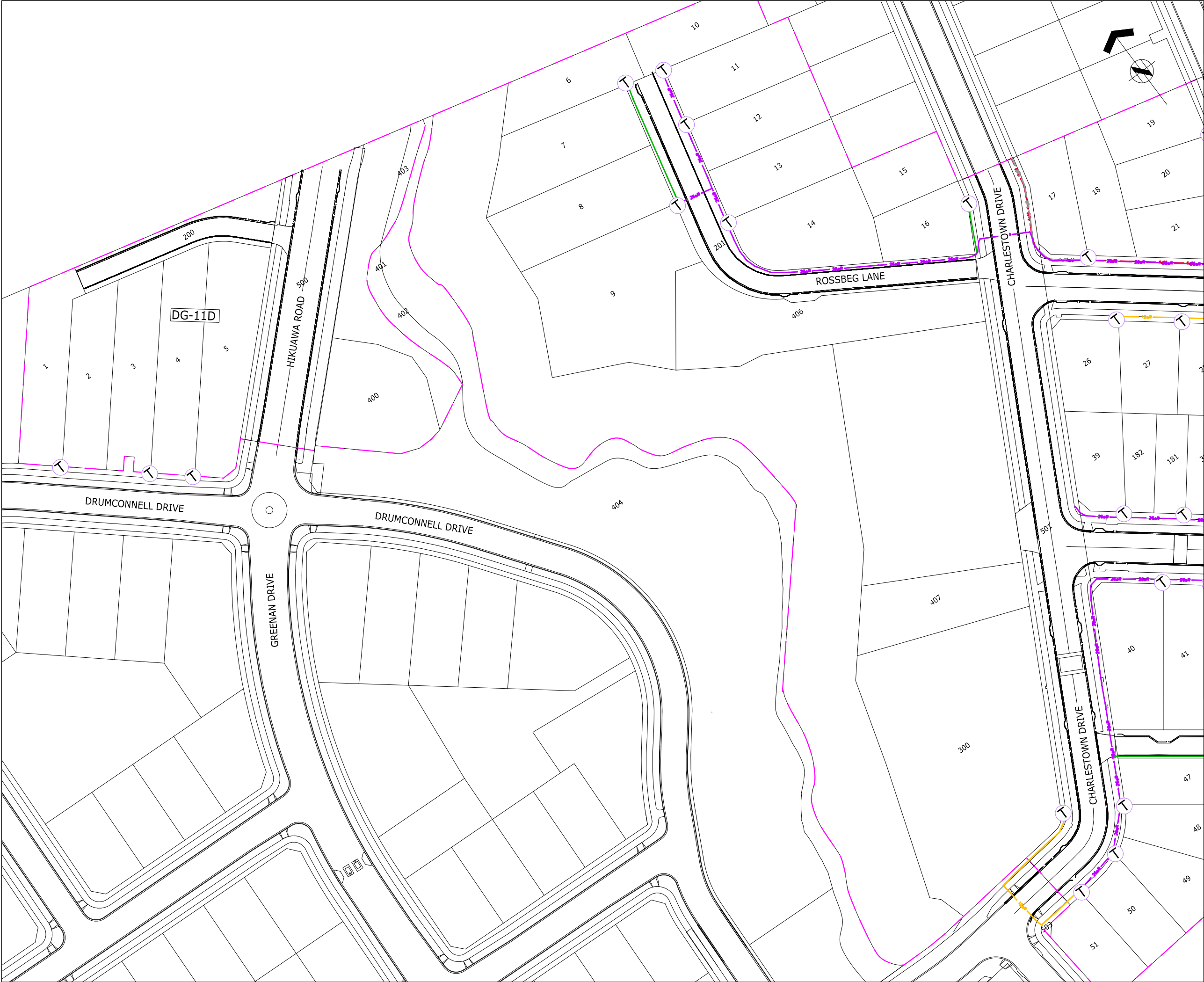
ISSUE STATUS:

AS-BUILT

PROJECT No: 1050-142875-01	SCALES: 1:1000-A1 1:2000-A3	A1
DRAWING No:		REV

142875-12-AB605

A





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ENGINEERS NEW ZEALAND

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S 66 SO 48643
RL 54.50m

2. ORIGIN OF COORDINATES
S 66 SO 48643
5905356.71mN
1770941.22mE

LEGEND

STAGE BOUNDARY

NEW TELECOMMUNICATIONS
(26WAY RIBBONET)

