

Appendix E

Concept Servicing Plans

LOOK UP AND LIVE

OVERHEAD POWER LINES IN VICINITY OF WORKS.

ENSURE ALL POWER LINES ARE CLEARLY MARKED WITH ORANGE WEATHERPROOF TAPE OR RIBBON

ALL WORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE NSW WORK COVER 'WORK NEAR OVERHEAD POWER LINES CODE OF PRACTICE 2006'

<http://www.workcover.nsw.gov.au/health-and-safety/industry-safety/electrical-and-power/power-lines/publications/work-near-overhead-power-lines-code-of-practice-2006>

Lot 1 DP 1253903 19 Barton Avenue Wallerawang, NSW 2845 LITHGOW, NSW 2795

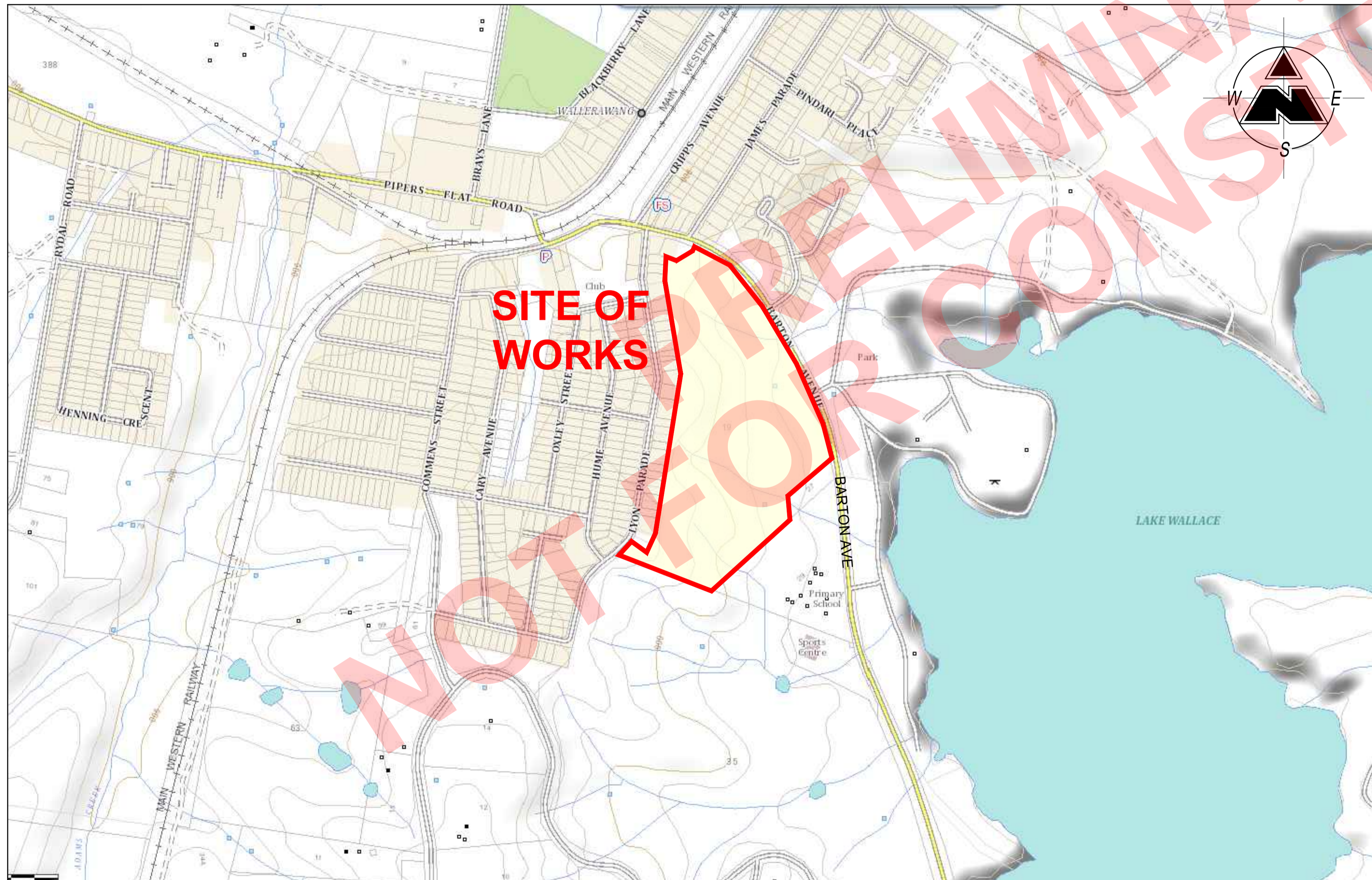
THERE MAY BE EXISTING SERVICES WITHIN THE WORKS AREA THAT ARE NOT SHOWN ON THESE PLANS. THE CONTRACTOR IS TO LOCATE ALL SERVICES PRIOR TO THE COMMENCEMENT OF WORKS.



**FOR
Timberfix
LITHGOW COUNCIL
Development Consent Number: N/A**

DRAWING INDEX

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W01	PRELIMINARY WATERMAIN LAYOUT PLAN



LOCALITY PLAN
N.T.S.

PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022 - 09:50:29

Amend	Date	Description	By	Amend	Date	Description	By
P2	22/09/22	ALTERATIONS DUE TO COUNCIL COMMENTS	GBL				
P1	11/10/21	ORIGINAL ISSUE	GBL				

Approved for Construction:
[Signature]
Garth Dean
B.E. GDSTT FIEAust CPEng NER
APEC Engineer IntPE (Aus) RBP
(Vic/NT)

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Scale (A1): AS SHOWN
Date: October 2021

**PRELIMINARY
Not for construction**

...2021.0574-Civil-P2.dwg

Lot 1 DP 1253903
19 Barton Avenue
Wallerawang, NSW 2845

COVER SHEET

Timberfix

CALARE CIVIL
CONSULTING ENGINEERS

170 RANKIN STREET,
BATHURST, N.S.W. 2795
Tel: (02) 63323343 Fax: (02) 63318210

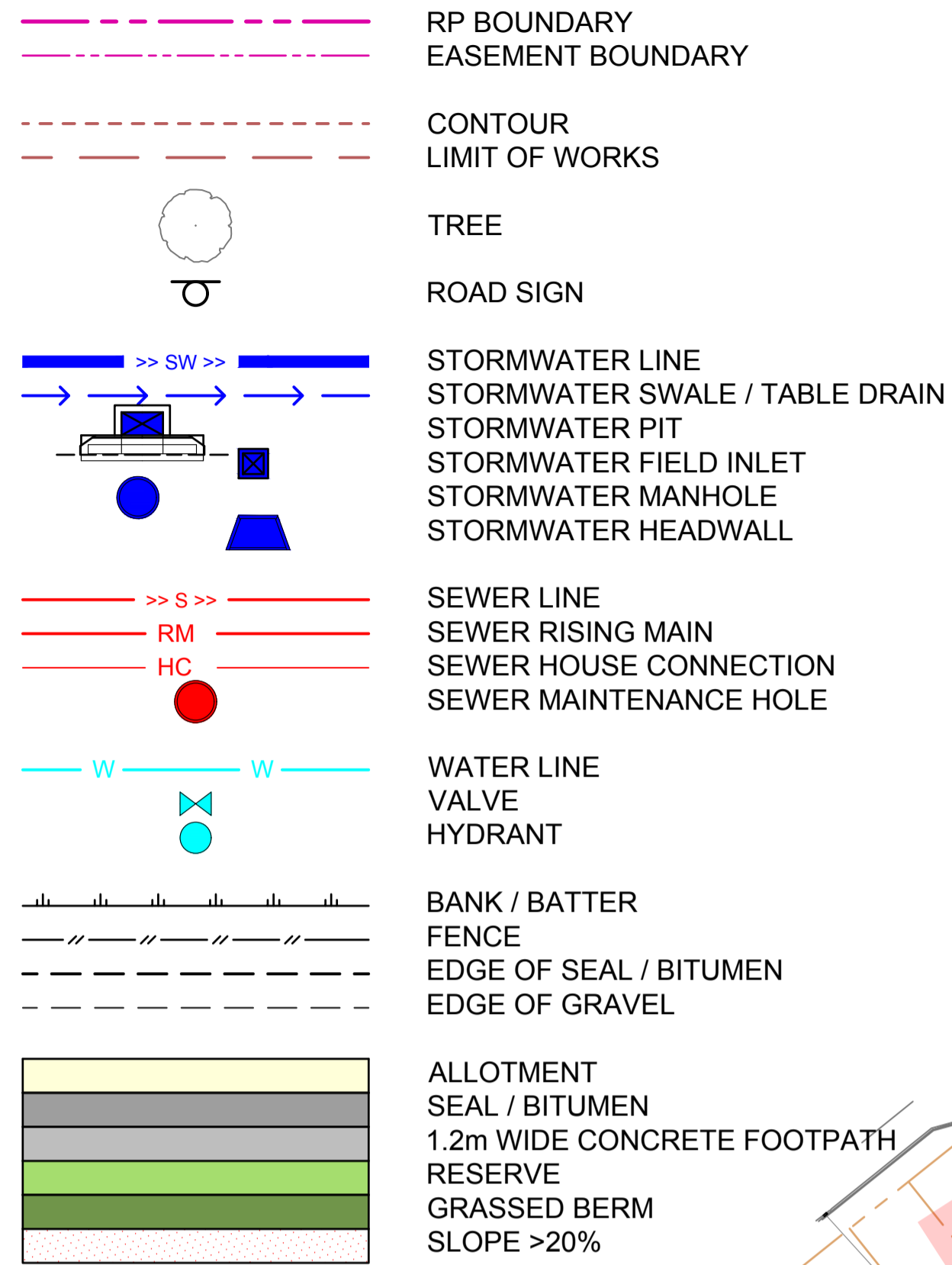
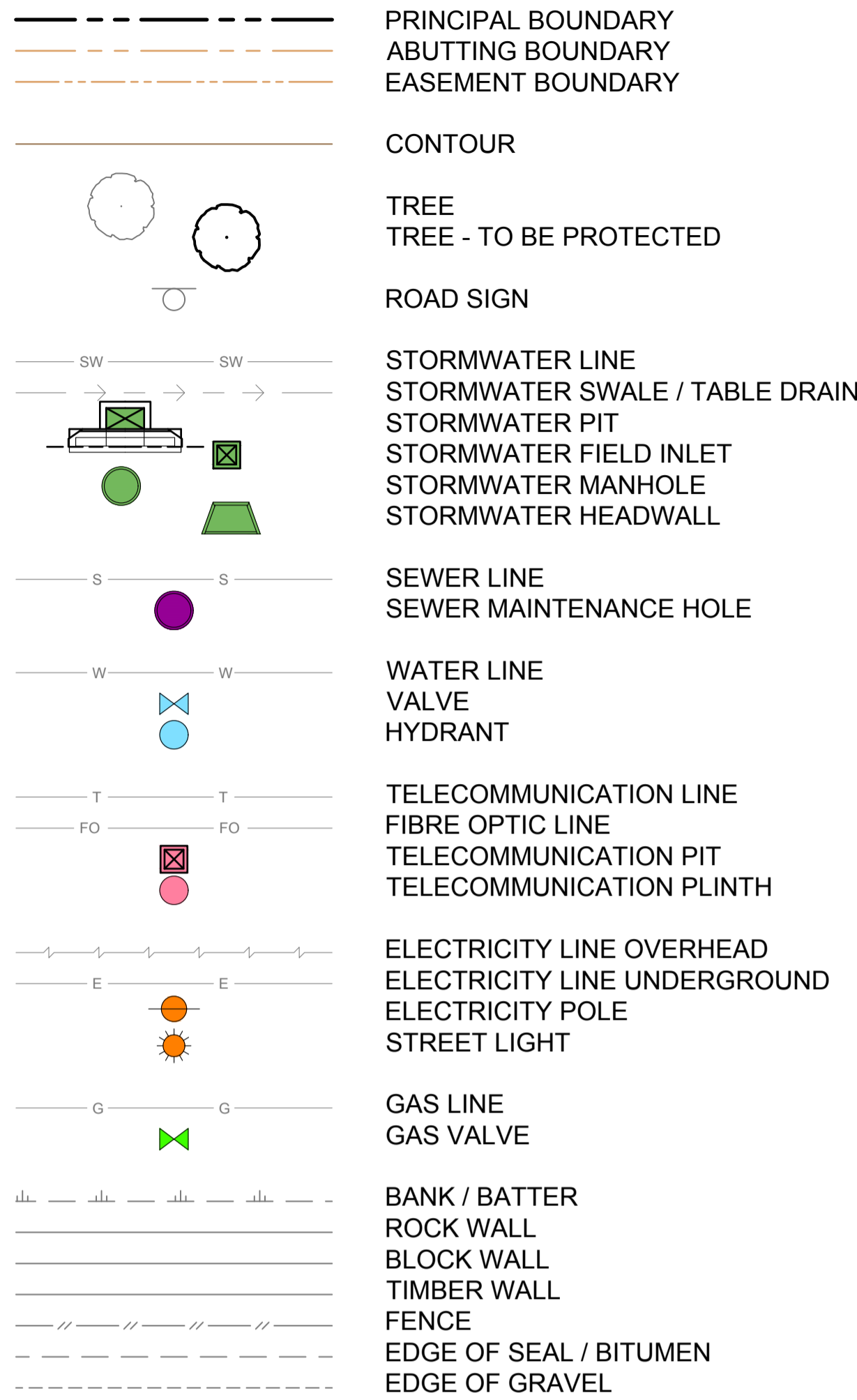
Job No.
2021.0574

DWG. No. Issue
G01 P1

No. in set
32

LEGEND - EXISTING

LEGEND - PROPOSED



PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022 - 09:50:34

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P2	22/09/22	ALTERATIONS DUE TO COUNCIL COMMENTS	GBL				
P1	11/10/21	ORIGINAL ISSUE	GBL				

Approved for Construction:

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Scale (A1): 1:1250
Date: October 2021

PRELIMINARY
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...2021.0574-Civil-P2.dwg

Lot 1 DP 1253903
19 Barton Avenue
Wallerawang, NSW 2845

GENERAL ARRANGEMENT PLAN

Timberfix

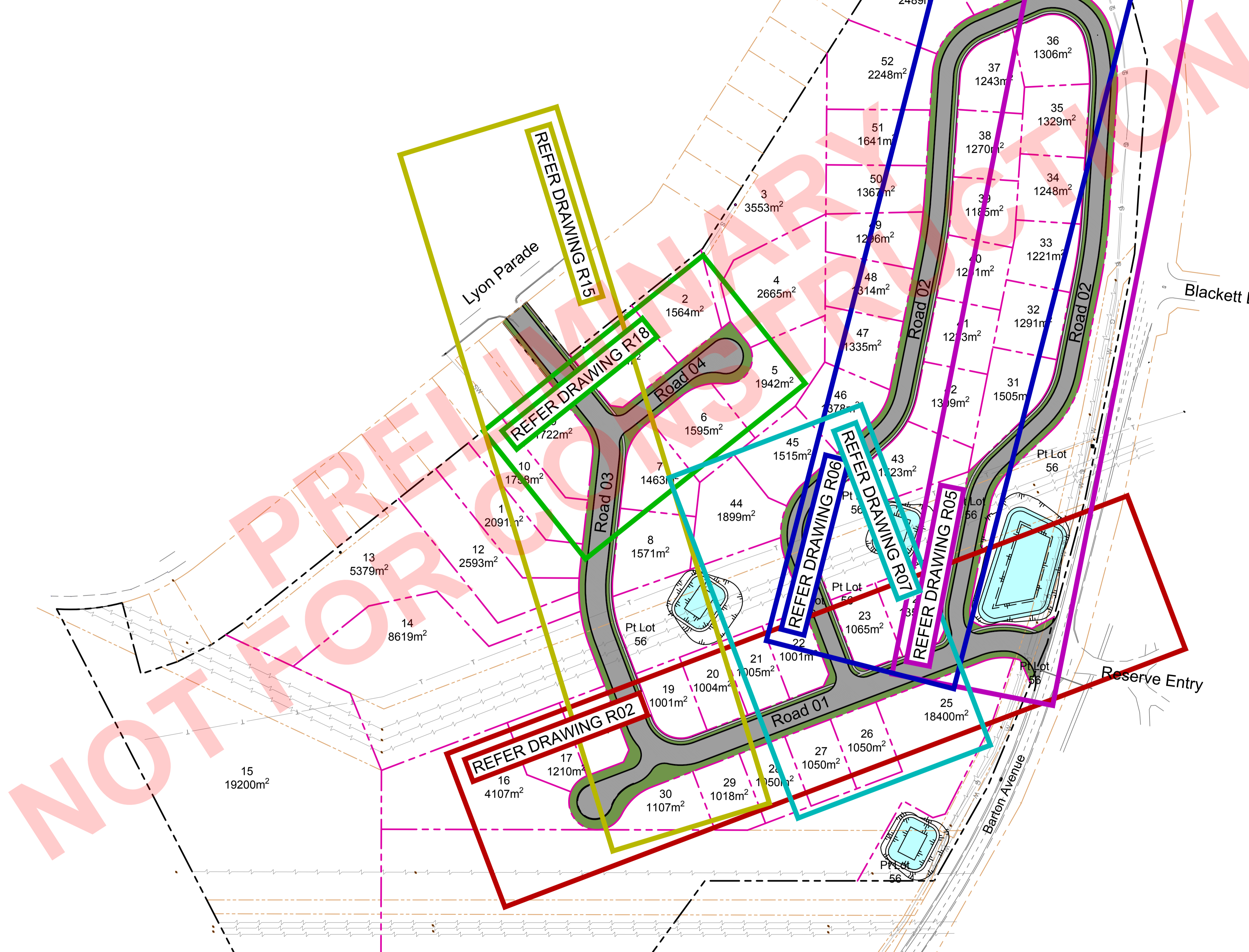
CALARE CIVIL
CONSULTING ENGINEERS

170 RANKIN STREET,
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Tel: (02) 63323343 Fax: (02) 63318210

Job No.
2021.0574

DWG. No. Issue
G02 P1


No. in set
32



PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022 - 09:50:38

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P2	22/09/22	ALTERATIONS DUE TO COUNCIL COMMENTS	GBL				
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Approved for Construction:



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ROAD LAYOUT INDEX PLAN

Timberfix

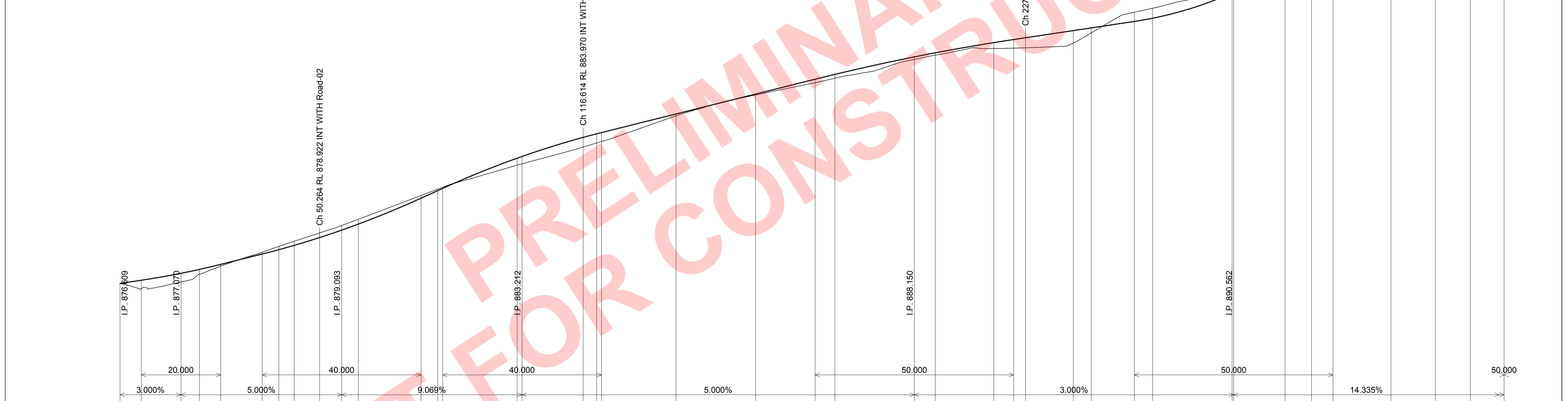
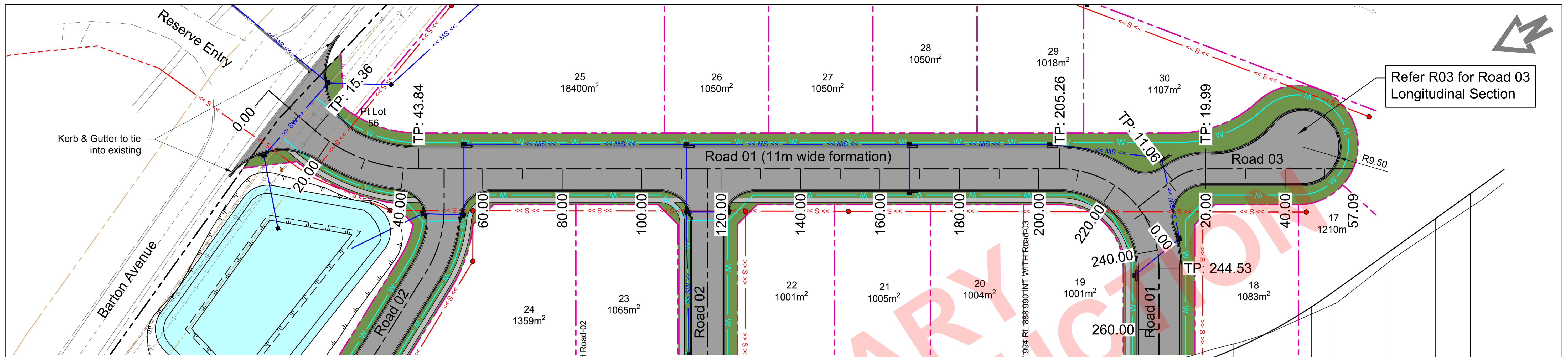
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Job No.
2021.0574

DWG. No. Issue
R01 P1

No. in set
32



EXISTING SURFACE	DESIGN SURFACE	CUT (-) FILL (+)	CHAINAGE	HORIZONTAL GEOMETRY
876.61	876.61	+0.000	0.000	L=15.362 B=246°27'06"
876.34	876.77	+0.431	5.362	
876.68	877.12	+0.438	15.362	L=28.482 R=40.000
877.08	877.32	+0.242	20.000	
877.48	877.57	+0.085	25.362	L=161.420 B=205°39'17"
878.18	878.09	-0.088	35.807	
878.48	878.31	-0.165	40.000	L=39.270 R=25.000
878.73	878.53	-0.207	43.844	
879.15	878.92	-0.232	50.264	L=48.794 B=295°39'17"
879.53	879.30	-0.234	55.807	
879.84	879.60	-0.240	60.000	L=37.860 R=80.000
881.04	880.91	-0.137	75.807	
881.36	881.29	-0.075	80.000	L=61.883 B=322°46'12"
881.46	881.40	-0.068	81.232	
882.57	882.92	+0.349	100.000	
882.64	883.01	+0.371	101.232	
883.48	883.97	+0.486	116.614	
883.69	884.15	+0.464	120.000	
883.76	884.21	+0.452	121.232	
885.06	885.15	+0.092	140.000	
886.11	886.15	+0.043	160.000	
886.72	886.90	+0.177	175.000	
886.95	887.15	+0.195	180.000	
887.90	888.03	+0.126	200.000	
888.11	888.23	+0.117	205.264	
888.45	888.75	+0.300	220.000	
888.47	888.90	+0.433	225.000	
888.48	888.99	+0.506	227.994	
888.73	889.35	+0.622	240.000	
889.23	889.49	+0.251	244.534	
890.28	889.81	-0.464	255.396	
890.48	889.97	-0.504	260.000	
891.52	891.24	-0.280	280.000	
891.54	891.27	-0.266	280.396	
892.45	892.58	+0.135	293.328	
893.04	893.41	+0.364	300.000	
893.52	894.15	+0.623	305.396	
895.74	896.24	+0.498	320.000	
897.26	897.84	+0.588	331.188	
898.41	899.11	+0.695	340.000	
899.65	900.32	+0.667	348.478	

LONGITUDINAL SECTION Road-01
SCALE 1:500 H 1:100 V

PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022 - 09:50:43

Amend	Date	Description	By	Amend	Date	Description	By
P2	22/09/22	ALTERATIONS DUE TO COUNCIL COMMENTS	GBL				
P1	11/10/21	ORIGINAL ISSUE	GBL				

Approved for Construction:
[Signature]
Garth Dean
B.E. GDSTT FIEAust CPEng NER
APEC Engineer IntPE (Aus) RBP
(Vic/NT)

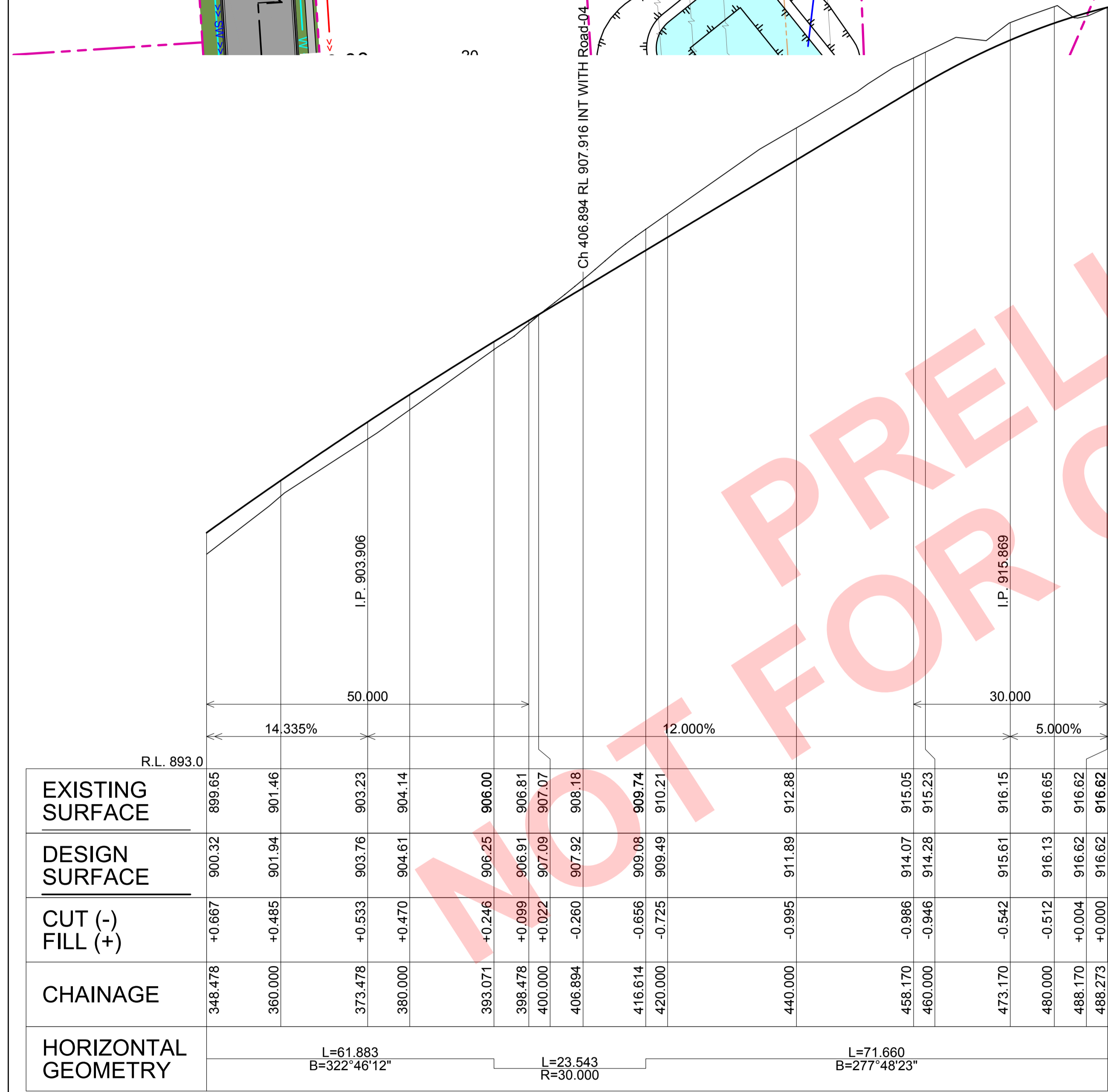
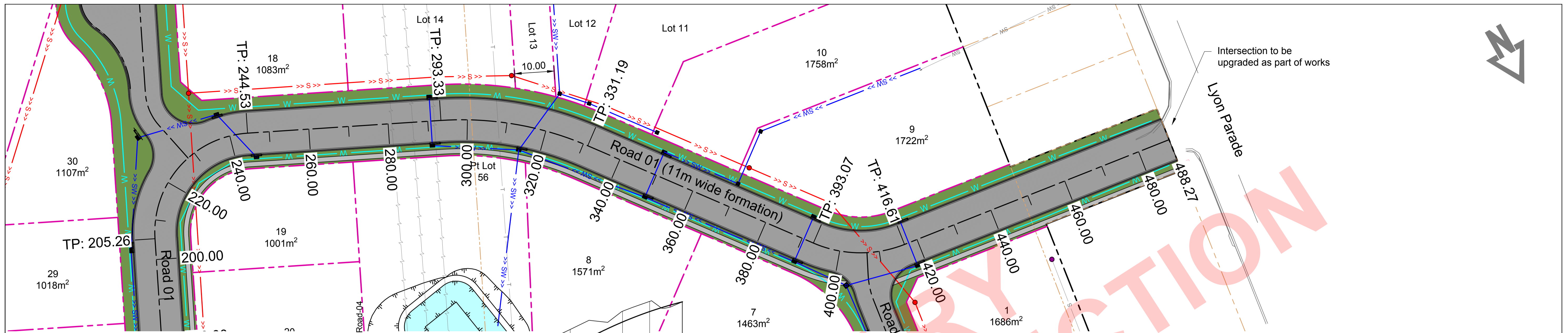
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Scale (A1): 1:500h 1:100v
Date: October 2021

Lot 1 DP 1253903
19 Barton Avenue
Wallerawang, NSW 2845
ROADS 01 & 03 - PRELIMINARY PLAN & LONG SECTION
Timberfix

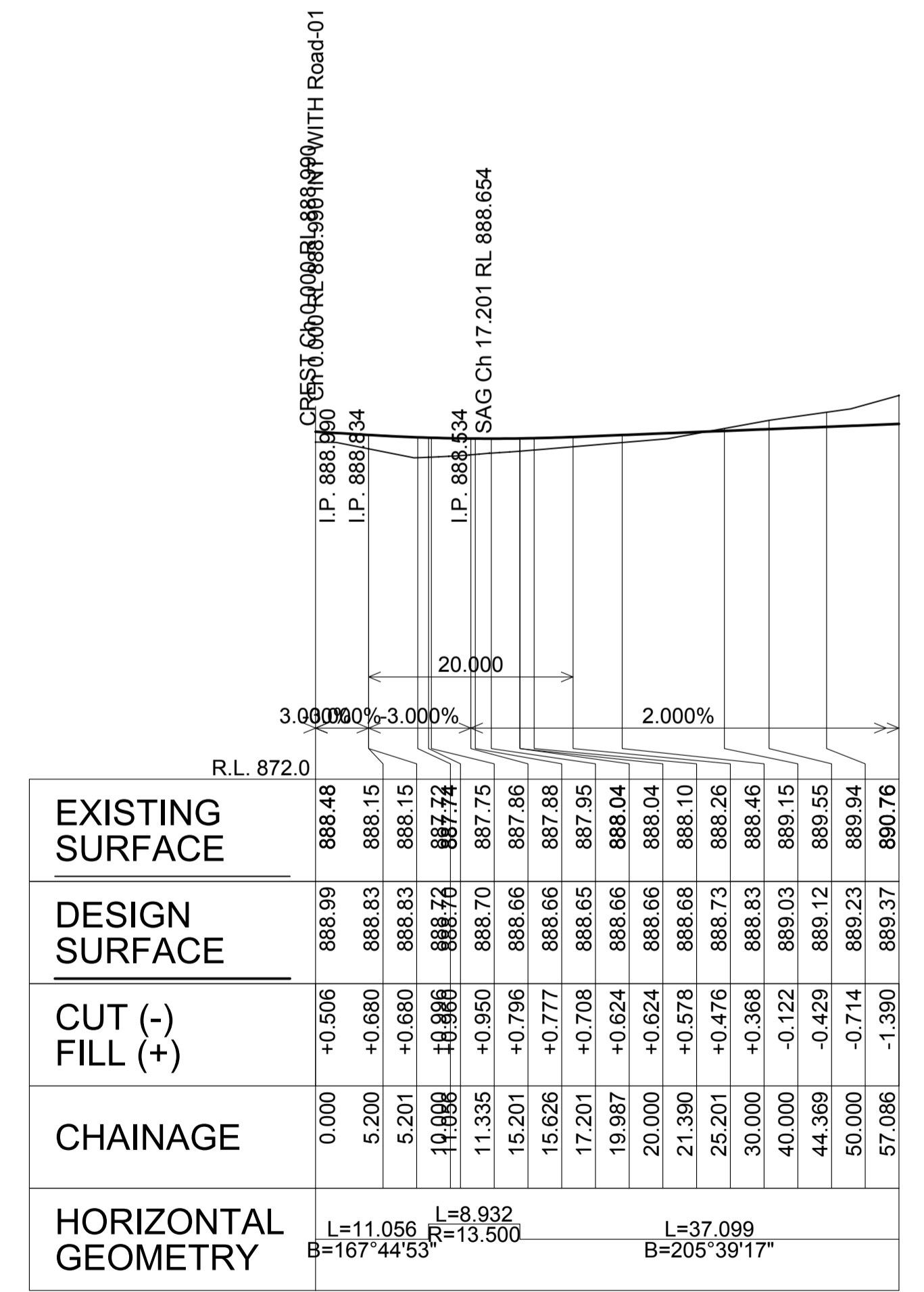
CALARE CIVIL
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170 RANKIN STREET,
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Tel: (02) 63323343 Fax: (02) 63318210

Job No.
2021.0574
DWG. No. Issue
R02 P1
No. in set
32

PRELIMINARY
Not for construction



LONGITUDINAL SECTION Road-01
SCALE 1:500 H 1:100 V



LONGITUDINAL SECTION Road-03
SCALE 1:500 H 1:250 V

PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022 - 09:50:50

Amend	Date	Description	By	Amend	Date	Description	By
P2	22/09/22	ALTERATIONS DUE TO COUNCIL COMMENTS	GBL				
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Scale (A1): 1:500h 1:250v
Date: October 2021

