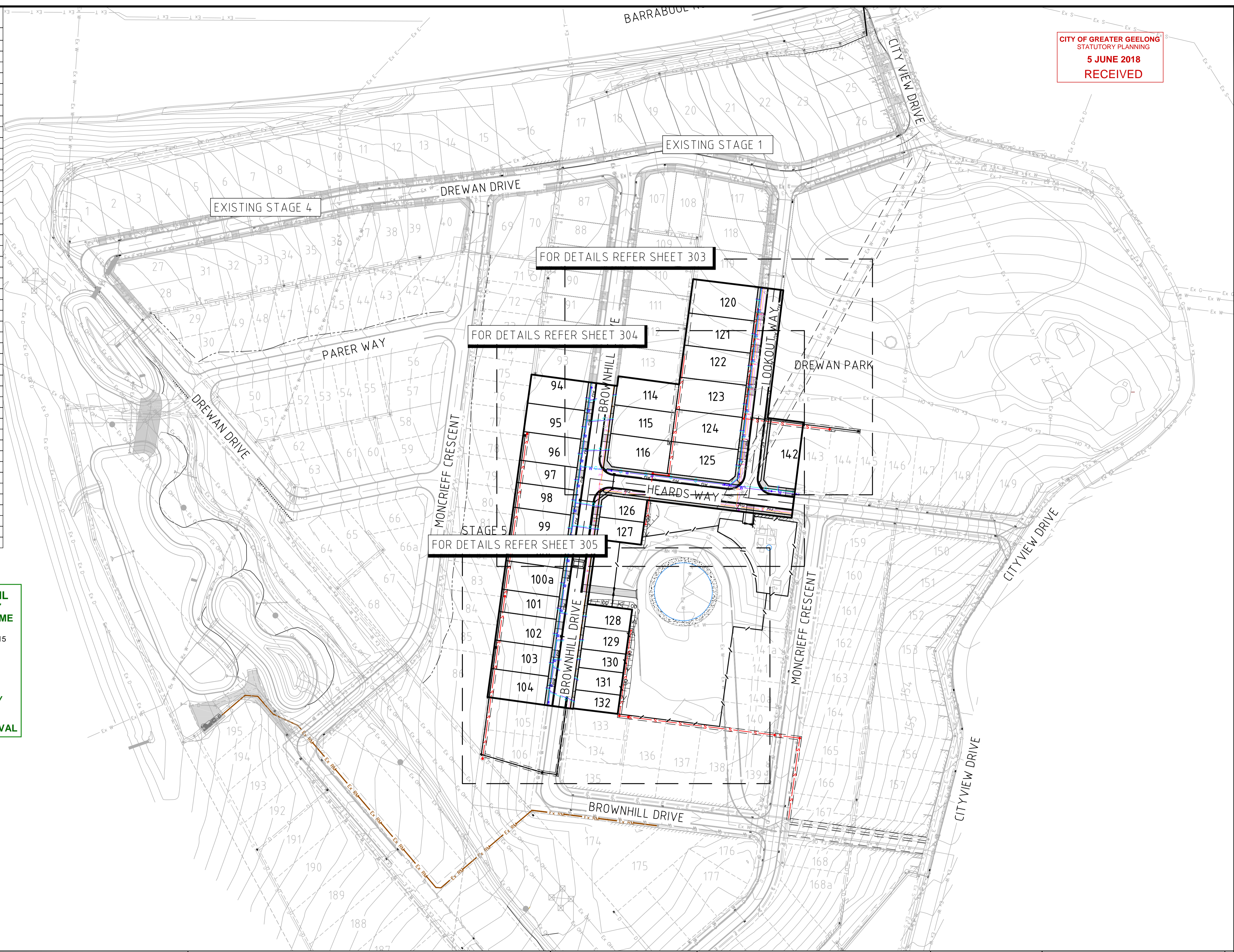




**LEGEND**

ITEM	DESCRIPTION
Ex D	EXISTING STORMWATER DRAIN
---	FUTURE STORMWATER DRAIN
---	PROPOSED STORMWATER DRAIN
■	EXISTING STORMWATER PIT
■	FUTURE STORMWATER PIT
■	PROPOSED STORMWATER PIT
○	STORMWATER PIT NUMBER
→ AG	90 DIAMETER UPVC AGRICULTURAL DRAIN
→ EX AG	EX AGRICULTURAL DRAIN
→ D	100 YEAR FLOOD PATH SURFACE FLOW
→	STORMWATER FLOW
Ex S	EXISTING SEWER
S	FUTURE SEWER
S	PROPOSED SEWER
●	EXISTING SEWER MH
●	FUTURE SEWER MH
●	PROPOSED SEWER MH
Ex W	EXISTING WATER
W	FUTURE WATER
W	PROPOSED WATER
○	PROPOSED WATER SV
○	PROPOSED WATER FP
○	EXISTING WATER METER
✕	PROPOSED WATER TAPPING/METER
E	PROPOSED ELECTRICITY
T	PROPOSED TELSTRA
G	PROPOSED GAS
Ex E	EXISTING ELECTRICITY SUPPLY
Ex OH	EXISTING OVERHEAD ELECTRICITY SUPPLY
Ex T	EXISTING UNDERGROUND TELEGRAPH CABLE
Ex G	EXISTING UNDERGROUND GAS PIPE
---	PROPOSED KERB
---	PROPOSED KERB AND CHANNEL
SD	PROPOSED SPOON DRAIN
---	FUTURE KERB
---	FUTURE KERB AND CHANNEL
---	FUTURE SPOON DRAIN
R7.55	RADIUS OF CURVE MEASURED TO BACK OF KERB OR CENTRELINE
X	CURVE NUMBER
HP	HIGH POINT
○	EXISTING TREES
36	EXISTING CONTOUR
36.2	MINOR CONTOUR
36	MAJOR CONTOUR

CITY OF GREATER GEELONG  
STATUTORY PLANNING  
**5 JUNE 2018**  
RECEIVED



**GREATER GEELONG CITY COUNCIL  
PLANNING & ENVIRONMENT ACT 1987  
GREATER GEELONG PLANNING SCHEME**

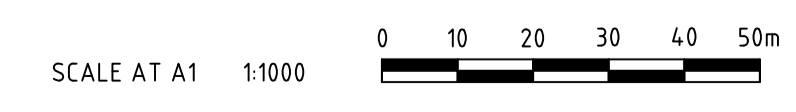
Endorsed Plan referred to in Permit No: 392-2015  
Sheet 2 of 25 Cert 13807  
Approved Engineering Plans

Signed *[Signature]* Date 21/09/2018

For and on behalf of the Greater Geelong City Council as the Responsible Authority

**NOTE: THIS IS NOT A BUILDING APPROVAL**

Rev	Description	Date	By	App	Rev	Description	Date	By	App
P1	ISSUED FOR APPROVAL	26.02.2018	A.V	M.J					



**ST. QUENTIN**  
Surveyors - Town Planners - Engineers  
51 LITTLE FYANS STREET,  
P.O. BOX 919, GEELONG 3220  
TELEPHONE (03) 5201 1811 FAX (03) 5229 2909

Project Name **WANDANA ESTATE STAGE 3 335 BARRABOOL ROAD**

Drawing Title **LAYOUT PLAN**

Level Datum AHD  
Contour Interval 1m  
Date of Survey 09 / 2015  
Designed By M.J / N.C  
Drawn By A.V  
Date Drawn 12.04.2018  
Scale NOTED

**ISSUED FOR APPROVAL**

ENGINEERING MANAGER APPROVED

Project Ref. 14816E Sheet No. 302 Rev. P1

ENGINEERING

CITY OF GREATER GEELONG  
STATUTORY PLANNING  
5 JUNE 2018  
RECEIVED

ITEM	DESCRIPTION
Ex D	EXISTING STORMWATER DRAIN
---	FUTURE STORMWATER DRAIN
---	PROPOSED STORMWATER DRAIN
□	EXISTING STORMWATER PIT
□	FUTURE STORMWATER PIT
□	PROPOSED STORMWATER PIT
○	STORMWATER PIT NUMBER
→ AG	90 DIAMETER UPVC AGRICULTURAL DRAIN
→ EX AG	EX AGRICULTURAL DRAIN
→ D	100 YEAR FLOOD PATH SURFACE FLOW
→	STORMWATER FLOW
Ex S	EXISTING SEWER
S	FUTURE SEWER
S	PROPOSED SEWER
●	EXISTING SEWER MH
●	FUTURE SEWER MH
●	PROPOSED SEWER MH
Ex W	EXISTING WATER
W	FUTURE WATER
W	PROPOSED WATER
○	PROPOSED WATER SV
○	PROPOSED WATER FP
○	EXISTING WATER METER
✕	PROPOSED WATER TAPPING/METER
E	PROPOSED ELECTRICITY
T	PROPOSED TELSTRA
G	PROPOSED GAS
Ex E	EXISTING ELECTRICITY SUPPLY
Ex OH	EXISTING OVERHEAD ELECTRICITY SUPPLY
Ex T	EXISTING UNDERGROUND TELEGRAPH CABLE
Ex G	EXISTING UNDERGROUND GAS PIPE
---	PROPOSED KERB
---	PROPOSED KERB AND CHANNEL
SD	PROPOSED SPOON DRAIN
---	FUTURE KERB
---	FUTURE KERB AND CHANNEL
---	FUTURE SPOON DRAIN
R7.5S	RADIUS OF CURVE MEASURED TO BACK OF KERB OR CENTRELINE
X	CURVE NUMBER
HP	HIGH POINT
○	EXISTING TREES
36	EXISTING CONTOUR
36.2	MINOR CONTOUR
36	MAJOR CONTOUR
01 SEP	PIT NUMBER AND TYPE

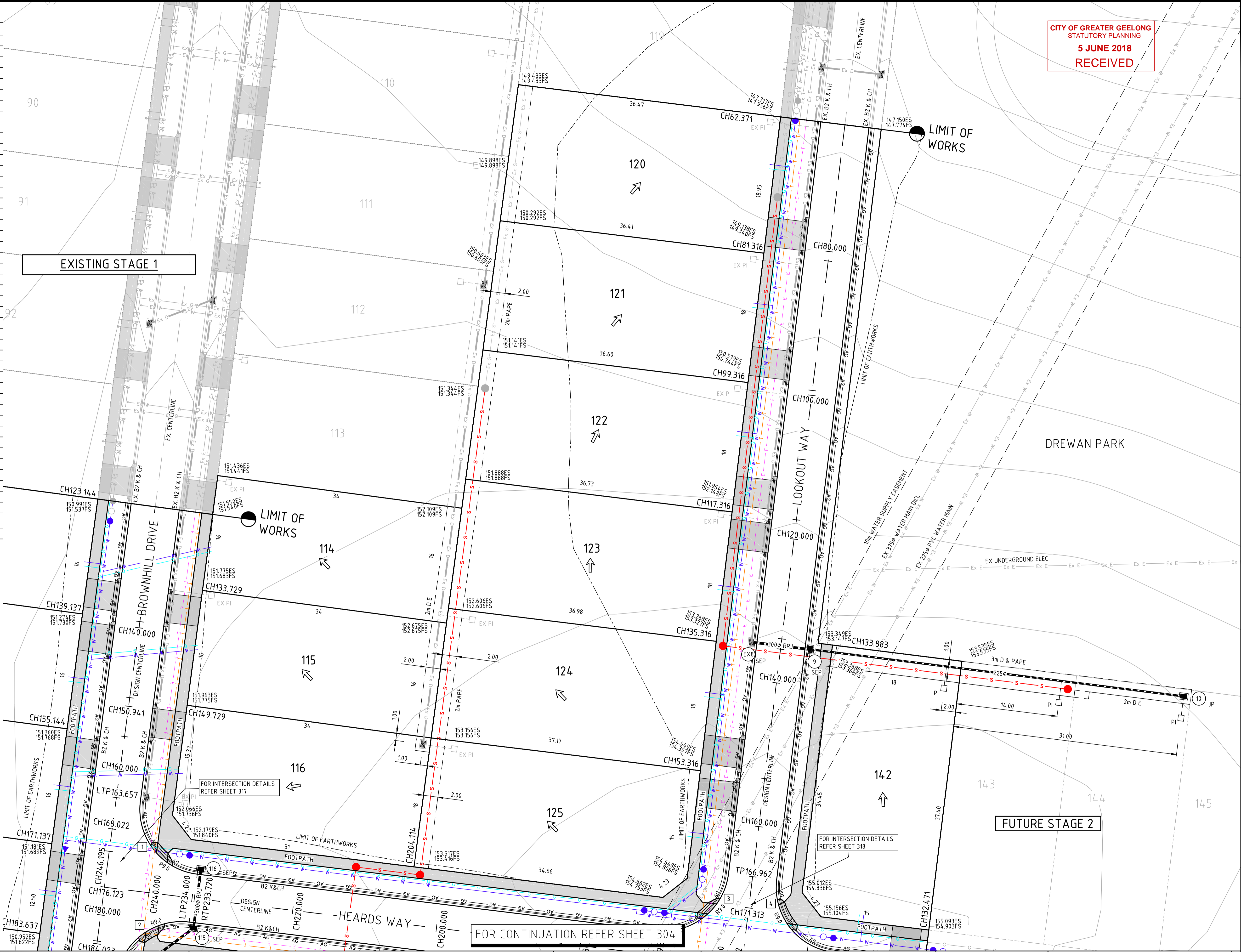
**GREATER GEELONG CITY COUNCIL  
PLANNING & ENVIRONMENT ACT 1987  
GREATER GEELONG PLANNING SCHEME**

Endorsed Plan referred to in Permit No: 392-2015  
Sheet 3 of 25 Cert 13807  
Approved Engineering Plans

Signed *[Signature]* Date 21/09/2018

For and on behalf of the Greater Geelong City Council as the Responsible Authority

**NOTE: THIS IS NOT A BUILDING APPROVAL**



Rev	Description	Date	By	App	Rev	Description	Date	By	App
P1	ISSUED FOR APPROVAL	30.04.2018	A.V	M.J					

Rev	Description	Date	By	App

SCALE AT A1 1:250

FOR CONTINUATION REFER SHEET 304

**ST. QUENTIN**  
Surveyors - Town Planners - Engineers  
51 LITTLE FYANS STREET,  
P.O. BOX 919, GEELONG 3220  
TELEPHONE (03) 5201 1811 FAX (03) 5229 2909

Project Name  
**WANDANA ESTATE  
STAGE 3  
335 BARRABOOL ROAD**

Drawing Title  
**DETAIL PLAN  
SHEET 1 OF 3**

Level Datum AHD  
Contour Interval 1m  
Date of Survey 09 / 2015  
Designed By M.J / N.C  
Drawn By A.V  
Date Drawn 12.04.2018  
Scale NOTED

**ISSUED FOR APPROVAL**

ENGINEERING MANAGER APPROVED

Project Ref. 14816E  
Sheet No. 303  
Rev. P1

ENGINEERING

ITEM	DESCRIPTION
Ex D	EXISTING STORMWATER DRAIN
---	FUTURE STORMWATER DRAIN
---	PROPOSED STORMWATER DRAIN
■	EXISTING STORMWATER PIT
■	FUTURE STORMWATER PIT
■	PROPOSED STORMWATER PIT
○	STORMWATER PIT NUMBER
→ AG	90 DIAMETER UPVC AGRICULTURAL DRAIN
→ EX AG	EX AGRICULTURAL DRAIN
→ D	100 YEAR FLOOD PATH SURFACE FLOW
→	STORMWATER FLOW
Ex S	EXISTING SEWER
S	FUTURE SEWER
S	PROPOSED SEWER
●	EXISTING SEWER MH
●	FUTURE SEWER MH
●	PROPOSED SEWER MH
Ex W	EXISTING WATER
W	FUTURE WATER
W	PROPOSED WATER
○	PROPOSED WATER SV
○	PROPOSED WATER FP
○	EXISTING WATER METER
✕	PROPOSED WATER TAPPING/METER
E	PROPOSED ELECTRICITY
T	PROPOSED TELSTRA
G	PROPOSED GAS
Ex E	EXISTING ELECTRICITY SUPPLY
Ex OH	EXISTING OVERHEAD ELECTRICITY SUPPLY
Ex T	EXISTING UNDERGROUND TELEGRAPH CABLE
Ex G	EXISTING UNDERGROUND GAS PIPE
---	PROPOSED KERB
---	PROPOSED KERB AND CHANNEL
---	PROPOSED SPOON DRAIN
---	FUTURE KERB
---	FUTURE KERB AND CHANNEL
---	FUTURE SPOON DRAIN
R7.5S	RADIUS OF CURVE MEASURED TO BACK OF KERB OR CENTRELINE
X	CURVE NUMBER
HP	HIGH POINT
○	EXISTING TREES
36	EXISTING CONTOUR
36.2	MINOR CONTOUR
36	MAJOR CONTOUR
01 SEP	PIT NUMBER AND TYPE

**GREATER GEELONG CITY COUNCIL  
PLANNING & ENVIRONMENT ACT 1987  
GREATER GEELONG PLANNING SCHEME**

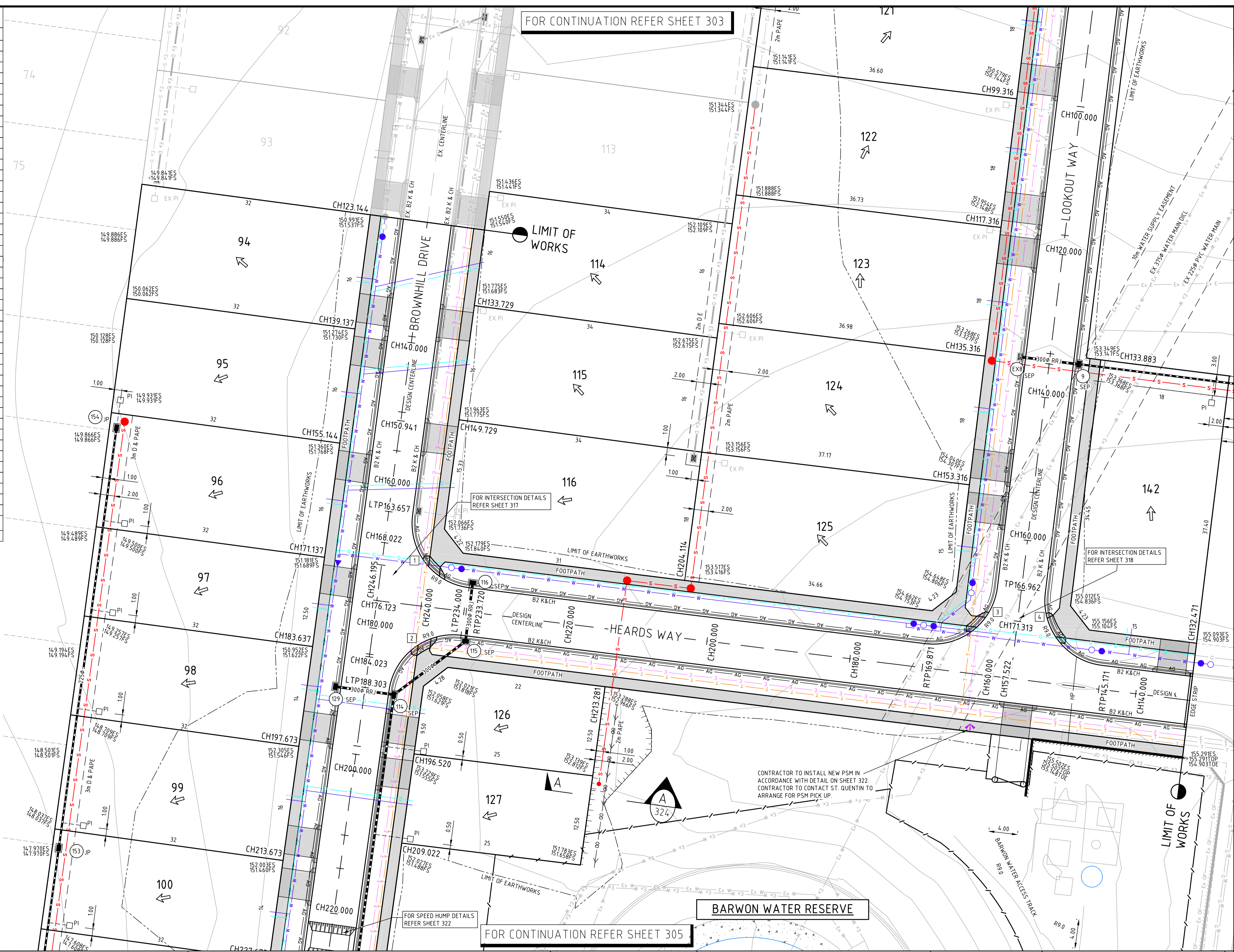
Endorsed Plan referred to in Permit No: 392-2015  
Sheet 4 of 25 Cert 13807  
Approved Engineering Plans

Signed *[Signature]* Date 21/09/2018

For and on behalf of the Greater Geelong City Council as the Responsible Authority

**NOTE: THIS IS NOT A BUILDING APPROVAL**

**CITY OF GREATER GEELONG  
STATUTORY PLANNING  
5 JUNE 2018  
RECEIVED**



FOR CONTINUATION REFER SHEET 303

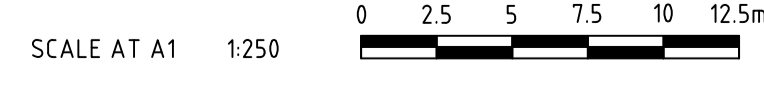
FOR CONTINUATION REFER SHEET 305

BARWON WATER RESERVE

CONTRACTOR TO INSTALL NEW PSM IN ACCORDANCE WITH DETAIL ON SHEET 322. CONTRACTOR TO CONTACT ST. QUENTIN TO ARRANGE FOR PSM PICK UP.

COPYRIGHT: All rights reserved. These drawings, plans and specifications and the copyright therein are the property of the St. Quentin consulting and must not be used, reproduced or copied wholly or in part without the written permission of St. Quentin consulting.

P1	ISSUED FOR APPROVAL	30.04.2018	A.V. M.J.
Rev	Description	Date	By App



**ST. QUENTIN**  
Surveyors - Town Planners - Engineers  
51 LITTLE FYANS STREET,  
P.O. BOX 919, GEELONG 3220  
TELEPHONE (03) 5201 1811 FAX (03) 5229 2909

Project Name: WANDANA ESTATE STAGE 3  
335 BARRABOOL ROAD  
Drawing Title: DETAIL PLAN SHEET 2 OF 3

Level Datum: AHD  
Contour Interval: 1m  
Date of Survey: 09 / 2015  
Designed By: M.J./N.C.  
Drawn By: A.V.  
Date Drawn: 12.04.2018  
Scale: NOTED

**ISSUED FOR APPROVAL**

ENGINEERING MANAGER APPROVED

Project Ref.	Sheet No.	Rev.
14816E	304	P1

ENGINEERING

ITEM	DESCRIPTION
Ex D	EXISTING STORMWATER DRAIN
---	FUTURE STORMWATER DRAIN
---	PROPOSED STORMWATER DRAIN
PI	EXISTING STORMWATER PIT
PI	FUTURE STORMWATER PIT
PI	PROPOSED STORMWATER PIT
PI	STORMWATER PIT NUMBER
AG	90 DIAMETER UPVC AGRICULTURAL DRAIN
EX AG	EX AGRICULTURAL DRAIN
D	100 YEAR FLOOD PATH SURFACE FLOW
S	STORMWATER FLOW
Ex S	EXISTING SEWER
S	FUTURE SEWER
S	PROPOSED SEWER
Ex W	EXISTING SEWER MH
W	FUTURE SEWER MH
W	PROPOSED SEWER MH
Ex W	EXISTING WATER
W	FUTURE WATER
W	PROPOSED WATER
W	PROPOSED WATER SV
W	PROPOSED WATER FP
W	EXISTING WATER METER
W	PROPOSED WATER TAPPING/METER
E	PROPOSED ELECTRICITY
T	PROPOSED TELSTRA
G	PROPOSED GAS
Ex E	EXISTING ELECTRICITY SUPPLY
Ex OH	EXISTING OVERHEAD ELECTRICITY SUPPLY
Ex T	EXISTING UNDERGROUND TELEGRAPH CABLE
Ex G	EXISTING UNDERGROUND GAS PIPE
---	PROPOSED KERB
---	PROPOSED KERB AND CHANNEL
SD	PROPOSED SPOON DRAIN
---	FUTURE KERB
---	FUTURE KERB AND CHANNEL
---	FUTURE SPOON DRAIN
R7.5S	RADIUS OF CURVE MEASURED TO BACK OF KERB OR CENTRELINE
X	CURVE NUMBER
HP	HIGH POINT
---	EXISTING TREES
36	EXISTING CONTOUR
36.2	MINOR CONTOUR
36	MAJOR CONTOUR
01 SEP	PIT NUMBER AND TYPE

**GREATER GEELONG CITY COUNCIL  
PLANNING & ENVIRONMENT ACT 1987  
GREATER GEELONG PLANNING SCHEME**

Endorsed Plan referred to in Permit No: 392-2015  
Sheet 5 of 25 Cert 13807  
Approved Engineering Plans

Signed *[Signature]* Date 21/09/2018

For and on behalf of the Greater Geelong City Council as the Responsible Authority

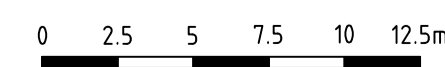
**NOTE: THIS IS NOT A BUILDING APPROVAL**

**CITY OF GREATER GEELONG  
STATUTORY PLANNING  
5 JUNE 2018  
RECEIVED**



Rev	Description	Date	By	App
P1	ISSUED FOR APPROVAL	30.04.2018	A.V	M.J

SCALE AT A1 1:250



Project Name: WANDANA ESTATE STAGE 3 335 BARRABOOL ROAD  
Drawing Title: DETAIL PLAN SHEET 3 OF 3

Level Datum: AHD  
Contour Interval: 1m  
Date of Survey: 09/2015  
Designed By: M.J/N.C  
Drawn By: A.V  
Date Drawn: 12.04.2018  
Scale: NOTED

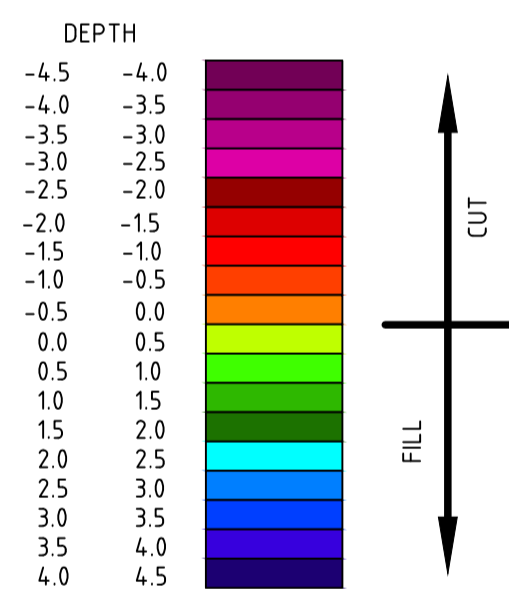
**ISSUED FOR APPROVAL**  
ENGINEERING MANAGER APPROVED  
Project Ref: 14816E  
Sheet No: 305  
Rev: P1

ENGINEERING

**FILL NOTES**

- EXISTING FILL ON SITE IS TO BE USED FOR PROPOSED ENGINEERED FILL. MATERIAL USED FOR ENGINEERED FILL SHOULD MEET THE FOLLOWING REQUIREMENTS.
  - NO WOOD/VEGETATION OR REFUSE.
  - NO CONCRETE OR ROCK PIECES GREATER THAN THAT APPROPRIATE FOR THE LAYER THICKNESS AND TYPE OF COMPACTION CONTROL TESTING.
  - NO STEEL REINFORCING
  - NO ORGANIC SILTS (TOPSOIL/AND MOISTURE SENSITIVE SILT SOIL
  - SOIL TO BE PLACED AT OR NEAR OPTIMUM MOISTURE CONTENT
- TO MINIMIZE DIFFERENTIAL SETTLEMENT IT IS IMPORTANT THAT LAYERS CONSIST OF PREDOMINATELY THE SAME MATERIAL. CONTRACTOR TO BOX INTO THE UNDISTURBED EXISTING SURFACE ADJACENT TO EDGE OF FILL TO PROVIDE A SUITABLE JUNCTION AND AVOID FEATHERED EDGES.
- ON COMPLETION OF THE FILL PLACEMENT, THE GEOTECHNICAL TESTING AUTHORITY SHALL PROVIDE DOCUMENTATION CONFIRMING THE SUITABILITY OF THE SUBGRADE FOR THE INTENDED PURPOSE.
- FILL MATERIAL SHOULD BE PLACED IN A MAXIMUM LOOSE THICKNESS OF 300mm WITH A MAXIMUM PARTICLE SIZE OF 75mm. EACH LAYER SHOULD BE COMPACTED TO A MINIMUM DRY DENSITY RATIO (AS 12895.4.1) OF 95% STANDARD COMPACTION USING A VIBRATING PAD FOOT ROLLER FOR COHESIVE SOILS AND VIBRATING SMOOTH DRUM ROLLER FOR COHESIONLESS SOILS.
- THE TOP 75mm SHOULD CONSIST OF SOIL WITH MAXIMUM PARTICLE SIZE AND MAXIMUM LIQUID LIMIT OF 20mm AND 35% RESPECTIVELY, COMPACTED IN LAYERS WITH MAXIMUM LOOSE THICKNESS OF 300mm TO A MINIMUM DRY DENSITY RATIO (AS 12895.4.1) OF 98% STANDARD COMPACTION.
- CONVENTIONAL COMPACTION SHOULD BE CONDUCTED UNDER LEVEL 1 INSPECTION AND TESTING IN INCREMENTS NOT GREATER THAN 500mm IN ACCORDANCE WITH AS 3798-2007, 'GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS', SECTION B.
- COMPACTION CONTROL TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH THE TEST FREQUENCY RECOMMENDED IN AS3798-2007, 'GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS', SECTION 7 & 8
- THE SURFACE OF ALL FILL LAYERS MUST BESHAPED TO PROVIDE DRAINAGE AND TO PREVENT PONDING.
- THE CONTRACTOR IS RESPONSIBLE FOR THE TESTING OF ALL FILL. AT THE COMPLETION OF WORKS THE CONTRACTOR SHALL SUPPLY THE SUPERVISING ENGINEER WITH A CERTIFICATE FROM A NATA APPROVED GEOTECHNICAL ENGINEER CERTIFYING THAT FILL MEETS ABOVE REQUIREMENTS AND HAS BEEN TESTED TO LEVEL 1 STANDARDS.

**LEGEND**



**GREATER GEELONG CITY COUNCIL  
PLANNING & ENVIRONMENT ACT 1987  
GREATER GEELONG PLANNING SCHEME**

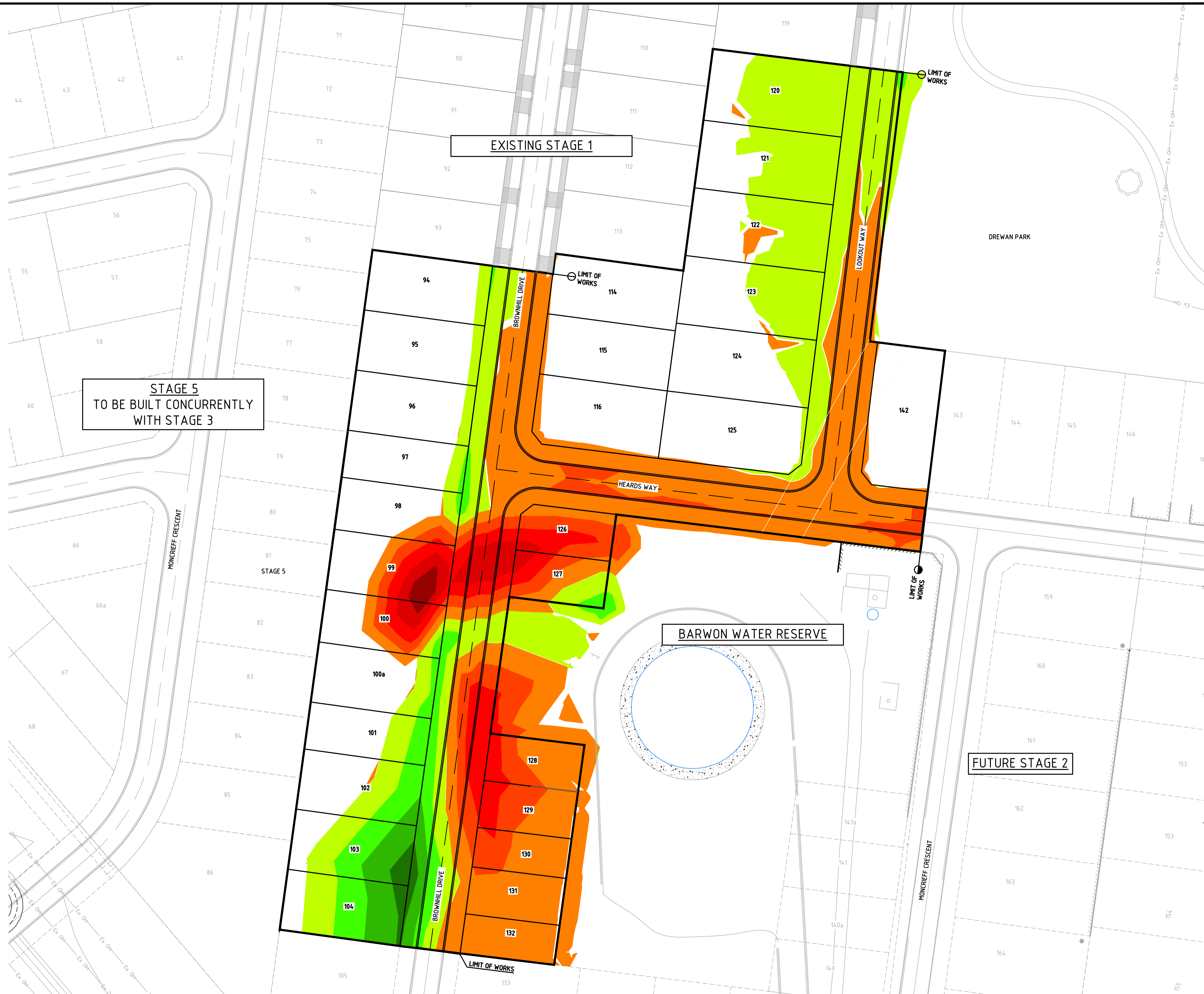
Endorsed Plan referred to in Permit No: 392-2015  
Sheet 6 of 25 Cert 13807  
Approved Engineering Plans

Signed *[Signature]* Date 21/09/2018

For and on behalf of the Greater Geelong City Council as the Responsible Authority

**NOTE: THIS IS NOT A BUILDING APPROVAL**

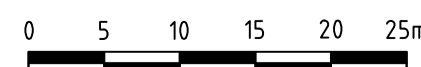
**CITY OF GREATER GEELONG  
STATUTORY PLANNING  
5 JUNE 2018  
RECEIVED**



COPYRIGHT  
These drawings, plans and specifications and the copyright therein are the property of the St. Quentin consulting and must not be used, reproduced or copied wholly or in part without the written permission of St. Quentin consulting.

