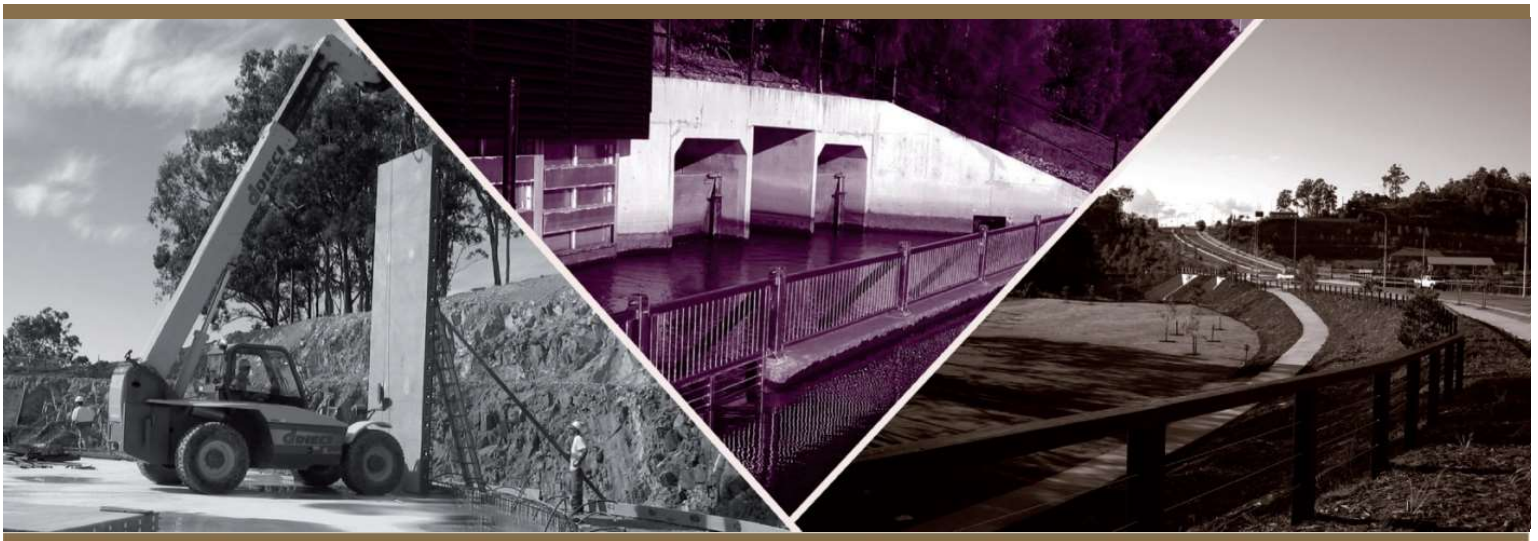
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Courtney Drive
Upper Coomera

PRELIMINARY ENGINEERING REPORT

Address:	79 to 99 Courtney Drive, Upper Coomera
Lot & RP Description:	Lot 188 to 192 on RP173728
Local Government:	Gold Coast City Council
Prepared for:	GALLERY THE ART OF LIVING
Prepared by:	**Mortons – Urban Solutions** Level 2, 19 Short Street (PO Box 2484) Southport Qld 4215 Ph: (07) 5571 1099 Fax: (07) 5571 1088 Email: mortons@urbansolutions.net.au



CIVIL ENGINEERING TOWN PLANNING PROJECT COORDINATION

MORTONS
urbansolutions

19 Short Street,
Southport Qld 4215

P: (07) 5571 1099
F: (07) 5571 1088
www.urbansolutions.net.au

Prepared for:

GALLERY
THE ART OF LIVING

Property Address:
79 to 99 Courtney Dr,
Upper Coomera

Real Property Description/s:
Lot 188 to 192
RP173728

DOCUMENT CONTROL

Report Summary					
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Project Reference:	36001-ALL [ID 731018]				
Document Title:	Preliminary Engineering Report Courtney Drive, Upper Coomera				
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Revision	**Date**	**Author**	**Reviewed**		**Distributed**
A	17/04/2019	MM	17/04/2019	JSH	Project Team
B	16/12/2021	MM	16/12/2021	JSH	Project Team

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(Plan No. 171101_021_PRO, Revision A, Dated 05.11.2020)
Prepared by Bennett and Bennett

Appendix B **Council Discussions**
(Emails dated 28.02.2019 and 27.03.2019)
Prepared by Mortons-Urban Solutions

Appendix C **Preliminary Earthworks Drawings**
(Drawing No.: 36001-PE-000 to 460, Issued 16.12.2021)
Prepared by Mortons-Urban Solutions

Appendix D **Preliminary Engineering Drawings**
(Drawing No.: 36001-PRE-000 to 705, Issued 16.12.2021)
Prepared by Mortons-Urban Solutions

Appendix E **Temporary Sewer Pump Station Discussions**
18th November 2021 Meeting Notes (MUS email 22.11.2021 & Council email 16.12.2021)
MUS Drawing 36001-ALL-SK002 (Rev B)
H2One Tech Memo dated 1st November 2021

1.0 INTRODUCTION

This Engineering Services Report has been prepared on behalf of **Gallery Homes** and is supporting information to the combined Reconfiguration of a Lot and Material Change of Use application for 79 to 99 Courtney Drive, Upper Coomera. The application proposes the creation of 196 residential lots, open space, associated public road and stormwater drainage reserve. The development is proposed to be constructed in 5 stages.

The proposed development is located within the Upper Coomera Investigation Area identified as an area that may be appropriate to be converted from rural to urban purposes to assist in the provision of the City's urban land supply and cater for the city's future population growth.

The investigations within this report are based on the Bennett and Bennett's Plan of Proposed Staged Subdivision Plan No. 171101_021_PRO Rev A dated 5th November 2020 (**Appendix A**). Refer excerpt below in **Figure 1.1**.

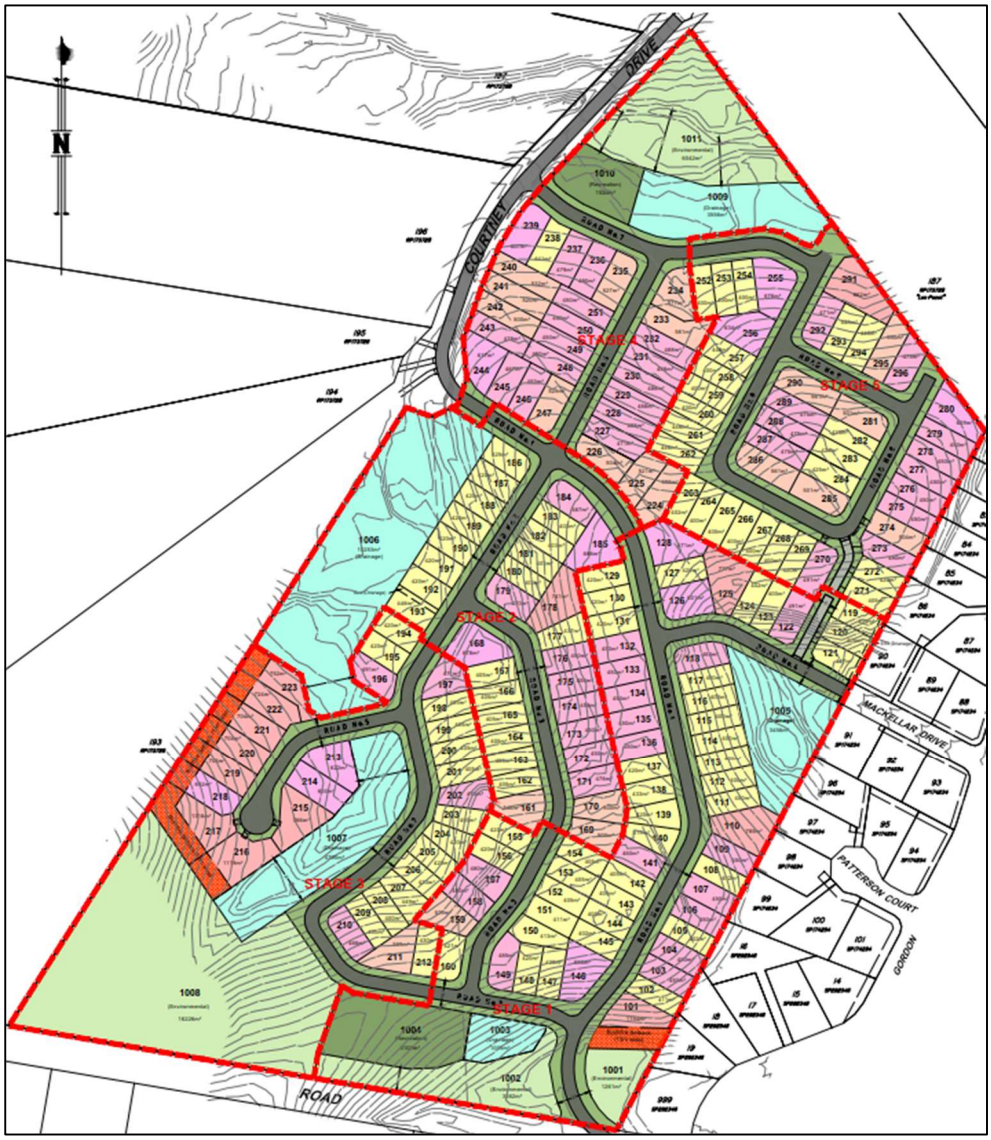


Figure 1.1 – Excerpt of Plan of Proposed Subdivision (refer Appendix A)

The location of the proposed development site is shown in Figures 1.2 and 1.3 below.



Figure 1.2 – Location of Proposed Development Site *Source: www.whereis.com*



Figure 1.3 – Aerial Photo of Proposed Development Site *Source: Google Earth*

The proposed servicing strategy for the development was discussed with Council on several occasions and the strategies noted in this report are consistent with these discussions. A copy of the notes from these discussions is included within **Appendix B**.

2.0 PRELIMINARY EARTHWORKS DESIGN

A preliminary earthworks design has been prepared over the site to establish the extent of earthworks, retaining walls & batters. The preliminary design incorporates the required stormwater management infrastructure (including basins) for the site proposed by BIOME Consulting (refer details in **Section 3.0** below). The preliminary earthworks and retaining wall design are shown on MUS Drawings No. 36001-PE-000 to 460 (refer **Appendix C**).

For Council's information, bulk earthworks cross-sections through the proposed development have been prepared and are shown on Drawings No. 36001-PE-050 to 050. Cut to Fill drawings are also provided and are shown on MUS Drawings No. 36001-PE-040 to 045. These drawings are included within **Appendix C**.

The preliminary earthworks model incorporates the following:

- An approximate cut volume of 300,000m3 with 40,000m3 (approx.) to spoil offsite;
- Batter slopes generally acceptable to Council and Geotechnic Engineers;
- Stormwater strategy in accordance with BIOME Consulting's conceptual management plan.
- Ties into the surrounding properties;
- Retaining walls as noted in **Section 2.1** below;
- The reconstruction of Courtney Drive where required to facilitate access to the proposed development, with the existing driveways adjusted to suit;
- The potential for a fire trail/access track within the road reserve that adjoins the southern boundary of the site, extending from the Gordon Drive entry road (ie Road 1);
- Interface along the southern boundary with Stockland's Highland Reserve as noted in **Section 6.1** below;
- Stormwater and sewer catchments generally in accordance with the Subconsultant reports.

2.1 Retaining Walls

Concrete sleeper retaining walls are proposed to be used within the development with a maximum height of 1.5m for a single tier wall and 3m for two tiers with a bench. Typical details are shown on MUS Drawing 36001-PE-460 (refer **Appendix C**). The proposed concrete sleeper retaining wall is a proprietary product and it is noted that the proposed wall heights have been accepted on other recent developments within the City of Gold Coast.

All retaining walls will be subject to site specific RPEQ structural engineer design prior to construction.

Anticipated retaining wall heights and site pad levels are shown on MUS Drawings No. 36001-PE-450 to 455 (refer **Appendix C**).

3.0 CONCEPTUAL STORMWATER MANAGEMENT

BIOME Consulting have prepared a Stormwater Management and Hydraulic Assessment report (dated March 2019) that provides a conceptual stormwater management plan (CSMP) for the proposed development. The CSMP presents a comprehensive review of available Stormwater Quality Improvement Devices (SQID) and stormwater Best Management Practices (BMP) to ensure that the proposed development adequately addresses the management of stormwater quantity and quality during both the construction and operational phases of the development.

An excerpt from BIOME's proposed operational control plan is below showing the proposed infrastructure to mitigate the development's potential stormwater impacts if left uncontrolled.

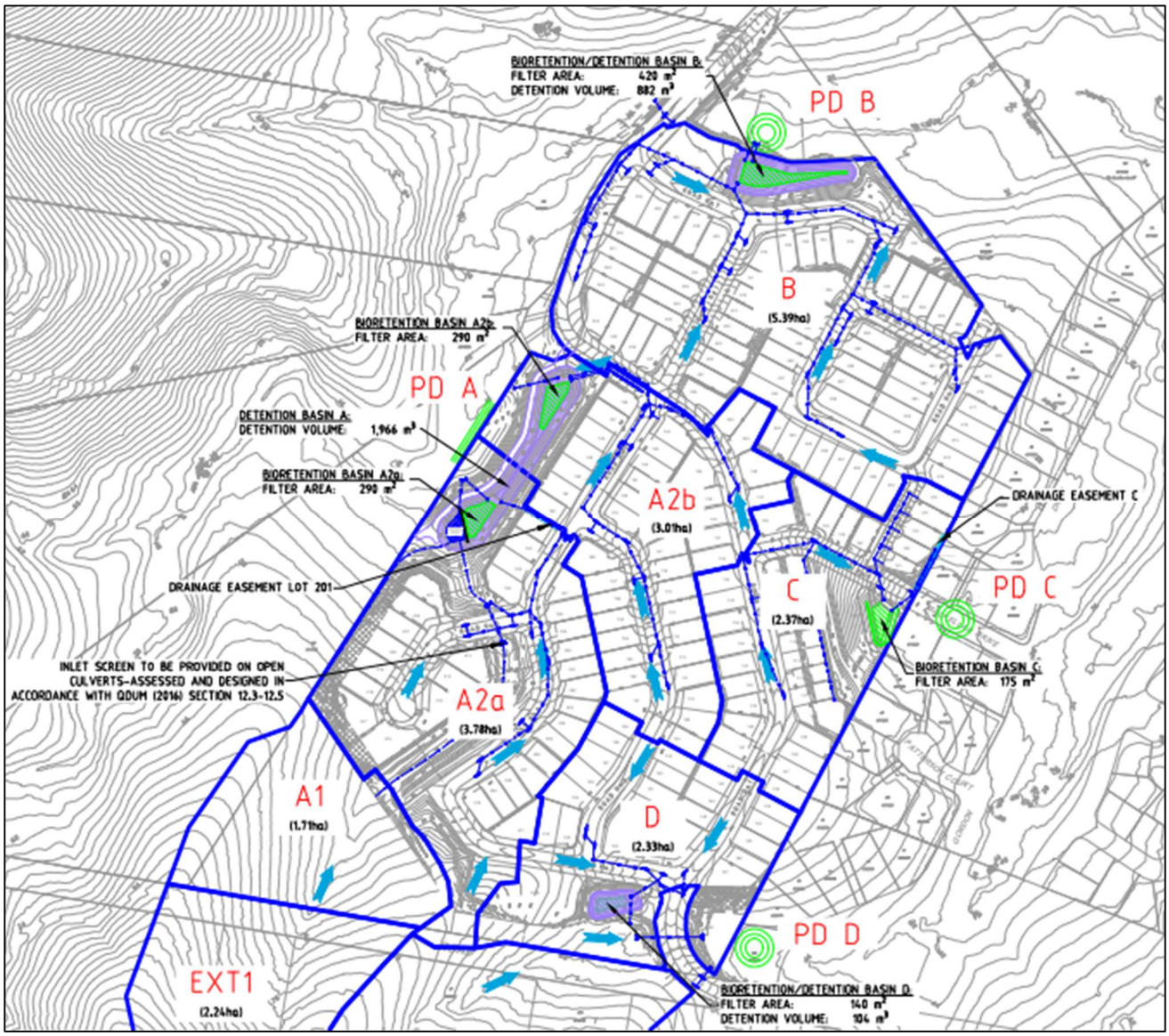


Figure 3.1 – BIOME Consulting's Operational Control Plan (refer Drawing DWG-300 Rev C)

BIOME's CSMP incorporates and confirms the following:

- A total of four (4) stormwater treatment basins are proposed:
  - Basins A, B and D will be combined bioretention/detention basin for quality and quantity management.
  - Basin C will only be required for treatment of pollutant loads, as catchment reductions in the post-development case have resulted in a reduction of peak discharge.
- The results of xpstorm modelling indicate that the inclusion of the three (3) proposed detention basins will mitigate the expected increases in peak discharge at PD-A, PD-B, and PD-D during all modelled AEP events.
- Utilising a 1D-2D flood model TUFLOW, the resulting spatial analysis of the peak pre- and post-development flooding indicates that the proposed earthworks required to create the subdivision will not cause any flood increase or nuisance to neighbouring properties.
- All internal catchments will be directed to bioretention measure for quality treatment. MUSIC v6 modelling indicates that reduction target for TSS, TP, TN and gross pollutants of 80%, 60%, 45% and 90% respectively can be achieved for the rainfall data set simulated.

A future Detailed Stormwater Management Plan containing the detailed engineering designs will be prepared in the future to finalise the stormwater concepts presented in their report.

Following the implementation of the BIOME's proposed strategies, the CSMP confirms that:

- There should be no worsening in peak discharge as a result of the proposed development;
- Stormwater pollutant load reductions in accordance with best practice should be achieved.

For further discussion on the stormwater mitigation strategies regarding this development refer to BIOME Consulting's report supporting the development.

4.0 PRELIMINARY CIVIL ENGINEERING DESIGN

A preliminary civil engineering design has been prepared over the site to establish preliminary catchments and alignments of the required stormwater culverts, water and sewer mains to service the proposed development. The preliminary design also provides long-sections and indicative cross-sections of the proposed roads.

The water and sewer layouts prepared in the preliminary civil design have formed the base for the water and sewer modelling discussed in **Section 5.0** below.

The preliminary civil design is shown on MUS Drawings No. 36001-PRE-000 to 705 (refer **Appendix D**).

5.0 WATER & SEWER SERVICING

H2One have prepared a Water Supply and Sewerage Network Hydraulic Analysis report (Version 5 dated 4th November 2019) summarising the proposed infrastructure to service the proposed development with potable water and sewer. Adopting the water and sewerage layouts noted in **Section 4.0** above, H2One have prepared the following:

- A hydraulic model assessing the proposed internal networks and prepared reticulation schematic plans, to ensure adequate service will be achieved throughout the subdivision.
- A network capacity assessment to determine if the proposed development's additional loading will impact CoGC's existing systems and trigger the need for infrastructure upgrades.

The desired standards of service identified within the SEQ Water Supply and Sewerage Design and Construction Code were adopted for H2One's study.

The hydraulic analysis identified the following outcomes:

- The proposed internal pipe layouts and service strategies achieved Council's design standards for both water and sewer.
- Council's existing water supply network has sufficient capacity to incorporate the proposed development and infrastructure upgrades are not required. The following connection points to service the development are proposed:
    - Stage 1 will connect to the existing watermain in Gordon & MacKellar Drives.
    - No other external connections or upgrades are required to service the development.
- Proposed water network from Appendix 7 of the H2One's report is below:

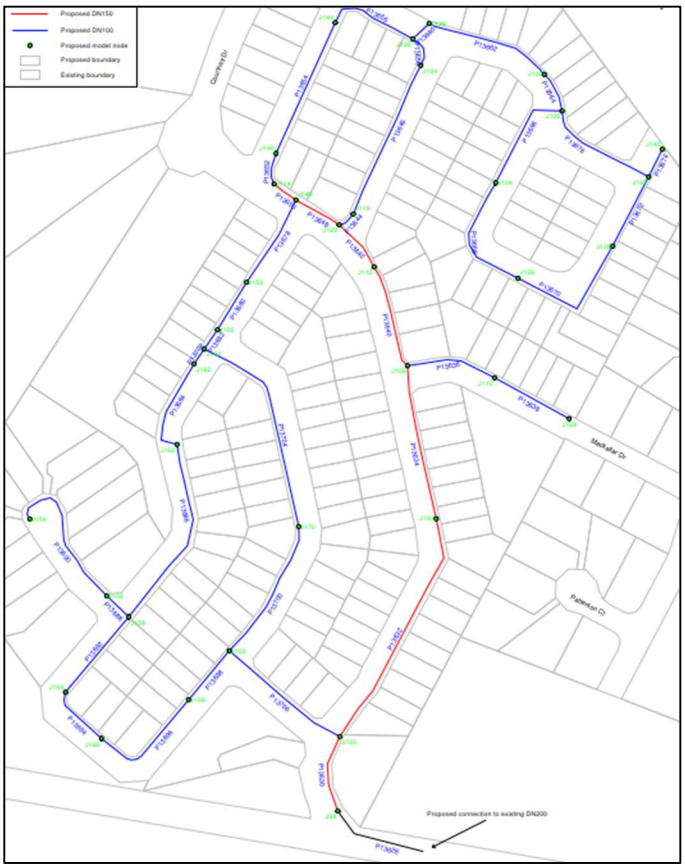


Figure 5.1 – H2One's Water Model Layout (refer Appendix 12 of report 4th Nov 2019)

- Council's existing sewer network has sufficient capacity to incorporate the proposed development up to the 2036 planning horizon. The 2066 planning horizon required the following infrastructure upgrades to service the site's additional loading:
    - Construction of 210m of DN300 parallel gravity mains (refer Appendix 9 for layout plan).
    - Construction of 30.5 kL of emergency storage. Note the subject site is estimated to have contributed 75% towards this upgrade, with the remaining component attributed to the approved development at 155 Baileys Mountain Road, Upper Coomera.
- Proposed sewer network from Appendix 7 of the H2One's report is below:

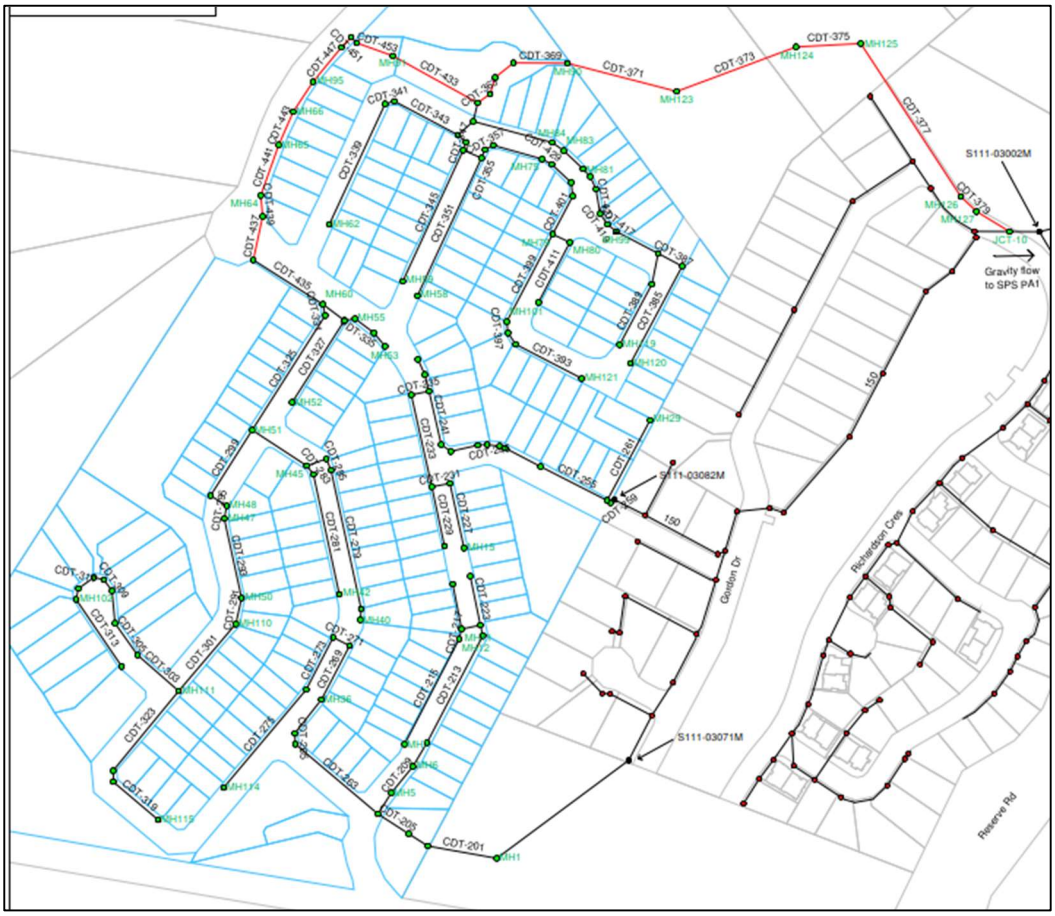


Figure 5.2 – H2One's Sewer Model Layout (refer Appendix 7 of report 4th Nov 2019)

H2One's report provides a review of their sensitivity analysis results for their water modelling due to the elevation of the proposed development plus the identified minimum pressure failures within existing development not triggered nor exacerbated by the proposed development.

For further discussion on the water and sewer strategies regarding this development refer to H2One's report supporting the development.

5.1 Temporary Sewer Pump Station Strategy

The ultimate sewer strategy to service the proposed development (and others within the Upper Coomera Investigation Area) requires the construction of approximately 370m of sewer main external to the proposed development.

The delivery of this external sewer main was discussed with Council on 18th November 2021 and it was agreed that, while the alignment and landowner discussions/negotiations were being finalised, a temporary sewer pump station would be acceptable to Council. A copy of the notes from the meeting are included in **Appendix E**. The agreed sewer servicing strategy for the proposed development is as follows:

- Stage 1 – Sewer to gravitate to the east into the existing Gordon Dr network as per the ultimate strategy.
- Stages 2, 3 & 4 – Developer to construct, at no cost to Council, a temporary pump station in the low point of the site (adjacent to Yuan Creek) which will pump to the top of MacKellar Dr and then gravitate into the existing Gordon Dr network. A drawing showing this is included within **Appendix E**. H2One have prepared a Tech Note (copy included in **Appendix E**) which confirms capacity within the existing network to accommodate this strategy. Council will receive the temporary pump station as a 'gifted asset' and the Developer will provide a bond to cover the maintenance costs prior to its decommissioning. Council will own and maintain the temporary pump station until decommissioning.
- Stage 5 – prior to plan sealing the last stage (ie Stage 5) of the development, the Developer will be conditioned to remove the temporary pump station, decommission the rising main and deliver the ultimate gravity sewer connection to the east.
- If there are issues surrounding the delivery of the ultimate gravity sewer in the future, the Developer will need to amend the MCU/ROL approval at that point in time via negotiation & agreement with Gold Coast Water & Waste.

6.0 TRAFFIC CONSIDERATIONS

SLR Consulting have prepared a Traffic Report summarising the traffic impacts and infrastructure required to support the proposed development. Initially it is proposed that access will be provided via the new road currently being constructed by others between Reserve Road and Gordon Dr. Further discussion on this access is in **Section 6.1** below.

Future links will also be provided via Mackellar Dr on the eastern boundary of the site and Courtney Drive along the north-west boundary.

For further discussion on the traffic considerations regarding this development refer to SLR Consulting's report supporting the development.

6.1 Access via Gordon Drive

Stockland's Highland Reserve development to the south is currently under construction and as part of their approved works, they are providing a road link connection between Gordon Drive and Reserve Road. A fire trail is also proposed beyond Gordon Drive to the west.

The preliminary earthworks model has replicated the approved PDF design and extended it to provide access into the proposed Courtney Drive development. It is likely the extension into the proposed development will require a retaining wall within the road reserve to facilitate the entry road construction as a result of the Council approved design.

This was discussed with Council in February 2019 and the emails are included within **Appendix B** confirming that a retaining wall would be accepted as long as its minimised as much as possible. The preliminary earthworks drawings (refer **Appendix C**) provide details of the expected cross-section in this area due to the approved design.

7.0 ELECTRICAL & TELCOMMUNICATION SERVICES

The Development will include the provision of electricity and telecommunications services to each residential lot. Given the extent of similar residential development to the south and east of the subject site, it is expected sufficient infrastructure is available to service the proposed development. The existing service provider networks will be extended into the subject site via underground networks.

Future detailed advice regarding the provision of these services will be commissioned and appropriate designs and upgrades will be provided in the future to facilitate this development.

8.0 CONCLUSION

Based on preliminary reporting from the associated consultants, the preliminary earthworks model and the preliminary civil engineering design drawings prepared to date, servicing of the proposed 196 lot residential development is proposed as follows:

- The preliminary earthworks design demonstrates that suitable house sites exist on each lot through a combination of batters and retaining walls to Council's standards.
- There is sufficient capacity to service via connections to Council's existing sewer and water infrastructure located in the vicinity of the development.
- While the ultimate sewer external to the site is finalised and constructed, Council is accepting of a temporary sewer pump station to service the development.
- Access to the site can be provided via the extension of existing roads into the development and proposes the reconstruction of the Courtney Dr for the development's frontage.
- Existing electrical and telecommunication services exist close to the development and are anticipated to supply the site as required.

It is therefore concluded that the subject site can be developed in accordance with the City of Gold Coast's Planning Scheme requirements and development codes and that no significant constraints exist to stop the development of this property as proposed.

APPENDIX A

Plan of Proposed Staged Subdivision

(Plan no. 171101_021_PRO, Revision A, dated 05.11.2020)
Prepared by Bennett and Bennett

BENNETT + BENNETT
PO Box 5021, GCMC QLD 9726
Ph: (07) 5631 8000
mail@bennettandbennett.com.au
Surveying, Town Planning & Spatial Services
GOLD COAST | BRISBANE | SUNSHINE COAST | IPSWICH
www.bennettandbennett.com.au

DEVELOPMENT SUMMARY

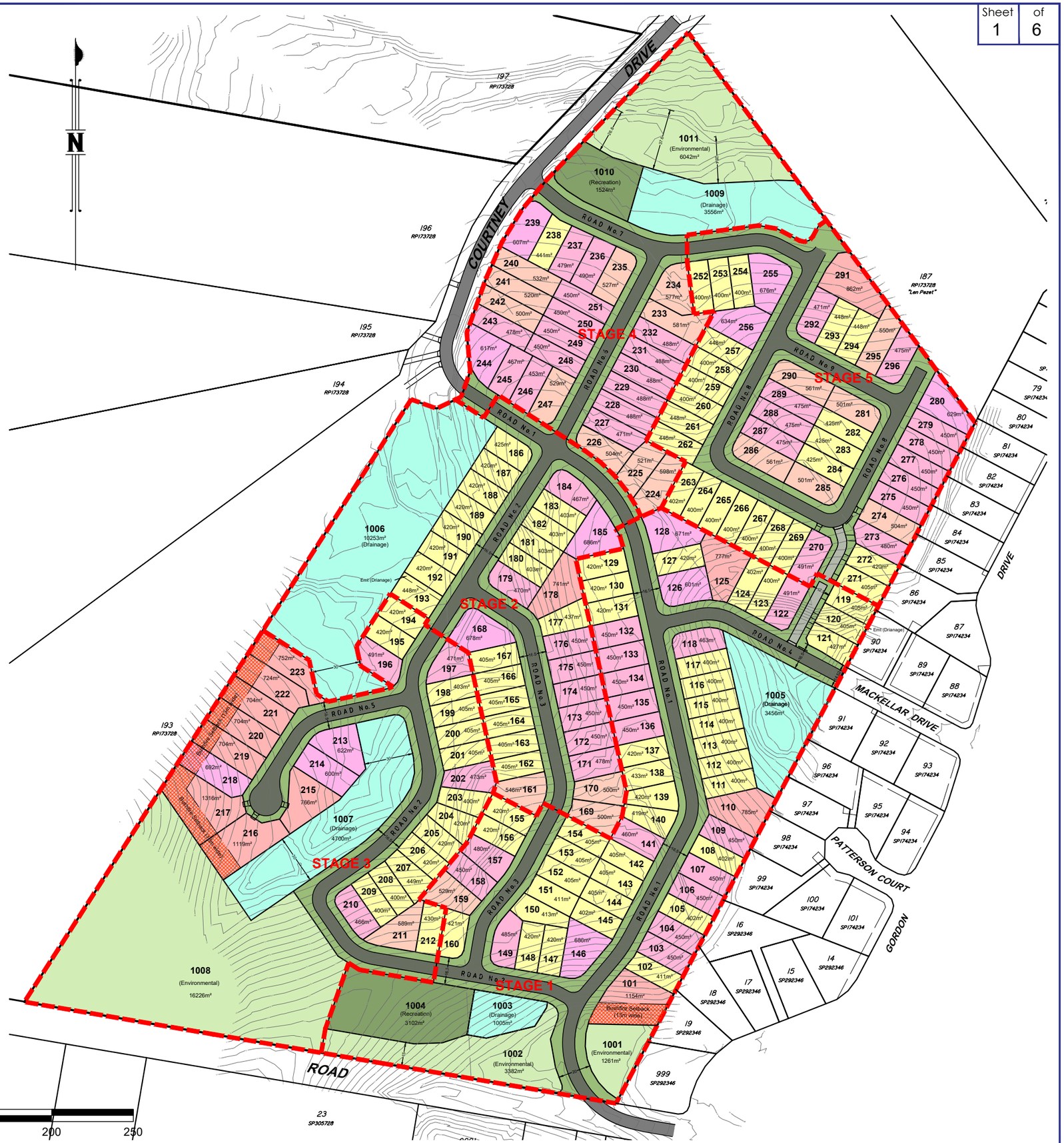
Residential Lots	196
Open Space Lots (Environmental)	4
Open Space Lots (Drainage)	5
Open Space Lots (Recreation)	2
Total Lots	207
Total Site Area	18.851ha
Open Space (Environmental)	2.691ha
Open Space (Drainage)	2.297ha
Open Space (Recreation)	4626m²
Area of New Road	3.887ha
Net Developable Area	13.401ha
Net Ha	9.514ha
Net Residential Density	20.6 d/ha

Precinct Density

CW Precinct	
Net Ha	1.490ha
Precinct Lots	25
Net Residential Density	16.8 d/ha
CSE Precinct	
Net Ha	8.024ha
Precinct Lots	171
Net Residential Density	21.3 d/ha

LOT SIZE MIX

Size	Number	%
400m² - 449m²	94	48%
450m² - 499m²	55	28%
500m² - 599m²	21	11%
600m² - 699m²	13	7%
700m² +	13	7%



Scale 1:2500

0m 50 100 150 200 250

NOTES:
1. Drawn to scale on an A3 sheet.
2. All dimensions and areas are subject to final survey and approval by G.C.C.C.
3. Dimensions shown are to the nearest decimeter.

Issue	Revision	Int	Date
A	Original Issue	DJR	05/11/20

Title:

Plan of Proposed Subdivision Overall

Courtney Drive, Upper Coomera (Described as Lots 188-192 on RP173728)

Client:	**GALLERY HOMES**		
Locality:	UPPER COOMERA		
Local Gov:	GCCC	Prepared By:	DJR
Surveyed By:		Approved:	----
Date Created:	05/11/2020	Scale:	1:2500
Comp File:			
Plan No:	**171101_021_PRO**		

A3

APPENDIX B

Council Discussions

(Emails dated 28th February 2019 and 27th March 2019)
Prepared by Mortons-Urban Solutions

Matthew McLaren

From: Matthew McLaren
Sent: Wednesday, 27 March 2019 5:10 PM
To: 'JOHNSON Mark'
Cc: 'Ashley Nankervis'
Subject: RE: Tuesday Meeting Notes - Courtney Dr - 13th March 2019
Attachments: Location Plan.JPG; Sewer conn l-sect.pdf; Sewer conn plan.pdf; IMG_0552.jpeg; IMG_0557.jpeg

Hi Mark

I've just noticed I haven't forwarded you my notes from our meeting. Sorry for the delay.

I appreciate you organising everyone to come along to give direct advice on the way forward. Definitely helps the process.

Attendees:
Council – Mark Johnson, Anton Adina, Ivan Mircev, Subra Subramaniam & Uttam Saha
Gallery Homes - Ashley Nankervis
Mortons - Matt McLaren

Water connection

- MM discussed proposed servicing of initial stages via connection to existing mains in Gordon Dr for Stage 1 and Mackellar Drive for Stage 2. Another connection is likely along Courtney Drive & Baileys Mountain Rd.
- Uttam noted no objections to proposed servicing of initial stages via eastern development as long as sufficient capacity. Capacity to be proven via modelling.
- MM noted H2One have prepared a water model report that confirms there is capacity. The report identifies the works external to the site to ensure the development can be serviced. This report will be updated to suit the current layout plan and lodged in support of the application to Council in due course.

Sewer connection

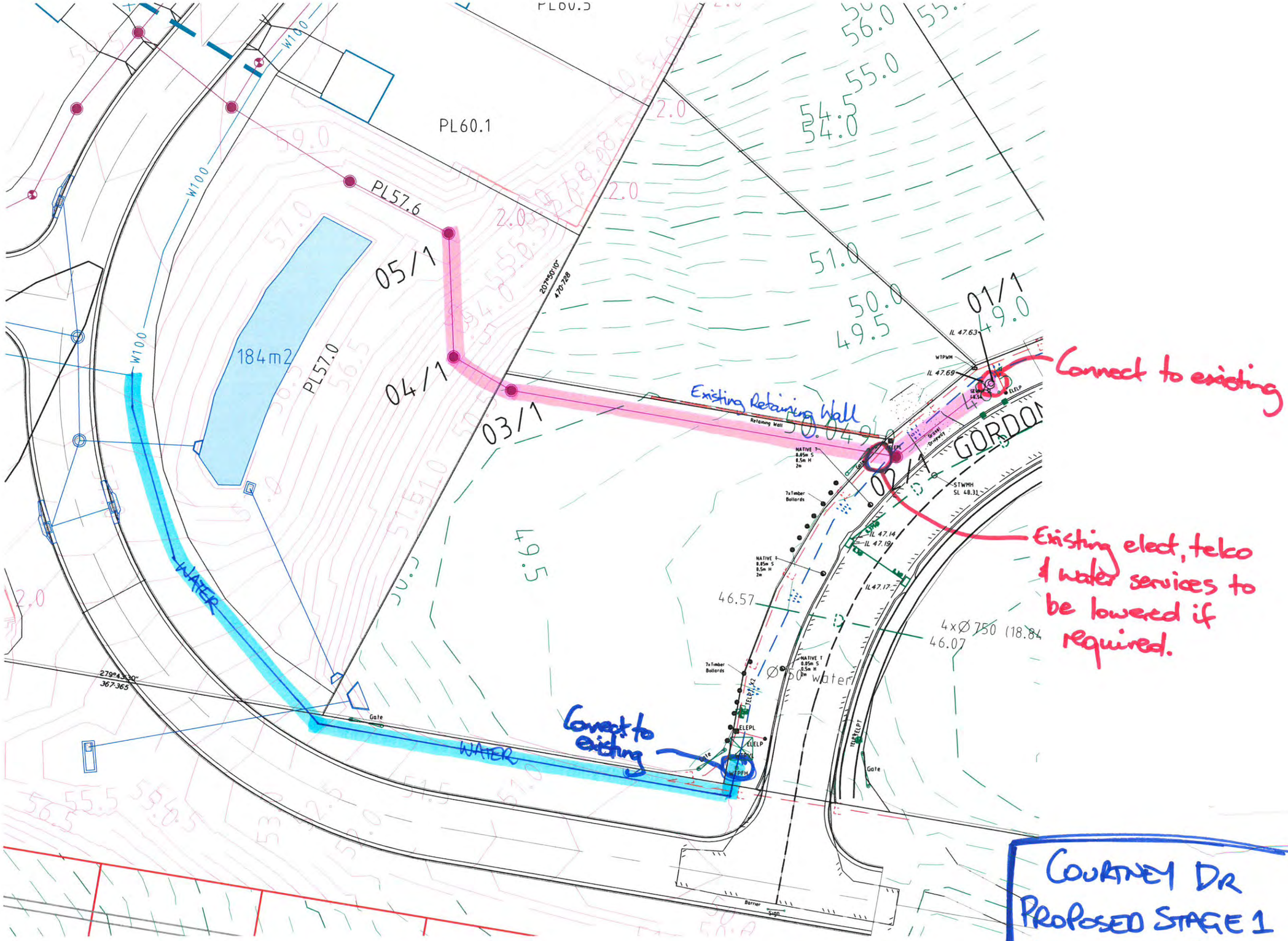
- MM discussed proposed servicing of Stage 1 via existing sewer in Gordon Dr and for Stage 2 via existing sewer in Mackellar Drive. Stage 3 to trigger external works to the north of the site with specific connection location to be confirmed via modelling.
- Similar to the water, Council had no objections to servicing Stage 1 and Stage 2 of the development via the existing development to the east assuming capacity exists. Council's sewer modeller didn't think there would be a problem with capacity.
- MM noted a Sewer report prepared by H2One will be lodged in support of the application to Council confirming the works required to service the development.
- Mark noted there is no house on the lot the proposed sewer passes in front of yet (Lot 19 SP292346). Therefore the design needs to consider that this lot may dig out the verge to construct their driveway. Mortons to consider as part of future detailed design.
- Concrete encasement for the reduced depth is not Council's preferred treatment. Council suggested DICL may be a better alternative. Mortons to consider as part of future detailed design.

Post meeting note – I drove past the lot and took a few photos (see attached). You can see that the lot in question is above the road and very unlikely to require digging out to access the site. You can see the sewer manhole we would connect to next to the light pole in the photos.

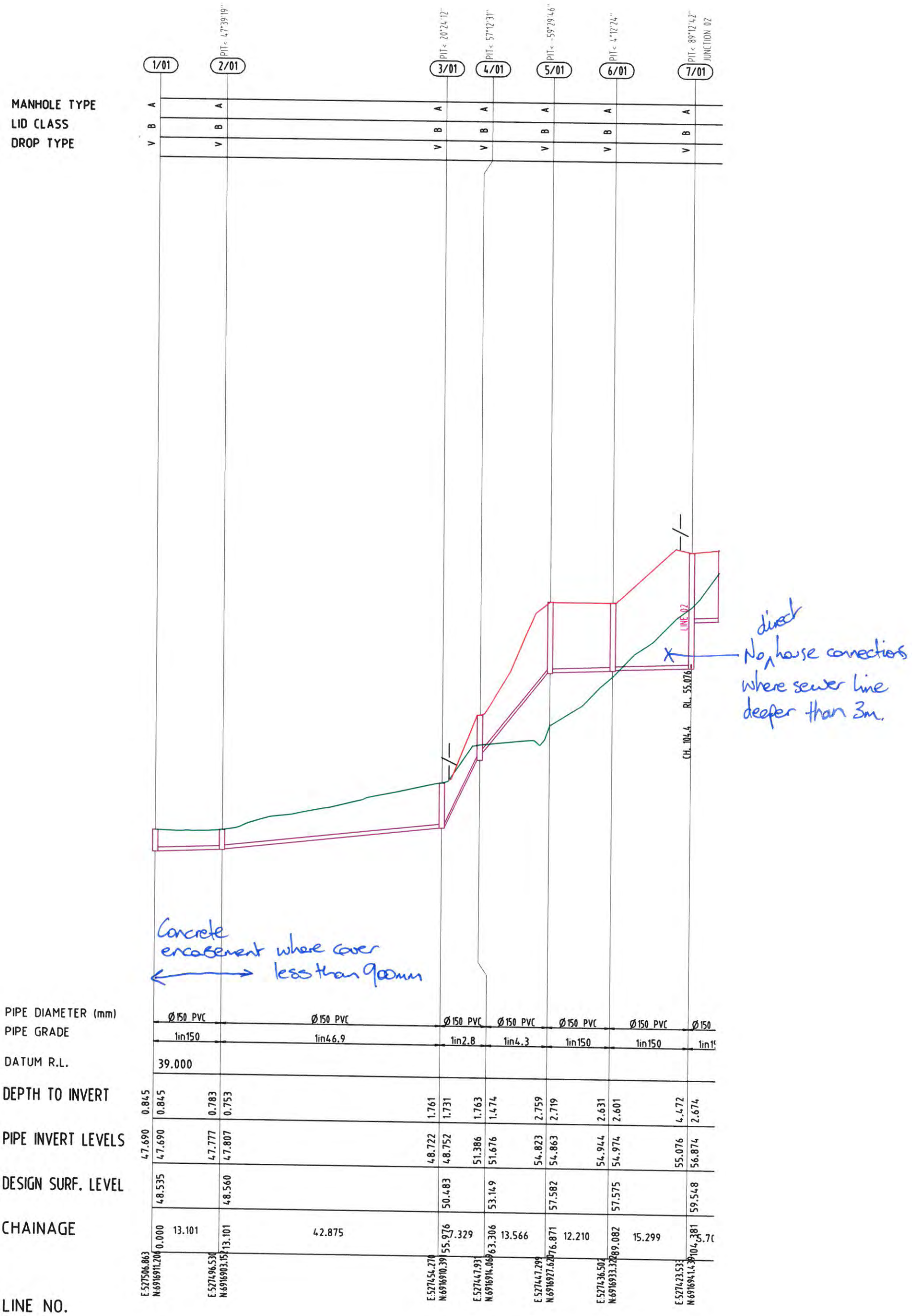
Thanks again and please give me a call if you have any comments on the above.

Regards Matt





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F:\Autocad Client\360 - Gallery Homes\01 - Courtney Drive\Overall\12d_mga\X_SEWERPROF_1.dwg, 27/02/2019 8:14:26 AM, 1:2

SHEET 2/2

27/2/19





Matthew McLaren

From: KOCSMAR Antony <AKOCSMAR@goldcoast.qld.gov.au>
Sent: Thursday, 28 February 2019 5:08 PM
To: Matthew McLaren
Cc: John Harrison; 'Ashley Nankervis'
Subject: RE: Courtney Dr Entry - 79, 89, 91, 97, 99 Courtney Drive, Upper Coomera (Lots 188-192 on RP173728)

Hi Matt,

As discussed, verge widths in the MCU/ROL are conditioned by the subdivision engineer (Steve Mcbean) so it would not be appropriate for me to commit to outcomes that he may not agree with.

I have however, had a chat with Steve and agree that exploring a reduced verge would be a more preferable outcome to prevent the need for a retaining wall.

Issues to consider include:
- Despite being a cut batter we would prefer that appropriate clear zones are maintained i.e. usually 3m min.
- The 3m clearzone will steepen the batter on section B and we may consider a small retaining wall to flatten the batter to manageable grades i.e. flatter than 1/2.
- You would need to demonstrate that services can be contained within the set verge widths.

For more definitive advice an official prelodgement would need to be arranged with Steve, City Assets & myself.

Antony Kocsmar
Supervisor Operational Works
For the Chief Executive Officer

City Development

CITY OF **GOLDCOAST.**
Ph: 5582 8298
Fax: 5582 8248
PO Box 5042 Gold Coast Mail Centre Qld 9726

From: Matthew McLaren [mailto:mattmc@urbansolutions.net.au]
Sent: Thursday, 28 February 2019 10:57 AM
To: KOCSMAR Antony
Cc: John Harrison; Ashley Nankervis
Subject: Courtney Dr Entry - 79, 89, 91, 97, 99 Courtney Drive, Upper Coomera (Lots 188-192 on RP173728)

Hi Antony

I left you a message earlier to discuss.

Our Client was hoping to meet and discuss a potential entry road arrangement for their proposed development on Courtney Drive. The Stage 1 entry road adjoins Stockland's Highland Reserve and their recently approved OPW impacts on access into this development. Please see attached location plan of the subject site for your information.

As some background, the subject area is located in the Upper Coomera Investigation Area as identified by City of Gold Coast as an area that may be appropriate to be converted from rural to urban purposes (subject to undertaking relevant studies) to assist in the provision of the City's urban land supply and cater to the city's future population growth. No application has been lodged as yet but when it is, its likely it will be a combined MCU/ROL to create approximately 240 lots subject to detailed investigations.

The Developer has engaged us to investigate entry road options into their proposed development via the existing road reserve in the south-east corner of their site. Stockland's Highland Reserve design impacts on access via this existing road reserve (they have designed this area as a narrow fire trail) and based on our investigations, results in retaining walls within road reserve to allow the construction of a entry road to our Client's site. We've attached a plan and sections for your review but it would be much easier to discuss in a meeting.

We were hoping to meet to discuss as soon as possible as the Developer is waiting on this advice to continue with their detailed planning.

Given the size of the attachments – please confirm receipt.

Thanks Matt

Regards

Matt McLaren
Senior Engineer & Project Coordinator
mobile: 0438 758 721
email: mattmc@urbansolutions.net.au

MORTONS urbansolutions

GOLD COAST
Level 2/19 Short Street
(PO Box 2484)
Southport Q 4215

tel: 07 5571 1099
email: mortons@urbansolutions.net.au

PERTH
Unit 4/100 Railway Road
Subiaco WA 6008

tel: 08 9380 9700

SUNSHINE COAST
6 Osterley Avenue
Caloundra Q 4551

tel: 07 5499 7000
fax: 07 5499 7712
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APPENDIX C

Preliminary Earthworks Drawings

(Drawing No.: 36001-PE-000 to 460, Issued 16th December 2021)
Prepared by Mortons-Urban Solutions

DATA TRANSMITTAL

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
ABN: 39 116 375 065 Tel: (07) 55711099

PROJECT NAME: COURTNEY DRIVE, UPPER COOMERA
JOB NO: 36001-PE

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MONTH	09	04	10	11	12									
YEAR	18	19	19	20	21									

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FILE NO.	DESCRIPTION	AMENDMENT												
	GENERAL													
36001-PE-000	COVER SHEET	A	B	C	D	E								
	EARTHWORKS: EXISTING FEATURES & DEMOLITION													
36001-PE-020	PLAN SHEET 01	A	B	C	C	D								
36001-PE-021	PLAN SHEET 02	A	B	C	C	D								
	EARTHWORKS: BULK EARTHWORKS CUT FILL													
36001-PE-040	PLAN SHEET 01	A	B	C	D	E								
36001-PE-041	PLAN SHEET 02	A	B	C	D	E								
36001-PE-042	PLAN SHEET 03	A	B	C	D	E								
36001-PE-043	PLAN SHEET 04	A	B	C	D	E								
36001-PE-044	PLAN SHEET 05	A	B	C	D	E								
36001-PE-045	PLAN SHEET 06	A	B	C	D	E								
	EARTHWORKS: BULK EARTHWORK SECTIONS													
36001-PE-050	SECTIONS KEY PLAN	A	B	C	D	E								
36001-PE-051	SECTIONS-SHEET 01	A	B	C	D	D								
36001-PE-052	SECTIONS-SHEET 02	A	A	B	C	C								
36001-PE-053	SECTIONS-SHEET 03	A	A	B	C	C								
36001-PE-054	SECTIONS-SHEET 04	A	B	C	D	D								
36001-PE-055	SECTIONS-SHEET 05	A	A	B	C	C								
	EARTHWORKS: FINAL SURFACE & SEDIMENT AND EROSION CONTRO													
36001-PE-070	PLAN SHEET 01	A	B	C	D	E								
36001-PE-071	PLAN SHEET 02	A	B	C	D	E								
36001-PE-072	PLAN SHEET 03	A	B	C	D	E								
36001-PE-073	PLAN SHEET 04	A	B	C	D	E								
36001-PE-074	PLAN SHEET 05	A	B	C	D	E								
36001-PE-075	PLAN SHEET 06	A	B	C	D	E								
	RETAINING WALL & DETAIL GRADING													
36001-PE-450	PLAN-SHEET 01	A	B	C	D	D								
36001-PE-451	PLAN-SHEET 02	A	B	C	D	D								
36001-PE-452	PLAN-SHEET 03	A	B	C	D	D								
36001-PE-453	PLAN-SHEET 04	A	B	C	D	D								
36001-PE-454	PLAN-SHEET 05	A	B	C	D	D								
36001-PE-455	PLAN-SHEET 06	A	B	C	D	D								
36001-PE-460	DETAILS SHEET 01	A	A	A	B	B								

TYPE: **C** - CIVILCAD **A** - AUTOCAD **P** - PLOT **H** - PHOTOCOPY OF APPROVED DWG **D** - Pdfs	D	D	D	D	D									
REASON: **Z** - COUNCIL **R** - REVISION **A** - APPROVAL **C** - CONSTRUCTION **S** - AS REQUESTED **T** - TENDER **P** - PRELIMINARY **X** - INFORMATION	ZA	ZA	A	A	A									

PLEASE CHECK THAT YOU HAVE RECEIVED ALL DOCUMENTS AS LISTED ABOVE.