**PRELIMINARY
Not for construction**

...2021.0574-Civil-P2.dwg

Lot 1 DP 1253903
19 Barton Avenue
Wallerawang, NSW 2845

ROADS 01 & 03 - PRELIMINARY PLAN &
LONG SECTION

Timberfix

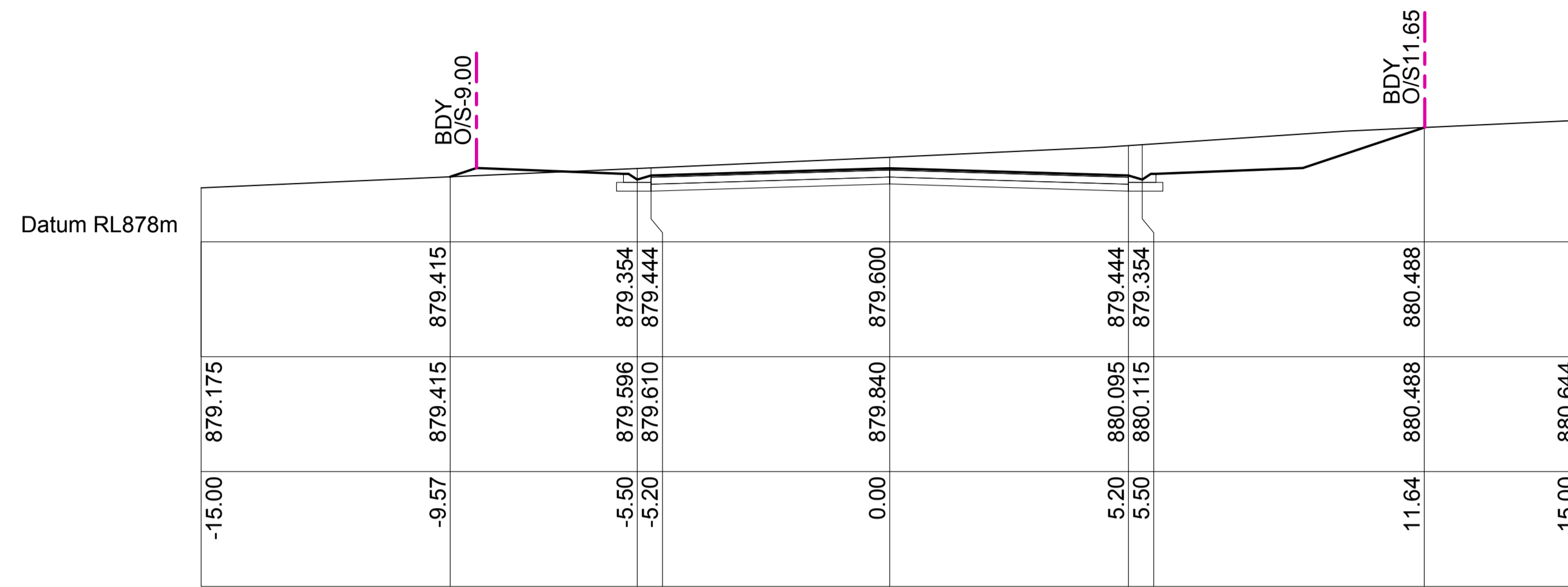
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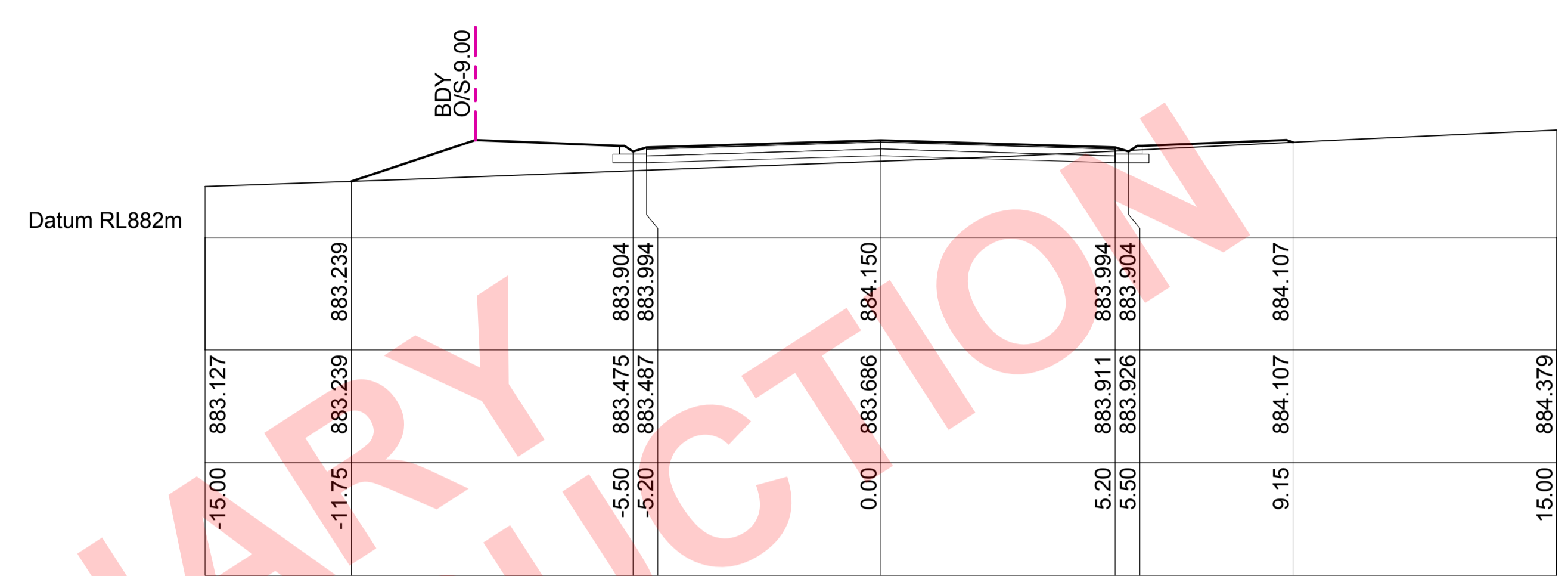
Job No.
2021.0574

DWG. No. Issue
R03 P1

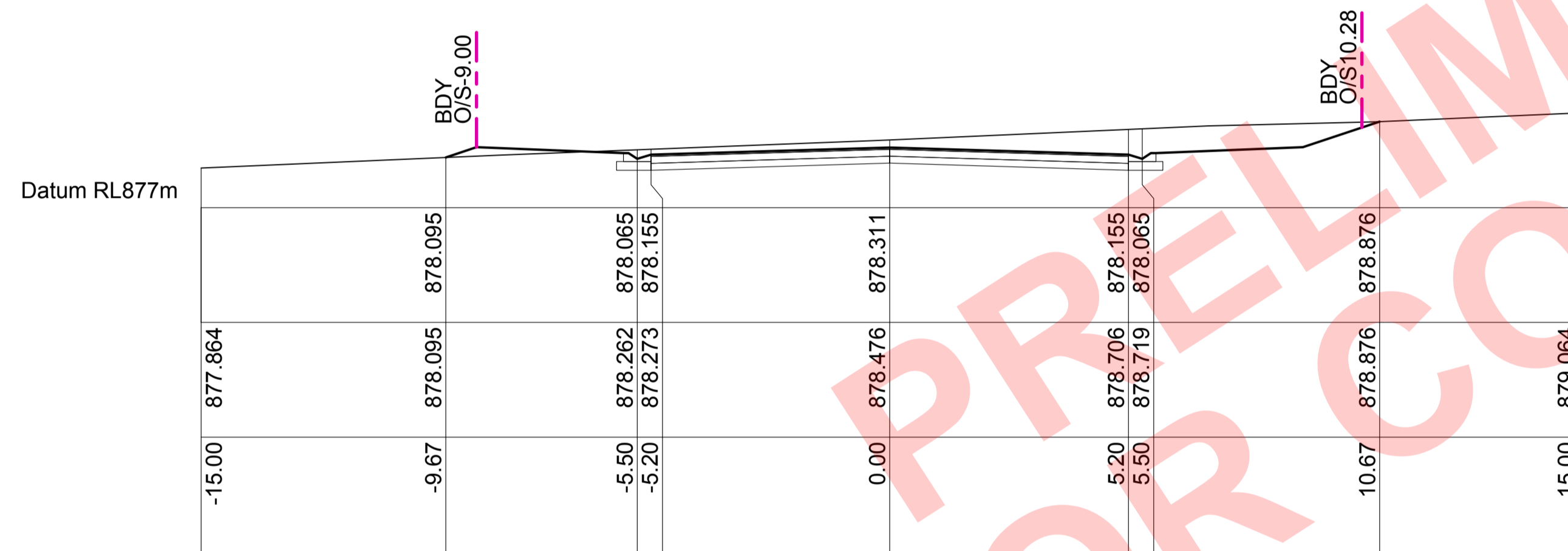
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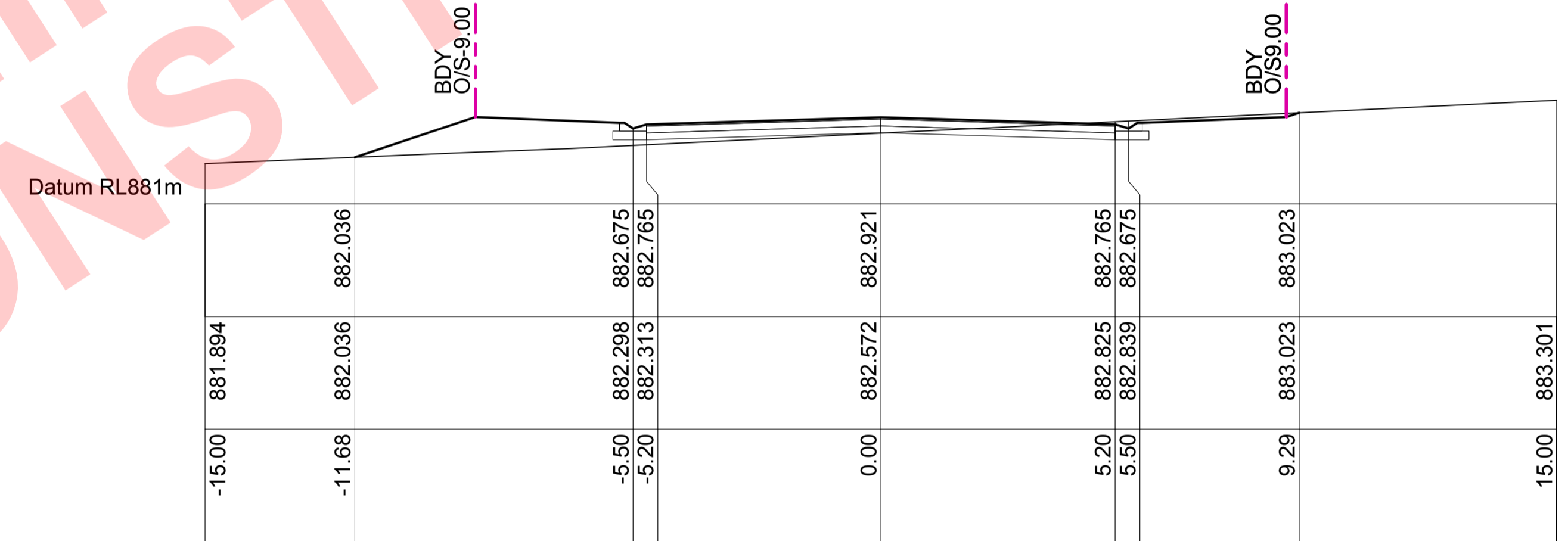
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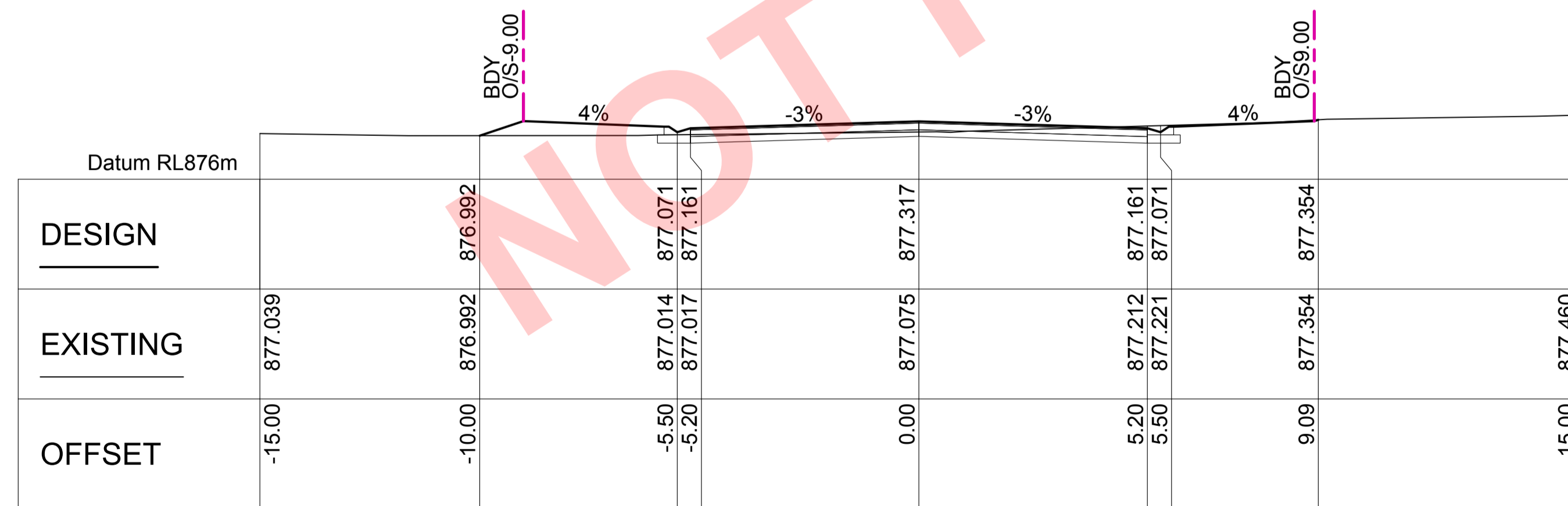
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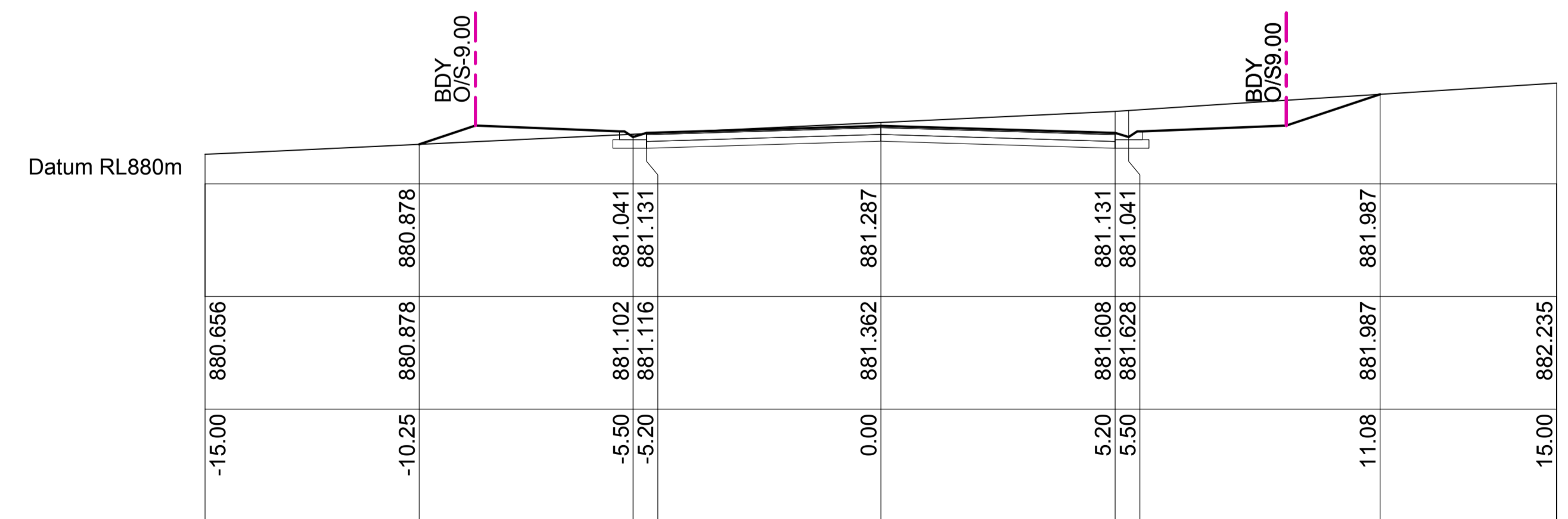
Ch 40.00 m



Ch 100.00 m



Scale 1:100
Ch 20.00 m



Ch 80.00 m

PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022 - 09:50:53

Amend	Date	Description	By	Amend	Date	Description	By
P2	22/09/22	ALTERATIONS DUE TO COUNCIL COMMENTS	GBL				
P1	11/10/21	ORIGINAL ISSUE	GBL				

Approved for Construction:
[Signature]
Garth Dean
B.E. GDSTT FIEAust CPEng NER
APEC Engineer IntPE (Aus) RBP
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Scale (A1): 1:100
Date: October 2021

**PRELIMINARY
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...2021.0574-Civil-P2.dwg

Lot 1 DP 1253903
19 Barton Avenue
Wallerawang, NSW 2845

ROAD 01 - PRELIMINARY
CROSS SECTIONS

Timberfix

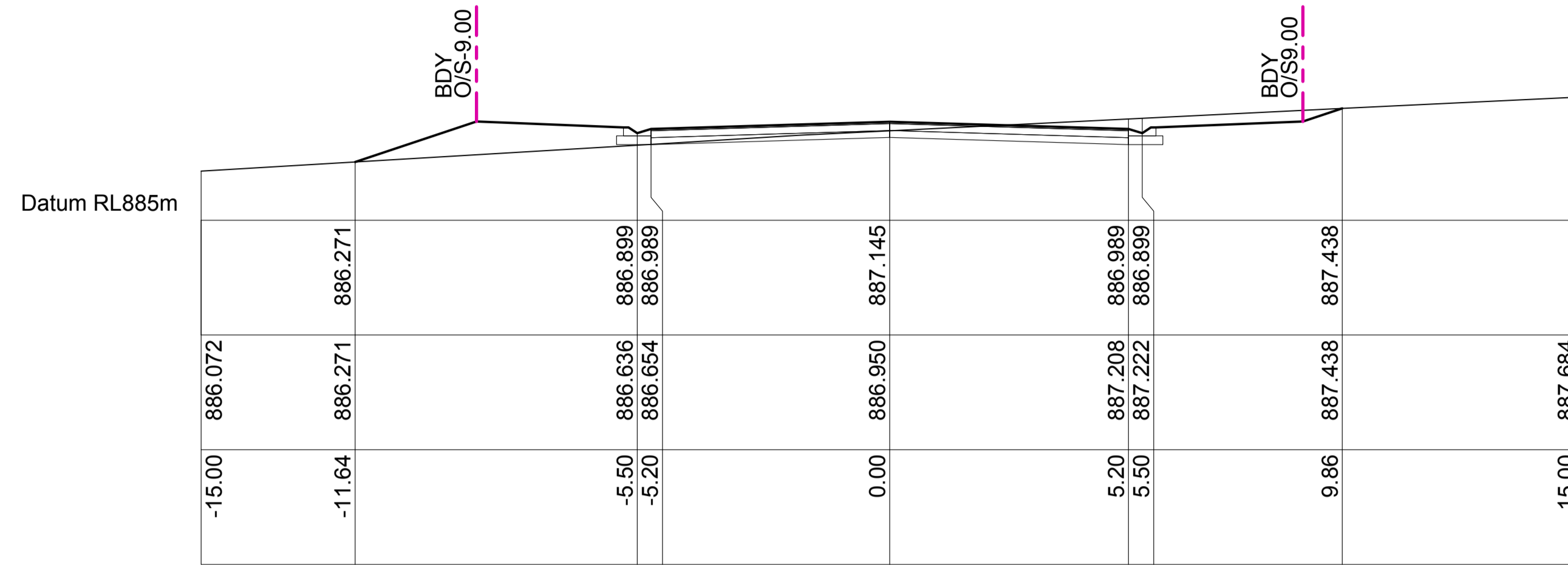
CALARE CIVIL
CONSULTING ENGINEERS

170 RANKIN STREET,
BATHURST, N.S.W. 2795
Tel: (02) 63323343 Fax: (02) 63318210

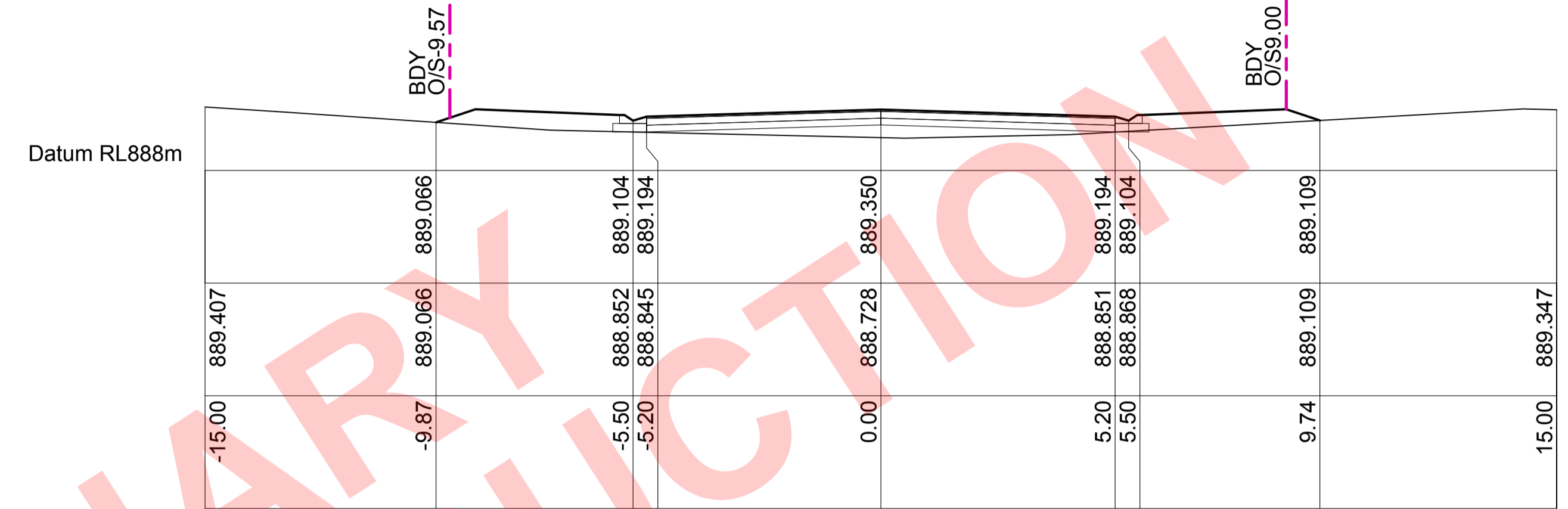
Job No.
2021.0574

DWG. No. Issue
R04 P1

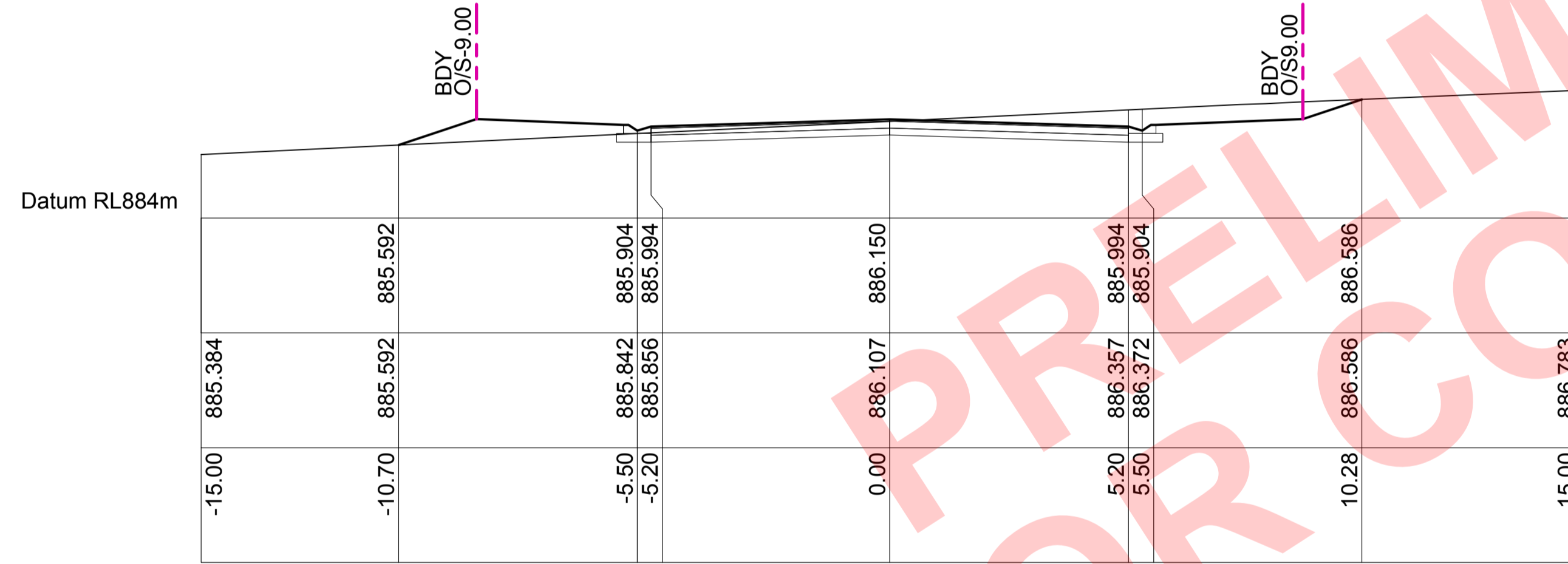
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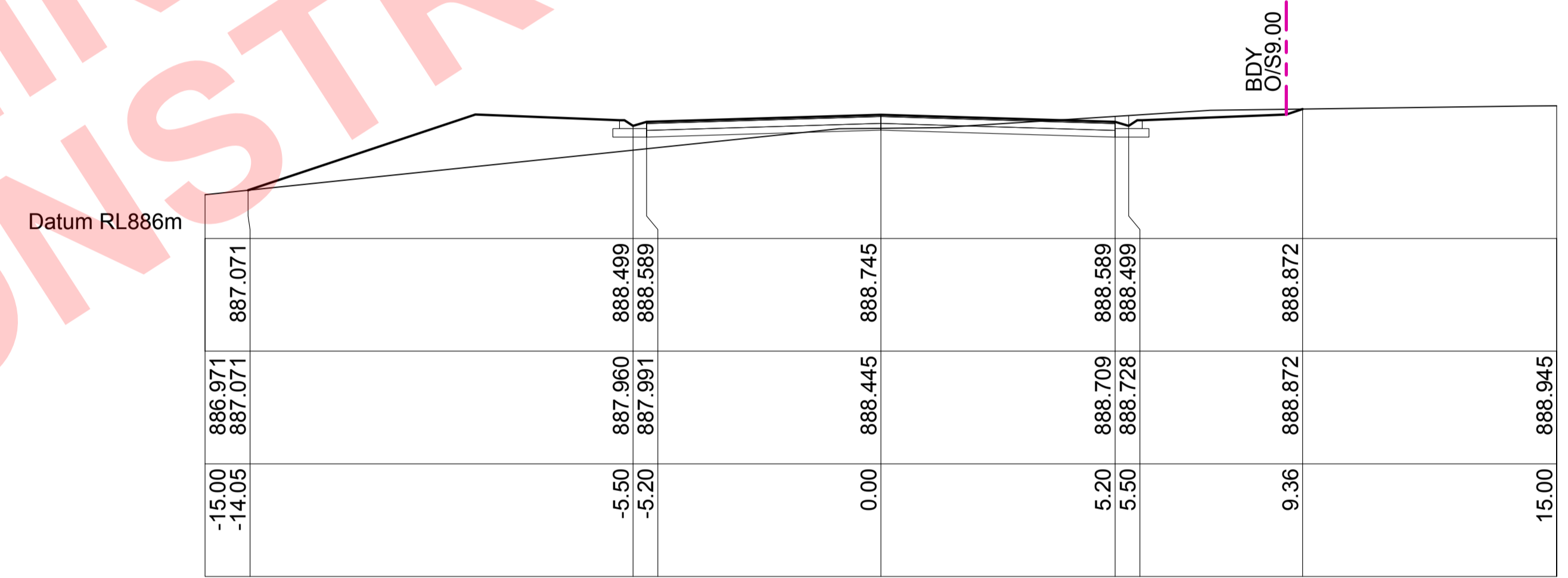
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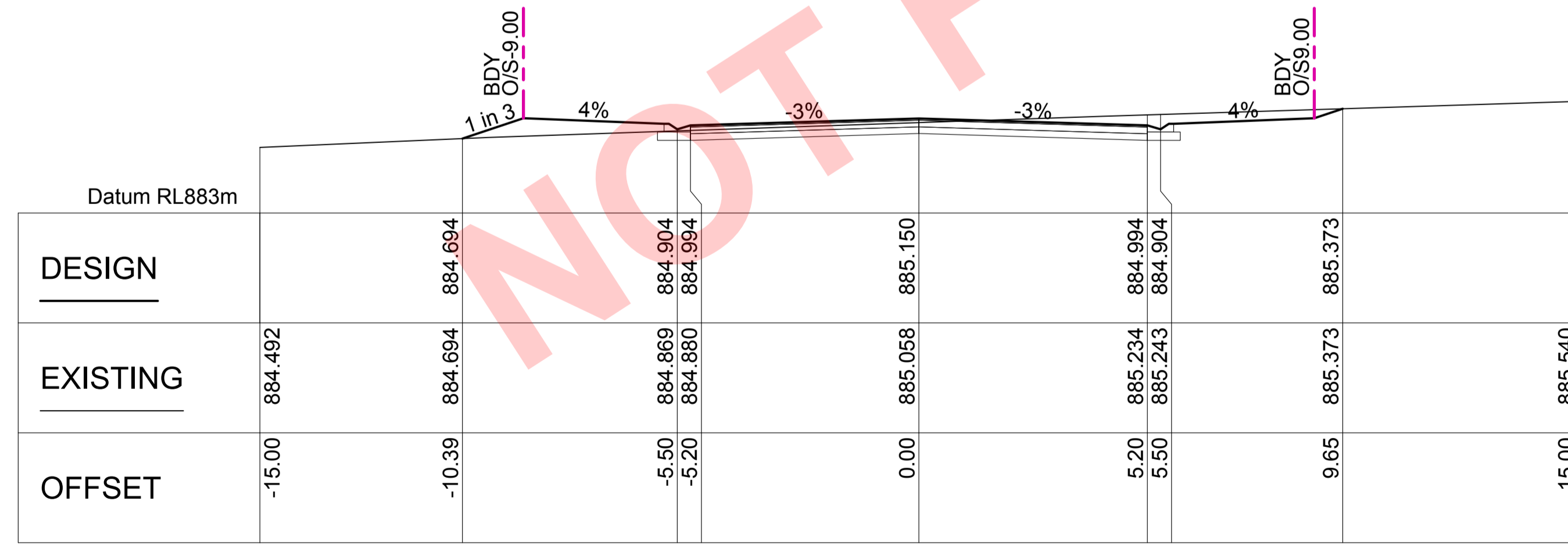
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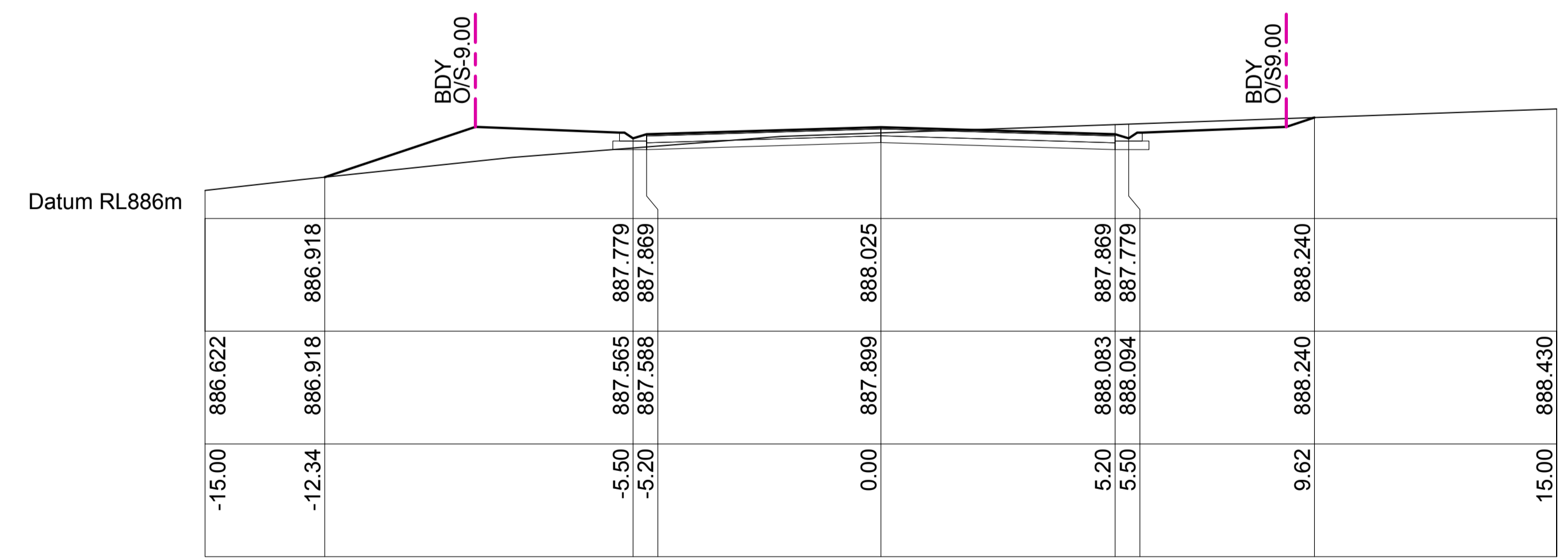
Ch 160.00 m



Ch 220.00 m



Scale 1:100
Ch 140.00 m



Ch 200.00 m

PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022 - 09:50:55

Amend	Date	Description	By	Amend	Date	Description	By
P2	22/09/22	ALTERATIONS DUE TO COUNCIL COMMENTS	GBL				
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Approved for Construction:
[Signature]
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Date: October 2021

**PRELIMINARY
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Lot 1 DP 1253903
19 Barton Avenue
Wallerawang, NSW 2845

ROAD 01 - PRELIMINARY
CROSS SECTIONS

Timberfix

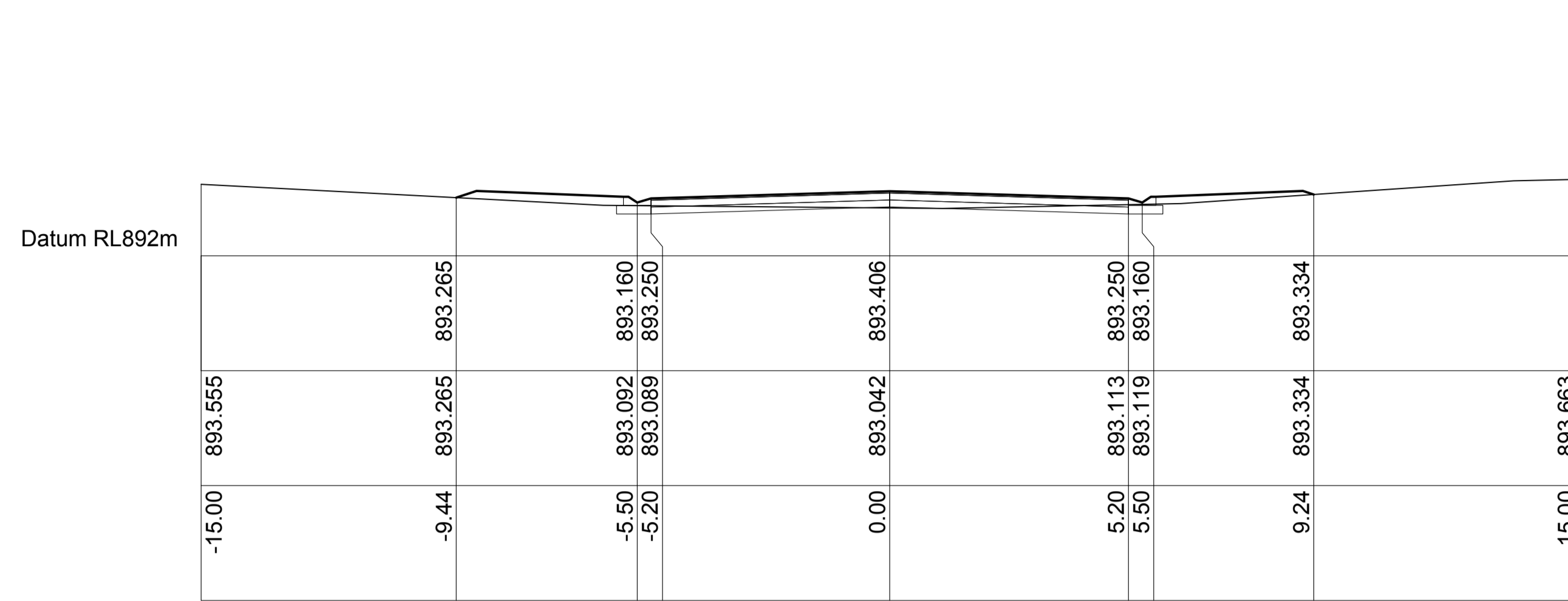
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Tel: (02) 63323343 Fax: (02) 63318210

