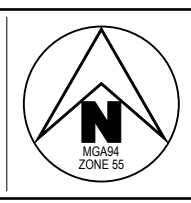


AS SUBMITTED TO COUNCIL	NJB SA AR AR 18/08/23
REVISION	DES DWG CHK AUTH DATE



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SCALE 1:1,000  
 LENGTHS ARE IN METRES - PAPER SIZE A3

**IMAGINE STAGE 31**  
**53 DUKES LANE STRATHFIELDSAYE**  
 OVERALL DEVELOPMENT PLAN  
 CITY OF GREATER BENDIGO REF: DS/377/2022  
 STRATHFIELDSAYE HOLDINGS 2 PTY LTD  
 DWG STATUS: **PRELIMINARY**  
 PROJECT & DWG No: 1352031R02 / 21  
 REV: A

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 PLOT DATE: 16/08/2023 FILE: C:\12\DATA\TOMKINSON\3089ENG\06\CAD\CURRENT\STAGE 31\1352031 R4D C1N PLANS REV A.DWG

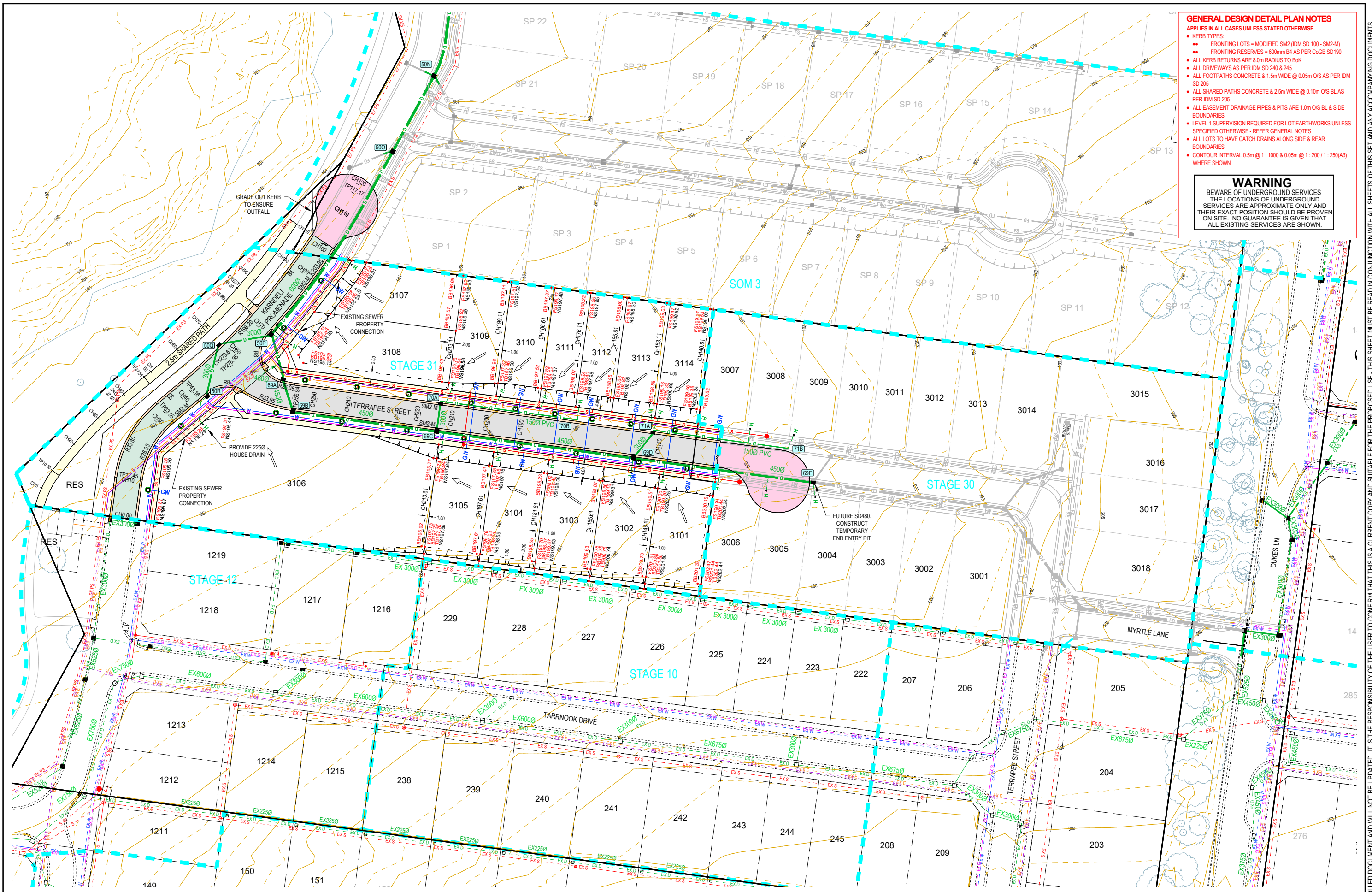




<p>A AS SUBMITTED TO COUNCIL</p> <p>REV</p>	<p>REVISION</p> <p>DES DWG CHK AUTH DATE</p> <p>NJB SA AR AR 18/08/23</p>	<p>RPE/ALEX REID - 0006159</p>	<p>SURVEY &gt; ENGINEERING &gt; PLANNING &gt; PROJECT MANAGEMENT</p> <p>HEAD OFFICE: 57 MYERS STREET BENDIGO PH 03 5445 8700 ABN 11 103 336 358 WWW.TOMKINSON.COM</p>	<p>STRATHFIELDSAYE</p>	<p>SCALE 1:1,000</p> <p>LENGTHS ARE IN METRES - PAPER SIZE A3</p> <p>© COPYRIGHT THE INFORMATION CONTAINED ON THIS DRAWING IS THE INTELLECTUAL PROPERTY OF TOMKINSON GROUP. COPYING OR USING THIS DRAWING IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF TOMKINSON GROUP INFRINGES COPYRIGHT</p>	<p><b>IMAGINE STAGE 31</b></p> <p><b>53 DUKES LANE STRATHFIELDSAYE</b></p> <p><b>EXISTING CONDITIONS &amp; TBM PLAN</b></p> <p>CITY OF GREATER BENDIGO REF: DS/377/2022</p> <p>STRATHFIELDSAYE HOLDINGS 2 PTY LTD</p> <p>DWG STATUS: <b>PRELIMINARY</b></p> <p>PROJECT &amp; DWG No: 1352031R03 / 21</p> <p>REV: A</p>
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- GENERAL DESIGN DETAIL PLAN NOTES**  
 APPLIES IN ALL CASES UNLESS STATED OTHERWISE
- KERB TYPES:
    - FRONTING LOTS = MODIFIED SM2 (DM SD 100 - SM2-M)
    - FRONTING RESERVES = 600mm B4 AS PER CoGB SD190
  - ALL KERB RETURNS ARE 8.0m RADIUS TO BOK
  - ALL DRIVEWAYS AS PER DIM SD 240 & 245
  - ALL FOOTPATHS CONCRETE & 1.5m WIDE @ 0.05m O/S AS PER DIM SD 205
  - ALL SHARED PATHS CONCRETE & 2.5m WIDE @ 0.10m O/S BL AS PER DIM SD 205
  - ALL EASEMENT DRAINAGE PIPES & PITS ARE 1.0m O/S BL & SIDE BOUNDARIES
  - LEVEL 1 SUPERVISION REQUIRED FOR LOT EARTHWORKS UNLESS SPECIFIED OTHERWISE - REFER GENERAL NOTES
  - ALL LOTS TO HAVE CATCH DRAINS ALONG SIDE & REAR BOUNDARIES
  - CONTOUR INTERVAL 0.5m @ 1:1000 & 0.05m @ 1:200 (1:250(A3)) WHERE SHOWN

**WARNING**  
 BEWARE OF UNDERGROUND SERVICES  
 THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

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REV	DES DWG CHK AUTH DATE	



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**IMAGINE STAGE 31**  
**53 DUKES LANE STRATHFIELDSAYE**  
 DETAIL PLAN  
 CITY OF GREATER BENDIGO REF: DS/377/2022  
 STRATHFIELDSAYE HOLDINGS 2 PTY LTD

DWG STATUS: **PRELIMINARY**  
 PROJECT & DWG No: 1352031R04 / 21  
 REV: A

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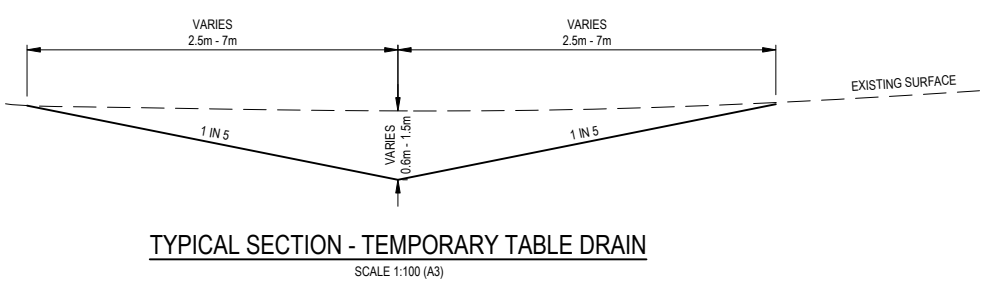
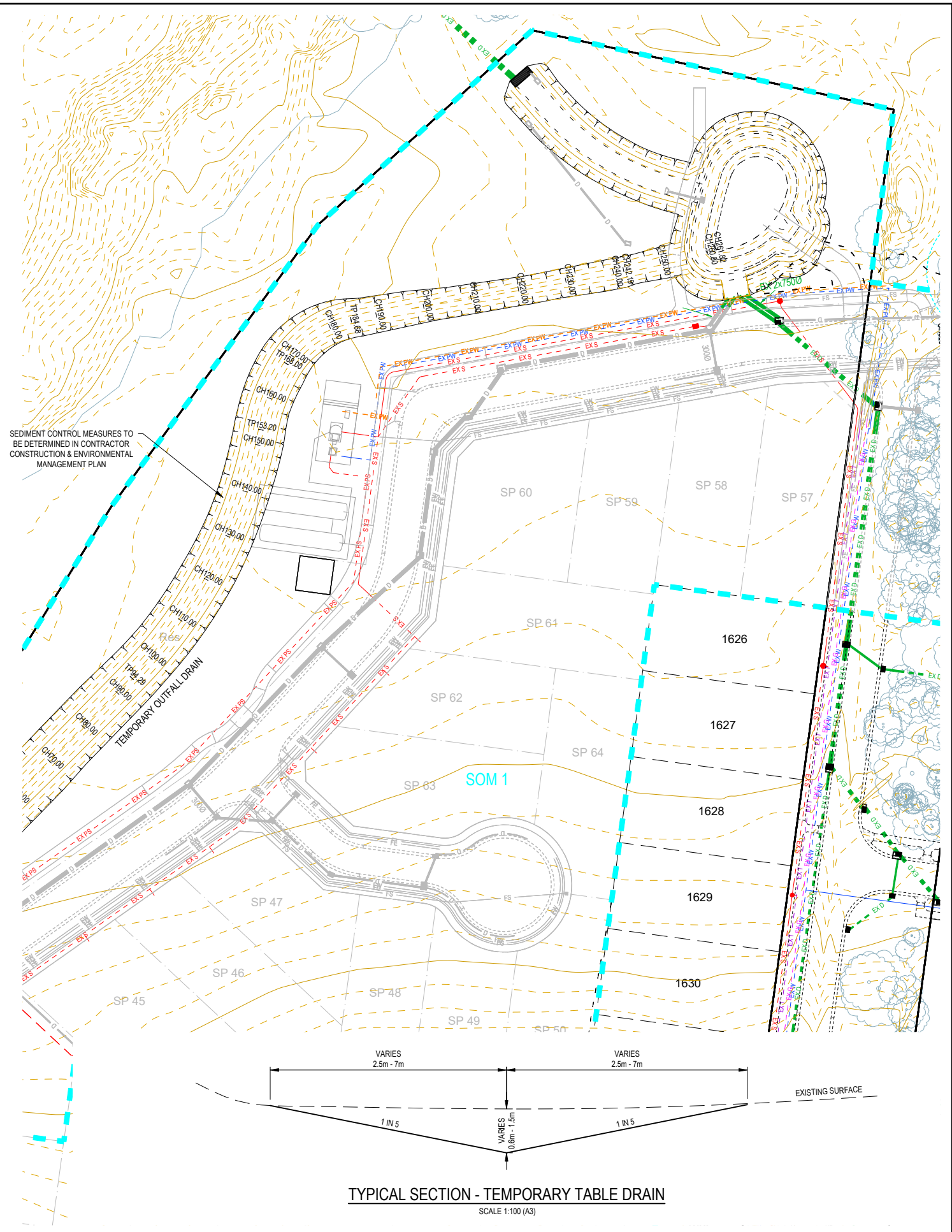
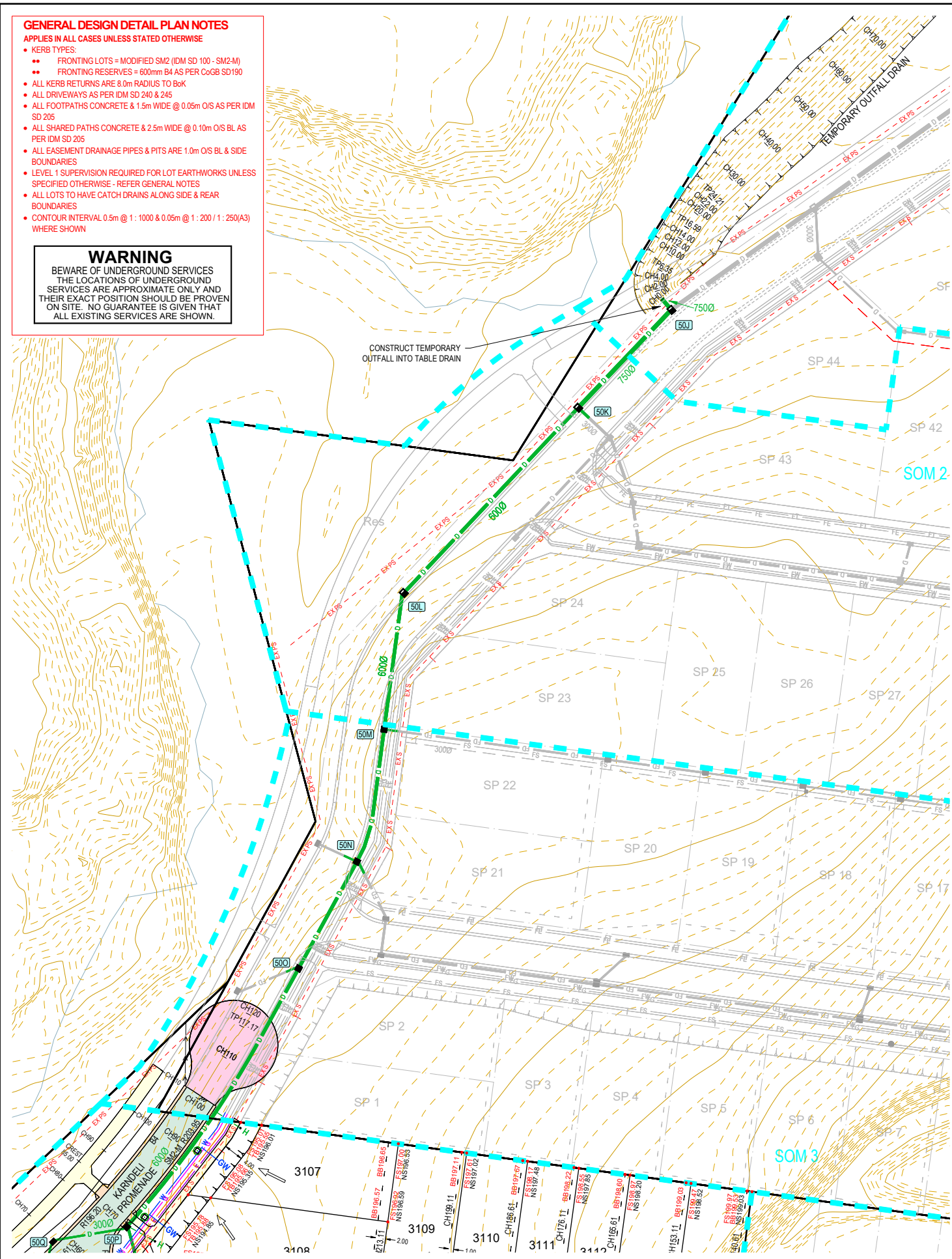