I hereby acknowledge receipt of the documents as detailed above.
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Company: _____

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COURTNEY DR, UPPER COOMERA

PRELIMINARY EARTHWORKS

OVERALL

No. 36001-PE

SCHEDULE OF DRAWINGS

NUMBER	REV. NO.	TITLE
GENERAL		
36001-PE-000	E	COVER SHEET
EARTHWORKS: EXISTING FEATURES & DEMOLITION		
36001-PE-020	D	PLAN SHEET 01
36001-PE-021	D	PLAN SHEET 02
EARTHWORKS: BULK EARTHWORKS CUT FILL		
36001-PE-040	E	PLAN SHEET 01
36001-PE-041	E	PLAN SHEET 02
36001-PE-042	E	PLAN SHEET 03
36001-PE-043	E	PLAN SHEET 04
36001-PE-044	E	PLAN SHEET 05
36001-PE-045	E	PLAN SHEET 06
EARTHWORKS: BULK EARTHWORK SECTIONS		
36001-PE-050	E	SECTIONS KEY PLAN
36001-PE-051	D	SECTIONS-SHEET 01
36001-PE-052	C	SECTIONS-SHEET 02
36001-PE-053	C	SECTIONS-SHEET 03
36001-PE-054	D	SECTIONS-SHEET 04
36001-PE-055	C	SECTIONS-SHEET 05
EARTHWORKS: FINAL SURFACE & SEDIMENT AND EROSION CONTROL		
36001-PE-070	E	PLAN SHEET 01
36001-PE-071	E	PLAN SHEET 02
36001-PE-072	E	PLAN SHEET 03
36001-PE-073	E	PLAN SHEET 04
36001-PE-074	E	PLAN SHEET 05
36001-PE-075	E	PLAN SHEET 06
RETAINING WALL & DETAIL GRADING		
36001-PE-450	D	PLAN-SHEET 01
36001-PE-451	D	PLAN-SHEET 02
36001-PE-452	D	PLAN-SHEET 03
36001-PE-453	D	PLAN-SHEET 04
36001-PE-454	D	PLAN-SHEET 05
36001-PE-455	D	PLAN-SHEET 06
36001-PE-460	B	DETAILS SHEET 01

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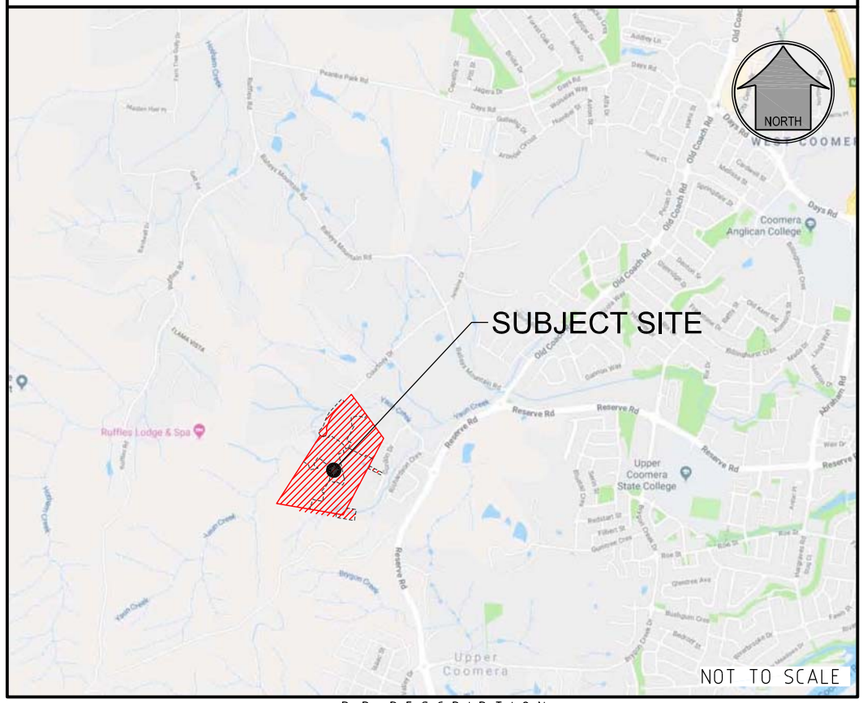
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THE ART OF LIVING

SUB-CONSULTANTS

BIOME
WATER AND ENVIRONMENTAL CONSULTING

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Planning Group

LOCALITY PLAN



R.P. DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

DRAWING NUMBER 36001-PE-000 | AMEND. E

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GENERAL

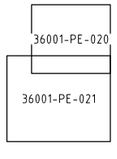
1. EXISTING SERVICES - External Works
   THE LOCATIONS OF ALL EXISTING SERVICES WITHIN THE WORK AREA SHALL BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION COMMENCING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE RELEVANT AUTHORITIES AND TO ENSURE THAT THE EXISTING SERVICES ARE NOT DAMAGED OR DISTURBED IN ANY WAY.
2. EXISTING STRUCTURES -
   ALL EXISTING STRUCTURES AND ASSOCIATED INFRASTRUCTURE TO BE REMOVED AND DISPOSED OF OFF SITE.
3. EXISTING DAMS -
   EXISTING DAMS TO BE DEWATERED. ALL SILT AND DEBRIS ARE TO BE REMOVED AND AND LAWFULLY DISPOSED OF. REPLACEMENT FILL IS TO BE LOCATED AND COMPACTED IN ACCORDANCE WITH LOCAL COUNCIL'S SPECIFICATIONS.

NOTE:
CONTRACTOR TO MAKE ALL NECESSARY ALLOWANCES FOR EXISTING SERVICES DURING BULK EARTHWORKS EXCAVATION.

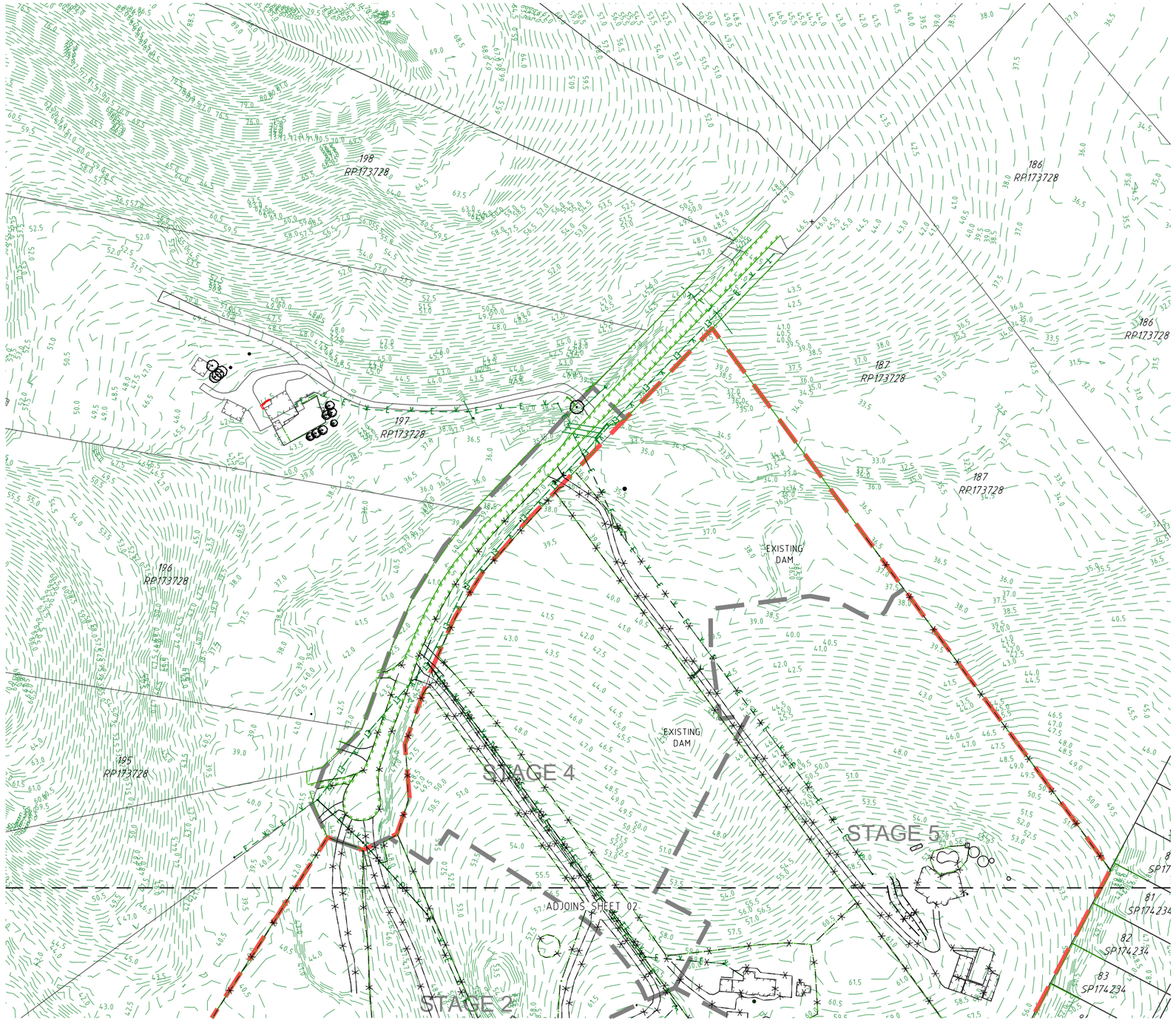
LEGEND

- EXISTING PROPERTY LINE
- EXISTING FENCE
- EXISTING KERB
- EXISTING EDGE OF BITUMEN
- CONTROL LINE / CENTER OF ROAD
- EXISTING FOOTPATH
- EXISTING EDGE OF VEGETATION
- RM RM EXISTING RISING MAIN
- S S EXISTING SEWER
- SW SW EXISTING STORMWATER
- W W EXISTING WATER
- G G EXISTING GAS
- E E EXISTING UNDERGROUND ELECTRICITY
- E E EXISTING OVERHEAD ELECTRICITY
- T T EXISTING TELSTRA
- C C EXISTING COMMUNICATIONS
- 1.0 EXISTING CONTOURS MAJOR
- 1.5 EXISTING CONTOURS MINOR
- RM RM DEMOLISH RISING MAIN
- S S DEMOLISH SEWER
- SW SW DEMOLISH STORMWATER
- W W DEMOLISH WATER
- G G DEMOLISH GAS
- E E DEMOLISH UNDERGROUND ELECTRICITY
- E E DEMOLISH OVERHEAD ELECTRICITY
- T T DEMOLISH TELSTRA
- C C DEMOLISH COMMUNICATIONS
- SITE BOUNDARY
- STAGE BOUNDARY
- TREE PROTECTION FENCE
- TREES TO BE RETAINED
- TREES TO BE REMOVED

SHEET LAYOUT



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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY EARTHWORKS

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 10 20 30 40 50m
Scale 1:1000 - A1 (1:2000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

D	16-12-21	STAGE BDY & TXT AMENDED
C	24-10-19	EXISTING DAMS LABELLED
B	27-03-19	EXISTING FEATURES & STAGES AMENDED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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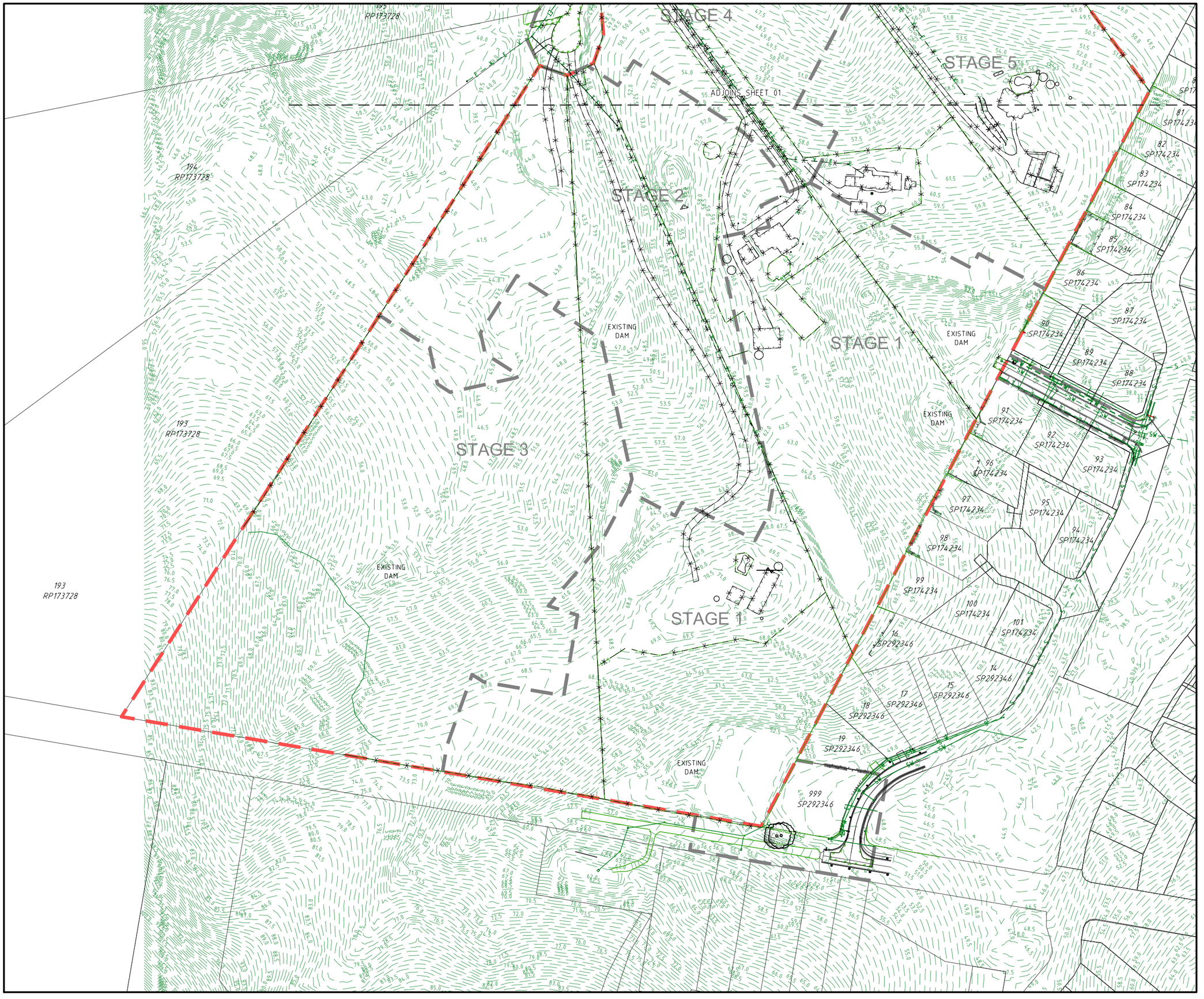
EXISTING FEATURES AND DEMOLITION PLAN SHEET 01

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088
Postal Address
PO Box 2484
Southport QLD 4215
Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

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APPROVED		RPEQ	DATE 09-08-18

DRAWING NUMBER 36001-PE-020 | AMEND. D

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY EARTHWORKS

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

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THE ART OF LIVING

NORTH

0 10 20 30 40 50m
Scale 1:1000 - A1 (1:2000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

PRE	DATE	AMENDMENT
D	16-12-21	STAGE BDY & TXT AMENDED
C	24-10-19	EXISTING DAMS LABELLED
B	27-03-19	EXISTING FEATURES & STAGES AMENDED
A	11-09-18	COUNCIL ISSUE

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EXISTING FEATURES AND DEMOLITION PLAN SHEET 02

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065

Postal Address
PO Box 2484
Southport QLD 4215

mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

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36001-PE-021	D

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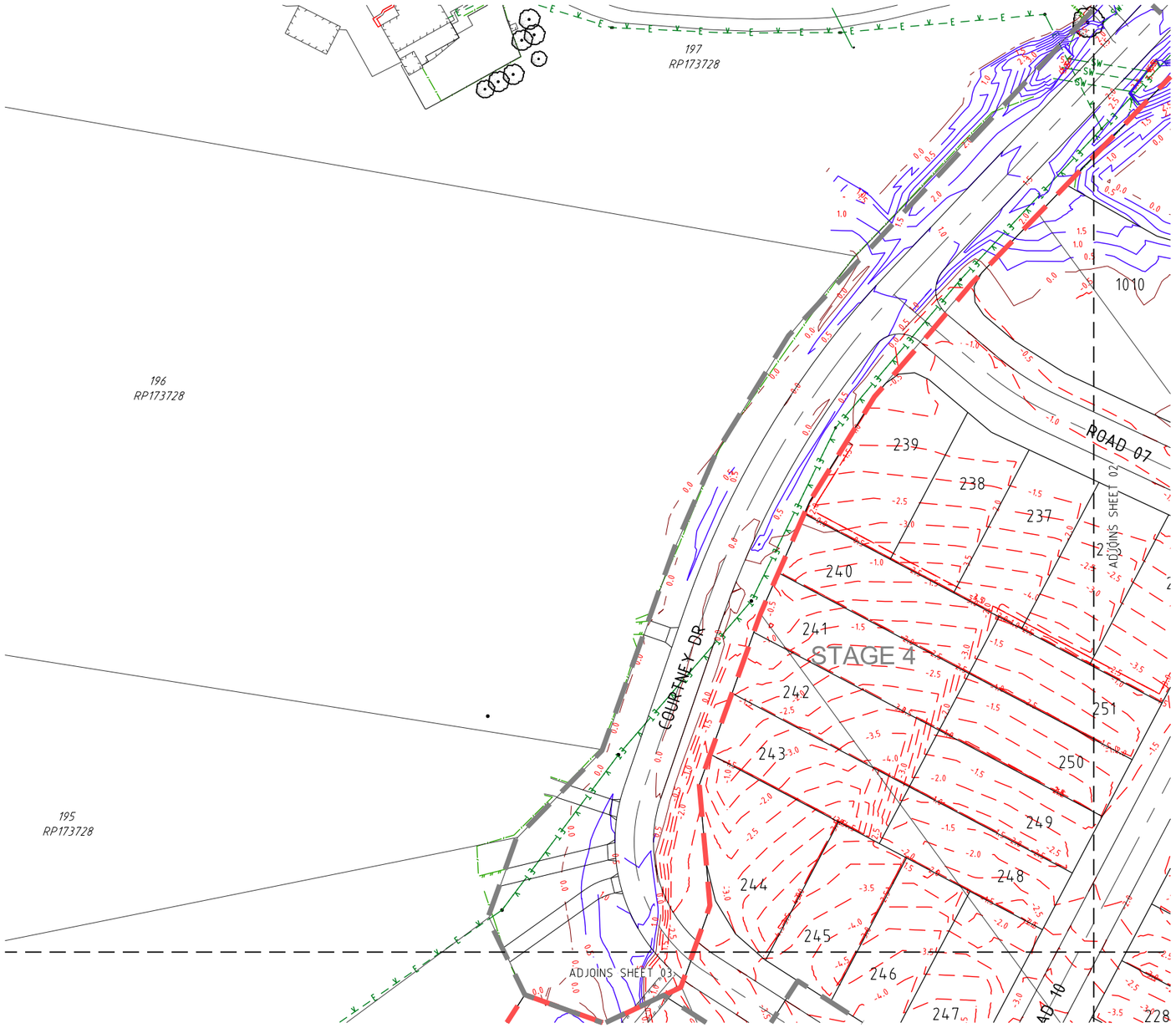
EARTHWORKS

1. TOPSOIL STRIPPING
   TOPSOIL SHALL BE STRIPPED ACROSS THE ENTIRE LIMIT OF THE EARTHWORKS CUT AND FILL AREAS AND SHALL BE STOCKPILED IN A LOCATION APPROVED BY THE SUPERINTENDENT. THE EXISTING STRATA IS TO BE TREATED IN ACCORDANCE WITH THE SPECIFICATION PRIOR TO PLACING ANY FILL.
2. EARTHWORKS LEVELS
   EARTHWORKS LEVELS SHOWN ON DRAWINGS ARE TO FINISHED SURFACE LEVELS AND INCLUDE 100mm OF TOPSOIL.
3. COMPACTION STANDARD
   SITE FILLING AND TRENCH BACKFILL SHALL BE COMPACTED TO THE STANDARDS OUTLINED IN THE LOCAL AUTHORITY'S SPECIFICATIONS.
4. PAVEMENT DEPTHS
   THE DESIGN PAVEMENT DEPTHS ALLOWED IN EARTHWORKS CALCULATIONS ARE BASED ON THE DEPTHS SHOWN IN THE SCHEDULE OF PAVEMENT DEPTHS. THE PAVEMENT DEPTHS GIVEN ARE DESIGN DEPTHS ONLY AND MAY BE VARIED AFTER SUB GRADE TESTS ARE TAKEN AND AUTHORITY APPROVAL.
5. TESTING AND CERTIFICATION
   ALL COMPACTION TESTING SHALL BE CARRIED OUT BY AN APPROVED N.A.T.A. TESTING AUTHORITY. ALL SITE FILLING SHALL BE TESTED AT LEVEL 1 REQUIREMENTS. THE CONTRACTOR IS TO PROVIDE ALL REQUIRED EARTHWORKS CERTIFICATIONS IN ACCORDANCE WITH THE APPROVAL CONDITIONS.
6. TOPSOIL REPLACEMENT
   ALL FOOTPATHS, BATTERS AND ALLOTMENT CUT & FILL AREAS SHALL BE TOPSOILED WITH TOPSOIL FROM ONSITE STOCKPILES.
7. GRASSING
   ALL CUT/FILL AREAS, DISTURBED AREAS AND TRENCHED AREAS SHALL BE GRASSED TO THE SATISFACTION OF THE SUPERINTENDENT AND AUTHORITY.
8. ROCK
   THE CONTRACTOR IS TO INCLUDE ROCK EXCAVATION AS PART OF THEIR EARTHWORKS RATE.
9. EARTHWORKS ZONE
   THE FOLLOWING ACTIVITIES ARE PROHIBITED OUTSIDE THE EARTHWORKS ZONE - STORAGE AND MIXING OF MATERIALS, VEHICLE PARKING, LIQUID DISPOSAL, MACHINERY REPAIRS/REFUELING, PLACEMENT OF SITE OFFICES OR SHEDS, COMBUSTION OF ANY MATERIAL, STOCKPILING OF SOIL, RUBBLE OR DEBRIS, ANY FILLING OR EXCAVATION INCLUDING TRENCHES, TOPSOIL, SKIMMING AND/OR SURFACE EXCAVATION UNLESS OTHERWISE APPROVED BY THE RELEVANT AUTHORITY.
10. CONSTRUCTION - STOCKPILING
    TEMPORARY SILT FENCE TO BE ERECTED 5m FROM TOE OF BATTER ON LOW SIDE OF STOCKPILING. STOCKPILE SITE TO BE CLEAR OF ADJACENT PROPERTY BOUNDARIES SO AS NOT TO CAUSE A NUISANCE TO ADJOINING PROPERTIES. NO STOCKPILES ARE TO BE LOCATED WITHIN THE TREE PROTECTION ZONE, REFER VEGETATION MANAGEMENT PLAN FOR MORE DETAILS. THE CONTRACTOR SHALL NOT CREATE STOCKPILES OF SURPLUS MATERIALS UNLESS DIRECTED BY THE SUPERINTENDENT. ALL MATERIALS ARISING FROM THE WORKS SHALL BE COMPACTED TO FUTURE FILL AREAS AS NOMINATED.
11. TOPSOIL SCREENING
    TOPSOIL SHALL BE SCREENED BY THE CONTRACTOR WHEN DIRECTED BY THE SUPERINTENDENT. ALL UNSUITABLE MATERIAL SCREENED FROM THE TOPSOIL WILL BE TAKEN TO AN OFFSITE TIP BY THE CONTRACTOR AT THE CONTRACTORS EXPENSE.

NOTE:
CONTRACTOR TO MAKE ALL NECESSARY ALLOWANCES FOR EXISTING SERVICES DURING ALL WORKS.

LEGEND

- EXISTING PROPERTY LINE
- EXISTING KERB (INVERT)
- FUTURE KERB (INVERT)
- FUTURE PROPERTY LINE
- SITE BOUNDARY
- STAGE BOUNDARY
- PROPOSED PROPERTY LINE
- PROPOSED KERB (INVERT)
- 0.5 BULK EARTHWORKS FILL CONTOUR
- 0.0 BULK EARTHWORKS INTERFACE CONTOUR
- -0.5 BULK EARTHWORKS CUT CONTOUR



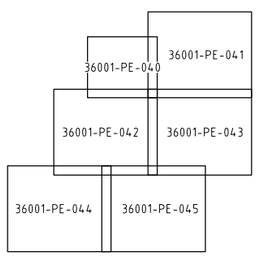
STRUCTURAL EARTHWORKS VOLUMES

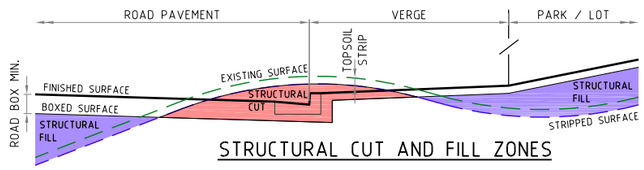
CUT	-294.886m³
FILL	256.035m³

NOTES:
1. EARTHWORKS VOLUMES ARE APPROXIMATE ONLY, CONTRACTOR TO VERIFY.
2. VOLUMES INDICATE THE STRUCTURAL QUANTITY OF EARTHWORKS, IE BETWEEN THE EXISTING SURFACE STRIP SURFACE AND THE UNDERSIDE OF THE MINIMUM BOX AND UNDERSIDE OF THE TOPSOIL, AS PRESCRIBED IN THE CONTRACT DOCUMENTATION.
3. NO ALLOWANCE FOR COMPACTION OR BULKING FACTOR IS INCLUDED.
4. THE CONTRACTOR IS TO VERIFY EXISTING SURFACE AND TOPSOIL DISTRIBUTION PRIOR TO SIGNING THE CONTRACT.
5. THE CONTRACTOR IS REQUIRED TO EXPORT / IMPORT AS NEEDED TO ACHIEVE THE FINAL SURFACE LEVELS.

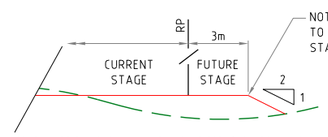
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STRUCTURAL CUT AND FILL ZONES



NOTE: EARTHWORKS TO BE UNDERTAKEN TO DESIGN LEVEL 3m MINIMUM BEYOND STAGE BOUNDARY

TEMPORARY BATTER BEYOND STAGE WORKS

PROJECT NAME
COURTNEY DR UPPER COOMERA

PRELIMINARY EARTHWORKS

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT
GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

PRE	DATE	AMENDMENT
E	16-12-21	STAGE BDY & TXT AMENDED
D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT, CONTOURS & VOLUMES REVISED
B	27-03-19	LOT NO'S & STAGES AMENDED
A	11-09-18	COUNCIL ISSUE

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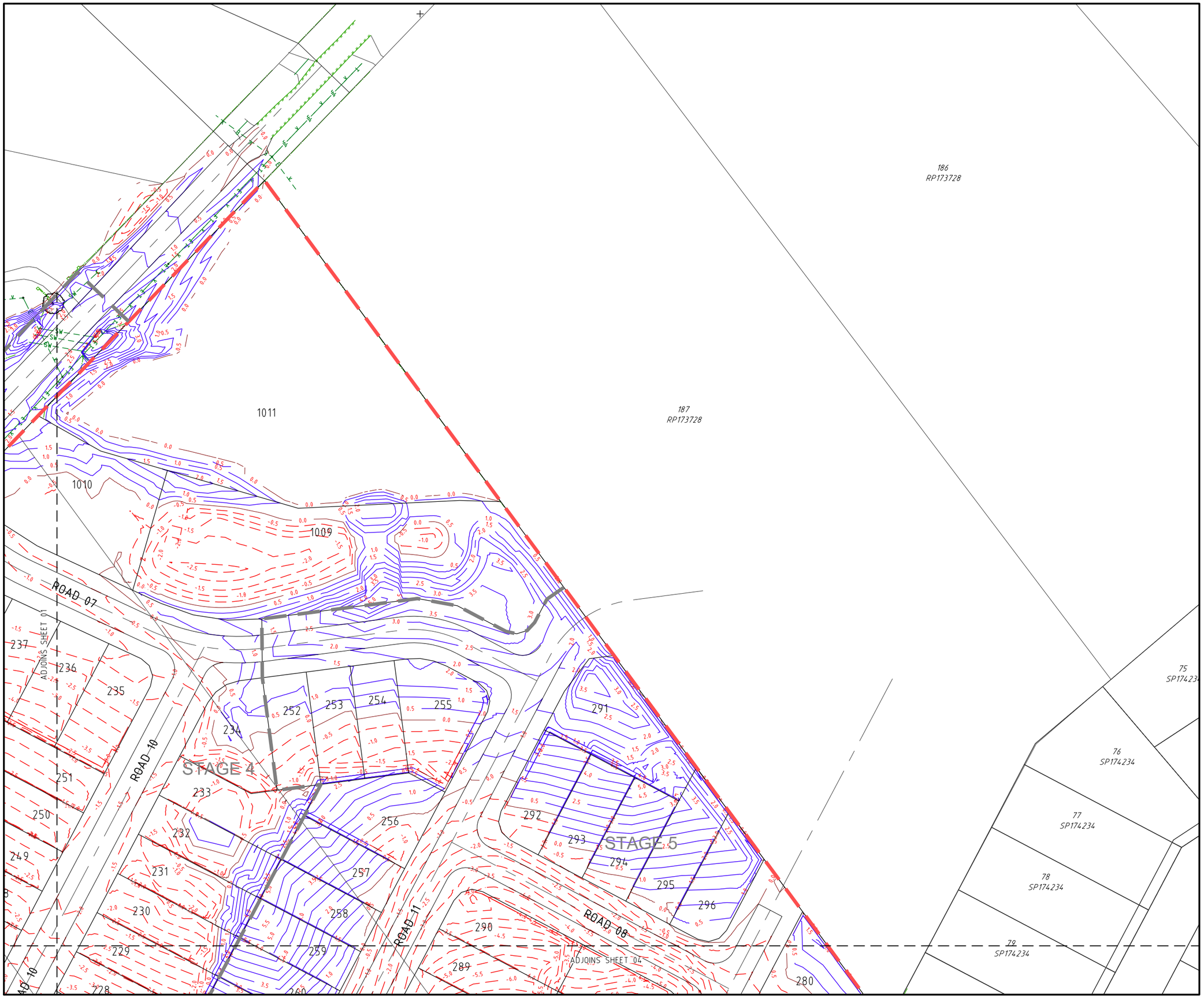
DRAWING TITLE
EARTHWORKS
CUT TO FILL
PLAN
SHEET 01

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Urban & Regional Planning
Civil Engineering
Project Coordination
MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088
Postal Address
PO Box 2484
Southport QLD 4215
Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

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APPROVED		RPEQ	DATE 09-08-18

DRAWING NUMBER 36001-PE-040
AMEND. E

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY EARTHWORKS

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
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LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

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ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

E	16-12-21	STAGE BDY & TXT AMENDED
D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT & CONTOURS REVISED
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DRAWING TITLE

EARTHWORKS
CUT TO FILL
PLAN
SHEET 02

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Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

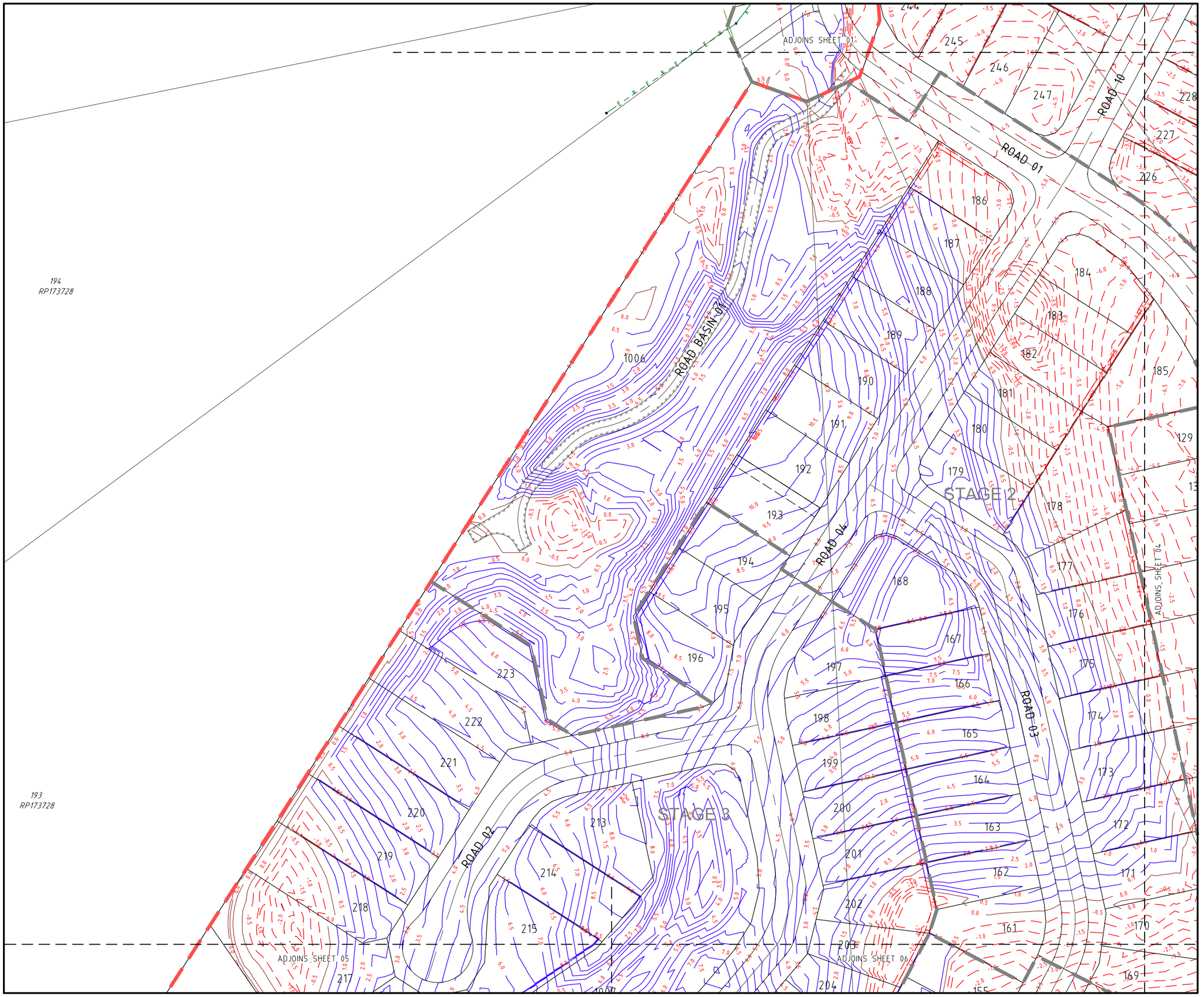
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Southport QLD 4215

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Suite 9, 19 Short St
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DESIGNED	RB	DRAWN	EP
APPROVED		RPEQ	DATE 09-08-18

DRAWING NUMBER 36001-PE-041 | AMEND. E

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY EARTHWORKS

RP DESCRIPTION
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LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

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NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

PRE	DATE	AMENDMENT
E	16-12-21	STAGE BDY & TXT AMENDED
D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT & CONTOURS REVISED
A	27-03-19	LOTS, LOT NO'S & STAGES AMENDED
A	11-09-18	COUNCIL ISSUE

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BIOME WATER AND ENVIRONMENTAL CONSULTING

zone Planning Group

DRAWING TITLE

EARTHWORKS
CUT TO FILL
PLAN
SHEET 03

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

Postal Address
PO Box 2484
Southport QLD 4215

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

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APPROVED		RPEQ	DATE 09-08-18

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ADJOINS SHEET 02

ADJOINS SHEET 03

ADJOINS SHEET 06

ROAD 10

ROAD 11

ROAD 09

ROAD 06

ROAD 01

STAGE 4

STAGE 5

STAGE 1

MACKELLAR DR

GORDON DR

72 SP174234

80 SP174234

81 SP174234

82 SP174234

83 SP174234

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87 SP174234

88 SP174234

89 SP174234

90 SP174234

91 SP174234

92 SP174234

93 SP174234

95 SP174234

96 SP174234

97 SP174234

PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY EARTHWORKS

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

PRE	DATE	AMENDMENT
E	16-12-21	STAGE BDY & TXT AMENDED
D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT & CONTORS REVISED
B	27-03-19	LOT NO'S & STAGES AMENDED
A	11-09-18	COUNCIL ISSUE

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DRAWING TITLE

EARTHWORKS
CUT TO FILL
PLAN
SHEET 04

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Civil Engineering
Project Coordination

MUS Pty Ltd T/As
Mortons-Urban Solutions
ABN: 39 116 375 065

mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

Postal Address
PO Box 2484
Southport QLD 4215

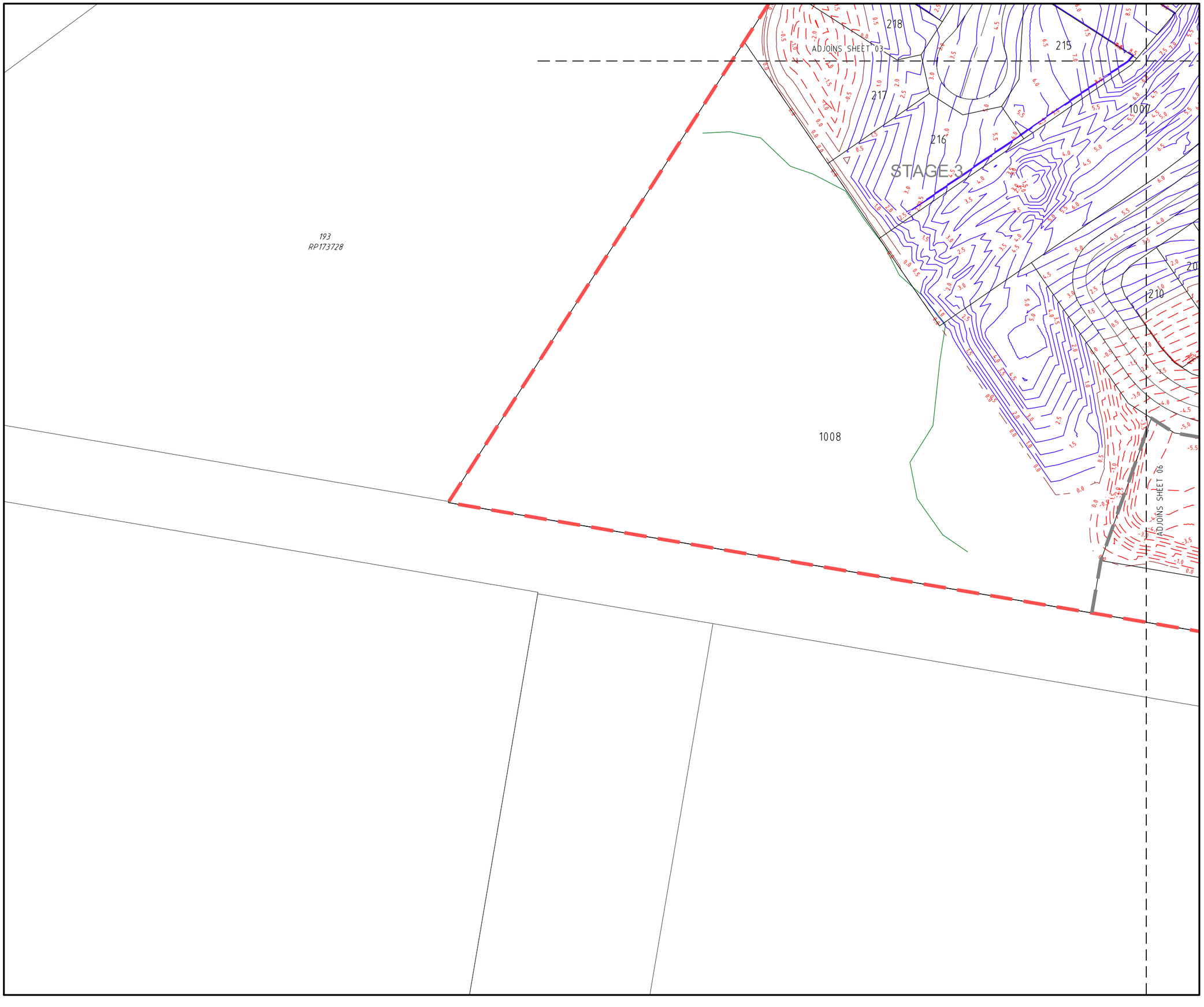
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DRAWING NUMBER 36001-PE-043

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY EARTHWORKS

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

PRE	DATE	AMENDMENT
E	16-12-21	STAGE BDY & TXT AMENDED
D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT & CONTOURS REVISED
B	27-03-19	LOTS, LOT NO'S & STAGES AMENDED
A	11-09-18	COUNCIL ISSUE

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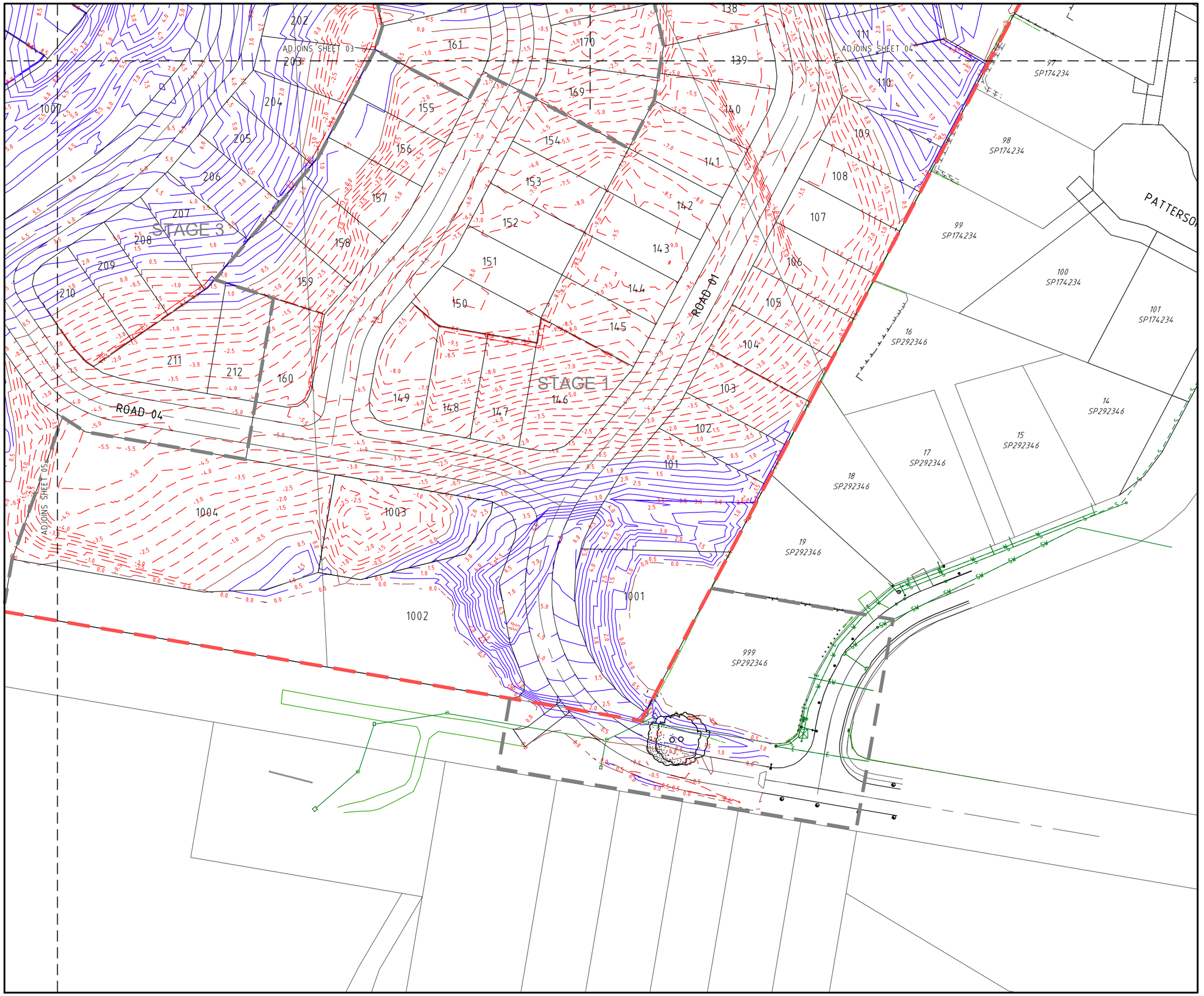
EARTHWORKS
CUT TO FILL
PLAN
SHEET 05

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088
Postal Address
PO Box 2484
Southport QLD 4215
Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

DESIGNED	RB	DRAWN	EP
APPROVED		RPEQ	DATE 09-08-18

DRAWING NUMBER 36001-PE-044
AMEND. E

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY EARTHWORKS

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

PRE	DATE	AMENDMENT
E	16-12-21	STAGE BDY & TXT AMENDED
D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT & CONTOURS REVISED
B	27-03-19	LOT NO'S, STAGES & CONTOURS AMENDED
A	11-09-18	COUNCIL ISSUE

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DRAWING TITLE

EARTHWORKS
CUT TO FILL
PLAN
SHEET 06

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MUS Pty Ltd T/As
Mortons-Urban Solutions
ABN 39 116 375 065

Postal Address
PO Box 2484
Southport QLD 4215

mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

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DRAWING NUMBER 36001-PE-045 | AMEND. E

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY EARTHWORKS

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 12.5 25 37.5 50 62.5m
Scale 1:1250 - A1 (1:2500 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

E	16-12-21	STAGE BDY & TXT AMENDED
D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT & CONTOURS REVISED
B	27-03-19	LOTS, LOT NO'S, STAGES, CONTOURS, SECTIONS AMENDED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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DRAWING TITLE

BULK EARTHWORKS
SECTIONS
KEY PLAN

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MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

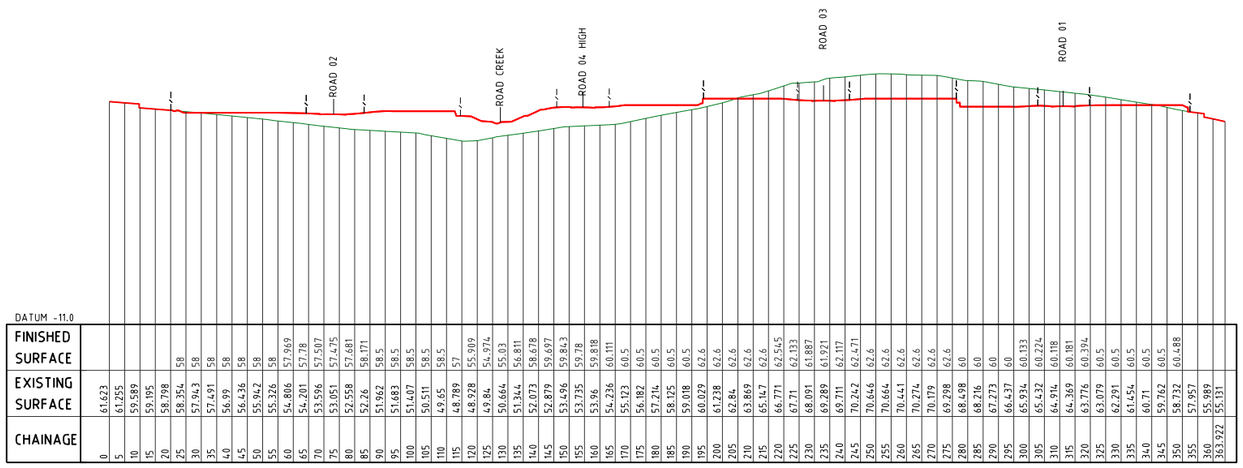
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APPROVED		RPEQ	DATE 09-08-18

DRAWING NUMBER 36001-PE-050 | AMEND. E

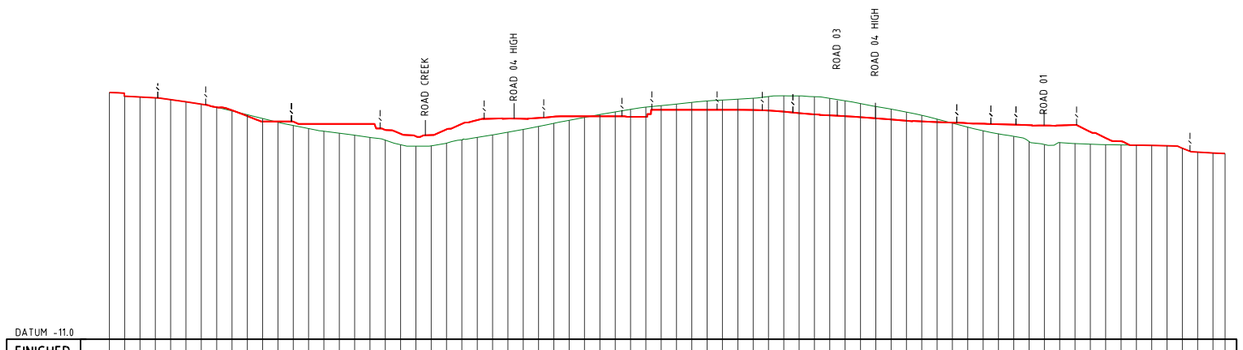
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DATUM -11.0

CHAINAGE	FINISHED SURFACE	EXISTING SURFACE
0		61.623
5		61.255
10		59.589
15		59.195
20		58.798
25	58	58.354
30	58	57.943
35	58	57.491
40	58	56.99
45	58	56.436
50	58	55.942
55	58	55.326
60	57.969	54.806
65	57.78	54.201
70	57.507	53.596
75	57.475	53.051
80	57.681	52.558
85	58.171	52.26
90	58.5	51.962
95	58.5	51.683
100	58.5	51.407
105	58.5	50.511
110	58.5	49.65
115	57	48.789
120	55.909	48.928
125	54.974	49.84
130	55.03	50.664
135	56.811	51.344
140	58.678	52.073
145	59.697	52.879
150	59.843	53.496
155	59.78	53.735
160	59.818	53.96
165	60.111	54.236
170	60.5	55.123
175	60.5	56.182
180	60.5	57.214
185	60.5	58.125
190	60.5	59.018
195	62.6	60.029
200	62.6	61.238
205	62.6	62.84
210	62.6	63.869
215	62.6	65.147
220	62.545	66.771
225	62.133	67.71
230	61.887	68.091
235	61.921	69.289
240	62.117	69.711
245	62.471	70.242
250	62.6	70.646
255	62.6	70.664
260	62.6	70.441
265	62.6	70.274
270	62.6	70.179
275	62.6	69.298
280	60	68.498
285	60	68.216
290	60	67.273
295	60	66.437
300	60.133	65.934
305	60.224	65.432
310	60.118	64.914
315	60.181	64.369
320	60.394	63.776
325	60.5	63.079
330	60.5	62.291
335	60.5	61.454
340	60.5	60.71
345	60.5	59.762
350	60.488	58.732
355		57.957
360		55.989
363.922		55.131

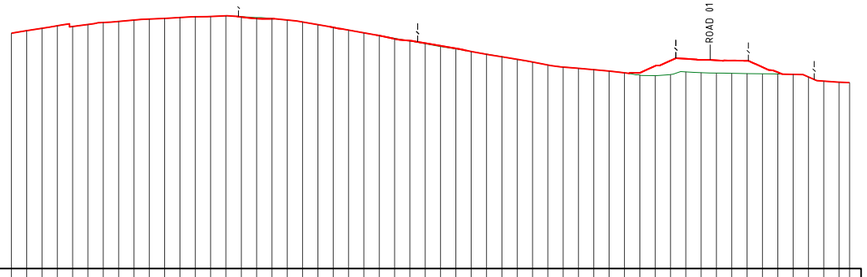
SECTION 3
SCALE 1:1000
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050



DATUM -11.0

CHAINAGE	FINISHED SURFACE	EXISTING SURFACE
0		69.422
5		68.218
10		67.956
15		67.7
20		67.099
25		66.388
30		65.636
35	64.624	64.695
40	63.642	63.429
45	61.753	62.198
50	60	60.957
55		59.716
60	59.93	58.663
65	59.2	57.664
70	59.2	56.801
75	59.2	56.163
80	59.2	55.512
85	59.2	54.794
90	57.222	53.926
95	55.964	52.411
100	55.154	51.927
105	55.548	52.033
110	57.439	52.913
115	59.227	54.002
120	60.422	54.816
125	60.91	55.627
130	60.916	56.456
135	60.867	57.382
140	61.133	58.399
145	61.535	59.416
150	61.7	60.383
155	61.7	61.32
160	61.7	62.256
165	61.7	63.102
170	61.5	63.947
175	61.5	64.674
180	63.8	65.149
185	63.8	65.654
190	63.8	66.225
195	63.8	66.678
200	63.8	66.989
205	63.8	67.277
210	63.742	67.58
215	63.549	68.122
220	63.223	68.351
225	62.69	68.337
230	62.346	68.077
235	61.967	67.527
240	61.724	66.73
245	61.396	65.835
250	61.057	64.878
255	60.63	64.038
260	60.215	63.032
265	60.022	62.024
270	59.793	60.741
275	59.604	59.42
280	59.405	58.165
285	59.268	56.98
290	59.095	56.003
295	58.94	55.139
300	58.776	53.446
305	58.699	52.472
310	58.708	53.144
315	58.843	52.816
320	56.591	52.579
325	54.584	52.445
330	53.524	52.318
335		52.241
340		52.169
345		52.054
350		51.259
355		50.002
360		49.69
363.922		49.529

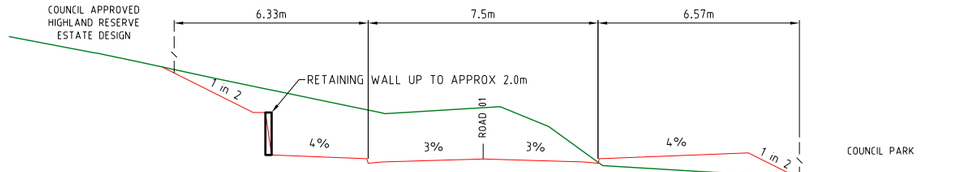
SECTION 2
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050



DATUM -11.0

CHAINAGE	FINISHED SURFACE	EXISTING SURFACE
0		65.75
5		66.582
10		67.345
15		68.177
20		67.952
25		68.616
30		69.242
35		69.59
40		70.028
45		70.358
50		70.585
55		70.879
60		71.123
65		71.19
70		71.419
75	71.043	71.153
80	70.54	70.854
85	70.454	70.533
90		70.038
95		69.396
100		68.535
105	67.63	67.675
110		66.775
115		65.876
120	64.965	65.012
125	63.92	64.116
130	63.303	63.218
135	62.501	62.315
140	61.642	61.408
145	60.784	60.604
150		59.772
155		58.936
160		58.09
165		57.184
170		56.321
175		55.371
180		54.685
185		54.29
190		53.87
195		53.373
200		52.841
205	52.81	52.091
210	55.071	51.922
215	56.818	52.283
220	57.406	53.14
225	57.054	52.878
230	56.907	52.748
235	56.843	52.664
240	56.742	52.582
245	54.69	52.527
250	53.004	52.438
255		52.327
260		51.486
265		50.125
270		49.769
273.439		49.656

SECTION 1
SCALE 1:1000
1:1000
050



SECTION 00
SCALE 1:100
1:100
050

PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY EARTHWORKS

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

0 10 20 30 40 50m
Scale 1:1000 - A1 (1:2000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