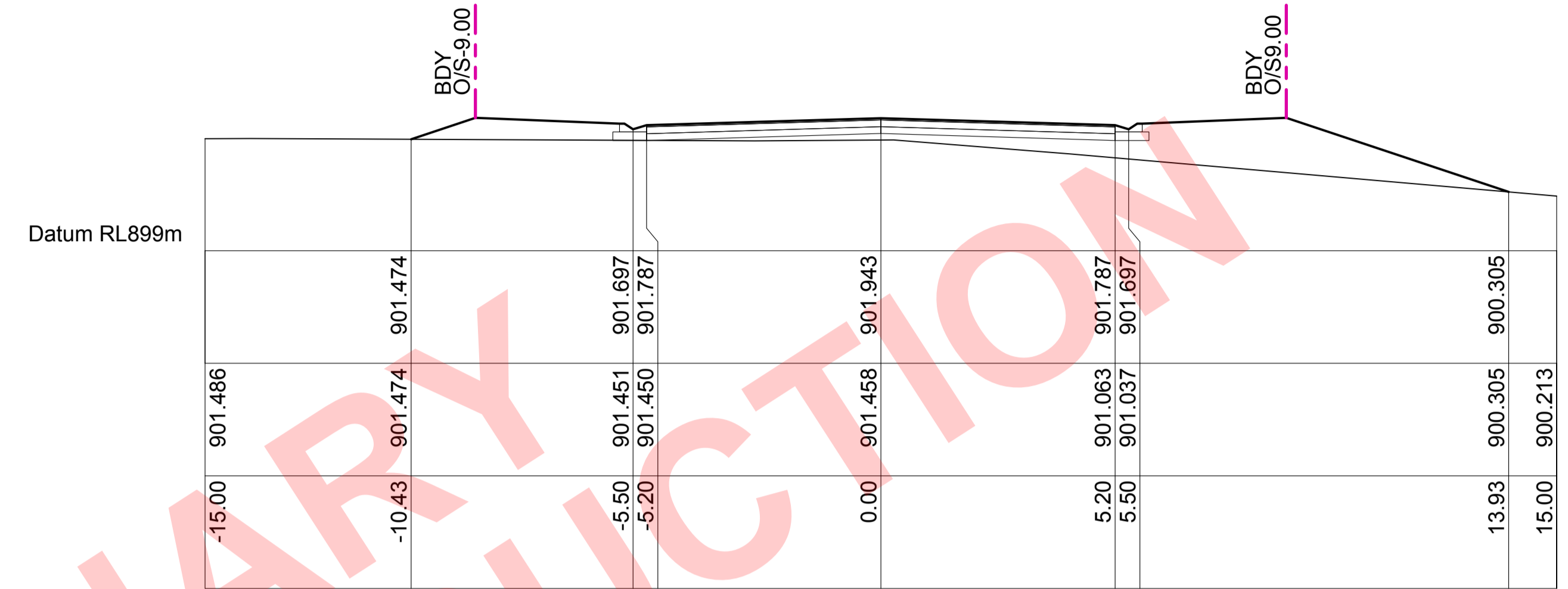
Job No.
2021.0574

DWG. No. Issue
R05 P1

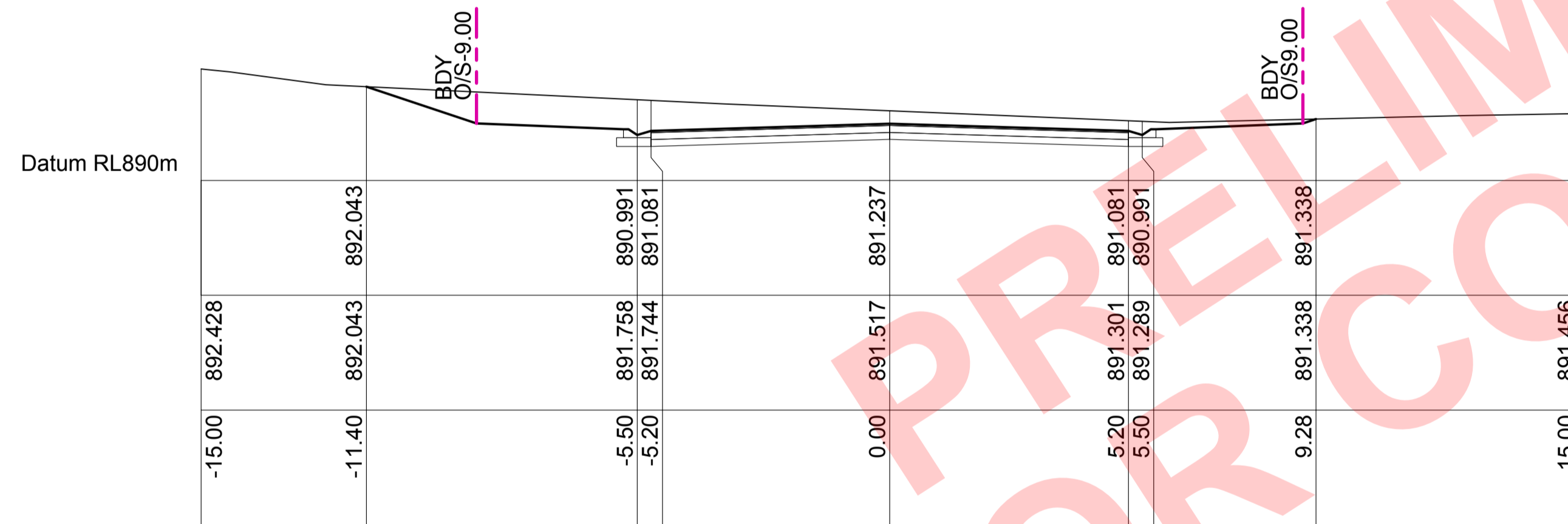
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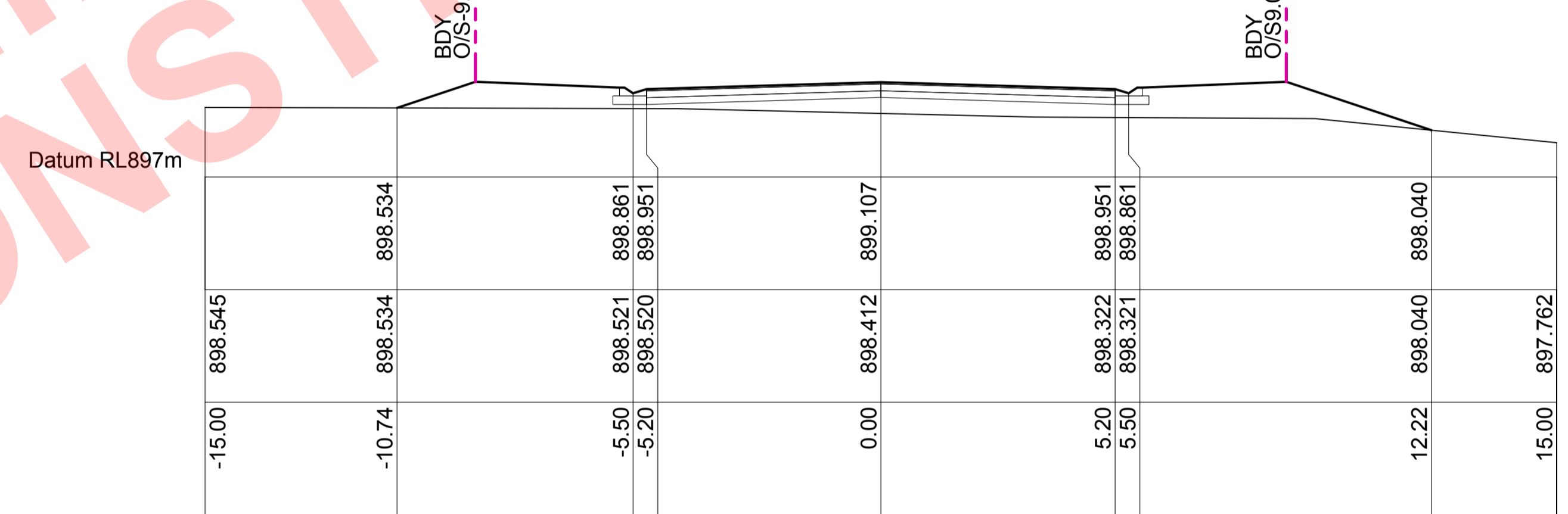
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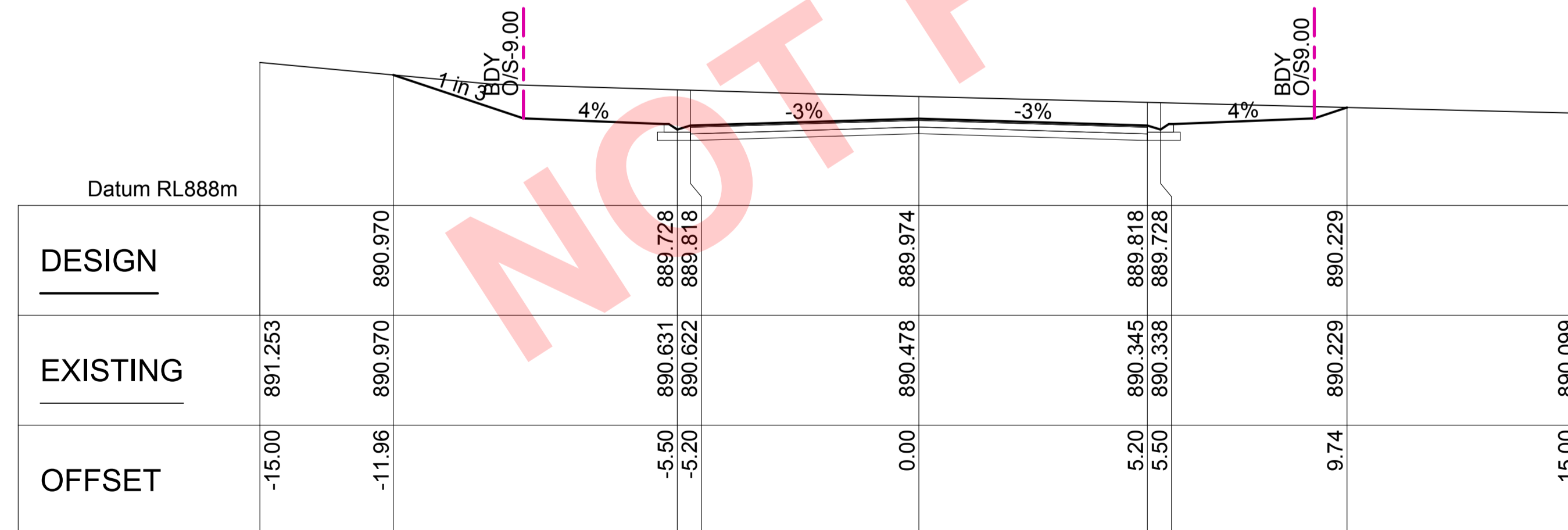
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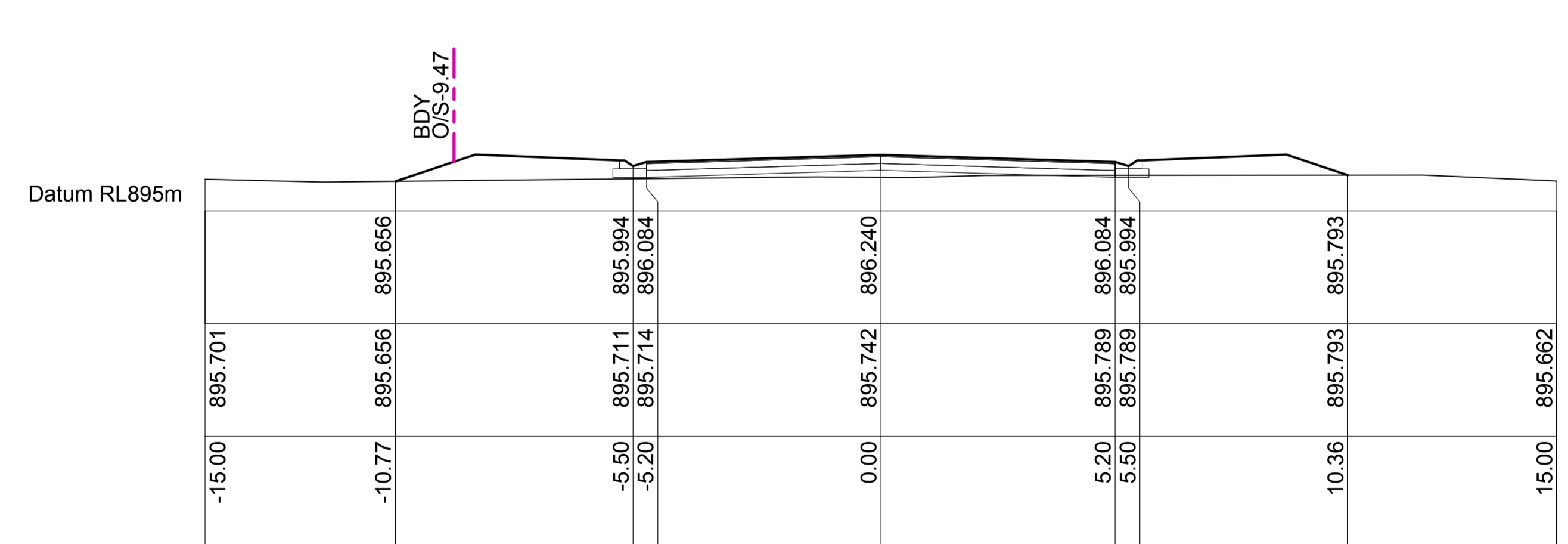
Ch 280.00 m



Ch 340.00 m



Scale 1:100
Ch 260.00 m



Ch 320.00 m

PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022 - 09:50:58

Amend	Date	Description	By	Amend	Date	Description	By
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Scale (A1): 1:100
Date: October 2021

**PRELIMINARY
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Lot 1 DP 1253903
19 Barton Avenue
Wallerawang, NSW 2845

ROAD 01 - PRELIMINARY
CROSS SECTIONS

Timberfix

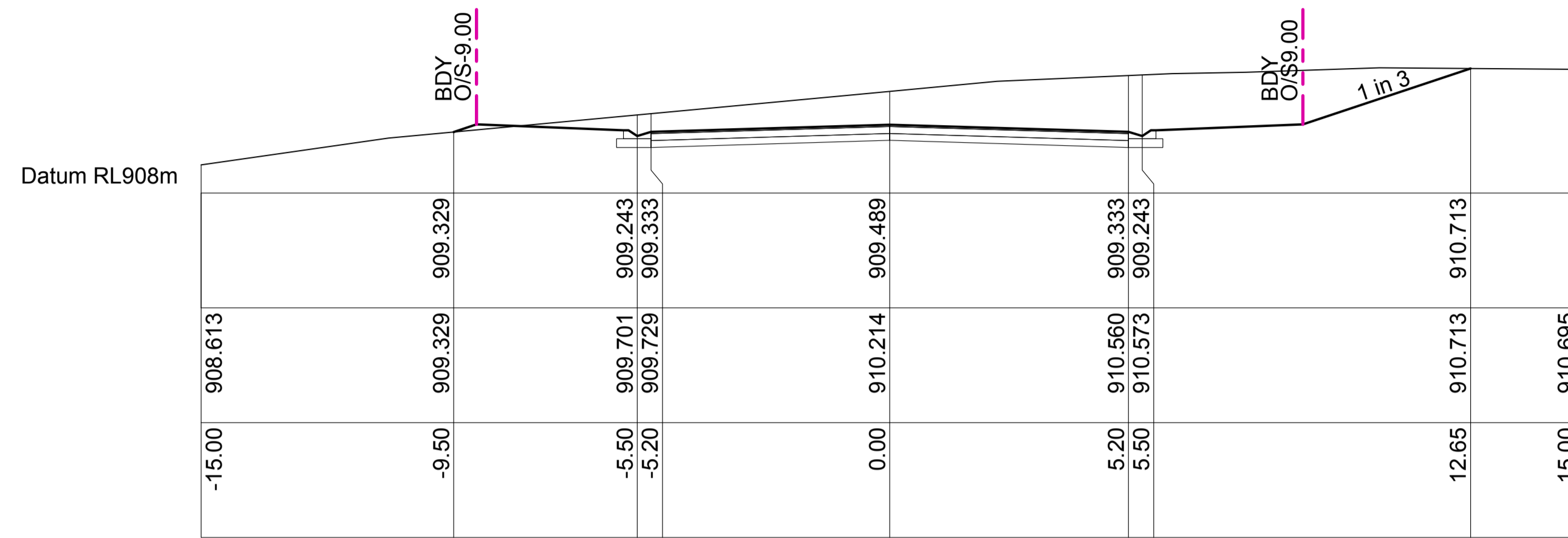
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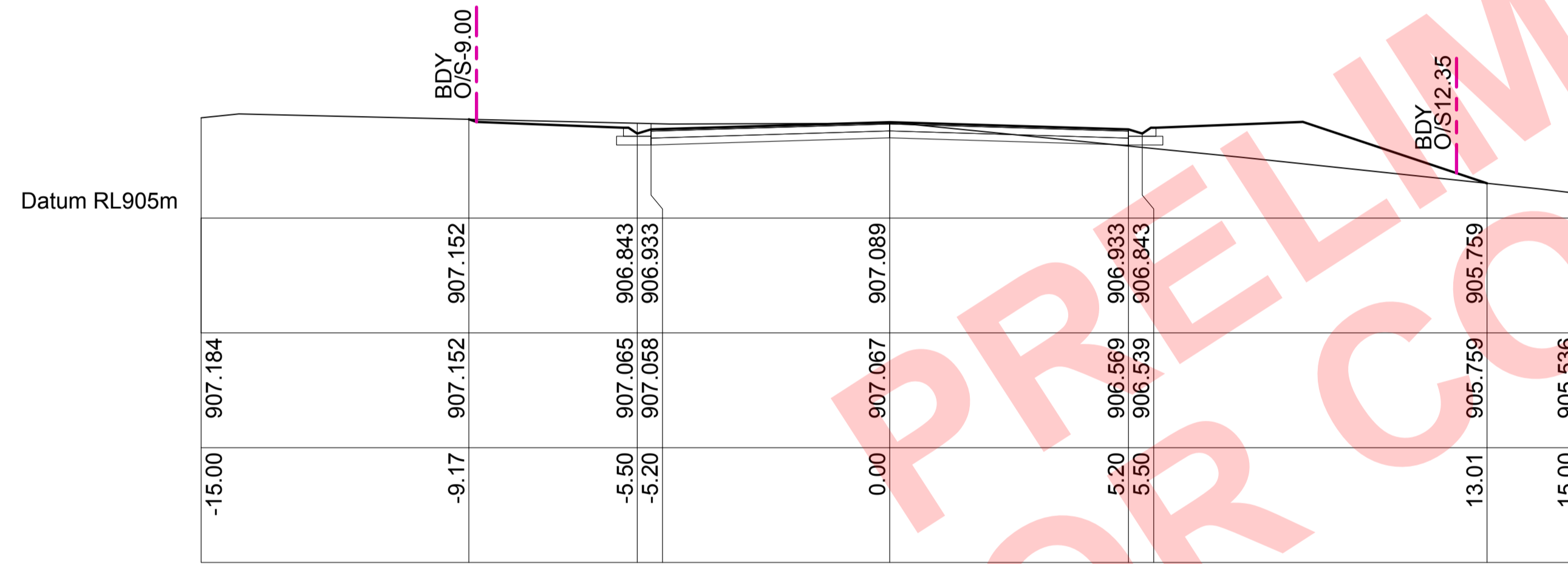
Job No.
2021.0574

DWG. No. Issue
R06 P1

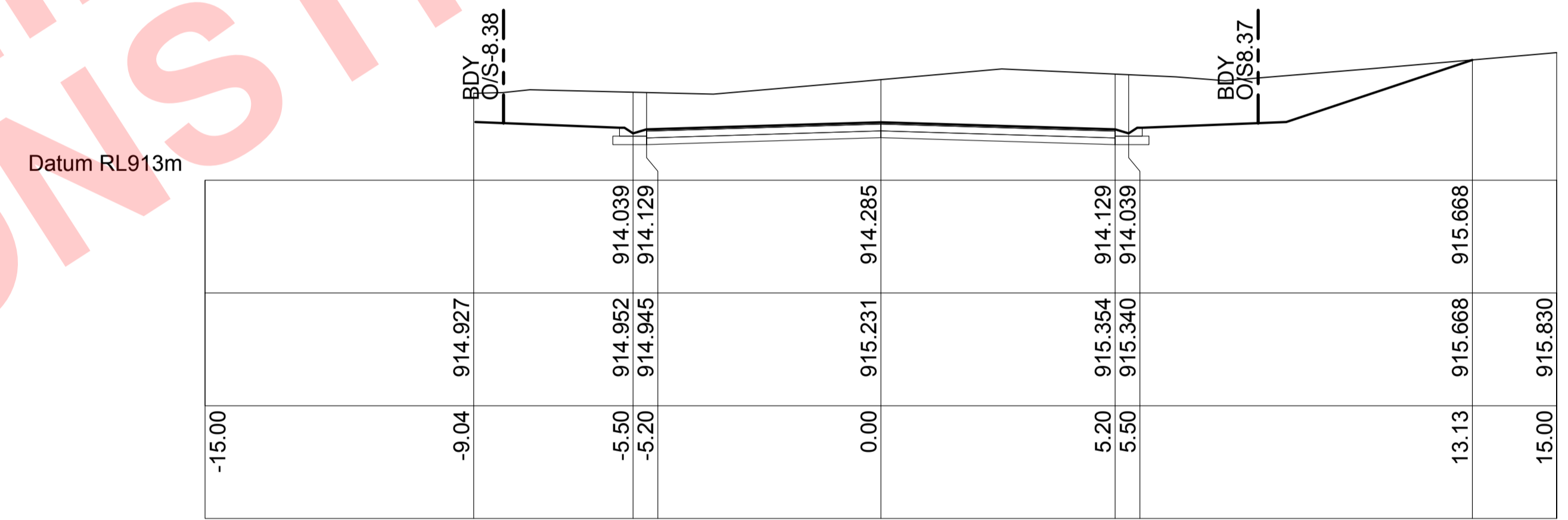
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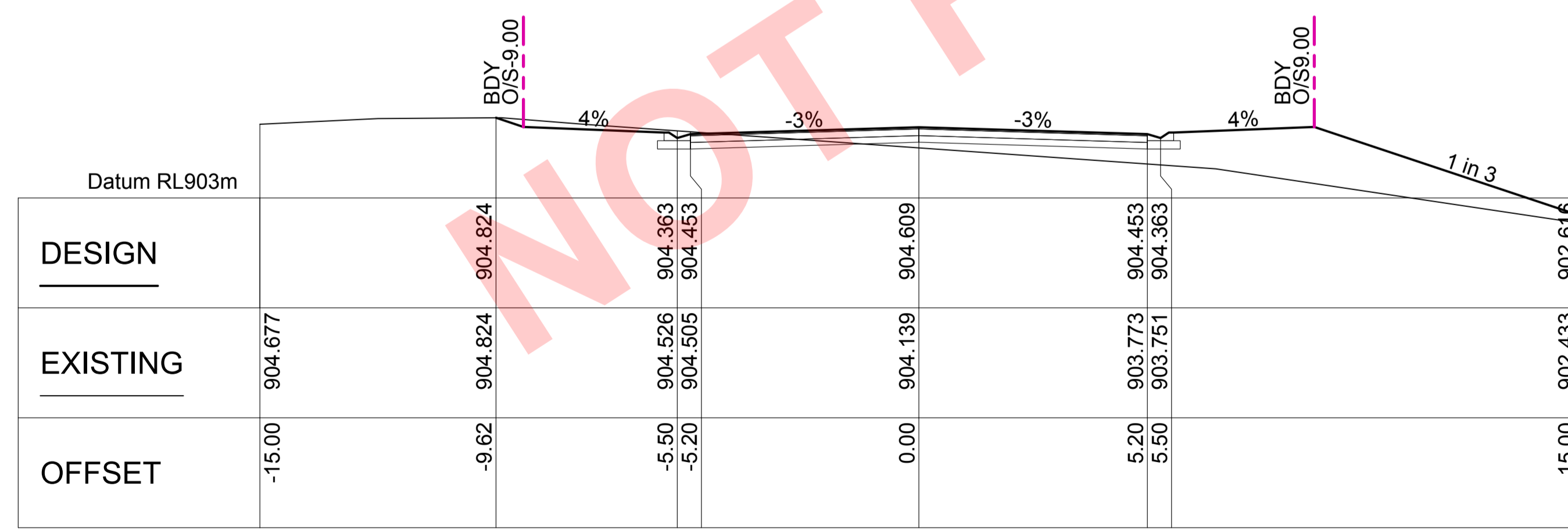
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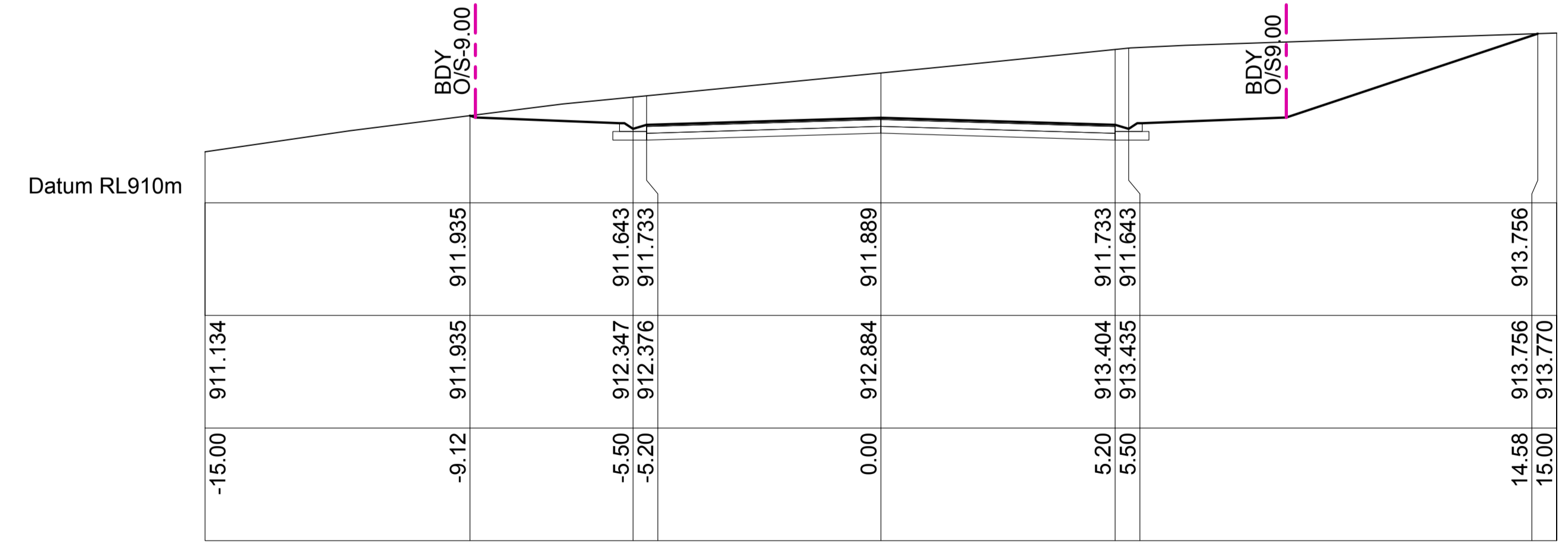
Ch 400.00 m



Ch 460.00 m



Scale 1:100
Ch 380.00 m



Ch 440.00 m

PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022 - 09:51:04

Amend	Date	Description	By	Amend	Date	Description	By
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Date: October 2021

**PRELIMINARY
Not for construction**

...2021.0574-Civil-P2.dwg

Lot 1 DP 1253903
19 Barton Avenue
Wallerawang, NSW 2845

ROAD 01 - PRELIMINARY
CROSS SECTIONS

Timberfix

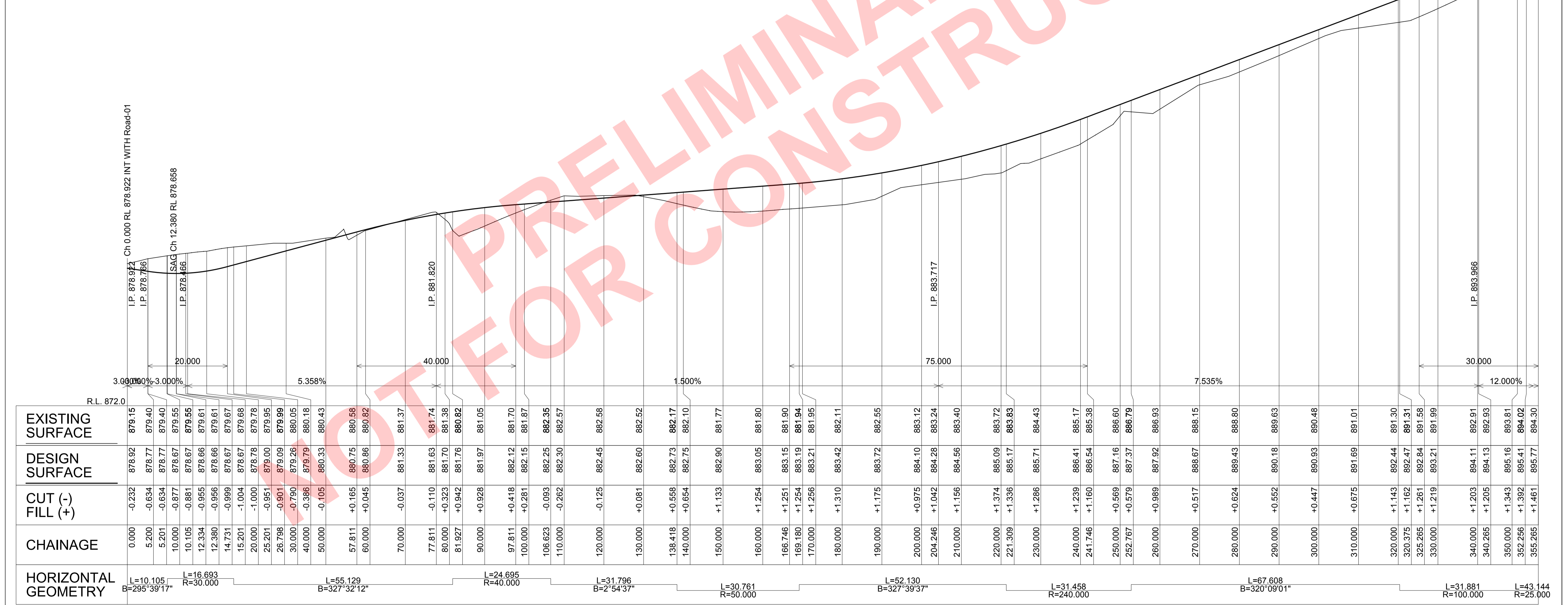
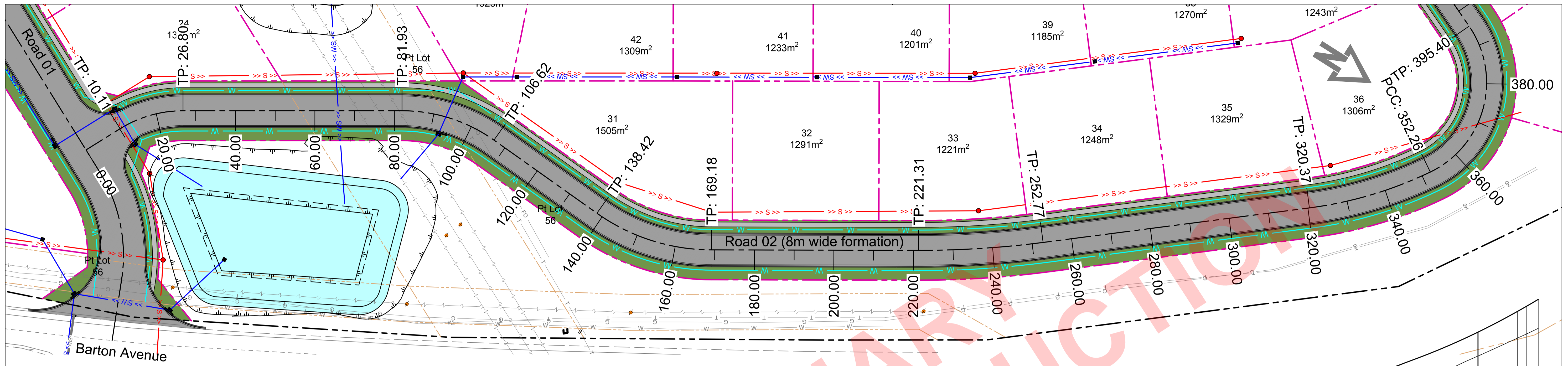
CALARE CIVIL
CONSULTING ENGINEERS

170 RANKIN STREET,
BATHURST, N.S.W. 2795
Tel: (02) 63323343 Fax: (02) 63318210

Job No.
2021.0574

DWG. No. Issue
R07 P1

No. in set
32



LONGITUDINAL SECTION Road-02
SCALE 1:500 H 1:100 V

PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022 - 09:51:09

Amend	Date	Description	By	Amend	Date	Description	By
P2	22/09/22	ALTERATIONS DUE TO COUNCIL COMMENTS	GBL				
P1	11/10/21	ORIGINAL ISSUE	GBL				

Approved for Construction:
[Signature]
Garth Dean
B.E. GDSTT FIEAust CPEng NER
APEC Engineer IntPE (Aus) RBP
(Vic/NT)

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Drawn: GBL
Designed: GBL
Checked: ...
Scale (A1): 1:500h 1:100v
Date: October 2021