**GENERAL DESIGN DETAIL PLAN NOTES**

- APPLIES IN ALL CASES UNLESS STATED OTHERWISE
- KERB TYPES:
  - FRONTING LOTS = MODIFIED SM2 (DM SD 100 - SM2-M)
  - FRONTING RESERVES = 600mm B4 AS PER CoGS SD190
- ALL KERB RETURNS ARE 8.0m RADIUS TO BxK
- ALL DRIVEWAYS AS PER DM SD 240 & 245
- ALL FOOTPATHS CONCRETE & 1.5m WIDE @ 0.05m O/S AS PER DM SD 205
- ALL SHARED PATHS CONCRETE & 2.5m WIDE @ 0.10m O/S BL AS PER DM SD 205
- ALL EASEMENT DRAINAGE PIPES & PITS ARE 1.0m O/S BL & SIDE BOUNDARIES
- LEVEL 1 SUPERVISION REQUIRED FOR LOT EARTHWORKS UNLESS SPECIFIED OTHERWISE - REFER GENERAL NOTES
- ALL LOTS TO HAVE CATCH DRAINS ALONG SIDE & REAR BOUNDARIES
- CONTOUR INTERVAL 0.5m @ 1:1000 & 0.05m @ 1:200 / 1:250(A3) WHERE SHOWN

**WARNING**

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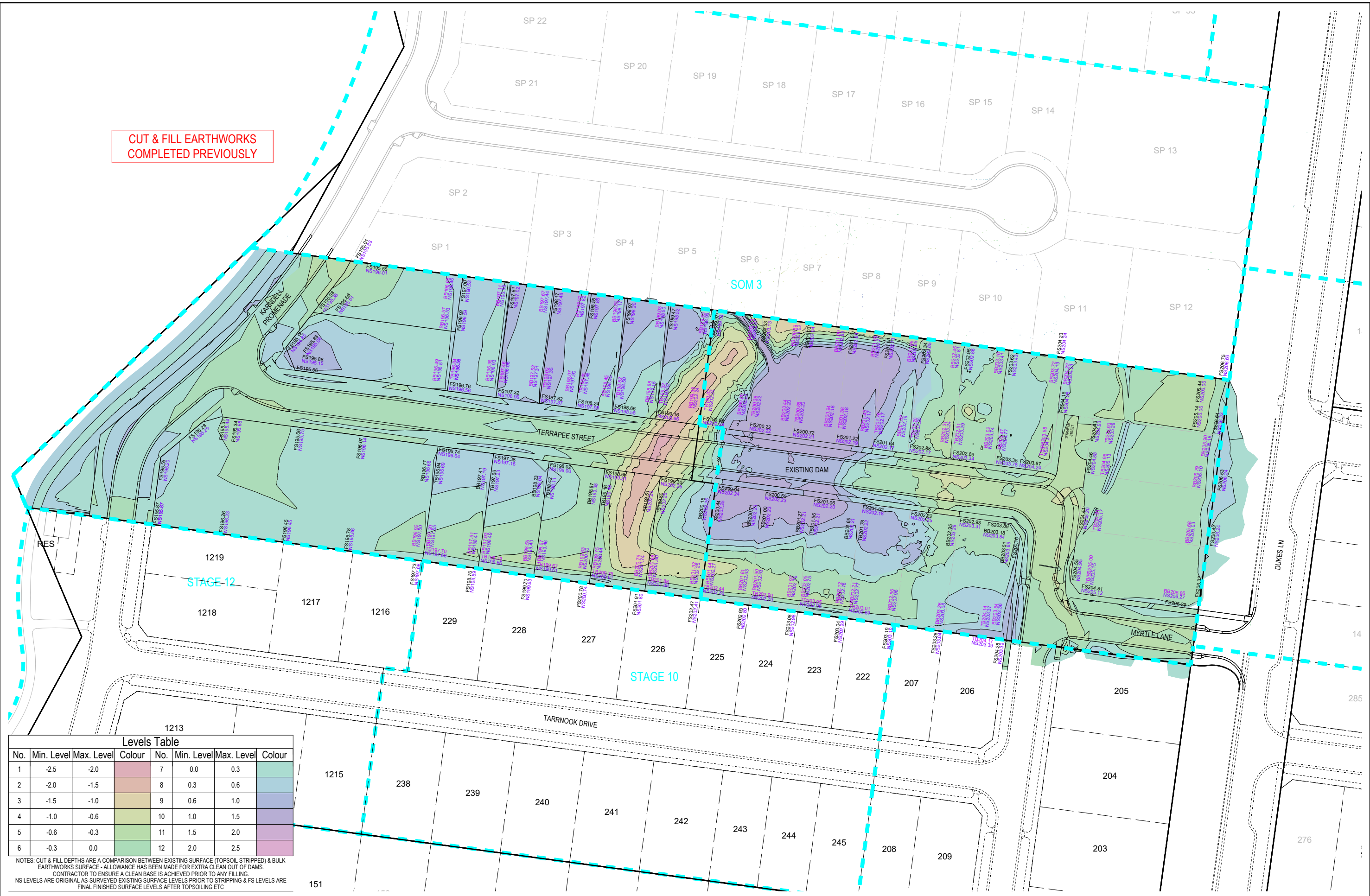
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**53 DUKES LANE STRATHFIELDSAYE**  
**DRAINAGE OUTFALL DETAIL PLAN**  
CITY OF GREATER BENDIGO REF: DS/377/2022  
STRATHFIELDSAYE HOLDINGS 2 PTY LTD

DWG STATUS: **PRELIMINARY**  
PROJECT & DWG No: 1352031R05 / 21

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PLOT DATE: 16/08/2023 FILE: C:\12\DATA\TOMKINSON\3088ENG\DWG\CURRENTS\STAGE 31\1352031R05.DWG



CUT & FILL EARTHWORKS COMPLETED PREVIOUSLY



Levels Table							
No.	Min. Level	Max. Level	Colour	No.	Min. Level	Max. Level	Colour
1	-2.5	-2.0	Red	7	0.0	0.3	Light Green
2	-2.0	-1.5	Orange	8	0.3	0.6	Light Blue
3	-1.5	-1.0	Yellow	9	0.6	1.0	Light Purple
4	-1.0	-0.6	Light Green	10	1.0	1.5	Light Blue
5	-0.6	-0.3	Light Green	11	1.5	2.0	Light Purple
6	-0.3	0.0	Light Green	12	2.0	2.5	Light Purple

NOTES: CUT & FILL DEPTHS ARE A COMPARISON BETWEEN EXISTING SURFACE (TOPSOIL STRIPPED) & BULK EARTHWORKS SURFACE - ALLOWANCE HAS BEEN MADE FOR EXTRA CLEAN OUT OF DAMS. CONTRACTOR TO ENSURE A CLEAN BASE IS ACHIEVED PRIOR TO ANY FILLING. NS LEVELS ARE ORIGINAL AS-SURVEYED EXISTING SURFACE LEVELS PRIOR TO STRIPPING & FS LEVELS ARE FINAL FINISHED SURFACE LEVELS AFTER TOPSOILING ETC

A AS SUBMITTED TO COUNCIL  
 NIB SA AR AR 18/09/23  
 DES DWG CHK AUTH DATE  
 RPE ALEX REID - 0006159  
 MGA94 ZONE 55



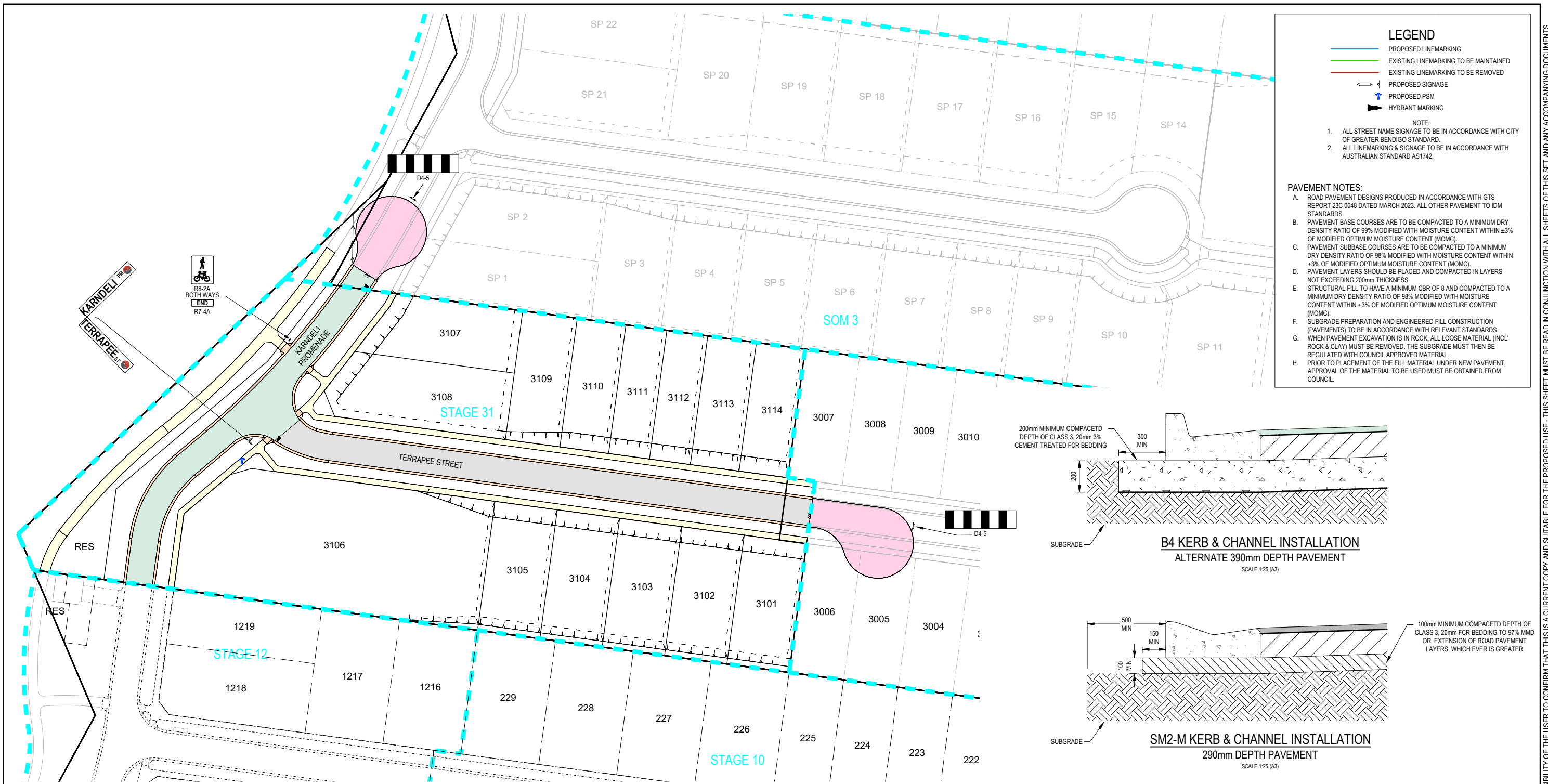
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**IMAGINE STAGE 31**  
**53 DUKES LANE STRATHFIELDSAYE**  
 CUT & FILL DEPTH RANGE & LOT LEVELS  
 CITY OF GREATER BENDIGO REF: DS/377/2022  
 STRATHFIELDSAYE HOLDINGS 2 PTY LTD  
 DWG STATUS: **PRELIMINARY**  
 PROJECT & DWG No: 1352031R06 / 21  
 REV: A