D	11-11-20	SECTIONS REVISED
C	24-10-19	SECTIONS REVISED
B	27-03-19	SECTION ADDED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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BIOME WATER AND ENVIRONMENTAL CONSULTING

zone Planning Group

DRAWING TITLE

BULK EARTHWORKS
SECTIONS
SHEET 01

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065

mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

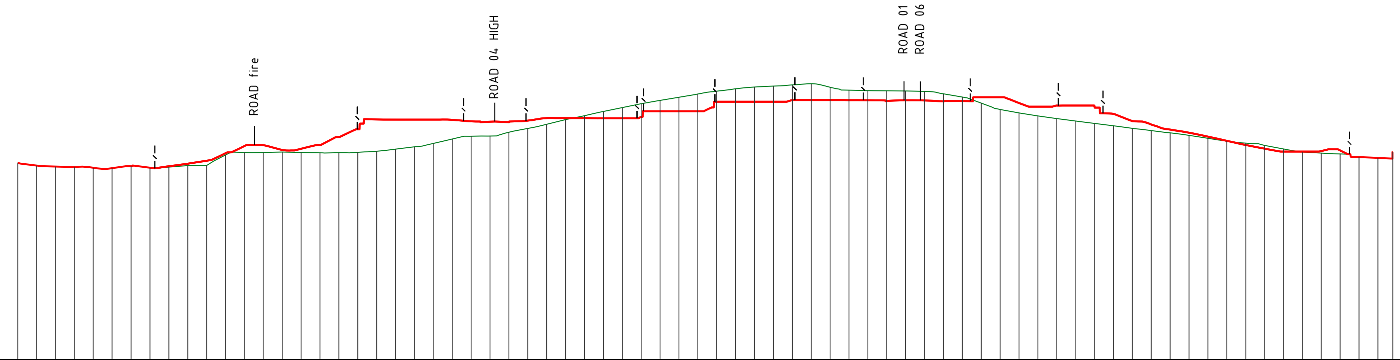
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Southport QLD 4215

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

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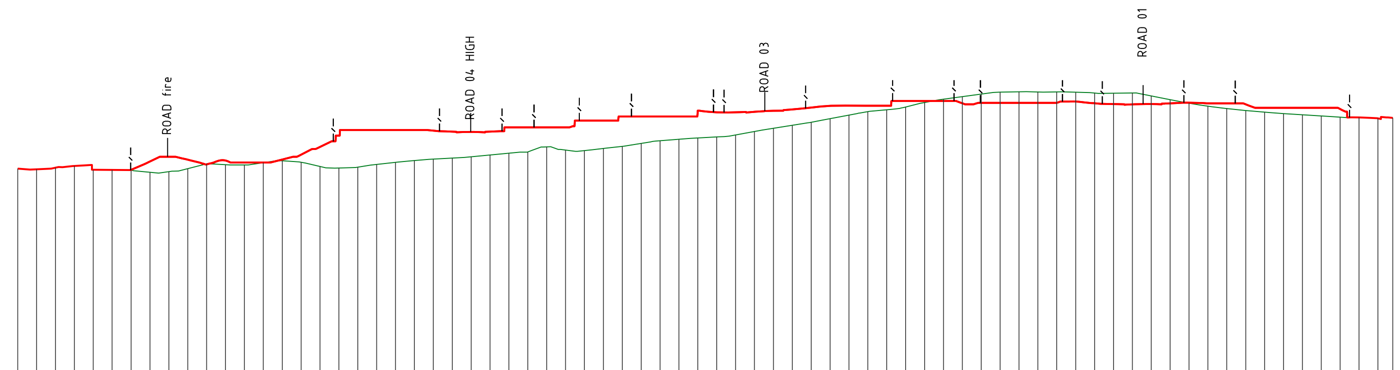
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DATUM -11.0

CHAINAGE	FINISHED SURFACE	EXISTING SURFACE
0		41.229
5		40.492
10		40.23
15		40.102
20		39.95
25		39.841
30		40.33
35		39.928
40	40.316	40.103
45	40.993	40.503
50	41.79	40.552
55	43.764	43.299
60	45.694	43.98
65	45.925	43.969
70	44.69	44.066
75	44.942	43.986
80	46	43.878
85	48.087	43.917
90	50.1	44.019
95	52.714	44.295
100	52.7	44.86
105	52.7	45.441
110	52.7	46.357
115	52.645	47.536
120	52.265	48.297
125	52.12	48.345
130	52.018	49.351
135	52.387	50.345
140	53.1	51.43
145	53.1	52.677
150	53.1	53.718
155	53	54.822
160	53	55.863
165	53.4	56.898
170	54.9	57.759
175	54.9	58.6
180	54.9	59.467
185	57.4	60.223
190	57.4	60.82
195	57.4	61.33
200	57.4	61.539
205	57.878	61.863
210	57.9	62.152
215	57.9	61.285
220	57.846	60.476
225	57.82	60.377
230	57.636	60.295
235	57.814	60.248
240	57.756	60.143
245	57.497	59.503
250	57.631	58.635
255	58.6	57.041
260	58.6	55.396
265	57.091	54.434
270	56.1	53.697
275	56.4	52.988
280	56.4	52.26
285	55.85	51.704
290	54.203	51.042
295	52.293	50.361
300	51.401	49.77
305	50.022	49.127
310	49.231	48.478
315	48.18	47.743
320	47.063	47.018
325	45.947	46.454
330	44.985	45.85
335	44.2	44.904
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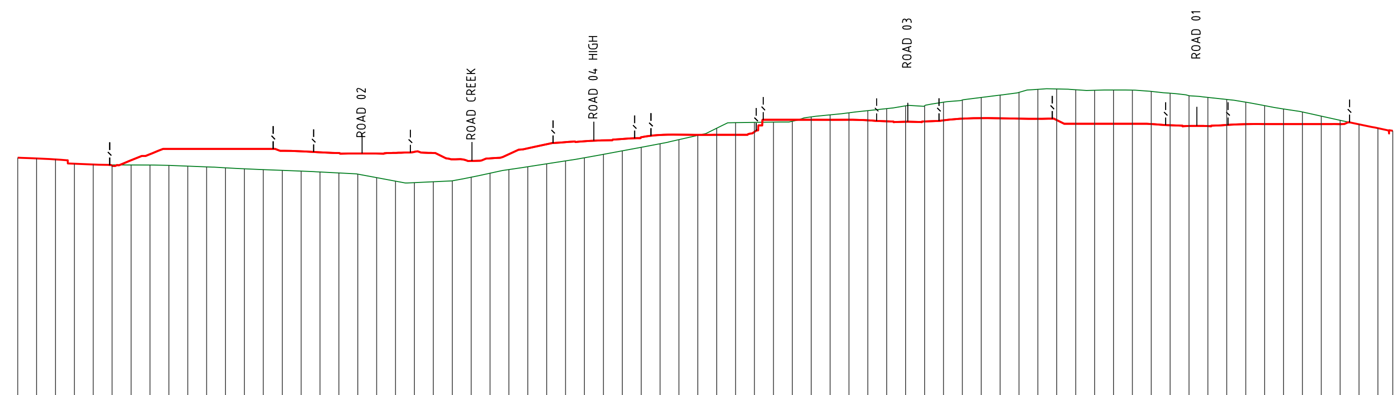
SECTION 6/050
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DATUM -11.0

CHAINAGE	FINISHED SURFACE	EXISTING SURFACE
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5		42.694
10		43.117
15		43.595
20		42.561
25		42.524
30	42.543	42.469
35	44.77	41.907
40	46	42.086
45	45.236	42.883
50	44.015	44.155
55	45.016	43.924
60	44.5	43.862
65	44.5	44.454
70	45.289	44.941
75	46.583	44.578
80	48.63	43.465
85	51.6	43.057
90	53.1	43.266
95	53.1	43.98
100	53.1	44.551
105	53.1	45.033
110	52.932	45.396
115	52.662	45.66
120	52.606	45.999
125	52.665	46.473
130	53.8	46.956
135	53.8	47.287
140	53.8	48.643
145	53.8	47.792
150	55.6	47.647
155	55.6	48.223
160	56.7	48.752
165	56.7	49.552
170	56.7	50.252
175	56.7	50.638
180	58.2	50.978
185	57.787	51.253
190	57.794	51.776
195	57.897	52.71
200	58.166	53.558
205	58.553	54.345
210	59.037	55.152
215	59.496	56.101
220	59.5	57.055
225	59.5	57.968
230	59.5	58.451
235	60.8	59.183
240	60.8	60.389
245	60.8	61.246
250	60.156	61.923
255	60.3	62.599
260	60.3	63.122
265	60.3	63.22
270	60.3	63.17
275	60.309	63.171
280	60.6	63.082
285	60.162	62.868
290	59.961	62.824
295	59.872	62.892
300	59.958	62.126
305	60.153	61.142
310	60.309	60.196
315	60.158	59.469
320	60.15	58.857
325	59.894	58.179
330	58.95	57.825
335	58.95	57.441
340	58.95	57.126
345	58.95	56.811
350	58.645	56.495
355		56.386
360		56.166
363.922		56.298

SECTION 5/050
SCALE: 1:1000
1:1000



DATUM -11.0

CHAINAGE	FINISHED SURFACE	EXISTING SURFACE
0		52.682
5		52.468
10		52.207
15		51.076
20		50.852
25	50.573	50.738
30	51.979	50.721
35	53.591	50.703
40	55	50.633
45	55	50.442
50	55	50.242
55	55	49.999
60	55	49.744
65	55	49.508
70	54.5	49.319
75	54.356	49.124
80	54.099	48.902
85	53.876	48.64
90	53.783	48.325
95	53.758	47.406
100	53.937	46.455
105	54.198	46.063
110	53.903	46.295
115	52.24	46.545
120	51.807	47.494
125	52.49	48.544
130	53.616	49.51
135	55.141	50.269
140	56.239	51.057
145	56.772	51.829
150	57.004	52.656
155	57.247	53.539
160	57.621	54.474
165	58.074	55.422
170	58.7	56.371
175	58.7	57.444
180	58.7	58.565
185	58.7	60.463
190	58.7	61.925
195	59.521	62.011
200	62.7	62.087
205	62.7	62.283
210	62.7	63.458
215	62.7	63.989
220	62.7	64.532
225	62.53	65.108
230	62.281	65.646
235	62.186	66.388
240	62.236	66.391
245	62.52	67.359
250	63	67.919
255	63	68.597
260	63	69.223
265	63	69.957
270	63	70.759
275	62.609	70.867
280	61.65	70.645
285	61.65	70.494
290	61.65	70.565
295	61.65	70.547
300	61.566	70.209
305	61.25	69.73
310	61.05	69.082
315	61.025	68.626
320	61.285	68.071
325	61.55	67.343
330	61.55	66.444
335	61.55	65.548
340	61.55	64.754
345	61.55	63.661
350	61.55	62.56
355		61.51
360		60.469
363.922		59.773

SECTION 4/050
SCALE: 1:1000
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y:\360 - gallery homes\01 - courtney drive\Overall\engineering drawings\preliminary earthworks\Current\36001-PE-050.dwg, SECTIONS-SHEET 02, 16/12/2021 1:36:19 PM, 1:2

PROJECT NAME

COURTNEY DR
UPPER COOMERA

PRELIMINARY
EARTHWORKS

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

0 10 20 30 40 50m
Scale 1:1000 - A1 (1:2000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

PRE	DATE	AMENDMENT
C	11-11-20	SECTIONS REVISED
B	24-10-19	SECTIONS REVISED
A	11-09-18	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

BIOME WATER AND ENVIRONMENTAL CONSULTING

zone Planning Group

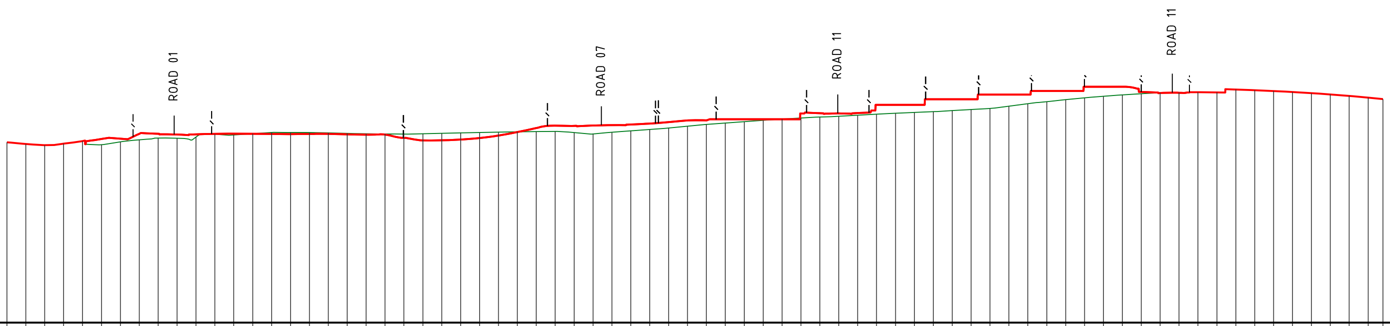
DRAWING TITLE

BULK EARTHWORKS
SECTIONS
SHEET 02

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088
Postal Address
PO Box 2484
Southport QLD 4215
Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

DESIGNED RB	DRAWN EP	
APPROVED	RPEQ	DATE 09-08-18

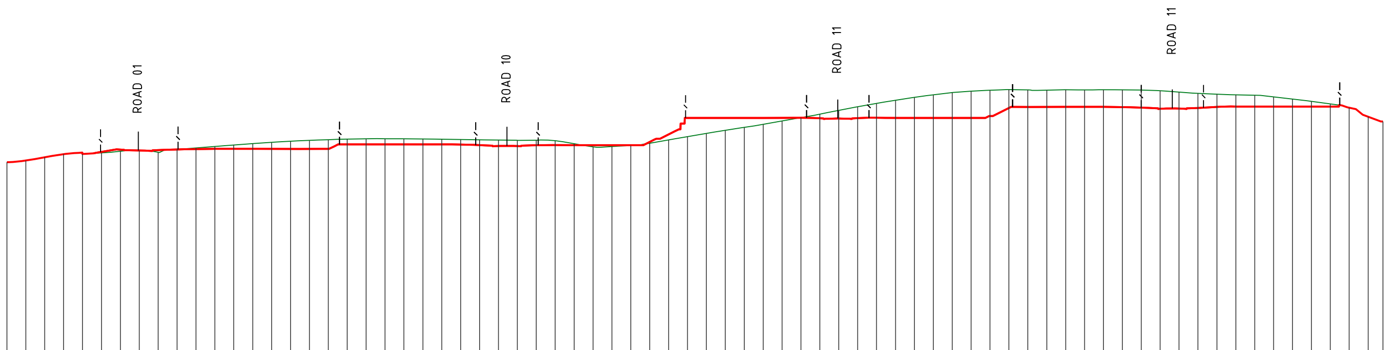
DRAWING NUMBER 36001-PE-052
AMEND. C



DATUM -11.0

CHAINAGE	FINISHED SURFACE	EXISTING SURFACE
0		36.681
5		36.249
10		35.931
15		36.342
20		36.998
25	37.564	36.057
30	37.647	36.792
35	38.939	37.358
40	38.937	37.807
45	38.733	37.769
50	38.806	38.087
55	38.957	38.857
60	38.964	38.64
65	38.974	38.971
70	38.882	39.303
75	38.857	39.285
80	38.898	39.229
85	38.91	39.172
90	38.805	39.067
95	38.701	38.938
100	38.665	38.927
105	37.9	38.857
110	37.182	38.944
115	37.218	39.064
120	37.433	39.183
125	37.798	39.29
130	38.479	39.385
135	39.39	39.476
140	40.461	39.513
145	41.07	39.558
150	41.066	39.273
155	41.116	38.902
160	41.218	39.335
165	41.412	39.709
170	41.638	40.088
175	42.051	40.488
180	42.487	40.965
185	42.5	41.43
190	42.8	41.789
195	42.8	42.147
200	42.8	42.505
205	42.8	42.828
210	44.3	43.125
215	44.401	43.389
220	44.349	43.591
225	44.423	43.855
230	46.6	44.118
235	46.6	44.382
240	46.6	44.591
245	48.1	44.815
250	48.1	45.079
255	48.1	45.355
260	49.3	45.637
265	49.3	46.23
270	49.3	46.89
275	50.3	47.445
280	50.3	47.952
285	51.4	48.437
290	51.4	48.867
295	51.4	49.248
300	50.02	49.536
305	49.739	49.771
310	49.782	49.871
315		49.953
320		49.885
325		50.665
330		50.485
335		50.285
340		49.97
345		49.661
350		49.353
355		48.958
360		48.501
363.922		48.122

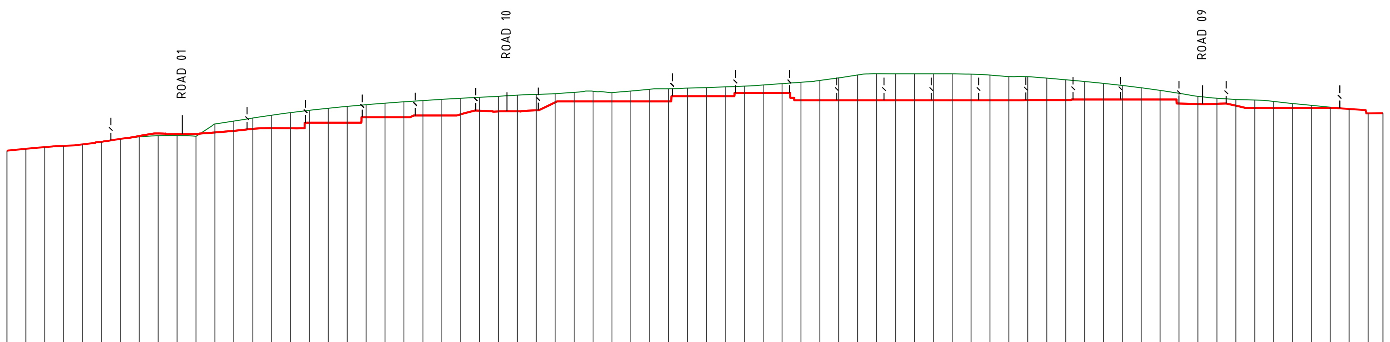
SECTION 9/050
SCALE: 1:1000 1:1000



DATUM -11.0

CHAINAGE	FINISHED SURFACE	EXISTING SURFACE
0		38.982
5		39.435
10		40.304
15		41.145
20		41.174
25	41.706	41.475
30	42.335	41.884
35	42.092	42.069
40	42.172	41.597
45	42.38	42.385
50	42.496	42.706
55	42.5	43.154
60	42.5	43.6
65	42.5	43.898
70	42.5	44.199
75	42.5	44.467
80	42.5	44.695
85	42.5	44.922
90	43.7	45.083
95	43.7	45.165
100	43.7	45.195
105	43.7	45.176
110	43.7	45.147
115	43.7	45.065
120	43.677	44.996
125	43.483	44.926
130	43.273	44.854
135	43.256	44.776
140	43.505	44.784
145	43.509	44.615
150	43.5	43.876
155	43.5	43.058
160	43.5	43.119
165	43.5	43.38
170	44.337	44.009
175	46.337	44.888
180	50.7	45.773
185	50.7	46.6
190	50.7	47.419
195	50.7	48.168
200	50.7	49.009
205	50.7	49.899
210	50.74	50.789
215	50.606	51.686
220	50.554	52.667
225	50.628	53.647
230	50.747	54.525
235	50.7	55.348
240	50.7	56.114
245	50.7	56.79
250	50.7	57.378
255	50.7	57.773
260	51.2	58.011
265	53.312	58.158
270	53.6	58.104
275	53.6	58.034
280	53.6	58.143
285	53.6	58.106
290	53.6	58.125
295	53.599	58.123
300	53.399	58.034
305	53.118	57.875
310	53.161	57.501
315	53.341	57.173
320	53.61	56.979
325	53.7	56.803
330	53.7	56.683
335	53.7	56.241
340	53.7	55.663
345	53.7	55.085
350	53.7	54.407
355		53.392
360		51.007
363.922		49.753

SECTION 8/050
SCALE: 1:1000 1:1000



DATUM -11.0

CHAINAGE	FINISHED SURFACE	EXISTING SURFACE
0		40.35
5		40.857
10		41.302
15		41.628
20		42.027
25		42.729
30		43.475
35	44.251	44.069
40	44.919	44.312
45	44.766	44.354
50	44.767	44.202
55	45.184	47.453
60	45.617	48.216
65	46.142	49.01
70	46.354	49.796
75	46.3	50.429
80	47.8	51.013
85	47.8	51.589
90	47.8	52.092
95	49.2	52.49
100	49.2	52.914
105	49.2	53.334
110	49.7	53.673
115	49.7	54.004
120	49.986	54.258
125	50.965	54.503
130	50.754	54.772
135	50.786	55.068
140	51.043	55.288
145	53.165	55.462
150	53.4	55.8
155	53.4	56.111
160	53.4	55.749
165	53.4	56.165
170	53.4	56.647
175	53.4	56.769
180	54.8	56.928
185	54.8	57.088
190	54.8	57.27
195	55.7	57.451
200	55.7	57.773
205	55.7	58.138
210	53.7	58.504
215	53.7	58.965
220	53.7	59.667
225	53.7	60.441
230	53.7	60.76
235	53.7	60.75
240	53.7	60.75
245	53.7	60.75
250	53.7	60.734
255	53.7	60.628
260	53.7	60.382
265	53.7	60.02
270	53.8	59.964
275	53.8	59.618
280	53.8	59.161
285	53.9	58.671
290	53.9	58.151
295	53.9	57.599
300	53.9	57.047
305	53.9	56.272
310	52.85	55.507
315	52.725	54.778
320	52.789	54.258
325	52.281	53.906
330	51.7	53.77
335	51.7	53.416
340	51.7	52.875
345	51.7	52.356
350	51.7	51.904
355		51.402
360		50.242
363.922		50.277

SECTION 7/050
SCALE: 1:1000 1:1000

PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY EARTHWORKS

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY THE ART OF LIVING

0 10 20 30 40 50m
Scale 1:1000 - A1 (1:2000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

PRE	DATE	AMENDMENT
C	11-11-20	SECTIONS REVISED
B	24-10-19	SECTIONS REVISED
A	11-09-18	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

BIOME WATER AND ENVIRONMENTAL CONSULTING

zone Planning Group

DRAWING TITLE

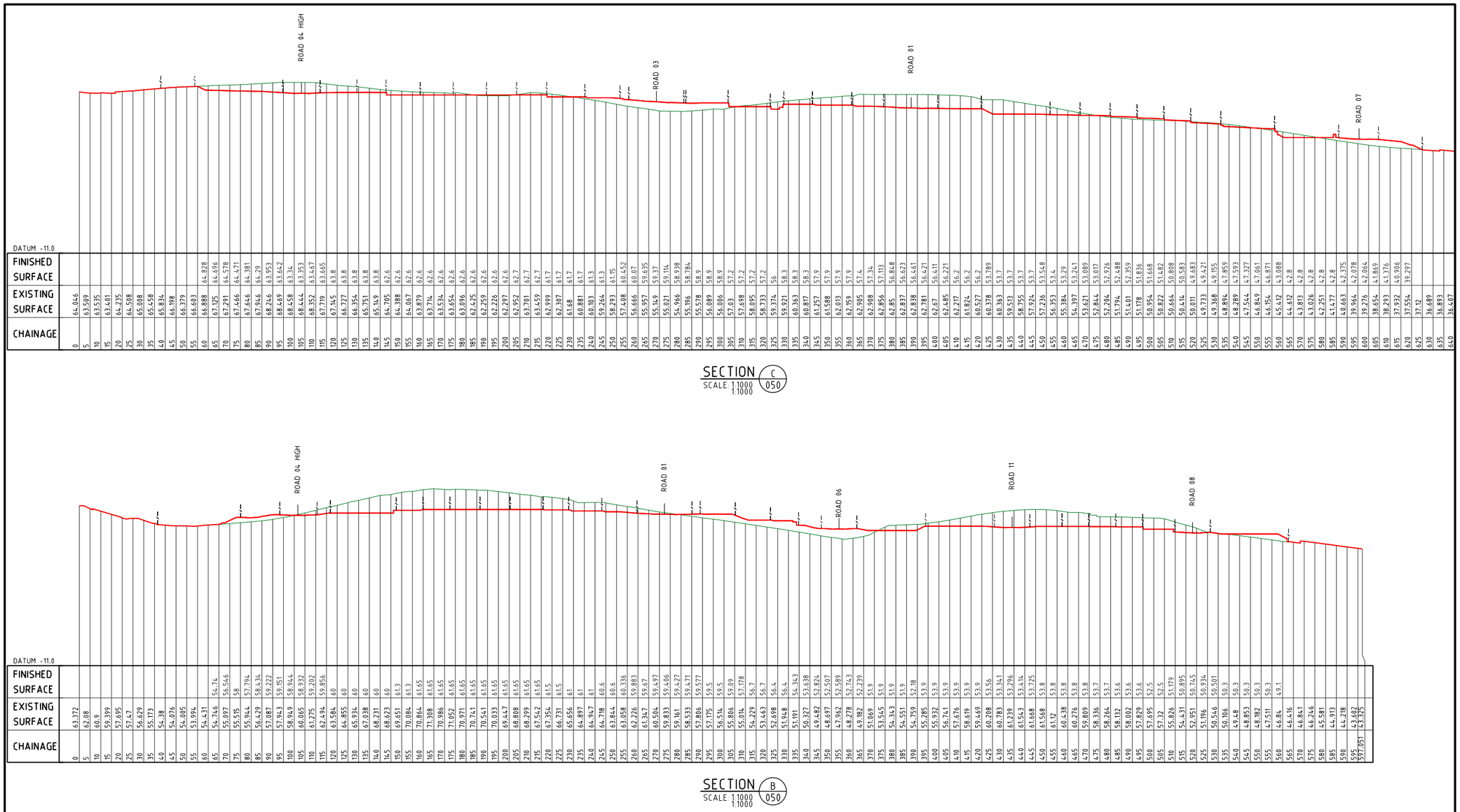
BULK EARTHWORKS
SECTIONS
SHEET 03

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088
Postal Address
PO Box 2484
Southport QLD 4215
Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

DESIGNED RB	DRAWN EP	
APPROVED	RPEQ	DATE 09-08-18

DRAWING NUMBER 36001-PE-053
AMEND. C

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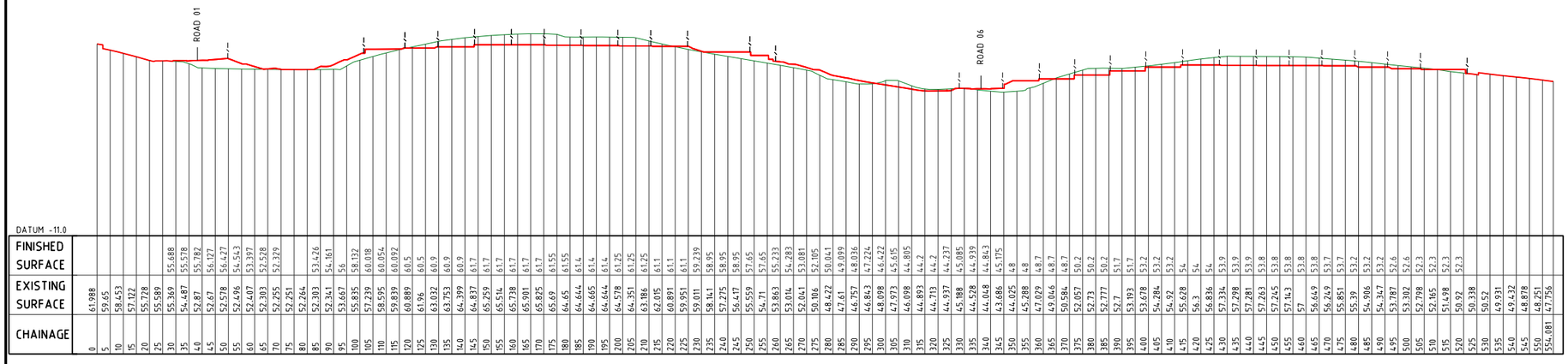
CHAINAGE	FINISHED SURFACE	EXISTING SURFACE
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10		63.535
15		63.401
20		64.235
25		64.508
30		65.008
35		65.458
40		65.834
45		66.198
50		66.379
55		66.603
60	64.828	66.888
65	64.696	67.125
70	64.578	67.291
75	64.471	67.466
80	64.381	67.646
85	64.29	67.946
90	63.953	68.246
95	63.642	68.469
100	63.34	68.458
105	63.353	68.444
110	63.467	68.352
115	63.665	67.719
120	63.8	67.145
125	63.8	66.727
130	63.8	66.354
135	63.8	65.751
140	63.8	65.149
145	62.6	64.705
150	62.6	64.388
155	62.6	64.067
160	62.6	63.879
165	62.6	63.774
170	62.6	63.534
175	62.6	63.654
180	62.6	63.096
185	62.6	62.425
190	62.6	62.259
195	62.6	62.226
200	62.6	62.297
205	62.7	62.952
210	62.7	63.701
215	62.7	63.459
220	61.7	62.999
225	61.7	62.307
230	61.7	61.68
235	61.7	60.881
240	61.3	60.103
245	61.3	59.264
250	61.15	58.293
255	60.452	57.408
260	60.07	56.666
265	59.635	55.957
270	59.37	55.149
275	59.114	55.021
280	58.938	54.966
285	58.784	55.196
290	58.9	55.578
295	58.9	56.089
300	58.9	56.006
305	57.2	57.03
310	57.2	57.698
315	57.2	58.095
320	57.2	58.733
325	57.2	59.374
330	58.3	59.921
335	58.3	60.363
340	58.3	60.817
345	57.9	61.257
350	57.9	61.588
355	57.9	62.013
360	57.9	62.159
365	57.4	62.905
370	57.34	62.908
375	57.113	62.856
380	56.848	62.885
385	56.623	62.837
390	56.461	62.838
395	56.421	62.781
400	56.411	62.67
405	56.221	62.485
410	56.2	62.217
415	56.2	61.824
420	56.2	60.527
425	53.789	60.378
430	53.7	60.363
435	53.7	59.533
440	53.7	58.755
445	53.7	57.924
450	53.548	57.236
455	53.4	56.353
460	53.29	55.384
465	53.241	54.397
470	53.089	53.621
475	53.017	52.844
480	52.926	52.204
485	52.488	51.794
490	52.359	51.401
495	51.836	51.178
500	51.668	50.954
505	51.482	50.822
510	50.808	50.664
515	50.583	50.414
520	49.683	50.011
525	49.421	49.733
530	49.155	49.368
535	47.859	48.894
540	47.593	48.289
545	47.327	47.544
550	47.061	46.849
555	46.871	46.154
560	43.088	45.412
565	42.8	44.612
570	42.8	43.813
575	42.8	43.026
580	42.8	42.251
585	42.8	41.477
590	42.375	40.663
595	42.078	39.964
600	42.064	39.276
605	41.869	38.654
610	41.376	38.293
615	40.906	37.932
620	39.297	37.554
625		37.12
630		36.689
635		36.893
640		36.407

SECTION C
SCALE 1:1000
1:1000
050

DATUM -11.0

CHAINAGE	FINISHED SURFACE	EXISTING SURFACE
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10		60.9
15		59.399
20		57.695
25		57.47
30		56.629
35		55.173
40		54.38
45		54.076
50		54.005
55		53.994
60	54.74	54.431
65	56.546	54.746
70	58	55.097
75		55.515
80	57.794	55.944
85	58.434	56.429
90	59.222	57.087
95	59.151	57.943
100	58.944	58.949
105	58.932	60.065
110	59.202	61.275
115	59.856	62.494
120	60	63.584
125	60	64.855
130	60	65.934
135	60	67.038
140	60	68.231
145	60	68.623
150	61.3	69.651
155	61.3	70.084
160	61.65	70.864
165	61.65	71.308
170	61.65	70.986
175	61.65	71.052
180	61.65	70.971
185	61.65	70.741
190	61.65	70.541
195	61.65	70.033
200	61.65	69.447
205	61.65	68.808
210	61.65	68.299
215	61.65	67.542
220	61.5	67.354
225	61.5	66.731
230	61	65.656
235	61	64.947
240	60.6	64.947
245	60.6	64.718
250	60.6	63.844
255	60.336	63.058
260	59.883	62.226
265	59.67	61.347
270	59.497	60.504
275	59.406	59.833
280	59.477	59.161
285	59.471	58.533
290	59.577	57.806
295	59.5	57.175
300	59.5	56.514
305	59.09	55.806
310	57.178	55.014
315	56.7	54.229
320	56.7	53.463
325	56.4	52.698
330	54.343	51.948
335	53.638	51.191
340	52.824	50.327
345	52.507	49.482
350	52.589	48.697
355	52.743	47.962
360	52.239	48.278
365	51.725	49.182
370	53.8	51.069
375	51.9	53.545
380	51.9	54.343
385	51.9	54.551
390	52.18	54.759
395	53.9	55.285
400	53.9	55.932
405	53.9	56.741
410	53.9	57.676
415	53.9	58.619
420	53.9	59.469
425	53.56	60.208
430	53.341	60.783
435	53.296	61.239
440	53.414	61.543
445	53.725	61.668
450	53.8	61.568
455	53.8	61.12
460	53.8	60.438
465	53.8	60.276
470	53.8	59.809
475	53.7	58.336
480	53.7	58.264
485	53.6	58.132
490	53.6	58.002
495	53.6	57.829
500	52.5	57.695
505	52.5	57.32
510	51.179	55.826
515	50.895	54.431
520	50.745	52.951
525	50.934	51.196
530	50.501	50.546
535	50.3	50.106
540	50.3	49.548
545	50.3	48.853
550	50.3	48.182
555	50.3	47.511
560	49.1	46.84
565		46.416
570		46.841
575		46.246
580		45.581
585		44.913
590		44.218
595		43.469
597.051		43.395

SECTION B
SCALE 1:1000
1:1000
050



DATUM -11.0

CHAINAGE	FINISHED SURFACE	EXISTING SURFACE
0		61.988
5		59.65
10		58.453
15		57.122
20		55.728
25		55.589
30	55.688	55.369
35	55.578	54.487
40	55.782	52.87
45	56.127	52.67
50	56.427	52.578
55	56.543	52.496
60	53.397	52.407
65	52.538	52.303
70	52.329	52.255
75		52.251
80	53.426	52.264
85	54.161	52.303
90	56	53.667
95	58.132	55.835
100	60.018	57.239
105	60.054	58.595
110	60.092	59.839
115	60.5	60.889
120	60.5	61.96
125	60.9	63.032
130	60.9	63.753
135	60.9	64.399
140	61.7	64.837
145	61.7	65.259
150	61.7	65.514
155	61.7	65.738
160	61.7	65.901
165	61.7	65.825
170	61.7	65.69
175	61.55	64.65
180	61.4	64.644
185	61.4	64.665
190	61.4	64.644
195	61.4	64.578
200	61.25	64.351
205	61.25	63.186
210	61.25	62.015
215	61.1	60.891
220	61.1	59.951
225	61.1	59.011
230	52.239	58.141
235	58.95	57.275
240	58.95	56.477
245	58.95	55.559
250	57.65	54.71
255	57.65	53.863
260	55.233	53.014
265	54.283	52.041
270	53.081	50.106
275	52.105	48.422
280	50.041	47.61
285	49.099	46.757
290	48.036	46.843
295	47.224	48.098
300	46.422	47.973
305	45.615	46.098
310	44.805	44.893
315	44.2	44.713
320	44.2	44.937
325	44.237	45.188
330	45.085	44.528
335	44.939	44.048
340	44.843	43.686
345	45.175	44.025
350	48	45.288
355	48	47.029
360	48.7	49.046
365	48.7	50.584
370	48.7	52.057
375	50.2	52.73
380	50.2	52.777
385	50.2	52.7
390	51.7	53.193
395	51.7	53.678
400	53.2	54.284
405	53.2	54.92
410	53.2	55.628
415	54	56.3
420	54	56.836
425	54	57.334
430	53.9	57.298
435	53.9	57.281
440	53.8	57.263
445	53.8	57.245
450	53.8	57.143
455	53.8	57
460	53.8	56.849
465	53.8	56.249
470	53.7	55.851
475	53.7	55.39
480	53.2	54.906
485	53.2	54.347
490	53.2	53.787
495	52.6	53.302
500	52.6	52.798
505	52.3	52.165
510	52.3	51.498
515	52.3	50.92
520	52.3	50.338
525		50.52
530		49.931
535		49.432
540		48.878
545		48.251
550		47.756
554.081		

SECTION A
SCALE 1:1000
1:1000
050

PROJECT NAME

COURTNEY DR
UPPER COOMERA

PRELIMINARY EARTHWORKS

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

0 10 20 30 40 50m
Scale 1:1000 - A1 (1:2000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

PRE	DATE	AMENDMENT
D	11-11-20	SECTIONS REVISED
C	24-10-19	SECTIONS REVISED
B	27-03-19	SECTION A AMENDED
A	11-09-18	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

BIOME WATER AND ENVIRONMENTAL CONSULTING

zone Planning Group

DRAWING TITLE

BULK EARTHWORKS
SECTIONS
SHEET 04

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

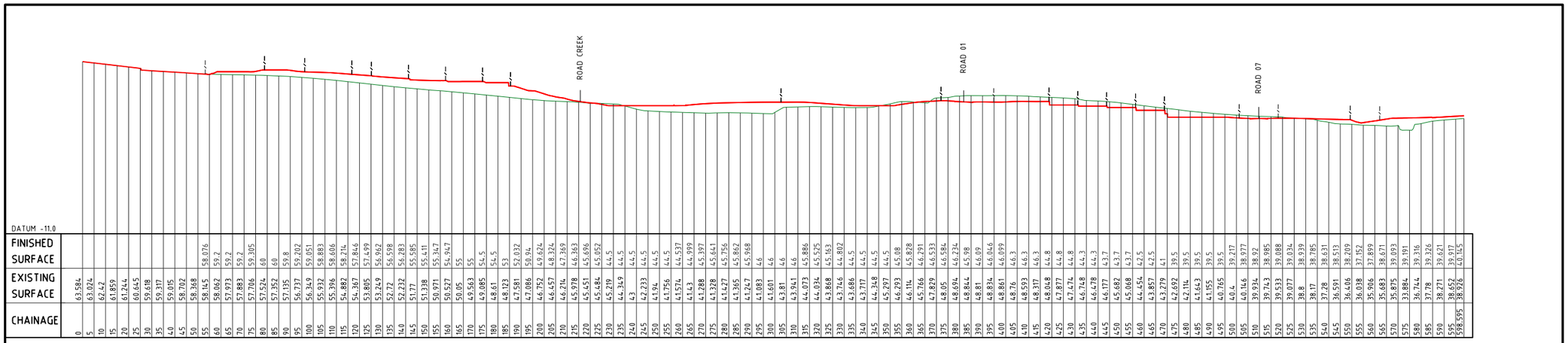
Postal Address
PO Box 2484
Southport QLD 4215

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

DESIGNED	RB	DRAWN	EP
APPROVED		RPEQ	DATE 09-08-18

DRAWING NUMBER: 36001-PE-054
AMEND.: D

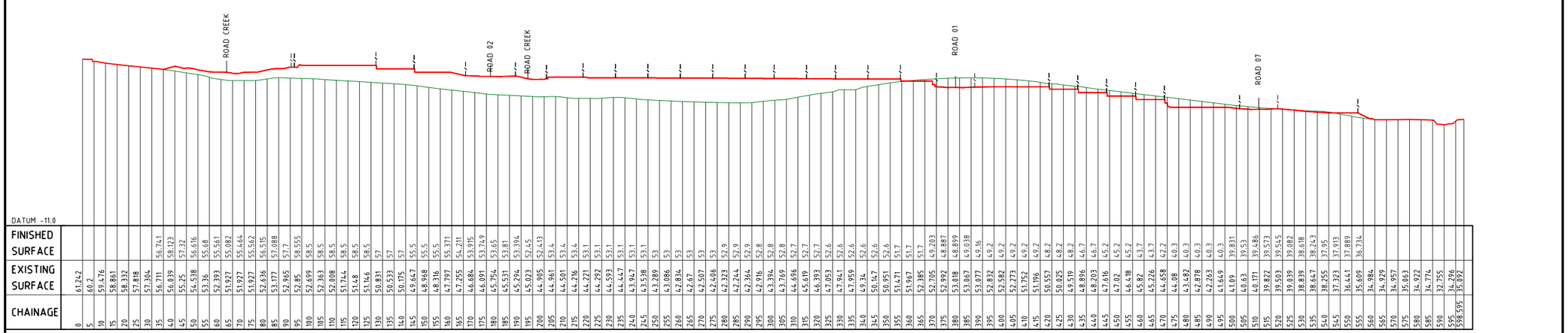
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DATUM -11.0

CHAINAGE	FINISHED SURFACE	EXISTING SURFACE
0	58.076	63.584
5	59.2	63.024
10	59.2	62.442
15	59.2	61.859
20	59.305	61.244
25	60	60.645
30	59.8	59.698
35	59.202	59.317
40	59.051	59.015
45	58.883	58.702
50	58.606	58.368
55	58.214	58.145
60	57.846	58.062
65	57.499	57.973
70	56.962	57.883
75	56.598	57.706
80	56.283	57.524
85	55.962	57.352
90	55.585	57.135
95	55.411	56.737
100	55.347	56.349
105	54.947	55.932
110	55.027	55.396
115	55.054	54.882
120	55.062	54.367
125	55.249	53.805
130	55.272	53.249
135	55.232	52.672
140	55.177	52.232
145	55.585	51.77
150	55.411	51.338
155	55.347	50.971
160	54.947	50.527
165	55	50.05
170	55	49.563
175	54.5	49.085
180	54.5	48.61
185	53	48.123
190	52.032	47.581
195	50.974	47.086
200	49.624	46.752
205	48.324	46.457
210	47.369	46.214
215	46.363	45.978
220	45.696	45.451
225	45.052	45.484
230	44.5	45.219
235	44.5	44.349
240	44.5	44.3
245	44.5	42.233
250	44.5	41.94
255	44.5	41.756
260	44.537	41.574
265	44.999	41.43
270	45.397	41.288
275	45.641	41.328
280	45.756	41.427
285	45.862	41.365
290	45.988	41.247
295	46	41.083
300	46	41.601
305	46	43.81
310	46	43.941
315	45.886	44.073
320	45.525	44.034
325	45.163	43.868
330	44.802	43.746
335	44.5	43.686
340	44.5	43.717
345	44.5	44.348
350	44.5	45.297
355	45.08	46.293
360	45.828	46.114
365	46.291	45.766
370	46.533	47.829
375	46.584	48.05
380	46.234	48.694
385	45.98	48.844
390	46.09	48.81
395	46.046	48.834
400	46.099	48.861
405	46.3	48.76
410	46.3	48.593
415	46.3	48.317
420	44.8	48.048
425	44.8	47.877
430	44.8	47.474
435	44.3	46.748
440	44.3	46.478
445	43.7	46.177
450	43.7	45.682
455	43.7	45.068
460	42.5	44.454
465	42.5	43.857
470	41	43.279
475	39.5	42.692
480	39.5	42.114
485	39.5	41.643
490	39.5	41.155
495	39.5	40.765
500	39.217	40.4
505	38.977	40.146
510	38.92	39.934
515	38.985	39.743
520	39.088	39.533
525	39.034	39.077
530	38.939	38.8
535	38.785	38.17
540	38.631	37.28
545	38.513	36.591
550	38.209	36.406
555	37.152	36.038
560	37.899	35.906
565	38.671	35.683
570	39.093	35.875
575	39.191	33.884
580	39.316	36.744
585	39.326	37.78
590	39.621	38.271
595	39.917	38.652
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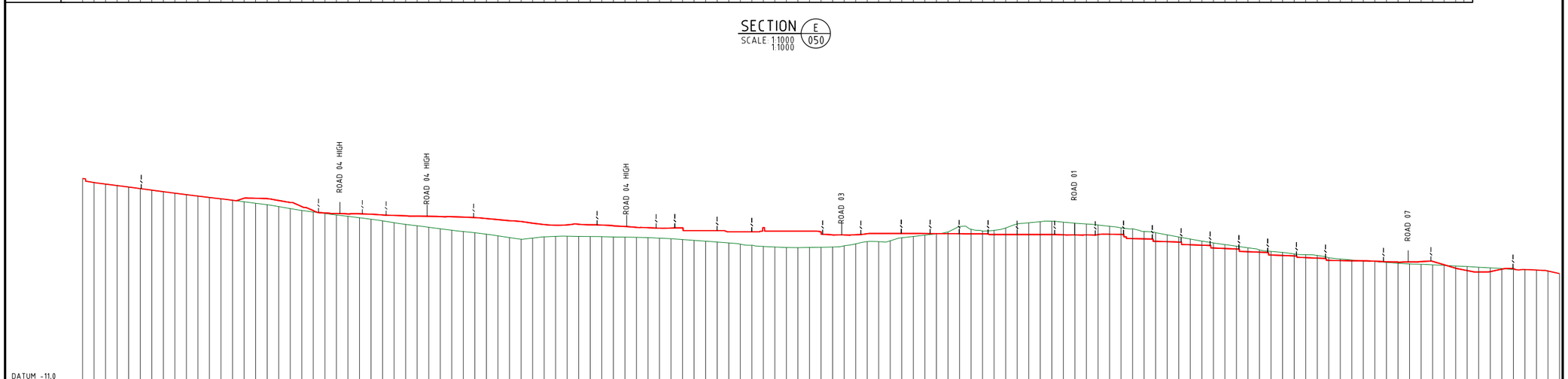
SECTION F
SCALE 1:1000
1:1000
050



DATUM -11.0

CHAINAGE	FINISHED SURFACE	EXISTING SURFACE
0	56.741	61.242
5	58.123	60.2
10	57.32	59.476
15	56.616	58.861
20	55.68	58.332
25	56.616	57.818
30	55.561	57.304
35	55.082	56.711
40	55.464	56.039
45	55.562	55.25
50	56.515	54.538
55	57.088	53.36
60	57.7	52.393
65	58.555	51.927
70	58.5	51.927
75	58.5	51.927
80	58.5	52.636
85	58.5	53.177
90	58.5	52.965
95	58.5	52.85
100	58.5	52.699
105	58.5	52.363
110	58.5	52.008
115	58.5	51.744
120	58.5	51.48
125	58.5	51.146
130	57	50.831
135	57	50.533
140	57	50.175
145	55.5	49.647
150	55.5	48.968
155	55.5	48.316
160	55.371	47.797
165	54.211	47.255
170	53.915	46.684
175	53.749	46.091
180	53.65	45.754
185	53.381	45.531
190	53.394	45.294
195	52.45	45.023
200	52.413	44.905
205	53.4	44.961
210	53.4	44.501
215	53.4	44.216
220	53.1	44.221
225	53.1	44.292
230	53.1	44.593
235	53.1	44.447
240	53.1	43.947
245	53.1	43.538
250	53	43.289
255	53	43.086
260	53	42.834
265	53	42.67
270	53	42.507
275	53	42.406
280	52.9	42.323
285	52.9	42.244
290	52.9	42.364
295	52.8	42.916
300	52.8	43.394
305	52.8	43.769
310	52.7	44.696
315	52.7	45.619
320	52.7	46.393
325	52.6	47.053
330	52.6	47.941
335	52.6	47.959
340	52.6	49.34
345	52.6	50.147
350	52.6	50.951
355	51.7	51.471
360	51.7	51.967
365	51.7	52.385
370	49.203	52.705
375	48.887	52.992
380	48.899	53.018
385	49.038	53.067
390	49.16	53.077
395	49.2	52.832
400	49.2	52.582
405	49.2	52.273
410	49.2	51.752
415	49.2	51.196
420	48.2	50.557
425	48.2	50.025
430	48.2	49.519
435	46.7	48.896
440	46.7	48.203
445	45.2	47.616
450	45.2	47.02
455	45.2	46.418
460	43.7	45.82
465	43.7	45.226
470	42.2	44.658
475	40.3	44.08
480	40.3	43.482
485	40.3	42.878
490	40.3	42.263
495	40.3	41.669
500	39.831	41.109
505	39.53	40.63
510	39.486	40.171
515	39.573	39.822
520	39.545	39.503
525	39.082	39.039
530	38.618	38.839
535	38.243	38.647
540	37.95	38.255
545	37.913	37.323
550	37.889	36.441
555	36.734	35.609
560		34.984
565		34.929
570		34.957
575		35.063
580		34.922
585		34.774
590		32.755
595		34.296
598.595		35.092

SECTION E
SCALE 1:1000
1:1000
050



DATUM -11.0

CHAINAGE	FINISHED SURFACE	EXISTING SURFACE
0	76.906	
5	75.166	
10	74.493	
15	73.867	
20	73.222	
25	72.533	
30	71.816	
35	71.146	
40	70.552	
45	69.91	
50	69.325	
55	68.7	
60	68.104	
65	67.489	
70	66.833	68.373
75	66.177	68.344
80	65.566	68.278
85	64.749	67.379
90	63.89	66.512
95	63.078	64.735
100	62.389	62.982
105	61.733	61.981
110	61.115	61.72
115	60.509	61.547
120	59.913	61.618
125	59.277	61.478
130	58.567	61.099
135	57.759	60.904
140	57.036	60.752
145	56.416	60.593
150	55.775	60.561
155	55.107	60.397
160	54.48	60.355
165	53.918	60.179
170	53.413	59.989
175	52.779	59.534
180	52.064	59.085
185	51.307	58.617
190	50.593	58.302
195	51.081	57.556
200	51.637	56.94
205	51.813	56.628
210	51.887	56.789
215	51.8	57.059
220	51.74	56.819
225	51.68	56.723
230	51.571	56.333
235	51.492	56.127
240	51.404	55.731
245	51.267	55.578
250	51.038	55.366
255	50.791	55.412
260	50.453	55.5
265	50.098	54.3
270	49.743	54.3
275	49.37	54.3
280	48.981	53.8
285	48.456	53.8
290	47.954	53.8
295	47.464	55.6
300	47.198	54.1
305	46.995	54.1
310	46.967	54.1
315	47.001	54.1
320	47.083	53.804
325	47.223	52.512
330	47.707	52.438
335	48.583	52.535
340	49.521	52.981
345	49.539	53.1
350	49.905	53.1
355	51.208	53.1
360	51.765	53.1
365	52.338	53.1
370	52.868	53
375	53.735	53
380	56.108	52.9
385	54.912	52.9
390	54.133	52.9
395	54.43	52.6
400	55.464	52.6
405	57.183	52.6
410	57.716	52.6
415	58.169	52.6
420	58.392	52.6
425	57.983	52.519
430	57.54	52.446
435	57.196	52.448
440	56.746	52.577
445	56.198	52.758
450	55.518	52.656
455	55.099	50.856
460	53.951	50.738
465	53.46	49.665
470	52.482	49.522
475	51.572	49.365
480	50.66	48.177
485	49.772	47.988
490	48.991	46.772
495	48.25	46.57
500	47.552	46.347
505	46.841	45.15
510	45.911	44.928
515	45.297	43.746
520	44.853	43.544
525	44.228	43.342
530	43.884	42.583
535	43.562	42.381
540	42.553	41.442
545	42.006	41.3
550	41.575	41.222
555	41.164	41.222
560	40.934	41.067
565	40.526	40.82
570	40.194	40.716
575	39.85	40.756
580	39.71	40.893
585	39.471	40.982
590	39.24	39.505
595	38.999	38.006
600	38.761	36.988
605	38.425	36.4
610	38.168	36.532
615	37.906	37.607
620	37.472	37.833
625	37.409	
630	37.218	
635	36.797	
640	35.693	

SECTION D
SCALE 1:1000
1:1000
050

PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY EARTHWORKS

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

0 10 20 30 40 50m
Scale 1:1000 - A1 (1:2000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

C	11-11-20	SECTIONS REVISED
B	24-10-19	SECTIONS REVISED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

BIOME WATER AND ENVIRONMENTAL CONSULTING

zone Planning Group

DRAWING TITLE

BULK EARTHWORKS
SECTIONS
SHEET 05

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088
Postal Address
PO Box 2484
Southport QLD 4215
Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

DESIGNED	RB	DRAWN	EP
APPROVED		RPEQ	DATE 09-08-18

DRAWING NUMBER 36001-PE-055
AMEND. C

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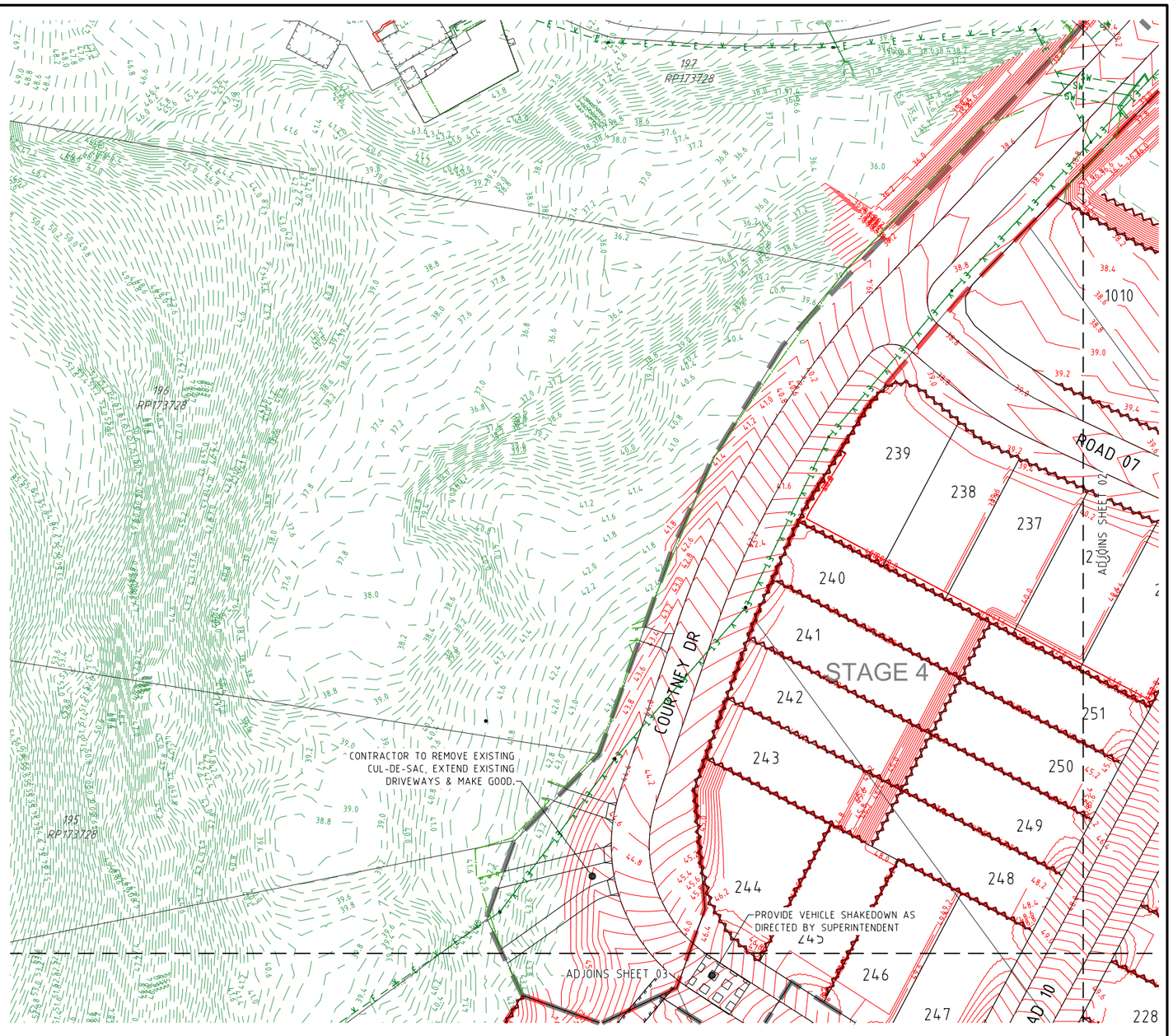
SEDIMENT AND EROSION

