



Client: BMD Urban Pty Ltd
Project Name: Brentwood Stages 8 & 9
Site Address: Raniga Drive, Bellbird Park
Date: 19/08/2021

Attention: Kody O’Hea
Email: Kody.OHea@bmd.com.au

1.0 Introduction

Quality Control Testing Services (QCTS) was engaged by BMD Urban Pty Ltd between the 12th of April 2021 and the 12th of August 2021 to provide “Level 1” earthworks inspection and testing services for bulk earthworks, as per Section 8.0 of AS3798-2007- “Guidelines for Earthworks for Commercial and Residential Developments”.

Supervision and compaction control testing were carried out during the placement of material to the lot as indicated in the attached drawings. Fill material was placed and compacted between 0.2m and 1.0m depths across the site. The volume of fill material places across the site was approximately 7300m³, comprising of 6500m³ throughout stage 8 and 800m³ throughout stage 9.

A total number of twenty-eight (28) compaction control tests were carried out in line with the requirements of AS3798 Table 5.1 (Item 2) and Table 8.1 (Type 1). Site drawings showing the extent of the fill placement is attached at the end of this report.

2.0 Stripping

Stripping of any vegetation and organic material was carried out by Scrapers and was utilised to remove any deleterious materials. Once the site was cleared, the surface was then compacted using an 825 compactor until No deflection was noted. A fully loaded water truck with greater than 14t capacity was utilised to proof roll the treated surface to ascertain if any “soft spots” or unsuitable material was present.

3.0 Earthworks

The filling process involved transporting cut to fill material into the fill zones. The fill material was conditioned and placed in layers not exceeding 300mm loose. An 825 compactor and scrapers were used to spread and compact the fill material. A water truck was on hand to moisture condition the fill material to assist the roller until the required density specification was achieved.

The specification requirements were that all fill materials were to be placed, conditioned and compacted in layers to a density ratio of not less than 95% (AS 1289 5.8.1, 5.7.1 & 2.1.1) with the moisture content suitable to achieve the desired compaction levels.

4.0 Material

The material consisted of a Red/Brown Sandy Clay/Clayey Sand, being in-situ site won. The site material consisted of cut material from works. Any existing unsuitable material was removed and replaced with suitable fill. Material was conditioned with water from the water cart to provide compaction above the required minimum standard.

5.0 Compliance Testing Programme

Test locations were randomly selected by QCTS, and compaction control tests were carried out throughout the filling process, spread evenly through each layer, until finished level was achieved. The fill placement was in accordance with the minimum test frequency requirements detailed in AS3798-2007.

Proof rolling was carried out using a fully loaded water truck with greater than 14t capacity. Any deflections were noted and reworked with good engineering practice to achieve appropriate compaction.

All field density reports have been previously issued to the client. A copy of such reports has been attached at the end of this report.

6.0 Conclusion

Based on the results obtained from compaction control tests along with observations made during earthworks operation indicate that all fill material placed in the filled lots within “Brentwood Estate Stages 8 & 9” would be considered to have met the requirements of AS3798-2007 and good engineering practice.

This report does not include any other geotechnical issues, road works, backfill behind any retaining structures or trench services, any topsoil placed, slope stability and site drainage.

This report has been reasonably reviewed in order to eliminate potential human errors, inappropriateness, and omissions.

On behalf of QCTS Pty Ltd,



Mark Jackman
Director
QCTS Pty Ltd

Attachments:

- Site Drawings showing the extent of fill placement and cut material.
- Site Drawings showing locations of tests
- Compaction control test reports.



Q100 LEVELS EXTRACTED FROM BRENTWOOD ESTATE, BELLBIRD PARK, NORTHERN COLLECTOR ROAD CULVERT TECHNICAL MEMORANDUM DATED 11/11/2016.

STAGE 11A

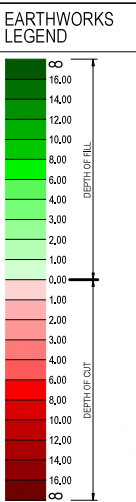
STAGE 10A

STAGE 9A

STAGE 8

STAGE 10A

STAGE 9A



LEGEND

- 5.0 --- PROPOSED SURFACE CONTOURS
- 5.0 --- EXISTING SURFACE CONTOURS
- --- BUILDING PAD AND LEVEL
- --- NOMINAL KERB LINE
- --- PROPOSED BOULDER WALL 'A'
- --- GRADE SANDSTONE RETAINING WALL
- --- BATTER SLOPE - 0-0.6m
- --- RETAINING WALL - 0.6-1.5m
- --- RETAINING WALL - 1.5-2.0m
- --- RETAINING WALL - 2.0-3.0m
- --- TIERED WALL - 2.0-3.0m
- --- Q100 INUNDATION LINE
- --- PROPOSED CATCH DRAIN
- --- TOP OF BANK
- --- 10m OFFSET FROM TOP OF BANK
- --- EXISTING SANTOS PIPELINE
- --- EXISTING WATER RETICULATION
- --- EXISTING SEWER RETICULATION
- --- EPBC LINE
- --- STAGE BOUNDARY

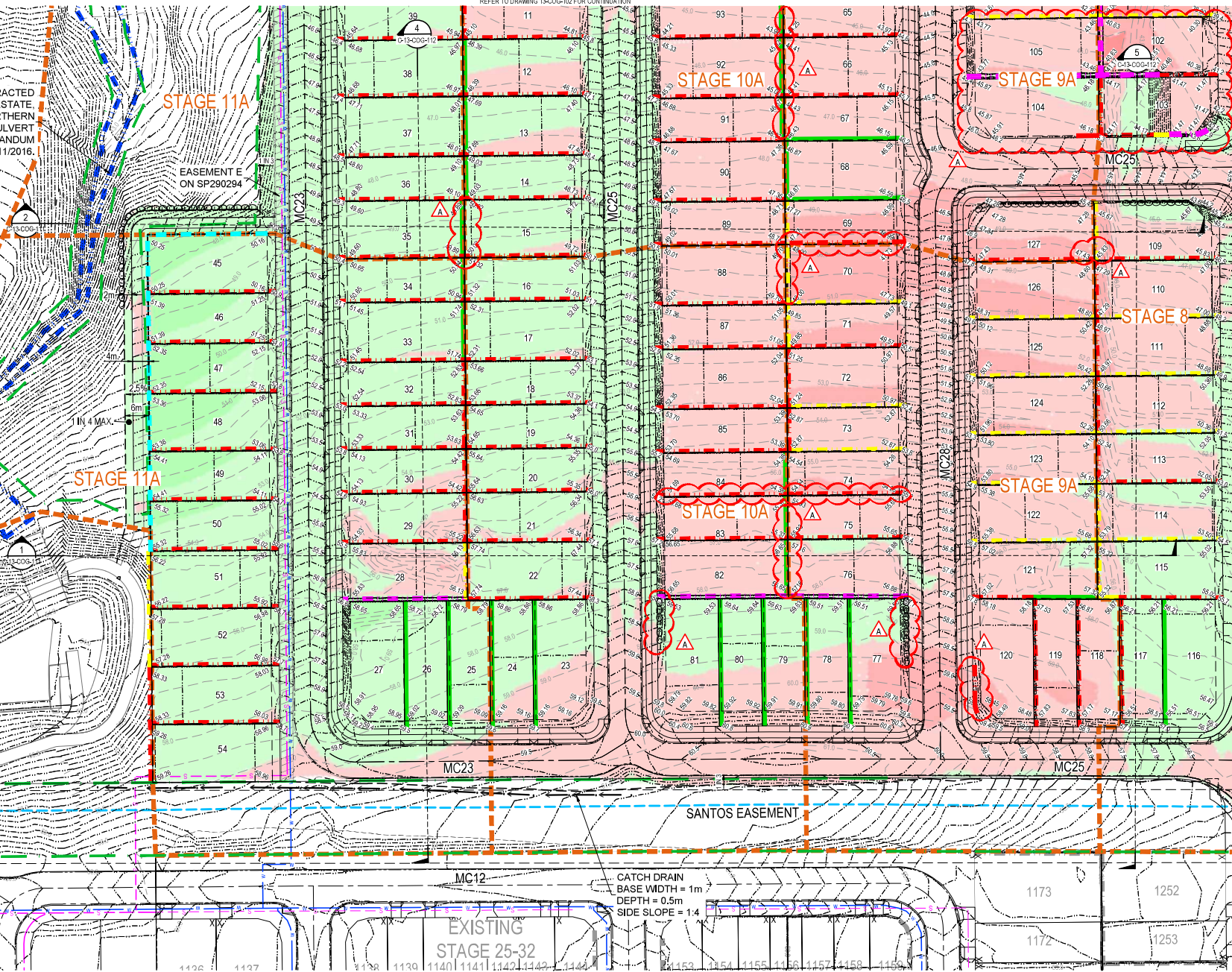
- NOTES**
- NOTWITHSTANDING THE LIMITS OF CUTTING AND FILLING SHOWN ON THE DRAWINGS, THE ACTUAL LIMITS SHALL BE DETERMINED ON SITE BY THE ENGINEER DURING CONSTRUCTION. FINISHED SURFACE CONTOURS MAY BE ADJUSTED BY WRITTEN DIRECTION OF THE ENGINEER DURING CONSTRUCTION. NO EARTHWORKS ARE TO BE CARRIED OUT WITHIN WINE FOREST OR ITS EXCLUSION ZONE.
 - FILL AREAS SHALL BE CONSTRUCTED IN LAYERS NOT EXCEEDING 300mm LOOSE DEPTH. THE FILL MATERIAL SHALL BE COMPACTED TO 95% (MINIMUM OF THE MAXIMUM DRY DENSITY) TESTING SHALL BE IN ACCORDANCE WITH A.S.1289 (MODIFIED) COMPACTED. THE CONTRACTOR SHALL SUPPLY TO THE ENGINEER CERTIFICATION OF THE COMPACTION ACHIEVED.
 - ALL EARTHWORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH AS3798 UNDER LEVEL 1 SUPERVISION.
 - DESIGN LEVELS GIVEN ARE FINISHED SURFACE LEVELS.
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 - MINIMUM TOPSOIL THICKNESS 100mm
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 - ALL ALLOTMENTS TO BE GRASS SEEDING WITH MINIMUM 80% COVERAGE. SEEDING TO OCCUR WITHIN 7 DAYS OF COMPLETION OF EARTHWORKS.
 - WORKS LOCATED IN FIRE HAZ ZONE 1. ALL WORKS TO BE CONDUCTED IN ACCORDANCE WITH DAF REQUIREMENTS.