**PRELIMINARY
Not for construction**

Lot 1 DP 1253903
19 Barton Avenue
Wallerawang, NSW 2845

ROAD 02 - PRELIMINARY PLAN &
LONG SECTION

Timberfix

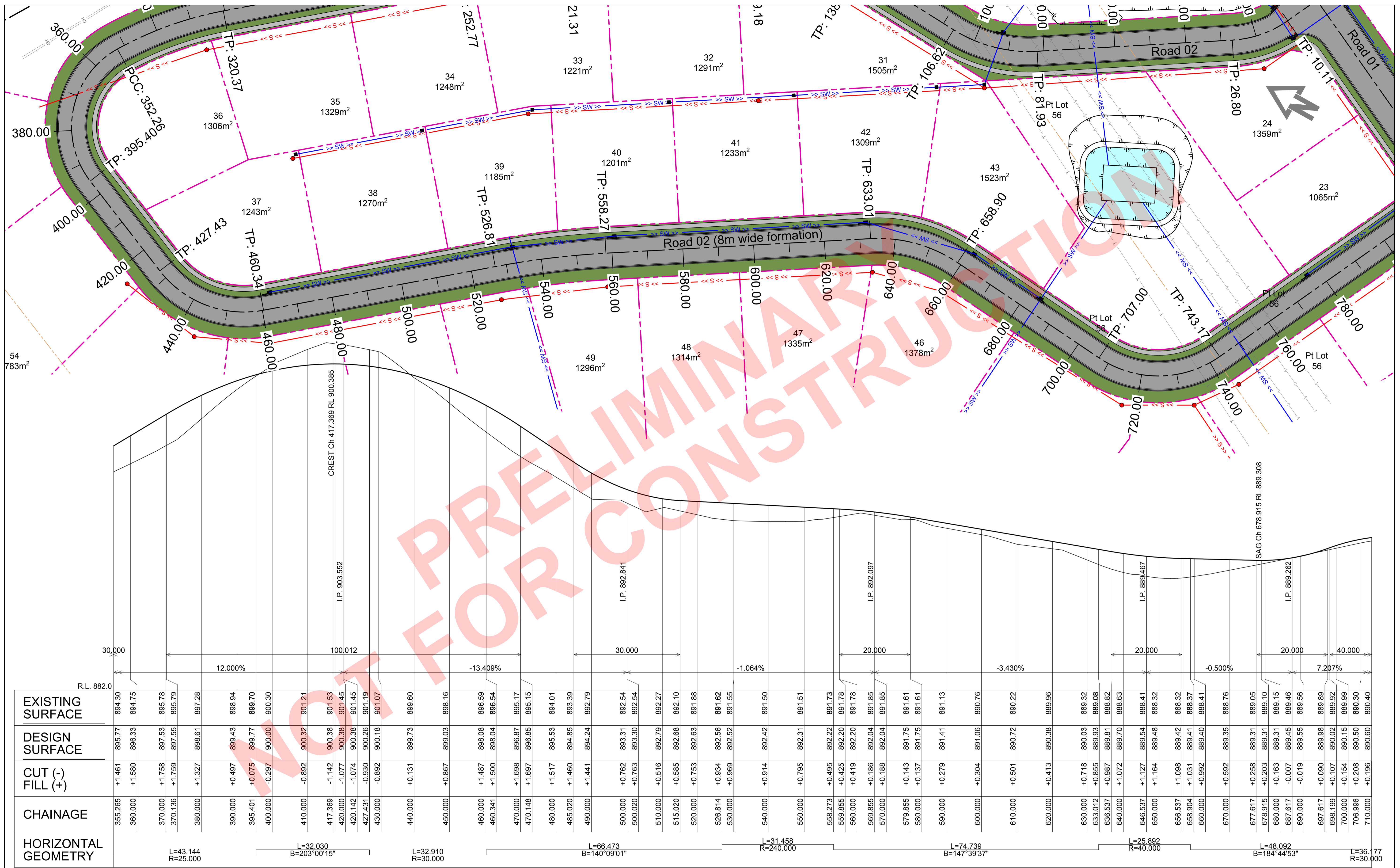
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BATHURST, N.S.W. 2795
Tel: (02) 63323343 Fax: (02) 63318210

Job No.
2021.0574

DWG. No. Issue
R08 P1

No. in set
32



LONGITUDINAL SECTION Road-02
SCALE 1:500 H 1:100 V

PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022 - 09:51:14

Amend	Date	Description	By	Amend	Date	Description	By
P2	22/09/22	ALTERATIONS DUE TO COUNCIL COMMENTS	GBL				
P1	11/10/21	ORIGINAL ISSUE	GBL				

Approved for Construction:
[Signature]
Garth Dean
B.E. GDSTT FIEAust CPEng NER
APECE Engineer IntPE (Aus) RBP
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Drawn: GBL
Designed: GBL
Checked: ...
Scale (A1): 1:500h 1:100v
Date: October 2021

**PRELIMINARY
Not for construction**

...2021.0574-Civil-P2.dwg

Lot 1 DP 1253903
19 Barton Avenue
Wallerawang, NSW 2845

ROAD 02 - PRELIMINARY PLAN &
LONG SECTION

Timberfix

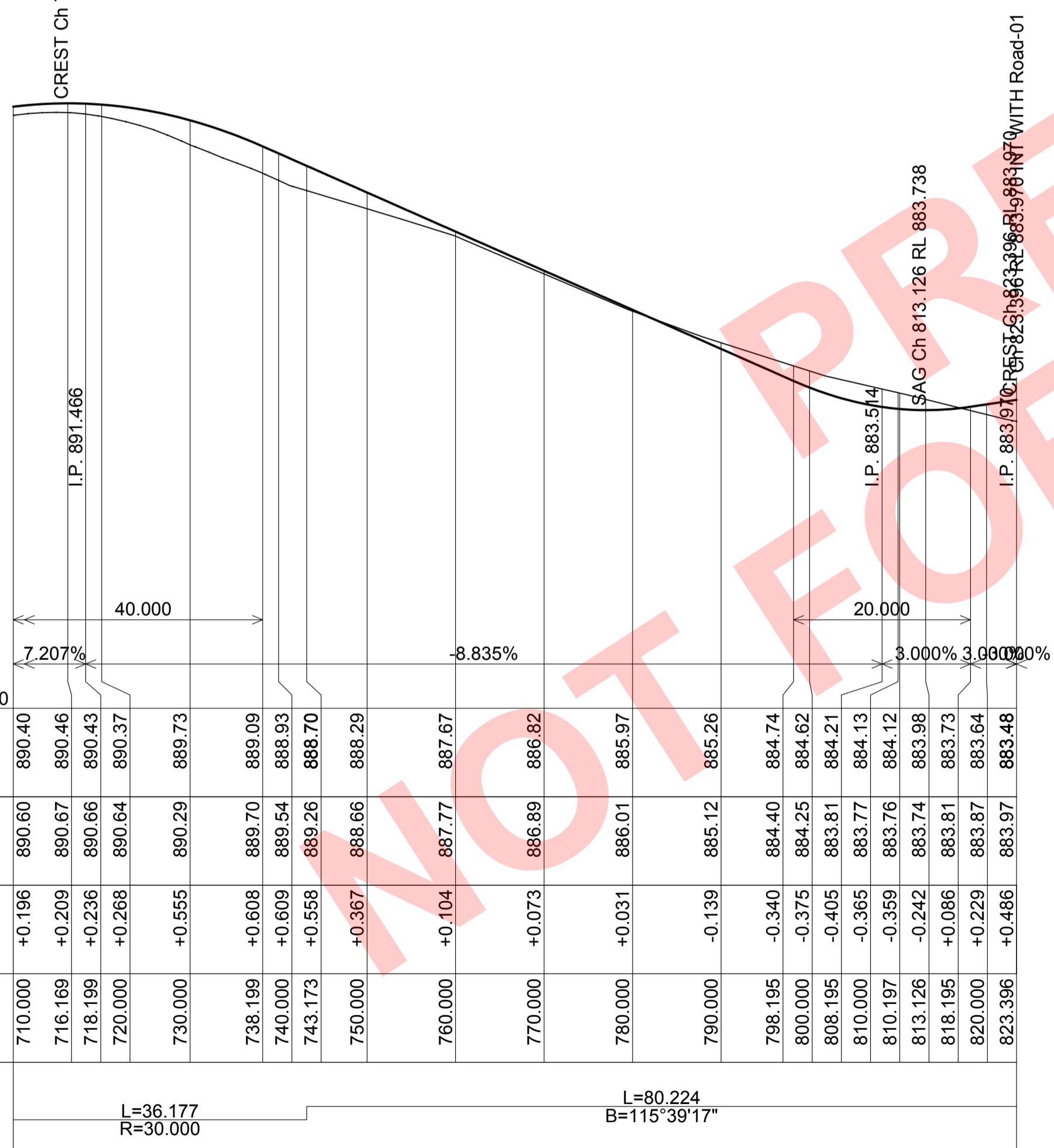
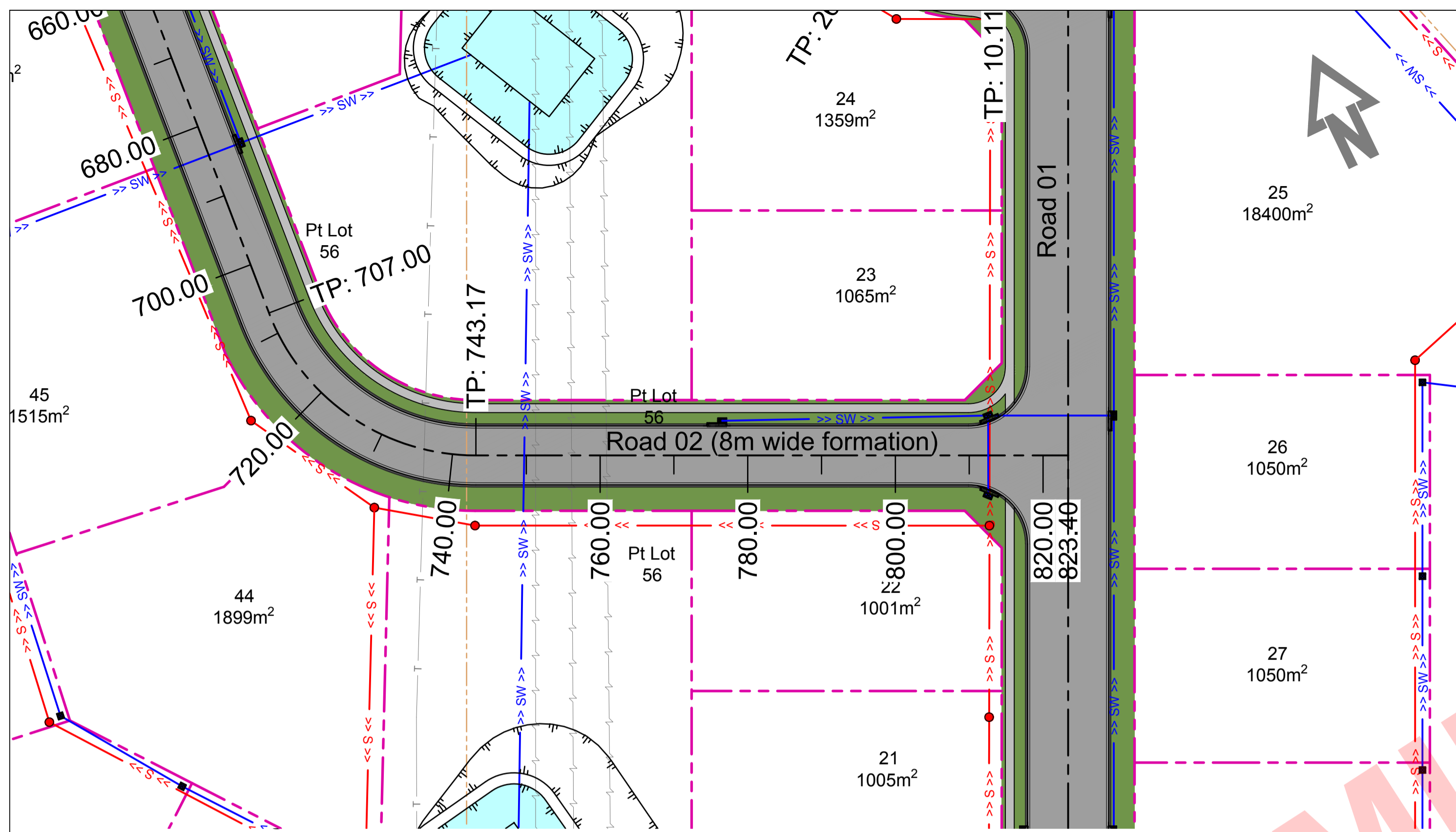
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Job No.
2021.0574

DWG. No. Issue
R09 P1

No. in set
32



LONGITUDINAL SECTION Road-02
SCALE 1:500 H 1:100 V

PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022 - 09:51:19

Amend	Date	Description	By	Amend	Date	Description	By
P2	22/09/22	ALTERATIONS DUE TO COUNCIL COMMENTS	GBL				
P1	11/10/21	ORIGINAL ISSUE	GBL				

Approved for Construction:
[Signature]
Garth Dean
B.E. GDSTT FIEAust CPEng NER
APEC Engineer IntPE (Aus) RBP
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Drawn: GBL
Designed: GBL
Checked: ...
Scale (A1): 1:500h 1:100v
Date: October 2021

**PRELIMINARY
Not for construction**

...2021.0574-Civil-P2.dwg

Lot 1 DP 1253903
19 Barton Avenue
Wallerawang, NSW 2845

ROAD 02 - PRELIMINARY PLAN &
LONG SECTION

Timberfix

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CONSULTING ENGINEERS

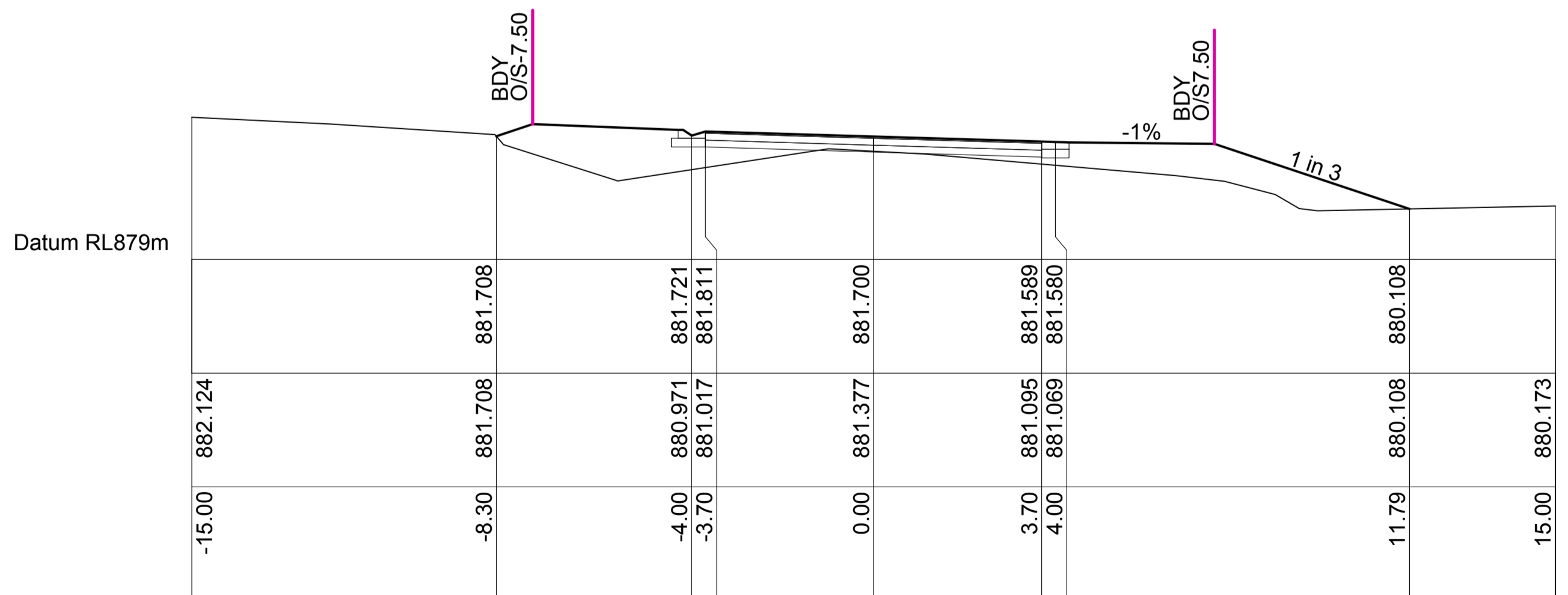
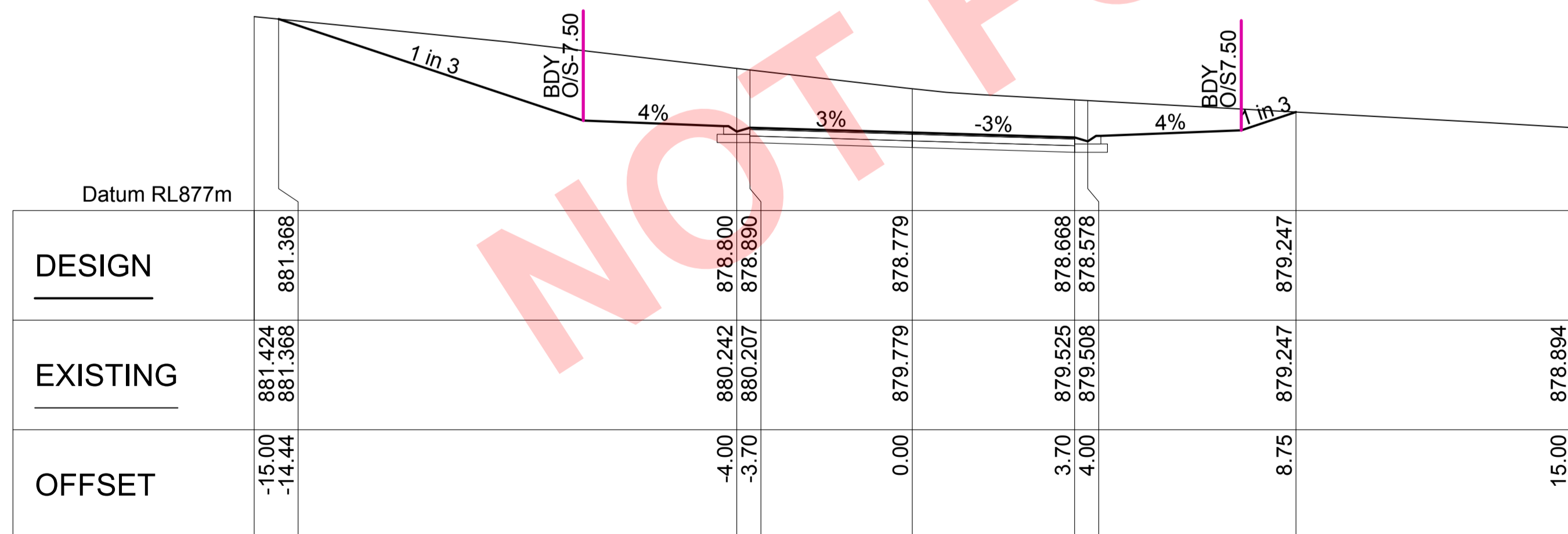
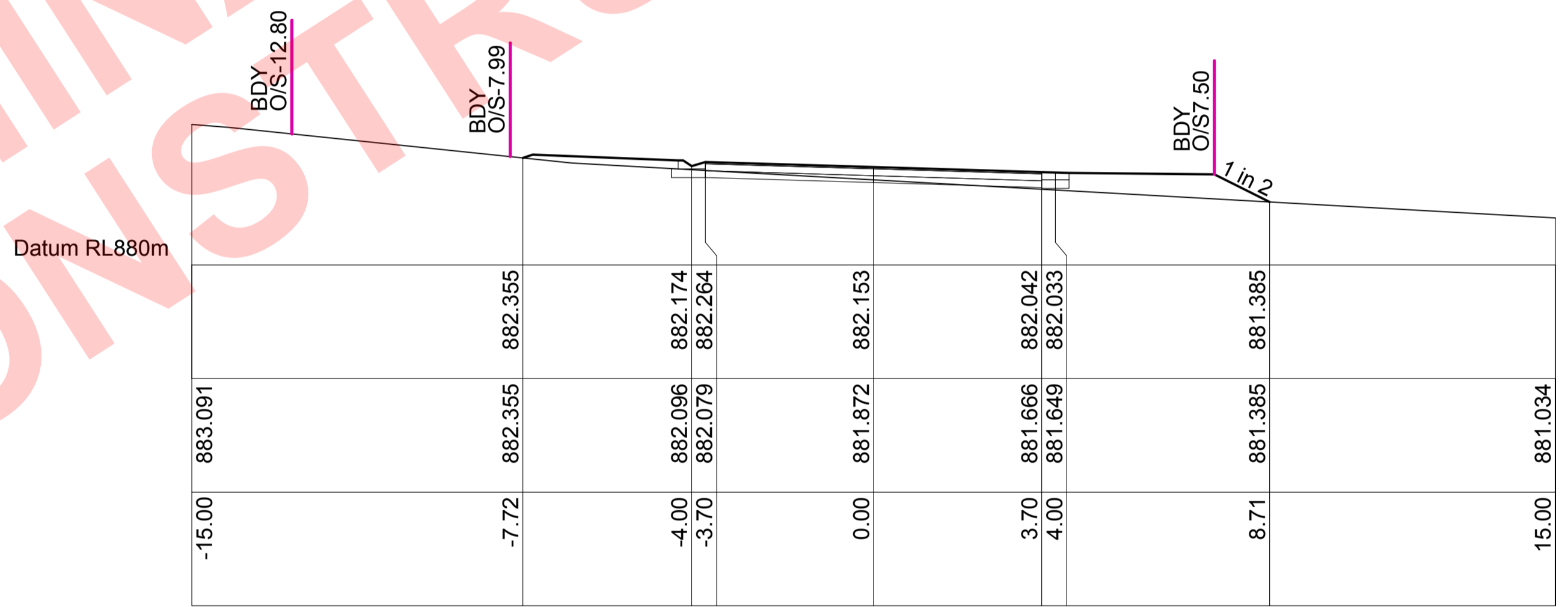
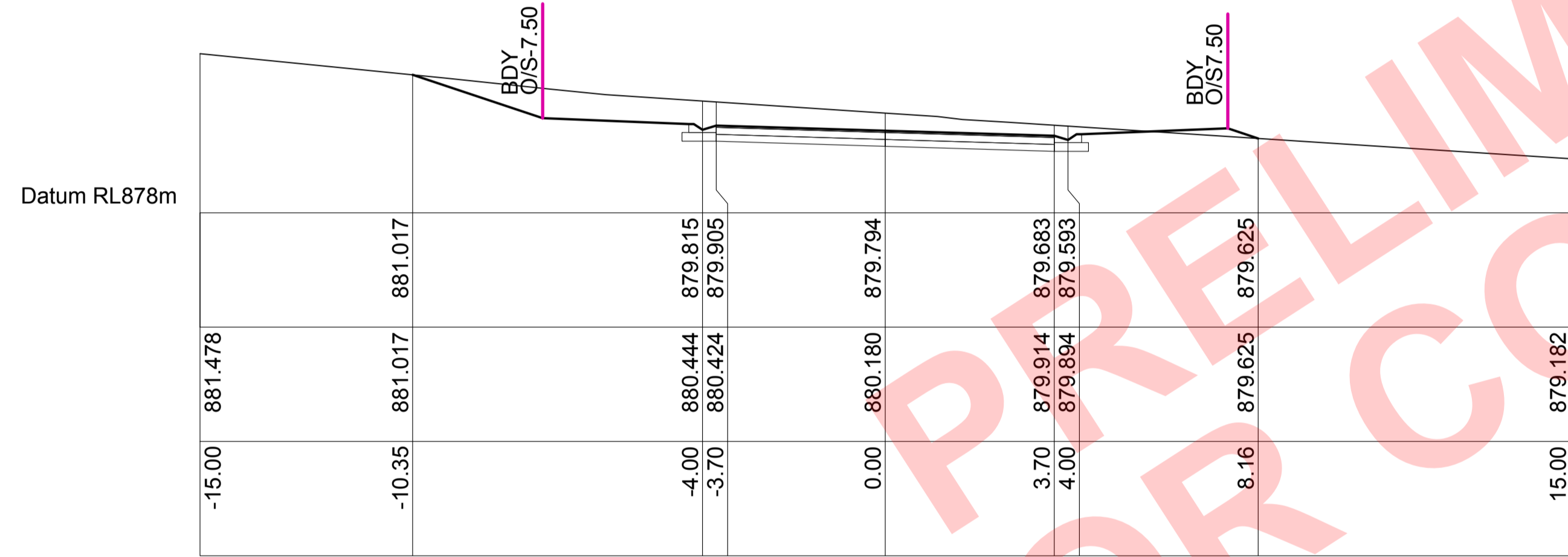
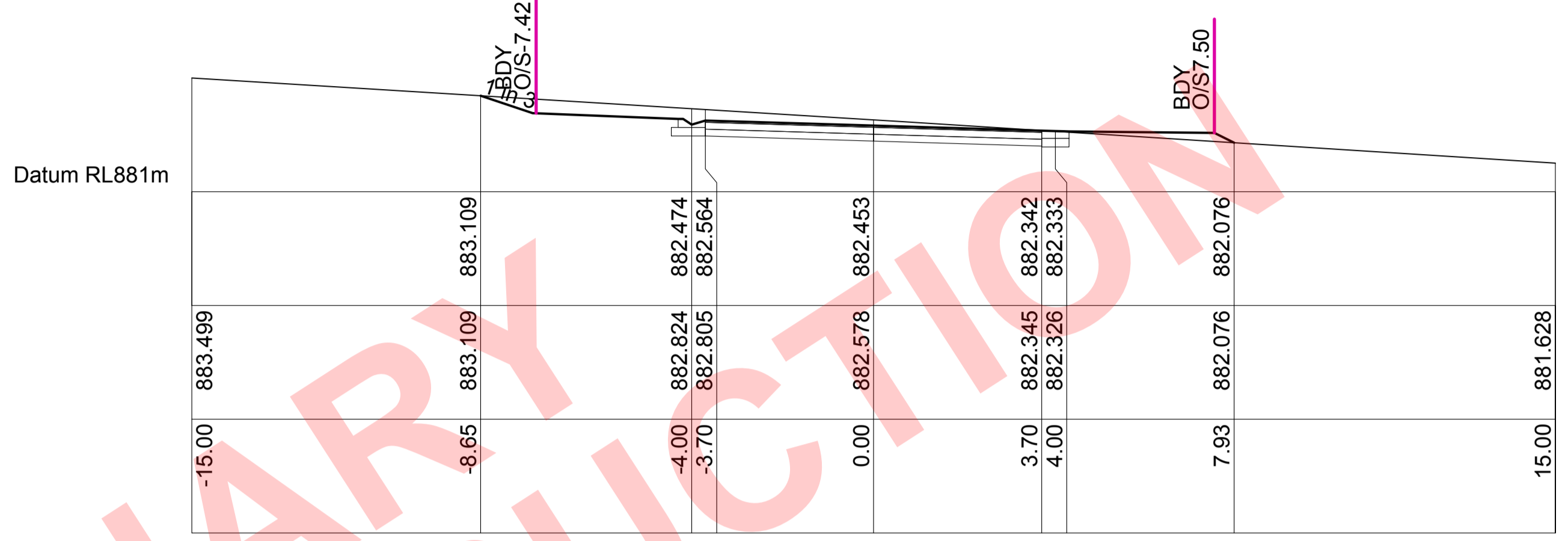
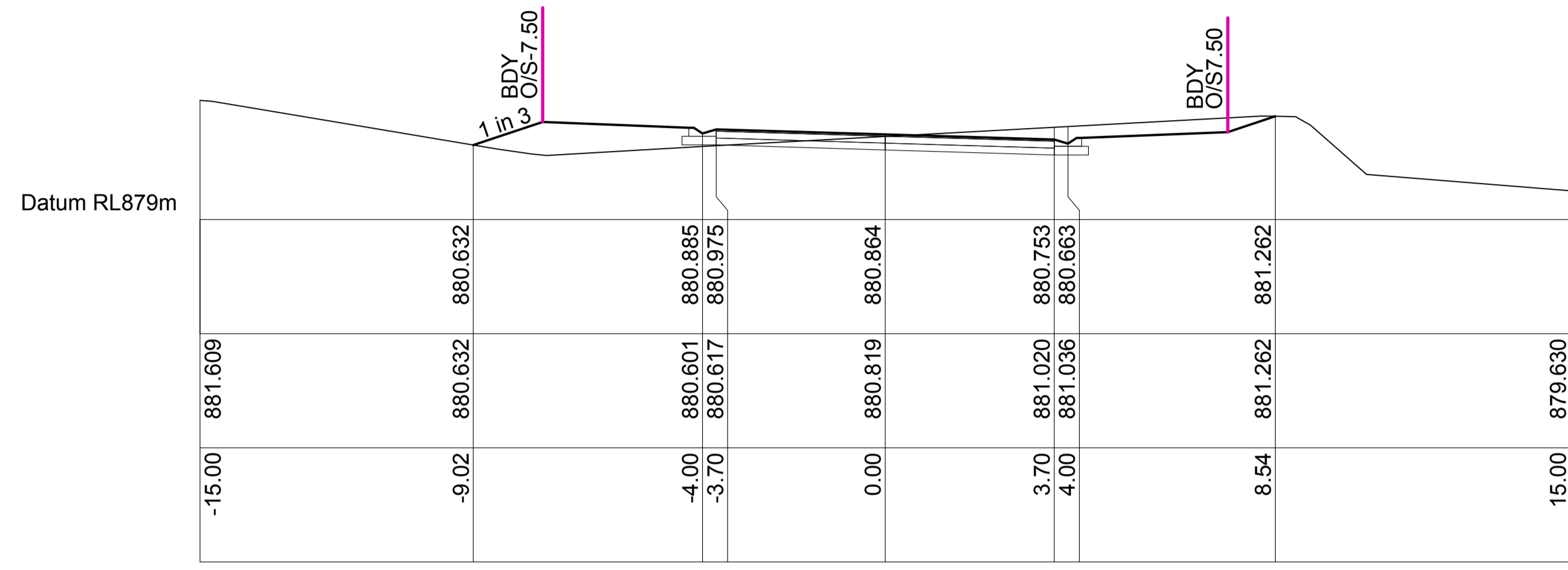
170 RANKIN STREET,
BATHURST, N.S.W. 2795
Tel: (02) 63323343 Fax: (02) 63318210

Job No.
2021.0574

DWG. No. Issue
R10 P1

No. in set
32

Note
One-way crossfall due to existing ground slope to reduce impact of batters on allotments



Scale 1:100
Ch 20.00 m

PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022 - 09:51:22

Amend	Date	Description	By	Amend	Date	Description	By
P2	22/09/22	ALTERATIONS DUE TO COUNCIL COMMENTS	GBL				
P1	11/10/21	ORIGINAL ISSUE	GBL				

Approved for Construction:
[Signature]
Garth Dean
B.E. GDSTT FIEAust CPEng NER
APEC Engineer IntPE (Aus) RBP
(Vic/NT)

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Drawn: GBL
Designed: GBL
Checked: ...
Scale (A1): 1:100
Date: October 2021

