REFER TO DRAWING CC5404 FOR CONTINUATION

REFER TO DRAWING CC5402 FOR CONTINUATION

REFER TO DRAWING CC5401 FOR CONTINUATION

LEGEND

- CATCHMENT BOUNDARY
- EXISTING CATCHMENT BOUNDARY
- FLOW DIRECTION ARROW
- EXISTING CONTOURS 47.0
- DESIGN CONTOURS 47.0
- DRAINAGE LINE & PIT
- EXISTING DRAINAGE LINE & PIT
- FUTURE DRAINAGE LINE & PIT

I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature.....

PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

These plans are referred to in certificate no. 16635 approved by:
Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision
Land Development Certificates
www.LDC.com.au

1:500 (AT A1)
1:1000 (AT A3)

10 0 10 20 30 40 50
METRES

B	CATCHMENTS UPDATED	DG	VS	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 **W** www.jwprince.com.au **E** jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

NEWPARK
PRECINCT 7, STAGE 7B
CATCHMENT PLAN SHEET 3

PROJECT No: 9985-12
SHEET No: CC5403

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5403 | B

Plotted: 14 September, 2021 12:47:12 PM File Name: J:\9985\DCC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCT\SI5 - Precinct 7B\9985-12-CC5403.dwg

These plans are referred to in certificate no. 16635 approved by:

Christopher Louis Wahbe
Registered Certifier

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PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

LEGEND

- CATCHMENT BOUNDARY
- EXISTING CATCHMENT BOUNDARY
- FLOW DIRECTION ARROW
- EXISTING CONTOURS 47.0
- DESIGN CONTOURS 47.0
- DRAINAGE LINE & PIT
- EXISTING DRAINAGE LINE & PIT
- FUTURE DRAINAGE LINE & PIT

B SYSTEM "C" CATCHMENT BOUNDARIES/LABELS ADDED

REFER TO DRAWING CC5403 FOR CONTINUATION

1:500 (AT A1)
1:1000 (AT A3)

10 0 10 20 30 40 50
METRES

	AMENDMENT	DES	DRN	CKD	APR	DATE
B	CATCHMENTS UPDATED	DG	VS	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21

J. WYNDHAM PRINCE
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CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
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NEWPARK
PRECINCT 7, STAGE 7B
CATCHMENT PLAN SHEET 4

PROJECT No: 9985-12
SHEET No: CC5404

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5404 | B

PIT SCHEDULE

PIT NAME (-)	SURFACE FITTING TYPE AND SIZE (-)	PIT EASTING (m)	PIT NORTHING (m)	PIT DEPTH (m)	COMMENTS
A04/5	1.8 m lintel	295107.04	6268940.56	1.64	PIT CONSTRUCTION ONLY
A04/6	1.8 m lintel	295098.73	6268949.84	1.74	PIT CONSTRUCTION ONLY
A04/7	2.4 m lintel sag	295095.23	6268969.42	1.82	
A04/8	1.8 m lintel	295081.04	6268975.92	2.22	
A04/8A	Headwall	295050.23	6268964.14		TEMPORARY HEADWALL
A04/9	1.8 m lintel	295040.85	6268960.23	2.43	FUTURE PIT
A37/1	2.4 m lintel sag	295103.63	6268972.65	1.41	
B02/1	1.8 m lintel	295406.65	6269063.33	1.45	
B02/2	2.4 m lintel sag	295400.3	6269051.27	1.57	
B02/3	2.4 m lintel sag	295392.26	6269055.33	1.72	
B02/4	1.8 m lintel	295380.22	6269029.14	2.2	
B02/5	1.8 m lintel	295365.92	6269023.7	2.01	
B02/6	1.8 m lintel	295343.8	6269031.98	1.99	
B02/7	1.8 m lintel	295322.41	6269039.99	1.99	
B02/8	2.4 m lintel sag	295297.76	6269050.29	1.99	SPECIAL PIT CC5550
B02/9	2.4 m lintel sag	295285.75	6269048.69	2.08	SPECIAL PIT CC5550
B02/10	1.8 m lintel	295271.72	6269051.71	2.37	SPECIAL PIT CC5550
B02/11	2.4 m lintel sag	295258.01	6269045.46	2.42	SPECIAL PIT CC5550
B02/12	1.8 m lintel	295213.67	6269027.95	2.75	SPECIAL PIT CC5550
B02/13	1.8 m lintel	295204.66	6269034.08	2.85	SPECIAL PIT CC5551
B02/14	1.8 m lintel	295171.93	6269021.24	2.83	SPECIAL PIT CC5551
B02/15	1.8 m lintel	295158.16	6269028.08	2.63	SPECIAL PIT CC5552
B02/16	1.8 m lintel	295150.77	6269046.9	2.61	SPECIAL PIT CC5552
B02/17	2.4 m lintel sag	295143.37	6269065.77	2.67	SPECIAL PIT CC5553
B02/18	1.8 m lintel	295148.89	6269078.8	2.87	SPECIAL PIT CC5553
B02/19	1.8 m lintel	295173.26	6269088.36	3.26	SPECIAL PIT CC5554
B03/17	1.8 m lintel	295246.61	6268913.72	2.64	SPECIAL PIT CC5554
B03/18	1.8 m lintel	295252.53	6268953.85	2.61	SPECIAL PIT CC5555
B03/19	2.4 m lintel	295244.16	6268963.03	2.64	SPECIAL PIT CC5555
B03/20	1.8 m lintel	295239.84	6268989.5	2.55	SPECIAL PIT CC5555
B03/21	2.4 m lintel sag	295227.4	6269021.34	2.49	SPECIAL PIT CC5556
B04/1	1.8 m lintel	295463.65	6268933.28	1.82	
B04/2	1.8 m lintel	295445.9	6268935.9	1.9	
B04/3	1.8 m lintel	295415.74	6268940.37	2.02	
B04/4	1.8 m lintel	295366.94	6268947.58	2.2	
B04/5	1.8 m lintel	295314.09	6268955.4	2.01	
B04/6	2.4 m lintel sag	295263.94	6268962.82	1.56	
B04/7	2.4 m lintel sag	295261.44	6268972.29	1.75	SPECIAL PIT CC5556
B04/8	1.8 m lintel	295250.71	6268984.56	2.04	SPECIAL PIT CC5556
B05/1	1.8 m lintel	295446.27	6268977.66	1.38	
B05/2	1.8 m lintel	295456.55	6269004.17	1.51	
B05/3	2.4 m lintel	295472.92	6269036.3	1.66	
B05/4	2.4 m lintel	295489.44	6269065.01	1.79	
B05/5	2.4 m lintel sag	295497.37	6269078.79	1.89	
B05/6	2.4 m lintel sag	295489.88	6269083.82	2.17	SPECIAL PIT CC5556
B05/7	1.8 m lintel	295485.34	6269098.58	2.49	SPECIAL PIT CC5557
B05/8	1.8 m lintel	295484.24	6269109.12	2.72	SPECIAL PIT CC5557
B05/9	1.8 m lintel	295470.3	6269115.9	2.77	
B05/10	1.8 m lintel	295450.91	6269125.32	2.87	
B05/11	1.8 m lintel	295422.04	6269139.36	2.99	
B05/12	1.8 m lintel	295401.25	6269149.46	3.11	
B05/13	1.8 m lintel	295392.25	6269143.83	3.34	
B05/14	1.8 m lintel	295363.57	6269157.77	3.28	SPECIAL PIT CC5557
B05/15	2.4 m lintel sag	295326.62	6269175.74	2.34	SPECIAL PIT CC5557
B08/1	1.8 m lintel	295527.13	6269130.51	1.47	SPECIAL PIT CC5558
B08/2	1.8 m lintel	295525.88	6269146.38	1.59	SPECIAL PIT CC5558
B08/3	1.8 m lintel	295520.85	6269160.26	1.52	SPECIAL PIT CC5558
B08/4	1.8 m lintel	295497.78	6269171.47	1.59	
B08/5	1.8 m lintel	295469.31	6269185.31	1.66	
B08/6	2.4 m lintel	295439.86	6269199.63	1.74	
B08/7	2.4 m lintel	295410.57	6269213.87	1.82	
B08/8	1.8 m lintel	295388.31	6269224.69	1.89	
B08/9	2.4 m lintel sag	295363.45	6269236.77	1.85	SPECIAL PIT CC5558
B08/10	1.8 m lintel	295348.53	6269231.71	2.15	SPECIAL PIT CC5558
B08/11	2.4 m lintel sag	295340.08	6269216.06	2.21	SPECIAL PIT CC5558
B08/12	1.8 m lintel	295329.38	6269196.77	2.48	SPECIAL PIT CC5559
B08/13	1.8 m lintel	295312.08	6269172.21	2.75	SPECIAL PIT CC5559
B08/14	1.8 m lintel	295290.22	6269149.17	2.66	SPECIAL PIT CC5559
B08/15	2.4 m lintel sag	295280.52	6269140.88	2.62	SPECIAL PIT CC5560
B08/16	1.8 m lintel	295265.37	6269129.77	2.84	SPECIAL PIT CC5560
B08/17	2.4 m lintel sag	295217.02	6269105.53	3.05	SPECIAL PIT CC5560
B08/18	1.8 m lintel	295182.65	6269092.05	3.42	SPECIAL PIT CC5561
B08/19	1.8 m lintel	295174.96	6269098.7	3.48	SPLITTER/SPECIAL PIT CC5561
B08/20	NODE	295172.76	6269104.3	3.64	FUTURE GPT INLET
B08/21	GPT	295174.34	6269106.63	3.61	FUTURE GPT VORTEX
B08/22	NODE	295171.61	6269107.23	3.58	FUTURE GPT OUTLET
B08/23	JP SEALED 900 x 900	295170.05	6269111.23	2.99	SPLITTER PIT - TEMPORARY HEADWALL
B10/1	1.8 m lintel	295330.51	6269102.02	1.45	
B10/2	1.8 m lintel	295334.29	6269093.34	1.62	
B10/3	2.4 m lintel sag	295317.87	6269080	1.73	
B10/4	1.8 m lintel	295299.61	6269067.33	2.17	
B11/1	2.4 m lintel sag	295364.54	6269280.29	1.44	
B11/2	2.4 m lintel sag	295372.46	6269276.01	1.58	
B19/14	2.4 m lintel sag	295161.28	6268995.47	1.75	LINTEL CONSTRUCTION ONLY
B19/15	2.4 m lintel sag	295169.66	6268998.74	1.98	LINTEL CONSTRUCTION ONLY
B19/16	1.8 m lintel	295175.17	6269012.85	2.38	
B20/1	2.4 m lintel sag	295135.48	6269061.23	1.44	
B26/1	2.4 m lintel	295430.02	6268893.54	1.45	
B26/2	1.8 m lintel	295420.6	6268888	1.68	SPECIAL PIT CC5562
B31/1	1.8 m lintel	295448.88	6268944.56	1.45	
B32/1	1.8 m lintel	295377.03	6268955.19	1.46	

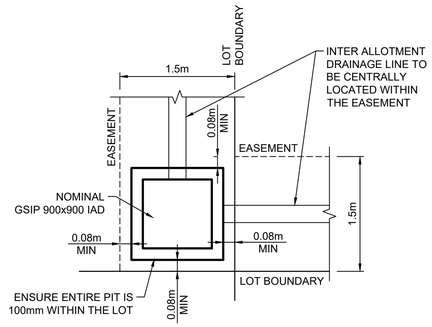
PIT SCHEDULE

PIT NAME (-)	SURFACE FITTING TYPE AND SIZE (-)	PIT EASTING (m)	PIT NORTHING (m)	PIT DEPTH (m)	COMMENTS
B37/1	2.4 m lintel	295237.64	6268914.58	1.44	
B39/1	1.8 m lintel	295142.41	6269043.58	1.45	
B43/1	2.4 m lintel sag	295312.3	6269087.07	1.43	
B44/1	2.4 m lintel sag	295274.96	6269147.96	1.43	
B45/1	2.4 m lintel sag	295332.16	6269220.34	1.44	
B46/1	2.4 m lintel sag	295254.68	6269053.82	1.44	
B48/1	1.8 m lintel	295269.73	6269060.76	1.45	
B49/1	1.8 m lintel	295518.33	6269092.55	1.45	
B49/2	1.8 m lintel	295512.78	6269085.24	1.65	
B50/1	1.8 m lintel	295447.97	6269116.74	1.45	
B51/1	2.4 m lintel sag	295213.73	6269113.91	1.44	
B55/1	2.4 m lintel sag	295333.28	6269182.5	1.45	
B56/1	1.8 m lintel	295463.56	6269038.07	1.45	
B58/1	1.8 m lintel	295374.67	6268986.72	1.47	
B58/2	2.4 m lintel sag	295378.6	6268999.21	1.5	
B58/3	1.8 m lintel	295370.25	6269002.61	1.72	
B58/4	1.8 m lintel	295362.77	6269015.27	1.7	
B59/1	1.8 m lintel	295343.19	6269022.6	1.45	
B60/1	1.8 m lintel	295321.71	6269030.65	1.45	
B61/1	1.8 m lintel	295147.11	6269001.84	1.45	
B61/2	1.8 m lintel	295144.62	6269010.53	1.67	
B61/3	1.8 m lintel	295149.76	6269024.83	1.54	
B67/1	1.8 m lintel	295506.32	6269177.33	1.46	
B68/1	2.4 m lintel	295475.98	6269192.08	1.44	
B69/1	1.8 m lintel	295448.71	6269205.33	1.46	
B70/1	2.4 m lintel	295417.52	6269220.49	1.45	
B71/1	1.8 m lintel	295395.15	6269231.37	1.45	
B72/1	2.4 m lintel sag	295375.87	6269138.66	1.44	
B72/2	2.4 m lintel sag	295367.81	6269142.9	1.68	SPECIAL PIT CC5562
B73/1	1.8 m lintel	295424.51	6269094.53	1.63	
B73/2	2.4 m lintel sag	295433.86	6269110.78	1.74	
B73/3	2.4 m lintel sag	295425.79	6269114.8	1.98	SPECIAL PIT CC5562
B73/4	1.8 m lintel	295421.83	6269129.45	2.36	SPECIAL PIT CC5562
B75/1	1.8 m lintel	295243.4	6269005.19	1.52	
B75/2	2.4 m lintel sag	295235.87	6269024.39	1.64	
B76/1	2.4 m lintel	295374.37	6269162.53	1.46	
B77/1	2.4 m lintel sag	295368.41	6269244.37	1.44	
B78/1	2.4 m lintel sag	295144.23	6269086.64	1.44	
B99/1	NODE	295173.49	6269098.19	3.62	SPLITTER PIT INTERNAL WEIR
B99/2	JP SEALED 900 x 900	295163.73	6269101.5	3.56	
B99/2	JP SEALED 900 x 900	295163.73	6269101.5	3.56	TEMPORARY HEADWALL
C01/1	1.8 m lintel	295542.61	6269157.41	1.52	
C01/2	1.8 m lintel	295553.93	6269177.09	1.62	
C01/3	2.4 m lintel sag	295569.59	6269204.31	1.78	TEMPORARY HEADWALL
BAB/1	IAD 600x900			0.75	
BAB/2	IAD 600x900			0.82	
BAB/3	IAD 600x900			0.89	
BAB/4	IAD 600x900			0.97	
BAB/5	IAD 600x900			1	
BAB/6	IAD 600x900			1.04	
BAB/7	IAD 900x900			1.54	
BAC/1	IAD 600x900			0.77	
BAC/2	IAD 600x900			0.77	
BAC/3	IAD 600x900			0.77	
BAC/4	IAD 600x900			0.84	
BAC/5	IAD 900x900			1.54	
BE/1	IAD 600x900			0.76	
BE/2	IAD 600x900			0.84	
BE/3	IAD 600x900			0.86	
BE/4	IAD 600x900			0.89	
BE/5	IAD 600x900			0.93	
BE/6	IAD 900x900			1.54	
BJ/1	IAD 600x900			0.75	
BJ/2	IAD 600x900			0.87	
BJ/3	IAD 600x900			0.99	
BJ/4	IAD 600x900			1.1	
BJ/5	IAD 600x900			1.28	
BJ/6	IAD 600x900			1.44	
BJ/7	IAD 900x900			1.61	
BJ/8	IAD 900x900			1.8	
BJ/9	IAD 900x900			2.01	
BK/1	IAD 600x900			0.76	
BK/2	IAD 600x900			0.77	
BK/3	IAD 600x900			0.84	
BK/4	IAD 900x900			1.54	
BL/1	IAD 600x900			0.75	
BL/2	IAD 600x900			0.9	
BL/3	IAD 600x900			1.01	
BL/4	IAD 600x900			1.09	
BL/5	IAD 600x900			1.16	
BL/6	IAD 600x900			1.25	
BL/7	IAD 600x900			1.43	
BL/8	IAD 900x900			1.48	
BL/9	IAD 900x900			1.27	
BL/10	IAD 900x900			1.54	
BM/1	IAD 600x900			0.76	
BM/2	IAD 600x900			0.77	
BM/3	IAD 600x900			0.85	
BM/4	IAD 900x900			1.54	
BN/1	IAD 600x900			0.76	
BN/2	IAD 600x900			0.84	

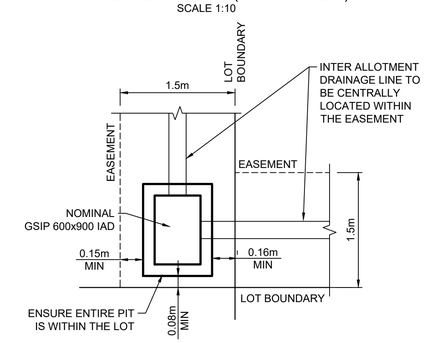
PIT SCHEDULE

PIT NAME (-)	SURFACE FITTING TYPE AND SIZE (-)	PIT EASTING (m)	PIT NORTHING (m)	PIT DEPTH (m)	COMMENTS
BN/3	IAD 600x900			0.94	
BN/4	IAD 600x900			1.01	
BN/5	IAD 600x900			1.15	
BN/6	IAD 600x900			1.32	
BN/7	IAD 900x900			1.45	
BN/8	IAD 900x900			1.56	
BN/9	IAD 900x900			1.62	
BN/10	IAD 900x900			1.69	
BN/11	IAD 900x900			1.71	
BN/12	IAD 900x900			1.82	
BO/1	IAD 600x900			0.75	
BP/1	IAD 600x900			0.76	
BP/2	IAD 600x900			0.79	
BP/3	IAD 600x900			0.84	
BP/4	IAD 900x900			1.54	
BR/1	IAD 600x900			0.76	
BR/2	IAD 600x900			0.83	
BR/3	IAD 600x900			0.86	
BR/4	IAD 600x900			0.89	
BR/5	IAD 600x900			0.91	
BR/6	IAD 600x900			0.95	
BR/7	IAD 600x900			0.97	
BR/8	IAD 600x900			1.01	
BR/9	IAD 600x900			1.04	
BR/10	IAD 600x900			1.08	
BR/11	IAD 600x900			1.13	
BR/12	IAD 900x900			1.53	
BS/1	IAD 600x900			0.76	
BS/2	IAD 600x900			0.77	
BS/3	IAD 600x900			0.84	
BS/4	IAD 900x900			1.54	
BU/1	IAD 600x900			0.77	
BR/9	IAD 600x900			1.04	
BR/10	IAD 600x900			1.08	
BR/11	IAD 600x900			1.13	
BR/12	IAD 900x900			1.53	
BS/1	IAD 600x900			0.76	
BS/2	IAD 600x900			0.77	
BS/3	IAD 600x900			0.84	
BS/4	IAD 900x900			1.54	
BU/1	IAD 600x900			0.77	

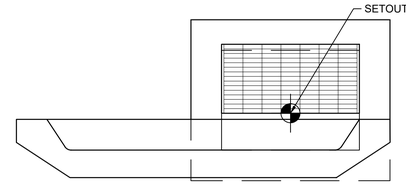
B PIT SCHEDULE UPDATED



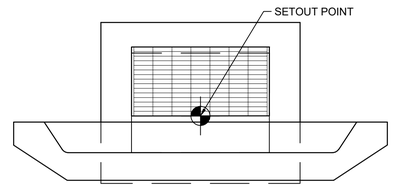
TYPICAL INTER-ALLOTMENT SETOUT FROM LOT BOUNDARY (900 x 900 GSIP)
SCALE 1:10



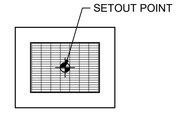
TYPICAL INTER-ALLOTMENT SETOUT FROM LOT BOUNDARY (600 x 900 GSIP)
SCALE 1:10



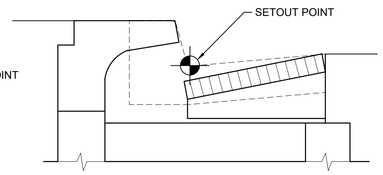
SETOUT DETAIL KERB INLET PIT (LINTEL)
SCALE 1:20



SETOUT DETAIL KERB INLET PIT (SAG)
SCALE 1:20



GRATED SURFACE INLET PIT (GSIP)
SCALE 1:10



SETOUT DETAIL KERB INLET PIT (LINTEL)
SCALE 1:10

These plans are referred to in certificate no. 16635 approved by:
Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision
Land Development Certificates
www.LDC.com.au

I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature.....
PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

B	DRAINAGE TABLE UPDATED	DG	VS	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

NEWPARK
PRECINCT 7, STAGE 7B
PIT SCHEDULE

PROJECT No: 9985-12
SHEET No: CC5410

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5410 | B

Plotted: 14 September , 2021 12:49:40 PM File Name: J:\9985D\CC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCT\SI5 - Precinct 7B\9985-12-CC5410.dwg

I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature.....

PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260.7

DESIGN STORM 10% AEP HYDROLOGIC RESULTS

PIT NAME	PIT TYPE	CATCHMENT AREA	PERCENT IMPERVIOUS	Tc IMP	Tc PERV	CRITICAL STORM	APPROACH FLOW	CAPTURED FLOW	UNCAPTURED FLOW	GRATE DEPTH	ROAD GRADE	ROAD CROSSFALL	BYPASS PIT	FLOW AT BYPASS PIT	FLOW WIDTH AT BYPASS PIT	VxD AT BYPASS PIT	COMMENTS
(-)	(-)	(Ha)	(%)	(min)	(min)	(min)	(L/s)	(L/s)	(L/s)	(mm)	(%)	(%)	(-)	(L/s)	(m)	(m/s^2)	(-)
A04/6	1.8 m lintel	0.029	95	5	5	15	10	10	0	61	1.1	3	A04/7	18	1.18	0.04	
A04/7	2.4 m lintel sag	0.071	85	5	5	5	18	18	0	31	0.7	2.9	A04/8	0	1.12	0	
A04/8	1.8 m lintel	0.004	95	5	5	5	1	1	0	60	0.2	4	A04/9	13	1.27	0.03	
A04/9	1.8 m lintel	0.035	95	5	5	25	13	13	0	64	0.7	3	A65/1	27	1.57	0.05	
A37/1	2.4 m lintel sag	0.16	85	5	5	15	63	63	0	66	0.5	3	A04/7	0			
B02/1	1.8 m lintel	0.082	85	5	5	25	27	26	1	99	1	3	B02/2	60	2.43	0.06	
B02/2	2.4 m lintel sag	0.16	85	5	5	15	60	60	0	76	0.1	3	B58/2	0	0	0	
B02/3	2.4 m lintel sag	0.2	85	5	5	5	25	25	0	37	0.5	3	B02/4	0	0.42	0	
B02/4	1.8 m lintel		0			15	0	0	0	36	0.5	3	B02/5	6	1.83	0.01	
B02/5	1.8 m lintel	0.017	95	5	5	25	6	6	0	81	0.9	3	B02/6	37	1.83	0.05	
B02/6	1.8 m lintel	0.1	85	5	5	15	37	33	4	78	0.7	3	B02/7	33	1.74	0.05	
B02/7	1.8 m lintel	0.079	85	5	5	15	33	30	3	72	0.7	3	B02/8	25	1.54	0.04	
B02/8	2.4 m lintel sag	0.121	85	5	5	15	45	45	0	60	0.4	2.8	B02/9	0			SPECIAL PIT
B02/9	2.4 m lintel sag	0.166	85	5	5	5	52	52	0	57	0.7	3	B02/10	0	1.93	0	SPECIAL PIT
B02/10	1.8 m lintel	0.005	95	5	5	15	1	1	0	86	1	3	B02/11	41	2	0.05	SPECIAL PIT
B02/11	2.4 m lintel sag	0.111	85	5	5	15	38	38	0	57	0.1	3	B75/2	0	0	0	SPECIAL PIT
B02/12	1.8 m lintel		0			25	0	0	0	77	0.7	4.3	B19/16	35	1.7	0.05	SPECIAL PIT
B02/13	1.8 m lintel	0.078	85	5	5	25	7	7	0	82	0.7	3	B02/14	39	1.87	0.06	SPECIAL PIT
B02/14	1.8 m lintel	0.111	85	5	5	15	39	35	5	39	0.7	3	B02/15	7	0.84	0.03	SPECIAL PIT
B02/15	1.8 m lintel	0.018	95	5	5	15	7	7	0	51	0.9	3	B02/16	8	1.51	0.02	SPECIAL PIT
B02/16	1.8 m lintel	0.058	85	5	5	15	8	8	0	72	0.7	3	B02/17	19	1.46	0.04	SPECIAL PIT
B02/17	2.4 m lintel sag	0.076	85	5	5	15	19	19	0	41	0.3	1.8	B02/18	0	0	0	SPECIAL PIT
B02/18	1.8 m lintel	0.076	85	5	5	15	18	17	1	46	0.5	2.7	B78/1	1	0.28	0	SPECIAL PIT
B02/19	1.8 m lintel	0.035	85	5	5	15	13	13	0	64	0.6	3	B02/18	18	1.26	0.04	SPECIAL PIT
B03/15	1.8 m lintel	0.005	95	5	5	15	1	1	0	79	0.7	3	B03/16	37	1.75	0.05	
B03/16	1.8 m lintel	0.101	85	5	5	15	34	32	2	57	0.7	3	B65/1	19	1.19	0.05	
B03/17	1.8 m lintel	0.004	95	5	5	15	1	1	0	79	0.7	3	B03/18	37	1.74	0.05	SPECIAL PIT
B03/18	1.8 m lintel	0.101	85	5	5	15	33	32	2	51	0.7	3	B04/6	11	0.82	0.03	SPECIAL PIT
B03/19	2.4 m lintel	0.156	85	5	5	15	58	53	5	83	0.7	3	B03/20	41	2.05	0.05	SPECIAL PIT
B03/20	1.8 m lintel	0.101	85	5	5	15	41	36	5	88	0.7	3	B03/21	44	2.05	0.06	SPECIAL PIT
B03/21	2.4 m lintel sag	0.134	85	5	5	5	50	50	0	54	0.4	2	B02/12	0	1.37	0.01	SPECIAL PIT
B04/1	1.8 m lintel	0.04	95	5	5	15	15	15	0	44	0.7	3	B04/2	5	1.85	0.01	
B04/2	1.8 m lintel	0.015	95	5	5	15	5	5	0	82	0.7	3	B26/1	53	2.17	0.06	
B04/3	1.8 m lintel	0.003	95	5	5	15	1	1	0	61	0.7	3	B04/4	14	1.17	0.03	
B04/4	1.8 m lintel	0.039	95	5	5	15	14	14	0	56	0.7	3	B04/5	15	1.16	0.04	
B04/5	1.8 m lintel	0.042	95	5	5	15	15	15	0	61	2.7	3	B04/6	28	1.16	0.07	
B04/6	2.4 m lintel sag	0.102	85	5	5	5	39	39	0	51	1.5	3.4	B04/7	0			
B04/7	2.4 m lintel sag	0.132	85	5	5	5	46	46	0	53	0.8	2.8	B04/8	0	1.34	0	SPECIAL PIT
B04/8	1.8 m lintel	0.006	95	5	5	15	1	1	0	74	0.7	3	B75/1	28	1.59	0.05	SPECIAL PIT
B05/1	1.8 m lintel	0.036	95	5	5	15	14	14	0	77	0.7	3	B05/2	31	2.01	0.04	
B05/2	1.8 m lintel	0.085	85	5	5	25	31	29	2	87	0.7	3	B05/3	47	2.01	0.06	
B05/3	2.4 m lintel	0.123	85	5	5	25	47	45	2	86	0.7	3	B05/4	46	2	0.06	
B05/4	2.4 m lintel	0.12	85	5	5	25	46	45	1	61	0.7	3	B05/5	14	1.17	0.03	
B05/5	2.4 m lintel sag	0.079	85	5	5	5	30	30	0	44	1.3	2.9	B05/6	0			
B05/6	2.4 m lintel sag	0.059	95	5	5	5	31	31	0	42	0.4	2.3	B05/7	0	0.49	1.46	SPECIAL PIT
B05/7	1.8 m lintel	0.005	95	5	5	15	0	0	0	41	0.7	3.7	B50/1	5	0.73	0.02	SPECIAL PIT
B05/8	1.8 m lintel	0.01	95	5	5	15	4	4	0	63	1.1	3	B05/9	18	1.58	0.03	SPECIAL PIT
B05/9	1.8 m lintel	0.047	85	5	5	25	18	18	0	74	0.7	3	B05/10	27	1.95	0.04	
B05/10	1.8 m lintel	0.073	85	5	5	25	27	26	1	85	0.7	3	B05/11	43	1.95	0.06	
B05/11	1.8 m lintel	0.115	85	5	5	15	43	40	4	77	0.7	3	B05/12	31	1.92	0.04	
B05/12	1.8 m lintel	0.074	85	5	5	25	31	28	2	84	0.7	3	B76/1	44	1.92	0.06	
B05/13	1.8 m lintel	0.082	85	5	5	25	30	29	1	66	0.7	3	B72/1	30	1.31	0.06	
B05/14	1.8 m lintel	0.007	95	5	5	25	3	3	0	69	1.7	3	B05/15	45	1.43	0.09	SPECIAL PIT
B05/15	2.4 m lintel sag	0.121	85	5	5	15	45	45	0	56	1.6	2.8	B55/1	0	0	0	SPECIAL PIT
B08/1	1.8 m lintel	0.041	95	5	5	5	15	15	0	0	0.7	3	LOST	0	0	0	SPECIAL PIT
B08/2	1.8 m lintel	0.138	85	5	5	15	51	46	5	48	0.7	3	B08/3	13	1.36	0.03	SPECIAL PIT
B08/3	1.8 m lintel	0.02	95	5	5	15	13	13	0	67	1.1	3	B08/4	21	1.81	0.03	SPECIAL PIT
B08/4	1.8 m lintel	0.058	85	5	5	25	21	21	0	80	0.9	3	B08/5	40	1.94	0.05	
B08/5	1.8 m lintel	0.108	85	5	5	25	40	35	5	84	0.9	3	B08/6	47	1.94	0.06	
B08/6	2.4 m lintel	0.115	85	5	5	25	47	45	2	83	0.9	3	B08/7	45	1.9	0.06	
B08/7	2.4 m lintel	0.116	85	5	5	15	45	44	1	74	0.9	3	B08/8	31	1.6	0.05	
B08/8	1.8 m lintel	0.082	85	5	5	15	31	29	1	69	0.9	3	B08/9	23	1.42	0.04	
B08/9	2.4 m lintel sag	0.113	85	5	5	15	40	40	0	55	0.5	2.7	B77/1	0			SPECIAL PIT
B08/10	1.8 m lintel	0.003	95	5	5	25	1	1	0	64	0.7	3.5	B08/9	19	1.25	0.04	SPECIAL PIT
B08/11	2.4 m lintel sag	0.149	85	5	5	5	53	53	0	57	0.2	3	B08/10	0	1.15	0	SPECIAL PIT
B08/12	1.8 m lintel	0.007	95	5	5	25	1	1	0	94	0.7	3.9	B08/11	55	2.26	0.06	SPECIAL PIT
B08/13	1.8 m lintel	0.005	95	5	5	15	2	2	0	77	0.7	3	B08/14	30	1.68	0.05	SPECIAL PIT
B08/14	1.8 m lintel	0.082	85	5	5	25	30	29	1	73	0.7	3	B08/15	28	1.55	0.05	SPECIAL PIT
B08/15	2.4 m lintel sag	0.169	85	5	5	5	63	63	0	62	0.6	3.9	B44/1	0			SPECIAL PIT
B08/16	1.8 m lintel	0.075	85	5	5	25	7	7	0	78	1	3	B08/15	35	1.74	0.05	SPECIAL PIT
B08/17	2.4 m lintel sag	0.227	85	5	5	15	85	85	0	83	0.1	3	B08/16	0	0	0	SPECIAL PIT
B08/18	1.8 m lintel		0	5	5	25	0	0	0	108	-0.2	3	B08/17	47			SPECIAL PIT
B08/19	1.8 m lintel	0.002	95	5	5	5	5	5	0	0	0.7	3	B99/1	0	0.27	0.03	SPLITTER/SPECIAL PIT
B08/20	NODE		0			5	0	0	0	0							GPT INLET
B08/21	GPT		0			5	0	0	0	0							GPT VORTEX
B08/22	NODE		0			5	0	0	0	0							GPT OUTLET
B08/23	JP SEALED 900 x 900		0			5	0	0	0	0							SPLITTER PIT
B08/24	JP SEALED 900 x 900		0			5	0	0	0	0							
B10/1	1.8 m lintel	0.09	85	5	5	25	12	12	0	98	1	3	B43/1	73	2.38	0.08	
B10/2	1.8 m lintel	0.111	85	5	5	25	14	14	0	87	1	3	B10/3	48	2.02	0.06	
B10/3	2.4 m lintel sag	0.133	85	5	5	5	51	51	0	56	0.6	3.8	B10/4	0	1.39	0.01	

B DRAINAGE TABLE UPDATED

These plans are referred to in certificate no. 16635 approved by:
Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision
Land Development Certificates
www.LDC.com.au

	AMENDMENT	DES	DRN	CKD	APR	DATE
B	DRAINAGE TABLE UPDATED	DG	VS	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
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NEWPARK
PRECINCT 7, STAGE 7B
DRAINAGE CALCULATIONS
SHEET 1

PROJECT No: 9985-12
SHEET No: CC5411

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5411 | B

Plotted: 14 September , 2021 12:50:02 PM File Name: J:\9985\DICC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCT\SI5 - Precinct 7B\9985-12-CC5411.dwg

DESIGN STORM 10% AEP HYDROLOGIC RESULTS

PIT NAME	PIT TYPE	CATCHMENT AREA	PERCENT IMPERVIOUS	Tc IMP	Tc PERV	CRITICAL STORM	APPROACH FLOW	CAPTURED FLOW	UNCAPTURED FLOW	GRATE DEPTH	ROAD GRADE	ROAD CROSSFALL	BYPASS PIT	FLOW AT BYPASS PIT	FLOW WIDTH AT BYPASS PIT	VxD AT BYPASS PIT	COMMENTS
(-)	(-)	(Ha)	(%)	(min)	(min)	(min)	(L/s)	(L/s)	(L/s)	(mm)	(%)	(%)	(-)	(L/s)	(m)	(m/s^2)	(-)
B10/4	1.8 m lintel	0.003	95	5	5	15	1	1	0	68	0.7	2.9	B02/8	22	1.39	0.04	
B11/1	2.4 m lintel sag	0.035	95	5	5	5	4	4	0	11	0.1	3	LOST	0			
B11/2	2.4 m lintel sag	0.113	85	5	5	5	21	21	0	34	0.1	3	B11/1	0	0	0	
B19/12	2.4 m lintel	0.05	85	5	5	25	20	20	0	60	1.7	3	B19/13	21	1.3	0.04	
B19/13	1.8 m lintel	0.057	85	5	5	15	21	21	0	65	1.7	3	B19/14	28	1.3	0.06	
B19/14	2.4 m lintel sag	0.128	85	5	5	15	51	51	0	59	0.8	3.1	B19/15	0			
B19/15	2.4 m lintel sag	0.124	85	5	5	5	43	43	0	53	0.8	4	B02/15	0	0	0	
B19/16	1.8 m lintel	0.094	85	5	5	15	29	28	1	58	0.7	3	B19/15	15	1.06	0.04	
B20/1	2.4 m lintel sag	0.078	85	5	5	15	29	29	0	47	0.9	2.9	B02/17	0			
B26/1	2.4 m lintel	0.143	85	5	5	15	53	51	2	91	0.7	3	B06/2	52	2.17	0.06	
B26/2	1.8 m lintel	0.049	95	5	5	15	18	18	0	38	0.7	3	B06/5	7	0.76	0.03	SPECIAL PIT
B31/1	1.8 m lintel	0.046	95	5	5	15	18	18	0	53	0.7	3	B05/1	14	1.69	0.02	
B32/1	1.8 m lintel	0.039	95	5	5	15	15	15	0	45	0.7	3	B58/1	13	0.63	0.05	
B37/1	2.4 m lintel	0.108	85	5	5	15	44	42	2	92	0.7	3	B03/19	58	2.2	0.07	
B39/1	1.8 m lintel	0.057	85	5	5	15	21	21	0	63	0.8	3	B20/1	16	1.23	0.04	
B43/1	2.4 m lintel sag	0.201	85	5	5	25	73	73	0	74	0.7	3.9	B48/1	0	0	0	
B44/1	2.4 m lintel sag	0.045	95	5	5	5	7	6	0	15	0.6	3.8	LOST	0			
B45/1	2.4 m lintel sag	0.032	95	5	5	5	12	12	0	32	0.2	3	B11/1	0	0	0	
B46/1	2.4 m lintel sag	0.182	85	5	5	15	66	66	0	75	0.1	3	B02/13	0	0	0	
B48/1	1.8 m lintel	0.049	85	5	5	25	5	5	0	99	1	3	B46/1	66	2.43	0.07	
B49/1	1.8 m lintel	0.048	95	5	5	15	18	18	0	54	1.8	3	B08/1	15	0.91	0.04	
B49/2	1.8 m lintel	0.062	85	5	5	15	23	22	0	50	1.8	3	B05/5	16	0.79	0.05	
B50/1	1.8 m lintel	0.033	95	5	5	15	5	5	0	48	0.7	3	B73/2	12	0.73	0.04	
B51/1	2.4 m lintel sag	0.031	95	5	5	25	12	12	0	33	0.1	3	B44/1	0	0	0	
B55/1	2.4 m lintel sag	0.119	85	5	5	5	43	43	0	51	1.7	2.6	B08/12	0	2.26	0.01	
B56/1	1.8 m lintel	0.081	95	5	5	25	31	29	2	70	0.7	3	B05/6	21	1.47	0.04	
B58/1	1.8 m lintel	0.036	95	5	5	5	13	13	0	41	2.3	3	B58/2	6	0.5	0.03	
B58/2	2.4 m lintel sag	0.124	85	5	5	5	17	17	0	32	0.2	3	B58/3	0	0	0	
B58/3	1.8 m lintel	0.042	95	5	5	5	13	13	0	39	0.7	3.3	B58/4	6	0.7	0.02	
B58/4	1.8 m lintel	0.019	95	5	5	15	6	6	0	47	0.9	3	B59/1	6	1.67	0.01	
B59/1	1.8 m lintel	0.017	95	5	5	15	6	6	0	76	0.7	3	B60/1	30	2.09	0.04	
B60/1	1.8 m lintel	0.083	85	5	5	25	30	28	2	89	0.7	3	B02/9	49	2.09	0.06	
B61/1	1.8 m lintel	0.105	85	5	5	15	40	37	3	66	1.3	3	B19/14	23	1.33	0.05	
B61/2	1.8 m lintel	0.049	95	5	5	15	18	18	0	38	1	3	B61/3	6	1.41	0.01	
B61/3	1.8 m lintel	0.017	95	5	5	15	6	6	0	69	0.9	3	B39/1	21	1.41	0.04	
B65/1	2.4 m lintel sag	0.144	85	5	5	15	55	55	0	62	0.8	2.8	B06/11	0			
B66/1	1.8 m lintel	0.117	85	5	5	15	44	40	4	66	1.5	3	B19/15	28	1.32	0.06	
B67/1	1.8 m lintel	0.066	85	5	5	25	25	24	1	83	0.9	3	B68/1	44	1.88	0.06	
B68/1	2.4 m lintel	0.115	85	5	5	25	44	42	2	81	0.9	3	B69/1	41	1.96	0.05	
B69/1	1.8 m lintel	0.107	85	5	5	15	41	38	3	85	0.9	3	B70/1	49	1.96	0.07	
B70/1	2.4 m lintel	0.124	85	5	5	15	49	47	2	75	0.9	3	B71/1	32	1.69	0.05	
B71/1	1.8 m lintel	0.082	85	5	5	25	32	30	1	77	0.9	3	B77/1	34	1.69	0.05	
B72/1	2.4 m lintel sag	0.079	85	5	5	15	30	30	0	59	0.6	3	B10/2	0	0	0	
B72/2	2.4 m lintel sag	0.065	85	5	5	25	25	25	0	53	0.4	3	B10/1	0	0	0	SPECIAL PIT
B73/1	1.8 m lintel	0.039	85	5	5	15	5	5	0	81	0.7	3	B02/1	30	2.43	0.03	
B73/2	2.4 m lintel sag	0.034	85	5	5	15	15	15	0	37	0.7	2.8	B73/1	0	1.81	0	
B73/3	2.4 m lintel sag	0.112	85	5	5	25	43	43	0	77	0.4	2.7	B02/3	0	0	0	SPECIAL PIT
B73/4	1.8 m lintel	0.003	95	5	5	15	1	1	0	78	0.7	3.9	B05/13	30	1.73	0.05	SPECIAL PIT
B75/1	1.8 m lintel	0.077	85	5	5	15	27	25	1	56	0.7	3	B75/2	10	0.98	0.03	
B75/2	2.4 m lintel sag	0.067	85	5	5	15	10	20	0	32	0.5	2.9	B03/21	0	7.12	0.08	
B76/1	2.4 m lintel	0.113	85	5	5	15	44	41	3	67	1.2	3	B55/1	39	1.35	0.08	
B77/1	2.4 m lintel sag	0.118	85	5	5	25	34	34	0	57	0.5	2.6	B11/2	0	0	0	
B78/1	2.4 m lintel sag	0.03	95	5	5	5	6	6	0	15	0.1	3	LOST	0	0	0	
B99/1	NODE		0			5	0	0	0	24	0.2	3		5	0.27	0.01	SPLITTER PIT INTERNAL WEIR
B99/2	JP SEALED 900 x 900		0			5	0	0	0	0							
C01/1	1.8 m lintel	0.107	85	5	5	15	40	35	5	84	0.7	3	C01/2	34	2.23	0.04	
C01/2	1.8 m lintel	0.08	85	5	5	25	34	32	2	92	0.7	3	C01/3	44	2.15	0.05	
C01/3	2.4 m lintel sag	0.222	85	5	5	5	86	86	0	77	0.2	3	C01/4	0			
C01/4	1.8 m lintel	0.096	95	5	5	5	29	28	1	47	1.2	3	C01/5	8	0.9	0.02	
C01/5	1.8 m lintel	0.019	95	5	5	15	8	8	0	53	1.1	3	C01/6	7	2.15	0.01	

B DRAINAGE TABLE UPDATED

I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature.....

PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

These plans are referred to in certificate no. 16635 approved by:
Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision
Land Development Certificates
www.LDC.com.au

	AMENDMENT	DES	DRN	CKD	APR	DATE
B	DRAINAGE TABLE UPDATED	DG	VS	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

NEWPARK
PRECINCT 7, STAGE 7B
DRAINAGE CALCULATIONS
SHEET 2

PROJECT No: 9985-12
SHEET No: CC5412

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5412 | B

DESIGN STORM 10% AEP HYDRAULIC RESULTS

PIPE NAME	PIPE DIAMETER	PIPE TYPE	PIPE LENGTH	PIPE GRADE	CRITICAL STORM	PEAK FLOW	CAPACITY RATIO	PEAK VELOCITY	PIPE U/S IL	PIPE D/S IL	PIPE D/S DROP	U/S PIT Ku	D/S PIT Kw	PIT LOSS (Ku.V'head)	WSE LOSS (Kw.V'head)	U/S PIPE HGL	D/S PIPE HGL	HGL GRADE	MINIMUM COVER	MINIMUM FREEBOARD	COMMENTS
(-)	(mm)	(-)	(m)	(%)	(min)	(L/s)	(-)	(m/s)	(m)	(m)	(m)	(-)	(-)	(m)	(m)	(m)	(m)	(%)	(m)	(m)	
A04/6 to A04/7	450	RRJ2	19.89	1	20	304	0.98	1.91	17.239	17.04	0.05	1.09	1.22	0.19	0.19	18.17	18.011	0.8	1.39	0.674	
A04/7 to A04/8	525	RRJ2	15.6	1	15	384	0.82	1.92	16.99	16.834	0.05	1.08	1.13	0.17	0.18	17.893	17.812	0.52	1.46	0.82	
A04/8 to A04/9	600	RRJ2	43.15	1	20	358	0.54	2.11	16.784	16.353	0.05	0.37	0.39	0.1	0.03	17.786	17.675	0.26	1.57	1.191	
A37/1 to A04/7	375	RRJ2	9	2	15	66	0.25	1.13	17.366	17.186	0.196	4.5	4.5	0.17	0.08	18.012	18.008	0.04	1.1	0.752	
B02/1 to B02/2	375	RRJ2	13.62	1	5	26	0.13	0.6	17.834	17.698	0.05	4.5	4.5	0.09	0.01	18.359	18.358	0.01	1.1	0.919	
B02/2 to B02/3	375	RRJ2	9	1	15	110	0.58	1.08	17.648	17.558	0.05	5.6	5.62	0.21	0.22	18.28	18.272	0.09	1.24	0.864	
B02/3 to B02/4	375	RRJ2	28.83	1	20	124	0.65	1.44	17.508	17.219	0.05	2.13	2.6	0.18	0.17	18.209	18.144	0.23	1.31	0.95	
B02/4 to B02/5	375	RRJ2	15.29	1	20	113	0.6	1.15	17.169	17.016	0.05	0.58	0.58	0.07	0.03	18.125	18.09	0.23	1.73	1.22	
B02/5 to B02/6	450	RRJ2	23.62	0.5	10	193	0.88	1.26	16.966	16.848	0.03	1.4	1.49	0.1	0.11	18.036	17.976	0.25	1.48	0.883	
B02/6 to B02/7	525	RRJ2	22.84	0.5	20	276	0.84	1.42	16.818	16.704	0.05	2.14	0.82	0.06	0.06	17.95	17.902	0.21	1.39	0.833	
B02/7 to B02/8	525	RRJ2	26.71	0.5	20	314	0.95	1.6	16.654	16.521	0.05	0.67	0.63	0.06	0.06	17.873	17.795	0.29	1.54	0.746	
B02/8 to B02/9	600	RRJ2	12.12	0.8	20	351	0.59	1.48	16.471	16.374	0.05	8.25	0.87	0.09	0.06	17.768	17.745	0.19	1.41	0.669	
B02/9 to B02/10	600	RRJ2	14.35	0.5	20	387	0.82	1.51	16.324	16.252	0.058	0.79	0.79	0.07	0.07	17.708	17.675	0.23	1.62	0.662	
B02/10 to B02/11	750	RRJ2	15.07	0.5	20	506	0.59	1.63	16.194	16.119	0.05	0.37	0.38	0.05	0.03	17.657	17.637	0.13	1.56	0.886	
B02/11 to B02/12	750	RRJ2	47.67	0.5	5	578	0.68	1.76	16.069	15.831	0.05	1.67	0.77	0.1	0.06	17.604	17.514	0.19	1.62	0.853	
B02/12 to B02/13	(2x)1200	RRJ2	10.9	0.5	25	3416	0.57	1.79	15.781	15.726	0.05	0.26	0.25	0.04	0.03	17.485	17.467	0.17	1.52	1.012	
B02/13 to B02/14	(2x)1200	RRJ2	35.16	0.5	25	3421	0.57	1.62	15.676	15.5	0.05	1.04	1.07	0.14	0.12	17.349	17.291	0.16	1.52	1.063	
B02/14 to B02/15	(2x)1200	RRJ2	15.38	0.5	25	3971	0.66	1.84	15.45	15.373	0.05	0.75	0.74	0.11	0.11	17.18	17.145	0.23	1.47	0.992	
B02/15 to B02/16	(2x)1200	RRJ2	20.22	0.5	25	4010	0.67	1.97	15.323	15.222	0.03	0.58	0.56	0.1	0.09	17.056	17.01	0.23	1.32	0.805	
B02/16 to B02/17	(2x)1200	RRJ2	20.27	0.5	25	4070	0.68	1.91	15.192	15.091	0.05	0.22	0.22	0.04	0.04	16.974	16.927	0.23	1.33	0.795	
B02/17 to B02/18	(2x)1200	RRJ2	14.15	0.5	25	4109	0.69	1.82	15.041	14.97	0.05	0.67	0.61	0.1	0.1	16.824	16.791	0.23	1.56	0.789	
B02/18 to B02/19	(2x)1200	RRJ2	26.18	0.5	25	4124	0.69	1.82	14.92	14.789	0.05	0.73	0.64	0.11	0.11	16.683	16.621	0.24	1.6	0.999	
B02/19 to B08/19	(2x)1200	RRJ2	10.48	1	25	4130	0.49	1.83	14.739	14.634	0.084	1.17	1.23	0.19	0.2	16.429	16.404	0.24	2.04	1.377	
B03/15 to B03/16	1050	RRJ2	40.53	0.6	25	1834	0.8	2.42	16.948	16.704	0.03	0.28	0.26	0.08	0.06	18.458	18.303	0.38	1.48	1.068	
B03/16 to B03/17	1050	RRJ2	30.6	0.6	25	1886	0.82	2.24	16.674	16.491	0.043	0.29	0.27	0.07	0.06	18.245	18.121	0.41	1.48	0.996	
B03/17 to B03/18	1350	RRJ2	40.57	0.5	25	2515	0.62	2	16.448	16.245	0.05	0.25	0.23	0.06	0.04	18.086	18.009	0.19	1.14	0.963	
B03/18 to B03/19	1350	RRJ2	12.42	0.5	25	2534	0.62	1.87	16.195	16.133	0.03	0.86	0.89	0.14	0.14	17.876	17.852	0.19	1.23	0.792	
B03/19 to B03/20	1350	RRJ2	26.82	0.3	25	2566	0.81	2.02	16.103	16.022	0.03	0.5	0.5	0.1	0.08	17.776	17.723	0.2	1.25	0.889	
B03/20 to B03/21	1350	RRJ2	34.19	0.3	25	2799	0.88	2.36	15.992	15.89	0.03	0.3	0.3	0.07	0.05	17.67	17.589	0.24	1.04	0.818	
B03/21 to B02/12	(2x)1200	RRJ2	15.24	0.3	25	2890	0.62	1.48	15.86	15.814	0.034	0.7	0.66	0.07	0.05	17.536	17.518	0.12	1.38	0.76	
B04/1 to B04/2	375	RRJ2	17.94	1	25	107	0.56	1.34	19.627	19.447	0.03	1.78	2.03	0.12	0.1	19.797	19.667	0.72	1.4	1.525	
B04/2 to B04/3	375	RRJ2	30.49	1	25	129	0.68	1.74	19.417	19.113	0.03	0.39	0.39	0.04	0.03	19.622	19.339	0.93	1.48	1.65	
B04/3 to B04/4	375	RRJ2	49.33	1	25	129	0.68	1.74	19.083	18.589	0.03	0.24	0.24	0.02	0.02	19.291	18.844	0.91	1.6	1.795	
B04/4 to B04/5	375	RRJ2	53.43	1	25	160	0.84	1.82	18.559	18.025	0.03	0.6	0.58	0.05	0.06	18.798	18.419	0.71	1.6	1.914	
B04/5 to B04/6	375	RRJ2	50.69	1.84	15	164	0.64	2.04	17.995	17.064	0.05	0.56	0.56	0.06	0.06	18.376	18.053	0.64	1.12	1.587	
B04/6 to B04/7	450	RRJ2	9.79	2	20	182	0.42	1.49	17.014	16.819	0.05	1.54	1.86	0.15	0.12	17.973	17.94	0.34	1.13	0.525	
B04/7 to B04/8	450	RRJ2	16.3	1	5	214	0.69	1.69	16.769	16.606	0.05	4.57	1.14	0.12	0.1	17.879	17.805	0.45	1.44	0.578	
B04/8 to B03/20	450	RRJ2	11.94	2	25	212	0.48	2.27	16.556	16.317	0.324	0.31	0.31	0.11	0.03	17.778	17.723	0.46	1.6	0.791	
B05/1 to B05/2	375	RRJ2	28.43	1	25	72	0.38	1.34	19.297	19.013	0.05	1.91	2.2	0.12	0.05	19.499	19.501	-0.01	1.11	1.141	
B05/2 to B05/3	375	RRJ2	36.07	1	20	90	0.47	1.3	18.963	18.602	0.05	1.59	1.38	0.12	0.05	19.477	19.434	0.12	1.24	0.97	
B05/3 to B05/4	375	RRJ2	33.13	1	20	137	0.72	1.33	18.552	18.221	0.03	1.6	1.47	0.14	0.1	19.381	19.264	0.35	1.24	0.781	
B05/4 to B05/5	450	RRJ2	15.89	1	15	280	0.91	1.76	18.191	18.032	0.05	1.44	1.55	0.21	0.22	19.128	19.042	0.54	1.29	0.719	
B05/5 to B05/6	525	RRJ2	9.02	2	15	307	0.47	1.52	17.982	17.801	0.05	1.99	2.52	0.2	0.26	18.918	18.89	0.31	1.4	0.833	
B05/6 to B05/7	525	RRJ2	15.44	1	20	335	0.72	1.85	17.751	17.597	0.05	0.84	0.84	0.12	0.1	18.837	18.786	0.33	1.79	1.027	
B05/7 to B05/8	525	RRJ2	10.6	2	20	350	0.53	2.3	17.547	17.335	0.05	0.33	0.36	0.16	0.04	18.76	18.717	0.41	1.98	1.254	
B05/8 to B05/9	525	RRJ2	15.5	1	20	344	0.74	1.78	17.285	17.13	0.03	1.15	1.21	0.15	0.16	18.625	18.561	0.41	2.14	1.286	
B05/9 to B05/10	525	RRJ2	21.56	1	45	366	0.79	2.07	17.1	16.884	0.03	0.37	0.41	0.1	0.05	18.534	18.439	0.44	2.2	1.311	
B05/10 to B05/11	600	RRJ2	32.11	1	25	351	0.53	1.72	16.854	16.533	0.03	0.48	0.52	0.13	0.03	18.417	18.338	0.25	2.21	1.282	
B05/11 to B05/12	600	RRJ2	23.12	1	25	540	0.81	1.94	16.503	16.272	0.05	0.71	0.76	0.12	0.12	18.269	18.123	0.63	2.34	1.159	
B05/12 to B05/13	600	RRJ2	10.62	2	25	558	0.59	1.97	16.222	16.01	0.05	1.22	1.29	0.21	0.22	17.941	17.87	0.67	2.52	1.211	
B05/13 to B05/14	600	RRJ2	31.89	0.7	25	576	1.03	2.04	15.96	15.737	0.03	1.22	1.31	0.22	0.23	17.678	17.455	0.7	2.63	1.425	
B05/14 to B05/15	675	RRJ2	41.08	0.65	25	663	0.9	1.85	15.707	15.44	0.05	0.99	0.41	0.09	0.06	17.407	17.191	0.53	1.59	1.536	
B05/15 to B08/13	675	RRJ2	14.96	0.65	25	730	0.99	2.04	15.39	15.292	0.068	0.84	0.84	0.17	0.17	17.045	16.949	0.64	1.81	0.543	
B08/1 to B08/2	375	RRJ2	15.92	1	25	75	0.4	1.15	18.244	18.085	0.05	1.13	1.13	0.09	0.03	18.359	18.336	0.14	1.1	1.267	
B08/2 to B08/3	375	RRJ2	14.76	1.42	25	128	0.56	1.57	18.035	17.825	0.18	1.95	1.75	0.16	0.11	18.258	18.25	0.05	1.12	1.286	
B08/3 to B08/4	375	RRJ2	25.65	1	15	131	0.69	1.48	17.644	17.388	0.03	0.93	0.92	0.12	0.07	18.215	18.147	0.27	1.1	0.915	
B08/4 to B08/5	375	RRJ2	31.66	1	20	166	0.87	1.67	17.358	17.041	0.03	0.77	0.72	0.1	0.08	18.111	17.971	0.44	1.17	0.799	
B08/5 to B08/6	450	RRJ2	32.75	1	20	224	0.73	1.64	17.011	16.684	0.03	0.93	0.85	0.14	0.08	17.93	17.821	0.33	1.16	0.704	
B08/6 to B08/7	450	RRJ2	32.56	1	5	268	0.87	1.82	16.654	16.328	0.03	0.85	0.87	0.13	0.11	17.76	17.571	0.58	1.24	0.575	
B08/7 to B08/8	525	RRJ2	24.75	1	20	327	0.7	1.62	16.298	16.051	0.03	0.81	0.73	0.13	0.08	17.526	17.425	0.41	1.24	0.547	
B08/8 to B08/9	525	RRJ2	27.64	0.5	20	372	1.13	1.72	16.021	15.882	0.05	0.5	0.5	0.07	0.07	17.381	17.237	0.52	1.24	0.481	
B08/9 to B08/10	675	RRJ2	15.75	0.5	20	469	0.73	1.49	15.832	15.754	0.05	1.84	2.2	0.1	0.12	17.186	17.155	0.2	1.31	0.44	
B08/10 to B08/11	675	RRJ2	17.79	0.5	20	466	0.72	1.56	15.704	15.615	0.03	2.09	2.66	0.08	0.1	17.116	17.075	0.23	1.42	0.7	
B08/11 to B08/12	750	RRJ2	22.06	0.5	20	508	0.6	1.68	15.585	15.474	0.05	7.02	2.66	0.08	0.07	17.048	17.011	0.17	1.41	0.723	
B08/12 to B08/13	750	RRJ2	30.05	0.5	25	490	0.57	1.19	15.424	15.274	0.05	0.23	0.23	0.03	0.01	16.998	16.947	0.17	1.69	0.889	
B08/13 to B08/14	1050	RRJ2	31.76	0.3	25	1219	0.75	1.73	15.224	15.129	0.03	0.22	0.21	0.03	0.02	16.927	16.872	0.17	1.52	1.028	
B08/14 to B08/15	1050	RRJ2	12.75	0.3	10	1243	0.77	1.72	15.099	15.061	0.03	0.32	0.31	0.04	0.03	16.844	16.821	0.18	1.48	0.885	
B08/15 to B08/16	1050	RRJ2	18.79	0.3	25	1288	0.79	1.85	15.031	14.974	0.03	7.08	0.38	0.06	0.04	16.784	16.748	0.19	1.5	0.83	
B08/16 to B08/17	1050	RRJ2	54.09	0.3	25	1294	0.8	1.66	14.944	14.782	0.03	0.26	0.25	0.04	0.03	16.721	16.616	0.19	1.74	1.037	
B08/17 to B08/18	1050	RRJ2	36.92	0.3	25	1369	0.85	1.58	14.752	14.641	0.03	7	0.49	0.11	0.05	16.568	16.489	0.21	1.92	1.183	
B08/18 to B08/19	1200	RRJ2	10.17	0.3	25	1369	0.59	1.21	14.611	14.581	0.03	1.01	1.32	0.07	0.1	16.415	16.404	0.11	2.21	1.546	
B08/19 to B08/20	1200	RRJ2	6.02	1	25	2974	0.7	2.63	14.551	14.491	0.091	0.6	0.6	0.21	0.21	16.193	16.163	0.5	2.29	1.623	
B08/20 to B08/21	GPT	Inlet	2.81	0	60	2300	1.77	1.02	14.4	14.4	0	1.5	1.5	0.08	0.08	16.093	16.092	0.04	2.11	1.874	GPT INLET CHAMBER
B08/21 to B08/22	GPT	Outlet	2.79	0	60	2303	1.76	1.15	14.4	14.4	0	6.1	6.1	0.33	0.33	15.816	15.796	0.72	2.09	1.919	
B08/22 to B08/23	1200	RRJ2	4.29	1	45	3229	0.76	2.87	14.4	14.357	0.05	0.95	0.85	0.23	0.23	15.63	15.878	-5.78	1.86	2.184	
B08/23 to B08/24	675	RRJ2	13.47	4.7	45	1381	0.7	3.86	14.307	13.675	0.05	0.45	0.45	0.34	0.34	15.573	14.942	4.68	0.64	1.422	
B08/24 to B08/25	675	RRJ2	8.58	0.5	10	1160	1.8	3.24	13.625	13.582	0.05	0.51	0.51	0.27	0.27	14.681	14.53	1.76	0.2	-0.002	
B10/1 to B10/2	375	RRJ2	9.46	1.5	20	-24	-0.1	0.82	17.29	17.148	0.05	4.5	4.5	0.07	0	17.805	17.805	0	1.1	0.937	
B10/2 to B10/3	375	RRJ2	21.16	1	15	-36	-0.19	0.66	17.098	16.886	0.05	7.06	3.24	0.1	0.01	17.803	17.797	0.03	1.2	0.91	
B10/3 to B10/4	450	RRJ2	22.22	1	15	164	0.53	1.51	16.836	16.614	0.05	1.91	2.62	0.19	0.12	17.755	17.726	0.13	1.25	0.765	
B10/4 to B02/10	450	RRJ2	31.97	1	20	139	0.45	1.25	16.564	16.244	0.05	0.24	0.24	0.04	0.01	17.721	17.679	0.13	1.68	1.003	