1. THE EROSION AND SEDIMENT CONTROL DEVICES SHOWN ON THESE DRAWINGS ARE INDICATIVE AND PROVIDED FOR SUBMISSION TO LOCAL AUTHORITY ONLY. NOTWITHSTANDING THE EROSION AND CONTROL DEVICES SHOW ON THESE DRAWINGS, THE CONTRACTOR MUST PREPARE AND FOLLOW AN EROSION AND SEDIMENT CONTROL PLAN TO MEET ALL LOCAL AND STATE GOVERNMENT LEGISLATION INCLUDING BUT NOT LIMITED TO:
   a. ENVIRONMENTAL PROTECTION ACT WITH SPECIFIC REFERENCE TO PARTS S440G AND S319
   b. STATE PLANNING POLICY

   PRESCRIBED WATER CONTAMINANTS (AS DEFINED IN THE ENVIRONMENTAL PROTECTION ACT 1994) MUST NOT BE RELEASED FROM THE SITE OR TO WATERS WITHIN THE SITE, OR BE LIKELY TO BE RELEASED SHOULD RAINFALL OCCUR, UNLESS ALL REASONABLE AND PRACTICABLE MEASURES ARE TAKEN TO PREVENT OR MINIMISE THE RELEASE AND CONCENTRATION OF CONTAMINATION. THE ESC PLAN MUST BE DESIGNED, IMPLEMENTED AND MAINTAINED IN ACCORDANCE WITH "BEST PRACTICE EROSION AND SEDIMENT CONTROL" PUBLISHED BY THE INTERNATIONAL EROSION CONTROL ASSOCIATION (AUSTRALASIAN CHAPTER) (IECA, 2008).
2. TO COMPLY WITH THE REQUIREMENTS OF THE EP ACT AND BEST PRACTICE DESIGN, THE SEDIMENT BASINS ON THE SITE MUST BE DESIGNED AND IMPLEMENTED TO ACHIEVE THE FOLLOWING:
   SEDIMENT BASINS ARE TO BE DESIGNED, IMPLEMENTED AND MAINTAINED TO A STANDARD WHICH WOULD ACHIEVE AT LEAST 80% OF THE AVERAGE ANNUAL RUNOFF VOLUME OF THE CONTRIBUTING CATCHMENT TREATED (I.E. 80% HYDROLOGIC EFFECTIVENESS) TO 50MG/L TSS OR LESS AND PH IN THE RANGE 6.5-8.5

   THIS WILL REQUIRE THE INSTALLATION AND OPERATION OF A HIGH-EFFICIENCY SEDIMENT BASIN(S) DESIGNED IN ACCORDANCE WITH THE SPECIFICATIONS CONTAINED IN THE "BEST PRACTICE EROSION AND SEDIMENT CONTROL - APPENDIX B SEDIMENT BASIN DESIGN AND OPERATION" PUBLISHED BY THE INTERNATIONAL EROSION CONTROL ASSOCIATION (AUSTRALASIAN CHAPTER) (IECA, 2016, DRAFT)
3. THE EROSION AND SEDIMENT CONTROL PLAN MUST BE PREPARED AND CERTIFIED BY A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL AND FOLLOW THE REQUIREMENTS OUTLINED IN IECA'S BEST PRACTICE EROSION AND SEDIMENT CONTROL DOCUMENT AND THE QUEENSLAND URBAN DRAINAGE MANUAL.
4. PRIOR TO THE COMMENCEMENT OF WORKS ONSITE THE CONTRACTOR MUST MAKE THEMSELVES AWARE OF ALL PREVIOUS GEOTECHNICAL REPORTS AND DETERMINE THE DISPERSIVE CHARACTERISTICS OF THE SOIL (INCLUDING PERFORMING ANY SOIL TESTS IF REQUIRED). THE RESULTS OF THIS REVIEW AND ANY TESTS MUST BE INCLUDED IN THE CONTRACTOR'S EROSION AND SEDIMENT CONTROL PLAN. A COPY OF ALL TEST RESULTS MUST BE PROVIDED TO THE SUPERINTENDENT.
5. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO CONTROL EROSION AND DOWNSTREAM SEDIMENTATION DURING ALL STAGES OF CONSTRUCTION (INCLUDING THE MAINTENANCE PERIOD). NOTWITHSTANDING THE CONTROL MEASURES OR FINISHED EARTHWORKS DESIGN SHOWN ON THESE DRAWINGS, THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING ADDITIONAL OR ALTERNATIVE EROSION & SEDIMENT CONTROL MEASURES TO MINIMISE SEDIMENT ACROSS OR LEAVING THE SITE.
6. AT ALL TIMES THE CONTRACTOR SHALL MONITOR THE PREVAILING WEATHER CONDITIONS (INCLUDING WEEKENDS AND PUBLIC HOLIDAYS) AND AT ALL TIMES REMAINS RESPONSIBLE TO:
   a) CLEAN AND REPAIR CONTROL DEVICES WHENEVER THE ACCUMULATED SEDIMENT REDUCES THEIR CAPACITY BY 50%.
   b) MAINTAIN POSITIVE GRADES OF ALL PERIMETER BANKS AND SWALES TO AN OUTLET.
   c) PROTECT ANY DOWNSTREAM CONSTRUCTION.
   d) CONTROLLING DUST.
   e) MEASURES HAVE BEEN INSTALLED IN ACCORDANCE WITH DETAILS OUTLINED IN THEIR EROSION AND SEDIMENT CONTROL PLAN AND AS DIRECTED BY THE SUPERINTENDENT.
7. THE CONTRACTOR'S PLAN SHALL ALLOW FOR SUITABLE ACCESS TO ALLOW MAINTENANCE OF ALL SEDIMENT CONTROL DEVICES. NO ADDITIONAL VEGETATION CLEARING IS PERMITTED FOR GAINING ACCESS UNLESS APPROVED BY THE SUPERINTENDENT.
8. THE CONTRACTOR MAY REQUEST APPROVAL FROM THE SUPERINTENDENT TO REUSE THE STOCKPILED MULCH FOR STABILISING BATTERS ONLY IN LOCATIONS WHERE THE APPROVED LANDSCAPE OPW DESIGN REQUIRES MULCH ULTIMATELY.
9. CONSTRUCTION STOCKPILING
   a) TOPSOIL SHALL BE STRIPPED AND STOCKPILED IN LOCATIONS NOMINATED ON THE CONSTRUCTION DRAWINGS OR IN LOCATIONS AGREED WITH THE SUPERINTENDENT.
   b) ADDITIONAL VEGETATION CLEARING IS NOT PERMITTED TO FACILITATE THE STOCKPILING OF MATERIALS UNLESS SHOWN ON THE APPROVED VEGETATION MANAGEMENT PLAN.
   c) ANY STOCKPILE SITE MUST BE CLEAR OF ADJACENT PROPERTY BOUNDARIES SO AS NOT TO CAUSE A NUISANCE TO ADJOINING PROPERTIES.
   d) NO STOCKPILES ARE TO BE LOCATED WITHIN THE TREE PROTECTION ZONE OF VEGETATION.
   e) A TEMPORARY SILT FENCE IS TO BE ERECTED APPROXIMATELY 5m FROM TOE OF BATTER ON LOW SIDE OF STOCKPILING.
10. NOTWITHSTANDING THE DETAILS SHOWN IN THE CONTRACTOR'S EROSION AND SEDIMENT CONTROL PLAN, DURING CONSTRUCTION THE CONTRACTOR MUST:
    a) SIZE ALL TEMPORARY SEDIMENT BASINS APPROPRIATELY TO TREAT THE UPSTREAM CATCHMENT. NOTE THAT THE PERMANENT BIO BASINS SHOWN ON THESE DRAWINGS ARE SIZED FOR THE ULTIMATE CATCHMENT NOT FOR THE CONSTRUCTION PHASE.
    b) PLACE A ROCK BUND AROUND ALL HEADWALLS DURING CONSTRUCTION.
    c) PROVIDE KERB INLET PROTECTION TO ALL GULLIES.
    c) PLACE A MINIMUM 1.0m WIDE TURF STRIP BEHIND ALL KERBS AND IN A HERRINGBONE LAYOUT WITHIN THE ROAD VERGE.
    d) MAINTENANCE (INCLUDING FLOCCULATION IF REQUIRED AND PUMP OUT) OF ALL CONSTRUCTION SEDIMENT BASINS (WHETHER EXISTING OR NEW).
    e) CLEAN OUT OF ALL GROSS POLLUTANT TRAPS, SEDIMENT FOREBAYS AND ALL OTHER PERMANENT SEDIMENT CONTROL DEVICES AT BOTH ON AND OFF MAINTENANCE.
11. CONTRACTOR TO CONFIRM THE EXTENTS OF REQUIRED GRASSING TREATMENTS WITH THE SUPERINTENDENT AT LEAST 7 DAYS PRIOR TO FINAL TRIMMING.
12. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT GRASSING STRIKE RATES ARE ACHIEVED AT THE ON AND OFF MAINTENANCE INSPECTIONS IN ACCORDANCE WITH COUNCIL REQUIREMENTS. THIS INCLUDES THE SUPPLY AND INSTALLATION OF ANY REQUIRED CHEMICAL/FERTILIZER AMELIORATION TO ACHIEVE THE SPECIFIED GRASS STRIKE RATES.
13. GEOFABRIC LINING OF CHANNELS AND CHECK DAMS MAY BE REQUIRED SUBJECT TO THE SITE CONDITIONS.
14. BATTERS WITHIN PUBLIC OPEN SPACE TO BE VEGETATED IN ACCORDANCE WITH APPROVED OPEN SPACE MANAGEMENT PLAN AND LANDSCAPING OPW. CONTRACT DOCUMENTATION WILL SPECIFY WHETHER THIS IS THE CIVIL CONTRACTOR OR THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY TO SUPPLY AND INSTALL. THE CIVIL CONTRACTOR IS RESPONSIBLE FOR PROVIDING SUITABLE ACCESS FOR THE LANDSCAPE CONTRACTOR TO PERFORM THEIR WORKS.
15. MAINTENANCE PERIOD (PRE TO POST CONSTRUCTION)
    a) ALL PROTECTION MEASURES ARE TO BE INSPECTED AND MAINTAINED REGULARLY
    b) REPAIRS ARE TO BE EFFECTED IMMEDIATELY.
    c) SILT AFTER RAIN IS TO BE CLEANED FROM STREETS AND ALLOTMENTS IMMEDIATELY AND CORRECTIVE ACTION TAKEN TO AVOID A RE-OCCURRENCE.
    d) AT OFF-MAINTENANCE AND ONLY WHEN DIRECTED BY COUNCIL, REMOVE AND DISPOSE OFFSITE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES.

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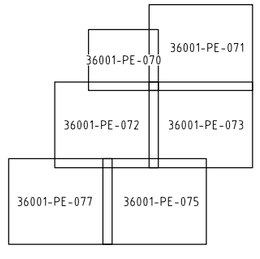


NOTE:
SEDIMENT AND EROSION CONTROL MEASURES SHOWN RELATES TO THE FINISHED SURFACE ONLY.
THE CONTRACTOR IS TO PREPARE A CONSTRUCTION PHASE SEDIMENT AND EROSION CONTROL PLAN.

LEGEND

- EXISTING PROPERTY LINE
- EXISTING KERB (INVERT)
- EXISTING STORMWATER (SW)
- EXISTING CONTOURS (1.0)
- FUTURE PROPERTY LINE
- FUTURE KERB (INVERT)
- FUTURE STORMWATER (SW)
- FUTURE CONTOURS (1.0)
- SITE BOUNDARY
- STAGE BOUNDARY
- PROPOSED PROPERTY LINE
- PROPOSED KERB (INVERT)
- PROPOSED STORMWATER (SW)
- DESIGN CONTOURS (1.0)
- SEDIMENT FENCE
- MANHOLE
- KERB INLET (ON GRADE) PIT
- KERB INLET (SAG) PIT
- HEADWALL
- SCOUR PROTECTION
- TEMPORARY SEDIMENT BASIN
- STORMWATER INLET FILTER
- ROCK CHECK DAM
- VEHICLE SHAKEDOWN
- TREES

SHEET LAYOUT



PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY EARTHWORKS

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

E	16-12-21	STAGE BDY & TXT AMENDED
D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT, SILT FENCES & CONTOURS REVISED
B	27-03-19	LOT NO'S & STAGES AMENDED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

BIOME WATER AND ENVIRONMENTAL CONSULTING

zone Planning Group

DRAWING TITLE

FINAL SURFACE AND SEDIMENT AND EROSION PLAN
SHEET 01

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

Postal Address
PO Box 2484
Southport QLD 4215

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

DESIGNED	RB	DRAWN	EP
APPROVED		RPEQ	DATE 09-08-18

DRAWING NUMBER: 36001-PE-070
AMEND.: E

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY EARTHWORKS

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

E	16-12-21	STAGE BDY & TXT AMENDED
D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT, SILT FENCES & CONTOURS REVISED
B	27-03-19	LOT NO'S & STAGES AMENDED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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DRAWING TITLE

FINAL SURFACE AND SEDIMENT AND EROSION PLAN
SHEET 02

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

Postal Address
PO Box 2484
Southport QLD 4215

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

DESIGNED	RB	DRAWN	EP
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DRAWING NUMBER 36001-PE-071 | AMEND. E

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY EARTHWORKS

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

E	16-12-21	STAGE BDY & TXT AMENDED
D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT, SILT FENCES & CONTOURS REVISED
B	27-03-19	LOTS, LOT NO'S & STAGES AMENDED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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DRAWING TITLE

FINAL SURFACE AND SEDIMENT AND EROSION PLAN SHEET 03

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As
Mortons-Urban Solutions
ABN 39 116 375 065

mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

Postal Address
PO Box 2484
Southport QLD 4215

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

DESIGNED	RB	DRAWN	EP
APPROVED		RPEQ	DATE 09-08-18

DRAWING NUMBER	AMEND.
36001-PE-072	E

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY EARTHWORKS

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

PRE	DATE	AMENDMENT
E	16-12-21	STAGE BDY & TXT AMENDED
D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT, SILT FENCES & CONTOURS REVISED
B	27-03-19	LOT NO'S & STAGES AMENDED
A	11-09-18	COUNCIL ISSUE

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FINAL SURFACE AND SEDIMENT AND EROSION PLAN SHEET 04

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As
Mortons-Urban Solutions
ABN: 39 116 375 065

mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

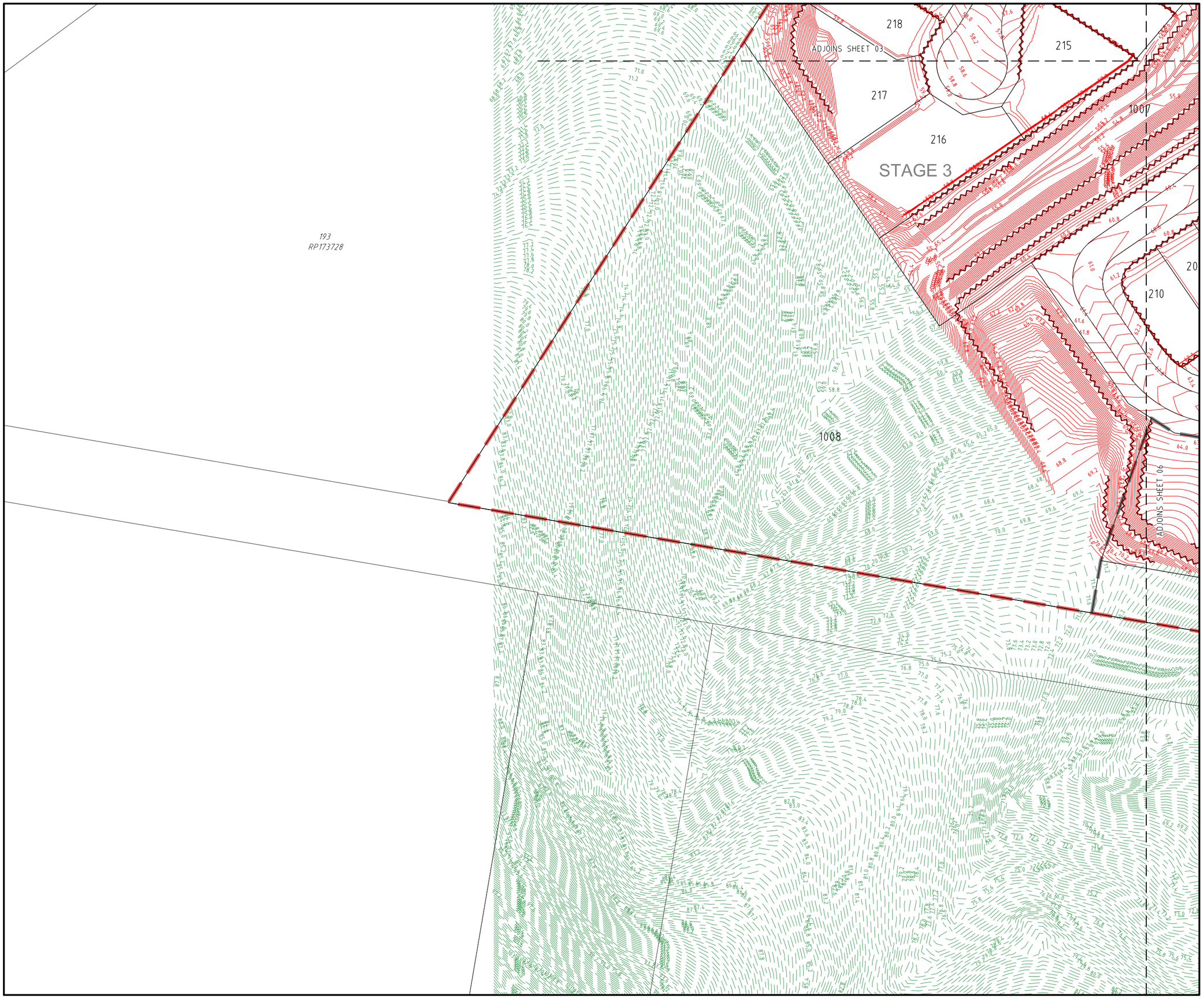
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APPROVED		RPEQ	DATE 09-08-18

DRAWING NUMBER 36001-PE-073 | AMEND. E

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY EARTHWORKS

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

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Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

E	16-12-21	STAGE BDY & TXT AMENDED
D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT, SILT FENCES & CONTOURS REVISED
B	27-03-19	LOT NO'S & STAGES AMENDED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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FINAL SURFACE AND SEDIMENT AND EROSION PLAN
SHEET 05

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
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MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN 39 116 375 065

mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

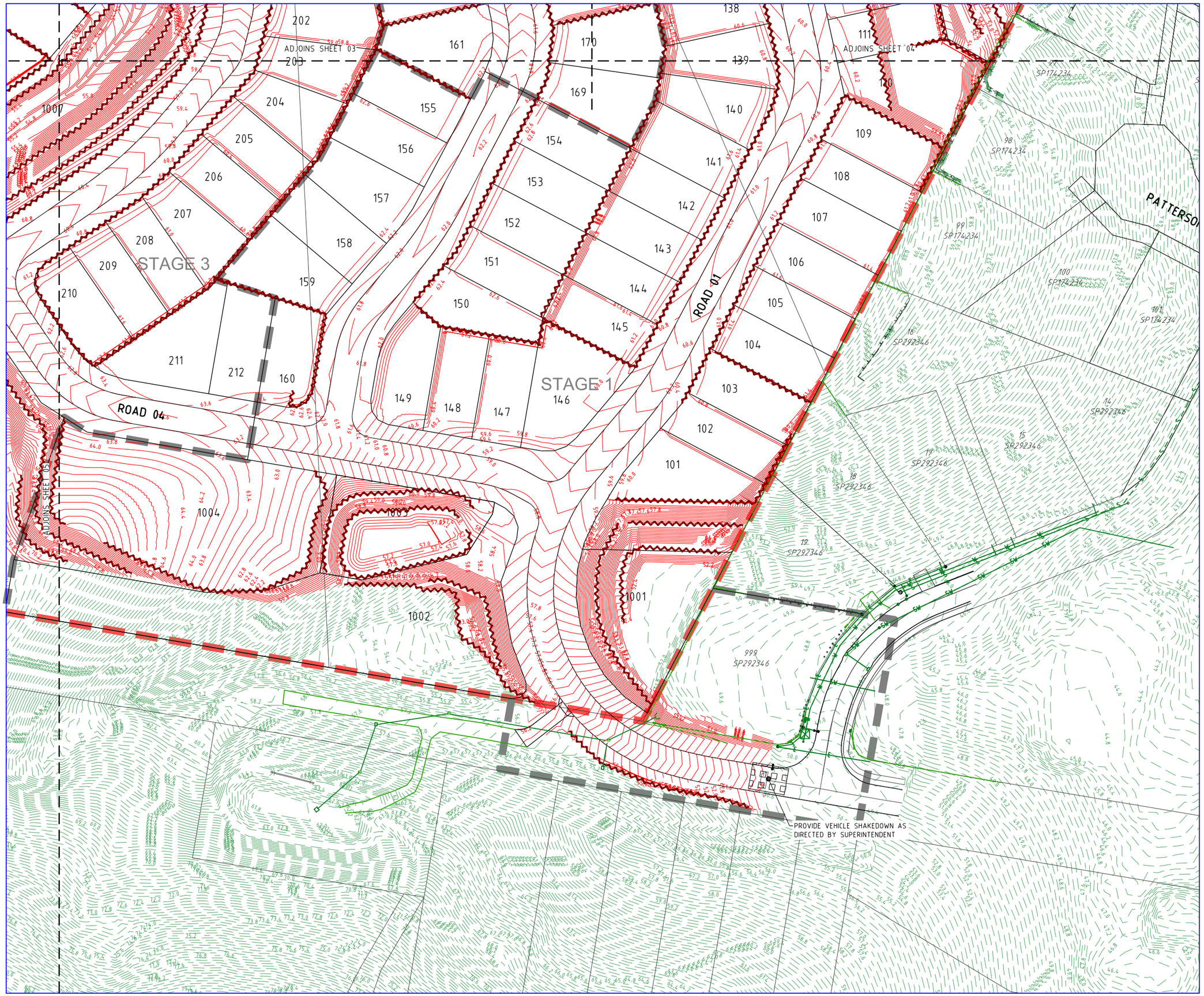
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Southport QLD 4215

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

DESIGNED	RB	DRAWN	EP
APPROVED		RPEQ	DATE 09-08-18

DRAWING NUMBER	AMEND.
36001-PE-074	E

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY EARTHWORKS

RP DESCRIPTION

LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE
TENDER	
COUNCIL	11-09-18
CONSTRUCTION	

PRE	DATE	AMENDMENT
E	16-12-21	STAGE BDY & TXT AMENDED
D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT, SILT FENCES & CONTOURS REVISED
B	27-03-19	CONOTURS, SILT FENCES, LOT NO'S & STAGES AMENDED
A	11-09-18	COUNCIL ISSUE

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DRAWING TITLE

FINAL SURFACE AND SEDIMENT AND EROSION PLAN
SHEET 06

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 865

Postal Address
PO Box 2484
Southport QLD 4215

mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

DESIGNED	RB	DRAWN	EP
APPROVED		RPEQ	DATE 09-08-18

DRAWING NUMBER: 36001-PE-075
AMEND.: E

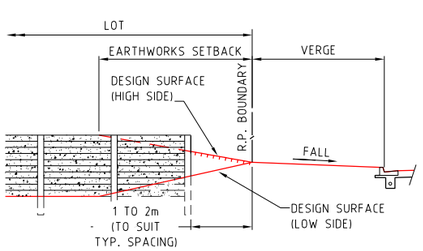
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GENERAL

1. CONTRACT SPECIFICATIONS
   ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE CONTRACT SPECIFICATION.
2. SETOUT
   SURVEY SETOUT INFORMATION HAS BEEN ESTABLISHED ON SITE BY THE PRINCIPAL'S SURVEYOR TO ENABLE THE CONTRACTOR TO ACCURATELY SETOUT THE WORKS TO THE CO-ORDINATES SHOWN. SETOUT INFORMATION SHALL NOT BE OBTAINED BY SCALING FROM THESE DRAWINGS.
3. DATUM
   LEVELS SHOWN ARE TO A.H.D.
4. EXISTING SERVICES - EXTERNAL WORKS
   THE LOCATIONS OF ALL EXISTING SERVICES WITHIN THE WORK AREA SHALL BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION COMMENCING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE RELEVANT AUTHORITIES AND TO ENSURE THAT THE EXISTING SERVICES ARE NOT DAMAGED OR DISTURBED IN ANY WAY.
5. ALL MATERIALS ARISING FROM RETAINING WALL CONSTRUCTION ARE TO BE COMPACTED TO FUTURE STAGES, TO LEVEL 1 OR IF DIRECTED BY THE SUPERINTENDENT SHALL BE TRUCKED TO A LICENSED TIP.

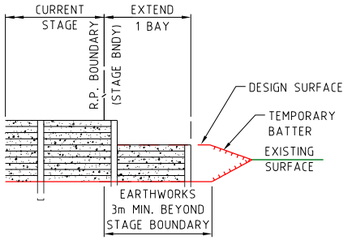
LEGEND

- EXISTING KERB (INVERT)
- EXISTING PROPERTY LINE
- 1.0 EXISTING CONTOURS
- EXISTING RETAINING WALL
- FUTURE KERB (INVERT)
- FUTURE PROPERTY LINE
- 1.0 FUTURE CONTOURS
- FUTURE RETAINING WALL
- PROPOSED KERB (INVERT)
- PROPOSED PROPERTY LINE
- 1.0 DESIGN CONTOURS
- PROPOSED RETAINING WALL
- PL50.4 NOMINAL LOT PAD LEVEL
- **RH1.0** INDICATIVE RETAINED HEIGHT



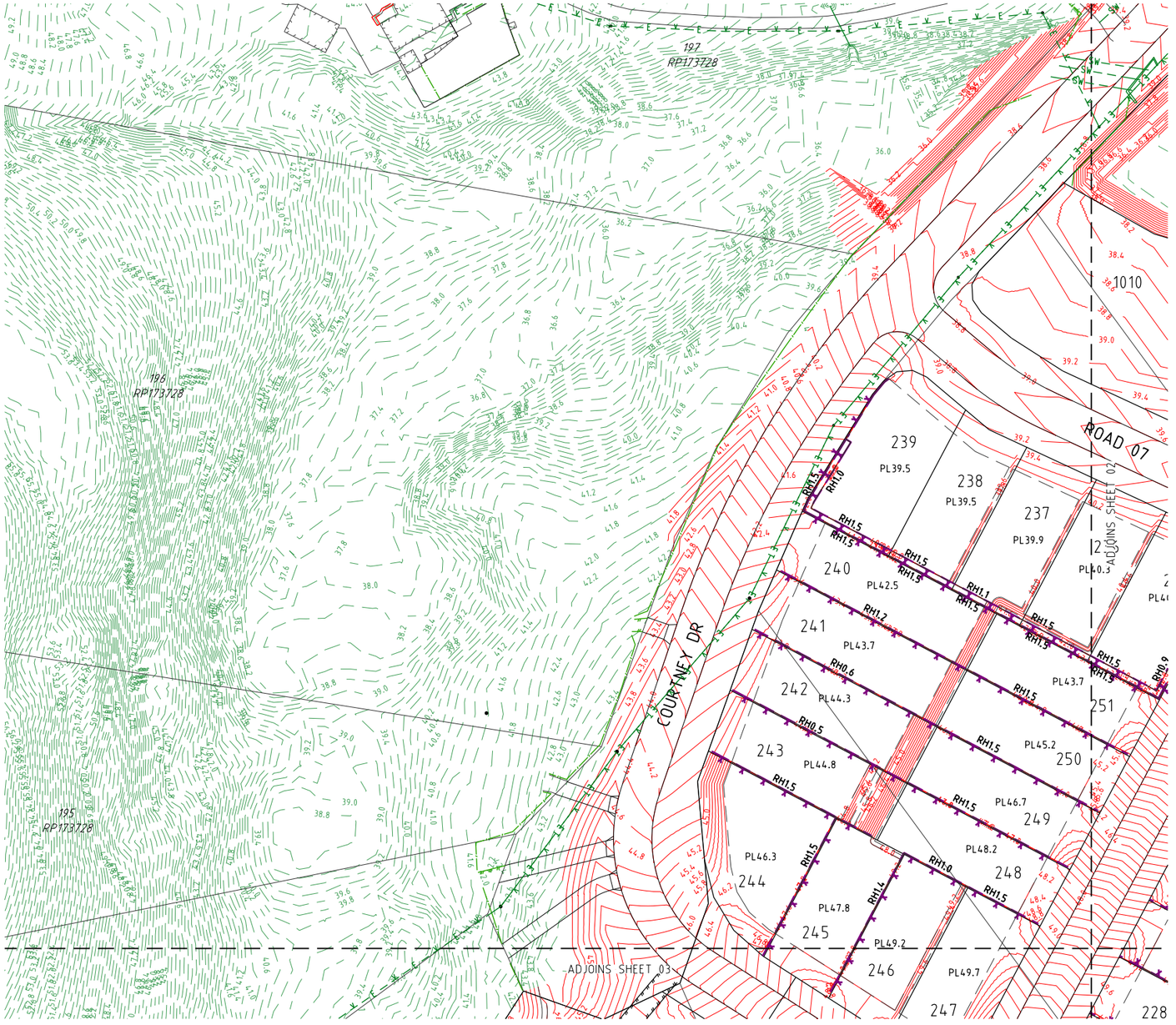
TYPICAL SIDE BOUNDARY CONSTRUCTION

SCALE 1:100 - A1 (1:200 - A3)

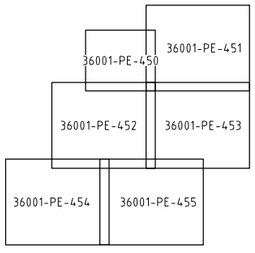


TYPICAL STAGE BOUNDARY CONSTRUCTION

SCALE 1:100 - A1 (1:200 - A3)



SHEET LAYOUT



PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY EARTHWORKS

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT, WALLS, PAD LEVELS & CONTOURS REVISED
B	27-03-19	LOT NO'S & STAGES AMENDED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

BIOME WATER AND ENVIRONMENTAL CONSULTING

zone Planning Group

DRAWING TITLE

RETAINING WALL
AND DETAIL GRADING PLAN
SHEET 01

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As
Mortons-Urban Solutions
ABN: 39 116 375 065

Postal Address
PO Box 2484
Southport QLD 4215

mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

DESIGNED	RB	DRAWN	EP
APPROVED		RPEQ	DATE 09-08-18

DRAWING NUMBER: 36001-PE-450
AMEND.: D

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY EARTHWORKS

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT, WALLS, PAD LEVELS & CONTOURS REVISED
B	27-03-19	LOT NO'S & STAGES AMENDED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

BIOME WATER AND ENVIRONMENTAL CONSULTING

zone Planning Group

DRAWING TITLE

RETAINING WALL
AND DETAIL GRADING PLAN
SHEET 02

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

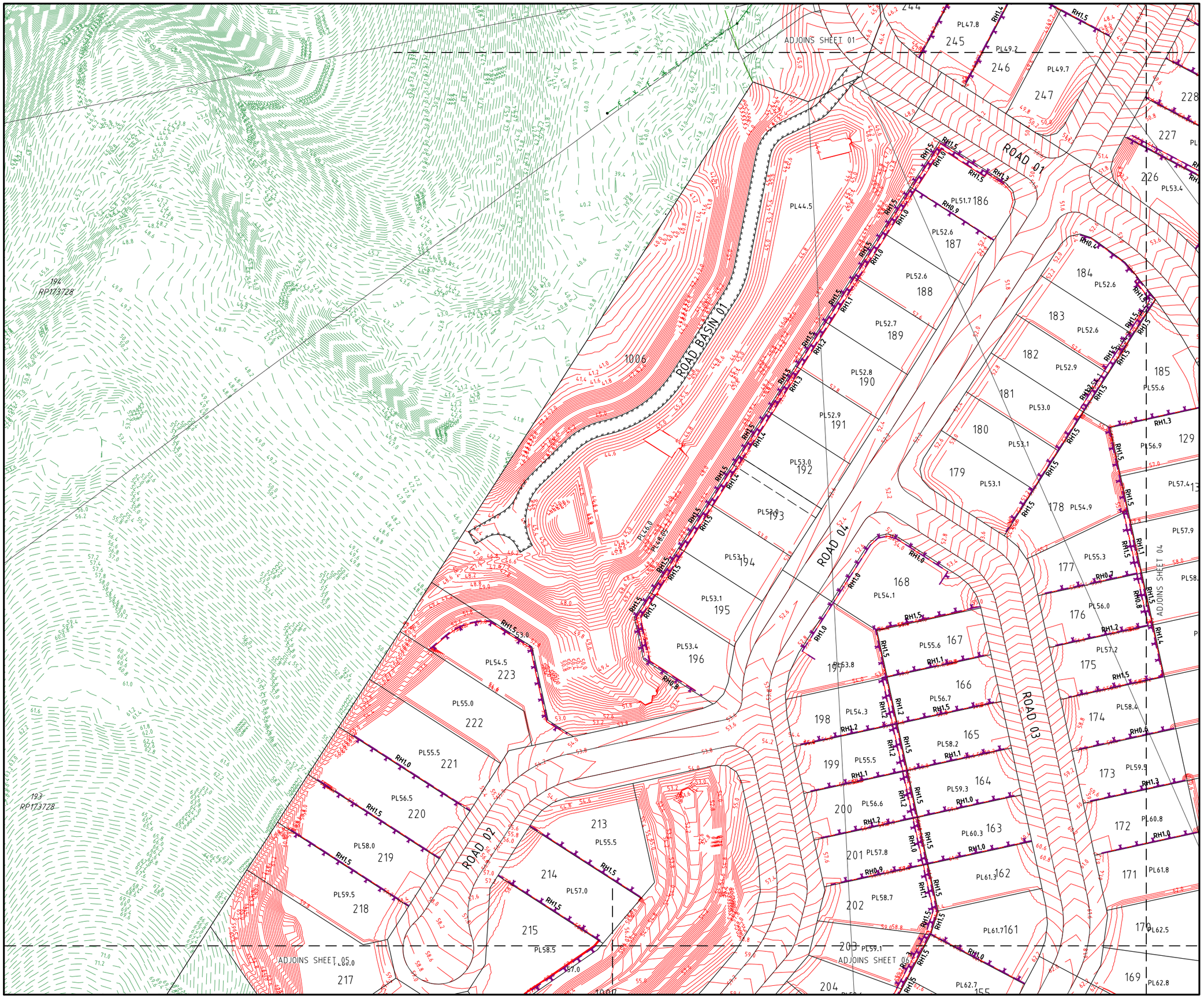
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Gold Coast Office
Suite 9, 19 Short St
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DESIGNED	RB	DRAWN	EP
APPROVED		RPEQ	DATE 09-08-18

DRAWING NUMBER 36001-PE-451 | AMEND. D

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY EARTHWORKS

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT, WALLS, PAD LEVELS & CONTOURS REVISED
B	27-03-19	LOTS, LOT NO'S & STAGES AMENDED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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DRAWING TITLE

RETAINING WALL
AND DETAIL GRADING PLAN
SHEET 03

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Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

Postal Address
PO Box 2484
Southport QLD 4215

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Suite 9, 19 Short St
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DRAWING NUMBER	AMEND.
36001-PE-452	D

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY EARTHWORKS

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

PRE	DATE	AMENDMENT
D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT, WALLS, PAD LEVELS & CONTOURS REVISED
B	27-03-19	LOT NO'S & STAGES AMENDED
A	11-09-18	COUNCIL ISSUE

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DRAWING TITLE

RETAINING WALL
AND DETAIL GRADING PLAN
SHEET 04

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Civil Engineering
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MUS Pty Ltd T/As
Mortons-Urban Solutions
ABN: 39 116 375 065

mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

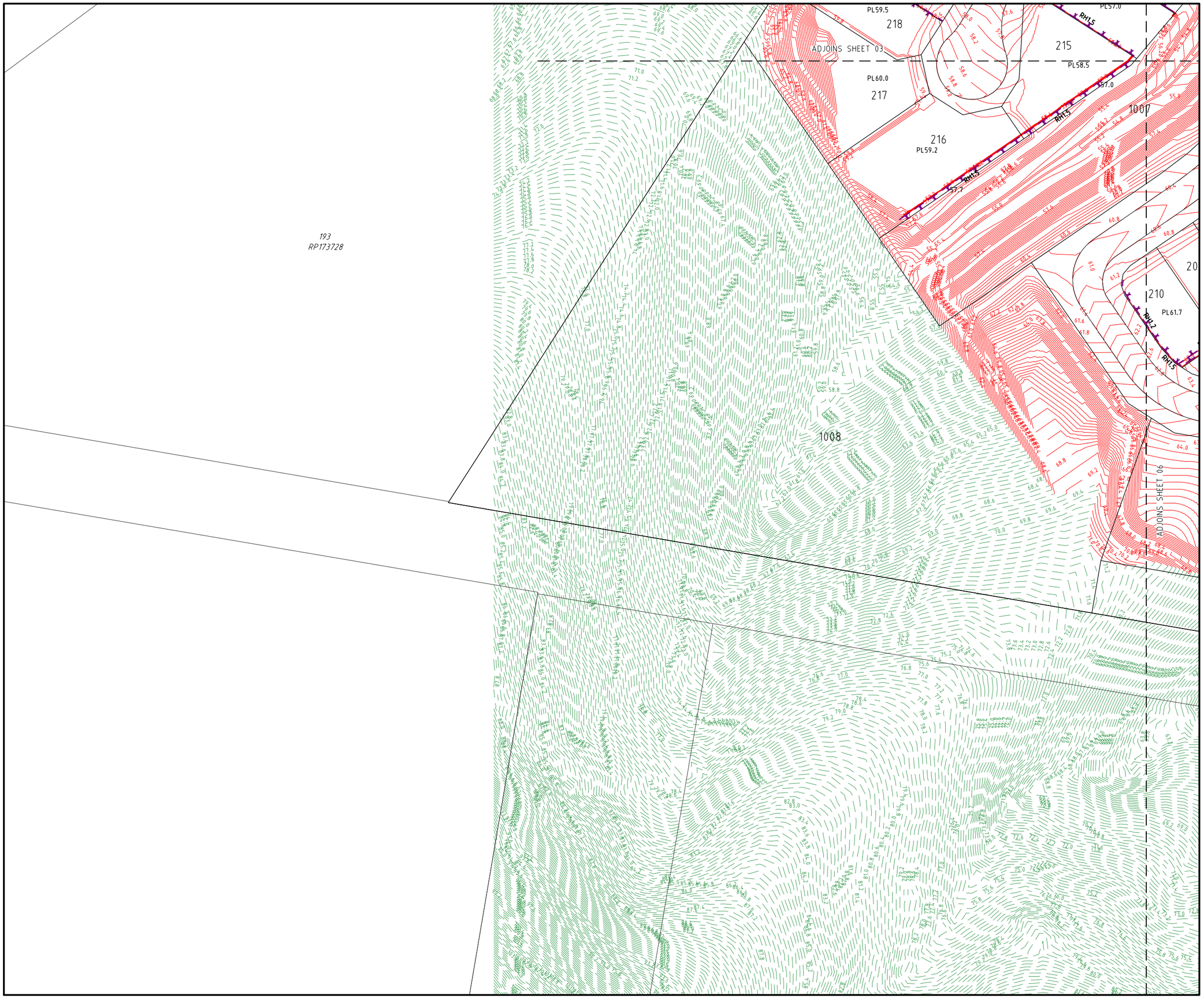
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APPROVED		RPEQ	DATE 09-08-18

DRAWING NUMBER 36001-PE-453 | AMEND. D

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY EARTHWORKS

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT, WALLS, PAD LEVELS & CONTOURS REVISED
B	27-03-19	LOTS, LOT NO'S & STAGES AMENDED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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DRAWING TITLE

RETAINING WALL
AND DETAIL GRADING PLAN
SHEET 05

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MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN 39 116 375 065

mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

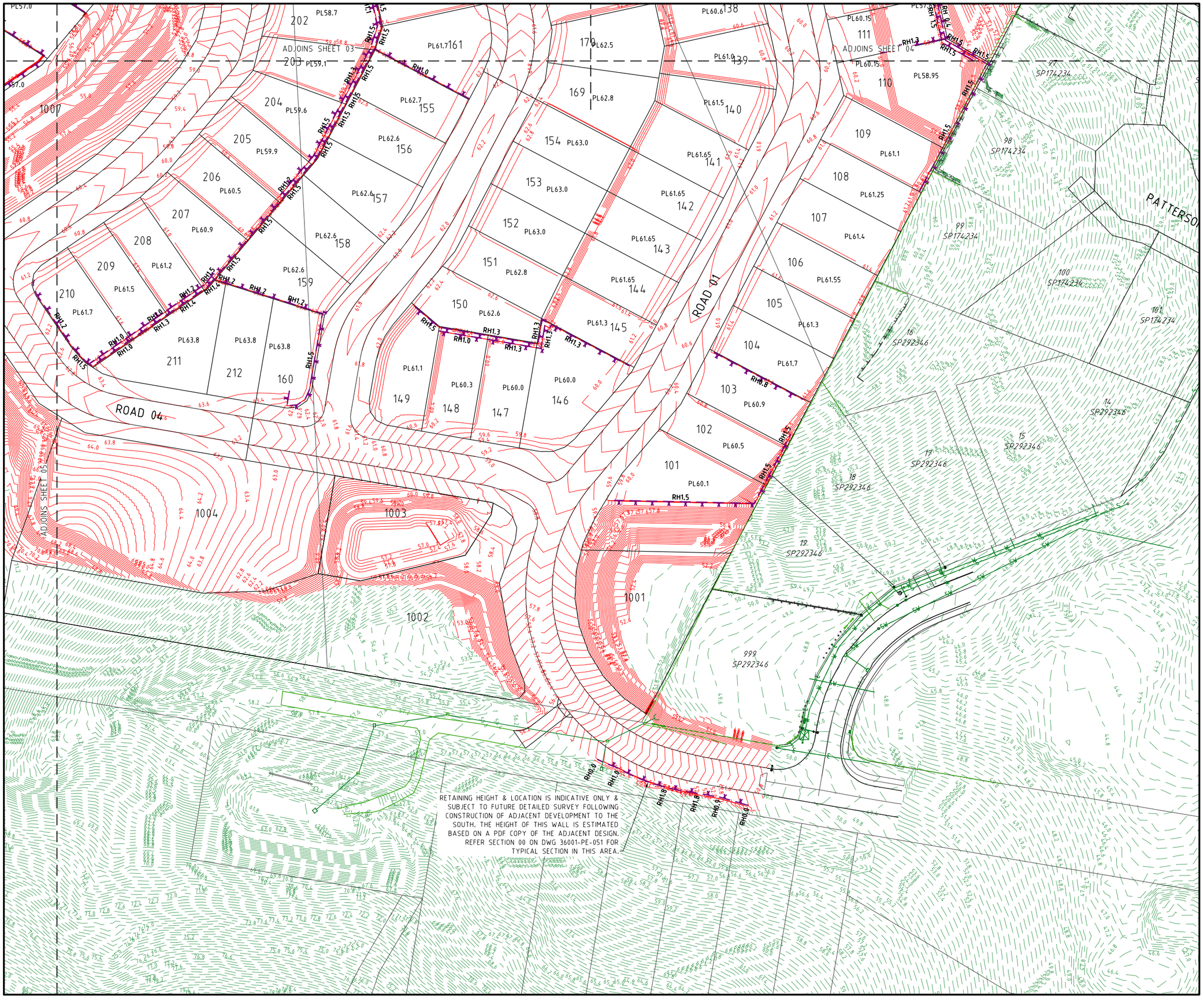
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APPROVED		RPEQ	DATE 09-08-18

DRAWING NUMBER	AMEND.
36001-PE-454	D

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY EARTHWORKS

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT, WALLS, PAD LEVELS & CONTOURS REVISED
B	27-03-19	R.WALL ADDED,CONTOURS,LOT NO'S & STAGES AMENDED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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DRAWING TITLE

RETAINING WALL
AND DETAIL GRADING PLAN
SHEET 06

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Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

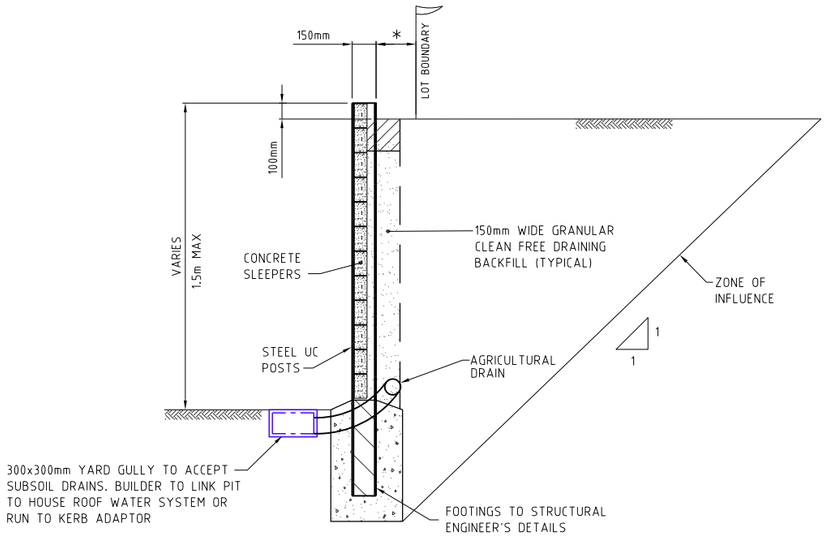
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DESIGNED	RB	DRAWN	EP
APPROVED		RPEQ	DATE 09-08-18

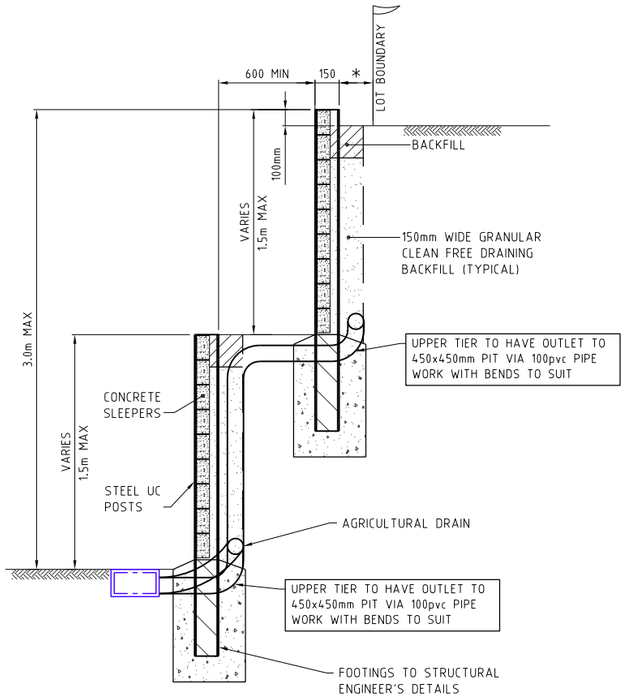
DRAWING NUMBER	AMEND.
36001-PE-455	D

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CROSS SECTION OF CONCRETE RETAINING WALL

SCALE 1:20 - A1 (1:40 - A3)



CROSS SECTION OF SPLIT CONCRETE RETAINING WALL

SCALE 1:20 - A1 (1:40 - A3)

NOTES:

1. RETAINING WALL DETAILS ARE INDICATIVE ONLY.
2. CONTRACTOR TO ARRANGE FOR DESIGN AND CONSTRUCTION OF WALLS BY RPEQ STRUCTURAL ENGINEER. CONTRACTOR TO PROVIDE STRUCTURAL CERTIFICATION OF DESIGN AND FINAL CONSTRUCTION.
3. ALLOW FOR 5KPa LOADING TO WALLS EXCEPT ADJACENT TO ROADS WHICH REQUIRE A 10kPa LOADING.
4. CONTRACTOR TO CONFIRM LOCATION OF LOT BOUNDARY PRIOR TO COMMENCING WALL CONSTRUCTION.
5. THE BUILDING ON THE HIGHER SIDE OF THE RETAINING WALL MUST MAINTAIN AN OFFSET OR APPROPRIATE FOUNDATION STRUCTURES (EG; PIERS) IN ORDER TO ENSURE THE ENTIRE DEPTH OF THE RETAINING WALL IS FREE FROM THE ZONE OF INFLUENCE OF THE BUILDING/OVERBURDEN LOAD UNLESS OTHERWISE SPECIFIED BY STRUCTURAL ENGINEER.
6. STRUCTURAL ENGINEER TO DESIGN SLAB AND PIER.
7. AGRICULTURAL DRAIN TO DISCHARGE TO 300x300mm STORMWATER PIT. HOUSE BUILDER TO CONNECT 300x300mm STORMWATER PIT TO ROOFWATER SYSTEM.
8. RETAINING WALL DESIGN TO ALLOW FOR ALL SERVICES (ADJACENT OR BELOW) AND HAVE NO IMPACT.

* LOT - LOT = 0.2m
LOT - ROAD RESERVE = 0.4m

PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY EARTHWORKS

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 0.2 0.4 0.6 0.8 1.0m
Scale 1:20 - A1 (1:40 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

PRE	DATE	AMENDMENT
B	11-11-20	WALL HEIGHTS AMENDED
A	11-09-18	COUNCIL ISSUE

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BIOME WATER AND ENVIRONMENTAL CONSULTING

zone Planning Group

DRAWING TITLE

RETAINING WALL DETAILS SHEET 01

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088
Postal Address
PO Box 2484
Southport QLD 4215
Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

DESIGNED	RB	DRAWN	EP
APPROVED		RPEQ	DATE 09-08-18

DRAWING NUMBER 36001-PE-460 | AMEND. B

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APPENDIX D

Preliminary Engineering Drawings

(Drawing No.: 36001-PRE-000 to 705, Issued 16th December 2021)
Prepared by Mortons-Urban Solutions

DATA TRANSMITTAL

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
ABN: 39 116 375 065 Tel: (07) 55711099

PROJECT NAME: COURTNEY DRIVE, UPPER COMERA PRELIMINARY ENGINEERING
JOB NO: 36001-PRE

DAY	11	04	17	30	13	16								
MONTH	09	04	04	10	11	12								
YEAR	18	19	19	19	20	21								

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COUNCIL				0/0/1										

FILE NO.	DESCRIPTION	AMENDMENT												
	GENERAL													
36001-PRE-000	COVER SHEET	A	B	C	D	E	F							
36001-PRE-005	ROAD HIERARCHY & STAGING PLAN	A	B	B	C	D	E							
	EARTHWORKS: COMBINED SERVICES													
36001-PRE-090	PLAN SHEET 01	A	B	B	C	D	E							
36001-PRE-091	PLAN SHEET 02	A	B	B	C	D	E							
36001-PRE-092	PLAN SHEET 03	A	B	C	D	E	F							
36001-PRE-093	PLAN SHEET 04	A	B	C	D	E	F							
36001-PRE-094	PLAN SHEET 05	A	B	C	D	E	F							
36001-PRE-095	PLAN SHEET 06	A	B	B	C	D	E							
~~36001-PRE-096~~	~~PLAN SHEET 07~~	~~A~~												
	ROADS: ROADWORKS													
36001-PRE-100	PLAN SHEET 01	A	B	B	C	D	E							
36001-PRE-101	PLAN SHEET 02	A	B	B	C	D	E							
36001-PRE-102	PLAN SHEET 03	A	B	B	C	D	E							
36001-PRE-103	PLAN SHEET 04	A	B	B	C	D	E							
36001-PRE-104	PLAN SHEET 05	A	B	B	C	D	E							
36001-PRE-105	PLAN SHEET 06	A	B	B	C	D	E							
36001-PRE-120	DETAILS SHEET 01	A	A	A	A	B	B							
	ROADS: LONGITUDINAL SECTIONS													
36001-PRE-200	ROAD 01	A	B	B	C	D	D							
36001-PRE-201	ROAD 01 (Cont.)	A	A	A	B	C	C							
36001-PRE-202	ROAD 02	A	A	A	B	C	C							
36001-PRE-203	ROAD 03 & ROAD 05	A	A	A	B	C	C							
36001-PRE-204	ROAD 04	A	A	A	B	C	C							
36001-PRE-205	ROAD 06 & ROAD 07	A	A	A	B	C	C							
36001-PRE-206	ROAD 08 & ROAD 10	A	A	A	B	C	C							
	SEWER: SEWER RETICULATION													
36001-PRE-500	PLAN SHEET 01	A	B	B	C	D	E							
36001-PRE-501	PLAN SHEET 02	A	B	B	C	D	E							
36001-PRE-502	PLAN SHEET 03	A	B	B	D	E	F							
36001-PRE-503	PLAN SHEET 04	A	B	B	D	E	F							
36001-PRE-504	PLAN SHEET 05	A	B	B	D	E	F							
36001-PRE-505	PLAN SHEET 06	A	B	B	C	D	E							
~~36001-PRE-506~~	~~PLAN SHEET 07~~	~~A~~												
	DRAINAGE: STORMWATER													
36001-PRE-600	PLAN SHEET 01	A	B	C	D	E	F							
36001-PRE-601	PLAN SHEET 02	A	B	C	D	E	F							
36001-PRE-602	PLAN SHEET 03	A	B	C	D	E	F							
36001-PRE-603	PLAN SHEET 04	A	B	C	D	E	F							
36001-PRE-604	PLAN SHEET 05	A	B	C	D	E	F							
36001-PRE-605	PLAN SHEET 06	A	B	C	D	E	F							
	WATER: WATER RETICULATION													
36001-PRE-700	PLAN SHEET 01	A	B	C	D	E	F							
36001-PRE-701	PLAN SHEET 02	A	B	C	D	E	F							
36001-PRE-702	PLAN SHEET 03	A	B	C	D	E	F							
36001-PRE-703	PLAN SHEET 04	A	B	C	D	E	F							
36001-PRE-704	PLAN SHEET 05	A	B	C	D	E	F							
36001-PRE-705	PLAN SHEET 06	A	B	C	D	E	F							

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REASON: Z - COUNCIL R - REVISION A - APPROVAL C - CONSTRUCTION S - AS REQUESTED T - TENDER P - PRELIMINARY X - INFORMATION	ZA	ZA	ZA	ZA	A	A								

PLEASE CHECK THAT YOU HAVE RECEIVED ALL DOCUMENTS AS LISTED ABOVE.