Rev	Description	Date	By	App
P1	ISSUED FOR APPROVAL	30.04.2018	A.V	M.J

SCALE AT A1 1:500



**ST. QUENTIN**  
Surveyors - Town Planners - Engineers  
51 LITTLE FYANS STREET,  
P.O. BOX 919, GEELONG 3220  
TELEPHONE (03) 5201 1811 FAX (03) 5229 2909

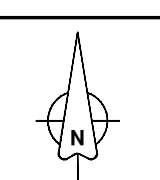
Project Name **WANDANA ESTATE  
STAGE 3  
335 BARRABOOL ROAD**  
Drawing Title **EARTHWORKS DETAIL PLAN**

Level Datum AHD  
Contour Interval N/A  
Date of Survey 09 / 2015  
Designed By M.J / N.C  
Drawn By A.V  
Date Drawn 12.04.2018  
Scale NOTED

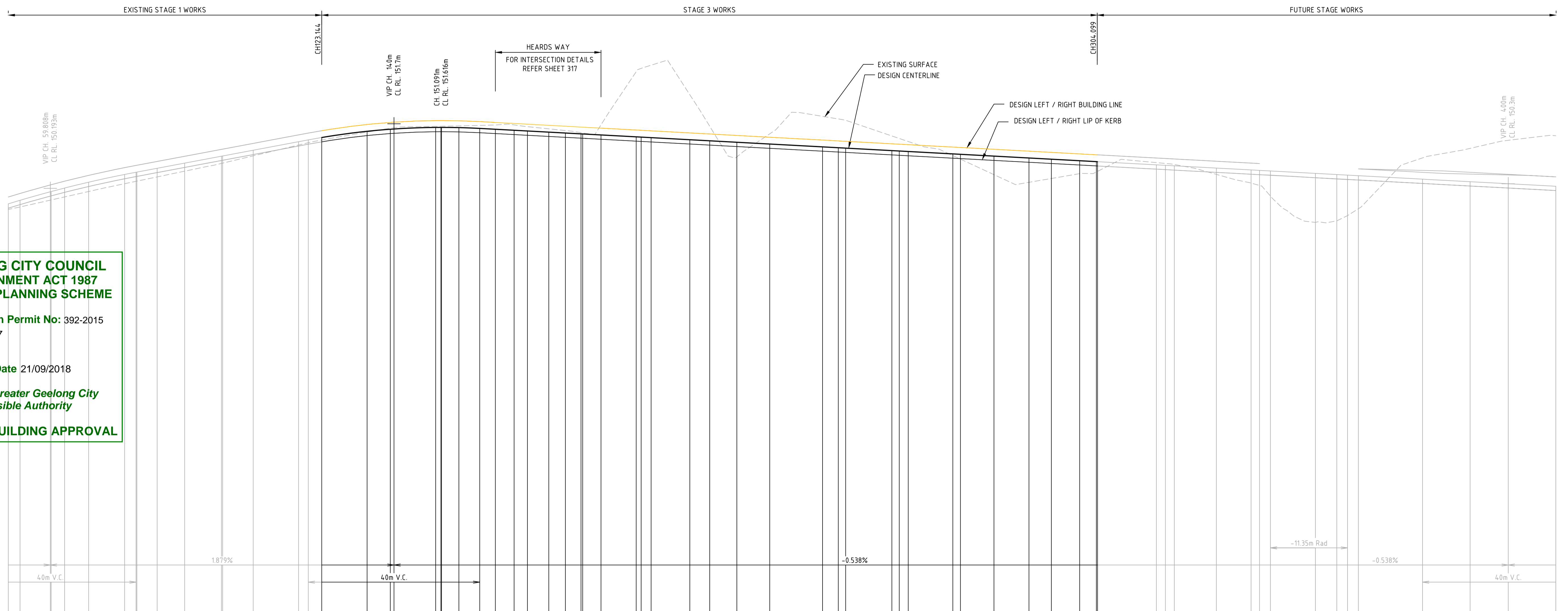
**ISSUED FOR APPROVAL**

ENGINEERING MANAGER APPROVED

Project Ref. **14816E** Sheet No. **306** Rev. **P1**



ENGINEERING



**GREATER GEELONG CITY COUNCIL PLANNING & ENVIRONMENT ACT 1987 GREATER GEELONG PLANNING SCHEME**

Endorsed Plan referred to in Permit No: 392-2015  
 Sheet 7 of 25 Cert 13807  
 Approved Engineering Plans

Signed Date 21/09/2018

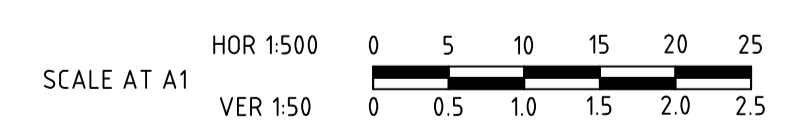
For and on behalf of the Greater Geelong City Council as the Responsible Authority

**NOTE: THIS IS NOT A BUILDING APPROVAL**

HORIZONTAL GEOMETRY  
 VERTICAL GRADE DESIGN C.L.  
 V.C. LENGTH DESIGN C.L.  
 DATUM RL CL 140.000

	50.000	52.736	59.808	60.000	63.164	68.737	77.164	79.808	80.000	84.737	91.164	99.737	100.000	107.164	117.737	120.000	123.164	133.739	139.137	140.000	149.739	150.941	151.091	155.164	160.000	163.657	168.022	171.137	176.123	180.000	183.637	184.033	188.303	196.520	197.673	200.000	209.022	213.673	220.000	227.673	240.000	243.673	245.393	256.173	257.894	260.000	270.396	272.173	280.000	288.173	293.398	300.000	303.899	304.173	317.901	320.000	322.091	331.902	340.000	341.968	344.505	365.036	380.000	391.103	400.000	411.106				
DESIGN CENTRELINE	149.832	149.914	150.113	150.118	150.200	150.336	150.538	150.569	150.573	150.667	150.782	150.843	150.848	151.083	151.282	151.324	151.380	151.525	151.573	151.579	151.616	151.616	151.616	151.616	151.616	151.573	151.549	151.532	151.505	151.485	151.465	151.463	151.440	151.396	151.389	151.377	151.288	151.203	151.303	151.162	151.142	151.132	151.074	151.074	151.065	151.065	150.998	150.897	150.888	150.946	150.902	150.874	150.838	150.817	150.816	150.742	150.731	150.720	150.667	150.623	150.617	150.599	150.542	150.515	150.502	150.488	150.408	150.348	150.301	150.242
DESIGN RIGHT LIP OF KERB	149.731	149.814	150.013	150.018	150.100	150.236	150.437	150.468	150.472	150.561	150.681	150.843	150.848	151.083	151.282	151.324	151.380	151.525	151.573	151.579	151.616	151.616	151.616	151.616	151.616	151.573	151.549	151.532	151.505	151.485	151.465	151.463	151.440	151.396	151.389	151.377	151.288	151.203	151.303	151.162	151.142	151.132	151.074	151.074	151.065	151.065	150.998	150.897	150.888	150.946	150.902	150.874	150.838	150.817	150.816	150.742	150.731	150.720	150.667	150.623	150.617	150.599	150.542	150.515	150.502	150.488	150.408	150.348	150.301	150.242
DESIGN LEFT LIP OF KERB	149.731	149.814	150.013	150.018	150.100	150.236	150.437	150.468	150.472	150.561	150.681	150.843	150.848	151.083	151.282	151.324	151.380	151.525	151.573	151.579	151.616	151.616	151.616	151.616	151.616	151.573	151.549	151.532	151.505	151.485	151.465	151.463	151.440	151.396	151.389	151.377	151.288	151.203	151.303	151.162	151.142	151.132	151.074	151.074	151.065	151.065	150.998	150.897	150.888	150.946	150.902	150.874	150.838	150.817	150.816	150.742	150.731	150.720	150.667	150.623	150.617	150.599	150.542	150.515	150.502	150.488	150.408	150.348	150.301	150.242
EXISTING SURFACE CL	149.703	149.758	149.918	150.018	150.100	150.236	150.437	150.468	150.472	150.561	150.681	150.843	150.848	151.083	151.282	151.324	151.380	151.525	151.573	151.579	151.616	151.616	151.616	151.616	151.616	151.573	151.549	151.532	151.505	151.485	151.465	151.463	151.440	151.396	151.389	151.377	151.288	151.203	151.303	151.162	151.142	151.132	151.074	151.074	151.065	151.065	150.998	150.897	150.888	150.946	150.902	150.874	150.838	150.817	150.816	150.742	150.731	150.720	150.667	150.623	150.617	150.599	150.542	150.515	150.502	150.488	150.408	150.348	150.301	150.242
CHAINAGE	50.000	52.736	59.808	60.000	63.164	68.737	77.164	79.808	80.000	84.737	91.164	99.737	100.000	107.164	117.737	120.000	123.164	133.739	139.137	140.000	149.739	150.941	151.091	155.164	160.000	163.657	168.022	171.137	176.123	180.000	183.637	184.033	188.303	196.520	197.673	200.000	209.022	213.673	220.000	227.673	240.000	243.673	245.393	256.173	257.894	260.000	270.396	272.173	280.000	288.173	293.398	300.000	303.899	304.173	317.901	320.000	322.091	331.902	340.000	341.968	344.505	365.036	380.000	391.103	400.000	411.106				

BROWNHILL DRIVE LONGITUDINAL SECTION



**CITY OF GREATER GEELONG STATUTORY PLANNING**  
 5 JUNE 2018  
 RECEIVED

Rev	Description	Date	By	App
P1	ISSUED FOR APPROVAL	30.04.2018	A.V.	M.J.



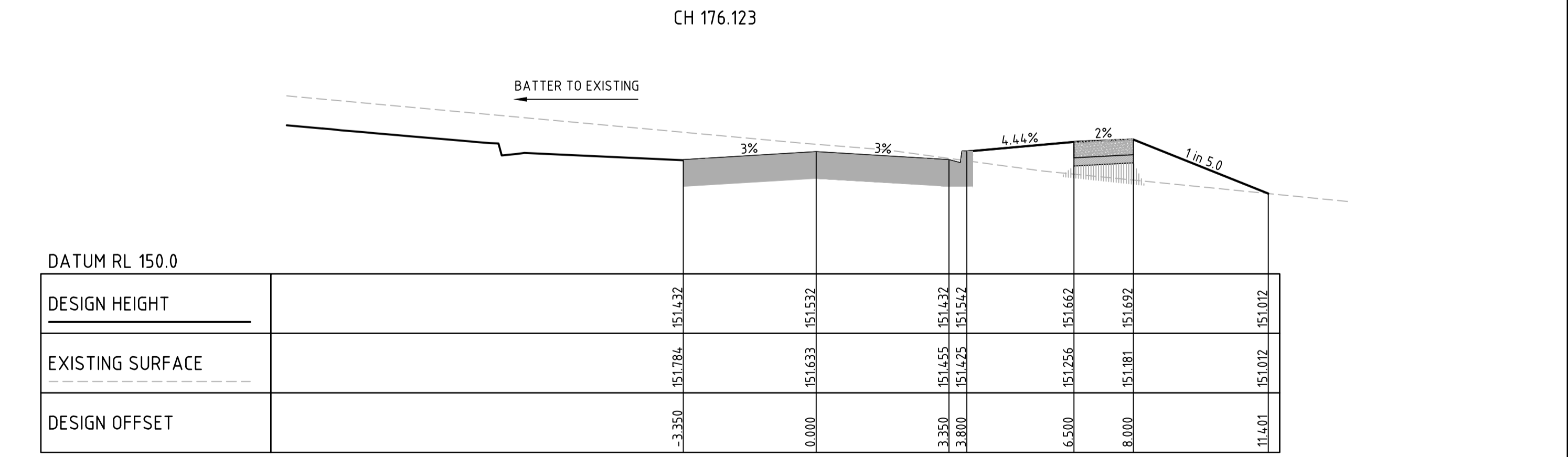
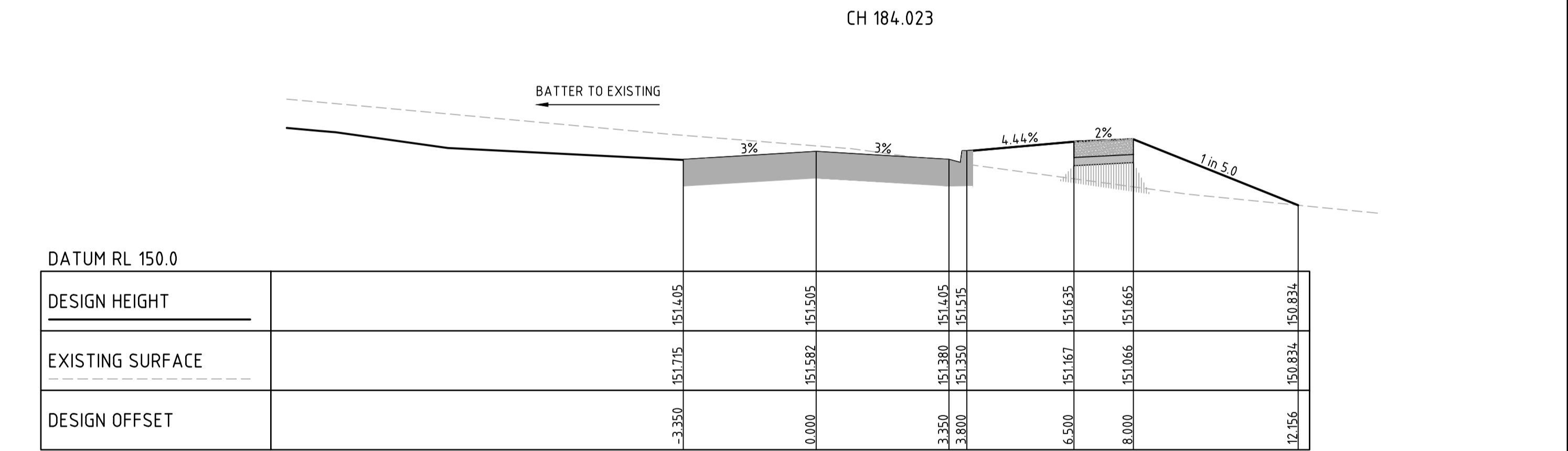
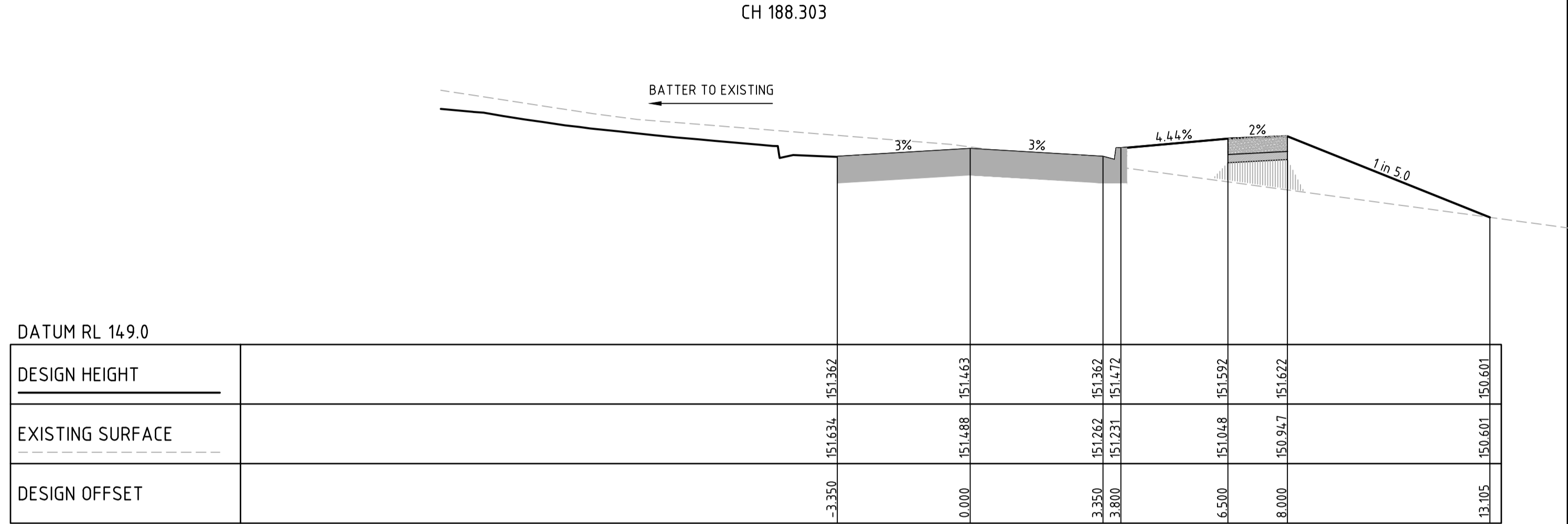
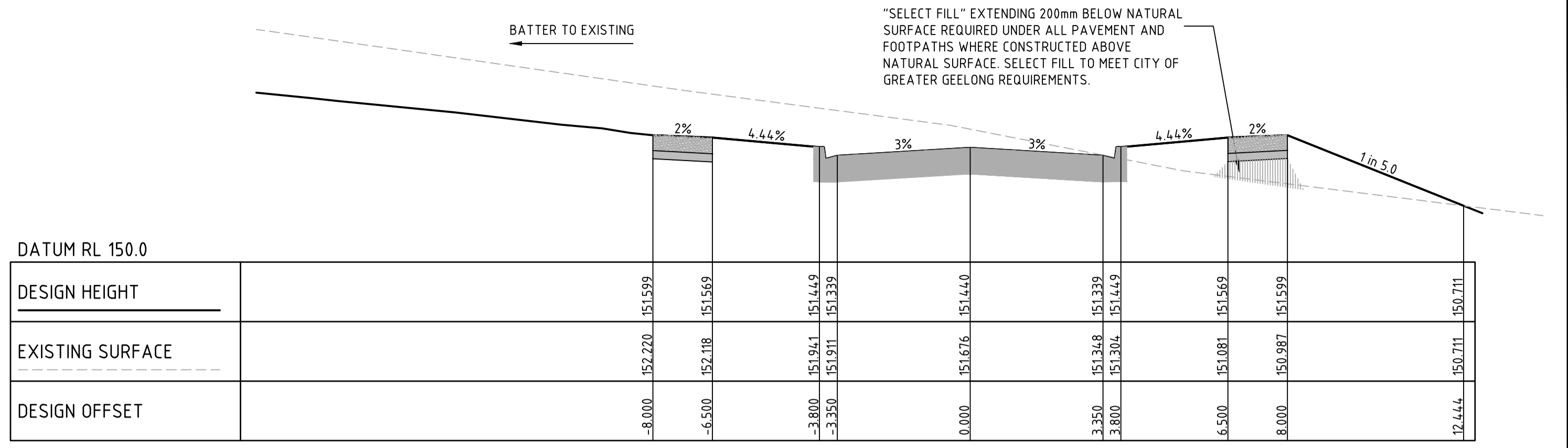
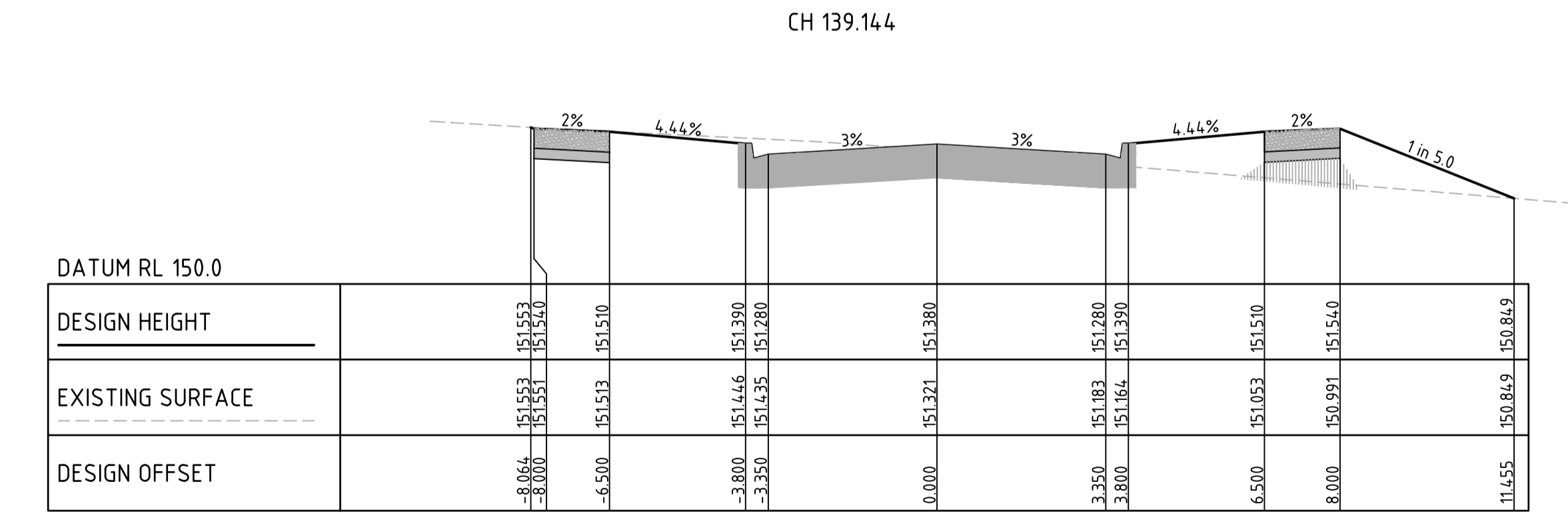
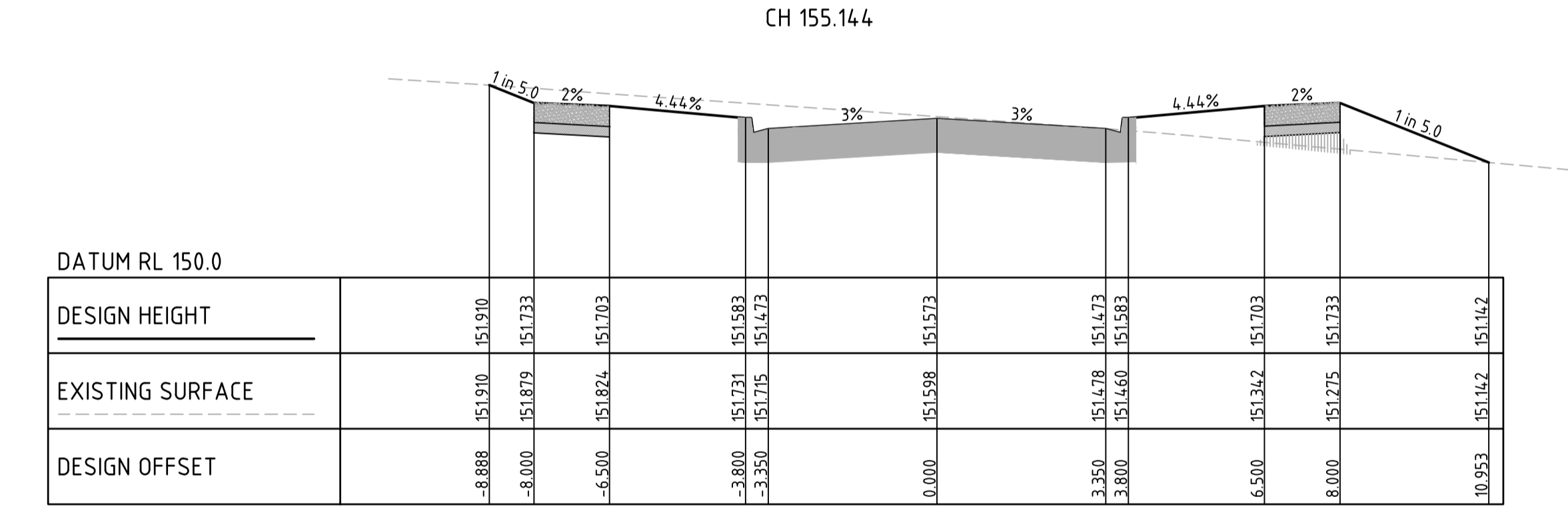
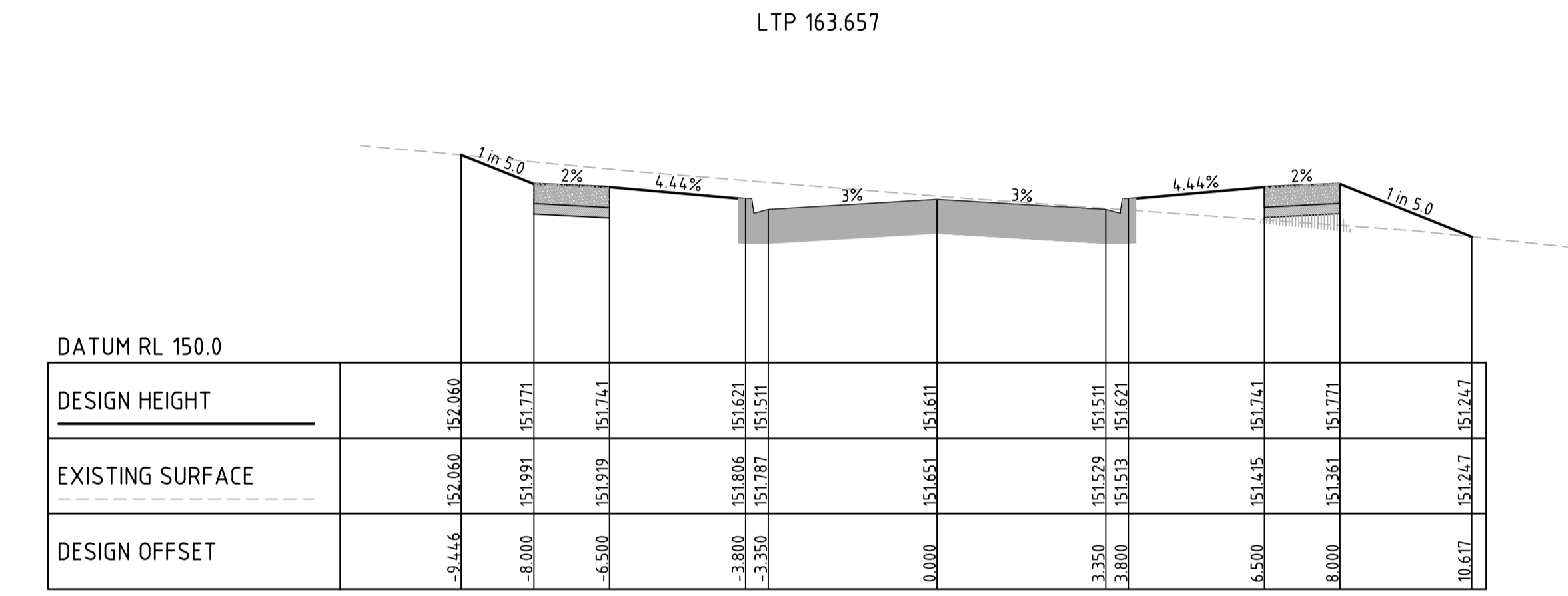
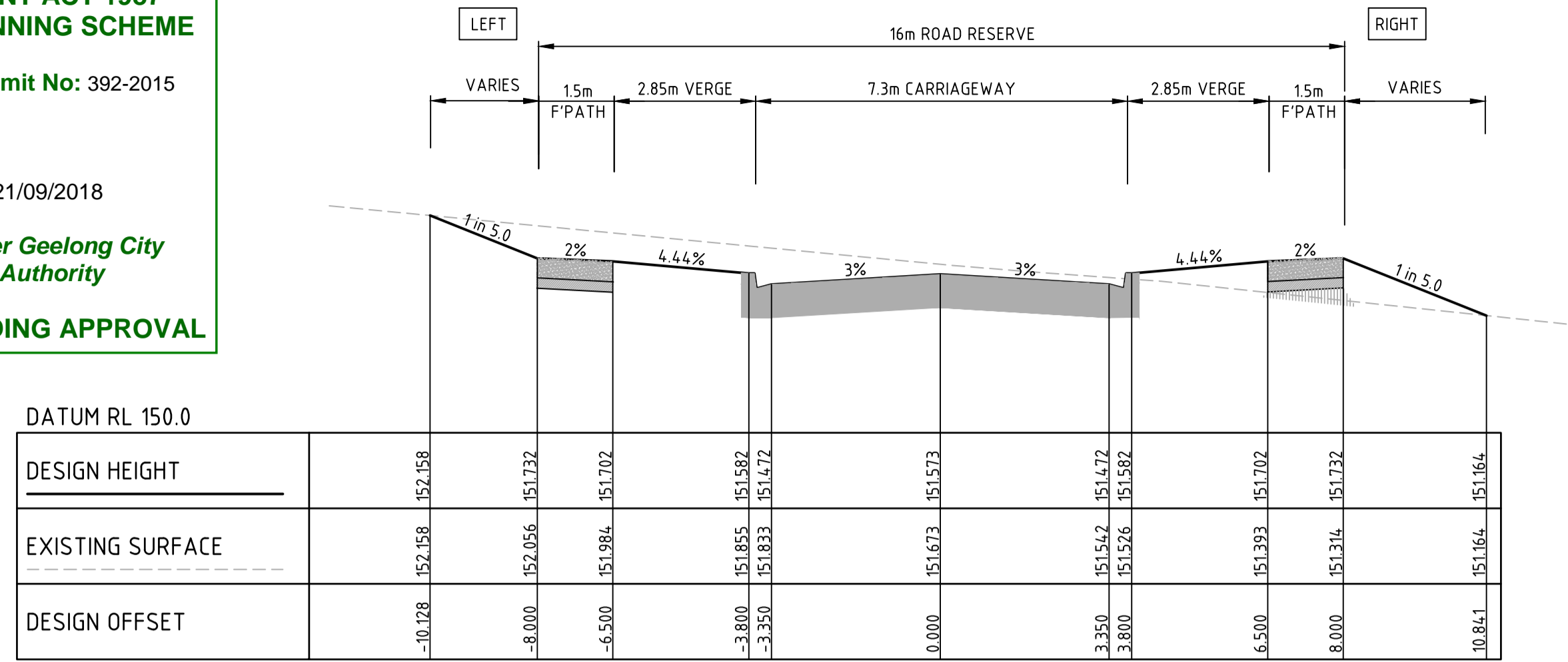
Project Name: WANDANA ESTATE STAGE 3 335 BARRABOOL ROAD  
 Drawing Title: BROWNHILL DRIVE LONG SECTION

Level Datum: AHD  
 Contour Interval: N/A  
 Date of Survey: 09 / 2015  
 Designed By: M.J./N.C.  
 Drawn By: A.V.  
 Date Drawn: 12.04.2018  
 Scale: NOTED

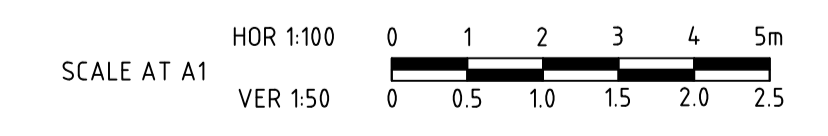
**ISSUED FOR APPROVAL**

ENGINEERING MANAGER APPROVED	Project Ref.	Sheet No.	Rev.
	14816E	307	P1

ENGINEERING



**BROWNHILL DRIVE CROSS SECTIONS**



**CITY OF GREATER GEELONG  
STATUTORY PLANNING  
5 JUNE 2018  
RECEIVED**

Rev	Description	Date	By	App	Rev	Description	Date	By	App
P1	ISSUED FOR APPROVAL	30.04.2018	A.V	M.J					

**ST. QUENTIN**  
Surveyors - Town Planners - Engineers  
51 LITTLE FYANS STREET,  
P.O. BOX 919, GEELONG 3220  
TELEPHONE (03) 5201 1811 FAX (03) 5229 2909

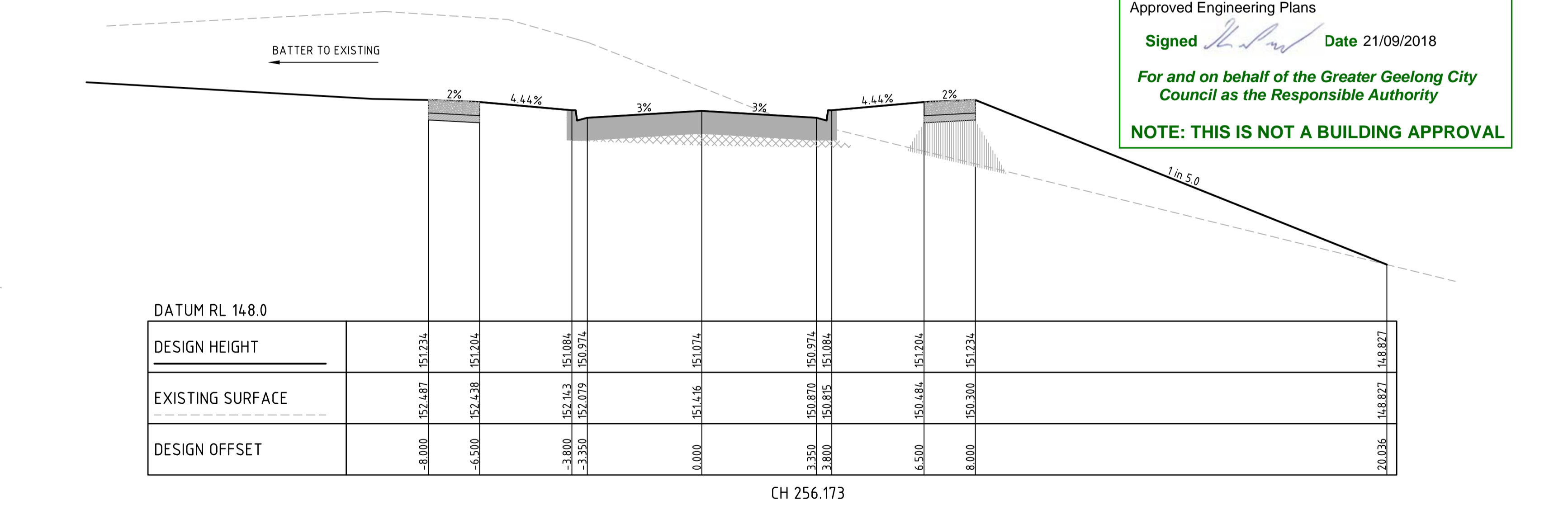
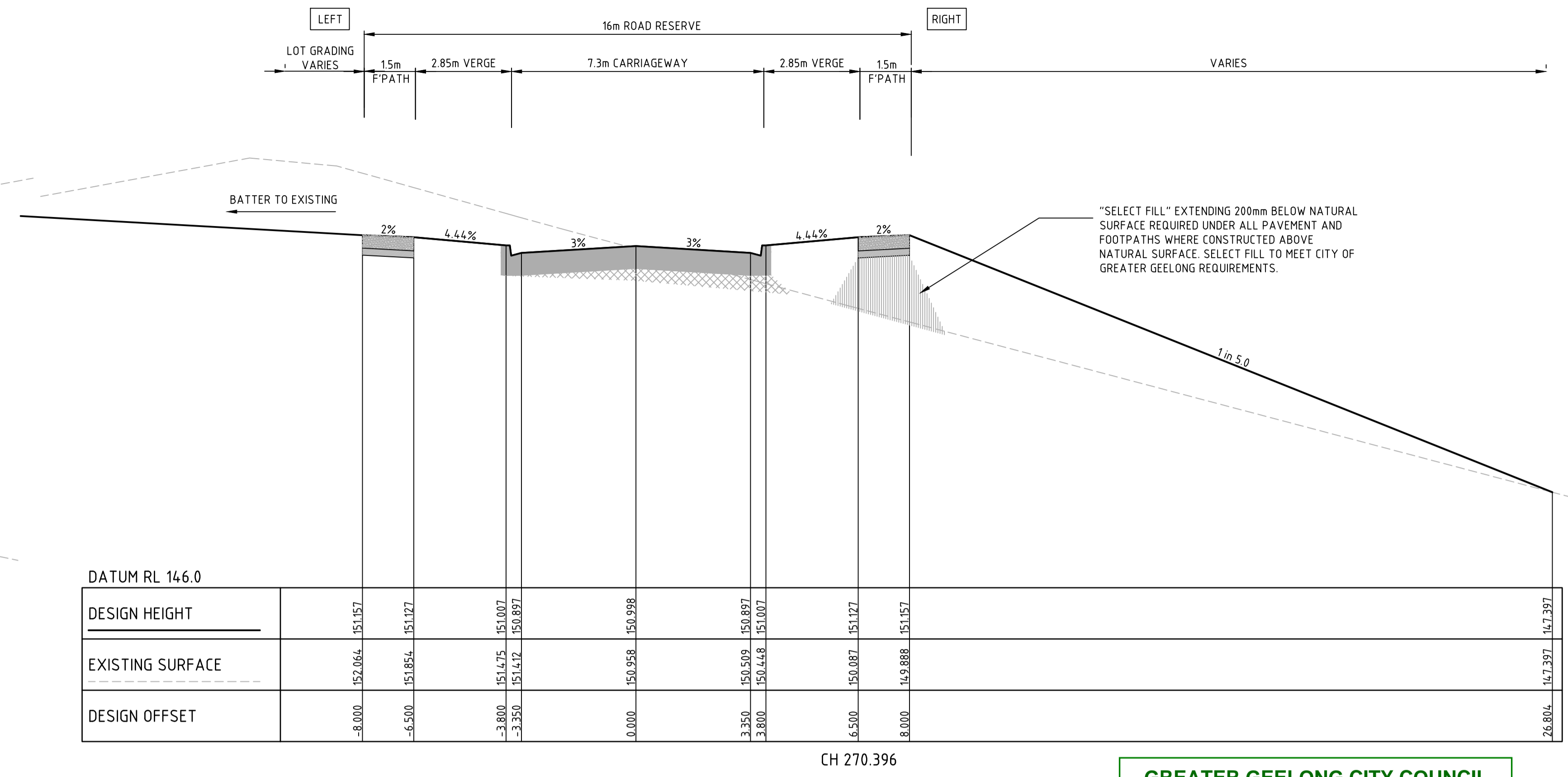
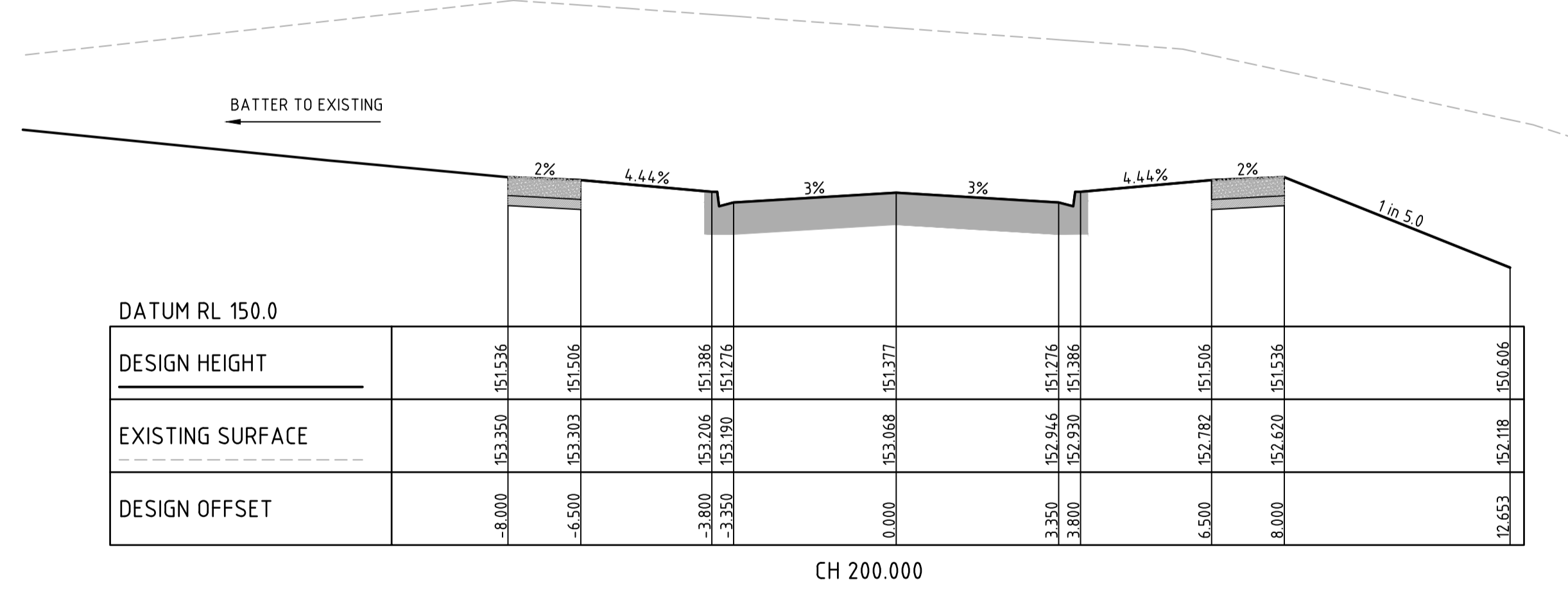
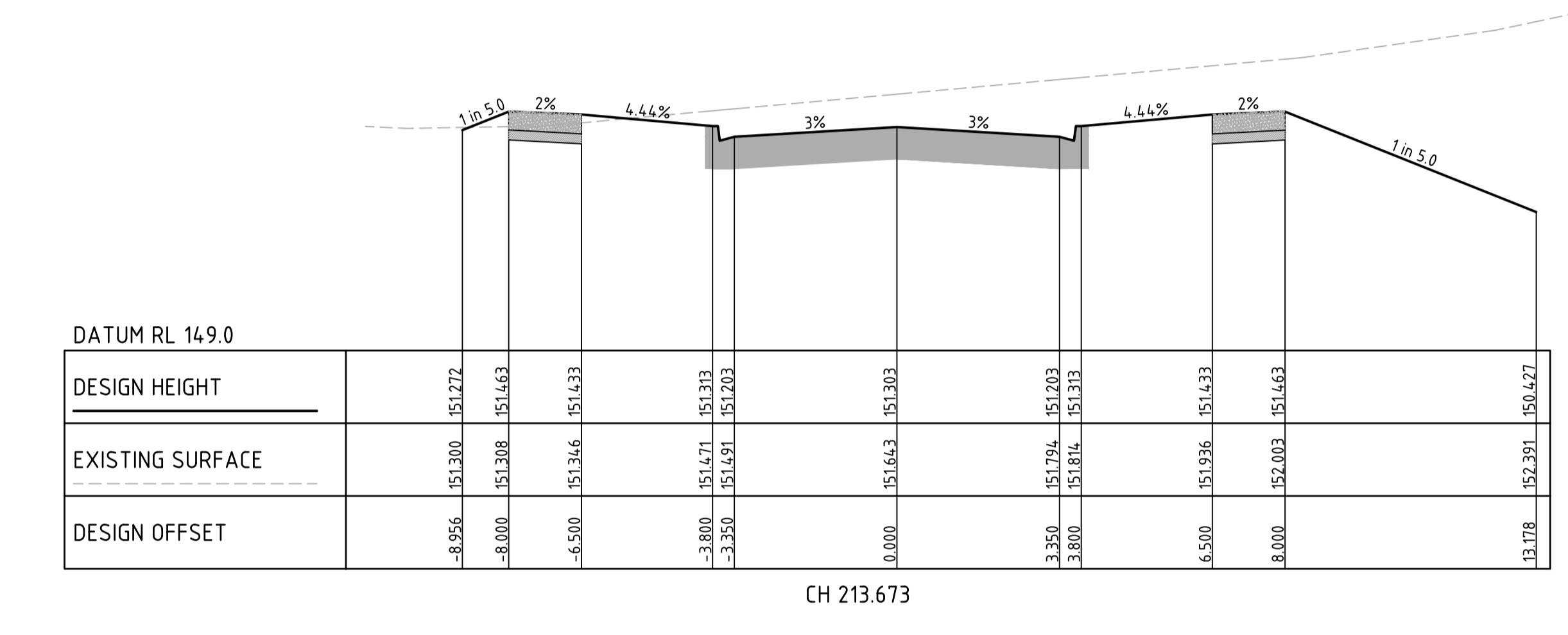
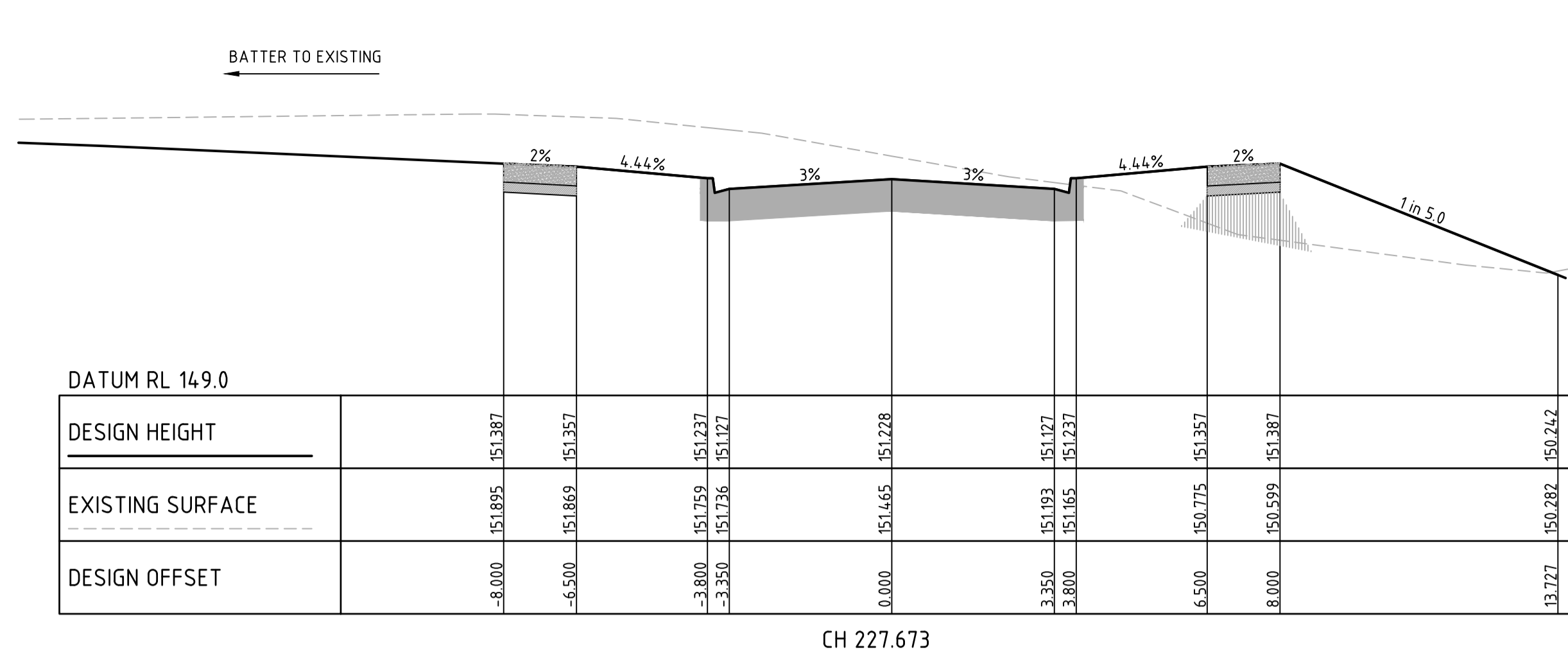
Project Name: **WANDANA ESTATE STAGE 3 335 BARRABOOL ROAD**  
Drawing Title: **BROWNHILL DRIVE CROSS SECTIONS SHEET 1 OF 4**