NEW TELECOMMUNICATIONS
(12WAY RIBBONET)

NEW TELECOMMUNICATIONS
(4 WAY MICRONET DUCT)

NEW TELECOMMUNICATIONS
(1 WAY MICRONET DUCT)

NEW TELECOMMUNICATIONS
(50 mmP MICRONET DUCT)

EXISTING TELECOMMUNICATION

NEW TELECOM PLINTH

ENGINEERING APPROVAL
ENG-60349136

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Signed: 

CHARTERED PROFESSIONAL ENGINEER

Date: 16/10/2020

Name: SHANE JAMES KELLY

Phone: 09-917-5000

Email: s.kelly@harrisongrierson.com

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LEVEL 4, 96 ST GEORGES BAY ROAD
PARNELL AUCKLAND 1052
T +64 9 917 5000
W www.harrisongrierson.com

A	AS-BUILT	DDS	19.10.20
REF	REVISIONS	BY	DATE

PROJECT:

HUGH GREEN LIMITED
DONEGAL STAGE 11D AND 12
36 TIR CONAILL AVE, FLATBUSH

TITLE:
TELECOMMUNICATION SERVICES
AS-BUILT PLAN
SHEET 1 OF 2

ORIGINATOR: DDS

DATE: 09.2020

SIGNED:

PLOT BY: DDS

DRAWN: DDS

DATE: 10.2020

SIGNED:

PLOT DATE: 20.10.20

CHECKED: SXX

DATE: 10.2020

SIGNED:

SURVEY BY: DEMPSEY WOOD

APPROVED: SXX

DATE: 10.2020

SIGNED:

SURVEY DATE: 04.2019

ISSUE STATUS:

AS-BUILT

PROJECT No: 1050-142875-01

SCALES: 1:500-A1
1:1000-A3

A1

DRAWING No:

142875-12-AB606

REV
A





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NOTES:
1. ORIGIN OF LEVELS
S 66 SO 48643
RL 54.50m
2. ORIGIN OF COORDINATES
S 66 SO 48643
5905356.71mN
1770941.22mE

LEGEND
--- STAGE BOUNDARY
--- NEW TELECOMMUNICATIONS
(26WAY RIBBONET)
--- NEW TELECOMMUNICATIONS
(12WAY RIBBONET)
--- NEW TELECOMMUNICATIONS
(4 WAY MICRONECT DUCT)
--- NEW TELECOMMUNICATIONS
(1 WAY MICRONECT DUCT)
--- NEW TELECOMMUNICATIONS
(50 mmP MICRONECT DUCT)
--- EXISTING TELECOMMUNICATION
T NEW TELECOM PLINTH

ENGINEERING APPROVAL
ENG-60349136

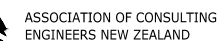
I CERTIFY THAT THESE ASBUILT PLANS ARE AN ACCURATE RECORD OF
THE WORKS UNDERTAKEN AND THAT:
• THE COORDINATES (X,Y) ARE IN TERMS OF NZTM ON NZGD
(2000), AND ARE WITHIN ±50mm.
• THE LEVELS (Z) ARE IN TERMS OF THE AUCKLAND 1946 (MSL)
LINZ DATUM (DOSLI DATUM), AND ARE WITHIN ±25mm.

Signed:
CHARTERED PROFESSIONAL ENGINEER
Date: 16/10/2020
Name: SHANE JAMES KELLY
Phone: 09-917-5000
Email: s.kelly@harrisonsgrison.com



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W www.harrisonsgrison.com

A	AS-BUILT	DDS	19.10.20
REF	REVISIONS	BY	DATE
PROJECT:			
HUGH GREEN LIMITED DONEGAL STAGE 11D AND 12 36 TIR CONAILL AVE, FLATBUSH			
TITLE: TELECOMMUNICATION SERVICES AS-BUILT PLAN SHEET 2 OF 2			
ORIGINATOR: DDS	DATE: 09.2020	SIGNED:	PLOT BY: DDS
DRAWN: DDS	DATE: 10.2020	SIGNED:	PLOT DATE: 20.10.20
CHECKED: SXX	DATE: 10.2020	SIGNED:	SURVEY BY: DEMPSEY WOOD
APPROVED: SXX	DATE: 10.2020	SIGNED:	SURVEY DATE: 04.2019
ISSUE STATUS:			
AS-BUILT			
PROJECT No: 1050-142875-01	SCALES: 1:500-A1 1:1000-A3	A1	
DRAWING No:			REV
142875-12-AB607			A



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NOTES:

1. ORIGIN OF LEVELS
S 66 SO 48643
RL 54.50m
2. ORIGIN OF COORDINATES
S 66 SO 48643
5905356.71mN
1770941.22mE
3. ALL CONNECTIONS ARE DN 100 uPVC, CHAINAGE
FOR CONNECTIONS ARE FROM DOWNSTREAM
MANHOLE CENTRE.
4. ALL WASTEWATER LINES ARE PVC-U SN16 UNLESS
SHOWN OTHERWISE.
5. ALL NEW MANHOLES ARE DN 1050 RC UNLESS
SHOWN OTHERWISE.