**PRELIMINARY
Not for construction**

...2021.0574-Civil-P2.dwg

Lot 1 DP 1253903
19 Barton Avenue
Wallerawang, NSW 2845

**ROAD 02 - PRELIMINARY
CROSS SECTIONS**

Timberfix

CALARE CIVIL
CONSULTING ENGINEERS

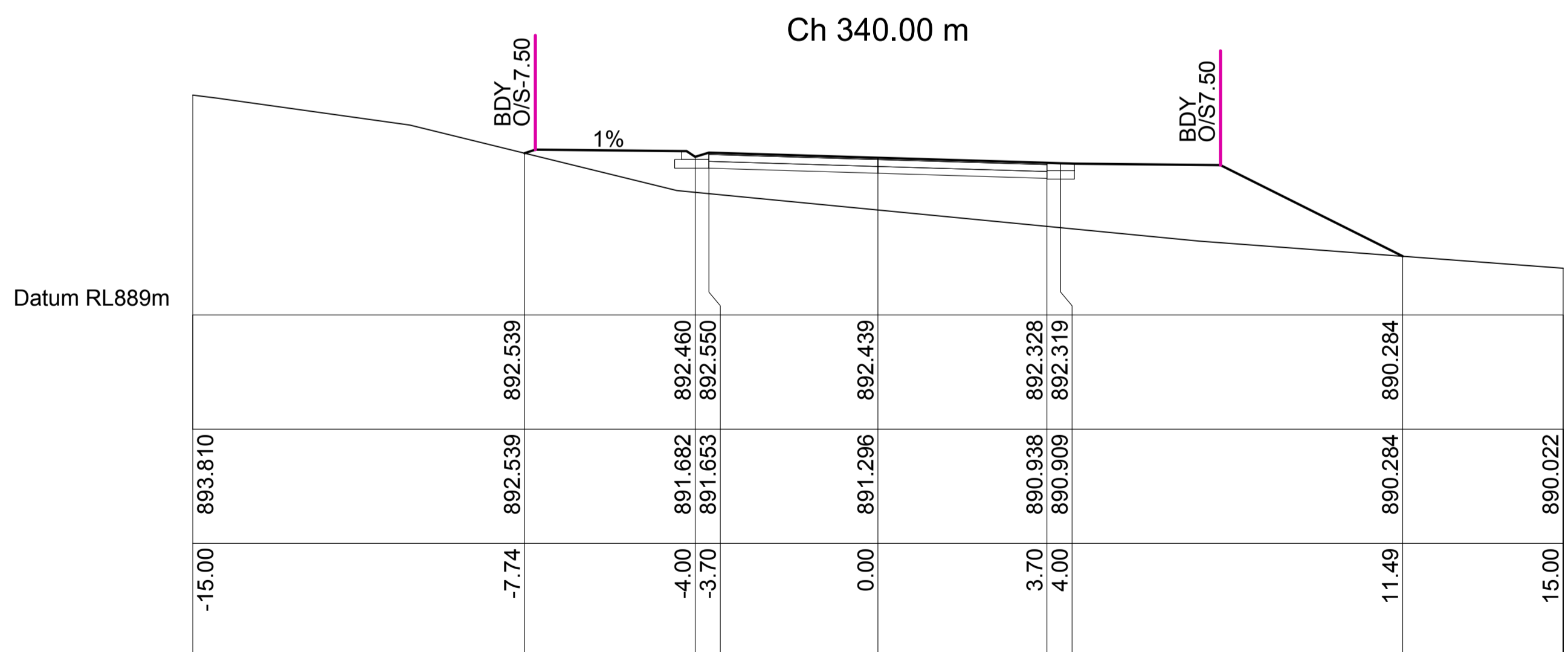
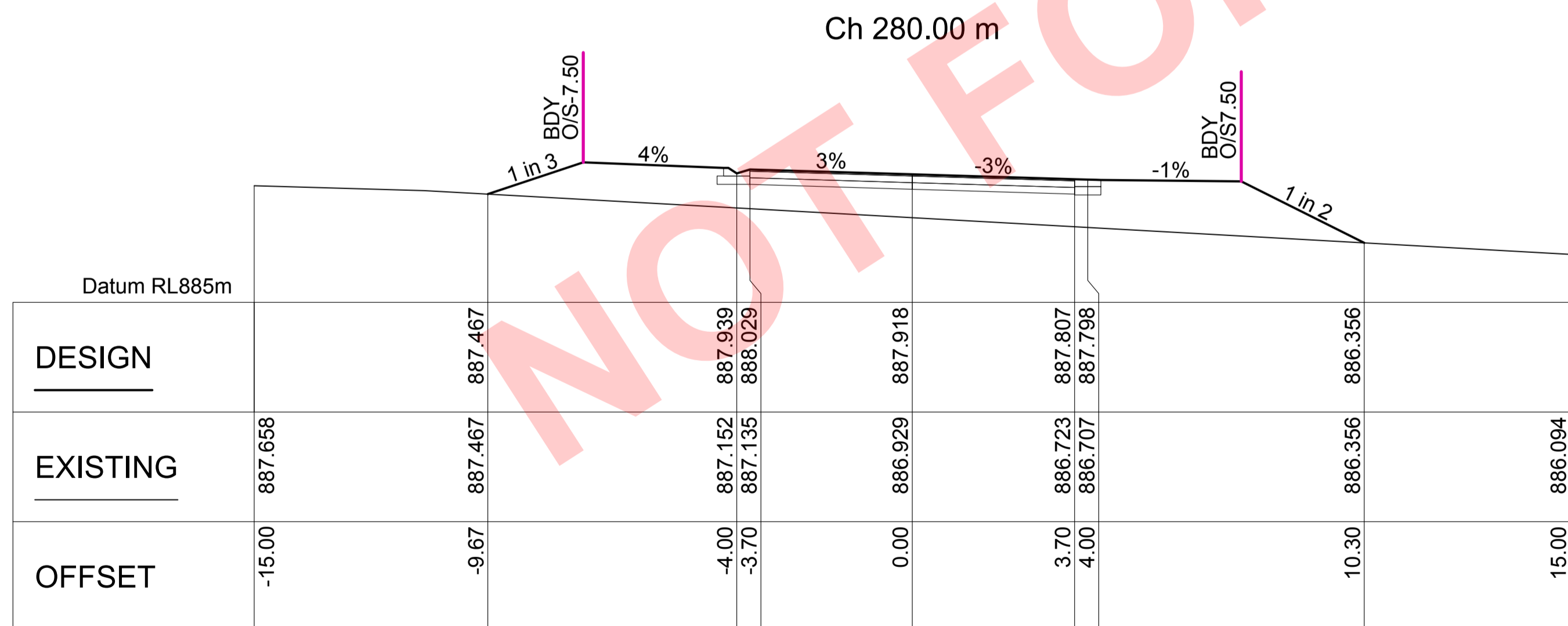
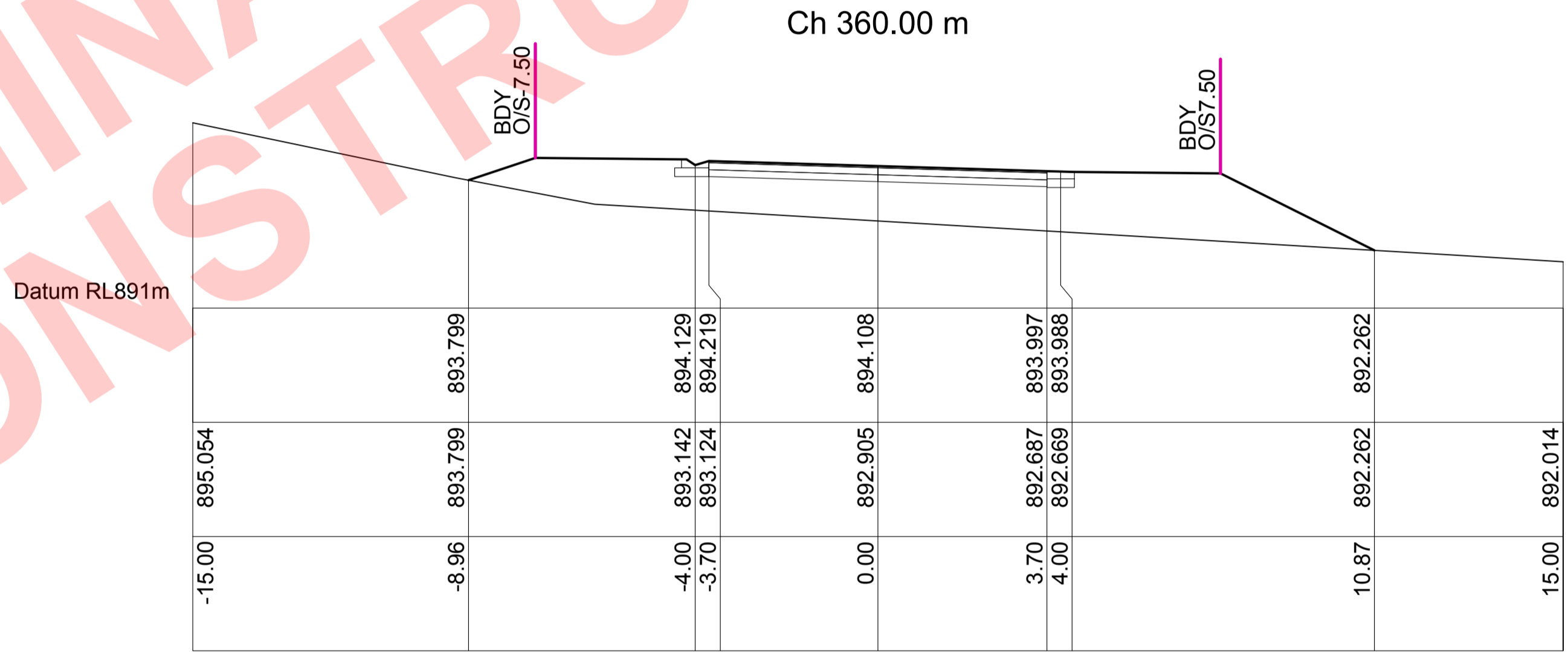
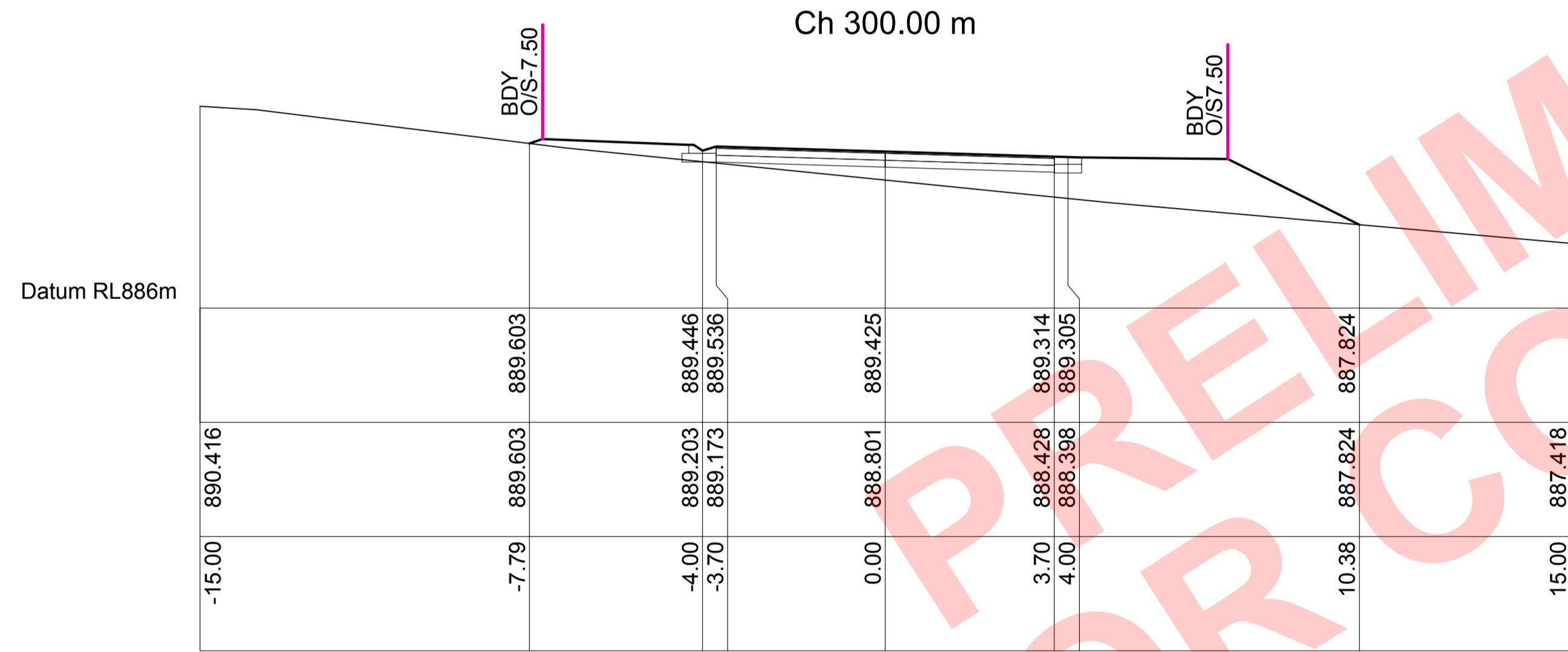
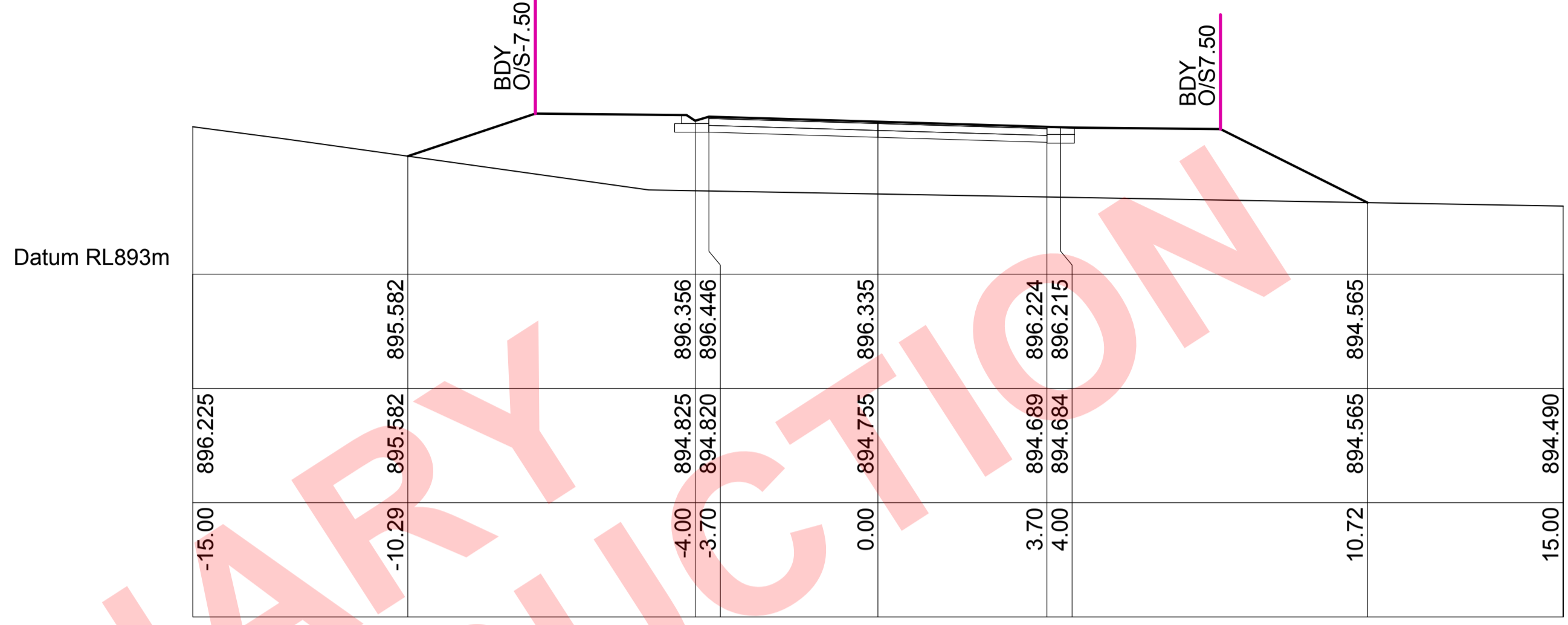
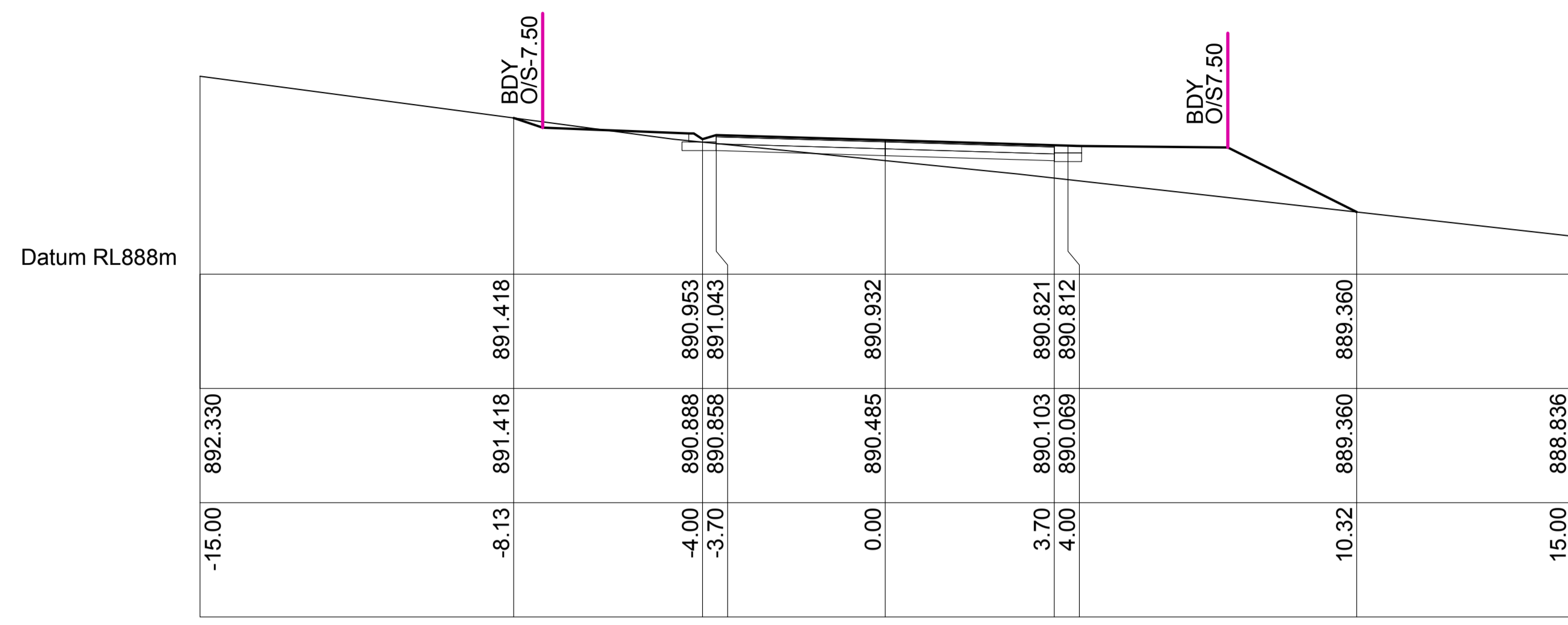
170 RANKIN STREET,
BATHURST, N.S.W. 2795
Tel: (02) 63323343 Fax: (02) 63318210

Job No.
2021.0574

DWG. No. Issue
R11 P1

No. in set
32

Note
One-way crossfall due to existing ground slope to reduce impact of batters on allotments



Scale 1:100
Ch 260.00 m

PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022 - 09:51:28

P2	22/09/22	ALTERATIONS DUE TO COUNCIL COMMENTS	GBL						
P1	11/10/21	ORIGINAL ISSUE	GBL						
Amend	Date	Description	By	Amend	Date	Description	By		

Approved for Construction:
[Signature]
Garth Dean
B.E. GDSTT FIEAust CPEng NER
APEC Engineer IntPE (Aus) RBP
(Vic/NT)

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Drawn: GBL
Designed: GBL
Checked: ...
Scale (A1): 1:100
Date: October 2021

PRELIMINARY
Not for construction

...2021.0574-Civil-P2.dwg

Lot 1 DP 1253903
19 Barton Avenue
Wallerawang, NSW 2845

ROAD 02 - PRELIMINARY CROSS SECTIONS

Timberfix

CALARE CIVIL
CONSULTING ENGINEERS

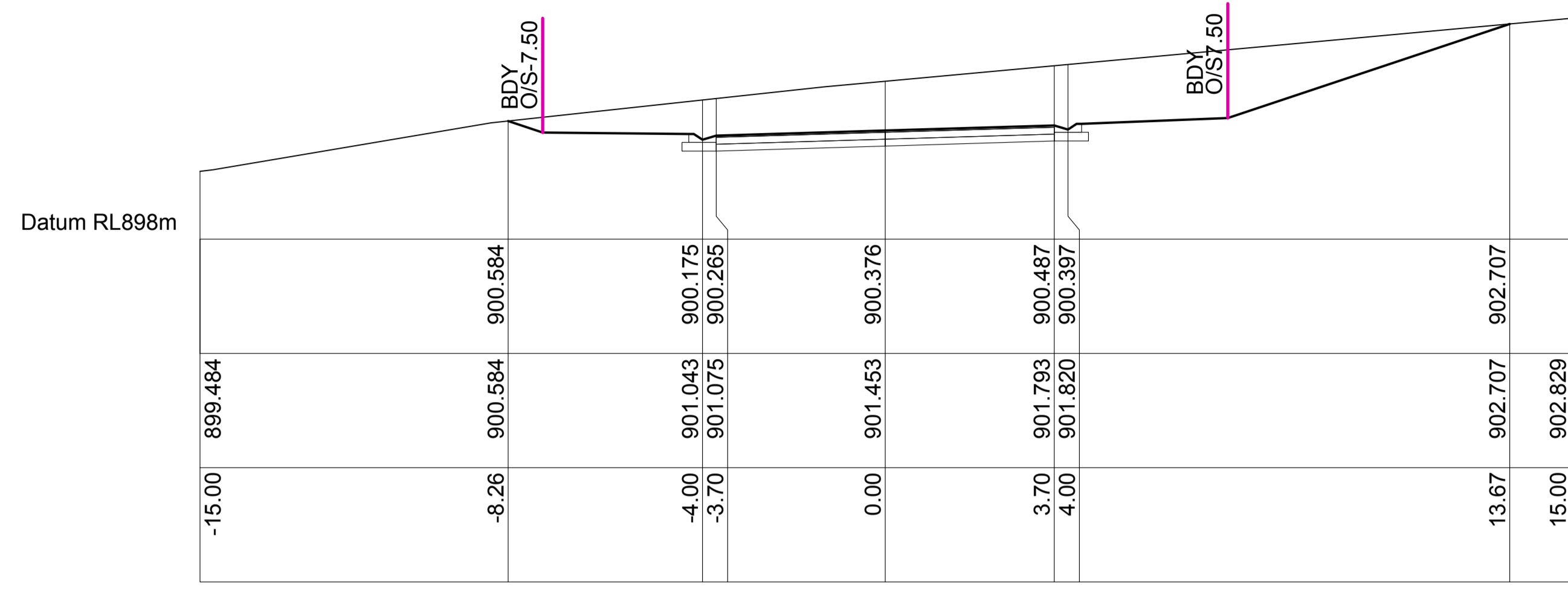
170 RANKIN STREET,
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Tel: (02) 63323343 Fax: (02) 63318210

Job No.
2021.0574

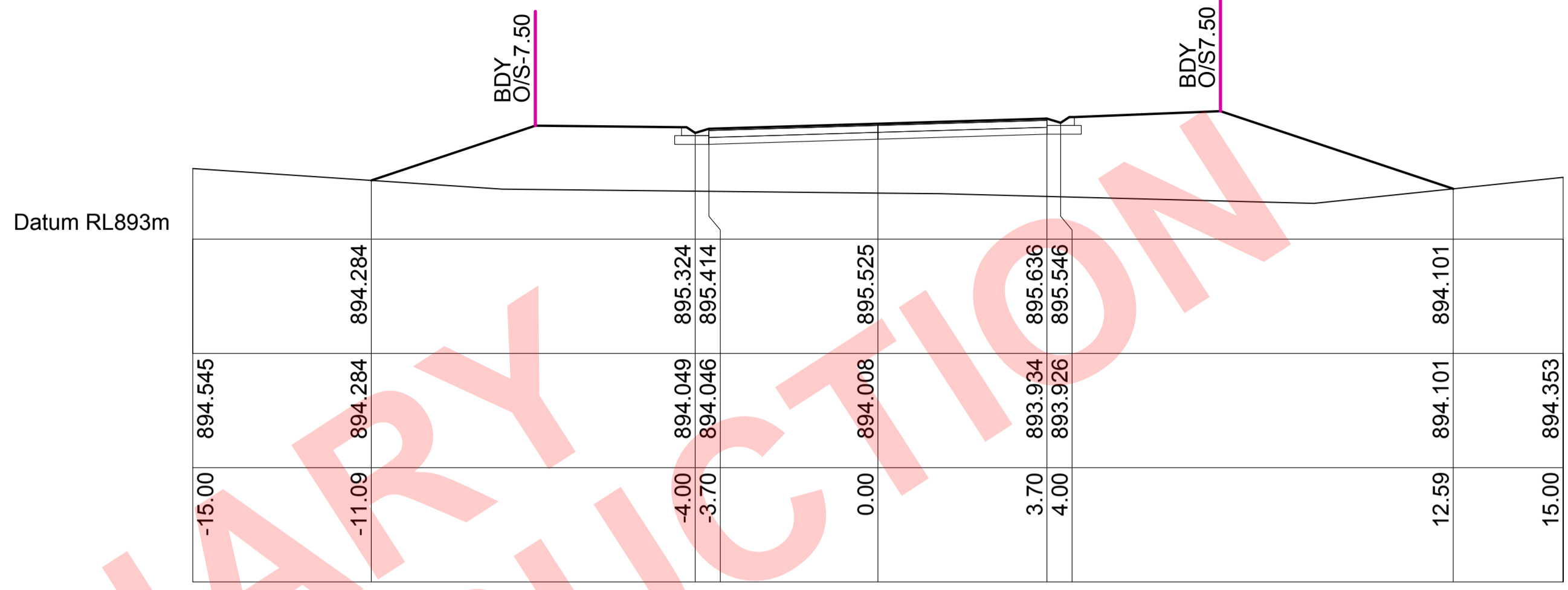
DWG. No. Issue
R13 P1

No. in set
32

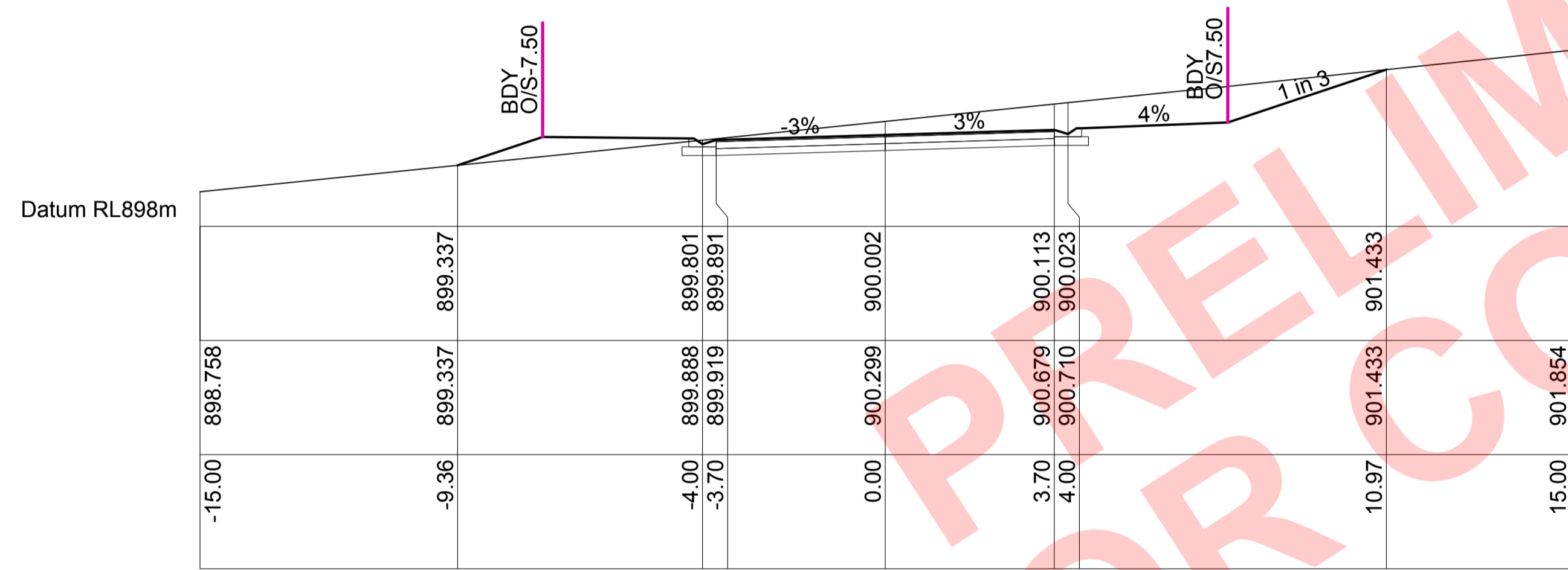
Note
One-way crossfall due to existing ground slope to reduce impact of batters on allotments



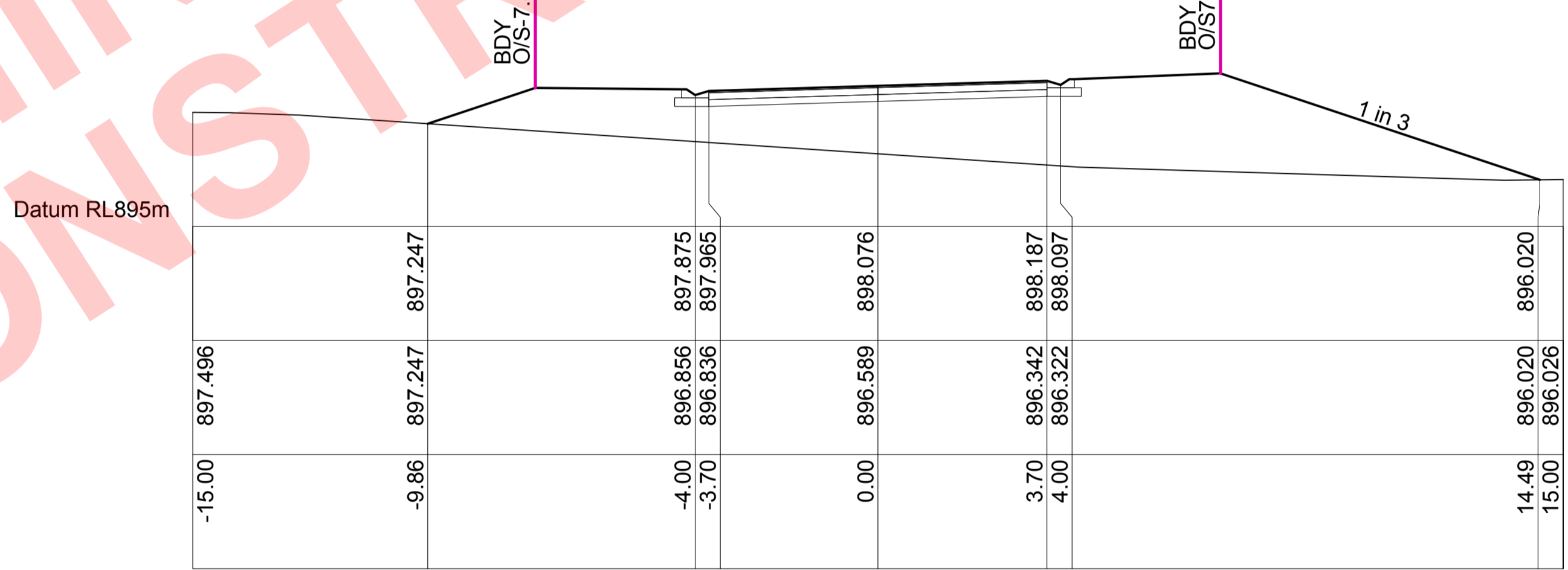
Ch 420.00 m



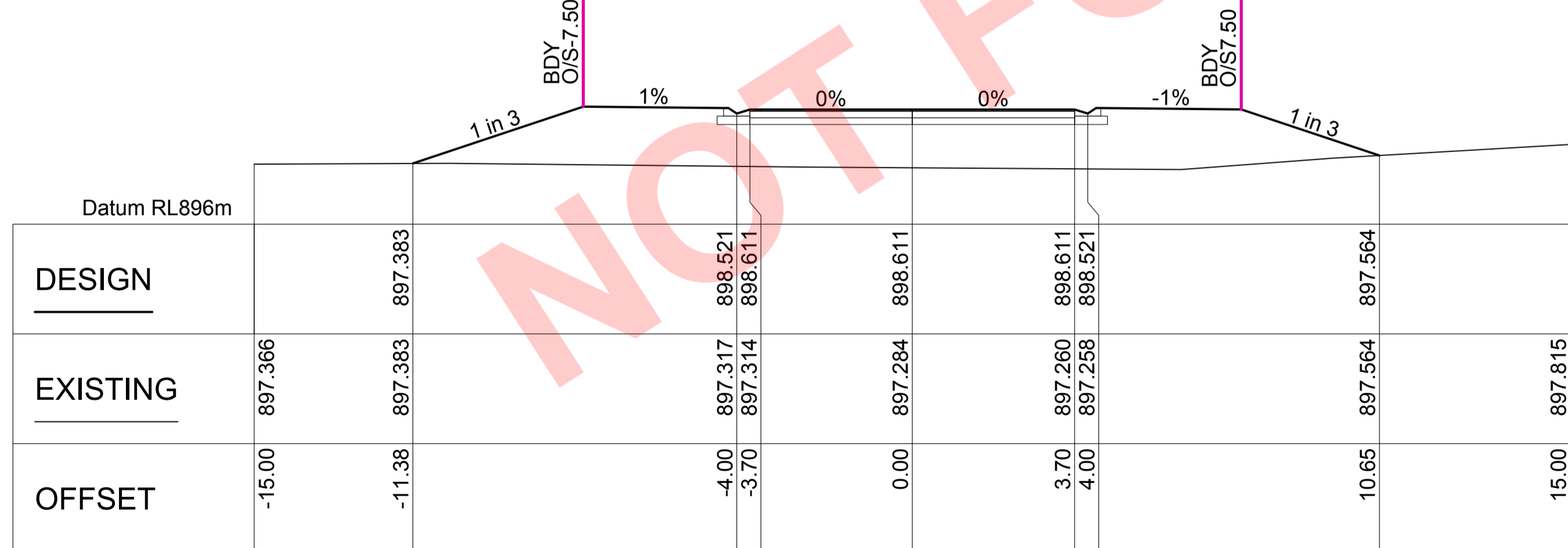
Ch 480.00 m



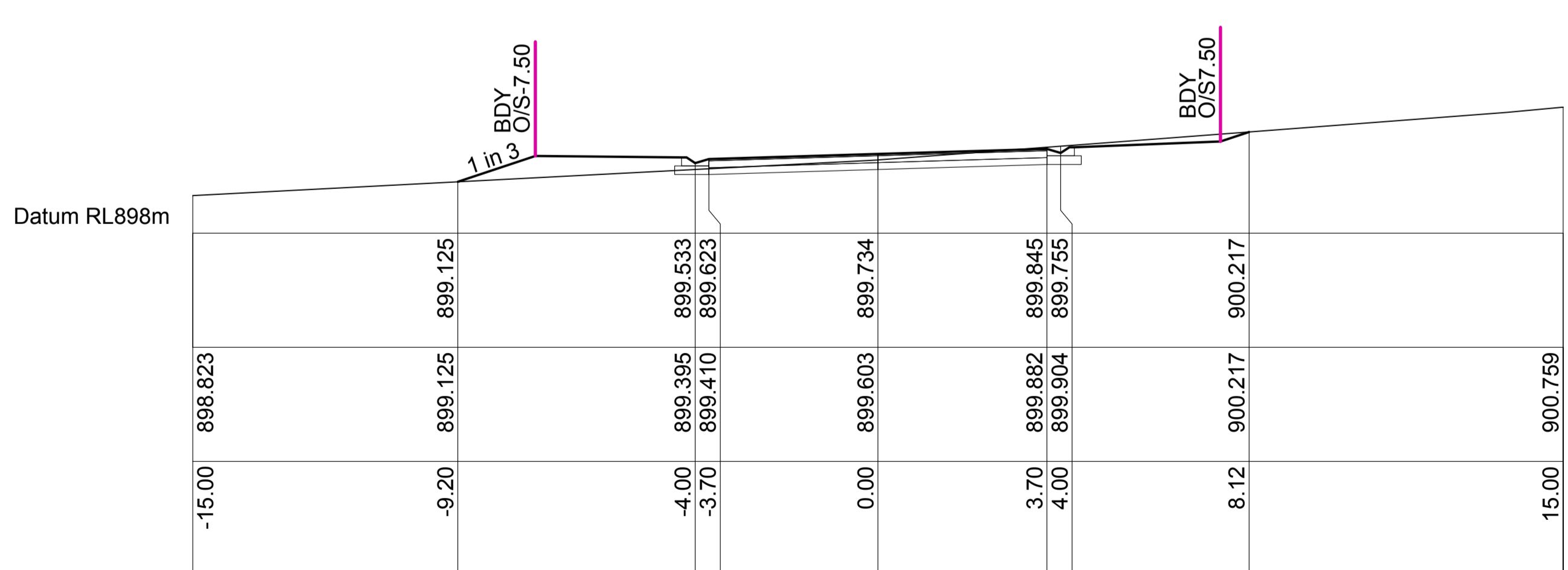
Ch 400.00 m



Ch 460.00 m



Scale 1:100
Ch 380.00 m



Ch 440.00 m

PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022 - 09:51:30

Amend	Date	Description	By	Amend	Date	Description	By
P2	22/09/22	ALTERATIONS DUE TO COUNCIL COMMENTS	GBL				
P1	11/10/21	ORIGINAL ISSUE	GBL				

Approved for Construction:
[Signature]
Garth Dean
B.E. GDSTT FIEAust CPEng NER
APEC Engineer IntPE (Aus) RBP
(Vic/NT)

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Drawn: GBL
Designed: GBL
Checked: ...
Scale (A1): 1:100
Date: October 2021

PRELIMINARY
Not for construction

Lot 1 DP 1253903
19 Barton Avenue
Wallerawang, NSW 2845

ROAD 02 - PRELIMINARY
CROSS SECTIONS

Timberfix

CALARE CIVIL
CONSULTING ENGINEERS

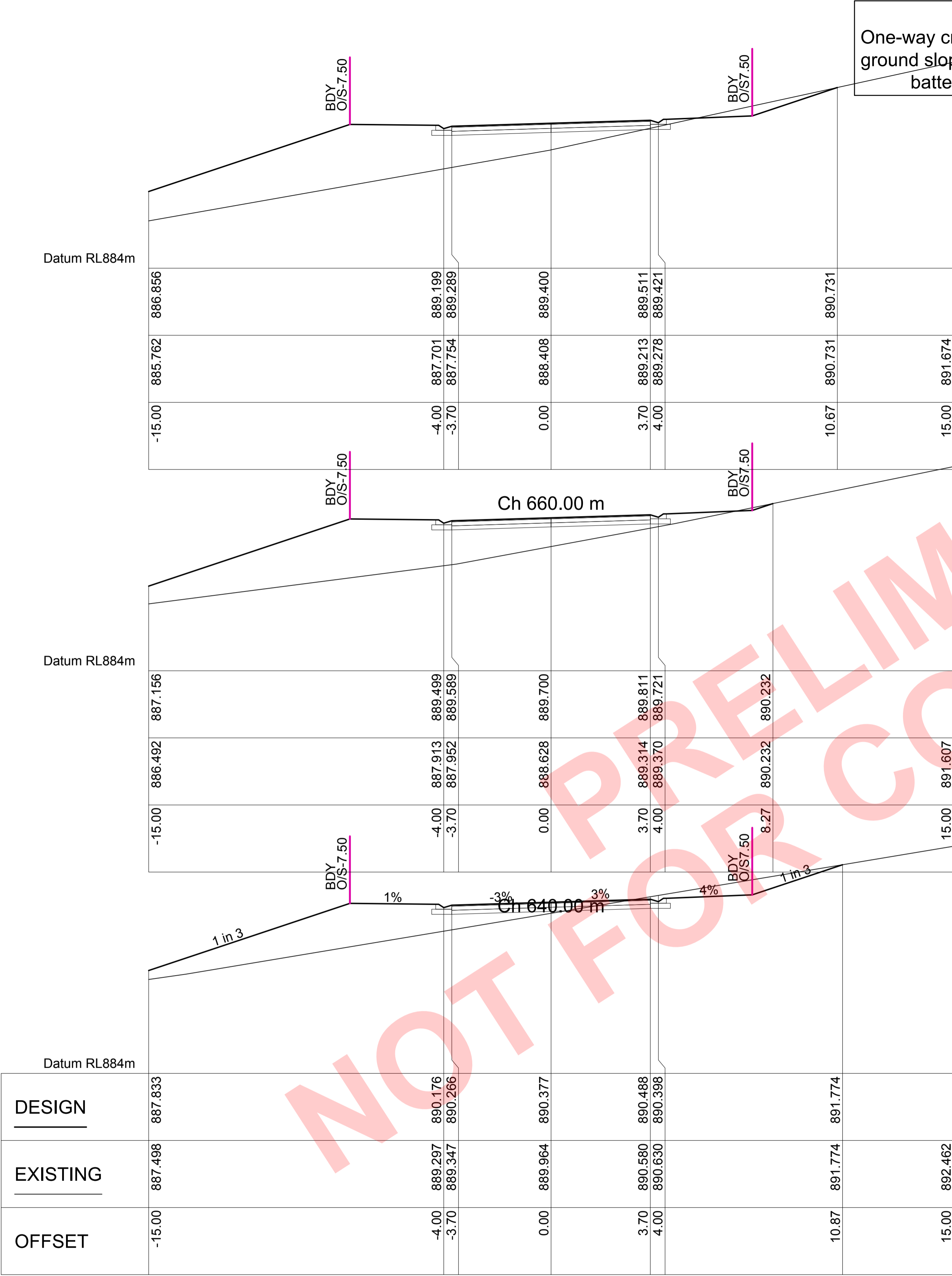
170 RANKIN STREET,
BATHURST, N.S.W. 2795
Tel: (02) 63323343 Fax: (02) 63318210