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### LEGEND

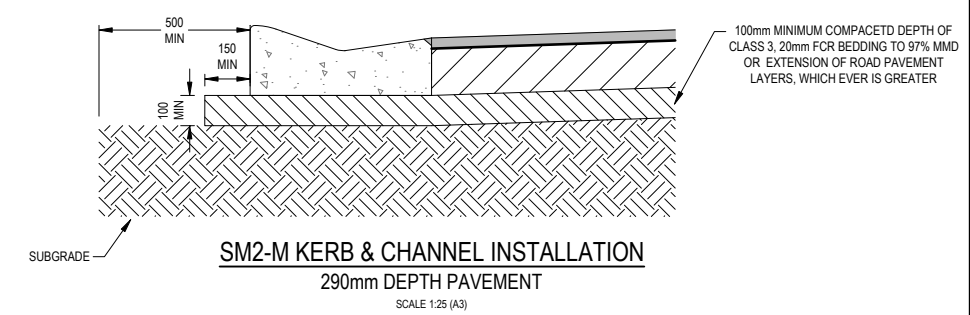
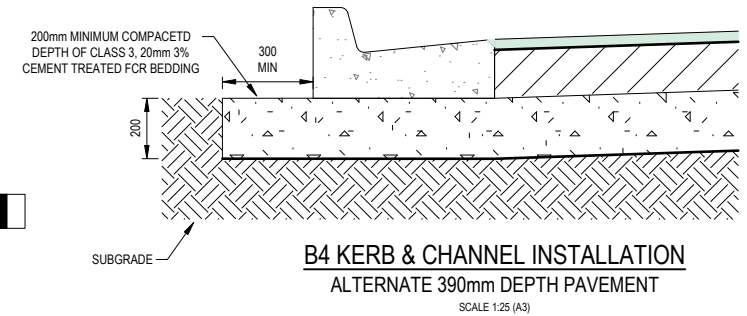
- PROPOSED LINEMARKING
- EXISTING LINEMARKING TO BE MAINTAINED
- EXISTING LINEMARKING TO BE REMOVED
- PROPOSED SIGNAGE
- PROPOSED PSM
- HYDRANT MARKING

NOTE:

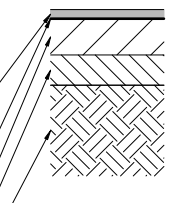
- ALL STREET NAME SIGNAGE TO BE IN ACCORDANCE WITH CITY OF GREATER BENDIGO STANDARD.
- ALL LINEMARKING & SIGNAGE TO BE IN ACCORDANCE WITH AUSTRALIAN STANDARD AS1742.

### PAVEMENT NOTES:

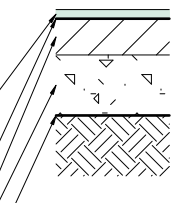
- ROAD PAVEMENT DESIGNS PRODUCED IN ACCORDANCE WITH GTS REPORT 23C 0048 DATED MARCH 2023. ALL OTHER PAVEMENT TO IDM STANDARDS
- PAVEMENT BASE COURSES ARE TO BE COMPACTED TO A MINIMUM DRY DENSITY RATIO OF 99% MODIFIED WITH MOISTURE CONTENT WITHIN ±3% OF MODIFIED OPTIMUM MOISTURE CONTENT (MOMC).
- PAVEMENT SUBBASE COURSES ARE TO BE COMPACTED TO A MINIMUM DRY DENSITY RATIO OF 98% MODIFIED WITH MOISTURE CONTENT WITHIN ±3% OF MODIFIED OPTIMUM MOISTURE CONTENT (MOMC).
- PAVEMENT LAYERS SHOULD BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 200mm THICKNESS.
- STRUCTURAL FILL TO HAVE A MINIMUM CBR OF 8 AND COMPACTED TO A MINIMUM DRY DENSITY RATIO OF 98% MODIFIED WITH MOISTURE CONTENT WITHIN ±3% OF MODIFIED OPTIMUM MOISTURE CONTENT (MOMC).
- SUBGRADE PREPARATION AND ENGINEERED FILL CONSTRUCTION (PAVEMENTS) TO BE IN ACCORDANCE WITH RELEVANT STANDARDS.
- WHEN PAVEMENT EXCAVATION IS IN ROCK, ALL LOOSE MATERIAL (INCL' ROCK & CLAY) MUST BE REMOVED. THE SUBGRADE MUST THEN BE REGULATED WITH COUNCIL APPROVED MATERIAL.
- PRIOR TO PLACEMENT OF THE FILL MATERIAL UNDER NEW PAVEMENT, APPROVAL OF THE MATERIAL TO BE USED MUST BE OBTAINED FROM COUNCIL.



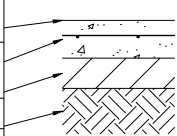
PAVEMENT LAYER	LAYER THICKNESS (mm)	MATERIAL
1 WEARING COURSE	30	SIZE 10 TYPE N ASPHALT
PRIME		
3 BASE COURSE	160	20mm NOM. SIZE CLASS 2 FINE CRUSHED ROCK (SEE NOTE B)
4 SUBBASE COURSE	100	20mm NOM. SIZE CLASS 3 FINE CRUSHED ROCK (SEE NOTE C)
5 SUBGRADE	300	SUBGRADE STABILISATION 3% LIME & 3% CEMENT (MINIMUM CBR 8)



PAVEMENT LAYER	LAYER THICKNESS (mm)	MATERIAL
1 WEARING COURSE	30	SIZE 10 TYPE N ASPHALT
PRIME		
3 BASE COURSE	160	20mm NOM. SIZE CLASS 2 FINE CRUSHED ROCK (SEE NOTE B)
4 SUBBASE COURSE	200	20mm NOM. SIZE CLASS 3, 3% CEMENT TREATED FINE CRUSHED ROCK
5 GEOTEXTILE	-	COMBIGRID



PAVEMENT LAYER	LAYER THICKNESS (mm)	MATERIAL
1 SURFACE FINISH		BROOMED FINISH & TOOLED JOINTS. FINISHED SURFACE TO COMPLY WITH AS 4586 - SLIP RESISTANT CLASSIFICATION OF NEW PEDESTRIAN SURFACE MATERIALS
2 CONCRETE	125	CONCRETE 32MPa WITH SL72 MESH LOCATED CENTRALLY
3 BASE	100	20mm NOM. SIZE CLASS 3 FINE CRUSHED ROCK (SEE NOTE C)
4 SUBGRADE		SUBGRADE PREPARATION (SEE NOTE 6). SUBGRADE IMPROVEMENT AS DIRECTED BY SUPERINTENDENT



TEMPORARY GRAVEL PAVEMENT		
PAVEMENT LAYER	LAYER THICKNESS (mm)	MATERIAL
1 BASE COURSE	100	20mm NOM. SIZE CLASS 2 FINE CRUSHED ROCK

A AS SUBMITTED TO COUNCIL

REV DES DWG CHK AUTH DATE

NJB SA AR AR 18/09/23

RPE: ALEX REID - 0006159

MG494 ZONE 55



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**imagine**  
STRATHFIELDSAYE

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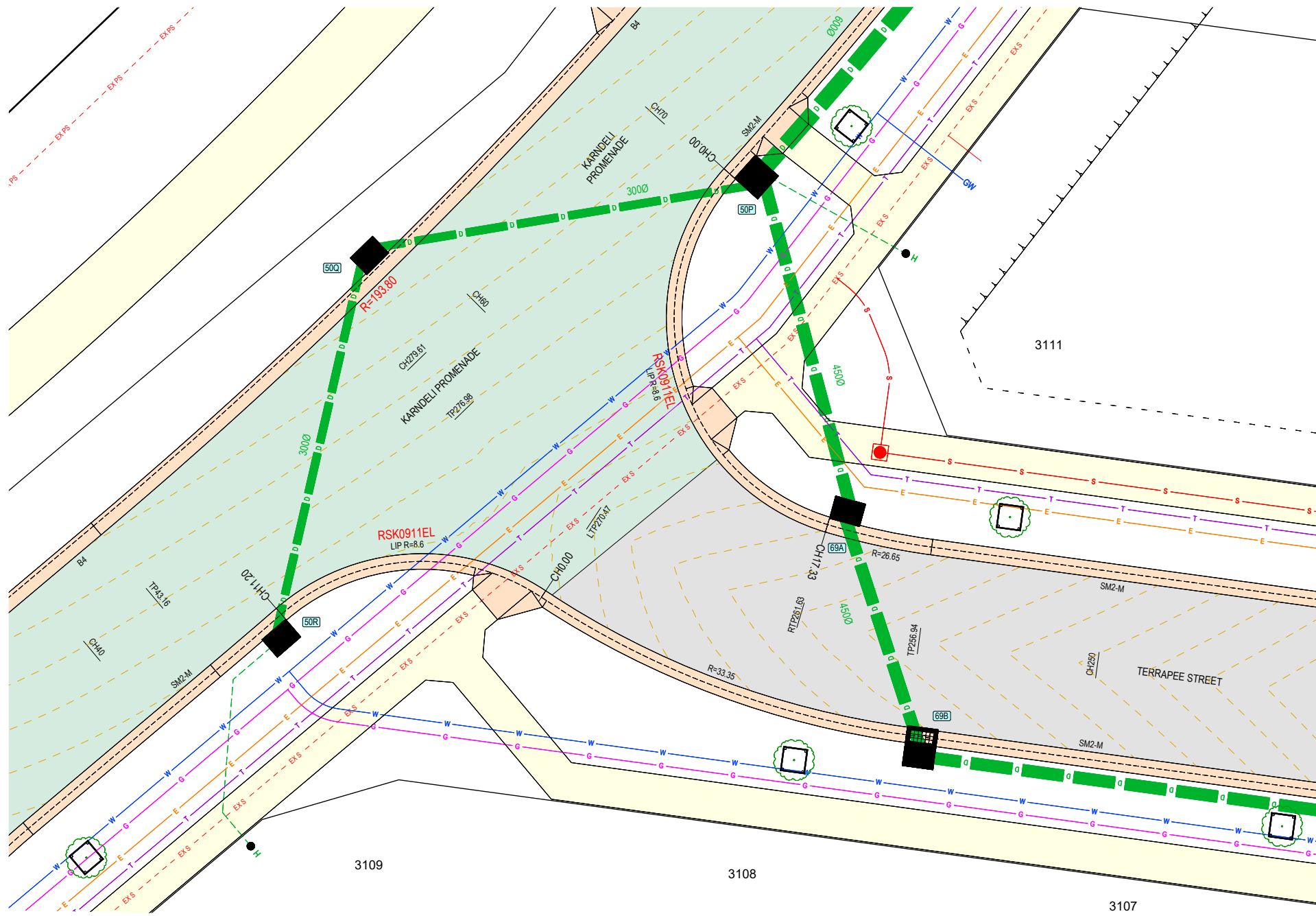
**IMAGINE STAGE 31**  
**53 DUKES LANE STRATHFIELDSAYE**  
**PAVEMENT, SIGNAGE & LINEMARKING PLAN**  
CITY OF GREATER BENDIGO REF: DS/377/2022  
STRATHFIELDSAYE HOLDINGS 2 PTY LTD