VOLUMES
(THESE VOLUMES ARE TIGHT AND HAS BEEN MEASURED FROM EXISTING TO DESIGN WITHOUT TOP SOIL CONSIDERATION)

TOTAL CUT =	-127,980.174m ³
TOTAL FILL =	40,586.891m ³
BALANCE =	(EXPORT) -87,393.283m ³



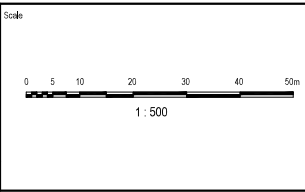
KEY PLAN



CATCH DRAIN
BASE WIDTH = 1m
DEPTH = 0.5m
SIDE SLOPE = 1:4

EXISTING
STAGE 25-32

Issue	Description	BY	Ckd	RPEd	Date
A	ISSUE FOR CONSTRUCTION	AO	SS	FV	11.03.21
05	AMENDED DRAWINGS AS PER COUNCIL RFI	OP	IC	FV	21.12.20
04	AMENDED DRAWINGS BASIN REDESIGN	EP	IC	FV	24.11.20
03	RETAINING WALLS AMENDED	JQ	IC	FV	04.09.20
02	RFI RESPONSE TO COUNCIL	JQ	IC	FV	04.09.20
01	ORIGINAL ISSUE	OP	IC	FV	13.05.20



Surveyor

Architect

Client

Status: FOR CONSTRUCTION

Approved: 11.03.21 R.P.E.O. No. - 20304

Original Issue Signatures

Original Size: A1

Height Datum: AHD

Grid: LOCAL

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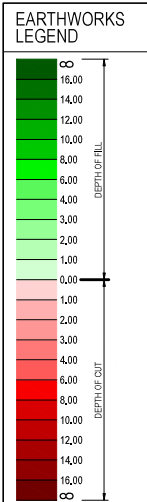
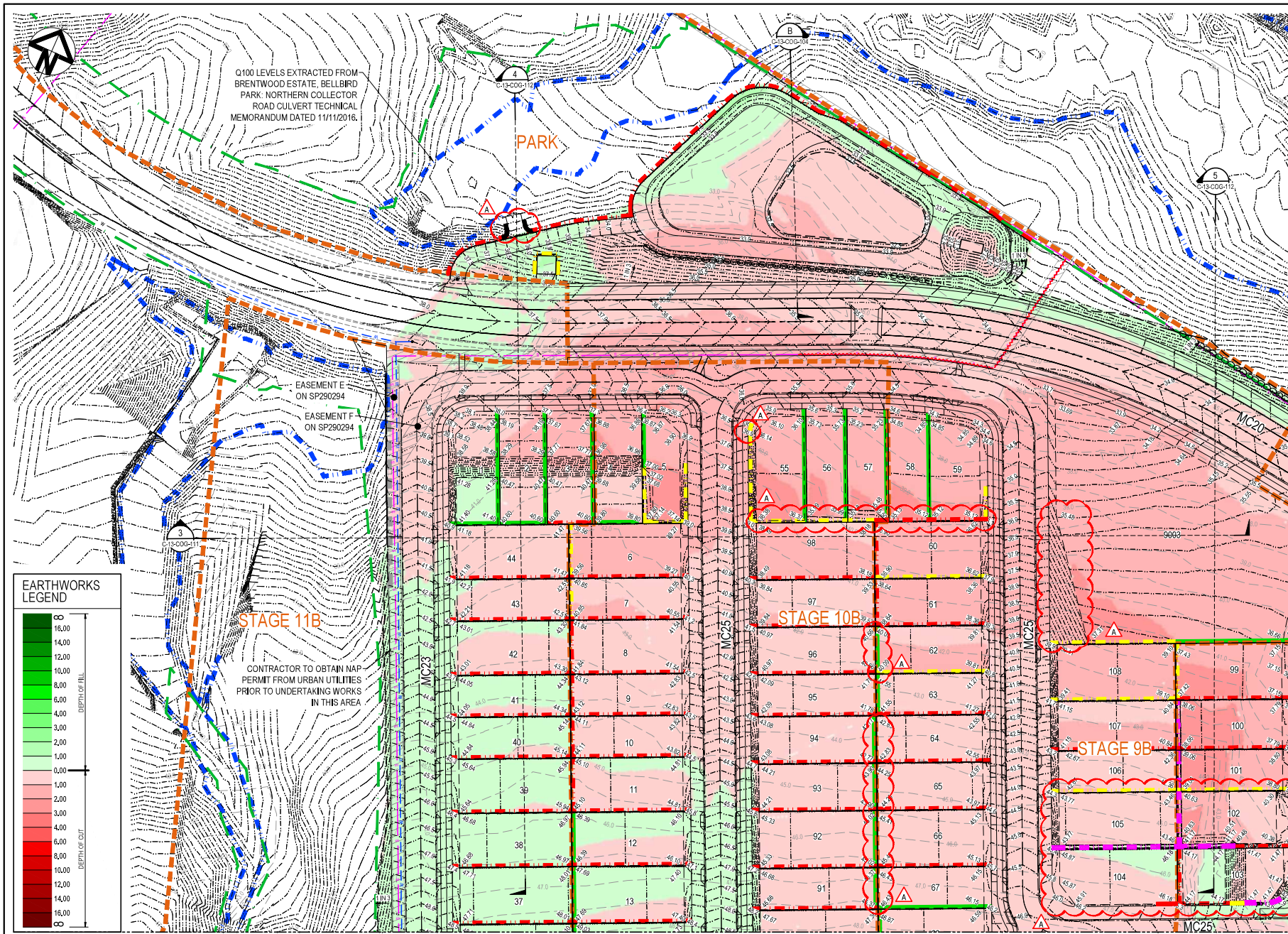
Drawn	O.PERRILLA
Designed	K.ANGELES
Project Manager	F.VANEGAS

Project: BRENTWOOD FOREST STAGE 8-13

Tab: BULK EARTHWORKS LAYOUT PLAN SHEET 1

Arcadis Australia Pacific Pty Limited
Level 5, 120 Edward Street
BRISBANE QLD 4000
ABN 76 104 485 289
Tel No: +61 7 3337 0000
www.arcadis.com/au

Drawing No: C-13-COC-101-11
Project No: AA006817
Issue: 05

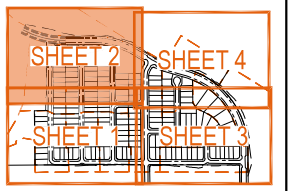


LEGEND	
--- 5.0 ---	PROPOSED SURFACE CONTOURS
- - - -	EXISTING SURFACE CONTOURS
---	BUILDING PAD AND LEVEL
- - -	NOMINAL KERB LINE
○ ○ ○ ○ ○	PROPOSED BOULDER WALL 'A'
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---	PROPOSED CATCH DRAIN
---	TOP OF BANK
---	10m OFFSET FROM TOP OF BANK
---	EXISTING SANDS PIPELINE
---	EXISTING WATER RETICULATION
---	EXISTING SEWER RETICULATION
---	EPBCLINE
---	STAGE BOUNDARY
---	EXISTING SEWERAGE RETICULATION TO BE DEMOLISHED

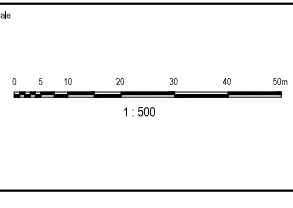
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01	ORIGINAL ISSUE	OP	IC	FV	13.06.20



Surveyor

veris

Architect

Client

AVID
Property Group

Filename

Status

FOR CONSTRUCTION

Approved

11.03.21 R.P.E.O. No. - 20304

Original Issue Signatures

Original Size

A1

Drawn

O.PERILLA

Designed

K.ANGELES

Project Manager

F.VINCENTAS

Height Datum

AHD

Grid

LOCAL

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Project

BRENTWOOD FOREST
STAGE 8-13

Tab

BULK EARTHWORKS
LAYOUT PLAN
SHEET 2

ARCADIS

Arcadis Australia Pacific Pty Limited
Level 5, 120 Edward Street
BRISBANE QLD 4000
ABN 76 104 485 289