B DRAINAGE TABLE UPDATED

I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature.....

PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

These plans are referred to in certificate no. 16635 approved by:
Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision
Land Development Certificates
www.LDC.com.au

	AMENDMENT	DES	DRN	CKD	APR	DATE
B	DRAINAGE TABLE UPDATED	DG	VS	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

NEWPARK
PRECINCT 7, STAGE 7B
DRAINAGE CALCULATIONS
SHEET 3

PROJECT No: 9985-12
SHEET No: CC5413

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5413 | B

DESIGN STORM 10% AEP HYDRAULIC RESULTS

PIPE NAME	PIPE DIAMETER	PIPE TYPE	PIPE LENGTH	PIPE GRADE	CRITICAL STORM	PEAK FLOW	CAPACITY RATIO	PEAK VELOCITY	PIPE U/S IL	PIPE D/S IL	PIPE D/S DROP	U/S PIT Ku	D/S PIT Kw	PIT LOSS (Ku.V²head)	WSE LOSS (Kw.V²head)	U/S PIPE HGL	D/S PIPE HGL	HGL GRADE	MINIMUM COVER	MINIMUM FREEBOARD	COMMENTS
(-)	(mm)	(-)	(m)	(%)	(min)	(L/s)	(-)	(m/s)	(m)	(m)	(m)	(-)	(-)	(m)	(m)	(m)	(m)	(%)	(m)	(m)	
B11/1 to B11/2	375	RRJ2	9	1	15	-94	-0.49	0.92	16.263	16.173	0.05	4.5	4.5	0.07	0.01	17.179	17.176	0.03	1.1	0.523	
B11/2 to B08/10	375	RRJ2	50.35	0.75	15	-111	-0.68	1.01	16.123	15.746	0.042	2.16	2.48	0.17	0.07	17.173	17.154	0.04	1.17	0.525	
B19/12 to B19/13	525	RRJ2	22.17	1.13	15	467	0.94	2.23	17.309	17.058	0.148	0.49	0.41	0.1	0.09	18.03	17.856	0.79	1.1	0.844	
B19/13 to B19/14	600	RRJ2	27.03	1.58	20	483	0.58	2.44	16.911	16.484	0.146	0.48	0.46	0.15	0.06	17.807	17.683	0.46	1.1	0.697	
B19/14 to B19/15	675	RRJ2	9	2	20	522	0.41	1.57	16.339	16.159	0.05	2.05	2.56	0.23	0.28	17.512	17.487	0.28	1.1	0.403	
B19/15 to B19/16	675	RRJ2	15.14	1	20	557	0.61	1.98	16.109	15.957	0.05	0.96	0.98	0.14	0.12	17.4	17.351	0.32	1.44	0.598	
B19/16 to B02/14	750	RRJ2	9	2	5	555	0.33	2.3	15.907	15.727	0.277	0.63	0.61	0.25	0.04	17.313	17.296	0.19	1.64	0.932	
B20/1 to B02/17	375	RRJ2	9.1	2	20	-50	-0.19	0.98	16.239	16.057	1.016	4.5	4.5	0.13	0.02	16.928	16.927	0.01	1.1	0.747	
B26/1 to B26/2	375	RRJ2	10.93	2	25	50	0.19	1.12	19.177	18.959	0.05	4.5	4.5	0.16	0.05	19.392	19.4	-0.07	1.1	1.204	
B26/2 to B06/5	375	RRJ2	14.9	1	15	73	0.38	1.3	18.909	18.76	0.492	1.4	1.24	0.1	0.03	19.392	19.385	0.05	1.15	1.186	
B31/1 to B04/2	375	RRJ2	9.16	2	25	18	0.07	0.98	19.88	19.697	0.279	4.5	4.5	0.07	0.01	19.905	19.762	1.56	1.1	1.35	
B32/1 to B04/4	375	RRJ2	12.63	2	15	14	0.05	1.01	19.357	19.105	0.545	4.5	4.5	0.05	0	19.386	19.164	1.76	1.1	1.382	
B37/1 to B03/17	375	RRJ2	9.01	2	15	41	0.15	1.13	17.649	17.469	1.021	4.5	4.5	0.16	0.03	18.122	18.121	0.01	1.1	0.953	
B39/1 to B02/16	375	RRJ2	9	2	20	97	0.36	1.56	16.358	16.178	0.986	1.44	1.38	0.14	0.04	17.018	17.01	0.09	1.1	0.771	
B43/1 to B10/3	375	RRJ2	9	2	15	83	0.31	1.21	17.133	16.953	0.117	4.5	4.5	0.19	0.13	17.803	17.797	0.07	1.1	0.691	
B44/1 to B08/15	375	RRJ2	9	2	15	-62	-0.23	0.78	16.224	16.044	1.014	2.09	2.66	0.27	0.04	16.824	16.824	0	1.1	0.827	
B45/1 to B08/11	375	RRJ2	9	2	15	-45	-0.17	0.99	16.36	16.18	0.595	4.5	4.5	0.14	0.02	17.077	17.076	0.01	1.1	0.718	
B46/1 to B02/11	375	RRJ2	9	2	15	86	0.32	1.28	17.051	16.871	0.803	4.5	4.5	0.2	0.14	17.646	17.641	0.06	1.1	0.774	
B48/1 to B02/10	375	RRJ2	9.27	2	20	-25	-0.09	0.76	17.132	16.947	0.753	4.5	4.5	0.13	0.01	17.679	17.679	0	1.1	0.904	
B49/1 to B49/2	375	RRJ2	9.18	2	15	18	0.07	0.94	19.118	18.935	0.05	4.5	4.5	0.08	0.01	19.14	19.024	1.26	1.1	1.355	
B49/2 to B05/7	375	RRJ2	30.51	1.18	25	42	0.2	1.25	18.885	18.524	0.977	3.52	3.28	0.07	0.02	18.958	18.786	0.56	1.1	1.515	
B50/1 to B05/10	375	RRJ2	9.07	2	25	11	0.04	0.76	18.281	18.099	1.245	4.5	4.5	0.08	0	18.439	18.439	0	1.1	1.287	
B51/1 to B08/17	375	RRJ2	9	2	15	25	0.09	1	16.362	16.182	1.43	4.5	4.5	0.1	0.01	16.618	16.619	-0.01	1.1	1.174	
B55/1 to B05/15	375	RRJ2	9.5	2	15	-48	-0.18	1.13	16.344	16.154	0.765	4.5	4.5	0.15	0.04	17.193	17.191	0.02	1.1	0.579	
B56/1 to B05/3	375	RRJ2	9.53	1.8	25	31	0.12	0.94	18.785	18.613	0.061	4.5	4.5	0.12	0.02	19.435	19.434	0.01	1.1	0.796	
B58/1 to B58/2	375	RRJ2	13.09	1	25	68	0.36	1.14	17.883	17.752	0.05	2.15	2.63	0.1	0.05	18.169	18.169	0	1.1	1.167	
B58/2 to B58/3	375	RRJ2	9.02	2	25	85	0.31	1.35	17.702	17.522	0.05	2.1	2.53	0.15	0.07	18.147	18.141	0.07	1.16	1.034	
B58/3 to B58/4	375	RRJ2	14.71	1	15	98	0.52	1.43	17.472	17.325	0.05	1.08	0.96	0.09	0.04	18.129	18.115	0.1	1.42	1.047	
B58/4 to B02/5	375	RRJ2	9	2	20	85	0.32	1.5	17.275	17.095	0.128	1.02	1.04	0.13	0.03	18.1	18.09	0.11	1.35	0.858	
B59/1 to B02/6	375	RRJ2	9.4	2	25	77	0.29	1.66	17.376	17.188	0.369	0.79	0.63	0.09	0.01	17.979	17.976	0.03	1.1	0.844	
B60/1 to B02/7	375	RRJ2	9.37	2	25	29	0.11	1.05	17.215	17.028	0.374	4.5	4.5	0.12	0.02	17.903	17.902	0.01	1.1	0.757	
B61/1 to B61/2	375	RRJ2	9.04	2	15	36	0.13	1.04	16.847	16.666	0.05	4.5	4.5	0.14	0.02	17.164	17.164	0	1.1	1.122	
B61/2 to B61/3	375	RRJ2	15.2	1	15	60	0.32	1.2	16.616	16.464	0.05	1.81	1.82	0.12	0.02	17.157	17.154	0.02	1.26	1.122	
B61/3 to B02/15	375	RRJ2	9	2	15	80	0.3	1.5	16.414	16.234	0.911	1.19	1.12	0.11	0.03	17.148	17.146	0.02	1.19	0.797	
B65/1 to B06/11	375	RRJ2	9	2	20	58	0.22	1.19	17.485	17.305	0.699	4.5	4.5	0.18	0.06	18.226	18.223	0.03	1.1	0.669	
B66/1 to B19/13	375	RRJ2	9.03	1.5	15	38	0.16	0.89	17.096	16.961	0.05	4.5	4.5	0.12	0.03	17.858	17.856	0.02	1.1	0.671	
B67/1 to B08/4	375	RRJ2	10.35	1.2	25	23	0.11	0.75	17.532	17.408	0.05	4.5	4.5	0.1	0.01	18.118	18.12	-0.02	1.1	0.867	
B68/1 to B08/5	375	RRJ2	9.5	2	15	39	0.14	0.91	17.257	17.067	0.056	4.5	4.5	0.14	0.03	17.96	17.958	0.02	1.1	0.728	
B69/1 to B08/6	375	RRJ2	10.53	2	20	33	0.12	0.98	16.985	16.774	0.12	4.5	4.5	0.14	0.02	17.811	17.809	0.02	1.1	0.62	
B70/1 to B08/7	375	RRJ2	9.61	2	20	41	0.15	1.09	16.701	16.509	0.211	4.5	4.5	0.16	0.03	17.567	17.565	0.02	1.1	0.56	
B71/1 to B08/8	375	RRJ2	9.56	2	15	-51	-0.19	1	16.482	16.29	0.27	4.5	4.5	0.11	0.03	17.422	17.421	0.01	1.1	0.505	
B72/1 to B72/2	375	RRJ2	9.11	2	25	56	0.21	0.93	17.432	17.249	0.05	4.5	4.5	0.16	0.06	17.496	17.529	-0.36	1.1	1.217	
B72/2 to B05/14	375	RRJ2	15.47	1	25	101	0.53	1.31	17.199	17.045	1.338	4.11	3.28	0.14	0.1	17.467	17.455	0.08	1.46	1.351	
B73/1 to B73/2	375	RRJ2	18.74	1	20	133	0.7	1.3	17.801	17.614	0.05	2.01	2.5	0.14	0.17	18.714	18.65	0.34	1.21	0.632	
B73/2 to B73/3	375	RRJ2	9.02	2	20	151	0.56	1.37	17.564	17.384	0.05	2.07	2.54	0.19	0.22	18.543	18.502	0.45	1.4	0.655	
B73/3 to B73/4	450	RRJ2	15.18	1	15	240	0.78	1.64	17.334	17.182	0.05	8.35	2.14	0.2	0.2	18.434	18.387	0.31	1.68	0.81	
B73/4 to B05/11	450	RRJ2	9.91	2	45	274	0.63	2.47	17.132	16.934	0.43	0.27	0.27	0.11	0.04	18.37	18.338	0.32	1.93	1.105	
B75/1 to B75/2	375	RRJ2	20.62	1	15	86	0.45	1.23	16.928	16.722	0.05	1.98	2.33	0.16	0.07	17.654	17.637	0.08	1.1	0.764	
B75/2 to B03/21	375	RRJ2	9	2	20	97	0.36	1.48	16.672	16.492	0.632	2.14	2.61	0.16	0.1	17.6	17.589	0.12	1.3	0.67	
B76/1 to B05/14	375	RRJ2	11.81	2	25	41	0.15	1.19	17.646	17.41	1.703	4.5	4.5	0.13	0.03	17.68	17.508	1.46	1.1	1.298	
B77/1 to B08/9	375	RRJ2	9.07	2	15	-106	-0.39	1.1	16.246	16.064	0.232	4.5	4.5	0.16	0.11	17.239	17.236	0.03	1.1	0.422	
B78/1 to B02/18	375	RRJ2	9.12	2	20	-40	-0.15	0.78	16.361	16.179	1.259	4.5	4.5	0.09	0.01	16.795	16.794	0.01	1.1	1.004	
B99/1 to B99/2	1200	RRJ2	10.3	1	25	2554	0.6	3.13	14.55	14.447	0.05	0	0	0	0	15.223	15.409	-1.81	2.25	2.948	GPT BYPASS CHAMBER
C01/1 to C01/2	375	RRJ2	22.7	1	20	33	0.17	0.96	17.978	17.751	0.03	4.5	4.5	0.13	0.02	18.343	18.339	0.02	1.1	1.389	
C01/2 to C01/3	375	RRJ2	31.4	1	25	71	0.38	0.73	17.721	17.407	0.05	3	3	0.16	0.06	18.311	18.291	0.06	1.2	1.325	
C01/3 to C01/4	525	RRJ2	9	1	25	336	0.72	1.55	17.357	17.267	0.05	2.11	2.56	0.23	0.28	18.091	18.053	0.42	1.29	1.18	
C01/4 to C01/5	525	RRJ2	14.41	1	20	358	0.77	1.82	17.217	17.073	0.05	0.82	0.81	0.11	0.11	17.969	17.899	0.49	1.39	1.432	

B DRAINAGE TABLE UPDATED

I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature.....

PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

These plans are referred to in certificate no. 16635 approved by:
Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision
Land Development Certificates
www.LDC.com.au

	AMENDMENT	DES	DRN	CKD	APR	DATE
B	DRAINAGE TABLE UPDATED	DG	VS	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

NEWPARK
PRECINCT 7, STAGE 7B
DRAINAGE CALCULATIONS
SHEET 4

PROJECT No: 9985-12
SHEET No: CC5414

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5414 | B

DESIGN STORM 5% AEP HYDROLOGIC RESULTS

PIT NAME (-)	PIT TYPE (-)	CATCHMENT AREA (Ha)	PERCENT IMPERVIOUS (%)	Tc IMP (min)	Tc PERV (min)	CRITICAL STORM (min)	APPROACH FLOW (L/s)	CAPTURED FLOW (L/s)	UNCAPTURED FLOW (L/s)	GRATE DEPTH (mm)	ROAD GRADE (%)	ROAD CROSSFALL (%)	BYPASS PIT (-)	FLOW AT BYPASS PIT (L/s)	FLOW WIDTH AT BYPASS PIT (m)	VxD AT BYPASS PIT (m/s^2)	COMMENTS (-)
BAB/1	IAD 600x900	0.034	80	5	5	15	15	15									
BAB/2	IAD 600x900	0.027	80	5	5	15	12	12									
BAB/3	IAD 600x900	0.027	80	5	5	15	12	12									
BAB/4	IAD 600x900	0.027	80	5	5	15	12	12									
BAB/5	IAD 600x900	0.027	80	5	5	15	12	12									
BAB/6	IAD 600x900	0.034	80	5	5	15	15	15									
BAB/7	IAD 900x900		0			5	0	0									
BAC/1	IAD 600x900	0.036	80	5	5	25	16	16									
BAC/2	IAD 600x900	0.03	80	5	5	15	13	13									
BAC/3	IAD 600x900	0.031	80	5	5	25	14	14									
BAC/4	IAD 600x900	0.032	80	5	5	15	14	14									
BAC/5	IAD 900x900	0.039	80	5	5	15	17	17									
BE/1	IAD 600x900	0.036	80	5	5	15	16	16									
BE/2	IAD 600x900	0.039	80	5	5	15	17	17									
BE/3	IAD 600x900	0.041	80	5	5	15	18	18									
BE/4	IAD 600x900	0.044	80	5	5	15	19	19									
BE/5	IAD 600x900		0			5	0	0									
BE/6	IAD 900x900		0			5	0	0									
BJ/1	IAD 600x900	0.028	80	5	5	15	12	12									
BJ/2	IAD 600x900	0.027	80	5	5	15	12	12									
BJ/3	IAD 600x900	0.028	80	5	5	15	12	12									
BJ/4	IAD 600x900	0.034	80	5	5	15	15	15									
BJ/5	IAD 600x900	0.034	80	5	5	15	15	15									
BJ/6	IAD 600x900	0.028	80	5	5	15	12	12									
BJ/7	IAD 900x900	0.028	80	5	5	15	12	12									
BJ/8	IAD 900x900	0.028	80	5	5	15	12	12									
BJ/9	IAD 900x900	0.034	80	5	5	15	15	15									
BK/1	IAD 600x900	0.042	80	5	5	15	18	18									
BK/2	IAD 600x900	0.034	80	5	5	15	15	15									
BK/3	IAD 600x900	0.034	80	5	5	15	15	15									
BK/4	IAD 900x900	0.04	80	5	5	15	17	17									
BL/1	IAD 600x900	0.032	80	5	5	15	14	14									
BL/2	IAD 600x900	0.032	80	5	5	15	14	14									
BL/3	IAD 600x900	0.032	80	5	5	15	14	14									
BL/4	IAD 600x900	0.032	80	5	5	15	14	14									
BL/5	IAD 600x900	0.032	80	5	5	15	14	14									
BL/6	IAD 600x900	0.032	80	5	5	15	14	14									
BL/7	IAD 600x900	0.032	80	5	5	15	14	14									
BL/8	IAD 900x900	0.034	80	5	5	15	15	15									
BL/9	IAD 600x900	0.027	80	5	5	15	12	12									
BL/10	IAD 900x900		0			5	0	0									
BM/1	IAD 600x900	0.04	80	5	5	25	18	18									
BM/2	IAD 600x900	0.034	80	5	5	15	15	15									
BM/3	IAD 600x900	0.034	80	5	5	15	15	15									
BM/4	IAD 900x900	0.041	80	5	5	15	18	18									
BN/1	IAD 600x900	0.032	80	5	5	15	14	14									
BN/2	IAD 600x900	0.032	80	5	5	15	14	14									
BN/3	IAD 600x900	0.032	80	5	5	15	14	14									
BN/4	IAD 600x900	0.032	80	5	5	15	14	14									
BN/5	IAD 600x900	0.032	80	5	5	15	14	14									
BN/6	IAD 600x900	0.032	80	5	5	15	14	14									
BN/7	IAD 900x900	0.032	80	5	5	15	14	14									
BN/8	IAD 900x900	0.032	80	5	5	15	14	14									
BN/9	IAD 900x900	0.032	80	5	5	15	14	14									
BN/10	IAD 900x900	0.034	80	5	5	15	15	15									
BN/11	IAD 900x900	0.027	80	5	5	15	12	12									
BN/12	IAD 900x900	0.045	80	5	5	25	20	20									
BO/1	IAD 600x900	0.042	80	5	5	15	18	18									
BP/1	IAD 600x900	0.041	80	5	5	15	18	18									
BP/2	IAD 600x900	0.033	80	5	5	15	14	14									
BP/3	IAD 600x900	0.033	80	5	5	15	14	14									
BP/4	IAD 900x900	0.044	80	5	5	15	19	19									
BR/1	IAD 600x900	0.034	80	5	5	15	15	15									
BR/2	IAD 600x900	0.034	80	5	5	15	15	15									
BR/3	IAD 600x900	0.028	80	5	5	15	12	12									
BR/4	IAD 600x900	0.028	80	5	5	15	12	12									
BR/5	IAD 600x900	0.027	80	5	5	15	12	12									
BR/6	IAD 600x900	0.034	80	5	5	15	15	15									
BR/7	IAD 600x900	0.028	80	5	5	15	12	12									
BR/8	IAD 600x900	0.028	80	5	5	15	12	12									
BR/9	IAD 600x900	0.028	80	5	5	15	12	12									
BR/10	IAD 600x900	0.034	80	5	5	15	15	15									
BR/11	IAD 600x900		0			5	0	0									
BR/12	IAD 900x900		0			5	0	0									
BS/1	IAD 600x900	0.043	80	5	5	15	19	19									
BS/2	IAD 600x900	0.037	80	5	5	15	16	16									
BS/3	IAD 600x900	0.038	80	5	5	25	17	17									
BS/4	IAD 900x900	0.046	80	5	5	15	20	20									
BU/1	IAD 600x900	0.042	80	5	5	15	18	18									

B DRAINAGE TABLE UPDATED

I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature.....

PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

These plans are referred to in certificate no. 16635 approved by:
Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision
Land Development Certificates
www.LDC.com.au

	AMENDMENT	DES	DRN	CKD	APR	DATE
B	DRAINAGE TABLE UPDATED	DG	VS	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 **W** www.jwprince.com.au **E** jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

NEWPARK
PRECINCT 7, STAGE 7B
DRAINAGE CALCULATIONS
SHEET 5

PROJECT No: 9985-12
SHEET No: CC5415

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5415 | B

Plotted: 14 September, 2021 12:51:17 PM File Name: J:\9985\DICC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCTS\5 - Precinct 7B\9985-12-CC5415.dwg

DESIGN STORM 5% AEP HYDRAULIC RESULTS

PIPE NAME	PIPE DIAMETER (mm)	PIPE TYPE (-)	PIPE LENGTH (m)	PIPE GRADE (%)	CRITICAL STORM (min)	PEAK FLOW (L/s)	CAPACITY RATIO (-)	PEAK VELOCITY (m/s)	PIPE U/S IL (m)	PIPE D/S IL (m)	PIPE D/S DROP (m)	U/S PIT Ku (-)	D/S PIT Kw (-)	PIT LOSS (Ku.V'head) (m)	WSE LOSS (Kw.V'head) (m)	U/S PIPE HGL (m)	D/S PIPE HGL (m)	HGL GRADE (%)	MINIMUM COVER (m)	MINIMUM FREEBOARD (m)	COMMENTS
BAB/1 to BAB/2	150	uPVC	10	1	25	14	0.7	0.78	17.993	17.893	0.03	4.44	4.44	0.1	0.1	18.395	18.347	0.48	0.6	0.272	
BAB/2 to BAB/3	150	uPVC	10	1	25	25	1.27	1.42	17.863	17.763	0.03	2.22	1.67	0.09	0.12	18.284	18.081	2.03	0.67	0.34	
BAB/3 to BAB/4	225	uPVC	10	1	25	36	0.62	1.2	17.733	17.633	0.03	1.07	2.21	0.05	0.03	18.081	18.044	0.37	0.66	0.545	
BAB/4 to BAB/5	225	uPVC	10	1	25	47	0.81	1.19	17.603	17.503	0.03	1.22	1.14	0.07	0.06	17.983	17.919	0.64	0.73	0.525	
BAB/5 to BAB/6	225	uPVC	12.5	1	25	58	1	1.46	17.473	17.348	0.03	1.07	0.92	0.08	0.08	17.841	17.717	0.99	0.73	0.554	
BAB/6 to BAB/7	225	uPVC	14.85	1.03	25	72	1.21	1.82	17.318	17.165	0.737	0.96	0.89	0.1	0.12	17.636	17.375	1.76	0.6	0.64	
BAB/7 to B39/1	375	RRJ2	4.45	1.89	15	73	0.28	1.25	16.428	16.344	0.122	2.09	3.24	0.12	0.07	17.203	17.199	0.09	1.1	0.743	
BAC/1 to BAC/2	150	uPVC	10	3.35	25	15	0.41	1.1	20.822	20.487	0.033	5.84	5.52	0.12	0.17	20.938	20.848	0.9	0.6	0.543	
BAC/2 to BAC/3	150	uPVC	10	3.35	15	27	0.75	1.54	20.454	20.119	0.033	2.29	2.27	0.09	0.15	20.783	20.522	2.61	0.6	0.374	
BAC/3 to BAC/4	150	uPVC	10	3.35	25	40	1.1	2.25	20.086	19.751	0.108	1.34	0.94	0.07	0.23	20.468	19.901	5.67	0.6	0.332	
BAC/4 to BAC/5	225	uPVC	12.35	3.42	25	53	0.49	2.7	19.642	19.22	0.742	7.19	3.39	0.01	0	19.753	19.331	3.42	0.6	0.733	
BAC/5 to B08/1	375	RRJ2	4.72	1.93	25	70	0.26	1.27	18.478	18.387	0.143	2.19	3.12	0.1	0.06	18.68	18.691	-0.23	1.1	1.293	
BE/1 to BE/2	150	uPVC	12.66	1	25	16	0.79	0.88	19.17	19.044	0.086	6.34	5.02	0.11	0.14	19.401	19.301	0.79	0.6	0.432	
BE/2 to BE/3	225	uPVC	12.66	1.04	30	35	0.59	1.12	18.958	18.826	0.03	5.51	4.37	0.12	0.06	19.252	19.216	0.28	0.6	0.498	
BE/3 to BE/4	225	uPVC	12.66	1	25	49	0.84	1.24	18.796	18.67	0.03	1.74	1.46	0.09	0.09	19.126	19.036	0.71	0.63	0.443	
BE/4 to BE/5	225	uPVC	17.47	1	25	67	1.15	1.71	18.64	18.465	0.05	1.4	1.12	0.1	0.14	18.949	18.672	1.59	0.66	0.493	
BE/5 to BE/6	225	uPVC	21	2.28	25	67	0.76	2.17	18.415	17.935	0.73	0.5	0.5	0.04	0.07	18.552	18.082	2.24	0.6	0.748	
BE/6 to B75/1	375	RRJ2	4.46	1.88	15	70	0.27	1.25	17.205	17.121	0.193	2.09	3.24	0.11	0.07	17.964	17.962	0.04	1.1	0.762	
BJ/1 to BJ/2	150	uPVC	10	1	15	11	0.57	0.65	20.865	20.765	0.03	6.8	6.8	0.1	0.1	21.307	21.278	0.29	0.6	0.251	
BJ/2 to BJ/3	150	uPVC	10	1	15	22	1.13	1.26	20.735	20.635	0.03	3.06	2.7	0.1	0.12	21.211	21.066	1.45	0.72	0.326	
BJ/3 to BJ/4	225	uPVC	12.5	1	25	33	0.57	1.16	20.605	20.48	0.03	2.91	6.34	0.09	0.04	21.066	21.028	0.3	0.76	0.525	
BJ/4 to BJ/5	225	uPVC	12.5	1	25	47	0.8	1.17	20.45	20.325	0.03	1.54	1.38	0.08	0.06	20.966	20.888	0.62	0.88	0.525	
BJ/5 to BJ/6	225	uPVC	10	1	25	60	1.03	1.51	20.295	20.195	0.03	1.01	1.01	0.09	0.09	20.806	20.7	1.06	1.05	0.682	
BJ/6 to BJ/7	225	uPVC	9.85	1	25	71	1.21	1.78	20.165	20.066	0.03	0.71	0.71	0.09	0.09	20.613	20.465	1.5	1.21	0.904	
BJ/7 to BJ/8	225	uPVC	10	1	25	82	1.4	2.06	20.036	19.936	0.03	0.8	0.8	0.1	0.12	20.378	20.152	2.26	1.39	1.185	
BJ/8 to BJ/9	300	uPVC	13.44	1	25	92	0.73	1.94	19.906	19.772	0.05	8.83	5.19	0.03	0	20.098	19.963	1	1.51	1.613	
BJ/9 to B04/1	375	RRJ2	4.47	1	25	106	0.56	1.54	19.722	19.677	0.05	9.41	0.21	0.04	0.01	19.92	19.957	-0.83	1.55	1.806	
BK/1 to BK/2	150	uPVC	12.5	2.07	15	17	0.61	0.98	20.992	20.733	0.03	5.43	4.35	0.11	0.14	21.267	21.124	1.14	0.6	0.399	
BK/2 to BK/3	150	uPVC	12.5	1.8	15	31	1.18	1.78	20.703	20.478	0.092	2.28	1.31	0.07	0.19	21.068	20.627	3.53	0.6	0.354	
BK/3 to BK/4	225	uPVC	12.99	1.79	25	48	0.62	2.04	20.385	20.152	0.721	0.47	0.47	0.03	0.02	20.518	20.28	1.83	0.6	0.697	
BK/4 to B05/1	375	RRJ2	4.47	1.89	15	64	0.24	1.2	19.431	19.347	0.05	2.2	3.11	0.09	0.05	20	20	0	1.1	0.955	
BL/1 to BL/2	150	uPVC	12.37	1	5	13	0.66	0.81	20.772	20.649	0.05	7.42	6.35	0.12	0.14	21.253	21.206	0.38	0.6	0.208	
BL/2 to BL/3	225	uPVC	12.37	1	5	32	0.55	1.09	20.599	20.475	0.05	8.92	7.08	0.12	0.05	21.189	21.167	0.18	0.67	0.29	
BL/3 to BL/4	225	uPVC	12.36	1	25	39	0.66	1.11	20.425	20.301	0.05	1.56	3.43	0.09	0.05	21.125	21.074	0.41	0.78	0.268	
BL/4 to BL/5	225	uPVC	11.81	1	25	51	0.88	1.29	20.251	20.133	0.03	1.28	1.42	0.08	0.06	21.017	20.931	0.73	0.86	0.272	
BL/5 to BL/6	225	uPVC	11.81	1	25	64	1.09	1.6	20.103	19.985	0.05	1.13	0.86	0.08	0.08	20.856	20.723	1.13	0.93	0.327	
BL/6 to BL/7	225	uPVC	10.93	1	25	76	1.31	1.92	19.935	19.826	0.05	0.7	0.7	0.09	0.1	20.641	20.451	1.74	1.02	0.465	
BL/7 to BL/8	225	uPVC	1.35	1	25	89	1.53	2.24	19.776	19.762	0.05	0.64	0.64	0.13	0.13	20.319	20.289	2.22	1.2	0.752	
BL/8 to BL/9	300	uPVC	10.15	1	25	118	0.94	1.66	19.712	19.611	0.03	1.95	2.34	0.22	0.29	20.067	19.968	0.98	0.95	0.907	
BL/9 to BL/10	300	uPVC	17.65	1.02	25	134	1.06	1.93	19.581	19.401	0.659	0.62	0.56	0.1	0.1	19.916	19.799	0.66	0.6	0.882	
BL/10 to B05/4	375	RRJ2	4.53	1.63	25	124	0.51	1.35	18.742	18.668	0.477	2.09	2.71	0.13	0.16	19.724	19.714	0.22	1.1	0.483	
BM/1 to BM/2	150	uPVC	12.5	1.77	15	17	0.64	0.96	19.928	19.707	0.03	5.01	4.96	0.11	0.16	20.146	20.005	1.13	0.6	0.45	
BM/2 to BM/3	150	uPVC	12.5	3.08	25	31	0.9	1.91	19.677	19.292	0.112	1.93	1.78	0.07	0.19	19.95	19.403	4.38	0.6	0.446	
BM/3 to BM/4	225	uPVC	13.56	2.61	25	47	0.5	2.35	19.18	18.825	0.723	0.46	0.45	0.03	0.02	19.289	18.937	2.6	0.6	0.73	
BM/4 to B58/1	375	RRJ2	4.25	1.76	25	64	0.25	1.2	18.102	18.027	0.144	2.2	3.11	0.09	0.05	18.569	18.569	0	1.1	1.062	
BN/1 to BN/2	150	uPVC	12.05	1	15	14	0.73	0.88	19.619	19.498	0.05	7.39	6.46	0.12	0.15	20.008	19.978	0.25	0.6	0.312	
BN/2 to BN/3	225	uPVC	12.05	1	15	41	0.71	1.26	19.448	19.328	0.05	9.03	6.5	0.12	0.06	19.967	19.954	0.11	0.61	0.313	
BN/3 to BN/4	225	uPVC	12.05	1	20	41	0.7	1.15	19.278	19.157	0.05	1.63	1.42	0.08	0.07	19.928	19.898	0.25	0.71	0.261	
BN/4 to BN/5	225	uPVC	12.05	1	20	53	0.91	1.39	19.107	18.987	0.05	1.15	1.15	0.1	0.1	19.863	19.813	0.42	0.78	0.221	
BN/5 to BN/6	300	uPVC	12.05	1	5	60	0.48	1.65	18.937	18.816	0.05	6.01	0.97	0.03	0.01	19.813	19.796	0.14	0.84	0.271	
BN/6 to BN/7	300	uPVC	11.62	1	5	67	0.54	1.31	18.766	18.65	0.03	0.89	0.95	0.08	0.04	19.778	19.756	0.19	1.02	0.293	
BN/7 to BN/8	300	uPVC	11.61	1	5	76	0.61	1.37	18.62	18.504	0.05	0.82	0.83	0.08	0.04	19.735	19.705	0.26	1.15	0.315	
BN/8 to BN/9	300	uPVC	10.73	1	20	85	0.68	1.23	18.454	18.347	0.05	0.86	0.75	0.07	0.05	19.68	19.645	0.33	1.25	0.306	
BN/9 to BN/10	300	uPVC	1.5	1	20	94	0.75	1.33	18.297	18.282	0.05	0.69	0.69	0.05	0.05	19.615	19.609	0.4	1.31	0.276	
BN/10 to BN/11	300	uPVC	10	1	15	120	0.96	1.7	18.232	18.132	0.03	1.9	2.22	0.22	0.28	19.451	19.39	0.61	1.38	0.309	
BN/11 to BN/12	300	uPVC	17.8	1	5	130	1.04	1.88	18.102	17.924	0.03	0.51	0.51	0.09	0.09	19.351	19.227	0.7	1.41	0.426	
BN/12 to B73/1	375	RRJ2	4.26	1	20	152	0.8	1.69	17.894	17.851	0.05	7.79	0.44	0.04	0	19.227	19.212	0.35	1.36	0.485	
BO/1 to BN/10	150	uPVC	12.35	1.05	25	19	0.92	1.1	19.303	19.173	0.942	6.46	4.25	0.12	0.18	19.647	19.609	0.31	0.6	0.339	
BP/1 to BP/2	150	uPVC	11.11	1.92	25	18	0.65	1.01	19.519	19.306	0.05	6.24	6.23	0.12	0.18	19.767	19.62	1.32	0.6	0.414	
BP/2 to BP/3	150	uPVC	11.02	2.57	25	32	1.02	1.88	19.256	18.973	0.104	2.19	1.72	0.08	0.2	19.56	19.123	3.97	0.6	0.426	
BP/3 to BP/4	225	uPVC	16.28	3.4	25	46	0.43	2.6	18.869	18.316	0.738	8.32	0.33	0.02	0.01	18.97	18.418	3.39	0.6	0.737	
BP/4 to B59/1	375	RRJ2	4.26	1.79	15	63	0.25	1.21	17.578	17.501	0.126	2.21	3.1	0.1	0.05	18.33	18.33	0	1.1	0.778	
BR/1 to BR/2	150	uPVC	12.5	1	5	13	0.68	0.81	19.893	19.768	0.043	5.96	5.27	0.12	0.13	20.306	20.252	0.43	0.6	0.269	
BR/2 to BR/3	225	uPVC	10	1	5	29	0.49	1.2	19.725	19.625	0.03	3.22	4.64	0.1	0.05	20.233	20.213	0.2	0.6	0.303	
BR/3 to BR/4	225	uPVC	10	1	25	37	0.64	1.06	19.595	19.495	0.03	1.39	1.5	0.07	0.05	20.177	20.137	0.4	0.63	0.244	
BR/4 to BR/5	225	uPVC	10	1	25	48	0.82	1.2	19.465	19.365	0.03	1.16	1.09	0.07	0.06	20.089	20.024	0.65	0.65	0.215	
BR/5 to BR/6	225	uPVC	12.5	1	25	58	1	1.46	19.335	19.21	0.03	1.04	0.84	0.07	0.07	19.962	19.842	0.96	0.68	0.223	
BR/6 to BR/7	225	uPVC	10	1	25	71	1.22	1.79	19.18	19.08	0.03	0.81	0.81	0.1	0.1	19.751	19.603	1.48	0.71	0.284	
BR/7 to BR/8	225	uPVC	10	1	25	82	1.4	2.06	19.05	18.95	0.03	0.69	0.64	0.1	0.12	19.523	19.31	2.13	0.74	0.421	
BR/8 to BR/9	300	uPVC	10	1	25	93	0.74	1.8	18.92	18.82	0.03	5.67	0.8	0.02	0	19.31	19.259	0.51	0.7	0.617	
BR/9 to BR/10	300	uPVC	12.5	1	25	104	0.83	1.49	18.79	18.665	0.05	0.72	0.63	0.07	0.06	19.215	19.151	0.51	0.73	0.572	
BR/10 to BR/11	300	uPVC	1.36	1	25	119	0.94	1.68	18.615	18.602	0.05	0.72	0.72	0.08	0.08	19.099	19.093	0.44	0.77	0.541	
BR/11 to BR/12	300	uPVC	27.35	1	25	120	0.95	1.75	18.552	18.278	0.46	1.9	2.2	0.17	0.27	18.943	18.771	0.63	0.78	0.588	
BR/12 to B06/10	375	RRJ2	4.35	1.86	15	111	0.43	1.38	17.818	17.738	0.953	2.09	2.71	0.12	0.14	18.707	18.697	0.23	1.1	0.582	
BS/1 to BS/2	150	uPVC	12.5	1.7	25	18	0.69	1.01	20.217	20.005	0.03	7.34	7.18	0.12	0.14	20.622	20.475	1.18	0.6	0.27	
BS/2 to BS/3	150	uPVC	12.5	1.65	25	33	1.3	1.88	19.975	19.769	0.092	2.86	1.58	0.08	0.21	20.419	19.919	4	0.6	0.274	
BS/3 to BS/4	225	uPVC	14.85	1.77	25	51	0.66	2.06	19.677	19.414	0.72	0.56	0.5	0.04	0.02	19.804	19.547	1.73	0.6	0.691	
BS/4 to B06/6	375	RRJ2	4.78	1.96	15	69	0.26	1.27	18.694	18.6	0.624	2.21	3.1	0.1	0.06	19.464	19.463	0.02	1.1	0.754	
BU/1 to BL/8	150	uPVC	12.35	3.01	15	18	0.53	1.33	20.838	20.466	0.754	5.01	5.01	0.09	0.22	20.883	20.544	2.74	0.6	0.627	

B DRAINAGE TABLE UPDATED

I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature.....

PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

These plans are referred to in certificate no. 16635 approved by:
Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision
Land Development Certificates
www.LDC.com.au

	AMENDMENT	DES	DRN	CKD	APR	DATE
B	DRAINAGE TABLE UPDATED	DG	VS	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

NEWPARK
PRECINCT 7, STAGE 7B
DRAINAGE CALCULATIONS
SHEET 6

PROJECT No: 9985-12
SHEET No: CC5416

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5416 | B

Plotted: 14 September , 2021 12:51:34 PM File Name: J:\9985\DICC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCT\SI5 - Precinct 7B\9985-12-CC5416.dwg

These plans are referred to in certificate no. 16635 approved by:

Christopher Louis Wahbe
Registered Certifier

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Signature.....
PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

DESIGN STORM 1% AEP HYDROLOGIC RESULTS

PIT NAME (-)	PIT TYPE (-)	CATCHMENT AREA (Ha)	PERCENT IMPERVIOUS (%)	Tc IMP (min)	Tc PERV (min)	CRITICAL STORM (min)	APPROACH FLOW (L/s)	CAPTURED FLOW (L/s)	UNCAPTURED FLOW (L/s)	GRATE DEPTH (mm)	ROAD GRADE (%)	ROAD CROSSFALL (%)	BYPASS PIT (-)	FLOW AT BYPASS PIT (L/s)	FLOW WIDTH AT BYPASS PIT (m)	VxD AT BYPASS PIT (m/s^2)	COMMENTS (-)
A04/6	1.8 m lintel	0.029	95	5	5	15	29	22	7	71	1.1	3	A04/7	29	1.5	0.05	
A04/7	2.4 m lintel sag	0.071	85	5	5	10	31	31	0	62	0.7	2.9	A04/8	0	1.3	0	
A04/8	1.8 m lintel	0.004	95	5	5	15	1	1	0	67	0.2	4	A04/9	18	1.56	0.03	
A04/9	1.8 m lintel	0.035	95	5	5	15	18	15	4	73	0.7	3	A65/1	42	5.47	0.03	
A37/1	2.4 m lintel sag	0.16	85	5	5	15	142	107	10	145	0.5	3	A04/7	45			
B02/1	1.8 m lintel	0.082	85	5	5	15	59	35	19	124	1	3	B02/2	113	5.73	0.06	
B02/2	2.4 m lintel sag	0.16	85	5	5	15	113	113	0	192	0.1	3	B58/2	6	1.21	0.02	
B02/3	2.4 m lintel sag	0.2	85	5	5	10	36	34	0	74	0.5	3	B02/4	0	0.51	0	
B02/4	1.8 m lintel		0			15	0	0	0	42	0.5	3	B02/5	9	2.15	0.01	
B02/5	1.8 m lintel	0.017	95	5	5	15	8	7	2	91	0.9	3	B02/6	54	2.23	0.06	
B02/6	1.8 m lintel	0.1	85	5	5	15	54	36	19	93	0.7	3	B02/7	60	2.39	0.07	
B02/7	1.8 m lintel	0.079	85	5	5	15	60	38	21	98	0.7	3	B02/8	70	4.08	0.05	
B02/8	2.4 m lintel sag	0.121	85	5	5	15	88	88	0	148	0.4	2.8	B02/9	81			SPECIAL PIT
B02/9	2.4 m lintel sag	0.166	85	5	5	10	129	119	0	136	0.7	3	B02/10	0	2.23	0.01	SPECIAL PIT
B02/10	1.8 m lintel	0.005	95	5	5	15	1	1	0	96	1	3	B02/11	59	2.56	0.05	SPECIAL PIT
B02/11	2.4 m lintel sag	0.111	85	5	5	15	54	54	0	103	0.1	3	B75/2	0	0	0	SPECIAL PIT
B02/12	1.8 m lintel		0			15	0	0	0	85	0.7	4.3	B19/16	50	1.97	0.05	SPECIAL PIT
B02/13	1.8 m lintel	0.078	85	5	5	15	10	8	2	93	0.7	3	B02/14	59	2.21	0.07	SPECIAL PIT
B02/14	1.8 m lintel	0.111	85	5	5	15	59	38	21	62	0.7	3	B02/15	24	1.34	0.05	SPECIAL PIT
B02/15	1.8 m lintel	0.018	95	5	5	15	24	19	5	66	0.9	3	B02/16	19	1.81	0.04	SPECIAL PIT
B02/16	1.8 m lintel	0.058	85	5	5	15	19	15	4	80	0.7	3	B02/17	29	1.77	0.04	SPECIAL PIT
B02/17	2.4 m lintel sag	0.076	85	5	5	15	29	29	0	74	0.3	1.8	B02/18	0	0	0	SPECIAL PIT
B02/18	1.8 m lintel	0.076	85	5	5	10	29	20	9	83	0.5	2.7	B78/1	9	0.97	0.01	SPECIAL PIT
B02/19	1.8 m lintel	0.035	85	5	5	15	19	15	4	74	0.6	3	B02/18	29	1.88	0.05	SPECIAL PIT
B03/15	1.8 m lintel	0.005	95	5	5	15	1	1	0	87	0.7	3	B03/16	53	2.02	0.06	
B03/16	1.8 m lintel	0.101	85	5	5	15	47	34	13	70	0.7	3	B65/1	38	5.89	0.03	
B03/17	1.8 m lintel	0.004	95	5	5	15	1	1	0	87	0.7	3	B03/18	53	2.02	0.06	SPECIAL PIT
B03/18	1.8 m lintel	0.101	85	5	5	15	47	34	13	67	0.7	3	B04/6	26	3.43	0.03	SPECIAL PIT
B03/19	2.4 m lintel	0.156	85	5	5	15	113	69	44	106	0.7	3	B03/20	94	2.8	0.08	SPECIAL PIT
B03/20	1.8 m lintel	0.101	85	5	5	15	94	54	41	110	0.7	3	B03/21	94	3.19	0.08	SPECIAL PIT
B03/21	2.4 m lintel sag	0.134	85	5	5	10	102	100	0	122	0.4	2	B02/12	0	1.56	0.01	SPECIAL PIT
B04/1	1.8 m lintel	0.04	95	5	5	15	21	17	4	58	0.7	3	B04/2	12	2.17	0.01	
B04/2	1.8 m lintel	0.015	95	5	5	15	12	9	2	91	0.7	3	B26/1	77	2.72	0.07	
B04/3	1.8 m lintel	0.003	95	5	5	15	2	1	0	68	0.7	3	B04/4	21	1.4	0.04	
B04/4	1.8 m lintel	0.039	95	5	5	15	21	16	4	65	0.7	3	B04/5	25	1.46	0.05	
B04/5	1.8 m lintel	0.042	95	5	5	15	25	20	5	70	2.7	3	B04/6	45	3.43	0.06	
B04/6	2.4 m lintel sag	0.102	85	5	5	15	71	62	118	129	1.5	3.4	B04/7	121			
B04/7	2.4 m lintel sag	0.132	85	5	5	15	155	140	1	150	0.8	2.8	B04/8	2	1.6	0	SPECIAL PIT
B04/8	1.8 m lintel	0.006	95	5	5	15	2	2	0	82	0.7	3	B75/1	41	1.85	0.05	SPECIAL PIT
B05/1	1.8 m lintel	0.036	95	5	5	15	25	19	6	88	0.7	3	B05/2	50	2.51	0.05	
B05/2	1.8 m lintel	0.085	85	5	5	15	50	34	16	102	0.7	3	B05/3	80	2.65	0.08	
B05/3	2.4 m lintel	0.123	85	5	5	15	80	54	27	106	0.7	3	B05/4	91	3.64	0.09	
B05/4	2.4 m lintel	0.12	85	5	5	15	91	63	182	135	0.7	3	B05/5	202	5.68	0.1	
B05/5	2.4 m lintel sag	0.079	85	5	5	15	221	192	0	190	1.3	2.9	B05/6	28			
B05/6	2.4 m lintel sag	0.059	95	5	5	10	438	54	0	84	0.4	2.3	B05/7	0	0.5	2.36	SPECIAL PIT
B05/7	1.8 m lintel	0.005	95	5	5	15	0	0	0	41	0.7	3.7	B50/1	555	0.97	0.02	SPECIAL PIT
B05/8	1.8 m lintel	0.01	95	5	5	15	5	4	1	71	1.1	3	B05/9	26	1.97	0.03	SPECIAL PIT
B05/9	1.8 m lintel	0.047	85	5	5	15	26	20	6	85	0.7	3	B05/10	44	2.4	0.05	
B05/10	1.8 m lintel	0.073	85	5	5	15	44	32	12	98	0.7	3	B05/11	72	2.4	0.08	
B05/11	1.8 m lintel	0.115	85	5	5	15	72	48	24	94	0.7	3	B05/12	62	2.47	0.06	
B05/12	1.8 m lintel	0.074	85	5	5	15	62	39	22	100	0.7	3	B76/1	81	2.47	0.08	
B05/13	1.8 m lintel	0.082	85	5	5	15	43	32	12	77	0.7	3	B72/1	53	2.94	0.05	
B05/14	1.8 m lintel	0.007	95	5	5	15	4	3	1	77	1.7	3	B05/15	65	2.65	0.08	SPECIAL PIT
B05/15	2.4 m lintel sag	0.121	85	5	5	15	72	72	0	106	1.6	2.8	B55/1	0	11.99	0	SPECIAL PIT
B08/1	1.8 m lintel	0.041	95	5	5	10	27	21	6	32	0.7	3	LOST	20	1.26	0.04	SPECIAL PIT
B08/2	1.8 m lintel	0.138	85	5	5	15	73	49	24	65	0.7	3	B08/3	35	1.78	0.05	SPECIAL PIT
B08/3	1.8 m lintel	0.02	95	5	5	15	35	26	8	79	1.1	3	B08/4	39	2.23	0.04	SPECIAL PIT
B08/4	1.8 m lintel	0.058	85	5	5	15	39	29	10	93	0.9	3	B08/5	66	2.47	0.07	
B08/5	1.8 m lintel	0.108	85	5	5	15	66	41	25	100	0.9	3	B08/6	85	2.84	0.09	
B08/6	2.4 m lintel	0.115	85	5	5	15	85	56	28	112	0.9	3	B08/7	121	2.84	0.11	
B08/7	2.4 m lintel	0.116	85	5	5	15	121	62	26	106	0.9	3	B08/8	102	3.15	0.08	
B08/8	1.8 m lintel	0.082	85	5	5	15	102	46	103	121	0.9	3	B08/9	154	5.86	0.08	
B08/9	2.4 m lintel sag	0.113	85	5	5	15	215	214	0	198	0.5	2.7	B77/1	0			SPECIAL PIT
B08/10	1.8 m lintel	0.003	95	5	5	15	1	1	0	71	0.7	3.5	B08/9	27	5.86	0.03	SPECIAL PIT
B08/11	2.4 m lintel sag	0.149	85	5	5	10	75	75	0	103	0.2	3	B08/10	0	1.34	0.01	SPECIAL PIT
B08/12	1.8 m lintel	0.007	95	5	5	15	2	1	0	104	0.7	3.9	B08/11	79	2.59	0.07	SPECIAL PIT
B08/13	1.8 m lintel	0.005	95	5	5	15	3	2	1	85	0.7	3	B08/14	44	1.99	0.06	SPECIAL PIT
B08/14	1.8 m lintel	0.082	85	5	5	15	44	32	12	86	0.7	3	B08/15	49	3.22	0.05	SPECIAL PIT
B08/15	2.4 m lintel sag	0.169	85	5	5	10	101	101	0	123	0.6	3.9	B44/1	0			SPECIAL PIT
B08/16	1.8 m lintel	0.075	85	5	5	15	10	8	2	88	1	3	B08/15	52	3.22	0.04	SPECIAL PIT
B08/17	2.4 m lintel sag	0.227	85	5	5	15	121	121	0	154	0.1	3	B08/16	0	2.05	0	SPECIAL PIT
B08/18	1.8 m lintel		0	5	5	15	0	0	0	121	-0.2	3	B08/17	66			SPECIAL PIT
B08/19	1.8 m lintel	0.002	95	5	5	10	6	5	1	164	0.7	3	B99/1	1	0.3	0.03	SPLITTER/SPECIAL PIT
B08/20	NODE		0			10	0	0	0	0							GPT INLET
B08/21	GPT		0			10	0	0	0	0							GPT VORTEX
B08/22	NODE		0			10	0	0	0	0							GPT OUTLET
B08/23	JP SEALED 900 x 900		0			10	0	0	0	0							SPLITTER PIT
B08/24	JP SEALED 900 x 900		0			10	0	0	0	0							
B10/1	1.8 m lintel	0.09	85	5	5	15	16	13	3	109	1	3	B43/1	107	5.34	0.07	
B10/2	1.8 m lintel	0.111	85	5	5	15	21	16	4	98	1	3	B10/3	72	2.58	0.07	
B10/3	2.4 m lintel sag	0.133	85	5	5	15	76	76	0	104	0.6	3.8	B10/4	0	1.63	0.01	

B DRAINAGE TABLE UPDATED

	AMENDMENT	DES	DRN	CKD	APR	DATE
B	DRAINAGE TABLE UPDATED	DG	VS	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL

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NEWPARK
PRECINCT 7, STAGE 7B
DRAINAGE CALCULATIONS
SHEET 7

PROJECT No: 9985-12
SHEET No: CC5417

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5417 | B

Plotted: 14 September , 2021 12:51:55 PM File Name: J:\9985\DICC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCT\SI5 - Precinct 7B\9985-12-CC5417.dwg

DESIGN STORM 1% AEP HYDROLOGIC RESULTS

PIT NAME (-)	PIT TYPE (-)	CATCHMENT AREA (Ha)	PERCENT IMPERVIOUS (%)	Tc IMP (min)	Tc PERV (min)	CRITICAL STORM (min)	APPROACH FLOW (L/s)	CAPTURED FLOW (L/s)	UNCAPTURED FLOW (L/s)	GRATE DEPTH (mm)	ROAD GRADE (%)	ROAD CROSSFALL (%)	BYPASS PIT (-)	FLOW AT BYPASS PIT (L/s)	FLOW WIDTH AT BYPASS PIT (m)	VxD AT BYPASS PIT (m/s^2)	COMMENTS (-)
B10/4	1.8 m lintel	0.003	95	5	5	15	1	1	0	75	0.7	2.9	B02/8	32	2.66	0.03	
B11/1	2.4 m lintel sag	0.035	95	5	5	10	6	6	0	22	0.1	3	LOST	0			
B11/2	2.4 m lintel sag	0.113	85	5	5	15	30	30	0	61	0.1	3	B11/1	0	0	0	
B19/12	2.4 m lintel	0.05	85	5	5	15	54	39	15	75	1.7	3	B19/13	45	1.75	0.07	
B19/13	1.8 m lintel	0.057	85	5	5	15	45	30	14	79	1.7	3	B19/14	53	5.57	0.04	
B19/14	2.4 m lintel sag	0.128	85	5	5	15	99	99	0	186	0.8	3.1	B19/15	104			
B19/15	2.4 m lintel sag	0.124	85	5	5	15	151	141	0	151	0.8	4	B02/15	0	0	0	
B19/16	1.8 m lintel	0.094	85	5	5	15	41	30	11	71	0.7	3	B19/15	31	4.32	0.03	
B20/1	2.4 m lintel sag	0.078	85	5	5	15	50	50	0	91	0.9	2.9	B02/17	0			
B26/1	2.4 m lintel	0.143	85	5	5	15	77	56	21	108	0.7	3	B06/2	91	5.57	0.06	
B26/2	1.8 m lintel	0.049	95	5	5	15	26	20	6	53	0.7	3	B06/5	17	1.41	0.04	SPECIAL PIT
B31/1	1.8 m lintel	0.046	95	5	5	15	25	20	5	64	0.7	3	B05/1	25	2.06	0.03	
B32/1	1.8 m lintel	0.039	95	5	5	15	21	16	4	55	0.7	3	B58/1	23	0.98	0.06	
B37/1	2.4 m lintel	0.108	85	5	5	15	94	61	33	112	0.7	3	B03/19	113	2.87	0.1	
B39/1	1.8 m lintel	0.057	85	5	5	15	33	24	9	77	0.8	3	B20/1	31	2.15	0.04	
B43/1	2.4 m lintel sag	0.201	85	5	5	15	107	107	0	177	0.7	3.9	B48/1	0	0	0	
B44/1	2.4 m lintel sag	0.045	95	5	5	10	9	9	0	30	0.6	3.8	LOST	0	0	0	
B45/1	2.4 m lintel sag	0.032	95	5	5	15	17	17	0	58	0.2	3	B11/1	0	0	0	
B46/1	2.4 m lintel sag	0.182	85	5	5	15	95	95	0	140	0.1	3	B02/13	0	0	0	
B48/1	1.8 m lintel	0.049	85	5	5	15	7	6	1	110	1	3	B46/1	95	3.79	0.06	
B49/1	1.8 m lintel	0.048	95	5	5	15	25	20	5	64	1.8	3	B08/1	27	1.25	0.06	
B49/2	1.8 m lintel	0.062	85	5	5	15	33	25	8	60	1.8	3	B05/5	30	5.68	0.04	
B50/1	1.8 m lintel	0.033	95	5	5	15	5	4	1	55	0.7	3	B73/2	19	5.03	0.04	
B51/1	2.4 m lintel sag	0.031	95	5	5	15	17	17	0	60	0.1	3	B44/1	0	0	0	
B55/1	2.4 m lintel sag	0.119	85	5	5	10	87	77	7	104	1.7	2.6	B08/12	9	2.6	0.01	
B56/1	1.8 m lintel	0.081	95	5	5	15	44	30	79	86	0.7	3	B05/6	42	1.99	0.06	
B58/1	1.8 m lintel	0.036	95	5	5	15	23	18	5	56	2.3	3	B58/2	13	1.21	0.03	
B58/2	2.4 m lintel sag	0.124	85	5	5	10	29	29	0	62	0.2	3	B58/3	0	0	0	
B58/3	1.8 m lintel	0.042	95	5	5	15	18	14	4	53	0.7	3.3	B58/4	12	1.85	0.03	
B58/4	1.8 m lintel	0.019	95	5	5	15	12	9	38	82	0.9	3	B59/1	38	1.99	0.05	
B59/1	1.8 m lintel	0.017	95	5	5	15	38	29	10	86	0.7	3	B60/1	46	2.58	0.04	
B60/1	1.8 m lintel	0.083	85	5	5	15	46	31	15	104	0.7	3	B02/9	82	3.65	0.08	
B61/1	1.8 m lintel	0.105	85	5	5	15	57	39	18	81	1.3	3	B19/14	46	5.53	0.04	
B61/2	1.8 m lintel	0.049	95	5	5	15	26	20	6	53	1	3	B61/3	14	1.73	0.02	
B61/3	1.8 m lintel	0.017	95	5	5	15	14	12	3	78	0.9	3	B39/1	33	1.73	0.05	
B65/1	2.4 m lintel sag	0.144	85	5	5	15	108	108	0	199	0.8	2.8	B06/11	34			
B66/1	1.8 m lintel	0.117	85	5	5	15	77	49	28	83	1.5	3	B19/15	61	4.32	0.06	
B67/1	1.8 m lintel	0.066	85	5	5	15	36	26	10	95	0.9	3	B68/1	71	2.38	0.08	
B68/1	2.4 m lintel	0.115	85	5	5	15	71	49	22	98	0.9	3	B69/1	77	2.53	0.08	
B69/1	1.8 m lintel	0.107	85	5	5	15	77	51	27	102	0.9	3	B70/1	90	2.53	0.09	
B70/1	2.4 m lintel	0.124	85	5	5	15	90	63	27	98	0.9	3	B71/1	78	2.41	0.08	
B71/1	1.8 m lintel	0.082	85	5	5	15	78	48	23	99	0.9	3	B77/1	79	5.73	0.06	
B72/1	2.4 m lintel sag	0.079	85	5	5	15	53	53	0	114	0.6	3	B10/2	0	0	0	
B72/2	2.4 m lintel sag	0.065	85	5	5	15	35	35	0	95	0.4	3	B10/1	0	0	0	SPECIAL PIT
B73/1	1.8 m lintel	0.039	85	5	5	15	7	5	42	101	0.7	3	B02/1	66	3.33	0.05	
B73/2	2.4 m lintel sag	0.034	85	5	5	15	23	23	0	164	0.7	2.8	B73/1	0	2.5	0.01	
B73/3	2.4 m lintel sag	0.112	85	5	5	15	60	60	0	144	0.4	2.7	B02/3	0	0	0	SPECIAL PIT
B73/4	1.8 m lintel	0.003	95	5	5	15	2	2	0	87	0.7	3.9	B05/13	43	2.02	0.06	SPECIAL PIT
B75/1	1.8 m lintel	0.077	85	5	5	15	38	27	11	71	0.7	3	B75/2	23	1.5	0.04	
B75/2	2.4 m lintel sag	0.067	85	5	5	15	23	23	0	68	0.5	2.9	B03/21	0	7.12	0.08	
B76/1	2.4 m lintel	0.113	85	5	5	15	81	52	28	82	1.2	3	B55/1	80	2.59	0.1	
B77/1	2.4 m lintel sag	0.118	85	5	5	15	79	79	0	192	0.5	2.6	B11/2	45	0	0	
B78/1	2.4 m lintel sag	0.03	95	5	5	10	17	16	0	43	0.1	3	LOST	0	0	0	
B99/1	NODE		0			15	1	0	0	27	0.2	3	B78/1	8	0.48	0.01	SPLITTER PIT INTERNAL WEIR
B99/2	JP SEALED 900 x 900		0			10	0	0	0	0							
C01/1	1.8 m lintel	0.107	85	5	5	15	57	37	20	100	0.7	3	C01/2	61	2.8	0.05	
C01/2	1.8 m lintel	0.08	85	5	5	15	61	42	19	109	0.7	3	C01/3	78	5.67	0.05	
C01/3	2.4 m lintel sag	0.222	85	5	5	15	157	155	0	191	0.2	3	C01/4	92			
C01/4	1.8 m lintel	0.096	95	5	5	15	117	67	50	85	1.2	3	C01/5	52	2.79	0.05	
C01/5	1.8 m lintel	0.019	95	5	5	15	52	16	60	109	1.1	3	C01/6	83	2.79	0.07	

B DRAINAGE TABLE UPDATED

I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature.....

PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

These plans are referred to in certificate no. 16635 approved by:
Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision
Land Development Certificates
www.LDC.com.au

B	DRAINAGE TABLE UPDATED	DG	VS	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

NEWPARK
PRECINCT 7, STAGE 7B
DRAINAGE CALCULATIONS
SHEET 8

PROJECT No: 9985-12
SHEET No: CC5418

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5418 | B

DESIGN STORM 1% AEP HYDRAULIC RESULTS

PIPE NAME	PIPE DIAMETER	PIPE TYPE	PIPE LENGTH	PIPE GRADE	CRITICAL STORM	PEAK FLOW	CAPACITY RATIO	PEAK VELOCITY	PIPE U/S IL	PIPE D/S IL	PIPE D/S DROP	U/S PIT Ku	D/S PIT Kw	PIT LOSS (Ku.V'head)	WSE LOSS (Kw.V'head)	U/S PIPE HGL	D/S PIPE HGL	HGL GRADE	MINIMUM COVER	MINIMUM FREEBOARD	COMMENTS
(-)	(mm)	(-)	(m)	(%)	(min)	(L/s)	(-)	(m/s)	(m)	(m)	(m)	(-)	(-)	(m)	(m)	(m)	(m)	(%)	(m)	(m)	
A04/6 to A04/7	450	RRJ2	19.89	1	10	334	1.08	2.1	17.239	17.04	0.05	1.2	1.26	0.22	0.23	18.899	18.789	0.55	1.39	-0.073	
A04/7 to A04/8	525	RRJ2	15.6	1	10	447	0.96	2.13	16.99	16.834	0.05	1.15	1.2	0.25	0.26	18.619	18.515	0.67	1.46	0.042	
A04/8 to A04/9	600	RRJ2	43.15	1	20	394	0.59	2.14	16.784	16.353	0.05	0.38	0.39	0.1	0.04	18.481	18.338	0.33	1.57	0.488	
A37/1 to A04/7	375	RRJ2	9	2	15	107	0.4	1.15	17.366	17.186	0.196	4.5	4.5	0.22	0.22	18.816	18.798	0.2	1.1	-0.145	
B02/1 to B02/2	375	RRJ2	13.62	1	20	35	0.18	0.52	17.834	17.698	0.05	4.5	4.5	0.08	0.02	19.409	19.414	-0.04	1.1	-0.124	
B02/2 to B02/3	375	RRJ2	9	1	25	139	0.73	1.26	17.648	17.558	0.05	5.35	5.34	0.27	0.28	19.322	19.296	0.29	1.24	-0.192	
B02/3 to B02/4	375	RRJ2	28.83	1	10	134	0.71	1.45	17.508	17.219	0.05	2.15	2.6	0.18	0.19	19.215	19.111	0.36	1.31	-0.074	
B02/4 to B02/5	375	RRJ2	15.29	1	20	138	0.73	1.25	17.169	17.016	0.05	0.58	0.58	0.07	0.05	19.079	19.057	0.14	1.73	0.254	
B02/5 to B02/6	450	RRJ2	23.62	0.5	20	234	1.07	1.47	16.966	16.848	0.03	1.37	1.45	0.11	0.11	19.01	18.888	0.52	1.48	-0.084	
B02/6 to B02/7	525	RRJ2	22.84	0.5	20	290	0.88	1.36	16.818	16.704	0.05	0.78	0.82	0.06	0.06	18.85	18.745	0.46	1.39	-0.088	
B02/7 to B02/8	525	RRJ2	26.71	0.5	25	331	1	1.53	16.654	16.521	0.05	0.64	0.66	0.07	0.07	18.708	18.612	0.36	1.54	-0.098	
B02/8 to B02/9	600	RRJ2	12.12	0.8	20	394	0.66	1.39	16.471	16.374	0.05	6.98	1.15	0.1	0.1	18.538	18.515	0.19	1.41	-0.148	
B02/9 to B02/10	600	RRJ2	14.35	0.5	25	460	0.98	1.63	16.324	16.252	0.058	0.93	0.93	0.12	0.12	18.423	18.385	0.26	1.62	-0.136	
B02/10 to B02/11	750	RRJ2	15.07	0.5	25	617	0.72	1.54	16.194	16.119	0.05	0.37	0.38	0.04	0.04	18.356	18.324	0.21	1.56	0.177	
B02/11 to B02/12	750	RRJ2	47.67	0.5	25	713	0.84	1.78	16.069	15.831	0.05	0.78	0.84	0.11	0.09	18.253	18.098	0.33	1.62	0.166	
B02/12 to B02/13	(2x)1200	RRJ2	10.9	0.5	20	4033	0.68	1.82	15.781	15.726	0.05	0.27	0.25	0.04	0.04	18.058	18.033	0.23	1.52	0.428	
B02/13 to B02/14	(2x)1200	RRJ2	35.16	0.5	20	4039	0.68	1.79	15.676	15.5	0.05	1.04	1.01	0.15	0.16	17.88	17.8	0.23	1.52	0.497	
B02/14 to B02/15	(2x)1200	RRJ2	15.38	0.5	25	4695	0.79	2.08	15.45	15.373	0.05	0.69	0.7	0.15	0.15	17.649	17.602	0.31	1.47	0.484	
B02/15 to B02/16	(2x)1200	RRJ2	20.22	0.5	25	4744	0.79	2.1	15.323	15.222	0.03	0.57	0.57	0.13	0.13	17.474	17.41	0.32	1.32	0.349	
B02/16 to B02/17	(2x)1200	RRJ2	20.27	0.5	25	4839	0.81	2.14	15.192	15.091	0.05	0.22	0.22	0.05	0.05	17.359	17.292	0.33	1.33	0.395	
B02/17 to B02/18	(2x)1200	RRJ2	14.15	0.5	25	4904	0.82	2.17	15.041	14.97	0.05	0.62	0.62	0.15	0.15	17.145	17.097	0.34	1.56	0.424	
B02/18 to B02/19	(2x)1200	RRJ2	26.18	0.5	25	4931	0.83	2.18	14.92	14.789	0.05	0.64	0.64	0.16	0.16	16.943	16.853	0.34	1.6	0.693	
B02/19 to B08/19	(2x)1200	RRJ2	10.48	1	25	4940	0.58	2.18	14.739	14.634	0.084	1.1	1.14	0.26	0.27	16.593	16.557	0.34	2.04	1.144	
B03/15 to B03/16	1050	RRJ2	40.53	0.6	20	2054	0.9	2.43	16.948	16.704	0.03	0.31	0.26	0.09	0.07	19.292	19.1	0.47	1.48	0.217	
B03/16 to B03/17	1050	RRJ2	30.6	0.6	20	2113	0.92	2.44	16.674	16.491	0.043	0.28	0.27	0.07	0.07	19.03	18.876	0.5	1.48	0.198	
B03/17 to B03/18	1350	RRJ2	40.57	0.5	20	2903	0.71	2.03	16.448	16.245	0.05	0.25	0.23	0.07	0.05	18.831	18.734	0.24	1.14	0.208	
B03/18 to B03/19	1350	RRJ2	12.42	0.5	20	2920	0.71	2.04	16.195	16.133	0.03	0.86	0.88	0.17	0.17	18.572	18.541	0.25	1.23	0.067	
B03/19 to B03/20	1350	RRJ2	26.82	0.3	20	2953	0.93	2.06	16.103	16.022	0.03	0.51	0.51	0.1	0.1	18.442	18.374	0.25	1.25	0.2	
B03/20 to B03/21	1350	RRJ2	34.19	0.3	20	3218	1.02	2.35	15.992	15.89	0.03	0.31	0.31	0.09	0.07	18.305	18.205	0.29	1.04	0.167	
B03/21 to B02/12	(2x)1200	RRJ2	15.24	0.3	20	3336	0.72	1.48	15.86	15.814	0.034	0.78	0.78	0.08	0.08	18.13	18.107	0.15	1.38	0.144	
B04/1 to B04/2	375	RRJ2	17.94	1	15	148	0.78	1.45	19.627	19.447	0.03	1.74	1.98	0.16	0.18	20.004	19.939	0.36	1.4	1.341	
B04/2 to B04/3	375	RRJ2	30.49	1	15	177	0.93	1.8	19.417	19.113	0.03	0.44	0.43	0.07	0.05	19.909	19.766	0.47	1.48	1.378	
B04/3 to B04/4	375	RRJ2	49.33	1	15	167	0.88	1.82	19.083	18.589	0.03	0.24	0.23	0.03	0.03	19.75	19.515	0.48	1.6	1.339	
B04/4 to B04/5	375	RRJ2	53.43	1	20	192	1.01	1.84	18.559	18.025	0.03	0.66	0.57	0.06	0.09	19.476	19.134	0.64	1.6	1.244	
B04/5 to B04/6	375	RRJ2	50.69	1.84	10	183	0.71	1.98	17.995	17.064	0.05	0.71	0.6	0.07	0.08	19.096	18.707	0.77	1.12	0.871	
B04/6 to B04/7	450	RRJ2	9.79	2	10	218	0.5	1.42	17.014	16.819	0.05	1.71	1.92	0.16	0.17	18.673	18.667	0.06	1.13	-0.129	
B04/7 to B04/8	450	RRJ2	16.3	1	20	276	0.89	1.74	16.769	16.606	0.05	1.45	1.45	0.18	0.18	18.51	18.451	0.36	1.44	-0.15	
B04/8 to B03/20	450	RRJ2	11.94	2	20	282	0.65	2.29	16.556	16.317	0.324	0.3	0.3	0.11	0.05	18.426	18.374	0.44	1.6	0.145	
B05/1 to B05/2	375	RRJ2	28.43	1	20	92	0.49	1.39	19.297	19.013	0.05	1.93	2.19	0.14	0.08	20.515	20.471	0.15	1.11	0.124	
B05/2 to B05/3	375	RRJ2	36.07	1	10	108	0.57	1.37	18.963	18.602	0.05	1.56	1.56	0.12	0.06	20.437	20.32	0.32	1.24	-0.096	
B05/3 to B05/4	375	RRJ2	33.13	1	15	136	0.71	1.38	18.552	18.221	0.03	1.72	1.71	0.14	0.1	20.254	20.118	0.41	1.24	-0.106	
B05/4 to B05/5	450	RRJ2	15.89	1	10	291	0.94	1.83	18.191	18.032	0.05	1.62	1.78	0.25	0.27	20.076	20.065	0.07	1.29	-0.135	
B05/5 to B05/6	525	RRJ2	9.02	2	10	341	0.52	1.58	17.982	17.801	0.05	2.03	2.53	0.25	0.3	19.9	19.878	0.24	1.4	-0.19	
B05/6 to B05/7	525	RRJ2	15.44	1	10	386	0.83	1.88	17.751	17.597	0.05	0.94	0.94	0.15	0.15	19.797	19.733	0.41	1.79	0.039	
B05/7 to B05/8	525	RRJ2	10.6	2	10	385	0.58	2.39	17.547	17.335	0.05	0.31	0.42	0.16	0.05	19.701	19.648	0.5	1.98	0.307	
B05/8 to B05/9	525	RRJ2	15.5	1	10	387	0.83	1.86	17.285	17.13	0.03	1.15	1.21	0.19	0.2	19.537	19.459	0.5	2.14	0.355	
B05/9 to B05/10	525	RRJ2	21.56	1	10	399	0.86	2.07	17.1	16.884	0.03	0.36	0.36	0.1	0.06	19.425	19.308	0.54	2.2	0.413	
B05/10 to B05/11	600	RRJ2	32.11	1	20	412	0.62	1.67	16.854	16.533	0.03	0.51	0.55	0.14	0.04	19.28	19.182	0.31	2.21	0.414	
B05/11 to B05/12	600	RRJ2	23.12	1	20	612	0.92	2.16	16.503	16.272	0.05	0.79	0.79	0.15	0.15	19.101	18.931	0.74	2.34	0.315	
B05/12 to B05/13	600	RRJ2	10.62	2	20	630	0.67	2.23	16.222	16.01	0.05	1.18	1.24	0.24	0.25	18.71	18.625	0.8	2.52	0.404	
B05/13 to B05/14	600	RRJ2	31.89	0.7	20	647	1.16	2.29	15.96	15.737	0.03	0.95	0.97	0.25	0.26	18.393	18.122	0.85	2.63	0.67	
B05/14 to B05/15	675	RRJ2	41.08	0.65	25	774	1.05	2.16	15.707	15.44	0.05	1.17	0.51	0.09	0.09	18.044	17.777	0.65	1.59	0.869	
B05/15 to B08/13	675	RRJ2	14.96	0.65	25	891	1.21	2.49	15.39	15.292	0.068	0.86	0.84	0.24	0.25	17.537	17.372	1.1	1.81	-0.101	
B08/1 to B08/2	375	RRJ2	15.92	1	20	102	0.53	1.21	18.244	18.085	0.05	1.13	1.13	0.1	0.05	19.34	19.311	0.18	1.1	0.353	
B08/2 to B08/3	375	RRJ2	14.76	1.42	20	146	0.65	1.62	18.035	17.825	0.18	1.59	1.95	0.16	0.13	19.262	19.211	0.35	1.12	0.311	
B08/3 to B08/4	375	RRJ2	25.65	1	10	148	0.78	1.49	17.644	17.388	0.03	1.14	1.14	0.13	0.1	19.153	19.033	0.47	1.1	-0.074	
B08/4 to B08/5	375	RRJ2	31.66	1	10	173	0.91	1.68	17.358	17.041	0.03	0.8	0.76	0.1	0.09	18.979	18.765	0.68	1.17	-0.089	
B08/5 to B08/6	450	RRJ2	32.75	1	10	229	0.74	1.66	17.011	16.684	0.03	0.98	1.18	0.14	0.09	18.711	18.507	0.62	1.16	-0.097	
B08/6 to B08/7	450	RRJ2	32.56	1	120	267	0.86	1.78	16.654	16.328	0.03	0.9	0.9	0.13	0.13	18.432	18.224	0.64	1.24	-0.112	
B08/7 to B08/8	525	RRJ2	24.75	1	10	341	0.73	1.58	16.298	16.051	0.03	0.85	0.86	0.13	0.1	18.143	18.027	0.47	1.24	-0.106	
B08/8 to B08/9	525	RRJ2	27.64	0.5	10	399	1.21	1.84	16.021	15.882	0.05	0.59	0.59	0.1	0.1	17.968	17.875	0.34	1.24	-0.121	
B08/9 to B08/10	675	RRJ2	15.75	0.5	25	548	0.85	1.53	15.832	15.754	0.05	1.81	2.14	0.16	0.16	17.72	17.683	0.23	1.31	-0.198	
B08/10 to B08/11	675	RRJ2	17.79	0.5	25	582	0.9	1.63	15.704	15.615	0.03	2.09	2.66	0.07	0.09	17.63	17.576	0.3	1.42	0.172	
B08/11 to B08/12	750	RRJ2	22.06	0.5	25	633	0.74	1.7	15.585	15.474	0.05	7.02	2.66	0.09	0.06	17.534	17.483	0.23	1.41	0.223	
B08/12 to B08/13	750	RRJ2	30.05	0.5	25	638	0.75	1.44	15.424	15.274	0.05	0.23	0.22	0.03	0.02	17.463	17.393	0.23	1.69	0.418	
B08/13 to B08/14	1050	RRJ2	31.76	0.3	25	1491	0.92	1.74	15.224	15.129	0.03	0.22	0.21	0.03	0.03	17.363	17.284	0.25	1.52	0.582	
B08/14 to B08/15	1050	RRJ2	12.75	0.3	25	1508	0.93	1.74	15.099	15.061	0.03	0.31	0.3	0.04	0.04	17.244	17.211	0.26	1.48	0.473	
B08/15 to B08/16	1050	RRJ2	18.79	0.3	25	1583	0.98	1.87	15.031	14.974	0.03	0.47	0.46	0.07	0.06	17.149	17.095	0.29	1.5	0.44	
B08/16 to B08/17	1050	RRJ2	54.09	0.3	25	1589	0.98	1.84	14.944	14.782	0.03	0.25	0.24	0.04	0.04	17.054	16.897	0.29	1.74	0.689	
B08/17 to B08/18	1050	RRJ2	36.92	0.3	25	1720	1.06	1.99	14.752	14.641	0.03	7	0.47	0.11	0.09	16.814	16.69	0.34	1.92	0.902	
B08/18 to B08/19	1200	RRJ2	10.17	0.3	25	1720	0.74	1.52	14.611	14.581	0.03	1	1.26	0.12	0.14	16.574	16.557	0.17	2.21	1.345	
B08/19 to B08/20	1200	RRJ2	6.02	1	25	3282	0.78	2.9	14.551	14.491	0.091	0.6	0.6	0.26	0.26	16.3	16.264	0.6	2.29	1.47	
B08/20 to B08/21	GPT	Inlet	2.81	0	45	2294	1.77	1.02	14.4	14.4	0	1.5	1.5	0.08	0.08	16.205	16.203	0.07	2.11	1.773	GPT INLET CHAMBER
B08/21 to B08/22	GPT	Outlet	2.79	0	45	2297	1.76	1.14	14.4	14.4	0	6.1	6.1	0.32	0.32	15.963	15.962	0.04	2.09	1.807	
B08/22 to B08/23	1200	RRJ2	4.29	1	45	3337	0.79	2.96	14.4	14.357	0.05	0.69	0.7	0.23	0.23	15.777	15.947	-3.96	1.86	2.018	
B08/23 to B08/24	675	RRJ2	13.47	4.7	25	1539	0.78	4.3	14.307	13.675	0.05	0.45	0.45	0.35	0.42	15.624	14.942	5.06	0.64	1.352	
B08/24 to B08/25	675	RRJ2	8.58	0.5	10	1160	1.8	3.24	13.625	13.582	0.05	0.51	0.51	0.27	0.27	14.684	14.53	1.8	0.2	-0.002	
B10/1 to B10/2	375	RRJ2	9.46	1.5	20	-57	-0.24	0.81	17.29	17.148	0.05	4.5	4.5	0.07	0.01	18.638	18.638	0	1.1	0.103	
B10/2 to B10/3	375	RRJ2	21.16	1	20	-58	-0.3	0.64	17.098	16.886	0.05	7.06	2.66	0.1	0.03	18.636	18.627	0.04	1.2	0.077	

B DRAINAGE TABLE UPDATED

I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature.....

PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

These plans are referred to in certificate no. 16635 approved by:
Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision
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www.LDC.com.au

	AMENDMENT	DES	DRN	CKD	APR	DATE
B	DRAINAGE TABLE UPDATED	DG	VS	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

NEWPARK
PRECINCT 7, STAGE 7B
DRAINAGE CALCULATIONS
SHEET 9

PROJECT No: 9985-12
SHEET No: CC5419

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5419 | B

Plotted: 14 September , 2021 12:52:33 PM File Name: J:\9985DCC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCTS\5 - Precinct 7B\9985-12-CC5419.dwg

DESIGN STORM 1% AEP HYDRAULIC RESULTS

PIPE NAME	PIPE DIAMETER (mm)	PIPE TYPE (-)	PIPE LENGTH (m)	PIPE GRADE (%)	CRITICAL STORM (min)	PEAK FLOW (L/s)	CAPACITY RATIO (-)	PEAK VELOCITY (m/s)	PIPE U/S IL (m)	PIPE D/S IL (m)	PIPE D/S DROP (m)	U/S PIT Ku (-)	D/S PIT Kw (-)	PIT LOSS (Ku.V²head) (m)	WSE LOSS (Kw.V²head) (m)	U/S PIPE HGL (m)	D/S PIPE HGL (m)	HGL GRADE (%)	MINIMUM COVER (m)	MINIMUM FREEBOARD (m)	COMMENTS
B10/3 to B10/4	450	RRJ2	22.22	1	10	194	0.63	1.54	16.836	16.614	0.05	1.99	2.34	0.19	0.18	18.561	18.507	0.24	1.25	-0.099	
B10/4 to B02/10	450	RRJ2	31.97	1	25	159	0.51	1.29	16.564	16.244	0.05	0.24	0.24	0.04	0.01	18.497	18.418	0.25	1.68	0.222	
B11/1 to B11/2	375	RRJ2	9	1	20	-112	-0.59	1.04	16.263	16.173	0.05	4.5	4.5	0.07	0.01	17.722	17.732	-0.11	1.1	-0.021	
B11/2 to B08/10	375	RRJ2	50.35	0.75	20	-120	-0.73	1.09	16.123	15.746	0.042	2.21	1.89	0.14	0.08	17.723	17.675	0.1	1.17	-0.057	
B19/12 to B19/13	525	RRJ2	22.17	1.13	20	513	1.03	2.41	17.309	17.058	0.148	0.53	0.53	0.15	0.15	18.728	18.501	1.02	1.1	0.119	
B19/13 to B19/14	600	RRJ2	27.03	1.58	25	527	0.63	2.38	16.911	16.484	0.146	0.51	0.5	0.17	0.08	18.436	18.271	0.61	1.1	0.052	
B19/14 to B19/15	675	RRJ2	9	2	10	589	0.46	1.65	16.339	16.159	0.05	2.06	2.57	0.28	0.34	18.123	18.1	0.26	1.1	-0.186	
B19/15 to B19/16	675	RRJ2	15.14	1	10	665	0.73	2.05	16.109	15.957	0.05	1.12	1.12	0.19	0.2	17.948	17.879	0.46	1.44	-0.151	
B19/16 to B02/14	750	RRJ2	9	2	25	657	0.38	2.29	15.907	15.727	0.277	0.59	0.59	0.25	0.06	17.83	17.811	0.21	1.64	0.405	
B20/1 to B02/17	375	RRJ2	9.1	2	10	-94	-0.35	1.03	16.239	16.057	1.016	4.5	4.5	0.23	0.08	17.299	17.298	0.01	1.1	0.377	
B26/1 to B26/2	375	RRJ2	10.93	2	20	55	0.2	1.14	19.177	18.959	0.05	4.5	4.5	0.18	0.06	20.232	20.226	0.05	1.1	0.36	
B26/2 to B06/5	375	RRJ2	14.9	1	10	76	0.4	1.29	18.909	18.76	0.492	1.19	1.19	0.11	0.03	20.214	20.201	0.09	1.15	0.36	
B31/1 to B04/2	375	RRJ2	9.16	2	15	19	0.07	1	19.88	19.697	0.279	4.5	4.5	0.08	0.01	19.905	19.939	-0.37	1.1	1.344	
B32/1 to B04/4	375	RRJ2	12.63	2	25	18	0.07	1.03	19.357	19.105	0.545	4.5	4.5	0.08	0.01	19.509	19.515	-0.05	1.1	1.3	
B37/1 to B03/17	375	RRJ2	9.01	2	20	61	0.23	1.19	17.649	17.469	1.021	4.5	4.5	0.2	0.07	18.877	18.876	0.01	1.1	0.176	
B39/1 to B02/16	375	RRJ2	9	2	10	152	0.57	1.65	16.358	16.178	0.986	1.29	1.13	0.16	0.08	17.434	17.417	0.19	1.1	0.348	
B43/1 to B10/3	375	RRJ2	9	2	25	118	0.44	1.22	17.133	16.953	0.117	4.5	4.5	0.26	0.26	18.631	18.627	0.04	1.1	-0.177	
B44/1 to B08/15	375	RRJ2	9	2	10	-87	-0.32	0.93	16.224	16.044	1.014	4.5	4.5	0.35	0.08	17.19	17.186	0.04	1.1	0.461	
B45/1 to B08/11	375	RRJ2	9	2	10	-69	-0.26	1.04	16.36	16.18	0.595	4.5	4.5	0.16	0.05	17.565	17.564	0.01	1.1	0.225	
B46/1 to B02/11	375	RRJ2	9	2	20	114	0.42	1.29	17.051	16.871	0.803	4.5	4.5	0.24	0.25	18.371	18.348	0.26	1.1	-0.13	
B48/1 to B02/10	375	RRJ2	9.27	2	10	-56	-0.21	0.78	17.132	16.947	0.753	4.5	2.09	0.27	0.03	18.419	18.418	0.01	1.1	0.165	
B49/1 to B49/2	375	RRJ2	9.18	2	15	-22	-0.08	0.99	19.118	18.935	0.05	4.5	4.5	0.09	0.01	19.748	19.747	0.01	1.1	0.82	
B49/2 to B05/7	375	RRJ2	30.51	1.18	15	55	0.27	1.27	18.885	18.524	0.977	7	3.33	0.12	0.03	19.74	19.733	0.02	1.1	0.792	
B50/1 to B05/10	375	RRJ2	9.07	2	15	-41	-0.15	0.73	18.281	18.099	1.245	4.5	4.5	0.16	0.02	19.308	19.308	0	1.1	0.421	
B51/1 to B08/17	375	RRJ2	9	2	10	30	0.11	1.05	16.362	16.182	1.43	4.5	4.5	0.12	0.02	16.895	16.889	0.07	1.1	0.898	
B55/1 to B05/15	375	RRJ2	9.5	2	15	-85	-0.32	1.18	16.344	16.154	0.765	4.5	4.5	0.18	0.11	17.766	17.777	-0.12	1.1	-0.102	
B56/1 to B05/3	375	RRJ2	9.53	1.8	10	32	0.13	0.92	18.785	18.613	0.061	4.5	4.5	0.12	0.02	20.319	20.32	-0.01	1.1	-0.086	
B58/1 to B58/2	375	RRJ2	13.09	1	20	92	0.49	1.16	17.883	17.752	0.05	2.15	2.63	0.11	0.09	19.191	19.178	0.1	1.1	0.14	
B58/2 to B58/3	375	RRJ2	9.02	2	10	110	0.41	1.38	17.702	17.522	0.05	2.11	2.54	0.16	0.13	19.133	19.115	0.2	1.16	0.024	
B58/3 to B58/4	375	RRJ2	14.71	1	10	121	0.64	1.49	17.472	17.325	0.05	0.93	1.08	0.09	0.05	19.09	19.055	0.24	1.42	0.073	
B58/4 to B02/5	375	RRJ2	9	2	10	98	0.36	1.52	17.275	17.095	0.128	1.05	1.07	0.13	0.04	19.036	19.057	-0.23	1.35	-0.082	
B59/1 to B02/6	375	RRJ2	9.4	2	10	100	0.37	1.77	17.376	17.188	0.369	0.69	1.09	0.11	0.02	18.897	18.888	0.1	1.1	-0.081	
B60/1 to B02/7	375	RRJ2	9.37	2	20	32	0.12	1.05	17.215	17.028	0.374	4.5	4.5	0.12	0.02	18.755	18.745	0.11	1.1	-0.099	
B61/1 to B61/2	375	RRJ2	9.04	2	20	40	0.15	1.03	16.847	16.666	0.05	4.5	4.5	0.15	0.03	17.638	17.637	0.01	1.1	0.646	
B61/2 to B61/3	375	RRJ2	15.2	1	20	67	0.35	1.2	16.616	16.464	0.05	1.82	3.88	0.13	0.03	17.629	17.623	0.04	1.26	0.65	
B61/3 to B02/15	375	RRJ2	9	2	10	114	0.42	1.49	16.414	16.234	0.911	1.36	1.39	0.14	0.06	17.615	17.609	0.07	1.19	0.327	
B65/1 to B06/11	375	RRJ2	9	2	20	111	0.41	1.28	17.485	17.305	0.699	4.5	4.5	0.23	0.23	19.068	19.066	0.02	1.1	-0.199	
B66/1 to B19/13	375	RRJ2	9.03	1.5	10	-51	-0.22	0.91	17.096	16.961	0.05	4.5	4.5	0.12	0.04	18.503	18.501	0.02	1.1	0.014	
B67/1 to B08/4	375	RRJ2	10.35	1.2	10	27	0.13	0.74	17.532	17.408	0.05	4.5	4.5	0.09	0.01	19.024	19.009	0.14	1.1	-0.086	
B68/1 to B08/5	375	RRJ2	9.5	2	25	50	0.19	0.93	17.257	17.067	0.056	4.5	4.5	0.15	0.05	18.77	18.761	0.09	1.1	-0.094	
B69/1 to B08/6	375	RRJ2	10.53	2	25	47	0.17	1.01	16.985	16.774	0.12	4.5	4.5	0.15	0.04	18.515	18.505	0.09	1.1	-0.101	
B70/1 to B08/7	375	RRJ2	9.61	2	15	53	0.2	1.1	16.701	16.509	0.211	4.5	4.5	0.17	0.05	18.214	18.221	-0.07	1.1	-0.098	
B71/1 to B08/8	375	RRJ2	9.56	2	25	49	0.18	1.04	16.482	16.29	0.27	4.5	4.5	0.13	0.04	18.016	18.025	-0.09	1.1	-0.099	
B72/1 to B72/2	375	RRJ2	9.11	2	20	85	0.32	0.95	17.432	17.249	0.05	4.5	4.5	0.16	0.14	18.255	18.244	0.12	1.1	0.531	
B72/2 to B05/14	375	RRJ2	15.47	1	20	148	0.78	1.46	17.199	17.045	1.338	2.59	3.58	0.19	0.19	18.172	18.122	0.32	1.46	0.636	
B73/1 to B73/2	375	RRJ2	18.74	1	10	148	0.78	1.34	17.801	17.614	0.05	2.01	2.49	0.16	0.17	19.498	19.47	0.15	1.21	-0.101	
B73/2 to B73/3	375	RRJ2	9.02	2	10	168	0.63	1.53	17.564	17.384	0.05	2.07	2.53	0.21	0.23	19.377	19.358	0.21	1.4	-0.164	
B73/3 to B73/4	450	RRJ2	15.18	1	10	283	0.92	1.85	17.334	17.182	0.05	2.38	2.39	0.26	0.27	19.272	19.229	0.28	1.68	-0.124	
B73/4 to B05/11	450	RRJ2	9.91	2	10	328	0.75	2.48	17.132	16.934	0.43	0.27	0.27	0.13	0.06	19.213	19.182	0.31	1.93	0.263	
B75/1 to B75/2	375	RRJ2	20.62	1	20	104	0.54	1.23	16.928	16.722	0.05	1.92	2.21	0.16	0.1	18.337	18.299	0.18	1.1	0.07	
B75/2 to B03/21	375	RRJ2	9	2	10	126	0.47	1.56	16.672	16.492	0.632	2.17	2.62	0.17	0.17	18.225	18.205	0.22	1.3	0.008	
B76/1 to B05/14	375	RRJ2	11.81	2	15	54	0.2	1.24	17.646	17.41	1.703	4.5	4.5	0.17	0.06	18.128	18.122	0.05	1.1	0.948	
B77/1 to B08/9	375	RRJ2	9.07	2	25	-95	0.35	1.13	16.246	16.064	0.232	4.5	4.5	0.17	0.16	17.864	17.862	0.02	1.1	-0.192	
B78/1 to B02/18	375	RRJ2	9.12	2	10	-83	-0.31	0.88	16.361	16.179	1.259	4.5	4.5	0.14	0.03	17.119	17.11	0.1	1.1	0.678	
B99/1 to B99/2	1200	RRJ2	10.3	1	25	3612	0.86	3.59	14.55	14.447	0.05	0	0	0	0	16.396	16.364	0.31	2.25	1.776	GPT BYPASS CHAMBER
C01/1 to C01/2	375	RRJ2	22.7	1	15	38	0.2	0.93	17.978	17.751	0.03	4.5	4.5	0.13	0.03	19.437	19.443	-0.03	1.1	0.473	
C01/2 to C01/3	375	RRJ2	31.4	1	15	83	0.44	0.86	17.721	17.407	0.05	3	3	0.17	0.09	19.428	19.333	0.3	1.2	0.324	
C01/3 to C01/4	525	RRJ2	9	1	10	391	0.84	1.81	17.357	17.267	0.05	2.06	2.49	0.26	0.32	19.169	19.139	0.33	1.29	0.165	
C01/4 to C01/5	525	RRJ2	14.41	1	10	406	0.87	1.88	17.217	17.073	0.05	0.93	0.93	0.12	0.12	19.025	18.953	0.5	1.39	0.371	

B DRAINAGE TABLE UPDATED

I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature.....

PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

These plans are referred to in certificate no. 16635 approved by:
Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision
Land Development Certificates
www.LDC.com.au

B	DRAINAGE TABLE UPDATED	DG	VS	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

NEWPARK
PRECINCT 7, STAGE 7B
DRAINAGE CALCULATIONS
SHEET 10

PROJECT No: 9985-12
SHEET No: CC5420

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5420 | B

NOTE:
——— 1% AEP HGL PROVIDED FOR INFORMATION ONLY.
– – – – 5% AEP HGL

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VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

LDC
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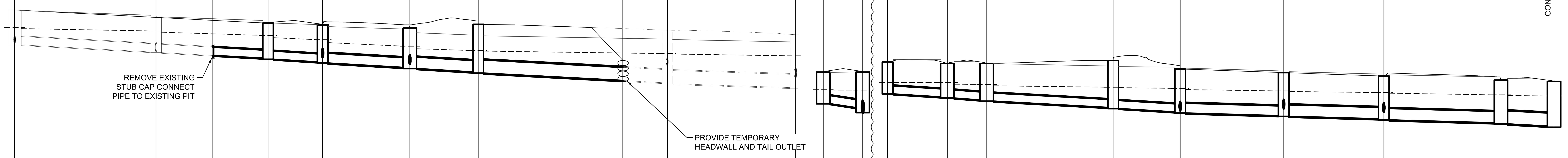
Pits

Pit	Notes
A04/3	2.4 m lintel, LINE A35 ✓
A04/4	1.8 m lintel, LINE A36 ✓
A04/4A	CAP
A04/5	1.8 m lintel ✓
A04/6	1.8 m lintel, LINE AF ✓
A04/7	2.4 m lintel sag, LINE A37 ✓
A04/8	1.8 m lintel ✓
A04/8A	**7D CONSTRUCTED** TEMPORARY HW
A04/9	1.8 m lintel, LINE A38 ✓
A04/10	1.8 m lintel ✓
A37/1	LINE A09, 2.4 m lintel sag ✓
A04/7	2.4 m lintel sag ✓
B02/1	1.8 m lintel ✓
B02/2	2.4 m lintel sag ✓
B02/3	2.4 m lintel sag ✓
B02/4	1.8 m lintel ✓
B02/5	1.8 m lintel, LINE B58 ✓
B02/6	1.8 m lintel, LINE B59 ✓
B02/7	1.8 m lintel, LINE B60 ✓
B02/8	2.4 m lintel sag ✓
B02/9	2.4 m lintel sag ✓

B (revision cloud)

PRECINCT 7C DRAINAGE (A04/3 to A04/4A)

PRECINCT 7D DRAINAGE (A04/8A to A04/10)



CONITUES ON DRAWING CC5422

LINE A04

DATUM (m) 10.00

Segment	PEAK FLOW (L/s)	PIPE SIZE (mm)	PIPE CLASS	PIPE GRADE (%)	PIPE COVER MINIMUM	FULL PIPE VELOCITY (m/s)	HGL GRADE (%)
A04/3 – A04/4	130	375	RRJ2	1.0	1.16	1.39	0.33
A04/4 – A04/5	157	375	RRJ2	1.0	1.18	1.50	0.56
A04/5 – A04/6	177	375 ✓	RRJ2	1.0 **1.5**	1.28	1.60	0.73
A04/6 – A04/7	304	450 ✓	RRJ2	1.0 **0.9**	1.39	1.91	0.8
A04/7 – A04/8	384	525 ✓	RRJ2	1.0 **0.95**	1.46	1.92	0.52
A04/8 – A04/9	358	600 ✓	RRJ2	1.0 **1.1**	1.57	2.11	0.26
A04/9 – A04/10	357	600 ✓	RRJ2	0.6	1.77	1.56	0.28

NOTE: 10% AEP VALUES SHOWN

Pit	WAE	HYDRAULIC GRADE LINE	INVERT LEVEL	DESIGN SURFACE LEVEL	ROAD CHAINAGE	PIPE CHAINAGE
A04/3		18.855 / 18.808	18.103 / 18.072	19.656	105.70	69.222
A04/4		18.702 / 18.645	17.749 / 17.719	19.318	137.99	101.515
A04/4A			17.589	19.183	137.99	114.442
A04/5		18.501 / 18.395	**17.50** 17.463 / 17.413 **17.42**	**19.04** 19.055	163.53	127.054
A04/6		18.304 / 18.17	**17.24** 17.289 / 17.239 **17.18**	**18.93** 18.978	172.16	139.504
A04/7		18.011 / 17.893	**17.01** 17.04 / 16.99 **16.95**	**18.81** 18.808	193.78	159.393
A04/8		17.812 / 17.786	**16.80** 16.834 / 16.784 **16.77**	**18.99** 19.003	124.30	174.995
A04/8A			16.454	18.809		207.980
A04/9		17.675 / 17.653	**16.28** 16.353 / 16.303 **16.25**	**18.71** 18.734	81.25	218.147
A04/10		17.57 / 17.536	16.127 / 16.077	18.532	52.50	247.347

LINE A37

DATUM (m) 12.00

Segment	PEAK FLOW (L/s)	PIPE SIZE (mm)	PIPE CLASS	PIPE GRADE (%)	PIPE COVER MINIMUM	FULL PIPE VELOCITY (m/s)	HGL GRADE (%)
A37/1 – A04/7	64	375 ✓	RRJ2	2.0 **1.1**	1.10	1.14	0.04

Pit	WAE	HYDRAULIC GRADE LINE	INVERT LEVEL	DESIGN SURFACE LEVEL	ROAD CHAINAGE	PIPE CHAINAGE
A37/1		18.015	17.391 **17.17**	18.804 **18.76**	193.86	0
A04/7		18.011 / 17.893	**17.08** 17.211 / 16.99 **16.95**	**18.81** 18.808	193.78	9

LINE B02

DATUM (m) 12.00

Segment	PEAK FLOW (L/s)	PIPE SIZE (mm)	PIPE CLASS	PIPE GRADE (%)	PIPE COVER MINIMUM	FULL PIPE VELOCITY (m/s)	HGL GRADE (%)
B02/1 – B02/2	26	375 ✓	RRJ2	1.0 **1.2**	1.10	0.60	0.01
B02/2 – B02/3	110	375 ✓	RRJ2	1.0 **1.3**	1.24	1.08	0.09
B02/3 – B02/4	124	375 ✓	RRJ2	1.0 **1.1**	1.31	1.44	0.23
B02/4 – B02/5	113	375 ✓	RRJ2	1.0 **0.8**	1.73	1.15	0.23
B02/5 – B02/6	193	450 ✓	RRJ2	0.5 **0.5**	1.48	1.26	0.25
B02/6 – B02/7	276	525 ✓	RRJ2	0.5 **0.6**	1.39	1.42	0.21
B02/7 – B02/8	314	525 ✓	RRJ2	0.5 **0.6**	1.54	1.60	0.29
B02/8 – B02/9	351	600 ✓	RRJ2	0.8 **1.2**	1.41	1.48	0.19

Pit	WAE	HYDRAULIC GRADE LINE	INVERT LEVEL	DESIGN SURFACE LEVEL	ROAD CHAINAGE	PIPE CHAINAGE
B02/1		18.359	17.834 **17.82**	19.285 **19.28**	120.30	0
B02/2		18.358 / 18.28	**17.66** 17.698 / 17.648 **17.61**	**19.22** 19.222	106.51	13.625
B02/3		18.272 / 18.209	**17.50** 17.558 / 17.508 **17.47**	**19.21** 19.223	106.51	22.625
B02/4		18.144 / 18.125	**17.16** 17.219 / 17.169 **17.15**	**19.34** 19.364	78.01	51.452
B02/5		18.09 / 18.036	**17.00** 17.016 / 16.966 **16.96**	**18.98** 18.973	95.00	66.744
B02/6		17.976 / 17.95	**16.85** 16.848 / 16.818 **16.84**	**18.80** 18.809	71.38	90.364
B02/7		17.902 / 17.873	**16.70** 16.704 / 16.654 **16.66**	**18.64** 18.648	48.54	113.203
B02/8		17.795 / 17.768	**16.50** 16.521 / 16.471 **16.48**	**18.46** 18.464	20.69	139.916
B02/9		17.745	**18.35** 16.374	**18.40** 18.408	12.51	152.037

H 1:500 (AT A1) — 10 0 10 20 30 40 50 METRES

V 1:100 (AT A1) — 2 1 0 1 2 3 4 5 6 7 8 9 10 METRES

	AMENDMENT	DES	DRN	CKD	APR	DATE
B	DRAINAGE LONG SECTION B02 UPDATED	DG	VS	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL

THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

NEWPARK
PRECINCT 7, STAGE 7B
LONGITUDINAL DRAINAGE SHEET 1

PROJECT No: 9985-12

SHEET No: CC5421

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5421 | B

Plotted: 14 September , 2021 12:53:04 PM File Name: J:\9985D\CC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCTS\5 - Precinct 7B\9985-12-CC5421.dwg

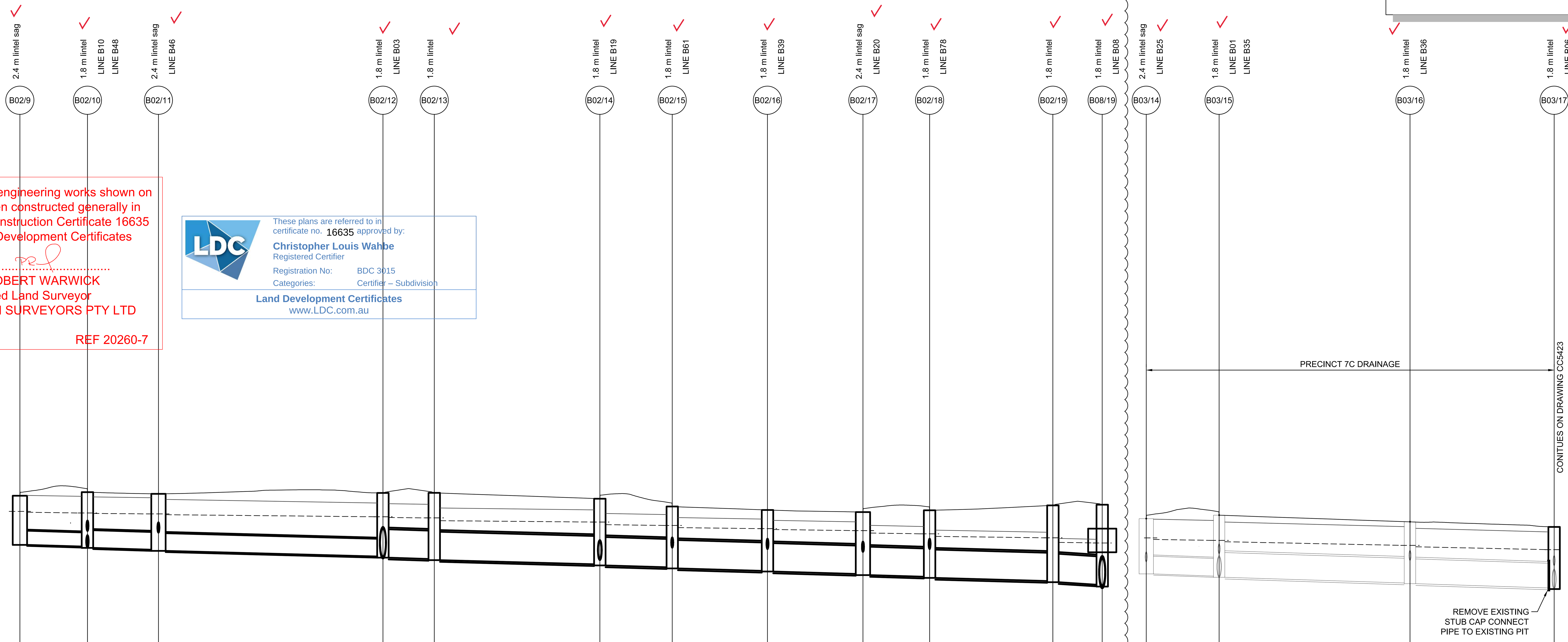
NOTE:
——— 1% AEP HGL PROVIDED FOR INFORMATION ONLY.
– – – – 5% AEP HGL

I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature..
PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

These plans are referred to in certificate no. 16635 approved by:
Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision
Land Development Certificates
www.LDC.com.au



DATUM (m) 10.00 (LINE B02); 12.00 (LINE B03)

NOTE: 10% AEP VALUES SHOWN

LINE B02

Pipe	B02/9–B02/10	B02/10–B02/11	B02/11–B02/12	B02/12–B02/13	B02/13–B02/14	B02/14–B02/15	B02/15–B02/16	B02/16–B02/17	B02/17–B02/18	B02/18–B02/19	B02/19–B08/19
PEAK FLOW (L/s)	387	506	578	3416	3421	3971	4010	4070	4109	4124	4130
PIPE SIZE (mm)	600 ✓	750 ✓	750 ✓	(2x)1200 ✓	(2x)1200 ✓	(2x)1200 ✓	(2x)1200 ✓	(2x)1200 ✓	(2x)1200 ✓	(2x)1200 ✓	(2x)1200 ✓
PIPE CLASS	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2
PIPE GRADE (%)	0.5 [0.6]	0.5 [0.6]	0.5 [0.5]	0.5 ✓	0.5 [0.5]	0.5 [0.7]	0.5 [0.5]	0.5 [0.8]	0.5 [0.5]	0.5 [0.7]	1.0 [0.5]
PIPE COVER MINIMUM	1.62	1.56	1.62	1.52	1.52	1.47	1.32	1.33	1.56	1.60	2.04
FULL PIPE VELOCITY (m/s)	1.51	1.63	1.76	1.79	1.62	1.84	1.97	1.91	1.82	1.82	1.83
HGL GRADE (%)	0.23	0.13	0.19	0.17	0.16	0.23	0.23	0.23	0.23	0.24	0.24

Pit	B02/9	B02/10	B02/11	B02/12	B02/13	B02/14	B02/15	B02/16	B02/17	B02/18	B02/19	B08/19
WAE												
HYDRAULIC GRADE LINE	17.745 / 17.708	17.675 / 17.657	17.637 / 17.604	17.514 / 17.485	17.467 / 17.349	17.291 / 17.18	17.145 / 17.056	17.01 / 16.974	16.927 / 16.824	16.791 / 16.683	16.621 / 16.429	16.404 / 16.193
INVERT LEVEL	[16.34] 16.374 / 16.324 [16.30]	[16.21] 16.252 / 16.194 [16.18]	[16.12] 16.119 / 16.069 [16.06]	[15.83] 15.831 / 15.781 [15.78]	[15.72] 15.726 / 15.676 [15.68]	[15.49] 15.5 / 15.45 [15.47]	[15.38] 15.373 / 15.323 [15.32]	[15.23] 15.222 / 15.192 [15.22]	[15.08] 15.091 / 15.041 [15.01]	[14.95] 14.97 / 14.92 [14.93]	[14.75] 14.789 / 14.739 [14.67]	[14.62] 14.634 / 14.551 [14.57]
DESIGN SURFACE LEVEL	18.408 [18.40]	[18.55] 18.561	[18.48] 18.49	[18.50] 18.526	[18.52] 18.53	[18.27] 18.284	[17.93] 17.951	[17.79] 17.805	[17.70] 17.716	[17.77] 17.79	[17.99] 17.997	[18.02] 18.027
ROAD CHAINAGE	12.51	329.14	314.31	266.76	260.62	225.46	336.56	356.79	377.06	659.63	685.81	691.17
PIPE CHAINAGE	152.037	166.389	181.459	229.126	240.025	275.181	290.556	310.78	331.049	345.199	371.379	381.856

LINE B02

LINE B03

Pipe	B03/14–B03/15	B03/15–B03/16	B03/16–B03/17
PEAK FLOW (L/s)	684	1835	1887
PIPE SIZE (mm)	750	1050	1050
PIPE CLASS	RRJ2	RRJ2	RRJ2
PIPE GRADE (%)	0.6	0.6	0.6
PIPE COVER MINIMUM	1.73	1.48	1.48
FULL PIPE VELOCITY (m/s)	1.55	2.42	2.24
HGL GRADE (%)	0.26	0.38	0.41

Pit	B03/14	B03/15	B03/16	B03/17
WAE				
HYDRAULIC GRADE LINE	18.616 / 18.553	18.512 / 18.455	18.3 / 18.242	18.118 / 18.083
INVERT LEVEL	17.141 / 17.091	16.998 / 16.948	16.704 / 16.674	16.491 / 16.448
DESIGN SURFACE LEVEL	19.434	19.582	19.298	19.084
ROAD CHAINAGE	15.63	86.26	126.79	157.39
PIPE CHAINAGE	276.688	292.171	332.7	363.304

LINE B03

H 1:500 (AT A1) 10 0 10 20 30 40 50 METRES

V 1:100 (AT A1) 2 1 0 1 2 3 4 5 6 7 8 9 10 METRES

Plotted: 14 September , 2021 12:53:18 PM File Name: J:\9985D\CC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCTS\5 - Precinct 7B\9985-12-CC5422.dwg

	AMENDMENT	DES	DRN	CKD	APR	DATE
B	DRAINAGE LONG SECTION B02 UPDATED	DG	VS	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21

J. WYNDHAM PRINCE
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CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
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NEWPARK
PRECINCT 7, STAGE 7B
LONGITUDINAL DRAINAGE SHEET 2

PROJECT No: 9985-12
SHEET No: CC5422

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5422 | B

NOTE:
——— 1% AEP HGL PROVIDED FOR INFORMATION ONLY.
– – – – 5% AEP HGL

Pit	B03/17	B03/18	B03/19	B03/20	B03/21	B02/12	B04/1	B04/2	B04/3	B04/4	B04/5	B04/6	B04/7
Lintel	1.8 m lintel ✓	1.8 m lintel ✓	2.4 m lintel ✓	1.8 m lintel ✓	2.4 m lintel sag ✓	1.8 m lintel ✓	1.8 m lintel ✓	1.8 m lintel ✓	1.8 m lintel ✓	1.8 m lintel ✓	1.8 m lintel ✓	2.4 m lintel sag ✓	2.4 m lintel sag ✓
Connecting lines	LINE B06, LINE B37			LINE B04	LINE B75	LINE B02	LINE BJ	LINE B31		LINE B32			

CONITUES ON DRAWING CC5422

CONITUES ON DRAWING CC5424

I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature.......................................
PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

These plans are referred to in certificate no. 16635 approved by:
Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision
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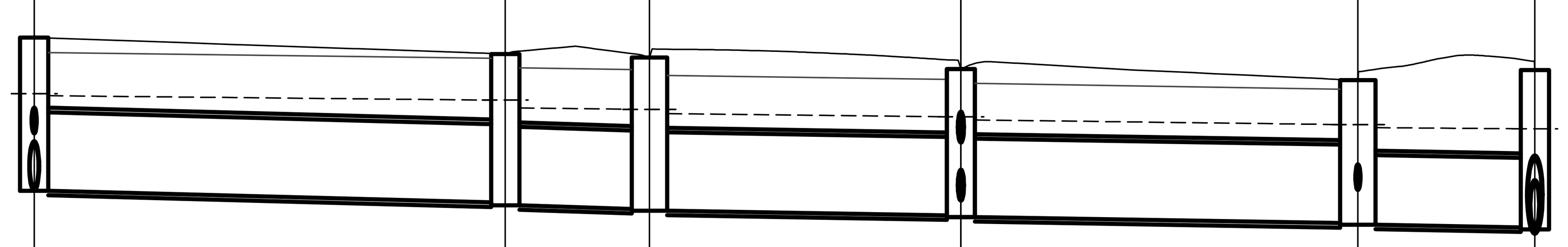
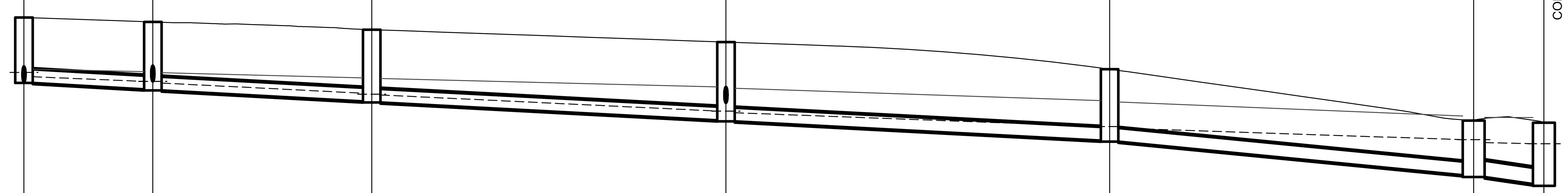
www.LDC.com.au





LINE B03

DATUM (m) 12.00

	B03/17 – B03/18	B03/18 – B03/19	B03/19 – B03/20	B03/20 – B03/21	B03/21 – B02/12
PEAK FLOW (L/s)	2516	2535	2567	2800	2891
PIPE SIZE (mm)	1350 ✓	1350 ✓	1350 ✓	1350 ✓	(2x)1200 ✓
PIPE CLASS	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2
PIPE GRADE (%)	0.5 **0.5**	0.5 **0.5**	0.3 **0.3**	0.3 **0.2**	0.3 **0.5**
PIPE COVER MINIMUM	1.14	1.23	1.25	1.04	1.38
FULL PIPE VELOCITY (m/s)	2.00	1.87	2.02	2.36	1.48
HGL GRADE (%)	0.19	0.19	0.2	0.23	0.12

NOTE: 10% AEP VALUES SHOWN

	B03/17	B03/18	B03/19	B03/20	B03/21	B02/12
WAE						
HYDRAULIC GRADE LINE	18.118 / 18.083	18.006 / 17.873	17.849 / 17.773	17.719 / 17.666	17.586 / 17.532	17.514 / 17.486
INVERT LEVEL	**16.43** 16.491 / 16.448 **16.39**	**16.19** 16.245 / 16.195 **16.14**	**16.09** 16.133 / 16.103 **16.08**	**16.00** 16.022 / 15.992 **15.98**	**15.93** 15.89 / 15.86 **15.89**	**15.82** 15.814 / 15.781 **15.78**
DESIGN SURFACE LEVEL	19.084 **19.10**	**18.79** 18.801	**18.73** 18.741	**18.52** 18.541	**18.34** 18.35	**18.50** 18.526
ROAD CHAINAGE	157.39	197.86	206.43	235.00	269.34	266.76
PIPE CHAINAGE	363.304	403.869	416.286	443.107	477.295	492.53

LINE B04

DATUM (m) 12.00

	B04/1 – B04/2	B04/2 – B04/3	B04/3 – B04/4	B04/4 – B04/5	B04/5 – B04/6	B04/6 – B04/7
PEAK FLOW (L/s)	107	129	129	160	164	182
PIPE SIZE (mm)	375 ✓	375 ✓	375 ✓	375 ✓	375 ✓	450 ✓
PIPE CLASS	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2
PIPE GRADE (%)	1.0 **1.3**	1.0 **1.2**	1.0 **1.0**	1.0 **1.0**	1.8 **1.8**	2.0 **2.0**
PIPE COVER MINIMUM	1.40	1.48	1.60	1.60	1.12	1.13
FULL PIPE VELOCITY (m/s)	1.34	1.74	1.74	1.82	2.04	1.49
HGL GRADE (%)	0.72	0.93	0.91	0.72	0.63	0.33

	B04/1	B04/2	B04/3	B04/4	B04/5	B04/6	B04/7
WAE							
HYDRAULIC GRADE LINE	19.797	19.667 / 19.622	19.339 / 19.291	18.844 / 18.798	18.414 / 18.371	18.05 / 17.969	17.937 / 17.876
INVERT LEVEL	19.627 **19.63**	**19.40** 19.447 / 19.417 **19.37**	**19.05** 19.113 / 19.083 **19.03**	**18.54** 18.589 / 18.559 **18.53**	**17.99** 18.025 / 17.995 **17.97**	**17.03** 17.064 / 17.014 **16.99**	**16.81** 16.819 / 16.769 **16.74**
DESIGN SURFACE LEVEL	21.443 **21.44**	**21.31** 21.317	**21.10** 21.104	**20.75** 20.759	**20.00** 20.006	**18.59** 18.578	**18.52** 18.518
ROAD CHAINAGE	218.16	200.22	169.73	120.40	66.97	16.28	12.42
PIPE CHAINAGE	0	17.942	48.43	97.759	151.191	201.884	211.676

H 1:500 (AT A1) 10 0 10 20 30 40 50 METRES

V 1:100 (AT A1) 2 1 0 1 2 3 4 5 6 7 8 9 10 METRES

A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
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NEWPARK
PRECINCT 7, STAGE 7B
LONGITUDINAL DRAINAGE SHEET 3

PROJECT No: 9985-12
SHEET No: CC5423

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5423 | A

NOTE:
—— 1% AEP HGL PROVIDED FOR INFORMATION ONLY.
– – – – 5% AEP HGL

Pit	Note	Line
B04/7	2.4 m lintel sag ✓	
B04/8	1.8 m lintel ✓	
B03/20	1.8 m lintel ✓	LINE B03
B05/1	1.8 m lintel ✓	LINE BK
B05/2	1.8 m lintel ✓	
B05/3	2.4 m lintel ✓	LINE B56
B05/4	2.4 m lintel ✓	LINE BL
B05/5	2.4 m lintel sag ✓	
B05/6	2.4 m lintel sag ✓	
B05/7	1.8 m lintel ✓	LINE B49
B05/8	1.8 m lintel ✓	
B05/9	1.8 m lintel ✓	
B05/10	1.8 m lintel ✓	LINE B50
B05/11	1.8 m lintel ✓	LINE B73
B05/12	1.8 m lintel ✓	
B05/13	1.8 m lintel ✓	
B05/14	1.8 m lintel ✓	LINE B72, LINE B76

I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature......[signature]......
PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

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Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision
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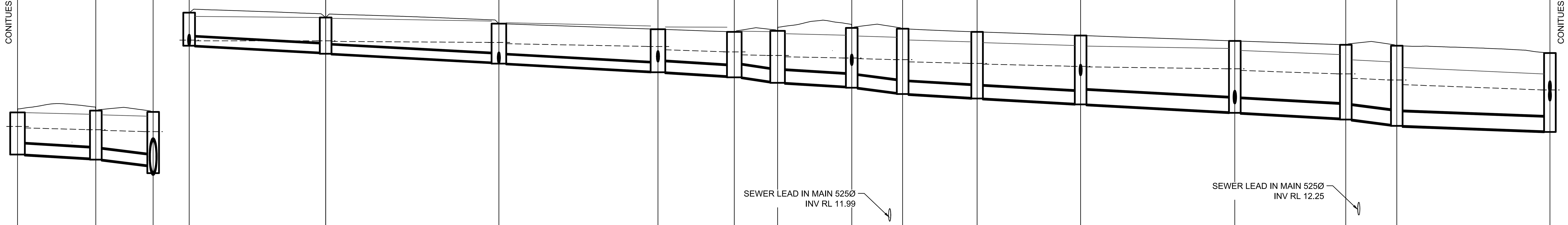
CONITUES ON DRAWING CC5423

CONITUES ON DRAWING CC5425



DATUM (m): LINE B04 12.00; LINE B05 10.00

NOTE: 10% AEP VALUES SHOWN

Pipe	PEAK FLOW (L/s)	PIPE SIZE (mm)	PIPE CLASS	PIPE GRADE (%)	PIPE COVER MINIMUM	FULL PIPE VELOCITY (m/s)	HGL GRADE (%)
B04/7 – B04/8	214	450 ✓	RRJ2	1.0 1.0	1.44	1.69	0.46
B04/8 – B03/20	212	450 ✓	RRJ2	2.0 ✓	1.60	2.26	0.47
B05/1 – B05/2	72	375 ✓	RRJ2	1.0 1.0	1.11	1.34	-0.01
B05/2 – B05/3	90	375 ✓	RRJ2	1.0 1.2	1.24	1.30	0.12
B05/3 – B05/4	137	375 ✓	RRJ2	1.0 1.0	1.24	1.33	0.35
B05/4 – B05/5	280	450 ✓	RRJ2	1.0 1.3	1.29	1.76	0.55
B05/5 – B05/6	307	525 ✓	RRJ2	2.0 2.0	1.40	1.52	0.3
B05/6 – B05/7	335	525 ✓	RRJ2	1.0 1.7	1.79	1.85	0.34
B05/7 – B05/8	350	525 ✓	RRJ2	2.0 2.00	1.98	2.30	0.41
B05/8 – B05/9	344	525 ✓	RRJ2	1.0 0.95	2.14	1.78	0.41
B05/9 – B05/10	366	525 ✓	RRJ2	1.0 1.0	2.20	2.07	0.44
B05/10 – B05/11	351	600 ✓	RRJ2	1.0 1.1	2.21	1.72	0.25
B05/11 – B05/12	541	600 ✓	RRJ2	1.0 1.2	2.34	1.94	0.63
B05/12 – B05/13	558	600 ✓	RRJ2	2.0 1.6	2.52	1.97	0.67
B05/13 – B05/14	576	600 ✓	RRJ2	0.7 0.5	2.63	2.04	0.7

Pit	WAE	HYDRAULIC GRADE LINE	INVERT LEVEL	DESIGN SURFACE LEVEL	ROAD CHAINAGE	PIPE CHAINAGE
B04/7		17.937 / 17.876	16.81 16.819 / 16.769 16.74	18.52 18.518	12.42	211.676
B04/8		17.801 / 17.775	16.57 16.606 / 16.556 16.53	18.58 18.596	227.14	227.979
B03/20		17.719 / 17.666	16.28 16.317 / 15.992 15.98	18.53 18.541	235.00	239.916
B05/1		19.499	19.297 19.26	20.673 20.67	251.46	0
B05/2		19.501 / 19.476	18.98 19.013 / 18.963 18.92	20.47 20.471	280.30	28.426
B05/3		19.434 / 19.381	18.52 18.602 / 18.552 18.49	20.21 20.215	316.87	64.491
B05/4		19.264 / 19.128	18.18 18.221 / 18.191 18.16	19.98 19.983	350.00	97.622
B05/5		19.041 / 18.917	17.95 18.032 / 17.982 17.93	19.89 19.874	365.89	113.516
B05/6		18.89 / 18.837	17.75 17.801 / 17.751 17.71	19.91 19.917	366.52	122.537
B05/7		18.785 / 18.759	17.48 17.597 / 17.547 17.42	20.01 20.039	189.76	137.982
B05/8		18.716 / 18.625	17.28 17.335 / 17.285 17.25	19.98 20.003	184.16	148.578
B05/9		18.561 / 18.533	17.12 17.13 / 17.1 17.09	19.85 19.872	168.66	164.082
B05/10		18.439 / 18.417	16.89 16.884 / 16.854 16.87	19.69 19.721	147.11	185.637
B05/11		18.337 / 18.268	16.54 16.533 / 16.503 16.50	19.47 19.497	115.00	217.743
B05/12		18.123 / 17.94	16.22 16.272 / 16.222 16.18	19.30 19.335	91.88	240.859
B05/13		17.869 / 17.677	16.01 16.01 / 15.96 15.94	19.24 19.295	86.25	251.476
B05/14		17.454 / 17.405	15.79 15.737 / 15.707 15.77	18.98 18.991	54.36	283.365

LINE B04 LINE B05

H 1:500 (AT A1) 10 0 10 20 30 40 50 METRES

V 1:100 (AT A1) 2 1 0 1 2 3 4 5 6 7 8 9 10 METRES

	AMENDMENT	DES	DRN	CKD	APR	DATE
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

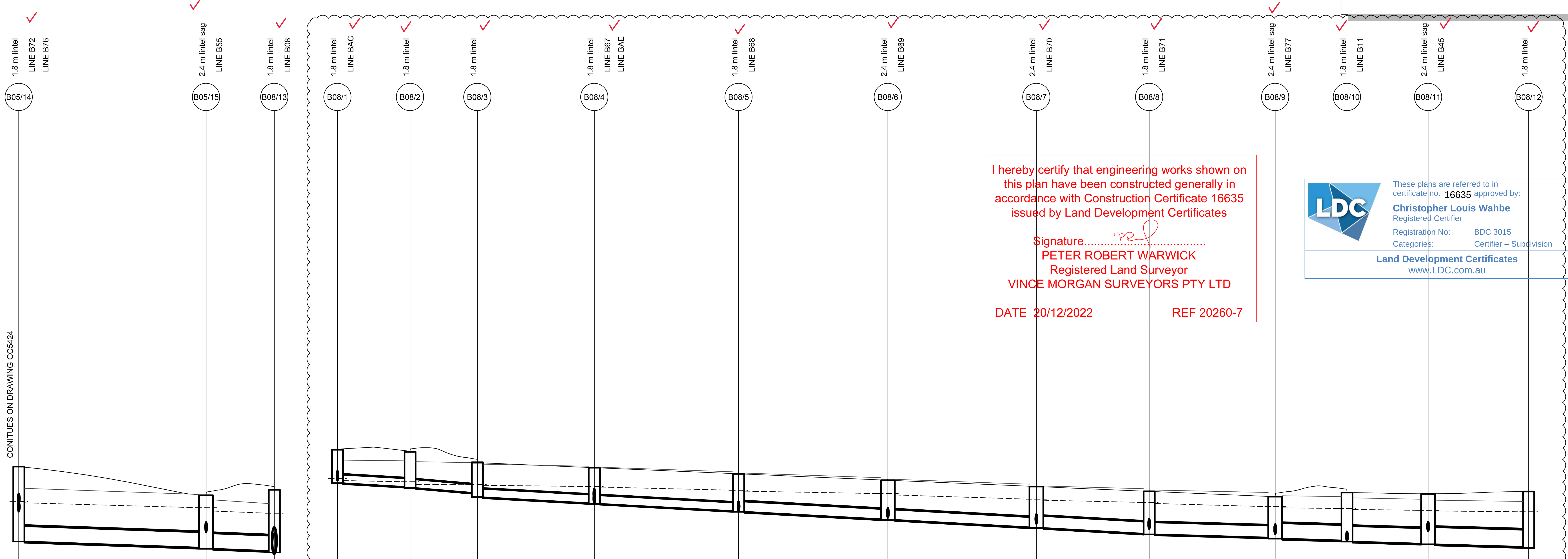
STATUS: ISSUE FOR CONSTRUCTION APPROVAL
THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

NEWPARK
PRECINCT 7, STAGE 7B
LONGITUDINAL DRAINAGE SHEET 4

PROJECT No: 9985-12
SHEET No: CC5424

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5424 | A

NOTE:
——— 1% AEP HGL PROVIDED FOR INFORMATION ONLY.
– – – – 5% AEP HGL



I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature..................................
PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

LDC
These plans are referred to in certificate no. 16635 approved by:
Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision
Land Development Certificates
www.LDC.com.au

LINE B05

DATUM (m) 10.00

Pipe	PEAK FLOW (L/s)	PIPE SIZE (mm)	PIPE CLASS	PIPE GRADE (%)	PIPE COVER MINIMUM	FULL PIPE VELOCITY (m/s)	HGL GRADE (%)
B05/14 – B05/15	663	675 ✓	RRJ2	0.7 0.7	1.59	1.85	0.53
B05/15 – B08/13	731	675 ✓	RRJ2	0.6 1.0	1.81	2.04	0.63

NOTE: 10% AEP VALUES SHOWN

Pit	WAE	HYDRAULIC GRADE LINE	INVERT LEVEL	DESIGN SURFACE LEVEL	ROAD CHAINAGE	PIPE CHAINAGE
B05/14		17.454 17.405	15.79 15.737 15.707 15.77	18.991 18.98	54.36	283.365
B05/15		17.189 17.043	15.49 15.44 15.39 15.45	17.75 17.734	13.28	324.45
B08/13		16.948 16.927	15.29 15.292 15.224 15.23	17.96 17.975	848.07	339.412

LINE B08

DATUM (m) 10.00

Pipe	PEAK FLOW (L/s)	PIPE SIZE (mm)	PIPE CLASS	PIPE GRADE (%)	PIPE COVER MINIMUM	FULL PIPE VELOCITY (m/s)	HGL GRADE (%)
B08/1 – B08/2	75	375 ✓	RRJ2	1.0 1.4	1.10	1.15	0.14
B08/2 – B08/3	128	375 ✓	RRJ2	1.4 2.0	1.12	1.57	0.05
B08/3 – B08/4	131	375 ✓	RRJ2	1.0 1.1	1.10	1.48	0.27
B08/4 – B08/5	166	375 ✓	RRJ2	1.0 1.2	1.17	1.67	0.44
B08/5 – B08/6	224	450 ✓	RRJ2	1.0 1.0	1.16	1.64	0.33
B08/6 – B08/7	268	450 ✓	RRJ2	1.0 1.0	1.24	1.82	0.58
B08/7 – B08/8	327	525 ✓	RRJ2	1.0 1.0	1.24	1.62	0.41
B08/8 – B08/9	372	525 ✓	RRJ2	0.5 0.5	1.24	1.72	0.52
B08/9 – B08/10	469	675 ✓	RRJ2	0.5 0.9	1.31	1.49	0.2
B08/10 – B08/11	466	675 ✓	RRJ2	0.5 0.5	1.42	1.56	0.23
B08/11 – B08/12	508	750 ✓	RRJ2	0.5 0.5	1.41	1.68	0.17

Pit	WAE	HYDRAULIC GRADE LINE	INVERT LEVEL	DESIGN SURFACE LEVEL	ROAD CHAINAGE	PIPE CHAINAGE
B08/1		18.359	18.244 18.22	19.714 19.67	42.90	0
B08/2		18.336 18.258	18.02 18.085 18.035 18.01	19.57 19.622	56.04	15.921
B08/3		18.25 18.215	17.73 17.825 17.644 17.61	19.15 19.165	190.05	30.686
B08/4		18.147 18.111	17.32 17.388 17.358 17.30	18.92 18.946	164.41	56.335
B08/5		17.971 17.93	16.96 17.041 17.011 16.95	18.66 18.675	132.75	87.994
B08/6		17.821 17.76	16.65 16.684 16.654 16.63	18.37 18.396	100.00	120.74
B08/7		17.571 17.526	16.32 16.328 16.298 16.31	18.11 18.118	67.44	153.303
B08/8		17.425 17.381	16.06 16.051 16.021 16.03	17.90 17.907	42.69	178.053
B08/9		17.237 17.186	15.92 15.882 15.832 15.87	17.67 17.678	15.04	205.695
B08/10		17.155 17.116	15.74 15.754 15.704 15.72	17.84 17.855	917.14	221.449
B08/11		17.075 17.048	15.63 15.615 15.585 15.60	17.80 17.798	899.35	239.241
B08/12		17.011 16.998	15.49 15.474 15.424 15.44	17.88 17.901	877.50	261.3

H 1:500 (AT A1) 10 0 10 20 30 40 50 METRES
V 1:100 (AT A1) 2 1 0 1 2 3 4 5 6 7 8 9 10 METRES

	AMENDMENT	DES	DRN	CKD	APR	DATE
B	DRAINAGE LONG SECTION B08 UPDATED	DG	VS	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21

J. WYNDHAM PRINCE
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P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
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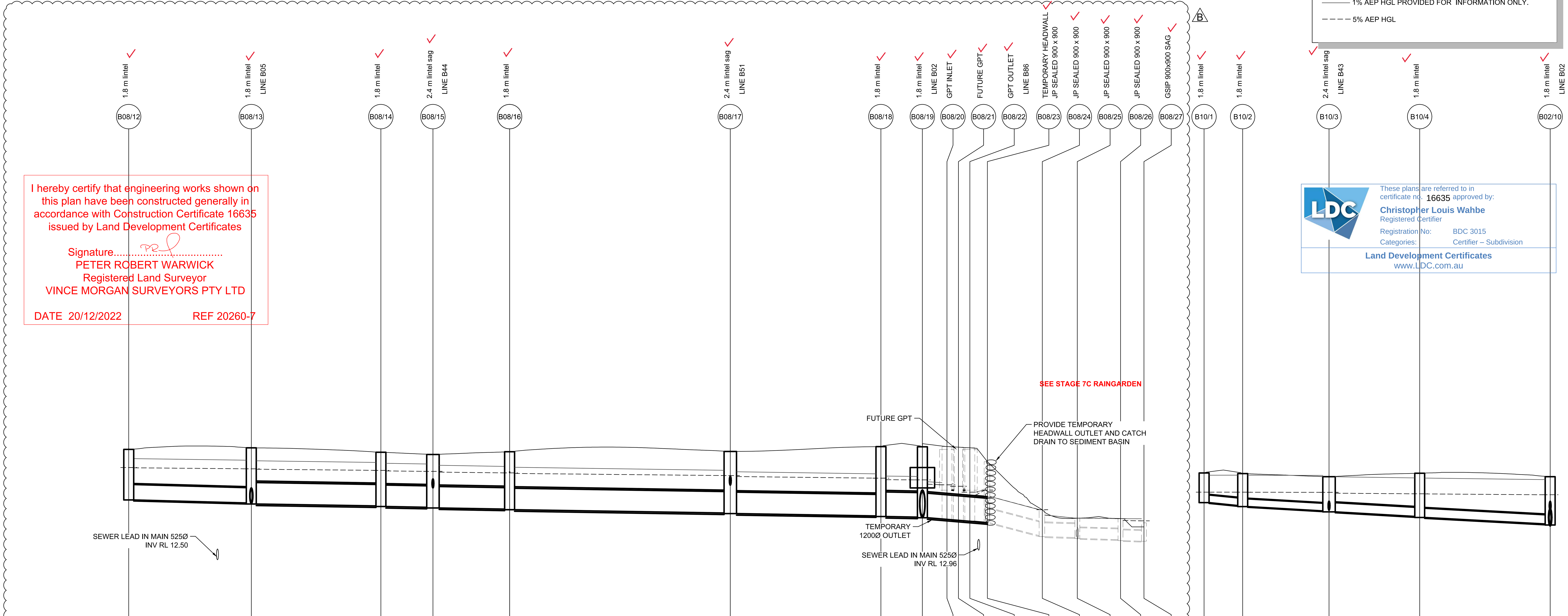
NEWPARK
PRECINCT 7, STAGE 7B
LONGITUDINAL DRAINAGE SHEET 5

PROJECT No: 9985-12
SHEET No: CC5425
AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5425 | B

Plotted: 14 September , 2021 12:54:08 PM File Name: J:\9985D\CC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCTS\5 - Precinct 7B\9985-12-CC5425.dwg

NOTE:
——— 1% AEP HGL PROVIDED FOR INFORMATION ONLY.
– – – – 5% AEP HGL



I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature..
PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

These plans are referred to in certificate no. 16635 approved by:
Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision
Land Development Certificates
www.LDC.com.au

LINE B08

DATUM (m) 9.00

NOTE: 10% AEP VALUES SHOWN

Pipe	PEAK FLOW (L/s)	PIPE SIZE (mm)	PIPE CLASS	PIPE GRADE (%)	PIPE COVER MINIMUM	FULL PIPE VELOCITY (m/s)	HGL GRADE (%)
B08/12–B08/13	490	750 ✓	RRJ2	0.5 0.5	1.69	1.19	0.17
B08/13–B08/14	1219	1050 ✓	RRJ2	0.3 0.3	1.52	1.73	0.17
B08/14–B08/15	1243	1050 ✓	RRJ2	0.3 0.3	1.48	1.72	0.18
B08/15–B08/16	1288	1050 ✓	RRJ2	0.3 0.5	1.50	1.85	0.19
B08/16–B08/17	1294	1050 ✓	RRJ2	0.3 0.3	1.74	1.66	0.19
B08/17–B08/18	1369	1050 ✓		0.3 0.4	1.92	1.58	0.21
B08/18–B08/19	1369	1200 ✓	RRJ2	0.3 ✓	2.21	1.21	0.11
B08/19–B08/20	2974	1200 ✓	RRJ2	1.0 ✓	2.29	2.63	0.5
B08/20–B08/21	2300	GPT ✓	INLET	-0.0 ✓	2.11	1.02	0.04
B08/21–B08/22	2303	GPT ✓	OUTLET	-0.0 ✓	2.09	1.15	0.72
B08/22–B08/23	3229	1200 ✓	RRJ2	1.0 ✓	1.86	2.87	-5.78
B08/23–B08/24	1381	675 ✓	RRJ2	4.7 ✓	0.64	3.86	4.68
B08/24–B08/25	1160	675 ✓	RRJ2	0.5 ✓	0.20	3.24	1.76
B08/25–B08/26	224	525 ✓	RRJ2	0.5 ✓	0.43	1.04	0.23
B08/26–B08/27	224	525 ✓	RRJ2	0.5 ✓	0.12	1.04	0.23

Pit	WAE	HYDRAULIC GRADE LINE	INVERT LEVEL	DESIGN SURFACE LEVEL	ROAD CHAINAGE	PIPE CHAINAGE
B08/12		17.011 / 16.998	15.49 / 15.474 / 15.424 / 15.44	17.901 / 17.88	877.50	261.3
B08/13		16.947 / 16.927	15.29 / 15.274 / 15.224 / 15.23	17.96 / 17.975	848.07	291.345
B08/14		16.872 / 16.844	15.15 / 15.129 / 15.099 / 15.13	17.73 / 17.757	816.95	323.102
B08/15		16.821 / 16.784	15.09 / 15.061 / 15.031 / 15.07	17.66 / 17.651	804.46	335.856
B08/16		16.748 / 16.721	14.97 / 14.974 / 14.944 / 14.96	17.77 / 17.785	786.06	354.647
B08/17		16.616 / 16.568	14.82 / 14.782 / 14.752 / 14.78	17.79 / 17.799	732.82	408.735
B08/18		16.489 / 16.415	14.62 / 14.641 / 14.611 / 14.61	18.01 / 18.035	695.90	445.654
B08/19		16.404 / 16.193	14.581 / 14.551	18.06 / 18.027	691.17	455.819
B08/20		16.163 / 16.093	14.491 / 14.4	18.05 / 18.037	691.17	461.839
B08/21		16.092 / 15.816	14.4 / 14.4	18.06 / 18.01		464.653
B08/22		15.796 / 15.63	14.4 / 14.4	18.06 / 17.98		467.445
B08/23		15.878 / 15.573	14.357 / 14.307	17.33 / 17.3		471.738
B08/24		14.942 / 14.681	13.675 / 13.625	15.1 / 14.94		485.21
B08/25		14.53	13.582 / 13.532	14.60 / 14.528		493.789
B08/26		14.506 / 14.413	13.47 / 13.479 / 13.429 / 13.45	14.61 / 14.509		504.382
B08/27		14.4	13.43 / 13.4 / 13.4 / 13.43	14.32 / 14.3		510.116

LINE B10

DATUM (m) 11.00

Pipe	PEAK FLOW (L/s)	PIPE SIZE (mm)	PIPE CLASS	PIPE GRADE (%)	PIPE COVER MINIMUM	FULL PIPE VELOCITY (m/s)	HGL GRADE (%)
B10/1–B10/2	-24	375 ✓	RRJ2	1.5 1.0	1.10	0.82	-0.02
B10/2–B10/3	-35	375 ✓	RRJ2	1.0 1.1	1.20	0.66	0.03
B10/3–B10/4	164	450 ✓	RRJ2	1.0 1.0	1.25	1.51	0.13
B10/4–B02/10	139	450 ✓	RRJ2	1.0 0.8	1.68	1.25	0.13

Pit	WAE	HYDRAULIC GRADE LINE	INVERT LEVEL	DESIGN SURFACE LEVEL	ROAD CHAINAGE	PIPE CHAINAGE
B10/1		17.801	17.29 / 17.17	18.742 / 18.72	406.25	0
B10/2		17.803 / 17.8	17.07 / 17.148 / 17.098 / 17.04	18.70 / 18.716	403.33	9.463
B10/3		17.794 / 17.752	16.80 / 16.886 / 16.836 / 16.78	18.57 / 18.562	382.50	30.62
B10/4		17.723 / 17.717	16.55 / 16.614 / 16.564 / 16.53	18.68 / 18.729	360.62	52.843
B02/10		17.675 / 17.657	16.29 / 16.244 / 16.194 / 16.20	18.55 / 18.561	329.14	84.817

H 1:500 (AT A1) 10 0 10 20 30 40 50 METRES

V 1:100 (AT A1) 2 1 0 1 2 3 4 5 6 7 8 9 10 METRES

	AMENDMENT	DES	DRN	CKD	APR	DATE
B	DRAINAGE LONG SECTION B08 UPDATED	DG	VS	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21

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NEWPARK
PRECINCT 7, STAGE 7B
LONGITUDINAL DRAINAGE SHEET 6

PROJECT No: 9985-12
SHEET No: CC5426

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5426 | B

Plotted: 14 September , 2021 12:54:22 PM File Name: J:\9985D\CC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCTS\5 - Precinct 7B\9985-12-CC5426.dwg

NOTE:
——— 1% AEP HGL PROVIDED FOR INFORMATION ONLY.
– – – – 5% AEP HGL

Pit	Notes
B11/1	2.4 m lintel sag ✓
B11/2	2.4 m lintel sag ✓
B08/10	1.8 m lintel, LINE B08 ✓
B19/10	2.4 m lintel ✓
B19/11	2.4 m lintel, LINE B41 ✓
B19/12	2.4 m lintel, LINE B42 ✓
B19/13	1.8 m lintel, LINE B66 ✓
B19/14	2.4 m lintel sag, LINTEL CONSTRUCTION ONLY ✓
B19/15	2.4 m lintel sag, LINTEL CONSTRUCTION ONLY ✓
B19/16	1.8 m lintel ✓
B02/14	1.8 m lintel, LINE B02 ✓
B20/1	2.4 m lintel sag ✓
B02/17	2.4 m lintel sag, LINE B02 ✓
B26/1	2.4 m lintel ✓
B26/2	1.8 m lintel ✓
B06/5	1.8 m lintel, LINE B06 ✓
B31/1	1.8 m lintel ✓
B04/2	1.8 m lintel, LINE B04 ✓
B32/1	1.8 m lintel ✓
B04/4	1.8 m lintel, LINE B04 ✓
B37/1	2.4 m lintel ✓
B03/17	1.8 m lintel, LINE B03 ✓
B39/1	1.8 m lintel, LINE BAB ✓
B02/16	1.8 m lintel, LINE B02 ✓
B43/1	2.4 m lintel sag ✓
B10/3	2.4 m lintel sag, LINE B10 ✓

These plans are referred to in certificate no. 16635 approved by:
Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision
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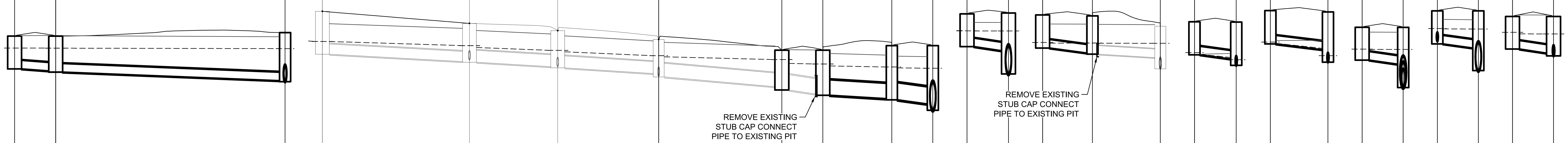
Signature.......PR.......
PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

PRECINCT 7C DRAINAGE (B19/10 to B19/15)

PRECINCT 7C DRAINAGE (B26/2 to B06/5)



NOTE: 10% AEP VALUES SHOWN

LINE B11 (DATUM 11.00 m)

Pipe	PEAK FLOW (L/s)	PIPE SIZE (mm)	PIPE CLASS	PIPE GRADE (%)	PIPE COVER MINIMUM	FULL PIPE VELOCITY (m/s)	HGL GRADE (%)
B11/1 – B11/2	-94	375 ✓	RRJ2	1.0 **0.5**	1.10	0.92	0.02
B11/2 – B08/10	-111	375 ✓	RRJ2	0.8 **0.9**	1.17	1.01	0.04

Pit	WAE	HYDRAULIC GRADE LINE	INVERT LEVEL	DESIGN SURFACE LEVEL	ROAD CHAINAGE	PIPE CHAINAGE
B11/1		17.177, 17.175	16.263, **16.22**, **16.18**, 16.173	17.701, **17.68**	967.48	0
B11/2		17.172, 17.153	16.123, **16.15**, **15.77**, 15.746	17.701, **17.69**, **17.84**	967.48	9
B08/10		17.114	15.704, **15.72**	17.855	917.14	59.347

LINE B19

Pipe	PEAK FLOW (L/s)	PIPE SIZE (mm)	PIPE CLASS	PIPE GRADE (%)	PIPE COVER MINIMUM	FULL PIPE VELOCITY (m/s)	HGL GRADE (%)
B19/10 – B19/11	269	450	RRJ2	1.0	1.21	1.86	0.56
B19/11 – B19/12	411	525	RRJ2	1.0	1.13	1.98	0.65
B19/12 – B19/13	461	525	RRJ2	1.1	1.10	2.23	0.77
B19/13 – B19/14	476	600	RRJ2	1.6	1.10	2.44	0.45
B19/14 – B19/15	513	675 ✓	RRJ2	2.0	1.10	1.56	0.28
B19/15 – B19/16	548	675 ✓	RRJ2	1.0 **1.4**	1.44	1.97	0.31
B19/16 – B02/14	546	750 ✓	RRJ2	2.0 **1.9**	1.64	2.29	0.19

Pit	WAE	HYDRAULIC GRADE LINE	INVERT LEVEL	DESIGN SURFACE LEVEL	ROAD CHAINAGE	PIPE CHAINAGE
B19/10		18.465	17.936, 17.906	19.784	201.77	187.815
B19/11		18.285, 18.202	17.583, 17.553	19.257	234.04	220.089
B19/12		18.076, 18.013	17.359, 17.309	18.938	253.57	239.45
B19/13		17.842, 17.794	17.058, 16.911	18.554	277.14	261.615
B19/14		17.672, 17.504, 17.479	16.484, 16.339, **16.18**, 16.159	18.086, **18.09**	305.07	288.642
B19/15		17.394, 17.347	16.109, **16.15**, **15.97**, 15.957	18.085, **18.27**	305.06	297.642
B19/16		17.309, 17.292	15.907, **15.92**, **15.73**, 15.727	18.283, **18.27**	225.41	312.78
B02/14		17.18	15.45, **15.48**	18.284	225.46	321.78

LINE B20 (DATUM 10.00 m)

Pipe	PEAK FLOW (L/s)	PIPE SIZE (mm)	PIPE CLASS	PIPE GRADE (%)	PIPE COVER MINIMUM	FULL PIPE VELOCITY (m/s)	HGL GRADE (%)
B20/1 – B02/17	-50	375 ✓	RRJ2	2.0 **1.0**	1.10	0.98	0.01

Pit	WAE	HYDRAULIC GRADE LINE	INVERT LEVEL	DESIGN SURFACE LEVEL	ROAD CHAINAGE	PIPE CHAINAGE
B20/1		16.928, 16.927	16.239, **16.23**, **16.14**, 16.057	17.677, **17.67**	375.71	0
B02/17		16.825	15.041, **15.00**	17.714, **17.70**	377.06	9.1

LINE B26 (DATUM 13.00 m)

Pipe	PEAK FLOW (L/s)	PIPE SIZE (mm)	PIPE CLASS	PIPE GRADE (%)	PIPE COVER MINIMUM	FULL PIPE VELOCITY (m/s)	HGL GRADE (%)
B26/1 – B26/2	50	375 ✓	RRJ2	2.0 **2.3**	1.10	1.12	-0.07
B26/2 – B06/5	73	375 ✓	RRJ2	1.0 **0.8**	1.15	1.30	0.05

Pit	WAE	HYDRAULIC GRADE LINE	INVERT LEVEL	DESIGN SURFACE LEVEL	ROAD CHAINAGE	PIPE CHAINAGE
B26/1		19.391, 19.399	19.177, **19.19**, **18.95**, 18.959	20.629, **20.61**, **20.56**	164.39	0
B26/2		19.391, 19.384	18.909, **18.91**, **18.78**, 18.76	20.586, **20.13**	158.19	10.931
B06/5		19.176	18.268, **18.28**	20.132	170.23	25.828

LINE B31 (DATUM 14.00 m)

Pipe	PEAK FLOW (L/s)	PIPE SIZE (mm)	PIPE CLASS	PIPE GRADE (%)	PIPE COVER MINIMUM	FULL PIPE VELOCITY (m/s)	HGL GRADE (%)
B31/1 – B04/2	18	375 ✓	RRJ2	2.0 **2.8**	1.10	0.98	1.56

Pit	WAE	HYDRAULIC GRADE LINE	INVERT LEVEL	DESIGN SURFACE LEVEL	ROAD CHAINAGE	PIPE CHAINAGE
B31/1		19.905, 19.762	19.88, **19.89**, **19.64**, 19.697	21.329, **21.33**, **21.32**	201.90	0
B04/2		19.622	19.417, **18.38**	21.317	200.22	9.155

LINE B32 (DATUM 13.00 m)

Pipe	PEAK FLOW (L/s)	PIPE SIZE (mm)	PIPE CLASS	PIPE GRADE (%)	PIPE COVER MINIMUM	FULL PIPE VELOCITY (m/s)	HGL GRADE (%)
B32/1 – B04/4	14	375 ✓	RRJ2	2.0 **2.1**	1.10	1.01	1.76

Pit	WAE	HYDRAULIC GRADE LINE	INVERT LEVEL	DESIGN SURFACE LEVEL	ROAD CHAINAGE	PIPE CHAINAGE
B32/1		19.386, 19.164	19.357, **19.33**, **19.06**, 19.105	20.821, **20.82**, **20.75**	129.27	0
B04/4		18.798	18.559, **18.52**	20.759	120.40	12.631

LINE B37 (DATUM 12.00 m)

Pipe	PEAK FLOW (L/s)	PIPE SIZE (mm)	PIPE CLASS	PIPE GRADE (%)	PIPE COVER MINIMUM	FULL PIPE VELOCITY (m/s)	HGL GRADE (%)
B37/1 – B03/17	41	375 ✓	RRJ2	2.0 ✓	1.10	1.13	0.01

Pit	WAE	HYDRAULIC GRADE LINE	INVERT LEVEL	DESIGN SURFACE LEVEL	ROAD CHAINAGE	PIPE CHAINAGE
B37/1		18.119, 18.118	17.649, **17.53**, **13.35**, 17.469	19.087, **19.09**, **19.10**	156.93	0
B03/17		18.083	16.448, **16.39**	19.084	157.39	9.012

LINE B39 (DATUM 10.00 m)

Pipe	PEAK FLOW (L/s)	PIPE SIZE (mm)	PIPE CLASS	PIPE GRADE (%)	PIPE COVER MINIMUM	FULL PIPE VELOCITY (m/s)	HGL GRADE (%)
B39/1 – B02/16	97	375 ✓	RRJ2	2.0 ✓	1.10	1.56	0.09

Pit	WAE	HYDRAULIC GRADE LINE	INVERT LEVEL	DESIGN SURFACE LEVEL	ROAD CHAINAGE	PIPE CHAINAGE
B39/1		17.018, 17.01	16.358, **16.31**, **16.12**, 16.178	17.806, **17.78**, **17.78**	356.75	0
B02/16		16.974	15.192, **15.24**	17.805	356.79	9

LINE B43 (DATUM 11.00 m)

Pipe	PEAK FLOW (L/s)	PIPE SIZE (mm)	PIPE CLASS	PIPE GRADE (%)	PIPE COVER MINIMUM	FULL PIPE VELOCITY (m/s)	HGL GRADE (%)
B43/1 – B10/3	83	375 ✓	RRJ2	2.0 **0.9**	1.10	1.21	0.07

Pit	WAE	HYDRAULIC GRADE LINE	INVERT LEVEL	DESIGN SURFACE LEVEL	ROAD CHAINAGE	PIPE CHAINAGE
B43/1		17.8, 17.794	17.133, **16.98**, **16.92**, 16.953	18.56, **18.59**, **18.58**	382.30	0
B10/3		17.752	16.836, **16.78**	18.562	382.50	9.002

H 1:500 (AT A1) — 10 0 10 20 30 40 50 METRES

V 1:100 (AT A1) — 2 1 0 1 2 3 4 5 6 7 8 9 10 METRES

REV	AMENDMENT	DES	DRN	CKD	APR	DATE
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