LEGEND

-  STAGE BOUNDARY
 NEW PUBLIC WASTEWATER LINE
 EXISTING PUBLIC WASTEWATER LINE
 NEW LOT CONNECTION
 NEW PUBLIC MANHOLE
 EXISTING PUBLIC MANHOLE

ENGINEERING APPROVAL
ENG-60349136

I CERTIFY THAT THESE ASBUILT PLANS ARE AN ACCURATE RECORD OF THE WORKS UNDERTAKEN AND THAT:

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- THE LEVELS (Z) ARE IN TERMS OF THE AUCKLAND 1946 (MSL) LINZ DATUM (DOSLI DATUM), AND ARE WITHIN $\pm 25\text{mm}$.

Signed: 
 CHARTERED PROFESSIONAL ENGINEER

Date: 13/10/2020

Name: SHANE JAMES KELLY

Phone: 09-917-5000

Email: s.kelly@harrisingrierson.com



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W www.harrisongrrierson.com

A	AS-BUILT	DDS	13.10.2017
REF	REVISIONS	BY	DATE
PROJECT:			

HUGH GREEN LIMITED
DONEGAL STAGES 11D AND 12
36 TIR CONAILL AVENUE, FLATBUSH

TITLE:	OVERALL WASTEWATER AS-BUILT PLAN
--------	-------------------------------------

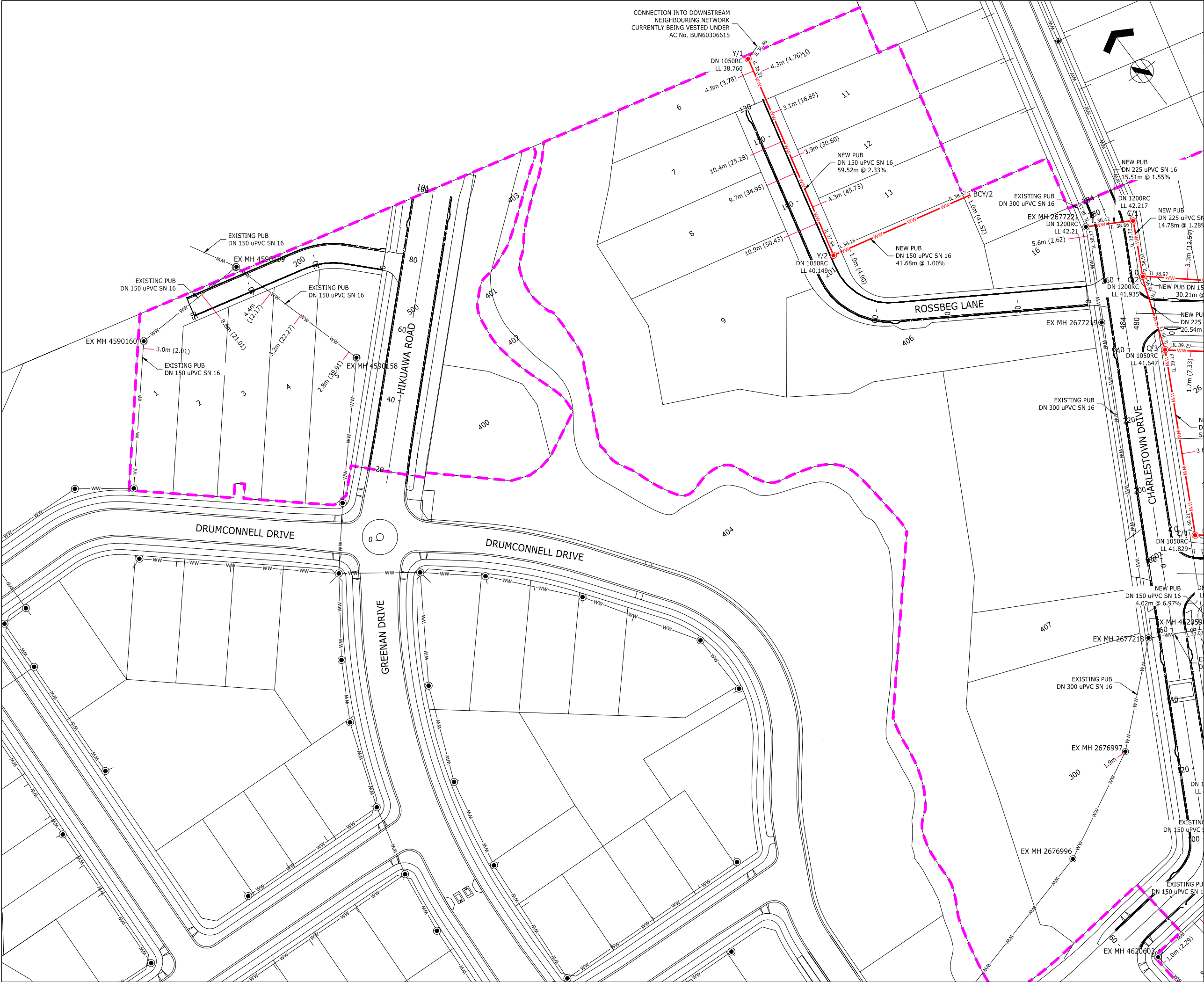
ORIGINATOR: DDS	DATE: 08.2020	SIGNED:	PLOT BY:
DRAWN: DDS	DATE: 09.2020	SIGNED:	PLOT DATE: 20.10.
CHECKED: SXX	DATE: 10.2020	SIGNED:	SURVEY BY: DEMPSEY WOOD
APPROVED: SXX	DATE: 10.2020	SIGNED:	SURVEY DATE: 08.2020