DWG STATUS: **PRELIMINARY**  
PROJECT & DWG No: 1352031R07 / 21

REV: A

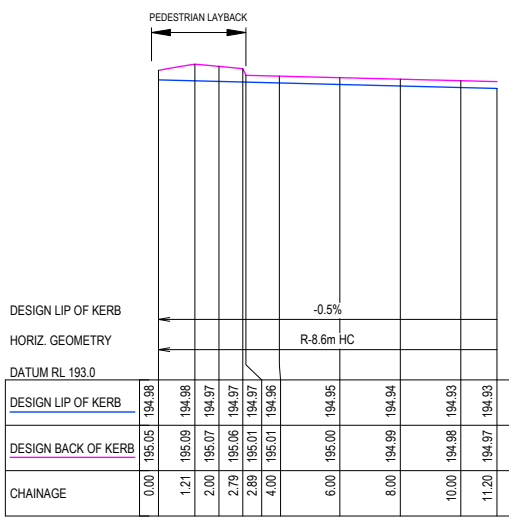
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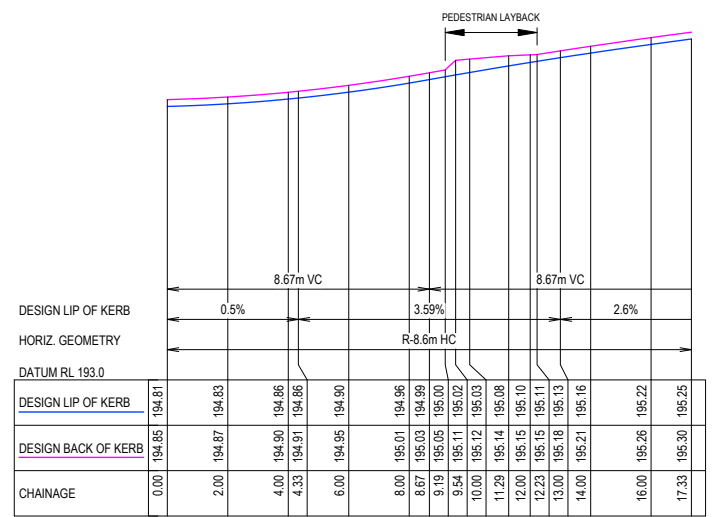


- GENERAL DESIGN DETAIL PLAN NOTES**  
 APPLIES IN ALL CASES UNLESS STATED OTHERWISE
- KERB TYPES:
    - FRONTING LOTS = MODIFIED SM2 (IDM SD 100 - SM2-M)
    - FRONTING RESERVES = 600mm B4 AS PER CoGB SD190
  - ALL KERB RETURNS ARE 8.0m RADIUS TO Bsk
  - ALL DRIVEWAYS AS PER IDM SD 240 & 245
  - ALL FOOTPATHS CONCRETE & 1.5m WIDE @ 0.05m O/S AS PER IDM SD 205
  - ALL SHARED PATHS CONCRETE & 2.5m WIDE @ 0.10m O/S BL AS PER IDM SD 205
  - ALL EASEMENT DRAINAGE PIPES & PITS ARE 1.0m O/S BL & SIDE BOUNDARIES
  - LEVEL 1 SUPERVISION REQUIRED FOR LOT EARTHWORKS UNLESS SPECIFIED OTHERWISE - REFER GENERAL NOTES
  - ALL LOTS TO HAVE CATCH DRAINS ALONG SIDE & REAR BOUNDARIES
  - CONTOUR INTERVAL 0.5m @ 1:1000 & 0.05m @ 1:200 (1:250(A3)) WHERE SHOWN

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RSK0911EL  
 SCALE H 1:250 V 1:50



RSK0911ER  
 SCALE H 1:250 V 1:50

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REVISION		DES	SA	AR	AR	DATE



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**IMAGINE STAGE 31**  
**53 DUKES LANE STRATHFIELDSAYE**  
 INTERSECTION DETAILS  
 CITY OF GREATER BENDIGO REF: DS/377/2022  
 STRATHFIELDSAYE HOLDINGS 2 PTY LTD

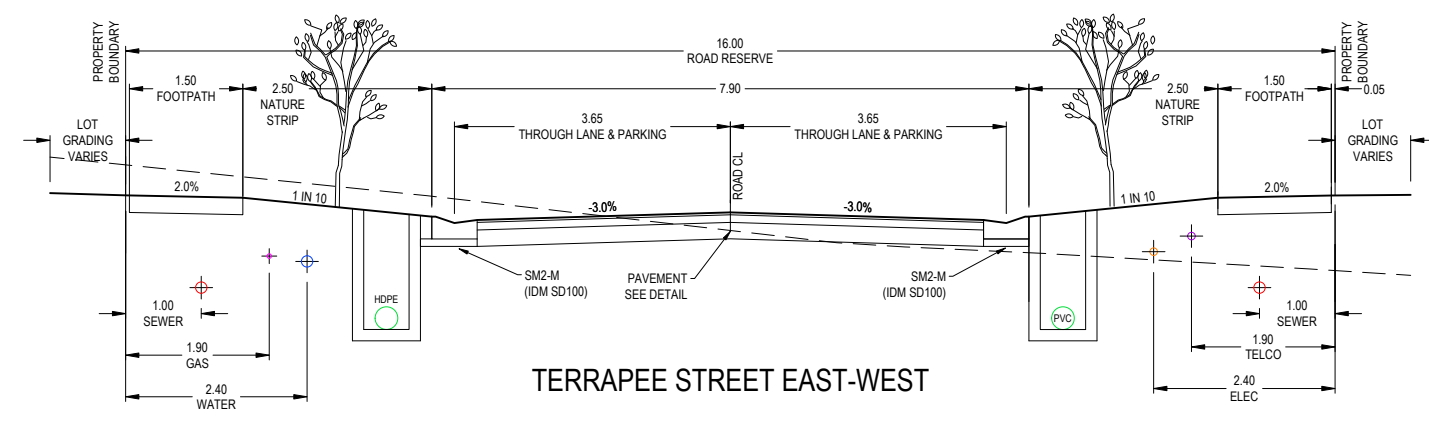
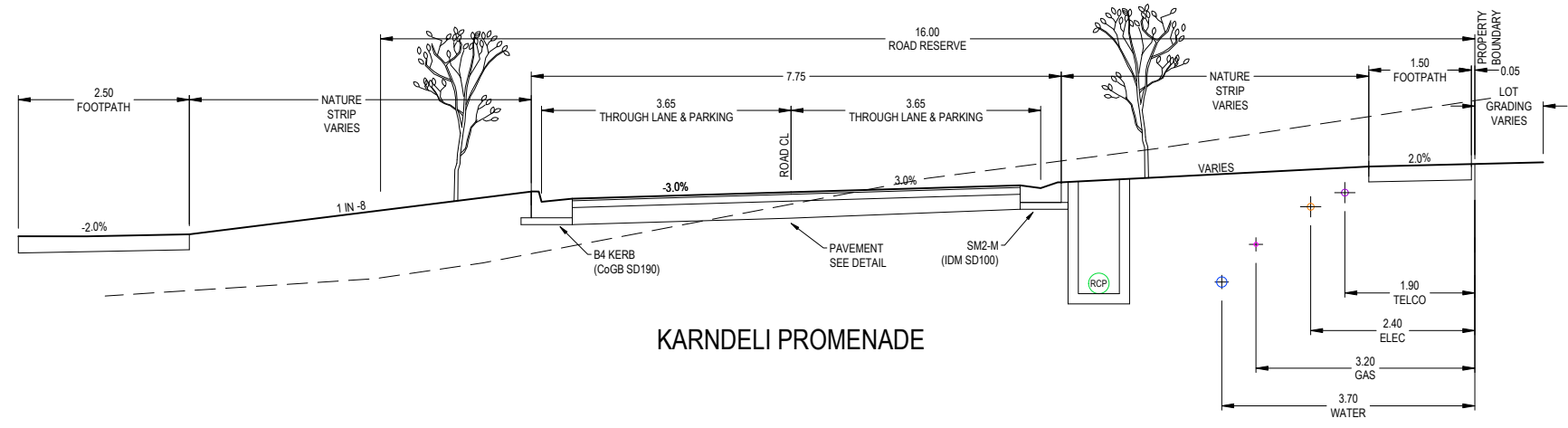
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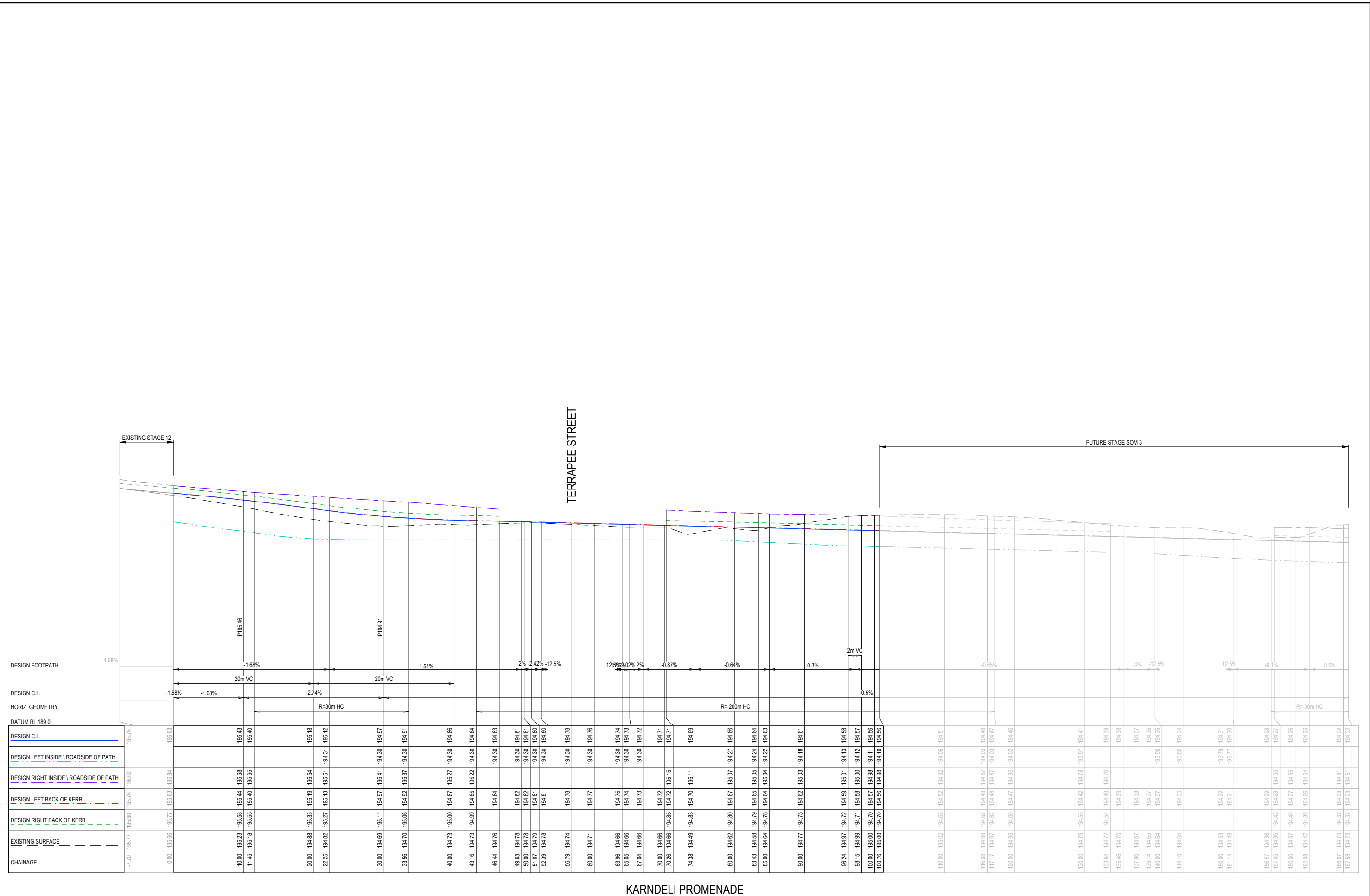
PROJECT & DWG No:  
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REV: A

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REVISION		DES	DWG	CHK	AUTH	DATE
		RPE	ALEX	RED	-0006159	

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SCALE H 1:500 V 1:100

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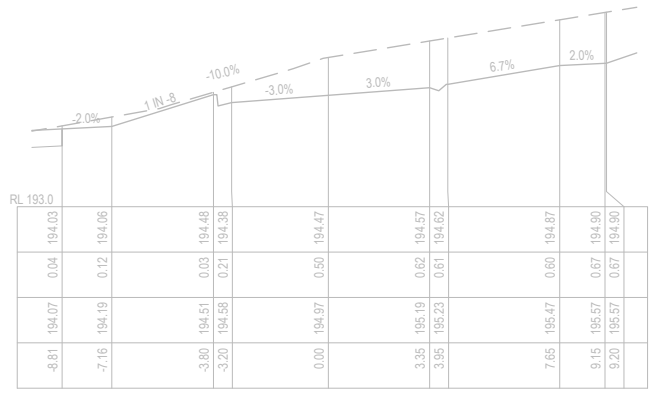
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**53 DUKES LANE STRATHFIELDSAYE**  
**KARNELI PROMENADE LONG SECTION**  
 CITY OF GREATER BENDIGO REF: DS/377/2022  
 STRATHFIELDSAYE HOLDINGS 2 PTY LTD