Job No.
2021.0574

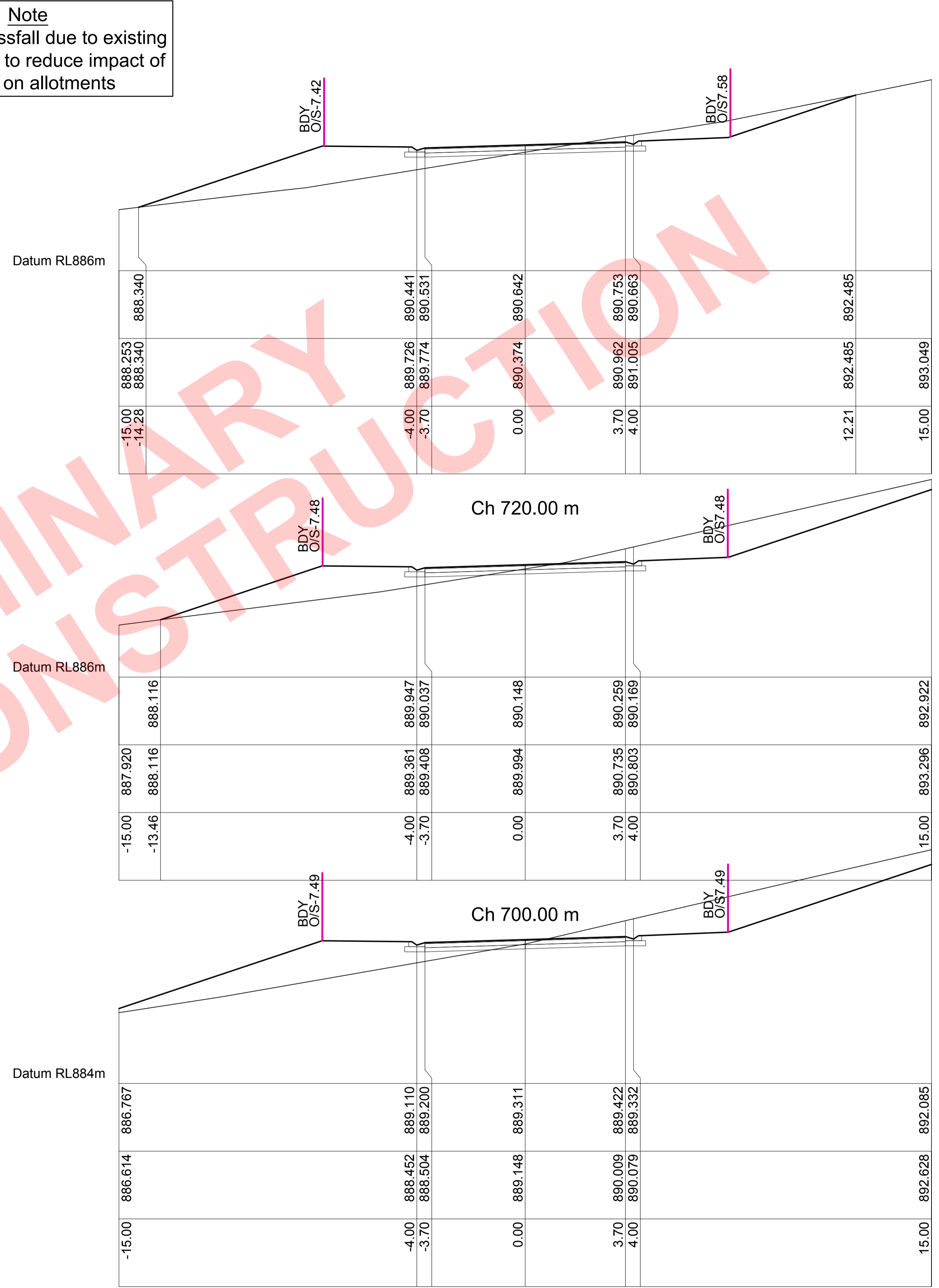
DWG. No. Issue
R14 P1

No. in set
32

Note
One-way crossfall due to existing ground slope to reduce impact of batters on allotments



Scale 1:100
Ch 620.00 m



Scale 1:100
Ch 680.00 m

PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022 - 09:51:36

Amend	Date	Description	By	Amend	Date	Description	By
P2	22/09/22	ALTERATIONS DUE TO COUNCIL COMMENTS	GBL				
P1	11/10/21	ORIGINAL ISSUE	GBL				

Approved for Construction:
Garth Dean
Garth Dean
B.E. GDSTT FIEAust CPEng NER
APEC Engineer IntPE (Aus) RBP
(Vic/NT)

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Drawn: GBL
Designed: GBL
Checked: ...
Scale (A1): 1:100
Date: October 2021

PRELIMINARY
Not for construction

Lot 1 DP 1253903
19 Barton Avenue
Wallerawang, NSW 2845

ROAD 02 - PRELIMINARY CROSS SECTIONS

Timberfix

CALARE CIVIL
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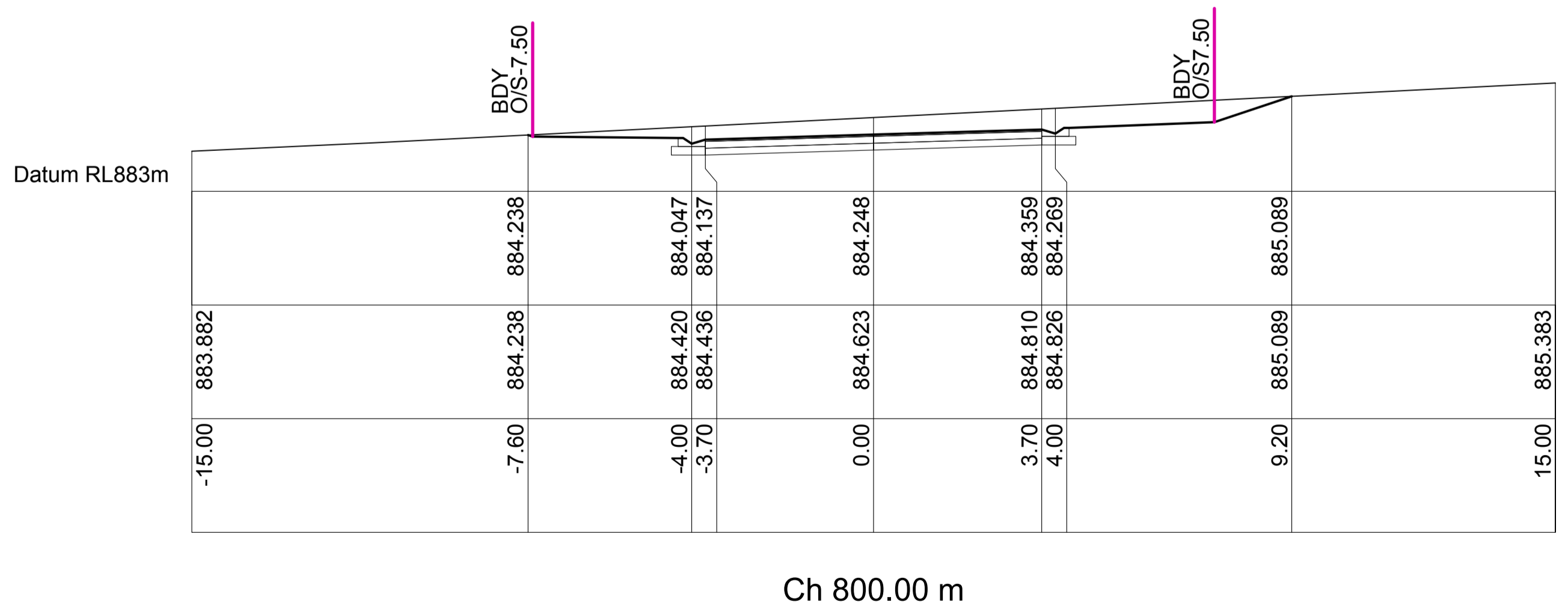
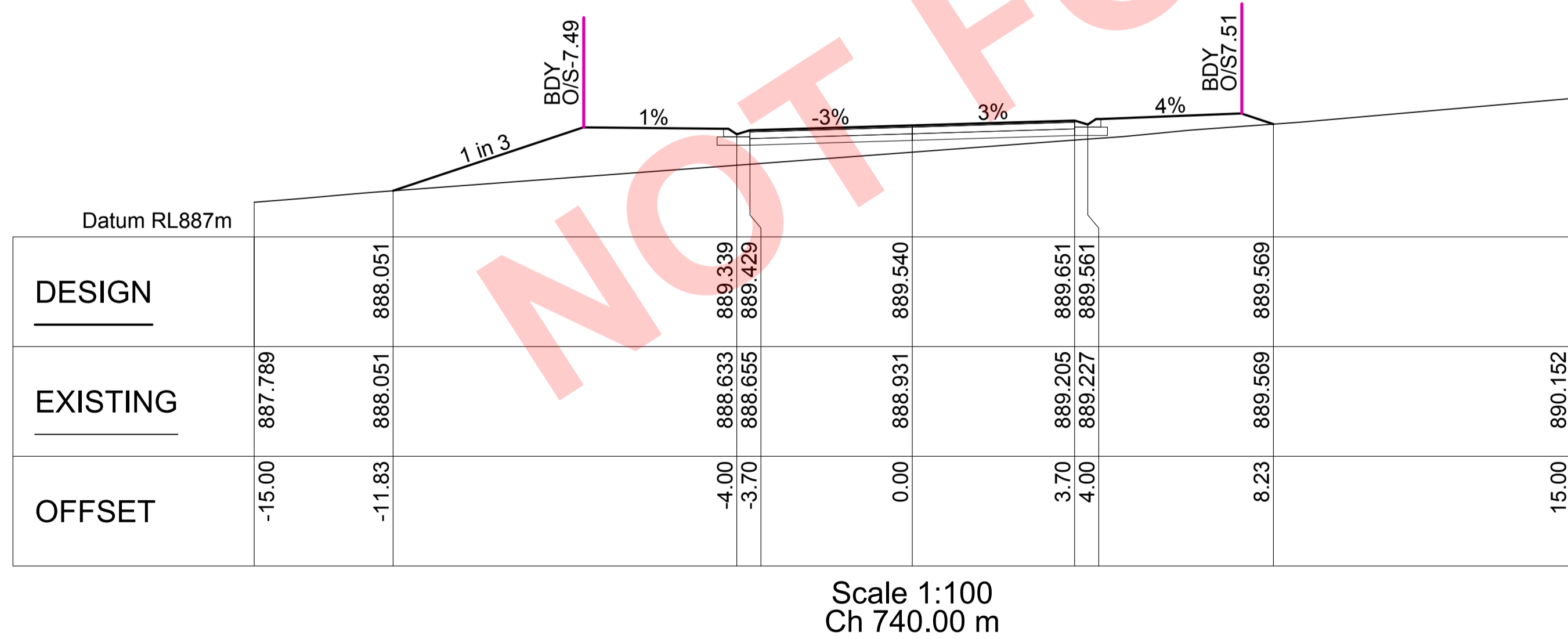
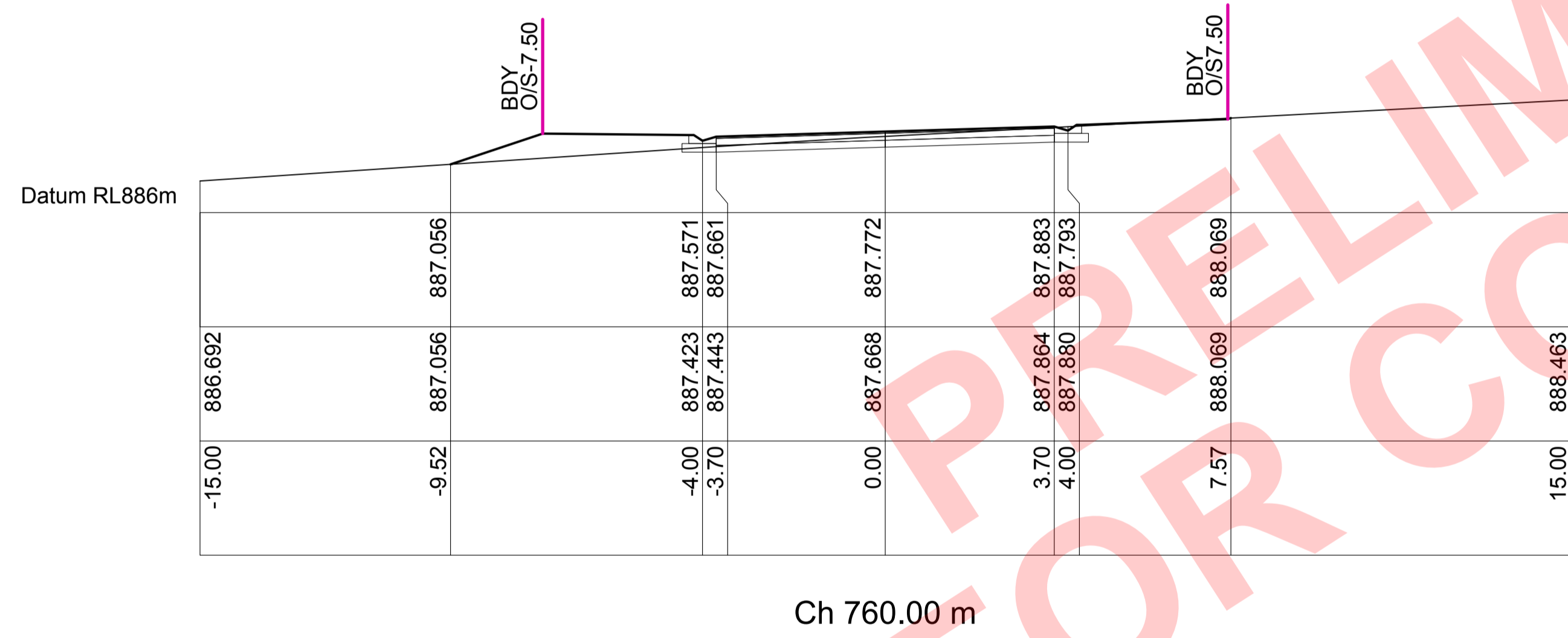
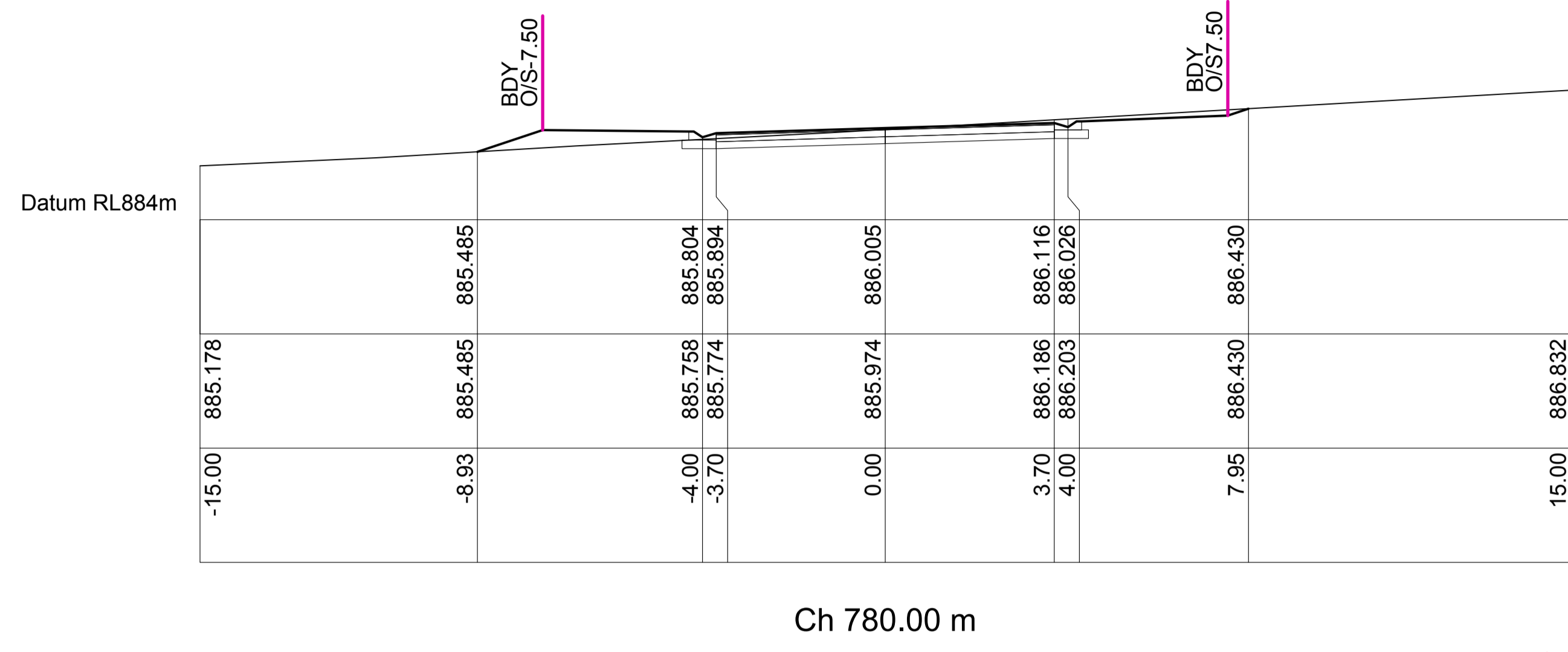
Job No.
2021.0574

DWG. No. Issue
R16 P1

No. in set
32

NOT FOR PRELIMINARY CONSTRUCTION

Note
One-way crossfall due to existing ground slope to reduce impact of batters on allotments



PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022 - 09:51:38

Amend	Date	Description	By	Amend	Date	Description	By
P2	22/09/22	ALTERATIONS DUE TO COUNCIL COMMENTS	GBL				
P1	11/10/21	ORIGINAL ISSUE	GBL				

Approved for Construction:
[Signature]
Garth Dean
B.E. GDSTT FIEAust CPEng NER
APEC Engineer IntPE (Aus) RBP
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Drawn: GBL
Designed: GBL
Checked: ...
Scale (A1): 1:100
Date: October 2021

PRELIMINARY
Not for construction

...2021.0574-Civil-P2.dwg

Lot 1 DP 1253903
19 Barton Avenue
Wallerawang, NSW 2845

ROAD 02 - PRELIMINARY CROSS SECTIONS

Timberfix

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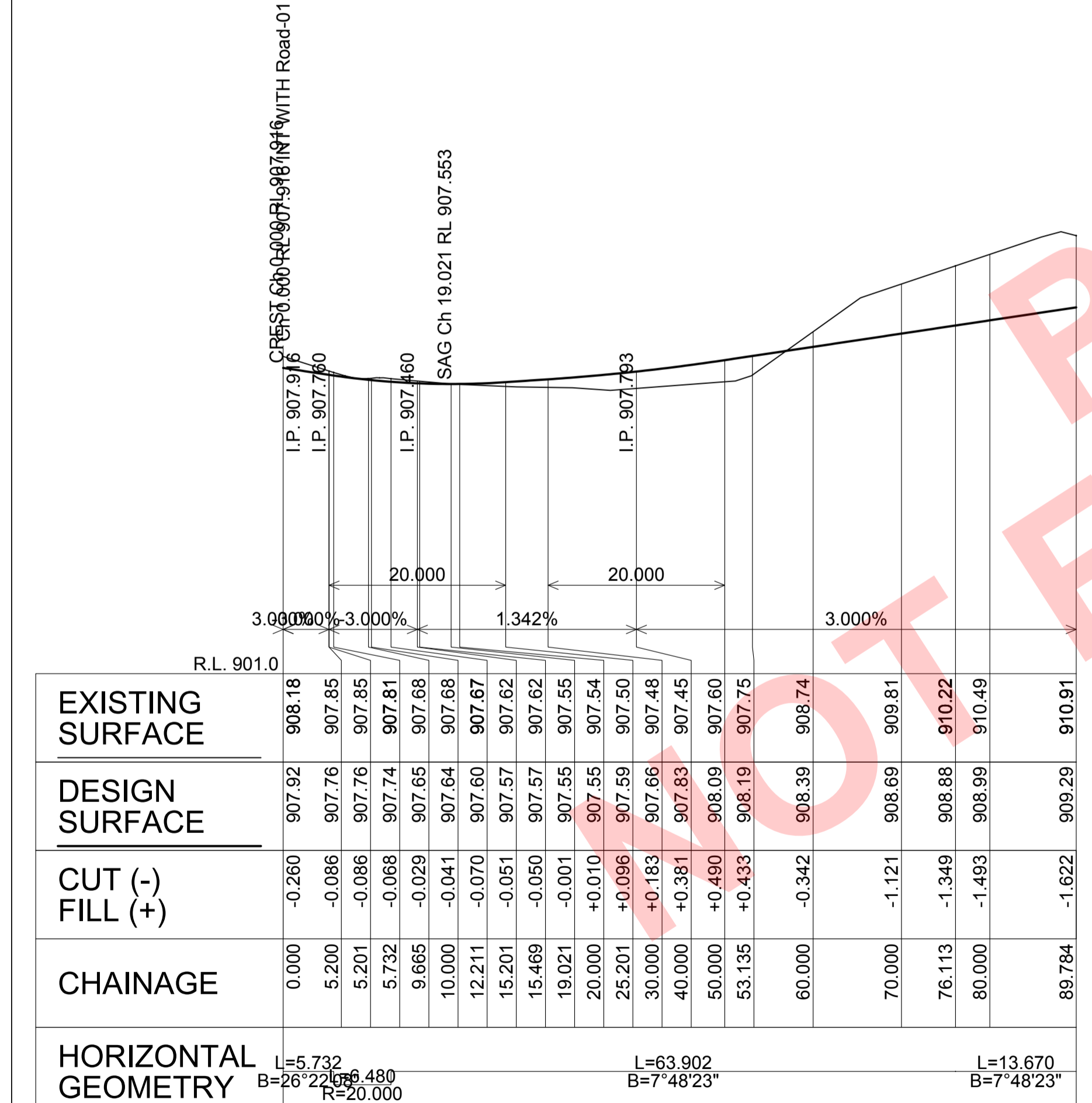
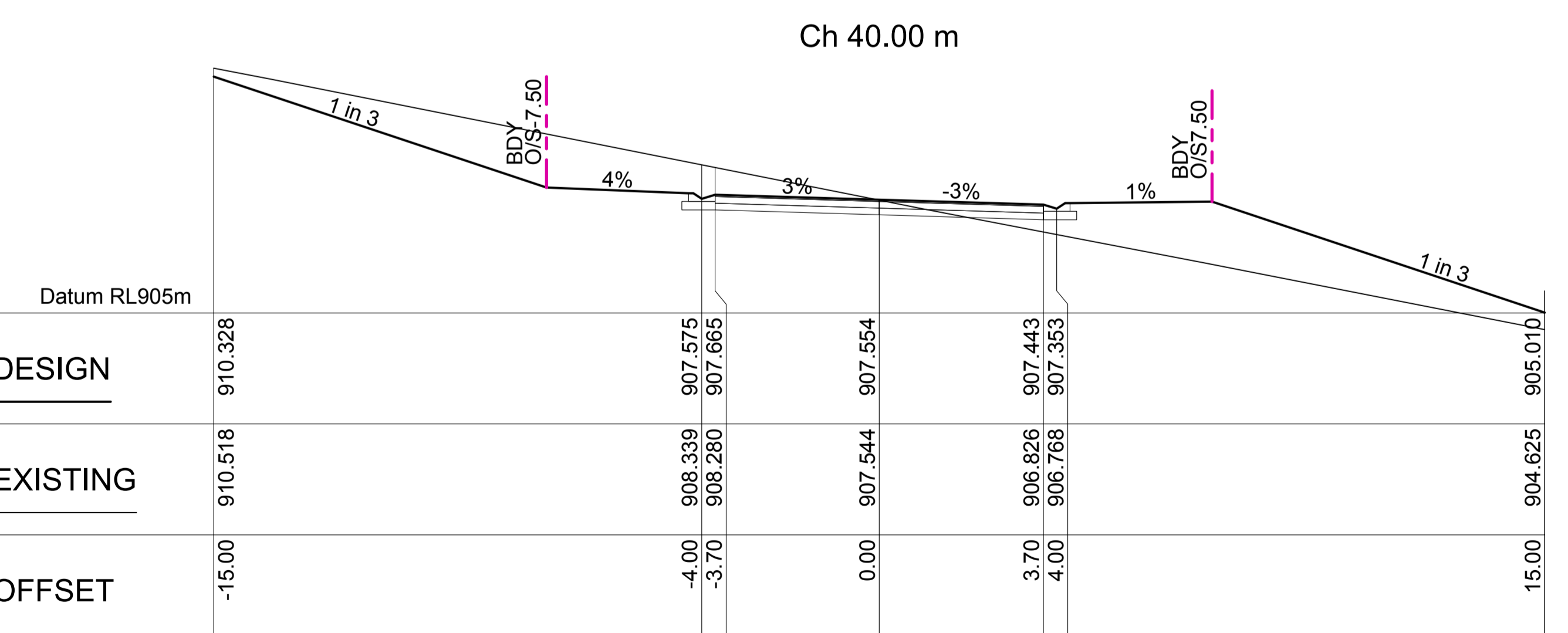
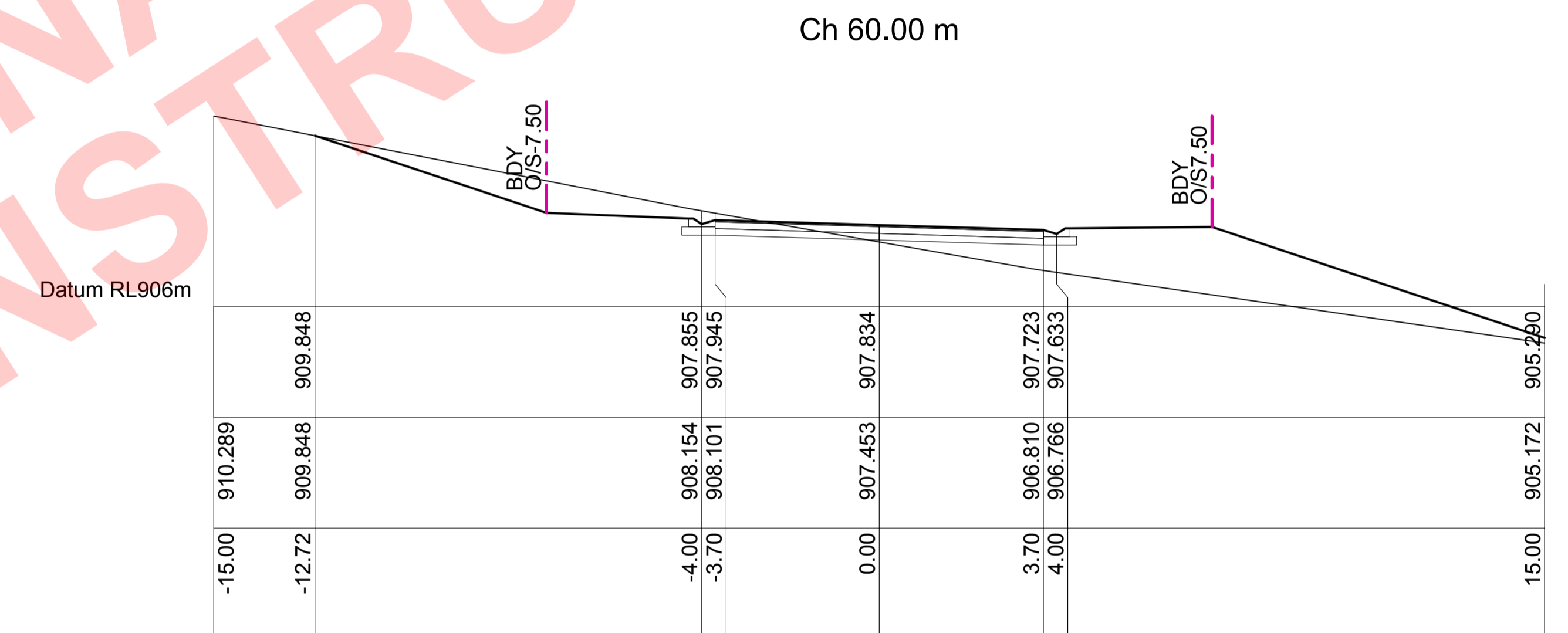
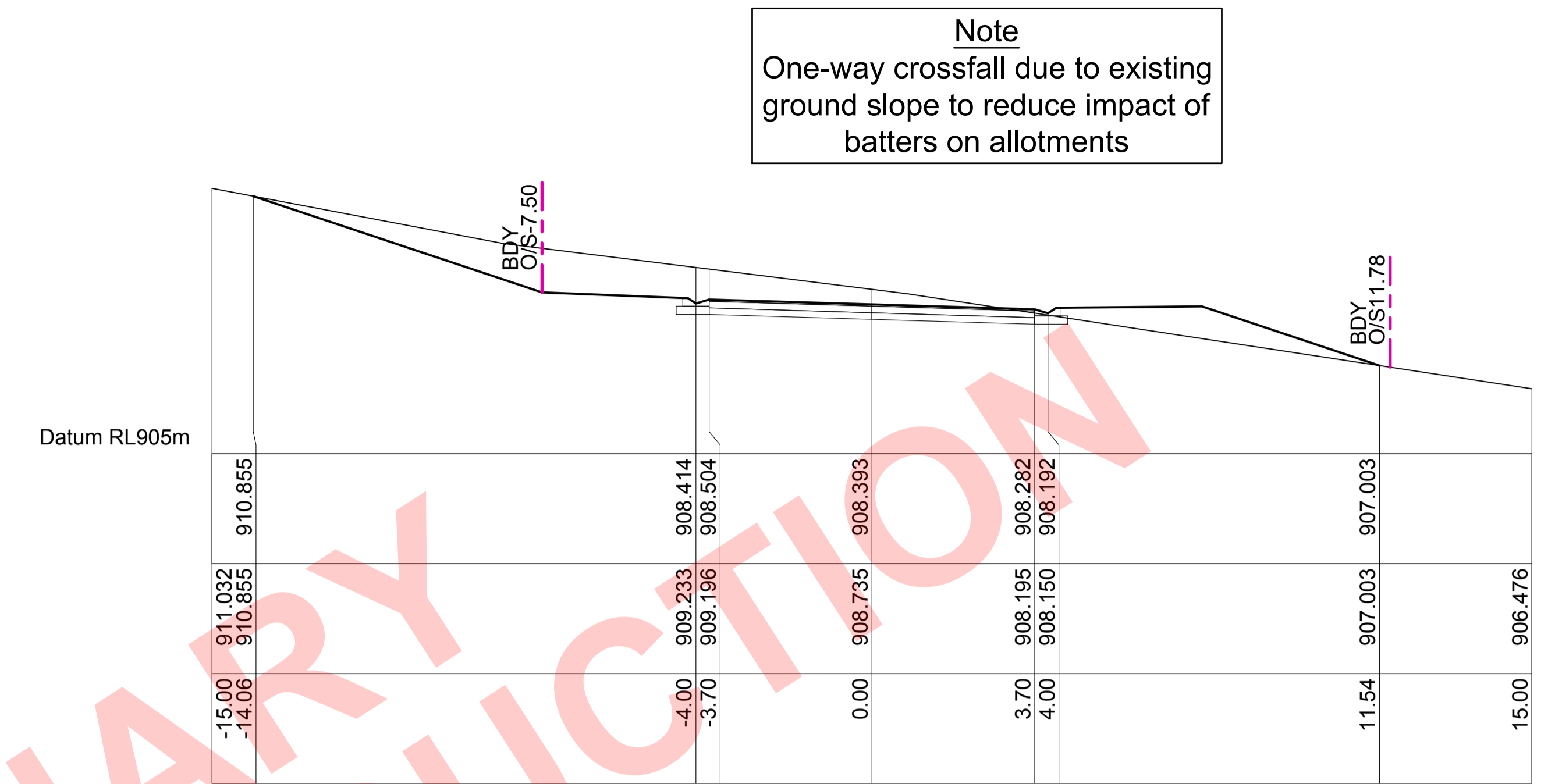
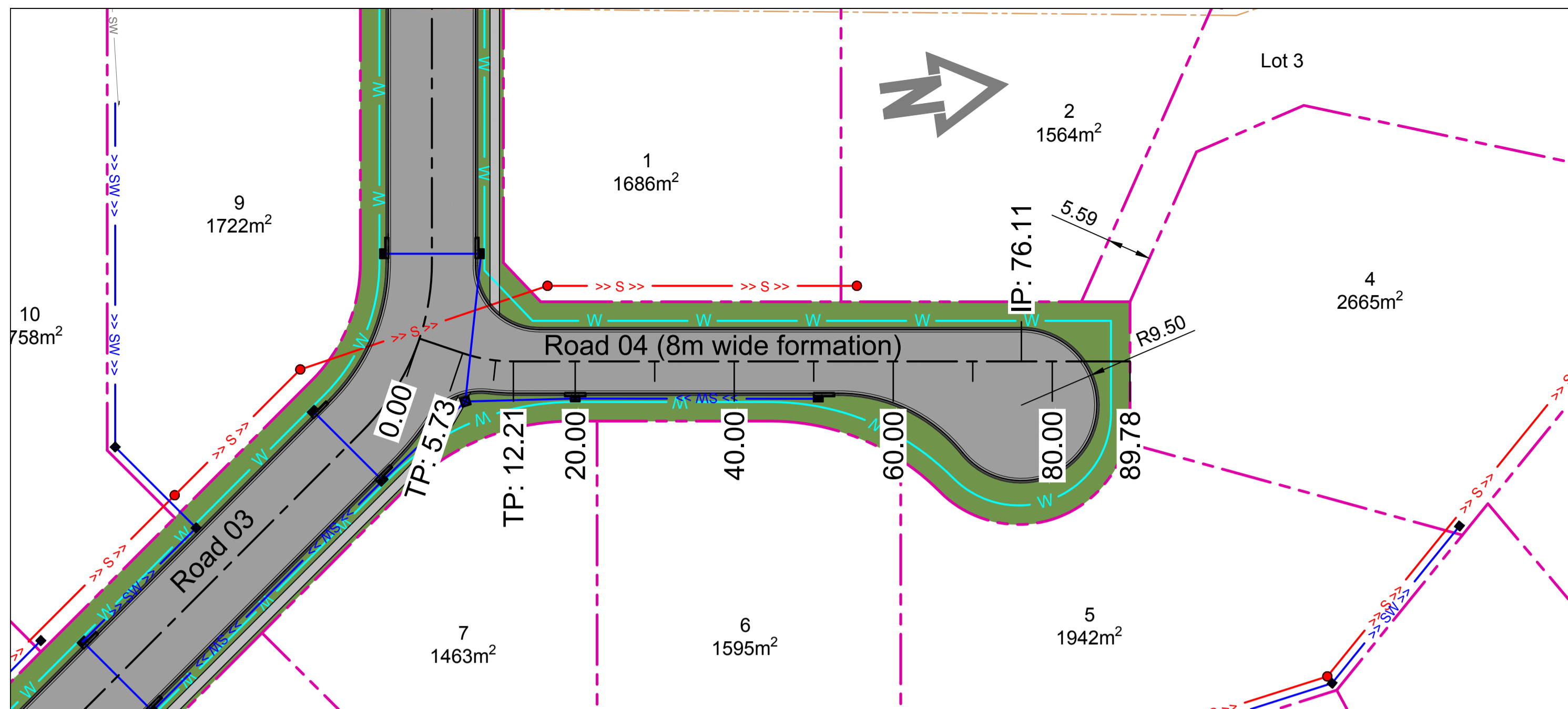
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Job No.
2021.0574