I hereby acknowledge receipt of the documents as detailed above.
Signed: _____ Date: / /
Company: _____

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COURTNEY DR, UPPER COOMERA

PRELIMINARY ENGINEERING

OVERALL

No. 36001-PRE

SCHEDULE OF DRAWINGS

NUMBER	REV	TITLE
GENERAL		
36001-PRE-000	F	COVER SHEET
36001-PRE-005	E	ROAD HIERARCHY & STAGING PLAN
EARTHWORKS. COMBINED SERVICES		
36001-PRE-090	E	PLAN SHEET 01
36001-PRE-091	E	PLAN SHEET 02
36001-PRE-092	F	PLAN SHEET 03
36001-PRE-093	F	PLAN SHEET 04
36001-PRE-094	F	PLAN SHEET 05
36001-PRE-095	E	PLAN SHEET 06
ROADS. ROADWORKS		
36001-PRE-100	E	PLAN SHEET 01
36001-PRE-101	E	PLAN SHEET 02
36001-PRE-102	E	PLAN SHEET 03
36001-PRE-103	E	PLAN SHEET 04
36001-PRE-104	E	PLAN SHEET 05
36001-PRE-105	E	PLAN SHEET 06
36001-PRE-120	B	DETAILS SHEET 01
ROADS. LONGITUDINAL SECTIONS		
36001-PRE-200	D	ROAD 01
36001-PRE-201	C	ROAD 01 (Cont.)
36001-PRE-202	C	ROAD 02 & ROAD 03
36001-PRE-203	C	ROAD 04
36001-PRE-204	C	ROAD 06 & ROAD 07
36001-PRE-205	C	ROAD 08, ROAD 09 & ROAD 10
36001-PRE-206	C	ROAD 11
SEWER. SEWER RETICULATION		
36001-PRE-500	E	PLAN SHEET 01
36001-PRE-501	E	PLAN SHEET 02
36001-PRE-502	F	PLAN SHEET 03
36001-PRE-503	F	PLAN SHEET 04
36001-PRE-504	F	PLAN SHEET 05
36001-PRE-505	E	PLAN SHEET 06
DRAINAGE. STORMWATER		
36001-PRE-600	F	PLAN SHEET 01
36001-PRE-601	F	PLAN SHEET 02
36001-PRE-602	F	PLAN SHEET 03
36001-PRE-603	F	PLAN SHEET 04
36001-PRE-604	F	PLAN SHEET 05
36001-PRE-605	F	PLAN SHEET 06
WATER. WATER RETICULATION		
36001-PRE-700	F	PLAN SHEET 01
36001-PRE-701	F	PLAN SHEET 02
36001-PRE-702	F	PLAN SHEET 03
36001-PRE-703	F	PLAN SHEET 04
36001-PRE-704	F	PLAN SHEET 05
36001-PRE-705	F	PLAN SHEET 06

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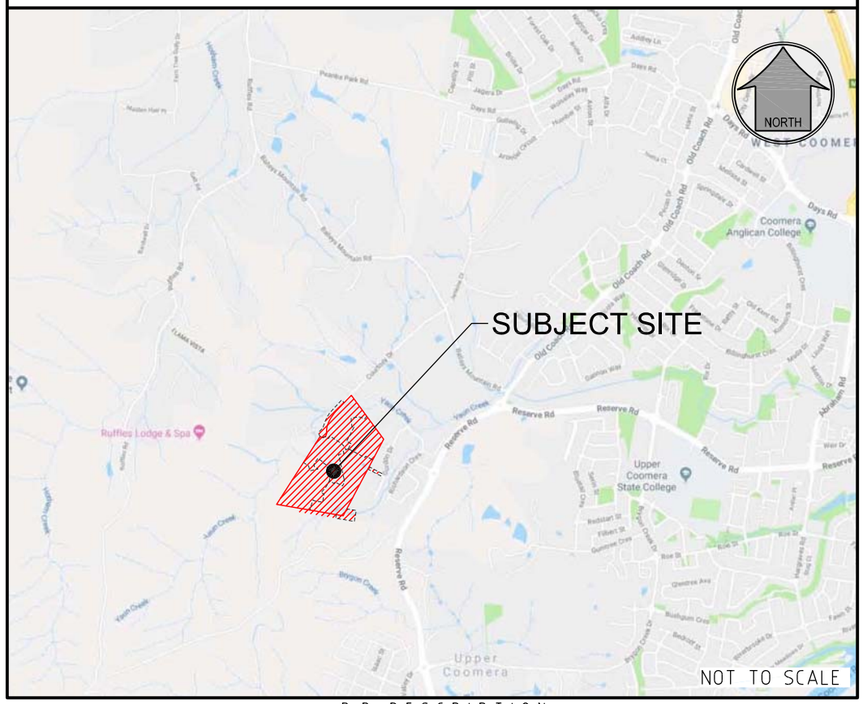
GALLERY
THE ART OF LIVING

SUB-CONSULTANTS

BIOME WATER AND ENVIRONMENTAL CONSULTING

zone Planning Group

LOCALITY PLAN



R. P. DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

DRAWING NUMBER 36001-PRE-000 | AMEND. F

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GENERAL

1. CONTRACT SPECIFICATIONS
   ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE CONTRACT SPECIFICATION.
2. SETOUT
   SURVEY SETOUT INFORMATION HAS BEEN ESTABLISHED ON SITE BY THE PRINCIPAL'S SURVEYOR TO ENABLE THE CONTRACTOR TO ACCURATELY SETOUT THE WORKS TO THE CO-ORDINATES SHOWN. SETOUT INFORMATION SHALL NOT BE OBTAINED BY SCALING FROM THESE DRAWINGS.
3. DATUM
   LEVELS SHOWN ARE TO A.H.D.
4. TRENCH SPOIL
   ALL MATERIALS ARISING FROM ROADS AND SERVICES ARE TO BE COMPACTED TO FUTURE STAGES, TO LEVEL 1 OR IF DIRECTED BY THE SUPERINTENDENT SHALL BE TRUCKED TO A LICENSED TIP AT THE CONTRACTOR'S EXPENSE.
5. CHECK ELECTRONIC SETOUT
   CONTRACTOR IS RESPONSIBLE TO ENSURE ANY ELECTRONIC DATA FILES MATCH THE DRAWINGS.
6. PRE START
   a. ERECT SITE SIGNAGE, CONSTRUCT ENTRY AND EXIT POINT AS INDICATED.
   b. CONSTRUCT VEHICLE WASHDOWN AREA AND ASSOCIATED SILT MANAGEMENT DEVICES.
   c. CONSTRUCT SITE OFFICE AND STORAGE COMPOUND AREA.
   d. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS PER THE CONTRACTOR'S EROSION AND SEDIMENT CONTROL PLAN.
   e. ERECT TEMPORARY TREE PROTECTION FENCING IN ACCORDANCE WITH THE APPROVED VEGETATION MANAGEMENT PLAN AND AUTHORITIES APPROVAL CONDITIONS (IF REQUIRED).
7. HEALTH AND SAFETY
   ALL WORKS UNDERTAKEN BY THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE WORKPLACE HEALTH AND SAFETY LEGISLATION.

PROJECT SPECIFIC REPORTS

THE CONTRACTOR MUST FOLLOW THE RECOMMENDATIONS AND PROCEDURES OUTLINED IN THE FOLLOWING REPORTS AT ALL TIMES:

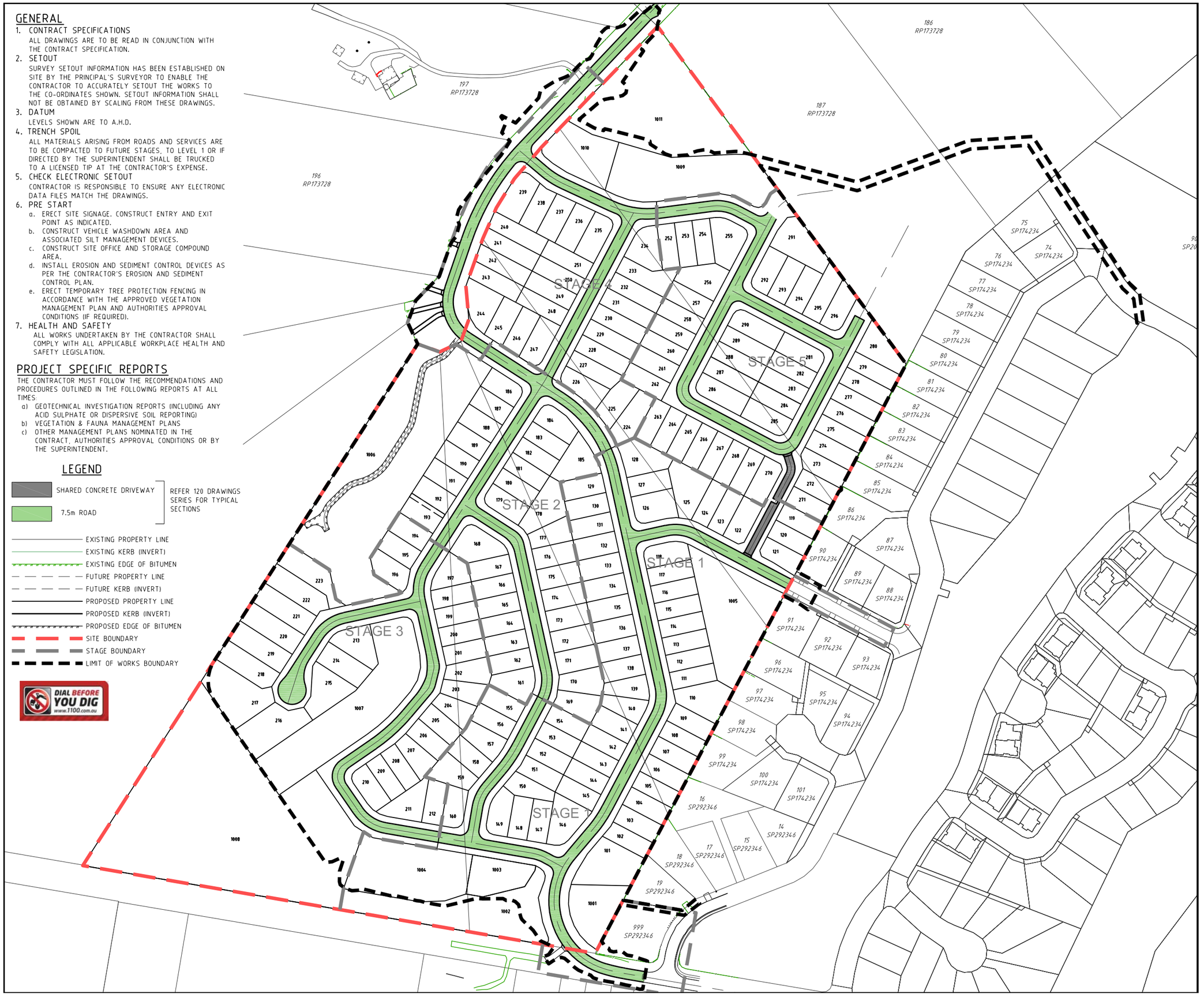
a) GEOTECHNICAL INVESTIGATION REPORTS (INCLUDING ANY ACID SULPHATE OR DISPERSIVE SOIL REPORTING)
b) VEGETATION & FAUNA MANAGEMENT PLANS
c) OTHER MANAGEMENT PLANS NOMINATED IN THE CONTRACT, AUTHORITIES APPROVAL CONDITIONS OR BY THE SUPERINTENDENT.

LEGEND

SHARED CONCRETE DRIVEWAY
7.5m ROAD
REFER 120 DRAWINGS SERIES FOR TYPICAL SECTIONS

EXISTING PROPERTY LINE
EXISTING KERB (INVERT)
EXISTING EDGE OF BITUMEN
FUTURE PROPERTY LINE
FUTURE KERB (INVERT)
PROPOSED PROPERTY LINE
PROPOSED KERB (INVERT)
PROPOSED EDGE OF BITUMEN
SITE BOUNDARY
STAGE BOUNDARY
LIMIT OF WORKS BOUNDARY

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 12.5 25 37.5 50 62.5m
Scale 1:1250 - A1 (1:2500 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

E	16-12-21	STAGE BDY & TXT AMENDED
D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT,LIMIT WORKS & ROAD HEIRARCHY REVISED
B	28-03-19	LOT NO'S, STAGES & LIMIT OF WORKS AMENDED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

BIOME WATER AND ENVIRONMENTAL CONSULTING

zone Planning Group

DRAWING TITLE

ROAD HIERARCHY
AND
STAGING PLAN
SHEET 01

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

Postal Address
PO Box 2484
Southport QLD 4215

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

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APPROVED		RPEQ	DATE 14-08-18

DRAWING NUMBER	AMEND.
36001-PRE-005	E

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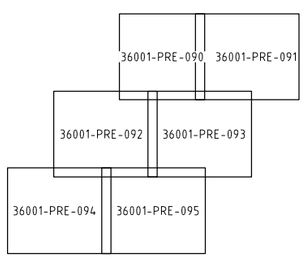
CONSTRUCTION SERVICES

1. CONSTRUCTION OF SEWER/ROOFWATER/STORMWATER/SERVICES
   EXCAVATED MATERIAL TO BE PLACED ON HIGH SIDE OF TRENCH AND TO PROTECT PIPE WORK AND DIRECT SURFACE MATERIAL AWAY FROM EXCAVATIONS.
   TOPSOIL AND GRASS SEED AREAS IN ALLOTMENTS IMMEDIATELY AFTER COMPLETING THE SEWER AND ROOFWATER DRAINAGE CONSTRUCTION.
   DEPRESS GROUND AROUND TEMPORARY FIELD INLETS TO CREATE SILT POND.
2. TRIP HAZARD
   MANHOLES OR STRUCTURES INSTALLED IN THE ROAD, FOOTPATH OR VERGE MUST MATCH NEATLY WITH NO TRIP HAZARD.
3. EXISTING SERVICES - EXTERNAL WORKS
   THE LOCATIONS OF ALL EXISTING SERVICES WITHIN THE WORK AREA SHALL BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION COMMENCING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE RELEVANT AUTHORITIES AND TO ENSURE THAT THE EXISTING SERVICES ARE NOT DAMAGED OR DISTURBED IN ANY WAY.

LEGEND

- EXISTING PROPERTY LINE
- EXISTING KERB (INVERT)
- EXISTING EDGE OF BITUMEN
- EXISTING FOOTPATH
- EXISTING RISING MAIN
- EXISTING SEWER
- EXISTING STORMWATER
- EXISTING ROOFWATER
- EXISTING SUBSOIL
- EXISTING WATER
- EXISTING WATER
- EXISTING WATER
- EXISTING WATER
- EXISTING WATER
- EXISTING WATER
- EXISTING WATER CONDUIT
- PROPOSED PROPERTY LINE
- PROPOSED KERB (INVERT)
- PROPOSED EDGE OF BITUMEN
- PROPOSED FOOTPATH
- PROPOSED RISING MAIN
- PROPOSED SEWER
- PROPOSED STORMWATER
- PROPOSED ROOFWATER
- PROPOSED SUBSOIL
- PROPOSED WATER
- PROPOSED WATER CONDUIT
- FUTURE PROPERTY LINE
- FUTURE KERB (INVERT)
- FUTURE FOOTPATH
- FUTURE RISING MAIN
- FUTURE SEWER
- FUTURE STORMWATER
- FUTURE ROOFWATER
- FUTURE SUBSOIL
- FUTURE WATER
- FUTURE WATER
- FUTURE WATER
- FUTURE WATER
- FUTURE WATER
- FUTURE WATER CONDUIT
- SITE BOUNDARY
- STAGE BOUNDARY

SHEET LAYOUT



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198 RP173728

197 RP173728

187 RP173728

1011

1010

1009

ROAD 07

COURTNEY DR

ROAD 10

ROAD 08

STAGE 4

STAGE 5

239 238 237 236 235 240 241 242 243 244 245 251 250 249 248 247 246 234 252 253 254 255 233 232 231 230 229 228 227 256 257 258 259 260 291 292 293 294 290 289

ADJOINS SHEET 02

ADJOINS SHEET 03

ADJOINS SHEET 04

PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

E	16-12-21	STAGE BDY & TXT AMENDED
D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT & SERVICES REVISED
B	28-03-19	SHEET LAYOUT, LOT NO'S & STAGES AMENDED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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BIOME WATER AND ENVIRONMENTAL CONSULTING

zone Planning Group

DRAWING TITLE

COMBINED SERVICES PLAN
SHEET 01

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

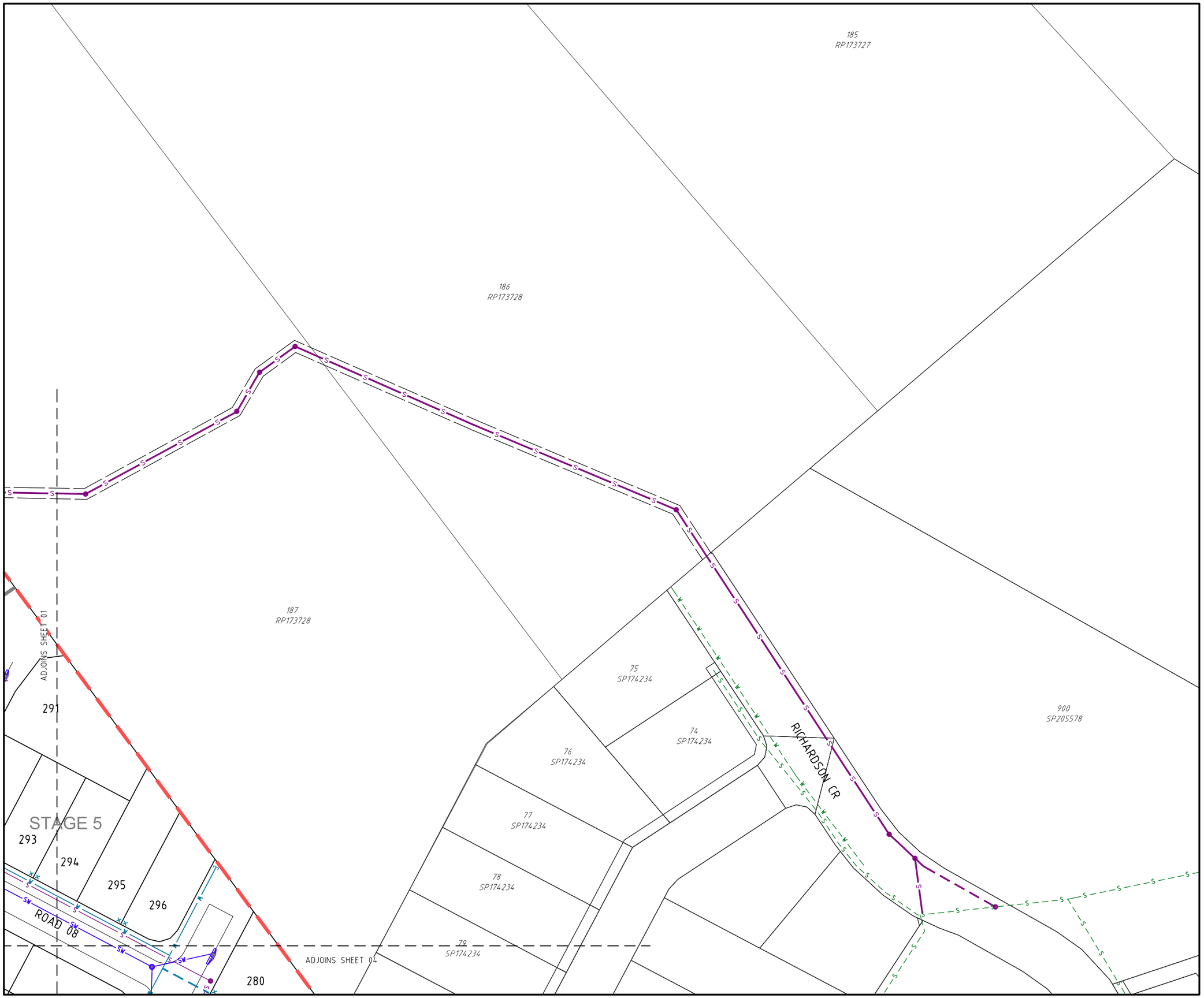
Postal Address
PO Box 2484
Southport QLD 4215

Gold Coast Office
Suite 9, 19 Short St
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DRAWING NUMBER 36001-PRE-090 | AMEND. E

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

PRE	DATE	AMENDMENT
E	16-12-21	STAGE BDY & TXT AMENDED
D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT & SERVICES REVISED
B	28-03-19	LOT NO'S, STAGES & SHEET LAYOUT AMENDED
A	11-09-18	COUNCIL ISSUE

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Urban & Regional Planning
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Project Coordination

MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065

Postal Address
PO Box 2484
Southport QLD 4215

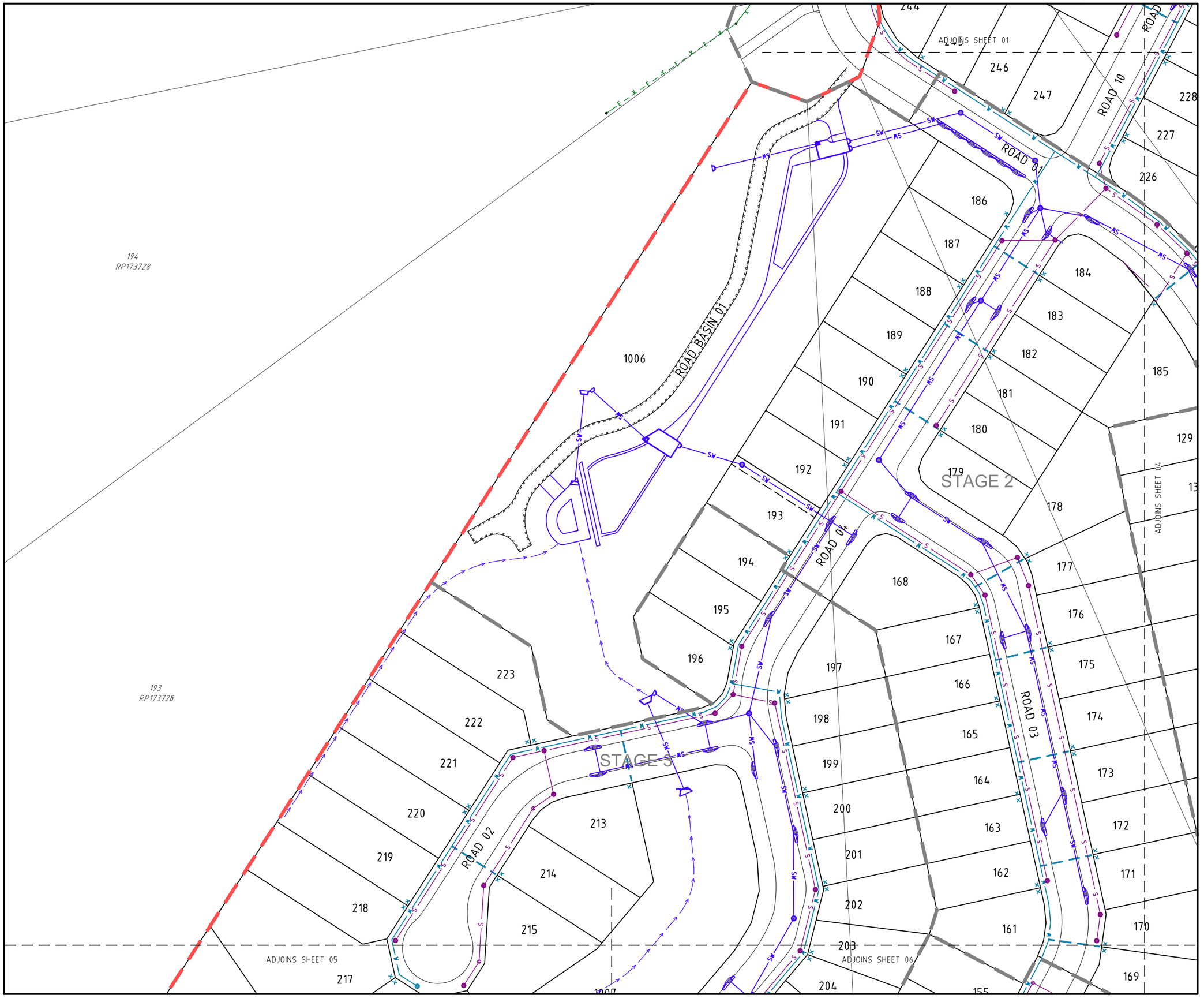
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

Gold Coast Office
Suite 9, 19 Short St
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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

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NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

PRE	DATE	AMENDMENT
F	16-12-21	STAGE BDY & TXT AMENDED
E	11-11-20	LOT LAYOUT AND DESIGN REVISED
D	24-10-19	LOT LAYOUT & SERVICES REVISED
C	16-04-19	SEWER AMENDED
B	28-03-19	LOTS, LOT NO'S, STAGES & SHEET LAYOUT AMENDED
A	11-09-18	COUNCIL ISSUE

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MUS Pty Ltd T/As
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

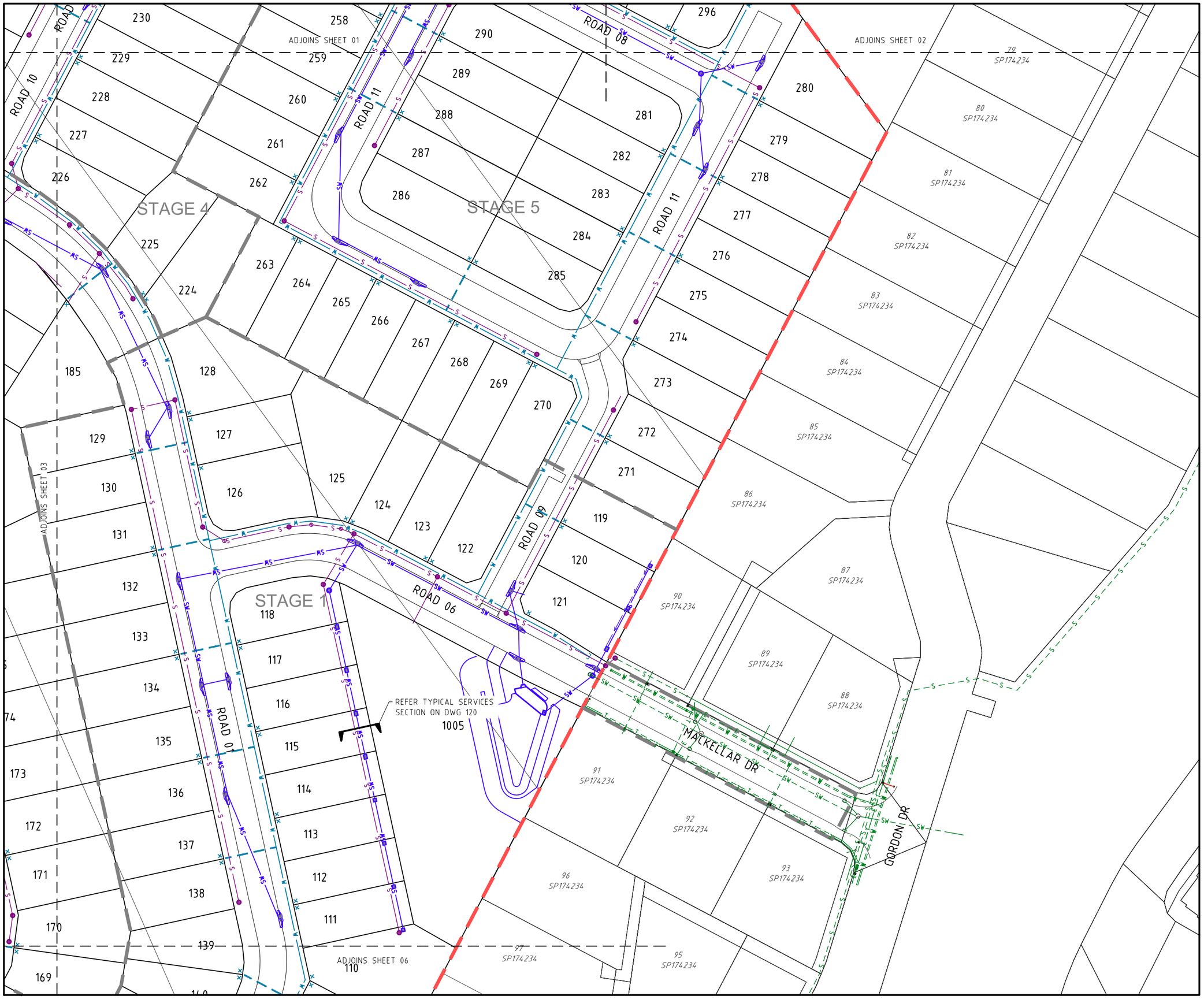
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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

PRE	DATE	AMENDMENT
F	16-12-21	STAGE BDY & TXT AMENDED
E	11-11-20	LOT LAYOUT AND DESIGN REVISED
D	24-10-19	LOT LAYOUT & SERVICES REVISED
C	16-04-19	SEWER AMENDED
B	28-03-19	LOT NO'S, STAGES & SHEET LAYOUT AMENDED
A	11-09-18	COUNCIL ISSUE

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Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

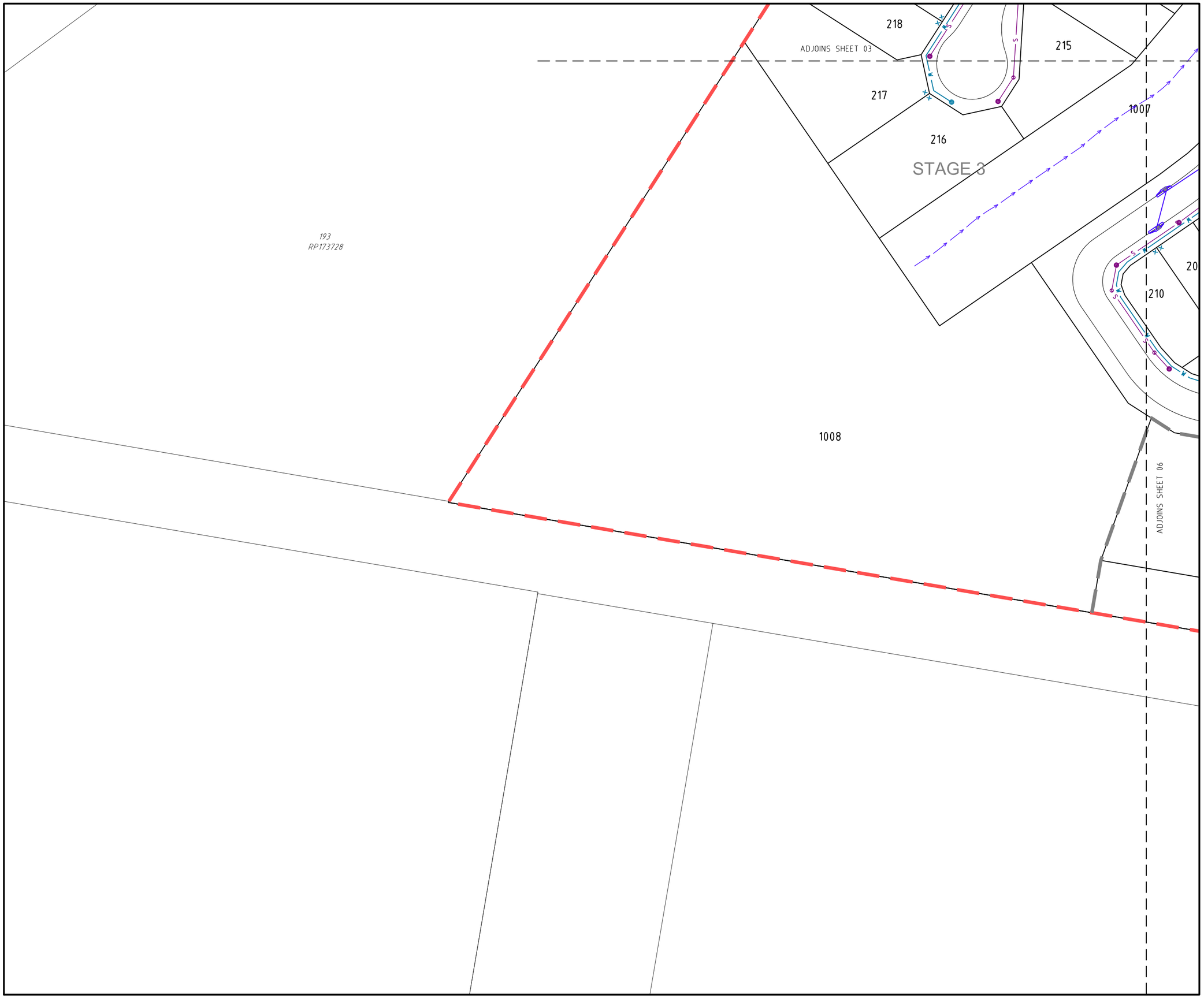
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DRAWING NUMBER	AMEND.
36001-PRE-093	F

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

PRE	DATE	AMENDMENT
F	16-12--21	STAGE BDY & TXT AMENDED
E	11-11-20	LOT LAYOUT AND DESIGN REVISED
D	24-10-19	LOT LAYOUT & SERVICES REVISED
C	16-04-19	SEWER AMENDED
B	28-03-19	LOTS, LOT NO'S, STAGES & SHEET LAYOUT AMENDED
A	11-09-18	COUNCIL ISSUE

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Project Coordination

MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065

mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

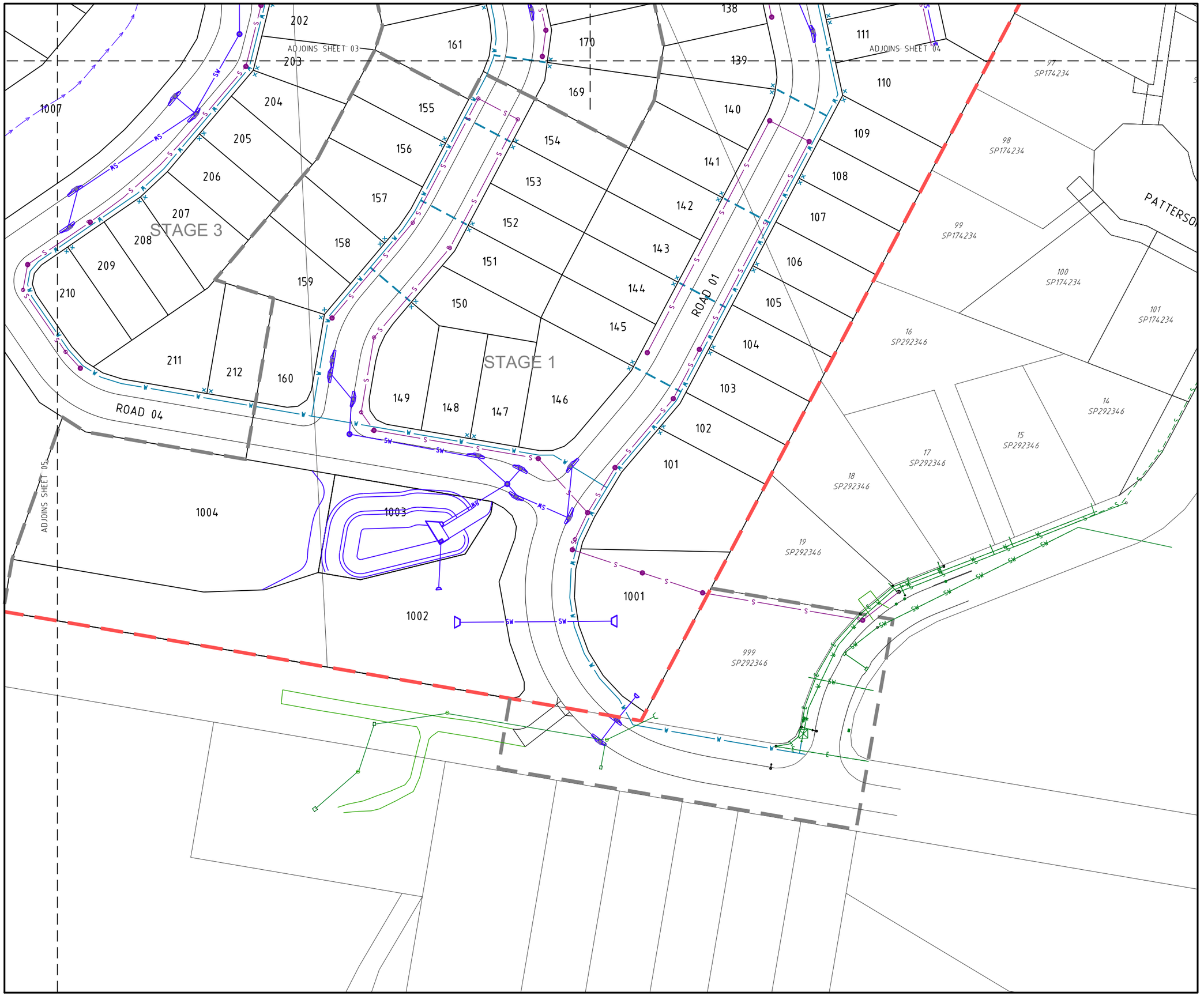
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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

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NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

E	16-12-21	STAGE BDY & TXT AMENDED
D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT & SERVICES REVISED
B	28-03-19	SERVICES, LOT NO'S, STAGES & SHEET LAYOUT AMENDED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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DRAWING TITLE

COMBINED SERVICES
PLAN
SHEET 06

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Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

Postal Address
PO Box 2484
Southport QLD 4215

Gold Coast Office
Suite 9, 19 Short St
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DESIGNED	RB	DRAWN	EP
APPROVED		RPEQ	DATE 14-08-18

DRAWING NUMBER 36001-PRE-095 | AMEND. E

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ROADWORKS

1. PAVEMENT DEPTHS
   a) THE DESIGN PAVEMENT DEPTHS ALLOWED IN EARTHWORKS CALCULATIONS ARE BASED ON THE DEPTHS SHOWN IN THE SCHEDULE OF PAVEMENT DEPTHS ON DRAWING 120.
   b) THE PAVEMENT DEPTHS GIVEN ARE DESIGN DEPTHS ONLY AND MAY BE VARIED AFTER SUB-GRADE TESTS ARE TAKEN. THE CONTRACTOR IS TO PROVIDE THE SUPERINTENDENT A SUBGRADE C.B.R. REPORT PREPARED BY A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER.
   THE SUPERINTENDENT WILL COORDINATE THE AUTHORITIES APPROVAL OF THE PAVEMENT DESIGN.
   c) REFER TO DWG. 120 FOR TYPICAL ROAD SECTIONS.
2. TESTING
   ALL COMPACTION TESTING SHALL BE CARRIED OUT BY AN APPROVED N.A.T.A. TESTING AUTHORITY. ALL SITE FILLING SHALL BE TESTED AT LEVEL 1 REQUIREMENTS.
3. SUBSOIL DRAINS
   SUBSOIL DRAINS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE LOCAL AUTHORITY'S SPECIFICATIONS. SUBSOIL DRAINS SHALL BE PLACED UNDER ALL KERB STRUCTURES AND ARE TO BE CONSTRUCTED TO A DEPTH GREATER THAN THAT OF THE INVERT OF THE DEEPEST SERVICE CROSSING.
4. MITRE DRAINS
   MITRE DRAINS ARE TO BE CONSTRUCTED ALONG THE CUT/FILL INTERFACE AND SAG/LOW POINTS OF ALL ROADS. CONTRACTOR TO REQUEST DIRECTION FROM SUPERINTENDENT WHETHER TO INSTALL MITRE DRAIN AT ROCK ENCOUNTERED IN SUBGRADE. ALL MITRE DRAINS MUST BE FREE DRAINING AND TIE INTO THE ADJACENT SUBSOIL DRAINS.
5. ROCK
   THE CONTRACTOR IS TO INCLUDE ROCK EXCAVATION AS PART OF THEIR RATES.
6. TURF
   1.0m TURF STRIP TO BE INSTALLED BEHIND THE BACK OF ALL KERBS. A PERPENDICULAR TURF STRIP AT MAXIMUM 10m INCREMENTS MUST BE INSTALLED TO FULL VERGE WIDTH FOR SEDIMENT AND EROSION CONTROL PURPOSES.
7. KERBS
   ALL KERBS TO BE CONSTRUCTED IN ACCORDANCE WITH AUTHORITY STANDARDS
8. PAVEMENT TIE-IN
   PAVEMENT TIE-IN TO BE IN ACCORDANCE WITH DWG. 120

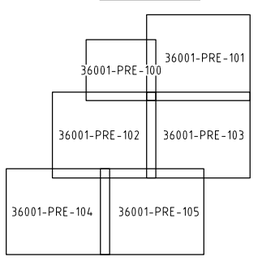
LEGEND

- EXISTING KERB (INVERT)
- EXISTING KERB (LIP & BACK)
- EXISTING FOOTPATH
- EXISTING EDGE OF BITUMEN
- EXISTING PROPERTY LINE
- EXISTING CONTOURS
- FUTURE KERB
- FUTURE FOOTPATH
- FUTURE PROPERTY LINE
- FUTURE CONTOURS
- CONTROL LINE / CENTER OF ROAD
- PROPOSED KERB (INVERT)
- PROPOSED KERB (LIP & BACK)
- PROPOSED EDGE OF BITUMEN
- PROPOSED FOOTPATH
- PROPOSED PROPERTY LINE
- SITE BOUNDARY
- STAGE BOUNDARY
- DESIGN CONTOURS
- PROPOSED CONCRETE
- 41.065 CENTRELINE CHAINAGE

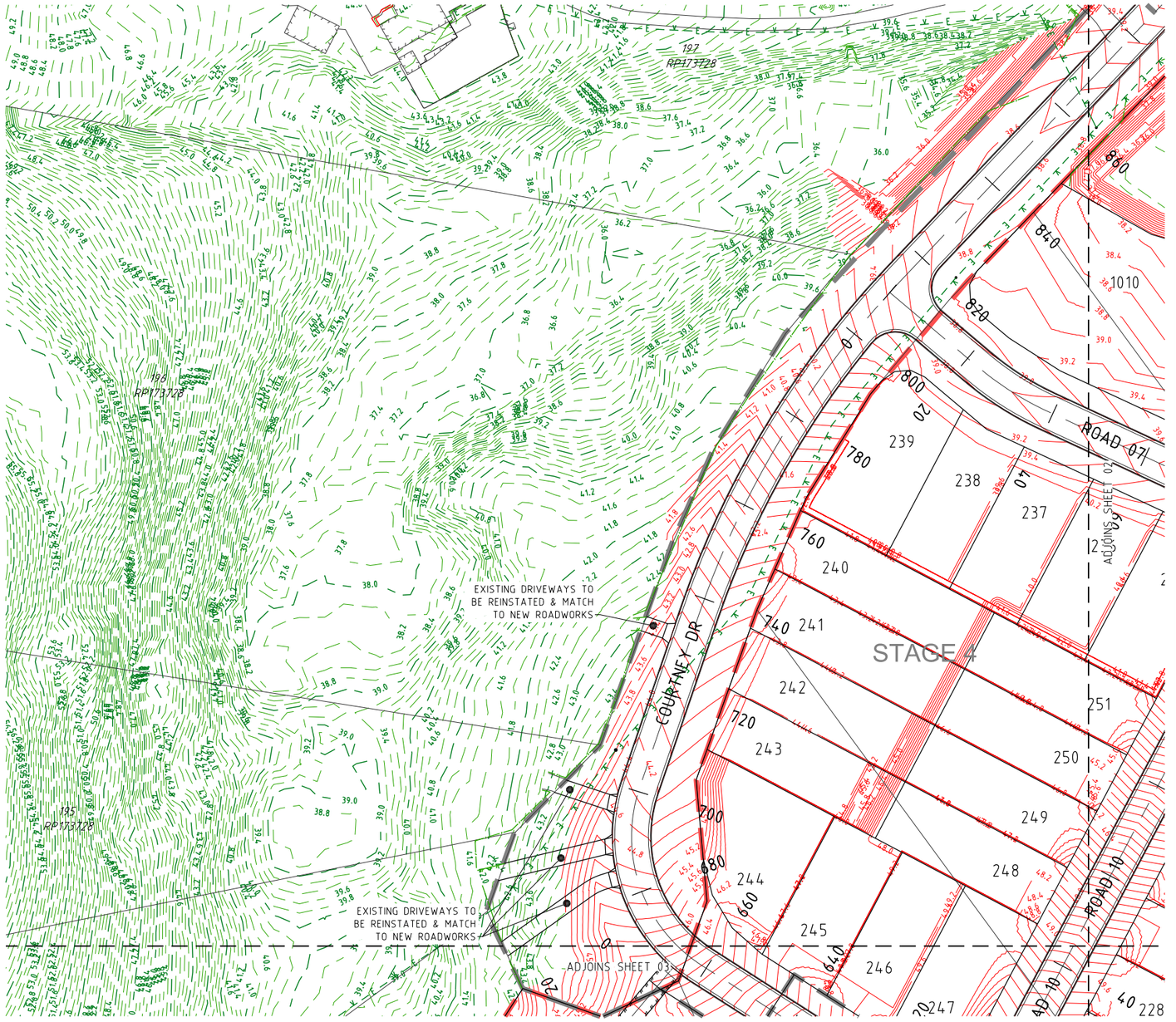
KERB TYPE NOTE:

1. FOR KERB TYPES REFER TO DWG. 120

SHEET LAYOUT



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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

E	16-12-21	STAGE BDY & TXT AMENDED
D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT, ROADS & CONTOURS REVISED
B	28-03-19	LOT NO'S & STAGES AMENDED, NOTES ADDED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

BIOME WATER AND ENVIRONMENTAL CONSULTING

zone Planning Group

DRAWING TITLE

ROADWORKS
PLAN
SHEET 01

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As
Mortons-Urban Solutions
ABN 39 116 375 065

Postal Address
PO Box 2484
Southport QLD 4215

mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

DESIGNED	RB	DRAWN	EP
APPROVED		RPEQ	DATE 14-08-18

DRAWING NUMBER 36001-PRE-100 | AMEND. E

y:\360 - gallery homes\01 - courtney drive\Overall\engineering drawings\preliminary engineering\Current\36001-PRE-100.dwg, PLAN SHEET 01, 16/12/2021 3:22:31 PM, 1:2

PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

E	16-12-21	STAGE BDY & TXT AMENDED
D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT, ROADS & CONTOURS REVISED
B	28-03-19	LOT NO'S & STAGES AMENDED, NOTE ADDED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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DRAWING TITLE

ROADWORKS
PLAN
SHEET 02

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Civil Engineering
Project Coordination

MUS Pty Ltd T/As
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

Postal Address
PO Box 2484
Southport QLD 4215

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

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DRAWING NUMBER 36001-PRE-101 | AMEND. E

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

E	16-12-21	STAGE BDY & TXT AMENDED
D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT, ROADS & CONTOURS REVISED
B	28-03-19	LOTS, LOT NO'S & STAGES AMENDED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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DRAWING TITLE

ROADWORKS
PLAN
SHEET 03

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Urban & Regional Planning
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Project Coordination

MUS Pty Ltd T/As
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

Postal Address
PO Box 2484
Southport QLD 4215

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

DESIGNED	RB	DRAWN	EP
APPROVED		RPEQ	DATE 14-08-18

DRAWING NUMBER 36001-PRE-102 | AMEND. E

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

E	16-12-21	STAGE BDY & TXT AMENDED
D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT, ROADS & CONTOURS REVISED
B	28-03-19	LOT NO'S & STAGES AMENDED, NOTE ADDED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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DRAWING TITLE

ROADWORKS
PLAN
SHEET 04

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Civil Engineering
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MUS Pty Ltd T/As
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

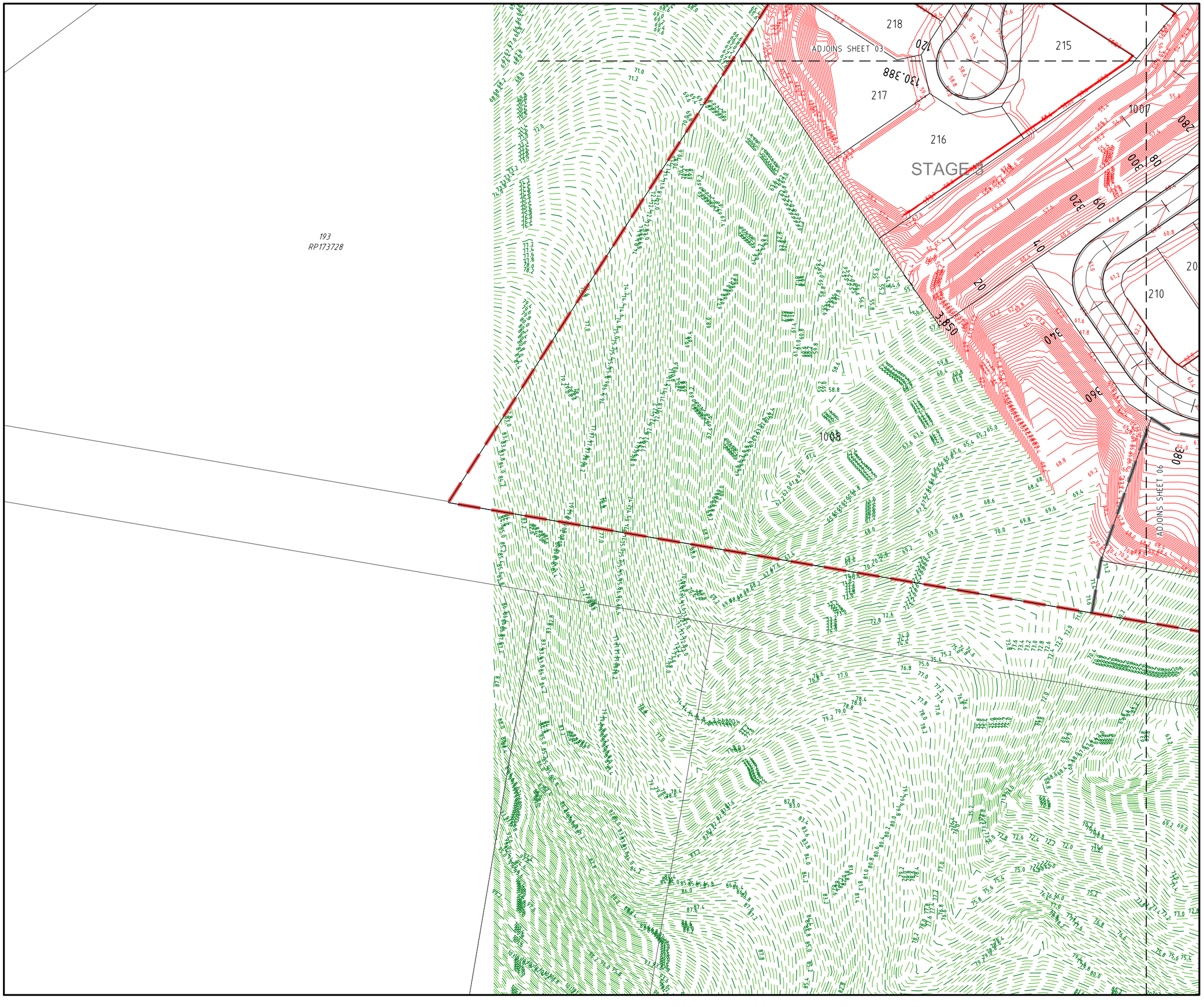
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DESIGNED	RB	DRAWN	EP
APPROVED		RPEQ	DATE 14-08-18

DRAWING NUMBER 36001-PRE-103 AMEND. E

y:\3360 - gallery homes\01 - courtney drive\Overall\engineering drawings\preliminary engineering\Current\36001-PRE-100.dwg, PLAN SHEET 04, 16/12/2021 3:26:55 PM, 1:2



PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

E	16-12-21	STAGE BDY & TXT AMENDED
D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT, ROADS & CONTOURS REVISED
B	28-03-19	LOTS, LOT NO'S & STAGES AMENDED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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DRAWING TITLE

ROADWORKS
PLAN
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Mortons-Urban Solutions
ABN 39 116 375 065

mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

Postal Address
PO Box 2484
Southport QLD 4215

Gold Coast Office
Suite 9, 19 Short St
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DRAWING NUMBER	AMEND.
36001-PRE-104	E

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

E	16-12-21	STAGE BDY & TXT AMENDED
D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT, ROADS & CONTOURS REVISED
B	28-03-19	LOT NO'S, STAGES & CONTOURS AMENDED, NOTE ADDED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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DRAWING TITLE

ROADWORKS
PLAN
SHEET 06

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Project Coordination

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Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

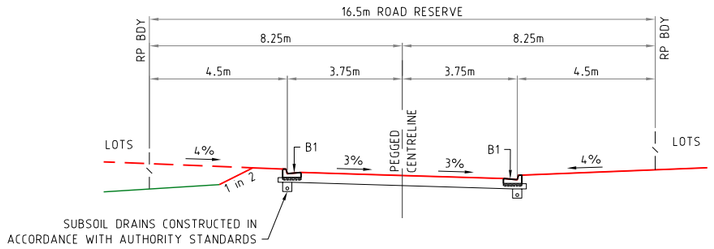
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DESIGNED	RB	DRAWN	EP
APPROVED		RPEQ	DATE 14-08-18

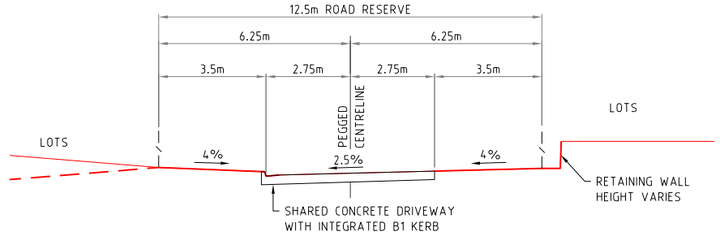
DRAWING NUMBER	AMEND.
36001-PRE-105	E

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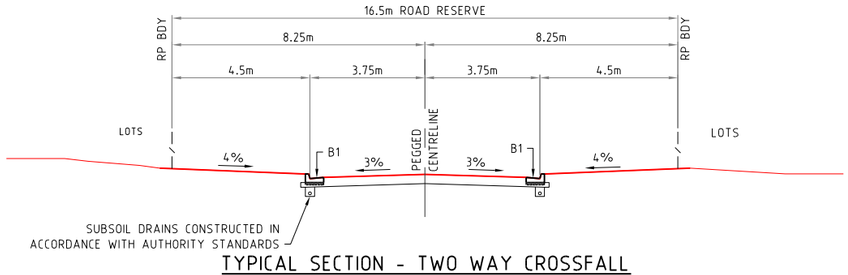
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7.5m ROAD-16.5m ROAD RESERVE