DWG STATUS: **PRELIMINARY** PROJECT & DWG No: 1352031R10 / 21

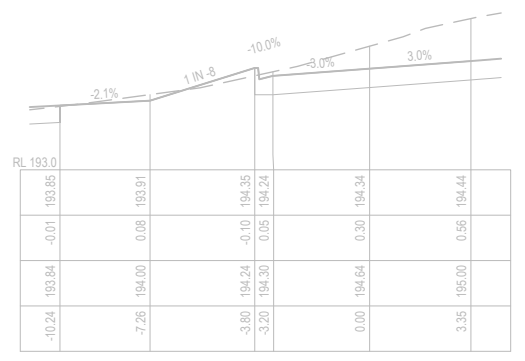
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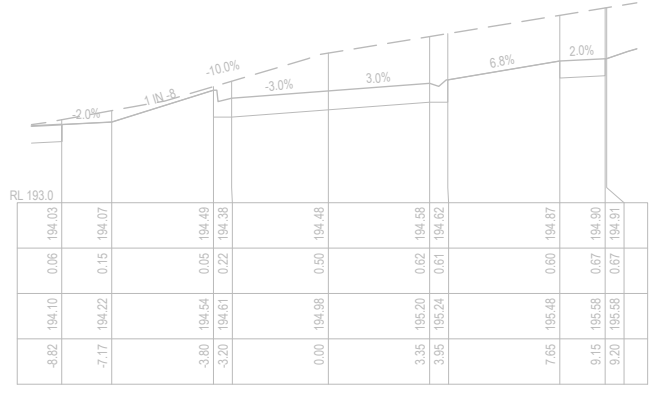




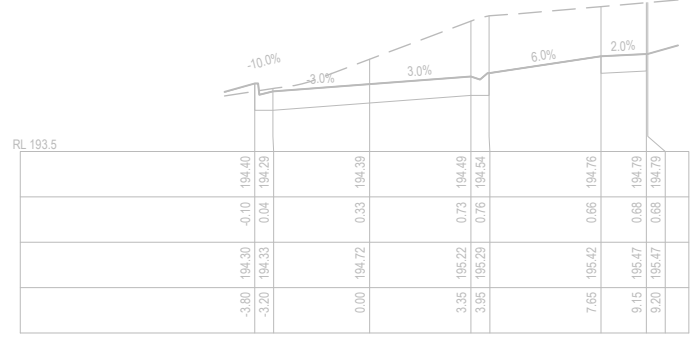
CH 117.17



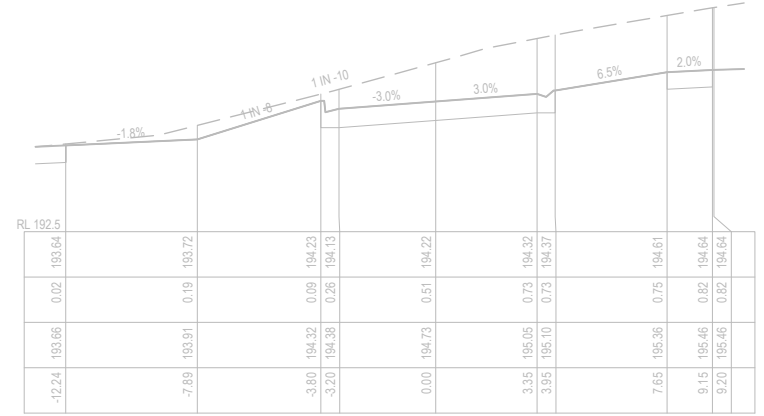
CH 144.1



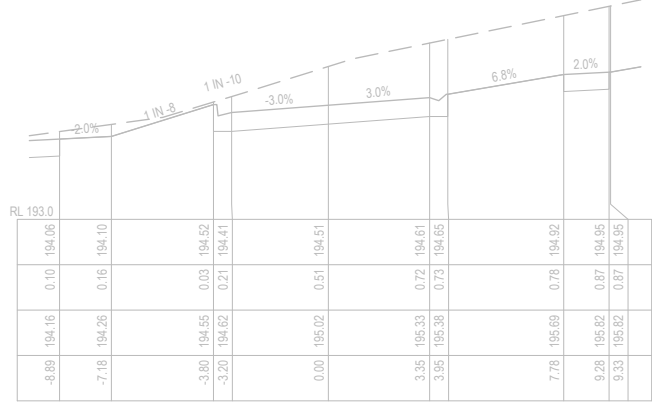
CH 116.08



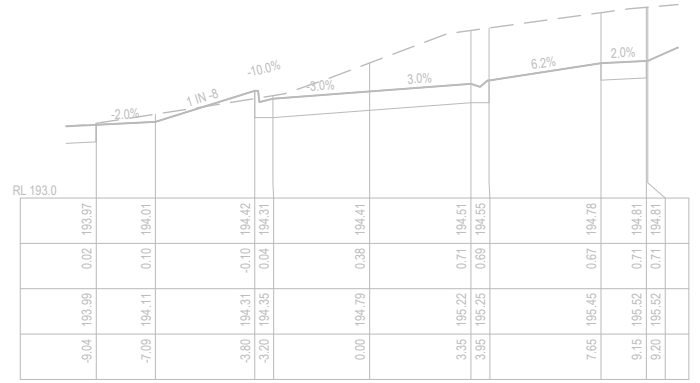
CH 133.64



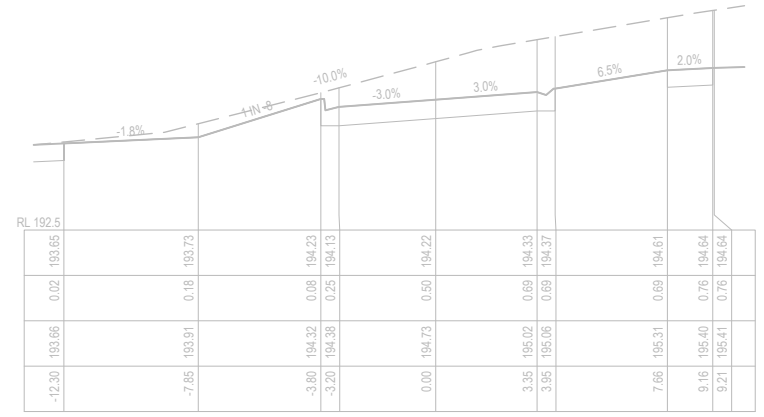
CH 167.58



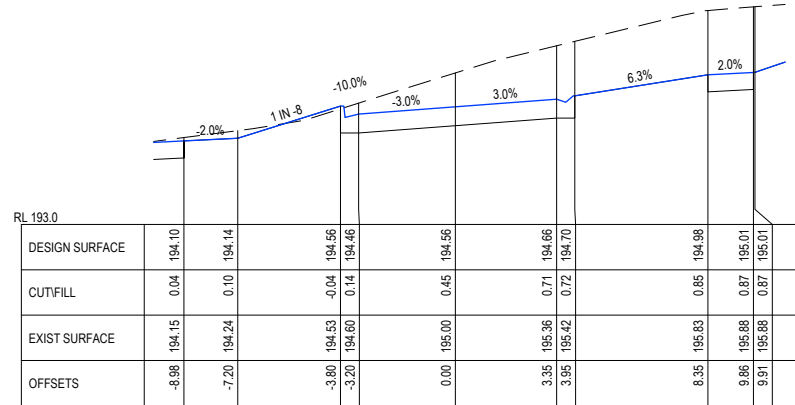
CH 110



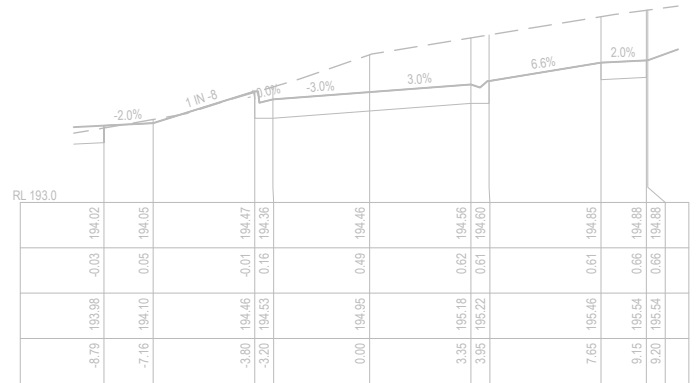
CH 130



CH 166.87



CH 100.76



CH 120

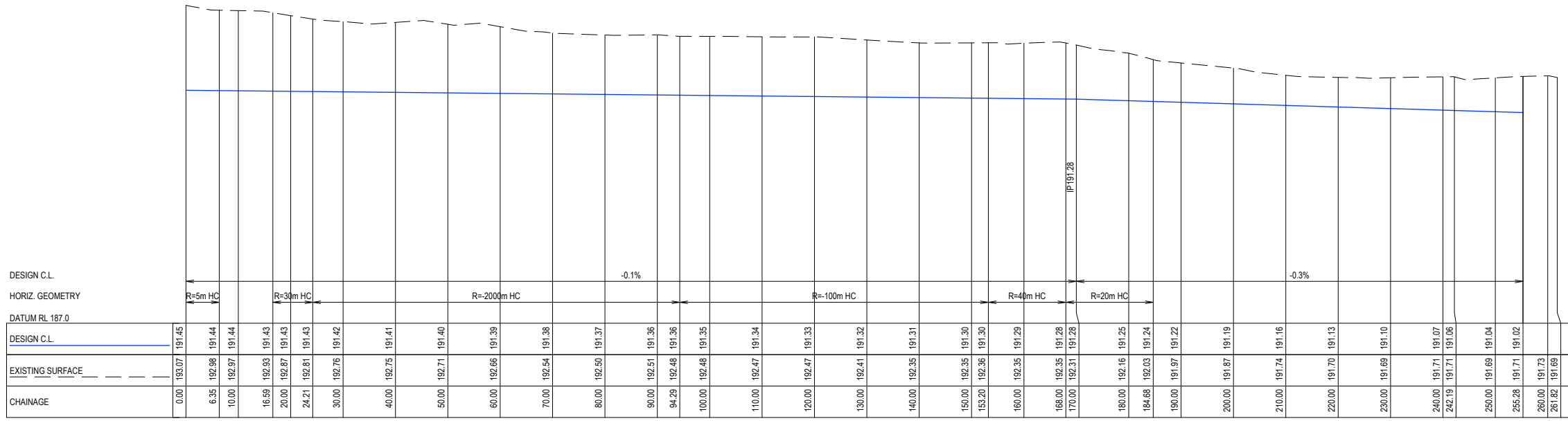












TEMPORARY DRAINAGE OUTFALL  
SCALE H 1:1000 V 1:100

REV	AS SUBMITTED TO COUNCIL	NJB SA AR AR	18/08/23	RPE: ALEX RED - 0006159
DES	DWG	CHK	AUTH	DATE

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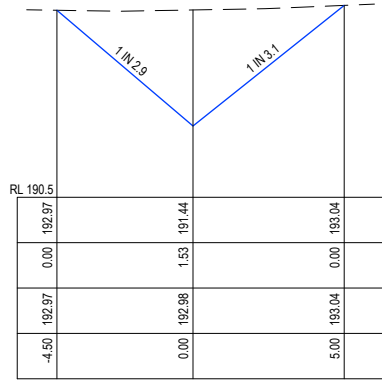
**imagine**  
STRATHFIELDSAYE

SCALE H 1:1000 V 1:100  
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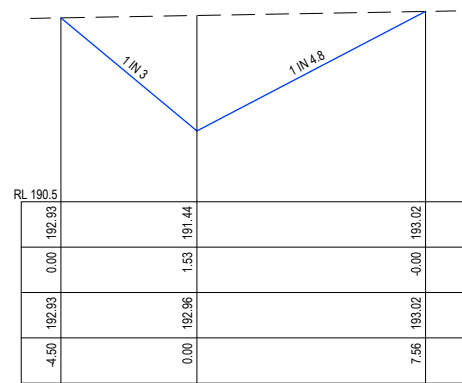
**IMAGINE STAGE 31**  
**53 DUKES LANE STRATHFIELDSAYE**  
**TEMPORARY DRAINAGE OUTFALL LONG SECTION**  
CITY OF GREATER BENDIGO REF: DS/377/2022  
STRATHFIELDSAYE HOLDINGS 2 PTY LTD  
DWG STATUS: **PRELIMINARY**  
PROJECT & DWG No: 1352031R16 / 21  
REV: A

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PLOT DATE: 18/08/2023 FILE: C:\TZD\DATA\TOMK66C-12DS01135203 - ENU CREEK HOLDINGS 2 PTY LTD - STRATHFIELDSAYE\_3089ENG00CAD\CURRENT\STAGE 31\1352031 R-D CIN PLANS REV A.DWG