Level Datum	AHD
Contour Interval	N/A
Date of Survey	09 / 2015
Designed By	M.J / N.C
Drawn By	A.V
Date Drawn	12.04.2018
Scale	NOTED

<b>ISSUED FOR APPROVAL</b>		
ENGINEERING MANAGER APPROVED		
Project Ref.	Sheet No.	Rev.
14816E	308	P1

ENGINEERING





**GREATER GEELONG CITY COUNCIL  
PLANNING & ENVIRONMENT ACT 1987  
GREATER GEELONG PLANNING SCHEME**

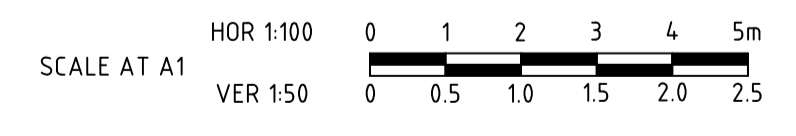
Endorsed Plan referred to in Permit No: 392-2015  
Sheet 9 of 25 Cert 13807  
Approved Engineering Plans

Signed *[Signature]* Date 21/09/2018

For and on behalf of the Greater Geelong City Council as the Responsible Authority

**NOTE: THIS IS NOT A BUILDING APPROVAL**

BROWNHILL DRIVE CROSS SECTIONS

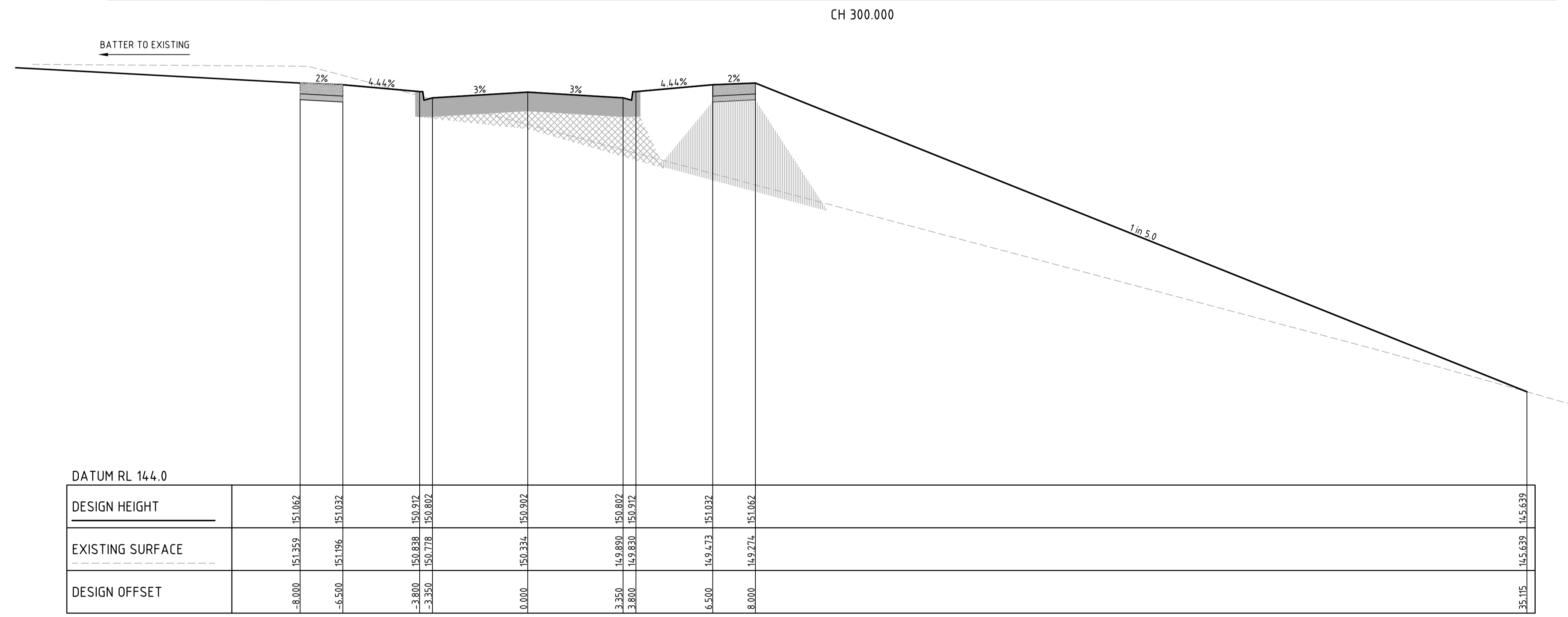
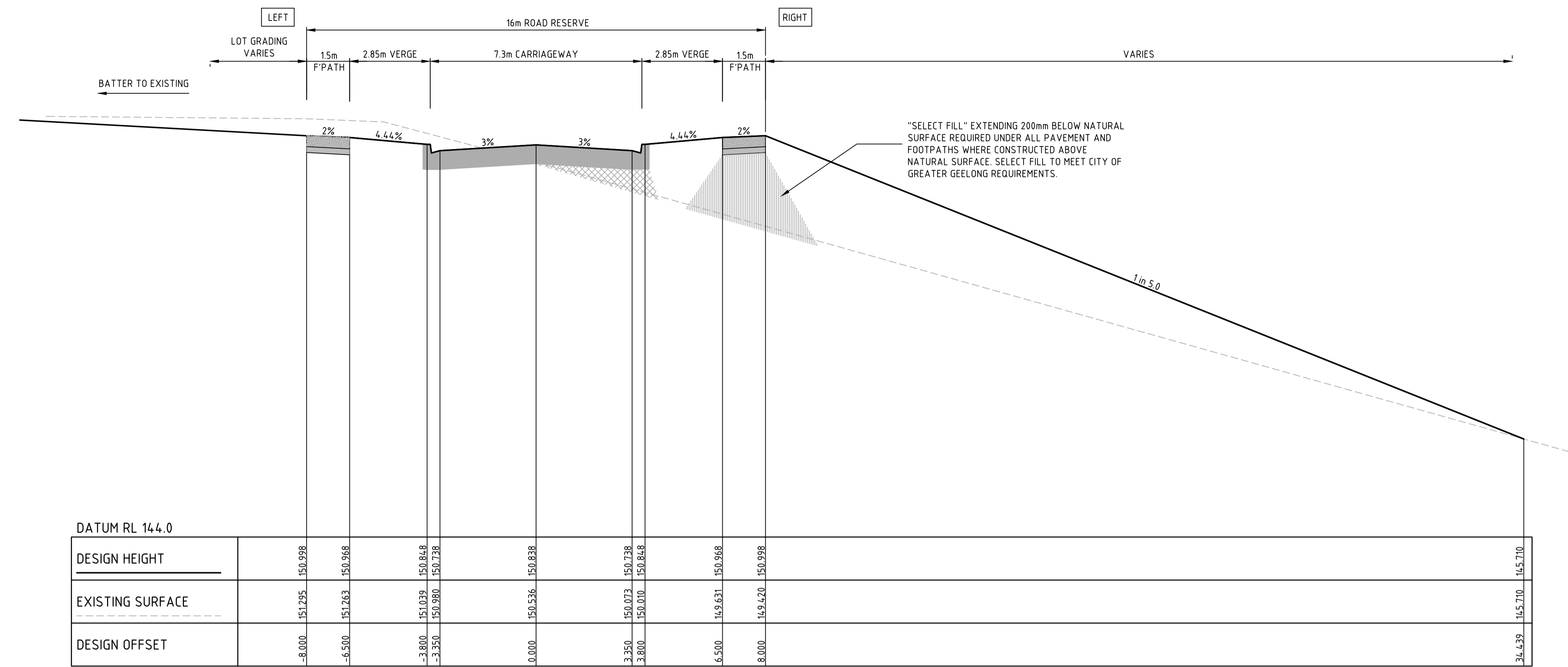


CITY OF GREATER GEELONG  
STATUTORY PLANNING  
**5 JUNE 2018**  
RECEIVED

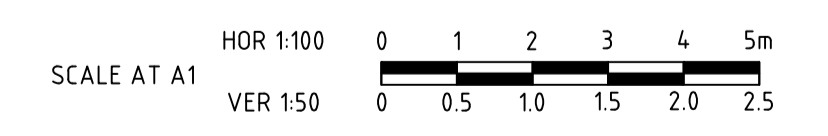
COPYRIGHT All rights reserved. These drawings, plans and specifications and the copyright therein are the property of the St. Quentin consulting and must not be used, reproduced or copied wholly or in part without the written permission of St. Quentin consulting.

Rev	Description	Date	By	App	Rev	Description	Date	By	App
P1	ISSUED FOR APPROVAL	30.04.2018	A.V.	M.J.					

<p>ST. QUENTIN Surveyors - Town Planners - Engineers 51 LITTLE FYANS STREET, P.O. BOX 919, GEELONG 3220 TELEPHONE (03) 5201 1811 FAX (03) 5229 2909</p>	<p>Project Name <b>WANDANA ESTATE STAGE 3 335 BARRABOOL ROAD</b></p>	<p>Level Datum AHD</p> <p>Contour Interval N/A</p> <p>Date of Survey 09 / 2015</p> <p>Designed By M.J / N.C</p> <p>Drawn By A.V</p> <p>Date Drawn 12.04.2018</p> <p>Scale NOTED</p>	<p><b>ISSUED FOR APPROVAL</b></p> <p>ENGINEERING MANAGER APPROVED</p>
	<p>Drawing Title <b>BROWNHILL DRIVE CROSS SECTIONS SHEET 2 OF 4</b></p>	<p>Project Ref. 14816E</p> <p>Sheet No. 309</p> <p>Rev. P1</p>	<p>ENGINEERING</p>



**BROWNHILL DRIVE CROSS SECTIONS**



**CITY OF GREATER GEELONG  
STATUTORY PLANNING  
5 JUNE 2018  
RECEIVED**

COPYRIGHT All rights reserved. These drawings, plans and specifications and the copyright therein are the property of the St Quentin consulting and must not be used, reproduced or copied wholly or in part without the written permission of St Quentin consulting.

Rev	Description	Date	By	App
P1	ISSUED FOR APPROVAL	30.04.2018	A.V	M.J

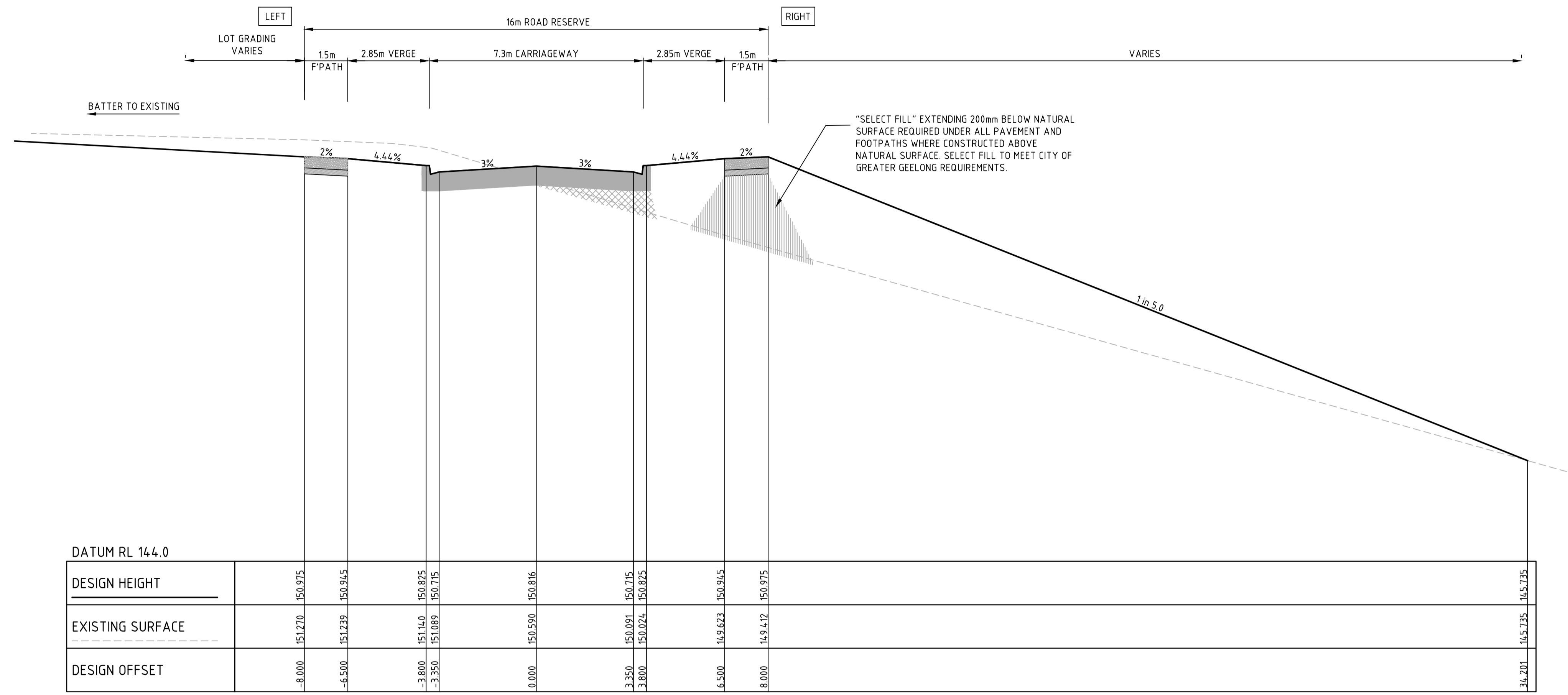
**ST. QUENTIN**  
Surveyors - Town Planners - Engineers  
51 LITTLE FYANS STREET,  
P.O. BOX 919, GEELONG 3220  
TELEPHONE (03) 5201 1811 FAX (03) 5229 2909

Project Name	WANDANA ESTATE STAGE 3 335 BARRABOOL ROAD
Drawing Title	BROWNHILL DRIVE CROSS SECTIONS SHEET 3 OF 4

Level Datum	AHD
Contour Interval	N/A
Date of Survey	09 / 2015
Designed By	M.J / N.C
Drawn By	A.V
Date Drawn	12.04.2018
Scale	NOTED

<b>ISSUED FOR APPROVAL</b>		
ENGINEERING MANAGER APPROVED		
Project Ref.	Sheet No.	Rev.
14816E	310	P1

ENGINEERING



CH 304.173 - LIMIT OF WORKS

**BROWNHILL DRIVE CROSS SECTIONS**



**CITY OF GREATER GEELONG  
STATUTORY PLANNING  
5 JUNE 2018  
RECEIVED**

Rev	Description	Date	By	App	Rev	Description	Date	By	App
P1	ISSUED FOR APPROVAL	30.04.2018	A.V	M.J					

**ST. QUENTIN**  
Surveyors - Town Planners - Engineers  
51 LITTLE FYANS STREET,  
P.O. BOX 919, GEELONG 3220  
TELEPHONE (03) 5201 1811 FAX (03) 5229 2909

Project Name  
**WANDANA ESTATE  
STAGE 3  
335 BARRABOOL ROAD**

Drawing Title  
**BROWNHILL DRIVE CROSS SECTIONS  
SHEET 4 OF 4**

Level Datum  
AHD

Contour Interval  
N/A

Date of Survey  
09 / 2015

Designed By  
M.J / N.C

Drawn By  
A.V

Date Drawn  
12.04.2018

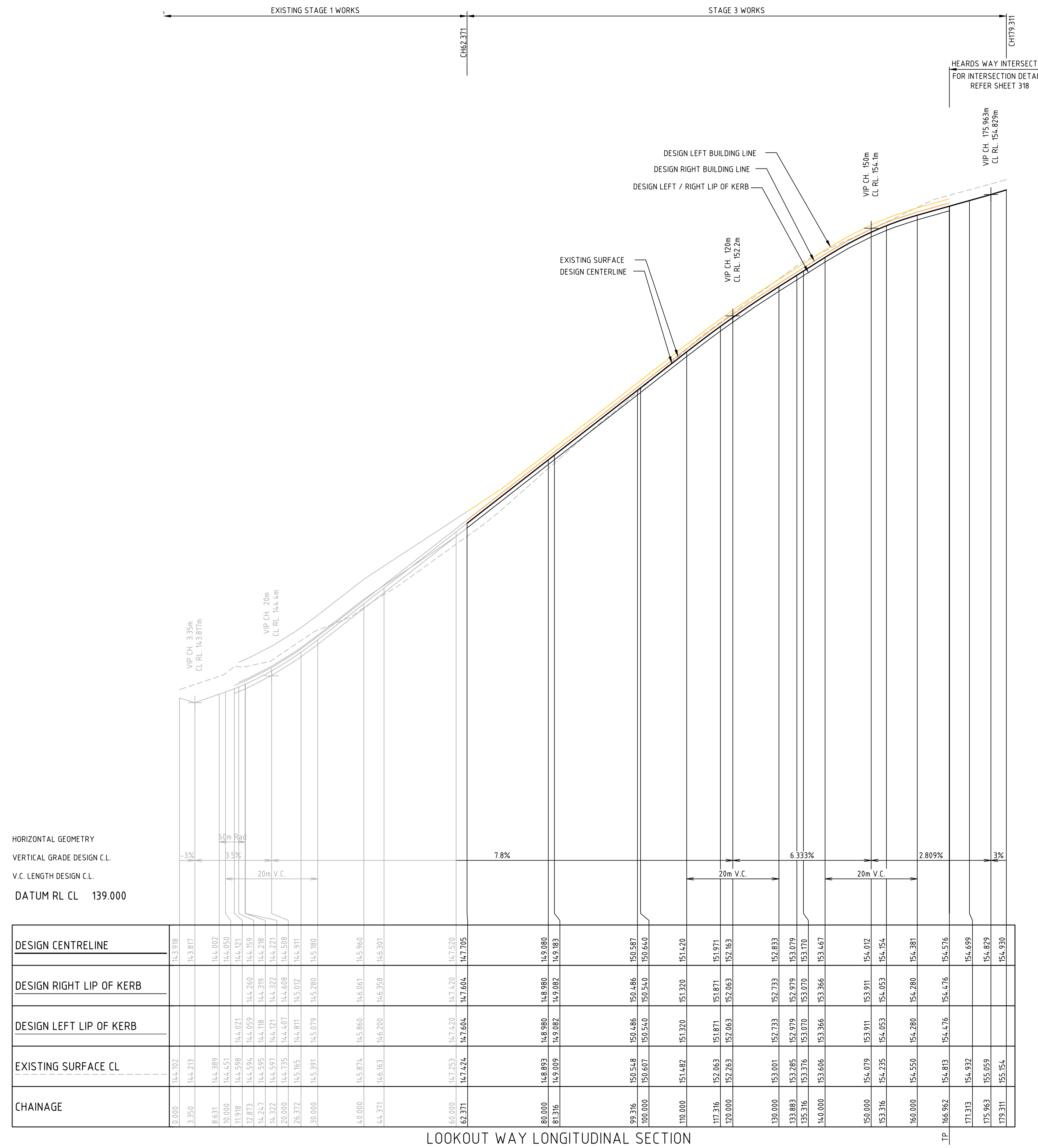
Scale  
NOTED

**ISSUED FOR APPROVAL**

ENGINEERING MANAGER APPROVED

Project Ref. 14816E  
Sheet No. 311  
Rev. P1

ENGINEERING



HORIZONTAL GEOMETRY  
VERTICAL GRADE DESIGN C.L.  
V.C. LENGTH DESIGN C.L.  
DATUM RL CL 139.000

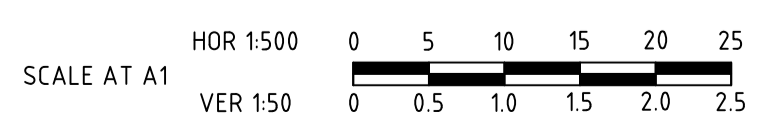
CHAINAGE	EXISTING SURFACE CL	DESIGN LEFT LIP OF KERB	DESIGN RIGHT LIP OF KERB	DESIGN CENTRELINE
0.000	144.102			143.918
3.350	144.213			143.817
8.631	144.389			144.002
10.000	144.451			144.050
11.918	144.598			144.171
12.873	144.594			144.059
14.247	144.595			144.260
16.322	144.597			144.319
20.000	144.735			144.421
26.372	145.165			144.471
30.000	145.391			145.079
40.000	145.874			145.860
44.371	146.163			146.200
60.000	147.263			147.420
62.371	147.424			147.604
80.000	148.893			148.980
81.376	149.009			149.082
99.376	150.548			150.587
100.000	150.607			150.640
110.000	151.482			151.320
117.316	152.063			151.871
120.000	152.263			152.063
130.000	153.001			152.733
133.883	153.285			152.979
135.316	153.376			153.070
140.000	153.606			153.366
150.000	154.079			153.911
153.376	154.235			154.053
160.000	154.550			154.280
166.962	154.813			154.476
171.313	154.932			154.699
175.963	155.059			154.879
179.311	155.154			154.930

LOOKOUT WAY LONGITUDINAL SECTION

**CITY OF GREATER GEELONG  
STATUTORY PLANNING  
5 JUNE 2018  
RECEIVED**

COPYRIGHT All rights reserved. These drawings, plans and specifications and the copyright therein are the property of the St. Quentin consulting and must not be used, reproduced or copied wholly or in part without the written permission of St. Quentin consulting.

Rev	Description	Date	By	App
P1	ISSUED FOR APPROVAL	30.04.2018	A.V	M.J



Project Name	WANDANA ESTATE STAGE 3 335 BARRABOOL ROAD
Drawing Title	LOOKOUT WAY LONG SECTION

Level Datum	AHD
Contour Interval	N/A
Date of Survey	09 / 2015
Designed By	M.J / N.C
Drawn By	A.V
Date Drawn	12.04.2018
Scale	NOTED

<b>ISSUED FOR APPROVAL</b>		
ENGINEERING MANAGER APPROVED		
Project Ref.	Sheet No.	Rev.
14816E	312	P1

ENGINEERING

**GREATER GEELONG CITY COUNCIL  
PLANNING & ENVIRONMENT ACT 1987  
GREATER GEELONG PLANNING SCHEME**

Endorsed Plan referred to in Permit No: 392-2015  
Sheet 13 of 25 Cert 13807  
Approved Engineering Plans

Signed *[Signature]* Date 21/09/2018

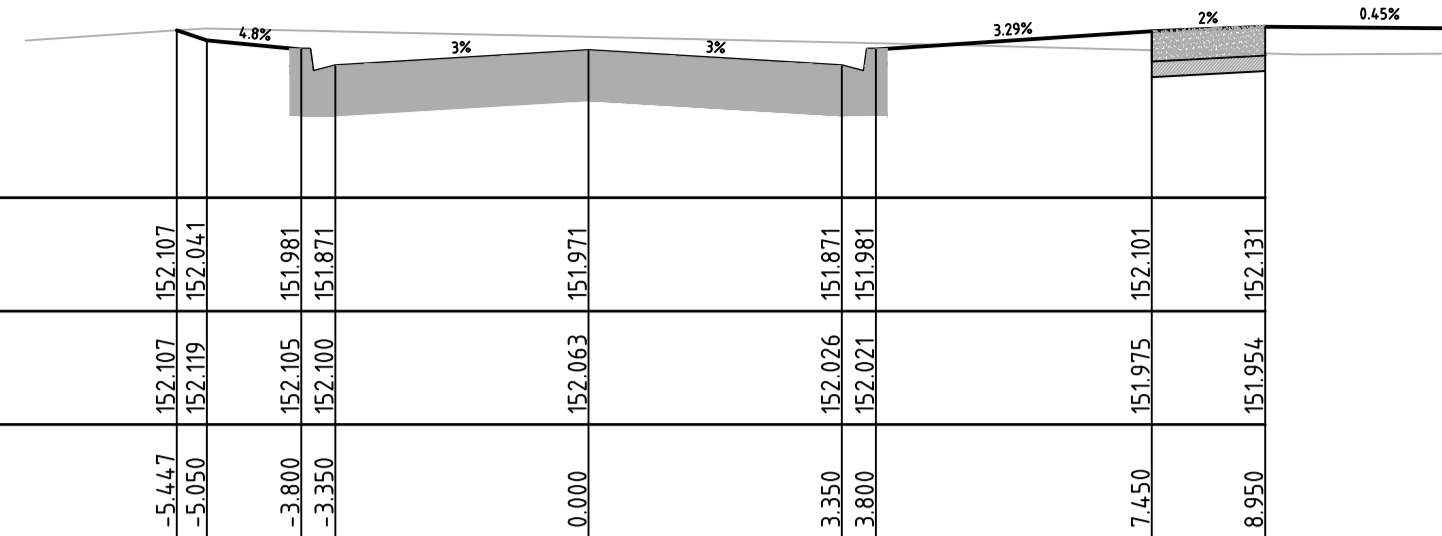
For and on behalf of the Greater Geelong City Council as the Responsible Authority

**NOTE: THIS IS NOT A BUILDING APPROVAL**

DATUM RL 151.0

DESIGN HEIGHT			152.007	152.011	151.981	151.971	152.001	152.011
EXISTING SURFACE			152.019	152.005	152.000	152.003	152.021	151.954
DESIGN OFFSET			-5.447	-3.800	0.000	3.350	7.450	8.950

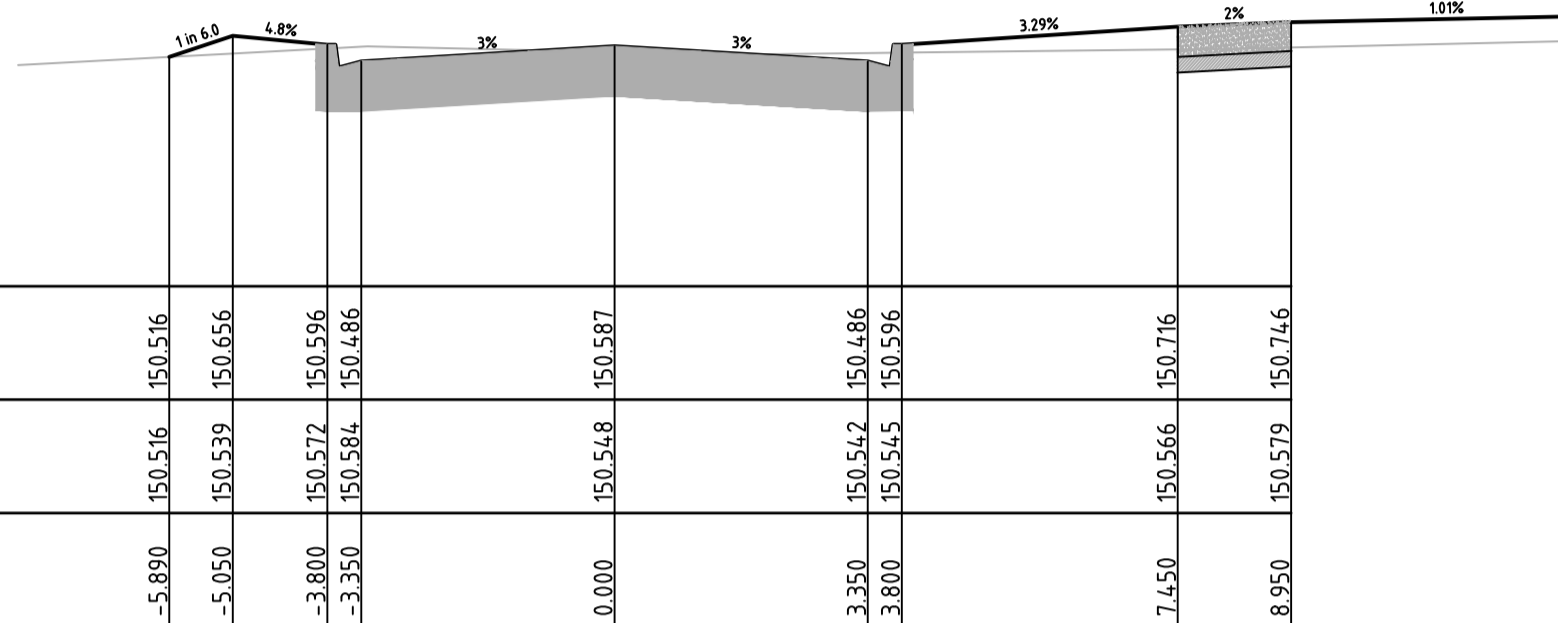
CH 117.316



DATUM RL 149.0

DESIGN HEIGHT			150.516	150.556	150.596	150.587	150.716	150.746
EXISTING SURFACE			150.539	150.572	150.584	150.548	150.566	150.579
DESIGN OFFSET			-5.880	-3.800	0.000	3.350	7.450	8.950

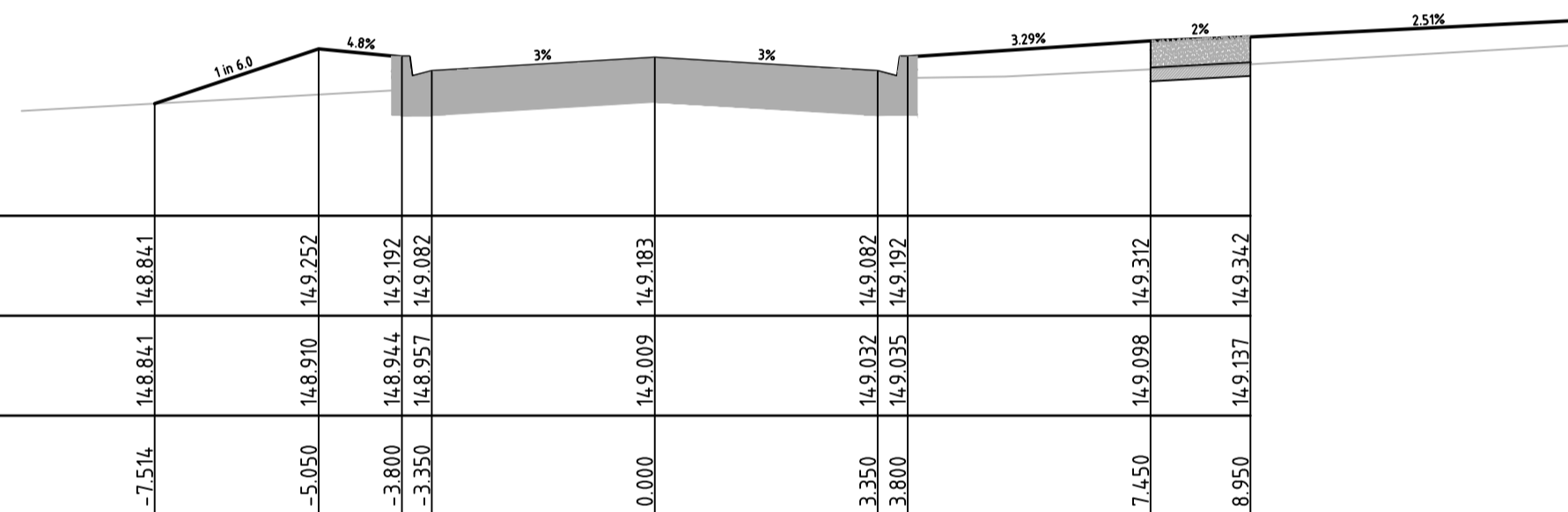
CH 99.316



DATUM RL 148.0

DESIGN HEIGHT			148.841	148.922	148.992	148.983	149.312	149.342
EXISTING SURFACE			148.810	148.944	148.957	149.009	149.098	149.137
DESIGN OFFSET			-7.514	-3.800	0.000	3.350	7.450	8.950