DWG. No. Issue
R17 P1

No. in set
32

NOT FOR PRELIMINARY CONSTRUCTION



PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022 - 09:51:45

Amend	Date	Description	By	Amend	Date	Description	By
P2	22/09/22	ALTERATIONS DUE TO COUNCIL COMMENTS	GBL				
P1	11/10/21	ORIGINAL ISSUE	GBL				

Approved for Construction:

 Garth Dean
 B.E. GDSTT FIEAust CPEng NER
 APEC Engineer IntPE (Aus) RBP
 (Vic/NT)

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Drawn: GBL
 Designed: GBL
 Checked: ...
 Scale (A1): As Shown
 Date: October 2021

**PRELIMINARY
Not for construction**

Lot 1 DP 1253903
 19 Barton Avenue
 Wallerawang, NSW 2845

ROAD 04 - PRELIMINARY PLAN, LONG SECTION & CROSS SECTIONS

Timberfix

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 Tel: (02) 63323343 Fax: (02) 63318210

Job No.
2021.0574

DWG. No. Issue
R18 P1

No. in set
32

Elevations Table				
Number	Minimum Elevation	Maximum Elevation	Volume	Color
1	-4.500	-4.000	2m ³	Dark Green
2	-4.000	-3.500	49m ³	Green
3	-3.500	-3.000	186m ³	Light Green
4	-3.000	-2.500	415m ³	Yellow-Green
5	-2.500	-2.000	614m ³	Yellow
6	-2.000	-1.500	906m ³	Light Yellow
7	-1.500	-1.000	1789m ³	Yellow-Orange
8	-1.000	-0.500	3548m ³	Orange
9	-0.500	0.000	7040m ³	Light Orange
10	0.000	0.500	7603m ³	Yellow
11	0.500	1.000	4127m ³	Light Yellow
12	1.000	1.500	1504m ³	Yellow
13	1.500	2.000	288m ³	Light Yellow
14	2.000	2.500	26m ³	Yellow

14549m³
Cut

13548m³
Fill

Notes

- These volumes are very preliminary and should not be used for quantity takeoff.
- Volumes based on an assumed pavement construction of 300mm (TBC)
- Does not allow for
 - Topsoil strip
 - Compaction or Bulking factors
 - Trench volumes for services



PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022 - 09:51:51

Amend	Date	Description	By	Amend	Date	Description	By
P2	22/09/22	ALTERATIONS DUE TO COUNCIL COMMENTS	GBL				
P1	11/10/21	ORIGINAL ISSUE	GBL				

Approved for Construction:
[Signature]
Garth Dean
B.E. GDSTT FIEAust CPEng NER
APEC Engineer IntPE (Aus) RBP
(Vic/NT)

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Drawn: GBL
Designed: GBL
Checked: ...
Scale (A1): 1:1250
Date: October 2021

**PRELIMINARY
Not for construction**

Lot 1 DP 1253903
19 Barton Avenue
Wallerawang, NSW 2845

PRELIMINARY BULK EARTHWORKS PLAN

Timberfix

CALARE CIVIL
CONSULTING ENGINEERS

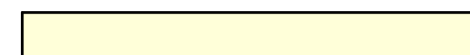
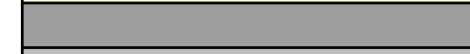






170 RANKIN STREET,
BATHURST, N.S.W. 2795
Tel: (02) 63323343 Fax: (02) 63318210

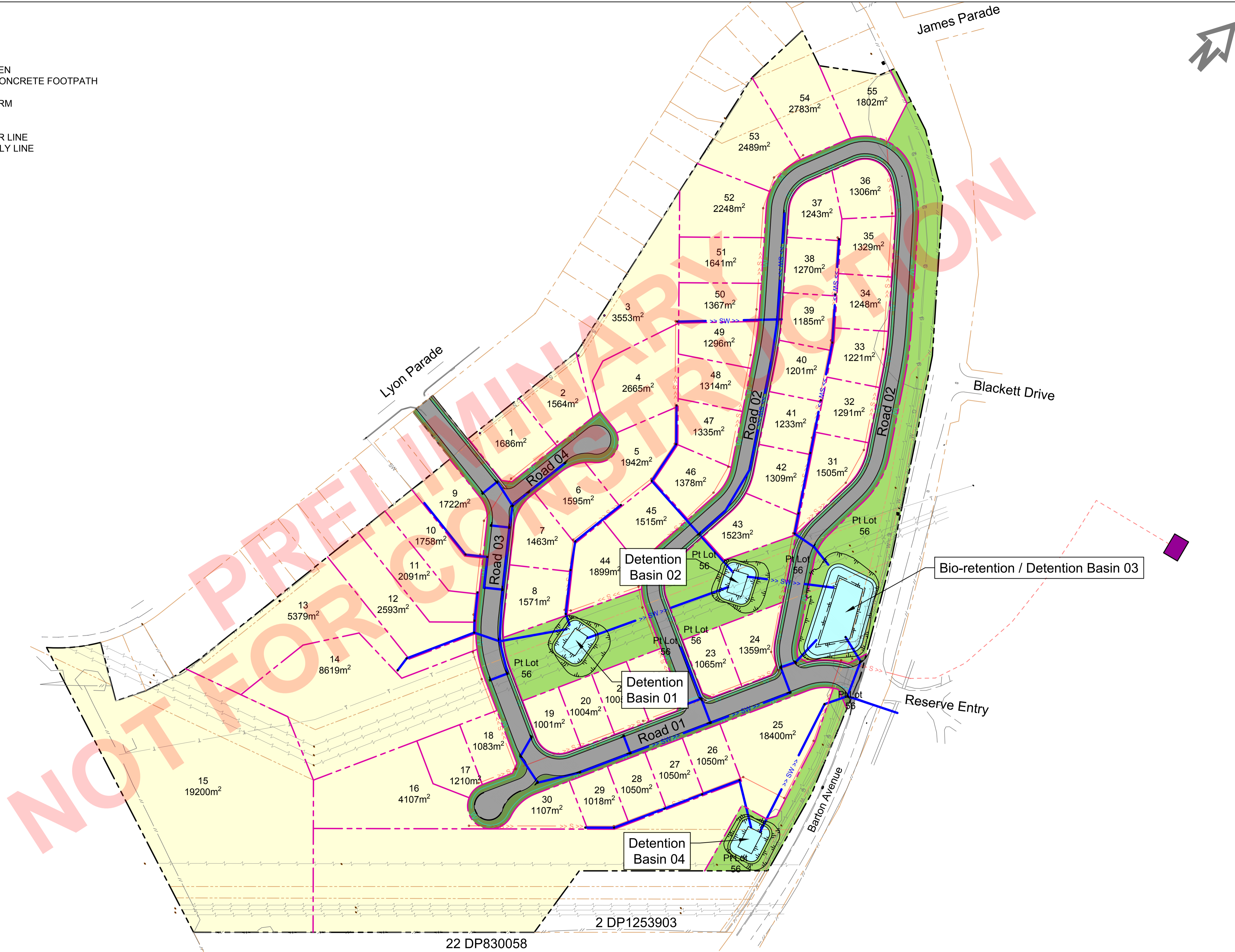
Job No.
2021.0574

DWG. No. Issue
EW-01 P1

No. in set
32


LEGEND

	ALLOTMENT
	SEAL / BITUMEN
	1.20m WIDE CONCRETE FOOTPATH
	RESERVE
	GRASSED BERM
	SEWER LINE
	STORMWATER LINE
	WATER SUPPLY LINE



PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022 - 09:51:55

Amend	Date	Description	By	Amend	Date	Description	By
P2	22/09/22	ALTERATIONS DUE TO COUNCIL COMMENTS	GBL				
P1	11/10/21	ORIGINAL ISSUE	GBL				

Approved for Construction:

Garth Dean
 B.E. GDSTT FIEAust CPEng NER
 APEC Engineer IntPE (Aus) RBP
 (Vic/NT)

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 Scale (A1): 1:1250
 Date: October 2021

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Lot 1 DP 1253903
 19 Barton Avenue
 Wallerawang, NSW 2845

PRELIMINARY STORMWATER
 LAYOUT PLAN

Timberfix

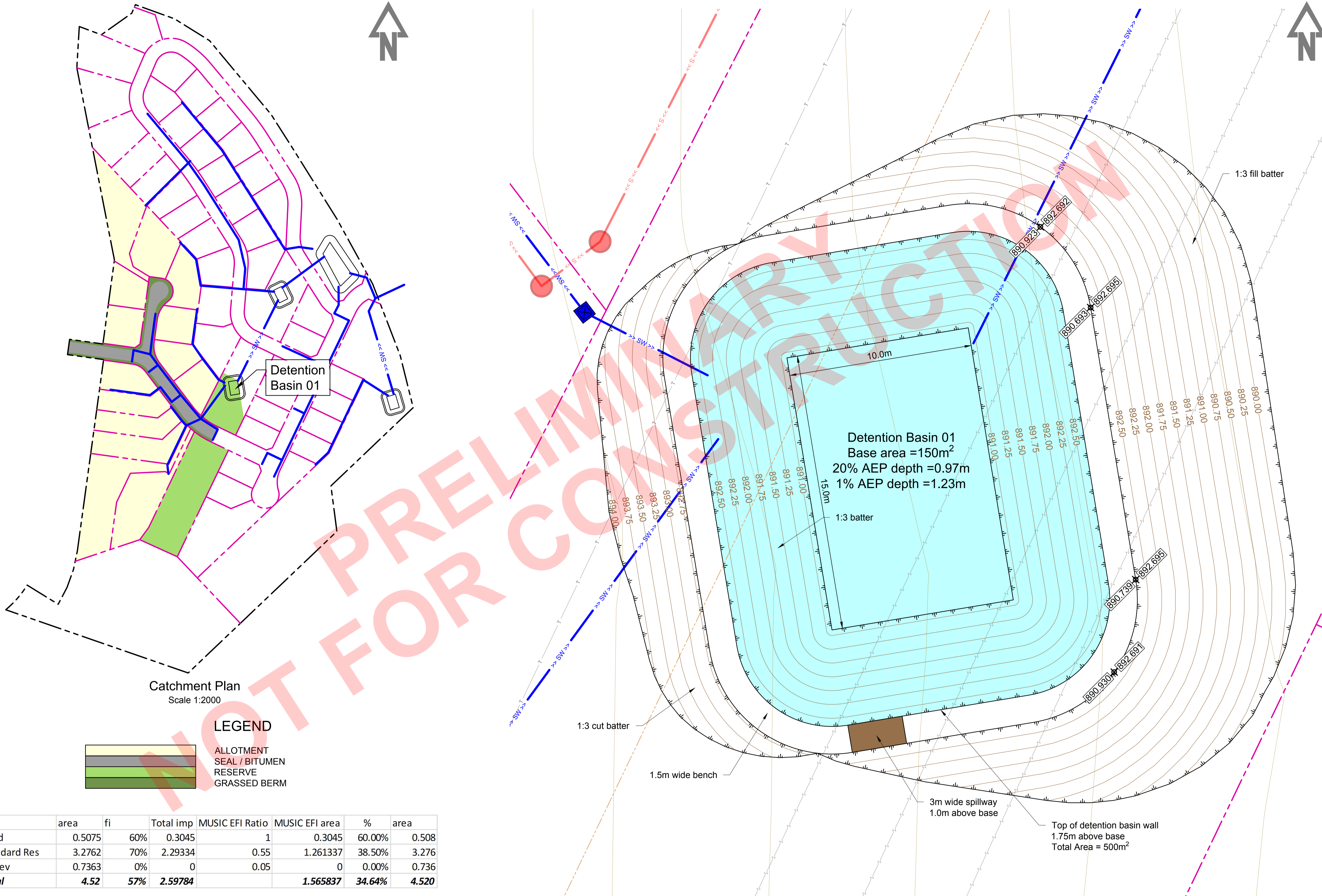
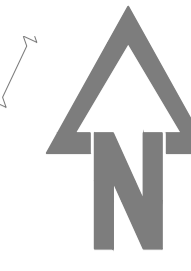
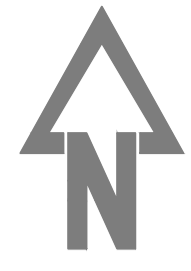
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Job No.
2021.0574

DWG. No. Issue
SW01 P1

No. in set
32



Catchment Plan
Scale 1:2000

LEGEND

	ALLOTMENT
	SEAL / BITUMEN
	RESERVE
	GRASSED BERM

	area	fi	Total imp	MUSIC EFI Ratio	MUSIC EFI area	%	area
Road	0.5075	60%	0.3045	1	0.3045	60.00%	0.508
Standard Res	3.2762	70%	2.29334	0.55	1.261337	38.50%	3.276
Undev	0.7363	0%	0	0.05	0	0.00%	0.736
Total	4.52	57%	2.59784		1.565837	34.64%	4.520

Detention Basin 01 Catchments

PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022 - 09:51:59

Amend	Date	Description	By	Amend	Date	Description	By
P2	22/09/22	ALTERATIONS DUE TO COUNCIL COMMENTS	GBL				
P1	11/10/21	ORIGINAL ISSUE	GBL				

Approved for Construction:

Garth Dean
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Scale (A1): 1:100
Date: October 2021

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19 Barton Avenue
Wallerawang, NSW 2845

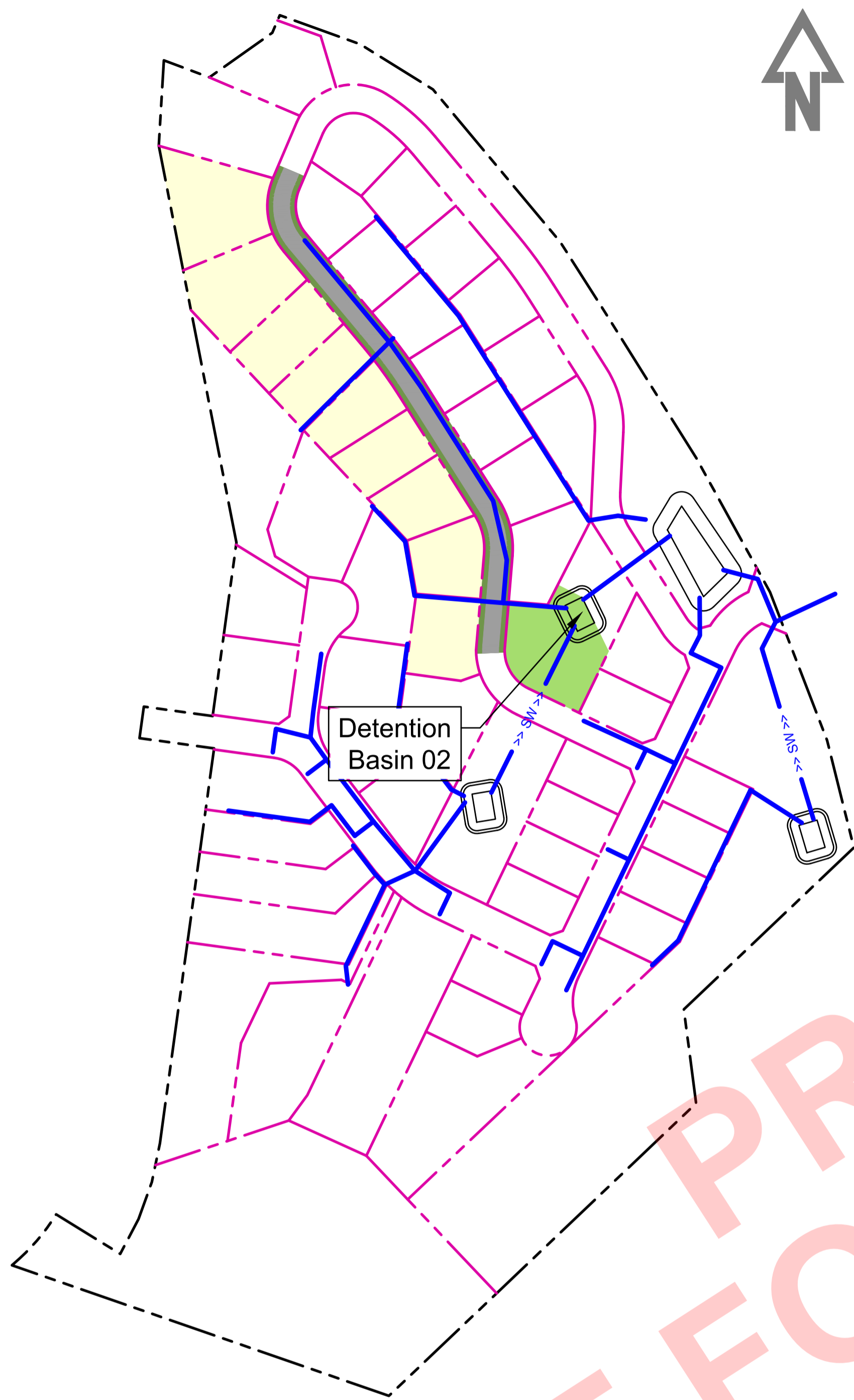
PRELIMINARY
DETENTION BASIN 01 DETAILS

Timberfix

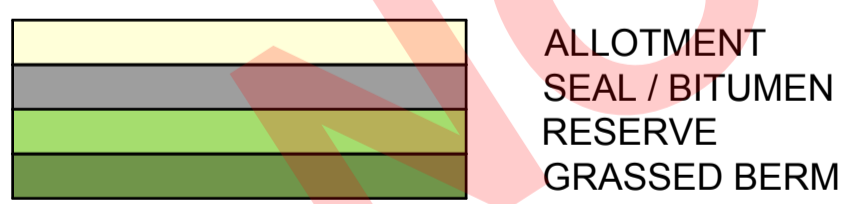
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Job No.	2021.0574
DWG. No.	SW02
Issue	P1
No. in set	32



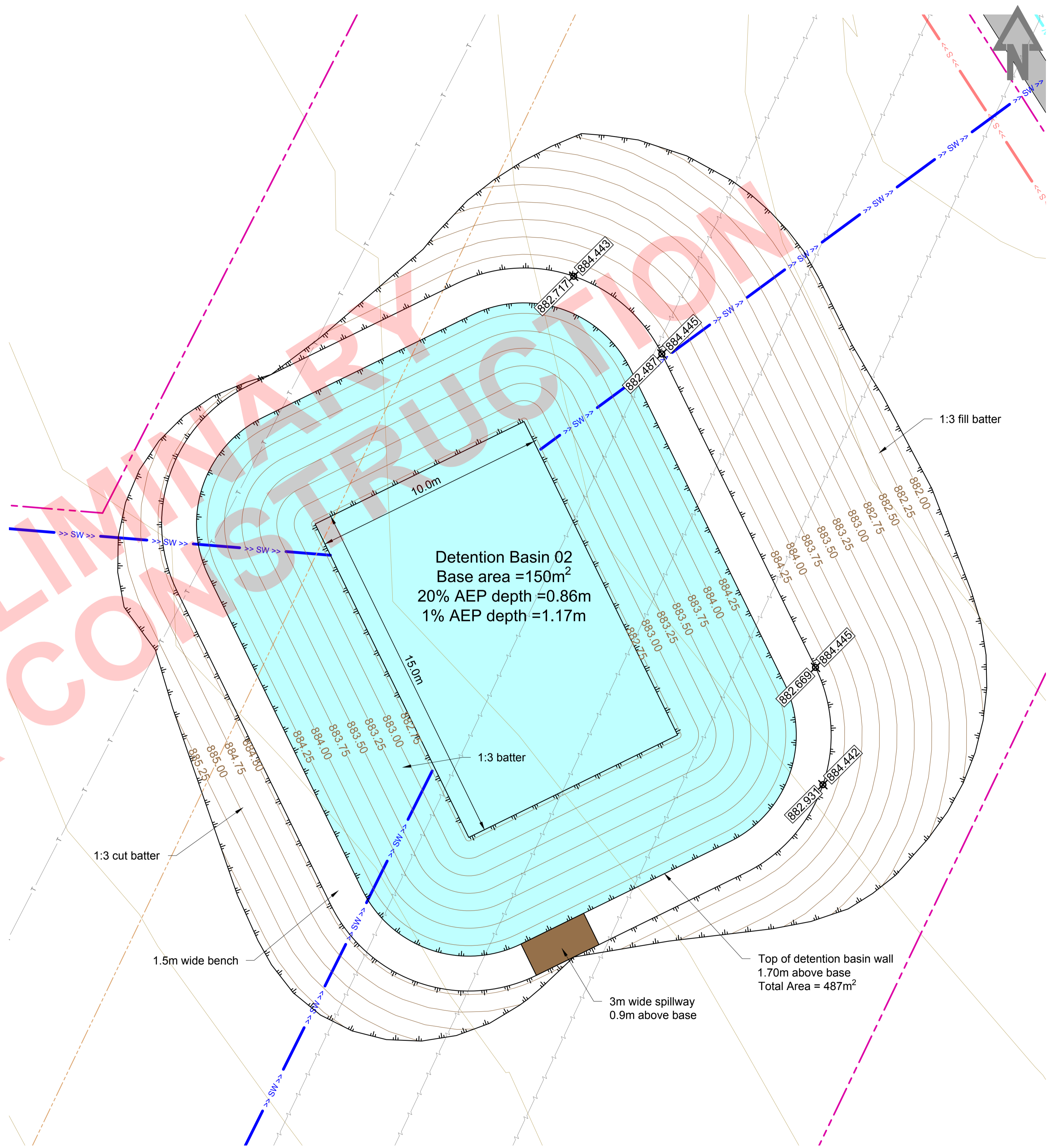
Catchment Plan
Scale 1:2000



LEGEND

	area	fi	Total imp	MUSIC EFI Ratio	MUSIC EFI area	%	area
Road	0.4361	60%	0.26166	1	0.26166	60.00%	0.436
Standard Res	1.4587	70%	1.02109	0.55	0.5615995	38.50%	1.459
Undev	0.2434	0%	0	0.05	0	0.00%	0.243
Total	2.1382	60%	1.28275		0.8232595	38.50%	2.138

Detention Basin 02 Catchments



Detention Basin 02
Base area = 150m²
20% AEP depth = 0.86m
1% AEP depth = 1.17m

PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022 - 09:52:04

Amend	Date	Description	By	Amend	Date	Description	By
P2	22/09/22	ALTERATIONS DUE TO COUNCIL COMMENTS	GBL				
P1	11/10/21	ORIGINAL ISSUE	GBL				

Approved for Construction:

Garth Dean
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APEC Engineer IntPE (Aus) RBP
(Vic/NT)

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Scale (A1): 1:100
Date: October 2021

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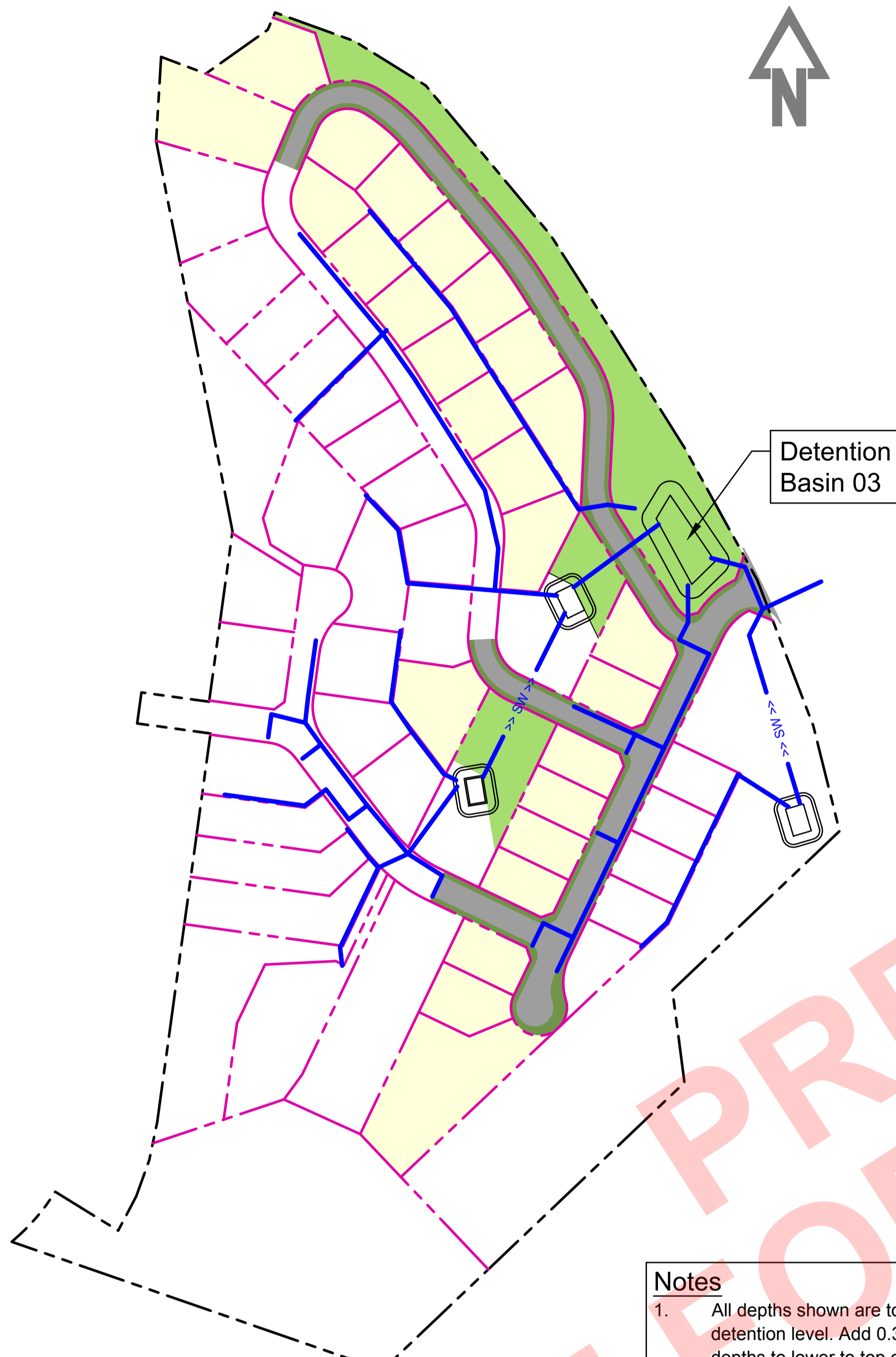
PRELIMINARY
DETENTION BASIN 02 DETAILS

Timberfix

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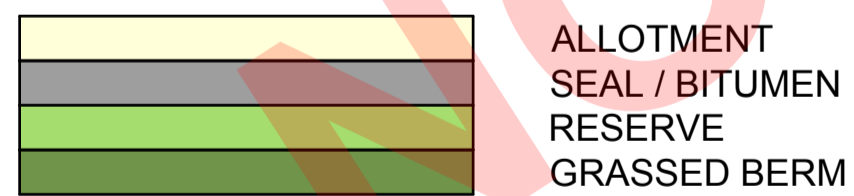
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DWG. No. Issue
SW03 P1
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32



Catchment Plan
Scale 1:2000

LEGEND

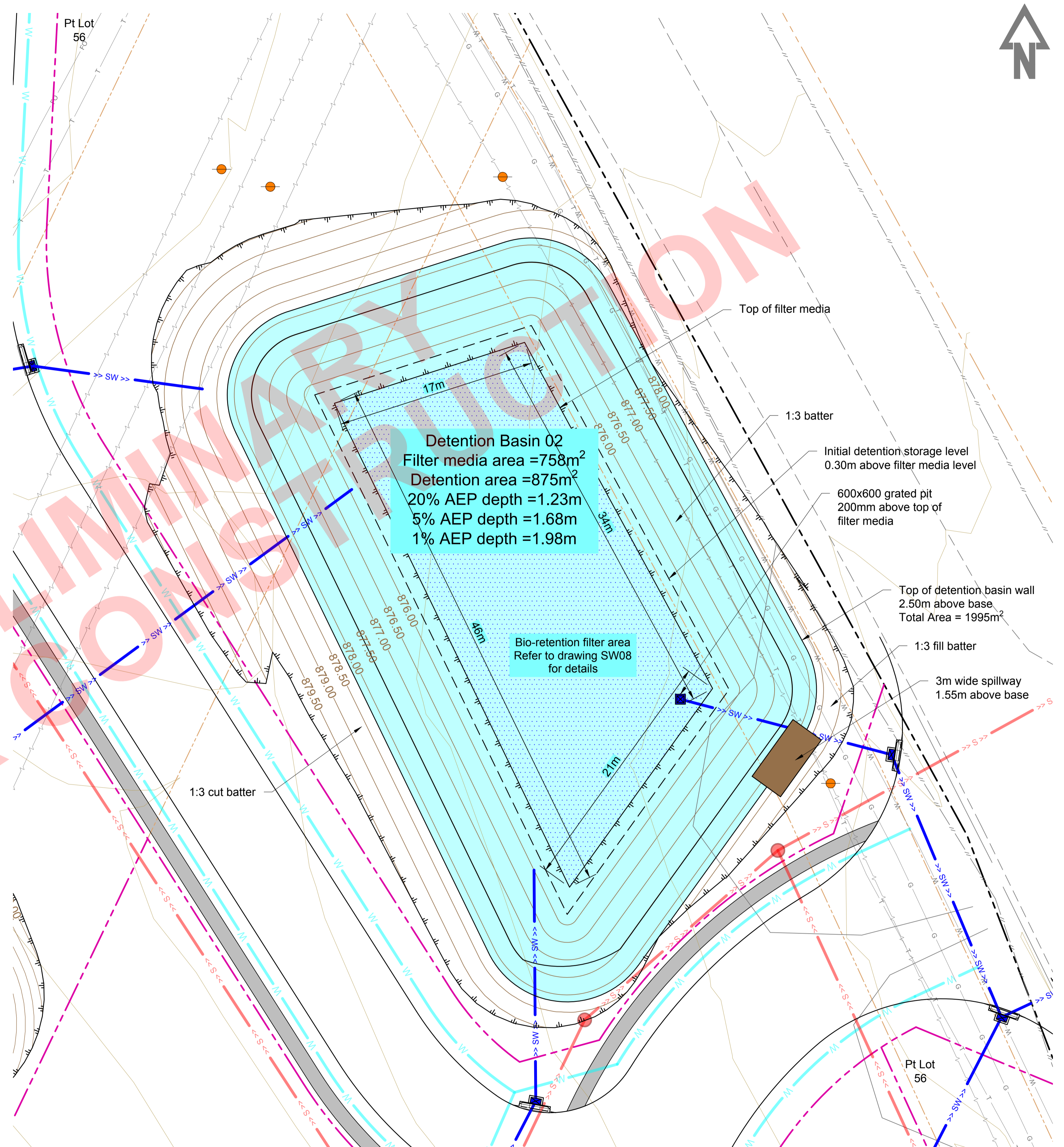


Notes

- All depths shown are to the initial detention level. Add 0.30m to all depths to lower to top of filter media.
- Total depth of water in 5% AEP level will be 1.98m, suitable child proof fencing and signage is to be included in final design.

	area	fi	Total imp	MUSIC EFI Ratio	MUSIC EFI area	%	area
Road	1.4199	60%	0.85194	1	0.85194	60.00%	1.420
Standard Res	3.6236	70%	2.53652	0.55	1.395086	38.50%	3.624
Large Res	1.9233	30%	0.57699	0.55	0.3173445	16.50%	1.923
Undev	1.2415	0%	0	0.05	0	0.00%	1.242
Total	8.2083	48%	3.96545		2.5643705	31.24%	8.208

Detention Basin 03 Catchments



Detention Basin 02
 Filter media area = 758m²
 Detention area = 875m²
 20% AEP depth = 1.23m
 5% AEP depth = 1.68m
 1% AEP depth = 1.98m

Bio-retention filter area
 Refer to drawing SW08
 for details

- Top of filter media
- 1:3 batter
- Initial detention storage level 0.30m above filter media level
- 600x600 grated pit 200mm above top of filter media
- Top of detention basin wall 2.50m above base. Total Area = 1995m²
- 1:3 fill batter
- 3m wide spillway 1.55m above base

PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022 - 09:52:10

Amend	Date	Description	By	Amend	Date	Description	By
P2	22/09/22	ALTERATIONS DUE TO COUNCIL COMMENTS	GBL				
P1	11/10/21	ORIGINAL ISSUE	GBL				

Approved for Construction:

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PRELIMINARY BIO-RETENTION &
 DETENTION BASIN 03 DETAILS

Timberfix

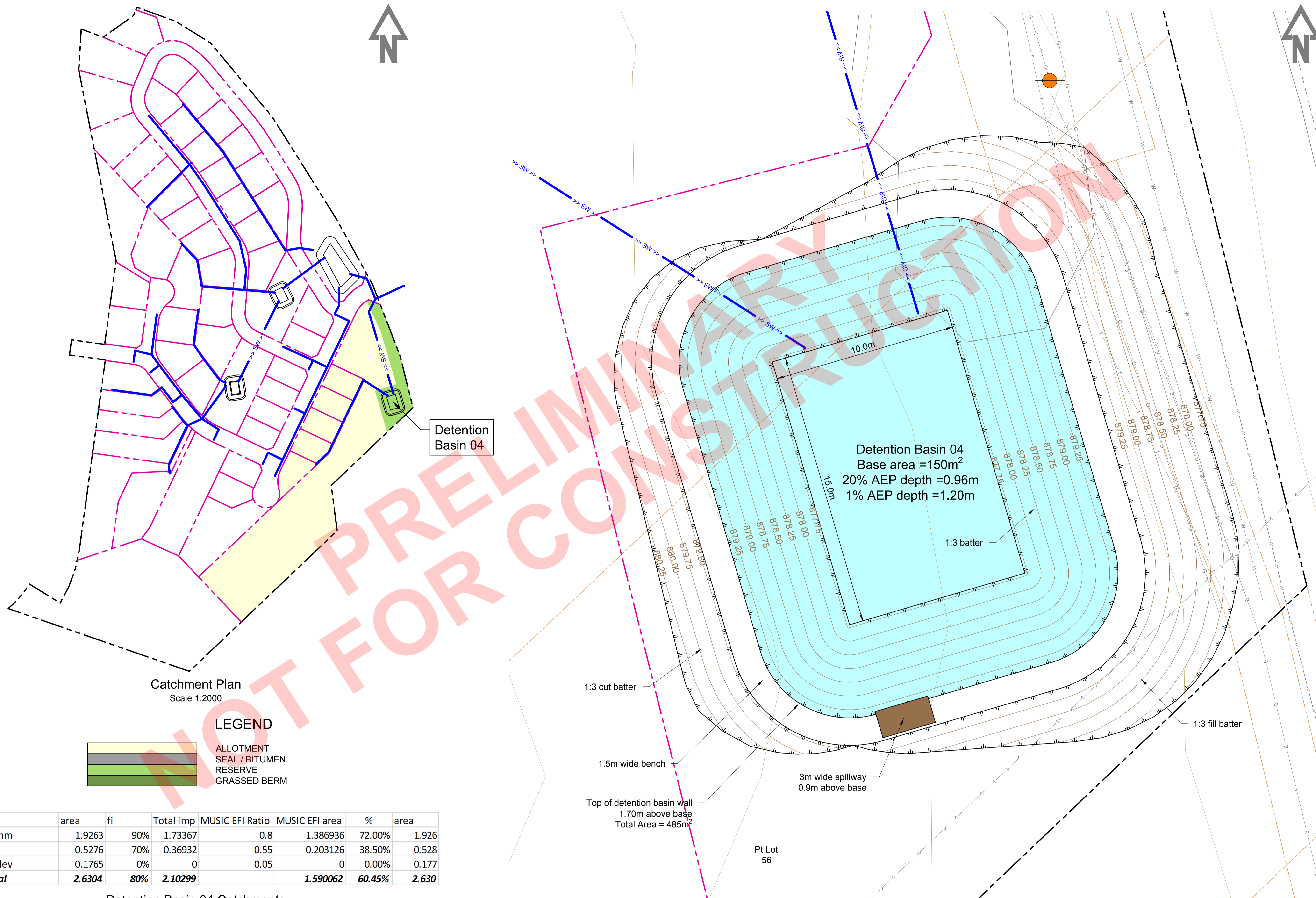
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Job No.
2021.0574