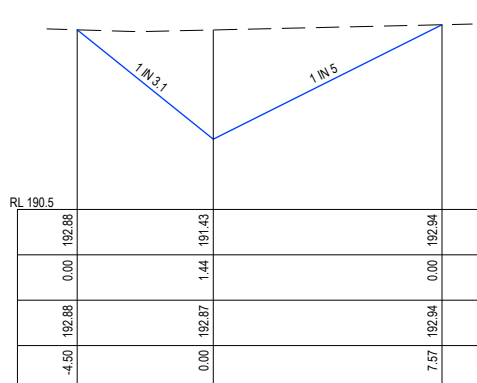




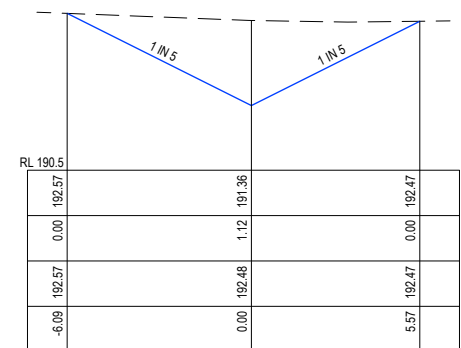
CH 6.35



CH 14



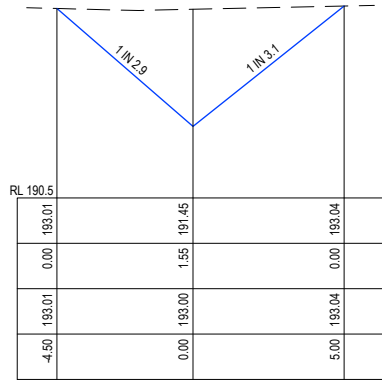
CH 20



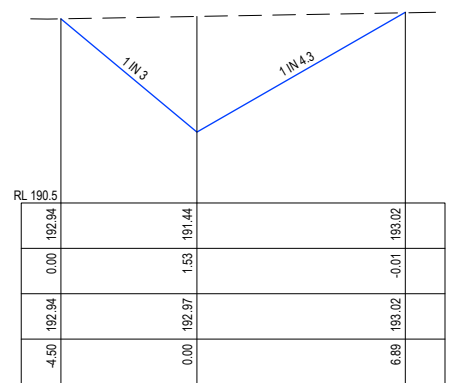
CH 94.29

DESIGN SURFACE	0.00	191.62	0.69	191.02	0.00	191.82
CUT/FILL	-2.97	191.62	0.00	191.02	0.00	191.82
EXIST SURFACE	-2.97	191.62	0.00	191.02	0.00	191.82
OFFSETS	-2.97	191.62	0.00	191.02	0.00	191.82

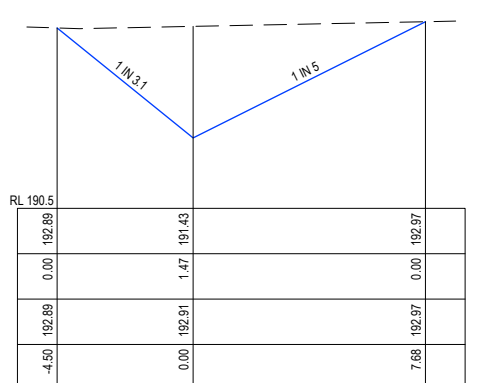
CH 255.28



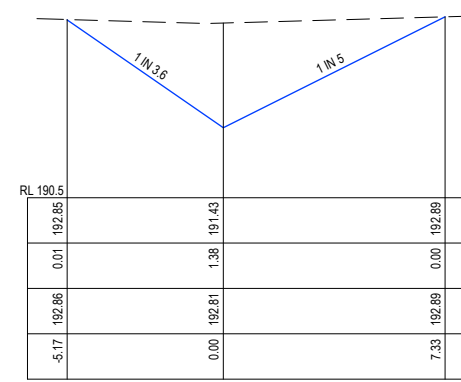
CH 4



CH 12



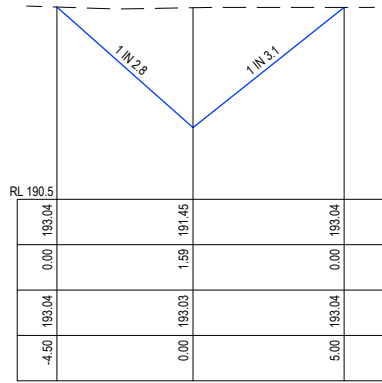
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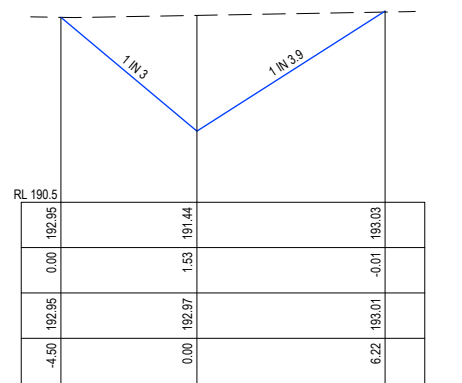
CH 24.21

DESIGN SURFACE	0.00	192.12	0.80	191.24	0.00	191.99
CUT/FILL	-4.41	192.12	0.00	191.24	0.00	191.99
EXIST SURFACE	-4.41	192.12	0.00	191.24	0.00	191.99
OFFSETS	-4.41	192.12	0.00	191.24	0.00	191.99

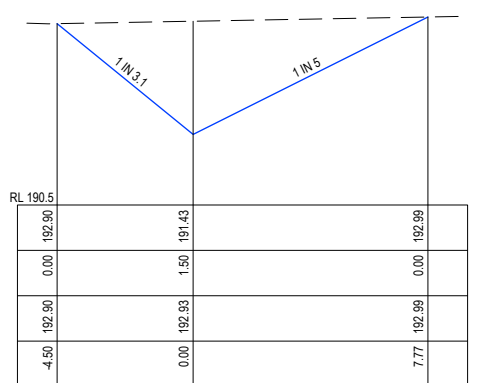
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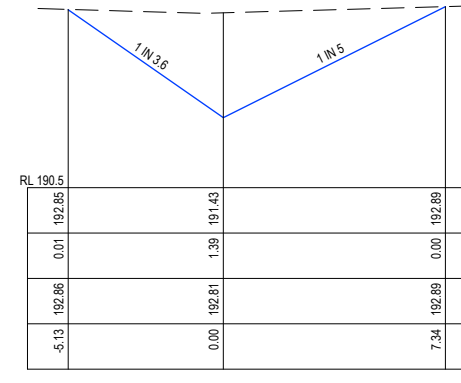
CH 2



CH 10



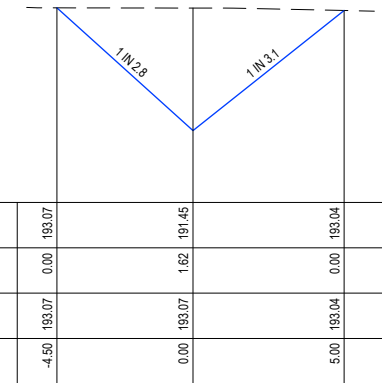
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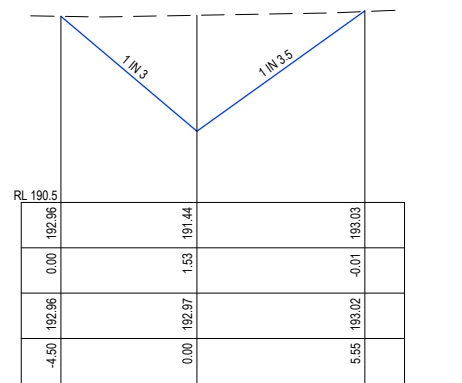
CH 24

DESIGN SURFACE	0.00	192.47	1.07	191.28	0.00	192.26
CUT/FILL	-5.93	192.47	0.00	192.35	1.07	191.28
EXIST SURFACE	-5.93	192.47	0.00	192.35	1.07	191.28
OFFSETS	-5.93	192.47	0.00	192.35	1.07	191.28

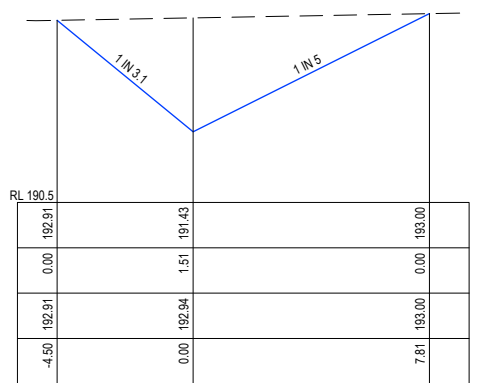
CH 168



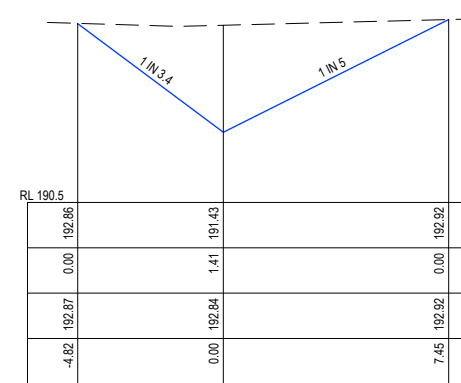
CH 0



CH 8



CH 16



CH 22

DESIGN SURFACE	0.00	192.42	1.06	191.30	0.00	192.32
CUT/FILL	-5.64	192.42	0.00	192.36	1.06	191.30
EXIST SURFACE	-5.64	192.42	0.00	192.36	1.06	191.30
OFFSETS	-5.64	192.42	0.00	192.36	1.06	191.30

CH 153.2

TEMPORARY DRAINAGE OUTFALL

SCALE H:1 V:250

REV	AS SUBMITTED TO COUNCIL	DES	DWG	CHK	AUTH	DATE
		NJB	SA	AR	AR	18/09/23

RPE/ALEX REID - 0006159

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**imagine**  
STRATHFIELDSAYE

SCALE H:1 V:250

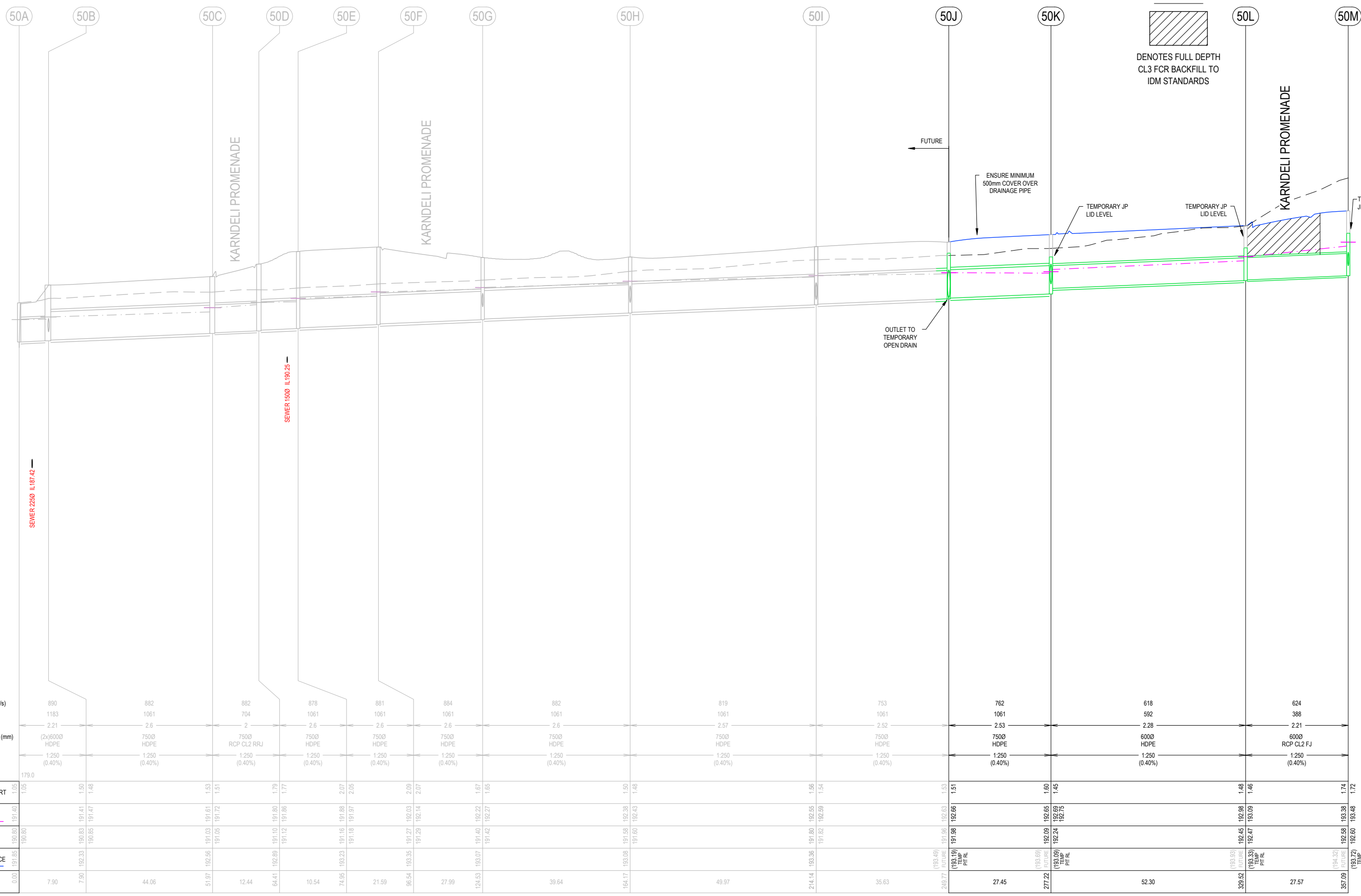
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**IMAGINE STAGE 31**  
**53 DUKES LANE STRATHFIELDSAYE**  
**TEMPORARY DRAINAGE OUTFALL CROSS SECTION**  
CITY OF GREATER BENDIGO REF: DS/377/2022  
STRATHFIELDSAYE HOLDINGS 2 PTY LTD  
DWG STATUS: **PRELIMINARY**  
PROJECT & DWG No: 1352031R17 / 21