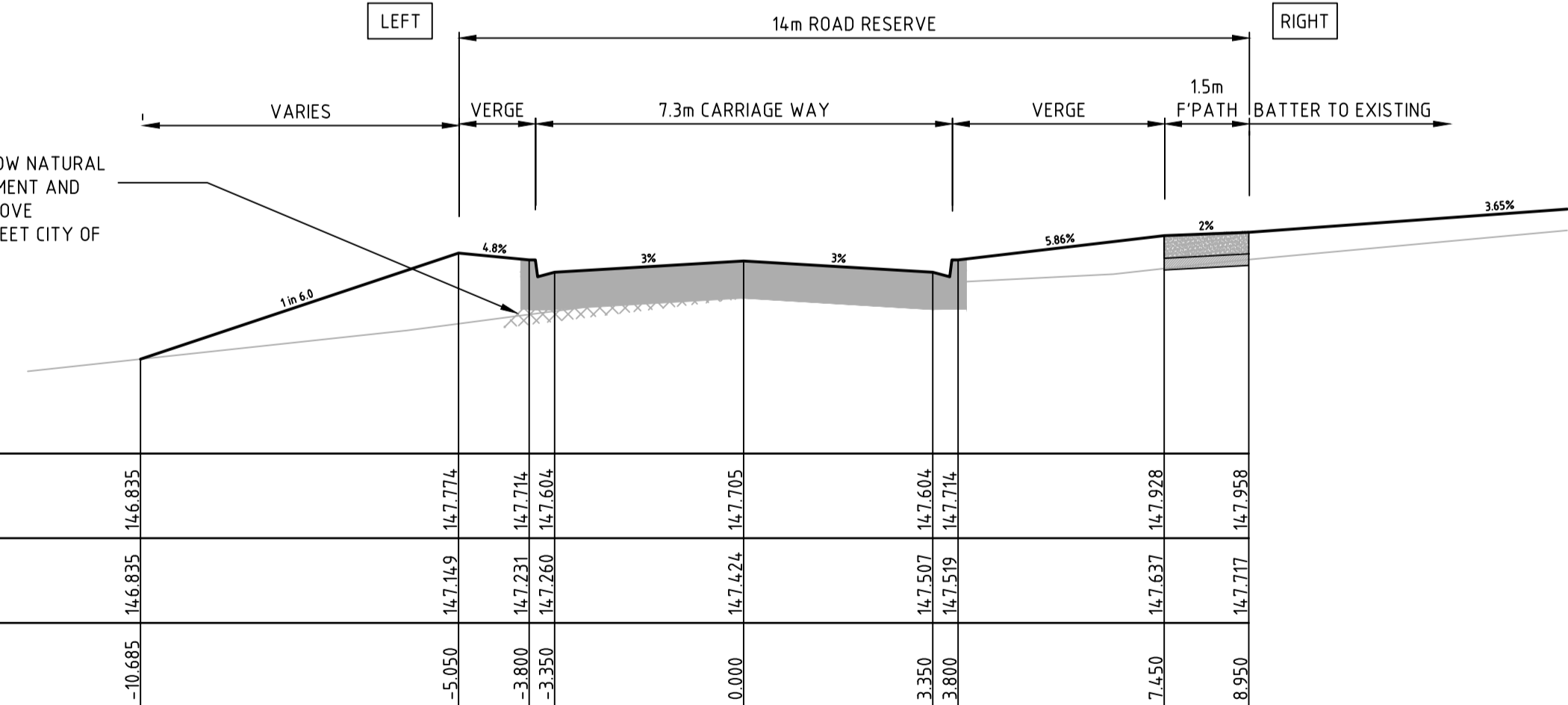
CH 81.316



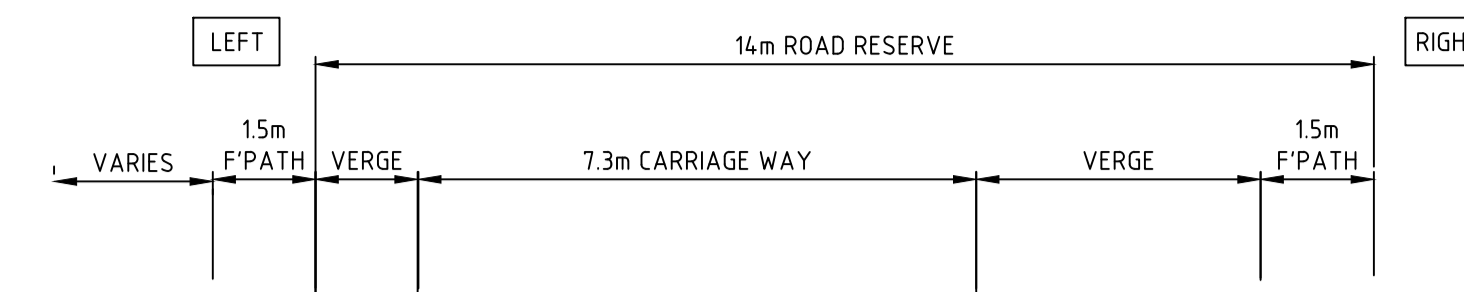
DATUM RL 146.0

DESIGN HEIGHT			146.835	147.774	147.714	147.705	147.928	147.958
EXISTING SURFACE			146.835	147.231	147.260	147.424	147.519	147.637
DESIGN OFFSET			-10.685	-3.800	0.000	3.350	7.450	8.950

CH 62.371



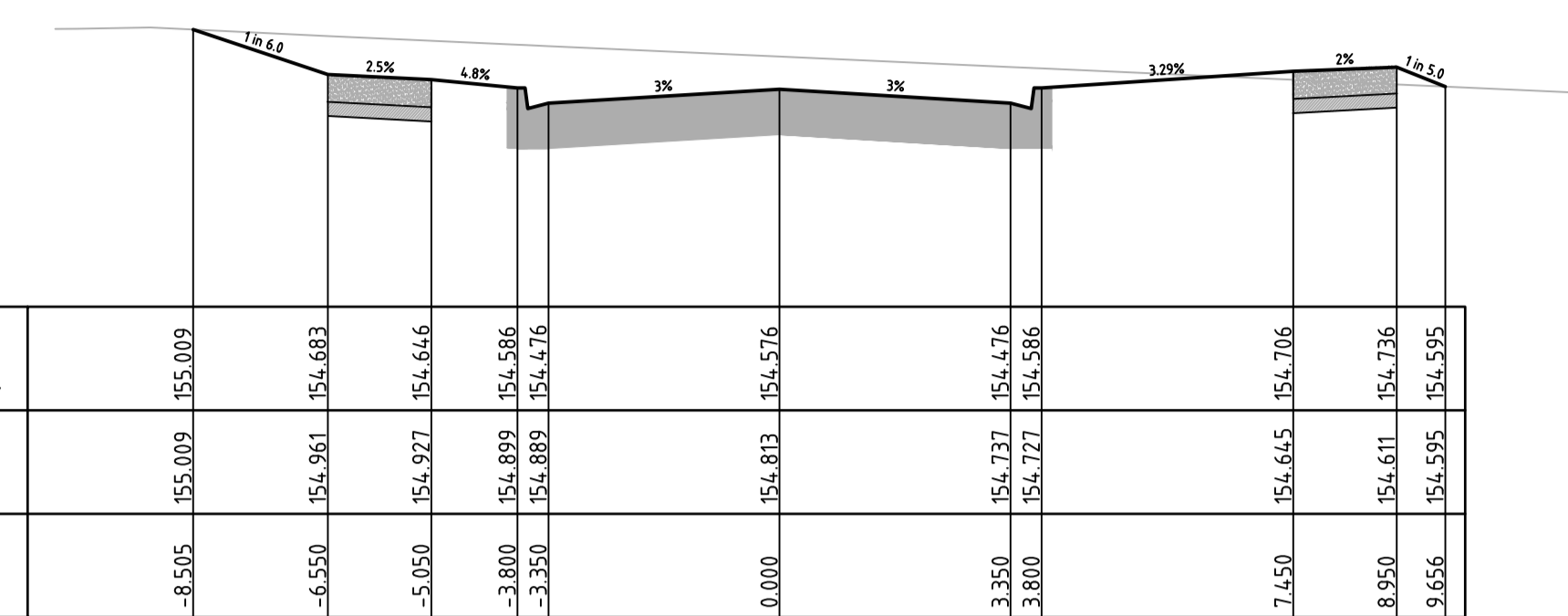
"SELECT FILL" EXTENDING 200mm BELOW NATURAL SURFACE REQUIRED UNDER ALL PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE NATURAL SURFACE. SELECT FILL TO MEET CITY OF GREATER GEELONG REQUIREMENTS.



DATUM RL 153.0

DESIGN HEIGHT			155.009	154.683	154.646	154.586	154.706	154.736
EXISTING SURFACE			155.009	154.961	154.927	154.889	154.727	154.595
DESIGN OFFSET			-8.505	-6.550	-5.050	0.000	3.350	8.950

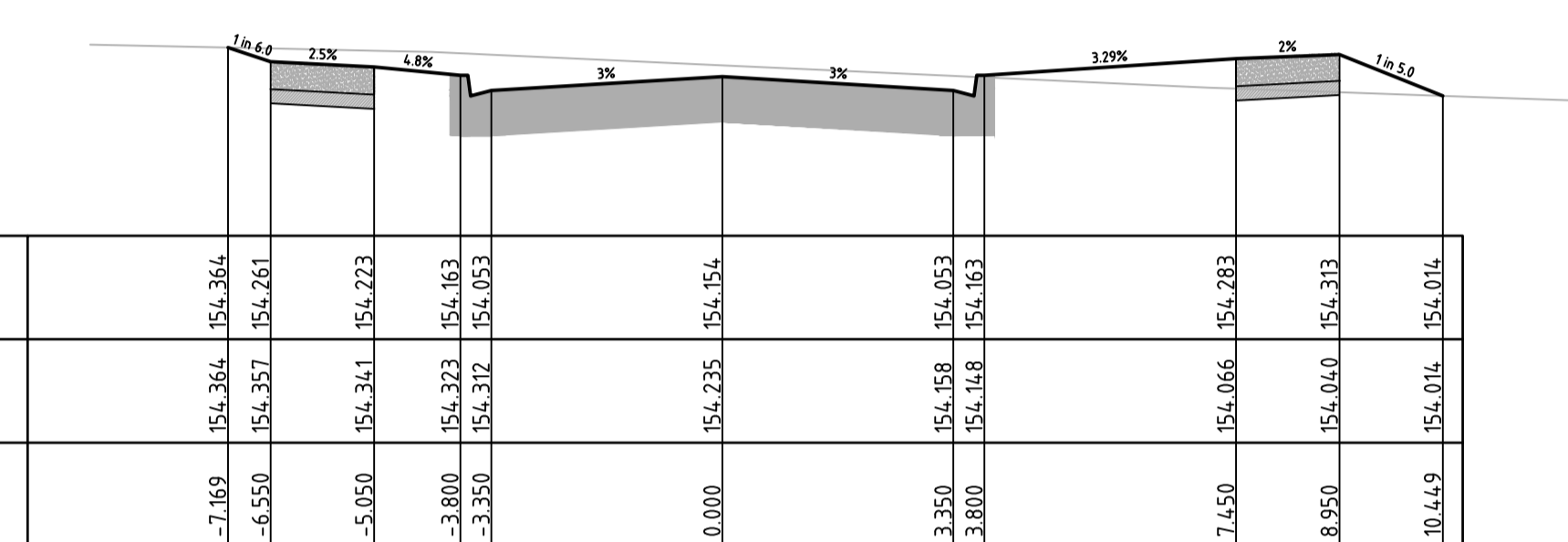
CH 166.962



DATUM RL 153.0

DESIGN HEIGHT			154.364	154.261	154.223	154.154	154.053	154.014
EXISTING SURFACE			154.364	154.357	154.341	154.235	154.148	154.014
DESIGN OFFSET			-7.169	-6.550	-5.050	0.000	3.350	10.449

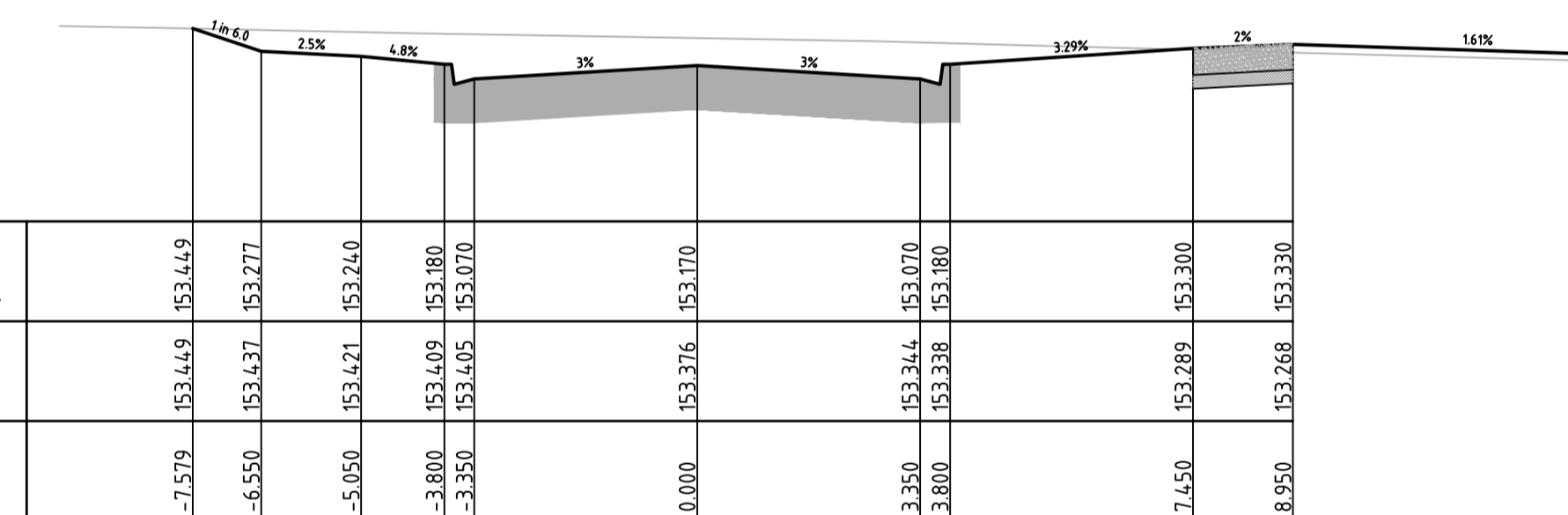
CH 153.316



DATUM RL 152.0

DESIGN HEIGHT			153.449	153.277	153.240	153.170	153.300	153.330
EXISTING SURFACE			153.449	153.437	153.421	153.316	153.289	153.268
DESIGN OFFSET			-7.579	-6.550	-5.050	0.000	7.450	8.950

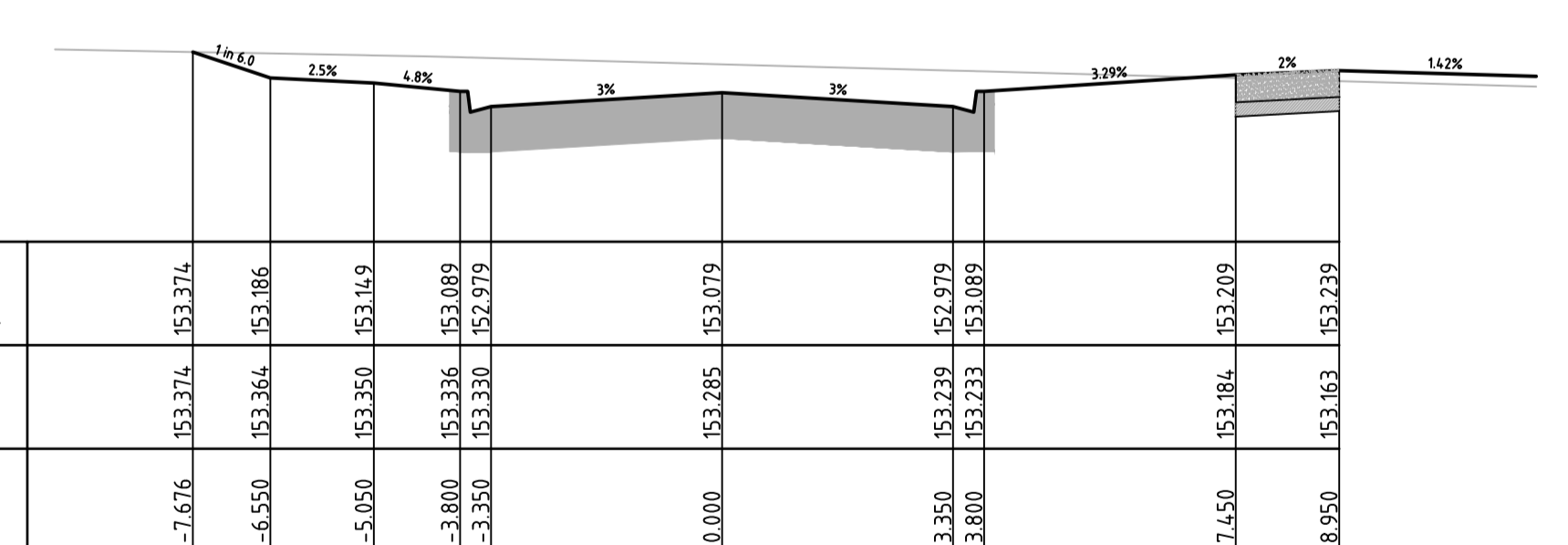
CH 135.316



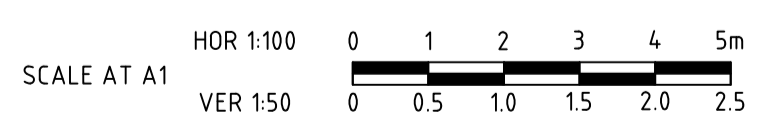
DATUM RL 152.0

DESIGN HEIGHT			153.374	153.186	153.149	153.079	153.209	153.239
EXISTING SURFACE			153.374	153.364	153.350	153.239	153.184	153.163
DESIGN OFFSET			-7.676	-6.550	-5.050	0.000	7.450	8.950

CH 133.883



LOOKOUT WAY CROSS SECTIONS



CITY OF GREATER GEELONG  
STATUTORY PLANNING  
5 JUNE 2018  
RECEIVED

Rev	Description	Date	By	App	Rev	Description	Date	By	App
P1	ISSUED FOR APPROVAL	30.04.2018	A.V	M.J					

<p>ST. QUENTIN Surveyors - Town Planners - Engineers 51 LITTLE FYANS STREET, P.O. BOX 919, GEELONG 3220 TELEPHONE (03) 5201 1811 FAX (03) 5229 2909</p>	<p>Project Name <b>WANDANA ESTATE STAGE 3 335 BARRABOOL ROAD</b></p> <p>Drawing Title <b>LOOKOUT WAY CROSS SECTIONS</b></p>	<p>Level Datum AHD</p> <p>Contour Interval N/A</p> <p>Date of Survey 09 / 2015</p> <p>Designed By M.J / N.C</p> <p>Drawn By A.V</p> <p>Date Drawn 12.04.2018</p> <p>Scale NOTED</p>	<p><b>ISSUED FOR APPROVAL</b></p> <p>ENGINEERING MANAGER APPROVED</p> <p>Project Ref. 14816E</p> <p>Sheet No. 313</p> <p>Rev. P1</p>
---	---	---	--

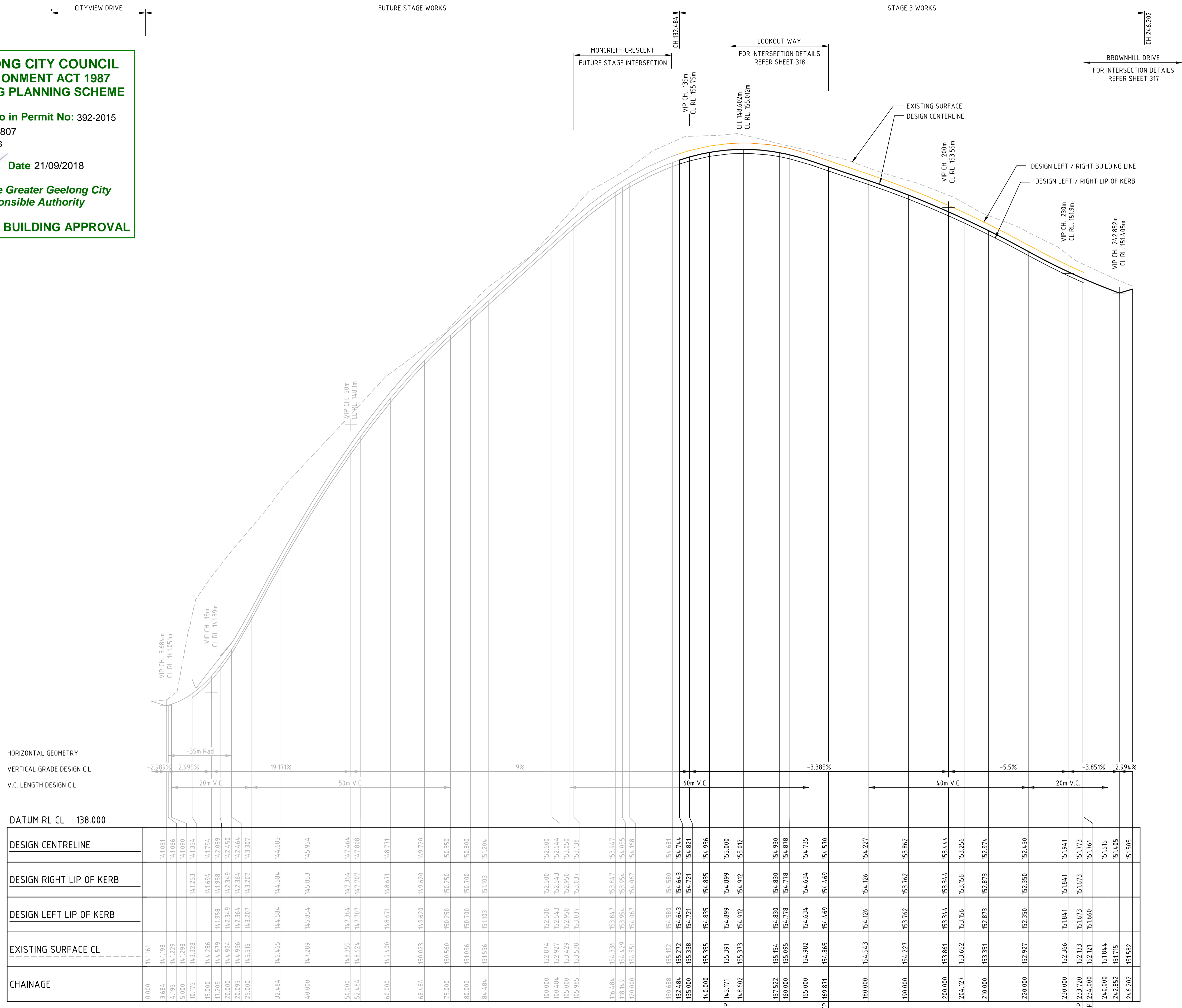
**GREATER GEELONG CITY COUNCIL  
PLANNING & ENVIRONMENT ACT 1987  
GREATER GEELONG PLANNING SCHEME**

Endorsed Plan referred to in Permit No: 392-2015  
Sheet 14 of 25 Cert 13807  
Approved Engineering Plans

Signed *[Signature]* Date 21/09/2018

For and on behalf of the Greater Geelong City Council as the Responsible Authority

**NOTE: THIS IS NOT A BUILDING APPROVAL**



HORIZONTAL GEOMETRY  
VERTICAL GRADE DESIGN C.L.  
V.C. LENGTH DESIGN C.L.

DATUM RL CL 138.000

CHAINAGE	EXISTING SURFACE CL	DESIGN LEFT LIP OF KERB	DESIGN RIGHT LIP OF KERB	DESIGN CENTRELINE
0.000	144.161			144.051
3.684	144.198			144.066
4.195	144.179			144.090
5.000	144.129			144.100
10.175	143.328			144.354
15.000	144.286			144.354
17.009	144.579			144.794
20.000	144.924			144.959
20.095	144.936			142.349
20.095	144.936			142.364
25.000	145.516			143.207
32.484	146.465			144.584
40.000	147.289			145.854
50.000	148.355			147.364
52.484	148.624			147.707
60.000	149.400			148.671
68.484	150.023			149.620
75.000	150.560			150.250
80.000	151.096			150.700
84.484	151.556			151.103
100.000	152.874			152.500
100.484	152.927			152.543
105.000	153.429			152.850
105.985	153.558			153.037
116.484	154.326			153.817
118.149	154.429			153.954
120.000	154.551			154.168
130.688	155.197			154.580
132.484	155.272			154.643
135.000	155.338			154.721
140.000	155.355			154.835
145.171	155.391			154.899
148.602	155.373			154.912
157.522	155.154			154.830
160.000	155.095			154.778
165.000	154.982			154.634
169.871	154.865			154.469
180.000	154.513			154.126
190.000	154.227			153.762
200.000	153.861			153.344
204.127	153.652			153.156
210.000	153.351			152.873
220.000	152.927			152.450
230.000	152.366			151.941
233.120	152.133			151.673
234.000	152.121			151.660
240.000	151.844			151.515
242.852	151.715			151.405
246.202	151.582			151.505

HEADS WAY LONGITUDINAL SECTION

CITY OF GREATER GEELONG  
STATUTORY PLANNING  
5 JUNE 2018  
RECEIVED

Rev	Description	Date	By	App	Rev	Description	Date	By	App
P1	ISSUED FOR APPROVAL	30.04.2018	A.V	M.J					



Project Name: WANDANA ESTATE STAGE 3 335 BARRABOOL ROAD  
Drawing Title: HEADS WAY LONG SECTION

Level Datum: AHD  
Contour Interval: N/A  
Date of Survey: 09 / 2015  
Designed By: M.J / N.C  
Drawn By: A.V  
Date Drawn: 12.04.2018  
Scale: NOTED

ISSUED FOR APPROVAL  
ENGINEERING MANAGER APPROVED  
Project Ref: 14816E  
Sheet No: 314  
Rev: P1

ENGINEERING

**GREATER GEELONG CITY COUNCIL  
PLANNING & ENVIRONMENT ACT 1987  
GREATER GEELONG PLANNING SCHEME**

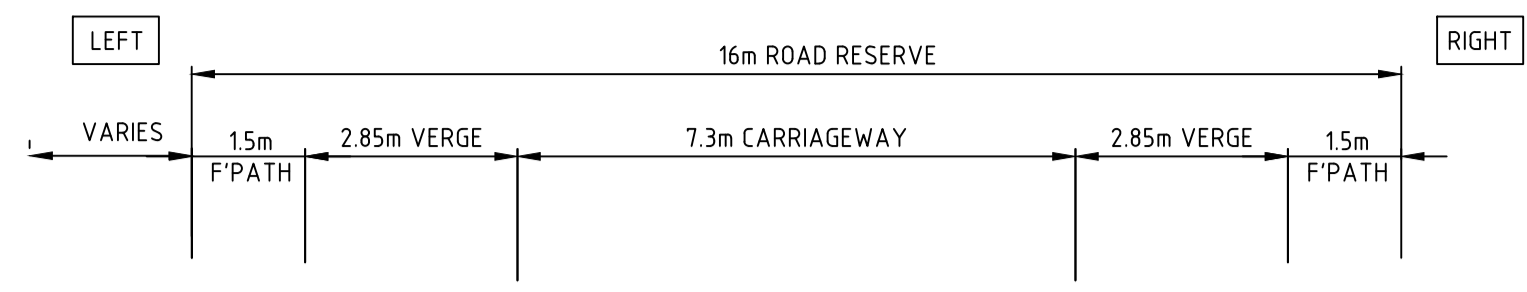
Endorsed Plan referred to in Permit No: 392-2015  
Sheet 15 of 25 Cert 13807  
Approved Engineering Plans

Signed *[Signature]* Date 21/09/2018

For and on behalf of the Greater Geelong City Council as the Responsible Authority

**NOTE: THIS IS NOT A BUILDING APPROVAL**

**CITY OF GREATER GEELONG  
STATUTORY PLANNING  
5 JUNE 2018  
RECEIVED**



DATUM RL 153.0

DESIGN HEIGHT	155.070	154.729	154.699	154.579	154.669	154.570	154.778	154.669	154.699	154.729	154.641
EXISTING SURFACE	155.070	155.069	155.034	154.964	154.952	154.865	154.778	154.766	154.694	154.653	154.641
DESIGN OFFSET	-9.704	-8.000	-6.500	-3.800	-3.350	0.000	3.350	3.800	6.500	8.000	8.442

RTP 169.871

DATUM RL 154.0

DESIGN HEIGHT	155.434	155.090	155.060	154.940	154.830	154.930	154.830	154.930	154.830	154.930	154.830
EXISTING SURFACE	155.434	155.383	155.340	155.263	155.250	155.154	154.830	154.830	154.830	154.830	154.830
DESIGN OFFSET	-9.772	-8.000	-6.500	-3.800	-3.350	0.000	3.350	3.800	6.500	8.000	8.487

CH 157.522

DATUM RL 154.0

DESIGN HEIGHT	155.651	155.651	155.129	155.009	154.899	155.009	154.899	155.009	154.899	155.129	155.651
EXISTING SURFACE	155.651	155.651	155.600	155.513	155.498	155.391	154.899	154.899	154.899	155.129	155.651
DESIGN OFFSET	-8.088	-8.000	-6.500	-3.800	-3.350	0.000	3.350	3.800	6.500	8.000	8.139

RTP 145.171

DATUM RL 154.0

DESIGN HEIGHT	155.285	155.231	154.873	154.753	154.643	154.744	154.643	154.753	154.873	154.903	155.068
EXISTING SURFACE	155.285	155.231	155.294	155.283	155.283	155.277	154.753	154.753	154.873	154.903	155.068
DESIGN OFFSET	-8.069	-8.000	-6.500	-3.800	-3.350	0.000	3.350	3.800	6.500	8.000	8.823

CH 132.484

DATUM RL 151.0

DESIGN HEIGHT	152.910	152.610	152.580	152.460	152.350	152.450	152.350	152.460	152.580	152.610	152.910
EXISTING SURFACE	152.965	152.972	152.973	152.974	152.975	152.977	152.974	152.971	152.974	152.973	152.972
DESIGN OFFSET	-9.505	-8.000	-6.500	-3.800	-3.350	0.000	3.350	3.800	6.500	8.000	9.462

CH 220.000

DATUM RL 152.0

DESIGN HEIGHT	153.846	153.416	153.386	153.266	153.156	153.256	153.156	153.266	153.386	153.416	153.846
EXISTING SURFACE	153.846	153.805	153.776	153.725	153.706	153.652	153.588	153.579	153.528	153.517	153.513
DESIGN OFFSET	-10.151	-8.000	-6.500	-3.800	-3.350	0.000	3.350	3.800	6.500	8.000	8.487

CH 204.127

DATUM RL 152.0

DESIGN HEIGHT	154.029	153.604	153.574	153.454	153.344	153.444	153.344	153.454	153.574	153.604	154.029
EXISTING SURFACE	154.029	153.994	153.969	153.924	153.917	153.861	153.806	153.798	153.753	153.729	153.719
DESIGN OFFSET	-10.127	-8.000	-6.500	-3.800	-3.350	0.000	3.350	3.800	6.500	8.000	8.576

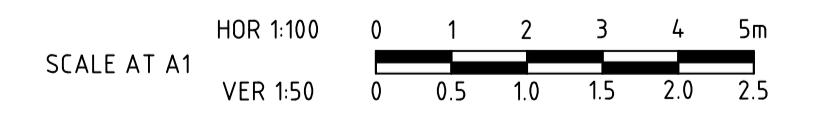
CH 200.000

DATUM RL 153.0

DESIGN HEIGHT	154.723	154.386	154.356	154.236	154.126	154.227	154.126	154.236	154.356	154.386	154.723
EXISTING SURFACE	154.723	154.748	154.711	154.641	154.630	154.543	154.457	154.445	154.378	154.356	154.306
DESIGN OFFSET	-9.681	-8.000	-6.500	-3.800	-3.350	0.000	3.350	3.800	6.500	8.000	8.230

CH 180.000

**HEARDS WAY CROSS SECTIONS**



**COPYRIGHT**  
All rights reserved.  
These drawings, plans and specifications and the copyright therein are the property of the St. Quentin consulting and must not be used, reproduced or copied wholly or in part without the written permission of St. Quentin consulting.

Rev	Description	Date	By	App	Rev	Description	Date	By	App
P1	ISSUED FOR APPROVAL	30.04.2018	A.V	M.J					

**ST. QUENTIN**  
Surveyors - Town Planners - Engineers  
51 LITTLE FYANS STREET,  
P.O. BOX 919, GEELONG 3220  
TELEPHONE (03) 5201 1811 FAX (03) 5229 2909

Project Name	WANDANA ESTATE STAGE 3 335 BARRABOOL ROAD
Drawing Title	HEARDS WAY CROSS SECTIONS SHEET 1 OF 2
Level Datum	AHD
Contour Interval	N/A
Date of Survey	09 / 2015
Designed By	M.J / N.C
Drawn By	A.V
Date Drawn	12.04.2018
Scale	NOTED

<b>ISSUED FOR APPROVAL</b>		
ENGINEERING MANAGER APPROVED		
Project Ref.	Sheet No.	Rev.
14816E	315	P1

ENGINEERING

**GREATER GEELONG CITY COUNCIL  
PLANNING & ENVIRONMENT ACT 1987  
GREATER GEELONG PLANNING SCHEME**

Endorsed Plan referred to in Permit No: 392-2015

Sheet 16 of 25 Cert 13807

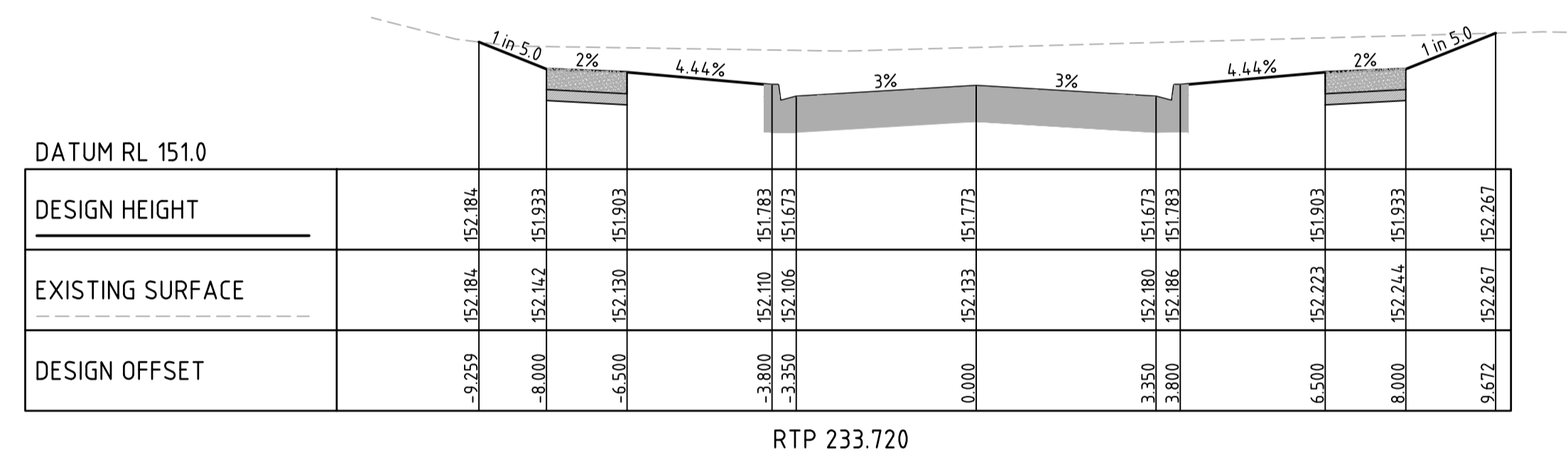
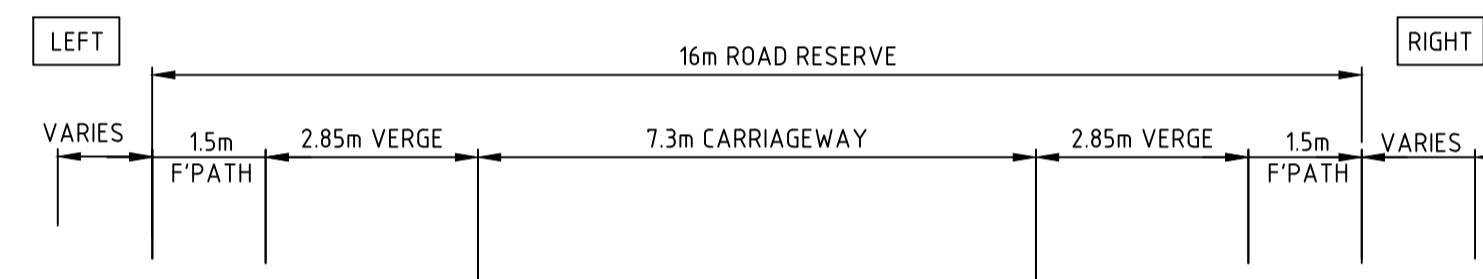
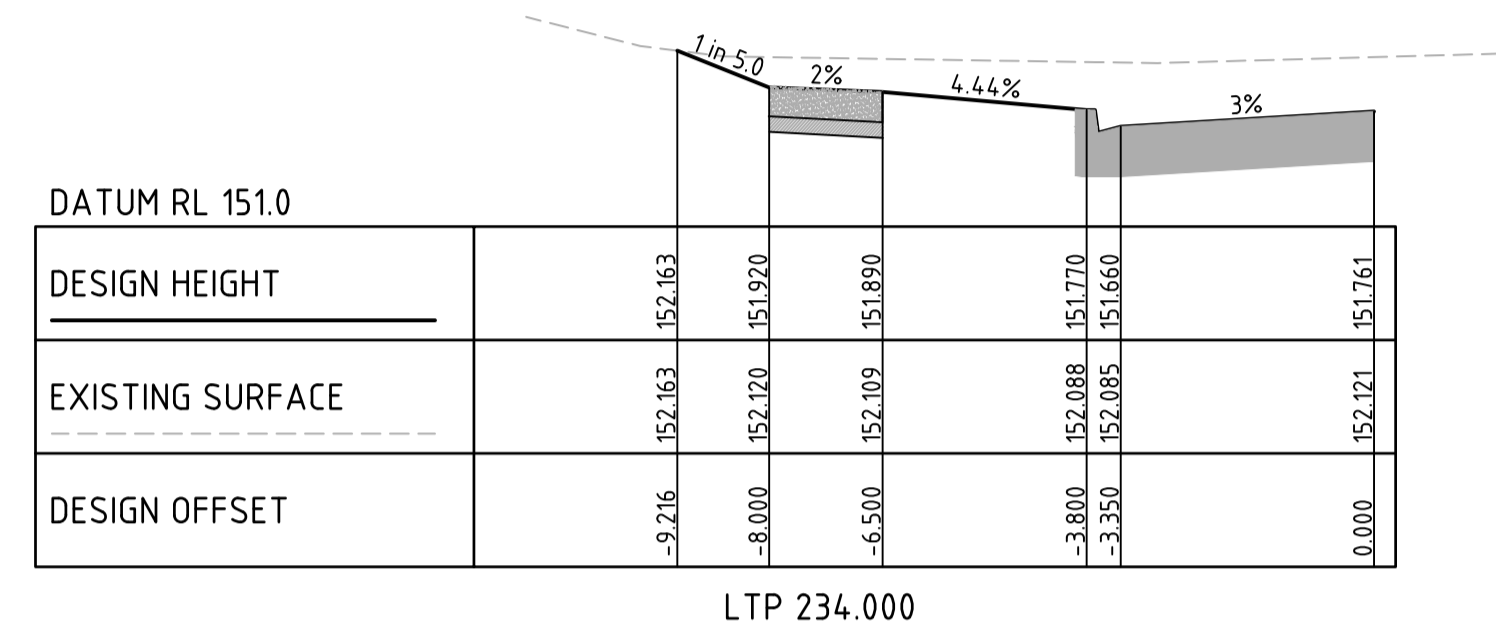
Approved Engineering Plans