AS-BUILT

PROJECT No: 1050-142875-01	SCALES: 1:1000-A1 1:2000-A3	A1
DRAWING No:		REV

142875-12-AB405

A





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NOTES:

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1770941.22mE
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- ALL NEW MANHOLES ARE DN 1050 RC UNLESS SHOWN OTHERWISE.

LEGEND

- STAGE BOUNDARY
- NEW PUBLIC WASTEWATER LINE
- EXISTING PUBLIC WASTEWATER LINE
- NEW LOT CONNECTION
- NEW PUBLIC MANHOLE
- EXISTING PUBLIC MANHOLE

ENGINEERING APPROVAL
ENG-60349136

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Date: 13/10/2020

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A	AS-BUILT	DDS	13.10.20
REF	REVISIONS	BY	DATE

PROJECT:

HUGH GREEN LIMITED
DONEGAL STAGE 11D AND 12
36 TIR CONAILL AVENUE, FLATBUSH

TITLE:

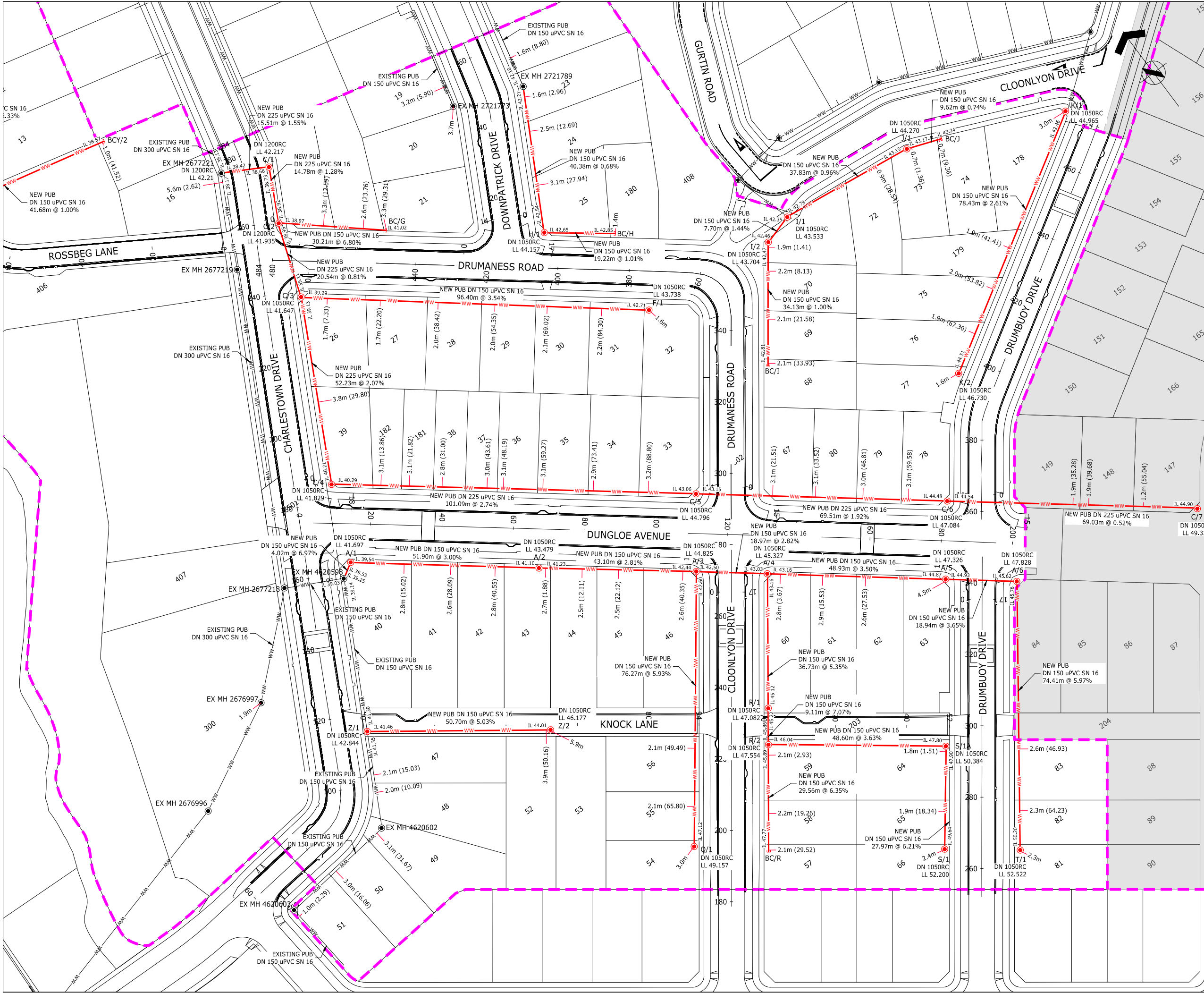
WASTEWATER
AS-BUILT PLAN
SHEET 1 OF 2

ORIGINATOR:	DATE:	SIGNED:	PLOT BY:
DDS	08.2020		DDS
DRAWN:	DATE:	SIGNED:	PLOT DATE:
DDS	09.2020		20.10.20
CHECKED:	DATE:	SIGNED:	SURVEY BY:
SXX	10.2020		DEMPSEY WOOD
APPROVED:	DATE:	SIGNED:	SURVEY DATE:
SXX	10.2020		08.2020

ISSUE STATUS:

AS-BUILT

PROJECT No:	SCALES:	A1
1050-142875-01	1:500-A1 1:1000-A3	