SCALE 1:100 - A1 (1:200 - A3)



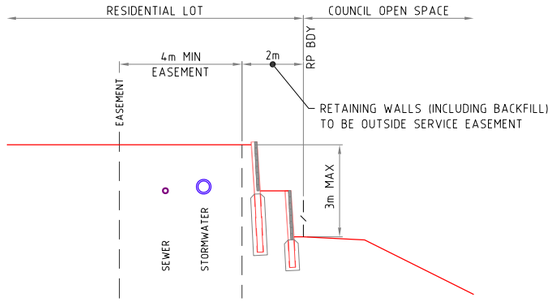
SHARED DRIVEWAY

SCALE 1:100 - A1 (1:200 - A3)



TYPICAL SECTION - TWO WAY CROSSFALL
7.5m ROAD-16.5m ROAD RESERVE

SCALE 1:100 - A1 (1:200 - A3)



INTERALLOTMENT SERVICES

SCALE 1:100 - A1 (1:200 - A3)

PROJECT NAME

COURTNEY DR
UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

0 1 2 3 4 5m
Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

PRE	DATE	AMENDMENT
B	11-11-20	SECTIONS AMENDED
A	11-09-18	COUNCIL ISSUE

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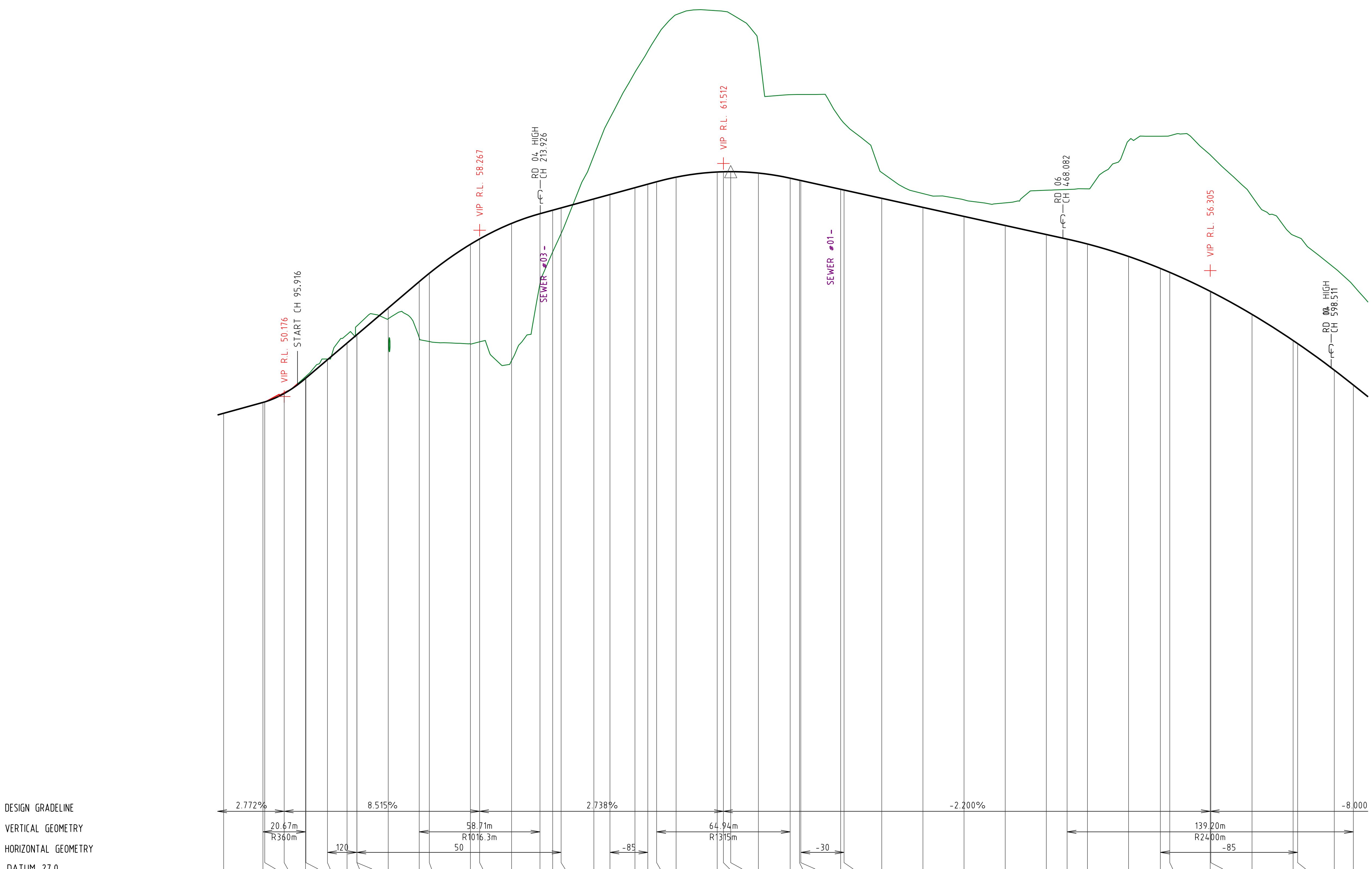
ROADWORKS
DETAILS
SHEET 01

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088
Postal Address
PO Box 2484
Southport QLD 4215
Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

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DRAWING NUMBER: 36001-PRE-120
AMEND.: B

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CHAINAGE	CONTROL LINE LEVELS	EXISTING SURFACE	DEPTH
0.019			
20			
40			
60	49.36	49.36	0
79.115	49.89	49.889	-0.001
80	49.915	49.914	-0.001
89.452	50.325	50.362	0.037
99.789	51.057	51.14	0.084
100	51.075	51.159	0.085
110.493	51.968	52	0.032
120	52.778	53.193	0.416
124.782	53.185	53.609	0.424
124.783	53.185	53.609	0.424
140	54.48	53.961	-0.519
155.109	55.767	53.035	-2.732
160	56.172	52.853	-3.319
180	57.582	52.735	-4.846
184.464	57.843	52.839	-5.003
200	58.598	51.926	-6.671
213.819	59.07	55.689	-3.381
220	59.24	57.214	-2.025
224.073	59.351	58.106	-1.245
240	59.787	61.887	2.1
247.841	60.002	63.723	3.721
260	60.335	65.949	5.614
266.262	60.506	66.978	6.472
270.534	60.623	67.676	7.053
280	60.848	68.75	7.902
300	61.1	68.941	7.842
303.002	61.111	68.917	7.806
306.54	61.116	68.797	7.681
320	61.047	67.304	6.257
335.47	60.798	64.862	4.064
340	60.698	64.868	4.169
340.639	60.684	64.868	4.184
360	60.258	63.667	3.408
361.664	60.222	63.472	3.251
380	59.818	61.074	1.256
400	59.378	60.049	0.671
420	58.938	59.746	0.808
440	58.498	59.597	1.099
460	58.058	60.214	2.156
470.107	57.836	60.25	2.414
480	57.598	60.279	2.682
500	56.992	62.621	5.628
515.44	56.41	62.838	6.427
520	56.22	62.864	6.644
539.707	55.295	61.933	6.637
540	55.28	61.904	6.623
560	54.175	59.915	5.74
580	52.902	58.028	5.125
582.199	52.752	57.933	5.181
600	51.463	56.439	4.976
609.307	50.737	55.577	4.84

LONGITUDINAL SECTION ROAD 01

PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY THE ART OF LIVING

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)
0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

PRE	DATE	AMENDMENT
D	11-11-20	DESIGN REVISED
C	24-10-19	LONG SECTION REVISED
B	28-03-19	ROAD 01 LONG SECTION AMENDED
A	11-09-18	COUNCIL ISSUE

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zone Planning Group

DRAWING TITLE

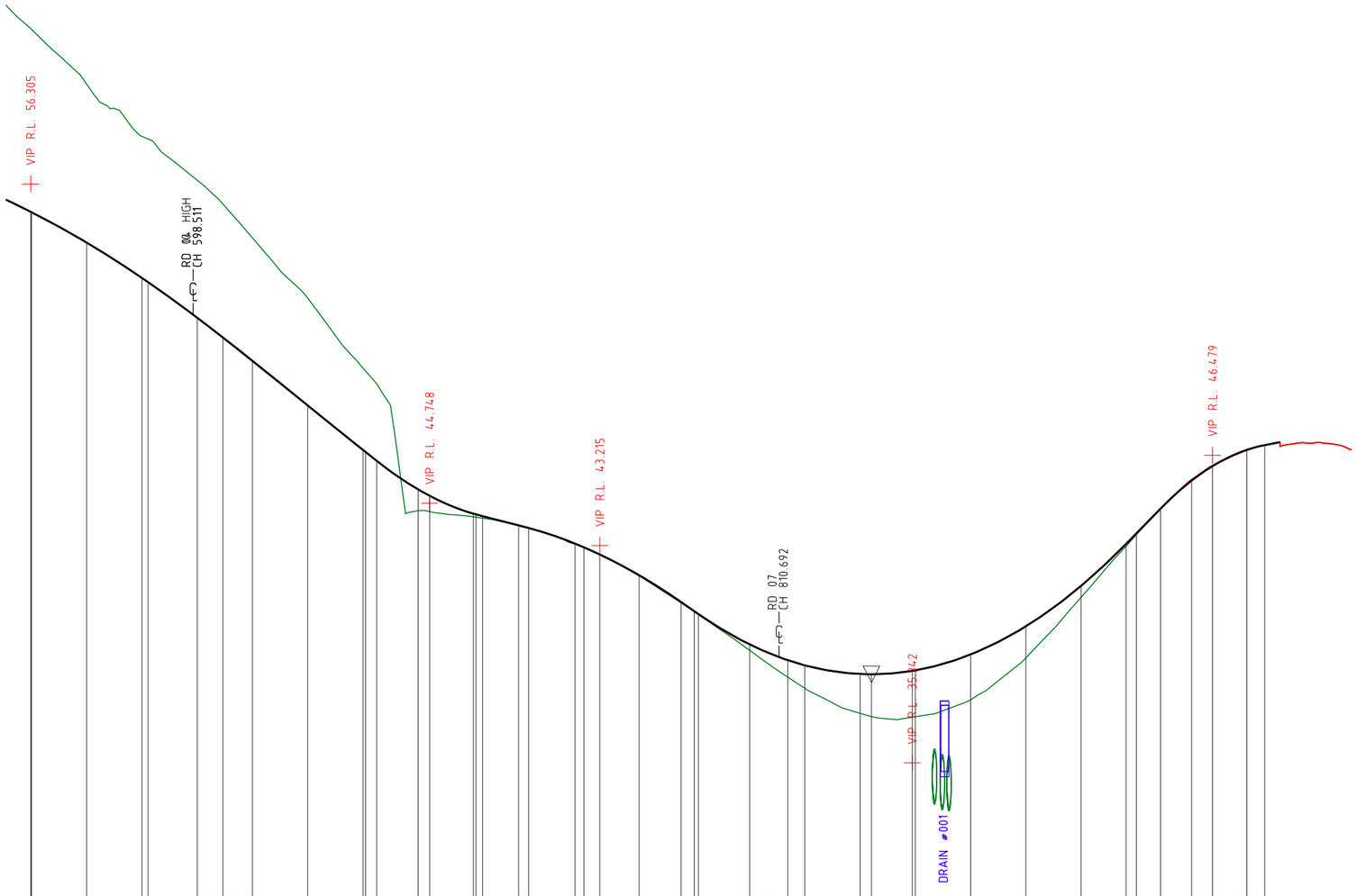
LONGITUDINAL SECTIONS ROAD 01

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
Postal Address
PO Box 2484
Southport QLD 4215
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088
Gold Coast Office
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Southport QLD 4215

DESIGNED RB	DRAWN EP	
APPROVED	RPEQ	DATE 14-08-18

DRAWING NUMBER 36001-PRE-200 AMEND. D

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CONTROL LINE LEVELS	55.295	55.28	54.175	52.902	52.752	51.463	50.737	49.881	48.281	46.681	46.602	46.28	45.243	45.012	44.362	44.336	44.272	43.946	43.851	43.281	43.146	42.886	42.136	41.169	40.831	40.73	39.63	39.06	38.872	38.559	38.55	38.671	38.69	39.266	40.286	41.75	43.27	43.651	44.549	45.561	46.089	46.676	46.848		
EXISTING SURFACE	61.933	61.904	59.915	58.028	57.933	56.439	55.577	54.353	52.176	49.643	49.527	49.05	44.474	44.441	44.252	44.239	44.203	43.931	43.835	43.272	43.159	42.891	42.113	41.141	40.817	40.714	39.418	38.449	38.04	37.135	37.018	36.997	37.014	37.626	39.143	41.334	43.189	43.599	44.524	45.595	46.107	46.66	46.845	46.937	46.922
DEPTH	6.637	6.623	5.74	5.125	5.181	4.976	4.84	4.472	3.895	2.962	2.925	2.77	-0.769	-0.571	-0.11	-0.097	-0.069	-0.016	-0.016	-0.009	0.013	0.005	-0.024	-0.028	-0.015	-0.015	-0.212	-0.611	-0.832	-1.424	-1.531	-1.674	-1.676	-1.64	-1.142	-0.416	-0.081	-0.052	-0.025	0.034	0.018	-0.016	-0.003		
CHAINAGE	539.707	540	560	580	582.199	600	609.307	620	640	660	660.985	665.014	680	684.162	700	700.893	703.31	716.366	720	736.752	740	745.757	760	775.148	780	781.464	800	813.788	820	840	844.103	858.872	860	880	900	920	936.279	940	948.764	960	967.609	980	986.455	1000	1007.969

LONGITUDINAL SECTION ROAD 01 (Cont.)

PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

PRE	DATE	AMENDMENT
C	11-11-20	DESIGN REVISED
B	24-10-19	LONG SECTION REVISED
A	11-09-18	COUNCIL ISSUE

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zone Planning Group

DRAWING TITLE

LONGITUDINAL SECTIONS
ROAD 01 (Cont.)

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As
Mortons-Urban Solutions
ABN 39 116 375 065

Postal Address
PO Box 2484
Southport QLD 4215

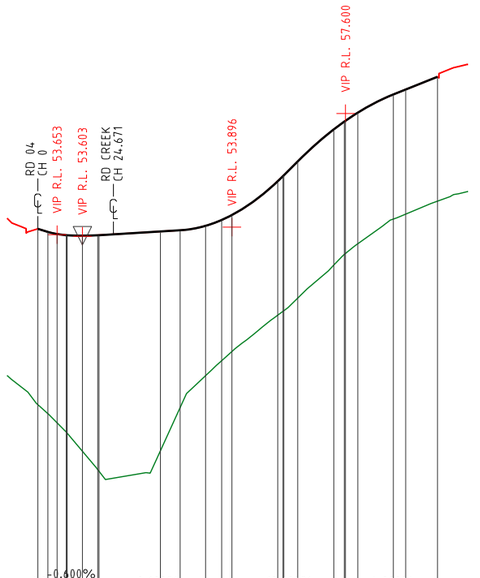
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

DESIGNED	RB	DRAWN	EP
APPROVED		RPEQ	DATE 14-08-18

DRAWING NUMBER: 36001-PRE-201
AMEND.: C

y:\360 - gallery homes\01 - courtney drive\Overall\engineering drawings\preliminary engineering\Current\36001-PRE-200.dwg, ROAD 01 (Cont.), 16/12/2021 3:30:17 PM, 1:2



CONTROL LINE LEVELS				
EXISTING SURFACE	48.111	47.819	47.521	47.212
DEPTH	-5.731	-5.924	-6.15	-6.423
CHAINAGE	0	3.3	6.3	9.3

CONTROL LINE LEVELS				
EXISTING SURFACE	47.179	46.861	46.586	45.989
DEPTH	-6.455	-7.032	-7.644	-7.7
CHAINAGE	9.583	14.583	19.583	20

CONTROL LINE LEVELS				
EXISTING SURFACE	46.606	48.014	49.054	49.544
DEPTH	-7.149	-5.78	-4.886	-4.588
CHAINAGE	40	46.426	54.733	60

CONTROL LINE LEVELS				
EXISTING SURFACE	49.845	51.029	51.154	51.173
DEPTH	-4.449	-4.366	-4.407	-4.414
CHAINAGE	63.346	78.276	80	80.266

CONTROL LINE LEVELS				
EXISTING SURFACE	51.585	52.664	53.009	53.043
DEPTH	-4.455	-4.422	-4.333	-4.323
CHAINAGE	84.788	96.578	100	100.388

CONTROL LINE LEVELS				
EXISTING SURFACE	53.358	54.161	54.319	54.744
DEPTH	-4.273	-4.063	-4.065	-4.056
CHAINAGE	104.397	115.988	120	130.388

CONTROL LINE LEVELS				
EXISTING SURFACE	53.842	53.743	53.671	53.635
DEPTH				
CHAINAGE				

CONTROL LINE LEVELS				
EXISTING SURFACE	53.633	53.618	53.636	53.756
DEPTH				
CHAINAGE				

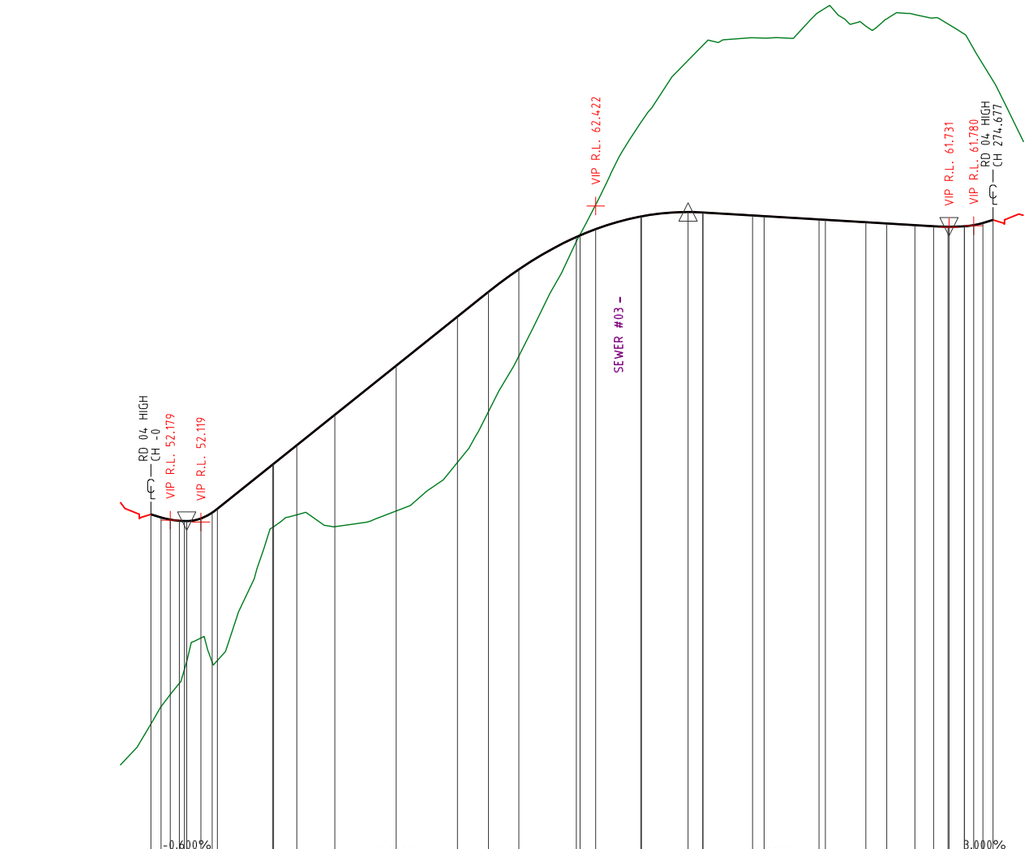
CONTROL LINE LEVELS				
EXISTING SURFACE	53.794	53.94	54.132	54.293
DEPTH				
CHAINAGE				

CONTROL LINE LEVELS				
EXISTING SURFACE	55.394	55.561	55.588	56.04
DEPTH				
CHAINAGE				

CONTROL LINE LEVELS				
EXISTING SURFACE	57.085	57.339	57.366	57.631
DEPTH				
CHAINAGE				

CONTROL LINE LEVELS				
EXISTING SURFACE	58.224	58.384	58.8	
DEPTH				
CHAINAGE				

LONGITUDINAL SECTION ROAD 02



CONTROL LINE LEVELS				
EXISTING SURFACE	52.368	52.269	52.197	52.161
DEPTH	-6.838	-6.175	-5.71	-5.3
CHAINAGE	0	3.3	6.3	9.3

CONTROL LINE LEVELS				
EXISTING SURFACE	52.151	52.149	52.235	52.426
DEPTH	-4.837	-4.573	-3.898	-4.877
CHAINAGE	10.926	11.676	16.3	20

CONTROL LINE LEVELS				
EXISTING SURFACE	52.549	53.995	54.015	54.623
DEPTH	-4.946	-2.048	-2.052	-2.271
CHAINAGE	21.674	39.752	40	47.606

CONTROL LINE LEVELS				
EXISTING SURFACE	55.615	57.215		
DEPTH	-3.647	-4.739		
CHAINAGE	60	80		

CONTROL LINE LEVELS				
EXISTING SURFACE	51.968	52.476	58.815	
DEPTH				
CHAINAGE				

CONTROL LINE LEVELS				
EXISTING SURFACE	54.064	55.718	59.622	60.355
DEPTH	-4.751	-3.904	-2.829	57.525
CHAINAGE	100	110.094	120	

CONTROL LINE LEVELS				
EXISTING SURFACE	61.412	61.466	61.67	62.081
DEPTH	61.267	61.5	62.455	62.085
CHAINAGE	138.772	140	145.094	159.797

CONTROL LINE LEVELS				
EXISTING SURFACE	62.081	62.227	62.213	62.212
DEPTH	65.142	65.172	67.168	67.655
CHAINAGE	160	175.21	180	180.094

CONTROL LINE LEVELS				
EXISTING SURFACE	62.115	62.093	61.985	61.973
DEPTH	67.665	67.907	67.898	68.748
CHAINAGE	196.259	200	217.931	220

CONTROL LINE LEVELS				
EXISTING SURFACE	61.894	61.853	61.798	61.761
DEPTH	68.875	68.287	68.523	68.661
CHAINAGE	233.222	240	249.206	255.315

CONTROL LINE LEVELS				
EXISTING SURFACE	61.746	61.761	61.762	61.798
DEPTH	68.555	68.356	68.026	67.543
CHAINAGE	260	260.315	265.315	268.377

CONTROL LINE LEVELS				
EXISTING SURFACE	61.87	61.969		
DEPTH	67.046	66.51		
CHAINAGE	271.377	274.677		

LONGITUDINAL SECTION ROAD 03

PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

PRE	DATE	AMENDMENT
C	11-11-20	DESIGN REVISED
B	24-10-19	LONG SECTIONS REVISED & ADDED
A	11-09-18	COUNCIL ISSUE

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zone Planning Group

DRAWING TITLE

LONGITUDINAL SECTIONS
ROAD 02
&
ROAD 03

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As
Mortons-Urban Solutions
ABN 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

Postal Address
PO Box 2484
Southport QLD 4215

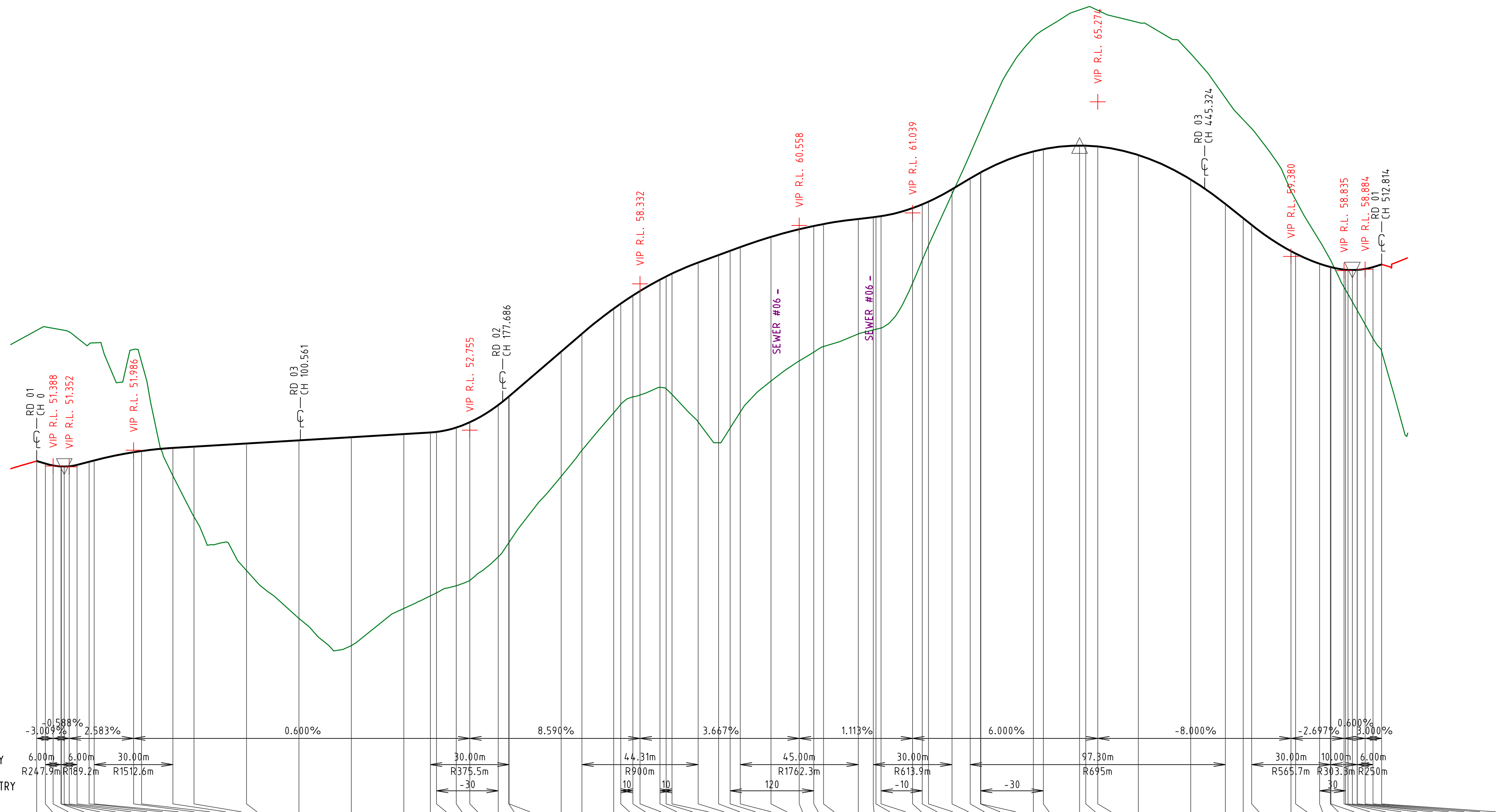
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APPROVED		RPEQ	DATE 14-08-18

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y:\360 - gallery homes\01 - courtney drive\Overall\engineering drawings\preliminary engineering\Current\36001-PRE-200.dwg, ROAD 04, 16/12/2021 3:30:24 PM, 1:2



CHAINAGE	CONTROL LINE LEVELS	EXISTING SURFACE	DEPTH
0	51.578	56.559	4.982
3.3	51.478	56.692	5.214
6.3	51.406	56.638	5.232
9.3	51.37	56.584	5.213
9.422	51.37	56.582	5.212
10.535	51.366	56.562	5.195
12.422	51.376	56.496	5.121
15.422	51.429	56.272	4.843
20	51.548	56.035	4.487
21.964	51.599	56.082	4.483
36.964	51.912	55.832	3.92
40	51.957	55.351	3.394
51.964	52.076	51.008	-1.068
60	52.124	49.445	-2.679
80	52.244	47.402	-4.842
100	52.364	45.576	-6.788
120	52.484	44.539	-7.945
140	52.604	45.953	-6.652
150.127	52.665	46.436	-6.229
152.428	52.686	46.549	-6.137
160	52.854	46.819	-6.035
165.127	53.055	47.015	-6.039
175.989	53.711	47.917	-5.793
180	54.033	48.457	-5.575
180.127	54.044	48.476	-5.567
200	55.751	50.99	-4.761
207.892	56.429	51.983	-4.445
220	57.387	53.413	-3.974
222.723	57.58	53.747	-3.833
227.319	57.888	54.028	-3.86
230.049	58.059	54.095	-3.964
237.653	58.493	54.389	-4.104
240	58.614	54.335	-4.279
242.232	58.723	54.118	-4.605
252.206	59.144	53.064	-6.081
260	59.43	52.272	-7.158
264.397	59.591	52.834	-6.757
268.257	59.733	53.441	-6.292
280	60.124	54.627	-5.498
290.757	60.414	55.397	-5.017
296.283	60.538	55.729	-4.809
300	60.611	55.943	-4.668
313.257	60.808	56.422	-4.386
318.973	60.872	56.576	-4.296
320	60.884	56.601	-4.283
321.947	60.912	56.649	-4.263
333.973	61.222	58.364	-2.858
337.655	61.364	59.241	-2.123
340	61.466	59.799	-1.667
348.973	61.939	61.753	-0.186
355.911	62.355	63.292	0.937
359.859	62.581	64.2	1.619
360	62.589	64.232	1.644
380	63.383	67.728	4.345
383.814	63.469	68.024	4.555
397.611	63.606	68.779	5.173
400	63.602	68.86	5.258
404.561	63.572	68.764	5.192
420	63.246	68.303	5.057
440	62.314	67.112	4.799
453.211	61.382	65.428	4.046
460	60.839	64.596	3.757
463.234	60.58	64.254	3.674
478.234	59.579	61.868	2.289
480	59.488	61.537	2.049
489.144	59.101	59.971	0.87
493.234	58.976	59.258	0.283
493.445	58.97	59.218	0.248
498.445	58.877	58.209	-0.667
499.04	58.871	58.106	-0.765
500	58.864	57.937	-0.927
501.625	58.86	57.652	-1.208
503.445	58.865	57.332	-1.534
503.512	58.866	57.32	-1.546
506.512	58.902	56.786	-2.116
509.512	58.974	56.243	-2.731
512.814	59.073	55.745	-3.327

LONGITUDINAL SECTION ROAD 04

PROJECT NAME

COURTNEY DR
UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)

0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

PRE	DATE	AMENDMENT
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B	24-10-19	LONG SECTIONS REMOVED & ADDED
A	11-09-18	COUNCIL ISSUE

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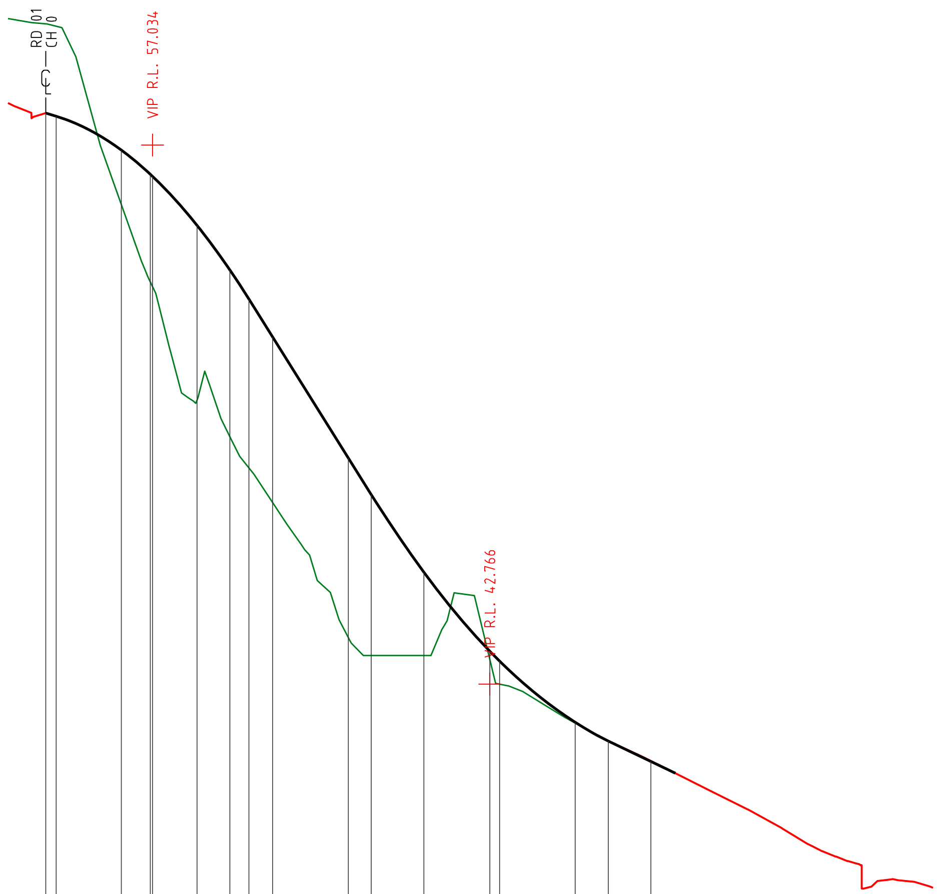
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LONGITUDINAL SECTIONS
ROAD 04

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
Postal Address
PO Box 2484
Southport QLD 4215
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088
Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

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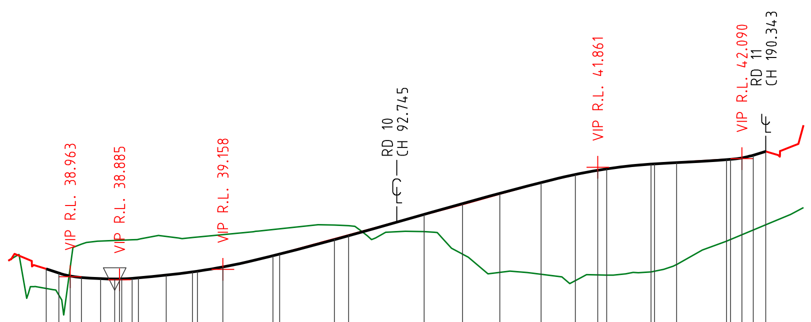
VERTICAL GEOMETRY: 50.96m R392m | 62.71m R560m

HORIZONTAL GEOMETRY: 30

DATUM 31.0

CHAINAGE	CONTROL LINE LEVELS	EXISTING SURFACE	DEPTH
0	57.881	60.243	2.362
2.753	57.798	60.181	2.383
20	56.901	55.462	-1.44
27.659	56.26	53.412	-2.848
28.233	56.206	53.29	-2.916
40	54.911	50.282	-4.63
48.684	53.729	49.313	-4.417
53.714	52.957	48.491	-4.466
60	51.951	47.571	-4.38
80	48.751	43.998	-4.753
86.052	47.783	43.523	-4.26
100	45.725	43.523	-2.202
117.406	43.644	43.422	-0.222
120	43.38	42.765	-0.615
140	41.749	41.736	-0.013
148.76	41.26	41.26	0
160	40.72	40.731	0.011
180		39.729	
200		38.623	
220		37.555	
224.561		37.593	

LONGITUDINAL SECTION ROAD 06



DESIGN GRADELINE: -3.273% | -0.600% | 1.000% | 2.725% | 0.600% | 3.000%

VERTICAL GEOMETRY: 6.00m R224.5m | 10.00m R625.1m | 30.00m R1738.8m | 30.00m R1411.8m | 6.00m R250m

HORIZONTAL GEOMETRY: -60 | -60 | 30

DATUM 31.0

CHAINAGE	CONTROL LINE LEVELS	EXISTING SURFACE	DEPTH
0	39.171	38.654	-0.517
3.344	39.061	38.478	-0.584
6.344	38.983	39.192	0.209
9.344	38.945	39.827	0.882
14.39	38.915	39.909	0.994
18.141	38.903	39.924	1.02
19.39	38.905	39.929	1.024
20	38.906	39.931	1.025
22.728	38.92	39.942	1.022
24.39	38.935	39.953	1.018
31.753	39.008	40.034	1.026
38.685	39.091	40.003	0.911
40	39.11	40.015	0.905
46.753	39.223	40.078	0.855
60	39.52	40.214	0.694
61.753	39.567	40.232	0.665
76.227	39.961	40.333	0.371
80	40.064	40.316	0.252
100	40.609	40.159	-0.45
110.133	40.885	39.562	-1.323
120	41.154	39.081	-2.074
130.929	41.452	39.029	-2.423
140	41.67	38.863	-2.807
145.929	41.781	39.013	-2.768
148.296	41.819	39.007	-2.811
160	41.945	39.092	-2.853
160.929	41.951	39.107	-2.844
166.766	41.986	39.288	-2.698
180	42.065	39.905	-2.161
181.043	42.072	39.948	-2.123
184.043	42.108	40.074	-2.034
187.043	42.18	40.2	-1.98
190.343	42.279	40.338	-1.941

LONGITUDINAL SECTION ROAD 07

PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY THE ART OF LIVING

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)
0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

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COUNCIL	11-09-18	
CONSTRUCTION		

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A	11-09-18	COUNCIL ISSUE

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ROAD 06
&
ROAD 07

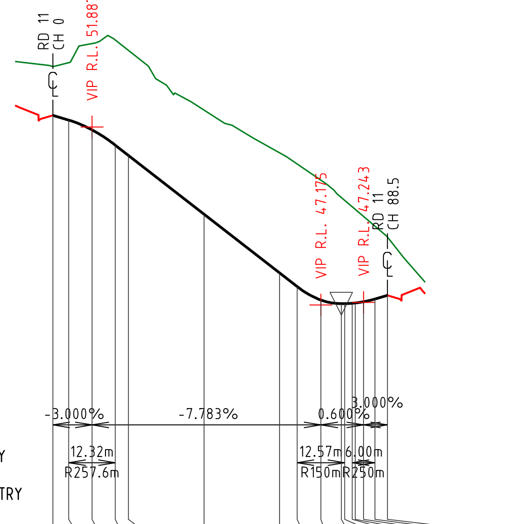
MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
Postal Address
PO Box 2484
Southport QLD 4215
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088
Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

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APPROVED	RPEQ	DATE 14-08-18

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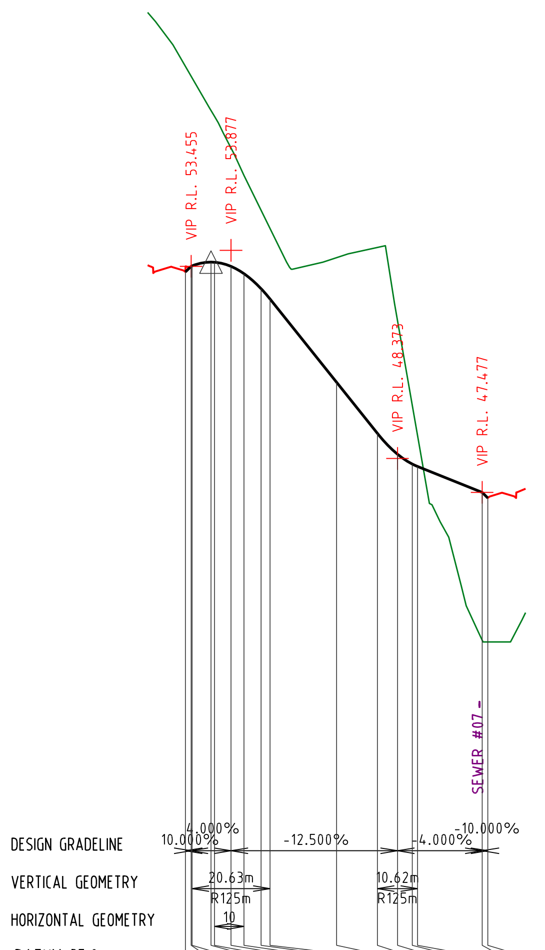
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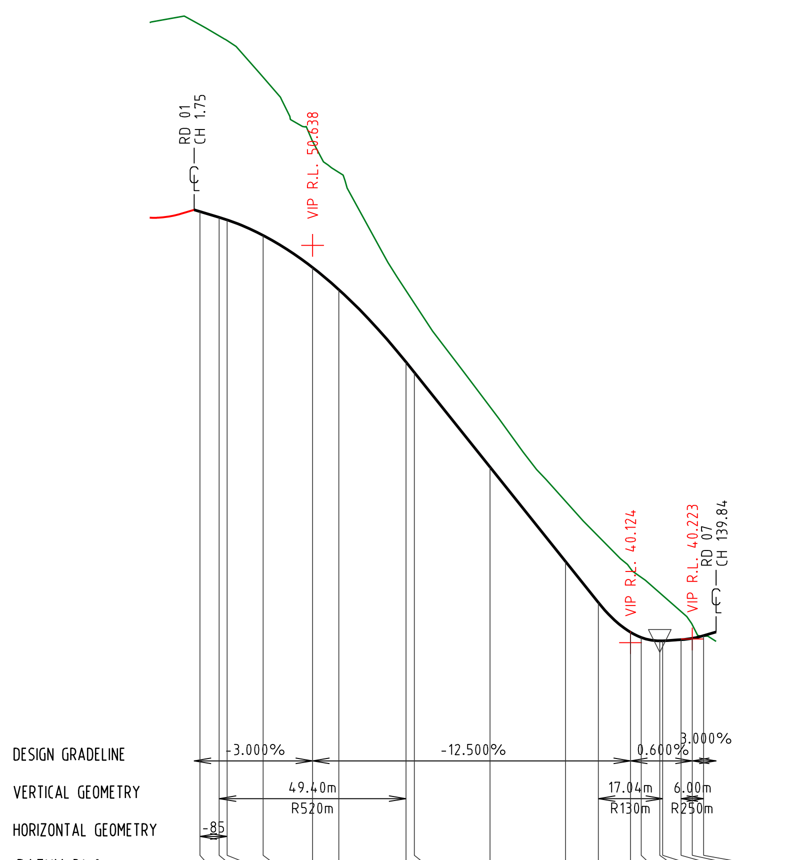
CHAINAGE	CONTROL LINE LEVELS	EXISTING SURFACE	DEPTH
0	52.198	53.492	1.294
4.212	52.072	53.593	1.521
10.371	51.813	54.098	2.285
16.531	51.408	54.193	2.785
20	51.138	53.919	2.782
40	49.581	52.337	2.756
60	48.025	51.206	3.181
64.627	47.664	50.912	3.247
70.914	47.307	50.481	3.174
76.301	47.21	50.025	2.815
77.201	47.213	49.949	2.736
79.2	47.225	49.778	2.553
80	47.231	49.709	2.478
82.2	47.261	49.521	2.261
85.2	47.333	49.265	1.932
88.5	47.432	48.976	1.544

LONGITUDINAL SECTION ROAD 08



CHAINAGE	CONTROL LINE LEVELS	EXISTING SURFACE	DEPTH
0	53.305	58.738	5.433
1.5	53.455	58.479	5.024
1.753	53.465	58.435	4.97
6.753	53.565	57.574	4.01
7.682	53.561	57.418	3.857
12.065	53.452	56.575	3.123
15.498	53.259	55.856	2.597
20	52.863	54.941	2.078
22.378	52.588	54.458	1.87
40	50.386	53.683	3.297
50.786	49.037	53.951	4.914
56.099	48.486	52.028	3.542
60	48.225	49.792	1.566
61.411	48.161	48.983	0.822
78.492	47.477	43.571	-3.906
79.992	47.328	43.523	-3.805

LONGITUDINAL SECTION ROAD 09



CHAINAGE	CONTROL LINE LEVELS	EXISTING SURFACE	DEPTH
0		56.655	
3.277	51.532	56.475	4.944
8.374	51.379	56.183	4.805
10.464	51.312	56.055	4.743
20	50.9	55.082	4.182
33.074	50.051	53.394	3.343
40	49.468	52.567	3.099
57.774	47.55	49.446	1.896
60	47.272	49.106	1.834
80	44.772	46.37	1.598
100	42.272	43.866	1.594
108.662	41.189	42.941	1.752
117.179	40.403	42.088	1.685
120	40.266	41.856	1.589
124.917	40.173	41.443	1.27
125.697	40.176	41.374	1.199
130.54	40.205	40.949	0.744
133.54	40.241	40.598	0.357
136.54	40.313	40.297	-0.016

LONGITUDINAL SECTION ROAD 10

PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY THE ART OF LIVING

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)
0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

PRE	DATE	AMENDMENT
C	11-11-20	DESIGN REVISED
B	24-10-19	LONG SECTIONS REMOVED & REVISED
A	11-09-18	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

BIOME WATER AND ENVIRONMENTAL CONSULTING

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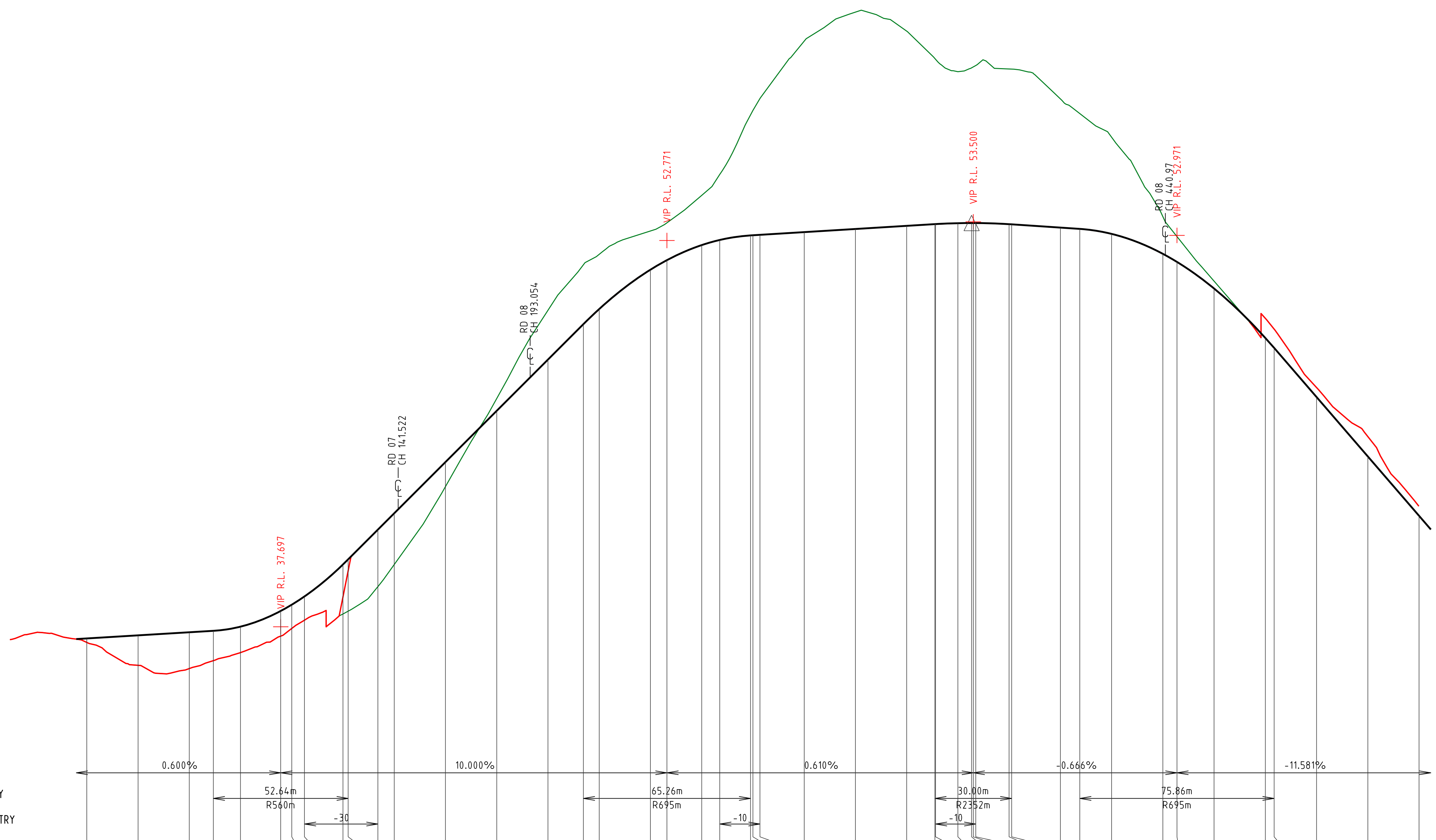
DRAWING TITLE

LONGITUDINAL SECTIONS
ROAD 08, ROAD 09
&
ROAD 10

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088
Postal Address
PO Box 2484
Southport QLD 4215
Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

DESIGNED RB	DRAWN EP	
APPROVED	RPEQ	DATE 14-08-18

DRAWING NUMBER 36001-PRE-205
AMEND. C



DATUM 29.0

CHAINAGE	CONTROL LINE LEVELS	EXISTING SURFACE	DEPTH
0		37.468	
20	37.243	37.088	-0.155
40	37.363	36.194	-1.168
60	37.483	36.067	-1.415
69.384	37.539	36.375	-1.164
80	37.703	36.692	-1.011
95.704	38.315	37.334	-0.981
100	38.559	37.631	-0.928
104.969	38.883	37.955	-0.928
120	40.13	38.195	-1.935
122.024	40.329	38.305	-2.024
133.623	41.489	39.264	-2.225
140	42.126	40.125	-2.001
160	44.126	43.169	-0.957
180	46.126	46.606	0.479
200	48.126	50.051	1.924
213.813	49.508	51.821	2.313
220	50.099	52.231	2.133
240	51.633	53.142	1.509
246.443	52.005	53.463	1.458
260	52.592	54.533	1.941
267.054	52.792	55.348	2.555
279.073	52.97	57.676	4.706
280	52.975	57.846	4.871
282.762	52.992	58.31	5.318
300	53.097	60.55	7.452
320	53.219	61.682	8.463
340	53.341	60.941	7.599
351.006	53.409	59.869	6.461
351.262	53.41	59.841	6.431
360	53.446	59.358	5.912
365.352	53.452	59.505	6.053
366.006	53.452	59.539	6.086
366.97	53.452	59.598	6.146
380	53.407	59.464	6.057
381.006	53.4	59.459	6.059
400	53.274	58.3	5.026
407.564	53.223	57.727	4.504
420	53.029	56.802	3.773
440	52.251	53.699	1.449
445.495	51.936	52.926	0.99
460	50.896	51.185	0.289
480	48.967	49.731	0.764
483.426	48.578	49.313	0.735
500	46.659	47.032	0.373
520	44.343	45.119	0.777
540	42.026		

LONGITUDINAL SECTION ROAD 11

PROJECT NAME

COURTNEY DR
UPPER COOMERA

PRELIMINARY
ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

0 5 10 15 20 25m
Horiz. Scale 1:500 - A1 (1:1000 - A3)
0 1 2 3 4 5m
Vert. Scale 1:100 - A1 (1:200 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

PRE	DATE	AMENDMENT
C	11-11-20	DESIGN REVISED
B	24-10-19	LONG SECTIONS REVISED
A	11-09-18	COUNCIL ISSUE

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ASSOCIATED CONSULTANTS

BIOME
WATER AND ENVIRONMENTAL CONSULTING

zone
Planning Group

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LONGITUDINAL SECTIONS
ROAD 11

MORTONS
urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088
Postal Address
PO Box 2484
Southport QLD 4215
Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

DESIGNED RB	DRAWN EP	
APPROVED	RPEQ	DATE 14-08-18

DRAWING NUMBER 36001-PRE-206
AMEND. C

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SEQ CODE SEWER NOTES

SEQ CODE NOTES COPIED DIRECTLY FROM DRAWING SEQ-SEW-1101-3.

ALL ENVIRONMENT PROTECTION MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY CONSTRUCTION WORK, INCLUDING CLEARING, COMMENCING.

VEGETATION PROTECTION

A. TREES LOCATED ALONG THE FOOTPATH SHALL BE, TRANSPLANTED PRIOR TO CONSTRUCTION, OR REPLACED IF DESTROYED.
B. WHEN WORKING WITHIN 4m OF TREES, RUBBER OR HARDWOOD GIRDLES SHALL BE CONSTRUCTED WITH 1.8 m BATTENS CLOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL. GIRDLES SHALL BE STRAPPED TO TREES PRIOR TO CONSTRUCTION AND REMAIN UNTIL COMPLETION.
C. TREE ROOTS SHALL BE TUNNELLED UNDER, RATHER THAN SEVERED. IF ROOTS ARE SEVERED THE DAMAGED AREA SHALL BE TREATED WITH A SUITABLE FUNGICIDE. CONTACT RELEVANT COUNCIL ARBORIST FOR FURTHER ADVICE.
D. ANY TREE LOPPING REQUIRED SHOULD BE UNDERTAKEN BY AN APPROVED ARBORIST.

SOIL

A. TOPSOIL AND SUBSOIL SHALL BE STOCKPILED SEPARATELY.
B. CARE SHALL BE TAKEN TO PREVENT SEDIMENT FROM ENTERING THE STORMWATER SYSTEM. THIS MAY INVOLVE PLACING APPROPRIATE SEDIMENT CONTROLS AROUND STOCKPILES.
C. IF ACID SULPHATE SOILS EXIST IN THE WORKS AREA. THE CONTRACTOR MUST PREPARE A RISK ASSESSMENT BASED ON THE QUEENSLAND ACID SULPHATE SOIL TECHNICAL MANUAL AND MANAGE THE ACID SULPHATE SOILS AS PER THE MANUAL.

CREEK CROSSINGS

A. SILTATION CONTROL MEASURES SHALL BE PLACED DOWNSTREAM OF ANY EXCAVATION WORK.
B. APPROPRIATE SEDIMENT CONTROLS SHALL BE USED TO PREVENT SEDIMENT FROM ENTERING THE CREEK.
C. NO SOIL SHALL BE STOCKPILED WITHIN 5 m OF THE CREEK.

REHABILITATION

A. PREDISTURBANCE SOIL PROFILES AND COMPACTION LEVELS SHALL BE REINSTATED.
B. PREDISTURBANCE VEGETATION PATTERNS SHALL BE RESTORED.