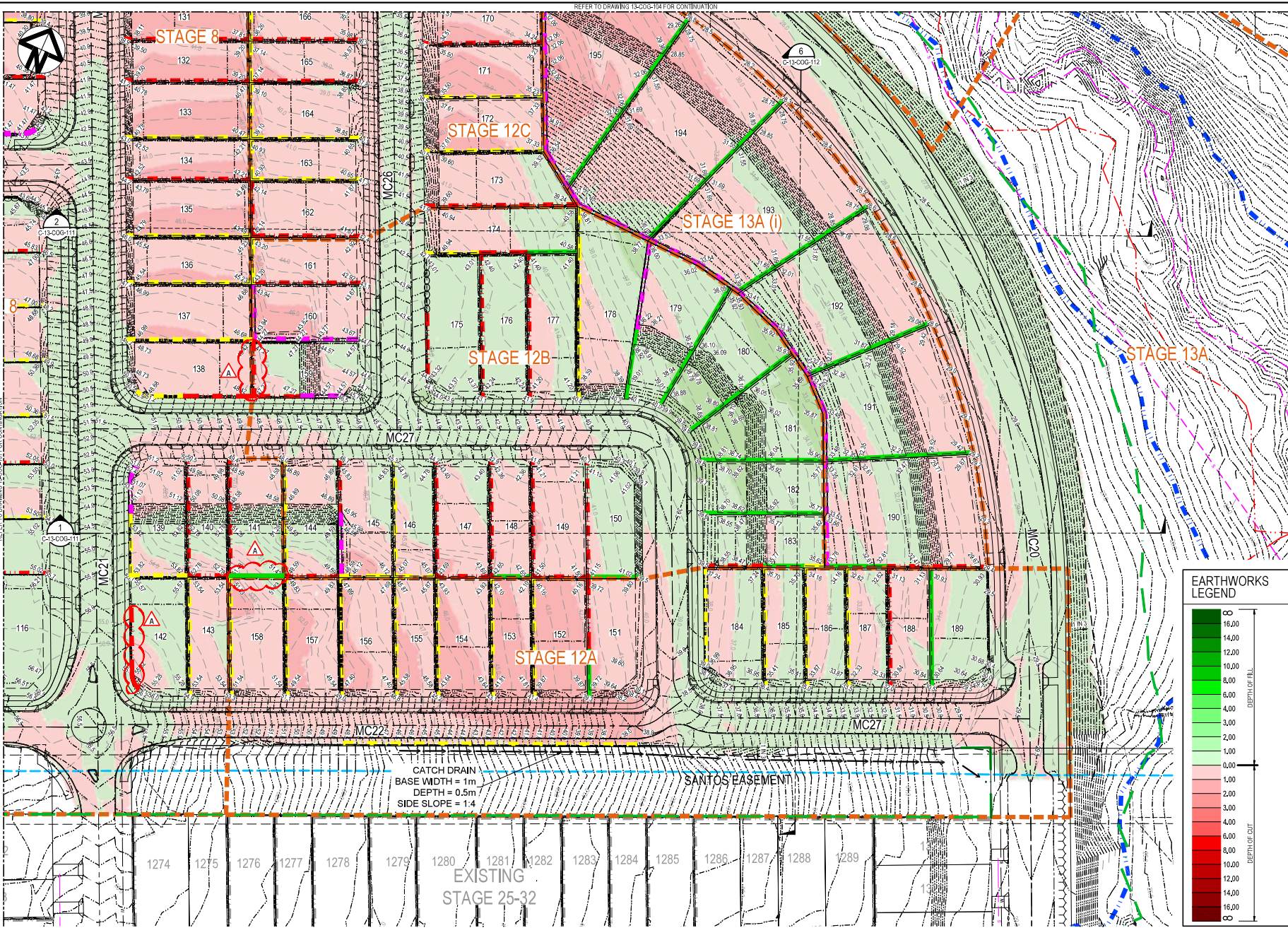
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Drawing No.

Project No.

Issue

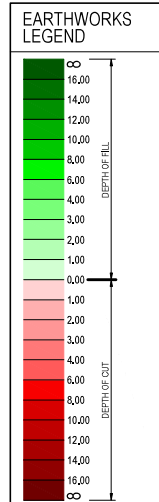
C-13-COG-102- AA006817 - A



LEGEND

- 5.0 PROPOSED SURFACE CONTOURS
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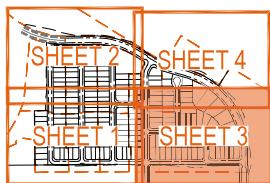
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05	AMENDED DRAWINGS AS PER COUNCIL RFI	OP	IC	FV	21.12.20
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02	RFI RESPONSE TO COUNCIL	JQ	IC	FV	04.09.20
01	ORIGINAL ISSUE	OP	IC	FV	13.06.20

Scale

Scale: 1:500

Surveyor

Architect

Filename

Client

Status: FOR CONSTRUCTION

Approved: 11.03.21 R.P.E.O. No. - 20304

Scale: 1:500

Original Issue Signatures

Original Size: A1

Height Datum: AHD

Proj. Manager: F.VANEGAS

Grid: LOCAL

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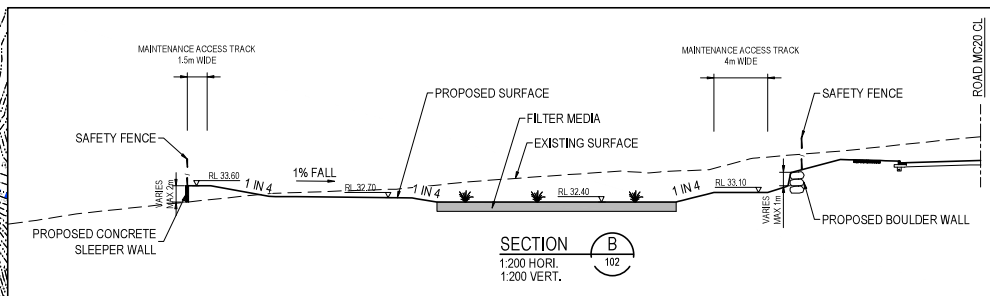
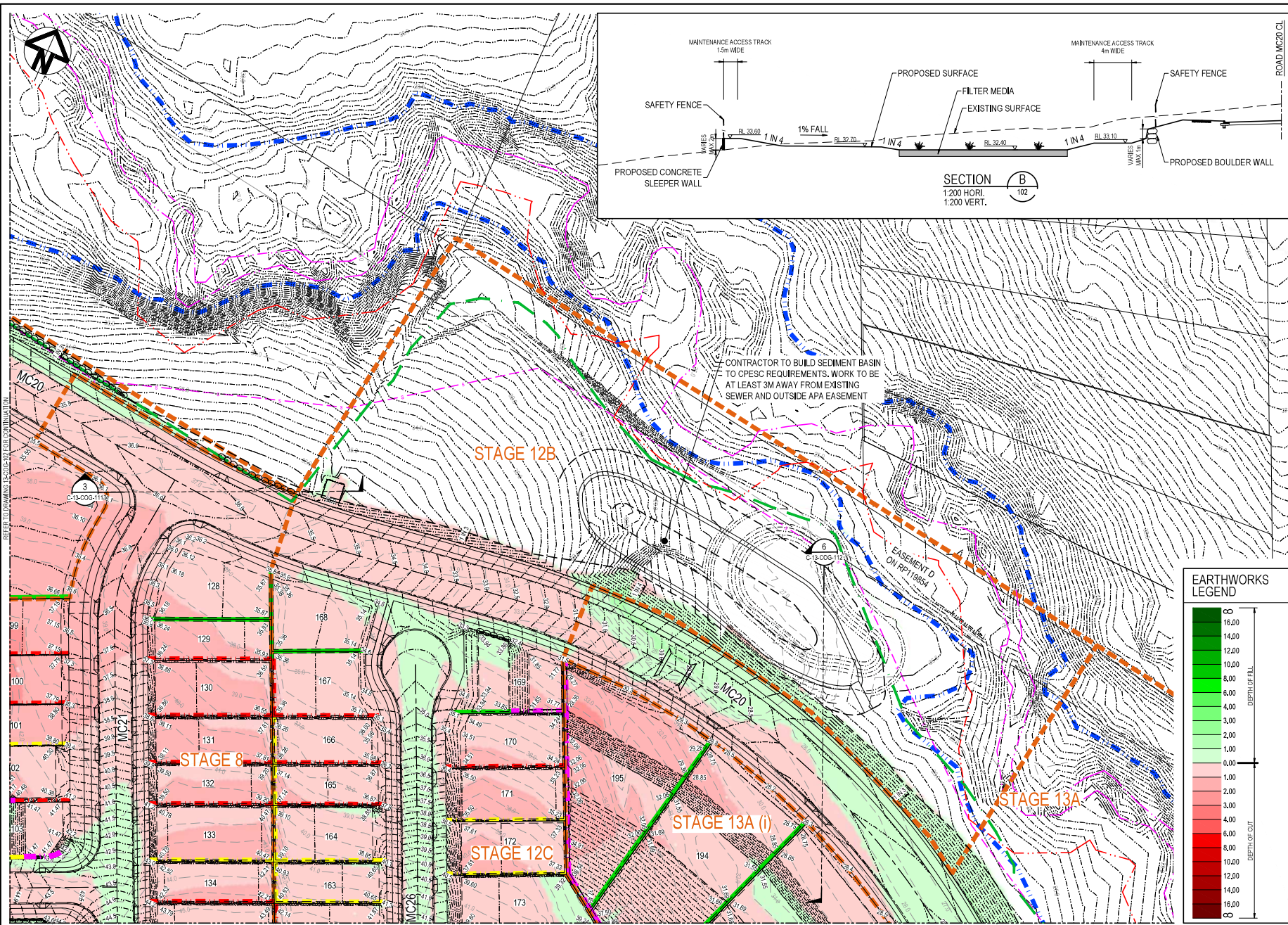
Project: BRENTWOOD FOREST STAGE 8-13