DRAWING No:	REV	A
142875-12-AB406		





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S 66 SO 48643
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S 66 SO 48643
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- ALL NEW MANHOLES ARE DN 1050 RC UNLESS SHOWN OTHERWISE.

LEGEND

- STAGE BOUNDARY
- NEW PUBLIC WASTEWATER LINE
- EXISTING PUBLIC WASTEWATER LINE
- NEW LOT CONNECTION
- NEW PUBLIC MANHOLE
- EXISTING PUBLIC MANHOLE

ENGINEERING APPROVAL
ENG-60349136

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Signed:  CHARTERED PROFESSIONAL ENGINEER

Date: 13/10/2020

Name: SHANE JAMES KELLY

Phone: 09-917-5000

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PARNELL AUCKLAND 1052
T +64 9 917 5000
W www.harrissongrierson.com

A	AS-BUILT	DDS	13.10.20
REF	REVISIONS	BY	DATE

PROJECT:

HUGH GREEN LIMITED
DONEGAL STAGE 11D AND 12
36 TIR CONAILL AVENUE, FLATBUSH

TITLE:

WASTEWATER
AS-BUILT PLAN
SHEET 2 OF 2

ORIGINATOR:	DATE:	SIGNED:	PLOT BY:
DDS	08.2020		DDS
DRAWN:	DATE:	SIGNED:	PLOT DATE:
DDS	09.2020		20.10.20
CHECKED:	DATE:	SIGNED:	SURVEY BY:
SXX	10.2020		DEMPEY WOOD
APPROVED:	DATE:	SIGNED:	SURVEY DATE:
SXX	10.2020		08.2020