DWG. No. Issue
SW04 P1

No. in set
32



Catchment Plan
Scale 1:2000

LEGEND

- ALLOTMENT
- SEAL / BITUMEN
- RESERVE
- GRASSED BERM

	area	fi	Total imp	MUSIC EFI Ratio	MUSIC EFI area	%	area
Comm	1.9263	90%	1.73367	0.8	1.386936	72.00%	1.926
Res	0.5276	70%	0.36932	0.55	0.203126	38.50%	0.528
Undev	0.1765	0%	0	0.05	0	0.00%	0.177
Total	2.6304	80%	2.10299		1.590062	60.45%	2.630

Detention Basin 04 Catchments

PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022 - 09:52:14

Amend	Date	Description	By	Amend	Date	Description	By
P2	22/09/22	ALTERATIONS DUE TO COUNCIL COMMENTS	GBL				
P1	11/10/21	ORIGINAL ISSUE	GBL				

Approved for Construction:
[Signature]
Garth Dean
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Scale (A1): 1:100
Date: October 2021

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PRELIMINARY
DETENTION BASIN 04 DETAILS

Timberfix

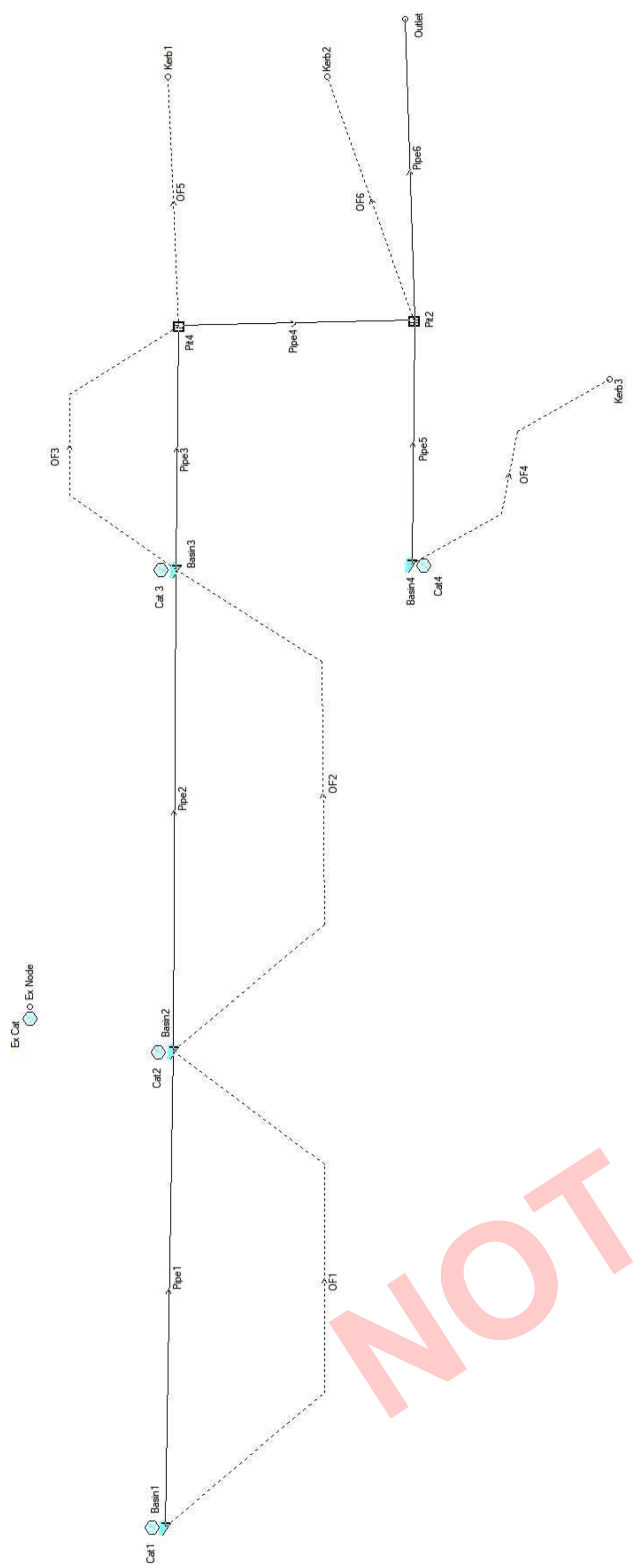
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Job No.
2021.0574

DWG. No. Issue
SW05 P1

No. in set
32



PIT / NODE DETAILS																		
Name	Type	Family	Size	Ponding Volume (cu.m)	Pressure Change Coeff. Ku	Surface Elev (m)	Max Pond Depth (m)	Base Inflow (cu.m/s)	Blocking Factor	x	y	Bolt-down lid	id	Part Full Shock Loss	Inflow Hydrograph	Pit is	Internal Width (mm)	Inflow is Misaligned
Ex Node	Node								0	786.709	-377.758		21		No			
Kerb1	Node								0	1138	-430		21190		No			
Kerb2	Node								0	1138	-490		269158		No			
Pit4	OnGrade	NSW RTA SA SA2			1.5	876.75			0	1044	-434	No		21176 1 x Ku	No	New		
Pit2	OnGrade	NSW RTA SA SA2			1.5	876.75			0	1046	-523	No		21174 1 x Ku	No	New		
Outlet	Node					874.8			0	1159.973	-519.541			2274	No			
Kerb3	Node								0	1024	-597		13089801		No			

DETENTION BASIN DETAILS																	
Name	Elev	Surf. Area	Not Used	Outlet Type	K	Dia(mm)	Centre RL	Pit Family	Pit Type	x	y	HED	Crest RL	Crest Leng	id		
Basin1		890.9	150	Culvert		0.5				590		-429	No			2462104	
		892.65	500														
Basin2		882.7	150	Culvert		0.5				770		-432	No			2462108	
		884.45	500														
Basin3		875.7	858	Culvert		0.5				952		-433	No			2210	
		878.2	1995														
Basin4		877.7	150	Culvert		0.5				954		-522	No			6629056	
		879.2	440														

SUB-CATCHMENT DETAILS																		
Name	Pit or Node	Total Area (ha)	EIA %	Perv Area %	RIA %	EIA Time (min)	Perv Time (min)	RIA Time (min)	EIA Length (m)	Perv Length (m)	RIA Length (m)	EIA Slope (%)	Perv Slope (%)	RIA Slope (%)	EIA Perv Rough	Perv Perv Rough	RIA Perv Rough	Rainfall Multiplier
Ex Cat	Ex Node	17.433	0	100	0	0	0	0	0	-1	300	-1	-1	12	-1	-1	0.035	-1
Cat1	Basin1	4.52	57	43	0	5	7	2										1
Cat2	Basin2	2.1382	60	40	0	5	7	2										1
Cat3	Basin3	8.2083	48	52	0	5	7	2										1
Cat4	Basin4	2.6304	80	20	0	5	7	2										1

PIPE DETAILS																		
Name	From	To	Length (m)	U/S IL (m)	D/S IL (m)	Slope (%)	Type	Dia (mm)	I.D. (mm)	Rough	Pipe Is	No. Pipes	Chg From	At Chg	Chg (m)	RI (m)	Chg (m)	RL (m)
Pipe1	Basin1	Basin2	97	890.9	883.1	8.04	Concrete, not under roads	450	450	0.013	NewFixed	1	Basin1		0			
Pipe2	Basin2	Basin3	56	882.7	875.7	12.5	Concrete, not under roads	375	375	0.013	NewFixed	2	Basin2		0			
Pipe3	Basin3	Pit4	17	875.7	875.33	2.18	Concrete, not under roads	450	450	0.013	NewFixed	1	Basin3		0			
Pipe4	Pit4	Pit2	12.5	875.33	875.205	1	Concrete, not under roads	525	525	0.013	NewFixed	1	Pit4		0			
Pipe6	Pit2	Outlet	35	875.205	874.855	1	Concrete, not under roads	600	600	0.013	NewFixed	1	Pit2		0			
Pipe5	Basin4	Pit2	110	877.7	875.205	2.27	Concrete, not under roads	375	375	0.013	NewFixed	1	Basin4		0			

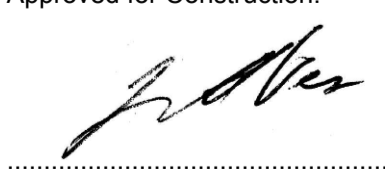
DETAILS OF SERVICES CROSSING PIPES																	
Pipe	Chg (m)	Bottom Elev (m)	Height of Se Chg (m)	Bottom Elev (m)	Height of Service (m)	Chg (m)	Bottom Elev (m)	Height of Service (m)	etc								

CHANNEL DETAILS																	
Name	From	To	Type	Length (m)	U/S IL (m)	D/S IL (m)	Slope (%)	Base Width (m)	L.B. Slope (1:?)	R.B. Slope (1:?)	Manning n	Depth (m)	Roofed				

OVERFLOW ROUTE DETAILS																	
Name	From	To	Travel Time (min)	Spill Level (m)	Crest Length (m)	Weir Coeff. C	Cross Section	Safe Depth Major Storms (m)	SafeDepth Minor Storms (m)	Safe Bed Slope (sq.m/sec) (%)	D/S Area Contributing %	id	U/S IL	D/S IL	Length (m)		
OF1	Basin1	Basin2	0.5	891.9	3		2 3m wide 1:4 batters	0.3	0.15	0.4	6.49	0	3485762	891.9	885.5	97	
OF2	Basin2	Basin3	0.3	883.6	3		2 3m wide 1:4 batters	0.3	0.15	0.4	6.43	0	4492933	883.6	880	56	
OF3	Basin3	Pit4	0.1	877.25	3		2 3m wide 1:4 batters	0.3	0.15	0.4	4.41	0	12969291	877.25	876.75	17	
OF5	Pit4	Kerb1	0.1				7.5 m roadway with 3% cro	0.3	0.15	0.4	1	0	21188	876.75	876.65	10	
OF6	Pit2	Kerb2	0.1				7.5 m roadway with 3% cro	0.3	0.15	0.4	1	0	269157	876.75	876.65	10	
OF4	Basin4	Kerb3	0.1	878.7	3		2 3m wide 1:4 batters	0.3	0.15	0.4	11	0	21160	878.7	877.6	10	

PIPE COVER DETAILS																	
Name	Type	Dia (mm)	Safe Cover (Cover (m))														
Pipe1	Concrete, not under road	450	0.45 -0.89 Unsafe														
Pipe2	Concrete, not under road	375	0.45 -0.41 Unsafe														
Pipe3	Concrete, not under road	450	0.45 -0.49 Unsafe														
Pipe4	Concrete, not under road	525	0.45 0.85														
Pipe6	Concrete, not under road	600	0.45 -0.7 Unsafe														
Pipe5	Concrete, not under road	375	0.45 -0.41 Unsafe														

PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022, 09:52:16

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Drawn: GBL Designed: GBL Checked: ... Scale (A1): N/A Date: October 2021		PRELIMINARY Not for construction		WATERCOM DRAINS DATA Timberfix					

DRAINS results prepared from Version 2021.02

PIT / NODE DETAILS								Version 8
Name	Max HGL	Max Pond HGL	Max Surface Flow Arriving (cu.m/s)	Max Pond Volume (cu.m)	Min Freeboard (m)	Overflow (cu.m/s)	Constraint	
Pit4	876.97		2.122		0	1.415	Outlet System	
Pit2	876.41		0		0.34	0	None	
Outlet	874.8		0					

SUB-CATCHMENT DETAILS							
Name	Max Flow Q (cu.m/s)	EIA Max Q (cu.m/s)	Remaining Max Q (cu.m/s)	EIA Tc (cu.m/s)	RIA Tc (min)	PA Tc (min)	Due to Storm (min)
Ex Cat	2.662	0	2.662	0	0	9.98	1% AEP, 45 min burst, Storm 7
Cat1	1.4	1.4	0	5	2	7	1% AEP, 5 min burst, Storm 1
Cat2	0.697	0.697	0	5	2	7	1% AEP, 5 min burst, Storm 1
Cat3	2.141	2.141	0	5	2	7	1% AEP, 5 min burst, Storm 1
Cat4	1.143	1.143	0	5	2	7	1% AEP, 5 min burst, Storm 1

PIPE DETAILS					
Name	Max Q (cu.m/s)	Max V (m/s)	Max U/S HGL (m)	Max D/S HGL (m)	Due to Storm
Pipe1	0.415	2.61	891.488	883.873	1% AEP, 10 min burst, Storm 7
Pipe2	0.572	2.59	883.235	877.676	1% AEP, 15 min burst, Storm 8
Pipe3	0.422	2.65	877.446	876.967	1% AEP, 2 hour burst, Storm 6
Pipe4	0.526	2.43	876.572	876.409	1% AEP, 4.5 hour burst, Storm 4
Pipe6	0.733	2.77	875.805	875.385	1% AEP, 45 min burst, Storm 7
Pipe5	0.267	2.42	878.759	876.409	1% AEP, 10 min burst, Storm 7

CHANNEL DETAILS		Due to Storm
Name	Max Q (cu.m/s)	Max V (m/s)

OVERFLOW ROUTE DETAILS								
Name	Max Q U/S	Max Q D/S	Safe Q	Max D	Max DxV	Max Width	Max V	Due to Storm
OF1	0.62	0.618	1.371	0.07	0.19	3.56	2.74	1% AEP, 10 min burst, Storm 7
OF2	0.801	0.8	1.39	0.082	0.24	3.65	2.97	1% AEP, 15 min burst, Storm 8
OF3	1.529	1.529	1.39	0.218	0.43	4.74	2.87	1% AEP, 1 hour burst, Storm 8
OF5	1.415	1.415	1.484	0.218	0.39	7.18	1.77	1% AEP, 1 hour burst, Storm 8
OF6	0	0	1.484	0	0	0	0	
OF4	0.494	0.494	1.355	0.052	0.15	3.42	2.96	1% AEP, 10 min burst, Storm 7

DETENTION BASIN DETAILS					
Name	Max WL	Max Vol	Max Q Total	Max Q Low Level	Max Q High Level
Basin1	892.13	312.7	1.035	0.415	0.62
Basin2	883.87	291.4	1.373	0.572	0.801
Basin3	877.68	2496.4	1.951	0.422	1.529
Basin4	878.9	300.9	0.761	0.267	0.494

1% AEP Results

DRAINS results prepared from Version 2021.02

PIT / NODE DETAILS								Version 8
Name	Max HGL	Max Pond HGL	Max Surface Flow Arriving (cu.m/s)	Max Pond Volume (cu.m)	Min Freeboard (m)	Overflow (cu.m/s)	Constraint	
Pit4	876.25		0		0.5	0	None	
Pit2	875.96		0		0.79	0	None	
Outlet	874.8		0					

SUB-CATCHMENT DETAILS							
Name	Max Flow Q (cu.m/s)	EIA Max Q (cu.m/s)	Remaining Max Q (cu.m/s)	EIA Tc (cu.m/s)	RIA Tc (min)	PA Tc (min)	Due to Storm (min)
Ex Cat	0.605	0	0.605	0	0	22.12	20% AEP, 6 hour burst, Storm 2
Cat1	0.789	0.789	0	5	2	7	20% AEP, 5 min burst, Storm 1
Cat2	0.393	0.393	0	5	2	7	20% AEP, 5 min burst, Storm 1
Cat3	1.207	1.207	0	5	2	7	20% AEP, 5 min burst, Storm 1
Cat4	0.645	0.645	0	5	2	7	20% AEP, 5 min burst, Storm 1

PIPE DETAILS					
Name	Max Q (cu.m/s)	Max V (m/s)	Max U/S HGL (m)	Max D/S HGL (m)	Due to Storm
Pipe1	0.357	2.4	891.298	883.562	20% AEP, 20 min burst, Storm 4
Pipe2	0.471	2.26	883.035	876.934	20% AEP, 25 min burst, Storm 9
Pipe3	0.397	2.49	876.71	876.247	20% AEP, 45 min burst, Storm 3
Pipe4	0.397	1.83	876.046	875.963	20% AEP, 45 min burst, Storm 3
Pipe6	0.58	2.45	875.701	875.324	20% AEP, 45 min burst, Storm 8
Pipe5	0.251	2.28	878.507	875.963	20% AEP, 20 min burst, Storm 4



CHANNEL DETAILS		Due to Storm
Name	Max Q (cu.m/s)	Max V (m/s)

OVERFLOW ROUTE DETAILS								
Name	Max Q U/S	Max Q D/S	Safe Q	Max D	Max DxV	Max Width	Max V	Due to Storm
OF1	0	0	1.371	0	0	0	0	
OF2	0	0	1.39	0	0	0	0	
OF3	0	0	1.39	0	0	0	0	
OF5	0	0	0.453	0	0	0	0	
OF6	0	0	0.453	0	0	0	0	
OF4	0	0	1.355	0	0	0	0	

DETENTION BASIN DETAILS					
Name	Max WL	Max Vol	Max Q Total	Max Q Low Level	Max Q High Level
Basin1	891.87	222.2	0.357	0.357	0
Basin2	883.56	189	0.471	0.471	0
Basin3	876.93	1356.3	0.397	0.397	0
Basin4	878.66	218.1	0.251	0.251	0

20% AEP Results

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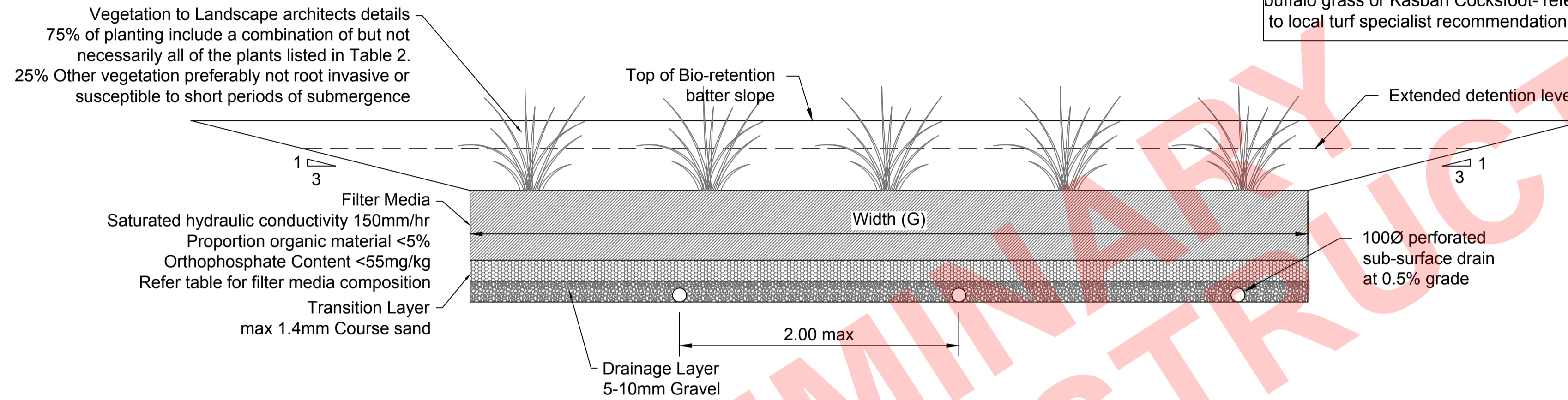
Approved for Construction:		This drawing and the information shown hereon is the property of Calare Civil Pty Limited and may not be used for any other purpose than that for which this drawing is supplied. Any other use, copying or reproduction of all or any part of this drawing is prohibited without the written consent of Calare Civil Pty Limited.		Lot 1 DP 1253903 19 Barton Avenue Wallerawang, NSW 2845				Job No. 2021.0574	
 Garth Dean B.E. GDSTT FIEAust CPEng NER APEC Engineer IntPE (Aus) RBP (Vic/NT)		Drawn: GBL Designed: GBL Checked: ... Scale (A1): N/A Date: October 2021		PRELIMINARY Not for construction		WATERCOM DRAINS RESULTS Timberfix		DWG. No. Issue SW07 P1	
P2 22/09/22 ALTERATIONS DUE TO COUNCIL COMMENTS P1 11/10/21 ORIGINAL ISSUE		Amend Date Description By Amend Date Description By				170 RANKIN STREET, BATHURST, N.S.W. 2795 Tel: (02) 63323343 Fax: (02) 63318210		No. in set 32	

Filter Media
Structural Stability
 Dispersibility testing should be done if soil may be structurally unstable
Engineered filter media
 Washed sand with appropriate Ks
 Top 100mm should be ameliorated with organic material, fertiliser and trace elements as detailed in Table 1

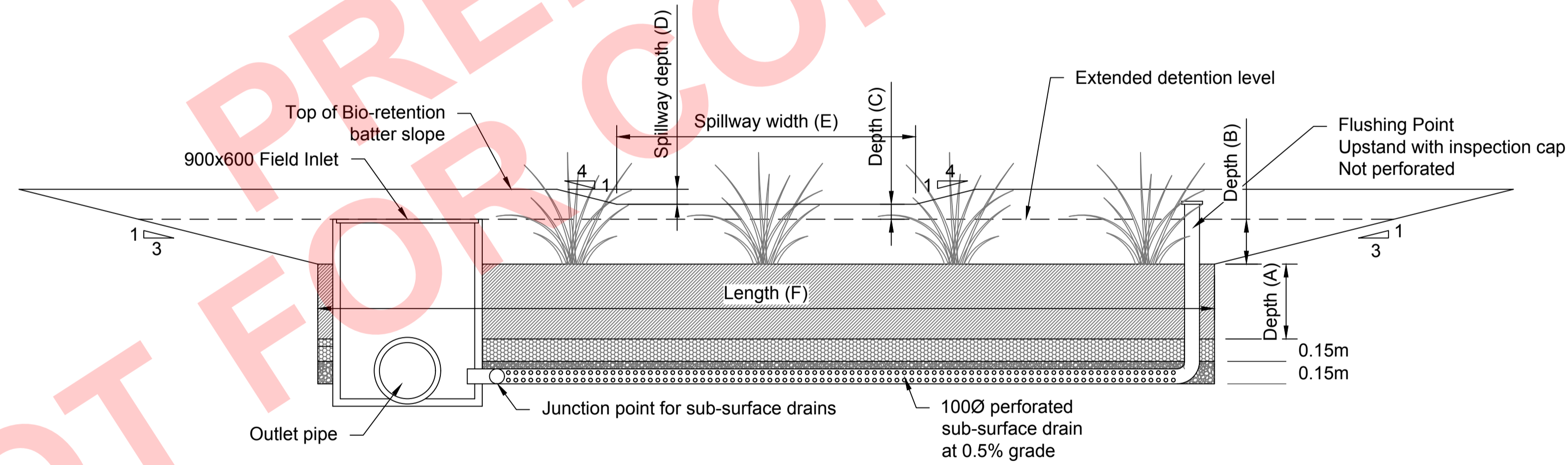
Name	Quantity (kg/100m2 filter area)
Granulated poultry manure fines	50
Superphosphate	2
Magnesium sulphate	3
Potassium sulphate	2
Trace element mix	1
Fertiliser NPK (16.4.14)	4
Lime	20
Total	82

Plant name	Listed in order of preference
Carex appressa	
Melaleuca ericifolia	
Goodenia ovata	
Ficinia nodosa	
Juncus amabilis	
Juncus flavidus	

For bio-retention swale use suitable deep rooting heavy mat grass eg. buffalo grass or Kasbah Cocksfoot- refer to local turf specialist recommendations



BIO-RETENTION DETAIL (Typical Cross Section)
 Scale 1:25



BIO-RETENTION DETAIL (Typical Long Section)
 Scale 1:25

Bioretention Area Name	A	B	C	D	E	Length F	Width G
Bio-retention 03	0.40m	0.30m	Refer SW04	Refer SW04	Refer SW04	Refer SW04	Refer SW04

PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022 - 09:52:22

Amend	Date	Description	By	Amend	Date	Description	By
P2	22/09/22	ALTERATIONS DUE TO COUNCIL COMMENTS	GBL				
P1	11/10/21	ORIGINAL ISSUE	GBL				

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PRELIMINARY BIO-RETENTION
 BASIN 03 DETAILS

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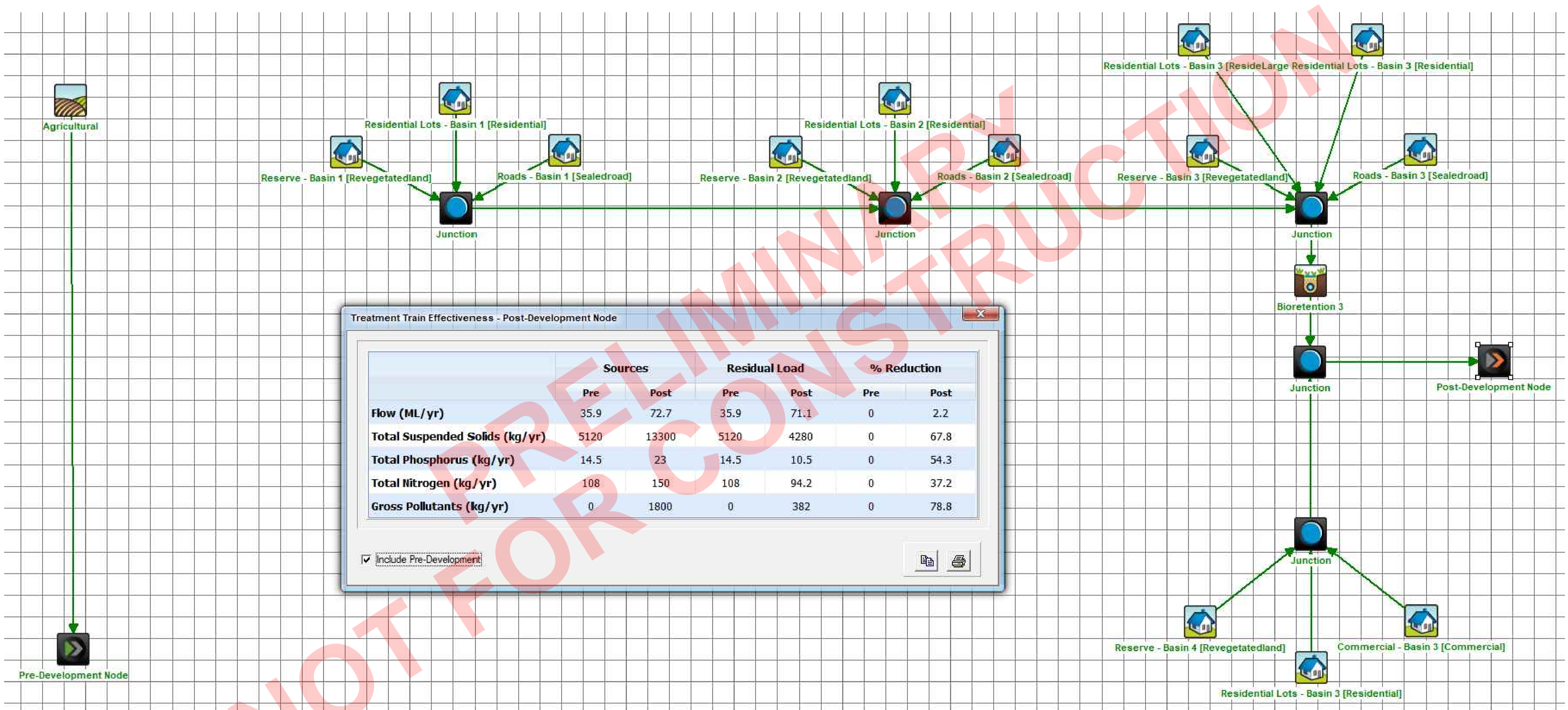
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SW08 P1

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32



Treatment Train Effectiveness - Post-Development Node

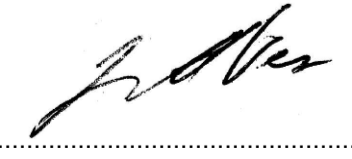
	Sources		Residual Load		% Reduction	
	Pre	Post	Pre	Post	Pre	Post
Flow (ML/yr)	35.9	72.7	35.9	71.1	0	2.2
Total Suspended Solids (kg/yr)	5120	13300	5120	4280	0	67.8
Total Phosphorus (kg/yr)	14.5	23	14.5	10.5	0	54.3
Total Nitrogen (kg/yr)	108	150	108	94.2	0	37.2
Gross Pollutants (kg/yr)	0	1800	0	382	0	78.8

Include Pre-Development

PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022 - 09:52:23

Amend	Date	Description	By	Amend	Date	Description	By
P2	22/09/22	ALTERATIONS DUE TO COUNCIL COMMENTS	GBL				
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PRELIMINARY BASIN 03
MUSIC MODELING RESULTS

Timberfix

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SW09 P1

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LEGEND

	ALLOTMENT
	SEAL / BITUMEN
	1.20m WIDE CONCRETE FOOTPATH
	RESERVE
	GRASSED BERM
	SEWER LINE
	STORMWATER LINE
	WATER SUPPLY LINE

Note:
Where sewer lines are within property boundaries a 3m wide easement is to be provided.



Ex sewer pump station

Gravity main from development to existing sewer pump station. Location indicative only, subject to further survey. Full design to be undertaken at subdivision works certificate stage.

PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022 - 09:52:27

Amend	Date	Description	By	Amend	Date	Description	By
P2	22/09/22	ALTERATIONS DUE TO COUNCIL COMMENTS	GBL				
P1	11/10/21	ORIGINAL ISSUE	GBL				

Approved for Construction:

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Date: October 2021

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PRELIMINARY SEWER LAYOUT PLAN

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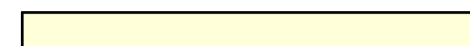

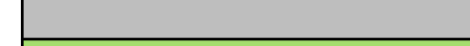





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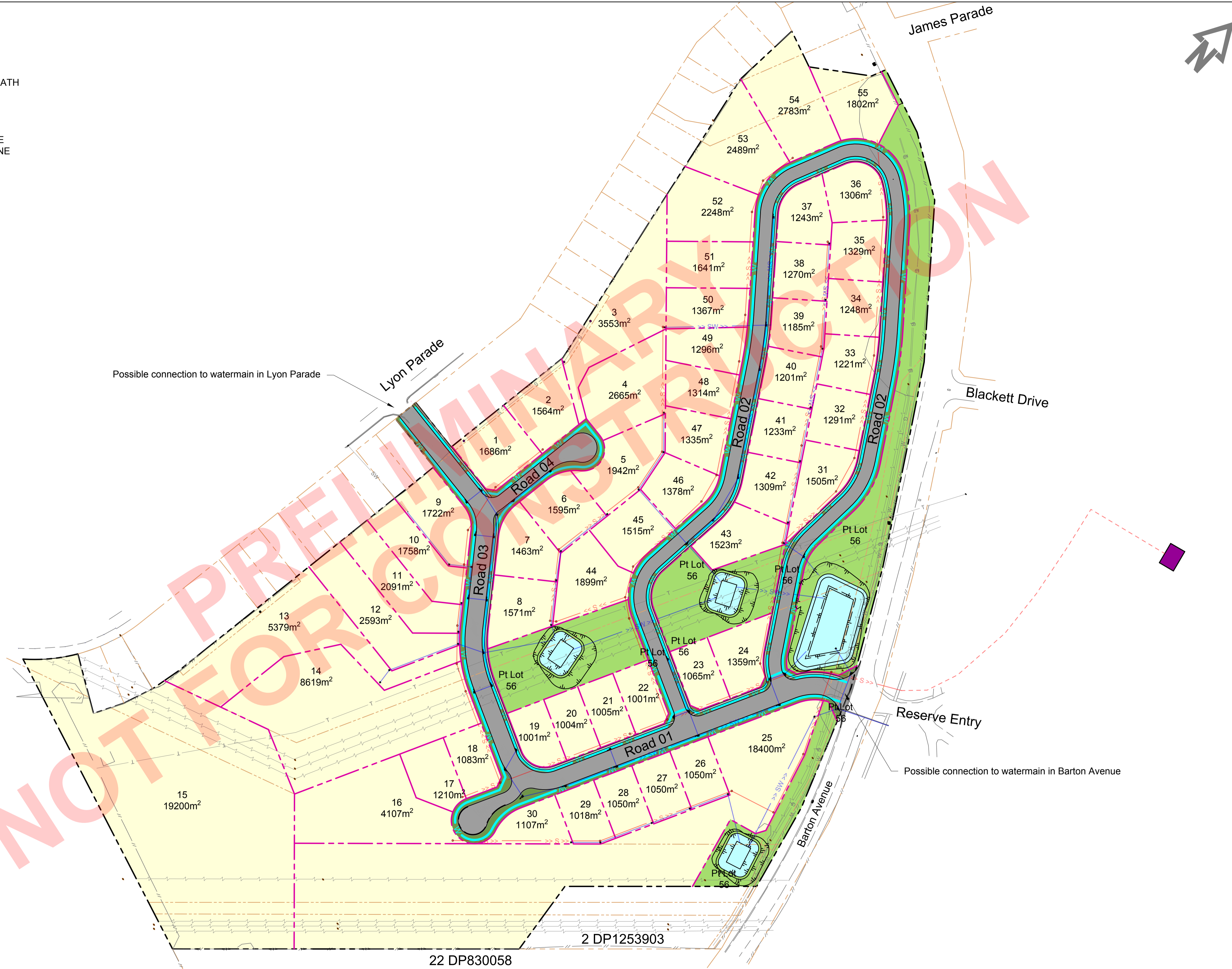
Job No.
2021.0574

DWG. No. Issue
SS01 P1

No. in set
32

LEGEND

	ALLOTMENT
	SEAL / BITUMEN
	1.20m WIDE FOOTPATH
	RESERVE
	GRASSED BERM
	SEWER LINE
	STORMWATER LINE
	WATER SUPPLY LINE



Possible connection to watermain in Lyon Parade


Reserve Entry

Possible connection to watermain in Barton Avenue

22 DP830058
Wallerawang Public School

PLOT INFO: ...2021.0574-Civil-P2.dwg, DATE: Sep 22, 2022 - 09:52:31

Amend	Date	Description	By	Amend	Date	Description	By
P2	22/09/22	ALTERATIONS DUE TO COUNCIL COMMENTS	GBL				
P1	11/10/21	ORIGINAL ISSUE	GBL				

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PRELIMINARY WATERMAIN LAYOUT PLAN

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Job No.
2021.0574

DWG. No. Issue
W01 P1

No. in set
32