SAFETY

A. THE DESIGN AND CONSTRUCTION OF THE WORKS SHALL COMPLY WITH ALL QUEENSLAND LEGISLATION.

GENERAL

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT SOUTH EAST QUEENSLAND SEWERAGE CODE SPECIFICATIONS AND STANDARDS.
2. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
3. THE CONSTRUCTION OF THE SEWERAGE WORK SHOWN ON THIS DRAWING SHALL BE SUPERVISED BY AN ENGINEER WHO HAS RPEQ REGISTRATION. SEWERAGE WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT INTO THE SEQ SERVICE PROVIDER SEWERAGE SYSTEM.
4. ALL WORK ASSOCIATED WITH LIVE SEWERS OR MAINTENANCE HOLES SHALL BE CARRIED OUT BY DEVELOPER'S APPROVED CONTRACTOR UNDER THE SUPERVISION OF SEQ'S AGENT AT THE DEVELOPER'S COST.
5. ALL PIPES AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE "ACCEPTED PRODUCTS AND MATERIALS" LIST.
6. EACH ALLOTMENT SHALL BE SERVED BY A DN100 PVC PROPERTY CONNECTION. FOR ALLOTMENTS OTHER THAN SINGLE RESIDENTIAL, A DN160 PE (OR DN150 PVC) PROPERTY CONNECTION SHALL BE PROVIDED.
7. PROPERTY CONNECTIONS SHALL BE LOCATED WITHIN THE PROPERTY AS SHOWN IN THE DRAWINGS.
8. PROPERTY CONNECTION BRANCHES SHALL EXTEND INTO THE PROPERTY A MINIMUM OF 300 mm AND A MAXIMUM OF 750 mm. UNITYWATER REQUIRES MINIMUM EXTENSION OF 500 mm INTO PROPERTY.
9. WHERE PIPES ARE LAID IN FILL, THE FILLING SHALL BE CARRIED OUT IN LAYERS NOT EXCEEDING 300 mm (LOOSE) IN DEPTH AND SHALL BE COMPACTED UNTIL THE COMPACTION IS NOT LESS THAN 95% OF THE MATERIALS MAXIMUM COMPACTION WHEN TESTED IN ACCORDANCE WITH A.S. 1289 (MODIFIED COMPACTION). TESTING SHALL BE CARRIED OUT AFTER EACH ALTERNATE LAYER. IN ALL SUCH CASES APPROVAL OF CONSTRUCTED SEWERS WILL NOT BE ISSUED BY THE SEQ SERVICE PROVIDER UNLESS CERTIFICATES ARE PRODUCED CERTIFYING THAT THE REQUIRED COMPACTION HAS BEEN ACHIEVED.
10. WHERE SEWERS HAVE A GRADE OF 1 IN 20 OR STEEPER,BULKHEADS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SEQ SEWER CODE.
11. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING SERVICES WITH RELEVANT AUTHORITIES BEFORE COMMENCING WORKS.
12. SEWERS SHALL BE DISUSED /ABANDONED IN ACCORDANCE WITH PROCEDURES SET OUT IN THE SEQ SEWER CODE.
13. BENCH MARK AND LEVELS TO AHD.
14. THE EXISTING DWELLING ON LOT 3, REFER SEQ-SEW-1100, SERVED BY A SEPTIC SYSTEM, SHALL BE CONNECTED TO THE NEW SEWER BY A LICENCED PLUMBER IN ACCORDANCE WITH THE RELEVANT STATUTORY AND COUNCIL REQUIREMENTS. THE SEPTIC SYSTEM, INCLUDING TRENCHES,SHALL BE REMOVED AT THE DEVELOPER'S COST. ALL FIXTURES SHALL BE UPGRADED IF REQUIRED BY PLUMBING CODE.
15. EXISTING ALLOTMENTS REQUIRING A PROPERTY CONNECTION FROM EXISTING SEWERS SHALL BE PROVIDED BY THE SEQ SERVICE PROVIDER AT THE DEVELOPERS COST.

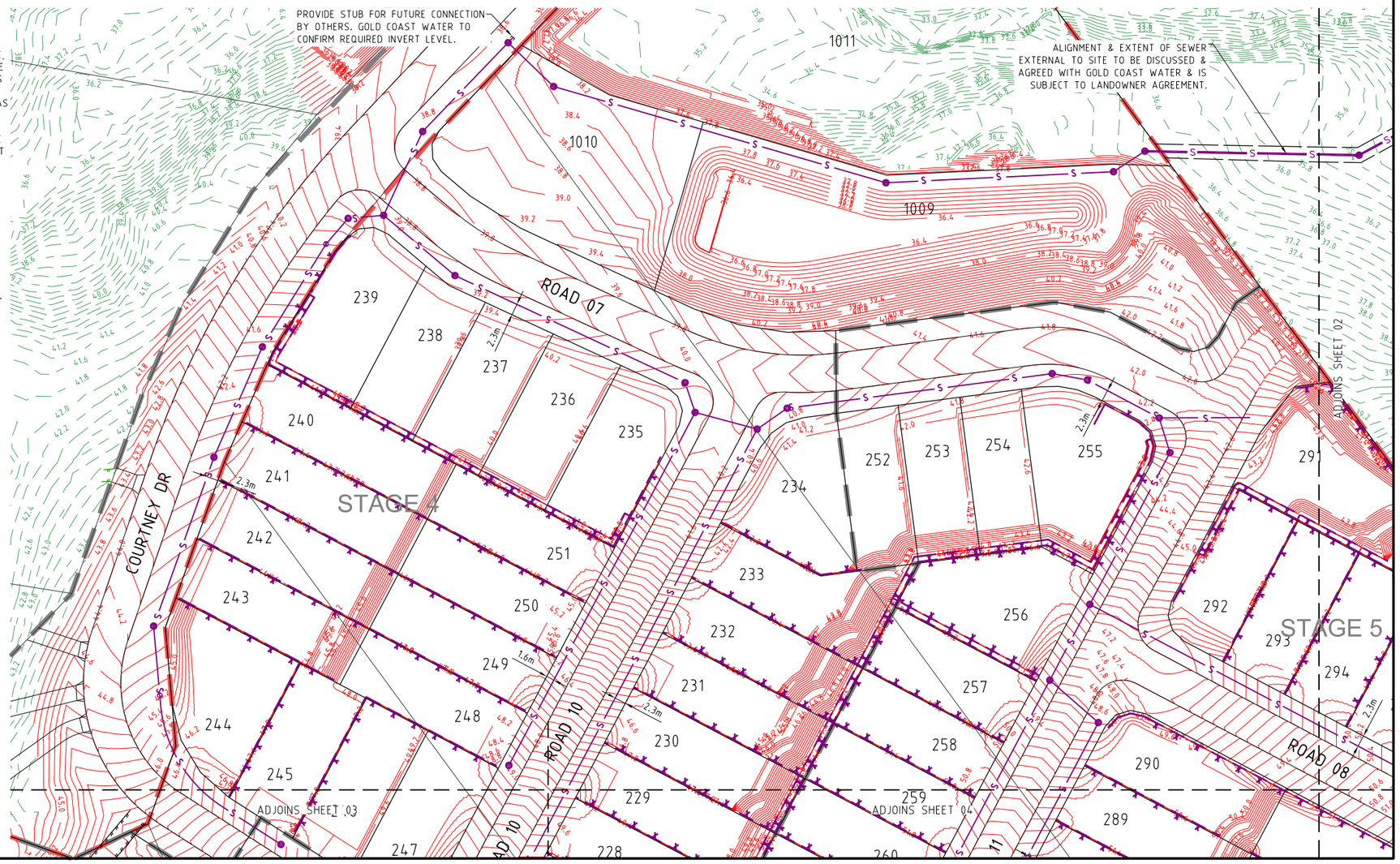
PROJECT SPECIFIC SEWER NOTES

a. ALL SEWER MAINS TO BE AS PER SEWER PIPE SPECIFICATIONS TABLE.
b. NOTWITHSTANDING THE STANDARD SEQ NOTES ABOVE, ALL MATERIALS AND WORKS MUST BE IN ACCORDANCE WITH THE SERVICE PROVIDER'S APPROVAL CONDITIONS AND THE SEQ WS&S D&C CODE.
c. THE CONTRACTOR IS TO INCLUDE ROCK EXCAVATION AS PART OF THEIR SEWER RATES UNLESS SCHEDULED OTHERWISE WITHIN THE CONTRACT.
d. THE CONTRACTOR TO PROVIDE CALCAREOUS CONCRETE WHERE SPECIFIED IN THE SEQ CODE BY THE RELEVANT AUTHORITY.
e. WATER AND ELECTRICAL CROSSING LOCATIONS ARE INDICATIVE ONLY. REFER TO PLANS TO DETERMINE PRECISE CROSSING LOCATIONS. WHERE SERVICE INDICATES CLASH WITH SEWER, SEWER TO TAKE PRECEDENCE. SERVICE TO BE CONSTRUCTED OVER OR UNDER SEWER ACCORDING TO SUPERINTENDENTS INSTRUCTION
f. ALL BENDS TO BE LONG RADIUS BEND, 3m RADIUS U.N.O.
g. CONTRACTOR TO VERIFY DOWNSTREAM EXISTING PIPE LEVELS PRIOR TO COMMENCEMENT OF WORKS ON-SITE.
h. PROPERTY CONNECTIONS HAVE BEEN DESIGNED TO CONTROL THE REQUIRED SERVICE AREA OF EACH LOT AT A GRADE OF 1:60 AND A MAXIMUM DEPTH OF PROPERTY CONNECTION AT 1.5m. UNLESS OTHERWISE STATED.
REFER SEQ STD. DWGS SEQ-SEW-1106-01 TO SEQ-SEW-1106-7 FOR JUNCTION DETAILS.
I. CONTRACTOR TO PAY ALL FEES AND CHARGES ASSOCIATED WITH CONNECTIONS

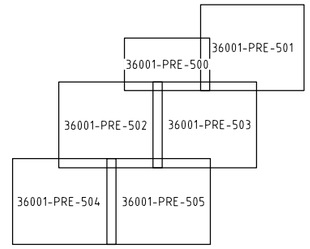
LEGEND

- EXISTING SEWER
- EXISTING RISING MAIN
- EXISTING KERB (INVERT)
- EXISTING EDGE OF BITUMEN
- EXISTING PROPERTY LINE
- EXISTING RETAINING WALL
- EXISTING CONTOURS
- FUTURE SEWER
- FUTURE RISING MAIN
- FUTURE KERB (INVERT)
- FUTURE PROPERTY LINE
- FUTURE RETAINING WALL
- FUTURE CONTOURS
- SITE BOUNDARY
- STAGE BOUNDARY
- PROPOSED KERB (INVERT)
- PROPOSED EDGE OF BITUMEN
- PROPOSED PROPERTY LINE
- PROPOSED RETAINING WALL
- DESIGN CONTOURS
- PROPOSED SEWER
- PROPOSED RISING MAIN
- SEWER MANHOLE
- SEWER RODDING END
- SEWER BEND
- SEWER MAINTENANCE SHAFT
- SEWER END CAP
- SEWER PUMP STATION

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SHEET LAYOUT



PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

E	16-12-21	STAGE BDY & TXT AMENDED
D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT, SEWER & CONTOURS REVISED
B	28-03-19	SEWER, SHEET LAYOUT, LOT NO'S & STAGES AMENDED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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ASSOCIATED CONSULTANTS

BIOME WATER AND ENVIRONMENTAL CONSULTING

zone Planning Group

DRAWING TITLE

SEWER RETICULATION PLAN AND NOTES SHEET 01

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

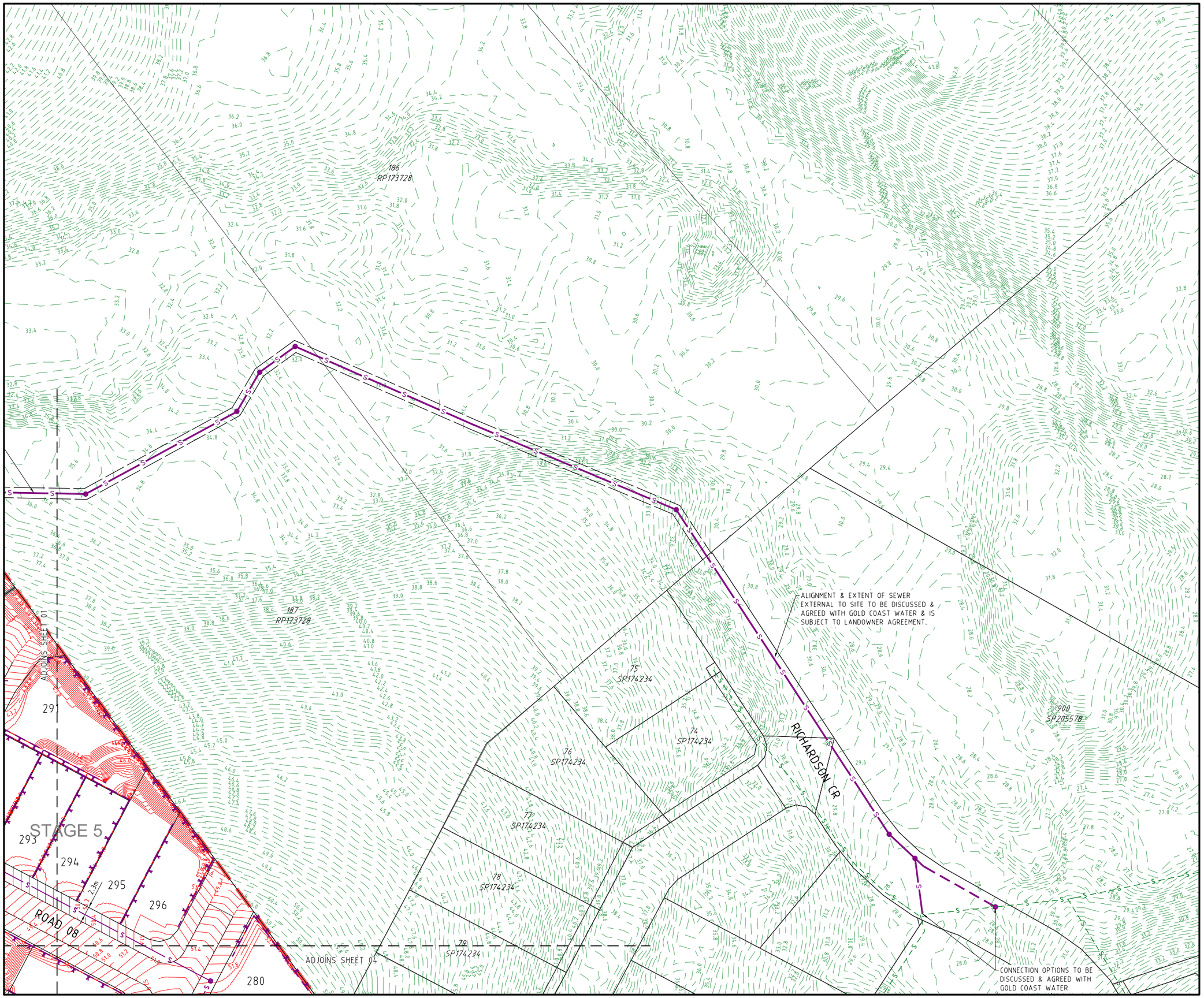
Postal Address
PO Box 2484
Southport QLD 4215

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

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APPROVED		RPEQ	DATE 14-08-18

DRAWING NUMBER 36001-PRE-500 | AMEND. E

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

E	16-12-21	STAGE BDY & TXT AMENDED
D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT, SEWER & CONTOURS REVISED
B	28-03-19	SHEET LAYOUT, LOT NO'S, NOTES & STAGES AMENDED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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DRAWING TITLE

SEWER RETICULATION
PLAN AND NOTES
SHEET 02

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

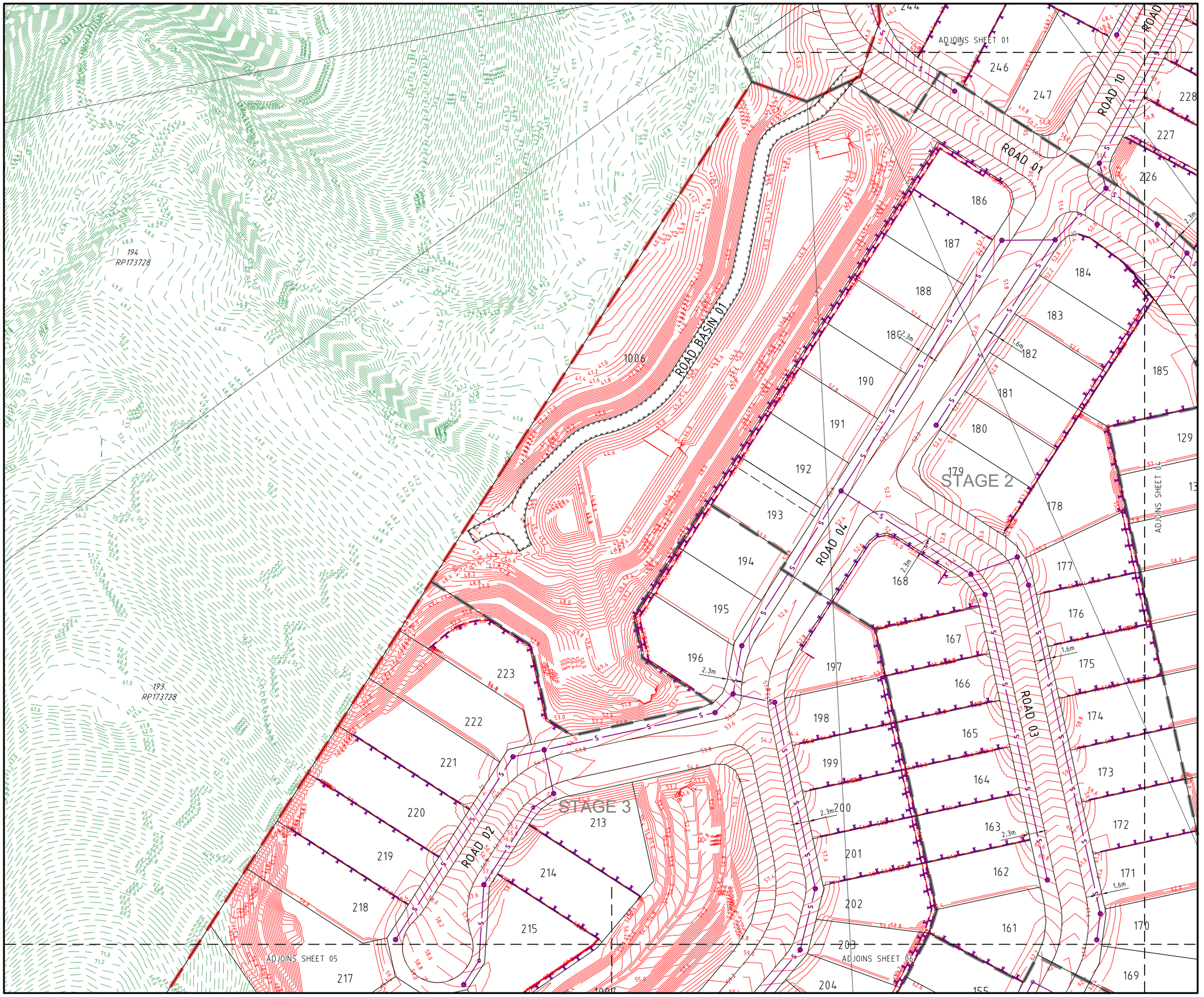
Postal Address
PO Box 2484
Southport QLD 4215

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

DESIGNED	RB	DRAWN	EP
APPROVED		RPEQ	DATE 14-08-18

DRAWING NUMBER	AMEND.
36001-PRE-501	E

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

F	16-12-21	STAGE BDY & TXT AMENDED
E	11-11-20	LOT LAYOUT AND DESIGN REVISED
D	24-10-19	LOT LAYOUT, SEWER & CONTOURS REVISED
C	16-04-19	SEWER AMENDED
B	28-03-19	LOTS, SHEET LAYOUT, LOT NO'S & STAGES AMENDED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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SEWER RETICULATION
PLAN AND NOTES
SHEET 03

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

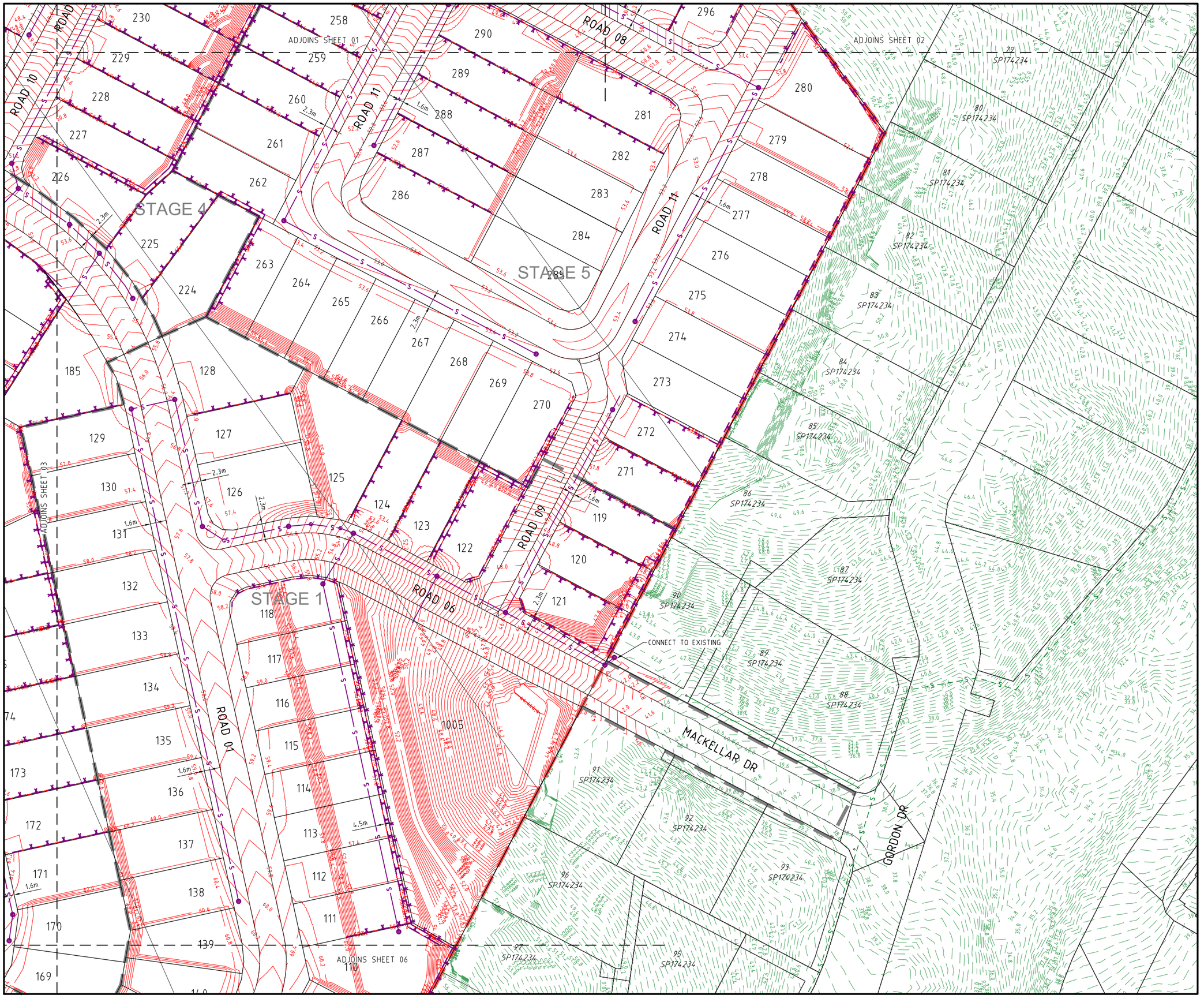
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PO Box 2484
Southport QLD 4215

Gold Coast Office
Suite 9, 19 Short St
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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

F	16-12-21	STAGE BDY & TXT AMENDED
E	11-11-20	LOT LAYOUT AND DESIGN REVISED
D	24-10-19	LOT LAYOUT, SEWER & CONTOURS REVISED
C	16-04-19	SEWER AMENDED
B	28-03-19	SHEET LAYOUT, LOT NO'S & STAGES AMENDED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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DRAWING TITLE

SEWER RETICULATION
PLAN AND NOTES
SHEET 04

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

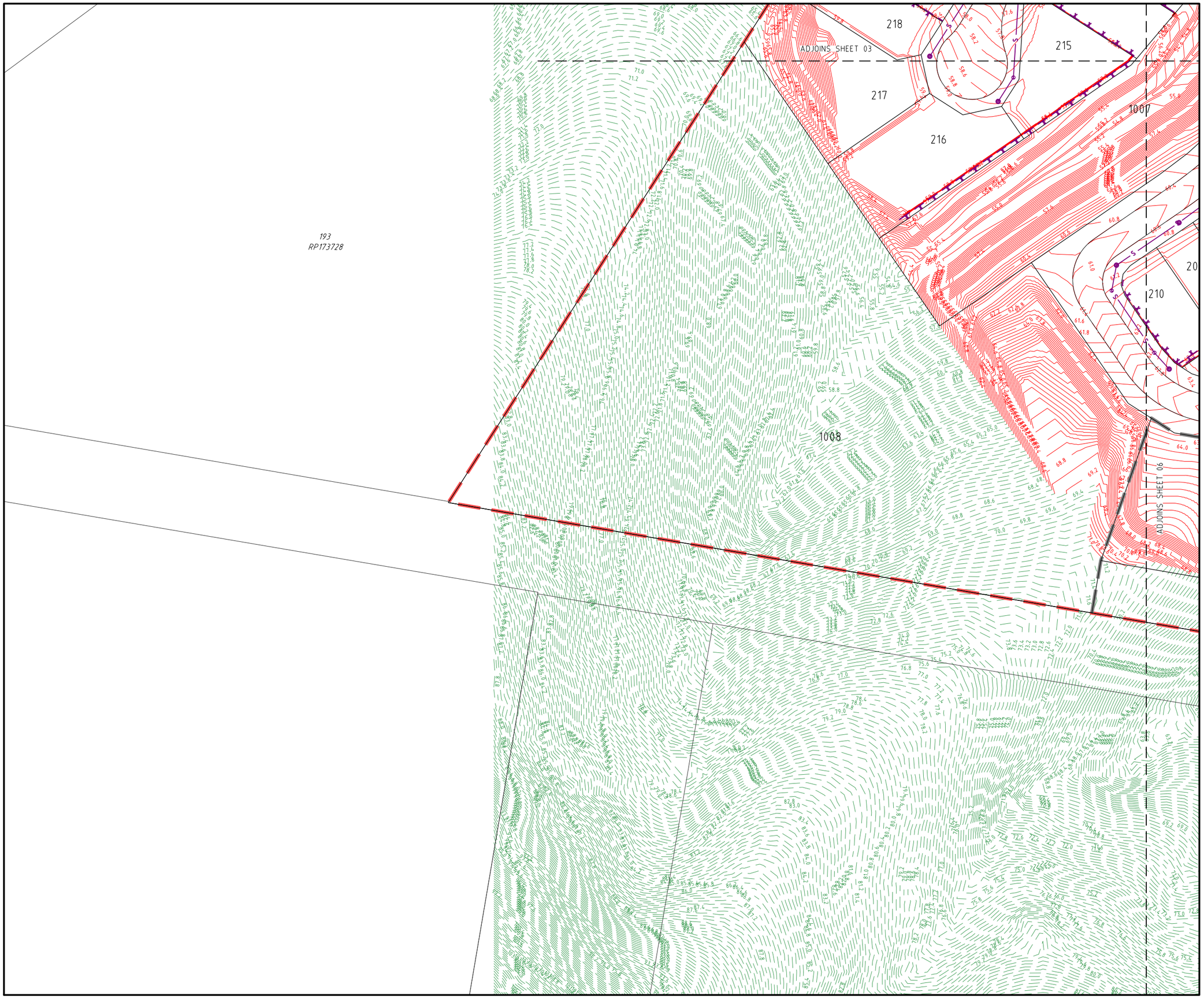
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PO Box 2484
Southport QLD 4215

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

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DRAWING NUMBER: 36001-PRE-503
AMEND.: F

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

F	16-12-21	STAGE BDY & TXT AMENDED
E	11-11-20	LOT LAYOUT AND DESIGN REVISED
D	24-10-19	LOT LAYOUT, SEWER & CONTOURS REVISED
C	16-04-19	SEWER AMENDED
B	28-03-19	LOTS, SHEET LAYOUT, LOT NO'S & STAGES AMENDED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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DRAWING TITLE

SEWER RETICULATION
PLAN AND NOTES
SHEET 05

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As
Mortons-Urban Solutions
ABN 39 116 375 065

Postal Address
PO Box 2484
Southport QLD 4215

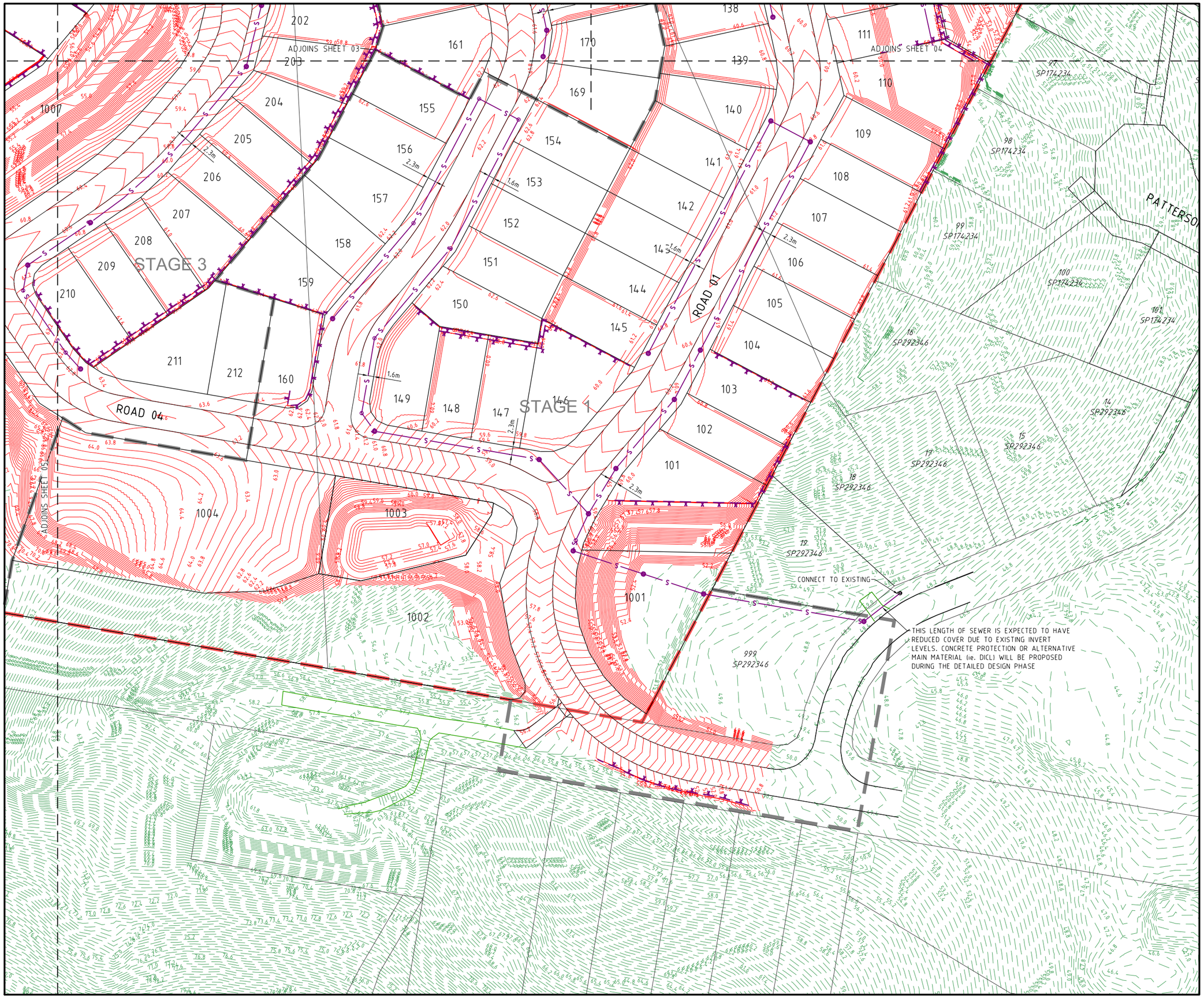
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

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36001-PRE-504	F

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

PRE	DATE	AMENDMENT
E	16-12-21	STAGE BDY & TXT AMENDED
D	11-11-20	LOT LAYOUT AND DESIGN REVISED
C	24-10-19	LOT LAYOUT, SEWER & CONTOURS REVISED
B	28-03-19	SHEET LAYOUT,LOT NO'S,STAGES AMENDED,NOTES ADDED
A	11-09-18	COUNCIL ISSUE

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DRAWING TITLE

SEWER RETICULATION
PLAN AND NOTES
SHEET 06

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As
Mortons-Urban Solutions
ABN 39 116 375 065

Postal Address
PO Box 2484
Southport QLD 4215

mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

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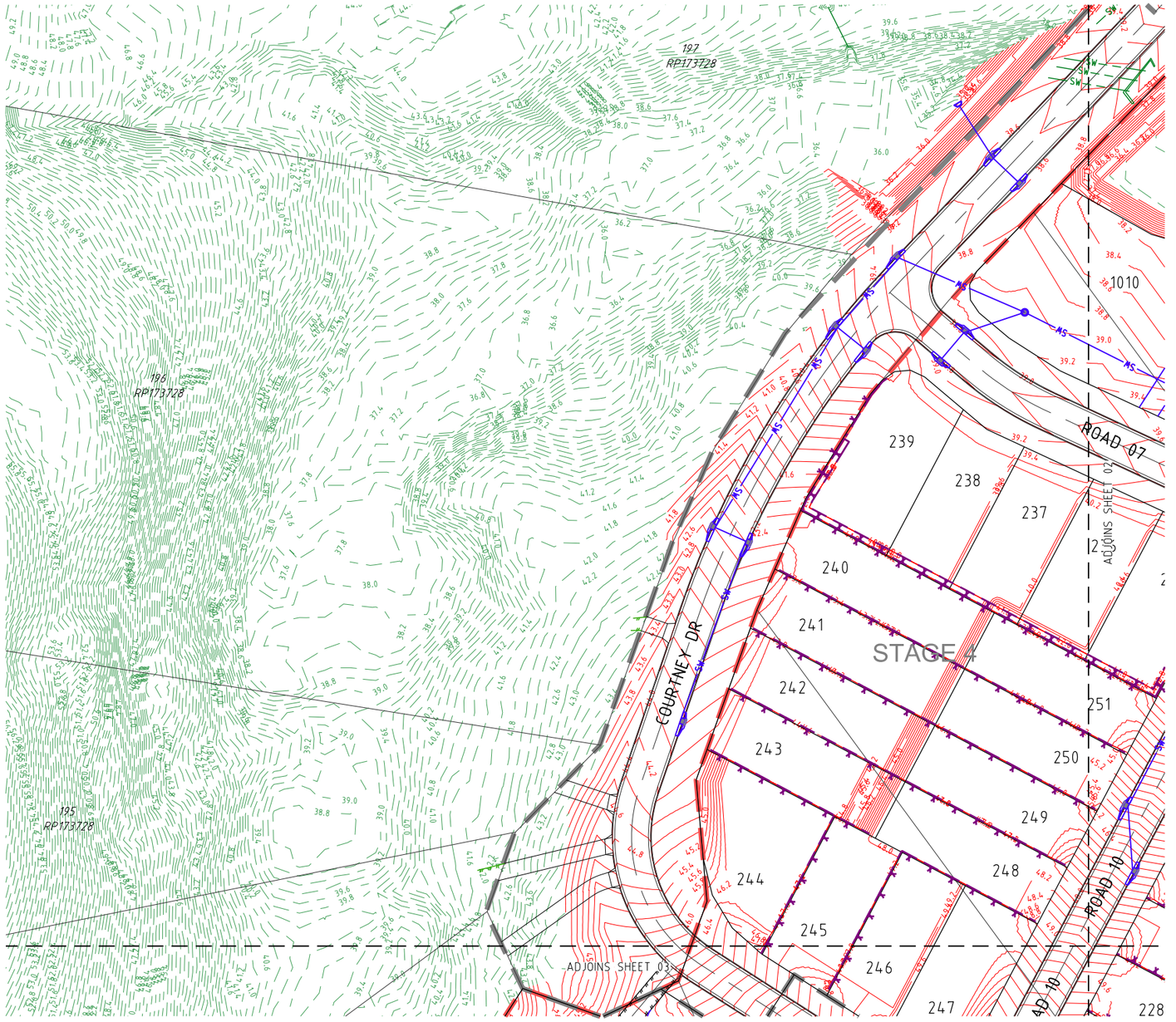
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STORMWATER

1. ALL FIELD GULLIES SHALL CONTAIN A 150mm DIA STUB 600mm BELOW GRADE LEVEL FOR FUTURE ROOFWATER DRAINAGE.
2. MANHOLES TO BE IN ACCORDANCE WITH IPWEAQ STANDARD DRAWING No DS-010, DS-015, DS-018, DS-019, DS-020, DS-021 OR STRUCTURAL DRAWINGS (STRUCTURAL DRAWINGS TAKE PRECEDENCE).
3. OUTLET HEADWALLS TO BE IN ACCORDANCE WITH LOCAL COUNCIL STANDARD DRAWINGS.
4. ALL HEADWALLS WITH A FALL GREATER THAN 900mm HIGH REQUIRE INSTALLATION OF PEDESTRIAN SAFETY FENCES.
5. ALL PIPES 600mm DIA OR LESS TO BE SOCKETED CONCRETE PIPES WITH RUBBER RING JOINTS. PIPED GREATER THAN 600mm DIA SHALL BE BUTT OR FLUSH JOINTED.
6. ALL ALLOTMENTS TO BE GRADED SUCH THAT FUTURE ROOFWATER DRAINAGE DISCHARGES TO KERB OR TO PIPED DRAINAGE SYSTEM.
7. ALL PIPE 300mm DIA AND GREATER SHALL BE CONSTRUCTED USING SRC OR FRC PIPES. CONTRACTOR MAY ELECT TO USE PVC PIPES WITHIN ALLOTMENTS FOR PIPES SMALLER THAN 300mm DIA.
8. FOR SETOUT DETAILS REFER TO 640 SERIES DRAWINGS (PROFILES AND PIT DETAILS).
9. GULLY PITS TO BE IN ACCORDANCE WITH IPWEAQ STANDARD DRAWING No DS-060, DS-061, DS-062, DS-063. WHERE PITS ARE CONSTRUCTED AS DRAINWAY PITS, TO BE IN ACCORDANCE WITH IPWEAQ STANDARD DRAWINGS No 05-068.
10. LOTS WHICH CAN DRAIN OVERLAND FLOW TO THE STREET SWALE / DRAINAGE WITHOUT FLOWING THROUGH ADJOINING PROPERTIES NEED TO PROVIDE FOR Q100 OVERLAND FLOW TO THE ROAD
11. LOT EARTHWORKS DURING BUILDING CONSTRUCTION MUST NOT CHANGE FLOW PATH DIRECTION UNLESS IT IS REPLACED WITH ANOTHER FLOW PATH DRAINING TO THE ROAD SWALE / DRAINAGE.
12. THE CONTRACTOR IS TO INCLUDE ROCK EXCAVATION AS PART OF THEIR STORMWATER RATE.
13. PIPE CLASS - PIPE CLASSES/TRENCH BEDDING SHOWN ON THE DRAWINGS ARE SUBJECT TO THE CONTRACTORS PREFERRED INSTALLATION METHOD. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE APPROPRIATE PIPE CLASSES AND BEDDING.
14. KERB ADAPTORS ARE TO BE INSTALLED TO AUTHORITIES REQUIREMENTS.
15. ALL RCBC BASE SLABS ARE TO BE CAST INSITU.
16. DRIVEWAY LOCATIONS ARE INDICATIVE ONLY TO SHOW STORMWATER DESIGN IS SUITABLE FOR PROPOSED LOT LAYOUT.

LEGEND

- EXISTING KERB (INVERT)
- EXISTING KERB (LIP & BACK)
- EXISTING EDGE OF BITUMEN
- EXISTING PROPERTY LINE
- EXISTING RETAINING WALL
- EXISTING STORMWATER
- EXISTING ROOFWATER
- EXISTING SUBSOIL
- EXISTING CONTOURS
- FUTURE KERB
- FUTURE PROPERTY LINE
- FUTURE RETAINING WALL
- FUTURE STORMWATER
- FUTURE ROOFWATER
- FUTURE SUBSOIL
- SITE BOUNDARY
- STAGE BOUNDARY
- CONTROL LINE / CENTER OF ROAD
- PROPOSED KERB (INVERT)
- PROPOSED KERB (LIP & BACK)
- PROPOSED EDGE OF BITUMEN
- PROPOSED PROPERTY LINE
- PROPOSED RETAINING WALL
- DESIGN CONTOURS
- PROPOSED STORMWATER
- PROPOSED ROOFWATER
- PROPOSED SUBSOIL
- MANHOLE
- FIELD INLET
- KERB INLET (ON GRADE) PIT
- KERB INLET (SAG) PIT
- HEADWALL
- SCOUR PROTECTION
- 10/001 DRAINAGE PIT & LINE NO.

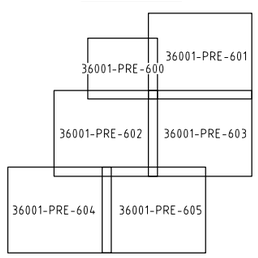


REFERENCE POINT LOCATION FOR DRAINAGE STRUCTURES

STRUCTURE TYPE	HORIZONTAL CONTROL (Reference Point Location)	VERTICAL CONTROL (Reference Level)
MANHOLE	CENTRE OF MANHOLE	FINISHED SURFACE LEVEL
GULLY PIT	LIP AT CENTRE OF PIT	FINISHED SURFACE LEVEL (LIP OF CHANNEL)
HEADWALL	INTERSECTION OF HEADWALL FACE & PIPE CENTRELINE	INVERT LEVEL

REFER TO DWG SERIES 640 FOR ALL DRAINAGE STRUCTURE SETOUT AND/OR CUSTOM DETAILS.

SHEET LAYOUT



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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

F	16-12-21	STAGE BDY & TXT AMENDED
E	11-11-20	LOT LAYOUT AND DESIGN REVISED
D	24-10-19	LOT LAYOUT, STORMWATER & CONTOURS REVISED
C	16-04-19	DRIVEWAYS REMOVED
B	28-03-19	NOTES, LOT NO'S & STAGES AMENDED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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zone Planning Group

DRAWING TITLE

STORMWATER
DRAINAGE
PLAN
SHEET 01

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination
MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088
Postal Address
PO Box 2484
Southport QLD 4215
Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

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THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

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DRAWING TITLE

STORMWATER
DRAINAGE
PLAN
SHEET 02

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As
Mortons-Urban Solutions
ABN: 39 116 375 065

Postal Address
PO Box 2484
Southport QLD 4215

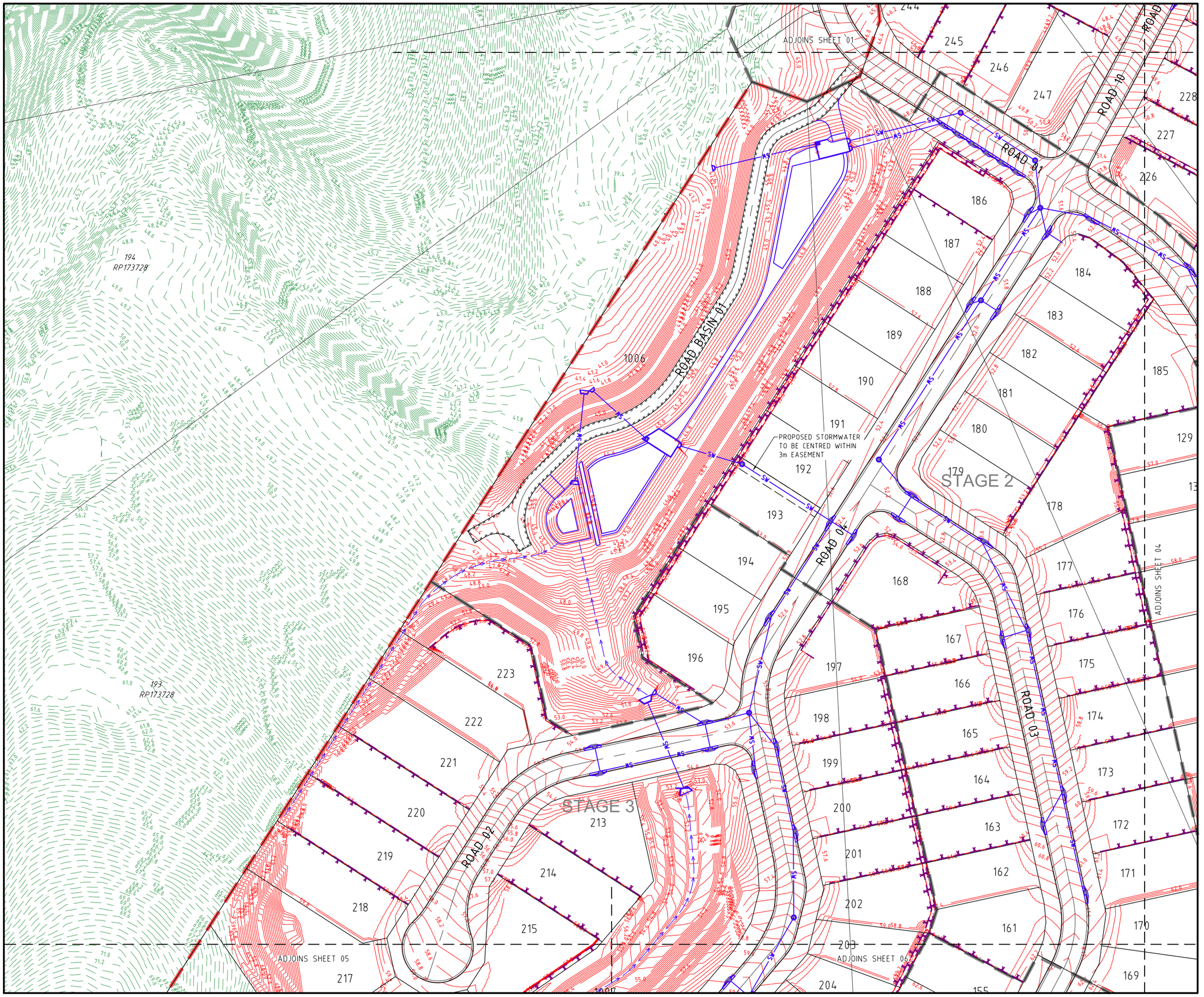
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

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ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

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A	11-09-18	COUNCIL ISSUE

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STORMWATER
DRAINAGE
PLAN
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MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

Postal Address
PO Box 2484
Southport QLD 4215

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

PRE	DATE	AMENDMENT
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E	11-11-20	LOT LAYOUT AND DESIGN REVISED
D	24-10-19	LOT LAYOUT, STORMWATER & CONTOURS REVISED
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A	11-09-18	COUNCIL ISSUE

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DRAWING TITLE

STORMWATER
DRAINAGE
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SHEET 04

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

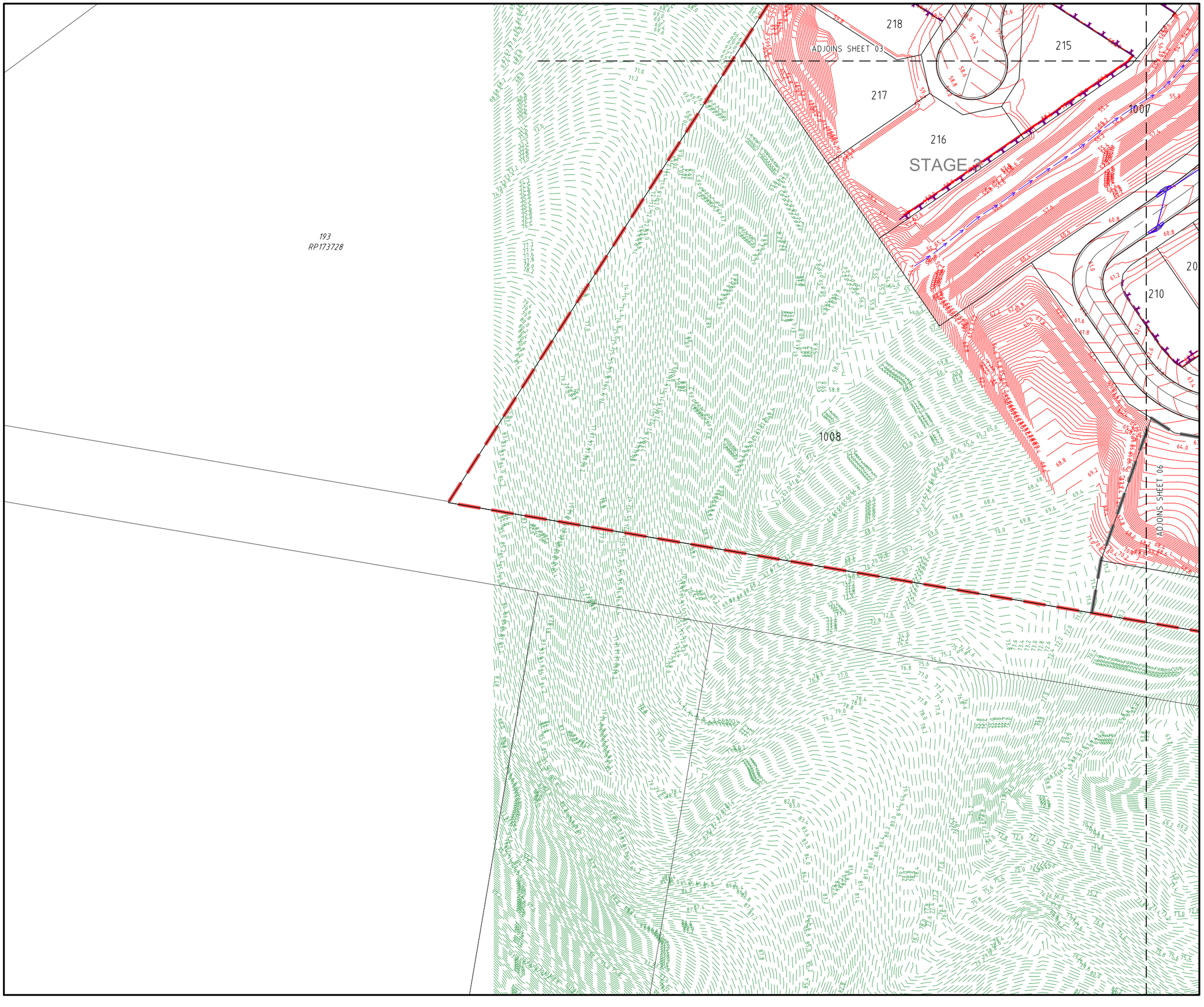
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Gold Coast Office
Suite 9, 19 Short St
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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
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PRE	DATE	AMENDMENT
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DRAWING TITLE

STORMWATER
DRAINAGE
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MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As
Mortons-Urban Solutions
ABN 39 116 375 065

Postal Address
PO Box 2484
Southport QLD 4215

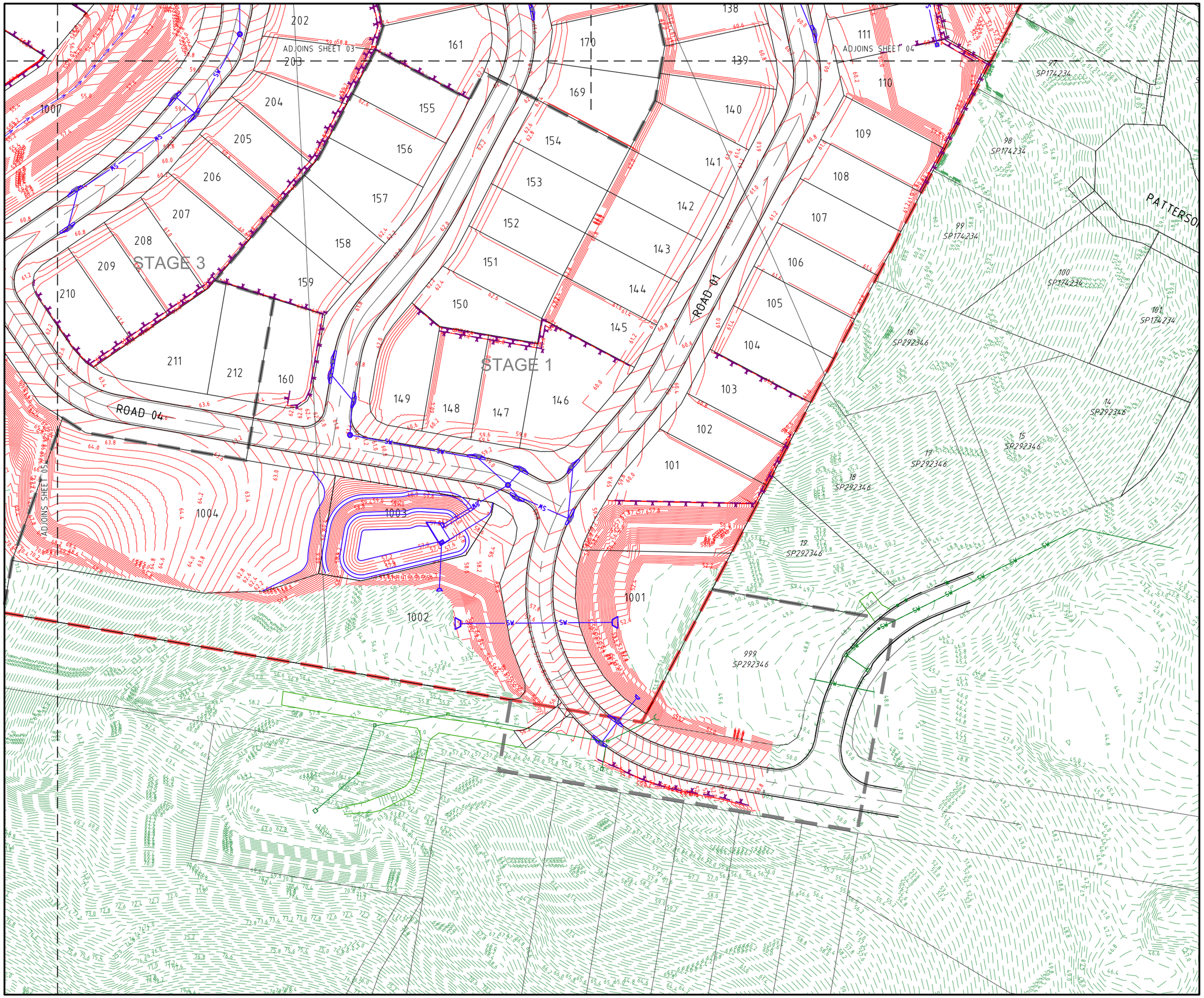
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

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36001-PRE-604	F

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

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DRAWING TITLE

STORMWATER
DRAINAGE
PLAN
SHEET 06

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As
Mortons-Urban Solutions
ABN: 39 116 375 065

mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

Postal Address
PO Box 2484
Southport QLD 4215

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

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36001-PRE-605	F

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SEQ CODE WATER NOTES

SEQ CODE NOTES COPIED DIRECTLY FROM DRAWING SEQ-WAT-1101-3.