Signed *[Signature]* Date 21/09/2018

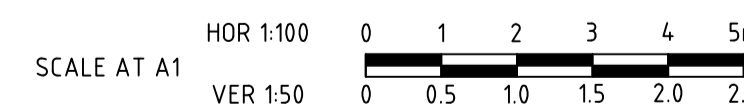
For and on behalf of the Greater Geelong City Council as the Responsible Authority

**NOTE: THIS IS NOT A BUILDING APPROVAL**

CITY OF GREATER GEELONG  
STATUTORY PLANNING  
**5 JUNE 2018**  
RECEIVED



HEADS WAY CROSS SECTIONS



Rev	Description	Date	By	App	Rev	Description	Date	By	App
P1	ISSUED FOR APPROVAL	30.04.2018	A.V	M.J					

**ST. QUENTIN**  
Surveyors - Town Planners - Engineers  
51 LITTLE FYANS STREET,  
P.O. BOX 919, GEELONG 3220  
TELEPHONE (03) 5201 1811 FAX (03) 5229 2909

Project Name  
**WANDANA ESTATE  
STAGE 3  
335 BARRABOOL ROAD**

Drawing Title  
**HEADS WAY CROSS SECTIONS  
SHEET 2 OF 2**

Level Datum  
AHD

Contour Interval  
N/A

Date of Survey  
09 / 2015

Designed By  
M.J / N.C

Drawn By  
A.V

Date Drawn  
12.04.2018

Scale  
NOTED

**ISSUED FOR APPROVAL**

ENGINEERING MANAGER APPROVED

Project Ref.	Sheet No.	Rev.
14816E	316	P1

ENGINEERING



**GREATER GEELONG CITY COUNCIL  
PLANNING & ENVIRONMENT ACT 1987  
GREATER GEELONG PLANNING SCHEME**

Endorsed Plan referred to in Permit No: 392-2015

Sheet 17 of 25 Cert 13807

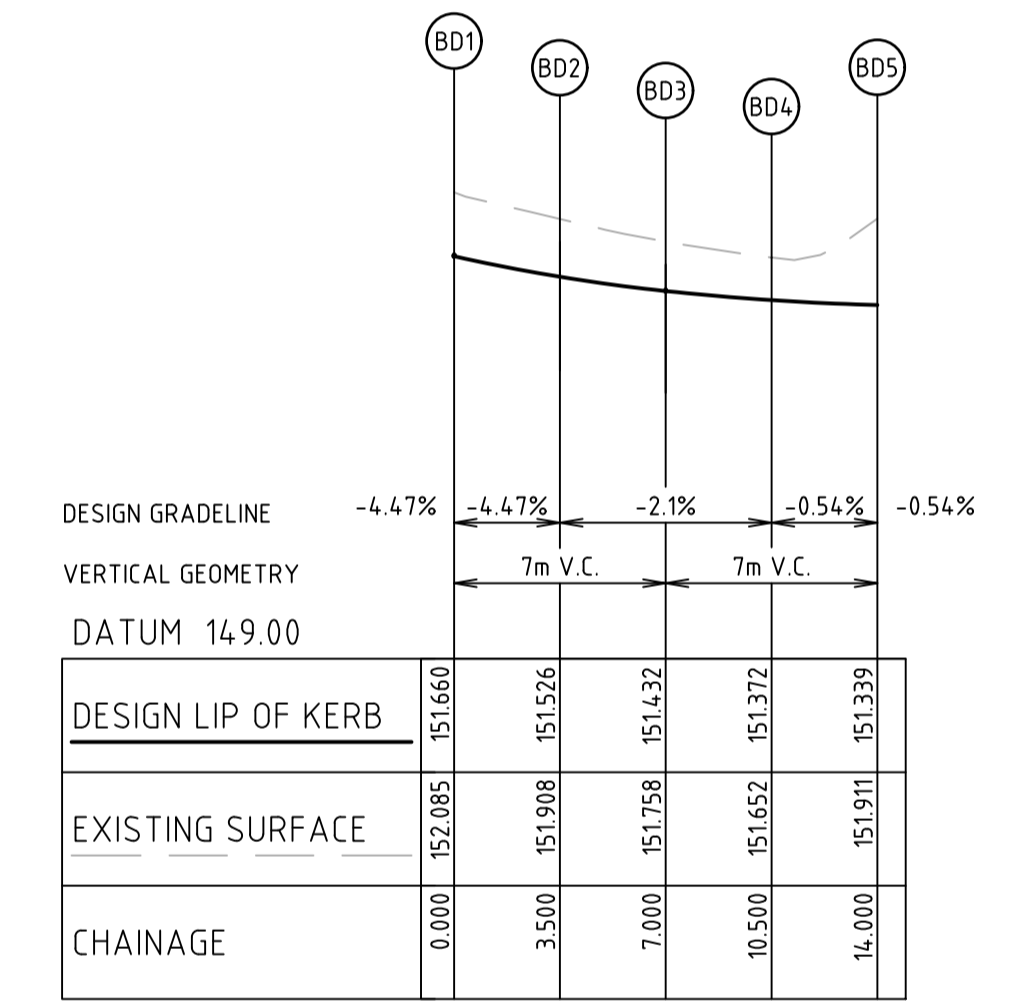
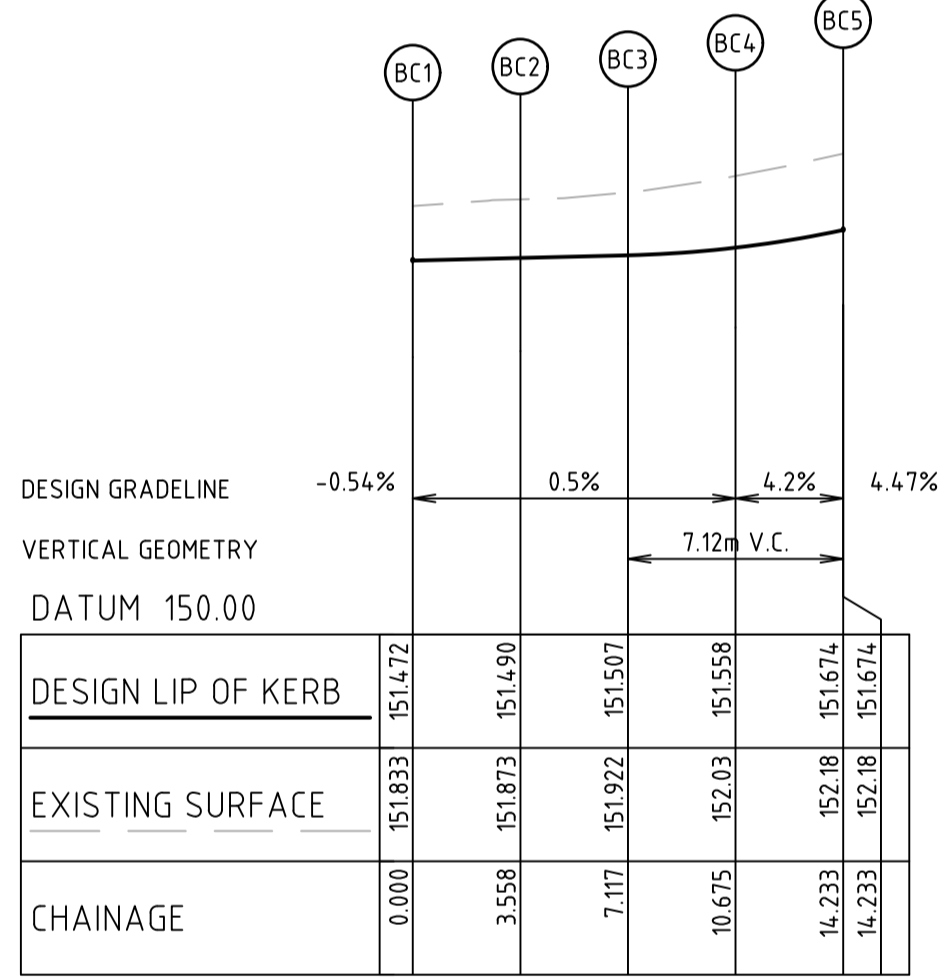
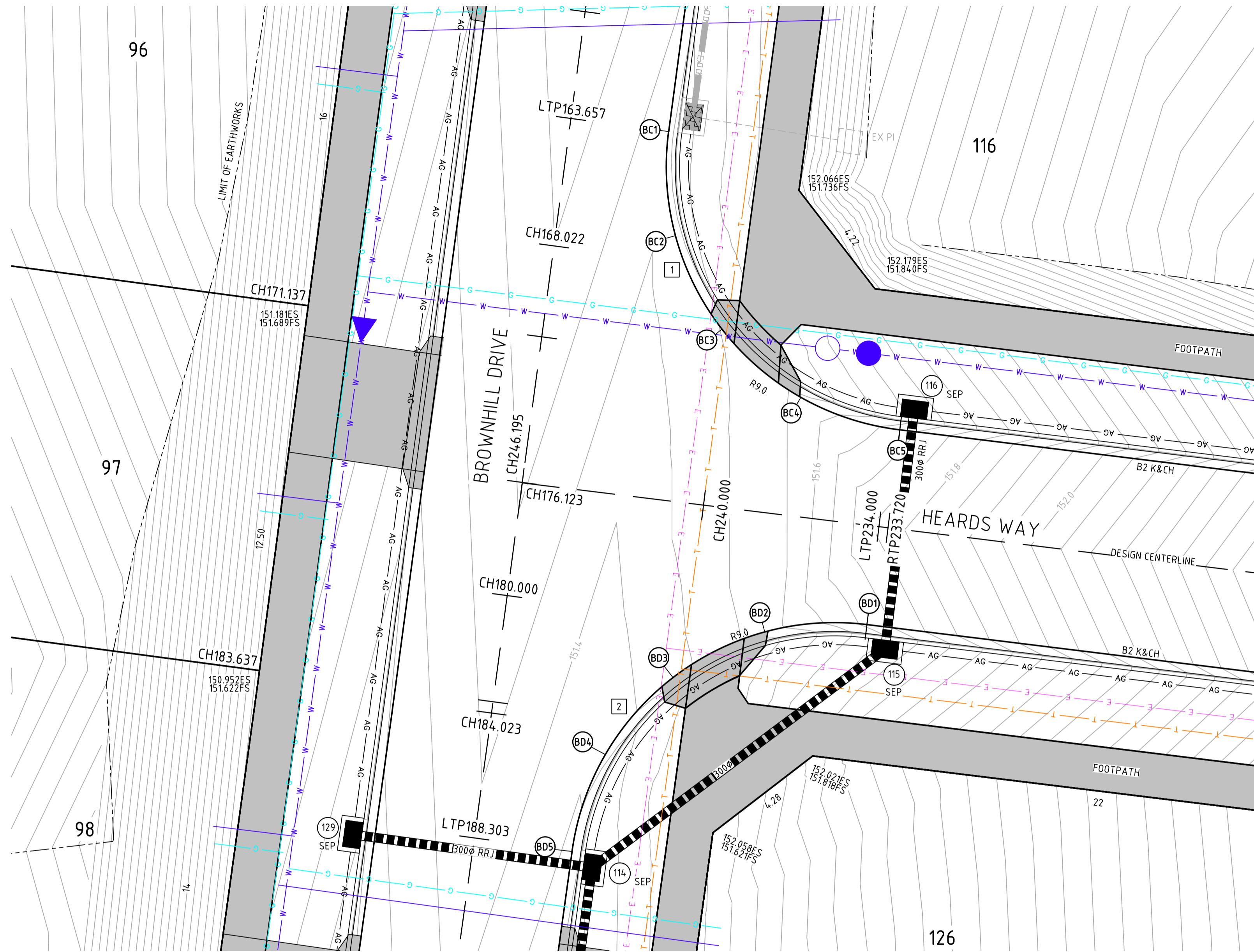
Approved Engineering Plans

Signed *[Signature]* Date 21/09/2018

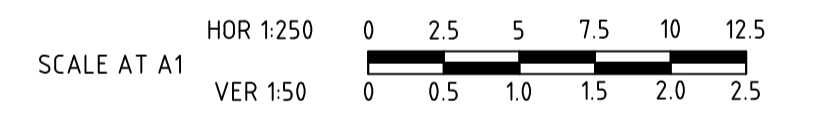
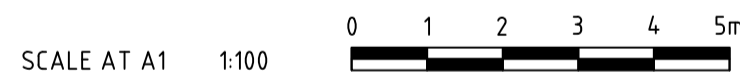
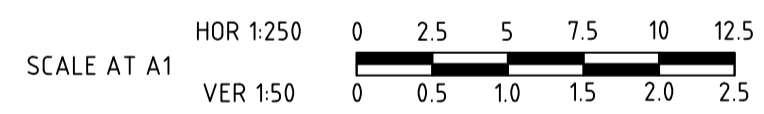
For and on behalf of the Greater Geelong City Council as the Responsible Authority

**NOTE: THIS IS NOT A BUILDING APPROVAL**

CITY OF GREATER GEELONG  
STATUTORY PLANNING  
**5 JUNE 2018**  
RECEIVED



**BROWN HILL DRIVE / HEARDS WAY INTERSECTION DETAIL PLAN**



COPYRIGHT All rights reserved. These drawings, plans and specifications and the copyright therein are the property of the St. Quentin consulting and must not be used, reproduced or copied wholly or in part without the written permission of St. Quentin consulting.

Rev	Description	Date	By	App	Rev	Description	Date	By	App
P1	ISSUED FOR APPROVAL	30.04.2018	A.V	M.J					



Project Name: **WANDANA ESTATE STAGE 3 335 BARRABOOL ROAD**  
Drawing Title: **BROWN HILL DRIVE / HEARDS WAY INTERSECTION DETAIL PLAN**

Level Datum: AHD  
Contour Interval: 0.05m  
Date of Survey: 09 / 2015  
Designed By: M.J / N.C  
Drawn By: A.V  
Date Drawn: 12.04.2018  
Scale: NOTED

**ISSUED FOR APPROVAL**

ENGINEERING MANAGER APPROVED

Project Ref. 14816E Sheet No. 317 Rev. P1

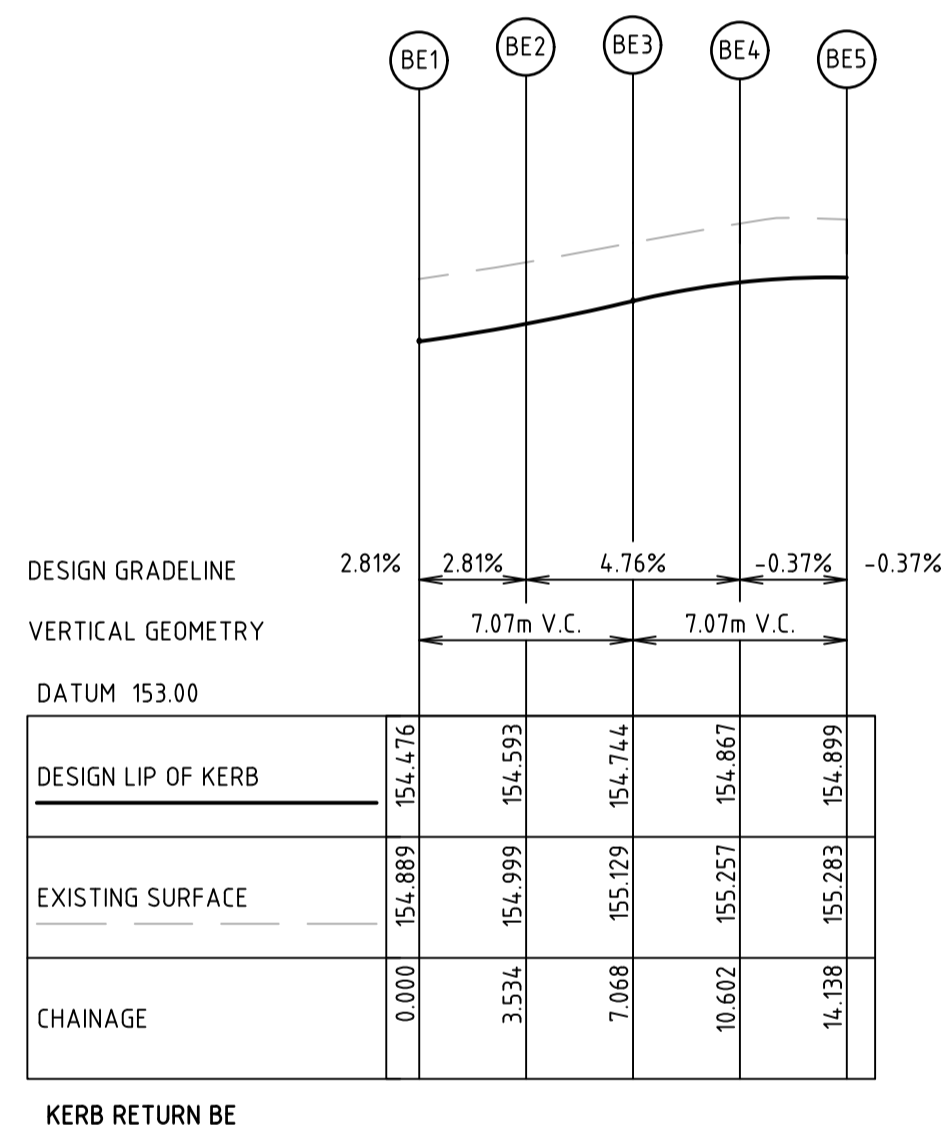
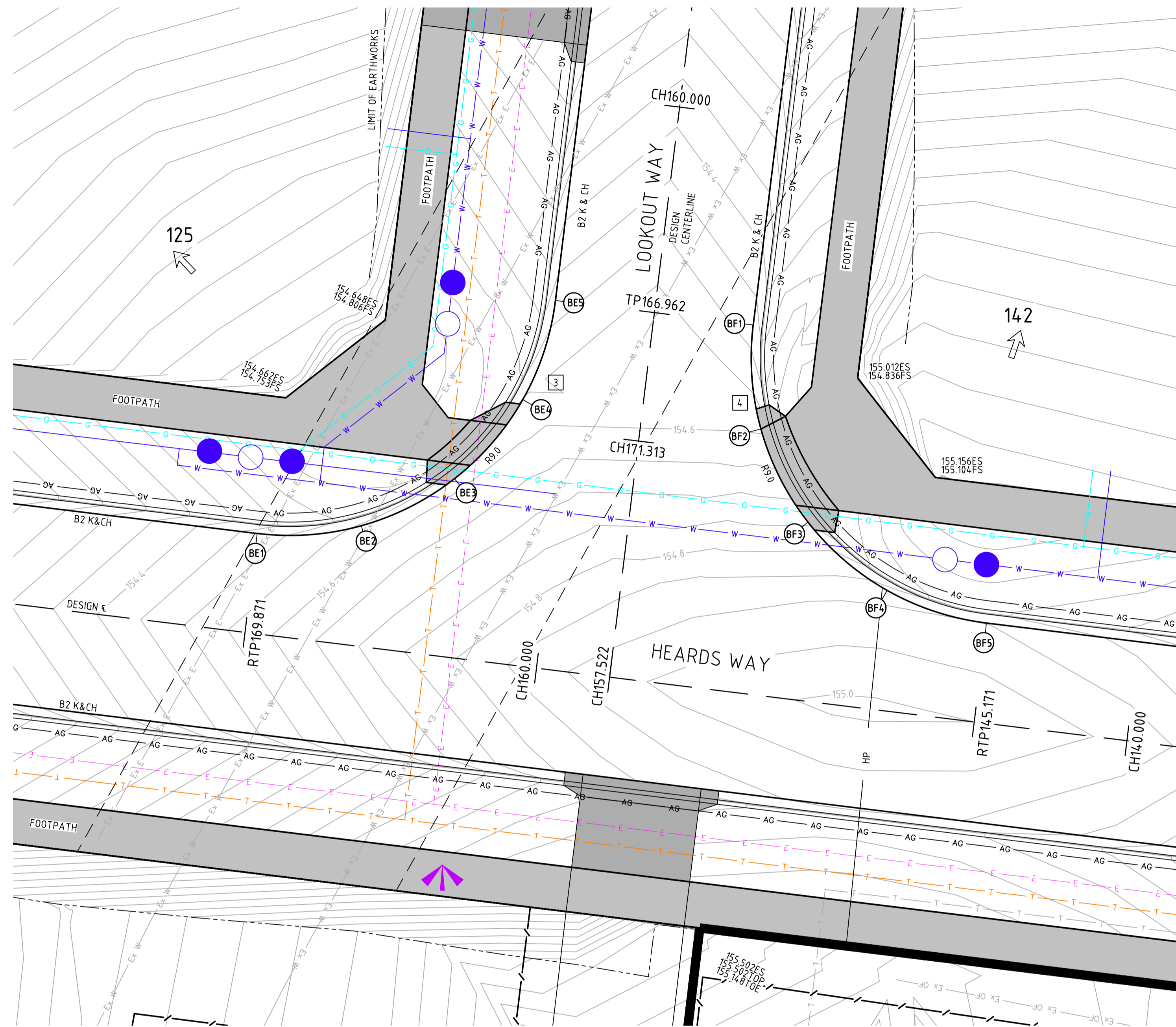
ENGINEERING

Endorsed Plan referred to in Permit No: 392-2015  
Sheet 18 of 25 Cert 13807  
Approved Engineering Plans

Signed *[Signature]* Date 21/09/2018

For and on behalf of the Greater Geelong City Council as the Responsible Authority

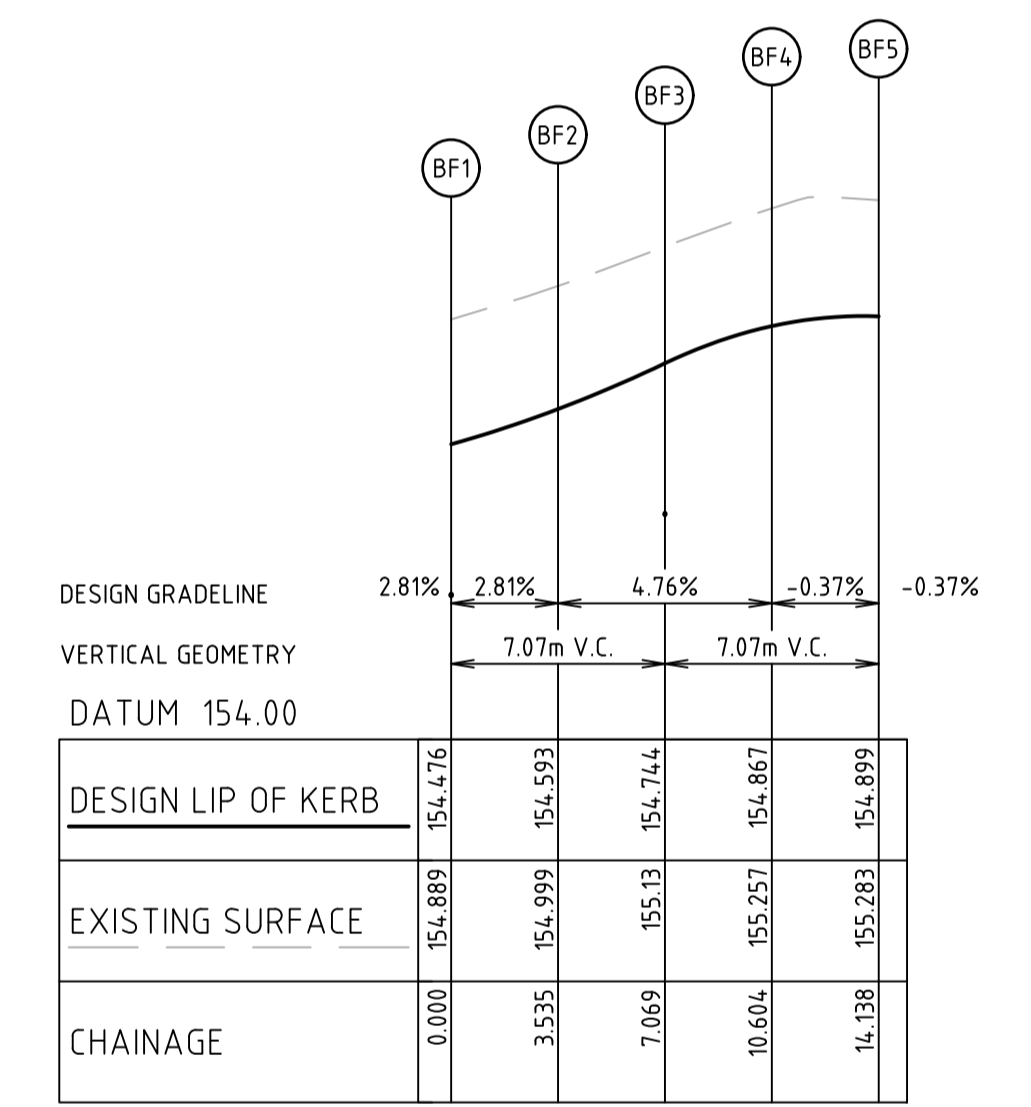
**NOTE: THIS IS NOT A BUILDING APPROVAL**



KERB RETURN BE  
SCALE AT A1  
HOR 1:250  
VER 1:50

**LOOKOUT WAY / HEARDS WAY INTERSECTION DETAIL PLAN**

SCALE AT A1 1:100



KERB RETURN BF

SCALE AT A1  
HOR 1:250  
VER 1:50

COPYRIGHT All rights reserved. These drawings, plans and specifications and the copyright therein are the property of the St. Quentin consulting and must not be used, reproduced or copied wholly or in part without the written permission of St. Quentin consulting.

Rev	Description	Date	By	App	Rev	Description	Date	By	App
P1	ISSUED FOR APPROVAL	30.04.2018	A.V	M.J					



Project Name  
**WANDANA ESTATE  
STAGE 3  
335 BARRABOOL ROAD**

Drawing Title  
**LOOKOUT WAY / HEARDS WAY  
INTERSECTION DETAIL PLAN**

Level Datum  
AHD

Contour Interval  
0.1m

Date of Survey  
09 / 2015

Designed By  
M.J / N.C

Drawn By  
A.V

Date Drawn  
12.04.2018

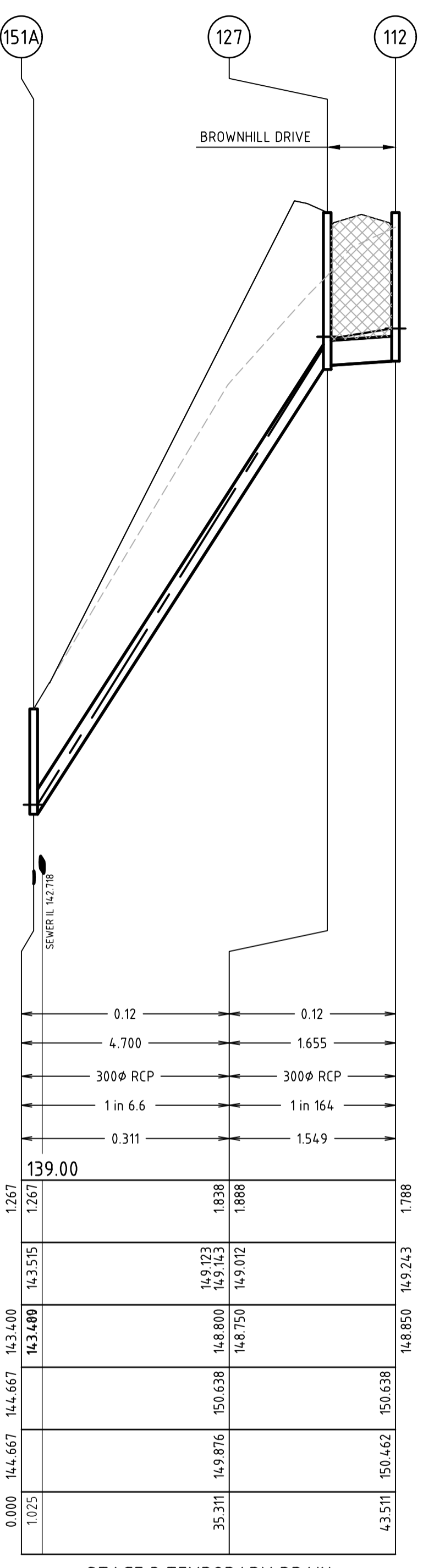
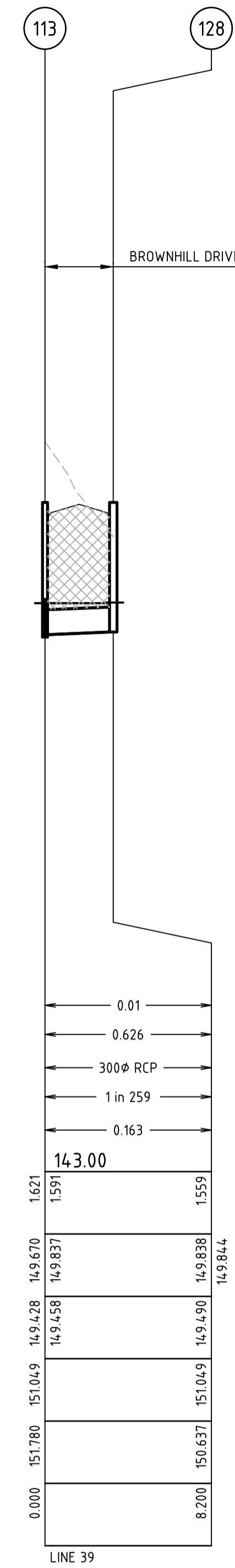
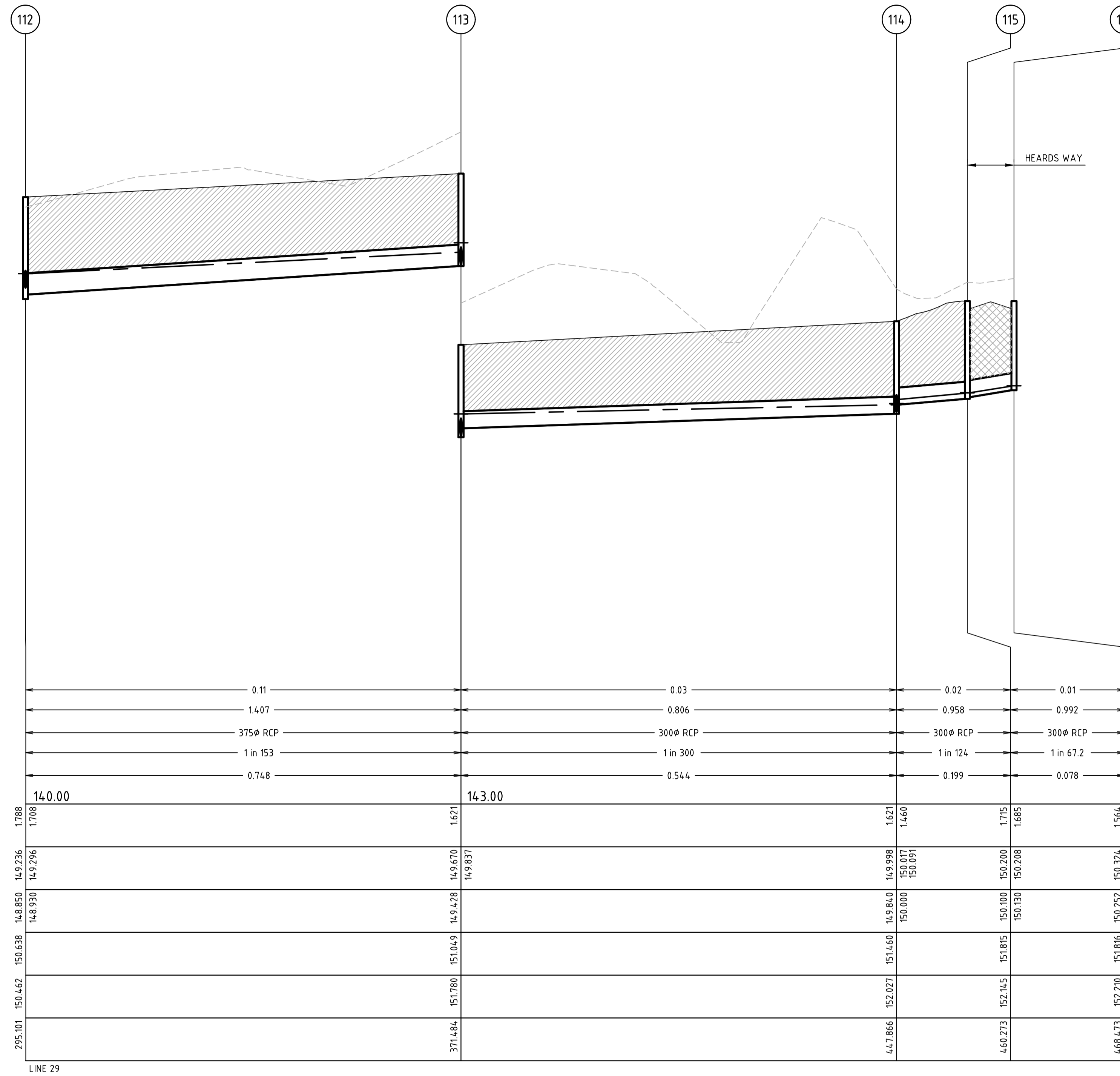
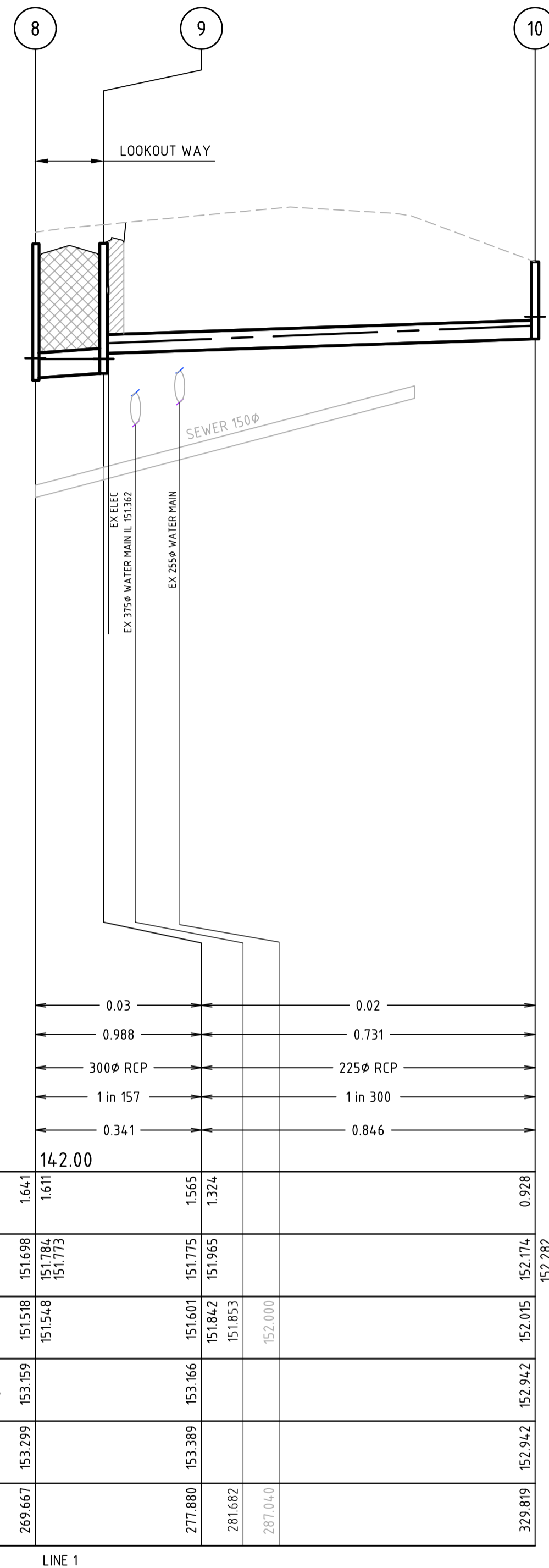
Scale  
NOTED

**ISSUED FOR APPROVAL**

ENGINEERING MANAGER APPROVED

Project Ref. 14816E Sheet No. 318 Rev. P1

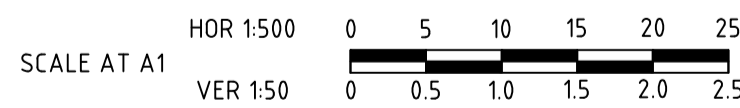
ENGINEERING



**LEGEND**

- SELECT BACKFILL
- FCR BACKFILL
- 2% CEMENT STABILIZED SAND BACKFILL TO SPRINGLINE

NOTE: RCP, STORMPRO OR EQUIVALENT



**GREATER GEELONG CITY COUNCIL  
PLANNING & ENVIRONMENT ACT 1987  
GREATER GEELONG PLANNING SCHEME**

Endorsed Plan referred to in Permit No: 392-2015  
Sheet 19 of 25 Cert 13807  
Approved Engineering Plans

Signed *[Signature]* Date 21/09/2018

For and on behalf of the Greater Geelong City Council as the Responsible Authority

**NOTE: THIS IS NOT A BUILDING APPROVAL**

**CITY OF GREATER GEELONG  
STATUTORY PLANNING**

**5 JUNE 2018  
RECEIVED**

Rev	Description	Date	By	App	Rev	Description	Date	By	App
P1	ISSUED FOR APPROVAL	30.04.2018	A.V	M.J					

**ST. QUENTIN**  
Surveyors - Town Planners - Engineers  
51 LITTLE FYANS STREET,  
P.O. BOX 919, GEELONG 3220  
TELEPHONE (03) 5201 1811 FAX (03) 5229 2909