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**NOTE:**  
  
 DENOTES FULL DEPTH  
 CL3 FCR BACKFILL TO  
 IDM STANDARDS



DESIGN FLOW (l/s)	890	882	882	878	881	884	882	819	753	762	618	624
CAPACITY (l/s)	1183	1061	704	1061	1061	1061	1061	1061	1061	1061	592	388
VELOCITY (m/s)	2.21	2.6	2	2.6	2.6	2.6	2.6	2.57	2.52	2.53	2.28	2.21
PIPE DIAMETER (mm)	(2)x6000 HDPE	7500 HDPE	7500 RCP CL2 RRJ	7500 HDPE	7500 HDPE	7500 HDPE	7500 HDPE	7500 HDPE	7500 HDPE	7500 HDPE	6000 HDPE	6000 RCP CL2 FJ
PIPE GRADE	1.250 (0.40%)	1.250 (0.40%)	1.250 (0.40%)	1.250 (0.40%)	1.250 (0.40%)	1.250 (0.40%)	1.250 (0.40%)	1.250 (0.40%)	1.250 (0.40%)	1.250 (0.40%)	1.250 (0.40%)	1.250 (0.40%)
DATUM RL	179.0											
DEPTH TO INVERT	1.05	1.50	1.53	1.51	1.79	1.77	2.07	2.05	2.09	2.07	2.09	1.74
H.G.L.	191.40	191.41	191.61	191.72	191.80	191.86	191.88	191.97	192.03	192.14	192.22	192.27
INVERT LEVEL	190.35	190.83	191.41	191.47	191.05	191.61	191.12	191.86	191.10	191.80	191.12	191.86
DESIGN SURFACE	191.85	192.33	190.83	191.41	191.05	191.61	191.12	191.86	191.10	191.80	191.12	191.86
CHAINAGE	0.00	7.90	7.90	44.06	51.97	12.44	64.41	10.54	74.95	193.23	191.18	191.97

SCALE H 1 : 1000 SCALE V 1 : 100

REV	AS SUBMITTED TO COUNCIL	NJB SA AR AR 18/08/23	RPE ALEX REID - 0006159
REVISION		DES DWG CHK AUTH DATE	

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**imagine**  
 STRATHFIELDSAYE

SCALE H 1:1000 V 1:100  
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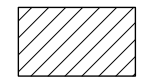
**IMAGINE STAGE 31**  
**53 DUKES LANE STRATHFIELDSAYE**  
**DRAINAGE LONG SECTIONS (1 OF 3)**  
 CITY OF GREATER BENDIGO REF: DS/377/2022  
 STRATHFIELDSAYE HOLDINGS 2 PTY LTD  
 DWG STATUS: **PRELIMINARY**  
 PROJECT & DWG No: 1352031R19 / 21 A

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 PLOT DATE: 16/08/2023 FILE: C:\TZ\DATA\TOMKINSON\53 DUKES LANE STRATHFIELDSAYE\3088ENG\DWG\CURRENT\STAGE 31\1352031 R-D CIN PLANS REV A.DWG



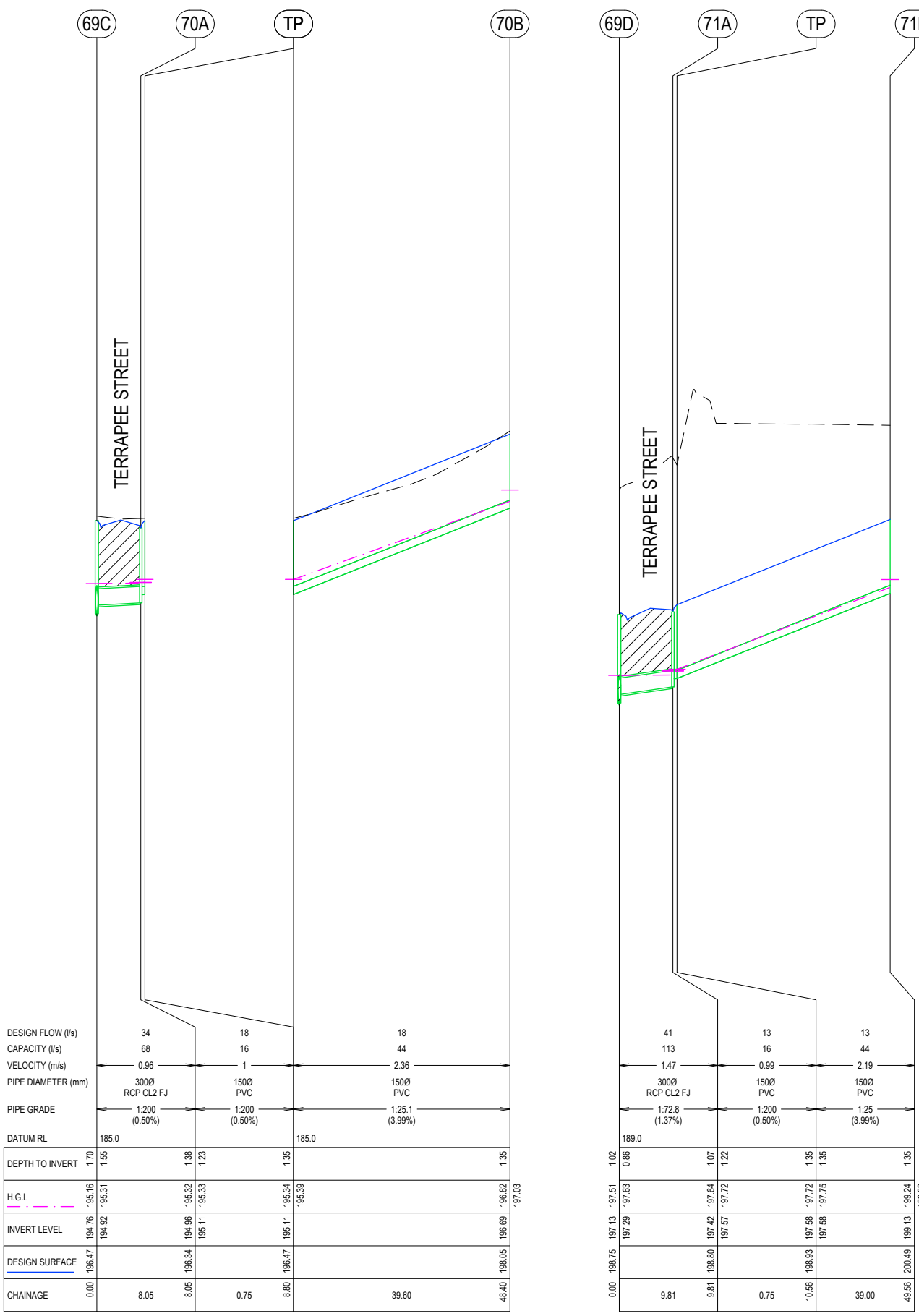


**NOTE:**



DENOTES FULL DEPTH  
CL3 FCR BACKFILL TO  
IDM STANDARDS

PIT SCHEDULE												
PIT NAME	TYPE	EASTING	NORTHING	INTERNAL		INLET DIA	INV LEV	OUTLET DIA	INV LEV	PIT SETOUT RL	DEPTH	REMARKS
				WD	LEN							
50J	JP	265443.251	5923876.64	1200	900	762	191.979	762	191.959	193.185 (TEMP)	1.526	TEMPORARY IDM SD420 FUTURE HAUNCHED IDM SD420+SD410
50K	SEP	265424.423	5923856.66	1200	900	612	192.239	762	192.089	193.086 (TEMP)	1.597	TEMPORARY IDM SD420 FUTURE CoGB SEP SD590BG
						450	192.401					
50L	SEP	265388.44	5923818.7	1200	900	600	192.468	612	192.448	193.328 (TEMP)	1.48	TEMPORARY IDM SD420 FUTURE CoGB SEP SD590BG
										193.722 (TEMP)		
50M	SEP	265384.875	5923791.45	900	900	612	192.598	600	192.578	193.722 (TEMP)	1.744	TEMPORARY IDM SD420 FUTURE CoGB SEP SD590G
						300	192.878					
TP	TP	265382.38	5923772.54	0	0	612	192.675	612	192.675	194.426	1.752	11.25° BEND
TP	TP	265380.849	5923767.58	0	0	612	192.695	612	192.695	194.446	1.75	11.25° BEND
50N	SEP	265379.337	5923764.59	900	900	600	192.729	612	192.709	193.851 (TEMP)	1.742	TEMPORARY IDM SD420 FUTURE CoGB SEP SD590G
						300	192.859					
50O	SEP	265367.504	5923742.91	900	900	612	192.848	600	192.828	193.973 (TEMP)	1.745	TEMPORARY IDM SD420 FUTURE CoGB SEP SD590G
						300	193.128					
TP	TP	265359.888	5923729	0	0	612	192.911	612	192.911	194.656	1.745	
50P	SEP	265332.561	5923690.44	900	900	300	193.413	612	193.101	194.884	1.784	CoGB SEP SD590G
						450	193.401					
50Q	SEP	265317.631	5923687.42	600	900	300	193.494	300	193.474	194.726	1.252	CoGB SEP SD590G
50R	SEP	265314.231	5923672.66	600	900			300	193.555	194.997	1.441	CoGB SEP SD590G
69A	SEP	265336.088	5923677.6	600	900	450	193.771	450	193.751	195.246	1.495	CoGB SEP SD590G
69B	JP + GJP	265338.815	5923667.97	600	900	450	193.851	450	193.821	195.353	1.532	IDM SD480
69C	JP + GJP	265380.095	5923662.53	600	900	450	194.78	459	194.76	196.465	1.705	IDM SD480
						300	194.919					
69D	JP + GJP	265436.678	5923654.86	600	900	450	197.149	459	197.129	198.747	1.618	IDM SD480
						300	197.288					
69E	JP	265488.207	5923647.88	600	900	450	199.092	450	199.072	200.827	1.75	IDM SD420 WITH 600 x 900 END ENTRY OPENING STAGE 31 FUTURE IDM SD480
						300	199.231					
70A	GJP IN KERB	265381.175	5923670.51	450	900	150	195.109	300	194.959	196.335	1.376	IDM SD481
TP	TP	265381.276	5923671.25	0	0	150	195.113	150	195.113	196.465	1.352	
70B	END	265420.513	5923665.93	0	150			150	196.692	198.046	1.355	BLANK END
71A	GJP IN KERB	265442.213	5923662.24	450	900	150	197.573	300	197.423	198.797	1.374	IDM SD481
71B	END	265480.961	5923657.75	0	150			150	199.134	200.486	1.353	BLANK END



DESIGN FLOW (l/s)	34	18	18
CAPACITY (l/s)	68	16	44
VELOCITY (m/s)	0.96	1	2.36
PIPE DIAMETER (mm)	3000 RCP CL2 FJ	1500 PVC	1500 PVC
PIPE GRADE	1:200 (0.50%)	1:200 (0.50%)	1:25.1 (3.99%)
DATUM RL	185.0	185.0	185.0
DEPTH TO INVERT	1.70 1.55	1.38 1.23	1.35 1.35
H.G.L.	194.76 194.92 195.16 195.31	194.96 195.11 195.32 195.33	195.34 195.39 196.82 197.03
INVERT LEVEL	194.76 194.92 195.16 195.31	194.96 195.11 195.32 195.33	195.34 195.39 196.82 197.03
DESIGN SURFACE	196.47	196.34	196.05
CHAINAGE	0.00	8.05	39.60

RPE: ALEX RED - 0006159

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**imagine**  
STRATHFIELDSAYE

SCALE H 1:1000 V 1:100  
LENGTHS ARE IN METRES - PAPER SIZE A3  
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**IMAGINE STAGE 31**  
**53 DUKES LANE STRATHFIELDSAYE**  
**DRAINAGE LONG SECTIONS (3 OF 3) + PIT SCHEDULE**  
CITY OF GREATER BENDIGO REF: DS/377/2022  
STRATHFIELDSAYE HOLDINGS 2 PTY LTD  
DWG STATUS: **PRELIMINARY** PROJECT & DWG No: 1352031R21 / 21 A  
REV: A

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LEGEND	
	PIT No
	CATCHMENT
	LOT FALL
	OVERLAND 1% AEP STORMWATER FLOWPATH