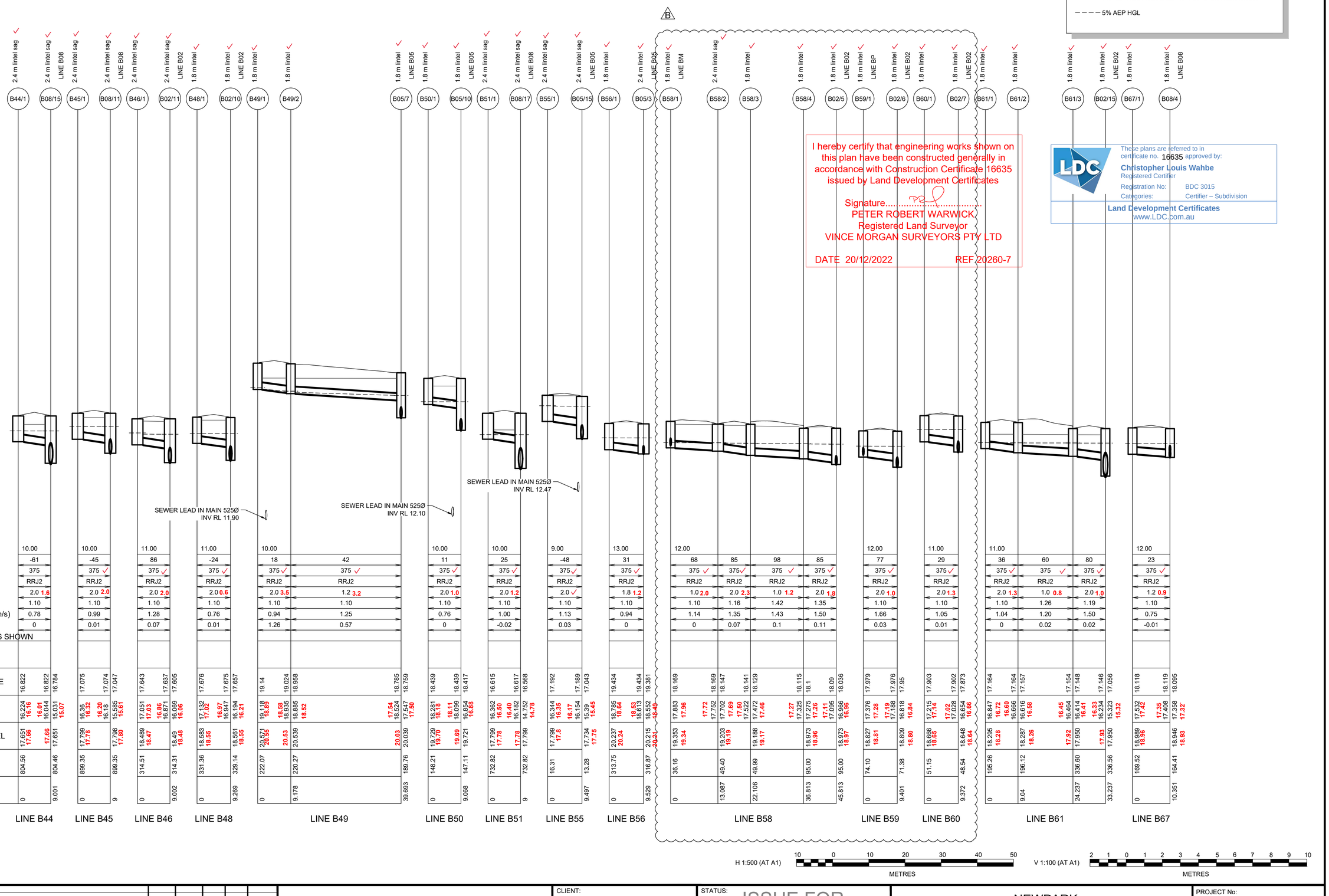
NEWPARK
PRECINCT 7, STAGE 7B
LONGITUDINAL DRAINAGE SHEET 7

PROJECT No: 9985-12
SHEET No: CC5427

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5427 | A

Plotted: 14 September , 2021 12:54:36 PM File Name: J:\9985D\CC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCTS\5 - Precinct 7B\9985-12-CC5427.dwg

NOTE:
——— 1% AEP HGL PROVIDED FOR INFORMATION ONLY.
– – – – 5% AEP HGL



I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature.....
PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

These plans are referred to in certificate no. 16635 approved by:
Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision
Land Development Certificates
www.LDC.com.au

	B44	B45	B46	B48	B49	B50	B51	B55	B56	B58	B59	B60	B61	B67
DATUM (m)	10.00	10.00	11.00	11.00	10.00	10.00	10.00	9.00	13.00	12.00	12.00	11.00	11.00	12.00
PEAK FLOW (L/s)	-61	-45	86	-24	18 / 42	11	25	-48	31	68 / 85 / 98 / 85	77	29	36 / 60 / 80	23
PIPE SIZE (mm)	375	375 ✓	375 ✓	375 ✓	375 ✓ / 375 ✓	375 ✓	375 ✓	375 ✓	375 ✓	375 ✓ / 375 ✓ / 375 ✓ / 375 ✓	375 ✓	375 ✓	375 ✓ / 375 ✓ / 375 ✓	375 ✓
PIPE CLASS	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2 / RRJ2	RRJ2	RRJ2	RRJ2	RRJ2	RRJ2 / RRJ2 / RRJ2 / RRJ2	RRJ2	RRJ2	RRJ2 / RRJ2 / RRJ2	RRJ2
PIPE GRADE (%)	2.0 **1.6**	2.0 **2.0**	2.0 **2.0**	2.0 **0.6**	2.0 **3.5** / 1.2 **3.2**	2.0 **1.0**	2.0 **1.2**	2.0 ✓	1.8 **1.2**	1.0 **2.0** / 2.0 **2.3** / 1.0 **1.2** / 2.0 **1.8**	2.0 **1.0**	2.0 **1.3**	2.0 **1.3** / 1.0 **0.8** / 2.0 **1.0**	1.2 **0.9**
PIPE COVER MINIMUM	1.10	1.10	1.10	1.10	1.10 / 1.10	1.10	1.10	1.10	1.10	1.10 / 1.16 / 1.42 / 1.35	1.10	1.10	1.10 / 1.26 / 1.19	1.10
FULL PIPE VELOCITY (m/s)	0.78	0.99	1.28	0.76	0.94 / 1.25	0.76	1.00	1.13	0.94	1.14 / 1.35 / 1.43 / 1.50	1.66	1.05	1.04 / 1.20 / 1.50	0.75
HGL GRADE (%)	0	0.01	0.07	0.01	1.26 / 0.57	0	-0.02	0.03	0	0 / 0.07 / 0.1 / 0.11	0.03	0.01	0 / 0.02 / 0.02	-0.01
NOTE: 10% AEP VALUES SHOWN														
WAE														
HYDRAULIC GRADE LINE	16.822 / 16.822 / 16.784	17.075 / 17.074 / 17.047	17.643 / 17.637 / 17.605	17.676 / 17.675 / 17.657	19.14 / 19.024 / 18.958 / 18.785	18.439 / 18.439 / 18.417	16.615 / 16.617 / 16.568	17.192 / 17.189 / 17.043	19.434 / 19.434 / 19.381	18.169 / 18.169 / 18.147 / 18.141 / 18.129 / 18.115 / 18.1 / 18.09 / 18.036	17.979 / 17.976 / 17.95	17.903 / 17.902 / 17.873	17.164 / 17.164 / 17.157 / 17.154 / 17.148 / 17.146 / 17.056	18.118 / 18.119 / 18.095
INVERT LEVEL	16.224 / **16.16** / 16.041 / **15.07**	16.36 / **16.32** / 16.20 / 16.18 / 15.585 / **15.51**	17.051 / **17.03** / 16.86 / 16.871 / 16.069 / **16.06**	17.132 / **17.02** / 16.97 / 16.947 / 16.194 / **16.21**	19.118 / **18.88** / 18.58 / 18.935 / 18.885 / **18.52** / 17.54 / 18.524 / 17.547 / **17.50**	18.281 / **18.18** / 18.11 / 18.099 / 16.854 / **16.88**	16.362 / **16.50** / 16.40 / 16.182 / 14.752 / **14.78**	16.344 / **16.35** / 16.17 / 16.154 / 15.39 / **15.45**	18.785 / **18.64** / 18.53 / 18.613 / 18.552 / **18.49**	17.883 / **17.96** / 17.72 / 17.752 / 17.702 / **17.69** / 17.50 / 17.522 / 17.472 / **17.46** / 17.27 / 17.325 / 17.275 / **17.26** / 17.11 / 17.095 / 16.966 / **16.96**	17.376 / **17.28** / 17.19 / 17.188 / 16.818 / **16.84**	17.215 / **17.14** / 17.02 / 17.028 / 16.654 / **16.66**	16.847 / **16.72** / 16.60 / 16.666 / 16.616 / **16.58** / 16.45 / 16.464 / 16.414 / **16.41** / 16.33 / 16.234 / 15.323 / **15.32**	17.532 / **17.42** / 17.35 / 17.408 / 17.358 / **17.32**
DESIGN SURFACE LEVEL	17.651 / **17.66** / 17.651	17.799 / **17.78** / 17.798 / **17.80**	18.489 / **18.47** / 18.49 / **18.48** / 18.561 / **18.55**	18.583 / **18.55** / 18.561 / **18.55** / 329.14	20.571 / **20.35** / 20.53 / 20.539 / 20.03 / 20.039	19.729 / **19.70** / 19.69 / 19.721 / 147.11	17.799 / **17.78** / 17.78 / 17.799 / 732.82	17.799 / **17.8** / 17.734 / **17.75** / 13.28	20.237 / **20.24** / 20.215 / **20.23** / 316.87	18.973 / **18.96** / 95.00	18.827 / **18.81** / 18.809 / **18.80** / 71.38	18.666 / **18.65** / 18.648 / **18.64** / 48.54	18.295 / **18.28** / 196.12 / 17.92 / 336.60 / 17.93 / 336.56	18.989 / **18.96** / 17.950 / 336.56
ROAD CHAINAGE	804.56	899.35	314.31	331.36	222.07 / 189.76	148.21	732.82	16.31	313.75	36.16 / 49.40 / 49.99 / 22.106 / 36.813 / 95.00	74.10	51.15	195.26 / 196.12 / 336.60 / 336.56	169.52
PIPE CHAINAGE	0 / 9.001	0 / 9	0 / 9.002	0 / 9.269	0 / 9.178 / 39.693	0 / 9.068	0 / 9	0 / 9.497	0 / 9.529	0 / 13.067 / 22.106 / 36.813 / 45.813	0 / 9.401	0 / 9.372	0 / 9.04 / 24.237 / 33.237	0 / 10.351

H 1:500 (AT A1) 10 0 10 20 30 40 50 METRES

V 1:100 (AT A1) 2 1 0 1 2 3 4 5 6 7 8 9 10 METRES

B	DRAINAGE LONG SECTIONS B58, B59 & B60 UPDATED	DG	VS	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
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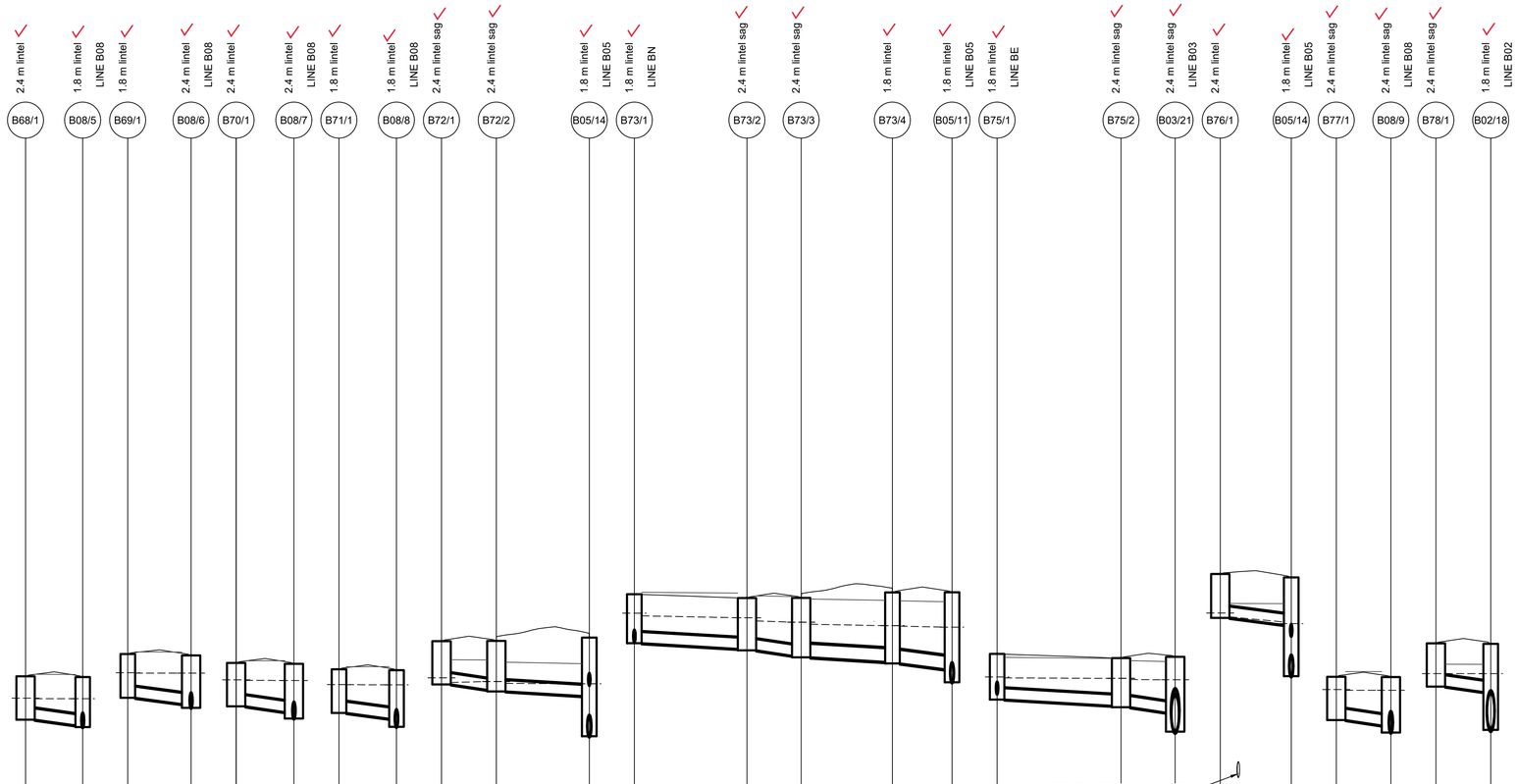
NEWPARK
PRECINCT 7, STAGE 7B
LONGITUDINAL DRAINAGE SHEET 8

PROJECT No: 9985-12
SHEET No: CC5428

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5428 | B

Plotted: 14 September , 2021 12:54:52 PM File Name: J:\9985DICC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCT\SI5 - Precinct 7B\9985-12-CC5428.dwg

NOTE:
——— 1% AEP HGL PROVIDED FOR INFORMATION ONLY.
– – – – 5% AEP HGL



	LINE B68			LINE B69			LINE B70			LINE B71			LINE B72				LINE B73								LINE B75				LINE B76			LINE B77			LINE B78		
DATUM (m)	12.00			11.00			11.00			11.00			11.00				10.00								11.00				9.00			11.00			10.00		
PEAK FLOW (L/s)	39			33			41			-51			56	101			133		151		240		273		86		97		41			-106			-40		
PIPE SIZE (mm)	375 ✓			375 ✓			375 ✓			375 ✓			375 ✓	375 ✓			375 ✓		375 ✓		450 ✓		450 ✓		375 ✓		375 ✓		375 ✓			375 ✓			375 ✓		
PIPE CLASS	RRJ2			RRJ2			RRJ2			RRJ2			RRJ2	RRJ2			RRJ2		RRJ2		RRJ2		RRJ2		RRJ2		RRJ2		RRJ2			RRJ2			RRJ2		
PIPE GRADE (%)	2.0 **1.0**			2.0 **1.0**			2.0 **1.2**			2.0 **1.1**			2.0 **1.2**	1.0 **0.5**			1.0 **1.1**		2.0 **2.0**		1.0 **0.9**		2.0 **2.3**		1.0 **1.1**		2.0 **2.3**		2.0 **1.0**			2.0 **1.5**			2.0 **1.0**		
PIPE COVER MINIMUM	1.10			1.10			1.10			1.10			1.10	1.46			1.21		1.40		1.68		1.93		1.10		1.30		1.10			1.10			1.10		
FULL PIPE VELOCITY (m/s)	0.91			0.98			1.09			1.00			0.93	1.31			1.30		1.37		1.64		2.47		1.23		1.48		1.19			1.10			0.78		
HGL GRADE (%)	0.02			0.02			0.02			0.01			-0.36	0.08			0.34		0.45		0.31		0.33		0.08		0.11		1.46			0.03			0		
NOTE: 10% AEP VALUES SHOWN																																					
WAE																																					
HYDRAULIC GRADE LINE	17.969		17.957	17.81		17.808	17.566		17.564	17.421		17.42	17.496		17.529	17.466	18.714		18.65	18.543		18.502	18.433		18.386	18.37		18.337	17.65		17.633	17.596		17.586	17.532	17.68		17.508	17.405	17.238		17.235	17.184	16.791		16.791	16.683
INVERT LEVEL	17.257 **17.12**	**17.01**	17.067	16.985 **16.88**	**16.75**	16.774	16.701 **16.62**	**16.5**	16.509	16.482 **16.40**	**16.30**	16.29	17.432 **17.28**	**17.14**	17.249	17.149 **17.44**	**17.37**		17.045	17.801 **17.77**	**17.56**	17.614	17.564 **17.55**	**17.36**	17.384	17.334 **17.31**	**17.17**	17.182	17.132 **17.14**	**16.91**		16.934	16.928 **16.77**	**16.55**	16.722	16.672 **16.53**	**16.37**	16.492	15.86 **15.89**	17.646 **17.89**	**17.72**	17.41	15.707 **15.77**	16.246 **16.16**	**16.04**	16.064	15.832 **15.86**	16.361 **16.37**	**16.29**	16.179	14.92 **14.93**
DESIGN SURFACE LEVEL	18.701 **18.69**		18.675 **18.66**	18.443 **18.43**		18.396 **18.37**	18.147 **18.14**		18.118 **18.11**	17.934 **17.93**		17.907 **17.90**	18.869 **18.85**		18.88 **18.89**		19.433 **19.42**		19.306 **19.32**		19.312 **19.31**		19.491 **19.48**		18.447 **18.43**		18.307		18.35 **18.34**		19.106 **19.09**		18.991 **18.98**	17.686 **17.7**		17.678 **17.66**	17.799 **17.76**	**17.78**	17.781
ROAD CHAINAGE	135.79		132.75	105.47		100.00	70.79		67.44	45.91		42.69	463.97		462.59		156.34		175.08		174.54		119.15		248.46		269.08		269.34		62.00		54.36	16.19		15.04	658.15		659.63
PIPE CHAINAGE	0		9.501	0		10.532	0		9.605	0		9.561	0		9.105		0		18.741		27.757		42.936		0		20.62		29.624		0		11.807	0		9.072	0		9.12

I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature.....
PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

These plans are referred to in certificate no. 16635 approved by:
Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision
Land Development Certificates
www.LDC.com.au

H 1:500 (AT A1) 10 0 10 20 30 40 50 METRES
V 1:100 (AT A1) 2 1 0 1 2 3 4 5 6 7 8 9 10 METRES

A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
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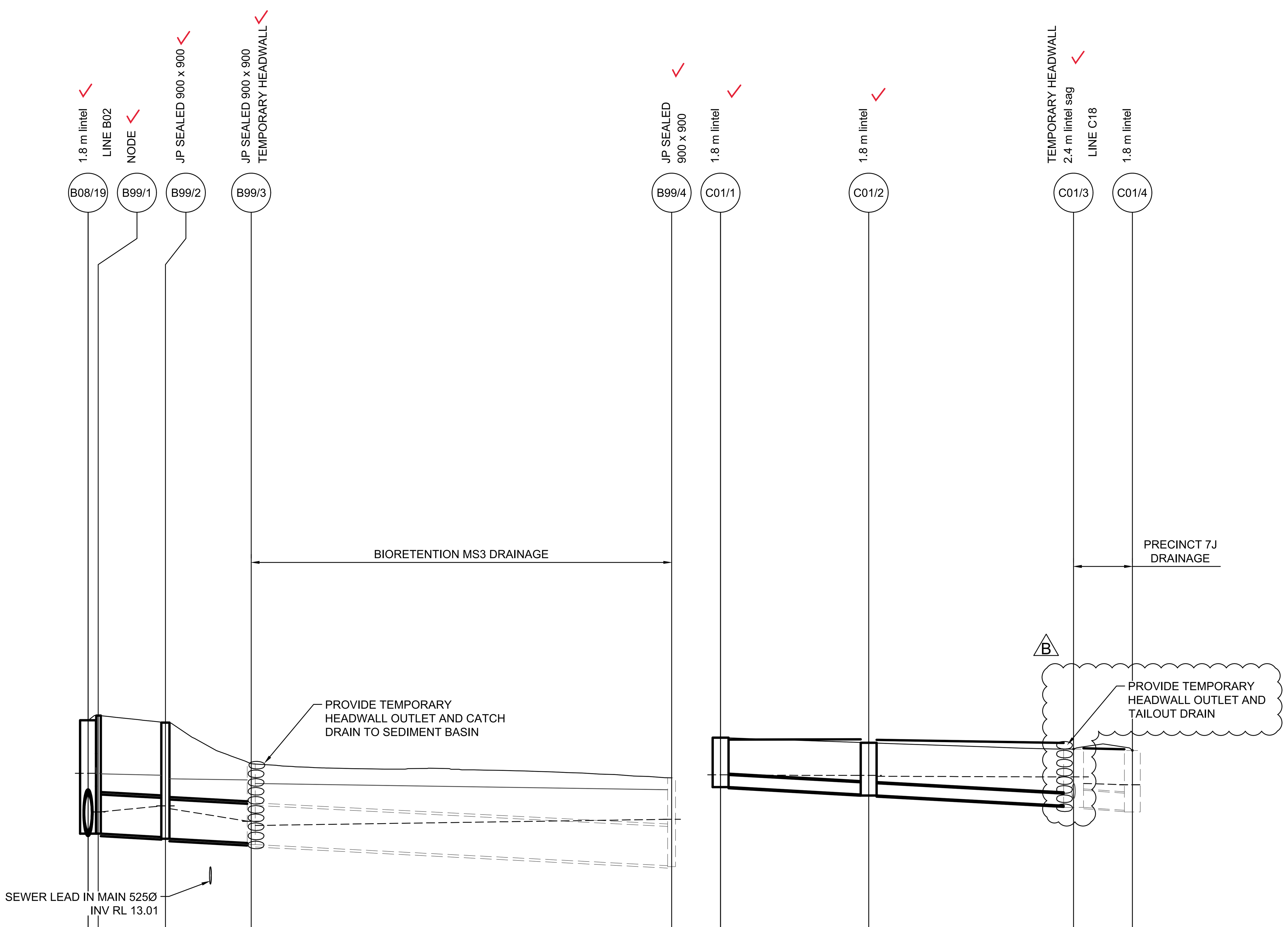
NEWPARK
PRECINCT 7, STAGE 7B
LONGITUDINAL DRAINAGE SHEET 9

PROJECT No: 9985-12
SHEET No: CC5429

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5429 | A

Plotted: 14 September , 2021 12:55:06 PM File Name: J:\9985D\CC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCTS\5 - Precinct 7B\9985-12-CC5429.dwg

NOTE:
———— 1% AEP HGL PROVIDED FOR INFORMATION ONLY.
– – – – 5% AEP HGL



LINE B99

	B08/19 – B99/1	B99/1 – B99/2	B99/2 – B99/3	B99/3 – B99/4
DATUM (m)	9.00			
PEAK FLOW (L/s)	2525	2525	2525	2569
PIPE SIZE (mm)	6m ✓	1200 ✓	1200 ✓	1200 ✓
PIPE CLASS	WEIR	RRJ2	RRJ2	RRJ2
PIPE GRADE (%)	-0.0 ✓	1.0 ✓	1.0 ✓	1.0 ✓
PIPE COVER MINIMUM	1.13	2.25	1.21	1.17
FULL PIPE VELOCITY (m/s)	0.00	3.10	3.00	3.47
HGL GRADE (%)	25.22	-1.78	2.92	-0.29

NOTE: 10% AEP VALUES SHOWN

	B08/19	B99/1	B99/2	B99/3	B99/4
WAE					
HYDRAULIC GRADE LINE	16.404	16.01 / 15.219	15.402 / 15.319	14.935 / 14.803	14.991
INVERT LEVEL	14.551 / 16.01 / 16.01	16.01 / 16.01 / 14.551 / 14.55	14.45 / 14.448 / 14.398 / 14.40	14.27 / 14.266 / 14.216 / 14.22	13.57 / 13.572
DESIGN SURFACE LEVEL	18.027 / 18.05	18.171 / 18.10	17.957 / 18.05	16.698 / 16.74	16.26 / 16.262
ROAD CHAINAGE	691.17	689.61	681.74		
PIPE CHAINAGE	0	1.562	11.866	25.013	89.431

LINE C01

	C01/1 – C01/2	C01/2 – C01/3	C01/3 – C01/4
DATUM (m)	11.00		
PEAK FLOW (L/s)	33	71	336
PIPE SIZE (mm)	375 ✓	375 ✓	525 ✓
PIPE CLASS	RRJ2	RRJ2	RRJ2
PIPE GRADE (%)	1.0 1.0	1.0 0.9	1.0
PIPE COVER MINIMUM	1.10	1.20	1.29
FULL PIPE VELOCITY (m/s)	0.96	0.73	1.55
HGL GRADE (%)	0.02	0.06	0.42

	C01/1	C01/2	C01/3	C01/4
WAE				
HYDRAULIC GRADE LINE	18.343	18.339 / 18.311	18.291 / 18.091	18.053 / 17.969
INVERT LEVEL	17.978 / 17.83	17.62 / 17.751 / 17.721 / 17.55	17.28 / 17.407 / 17.357 / 17.28	17.267 / 17.217
DESIGN SURFACE LEVEL	19.497 / 19.42	19.338 / 19.26	19.142 / 19.10	19.102
ROAD CHAINAGE	73.95	96.64	128.05	127.80
PIPE CHAINAGE	0	22.697	54.102	63.105

I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature.......PR.......
PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

LDC
These plans are referred to in certificate no. 16635 approved by:
Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision
Land Development Certificates
www.LDC.com.au

H 1:500 (AT A1) 10 0 10 20 30 40 50 METRES
V 1:100 (AT A1) 2 1 0 1 2 3 4 5 6 7 8 9 10 METRES

	AMENDMENT	DES	DRN	CKD	APR	DATE
B	TEMPORARY HEADWALL FOR LINE C01 ADDED	DG	VS	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

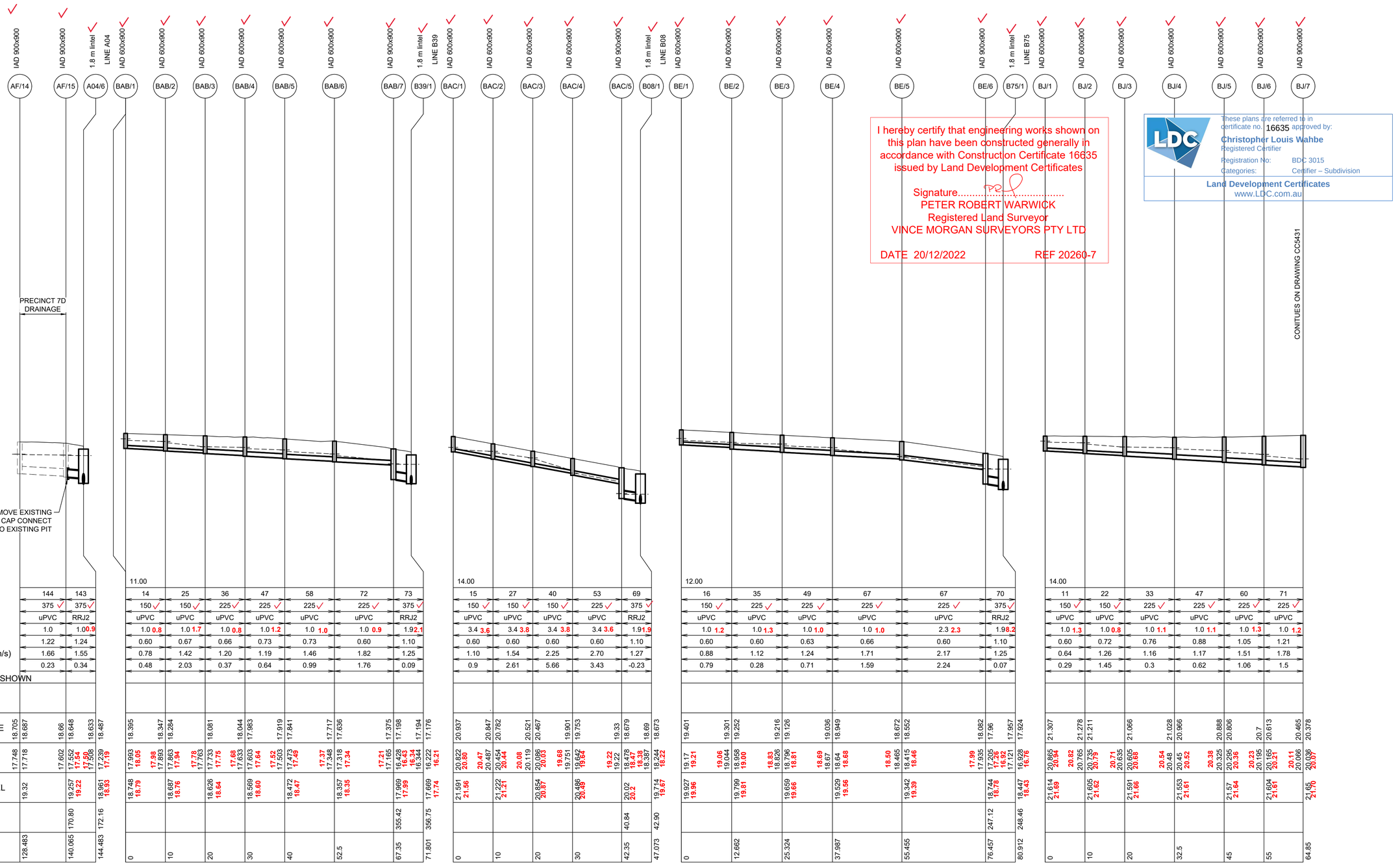
CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

NEWPARK
PRECINCT 7, STAGE 7B
LONGITUDINAL DRAINAGE SHEET 10

PROJECT No: 9985-12
SHEET No: CC5430
AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5430 | B

NOTE:
– – – – 5% AEP HGL



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VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

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	AF/14	AF/15	A04/6	BAB/1	BAB/2	BAB/3	BAB/4	BAB/5	BAB/6	BAB/7	B39/1	BAC/1	BAC/2	BAC/3	BAC/4	BAC/5	B08/1	BE/1	BE/2	BE/3	BE/4	BE/5	BE/6	B75/1	BJ/1	BJ/2	BJ/3	BJ/4	BJ/5	BJ/6	BJ/7
DATUM (m)				11.00								14.00						12.00														
PEAK FLOW (L/s)	144	143		14	25	36	47	58	72	73		15	27	40	53	69		16	35	49	67	67	70		11	22	33	47	60	71	
PIPE SIZE (mm)	375 ✓	375 ✓		150 ✓	150 ✓	225 ✓	225 ✓	225 ✓	225 ✓	375 ✓		150 ✓	150 ✓	150 ✓	225 ✓	375 ✓		150 ✓	225 ✓	225 ✓	225 ✓	225 ✓	375 ✓		150 ✓	150 ✓	225 ✓	225 ✓	225 ✓	225 ✓	
PIPE CLASS	uPVC	RRJ2		uPVC	uPVC	uPVC	uPVC	uPVC	uPVC	RRJ2		uPVC	uPVC	uPVC	uPVC	uPVC		uPVC	uPVC	uPVC	uPVC	uPVC	RRJ2		uPVC	uPVC	uPVC	uPVC	uPVC	uPVC	
PIPE GRADE (%)	1.0	1.0 **0.9**		1.0 **0.8**	1.0 **1.7**	1.0 **0.8**	1.0 **1.2**	1.0 **1.0**	1.0 **0.9**	1.9 **2.1**		3.4 **3.6**	3.4 **3.8**	3.4 **3.8**	3.4 **3.6**	1.9 **1.9**		1.0 **1.2**	1.0 **1.3**	1.0 **1.0**	1.0 **1.0**	2.3 **2.3**	1.9 **8.2**		1.0 **1.3**	1.0 **0.8**	1.0 **1.1**	1.0 **1.1**	1.0 **1.3**	1.0 **1.2**	
PIPE COVER MINIMUM	1.22	1.24		0.60	0.67	0.66	0.73	0.73	0.60	1.10		0.60	0.60	0.60	0.60	1.10		0.60	0.60	0.63	0.66	0.60	1.10		0.60	0.72	0.76	0.88	1.05	1.21	
FULL PIPE VELOCITY (m/s)	1.66	1.55		0.78	1.42	1.20	1.19	1.46	1.82	1.25		1.10	1.54	2.25	2.70	1.27		0.88	1.12	1.24	1.71	2.17	1.25		0.64	1.26	1.16	1.17	1.51	1.78	
HGL GRADE (%)	0.23	0.34		0.48	2.03	0.37	0.64	0.99	1.76	0.09		0.9	2.61	5.66	3.43	-0.23		0.79	0.28	0.71	1.59	2.24	0.07		0.29	1.45	0.3	0.62	1.06	1.5	
NOTE: 5% AEP VALUES SHOWN																															
WAE																															
HYDRAULIC GRADE LINE	18.705 18.687	18.66	18.648	18.633 18.487	18.395	18.347	18.284	18.081	18.044	17.983	17.919	17.841	17.717	17.636	17.375	17.198	17.194	17.176	20.937	20.847	20.782	20.521	20.467	19.901	19.753	19.33	18.679	18.69	18.673		
INVERT LEVEL	17.748 17.718	17.602	17.552 **17.54**	17.536 17.519	17.993 **18.05**	17.98	17.863 **17.94**	17.78 17.733	17.75	17.68 17.633	17.64	17.603 **17.64**	17.52 17.503	17.473 **17.49**	17.37 17.348	17.318 **17.34**	17.21 17.165	16.428 **16.43**	16.34 16.244	16.222 **16.21**	20.622 **20.80**	20.47 20.487	20.454 **20.44**	20.08 20.119	20.086 **20.03**	19.68 19.751	19.642 **19.84**	19.22 19.22	18.478 **18.47**	18.38 18.397	18.344 **18.22**	
DESIGN SURFACE LEVEL	19.32	19.257 **19.22**	18.961 **18.93**		18.748 **18.79**	18.687 **18.76**	18.626 **18.64**	18.569 **18.60**	18.472 **18.47**	18.357 **18.35**	17.969 **17.99**	17.669 **17.74**	21.591 **21.56**	21.222 **21.21**	20.854 **20.87**	20.486 **20.49**	20.02 **20.2**	19.714 **19.67**	19.927 **19.96**	19.799 **19.81**	19.659 **19.66**	19.529 **19.56**	19.342 **19.39**	18.744 **18.78**	18.447 **18.43**	21.614 **21.69**	21.605 **21.62**	21.591 **21.66**	21.553 **21.61**	21.57 **21.64**	21.604 **21.61**	21.65 **21.70**
ROAD CHAINAGE		170.80	172.16							355.42	356.75					40.84	42.90							247.12	248.46						
PIPE CHAINAGE	128.483	140.065	144.483	0	10	20	30	40	52.5	67.35	71.801	0	10	20	30	42.35	47.073	0	12.662	25.324	37.987	55.455	76.457	80.912	0	10	20	32.5	45	55	64.85

LINE AF | LINE BAB | LINE BAC | LINE BE | LINE BJ

B LINE BAE REMOVED

H 1:500 (AT A1) 10 0 10 20 30 40 50 METRES

V 1:100 (AT A1) 2 1 0 1 2 3 4 5 6 7 8 9 10 METRES

B	DRAINAGE LONG SECTION BAE REMOVED	DG	VS	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
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P 02 4720 3300 **W** www.jwprince.com.au **E** jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
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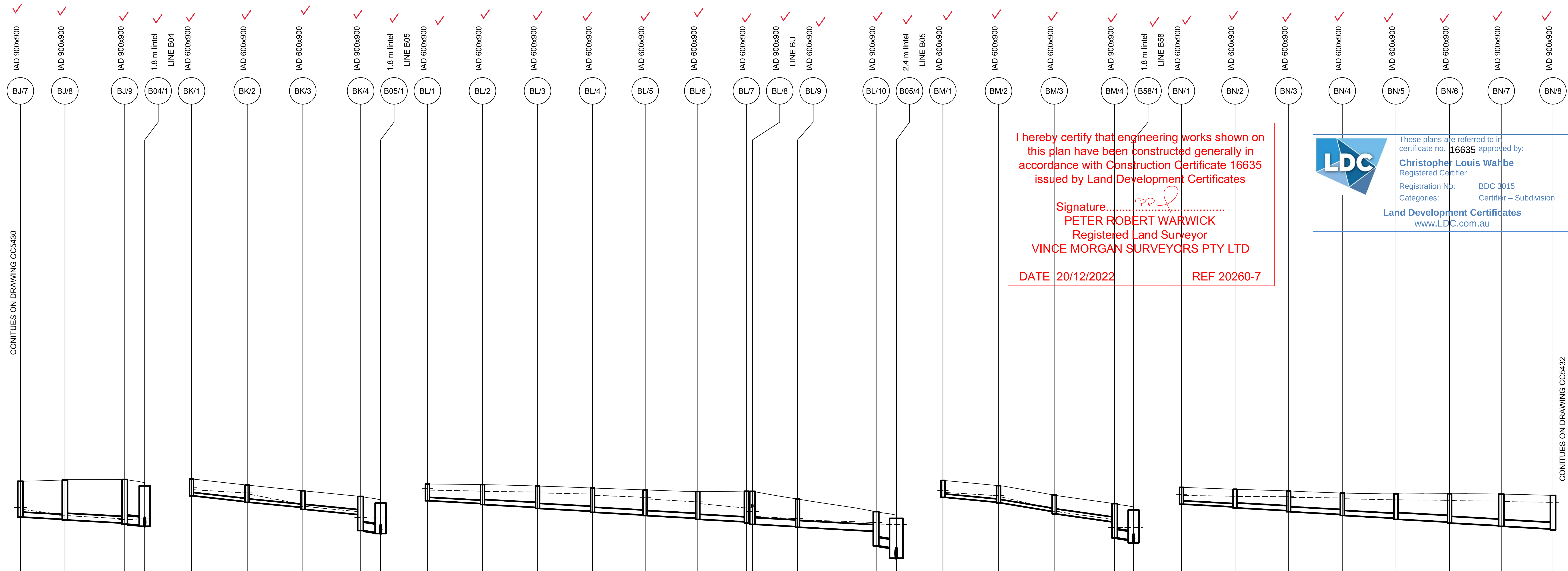
NEWPARK
PRECINCT 7, STAGE 7B
LONGITUDINAL DRAINAGE SHEET 11

PROJECT No: 9985-12
SHEET No: CC5431

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5431 | B

Plotted: 14 September , 2021 12:55:39 PM File Name: J:\9985D\CC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCTS\5 - Precinct 7B\9985-12-CC5431.dwg

NOTE: – – – – 5% AEP HGL



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Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

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Registration No: BDC 3015
Categories: Certifier – Subdivision
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www.LDC.com.au

NOTE: 5% AEP VALUES SHOWN

LINE BJ

DATUM (m) 14.00

	BJ/7–BJ/8	BJ/8–BJ/9	BJ/9–B04/1
PEAK FLOW (L/s)	82	92	106
PIPE SIZE (mm)	225 ✓	300 ✓	375 ✓
PIPE CLASS	uPVC	uPVC	RRJ2
PIPE GRADE (%)	1.0 2.2	1.0 0.8	1.0 2.2
PIPE COVER MINIMUM	1.39	1.51	1.55
FULL PIPE VELOCITY (m/s)	2.06	1.94	1.54
HGL GRADE (%)	2.26	1	-0.83

	BJ/7	BJ/8	BJ/9	B04/1
WAE				
HYDRAULIC GRADE LINE	20.465 / 20.378	20.152 / 20.098	19.963 / 19.92	19.957 / 19.829
INVERT LEVEL	20.11 20.066 / 20.036 20.07	19.86 19.936 / 19.906 19.88	19.78 19.772 / 19.722 19.73	19.64 19.677 / 19.627 19.63
DESIGN SURFACE LEVEL	21.65 21.70	21.71 21.72	21.732 21.75	21.443 21.43
ROAD CHAINAGE			219.55	218.16
PIPE CHAINAGE	64.85	74.85	88.288	92.759

LINE BJ

LINE BK

DATUM (m) 14.00

	BK/1–BK/2	BK/2–BK/3	BK/3–BK/4	BK/4–B05/1
PEAK FLOW (L/s)	17	31	48	64
PIPE SIZE (mm)	150 ✓	150 ✓	225 ✓	375 ✓
PIPE CLASS	uPVC	uPVC	uPVC	RRJ2
PIPE GRADE (%)	2.1 3.0	1.8 2.0	1.8 1.8	1.9 4.0
PIPE COVER MINIMUM	0.60	0.60	0.60	1.10
FULL PIPE VELOCITY (m/s)	0.98	1.78	2.04	1.20
HGL GRADE (%)	1.14	3.53	1.83	0.02

	BK/1	BK/2	BK/3	BK/4	B05/1
WAE					
HYDRAULIC GRADE LINE	21.267	21.124 / 21.068	20.627 / 20.518	20.28 / 20	19.999 / 19.983
INVERT LEVEL	20.992 21.13	20.78 20.733 / 20.703 20.76	20.55 20.478 / 20.385 20.46	20.24 20.152 / 19.431 19.45	19.28 19.347 / 19.297 19.26
DESIGN SURFACE LEVEL	21.756 21.86	21.478 21.52	21.221 21.27	20.968 21.01	20.673 20.67
ROAD CHAINAGE				250.05	251.46
PIPE CHAINAGE	0	12.5	25	37.989	42.46

LINE BK

LINE BL

DATUM (m) 14.00

	BL/1–BL/2	BL/2–BL/3	BL/3–BL/4	BL/4–BL/5	BL/5–BL/6	BL/6–BL/7	BL/7–BL/8	BL/8–BL/9	BL/9–BL/10	BL/10–B05/4
PEAK FLOW (L/s)	13	32	39	51	64	76	89	118	134	122
PIPE SIZE (mm)	150 ✓	225 ✓	225 ✓	225 ✓	225 ✓	225 ✓	225 ✓	300 ✓	300 ✓	375 ✓
PIPE CLASS	uPVC	uPVC	uPVC	uPVC	uPVC	uPVC	uPVC	uPVC	uPVC	RRJ2
PIPE GRADE (%)	1.0 0.9	1.0 1.2	1.0 0.8	1.0 1.2	1.0 1.3	1.0 1.4	1.0 3.0	1.0 1.0	1.0 1.1	1.6 3.4
PIPE COVER MINIMUM	0.60	0.67	0.78	0.86	0.93	1.02	1.20	0.95	0.60	1.10
FULL PIPE VELOCITY (m/s)	0.81	1.09	1.11	1.29	1.60	1.92	2.24	1.67	1.93	1.35
HGL GRADE (%)	0.38	0.18	0.41	0.73	1.13	1.74	2.22	0.98	0.66	0.24

	BL/1	BL/2	BL/3	BL/4	BL/5	BL/6	BL/7	BL/8	BL/9	BL/10	B05/4
WAE											
HYDRAULIC GRADE LINE	21.253	21.206 / 21.189	21.167 / 21.125	21.074 / 21.017	20.931 / 20.855	20.722 / 20.641	20.451 / 20.319	20.289 / 20.067	19.968 / 19.915	19.799 / 19.724	19.713 / 19.569
INVERT LEVEL	20.772 20.77	20.66 20.649 / 20.599 20.62	20.49 20.475 / 20.425 20.41	20.32 20.301 / 20.251 20.29	20.16 20.133 / 20.103 20.14	19.99 19.985 / 19.935 19.97	19.83 19.826 / 19.776 19.79	19.75 19.762 / 19.712 19.72	19.64 19.611 / 19.581 19.59	19.41 19.401 / 18.742 18.74	18.57 18.668 / 18.191 19.17
DESIGN SURFACE LEVEL	21.525 21.53	21.496 21.50	21.434 21.43	21.346 21.37	21.259 21.30	21.188 21.22	21.203 21.22	21.196 21.19	20.85 20.84	20.283 20.29	19.983 19.98
ROAD CHAINAGE										348.43	350.00
PIPE CHAINAGE	0	12.367	24.735	37.095	48.901	60.708	71.633	72.983	83.133	100.779	105.309

LINE BL

LINE BM

DATUM (m) 13.00

	BM/1–BM/2	BM/2–BM/3	BM/3–BM/4	BM/4–B58/1
PEAK FLOW (L/s)	17	31	47	64
PIPE SIZE (mm)	150 ✓	150 ✓	225 ✓	375 ✓
PIPE CLASS	uPVC	uPVC	uPVC	RRJ2
PIPE GRADE (%)	1.8 2.1	3.1 3.4	2.6 3.0	1.8 3.2
PIPE COVER MINIMUM	0.60	0.60	0.60	1.10
FULL PIPE VELOCITY (m/s)	0.96	1.91	2.35	1.20
HGL GRADE (%)	1.13	4.38	2.6	0

	BM/1	BM/2	BM/3	BM/4	B58/1
WAE					
HYDRAULIC GRADE LINE	20.146	20.005 / 19.95	19.403 / 19.289	18.937 / 18.567	18.567 / 18.552
INVERT LEVEL	19.928 19.98	19.74 19.707 / 19.677 19.73	19.33 19.292 / 19.18 19.22	18.84 18.825 / 18.102 18.12	17.98 18.027 / 17.883 17.96
DESIGN SURFACE LEVEL	20.689 20.72	20.451 20.50	20.028 20.07	19.641 19.65	19.353 19.37
ROAD CHAINAGE				36.16	36.16
PIPE CHAINAGE	0	12.5	25	38.562	42.812

LINE BM

LINE BN

DATUM (m) 13.00

	BN/1–BN/2	BN/2–BN/3	BN/3–BN/4	BN/4–BN/5	BN/5–BN/6	BN/6–BN/7	BN/7–BN/8
PEAK FLOW (L/s)	14	41	41	53	60	67	76
PIPE SIZE (mm)	150 ✓	225 ✓	225 ✓	225 ✓	300 ✓	300 ✓	300 ✓
PIPE CLASS	uPVC	uPVC	uPVC	uPVC	uPVC	uPVC	uPVC
PIPE GRADE (%)	1.0 1.1	1.0 1.5	1.0 1.1	1.0 1.3	1.0 1.1	1.0 1.0	1.0 1.0
PIPE COVER MINIMUM	0.60	0.61	0.71	0.78	0.84	1.02	1.15
FULL PIPE VELOCITY (m/s)	0.88	1.26	1.15	1.39	1.65	1.31	1.37
HGL GRADE (%)	0.25	0.11	0.24	0.42	0.13	0.2	0.26

	BN/1	BN/2	BN/3	BN/4	BN/5	BN/6	BN/7	BN/8
WAE								
HYDRAULIC GRADE LINE	20.008	19.978 / 19.967	19.954 / 19.927	19.898 / 19.863	19.812	19.796 / 19.778	19.755 / 19.734	19.704 / 19.679
INVERT LEVEL	19.619 19.68	19.55 19.498 / 19.448 19.50	19.33 19.328 / 19.278 19.31	19.18 19.157 / 19.107 19.15	19.01 18.987 / 18.937 18.97	18.85 18.816 / 18.766 18.80	18.70 18.65 / 18.62 18.65	18.53 18.504 / 18.454 18.49
DESIGN SURFACE LEVEL	20.374 20.42	20.291 20.34	20.215 20.23	20.12 20.13	20.083 20.13	20.089 20.10	20.071 20.10	20.011 20.03
ROAD CHAINAGE								
PIPE CHAINAGE	0	12.047	24.093	36.14	48.187	60.234	71.851	83.46

LINE BN

H 1:500 (AT A1) 10 0 10 20 30 40 50 METRES

V 1:100 (AT A1) 2 1 0 1 2 3 4 5 6 7 8 9 10 METRES

	AMENDMENT	DES	DRN	CKD	APR	DATE
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21

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CLIENT: WINTEN PROPERTY GROUP

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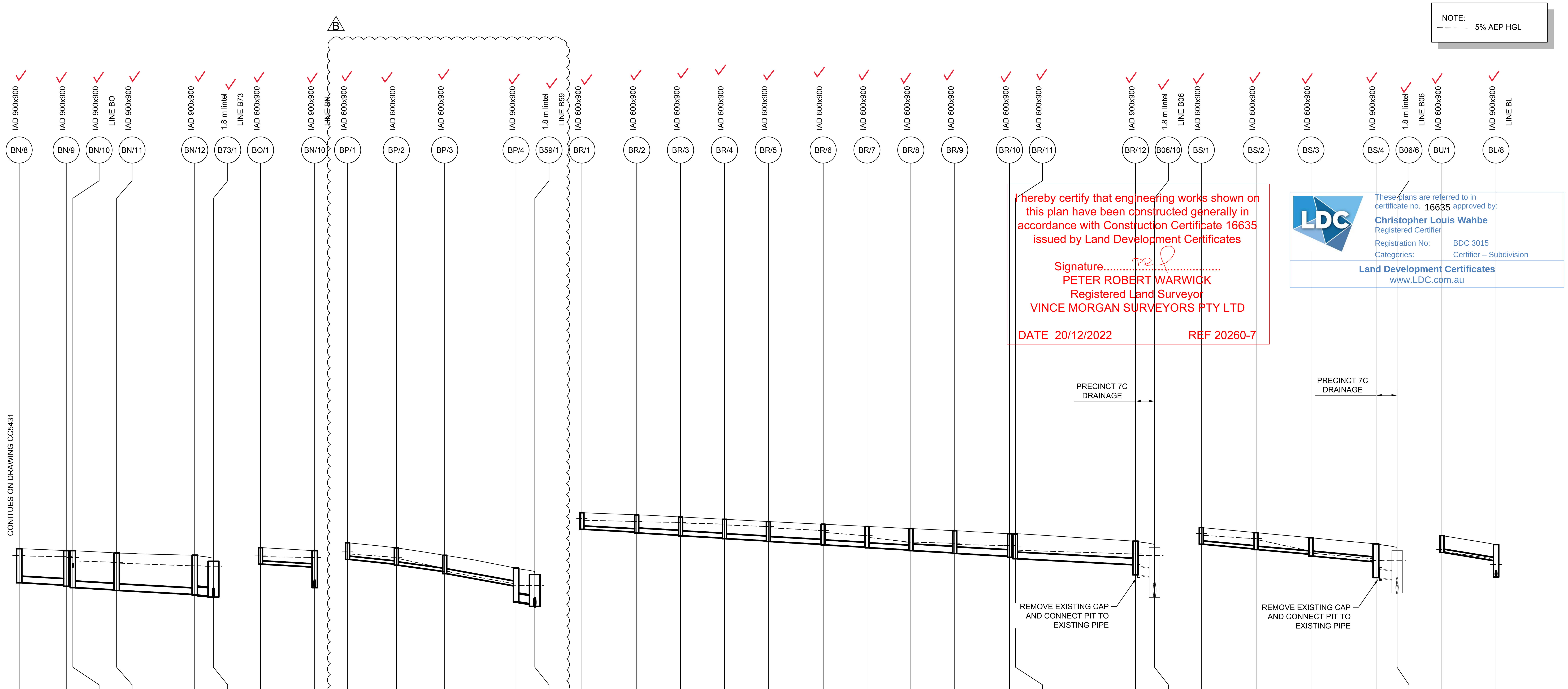
NEWPARK
PRECINCT 7, STAGE 7B
LONGITUDINAL DRAINAGE SHEET 12

PROJECT No: 9985-12
SHEET No: CC5432

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5432 | A



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Signature.......................................
PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

LDC

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NOTE: 5% AEP VALUES SHOWN (values in bold are shown in red on the drawing)

LINE BN

	BN/8–BN/9	BN/9–BN/10	BN/10–BN/11	BN/11–BN/12	BN/12–B73/1
DATUM (m)					
PEAK FLOW (L/s)	85	94	120	129	152
PIPE SIZE (mm)	300 ✓	300 ✓	300 ✓	300 ✓	375 ✓
PIPE CLASS	uPVC	uPVC	uPVC	uPVC	RRJ2
PIPE GRADE (%)	1.0 **0.8**	1.0 **2.3**	1.0 **1.1**	1.0 **1.3**	1.0 **2.0**
PIPE COVER MINIMUM	1.25	1.31	1.38	1.41	1.36
FULL PIPE VELOCITY (m/s)	1.23	1.33	1.70	1.85	1.69
HGL GRADE (%)	0.33	0.33	0.62	0.7	0.35