Project Name: **WANDANA ESTATE  
STAGE 3  
335 BARRABOOL ROAD**

Drawing Title: **STORMWATER DRAINAGE LONG SECTIONS  
SHEET 1 OF 2**

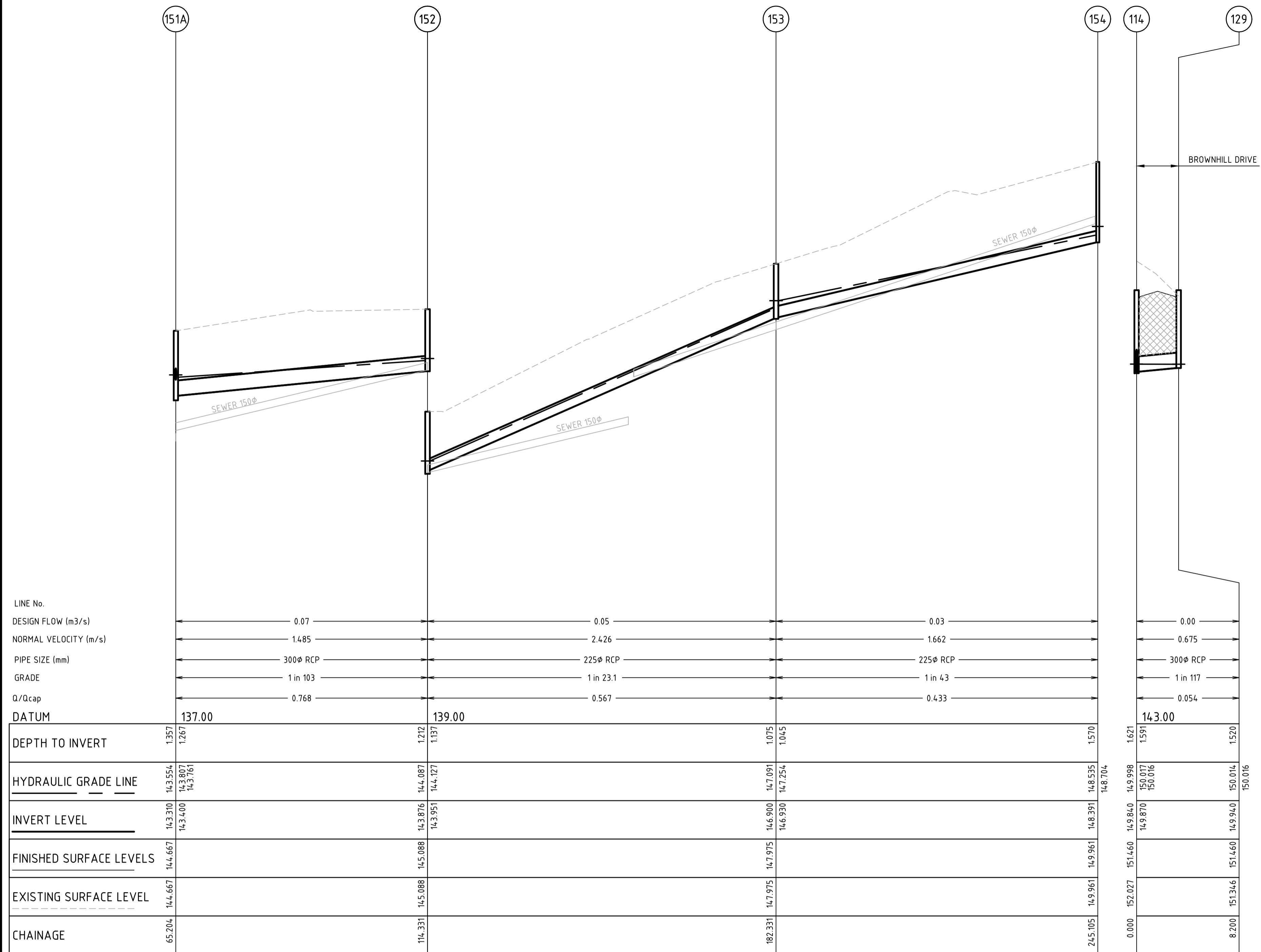
Level Datum: AHD  
Contour Interval: N/A  
Date of Survey: 09 / 2015  
Designed By: M.J / N.C  
Drawn By: A.V  
Date Drawn: 12.04.2018  
Scale: NOTED

**ISSUED FOR APPROVAL**

ENGINEERING MANAGER APPROVED

Project Ref.	Sheet No.	Rev.
14816E	319	P1

ENGINEERING



LINE No.	DESIGN FLOW (m <sup>3</sup> /s)	NORMAL VELOCITY (m/s)	PIPE SIZE (mm)	GRADE	Q/Q <sub>cap</sub>	DATUM
137.00	0.07	1.485	300φ RCP	1 in 103	0.768	137.00
139.00	0.05	2.426	225φ RCP	1 in 231	0.567	139.00
152	0.03	1.662	225φ RCP	1 in 43	0.433	152
153	0.00	0.675	300φ RCP	1 in 117	0.054	153
154	0.00	0.054	300φ RCP	1 in 117	0.054	154

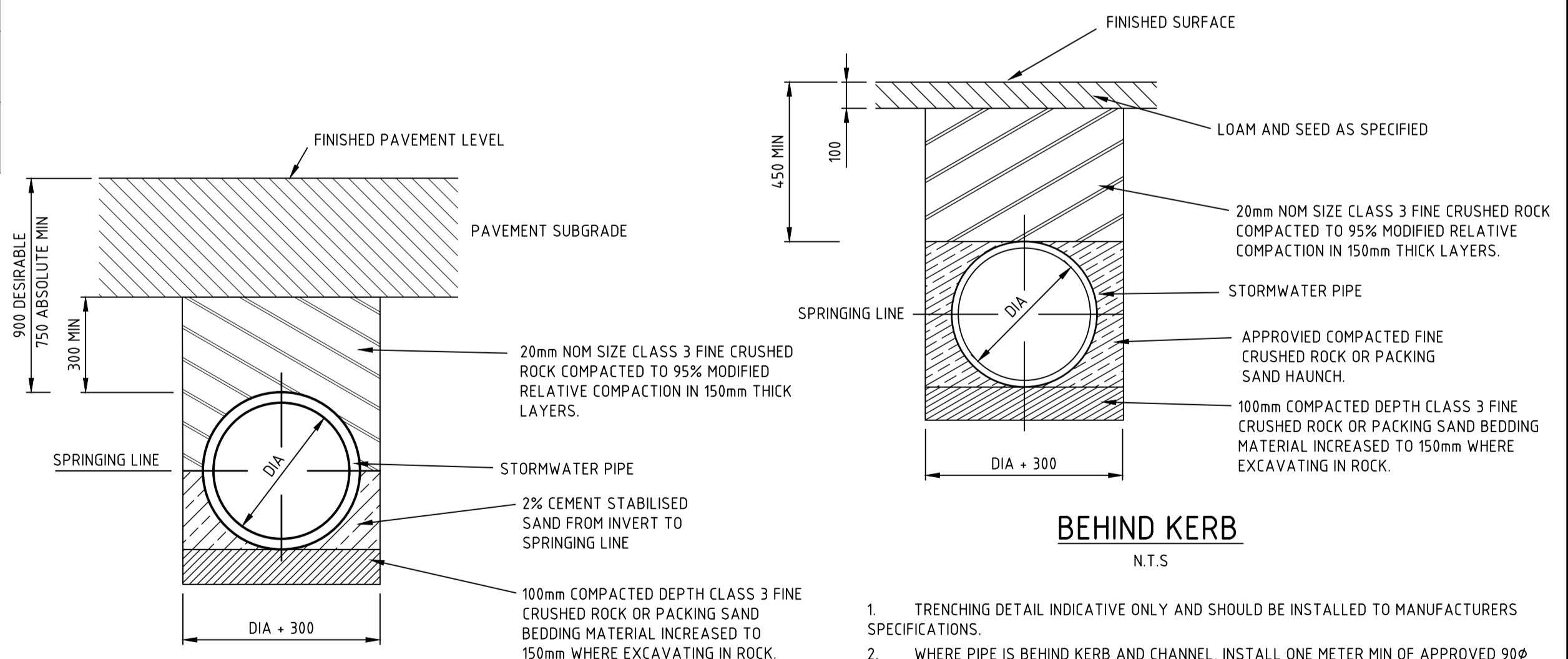
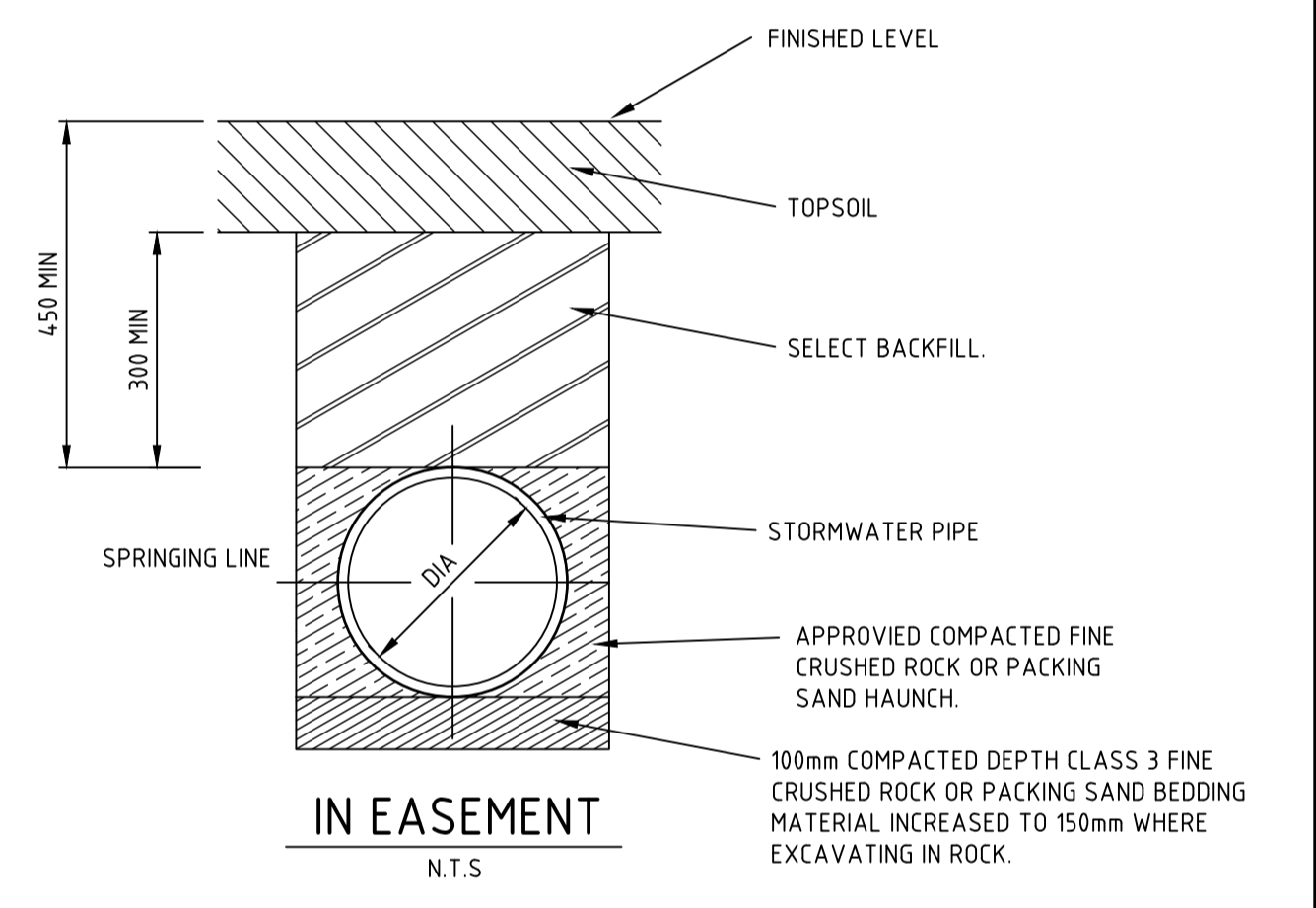
DEPTH TO INVERT	HYDRAULIC GRADE LINE	INVERT LEVEL	FINISHED SURFACE LEVELS	EXISTING SURFACE LEVEL	CHAINAGE
1.357	143.554	143.310	144.667	144.667	65.204
1.267	143.807	143.400	145.088	145.088	114.331
1.212	144.087	143.876	145.088	145.088	182.331
1.137	144.327	143.951	147.975	147.975	245.105
1.075	147.091	146.900	147.975	147.975	
1.045	147.254	146.930	151.460	151.346	
1.570	148.535	148.391	149.961	149.961	
1.621	149.998	149.840	151.460	151.460	
1.591	150.017	149.870	151.460	151.460	
1.520	150.016	150.014	151.460	151.460	



### PIT SCHEDULE

PIT NAME	TYPE	EASTING	NORTHING	INTERNAL WIDTH	INTERNAL LEN	INLET DIA	INLET INV LEV	OUTLET DIA	OUTLET INV LEV	PIT SETOUT RL	PIT DEPTH	REMARKS
8	SIDE ENTRY PIT	263313.770	5771455.475	0.600	0.900	300	151.548	300	151.518	153.159	1.641	REFER IDM SD430
9	SIDE ENTRY PIT	263321.920	5771454.454	0.600	0.900	225	151.842	300	151.601	153.166	1.565	REFER IDM SD430
10	JUNCTION PIT	263373.455	5771447.989	0.600	0.900			225	152.015	152.942	0.928	REFER IDM SD425
112	JUNCTION PIT	263205.865	5771257.246	0.600	0.900	300	149.296	300	148.850	150.638	1.788	REFER IDM SD430
113	SIDE ENTRY PIT	263216.319	5771332.910	0.600	0.900	300	149.585	375	149.428	151.049	1.621	REFER IDM SD430
114	SIDE ENTRY PIT	263226.773	5771408.573	0.600	0.900	300	149.458	300	150.000	151.460	1.621	REFER IDM SD430
115	SIDE ENTRY PIT	263236.717	5771415.992	0.600	0.900	300	150.130	300	150.100	151.815	1.715	REFER IDM SD430
116	SIDE ENTRY PIT	263237.716	5771424.131	0.600	0.900	300	150.252	300	150.252	151.816	1.564	REFER IDM SD430
127	JUNCTION PIT	263197.742	5771258.368	0.600	0.900	300	148.800	300	148.750	150.638	1.888	REFER IDM SD430
128	SIDE ENTRY PIT	263208.196	5771334.032	0.600	0.900			300	149.490	151.049	1.559	REFER IDM SD430
129	SIDE ENTRY PIT	263218.650	5771409.695	0.600	0.900			300	149.940	151.460	1.520	REFER IDM SD430
151A	JUNCTION PIT	263163.884	5771268.397	0.600	0.900	300	143.400	300	143.310	144.667	1.357	REFER IDM SD425
152	JUNCTION PIT	263170.569	5771317.067	0.600	0.900	225	143.951	300	143.876	145.088	1.212	REFER IDM SD425
153	JUNCTION PIT	263179.837	5771384.432	0.600	0.900	225	146.930	225	146.900	147.975	1.075	REFER IDM SD425
154	JUNCTION PIT	263188.388	5771446.621	0.600	0.600	225	148.391	225	148.391	149.961	1.570	REFER IDM SD425

NOTE:  
 1. xy setout to pit centre  
 2. setout level to pit cover level  
 NOTE: ANY PIT WITH AN INTERNAL WIDTH GREATER THAN 900 x 600mm IS TO BE HAUNCHED SO THE STANDARD SINGLE OR MULTIPLE 900 x 600mm LIDS CAN BE FITTED



### STORMWATER PIPE TRENCHING UNDER ROAD PAVEMENT

N.T.S.  
 NOTES:  
 1. TRENCHING DETAIL INDICATIVE ONLY AND SHOULD BE INSTALLED TO MANUFACTURERS SPECIFICATIONS.

- TRENCHING DETAIL INDICATIVE ONLY AND SHOULD BE INSTALLED TO MANUFACTURERS SPECIFICATIONS.
- WHERE PIPE IS BEHIND KERB AND CHANNEL, INSTALL ONE METER MIN OF APPROVED 90φ CLASS 400 SLOTTED/PERFORATED SUBSOIL DRAIN WITH GEOTEXTILE SOCK SURROUND INTO PIT IN LIEU OF SUBSOIL DRAINAGE BEHIND KERB. REFER SD 300
- BACKFILL DESIGN TO BE IN ACCORDANCE WITH CEMENT AND CONCRETE ASSOCIATION OF AUSTRALIA PIPE CLASS REQUIREMENTS. BACKFILL UNDER ROAD PAVEMENT TO BE STABILIZED WHERE CCAA INFORMATION IS NOT AVAILABLE. REFER SD 300
- APPROVAL MAY BE GIVEN FOR USE OF BACKFILL MATERIAL OTHER THAN CRUSHED ROCK WHERE IT CAN BE DEMONSTRATED THAT A MIN OF 95% MODIFIED RELATIVE COMPACTION CAN BE ACHIEVED. REFER SD 300

**LEGEND**

- SELECT BACKFILL
- FCR BACKFILL
- 2% CEMENT STABILIZED SAND BACKFILL TO SPRINGLINE

NOTE: STORMPRO OR EQUIVALENT

**GREATER GEELONG CITY COUNCIL**  
**PLANNING & ENVIRONMENT ACT 1987**  
**GREATER GEELONG PLANNING SCHEME**

Endorsed Plan referred to in Permit No: 392-2015  
 Sheet 20 of 25 Cert 13807  
 Approved Engineering Plans

Signed *[Signature]* Date 21/09/2018

For and on behalf of the Greater Geelong City Council as the Responsible Authority

**NOTE: THIS IS NOT A BUILDING APPROVAL**

**CITY OF GREATER GEELONG**  
 STATUTORY PLANNING

**5 JUNE 2018**  
**RECEIVED**

Rev	Description	Date	By	App	Rev	Description	Date	By	App
P1	ISSUED FOR APPROVAL	30.04.2018	A.V	M.J					

**ST. QUENTIN**  
 Surveyors-Town Planners - Engineers  
 51 LITTLE FYANS STREET,  
 P.O. BOX 919, GEELONG 3220  
 TELEPHONE (03) 5201 1811 FAX (03) 5229 2909

Project Name: **WANDANA ESTATE STAGE 3 335 BARRABOOL ROAD**

Drawing Title: **STORMWATER DRAINAGE LONG SECTIONS SHEET 2 OF 2 - & PIT SCHEDULE**

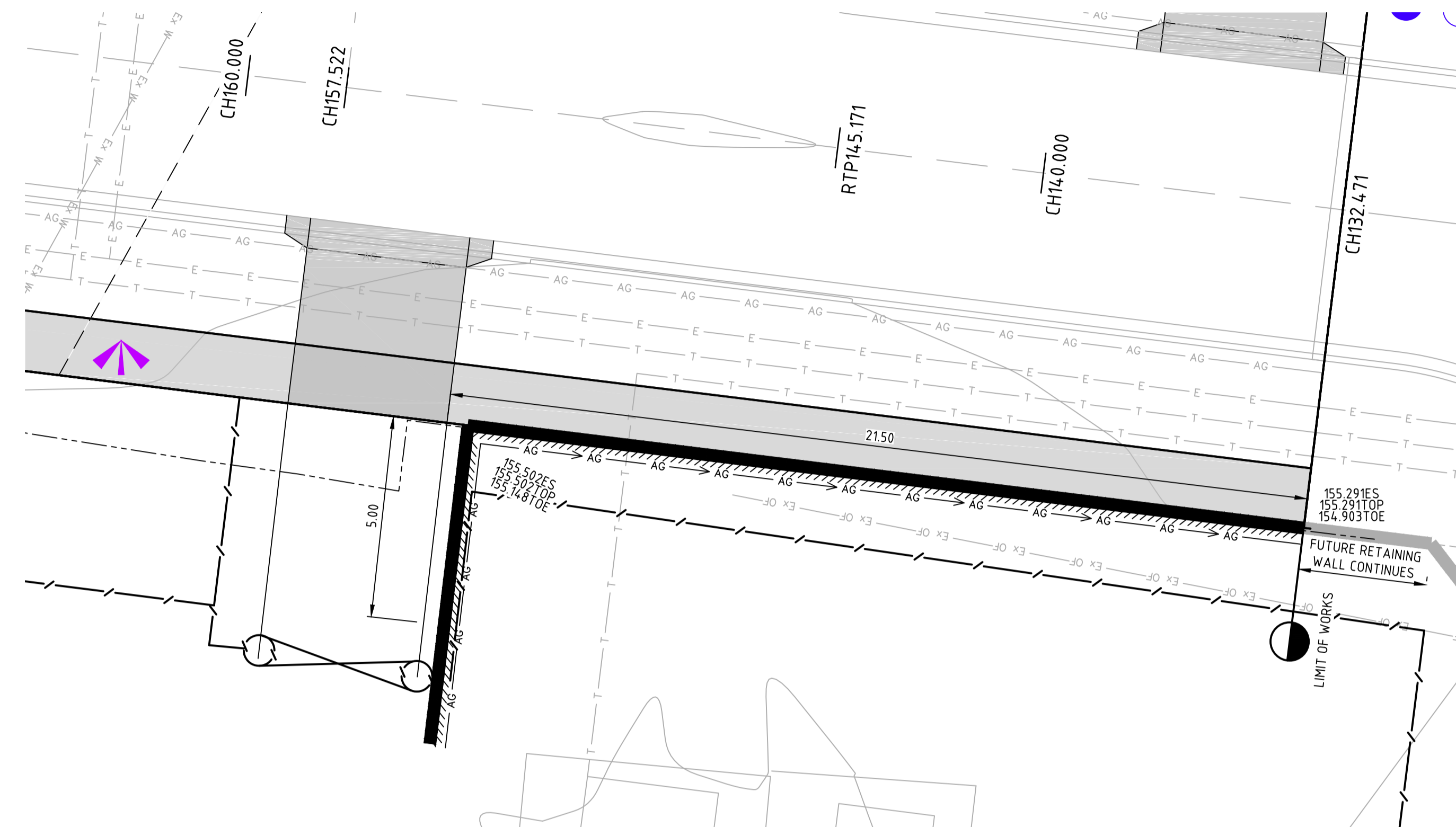
Level Datum	Contour Interval	Date of Survey	Designed By	Drawn By	Date Drawn	Scale
AHD	N/A	09 / 2015	M.J / N.C	A.V	12.04.2018	NOTED

**ISSUED FOR APPROVAL**

ENGINEERING MANAGER APPROVED

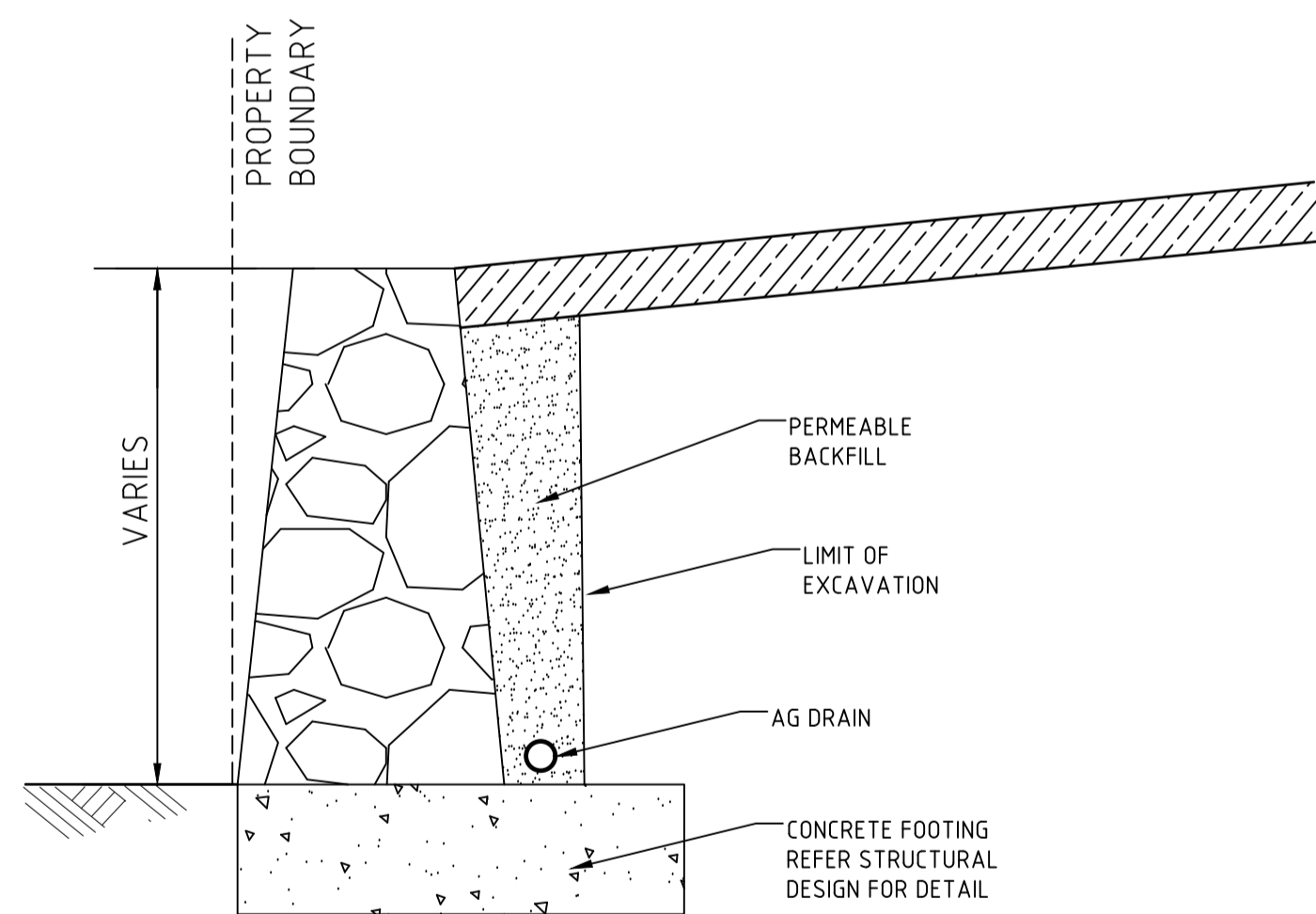
Project Ref. **14816E** Sheet No. **320** Rev. **P1**

ENGINEERING



**HEARDS WAY RETAINING WALL DETAIL PLAN**

SCALE AT A1 1:100  
0 1 2 3 4 5m



**RETAINING WALL TYPICAL SECTION**

NOT TO SCALE

**NOTE:**  
CHARCOAL GROUT COLOUR TO BE USED IN WALL CONSTRUCTION

**NOTE:**  
ALL AG DRAINS BEHIND RETAINING WALLS TO BE CONNECTED TO BELOW GROUND STORMWATER DRAINAGE.

**NOTE:**  
REFER STRUCTURAL ENGINEERING DESIGN PLANS S1 TO S11 WITH JOB REFERENCE 176-325 PREPARED BY ANDREW CHERUBIN & ASSOCIATES FOR WALL CONSTRUCTION DETAILS

**CITY OF GREATER GEELONG  
STATUTORY PLANNING  
5 JUNE 2018  
RECEIVED**

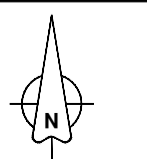
Rev	Description	Date	By	App	Rev	Description	Date	By	App
P1	ISSUED FOR APPROVAL	30.04.2018	A.V	M.J					

**ST. QUENTIN**  
Surveyors - Town Planners - Engineers  
51 LITTLE FYANS STREET,  
P.O. BOX 919, GEELONG 3220  
TELEPHONE (03) 5201 1811 FAX (03) 5229 2909