A AS SUBMITTED TO COUNCIL

REV DES DWG CHK AUTH DATE

REVISION

NJB SA AR AR 18/08/23

DES DWG CHK AUTH DATE

RPE: ALEX REID - 0006159



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**IMAGINE STAGE 31**  
**53 DUKES LANE STRATHFIELDSAYE**  
**OVERALL DEVELOPMENT PLAN**

CITY OF GREATER BENDIGO REF: DS/377/2022  
STRATHFIELDSAYE HOLDINGS 2 PTY LTD

DWG STATUS: **PRELIMINARY** PROJECT & DWG No: 1352031D01 / 21 REV: A

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PLOT DATE: 16/08/2023 FILE: C:\12\DATA\TOMKINSON\1352031\1352031\_53DUKES\STAGE\_31\1352031\_R4D\_CIN\_PLANS\_REV4.DWG



12D MODEL - HYDRAULIC DESIGN SHEET

Project: Design  
 Drainage Model: DRN  
 Rainfall File: Bendigo 100820.12dhydro

Rainfall Method: IFD Table  
 Freeboard Limit: 0.15 m  
 Minor 20.00 AEP(%) Storm Event

Pipe ID	Pipe Type	Pipe Length (m)	Pipe Size (mm)	Full Pipe Area (sq.m)	Pipe Grade (%)	Pipe Grade (1 in)	Full-area Tct (min)	Full-area I (mm/hr)	Full-area Sum CA (ha)	Full-area Qc=CIA (L/s)	Part-area Tct (min)	Part-area I (mm/hr)	Part-area Sum CA (ha)	Part-area Qc=CIA (L/s)	Catchment Flow Qc (L/s)	Direct Node Flow Qd (L/s)	Pipe Flow Q (L/s)	Capacity Flow Qcap (L/s)	Q/Qcap Ratio	Full Pipe Vel V=Q/Af (m/s)	Norm Depth Vel Vn=Q/An (m/s)	Crit Depth Vel Vc=Q/Ac (m/s)	Capacity Vel Vcap=Qcap/Af (m/s)	US Node Grate RL (m)	Pipe US IL (m)	Pipe DS IL (m)	DS Node Grate RL (m)	Cover Limit (m)	Cover Min (m)	Pipe DS Bend (deg)	Pipe DS Drop (m)	US Node Ku	US Node Kw	Pipe V'head (m)	P'head Loss (Ku.V'head) (m)	WSE Loss (Kw.V'head) (m)	Manning n	Pipe T'head Loss (m)	US Node HGL (m)	Pipe US HGL (m)	Pipe DS HGL (m)	DS Node HGL (m)	HGL Grade (%)	HGL Grade (1 in)	F'board US (m)
50K to 50J	HDPE	27.45	762	0.456	0.4	250	12.1	65.76	5.4911	1003.1	10.77	69.34	5.2551	1012.2	1012.2	-250	762.2	1061.5	0.72	1.67	2.53	2.21	2.33	193.69	192.09	191.98	193.49	0.5	0.69	-11.6	0.02	0.29		0.14	0.04		0.009	0.06	192.69	192.65	192.66	192.66	-0.05	-2031.1	1
50L to 50K	HDPE	52.3	612	0.294	0.4	250	11.67	66.93	4.6613	866.6	10.77	69.35	4.5083	868.4	868.4	-250	618.4	591.6	1.05	2.1	2.28	2.37	2.01	193.93	192.45	192.24	193.69	0.5	0.78	0.2	0.15	0.5		0.23	0.11		0.009	0.21	193.09	192.98	192.75	192.69	0.44	225.8	0.84
50M to 50L	RCP CL2 FJ	27.57	600	0.283	0.4	250	11.44	67.55	4.6325	869.2	9.17	75.32	4.1748	873.5	873.5	-250	623.5	388.5	1.6	2.21	2.21	2.43	1.37	194.32	192.58	192.47	193.93	0.9	0.76	-36.6	0.02	0.44		0.25	0.11		0.013	0.28	193.48	193.38	193.09	193.09	1.03	97.1	0.84
TP to 50M	HDPE	19.08	612	0.294	0.4	250	11.28	67.97	4.185	790.2	9.37	74.36	3.8181	788.7	790.2	-250	540.2	591.6	0.91	1.84	2.28	2.19	2.01	194.43	192.67	192.6	194.32	0.5	1.06	0.6	0.02	0.06		0.17	0.01		0.009	0.06	193.56	193.55	193.48	193.48	0.33	299.9	0.87
TP to TP	HDPE	5.19	612	0.294	0.4	250	11.24	68.09	4.185	791.5	9.46	73.95	3.8497	790.8	791.5	-250	541.5	591.6	0.92	1.84	2.28	2.19	2.01	194.45	192.7	192.67	194.43	0.5	1.08	9.7	0	0.06		0.17	0.01		0.009	0.02	193.59	193.58	193.56	193.56	0.34	298.4	0.86
50N to TP	HDPE	3.36	612	0.294	0.4	250	11.21	68.16	4.185	792.4	9.43	74.09	3.8497	792.2	792.4	-250	542.4	591.6	0.92	1.84	2.28	2.19	2.01	194.45	192.71	192.7	194.45	0.5	1.07	9.6	0	0.35		0.17	0.06		0.009	0.01	193.66	193.6	193.59	193.59	0.34	297.4	0.79
50O to 50N	RCP CL2 FJ	24.69	600	0.283	0.4	250	11	68.71	3.458	660	10.1	71.13	3.3051	653	660	-250	410	388.5	1.06	1.45	1.55	1.94	1.37	194.57	192.83	192.73	194.45	0.9	0.99	1.9	0.02	0.51		0.11	0.06		0.013	0.11	193.82	193.77	193.66	193.66	0.45	224.4	0.75
69C to 69B	HDPE	41.64	459	0.165	2.18	45.8	9.93	71.72	2.9897	595.6	9.03	75.96	2.8367	598.5	598.5	-250	348.5	641.7	0.54	2.11	3.96	2.26	3.88	196.47	194.76	193.85	195.35	0.9	0.97	-65	0.03	0.66		0.23	0.15		0.009	0.38	195.31	195.16	194.81	194.83	0.84	119	1.66
69D to 69C	HDPE	57.1	459	0.165	4.11	24.3	9.46	73.96	2.719	558.6	8.56	78.2	2.566	557.4	558.6	-250	308.6	880.9	0.35	1.86	4.85	2.08	5.32	198.75	197.13	194.78	196.47	1.1	1.1	0.2	0.02	0.68		0.18	0.12		0.009	2.24	197.63	197.51	195.31	195.31	3.86	25.9	1.63
69E to 69D	HDPE	52	459	0.165	3.7	27	9.02	75.99	2.4265	512.2	8.12	80.24	2.2736	506.7	512.2	-250	262.2	835.3	0.31	1.58	4.47	1.89	5.05	200.83	199.07	197.15	198.75	1.1	1.12	0	0.02	0.82		0.13	0.1		0.009	1.85	199.54	199.43	197.63	197.63	3.45	28.9	1.29
70A to 69C	RCP CL2 FJ	8.05	300	0.071	0.5	200	6.34	88.63	0.1366	33.6	6	90.22	0.1326	33.2	33.6		33.6	68.4	0.49	0.48	0.96	1.03	0.97	196.34	194.96	194.92	196.47	0.9	1.07	-89.8	0.159	1.01		0.01	0.01		0.013	0.01	195.33	195.32	195.31	195.31	0.12	827.3	1.18
TP to 70A	PVC	0.75	150	0.018	0.5	200	6.33	88.66	0.0719	17.7	6.33	88.66	0.0719	17.7	17.7		17.7	15.6	1.14	1	1	1.14	0.88	196.47	195.11	195.11	196.34	0.5	1.15	0	0.15	1		0.05	0.05		0.009	0	195.39	195.34	195.33	195.33	0.65	154.4	1.1
70B to TP	PVC	39.6	150	0.018	3.99	25.1	6	90.22	0.0719	18	6	90.22	0.0719	18	18		18	43.9	0.41	1.02	2.36	1.16	2.49	198.05	196.69	195.11	196.47	1.2	1.2	90	0	3.96		0.05	0.21		0.009	1.44	197.03	196.82	195.39	195.39	3.6	27.8	1.26
71A to 69D	RCP CL2 FJ	9.81	300	0.071	1.37	72.8	6.33	88.66	0.1658	40.8	6	90.22	0.1629	40.8	40.8		40.8	113.4	0.36	0.58	1.47	1.1	1.6	198.8	197.42	197.29	198.75	0.9	1	-61	0.159	4.39		0.02	0.07		0.013	0.02	197.72	197.64	197.63	197.63	0.06	1675.8	1.08
TP to 71A	PVC	0.75	150	0.018	0.5	199.9	6.33	88.69	0.0536	13.2	6.33	88.69	0.0536	13.2	13.2		13.2	15.6	0.85	0.75	0.99	0.98	0.88	198.93	197.58	197.57	198.8	0.5	1.15	-29	0.15	1		0.03	0.03		0.009	0	197.75	197.72	197.72	197.72	0.25	392.9	1.18
71B to TP	PVC	39	150	0.018	3.99	25	6	90.22	0.0536	13.4	6	90.22	0.0536	13.4	13.4		13.4	44	0.31	0.76	2.19	0.99	2.49	200.49	199.13	197.58	198.93	1.2	1.2	90	0	4.93		0.03	0.15		0.009	1.52	199.39	199.24	197.75	197.75	3.83	26.1	1.1

12D MODEL - HYDROLOGICAL DESIGN SHEET

Project: Design  
 Drainage Model: DRN  
 Rainfall File: Bendigo 100820.12dhydro

Tc Method: Direct  
 Rainfall Method: IFD Table  
 Runoff C Method: Direct  
 Minor 20.00 AEP(%) Storm Event

Node Name	Node Type	Setout Easting	Setout Northing	Setout RL	Grate RL	Catch ID	Time Tc	Intensity I	Runoff C	Area A	Full CA	Full Sum CA	Full Qc=CIA	Partial CA	Partial Sum CA	Partial Qc=CIA	Approach Flow Qa
(-)	(-)	(m)	(m)	(m)	(m)	(-)	(min)	(mm/hr)	(-)	(ha)	(ha)	(ha)	(L/s)	(ha)	(ha)	(L/s)	(L/s)
50J	IDM 900x1200 JP SD420+SD410	265443.25	5923876.64	193.49	193.49												0
50K	CoGB 900x1200 SEP SD590G	265424.42	5923856.66	193.69	193.69	5P	6	90.22	0.75	0.0247	0.0186	0.0186	4.7	0.0186	0.0186	4.7	4.7
50L	CoGB 900x1200 SEP SD590G	265388.44	5923818.7	193.93	193.93	5P	6	90.22	0.75	0.0383	0.0287	0.0287	7.2	0.0287	0.0287	7.2	7.2
50M	CoGB 900x900 SEP SD590G	265384.87	5923791.45	194.32	194.32	3P	6	90.22	0.55	0.1689	0.0929	0.1054	26.4	0.0929	0.1054	26.4	26.4
						5P	6	90.22	0.75	0.0167	0.0126			0.0126			
TP	TP	265382.38	5923772.54	194.43	194.43												0
TP	TP	265380.85	5923767.58	194.45	194.45												0
50N	CoGB 900x900 SEP SD590G	265379.34	5923764.59	194.45	194.45	3P	6	90.22	0.55	0.0742	0.0408	0.0474	11.9	0.0408	0.0474	11.9	11.9
						5P	6	90.22	0.75	0.0088	0.0066			0.0066			
50O	CoGB 900x900 SEP SD590G	265367.5	5923742.91	194.57	194.57	3P	6	90.22	0.55	0.1394	0.0766	0.1174	29.4	0.0766	0.1174	29.4	29.4
						5P	6	90.22	0.75	0.0543	0.0407			0.0407			
TP	TP	265359.89	5923729	194.66	194.66												0
50P	CoGB 900x900 SEP SD590G	265332.56	5923690.44	194.88	194.88	3P	6	90.22	0.55	0.0759	0.0417	0.0858	21.5	0.0417	0.0858	21.5	21.5
						4P	6	90.22	0.6	0.0582	0.0349			0.0349			
						5P	6	90.22	0.75	0.0123	0.0092			0.0092			
50Q	CoGB 900x600 SEP SD590G	265317.63	5923687.42	194.73	194.73	5P	6	90.22	0.75	0.0462	0.0346	0.0346	8.7	0.0346	0.0346	8.7	8.7
50R	CoGB 900x600 SEP SD590G	265314.23	5923672.66	195	195	3P	6	90.22	0.55	0.0637	0.035	0.068	17	0.035	0.068	17	17
						5P	6	90.22	0.75	0.0439	0.033			0.033			
69A	CoGB 900x600 SEP SD590G	265336.09	5923677.6	195.25	195.25	5P	6	90.22	0.75	0.0363	0.0272	0.0272	6.8	0.0272	0.0272	6.8	6.8
69B	IDM 900x600 GJP+JP SD480	265338.81	5923667.97	195.35	195.35	4P	6	90.22	0.6	0							