VEGETATION PROTECTION

A. TREES LOCATED ALONG THE FOOTPATH SHALL BE, TRANSPLANTED PRIOR TO CONSTRUCTION, OR REPLACED IF DESTROYED.
B. WHEN WORKING WITHIN 4m OF TREES, RUBBER OR HARDWOOD GIRDLES SHALL BE CONSTRUCTED WITH 1.8m BATTENS CLOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL. GIRDLES SHALL BE STRAPPED TO TREES PRIOR TO CONSTRUCTION AND REMAIN UNTIL COMPLETION.
C. TREE ROOTS SHALL BE TUNNELLED UNDER, RATHER THAN SEVERED. IF ROOTS ARE SEVERED THE DAMAGED AREA SHALL BE TREATED WITH A SUITABLE FUNGICIDE. CONTACT RELEVANT COUNCIL ARBORIST FOR FURTHER ADVICE.
D. ANY TREE LOPPING REQUIRED SHOULD BE UNDERTAKEN BY AN APPROVED ARBORIST.

SOIL

A. TOPSOIL AND SUBSOIL SHALL BE STOCKPILED SEPARATELY.
B. CARE SHALL BE TAKEN TO PREVENT SEDIMENT FROM ENTERING THE STORMWATER SYSTEM. THIS MAY INVOLVE PLACING APPROPRIATE SEDIMENT CONTROLS AROUND STOCKPILES.
C. IF ACID SULPHATE SOILS EXIST IN THE WORKS AREA, THE CONTRACTOR MUST PREPARE A RISK ASSESSMENT BASED ON THE QUEENSLAND ACID SULPHATE SOIL TECHNICAL MANUAL AND MANAGE THE ACID SULPHATE SOILS AS PER THE MANUAL.

CREEK CROSSINGS

A. SILTATION CONTROL MEASURES SHALL BE PLACED DOWNSTREAM OF ANY EXCAVATION WORK.
B. APPROPRIATE SEDIMENT CONTROLS SHALL BE USED TO PREVENT SEDIMENT FROM ENTERING THE CREEK.
C. NO SOIL SHALL BE STOCKPILED WITHIN 5m OF THE CREEK.

REHABILITATION

A. PREDISTURBANCE SOIL PROFILES AND COMPACTION LEVELS SHALL BE REINSTATED.
B. PREDISTURBANCE VEGETATION PATTERNS SHALL BE RESTORED.

GENERAL NOTES

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT SOUTH EAST QUEENSLAND WATER SUPPLY CODE SPECIFICATIONS AND STANDARDS.
2. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
3. ADOPT LIP OF KERB OR SHOULDER OF ROAD AS PERMANENT LEVEL.
4. COVER ON MAINS FROM PERMANENT LEVEL TO BE AS SHOWN IN SEQ-WAT-1200-2.
5. CONDUITS TO BE INSTALLED IN ACCORDANCE WITH THE STANDARD DRAWINGS.
6. A WATER METER SUPPLIED AT THE DEVELOPER'S COST, IS TO BE INSTALLED AT THE SERVICE POINT OF EACH LOT IN ACCORDANCE WITH THE STANDARD DRAWING FOR THE SEQ-SP.
7. ALL MATERIALS USED IN THE WORKS SHALL COMPLY WITH THE SEQ-SP's ACCEPTED PRODUCTS AND MATERIALS LIST OR BE APPROPRIATELY SHOWN, LISTED AND DEFINED IN THE ENGINEERING SUBMISSION SO THAT THE ALTERNATIVE PRODUCT OR MATERIAL CAN BE ASSESSED AND IF APPROPRIATE, APPROVED BY THE SEQ-SP.
8. ALL CONCRETE FOOTPATHS TO BE CLEAR OF WATER MAINS.
9. TEST/CHLORINATION POINTS TO BE INSTALLED IN ACCORDANCE WITH STANDARD DRAWING NO.SEQ-WAT-1410-1.
10. THE CONSTRUCTION OF THE WATER RETICULATION WORK SHOWN ON THIS DRAWING MUST BE SUPERVISED BY AN ENGINEER WHO HAS RPEQ REGISTRATION. WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT TO THE RETICULATION SYSTEM.

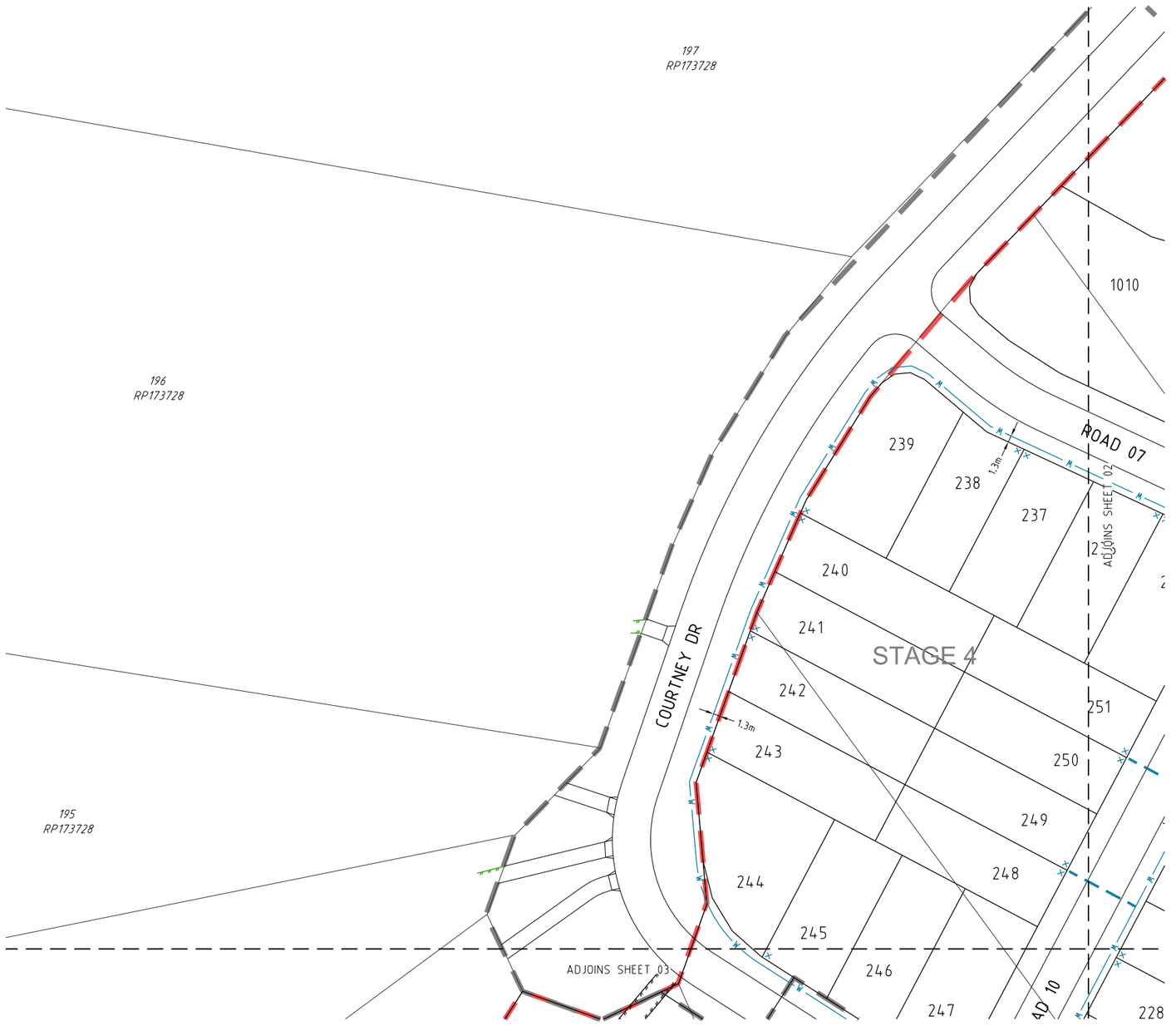
ALL ENVIRONMENT PROTECTION MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY CONSTRUCTION WORK, INCLUDING CLEARING, COMMENCING.

PROJECT SPECIFIC WATER NOTES

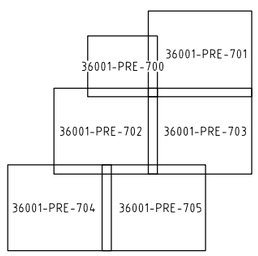
a. ALL PROPERTY CONNECTION ROAD CROSSINGS TO BE SLEEVED WITH DN100 mPVC CONDUIT.
b. ALL MATERIALS ARE TO BE SUPPLIED AND CONSTRUCTED IN ACCORDANCE WITH SEQ CODE.
c. WATER METERS ARE TO BE SUPPLIED AND INSTALLED AT ALL WATER SERVICE / CONNECTION POINTS IN ACCORDANCE WITH SEQ-WAT-1106 TO SEQ-WAT-1110-2.
d. THRUST BLOCKS, TRENCH STOPS AND BULK HEADS TO BE LOCATED AND INSTALLED BY CONTRACTOR IN ACCORDANCE WITH SEQ CODE.
e. TRENCH STOPS TO BE IN ACCORDANCE WITH SEQ-WAT-1201-1.
f. THE CONTRACTOR IS TO INCLUDE ROCK EXCAVATION AS PART OF THEIR WATER RATES UNLESS SCHEDULED OTHERWISE WITHIN THE CONTRACT.
g. FOOTPATHS SHOWN FOR INFORMATION PURPOSES ONLY.
h. ALL WATER CONSTRUCTION WORK UNDERTAKEN BY THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE WORKPLACE HEALTH AND SAFETY LEGISLATION.
i. MINIMUM WATERMAIN COVER TO BE IN ACCORDANCE WITH SECTION 7.4.2 TABLE 7.2 OF THE SEQ AMENDMENT TO WATER SUPPLY CODE OF AUSTRALIA.
j. CONTRACTOR TO PAY ALL FEES AND CHARGES ASSOCIATED WITH CONNECTIONS.
k. END OF LINE ARRANGEMENTS (EG. CUL-DE-SAC HEADS) TO BE CONSTRUCTED IN ACCORDANCE WITH SEQ-WAT-1104-1.
l. TEMPORARY CONSTRUCTION HYDRANTS TO BE PROVIDED IN ACCORDANCE WITH SEQ-WAT-1303-1 AND SEQ-WAT-1303-2 AT ALL CONNECTIONS.
m. ALL LIVE CONNECTIONS ARE TO BE ORGANISED BY THE CIVIL CONTRACTOR AND UNDERTAKEN BY COUNCIL AT THE DEVELOPERS EXPENSE.

LEGEND

- W100 EXISTING 100Ø WATER MAIN
- W150 EXISTING 150Ø WATER MAIN
- W200 EXISTING 200Ø WATER MAIN
- W225 EXISTING 225Ø WATER MAIN
- W250 EXISTING 250Ø WATER MAIN
- W300 EXISTING 300Ø WATER MAIN
- EXISTING KERB (INVERT)
- EXISTING PROPERTY LINE
- EXISTING EDGE OF BITUMEN
- W100 FUTURE 100Ø WATER MAIN
- W150 FUTURE 150Ø WATER MAIN
- W200 FUTURE 200Ø WATER MAIN
- W225 FUTURE 225Ø WATER MAIN
- W250 FUTURE 250Ø WATER MAIN
- W300 FUTURE 300Ø WATER MAIN
- FUTURE KERB (INVERT)
- FUTURE PROPERTY LINE
- PROPOSED KERB (INVERT)
- PROPOSED EDGE OF BITUMEN
- PROPOSED PROPERTY LINE
- SITE BOUNDARY
- STAGE BOUNDARY
- W PROPOSED 100Ø WATER MAIN
- METER LOCATION
- SERVICE CONDUIT



SHEET LAYOUT



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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

F	16-12-21	STAGE BDY & TXT AMENDED
E	11-11-20	LOT LAYOUT AND DESIGN REVISED
D	24-10-19	LOT LAYOUT & WATER REVISED
C	16-04-19	DRIVEWAYS REMOVED
B	28-03-19	WATER, LOT NO'S & STAGES AMENDED
A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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BIOME WATER AND ENVIRONMENTAL CONSULTING

zone Planning Group

DRAWING TITLE

WATER RETICULATION PLAN SHEET 01

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As:
Mortons Urban Solutions
ABN: 39 116 375 065

Postal Address
PO Box 2484
Southport QLD 4215

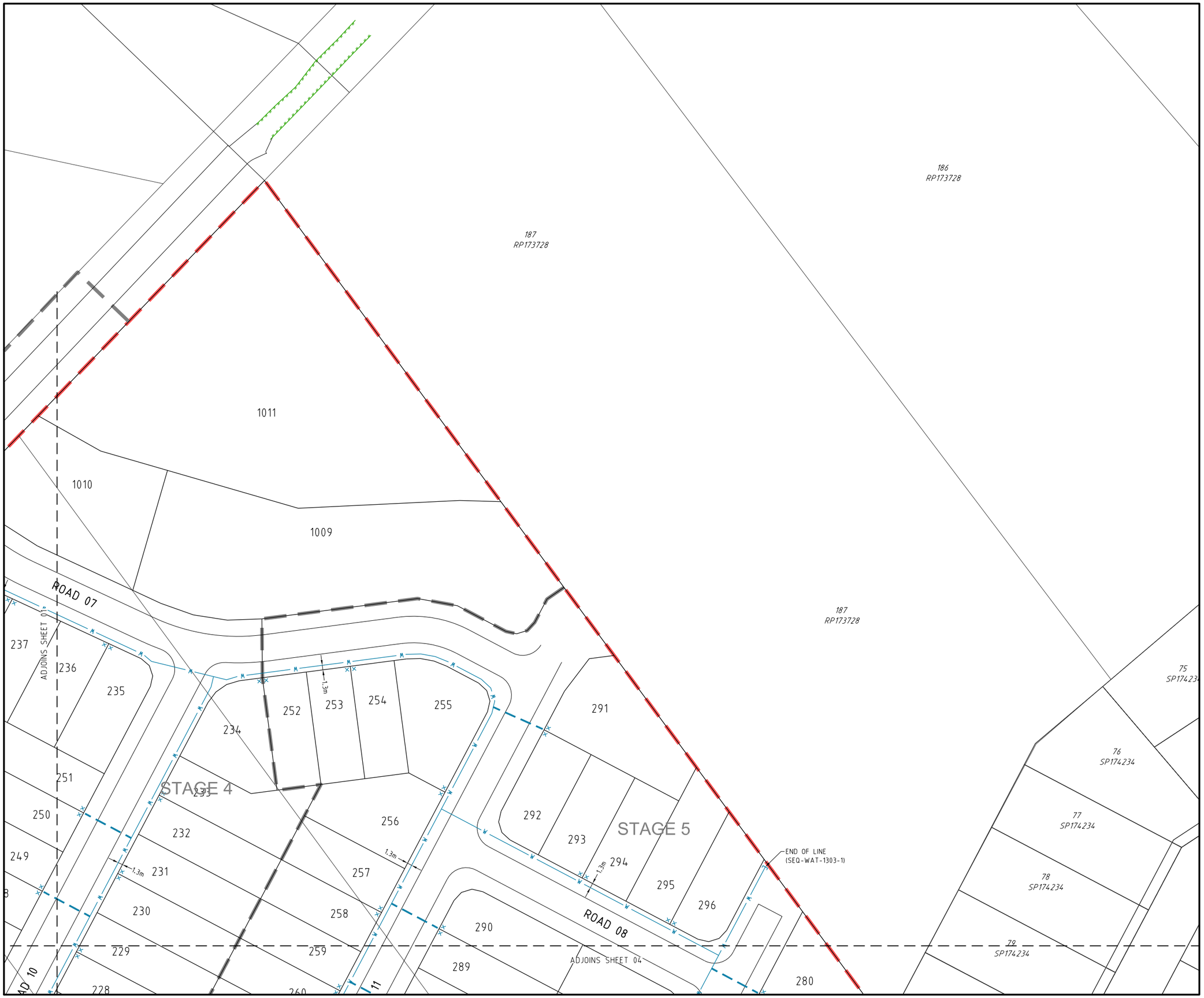
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

DESIGNED	RB	DRAWN	EP
APPROVED		RPEQ	DATE 14-08-18

DRAWING NUMBER: 36001-PRE-700
AMEND.: F

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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

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WATER
RETICULATION
PLAN
SHEET 02

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Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

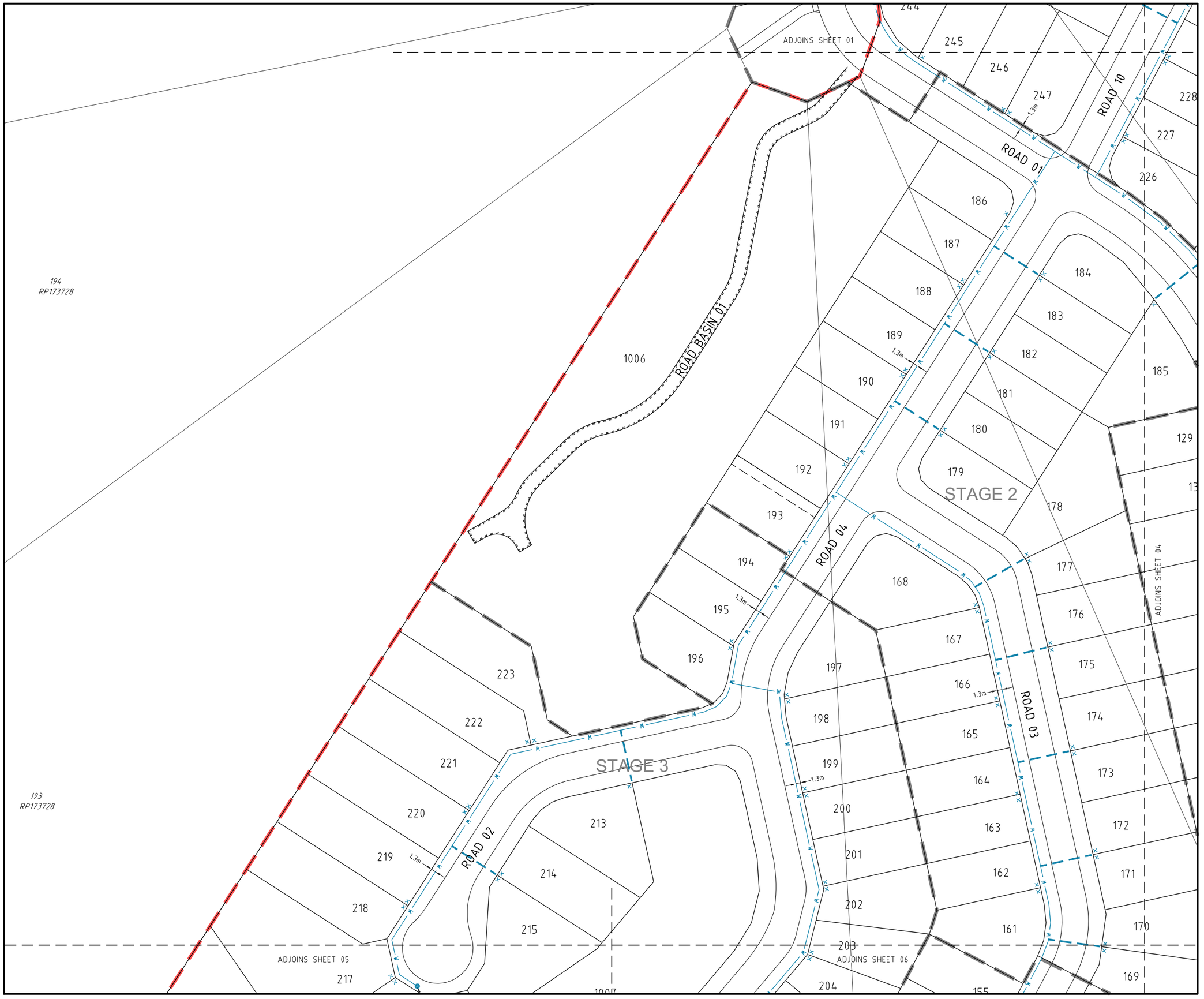
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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
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NORTH

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Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

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A	11-09-18	COUNCIL ISSUE
PRE	DATE	AMENDMENT

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Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

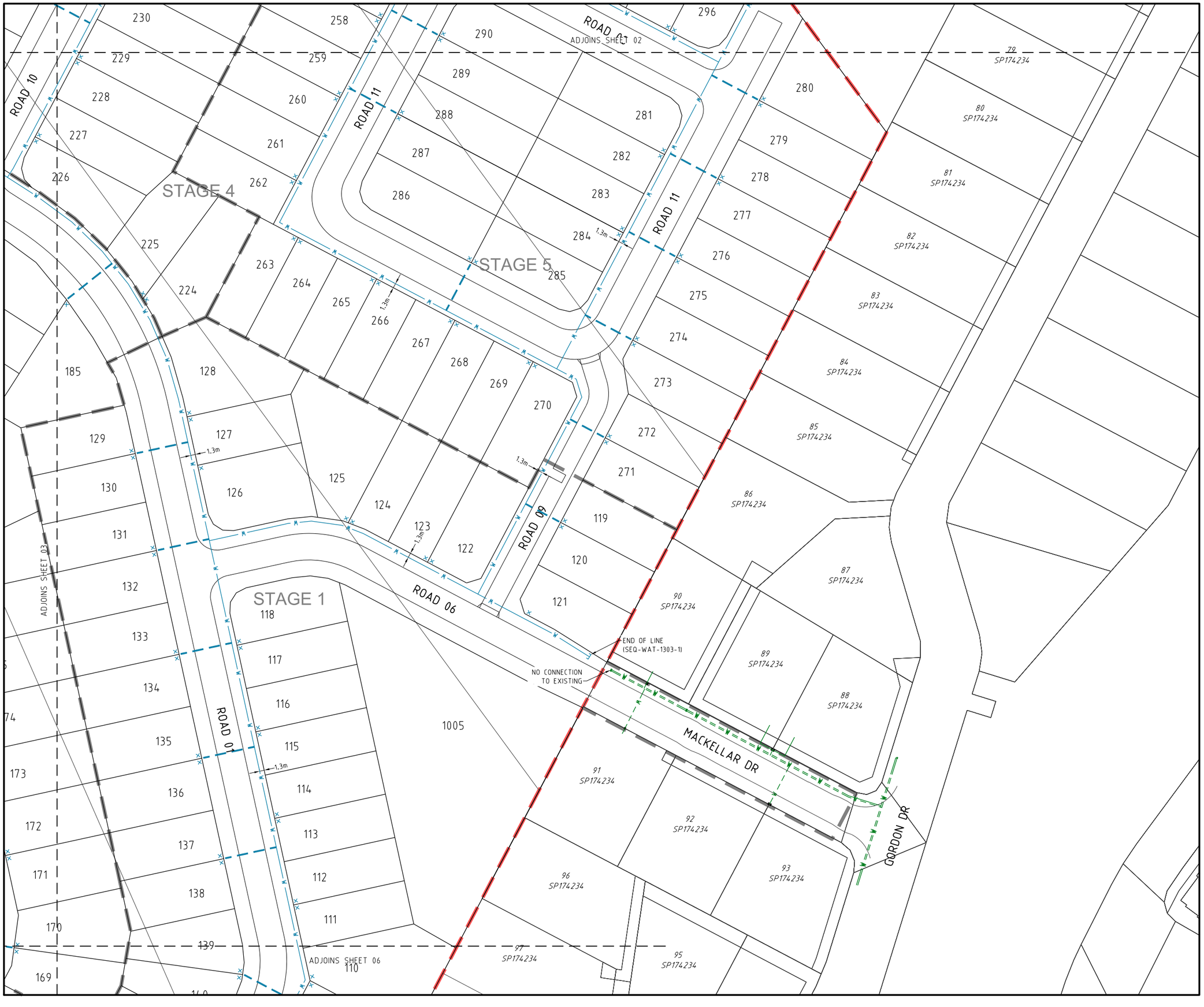
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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

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CONSTRUCTION		

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SHEET 04

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Project Coordination

MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

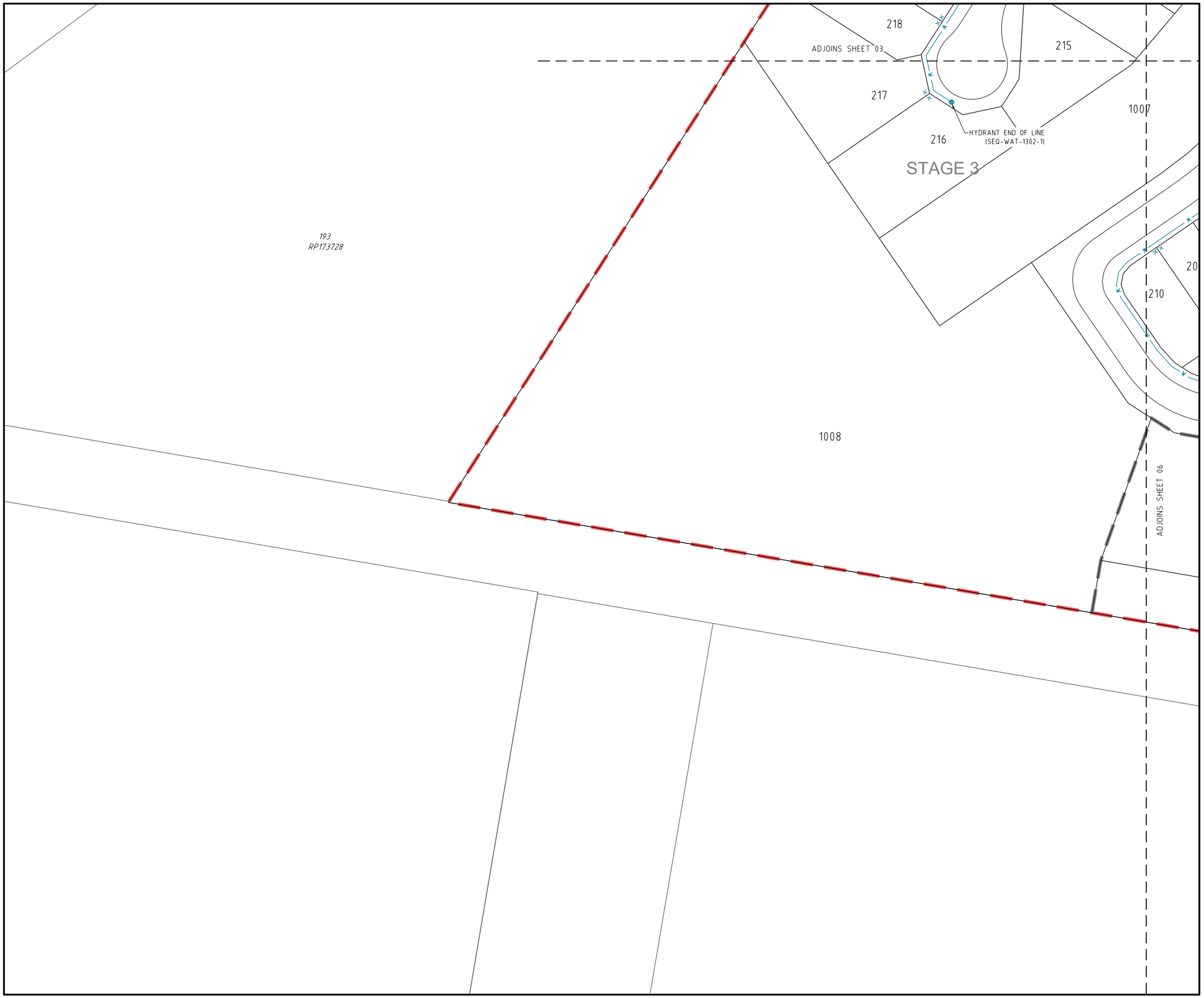
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PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

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Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

PRE	DATE	AMENDMENT
F	16-12-21	STAGE BDY & TXT AMENDED
E	11-11-20	LOT LAYOUT AND DESIGN REVISED
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A	11-09-18	COUNCIL ISSUE

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RETICULATION
PLAN
SHEET 05

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Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

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Southport QLD 4215

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ADJOINS SHEET 03

ADJOINS SHEET 04

ADJOINS SHEET 05

STAGE 3

STAGE 1

ROAD 01

ROAD 04

PATTERSO

EXTENT OF WORKS & CONNECTION
LOCATION TO EXISTING TO BE CONFIRMED
IN CONSULTATION WITH COUNCIL

PROJECT NAME

COURTNEY DR UPPER COOMERA

PRELIMINARY ENGINEERING

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 5 10 15 20 25m
Scale 1:500 - A1 (1:1000 - A3)

ISSUES	DATE	
TENDER		
COUNCIL	11-09-18	
CONSTRUCTION		

PRE	DATE	AMENDMENT
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A	11-09-18	COUNCIL ISSUE

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DRAWING TITLE

WATER
RETICULATION
PLAN
SHEET 06

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Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

Postal Address
PO Box 2484
Southport QLD 4215

Gold Coast Office
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APPROVED		RPEQ	DATE 14-08-18

DRAWING NUMBER 36001-PRE-705 | AMEND. F

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APPENDIX E

Temporary Sewer Pump Station Discussions

18th November 2021 Meeting Notes (MUS email 22/11/21 & Council email 16/12/21)

MUS Drawing 36001-ALL-SK002 (Rev B)

H2One Tech Memo dated 1st November 2021Prepared by Mortons-Urban Solutions

Matthew McLaren

From: THOMAS Roman <RTHOMAS@goldcoast.qld.gov.au>
Sent: Thursday, 16 December 2021 9:20 AM
To: Matthew McLaren
Cc: Ian Woods; Adam Barclay; John Harrison
Subject: RE: Courtney Dr Meeting Notes

Hi Matthew,

As discussed, WW agrees with the below servicing strategy proposed including the temp SPS as per the notes below.

Regards,

Roman Thomas
MBA, BEng (Hons) (Civil), BBus (Mgt), JP (Qual), MIEAust, CPEng, NER, RPEQ
A/ Executive Coordinator Development Services
Water and Waste
City of Gold Coast

T: (07) 5582 8313 **M:** 0466 925 609
PO Box 5042 Gold Coast Mail Centre Qld 9729
cityofgoldcoast.com.au

From: Matthew McLaren <mattmc@urbansolutions.net.au>
Sent: Monday, 22 November 2021 9:07 AM
To: JOHNSON Mark <MJOHNSON@goldcoast.qld.gov.au>; THOMAS Roman <RTHOMAS@goldcoast.qld.gov.au>
Cc: Ian Woods <ian.w@gallerygroup.com.au>; Adam Barclay <adam@gallerygroup.com.au>; John Harrison <johnh@urbansolutions.net.au>
Subject: Courtney Dr Meeting Notes

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Hi Mark & Roman

Thanks for your time last Thursday (18th Nov) to discuss our Client's Courtney Dr project and potential sewer servicing options. Please see a summary of my notes of the outcomes achieved at today's meeting, noting these will be formalised in an update to the Preliminary Engineering Servicing Report and lodged in support of the MCU/ROL currently before Council as soon as possible. I've also attached a copy of the current proposed subdivision layout, temporary pump station concept sketch & H2One's tech memo regarding capacity.

- Proposed sewer servicing strategy:
  - Stage 1 – Continue as per current proposal, gravitate east into the existing Gordon Dr network.
  - Stages 2, 3 & 4 – Developer to construct, at no cost to Council, a temporary pump station in the low point of the site (adjacent to Yuan Creek) which will pump to the top of MacKellar Dr and then gravitate into the existing Gordon Dr network. H2One's tech note (copy attached for ease of reference) confirms capacity within the existing network to accommodate this development. Council will receive the temporary pump station as a 'gifted asset' and will require a bond from the Developer to cover the maintenance costs prior to its decommissioning. Council will own and maintain until decommissioning.
  - Stage 5 – prior to plan sealing the last stage within the development, the Developer will be required to remove the temporary pump station, decommission the rising main and deliver the ultimate gravity sewer connection to the east.

    - If there are issues surrounding the delivery of the ultimate gravity sewer in the future, the Developer will need to amend the MCU/ROL approval at that point in time via negotiation & agreement with Council.
- Gallery/Mortons to suggest draft conditions to assist in conditioning/delivering the above strategy.
- To remove confusion, GC Water will require (& condition) the development to be developed in sequential order. Gallery/Mortons to review staging. It is expected the stage numbers will change as a result of this review with some minor tweaks to stage boundaries also expected.
- In the background, the Developer will continue to discuss delivery of the ultimate strategy with their neighbours.

Also appreciate the chat about the water & sewer alignments for Baileys Mountain Road. If you are able to provide any further design information we will tweak to suit and catch up again very soon to discuss in more detail.

Safe travels for your upcoming trip Mark.

Thanks again Matt.

Regards

Matt McLaren
Senior Engineer & Project Coordinator
mobile: 0438 758 721
email: mattmc@urbansolutions.net.au

MORTONS urbansolutions

GOLD COAST
Level 2/19 Short Street
(PO Box 2484)
Southport Qld 4215
tel: 07 5571 1099
email: mortons@urbansolutions.net.au

PERTH
Unit 4/100 Railway Road
Subiaco WA 6008
tel: 08 9380 9700

SUNSHINE COAST
6 Osterley Avenue
Caloundra Qld 4551
tel: 07 5499 7000
website: www.urbansolutions.net.au

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Reference: 36001-ALL / Council & Client / Meeting



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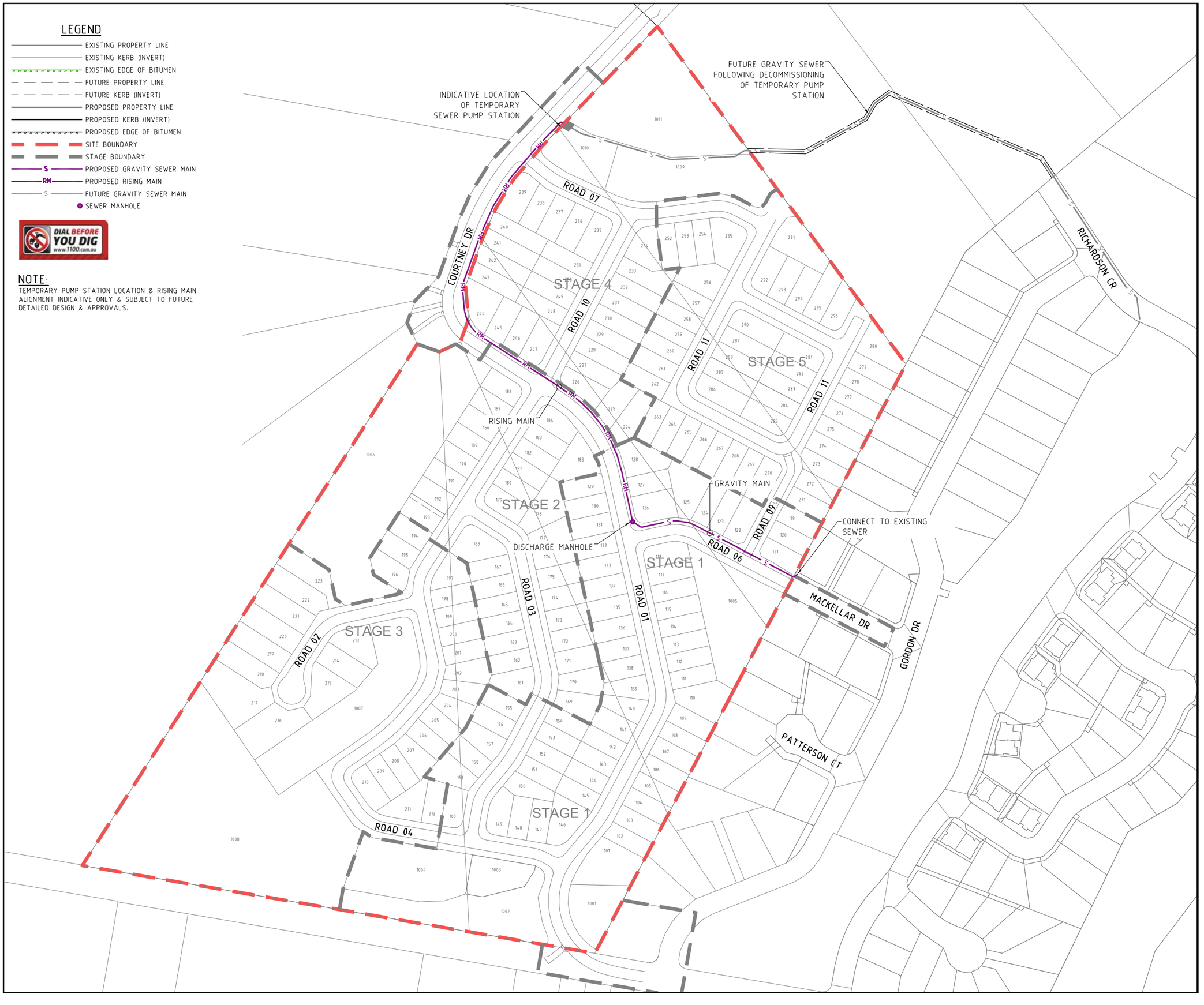
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LEGEND

- EXISTING PROPERTY LINE
- EXISTING KERB (INVERT)
- EXISTING EDGE OF BITUMEN
- FUTURE PROPERTY LINE
- FUTURE KERB (INVERT)
- PROPOSED PROPERTY LINE
- PROPOSED KERB (INVERT)
- PROPOSED EDGE OF BITUMEN
- SITE BOUNDARY
- STAGE BOUNDARY
- S — PROPOSED GRAVITY SEWER MAIN
- RM — PROPOSED RISING MAIN
- S — FUTURE GRAVITY SEWER MAIN
- SEWER MANHOLE

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NOTE:
TEMPORARY PUMP STATION LOCATION & RISING MAIN ALIGNMENT INDICATIVE ONLY & SUBJECT TO FUTURE DETAILED DESIGN & APPROVALS.



PROJECT NAME

COURTNEY DR UPPER COOMERA

EXTERNAL SEWER SKETCH

RP DESCRIPTION
LOT 188, 189, 190, 191 & 192 ON RP173728
COURTNEY DRIVE
LOCALITY OF UPPER COOMERA
LOCAL AUTHORITY - GOLD COAST CITY COUNCIL

CLIENT

GALLERY
THE ART OF LIVING

NORTH

0 12.5 25 37.5 50 62.5m
Scale 1:1250 - A1 (1:2500 - A3)

ISSUES	DATE	
TENDER		
COUNCIL		
CONSTRUCTION		

PRE	DATE	AMENDMENT
B	16-12-21	STAGE BDY & TXT AMENDED
A	13-10-21	CLIENT ISSUE

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BIOME WATER AND ENVIRONMENTAL CONSULTING

zone Planning Group

DRAWING TITLE

TEMPORARY SEWER PUMP STATION CONCEPT

MORTONS urbansolutions
Urban & Regional Planning
Civil Engineering
Project Coordination

MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065

mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099
Fax 07 5571 1088

Postal Address
PO Box 2484
Southport QLD 4215

Gold Coast Office
Suite 9, 19 Short St
Southport QLD 4215

DESIGNED	MM	DRAWN	SF
APPROVED		RPEQ	DATE 13-10-21

DRAWING NUMBER 36001-ALL-SK002 | AMEND. B

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TECHNICAL MEMORANDUM

To: Ian Woods

From: Joshua May

CC: Matthew McLaren, David Colledge

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Ref: 79-99 Courtney Dr, Upper Coomera QLD 4209 - Hydraulic Assessment of Temporary SPS

INTRODUCTION

A residential sub-division, at 79 to 99 Courtney Drive, Upper Coomera QLD 4209, lots 188-192 on RP173728, is currently in the planning phase of the Development Application (DA) process. The site has an estimated land area of 18.9 hectares and will comprise of 196 residential freehold allotments.

In reference to the H2One report "*79-99 Courtney Dr, Upper Coomera - Water_Sewer FINAL Rpt V7*", dated 19 November, 2020, a sewer hydraulic analysis was undertaken to confirm the proposed service strategy, and determine if the additional site loading (547 EP) would trigger the need for external infrastructure upgrades. The original service strategy consisted of constructing a DN225 trunk gravity main along Courtney Drive, which will traverse east through neighbouring properties and connect into the existing DN300 along Richardson Crescent. Two additional connections were proposed on the existing DN150 gravity mains along Mackellar Drive and Gordon Drive.

However, negotiations with the neighbouring property owner, re the alignment of the DN225 trunk gravity main, has yet to be resolved, and therefore, an alternative temporary service strategy has been developed. This would consist of a temporary sewer pump station (SPS), to service development stages 2-5, and transfer flow south-east to the gravity network discharging to Mackellar Drive.

H2One Pty Ltd was engaged to undertake the assessment in accordance with CoGC's requirements; "*South East Queensland Water Supply and Sewerage Design and Construction Code*" (SEQ Code) (2020) and "*Water and Sewerage Connections Policy Procedure*" (2018). The results of the completed hydraulic analysis are presented in this report.

DEMAND ASSESSMENT

A demand assessment of the development was undertaken to determine the approximate sewage demands attributed to the proposed land-use type and density. This was calculated using the CoGC's adopted Equivalent Tenement (ET) unit rates and average "per capita" demand for sewage; 200 L/EP/day and 180 L/EP/day for the 2021-2041 and 2066 planning horizons, respectively. Table 1 shows a summary of the development's demand estimation.

Table 1. Estimated demands for the proposed development

Site Land Use and Density	Demand Rate	ET	EP	ADWF (L/s)	PWWF (L/s)
196 x res. allotments	1 ET / Lot	196.0	546.8	1.27	6.4

Note 1: Based on 2.79 ET to EP conversion.

Note 2: Stages 2-5 consists of 136 res. lots, which equates to 379.4 EP or 4.4 L/s PWWF.

NETWORK DESIGN CRITERIA

CoGC's Design Standards were adopted from the SEQ Code (2020). The following table displays the standards relevant to this study.

Table 2. Design criteria relevant to the hydraulic analysis

	Provision	Specification
Sewerage	ET to EP conversion factor	2.79
	Average Dry Weather Flow (ADWF)	200 L/EP/day
	Peak Wet Weather Flow (PWWF)	5 x ADWF
	Single pump capacity	C1 x ADWF (L/s) where; C1 = 3.5 to 5.0 $C1 = 15 \times (EP)^{-0.1587}$
	Pump station operational storage (kL)	0.9 x Q / N where; Q = Single pump capacity (L/s) N = Number of pump starts per hour, where N = 12 for duty pump motor < 100 kW N = 8 for duty pump motor 100 – 200 kW N = 5 for duty pump motor > 200 kW
	Pump station emergency storage (kL)	4 hours ADWF
	Total pump station capacity (L/s)	PWWF
	Maximum depth of gravity flow (proposed system)	75% pipe diameter
	Maximum depth of gravity flow (existing system)	1.0 m below manhole level
	Min. and max. rising main flow velocity	0.75 m/s 3.0 m/s

RESULTS

CoGC's InfoWater SWMM LGIP hydraulic model (*PI_LGIP_2014*) was adopted for the analysis. The proposed location of the temporary SPS was assumed to be within within the recreational park, at the north-west area of the subject site, and the discharge manhole at the proposed DN150 gravity main upstream of the Mackellar Drive connection.

The main outcomes of the hydraulic analysis are as follows. Refer to Appendix 1 for a concept plan of the proposed service strategy and Appendix 2 for detailed modelling calculations.

1. Downstream DN150 gravity network: The model presented sufficient flow depth capacity to service the temporary SPS, up to the 2066 planning horizon. No changes to the overall outcomes of H2One'e original report ("*79-99 Courtney Dr, Upper Coomera - Water_Sewer FINAL Rpt V7*") is therefore required.

   Note: The total sewage load of the development had not changed since H2One's original study, therefore, only the gravity network relevant to the proposed temporary SPS necessitated re-modelling.

2. Proposed SPS/Rising Main: The recommended design of the temporary SPS and rising main is as follows (infrastructure sizing is concept only, to be confirmed at detailed design).

   a. 2 x 2 kw duty/assist pumps, with a combined duty of 4.4 L/s @ 31 m head.

b. Wet well with minimum diameter of 2.4 m, based on 3m depth, to provide 12.2 kL of emergency storage.

c. Operational volume of 0.3 kL.

d. PE SDR11 DN90 rising main, with internal diameter of 73 mm. This achieved the optimal flow velocity range, at 1.05 m/s.

CONCLUSION

In reference to H2One's report "*79-99 Courtney Dr, Upper Coomera - Water_Sewer FINAL Rpt V7*", dated 19 November, 2020, the proposed temporary SPS service strategy did not trigger additional infrastructure upgrades to the downstream network. In addition, the subject site's proposed DN150 gravity network, upstream of the Mackellar Drive connection, should have sufficient flow depth capacity to service the additional flow rate.

It is therefore recommended that Council approves the proposed temporary service strategy, until the permanent DN225 gravity trunk line is established within the neighbouring property. Refer to Appendices 1 and 2 for a plan view of the conceptual sewer service strategy and detailed modelling results.

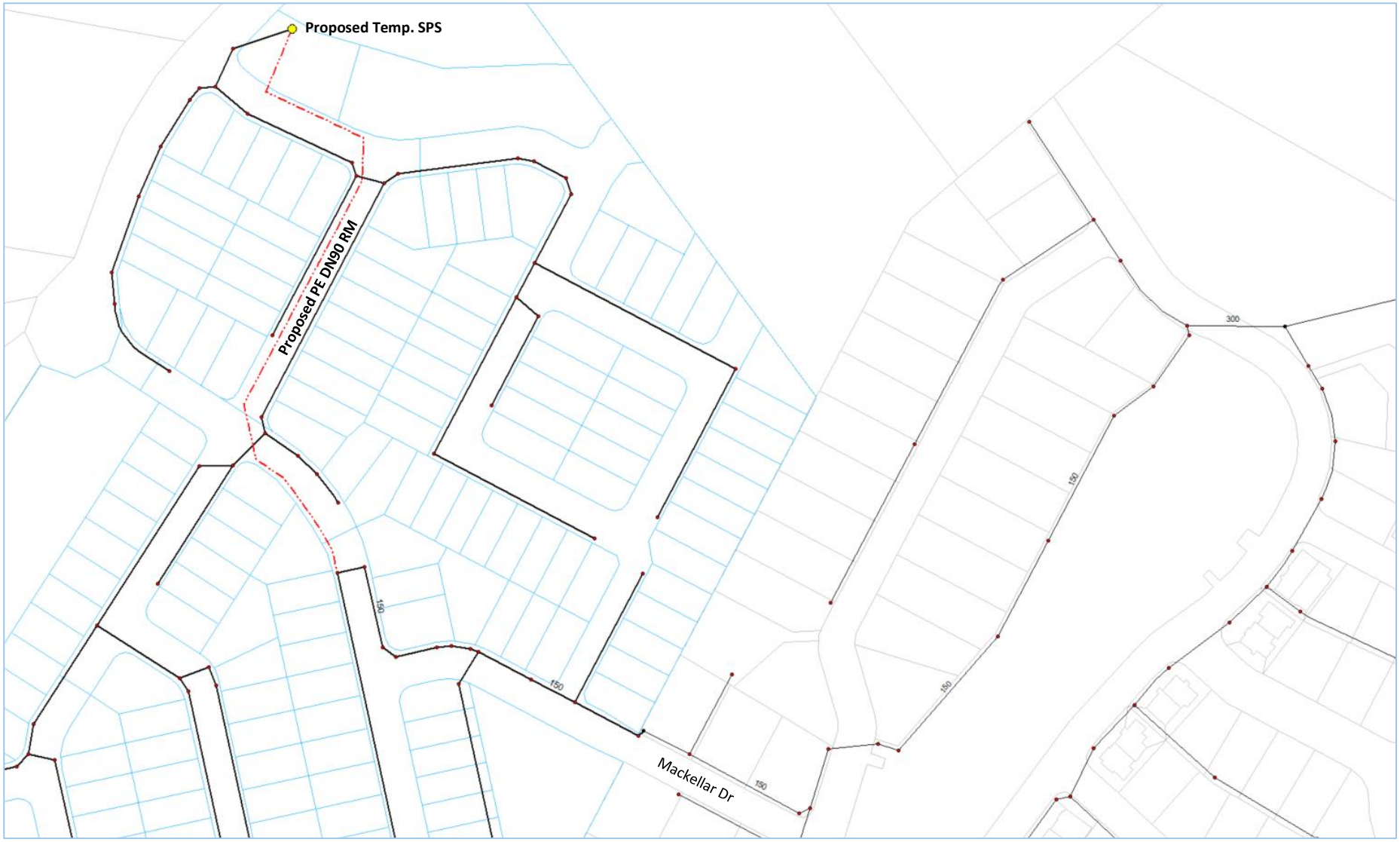
Yours Sincerely,



Joshua May
BEng (hon), RPEQ
Principal Water and Sewer Planning Engineer
H2One Pty Ltd

E JoshuaMay@H2One.com.au
P 0423 264 390
W h2one.com.au

Appendix 1. Conceptual sewer service strategy



Appendix 2. Hydraulic modelling results

Temp. SPS and RM

Catchment Demand	379.4 EP
PWWF	4.4 L/s
PS Surface Level	RL 38 m
PS Invert Level	RL 35 m
Discharge Invert Level	RL 56 m
Static Head	21.0 m
RM Length	315 m
RM Nom. Diameter	90 mm
RM Int. Diameter	73 mm
HW Coefficient	100
Flow Velocity	1.05 m/s
Friction Headloss	9.9 m
Duty Pump Power Rating	2.0 kW
Combined Pump Duty Point	4.4 L/s @ 31 m
4 hours ADWF ES	12.6 kL
Well diameter	2.4 m
Operational Storage	0.3 kL

Note 1: The wet well depth and OF was assumed at 3.0 m and 2.7 m depth, respectively

Note 2: Operational storage estimated on 0.6 m operating depth

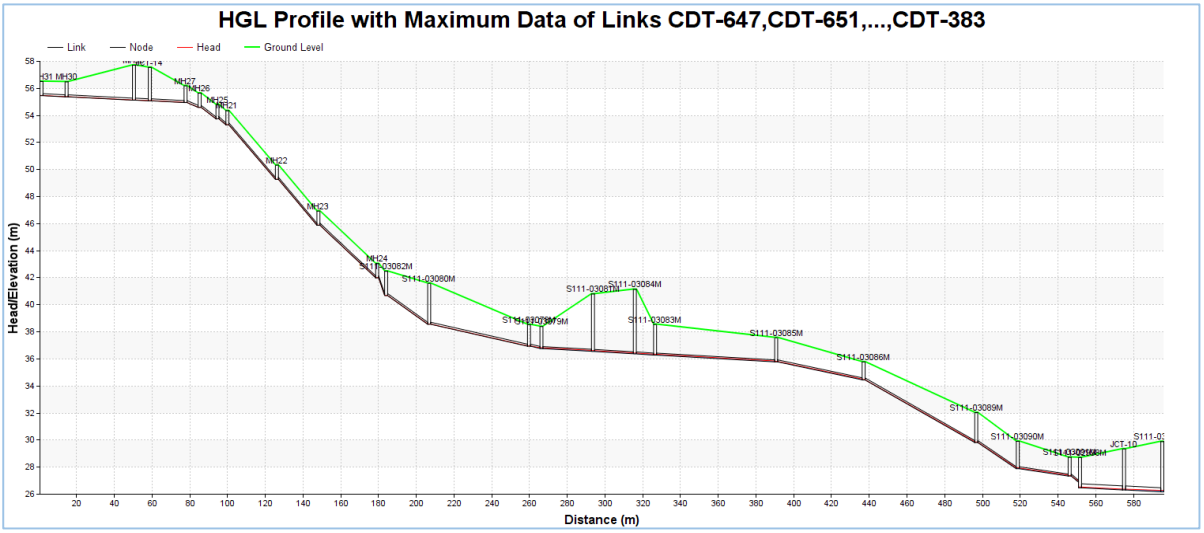
Note 3: Emergency storage did not consider available volume in the upstream gravity network.

D/S Gravity Network (2066)

		Pre-develop.		Post-develop. with Temp. SPS	
Gravity Main ID	Pipe Diam. (mm)	Pipe Flow (L/s)	Pipe Flow Depth d/D (%)	Pipe Flow (L/s)	Pipe Flow Depth d/D (%)
CDT-647	150	0.3	9.8%	4.6	42.9%
CDT-651	150	0.3	9.8%	4.6	43.0%
CDT-669	150	0.3	11.4%	4.6	45.6%
CDT-649	150	0.4	10.2%	4.8	37.7%
CDT-639	150	0.4	6.9%	4.8	24.4%
CDT-637	150	0.4	6.6%	4.8	22.1%
CDT-635	150	0.5	7.4%	4.9	21.5%
CDT-633	150	0.8	8.2%	5.1	20.0%
CDT-631	150	0.9	9.3%	5.3	21.6%
CDT-629	150	1.0	8.6%	5.4	19.6%
CDT-661	150	1.0	8.6%	5.4	19.4%
S111-03082ML1	150	1.0	11.8%	5.4	27.0%
S111-03080ML1	150	1.0	13.3%	5.4	30.8%
S111-03078ML1	150	1.0	25.0%	5.4	45.0%
S111-03079ML1	150	5.5	45.9%	9.9	65.3%
S111-03081ML1	150	5.5	45.2%	9.9	64.2%
S111-03084ML1	150	5.5	45.9%	9.9	66.9%
S111-03083ML1	150	5.5	40.4%	9.9	57.8%
S111-03085ML1	150	5.5	31.8%	9.9	43.6%
S111-03086ML1	150	5.5	25.9%	9.9	34.0%
S111-03089ML1	150	7.3	36.5%	11.7	47.8%
S111-03090ML1	150	7.3	37.0%	11.7	49.2%
S111-03091ML1	150	7.3	27.0%	11.7	35.2%
S111-02998ML1	300	7.3	20.7%	11.7	26.3%
CDT-383	300	11.7	34.2%	11.7	34.2%

Note: The “pre-develop.” scenario was based on the original sewer service strategy, with the DN225 trunk gravity main extending through the neighbouring property. This was to show a direct comparison of the findings presented in H2One’s report; “*79-99 Courtney Dr, Upper Coomera - Water_Sewer FINAL Rpt V7”.*

Pre-develop.



Post-develop. with Temp. SPS