ISSUE STATUS:

PROJECT No:	SCALES:	A1
1050-142875-01	1:500-A1 1:1000-A3	
DRAWING No:	REV	
142875-12-AB407	A	

COORDINATE SCHEDULE			
MH No.	mE	mN	LL
A/1	1770179.46	5905559.10	41.697
A/2	1770220.72	5905526.13	43.479
A/3	1770255.41	5905498.90	44.825
A/4	1770270.94	5905486.43	45.327
A/5	1770310.00	5905455.20	47.326
A/6	1770325.56	5905442.74	47.828
C/1	1770227.64	5905661.39	42.217
C/2	1770220.38	5905647.17	41.935
C/3	1770213.02	5905626.87	41.647
C/4	1770188.29	5905579.78	41.829
C/5	1770268.41	5905516.34	44.796
C/6	1770323.49	5905472.43	47.084
C/7	1770378.27	5905428.63	49.335
F/1	1770288.78	5905565.40	43.738
H/1	1770278.35	5905600.38	44.157
I/1	1770335.41	5905562.96	43.533
I/2	1770326.94	5905560.53	43.704
J/1	1770373.67	5905558.09	44.270
K/1	1770415.58	5905539.85	44.965
K/2	1770347.54	5905499.09	46.730
Q/1	1770208.68	5905437.65	49.157
R/1	1770248.53	5905456.16	47.082
R/2	1770242.45	5905447.97	47.554
S/1A	1770281.94	5905417.76	50.384
S/1	1770264.37	5905394.90	52.200
T/1	1770281.16	5905381.98	52.522
Y/1	1770168.08	5905763.42	38.760
Y/2	1770154.02	5905704.50	40.149
Z/1	1770154.76	5905518.44	42.844
Z/2	1770196.11	5905487.96	46.177



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NOTES:

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S 66 SO 48643
RL 54.50m

2. ORIGIN OF COORDINATES
S 66 SO 48643
5905356.71mN
1770941.22mE

ENGINEERING APPROVAL
ENG-60349136

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Signed:
CHARTERED PROFESSIONAL ENGINEER

Date: 13/10/2020

Name: SHANE JAMES KELLY

Phone: 09-917-5000

Email: s.kelly@harrisonsgrierson.com

HC

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PARNELL AUCKLAND 1052
T +64 9 917 5000
W www.harrisonsgrierson.com

A	AS-BUILT	DDS	13.10.20
REF	REVISIONS	BY	DATE

PROJECT:

HUGH GREEN LIMITED
DONEGAL STAGE 11D AND 12
36 TIR CONAILL AVENUE, FLATBUSH

TITLE:

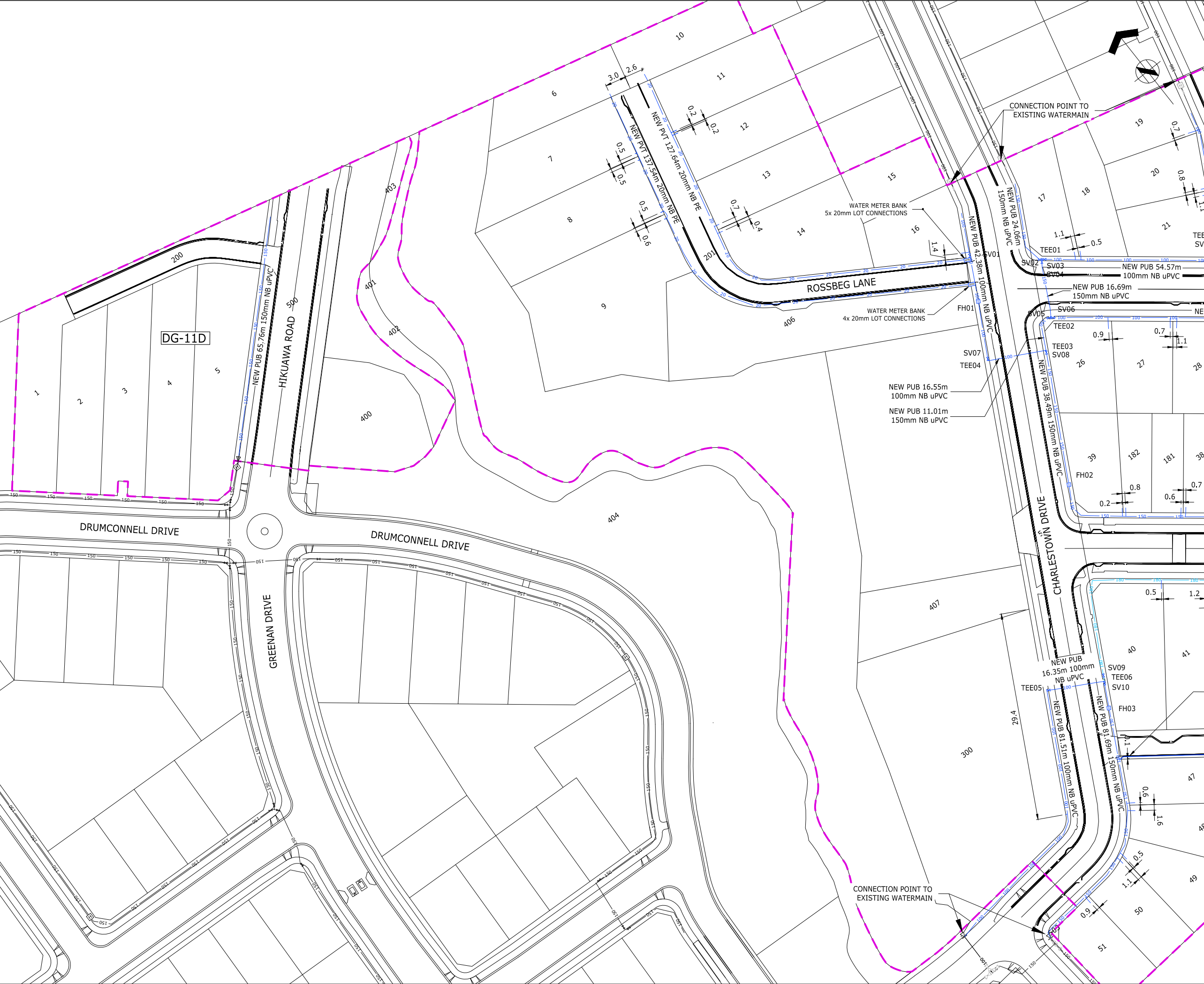
WASTEWATER AS-BUILTS
SCHEDULE OF COORDINATES

ORIGINATOR: DDS	DATE: 08.2020	SIGNED:	PLOT BY: DDS
DRAWN: DDS	DATE: 09.2020	SIGNED:	PLOT DATE: 14.10.20
CHECKED: SXX	DATE: 10.2020	SIGNED:	SURVEY BY: DEMPSEY WOOD
APPROVED: SXX	DATE: 10.2020	SIGNED:	SURVEY DATE: 08.2020

ISSUE STATUS:

AS-BUILT

PROJECT No: 1050-142875-01	SCALES: 1:500-A1 1:1000-A3	A1
DRAWING No: 142875-12-AB408		REV A





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NOTES

- COORDINATE DATUM - NZ TRANSVERSE MERCATOR DATUM 2000.
- ALL LOT CONNECTIONS ARE DN25
- NB 100-150mmØ uPVC, AS/NZS 1477:1999 SERIES 11 PN12 COLOURED BLUE

LEGEND:

---	STAGE BOUNDARIES
150	NEW PUBLIC 150 NB uPVC WATERMAIN
100	NEW PUBLIC 100 NB uPVC WATERMAIN
180	NEW PUBLIC 180 NB PE WATERMAIN
NEW PUBLIC FIRE HYDRANT	
NEW PUBLIC SLUCE VALVE	
NEW PUBLIC PEET VALVE	
NEW PUBLIC BLANK CAP	
NEW WATER METER BANK	
NEW PRIVATE WATER LOT CONNECTIONS	
150	EXISTING PUBLIC WATERMAIN
EXISTING SLUCE VALVE	
EXISTING PEET VALVE	

ENGINEERING APPROVAL
ENG-60349136

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Signed:  CHARTERED PROFESSIONAL ENGINEER

Date: 13/10/2020

Name: SHANE JAMES KELLY

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W www.harrisongrierson.com

B	AS-BUILT	DDS	13.10.20
A	AS-BUILT	DDS	07.09.20
REF	REVISIONS	BY	DATE

PROJECT:

HUGH GREEN LIMITED
DONEGAL STAGE 11D AND 12
36 TIR CONAILL AVENUE, FLAT BUSH

TITLE:

WATERMAIN AS-BUILT PLAN
SHEET 1 OF 2

ORIGINATOR:	DATE:	SIGNED:	PLOT BY:
MNP	08.2020		DDS
DRAWN:	DATE:	SIGNED:	PLOT DATE:
MNP	08.2020		20.10.20
CHECKED:	DATE:	SIGNED:	SURVEY BY:
SXK	09.2020		DEMSEY WOOD
APPROVED:	DATE:	SIGNED:	SURVEY DATE:
SXK	10.2020		08.2020

ISSUE STATUS:

AS-BUILT

PROJECT No:	1050-142875-01	SCALES:	1:500-A1 1:1000-A3	A1
DRAWING No:	142875-12-AB501			REV B

COORDINATE SCHEDULE			
POINT	mE	mN	RL
FH01	1770201.78	5905644.02	41.22
FH02	1770189.79	5905587.59	41.39
FH03	1770159.59	5905531.18	41.94
FH04	1770338.82	5905488.66	45.94
FH05	1770292.24	5905544.87	43.45
SV01	1770207.89	5905655.64	41.31
SV02	1770222.91	5905642.43	40.98
SV03	1770223.62	5905641.88	40.88
SV04	1770222.97	5905641.94	40.96
SV05	1770214.71	5905627.91	40.85
SV06	1770215.44	5905627.38	40.79
SV07	1770193.75	5905629.36	41.25
SV08	1770208.04	5905621.11	41.31
SV09	1770164.05	5905539.32	41.11
SV10	1770162.94	5905537.39	41.15
SV11	1770149.33	5905545.66	41.08
SV12	1770252.37	5905490.57	43.84
SV13	1770251.34	5905490.14	43.88
SV14	1770264.12	5905480.65	44.57
SV15	1770286.49	5905510.18	44.08
SV16	1770287.39	5905511.30	43.96
SV17	1770274.51	5905520.23	43.87
SV18	1770274.02	5905520.17	43.90
SV19	1770279.89	5905608.01	43.08
SV20	1770279.81	5905608.40	43.07
SV21	1770265.97	5905615.63	41.37
SV22	1770328.31	5905475.08	45.81
SV23	1770341.09	5905466.52	46.09
SV24	1770307.31	5905447.80	46.43
SV25	1770306.44	5905446.69	46.61
SV26	1770307.99	5905446.25	46.67
SV27	1770319.72	5905437.56	46.83
SV28	1770319.39	5905437.13	46.85
TEE01	1770223.16	5905642.21	40.62
TEE02	1770214.99	5905627.69	40.53
TEE03	1770208.20	5905621.39	40.96
TEE04	1770193.58	5905629.15	40.96
TEE05	1770148.94	5905545.86	40.83
TEE06	1770163.23	5905537.89	41.14
TEE07	1770251.94	5905490.99	43.90
TEE08	1770264.89	5905481.68	44.53
TEE09	1770306.84	5905447.16	46.54
TEE10	1770319.55	5905437.34	47.02
TEE11	1770340.57	5905465.84	46.19
TEE12	1770327.86	5905475.41	45.87
TEE13	1770286.89	5905510.68	43.72
TEE14	1770274.22	5905520.43	45.54
TEE15	1770324.14	5905560.71	43.20
TEE16	1770280.06	5905608.25	42.80
TEE17	1770266.12	5905615.89	42.91
TEE18	1770411.32	5905544.24	43.95



ASSOCIATION OF CONSULTING
ENGINEERS NEW ZEALAND

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ENGINEERING APPROVAL
ENG-60349136

I CERTIFY THAT THESE ASBUILT PLANS ARE AN ACCURATE RECORD OF THE WORKS UNDERTAKEN AND THAT:

- THE COORDINATES (X,Y) ARE IN TERMS OF NZTM ON NZGD (2000), AND ARE WITHIN ±50mm.
- THE LEVELS (Z) ARE IN TERMS OF THE AUCKLAND 1946 (MSL) LINZ DATUM (DOSLI DATUM), AND ARE WITHIN ±25mm.



Signed:
CHARTERED PROFESSIONAL ENGINEER

Date: 13/10/2020

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PROJECT:

HUGH GREEN LIMITED
DONEGAL STAGE 11D AND 12
36 TIR CONAILL AVENUE, FLAT BUSH

TITLE:

WATERMAIN AS-BUILT
COORDINATE SCHEDULE

ISSUE STATUS:

AS-BUILT