Tab: BULK EARTHWORKS LAYOUT PLAN SHEET 3

Arcadis Australia Pacific Pty Limited
Level 5, 120 Edward Street
BIRBAIRIE QLD 4000
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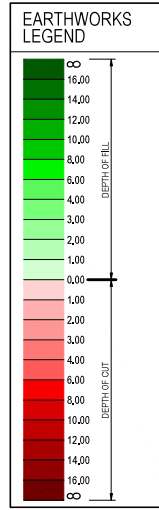
Drawing No. C-13-COG-103- AA006817 Issue A



LEGEND

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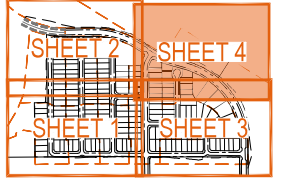
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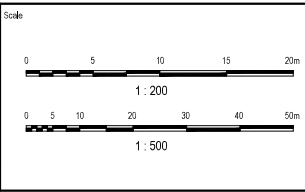
VOLUMES

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01	ORIGINAL ISSUE	OP	IC	FV	13.06.20



Surveyor

Architect

Filename

Client

Status	FOR CONSTRUCTION
Approved	11.03.21 R.P.E.O. No. - 20304
Scale	AS SHOWN
Original Size	A1
Height Datum	AHD
Grid	LOCAL

Project

BRENTWOOD FOREST
STAGE 8-13

Task

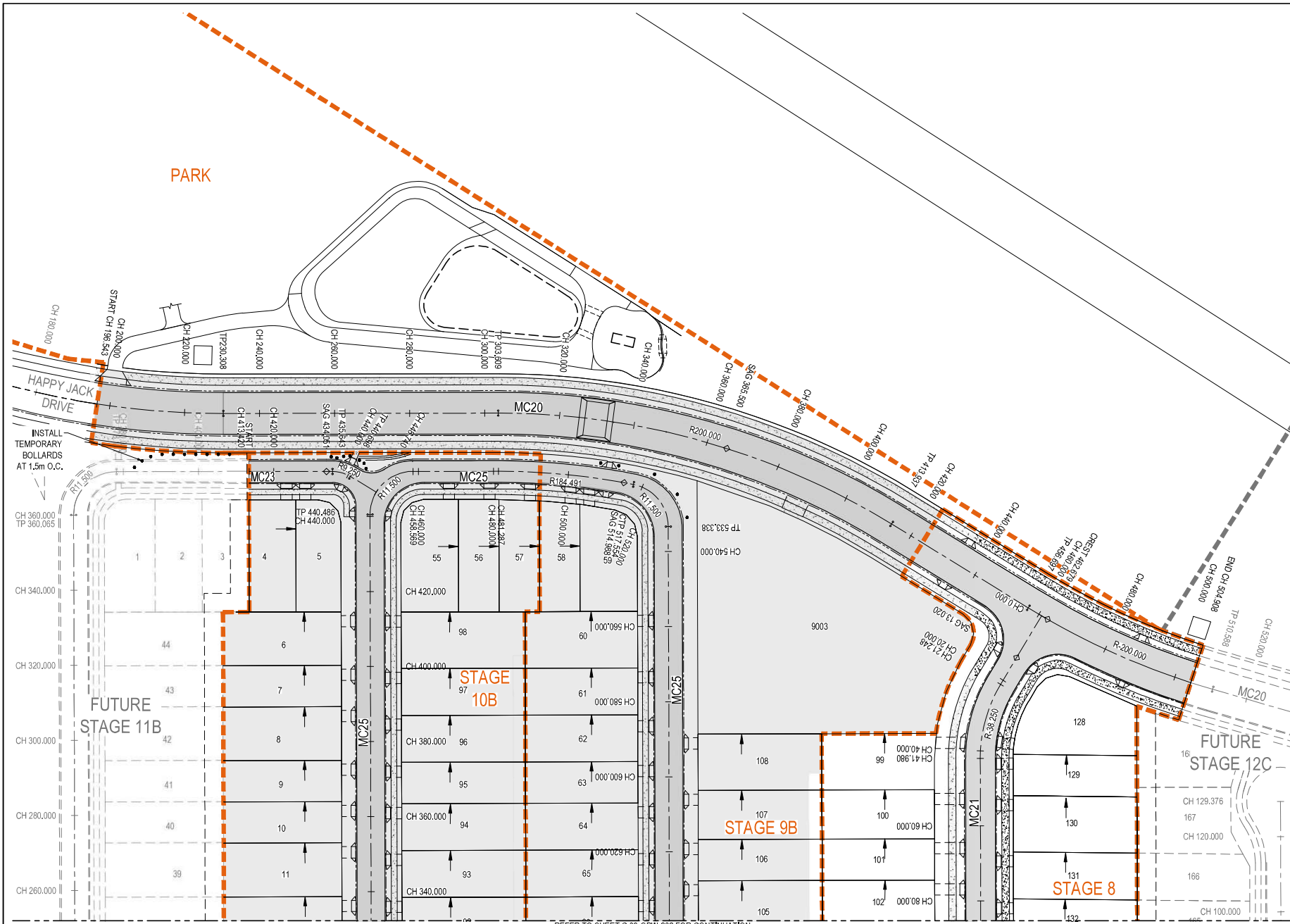
BULK EARTHWORKS
LAYOUT PLAN
SHEET 4

Arcadis Australia Pacific Pty Limited
Level 5, 120 Edward Street
BRISBANE QLD 4000
ABN 76 104 485 289
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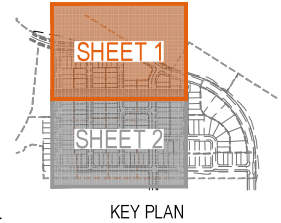
Drawing No. C-13-COG-104- AA006817 - Issue A

LEGEND	
	PROPOSED BARRIER KERB & CHANNEL TYPE B1
	PROPOSED MOUNTABLE KERB & CHANNEL TYPE M1
	PROPOSED NEW ASPHALT PAVEMENT
	CONCRETE DRIVEWAY
	PROPOSED CONCRETE FOOTPATH REFER TO ICC STD. DRS, SR, IS
	PROPOSED STAGE BOUNDARY
	ZERO LOT BOUNDARY
	INDICATIVE FUTURE DRIVEWAY
	SPEED PLATFORM MID BLOCK

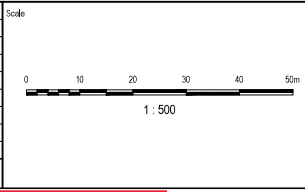
NOTE:	
REFER TO DRAWING C-08-OPW-203 FOR SETOUT TABLES.	
	FUTURE CIVIL WORKS CONSTRUCTION



IFC Received
BMD Urban Pty Ltd
Date: 28.04.2021



Issue	Description	BY	Ckd	RPEC	Date
A	ISSUE FOR CONSTRUCTION	A.C.	S.S.	F.V.	16.04.21
02	R/R RESPONSE	AC	S.S.	F.V.	16.02.21
01	ORIGINAL ISSUE	E.P.	S.S.	F.V.	07.12.20



Surveyor:

Architect:

Client:

Filename:

Status: FOR CONSTRUCTION

Approved: FELIPE VANEGAS 16.04.21 R.P.E.Q. No: 20304

Original Issue Signatures:

Drawn: E.PON

Designed: S.SEM

Project Manager: F. VANEGAS

Original Size: A1

Height Datum: AHD

Grid: LOCAL

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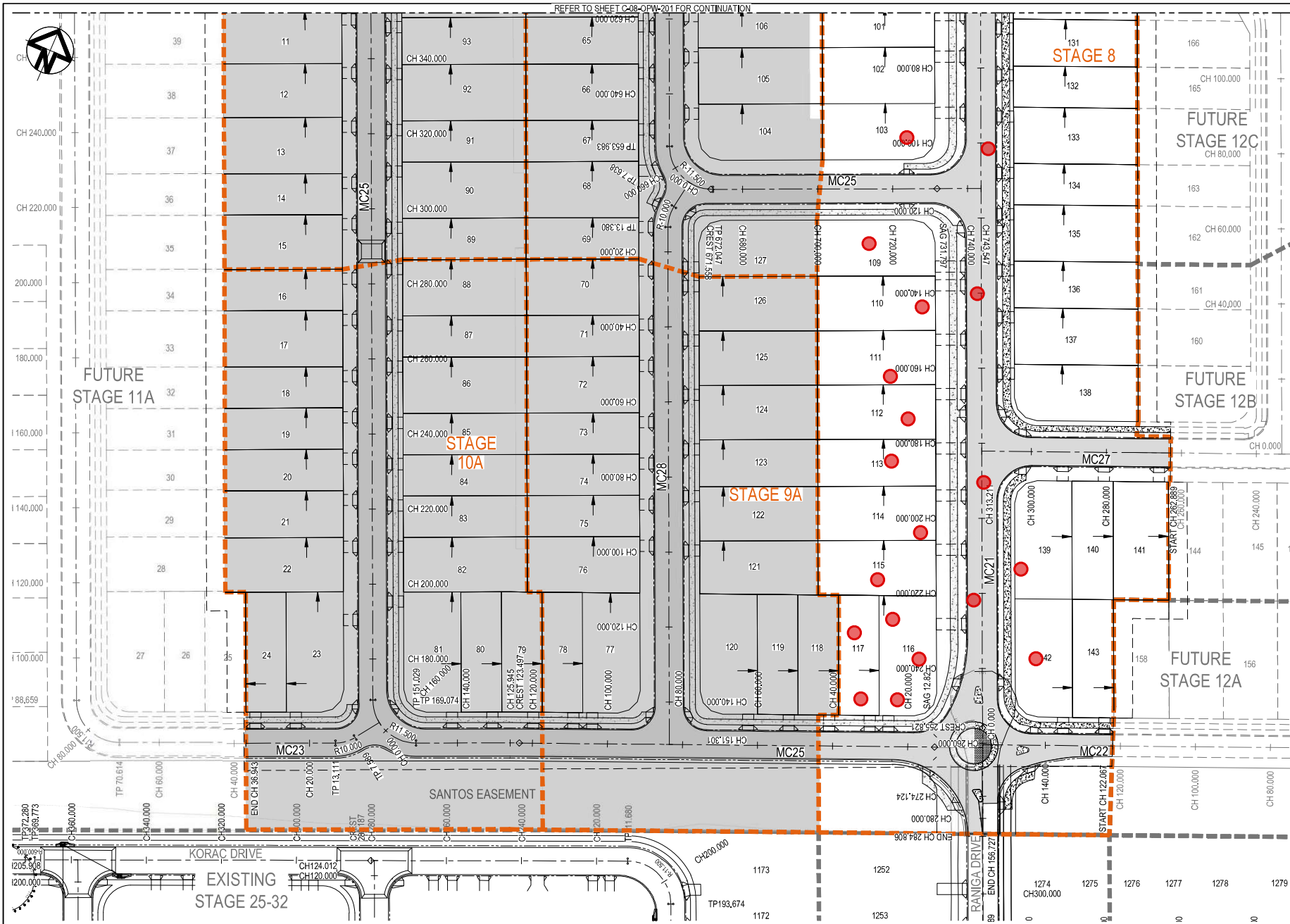
Project	
BRENTWOOD FOREST STAGES 8-10	
Title: CONTROL LINE SETOUT PLAN SHEET 1	

Arcadis Australia Pacific Pty Limited
Level 5, 120 Edward Street
BRISBANE QLD 4000
ABN 76 104 485 289
Tel No: +61 7 3337 0000
www.arcadis.com.au

Drawing No: C-08-OPW-201-
Project No: AA006817
Issue: A

● Test Locations

REFER TO SHEET C-08-OPW-201 FOR CONTINUATION



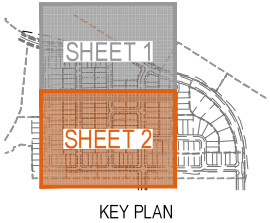
LEGEND

- PROPOSED BARRIER KERB & CHANNEL TYPE B1
- PROPOSED MOUNTABLE KERB & CHANNEL TYPE M1
- PROPOSED NEW ASPHALT PAVEMENT
- CONCRETE DRIVEWAY
- PROPOSED CONCRETE FOOTPATH REFER TO ICC STD. DRG. SR.19
- PROPOSED STAGE BOUNDARY
- ZERO LOT BOUNDARY
- INDICATIVE FUTURE DRIVEWAY
- SPEED PLATFORM/D BLOCK

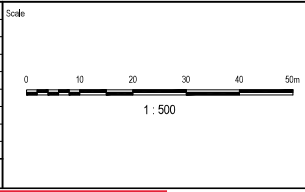
NOTE:
REFER TO DRAWING C-08-OPW-203 FOR SETOUT TABLES.

FUTURE CIVIL WORKS CONSTRUCTION

IFC Received
BMD Urban Pty Ltd
Date: 28.04.2021



Issue	Description	BY	Ckd	RPEC	Date
A	ISSUE FOR CONSTRUCTION	A.C.	S.S.	F.V.	16.04.21
02	R/R RESPONSE	AC	S.S.	F.V.	16.02.21
01	ORIGINAL ISSUE	E.P.	S.S.	F.V.	07.12.20



Surveyor

Architect

Filename:

Client

Status: FOR CONSTRUCTION

Approved: FELIPE VANEGAS 16.04.21 R.P.E.Q. No. 20304

Scales: 1 : 500

Original Issue Signatures

Drawn: E.PON

Original Size: A1

Height: AHD

Datum: LOCAL

Grid: LOCAL

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Project: BRENTWOOD FOREST STAGES 8-10

Title: CONTROL LINE SETOUT PLAN SHEET 2

ARCADIS

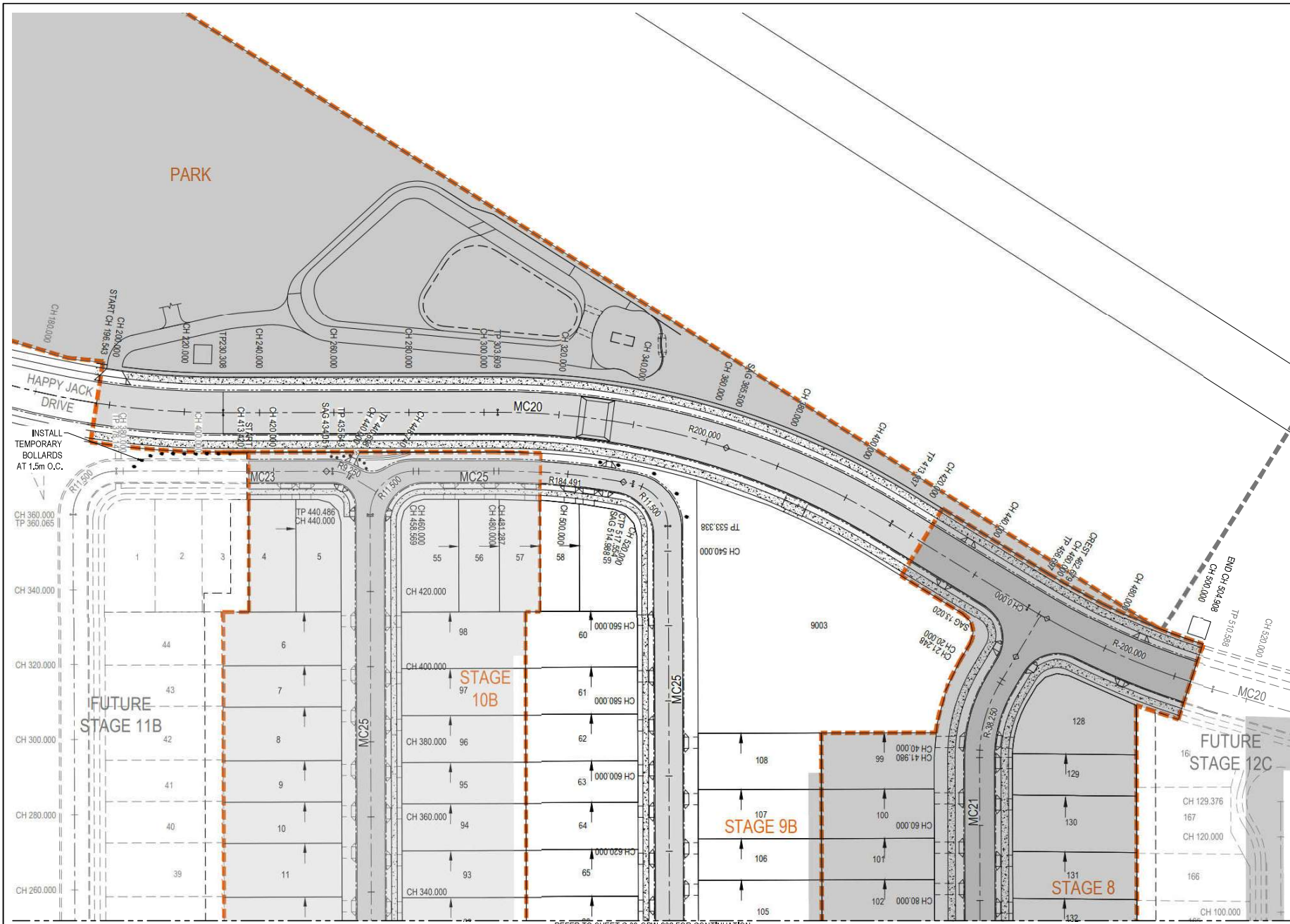
Arcadis Australia Pacific Pty Limited
Level 5, 120 Edward Street
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ABN 76 104 485 289
Tel No: +61 7 3337 0000
www.arcadis.com/au

Drawing No: C-08-OPW-202- AA006817 - A

Project No: AA006817

Issue: A

● Test Locations



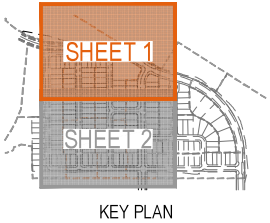
LEGEND

- PROPOSED BARRIER KERB & CHANNEL TYPE B1
- PROPOSED MOUNTABLE KERB & CHANNEL TYPE M1
- PROPOSED NEW ASPHALT PAVEMENT
- CONCRETE DRIVEWAY
- PROPOSED CONCRETE FOOTPATH REFER TO ICC STD. DRS, SR.19
- PROPOSED STAGE BOUNDARY
- ZERO LOT BOUNDARY
- INDICATIVE FUTURE DRIVEWAY
- SPEED PLATFORM / MD BLOCK

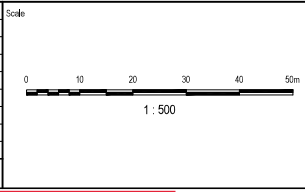
NOTE:
REFER TO DRAWING C-08-OPW-203 FOR SETOUT TABLES.