Row	Values (left to right)
WAE	
HYDRAULIC GRADE LINE	19.704, 19.679, 19.644, 19.614, 19.609, 19.451, 19.389, 19.351, 19.226, 19.211, 19.124
INVERT LEVEL	**18.53**, 18.504, 18.454, **18.49**, **18.41**, 18.347, 18.297, **18.38**, **18.35**, 18.282, 18.232, **18.31**, **18.21**, 18.132, 18.102, **18.15**, **17.93**, 17.924, 17.894, **17.88**, **17.80**, 17.851, 17.801, **17.77**
DESIGN SURFACE LEVEL	20.011, **20.03**, 19.92, **19.96**, 19.919, **19.99**, 19.816, **19.85**, 19.712, **19.71**, 19.433, **19.42**
ROAD CHAINAGE	156.62, 156.34
PIPE CHAINAGE	83.46, 94.189, 95.689, 105.689, 123.484, 127.743

LINE BO

	BO/1–BN/10
DATUM (m)	13.00
PEAK FLOW (L/s)	19
PIPE SIZE (mm)	150 ✓
PIPE CLASS	uPVC
PIPE GRADE (%)	1.1 **0.9**
PIPE COVER MINIMUM	0.60
FULL PIPE VELOCITY (m/s)	1.10
HGL GRADE (%)	0.31

Row	Values (left to right)
HYDRAULIC GRADE LINE	19.647, 19.609, 19.451
INVERT LEVEL	19.303, **19.37**, **19.26**, 19.173, 18.232, **18.31**
DESIGN SURFACE LEVEL	20.058, **20.12**, 19.919, **20.00**
PIPE CHAINAGE	0, 12.35

LINE BP

	BP/1–BP/2	BP/2–BP/3	BP/3–BP/4	BP/4–B59/1
DATUM (m)	13.00			
PEAK FLOW (L/s)	18	32	46	63
PIPE SIZE (mm)	150 ✓	150 ✓	225 ✓	375 ✓
PIPE CLASS	uPVC	uPVC	uPVC	RRJ2
PIPE GRADE (%)	1.9 **2.3**	2.6 **2.5**	3.4 **3.6**	1.8 **5.5**
PIPE COVER MINIMUM	0.60	0.60	0.60	1.10
FULL PIPE VELOCITY (m/s)	1.01	1.88	2.60	1.21
HGL GRADE (%)	1.32	3.97	3.39	0

Row	Values (left to right)
HYDRAULIC GRADE LINE	19.767, 19.62, 19.56, 19.123, 18.97, 18.418, 18.33, 18.33, 18.326
INVERT LEVEL	19.519, **19.55**, **19.31**, 19.306, 19.256, **19.27**, **19.01**, 18.973, 18.869, **18.91**, **18.34**, 18.316, 17.578, **17.59**, **17.35**, 17.501, 17.376, **17.28**
DESIGN SURFACE LEVEL	20.28, **20.29**, 20.047, **20.06**, 19.71, **19.73**, 19.119, **19.13**, 18.827, **18.81**
ROAD CHAINAGE	74.42, 74.10
PIPE CHAINAGE	0, 11.113, 22.131, 38.409, 42.671

LINE BR

	BR/1–BR/2	BR/2–BR/3	BR/3–BR/4	BR/4–BR/5	BR/5–BR/6	BR/6–BR/7	BR/7–BR/8	BR/8–BR/9	BR/9–BR/10	BR/10–BR/11	BR/11–BR/12	BR/12–B06/10
DATUM (m)	12.00											
PEAK FLOW (L/s)	13	29	37	48	58	71	82	93	104	119	120	111
PIPE SIZE (mm)	150 ✓	225 ✓	225 ✓	225 ✓	225 ✓	225 ✓	225 ✓	300 ✓	300 ✓	300 ✓	300 ✓	375 ✓
PIPE CLASS	uPVC	uPVC	uPVC	uPVC	uPVC	uPVC	uPVC	uPVC	uPVC	uPVC	uPVC	RRJ2
PIPE GRADE (%)	1.0 **1.1**	1.0 **1.1**	1.0 **1.1**	1.0 **1.0**	1.0 **1.0**	1.0 **1.2**	1.0 **1.1**	1.0 **1.2**	1.0 **0.9**	1.0 **3.7**	1.0 **0.95**	1.9
PIPE COVER MINIMUM	0.60	0.60	0.63	0.65	0.68	0.71	0.74	0.70	0.73	0.77	0.78	1.10
FULL PIPE VELOCITY (m/s)	0.81	1.20	1.06	1.20	1.47	1.79	2.06	1.80	1.49	1.68	1.75	1.38
HGL GRADE (%)	0.43	0.2	0.4	0.65	0.96	1.48	2.13	0.52	0.41	0.44	0.63	0.23

Row	Values (left to right)
HYDRAULIC GRADE LINE	20.306, 20.252, 20.233, 20.213, 20.177, 20.137, 20.089, 20.024, 19.962, 19.842, 19.751, 19.603, 19.523, 19.31, 19.258, 19.2, 19.149, 19.097, 19.091, 18.941, 18.768, 18.704, 18.694, 18.639
INVERT LEVEL	19.895, **19.93**, **19.8**, 19.77, 19.725, **19.75**, **19.65**, 19.625, 19.595, **19.62**, **19.52**, 19.495, 19.465, **19.48**, **19.39**, 19.365, 19.335, **19.36**, **19.24**, 19.21, 19.18, **19.21**, **19.10**, 19.08, 19.05, **19.08**, **18.98**, 18.95, 18.92, **18.96**, **18.85**, 18.82, 18.79, **18.82**, **18.71**, 18.665, 18.615, **18.65**, **18.61**, 18.602, 18.552, **18.58**, **18.33**, 18.278, 17.818, **17.86**, 17.738, 16.784
DESIGN SURFACE LEVEL	20.65, **20.67**, 20.555, **20.57**, 20.457, **20.47**, 20.352, **20.36**, 20.247, **20.26**, 20.126, **20.17**, 20.024, **20.03**, 19.927, **19.94**, 19.831, **19.85**, 19.692, **19.73**, 19.681, **19.71**, 19.353, **19.38**, 19.063
ROAD CHAINAGE	34.75, 33.85
PIPE CHAINAGE	0, 12.5, 22.5, 32.5, 42.5, 55, 65, 75, 85, 97.5, 98.858, 126.208, 130.553

LINE BS

	BS/1–BS/2	BS/2–BS/3	BS/3–BS/4	BS/4–B06/6
DATUM (m)	13.00			
PEAK FLOW (L/s)	18	33	51	69
PIPE SIZE (mm)	150 ✓	150 ✓	225 ✓	375 ✓
PIPE CLASS	uPVC	uPVC	uPVC	RRJ2
PIPE GRADE (%)	1.7 **1.5**	1.6 **2.0**	1.7 **1.8**	2.0
PIPE COVER MINIMUM	0.60	0.60	0.60	1.10
FULL PIPE VELOCITY (m/s)	1.01	1.88	2.05	1.27
HGL GRADE (%)	1.17	3.99	1.7	0.02

Row	Values (left to right)
HYDRAULIC GRADE LINE	20.616, 20.47, 20.413, 19.914, 19.799, 19.547, 19.462, 19.461, 19.427
INVERT LEVEL	20.213, **20.22**, **20.04**, 19.997, 19.967, **19.99**, **19.76**, 19.764, 19.671, **19.71**, **19.45**, 19.413, 18.694, **18.77**, 18.6, 17.976
DESIGN SURFACE LEVEL	20.974, **20.98**, 20.741, **20.74**, 20.507, **20.52**, 20.229, **20.27**, 19.927
ROAD CHAINAGE	146.25, 144.06
PIPE CHAINAGE	0, 12.5, 25, 39.85, 44.633

LINE BU

	BU/1–BL/8
DATUM (m)	14.00
PEAK FLOW (L/s)	18
PIPE SIZE (mm)	150 ✓
PIPE CLASS	uPVC
PIPE GRADE (%)	3.0 **3.2**
PIPE COVER MINIMUM	0.60
FULL PIPE VELOCITY (m/s)	1.33
HGL GRADE (%)	2.74

Row	Values (left to right)
HYDRAULIC GRADE LINE	20.883, 20.544, 20.067
INVERT LEVEL	20.838, **20.88**, **20.49**, 20.466, 19.712, **19.72**
DESIGN SURFACE LEVEL	21.604, **21.63**, 21.196, **21.19**
PIPE CHAINAGE	0, 12.35

H 1:500 (AT A1) 10 0 10 20 30 40 50 METRES

V 1:100 (AT A1) 2 1 0 1 2 3 4 5 6 7 8 9 10 METRES

	AMENDMENT	DES	DRN	CKD	APR	DATE
B	DRAINAGE LONG SECTION BP UPDATED	DG	VS	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
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NEWPARK
PRECINCT 7, STAGE 7B
LONGITUDINAL DRAINAGE SHEET 13

PROJECT No: 9985-12
SHEET No: CC5433

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5433 | B

Plotted: 14 September , 2021 12:56:11 PM File Name: J:\9985D\CC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCTS\5 - Precinct 7B\9985-12-CC5433.dwg

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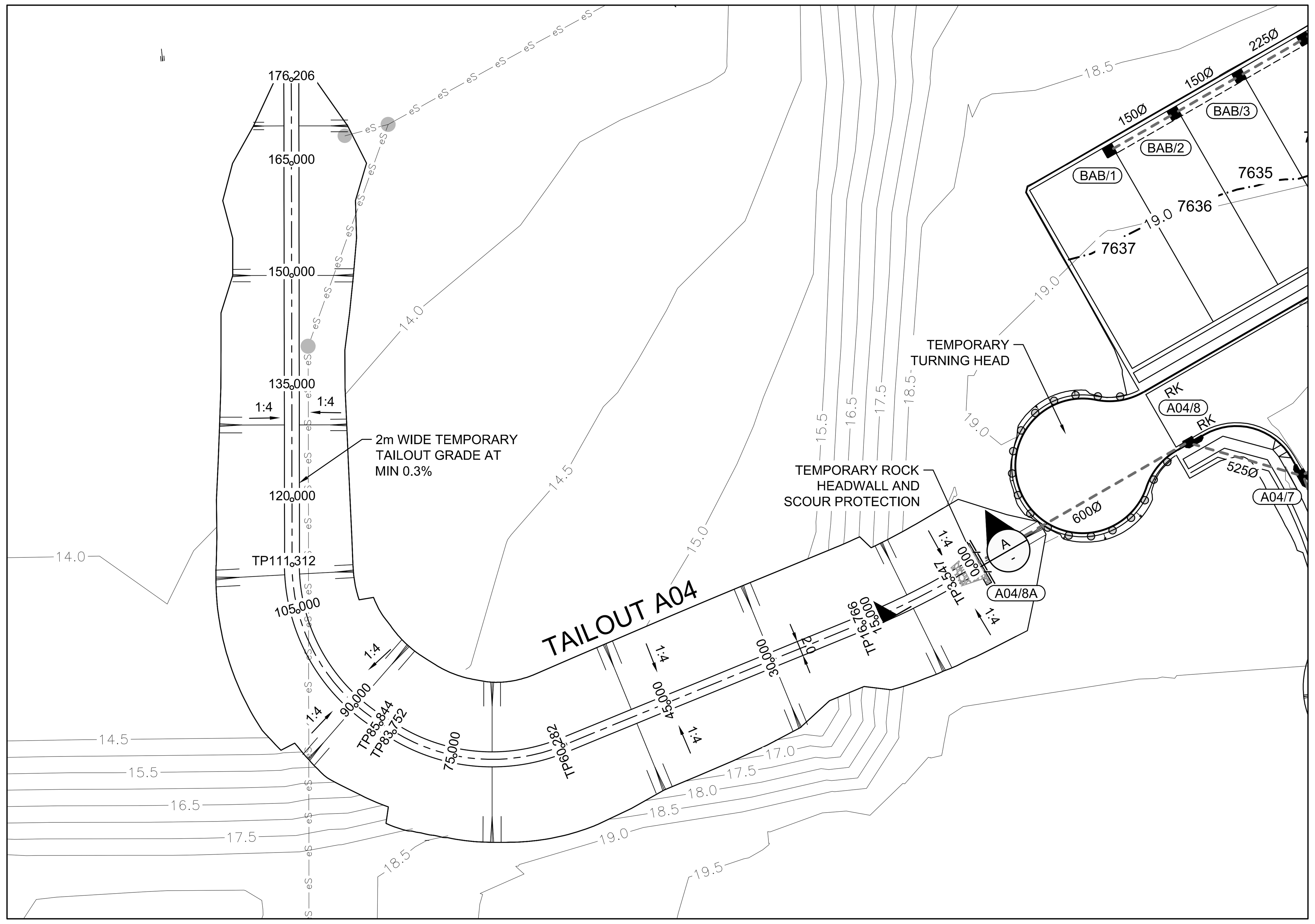
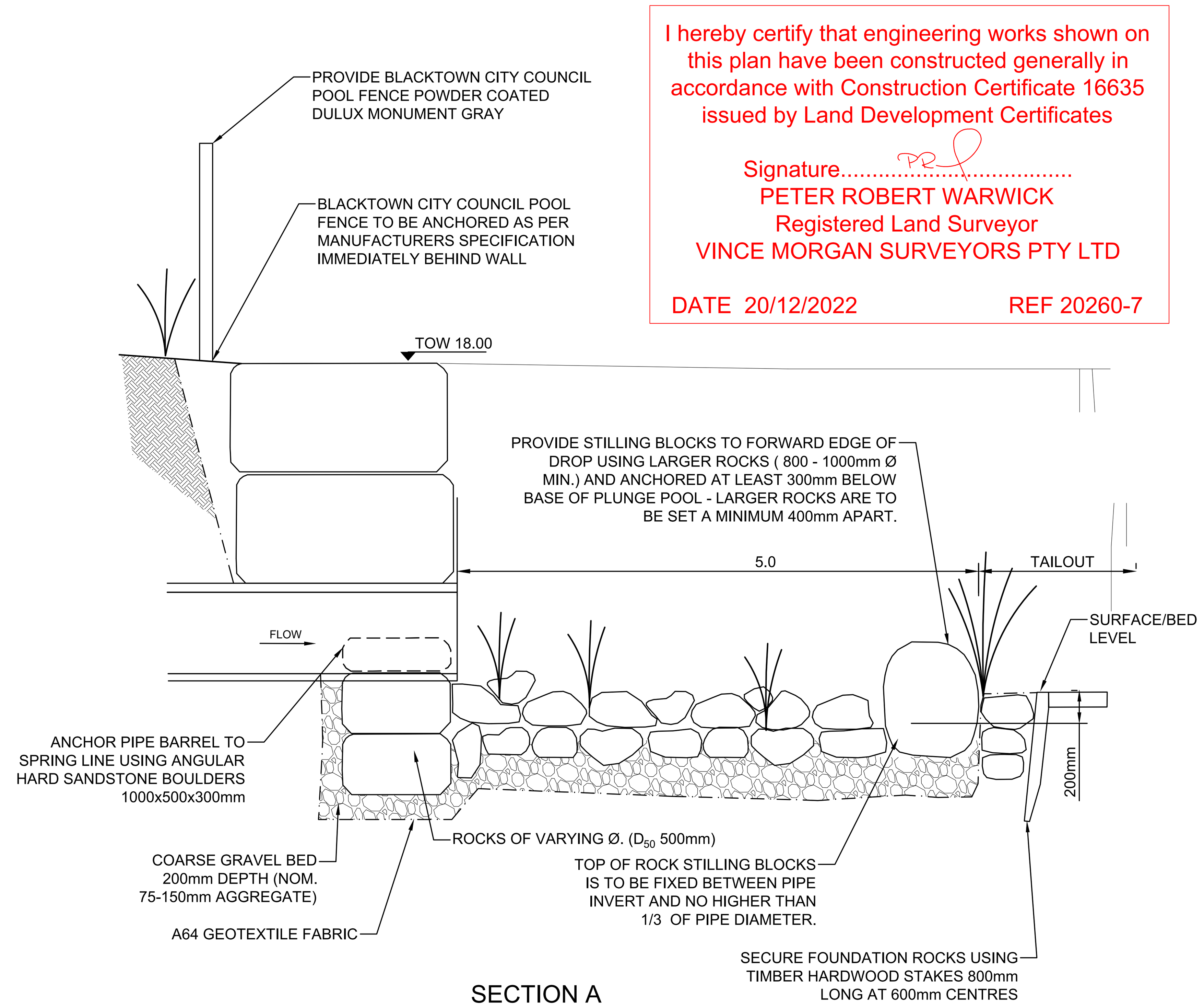


PLAN
SCALE 1:500



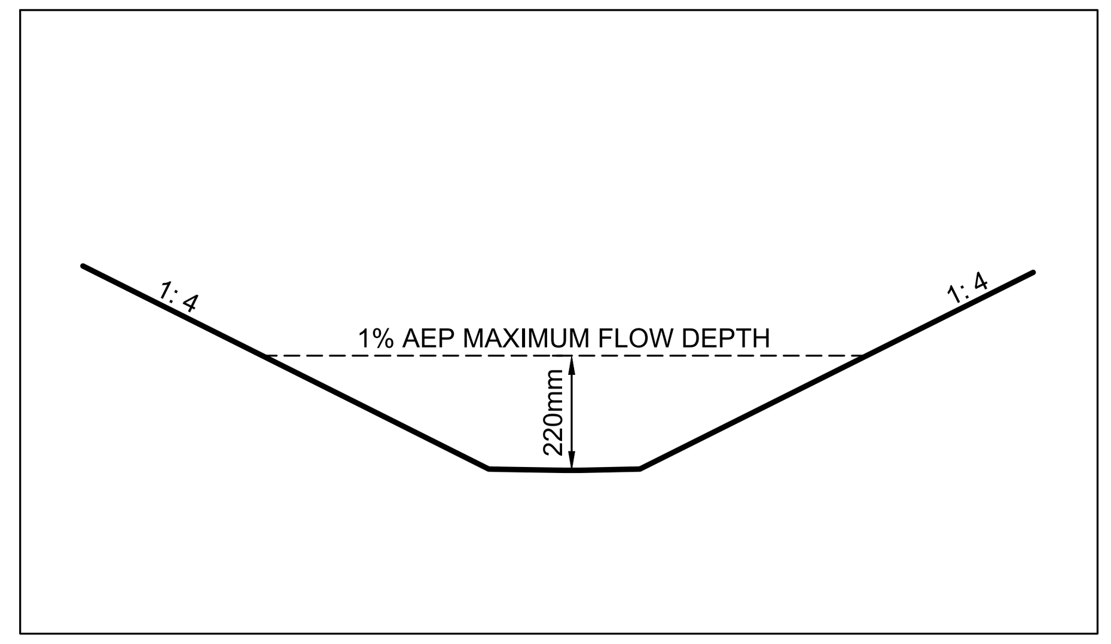
SECTION A
N.T.S

I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

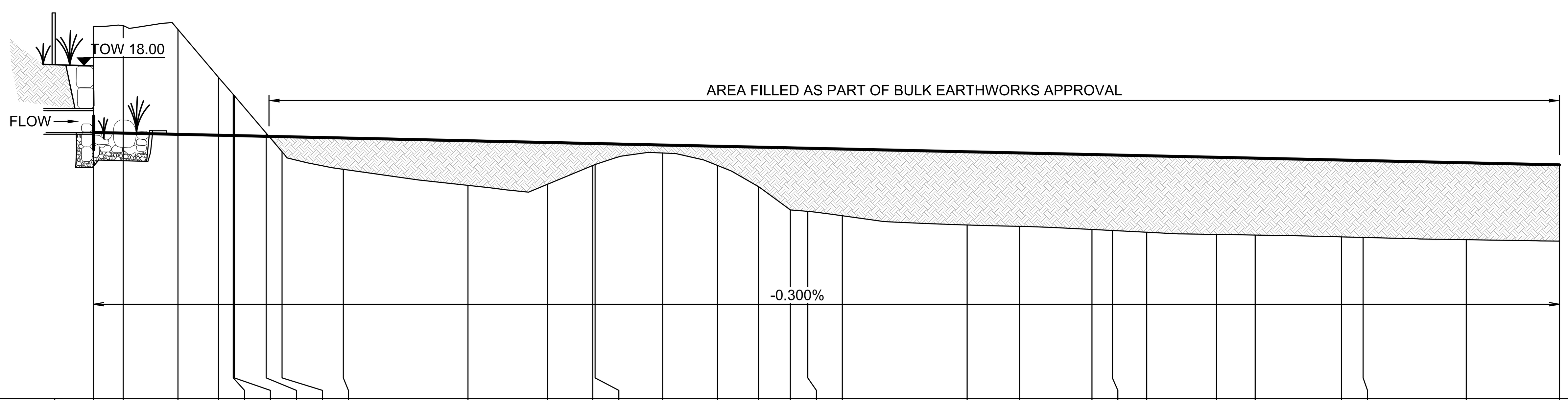
Signature......PR..........
PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

These plans are referred to in certificate no. 16635 approved by:
Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision
Land Development Certificates
www.LDC.com.au



TYPICAL TAILOUT SECTION
N.T.S



DATUM 10.0

CHAINAGE	DESIGN LINE GRADING	EXISTING SURFACE
0.000	16.400	18.946
3.547	16.384	18.965
10.127	16.355	18.879
15.000	16.334	17.728
16.766	16.326	17.316
16.909	16.325	17.283
20.730	16.309	16.388
22.643	16.300	15.940
30.000	16.268	15.517
45.000	16.202	15.129
54.547	16.160	15.156
60.000	16.136	15.609
60.282	16.134	15.632
68.396	16.099	15.921
75.000	16.070	15.621
79.886	16.048	15.105
83.752	16.031	14.537
85.844	16.022	14.506
90.000	16.004	14.399
105.000	15.937	14.175
111.312	15.910	14.147
120.000	15.871	14.070
122.472	15.861	14.044
126.597	15.842	14.001
135.000	15.805	13.950
139.632	15.785	13.935
150.000	15.739	13.889
152.610	15.728	13.876
165.000	15.673	13.825
176.206	15.624	13.789

LONGITUDINAL SECTION TAILOUT A04
HORIZONTAL SCALE 1:500
VERTICAL SCALE 1:100

TAILOUT A04

CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	295050.32	6268963.93	248°40'51.79"		
3.55	295047.01	6268962.64	248°40'51.79"		
10.16	295040.85	6268960.23		100	13.22
16.77	295034.42	6268958.66	256°15'17.87"		
60.28	294992.15	6268948.32	256°15'17.87"		
72.02	294979.83	6268945.31		25	23.47
83.75	294970.12	6268953.47	310°02'43.35"		
85.84	294968.52	6268954.81	310°02'43.35"		
98.58	294957.83	6268963.8		25	25.47
111.31	294959.87	6268977.61	8°24'49.73"		
176.21	294969.37	6269041.8	8°24'49.73"		

1:500 (AT A1) 1:1000 (AT A3) — 10 0 10 20 30 40 50 METRES

1:100 (AT A1) 1:200 (AT A3) — 2 1 0 1 2 3 4 5 6 7 8 9 10 METRES

Plotted: 14 September , 2021 12:57:47 PM File Name: J:\9985D\CC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCTS\5 - Precinct 7B\9985-12-CC5500.dwg

	AMENDMENT	DES	DRN	CKD	APR	DATE
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21

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STATUS: ISSUE FOR CONSTRUCTION APPROVAL
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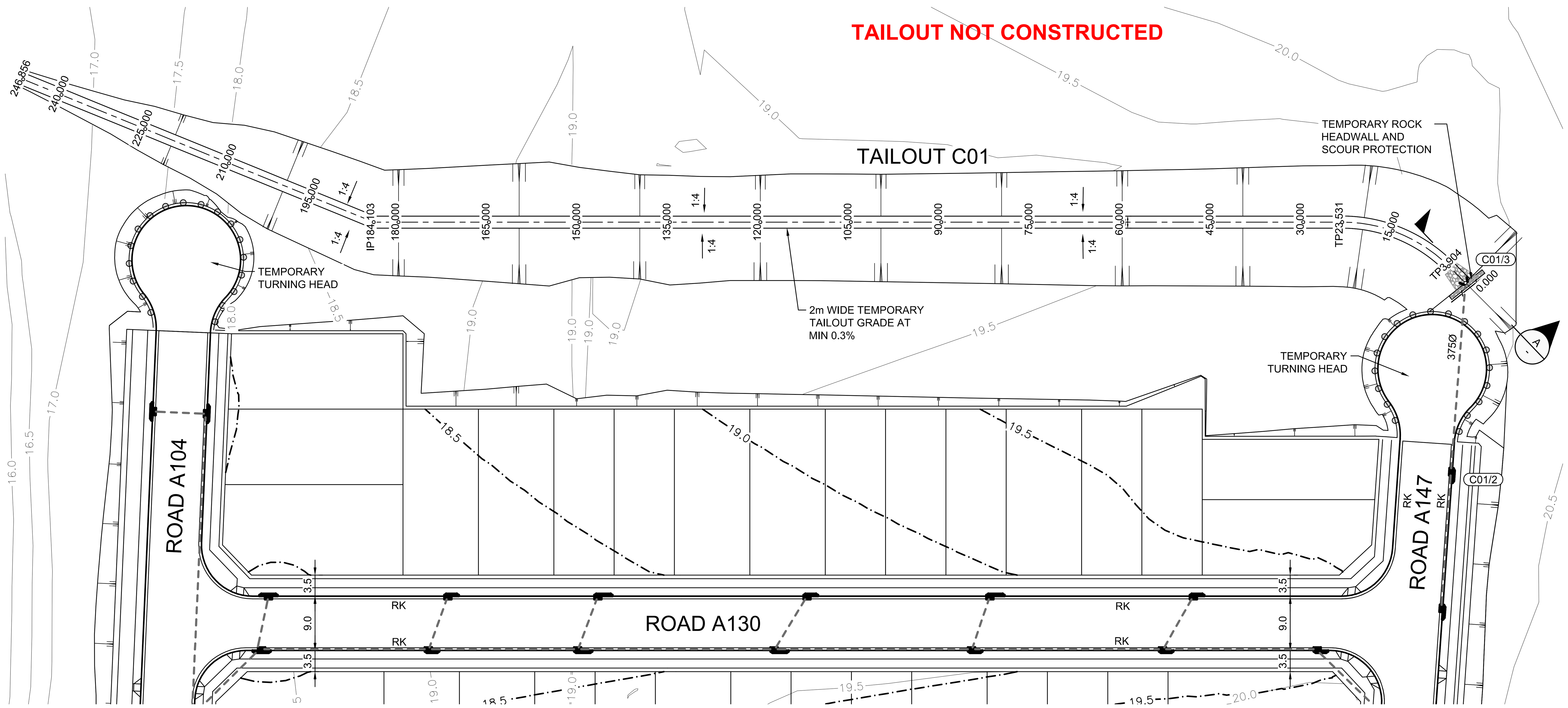
NEWPARK
PRECINCT 7, STAGE 7B
TAILOUT A04 PLAN

PROJECT No: 9985-12
SHEET No: CC5500

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5500 | A

TAILOUT NOT CONSTRUCTED

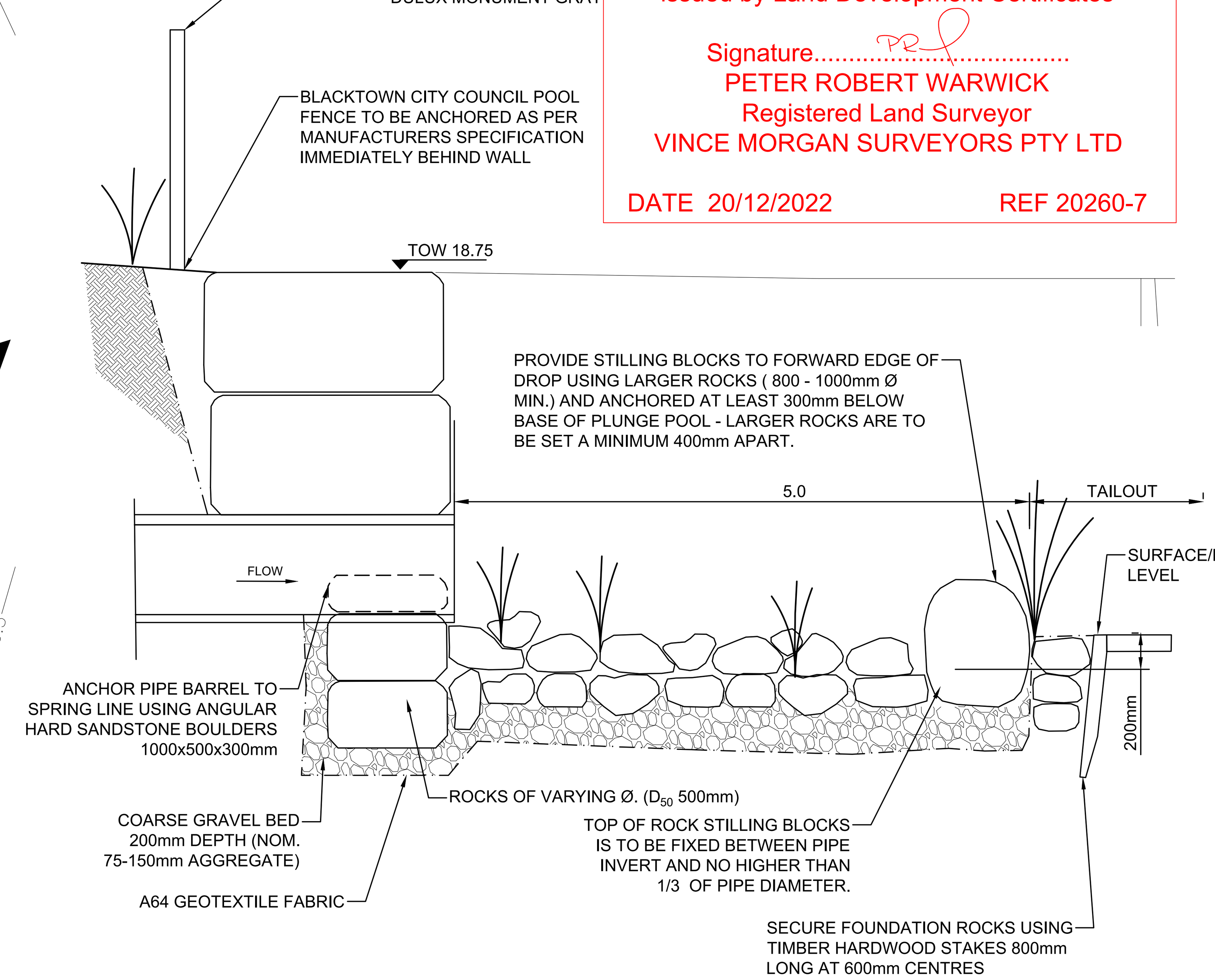


PLAN
SCALE 1:500

I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature..................................
PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7



SECTION A
N.T.S

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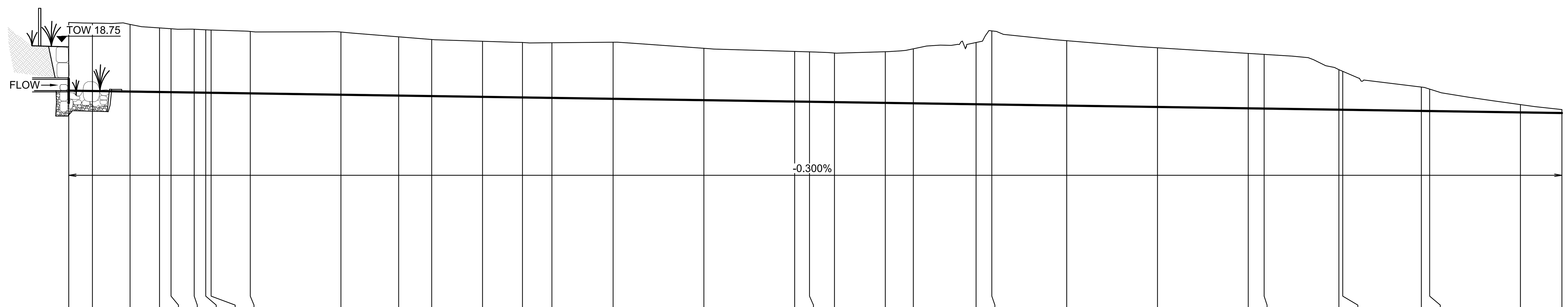
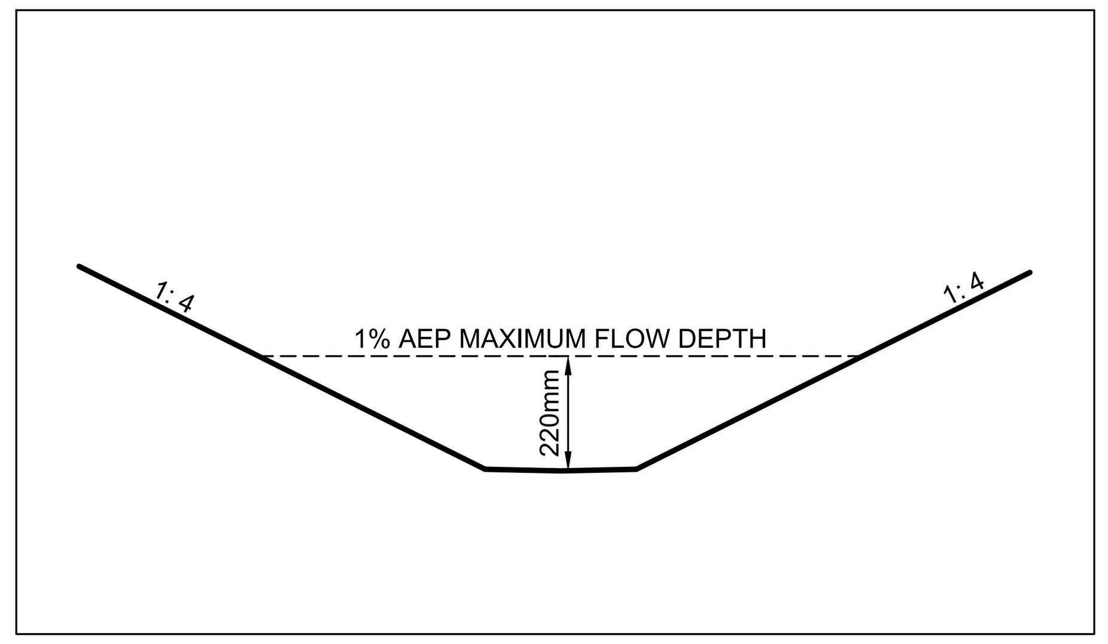


DATUM 10.0

CHAINAGE	DESIGN LINE GRADING	EXISTING SURFACE
0.000	17.300	19.557
3.904	17.288	19.538
10.127	17.270	19.495
15.000	17.255	19.380
16.909	17.249	19.352
20.730	17.238	19.335
22.643	17.232	19.316
23.531	17.229	19.309
30.000	17.210	19.262
45.000	17.165	19.242
54.547	17.136	19.082
60.000	17.120	18.994
68.396	17.095	18.935
75.000	17.075	18.898
79.886	17.060	18.888
90.000	17.030	18.904
105.000	16.985	18.703
120.000	16.940	18.602
122.472	16.933	18.587
126.597	16.920	18.547
135.000	16.895	18.592
139.632	16.881	18.688
150.000	16.850	18.896
152.610	16.842	19.281
165.000	16.805	18.956
180.000	16.760	18.722
195.000	16.715	18.534
197.632	16.707	18.501
210.000	16.670	17.994
210.632	16.668	17.940
223.632	16.629	17.420
225.000	16.625	17.352
240.000	16.580	16.839
246.856	16.559	16.673

LONGITUDINAL SECTION TAILOUT C01
HORIZONTAL SCALE 1:500
VERTICAL SCALE 1:100



TYPICAL TAILOUT SECTION
N.T.S

TAILOUT C01					
CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	A.LENGTH
0	295569.59	6269204.31	340°54'29.02"		
3.9	295568.31	6269207.99	340°54'29.02"		
13.72	295564.93	6269217.78		-25	19.63
23.53	295555.62	6269222.3	295°55'30.18"		
184.1	295411.21	6269292.5			
246.86	295369.29	6269339.21	318°05'34.21"		

1:100 (AT A1) 1:200 (AT A3) — 2 1 0 1 2 3 4 5 6 7 8 9 10 METRES

1:500 (AT A1) 1:1000 (AT A3) — 10 0 10 20 30 40 50 METRES

Plotted: 14 September , 2021 12:59:55 PM File Name: J:\9985D\CC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCTS\5 - Precinct 7B\9985-12-CC5501.dwg

	AMENDMENT	DES	DRN	CKD	APR	DATE
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21

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STATUS: ISSUE FOR CONSTRUCTION APPROVAL
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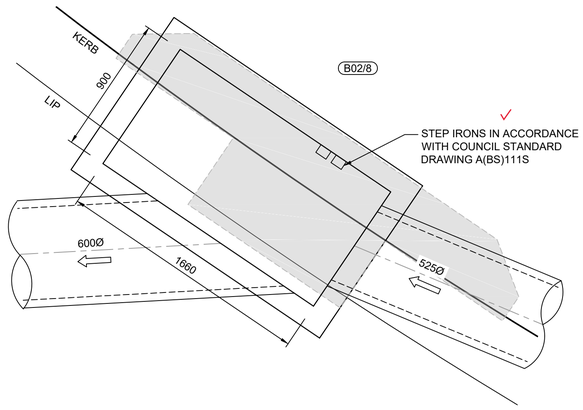
NEWPARK
PRECINCT 7, STAGE 7B
TAILOUT C01 PLAN

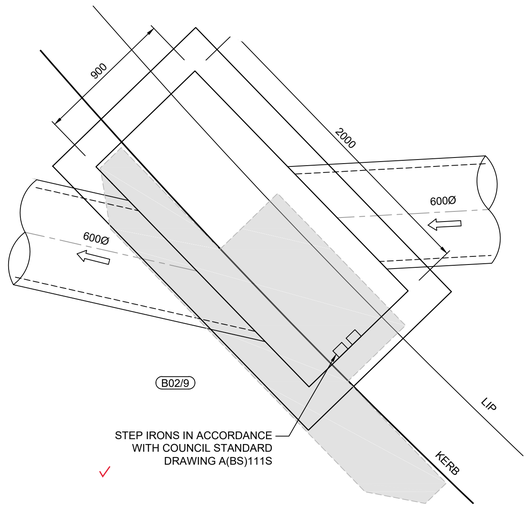
PROJECT No: 9985-12
SHEET No: CC5501

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5501 | A

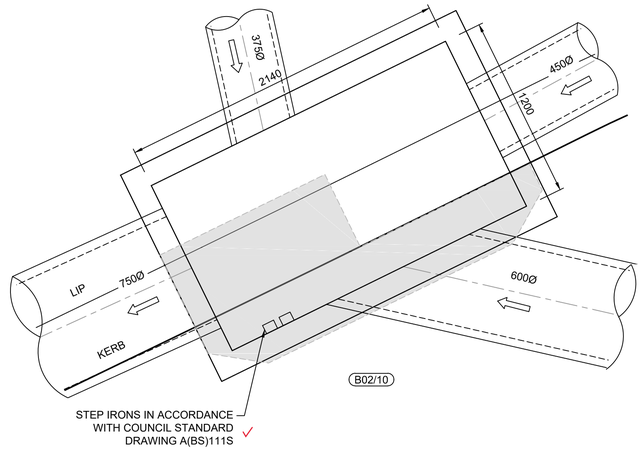


SPECIAL PIT - B02/8
SCALE 1:20

B



SPECIAL PIT - B02/9
SCALE 1:20



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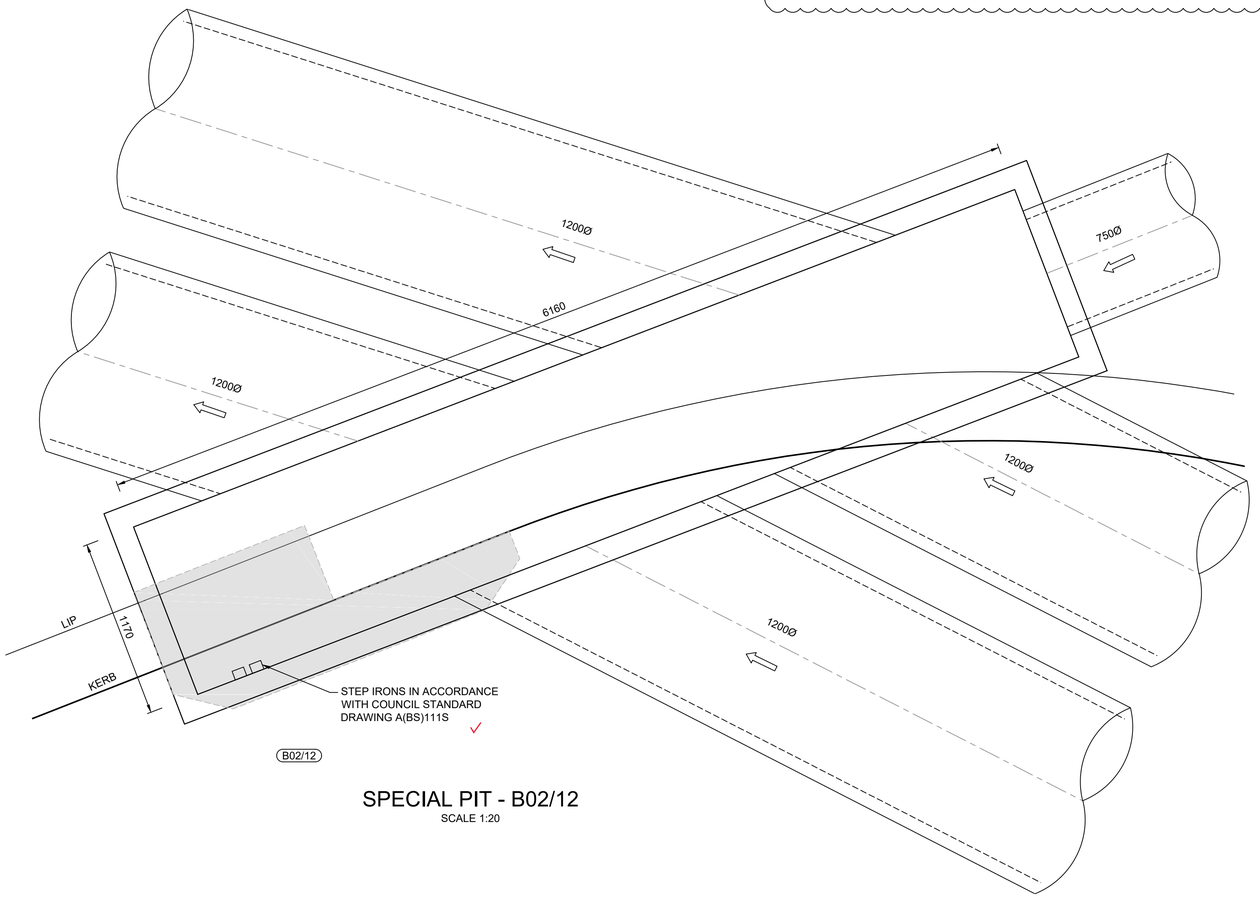
SCALE 1:20



SPECIAL PIT - B02/12
SCALE 1:20

I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature.....

PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

These plans are referred to in certificate no. 16635 approved by:
Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision

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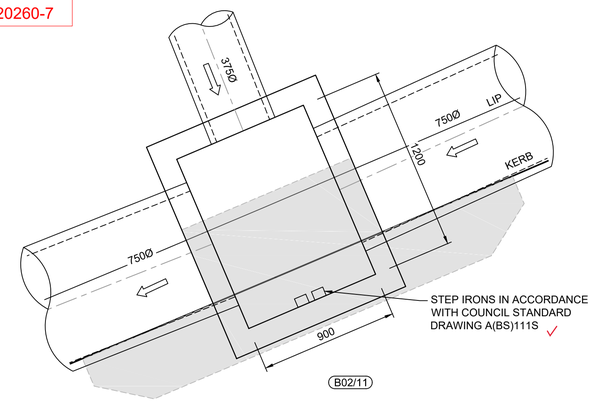

SPECIAL PIT - B02/11
SCALE 1:20

NOTES:
ALL PITS TO BE BENCHED TO DIRECT WATER FLOW

1:20 (AT A1)
400 200 0 400 800 1200 1600 2000
MILLIMETRES

B	SPECIAL PIT B02/9 UPDATED	DG	JM	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	JM	MP	PJM	12/08/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

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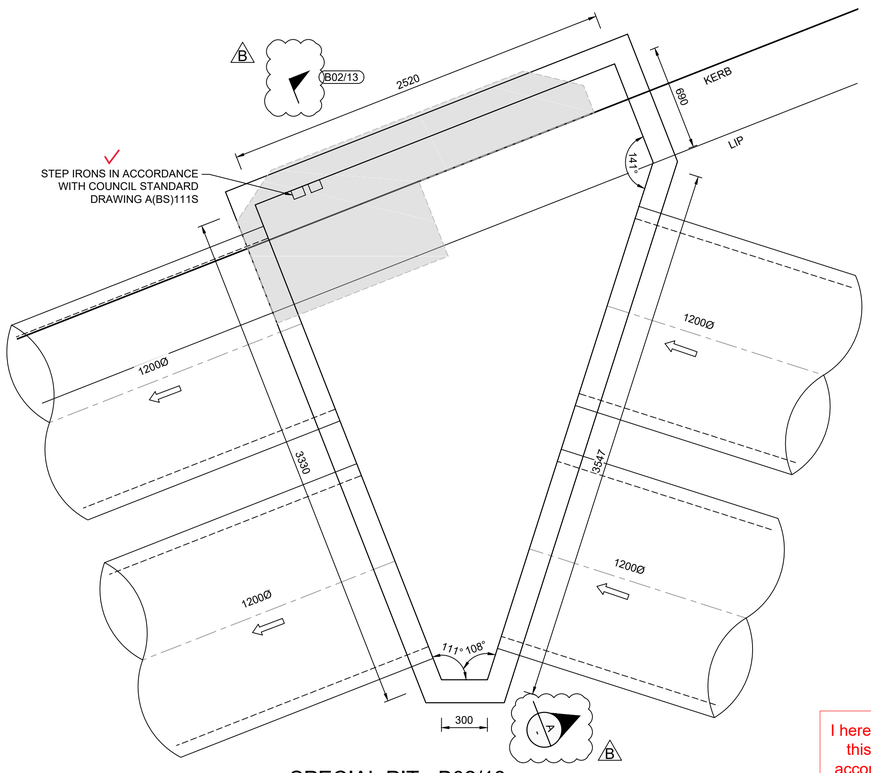
NEWPARK
PRECINCT 7, STAGE 7B
SPECIAL PIT DETAILS
SHEET 1

PROJECT No: 9985-12
SHEET No: CC5550

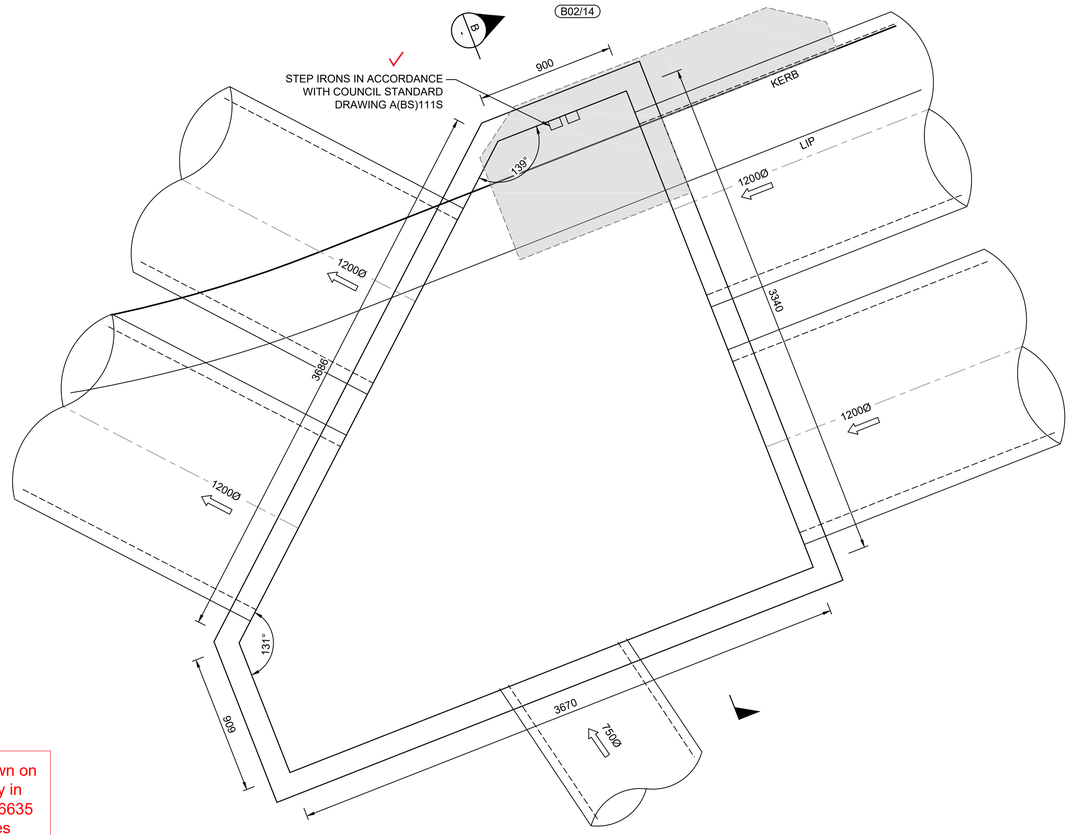
AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5550 | B

Plotted: 14 September , 2021 1:01:11 PM File Name: J:\9985D\CC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCTS\5 - Precinct 7B\9985-12-CC5550.dwg



SPECIAL PIT - B02/13

SCALE 1:20



SPECIAL PIT - B02/14

SCALE 1:20

I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature.....

PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

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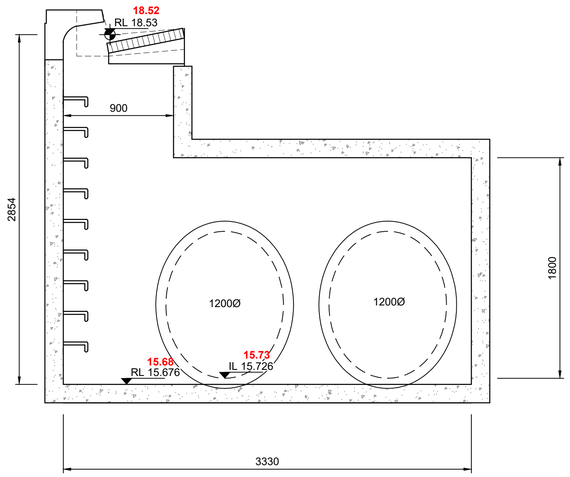
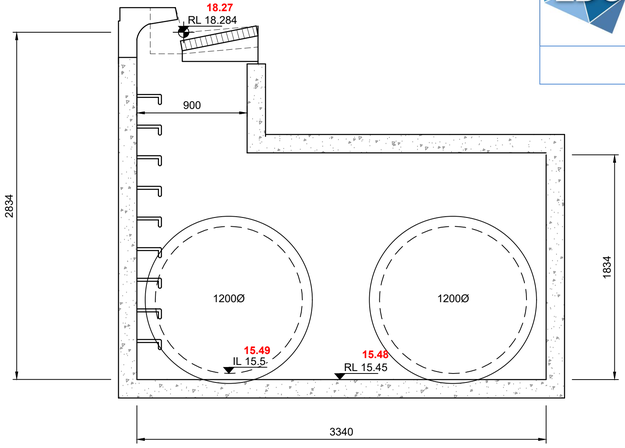


SECTION A
SCALE 1:25



SECTION B
SCALE 1:25

NOTES:
ALL PITS TO BE BENCHED TO DIRECT WATER FLOW

1:25(AT A1) 500 0 500 1000 1500 2000 2500 MILLIMETRES

1:20 (AT A1) 400 200 0 400 800 1200 1600 2000 MILLIMETRES

B	SECTION MARKER UPDATED	DG	JM	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	JM	MP	PJM	12/08/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

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P 02 4720 3300 **W** www.jwprince.com.au **E** jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL

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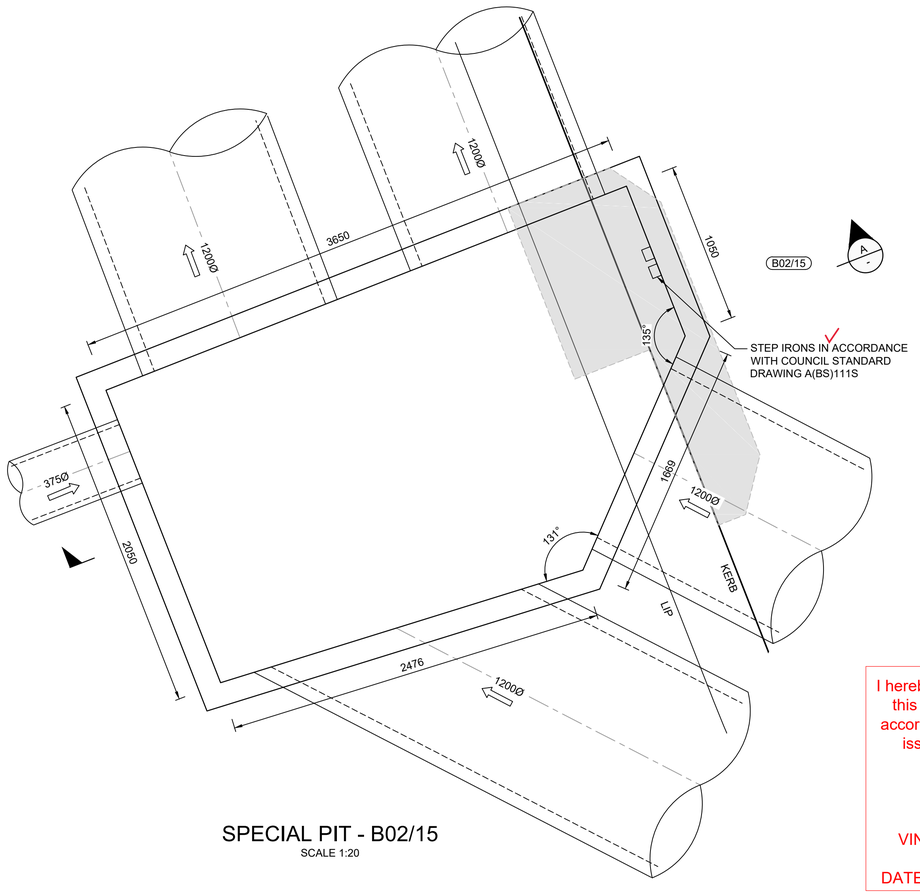
NEWPARK
PRECINCT 7, STAGE 7B
SPECIAL PIT DETAILS
SHEET 2

PROJECT No: 9985-12

SHEET No: CC5551

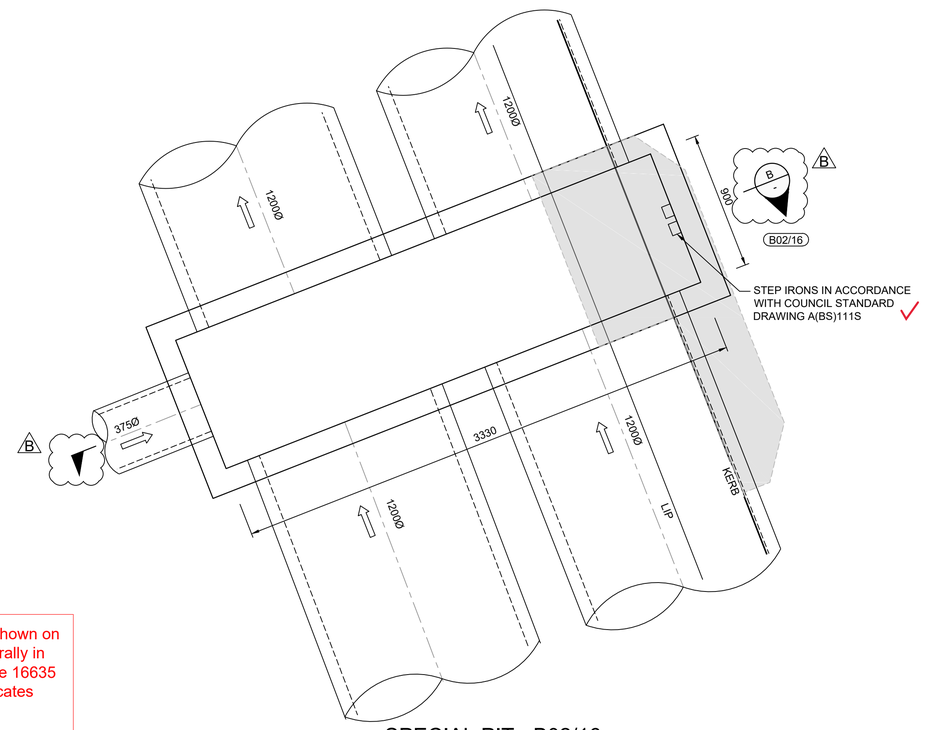
AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5551 | B

Plotted: 14 September , 2021 1:02:14 PM File Name: J:\9985\DCC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCT\SI5 - Precinct 7B\9985-12-CC5551.dwg



SPECIAL PIT - B02/15

SCALE 1:20



SPECIAL PIT - B02/16

SCALE 1:20

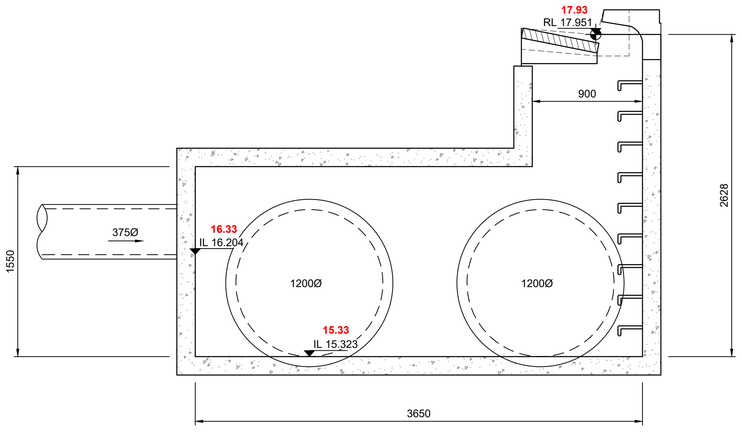
I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature.....

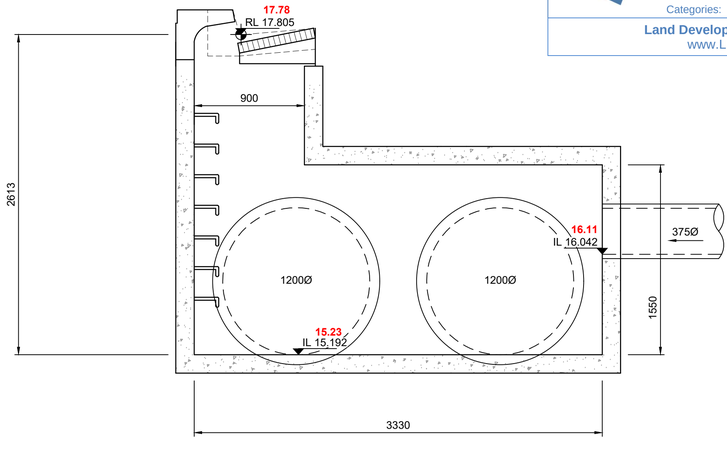
PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

These plans are referred to in certificate no. 16635 approved by:
Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision
Land Development Certificates
www.LDC.com.au



SECTION A
SCALE 1:25



SECTION B
SCALE 1:25

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1:20 (AT A1) 400 200 0 400 800 1200 1600 2000 MILLIMETRES

B	SECTION MARKER UPDATED	DG	JM	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	JM	MP	PJM	12/08/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 **W** www.jwprince.com.au **E** jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL

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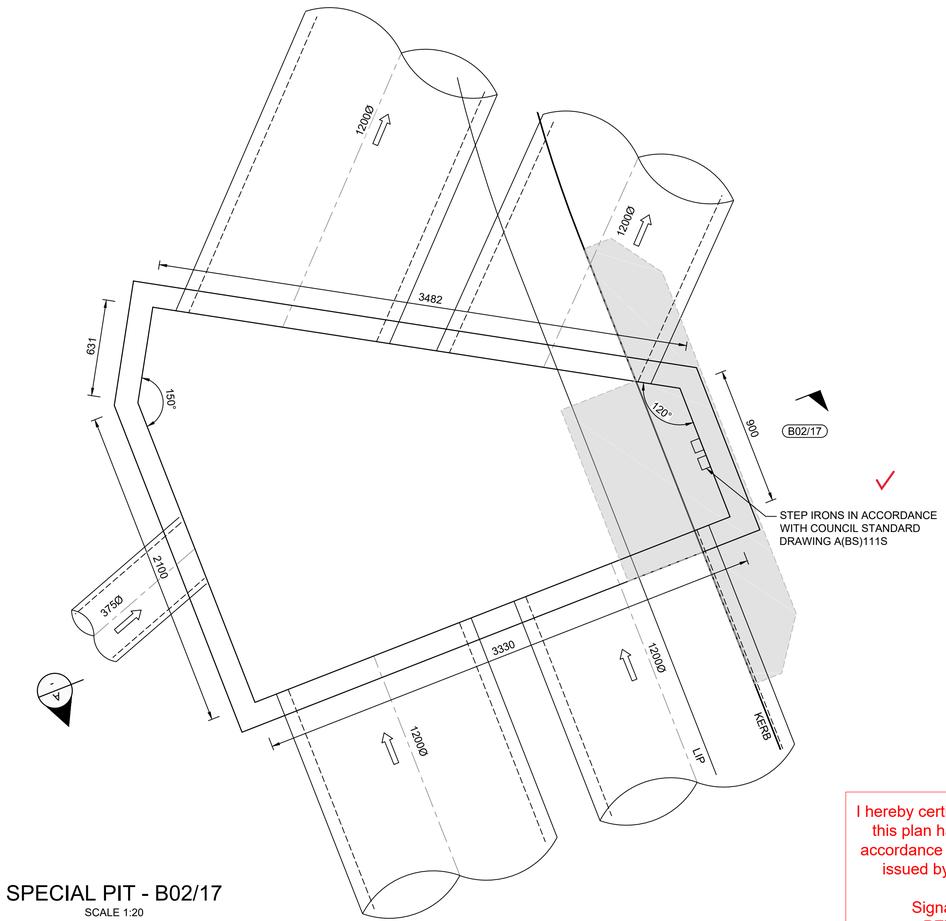
NEWPARK
PRECINCT 7, STAGE 7B
SPECIAL PIT DETAILS
SHEET 3

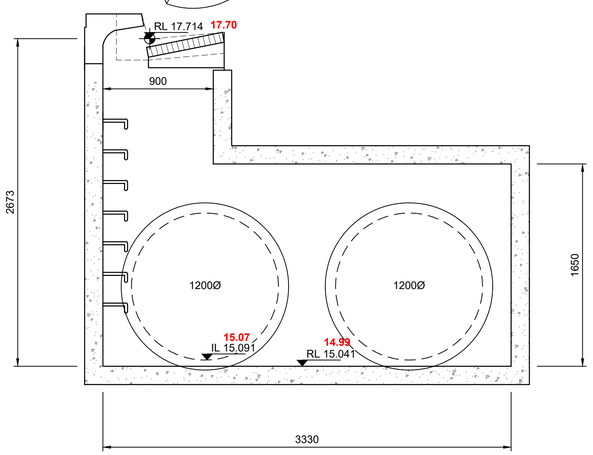
PROJECT No: 9985-12

SHEET No: CC5552

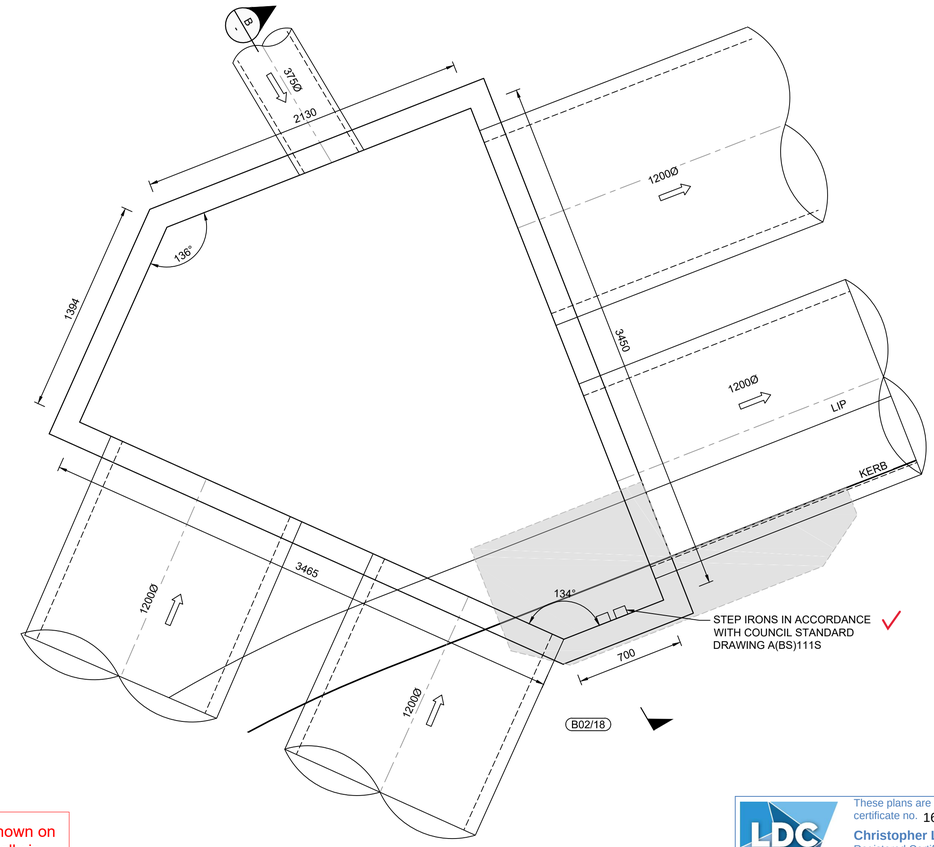
AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5552 | B



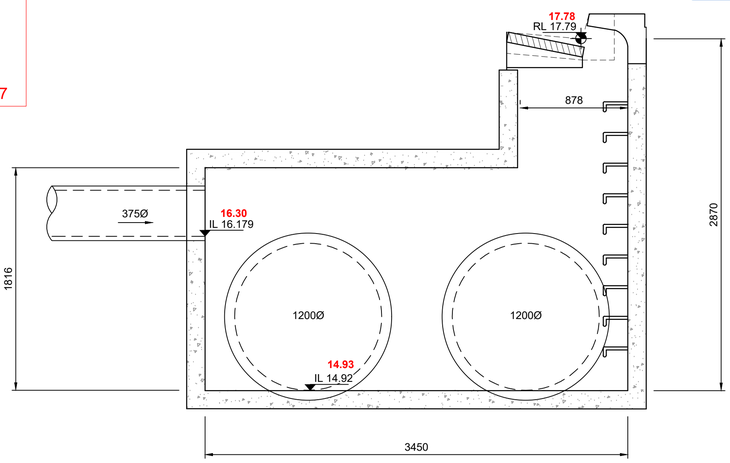
SPECIAL PIT - B02/17
SCALE 1:20



SECTION A
SCALE 1:25



SPECIAL PIT - B02/18
SCALE 1:20



SECTION B
SCALE 1:25

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Signature.....
PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

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Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision
Land Development Certificates
www.LDC.com.au

1:20 (AT A1)
400 200 0 400 800 1200 1600 2000
MILLIMETRES

	AMENDMENT	DES	DRN	CKD	APR	DATE
A	ISSUE FOR APPROVAL	DG	JM	MP	PJM	12/08/21

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
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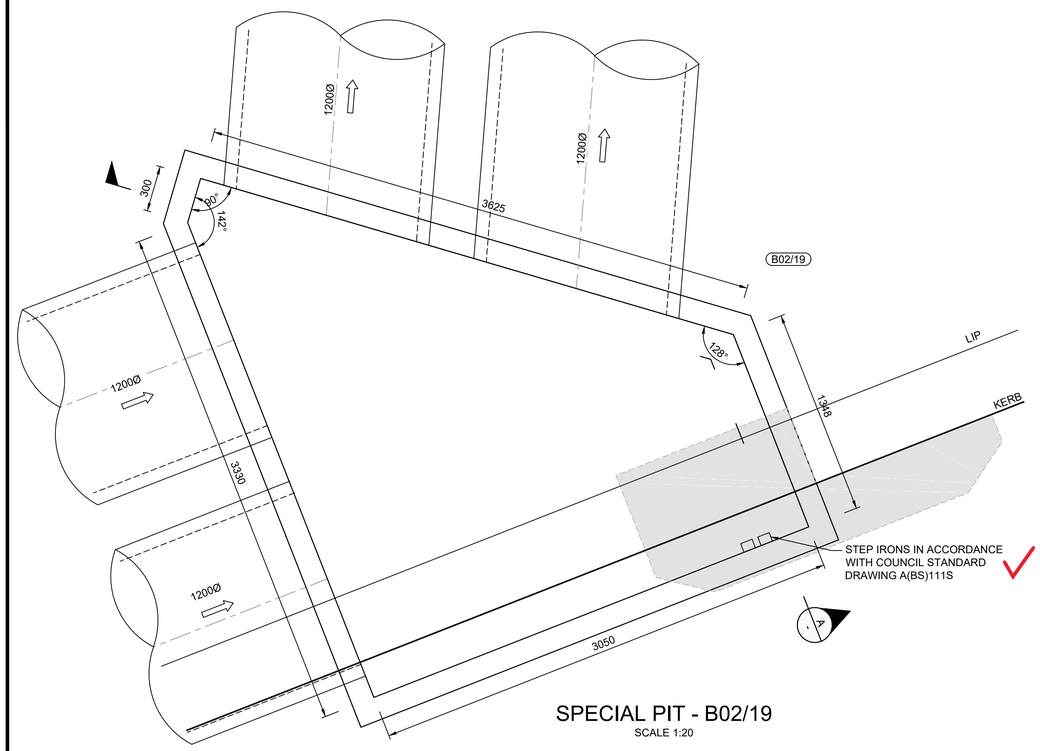
NEWPARK
PRECINCT 7, STAGE 7B
SPECIAL PIT DETAILS
SHEET 4

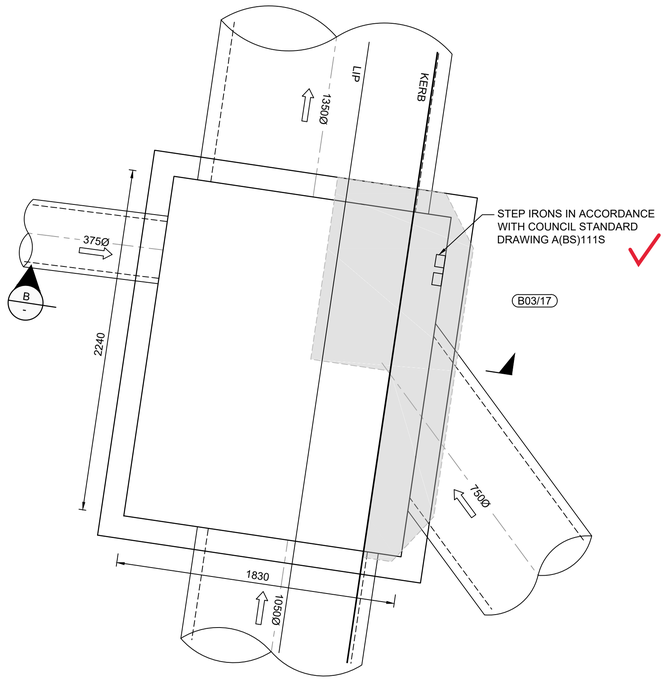
PROJECT No: 9985-12
SHEET No: CC5553

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5553 | A

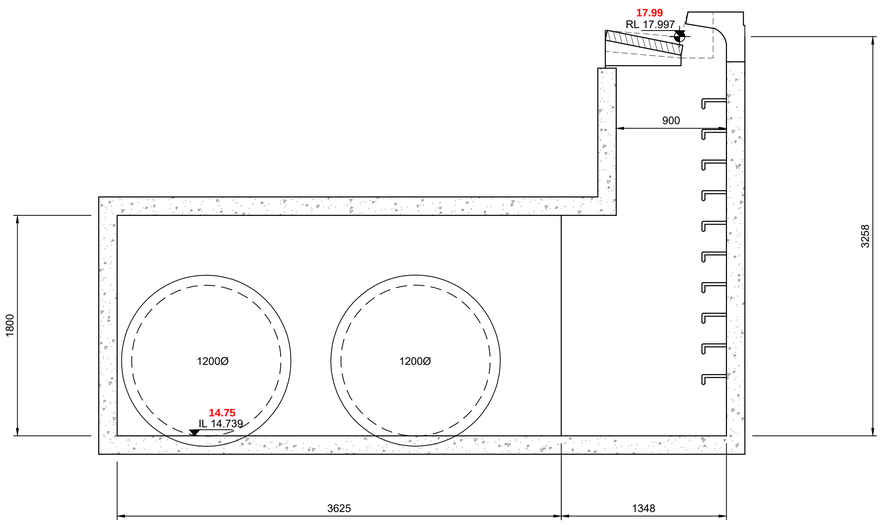
Plotted: 14 September , 2021 1:04:25 PM File Name: J:\9985\DICC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCTS\5 - Precinct 7B\9985-12-CC5553.dwg



SPECIAL PIT - B02/19
SCALE 1:20



SPECIAL PIT - B03/17
SCALE 1:20



SECTION A
SCALE 1:25

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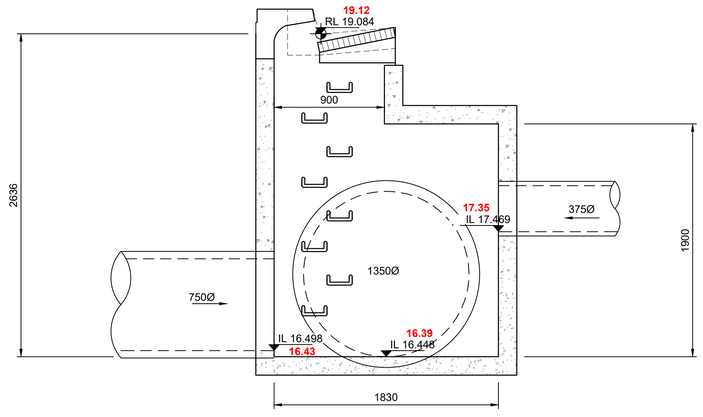
Signature.....
PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7



SECTION B
SCALE 1:25

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Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision
Land Development Certificates
www.LDC.com.au

1:25(AT A1) 500 0 500 1000 1500 2000 2500 MILLIMETRES

1:20 (AT A1) 400 200 0 400 800 1200 1600 2000 MILLIMETRES

A	ISSUE FOR APPROVAL	DG	JM	MP	PJM	12/08/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
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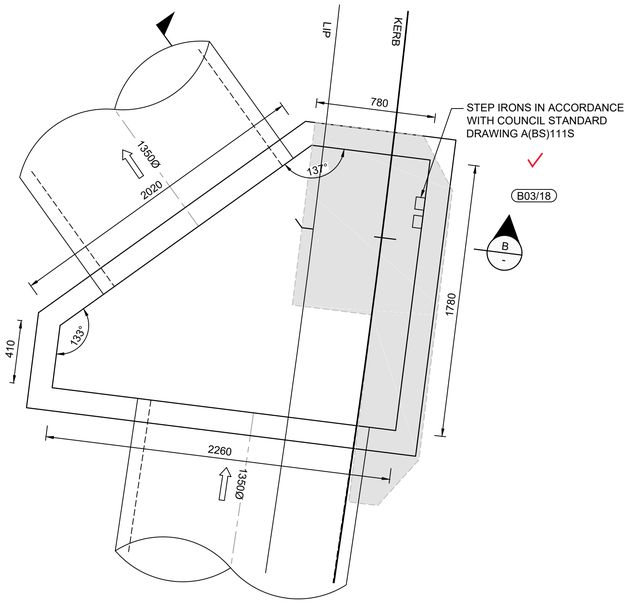
NEWPARK
PRECINCT 7, STAGE 7B
SPECIAL PIT DETAILS
SHEET 5

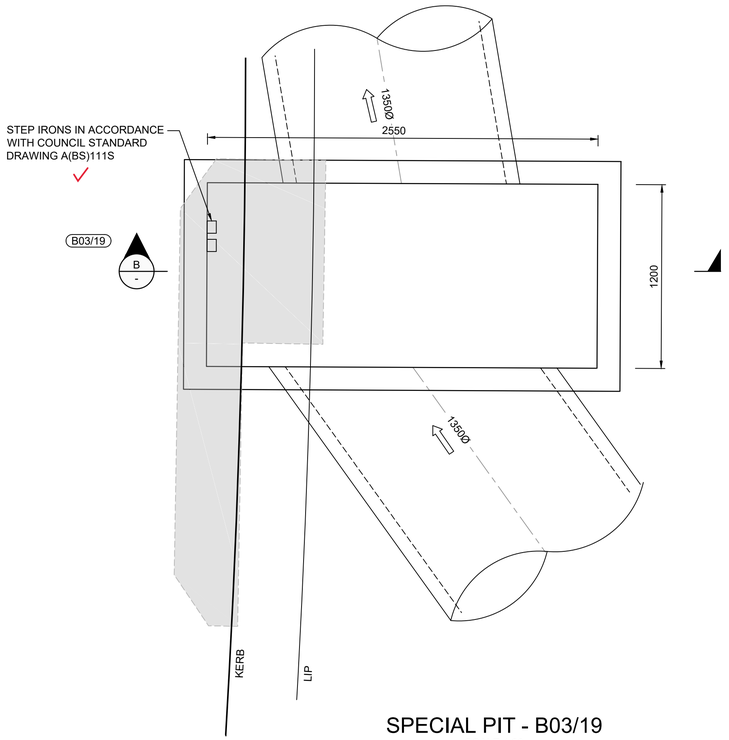
PROJECT No: 9985-12
SHEET No: CC5554

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5554 | A

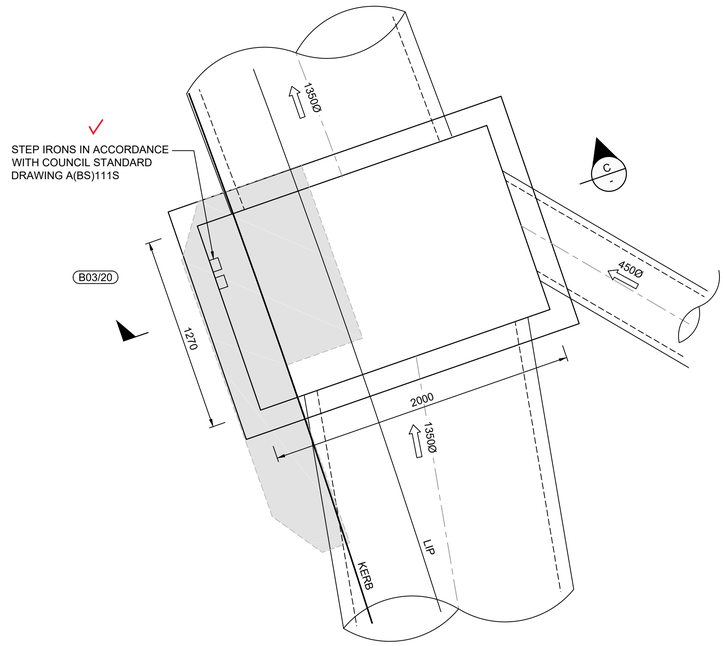
Plotted: 14 September , 2021 1:05:28 PM File Name: J:\9985D\CC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCT\SI5 - Precinct 7B\9985-12-CC5554.dwg



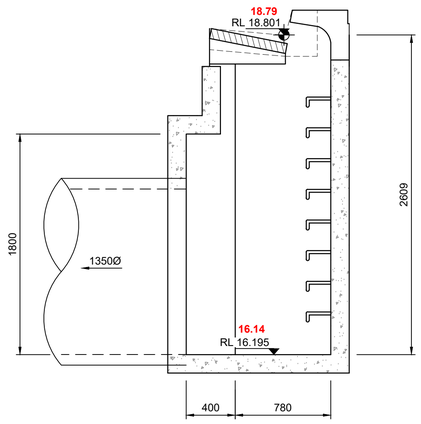
SPECIAL PIT - B03/18
SCALE 1:20



SPECIAL PIT - B03/19
SCALE 1:20



SPECIAL PIT - B03/20
SCALE 1:20



SECTION A
SCALE 1:25
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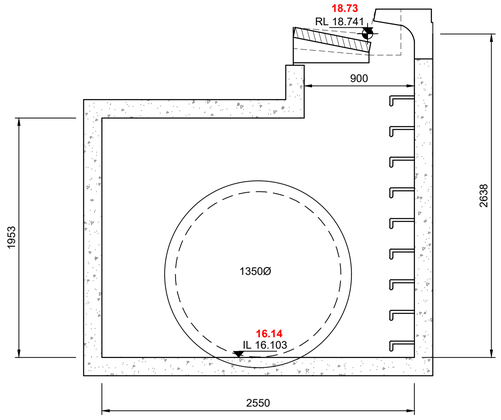

SECTION B
SCALE 1:25
-

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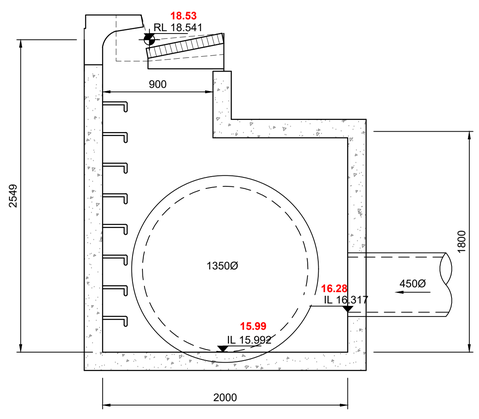
Signature.....
PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7



SECTION C
SCALE 1:25
-

LDC

These plans are referred to in certificate no. 16635 approved by:

Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision

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1:20 (AT A1)

400 200 0 400 800 1200 1600 2000
MILLIMETRES

A	ISSUE FOR APPROVAL	DG	JM	MP	PJM	12/08/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 **W** www.jwprince.com.au **E** jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
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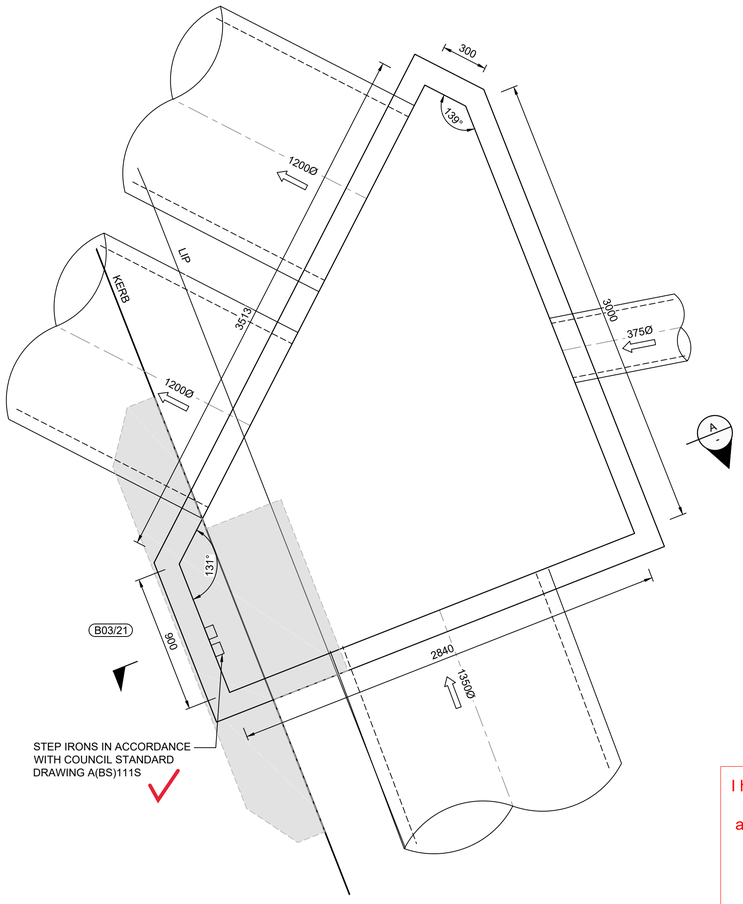
NEWPARK
PRECINCT 7, STAGE 7B
SPECIAL PIT DETAILS
SHEET 6

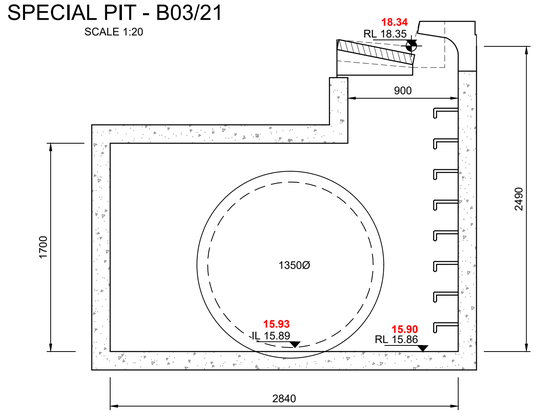
PROJECT No: 9985-12
SHEET No: CC5555

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5555 | A

Plotted: 14 September , 2021 1:06:43 PM File Name: J:\9985D\CC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCT\SI5 - Precinct 7B\9985-12-CC5555.dwg

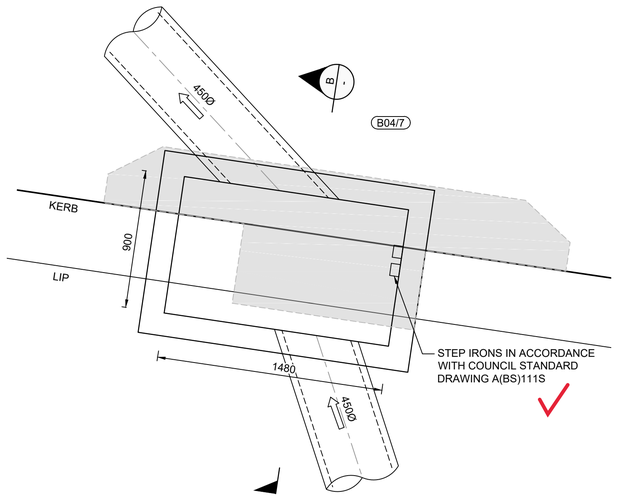


SPECIAL PIT - B03/21
SCALE 1:20

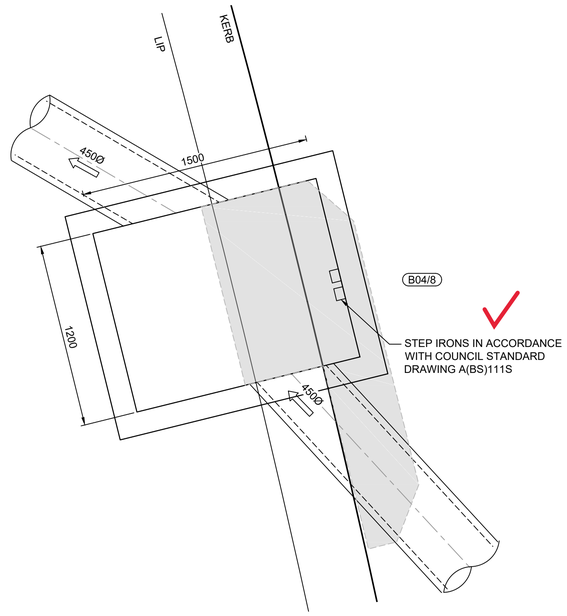


SECTION A
SCALE 1:25

B



SPECIAL PIT - B04/7
SCALE 1:20



SPECIAL PIT - B04/8
SCALE 1:20

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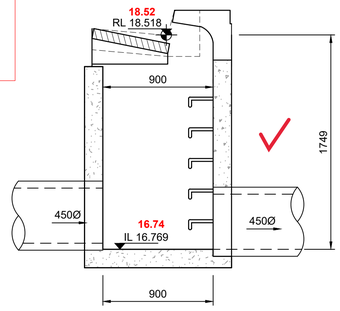
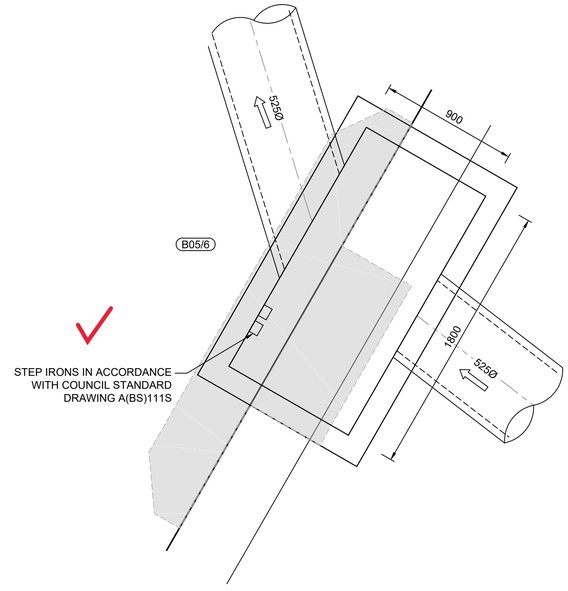
PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7



SECTION B
SCALE 1:25



SPECIAL PIT - B05/6
SCALE 1:20

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1:25(AT A1) 500 0 500 1000 1500 2000 2500 MILLIMETRES

1:20 (AT A1) 400 200 0 400 800 1200 1600 2000 MILLIMETRES

	AMENDMENT	DES	DRN	CKD	APR	DATE
B	PITS B04/7 & B04/8 UPDATED	DG	JM	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	JM	MP	PJM	12/08/21

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CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
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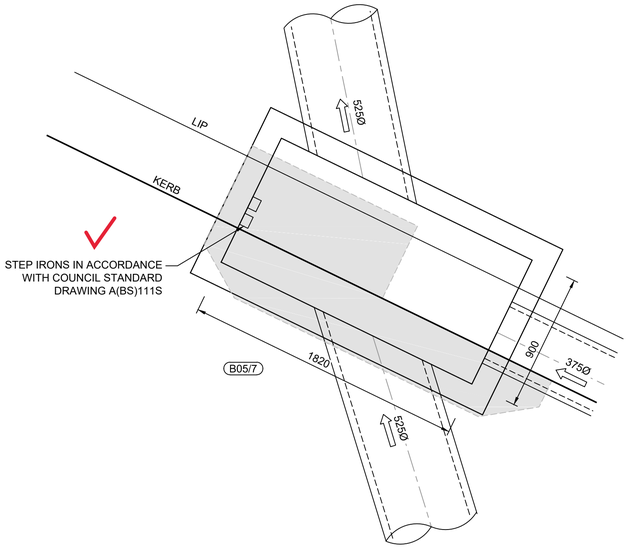
NEWPARK
PRECINCT 7, STAGE 7B
SPECIAL PIT DETAILS
SHEET 7

PROJECT No: 9985-12
SHEET No: CC5556

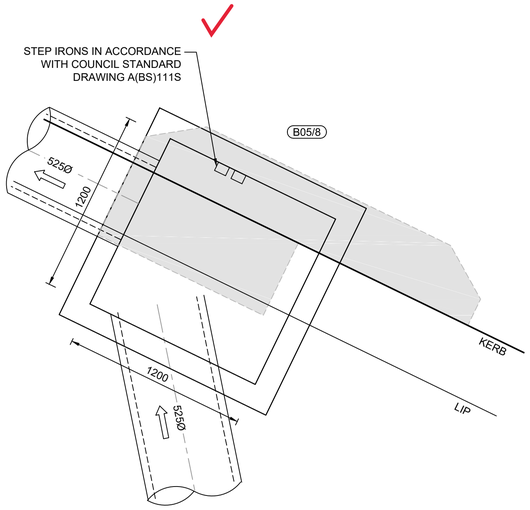
AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5556 | B

Plotted: 14 September , 2021 1:07:56 PM File Name: J:\9985\DICC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCTS\5 - Precinct 7B\9985-12-CC5556.dwg

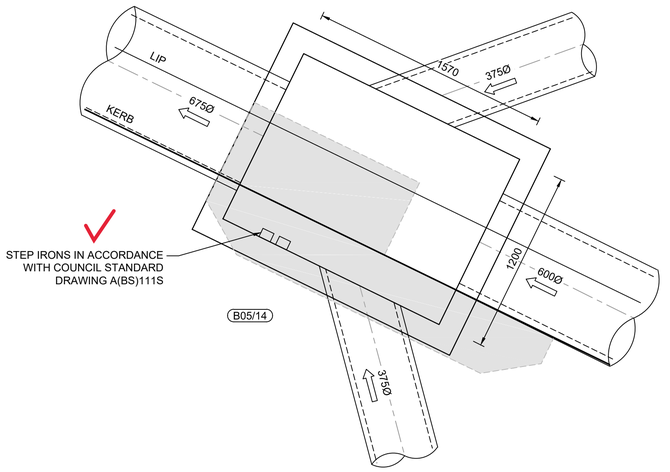
B



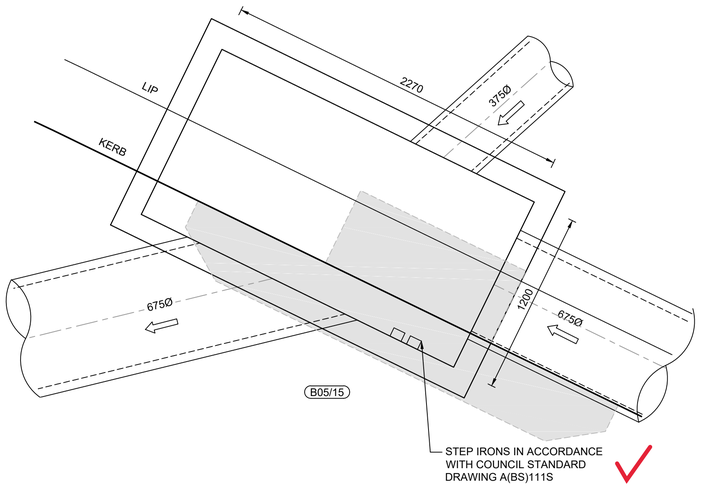
SPECIAL PIT - B05/7
SCALE 1:20



SPECIAL PIT - B05/8
SCALE 1:20



SPECIAL PIT - B05/14
SCALE 1:20



SPECIAL PIT - B05/15
SCALE 1:20

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Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

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Registration No: BDC 3015
Categories: Certifier – Subdivision

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1:20 (AT A1)

400 200 0 400 800 1200 1600 2000
MILLIMETRES

	AMENDMENT	DES	DRN	CKD	APR	DATE
B	PIT B05/7 UPDATED	DG	JM	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	JM	MP	PJM	12/08/21

J. WYNDHAM PRINCE
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P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
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NEWPARK
PRECINCT 7, STAGE 7B
SPECIAL PIT DETAILS
SHEET 8

PROJECT No: 9985-12
SHEET No: CC5557

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5557 | B

Plotted: 14 September , 2021 1:09:02 PM File Name: J:\9985D\CC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCT\SI5 - Precinct 7B\9985-12-CC5557.dwg

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Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision
Land Development Certificates
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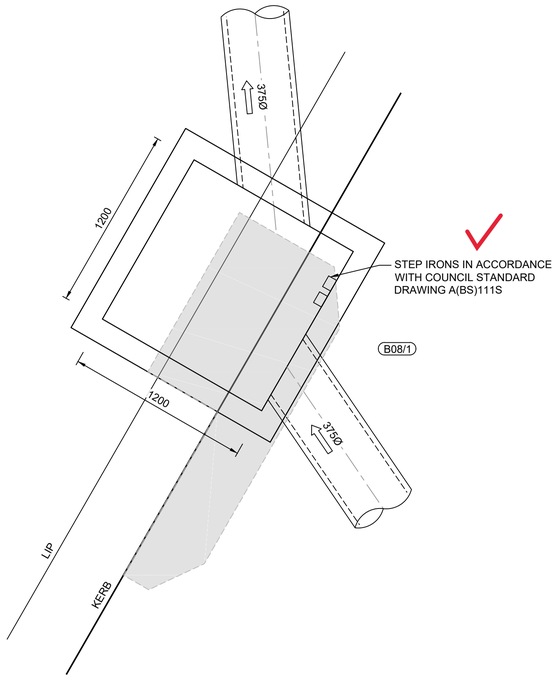
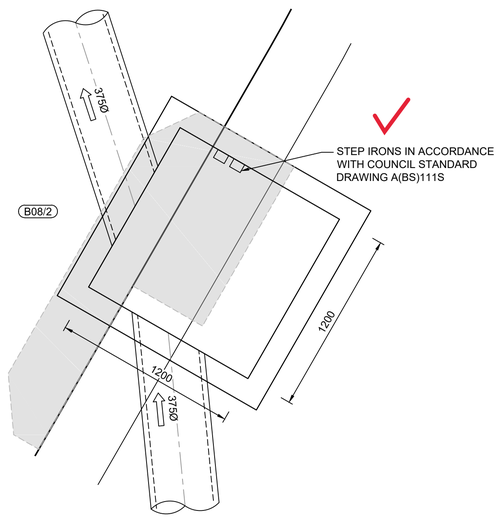
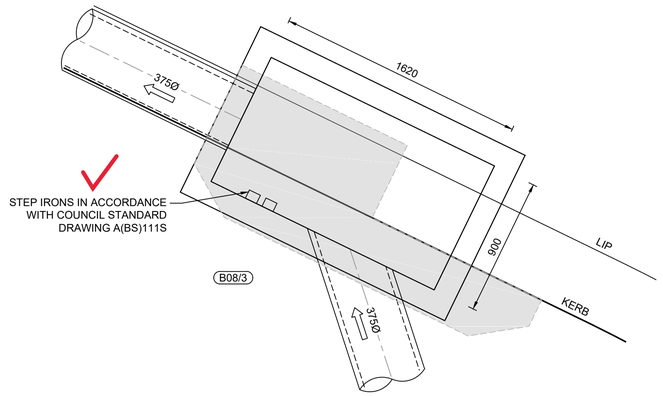


SPECIAL PIT - B08/1
SCALE 1:20



SPECIAL PIT - B08/2
SCALE 1:20



SPECIAL PIT - B08/3
SCALE 1:20

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Signature.....
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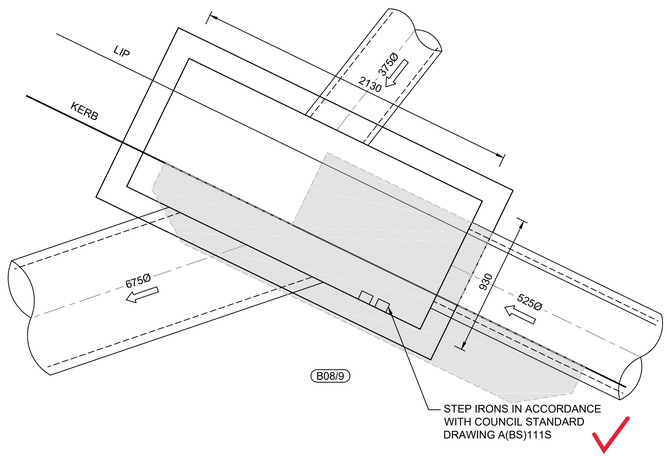
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7



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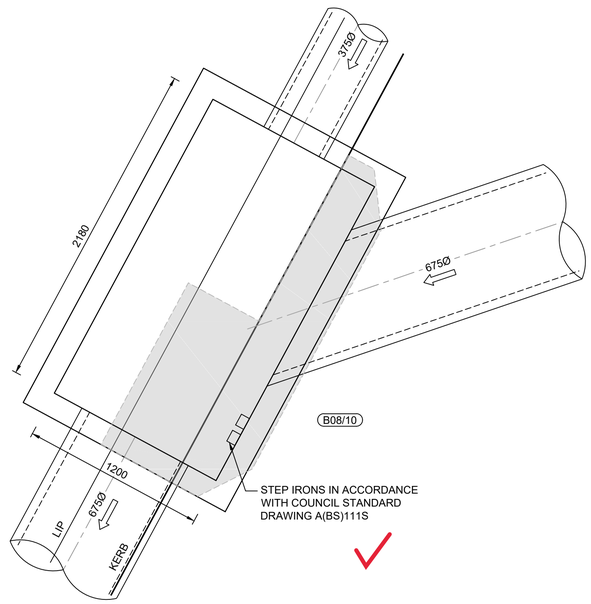
SCALE 1:20



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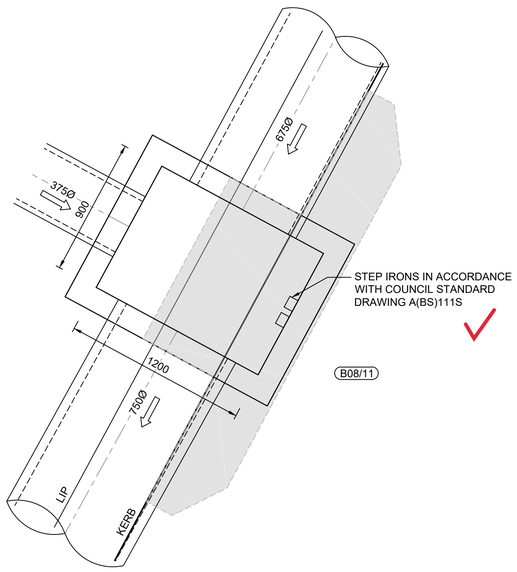

SPECIAL PIT - B08/11
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A	ISSUE FOR APPROVAL	DG	JM	MP	PJM	12/08/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
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NEWPARK
PRECINCT 7, STAGE 7B
SPECIAL PIT DETAILS
SHEET 9

PROJECT No: 9985-12
SHEET No: CC5558

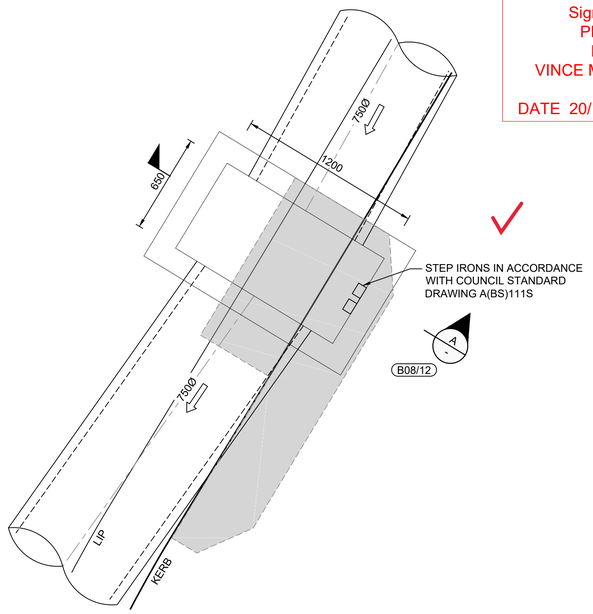
AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5558 | A

I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature.....
PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

These plans are referred to in certificate no. 16635 approved by:
Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision
Land Development Certificates
www.LDC.com.au



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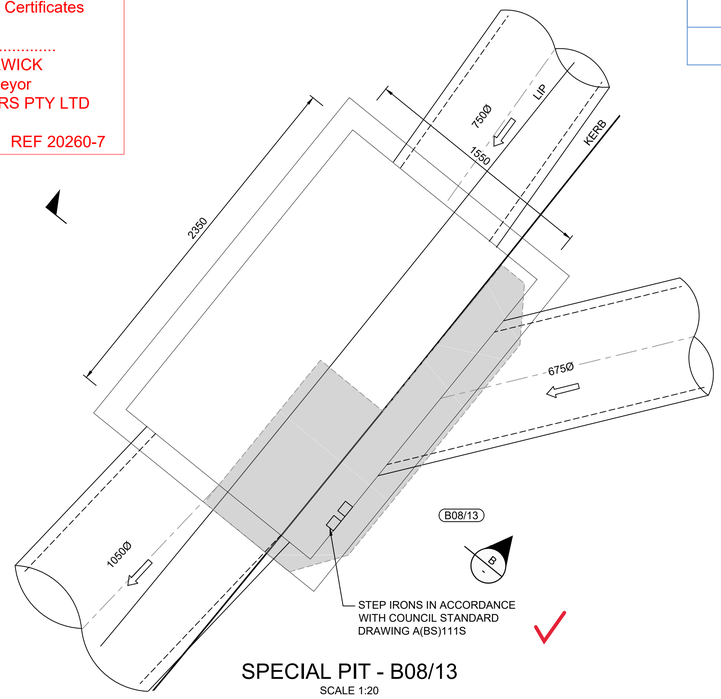

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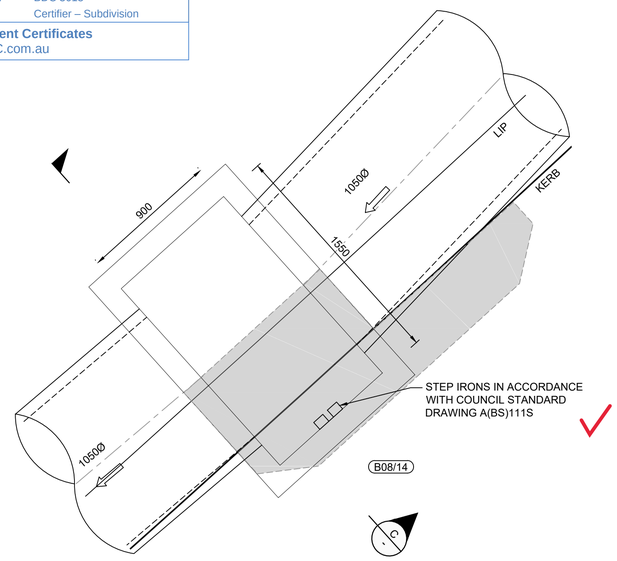

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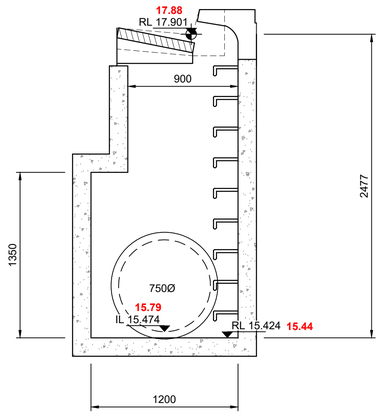