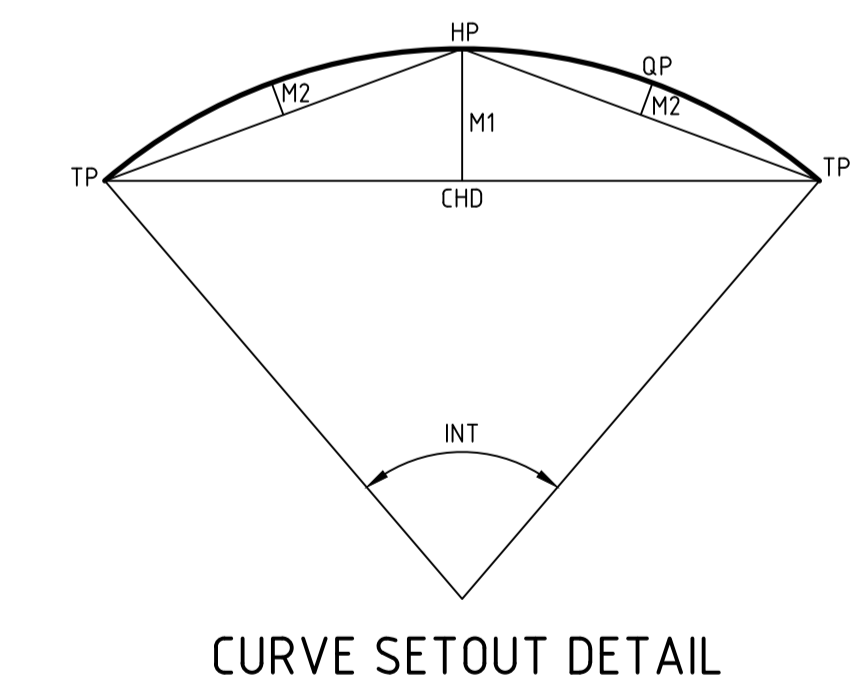
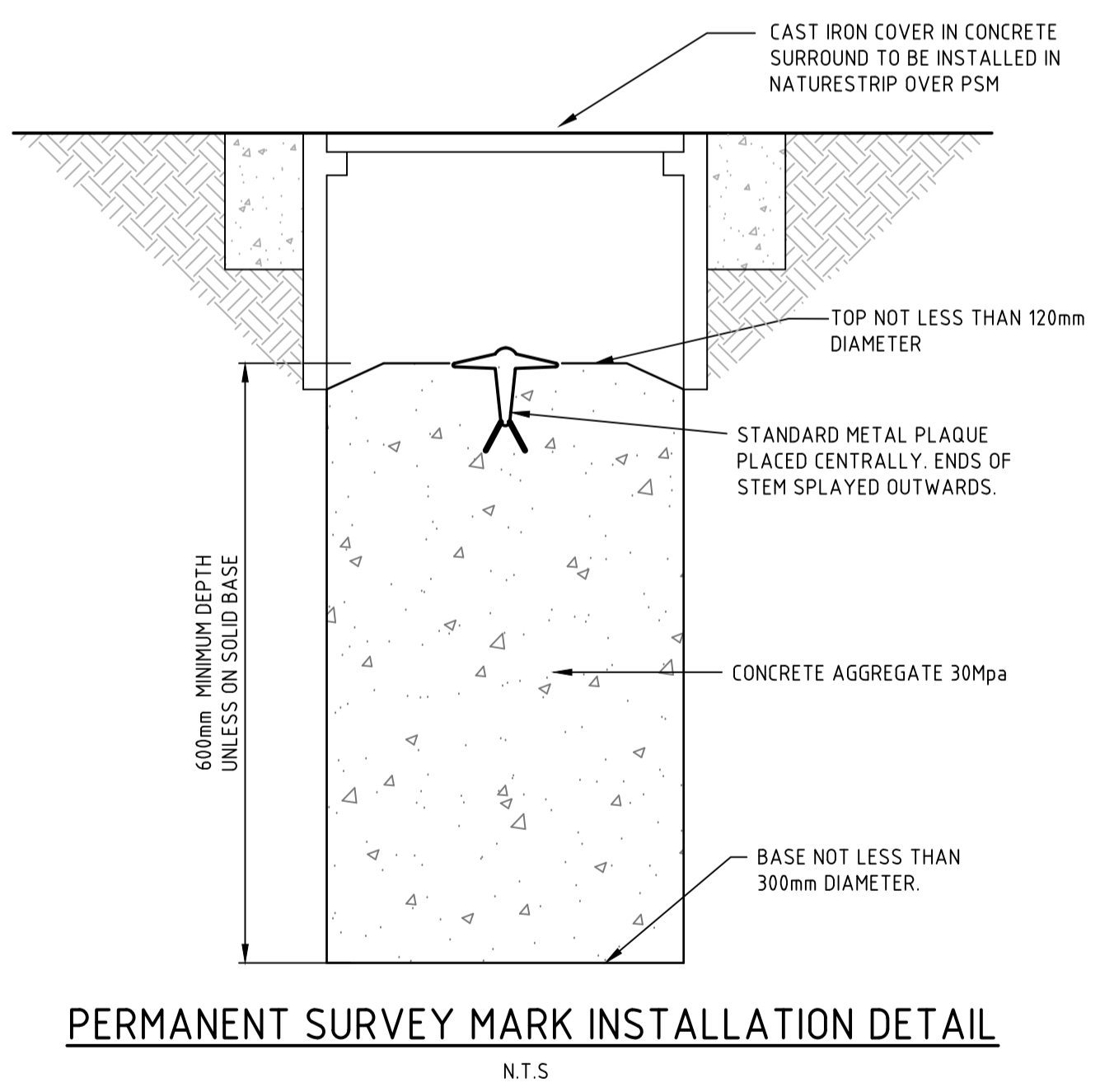
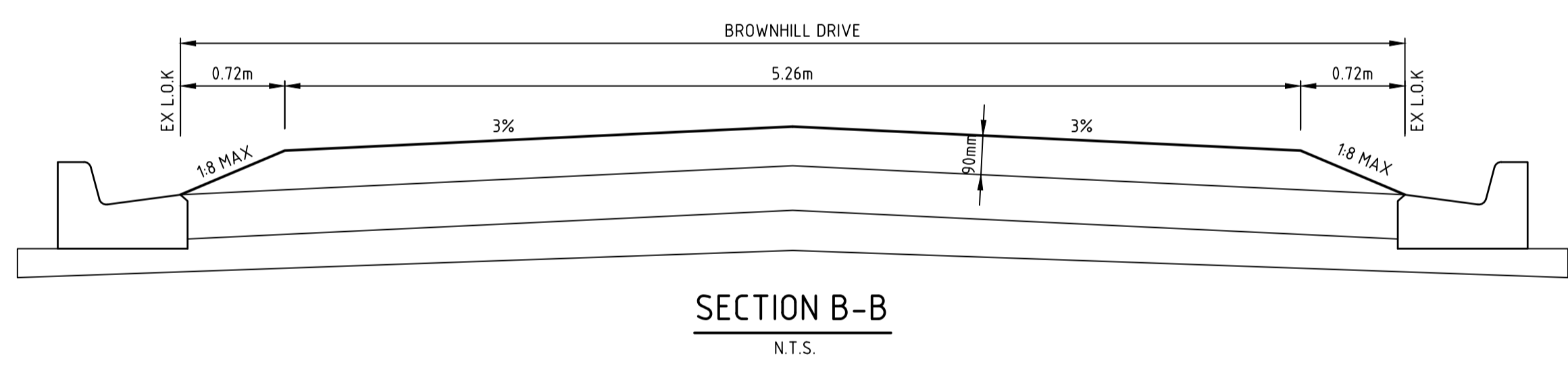
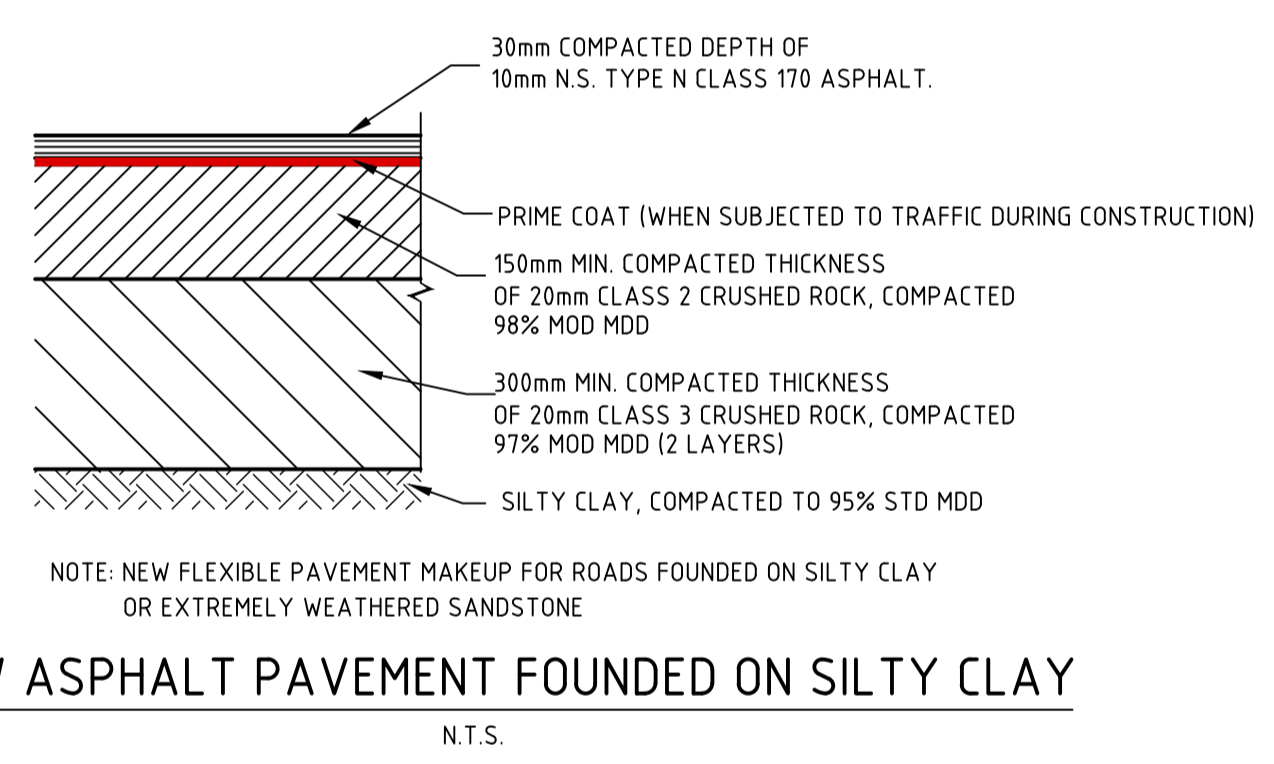
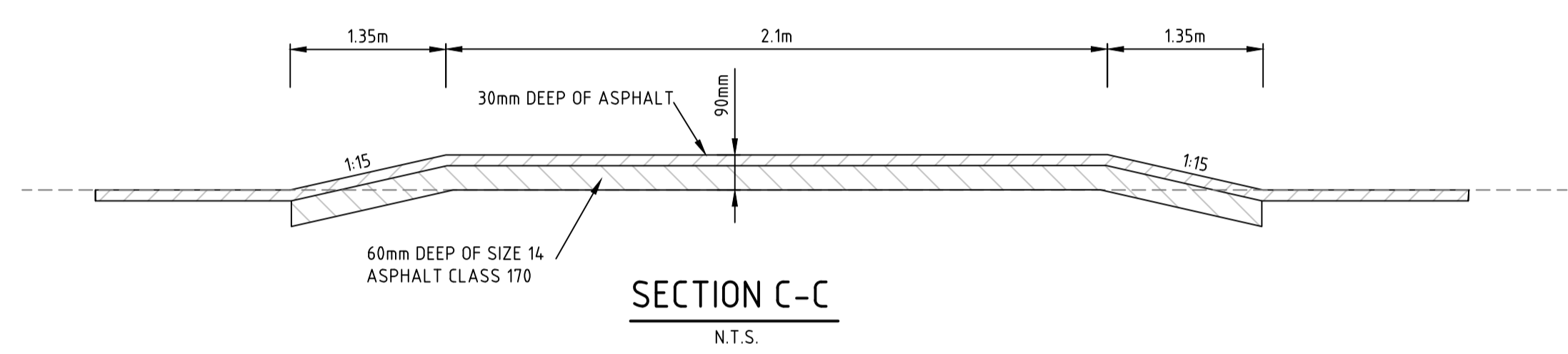
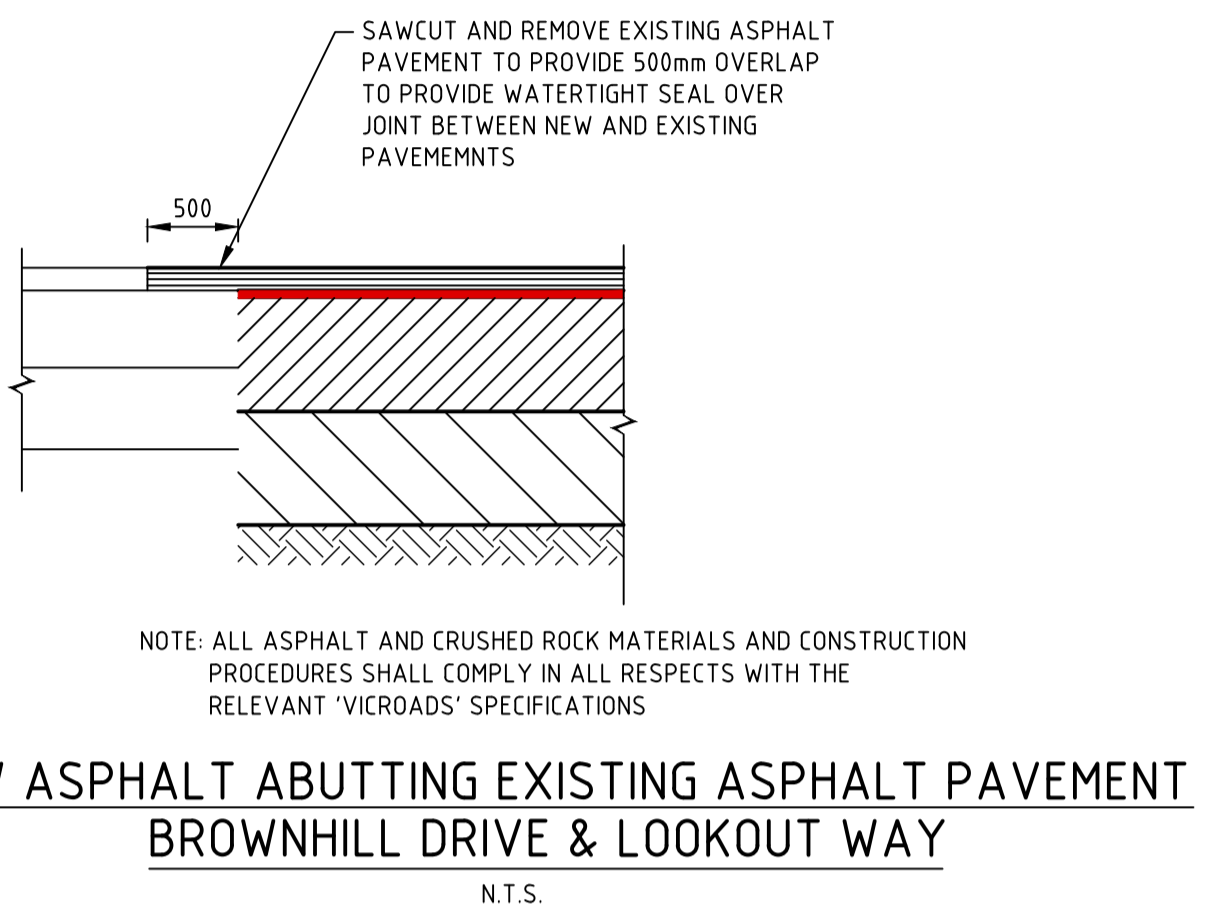
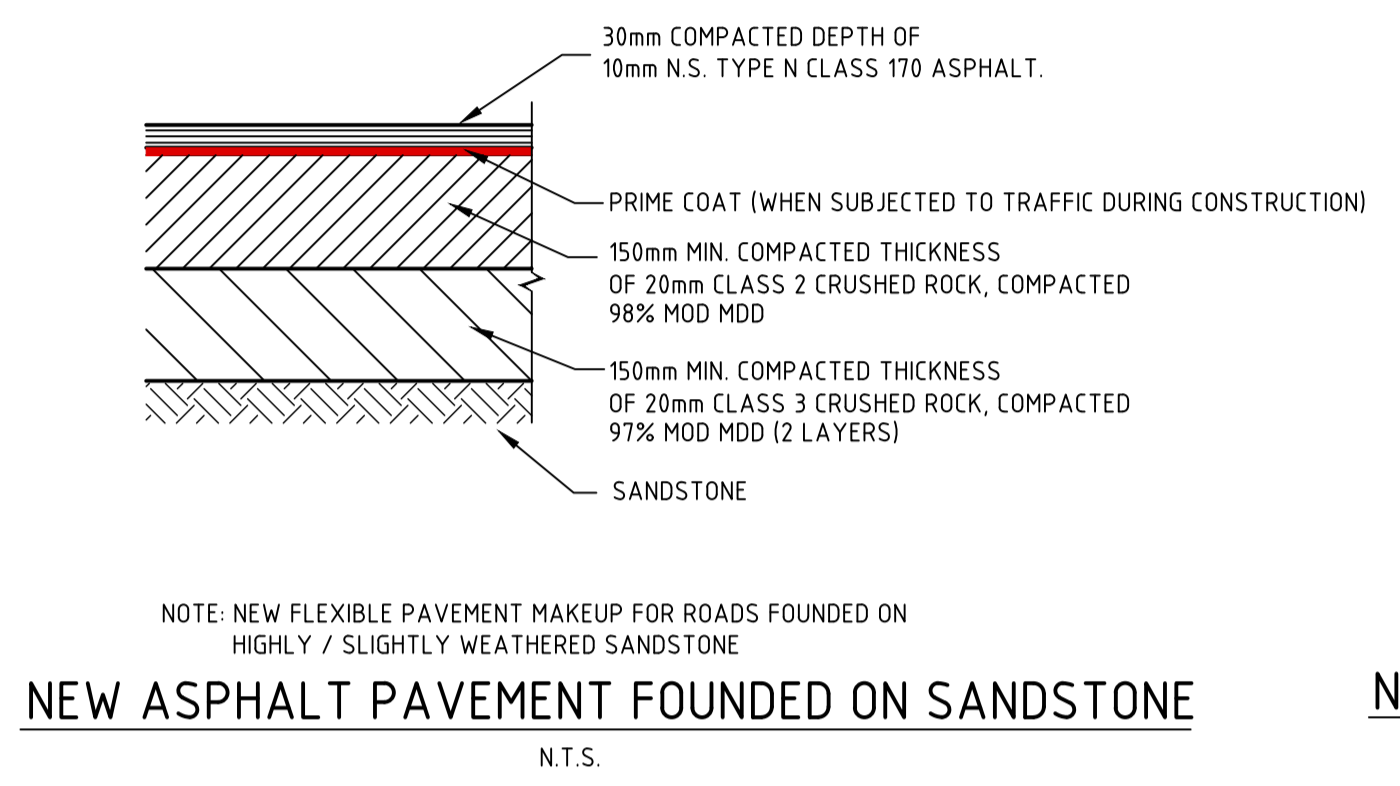
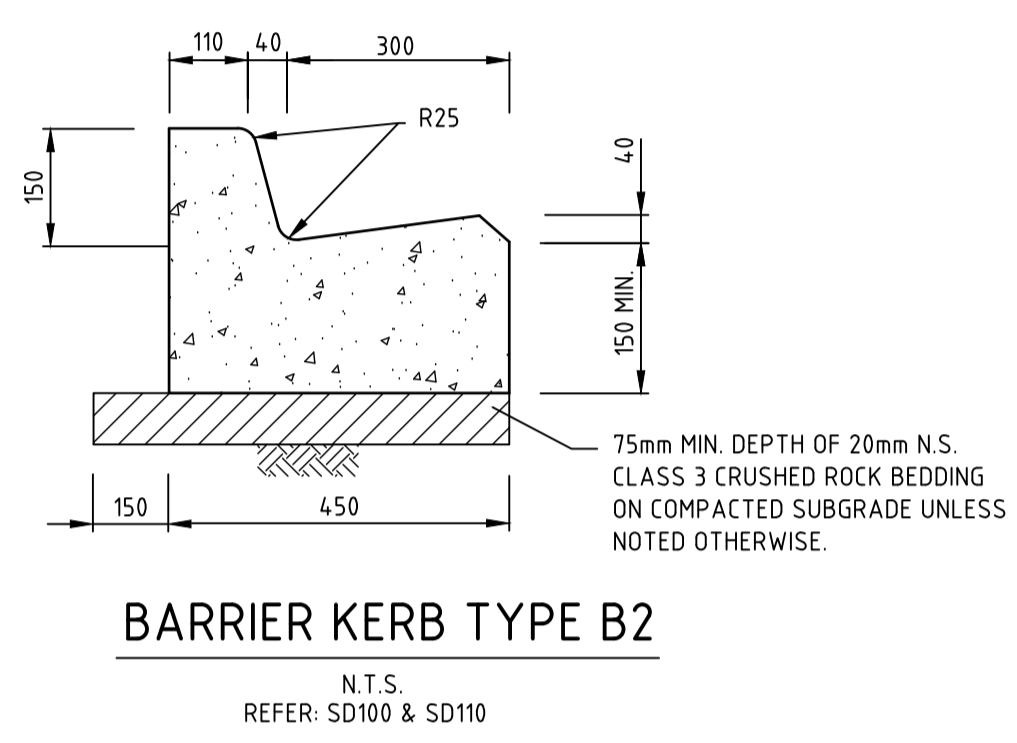
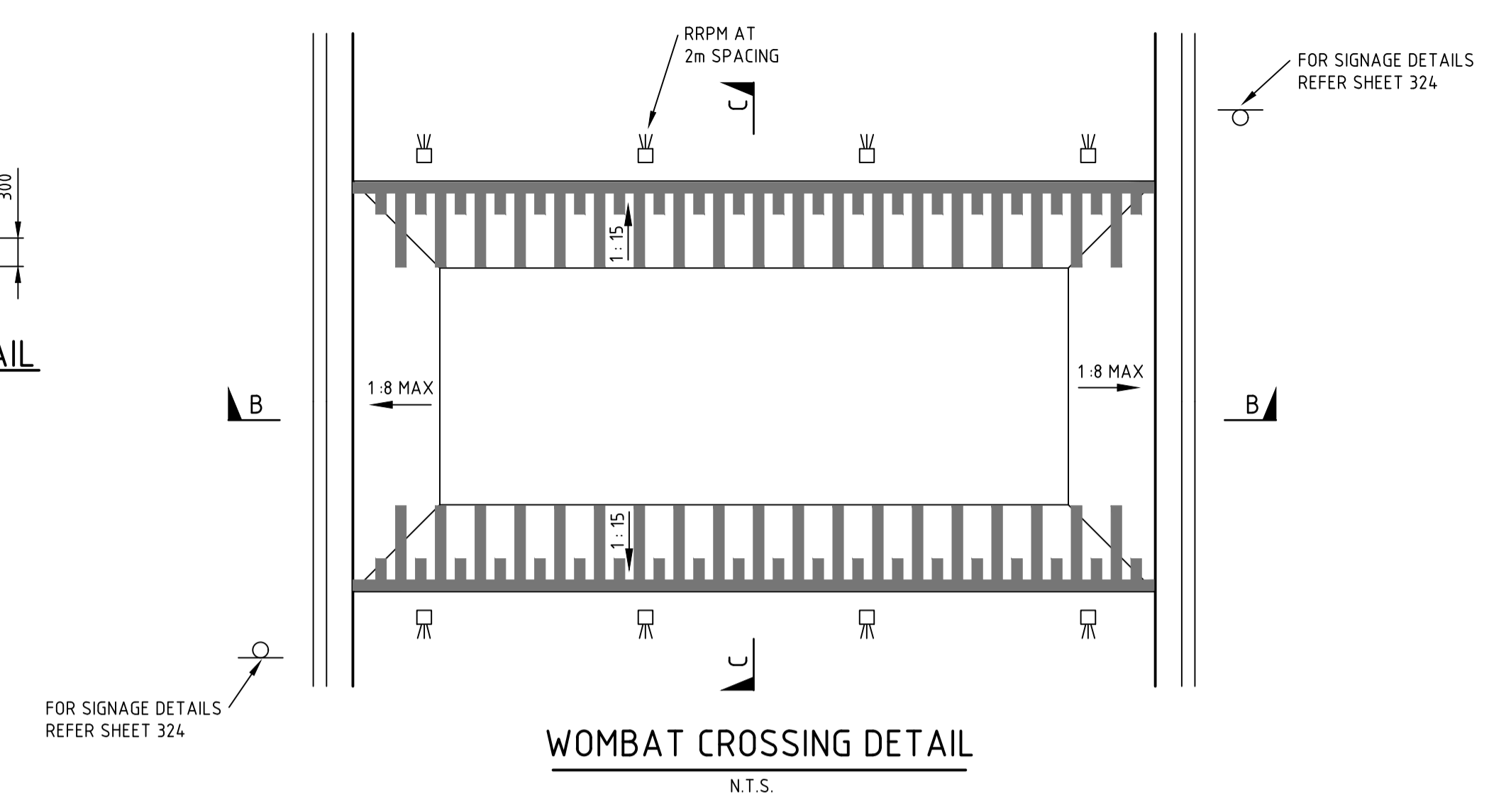
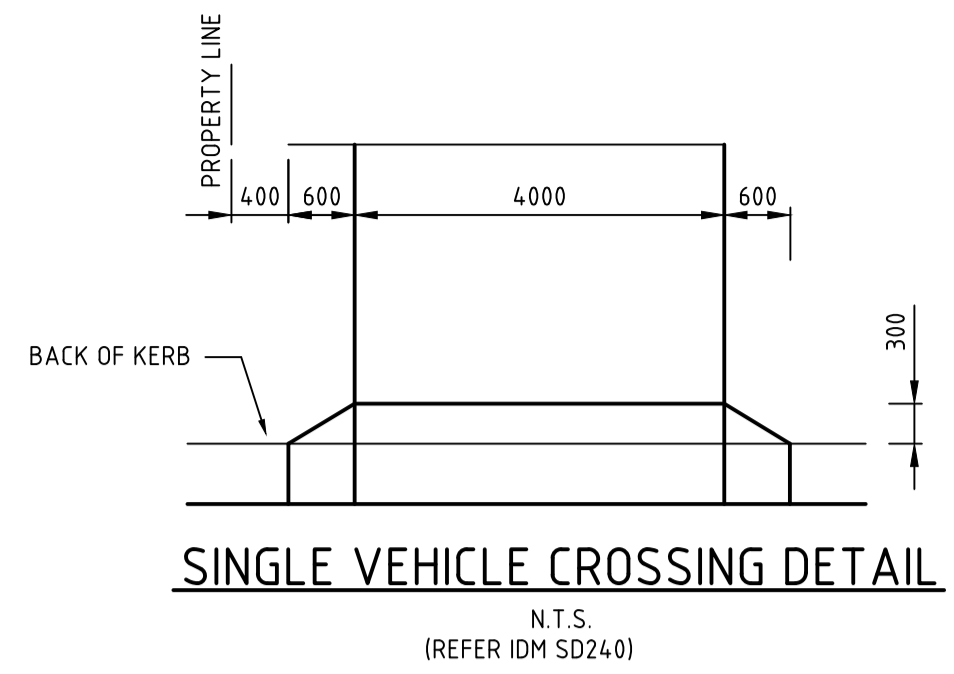
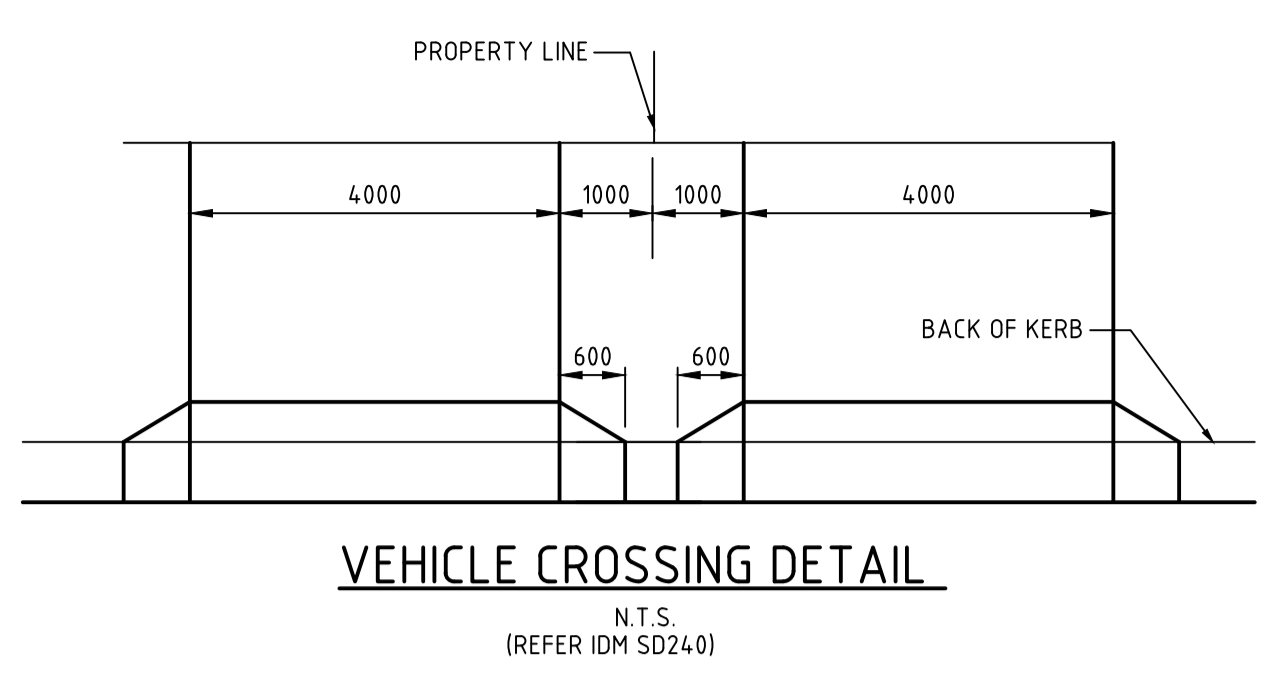
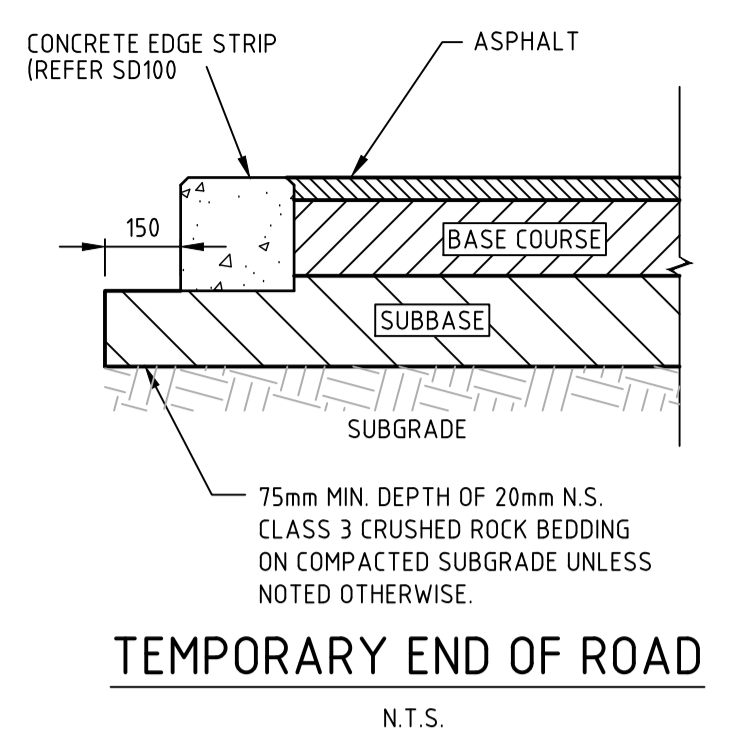
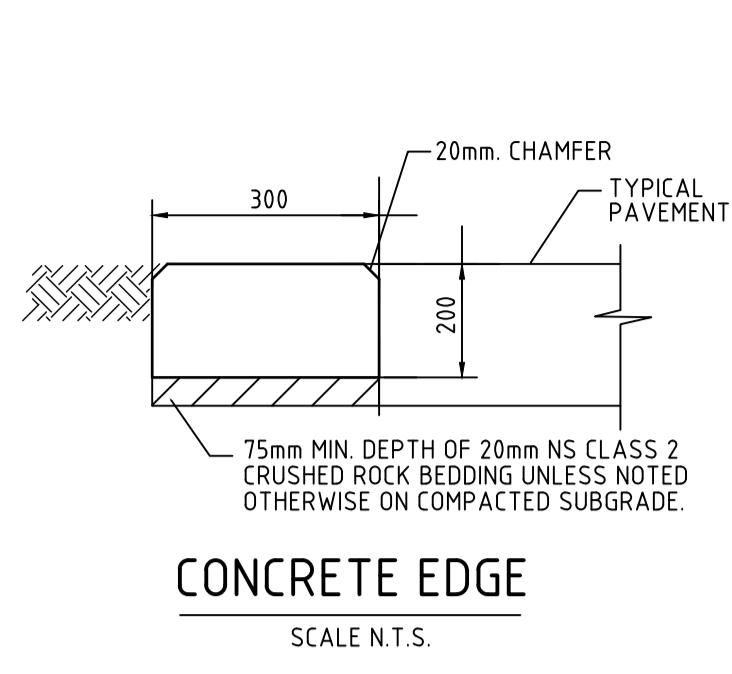
Project Name **WANDANA ESTATE  
STAGE 3  
335 BARRABOOL ROAD**  
Drawing Title **RETAINING WALL DETAIL PLANS**

Level Datum AHD  
Contour Interval N/A  
Date of Survey 09 / 2015  
Designed By M.J / N.C  
Drawn By A.V  
Date Drawn 12.04.2018  
Scale NOTED

**ISSUED FOR APPROVAL**  
ENGINEERING MANAGER APPROVED  
Project Ref. 14816E  
Sheet No. 321  
Rev. P1



ENGINEERING



**CURVE SETOUT DETAILS**

curve	Location	Rad	INT	TAN	CHD	arc	M1	M2	chord b	chord c
1	L.O.K	9.000	90.613	9.097	12.796	14.233	2.670	0.694	6.933	3.535
2	L.O.K	9.000	89.130	8.864	12.631	14.001	2.588	0.672	6.825	3.478
3	L.O.K	9.000	89.996	8.999	12.727	14.137	2.636	0.685	6.888	3.511
4	L.O.K	9.000	90.004	9.001	12.728	14.138	2.636	0.685	6.889	3.512

L.O.K - Lip of kerb  
C.L. - Road centreline

**GREATER GEELONG CITY COUNCIL PLANNING & ENVIRONMENT ACT 1987 GREATER GEELONG PLANNING SCHEME**

Endorsed Plan referred to in Permit No: 392-2015  
Sheet 22 of 25 Cert 13807  
Approved Engineering Plans

Signed *[Signature]* Date 21/09/2018

For and on behalf of the Greater Geelong City Council as the Responsible Authority

**NOTE: THIS IS NOT A BUILDING APPROVAL**

**CITY OF GREATER GEELONG STATUTORY PLANNING**

**5 JUNE 2018 RECEIVED**

Rev	Description	Date	By	App	Rev	Description	Date	By	App
P1	ISSUED FOR APPROVAL	30.04.2018	A.V	M.J					

**ST. QUENTIN**  
Surveyors - Town Planners - Engineers  
51 LITTLE FYANS STREET,  
P.O. BOX 919, GEELONG 3220  
TELEPHONE (03) 5201 1811 FAX (03) 5229 2909

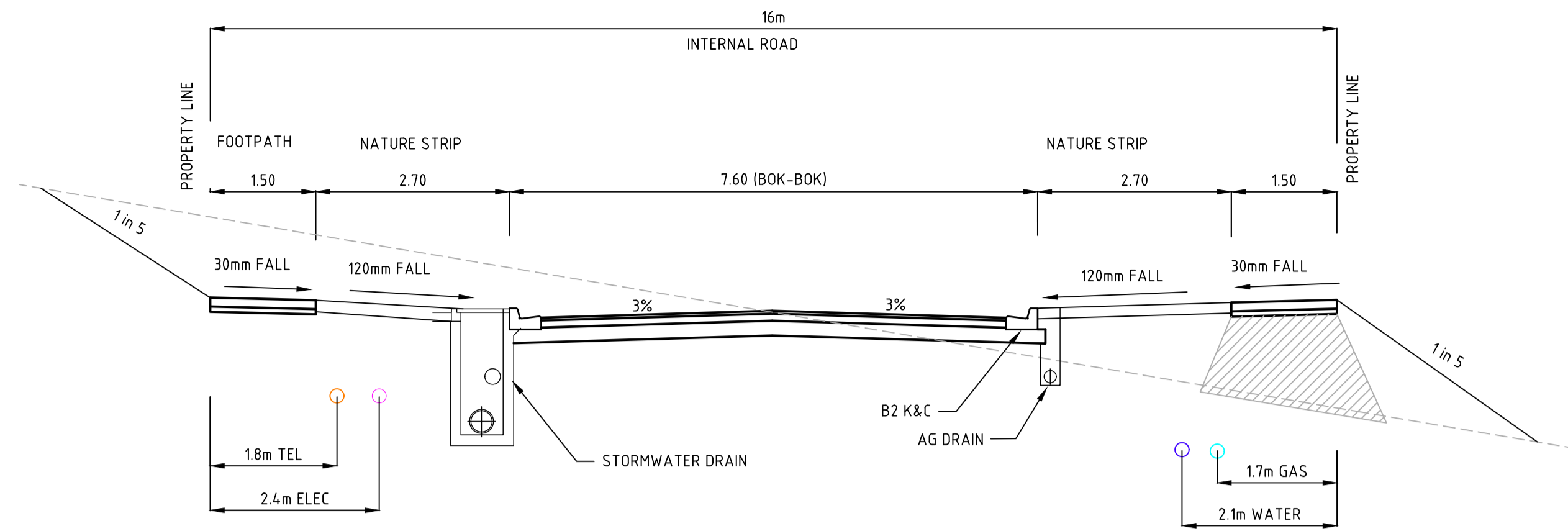
Project Name: **WANDANA ESTATE STAGE 3 335 BARRABOOL ROAD**

Drawing Title: **STANDARD DETAILS**

Level Datum	AHD
Contour Interval	N/A
Date of Survey	09 / 2015
Designed By	M.J / N.C
Drawn By	A.V
Date Drawn	12.04.2018
Scale	NOTED

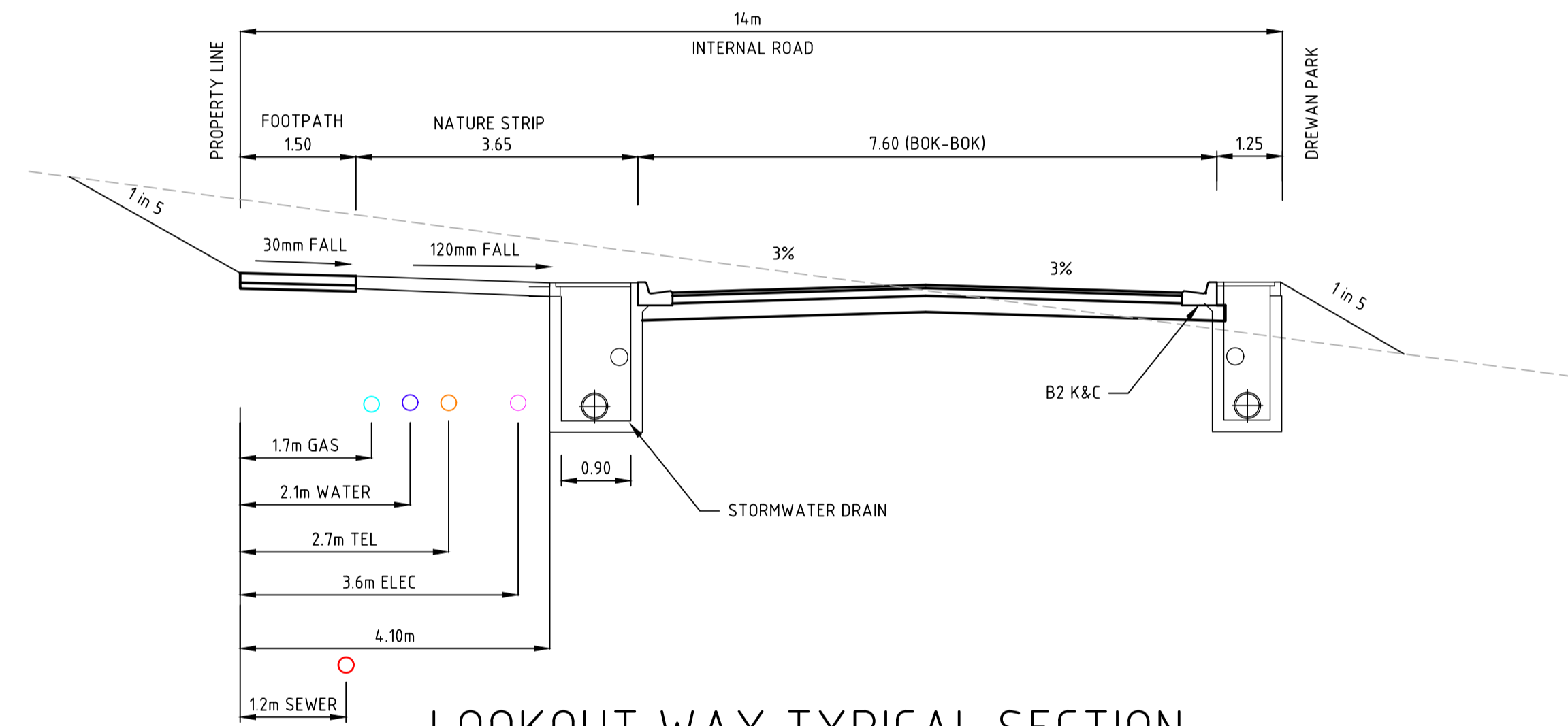
<b>ISSUED FOR APPROVAL</b>		
ENGINEERING MANAGER APPROVED		
Project Ref.	Sheet No.	Rev.
14816E	322	P1

ENGINEERING



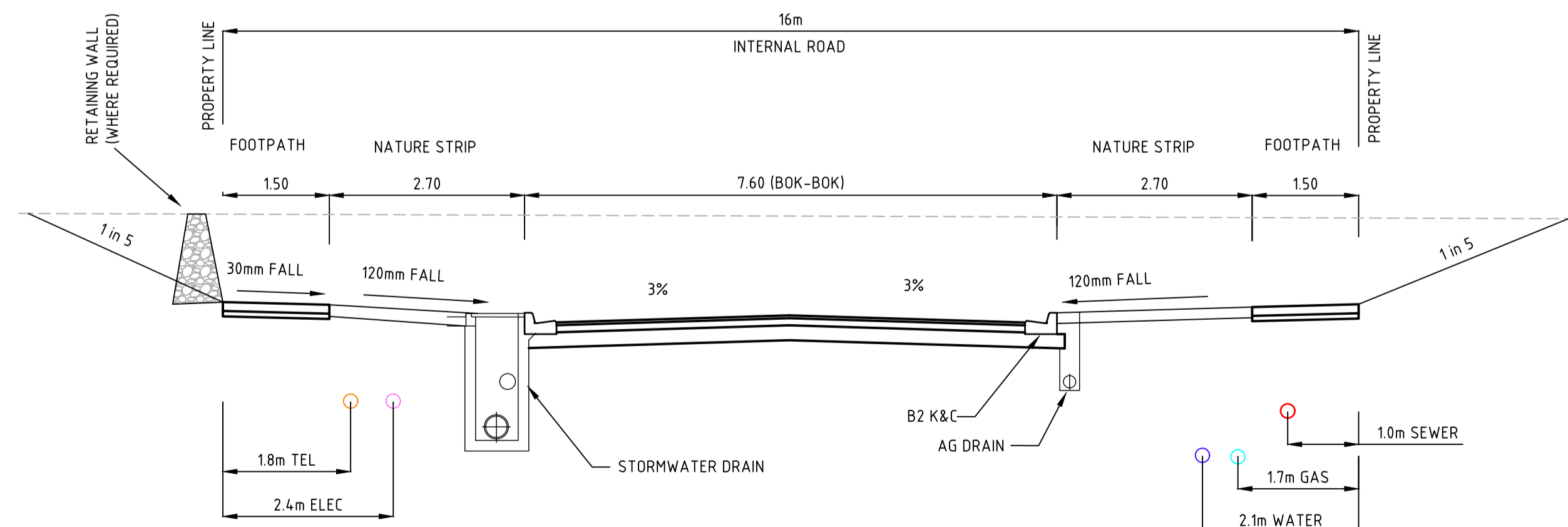
**BROWNHILL DRIVE TYPICAL SECTION**

NOT TO SCALE



**LOOKOUT WAY TYPICAL SECTION**

NOT TO SCALE



**HEARDS WAY TYPICAL SECTION**

NOT TO SCALE

**GREATER GEELONG CITY COUNCIL  
PLANNING & ENVIRONMENT ACT 1987  
GREATER GEELONG PLANNING SCHEME**

Endorsed Plan referred to in Permit No: 392-2015  
Sheet 23 of 25 Cert 13807  
Approved Engineering Plans

Signed *[Signature]* Date 21/09/2018

For and on behalf of the Greater Geelong City Council as the Responsible Authority

**NOTE: THIS IS NOT A BUILDING APPROVAL**

CITY OF GREATER GEELONG  
STATUTORY PLANNING

5 JUNE 2018

RECEIVED

COPYRIGHT		All rights reserved.	
These drawings, plans and specifications and the copyright therein are the property of the St. Quentin consulting and must not be used, reproduced or copied wholly or in part without the written permission of St. Quentin consulting.			
Rev	Description	Date	By App
P1	ISSUED FOR APPROVAL	30.04.2018	A.V. M.J.