- FUTURE CIVIL WORKS CONSTRUCTION
- EXISTING CIVIL WORKS CONSTRUCTION

IFC Received
BMD Urban Pty Ltd
Date: 28.04.2021



Issue	Description	BY	Ckd	REC'D	Date
A	ISSUE FOR CONSTRUCTION	MA	S.S.	F.V.	18.04.21
02	R/R RESPONSE	MA	S.S.	F.V.	19.02.21
01	ORIGINAL ISSUE	E.P.	S.S.	F.V.	07.12.20



Surveyor

Architect

Filename:

Client

Status: **FOR CONSTRUCTION**

Approved: FELIPE VANEGAS 16.04.21 R.P.E.Q. No: 20304

Scales: 1:500

Original Issue Signatures

Original Size: A1

Height Datum: AHD

Grid: LOCAL

Drawn: E.PON

Designed: S.SEM

Project Manager: F.VANEGAS

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Project: **BRENTWOOD FOREST STAGES 8-10**

Title: **CONTROL LINE SETOUT PLAN SHEET 1**

ARCADIS

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ABN 76 104 485 289
Tel No: +61 7 3337 0000
www.arcadis.com.au

Drawing No: C-08-OPW-201-
Project No: AA006817
Issue: A

● **Test Location**

REFER TO SHEET C-08-OPW-201 FOR CONTINUATION

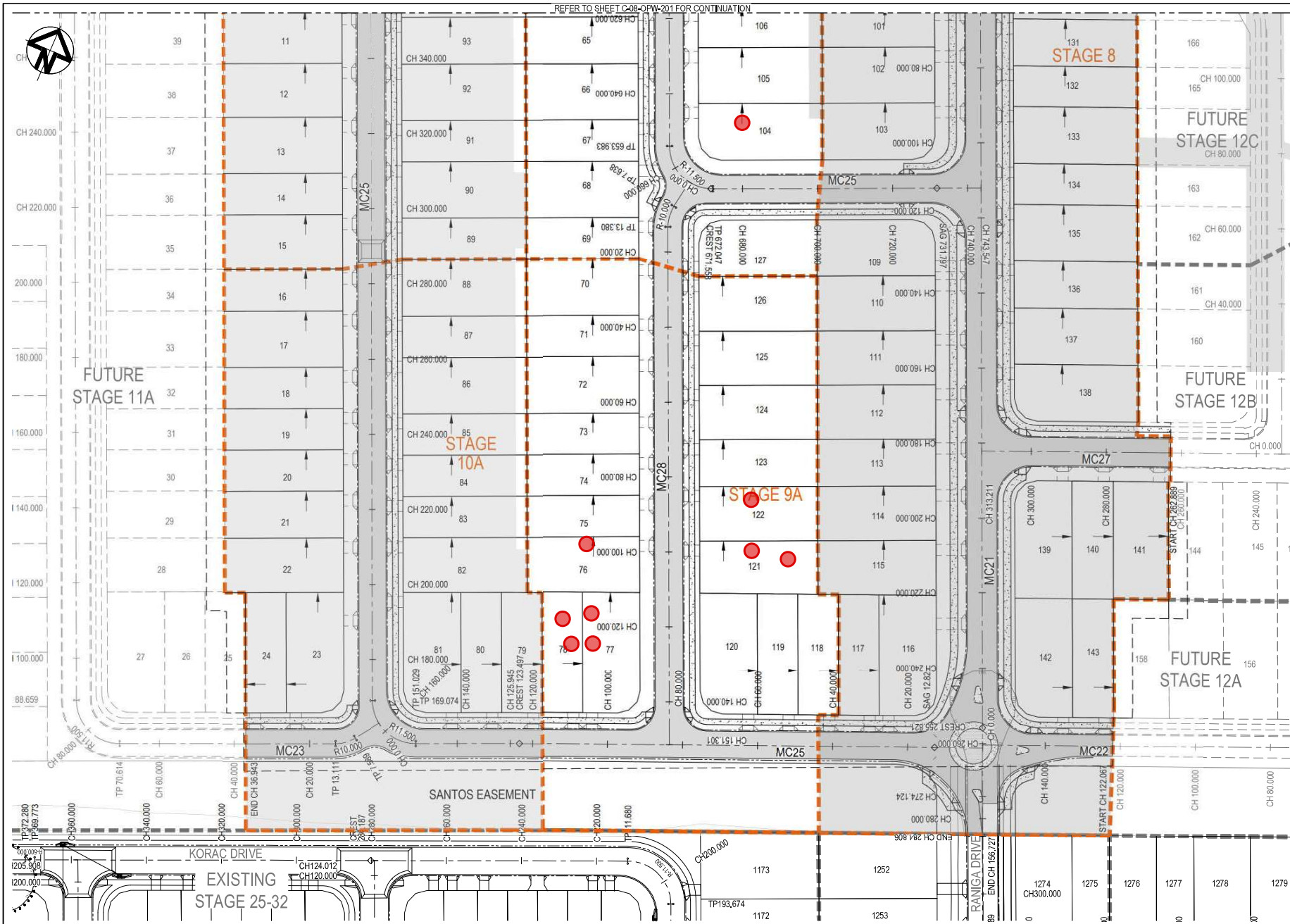


LEGEND

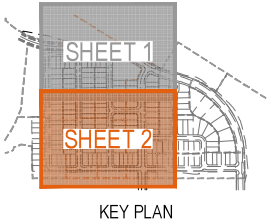
- PROPOSED BARRIER KERB & CHANNEL TYPE B1
- PROPOSED MOUNTABLE KERB & CHANNEL TYPE M1
- PROPOSED NEW ASPHALT PAVEMENT
- CONCRETE DRIVEWAY
- PROPOSED CONCRETE FOOTPATH REFER TO ICC STD, DRS, SR, IS
- PROPOSED STAGE BOUNDARY
- ZERO LOT BOUNDARY
- INDICATIVE FUTURE DRIVEWAY
- SPEED PLATFORM MID BLOCK

NOTE:
REFER TO DRAWING C-08-OPW-203 FOR SETOUT TABLES.

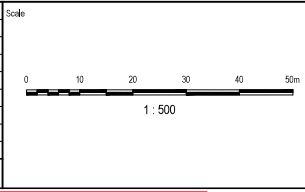
- FUTURE CIVIL WORKS CONSTRUCTION
- EXISTING CIVIL WORKS CONSTRUCTION



IFC Received
BMD Urban Pty Ltd
Date: 28.04.2021



Issue	Description	BY	Ckd	REPC	Date
A	ISSUE FOR CONSTRUCTION	MA	S.S.	F.V.	18.04.21
02	R/R RESPONSE	MA	S.S.	F.V.	19.02.21
01	ORIGINAL ISSUE	E.P.	S.S.	F.V.	07.12.20



Surveyor

Architect

Client

Filename:

Status: FOR CONSTRUCTION

Approved: FELIPE VANEGAS 16.04.21 R.P.E.Q. No: 20304

Scales: 1 : 500

Original Issue Signatures

Drawn: E.PON

Designed: S.SEM

Project Manager: F. VANEGAS

Grid: LOCAL

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Project: BRENTWOOD FOREST STAGES 8-10

Title: CONTROL LINE SETOUT PLAN SHEET 2

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Tel No: +61 7 3337 0000
www.arcadis.com/au

Drawing No: C-08-OPW-202-
Project No: AA006817
Issue: A

● Test Location

Material Test Report

Report Number: B21071-29
Issue Number: 1
Date Issued: 18/08/2021
Client: BMD Urban
 1 Sandpiper Ave, Port of Brisbane QLD 4178
Contact: Kody O'Hea
Project Number: B21071
Project Name: 4836 Brentwood Estate Stages 8 & 9
Project Location: Brentwood Estate Stage 8 Level 1
Work Request: 1681
Date Sampled: 17/08/2021
Dates Tested: 17/08/2021 - 18/08/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Preparation Method: AS 1289.1.1 - Sampling and preparation of soils
Specification: Minimum 95% Standard Compaction
Site Selection: Selected By QCTS Technician
Material: Embankment Fill
Material Source: On Site



Quality Control Testing Services Pty Ltd
 Brisbane Laboratory
 23/8 Riverland Drive Loganholme QLD 4129
 Phone: (07) 4633 0816
 Email: geoff@qcts.net.au



Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Geoff Turley
 Area Manager

NATA Accredited Laboratory Number: 20024

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	B21-1681A	B21-1681B	B21-1681C	B21-1681D	B21-1681E	B21-1681F
Date Tested	17/08/2021	17/08/2021	17/08/2021	17/08/2021	17/08/2021	17/08/2021
Time Tested	**	**	**	**	**	**
Test Request #/Location	Lot 117, 6m N, 3m E from SW Boundary	Lot 116, 2m N, 4m E from SW boundary	Lot 115, 3m N, 7m W from SE boundary	Lot 114, 1m N, 3m W from SE boundary	Lot 113, 5m N, 8m W from SE boundary	Lot 112, 4m N, 4m W from SE boundary
Layer / Reduced Level	FL	0.1m below FL	0.3m below FL	FL	0.4m below FL	0.2m below FL
Thickness of Layer (mm)	275	275	275	275	275	275
Soil Description	Sandy Clay, Brown	Sandy Clay, Brown	Sandy Clay, Brown	Sandy Clay, Brown	Sandy Clay, Brown	Sandy Clay, Brown
Test Depth (mm)	250	250	250	250	250	250
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	3	0	3	3	0
Field Wet Density (FWD) t/m ³	2.06	2.02	2.04	2.06	2.07	2.08
Field Moisture Content %	10.1	9.7	10.4	9.9	10.5	9.6
Field Dry Density (FDD) t/m ³	1.87	1.84	1.85	1.87	1.88	1.89
Peak Converted Wet Density t/m ³	2.06	**	2.11	**	**	2.06
Adjusted Peak Converted Wet Density t/m ³	**	2.12	**	2.12	2.10	**
Moisture Variation (Wv) %	2.0	**	2.5	**	**	2.0
Adjusted Moisture Variation %	**	2.5	**	2.0	-0.5	**
Hilf Density Ratio (%)	100.0	95.0	96.5	97.0	99.0	100.5
Compaction Method	Standard	Standard	Standard	Standard	Standard	Standard
Report Remarks	**	**	**	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report

Report Number: B21071-29
Issue Number: 1
Date Issued: 18/08/2021
Client: BMD Urban
 1 Sandpiper Ave, Port of Brisbane QLD 4178
Contact: Kody O'Hea
Project Number: B21071
Project Name: 4836 Brentwood Estate Stages 8 & 9
Project Location: Brentwood Estate Stage 8 Level 1
Work Request: 1681
Date Sampled: 17/08/2021
Dates Tested: 17/08/2021 - 18/08/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Preparation Method: AS 1289.1.1 - Sampling and preparation of soils
Specification: Minimum 95% Standard Compaction
Site Selection: Selected By QCTS Technician
Material: Embankment Fill
Material Source: On Site



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 Brisbane Laboratory
 23/8 Riverland Drive Loganholme QLD 4129
 Phone: (07) 4633 0816
 Email: geoff@qcts.net.au



Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Geoff Turley
 Area Manager

NATA Accredited Laboratory Number: 20024

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	B21-1681G	B21-1681H	B21-1681I	B21-1681J	B21-1681K	B21-1681L
Date Tested	17/08/2021	17/08/2021	17/08/2021	17/08/2021	17/08/2021	17/08/2021
Time Tested	**	**	**	**	**	**
Test Request #/Location	Lot 111, 2m N, 7m W from SE boundary	Lot 110, 5m N, 2m W from SE boundary	Lot 109, 6m N, 8m W from SE boundary	Lot 103, 3m N, 5m W from SE boundary	Lot 142, 7m N, 4m E from SW boundary	Lot 139, 3m N, 1m E from SW boundary
Layer / Reduced Level	FL	0.5m below FL	0.2m Below FL	FL	0.1m below FL	FL
Thickness of Layer (mm)	275	275	275	275	275	275
Soil Description	Sandy Clay, Brown	Sandy Clay, Brown	Sandy Clay, Brown	Sandy Clay, Brown	Sandy Clay, Brown	Sandy Clay, Brown
Test Depth (mm)	250	250	250	250	250	250
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	2	0	0	3	0	0
Field Wet Density (FWD) t/m ³	2.16	2.17	2.16	2.03	2.08	2.06
Field Moisture Content %	10.0	10.8	9.9	10.3	10.6	10.5
Field Dry Density (FDD) t/m ³	1.96	1.96	1.97	1.84	1.88	1.86
Peak Converted Wet Density t/m ³	**	2.19	2.19	**	2.06	2.04
Adjusted Peak Converted Wet Density t/m ³	2.11	**	**	2.09	**	**
Moisture Variation (Wv) %	**	0.0	0.5	**	2.0	2.0
Adjusted Moisture Variation %	0.5	**	**	2.5	**	**
Hilf Density Ratio (%)	102.5	99.0	98.5	97.0	101.0	100.5
Compaction Method	Standard	Standard	Standard	Standard	Standard	Standard
Report Remarks	**	**	**	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Material Test Report


Report Number: B21071-30
Issue Number: 1
Date Issued: 18/08/2021
Client: BMD Urban
 1 Sandpiper Ave, Port of Brisbane QLD 4178
Contact: Kody O'Hea
Project Number: B21071
Project Name: 4836 Brentwood Estate Stages 8 & 9
Project Location: Brentwood Estate Stage 8 Level 1
Work Request: 1684
Date Sampled: 08/07/2021
Dates Tested: 08/07/2021 - 18/08/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Preparation Method: AS 1289.1.1 - Sampling and preparation of soils
Specification: Minimum 95% Standard Compaction
Site Selection: Selected By QCTS Technician
Material: Embankment Fill
Material Source: On Site



Quality Control Testing Services Pty Ltd
 Brisbane Laboratory
 23/8 Riverland Drive Loganholme QLD 4129
 Phone: (07) 4633 0816
 Email: geoff@qcts.net.au



Accredited for compliance with ISO/IEC 17025 - Testing


 Approved Signatory: Geoff Turley
 Area Manager

NATA Accredited Laboratory Number: 20024

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1

	B21-1684A	B21-1684B	B21-1684C	B21-1684D
Sample Number	B21-1684A	B21-1684B	B21-1684C	B21-1684D
Date Tested	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Tested	**	**	**	**
Test Request #/Location	MC21	MC21	MC21	MC21
Chainage (m)	100	140	190	220
Location Offset (m)	-2.5 from CL	0.5 from CL	-1.0 from CL	2.0 from CL
Layer / Reduced Level	0.3m below FL	0.4m below FL	0.2m below FL	0.3m below FL
Thickness of Layer (mm)	275	275	275	275
Soil Description	Sandy Clay, Brown	Sandy Clay, Brown	Sandy Clay, Brown	Sandy Clay, Brown
Test Depth (mm)	250	250	250	250
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	1	0
Field Wet Density (FWD) t/m ³	2.17	2.18	2.16	2.17
Field Moisture Content %	8.9	8.5	8.9	9.5
Field Dry Density (FDD) t/m ³	1.99	2.01	1.99	1.99
Peak Converted Wet Density t/m ³	2.19	2.15	**	2.19
Adjusted Peak Converted Wet Density t/m ³	**	**	2.19	**
Moisture Variation (Wv) %	0.5	1.0	**	0.5
Adjusted Moisture Variation %	**	**	0.5	**
Hilf Density Ratio (%)	99.0	101.0	98.5	99.0
Compaction Method	Standard	Standard	Standard	Standard
Report Remarks	**	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

Material Test Report

Report Number: B21071-31
Issue Number: 1
Date Issued: 18/08/2021
Client: BMD Urban
 1 Sandpiper Ave, Port of Brisbane QLD 4178
Contact: Kody O'Hea
Project Number: B21071
Project Name: 4836 Brentwood Estate Stages 8 & 9
Project Location: Brentwood Estate Stage 9 Level 1
Work Request: 1685
Date Sampled: 17/08/2021
Dates Tested: 17/08/2021 - 17/08/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Preparation Method: AS 1289.1.1 - Sampling and preparation of soils
Specification: Minimum 95% Standard Compaction
Site Selection: Selected By QCTS Technician
Material: Embankment Fill
Material Source: On Site



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 Brisbane Laboratory
 23/8 Riverland Drive Loganholme QLD 4129
 Phone: (07) 4633 0816
 Email: geoff@qcts.net.au



Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Geoff Turley
 Area Manager

NATA Accredited Laboratory Number: 20024

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1						
Sample Number	B21-1685A	B21-1685B	B21-1685C	B21-1685D	B21-1685E	B21-1685F
Date Tested	17/08/2021	17/08/2021	17/08/2021	17/08/2021	17/08/2021	17/08/2021
Time Tested	**	**	**	**	**	**
Test Request #/Location	Lot 78, 12m N, 4m E from SW boundary	Lot 77, 8m N, 2m E from SW boundary	Lot 76, 9m N, 7m W from SE boundary	Lot 121, 15m N, 8m E from SW boundary	Lot 122, 12m N, 9m E from SW boundary	Lot 104, 10m N, 10m E from SW boundary
Layer / Reduced Level	0.3m below FL	0.1m below FL	FL	0.2m below FL	FL	FL
Thickness of Layer (mm)	275	275	275	275	275	275
Soil Description	Sandy Clay, Brown	Sandy Clay, Brown	Sandy Clay, Brown	Sandy Clay, Brown	Sandy Clay, Brown	Sandy Clay, Brown
Test Depth (mm)	250	250	250	250	250	250
Sieve used to determine oversize (mm)	19.0	19.0	19.0	19.0	19.0	19.0
Percentage of Wet Oversize (%)	2	0	0	2	0	0
Field Wet Density (FWD) t/m ³	2.02	2.03	2.06	2.05	2.02	2.08
Field Moisture Content %	10.8	10.2	9.9	10.8	11.1	10.6
Field Dry Density (FDD) t/m ³	1.82	1.84	1.87	1.85	1.82	1.88
Peak Converted Wet Density t/m ³	**	2.07	2.09	**	2.11	2.05
Adjusted Peak Converted Wet Density t/m ³	2.07	**	**	2.10	**	**
Moisture Variation (Wv) %	**	2.0	2.5	**	2.5	2.5
Adjusted Moisture Variation %	3.0	**	**	2.0	**	**
Hilf Density Ratio (%)	98.0	98.0	98.0	97.5	96.0	101.0
Compaction Method	Standard	Standard	Standard	Standard	Standard	Standard
Report Remarks	**	**	**	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC

Negative values = test is wet of OMC

Material Test Report

Report Number: B21071-32
Issue Number: 1
Date Issued: 18/08/2021
Client: BMD Urban
 1 Sandpiper Ave, Port of Brisbane QLD 4178
Contact: Kody O'Hea
Project Number: B21071
Project Name: 4836 Brentwood Estate Stages 8 & 9
Project Location: Brentwood Estate Stage 8 Level 1
Work Request: 1549
Date Sampled: 21/07/2021
Dates Tested: 21/07/2021 - 22/07/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Preparation Method: AS 1289.1.1 - Sampling and preparation of soils
Site Selection: Selected By QCTS Technician
Material: Embankment Fill
Material Source: On Site



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 Brisbane Laboratory
 23/8 Riverland Drive Loganholme QLD 4129
 Phone: (07) 4633 0816
 Email: geoff@qcts.net.au



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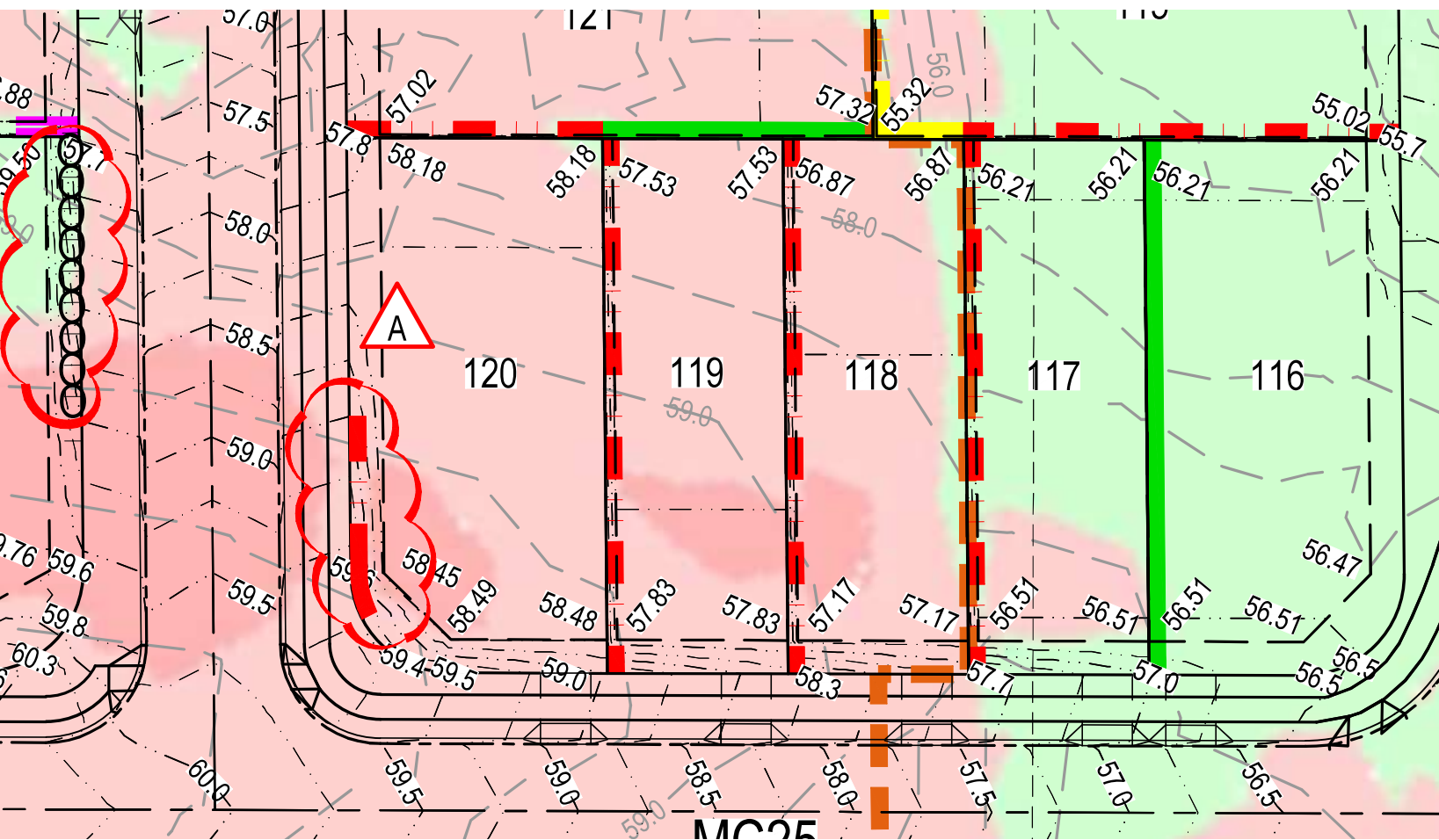
Approved Signatory: Geoff Turley
 Area Manager

NATA Accredited Laboratory Number: 20024

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	B21-1549A	B21-1549B	B21-1549C
Date Tested	21/07/2021	21/07/2021	21/07/2021
Time Tested	**	**	**
Test Request #/Location	Lot 116	Lot 117	Lot 116
Easting	489074.031	489076.572	489070.683
Northing	6942887.439	6942894.186	6942895.234
Layer / Reduced Level	0.6m below FL	0.3m below FL	FL
Thickness of Layer (mm)	300	300	300
Soil Description	Sandy Clay, Orange/Brown	Sandy Clay, Orange/Brown	Sandy Clay, Orange/Brown
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Field Wet Density (FWD) t/m ³	1.97	1.96	1.96
Field Moisture Content %	10.2	10.3	10.7
Field Dry Density (FDD) t/m ³	1.79	1.78	1.77
Peak Converted Wet Density t/m ³	2.06	2.05	2.05
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Moisture Variation (Wv) %	3.0	3.0	2.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	95.5	95.5	95.5
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC
 Negative values = test is wet of OMC



- THE CONTRACTORS EX
- 6. ALL OF THE SITE SHALL PHASES OF THE PROJE
- 7. REFER TO TYPICAL ROA GRADES. WHERE GRAD EARTHWORKS LAYOUT
- 8. MINIMUM TOPSOIL THIC
- 9. UNLESS DIRECTED OTH FILL SHALL BE PLACED MOISTURE CONTENT.
- 10. ALL ALLOTMENTS TO BE COVERAGE. SEEDING T COMPLETION OF EARTH
- 11. WORKS LOCATED IN FIR CONDUCTED IN ACCOR

VOLUMES
 (THESE VOLUMES ARE TIGHT
 EXISTING TO DESIGN WITHO

Material Test Report

Report Number: B21071-33
Issue Number: 1
Date Issued: 18/08/2021
Client: BMD Urban
 1 Sandpiper Ave, Port of Brisbane QLD 4178
Contact: Kody O'Hea
Project Number: B21071
Project Name: 4836 Brentwood Estate Stages 8 & 9
Project Location: Brentwood Estate Stage 9 Level 1
Work Request: 1582
Date Sampled: 29/07/2021
Dates Tested: 29/07/2021 - 30/07/2021
Sampling Method: AS 1289.1.2.1 6.4 (b) - Sampling from layers in earthworks or pavement - compacted
Preparation Method: AS 1289.1.1 - Sampling and preparation of soils
Specification: Minimum 95% Standard Compaction
Site Selection: Selected By QCTS Technician
Material: General Fill
Material Source: On Site



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 Brisbane Laboratory
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Accredited for compliance with ISO/IEC 17025 - Testing

Approved Signatory: Geoff Turley
 Area Manager

NATA Accredited Laboratory Number: 20024

Compaction Control AS 1289 5.7.1 & 5.8.1 & 2.1.1			
Sample Number	B21-1582A	B21-1582B	B21-1582C
Date Tested	29/07/2021	29/07/2021	29/07/2021
Time Tested	14:07	14:14	14:21
Test Request #/Location	Lot 121, 8m N, 13m E from SW boundary	Lot 77, 13m N, 2m E from SW boundary	Lot 78, 10m N, 8m E from SW boundary
Layer / Reduced Level	0.4m below FL	0.6m below FL	0.5m below FL
Soil Description	Sandy Clay, Brown	Sandy Clay, Brown	Sandy Clay, Brown
Test Depth (mm)	275	275	275
Sieve used to determine oversize (mm)	19.0	19.0	19.0
Percentage of Wet Oversize (%)	0	0	0
Field Wet Density (FWD) t/m ³	1.97	1.95	1.96
Field Moisture Content %	11.2	10.3	10.9
Field Dry Density (FDD) t/m ³	1.77	1.77	1.77
Peak Converted Wet Density t/m ³	2.05	2.01	2.04
Adjusted Peak Converted Wet Density t/m ³	**	**	**
Moisture Variation (Wv) %	2.5	2.5	2.5
Adjusted Moisture Variation %	**	**	**
Hilf Density Ratio (%)	96.0	97.0	96.0
Compaction Method	Standard	Standard	Standard
Report Remarks	**	**	**

Moisture Variation Note:

Positive values = test is dry of OMC
 Negative values = test is wet of OMC

Sample Locations Plan