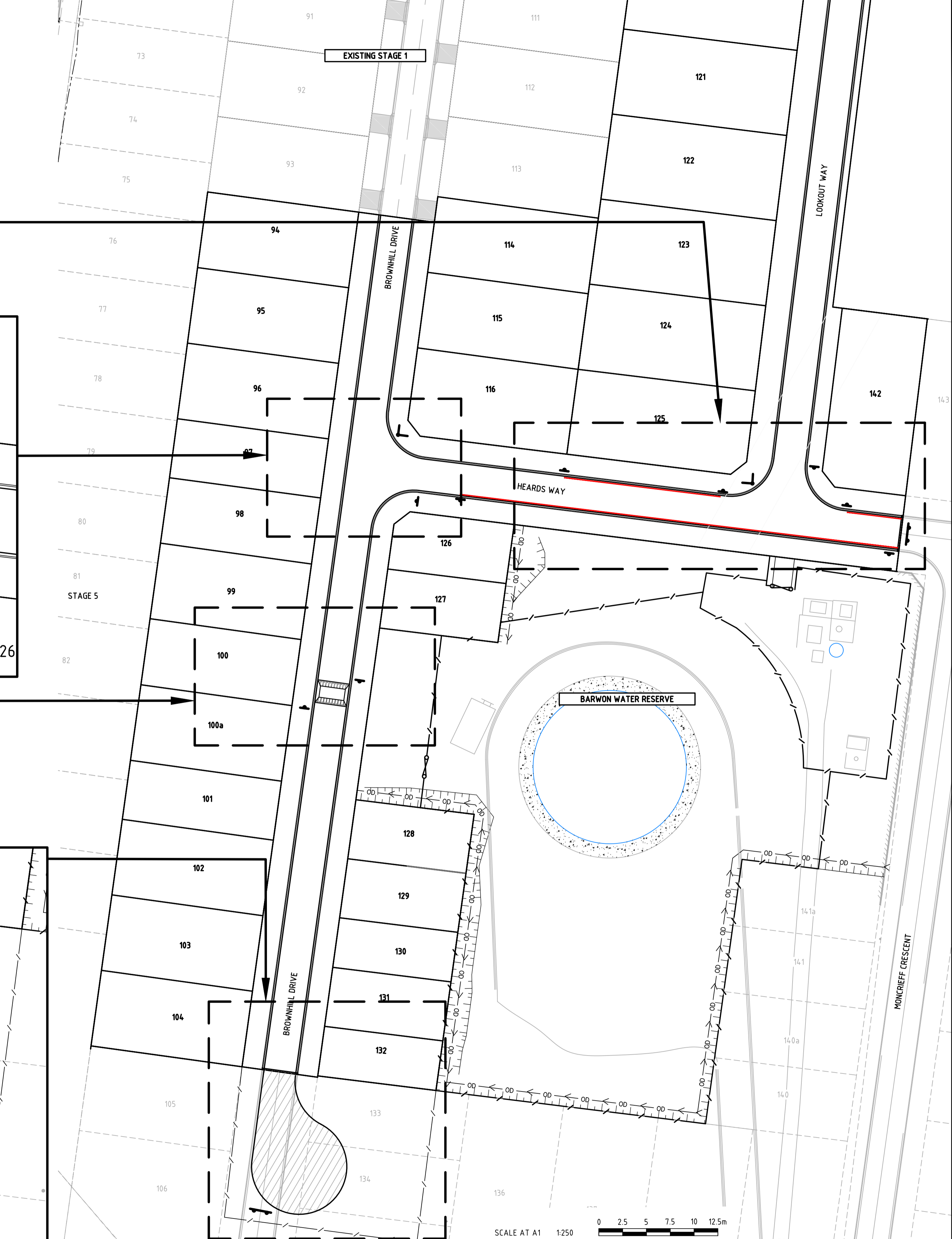
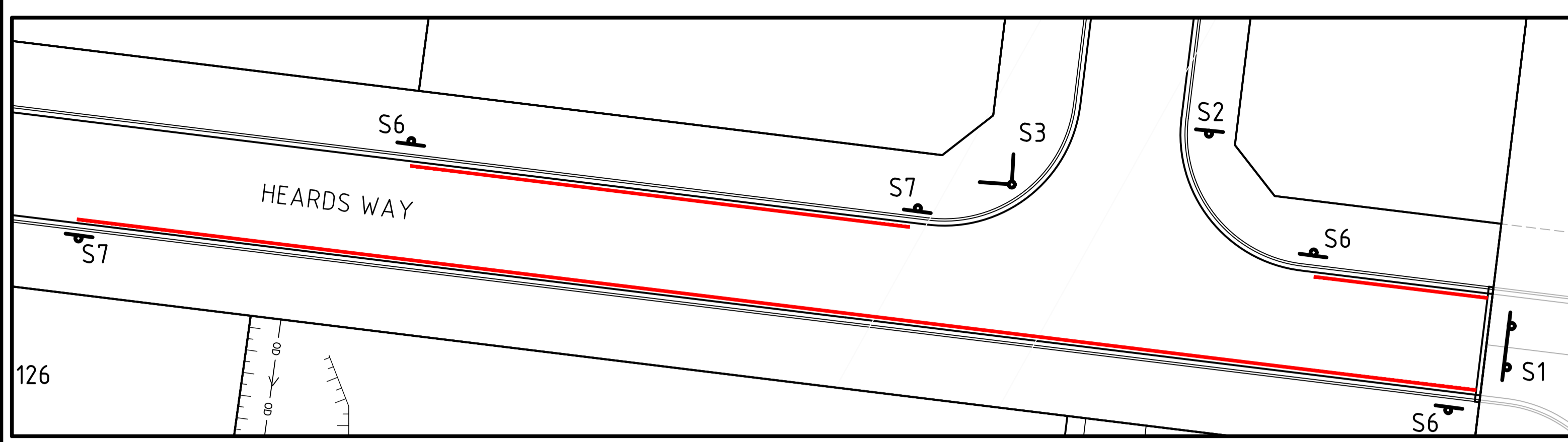
**ST. QUENTIN**  
Surveyors - Town Planners - Engineers  
51 LITTLE FYANS STREET,  
P.O. BOX 919, GEELONG 3220  
TELEPHONE (03) 5201 1811 FAX (03) 5229 2909

Project Name: **WANDANA ESTATE  
STAGE 3  
335 BARRABOOL ROAD**  
Drawing Title: **TYPICAL SECTIONS**

Level Datum: AHD  
Contour Interval: N/A  
Date of Survey: 09 / 2015  
Designed By: M.J. / N.C.  
Drawn By: A.V.  
Date Drawn: 12.04.2018  
Scale: NOTED

<b>ISSUED FOR APPROVAL</b>		
ENGINEERING MANAGER APPROVED		
Project Ref.	Sheet No.	Rev.
14816E	323	P1

ENGINEERING



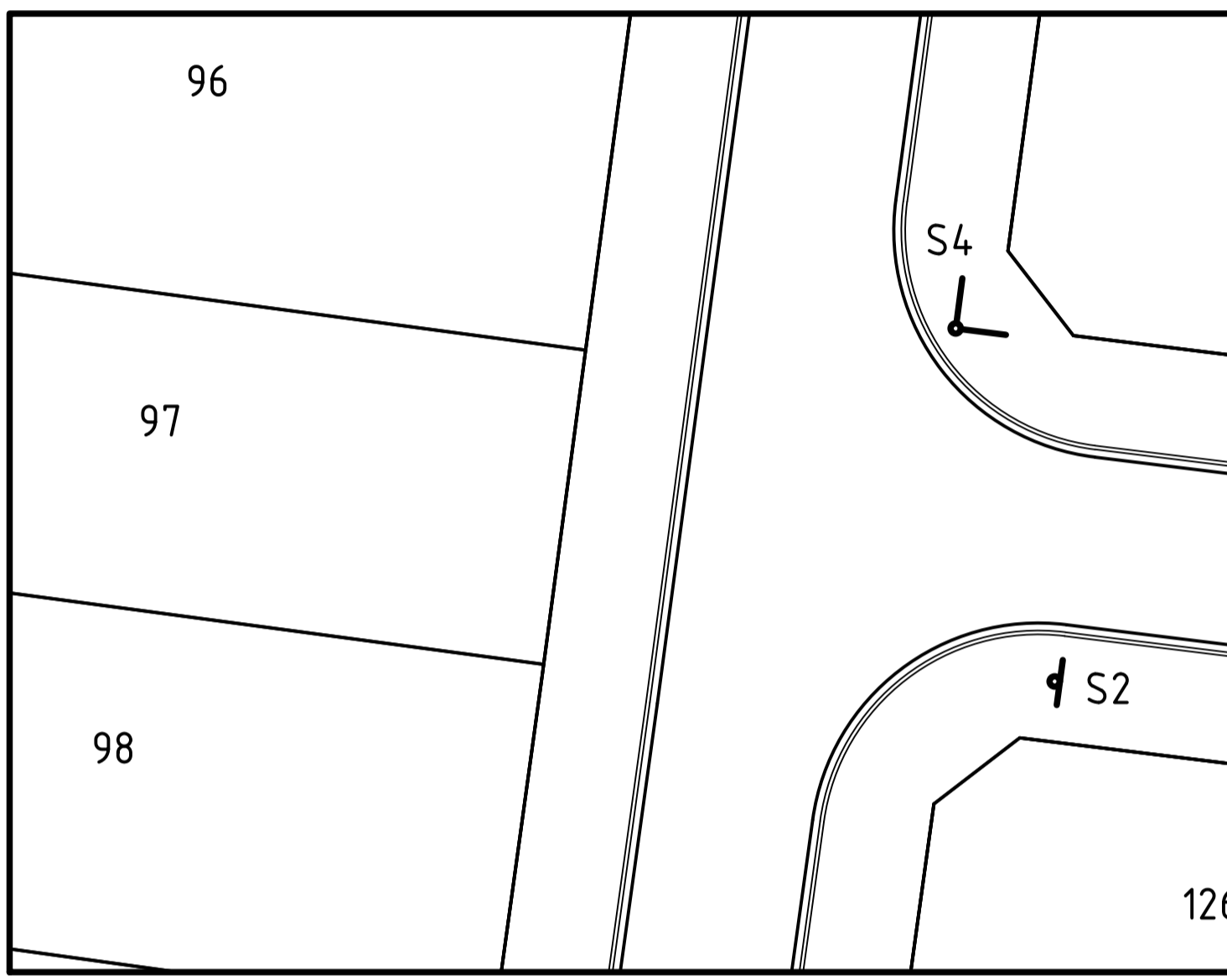
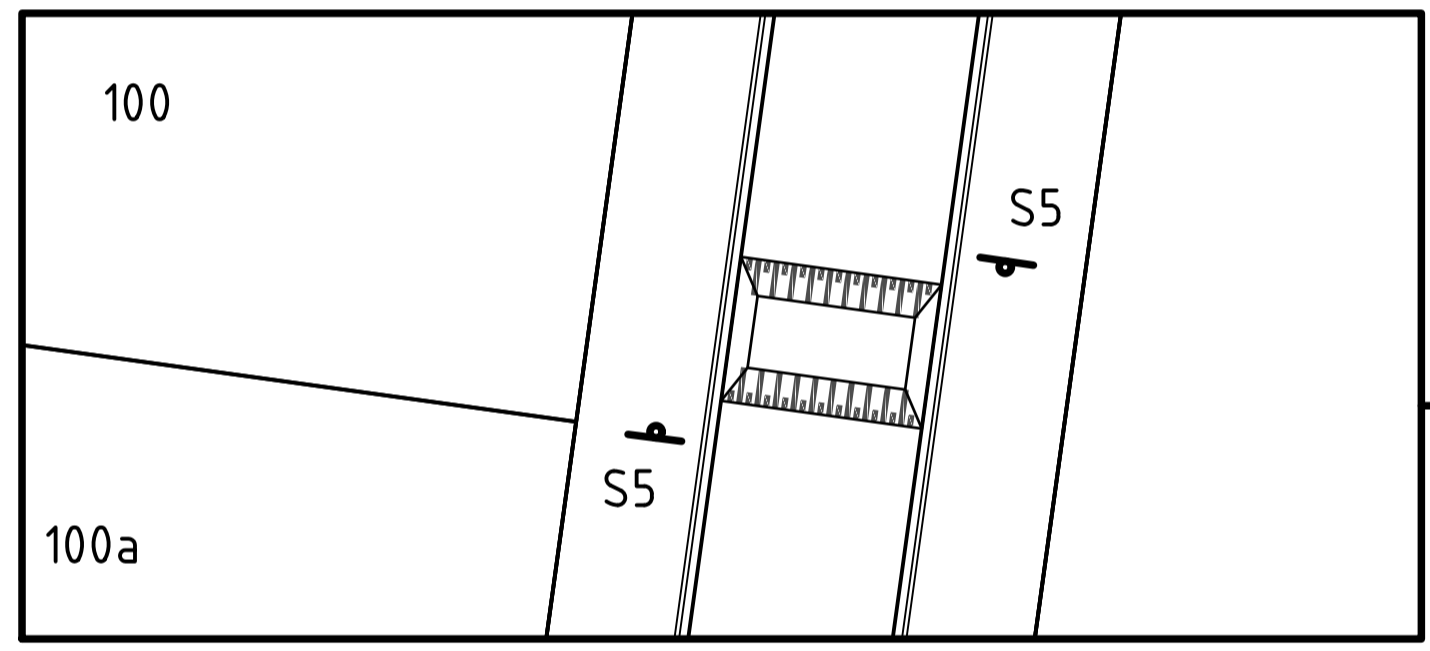
**GREATER GEELONG CITY COUNCIL  
PLANNING & ENVIRONMENT ACT 1987  
GREATER GEELONG PLANNING SCHEME**

Endorsed Plan referred to in Permit No: 392-2015  
Sheet 24 of 25 Cert 13807  
Approved Engineering Plans

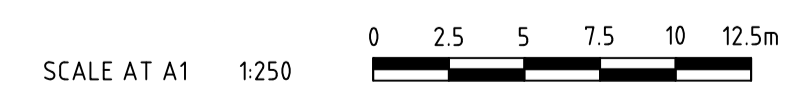
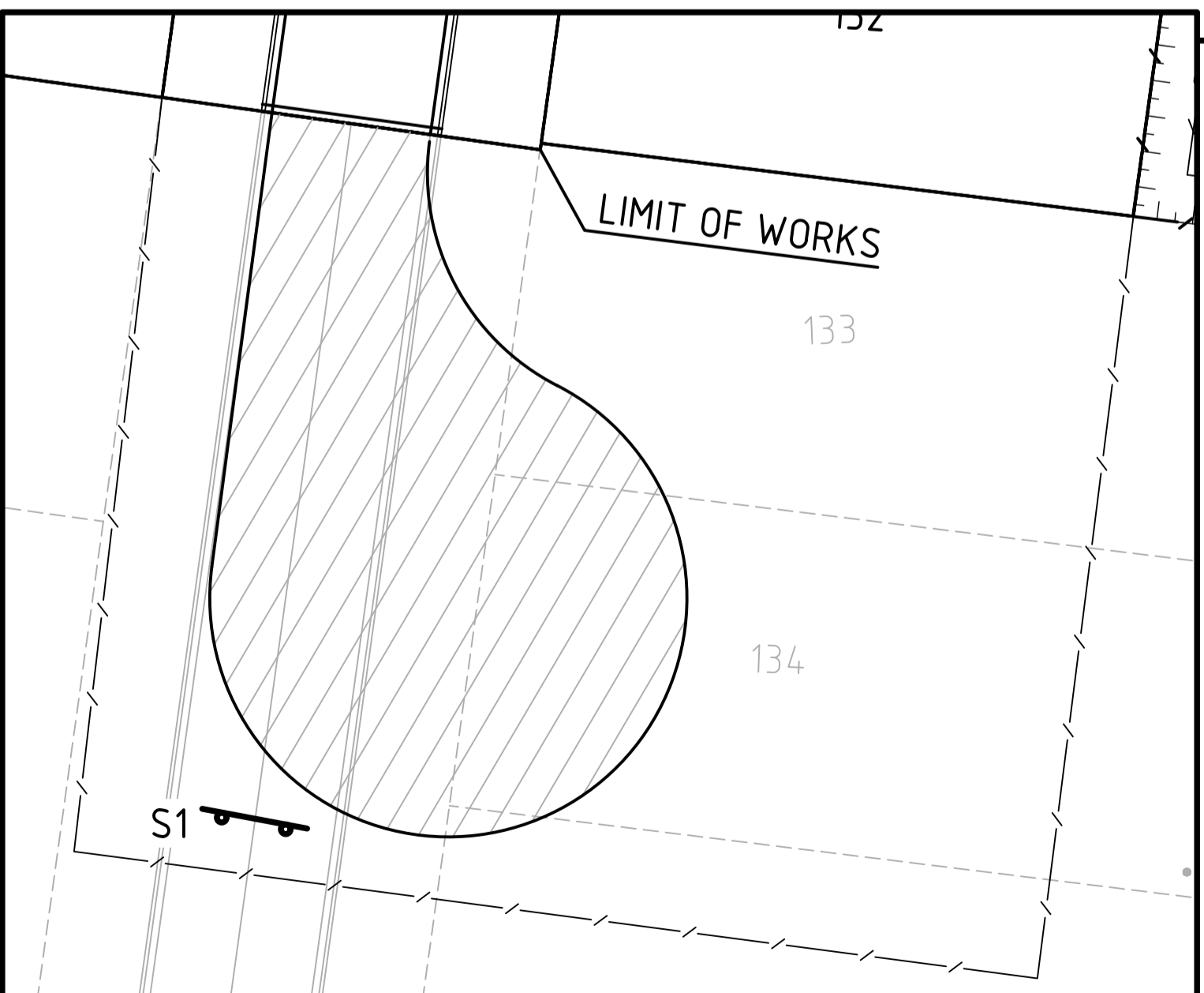
Signed *[Signature]* Date 21/09/2018

For and on behalf of the Greater Geelong City Council as the Responsible Authority

**NOTE: THIS IS NOT A BUILDING APPROVAL**



SIGN	TYPE	SIGN	TYPE
	S1		NO STOPPING ZONE
	S2		S6
	S3		S7
	S4		
	S5		



COPYRIGHT: All rights reserved. These drawings, plans and specifications and the copyright therein are the property of the St. Quentin consulting and must not be used, reproduced or copied wholly or in part without the written permission of St. Quentin consulting.

Rev	Description	Date	By	App	Rev	Description	Date	By	App
P1	ISSUED FOR APPROVAL	30.04.2018	A.V	M.J					

**CITY OF GREATER GEELONG  
STATUTORY PLANNING  
5 JUNE 2018  
RECEIVED**

**ST. QUENTIN**  
Surveyors - Town Planners - Engineers  
51 LITTLE FYANS STREET,  
P.O. BOX 919, GEELONG 3220  
TELEPHONE (03) 5201 1811 FAX (03) 5229 2909

Project Name: **WANDANA ESTATE STAGE 3  
335 BARRABOOL ROAD**

Drawing Title: **SIGNAGE & LINE MARKING**

Level Datum: AHD  
Contour Interval: N/A  
Date of Survey: 09 / 2015  
Designed By: M.J / N.C  
Drawn By: A.V  
Date Drawn: 12.04.2018  
Scale: NOTED

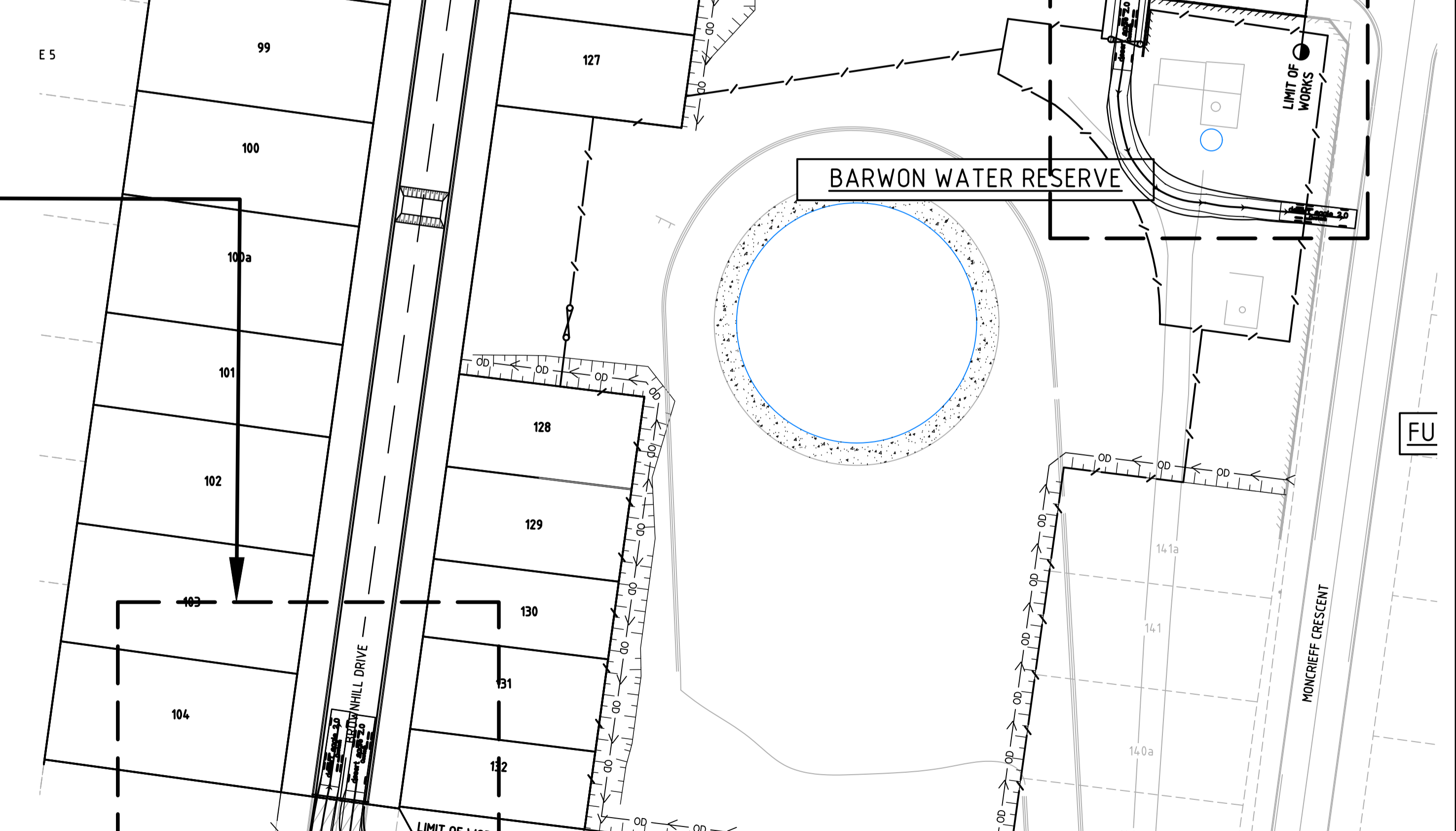
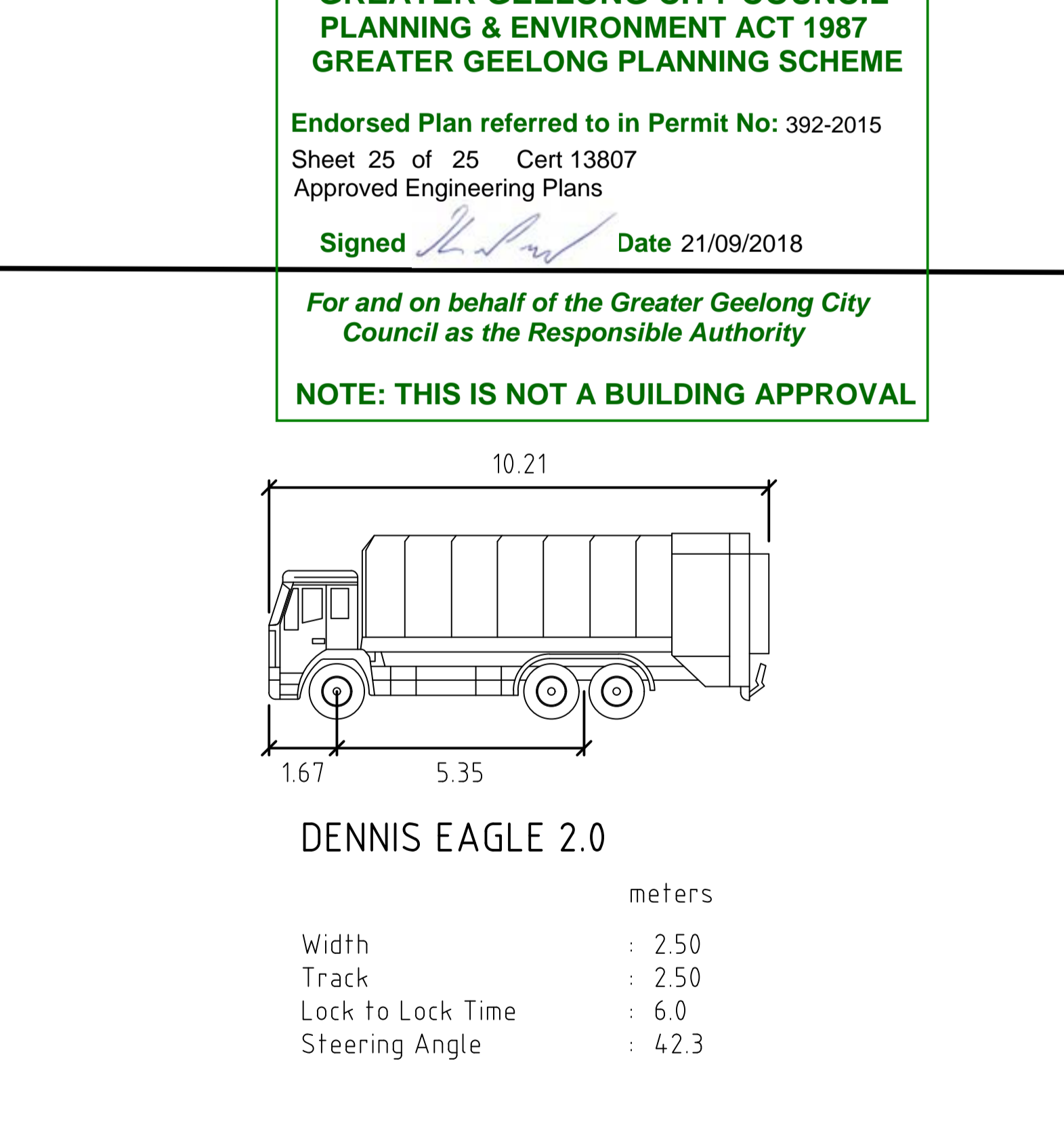
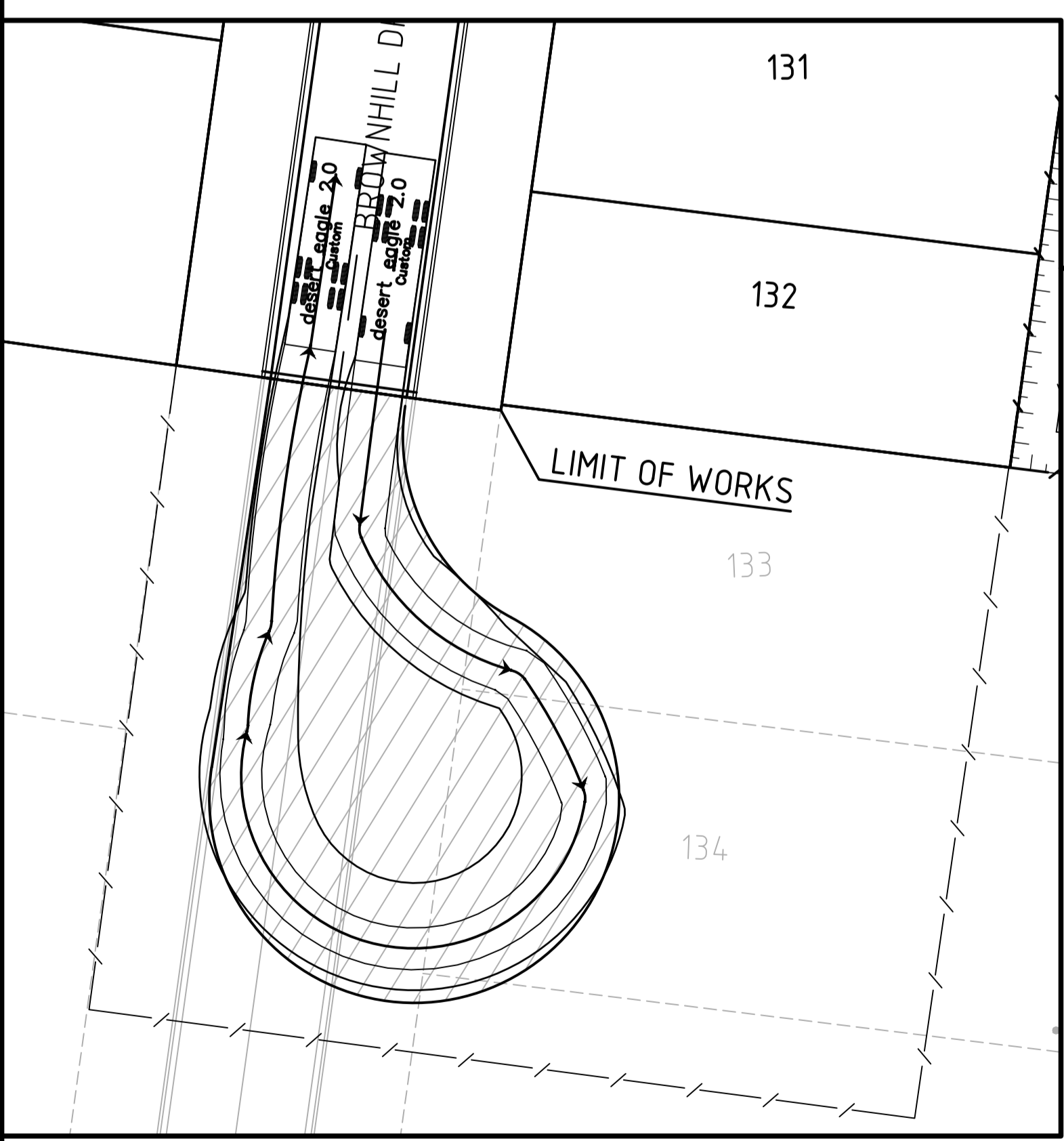
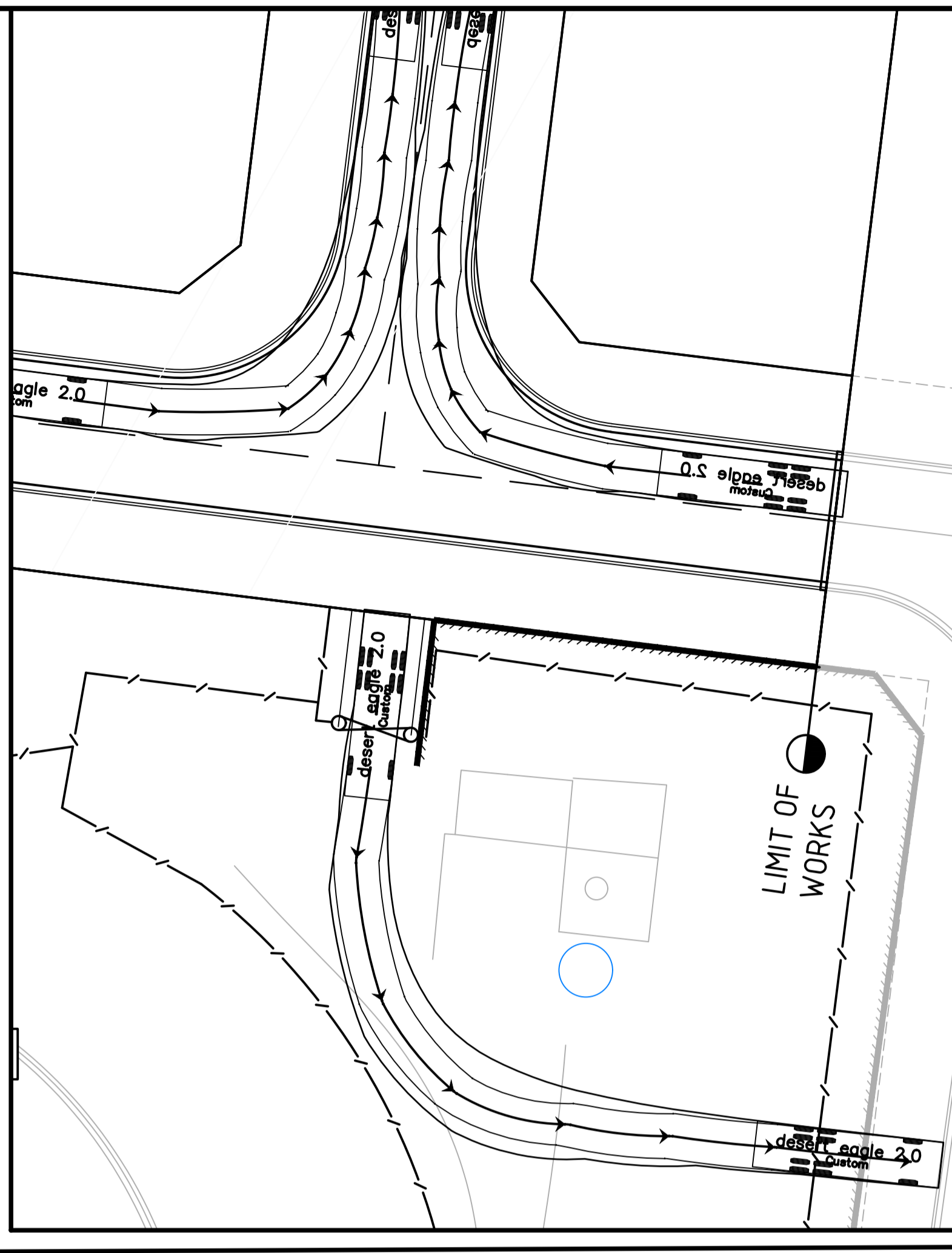
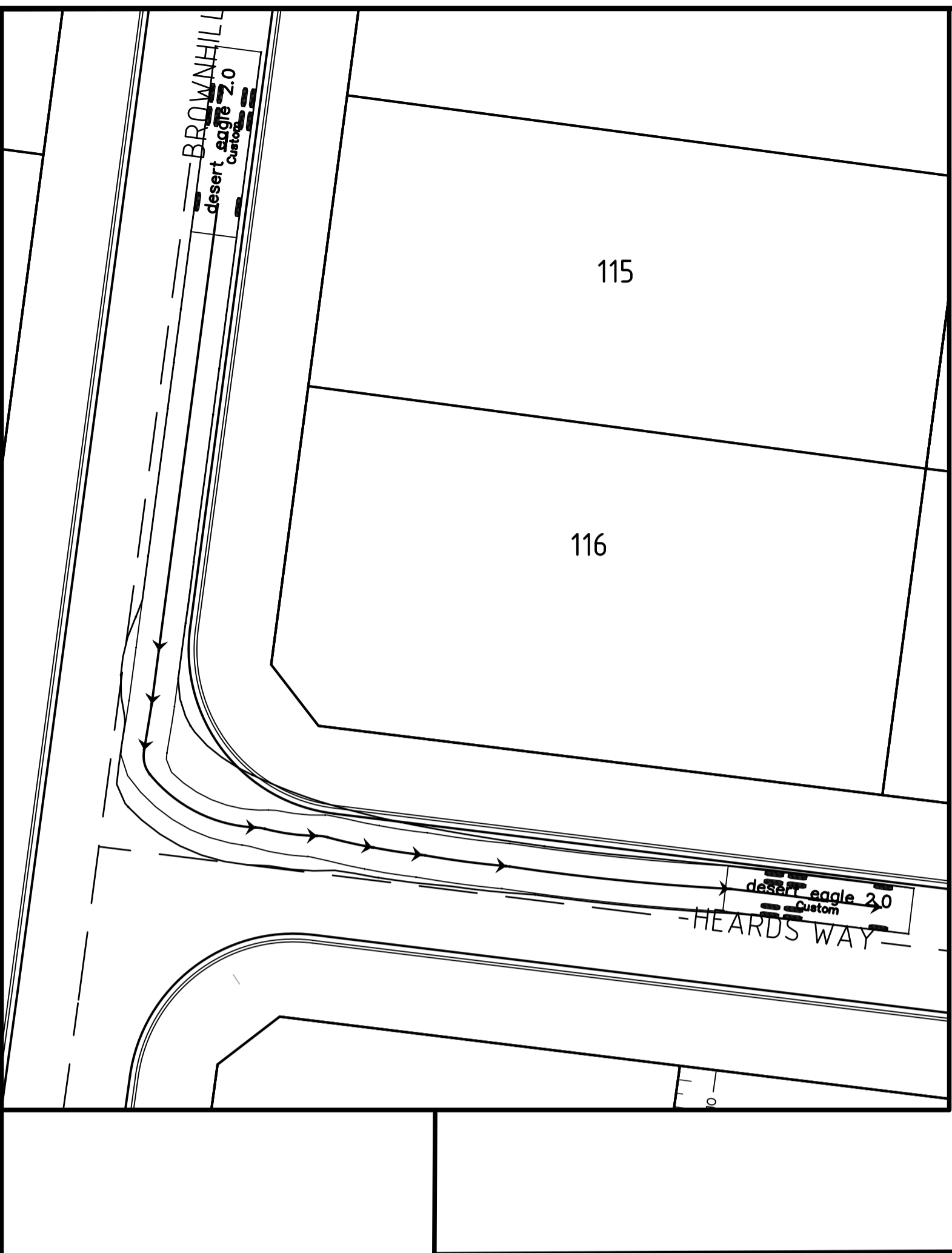
**ISSUED FOR APPROVAL**

ENGINEERING MANAGER APPROVED

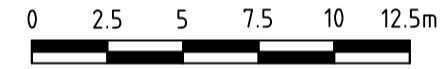
Project Ref: 14816E Sheet No: 324 Rev: P1

ENGINEERING





SCALE AT A1 1:250



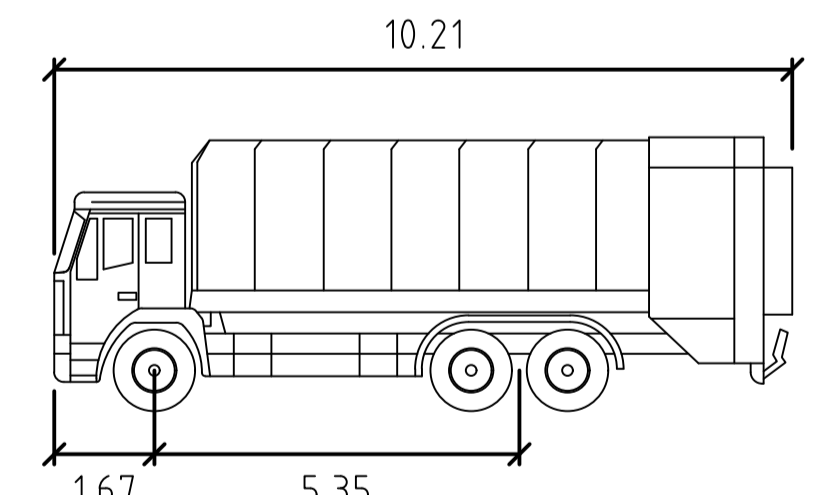
**GREATER GEELONG CITY COUNCIL  
PLANNING & ENVIRONMENT ACT 1987  
GREATER GEELONG PLANNING SCHEME**

Endorsed Plan referred to in Permit No: 392-2015  
Sheet 25 of 25 Cert 13807  
Approved Engineering Plans

Signed *[Signature]* Date 21/09/2018

For and on behalf of the Greater Geelong City Council as the Responsible Authority

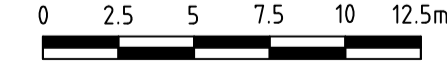
**NOTE: THIS IS NOT A BUILDING APPROVAL**



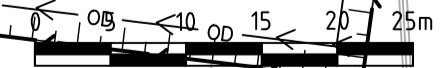
**DENNIS EAGLE 2.0**

Width : 2.50 meters  
Track : 2.50  
Lock to Lock Time : 6.0  
Steering Angle : 42.3

SCALE AT A1 1:250



SCALE AT A1 1:500



COPYRIGHT All rights reserved. These drawings, plans and specifications and the copyright therein are the property of the St. Quentin consulting and must not be used, reproduced or copied wholly or in part without the written permission of St. Quentin consulting.

Rev	Description	Date	By	App	Rev	Description	Date	By	App
P1	ISSUED FOR APPROVAL	30.04.2018	A.V.	M.J.					

**CITY OF GREATER GEELONG  
STATUTORY PLANNING**

**5 JUNE 2018  
RECEIVED**

**ST. QUENTIN**  
Surveyors - Town Planners - Engineers  
51 LITTLE FYANS STREET,  
P.O. BOX 919, GEELONG 3220  
TELEPHONE (03) 5201 1811 FAX (03) 5229 2909

Project Name: **WANDANA ESTATE  
STAGE 3  
335 BARRABOOL ROAD**

Drawing Title: **TURNING MOVEMENTS**

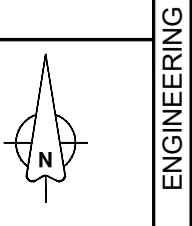
Level Datum: AHD  
Contour Interval: N/A  
Date of Survey: 09 / 2015  
Designed By: M.J. / N.C.  
Drawn By: A.V.  
Date Drawn: 12.04.2018  
Scale: NOTED

**ISSUED FOR APPROVAL**

ENGINEERING MANAGER APPROVED

Project Ref. 14816E Sheet No. 325 Rev. P1

FU



ENGINEERING