SECTION A
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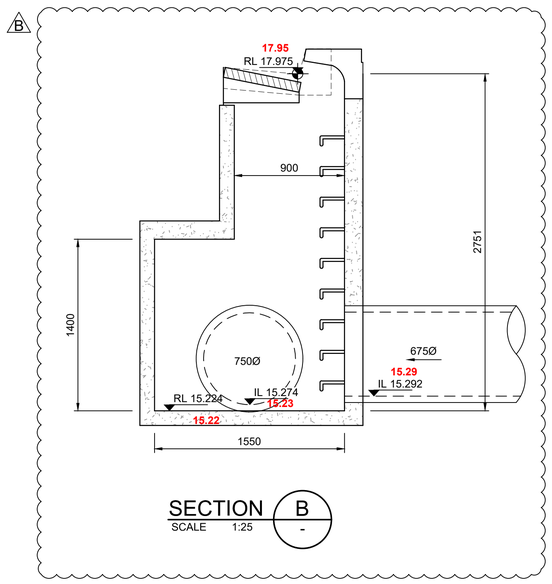

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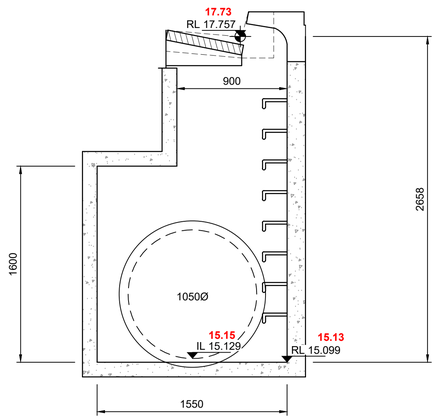

SECTION C
SCALE 1:25

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1:50 (AT A1)
1:100 (AT A3) 1 0 1 2 3 4 5 METRES

B	PIT B08/13 SECTION UPDATED	DG	JM	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	JM	MP	PJM	12/08/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
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P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

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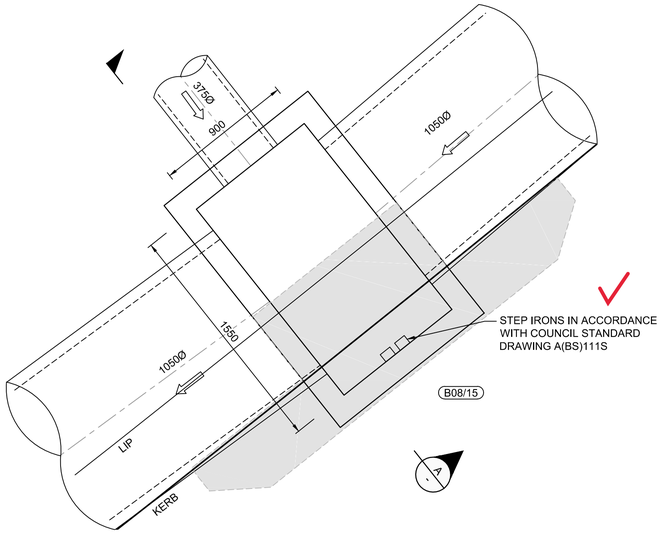
NEWPARK
PRECINCT 7, STAGE 7B
SPECIAL PIT DETAILS
SHEET 10

PROJECT No: 9985-12
SHEET No: CC5559

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5559 | B



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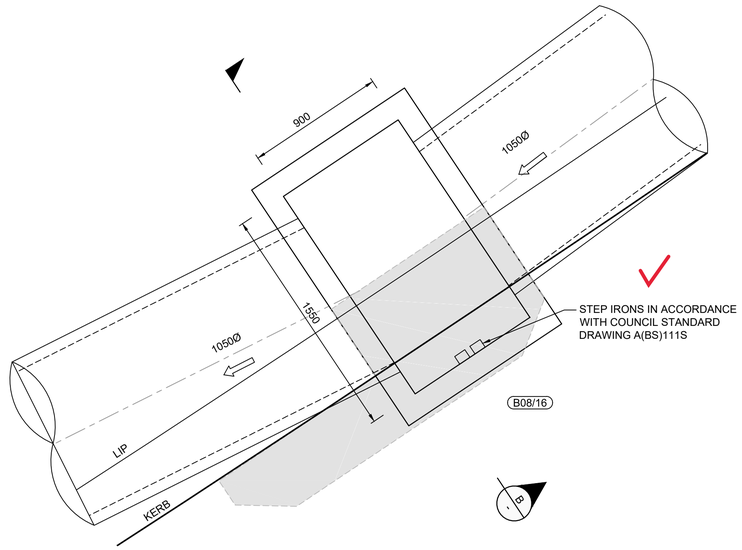
SCALE 1:20



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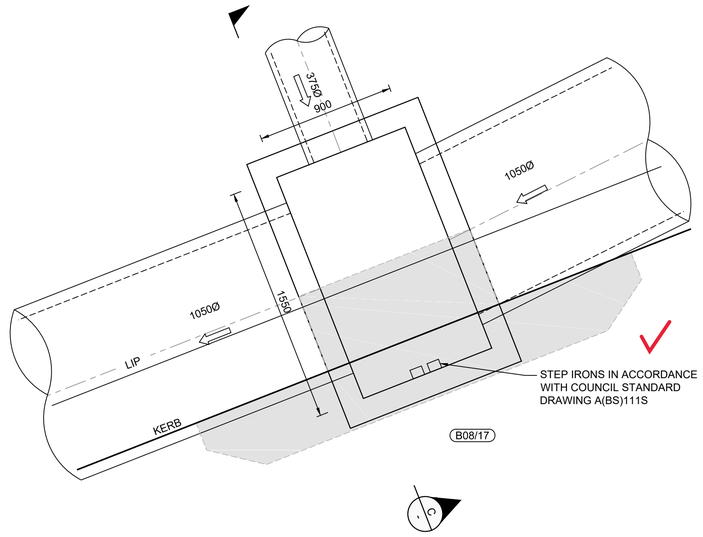
SCALE 1:20



SPECIAL PIT - B08/17
SCALE 1:20

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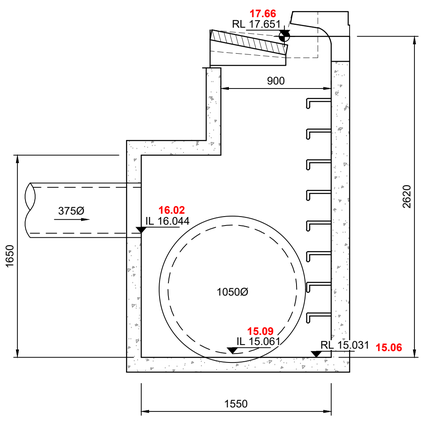
Signature.....
PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7



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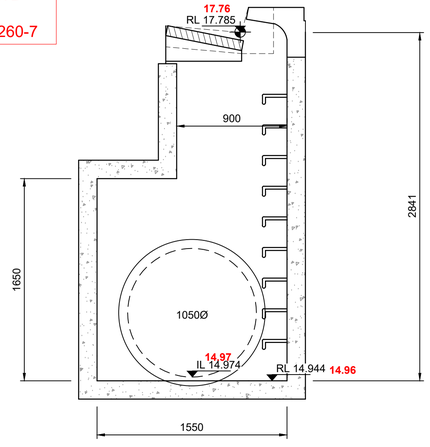

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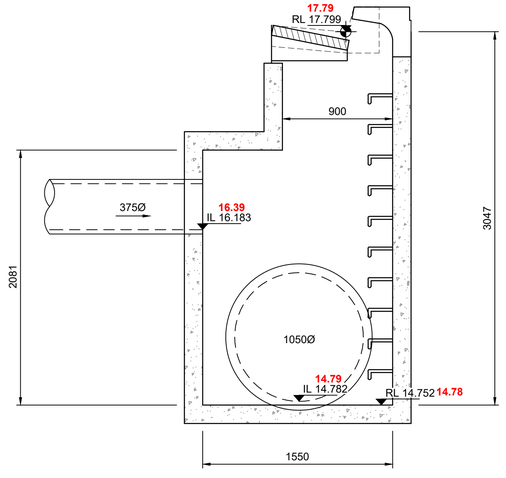

SECTION C
SCALE 1:25

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Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision
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1:25(AT A1) 500 0 500 1000 1500 2000 2500 MILLIMETRES

1:50 (AT A1)
1:100 (AT A3) 1 0 1 2 3 4 5 METRES

A	ISSUE FOR APPROVAL	DG	JM	MP	PJM	12/08/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

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PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 **W** www.jwprince.com.au **E** jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
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NEWPARK
PRECINCT 7, STAGE 7B
SPECIAL PIT DETAILS
SHEET 11

PROJECT No: 9985-12
SHEET No: CC5560

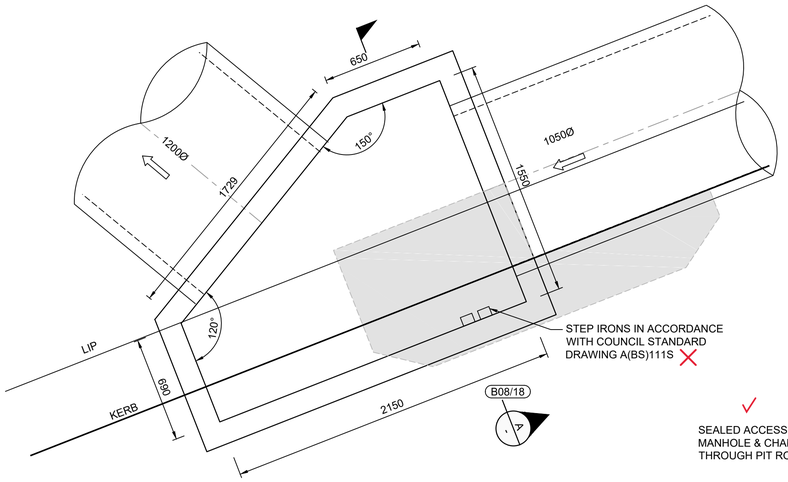
AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5560 | A

Plotted: 14 September , 2021 1:12:42 PM File Name: J:\9985D\CC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCT\SI5 - Precinct 7B\9985-12-CC5560.dwg

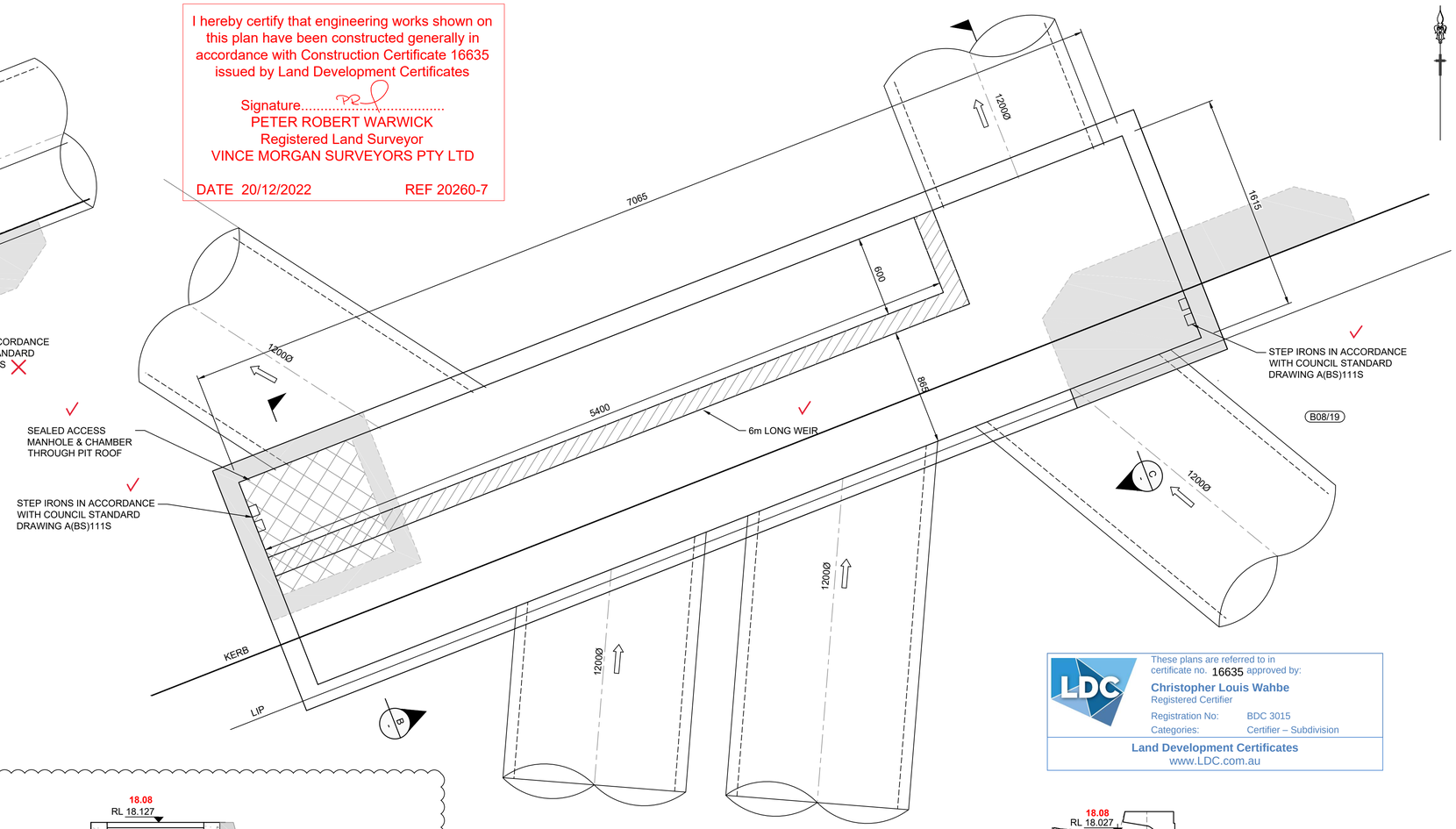
I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

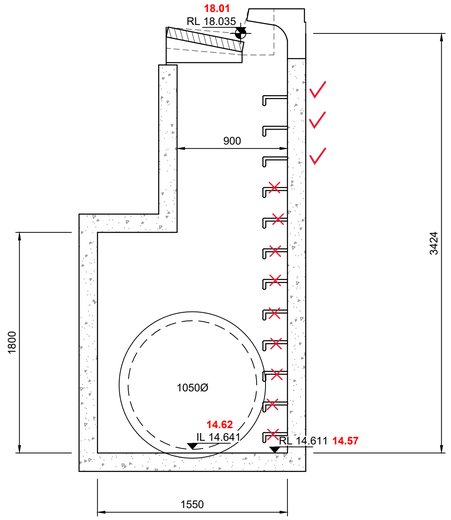
Signature.....
PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

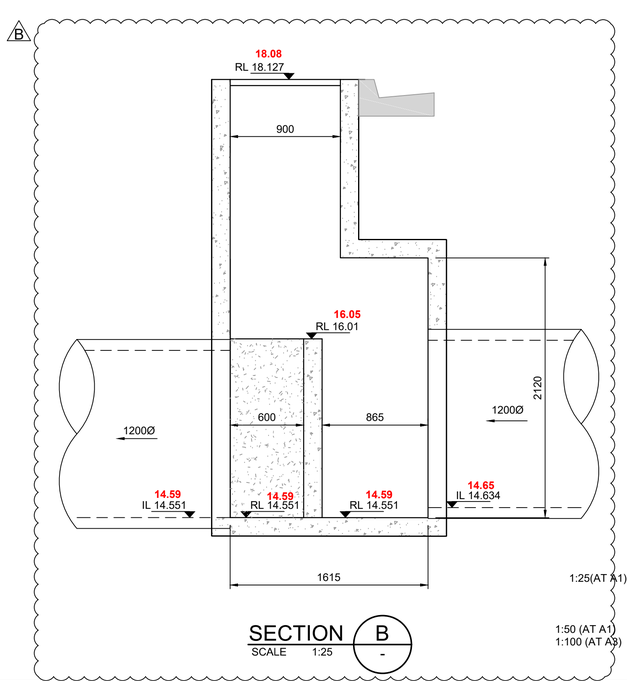


SPECIAL PIT - B08/18
SCALE 1:20



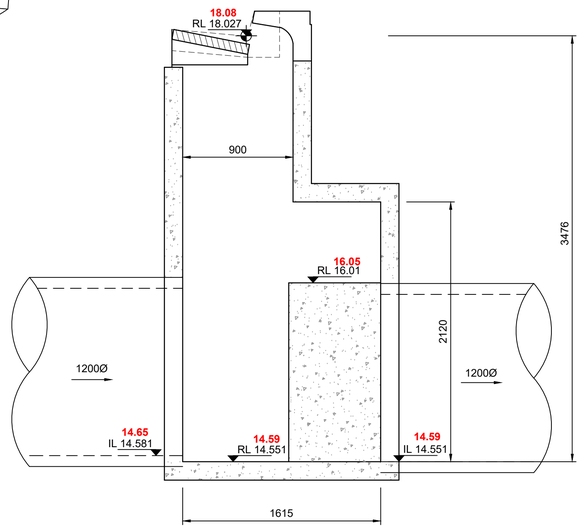


SECTION A
SCALE 1:25



SECTION B
SCALE 1:25

SPECIAL PIT - B08/19
SCALE 1:20



SECTION C
SCALE 1:25

1:25(AT A1)
500 0 500 1000 1500 2000 2500
MILLIMETRES

1:50 (AT A1)
1:100 (AT A3)
1 0 1 2 3 4 5
METRES

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B	PIT B08/19 SECTION B UPDATED	DG	JM	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	JM	MP	PJM	12/08/21
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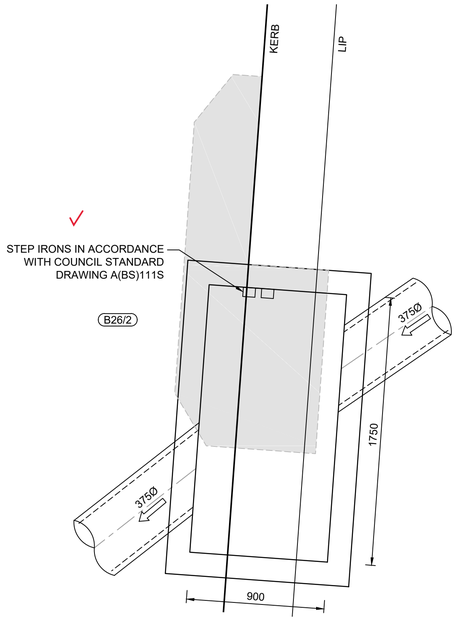
NEWPARK
PRECINCT 7, STAGE 7B
SPECIAL PIT DETAILS
SHEET 12

PROJECT No: 9985-12
SHEET No: CC5561

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5561 | B

Plotted: 14 September, 2021 1:13:48 PM File Name: J:\9985D\CC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCTS\5 - Precinct 7B\9985-12-CC5561.dwg



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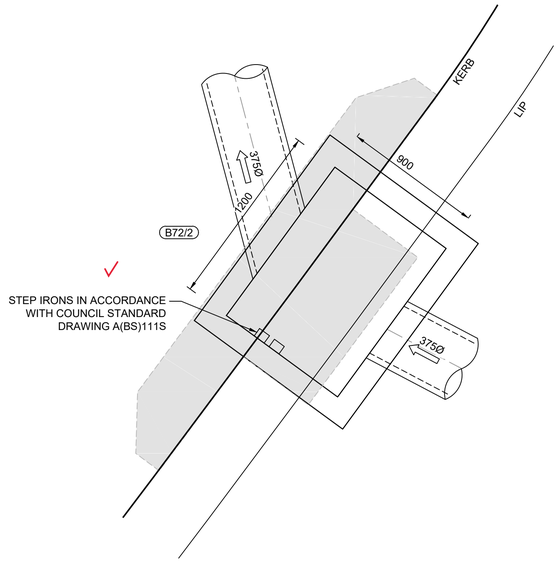
SCALE 1:20



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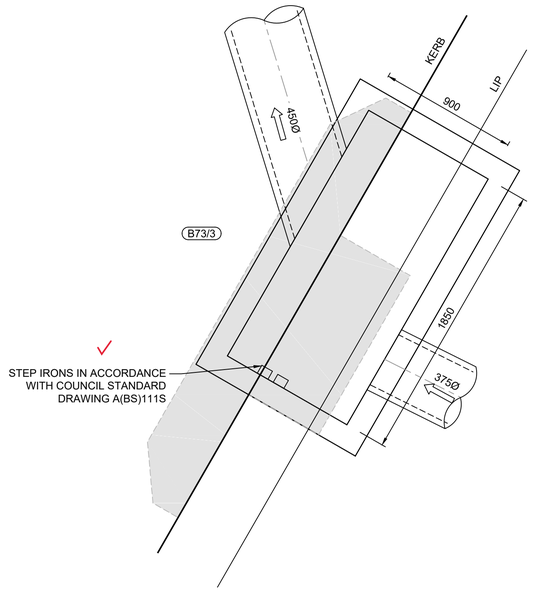
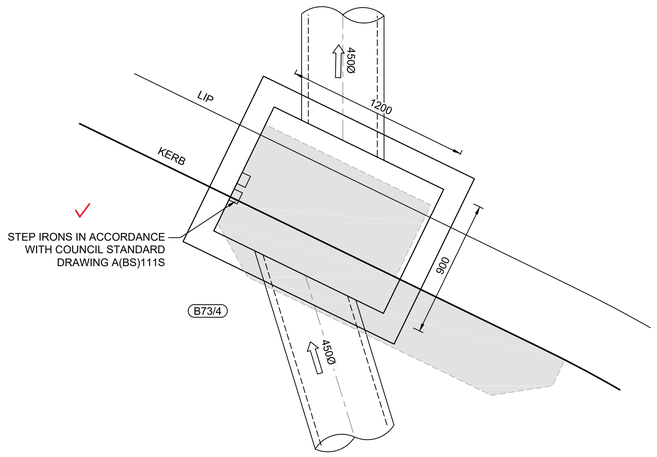
SCALE 1:20



SPECIAL PIT - B73/3
SCALE 1:20



SPECIAL PIT - B73/4
SCALE 1:20

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1:25(AT A1) 500 0 500 1000 1500 2000 2500 MILLIMETRES

1:50 (AT A1)
1:100 (AT A3) 1 0 1 2 3 4 5 METRES

B SPECIAL PITS B26/2, B72/2, B73/3 & B73/4 UPDATED

	AMENDMENT	DES	DRN	CKD	APR	DATE
B	PITS B26/2, B72/2, B73/3 & B73/4 UPDATED	DG	JM	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	JM	MP	PJM	12/08/21

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NEWPARK
PRECINCT 7, STAGE 7B
SPECIAL PIT DETAILS
SHEET 13

PROJECT No: 9985-12
SHEET No: CC5562

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5562 | B

Plotted: 14 September , 2021 1:14:52 PM File Name: J:\9985D\CC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCT\SI5 - Precinct 7B\9985-12-CC5562.dwg

SOIL AND WATER MANAGEMENT NOTES

GENERAL NOTES:

1. ALL EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING REVEGETATION AND STORAGE OF SOIL AND TOPSOIL, SHALL BE IMPLEMENTED TO THE REQUIREMENTS OF THE " SOILS AND CONSTRUCTION - VOLUME 1, 4TH EDITION, MARCH 2004 ".

2. TOPSOIL FROM ALL AREAS TO BE DISTURBED SHALL BE STOCKPILED AND LATER RESPREAD TO AID REVEGETATION IN THOSE AREAS.

3. ALL DRAINAGE WORKS SHALL BE CONSTRUCTED AND STABILISED AS EARLY AS POSSIBLE DURING DEVELOPMENT.

4. ALL TAIL-OUT DRAINS SHALL BE COUCH GRASSED AND TRAPEZOIDAL IN SECTION. STRAW BALES SHALL BE PLACED AS A SEDIMENT CONTROL DEVICE WHERE REQUIRED.

5. VEHICULAR TRAFFIC SHALL BE CONTROLLED DURING DEVELOPMENT CONFINING ACCESS WHERE POSSIBLE TO PROPOSED OR EXISTING ROAD ALIGNMENTS. AREAS TO BE LEFT UNDISTURBED SHALL BE MARKED OFF.

6. ROADS SHALL BE PAVED AS EARLY AS POSSIBLE AFTER FORMATION.

7. DISTURBANCE OF VEGETATION SHALL BE LIMITED TO FILL AREAS, ROADWAYS AND DRAINAGE LINES. NO LOT GRADING SHALL BE CARRIED OUT IN UNDISTURBED AREAS WITHOUT CONSULTATION WITH COUNCIL'S ENGINEER.

8. ALL DISTURBED AREAS SHALL BE REVEGETATED AS SOON AS THE RELEVANT WORKS ARE COMPLETED.

9. ALL SEDIMENT BASINS AND TRAPS SHALL BE CLEANED WHEN THE STRUCTURES ARE A MAXIMUM 60% FULL OF SOLID MATERIALS, INCLUDING DURING THE MAINTENANCE PERIOD.

10. THE SOIL AND WATER MANAGEMENT PLAN IS TO BE READ IN CONJUNCTION WITH THE ENGINEERING PLANS, AND COUNCIL'S WRITTEN GUIDELINES FOR THE DEVELOPMENT OF LAND.

11. CONTRACTORS SHALL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE UNDERTAKEN AS SPECIFIED ON THE PLAN AND IN ACCORDANCE WITH THE GUIDELINES SHOWN IN "MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTION 4TH EDITION" ("THE BLUE BOOK").

12. ALL CONTRACTORS AND SUBCONTRACTORS ARE RESPONSIBLE FOR REDUCING THE SOIL EROSION AND POLLUTION OF DOWNSLOPE AREAS.

13. THE SOIL EROSION HAZARD ON THE SITE IS TO BE KEPT AS LOW AS POSSIBLE AND GENERALLY IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

LAND USE	LIMITATION	COMMENTS
CONSTRUCTION AREAS	DISTURBANCE TO BE NO FURTHER THAN 5m (PREF 2m) FROM THE EDGE OF ANY ESSENTIAL ENGINEERING ACTIVITY AS SHOWN ON THESE PLANS	ALL SITE WORKERS WILL CLEARLY RECOGNISE THESE ZONES - WHERE APPROPRIATE THE CONSTRUCTION AREAS ARE TO BE IDENTIFIED WITH BARRIER FENCING (DOWNSLOPE) OR SIMILAR MATERIAL.
ACCESS AREAS	LIMITED TO A MAXIMUM WIDTH OF 10m	THE SITE MANAGER SHALL DETERMINE AND MARK THE LOCATION OF THESE ZONES ONSITE. THEY CAN VARY IN POSITION TO BEST CONSERVE THE EXISTING VEGETATION AND PROTECT DOWNSTREAM AREAS WHILE BEING CONSIDERATE OF THE NEEDS OF EFFICIENT WORKS ACTIVITIES. ALL SITE WORKERS SHALL CLEARLY RECOGNISE THEIR BOUNDARIES. WHERE APPROPRIATE THE ACCESS AREAS ARE TO BE MARKED WITH BARRIER MESH, SEDIMENT FENCING OR SIMILAR MATERIALS.
REMAINING LANDS	ENTRY PROHIBITED EXCEPT FOR ESSENTIAL THINNING OF PLANT GROWTH	THINNING OF GROWTH MAY BE REQUIRED FOR FIRE HAZARD REDUCTION.

NOTE:
WORKS WITHIN WATERWAYS AND CREEKS SHALL BE RESTRICTED AS DIRECTED - ALL LANDS WITHIN CREEKS AND WATERWAYS SHALL HAVE A GROUNDCOVER MORE THAN 70%, USING MATERIALS THAT CAN CATER FOR CONCENTRATED FLOWS.

14. WORKS ARE TO BE UNDERTAKEN IN THE FOLLOWING SEQUENCE. EACH SUBSEQUENT STAGE IS NOT TO COMMENCE UNTIL THE PREVIOUS ONE IS COMPLETE:-

    a. INSTALL ALL BARRIER AND SEDIMENT FENCING WHERE SHOWN ON THE PLAN AND TO DETAIL(SD) 6-8.
    b. CONSTRUCT STABILISED SITE ACCESS AS SHOWN ON THE PLAN AND TO DETAIL (SD) 6-14.
    c. CONSTRUCT LOW FLOW EARTH BANKS WHERE SHOWN ON THE PLAN AND TO DETAIL (SD) 5-5.
    d. PROVIDE TEMP. ACCESS TO THE SEDIMENT BASIN(S)AND PROTECT THIS WITH SEDIMENT FENCING (SD) 6-8 OR BARRIER FENCING AND EARTH BANKS (SD) 5-5.
    e. PLACE SEDIMENT FENCING (SD) 6-8 DOWNSLOPE OF LANDS TO BE DISTURBED FOR CONSTRUCTION OF THE SEDIMENT BASINS.
    f. CONSTRUCT SEDIMENT BASIN(S) GENERALLY IN ACCORDANCE WITH (SD) 6-4
    g. STABILISE LAND SURFACES DISTURBED BY CONSTRUCTION OF THE SEDIMENT BASIN(S) AS SOON AS FINAL LEVELS ARE ESTABLISHED
    h. CLEAR THE SITE AND STRIP AND STOCKPILE THE TOPSOIL IN THE LOCATIONS SHOWN ON THE PLAN OR AS DIRECTED BY THE SITE SUPERINTENDENT TO DETAIL (SD) 4-1.
    i. UNDERTAKE ALL ESSENTIAL CONSTRUCTION WORKS.
    j. GRADE LOT AREAS TO FINAL GRADES AND APPLY PERMANENT STABILISATION (LANDSCAPING) WITHIN 14 DAYS OF COMPLETION OF CONSTRUCTION WORKS.
    k. REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER THE PERMANENT LANDSCAPING HAS BEEN COMPLETED.

15. CLEARLY VISIBLE BARRIER FENCING SHALL BE INSTALLED WHERE DIRECTED BY THE SITE SUPERINTENDENT TO CONTROL AND PROHIBIT UNNECESSARY SITE DISTURBANCE

16. EARTH BATTERS SHALL BE CONSTRUCTED WITH AS LOW A GRADIENT AS PRACTICABLE BUT NO STEEPER THAN:-

    a. 2(h) - 1(v) WHERE SLOPE LENGTH IS LESS THAN 7m
    b. 2.5(h) - 1(v) WHERE SLOPE LENGTH IS BETWEEN 7m AND 10m
    c. 3(h) - 1(v) WHERE SLOPE LENGTH IS BETWEEN 10m AND 12m
    d. 4(h) - 1(v) WHERE SLOPE LENGTH IS BETWEEN 12m AND 18m
    e. 5(h) - 1(v) WHERE SLOPE LENGTH IS BETWEEN 18m AND 27m
    f. 6(h) - 1(v) WHERE SLOPE LENGTH IS GREATER THAN 27m

    SLOPE LENGTHS CAN BE SHORTENED BY USING LOW FLOW EARTH BANKS AS CATCH DRAINS ABOVE THE EARTH BATTER AREA.

17. PROTECTION FROM EROSIVE FORCES SHALL BE UNDERTAKEN ON ALL LANDS. GROUND COVER TO BE IN PLACE WITHIN 10 WORKING DAYS FROM COMPLETION OF FORMATION AND BEFORE THEY ARE ALLOWED TO CARRY ANY CONCENTRATED FLOWS.

18. TEMPORARY GROUND COVER SHOULD BE MINIMUM 70%. FOOT AND VEHICULAR TRAFFIC SHALL BE KEPT AWAY FROM REHABILITATED AREAS.

19. WHERE POSSIBLE THE CONSTRUCTION PROGRAM IS TO SCHEDULE WORKS SUCH THAT LAND DISTURBANCE ACTIVITIES ARE COMPLETED IN LESS THAN 6 MONTHS. REVEGETATION WORKS MUST BE CARRIED OUT AS STIPULATED IN THE RELEVANT COUNCIL GUIDELINES / SPECIFICATIONS SUCH THAT A SATISFACTORY GROUND COVER IS PROVIDED TO AT LEAST 60% OF THE DISTURBED AREA WITHIN 10 DAYS AND AT LEAST 70% OF THE DISTURBED AREA WITHIN A FURTHER 60 DAYS..

20. SEDIMENT FENCES (SD) 6-8 SHALL:-

    a. BE INSTALLED WHERE SHOWN ON THE PLAN AND AS DIRECTED AT THE DISCRETION OF THE SITE SUPERINTENDENT DURING THE COURSE OF CONSTRUCTION TO CONTAIN THE COARSER SEDIMENT FRACTIONS AS NEAR AS POSSIBLE TO THEIR SOURCE.
    b. HAVE A CATCHMENT AREA NOT EXCEEDING 720sq.m, AND A STORAGE DEPTH OF AT LEAST 0.6m.
    c. PROVIDE AN UPSLOPE RETURN OF 1m AT INTERVALS ALONG THE FENCE WHERE THE CATCHMENT AREA EXCEEDS 720sq.m. TO LIMIT THE DISCHARGE REACHING EACH SECTION TO 50litres/sec IN A MAX. 10yr Tc DISCHARGE.

21. STOCKPILES (SD) 4-1 SHALL BE LOCATED AS SHOWN ON THE PLANS AND AT THE DISCRETION OF THE SITE SUPERINTENDENT.

22. DURING WINDY WEATHER LARGE UNPROTECTED AREAS ARE TO BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL. IN THE EVENT WATER IS NOT AVAILABLE IN SUFFICIENT QUANTITIES SOIL BINDERS AND/OR DUST RETARDANTS SHALL BE USED OR THE SURFACE SHALL BE LEFT IN A CLODDY STATE THAT RESISTS REMOVAL BY WIND.

23. STOCKPILES SHALL NOT BE LOCATED WITHIN 5m OF HAZARD AREAS, INCLUDING LIKELY AREAS OF HIGH VELOCITY FLOWS SUCH AS WATERWAYS, PAVED AREAS OR DRIVEWAYS.

24. THE SEDIMENT RETENTION BASINS (SD) 6-4 SHALL:-

    a. BE CONSTRUCTED WHERE SHOWN ON THE PLANS.
    b. BE FLOCCULATED (APPENDIX E MANAGING URBAN STORMWATER SOILS & CONSTRUCTION 4TH ED.) BEFORE DISCHARGE OCCURS (UNLESS THE DESIGN STORM EVENT IS EXCEEDED)
    c. HAVE ONE OR MORE PEGS PLACED ON THE FLOOR TO CLEARLY INDICATE THE LEVEL AT WHICH DESIGN CAPACITY OCCURS AND WHEN SEDIMENT SHALL BE REMOVED.

25. STORED CONTENTS OF THE BASINS SHALL BE TREATED WITH GYPSUM (APPENDIX E MANAGING URBAN STORMWATER SOILS & CONSTRUCTION 4TH ED.) OR OTHER FLOCCULATING AGENTS WHERE THEY CONTAIN MORE THAN 50mg/litre OF SUSPENDED SOLIDS. TREATMENT SHALL BE AS FOLLOWS:-

    a. LOWER SUSPENDED SOLIDS TO LESS THAN 50mg/litre WITHIN 24hrs OF FILLING
    b. THE BASINS SHALL THEN BE ALLOWED TO STAND 36 TO 48hrs FOR FLOCCULATED PARTICLES TO SETTLE
    c. THE BASINS SHALL THEN BE DRAINED SO THAT FULL STORAGE CAPACITY IS REGAINED WITHOUT DISCHARGING SEDIMENT FROM THE SITE.

26. SEDIMENT REMOVED FROM ANY TRAPPING DEVICE SHALL BE DISPOSED IN LOCATIONS WHERE FURTHER EROSION AND CONSEQUENT POLLUTION TO DOWNSLOPE LANDS AND WATERWAYS SHALL NOT OCCUR.

27. WATER SHALL BE PREVENTED FROM DIRECTLY ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS IT IS RELATIVELY SEDIMENT FREE (ie THE CATCHMENT HAS BEEN LANDSCAPED AND/OR ANY LIKELY SEDIMENT HAS BEEN TREATED IN AN APPROVED DEVICE) NEVERTHELESS STORMWATER INLETS SHALL BE PROTECTED (SD) 6-11 & 6-12.

28. TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES SHALL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE STABILISED.

29. ACCEPTABLE BINS SHALL BE PROVIDED FOR ANY CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHTWEIGHT WASTE MATERIALS AND LITTER. CLEARANCE SERVICES SHALL BE PROVIDED AT LEAST ONCE A WEEK.

STOCKPILE NOTES:

1. SPOIL AND TOPSOIL STOCKPILES SHALL BE LOCATED AWAY FROM DRAINAGE LINES AND AREAS WHERE WATER MAY CONCENTRATE.

2. IF STOCKPILES ARE TO BE IN PLACE FOR LONGER THAN 14 DAYS THEN THEY SHALL BE STABILIZED BY COVERING WITH A MULCH OR WITH TEMPORARY VEGETATION.

3. FOLLOWING CONSTRUCTION, TOPSOIL SHALL BE RESPREAD TO A MINIMUM DEPTH OF 100mm ON THE BARE SOIL SURFACES AND REVEGETATED.

SEDIMENTATION CONTROL DEVICES:

1. ALL STRAW BALES SHALL BE BOUND WITH WIRE. STRAW BALES SHALL BE PLACED END TO END IN A SINGLE ROW AND EMBEDDED INTO THE SOIL TO A DEPTH OF 100mm. EACH BALE SHALL BE SECURELY ANCHORED WITH TWO STEEL STAKES DRIVEN 600mm INTO THE GROUND AND LOCKED ON THE BALE CENTRELINE.

2. SILT FENCES SHALL BE CONSTRUCTED BY STRETCHING A FILTER FABRIC (PROPEX OR SIMILAR) BETWEEN POSTS AT 2.5m CENTRES. FABRIC SHALL BE BURIED 150mm ALONG IT'S LOWER EDGE.

3. PROVIDE STRIP OF TURF MIN. 300mm WIDE BEHIND KERB + 1m WIDE AROUND ALL SURFACE INLET PITS

SITE INSPECTION AND MAINTENANCE:

1. A SELF-AUDITING PROGRAM SHALL BE ESTABLISHED BASED ON A INSPECTION TEST PLAN (ITP) OR LOG BOOK. A SITE INSPECTION USING THE ITP SHALL BE MADE BY THE SITE MANAGER-:

    a. AT LEAST WEEKLY
    b. IMMEDIATELY BEFORE SITE CLOSURE
    c. IMMEDIATELY FOLLOWING RAINFALL EVENTS IN EXCESS OF 5mm IN ANY 24hr PERIOD.

    THE SELF AUDIT SHALL INCLUDE:-

    a. RECORDING THE CONDITION OF EVERY 'BEST MANAGEMENT PRACTICE' EMPLOYED
    b. RECORDING MAINTENANCE REQUIREMENTS (IF ANY) FOR EACH 'BEST MANAGEMENT PRACTICE'
    c. RECORDING THE VOLUMES OF SEDIMENT REMOVED FROM SEDIMENT RETENTION SYSTEMS WHERE APPLICABLE
    d. RECORDING THE SITE WHERE SEDIMENT IS DISPOSED
    e. FORWARDING A SIGNED DUPLICATE OF THE COMPLETED CHECK SHEET TO THE PROJECT MANAGER/DEVELOPER FOR THEIR INFORMATION.

2. IN ADDITION A SUITABLY QUALIFIED PERSON SHALL BE RESPONSIBLE FOR OVERSEEING THE INSTALLATION AND MAINTENANCE OF ALL SOIL AND WATER MANAGEMENT WORKS ON THE SITE. THE PERSON SHALL BE REQUIRED TO SPEND A MINIMUM OF:-

    a. 2hrs ONSITE EACH FORTNIGHT UP UNTIL COMPLETION OF ROAD AND DRAINAGE WORKS AND/OR THE COMMISSIONING OF SEDIMENT BASIN(S)/WATER QUALITY CONTROL FACILITIES, AND DURING THE DECOMMISSIONING OF SAME AND/OR FINAL SITE STABILISATION. TO PROVIDE A SHORT MONTHLY WRITTEN REPORT.
    b. ONE HOUR ONSITE EACH 2 MONTHS DURING THAT PHASE WHERE THE DEVELOPERS RESPONSIBILITIES ARE LIMITED TO MAINTENANCE OF THE SDS DEVICES AND/OR SEDIMENT BASINS (ie DURING THE STAGE WHEN BUILDING WORKS CAN BE UNDERTAKEN) TO PROVIDE A SHORT WRITTEN REPORT EACH 4 MONTHS

    THE RESPONSIBLE PERSON SHALL ENSURE THAT:-

    a. THIS PLAN IS BEING IMPLEMENTED CORRECTLY
    b. REPAIRS ARE BEING UNDERTAKEN AS REQUIRED
    c. ESSENTIAL MODIFICATIONS TO THIS PLAN ARE BEING MADE IF AND WHEN NECESSARY. EACH REPORT SHALL CERTIFY THAT WORKS HAVE BEEN CARRIED OUT ACCORDING TO THE APPROVED PLANS.

3. WASTE BINS SHALL BE EMPTIED AS NECESSARY, DISPOSAL OF WASTE SHALL BE IN A MANNER APPROVED BY THE SITE SUPERINTENDENT

4. PROPER DRAINAGE OF THE SITE SHALL BE MAINTAINED. DRAINS (INCLUDING INLET AND OUTLET WORKS) SHALL BE CHECKED TO ENSURE THAT THEY ARE OPERATING AS INTENDED,ESPECIALLY THAT:-

    a. NO LOW POINTS EXIST WHICH CAN OVERTOP IN A LARGE STORM EVENT.
    b. AREAS OF EROSION ARE REPAIRED (e.g LINED WITH SUITABLE MATERIAL) AND/OR VELOCITY OF FLOW IS REDUCED APPROPRIATELY THROUGH CONSTRUCTION OF SMALL CHECK DAMS OR INSTALLING ADDITIONAL DIVERSIONS UPSLOPE
    c. BLOCKAGES ARE CLEARED (THESE MIGHT OCCUR BECAUSE OF SEDIMENT POLLUTION, SAND/SOIL/SPOIL BEING DEPOSITED IN OR TOO CLOSE TO THEM, BREACHED BY VEHICLE WHEELS etc)

5. SAND/SOIL/SPOIL MATERIALS PLACED CLOSER THAN 2m FROM HAZARD AREAS SHALL BE REMOVED SUCH HAZARD AREAS INCLUDE ANY AREAS OF HIGH VELOCITY WATER FLOWS (eg WATERWAYS AND GUTTERS) PAVED AREAS AND DRIVEWAYS.

6. RECENTLY STABILISED LANDS SHALL BE CHECKED TO ENSURE THAT THE EROSION HAZARD HAS BEEN EFFECTIVELY REDUCED. ANY REPAIRS SHALL BE INITIATED AS APPROPRIATE.

7. EXCESSIVE VEGETATIVE GROWTH SHALL BE CONTROLLED THROUGH MOWING OR SLASHING.

8. ALL SEDIMENT DETENTION SYSTEMS SHALL BE KEPT IN GOOD WORKING CONDITION. IN PARTICULAR ATTENTION SHALL BE GIVEN TO:-

    a. RECENT WORKS TO ENSURE THAT THEY HAVE NOT RESULTED IN DIVERSION OF SEDIMENT LADEN WATER AWAY FROM THEM.
    b. DEGRADABLE PRODUCTS TO ENSURE THAT THEY ARE REPLACED AS REQUIRED
    c. SEDIMENT REMOVAL TO ENSURE THE DESIGN CAPACITY OR LESS REMAINS IN THE SETTLING ZONE.

9. ADDITIONAL EROSION AND/OR SEDIMENT CONTROL WORKS SHALL BE CONSTRUCTED AS MIGHT BECOME NECESSARY TO ENSURE THE DESIRED PROTECTION IS GIVEN TO DOWNSLOPE LANDS AND WATERWAYS (ie MAKE ONGOING CHANGES TO THIS PLAN WHERE IT PROVES INADEQUATE IN PRACTICE OR IS SUBJECTED TO CHANGES IN CONDITIONS AT THE WORKS SITE OR ELSEWHERE IN THE CATCHMENT.

10. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN A FUNCTIONING CONDITION UNTIL ALL EARTHWORKS ACTIVITIES ARE COMPLETED AND THE SITE STABILISED.

11. WATERS IN SEDIMENT RETENTION BASIN(S) THAT OCCUPY MORE THAN 1/4 OF THE DESIGN CAPACITY DURING THAT STAGE OF THE WORKS UP UNTIL COMMISSIONING OF THE BASIN(s) SHALL BE:-

    a. TREATED WITH A FLOCCULATING AGENT (APPENDIX E MANAGING URBAN STORMWATER SOILS & CONSTRUCTION 4TH ED.)
    b. DISCHARGED WITHIN 5 days FROM THE CONCLUSION OF ANY STORM EVENT LARGE ENOUGH TO FILL THE BASIN TO THAT LEVEL.

12. LITTER, DEBRIS AND COARSE SEDIMENT SHALL BE REMOVED FROM THE GROSS POLLUTANT TRAPS AND TRASH RACKS AS REQUIRED.

I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature.....
PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7

LDC
These plans are referred to in certificate no. 16635 approved by:
Christopher Louis Wahbe
Registered Certifier
Registration No: BDC 3015
Categories: Certifier – Subdivision
Land Development Certificates
www.LDC.com.au

A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
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NEWPARK
PRECINCT 7, STAGE 7B
SOIL & WATER MANAGEMENT NOTES

PROJECT No: 9985-12
SHEET No: CC5700

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5700 | A

LEGEND

- STABILISED SITE ACCESS & WHEEL WASH BAY
- SEDIMENT FENCE
- CATCH DRAIN
- STRAW BALE BARRIER
- SP — STOCKPILE
- MESH AND GRAVEL INLET FILTER
- GEOTEXTILE INLET FILTER

B — PROTECTIVE FENCING REMOVED
SEDIMENT FENCE ADDED TO STOCKPILE

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SEDIMENT BASIN. REFER TO CC5702 FOR DETAILS

B — 1.5m WIDE CATCHDRAIN AND NOTE REMOVED

NEWPARK PRECINCT 7 FUTURE DEVELOPMENT

NEWPARK PRECINCT 7 EXISTING DEVELOPMENT

ROAD A104 · ROAD A105 · ROAD A107 · ROAD A109 · ROAD A110 · ROAD A116 · ROAD A118 · ROAD A120 · ROAD A121 · ROAD A130 · ROAD A147 · ROAD A102

1:1000 (AT A1)
1:2000 (AT A3)
20 10 0 10 20 30 40 50 60 70 80 90 100
METRES

B	FENCING REMOVED, SEDIEMENT FENCE ADDED & CATCHDRAIN REMOVED	DG	VS/NP	MP	MS	14/09/21
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
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NEWPARK PRECINCT 7, STAGE 7B
SOIL & WATER MANAGEMENT PLAN

PROJECT No: 9985-12
SHEET No: CC5701

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5701 | B

Plotted: 14 September , 2021 1:17:13 PM File Name: J:\9985D\CC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCTS\5 - Precinct 7B\9985-12-CC5701.dwg

LEGEND

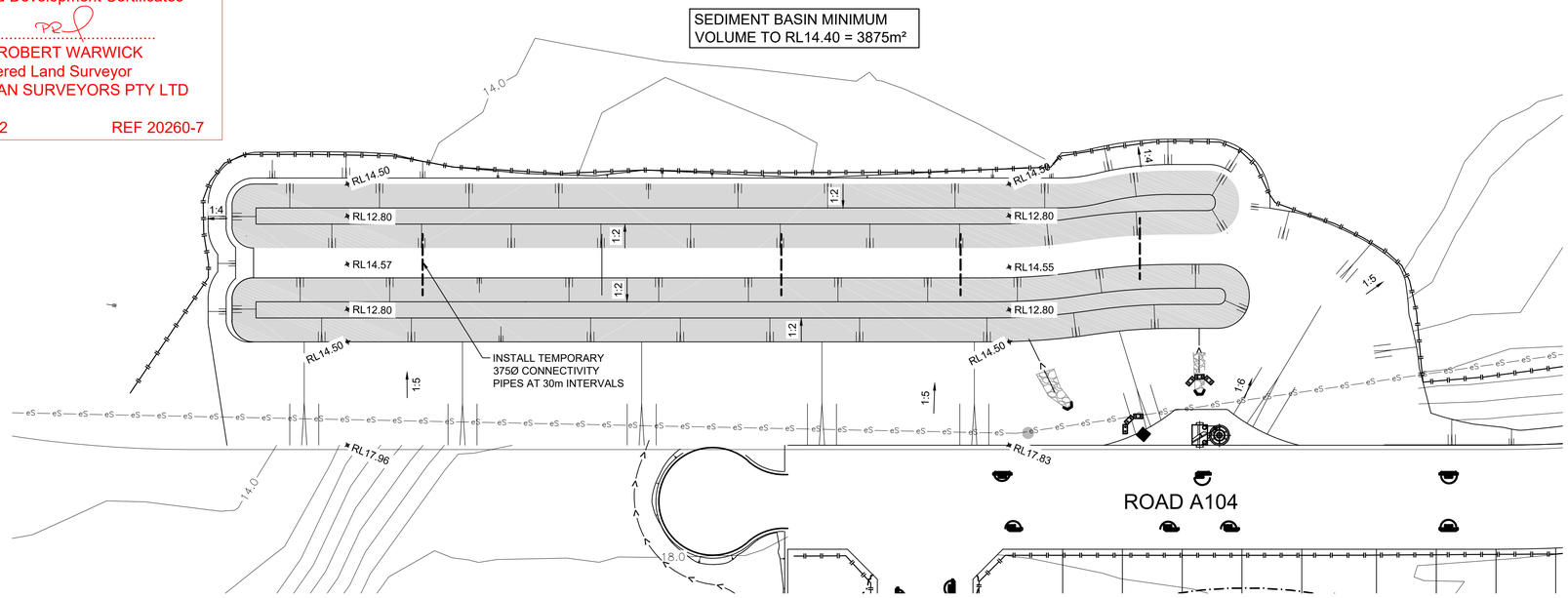
- SEDIMENT FENCE
- STRAW BALE BARRIER
- MESH AND GRAVEL INLET FILTER

I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature.....

PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 20/12/2022 REF 20260-7



1. Site Data Sheet

Site Name: NEWPARK PRECINCT 7B & 7C

Site Location: MARSDEN PARK

Precinct: BLACKTOWN CITY COUNCIL

Description of Site: SEDIMENT BASIN TO SUPPORT THE PRECINCT 7B & 7C SUBDIVISION CONSTRUCTION

Site area	Site						Remarks
	P7BC						
Total catchment area (ha)	22.2						
Disturbed catchment area (ha)	22.2						
Soil analysis							
% sand (fraction 0.02 to 2.00 mm							Soil texture should be assessed through
% silt (fraction 0.002 to 0.02 mm)	25						mechanical dispersion only. Dispersing
% clay (fraction finer than 0.002 mm)	75						agents (e.g. Calgon) should not be used
Dispersion percentage	100.0						E.g. enter 10 for dispersion of 10%
% of whole soil dispersible	87.5						See Section 6.3.3(e)
Soil Texture Group	D						See Section 6.3.3(c), (d) and (e)
Rainfall data							
Design rainfall depth (days)	5						See Sections 6.3.4 (d) and (e)
Design rainfall depth (percentile)	85						See Sections 6.3.4 (f) and (g)
x-day, y-percentile rainfall event	32.2						See Section 6.3.4 (h)
Rainfall intensity: 2-year, 6-hour storm	10.1						See IFD chart for the site
RUSLE Factors							
Rainfall erosivity (*R*-factor)	2250						Automatic calculation from above data
Soil erodibility (*K*-factor)	0.038						
Slope length (m)	80						
Slope gradient (%)	2						RUSLE data can be obtained from
Length/gradient (*LS*-factor)	0.65						Appendixes A, B and C
Erosion control practice (*P*-factor)	1.3						
Ground cover (*C*-factor)	1						
Calculations							
Soil loss (t/ha/yr)	72						
Soil Loss Class	1						See Section 4.4.2(b)
Soil loss (m^3/ha/yr)	56						
Sediment basin storage volume, m^3	210						See Sections 6.3.4(i) and 6.3.5 (e)

Total Basin Volume

Site	C_v	$R_{x\text{-day, }y\text{-\%ile}}$	Total catchment area (ha)	Settling zone volume (m^3)	Sediment storage volume (m^3)	Total basin volume (m^3)
P7BC	0.50	32.2	22.2	3574.2	210	3784.2

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1:500 (AT A1)
1:1000 (AT A3)
10 0 10 20 30 40 50
METRES

A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

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CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

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NEWPARK
PRECINCT 7, STAGE 7B
SEDIMENT BASIN DETAILS

PROJECT No: 9985-12
SHEET No: CC5702

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5702 | A

Plotted: 14 September , 2021 1:19:04 PM File Name: J:\9985DICC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCTS\5 - Precinct 7B\9985-12-CC5702.dwg

REFER TO DRAWING CC5802 FOR CONTINUATION

REFER TO DRAWING CC5803 FOR CONTINUATION

THESE SIGNAGE AND LINEMARKING PLANS ARE SUBJECT TO APPROVAL BY BLACKTOWN CITY COUNCIL TRAFFIC COMMITTEE

NOTE: REFER TO CC5802 FOR LEGEND AND NOTES.

I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature.....

PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 24/02/2023 REF 20260-7

1:500 (AT A1)
1:1000 (AT A3)

10 0 10 20 30 40 50
METRES

	AMENDMENT	DES	DRN	CKD	APR	DATE
B	C3' LINEMARKING ADDED	DG	NDW	DG	KE	20/01/22
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

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NEWPARK
PRECINCT 7, STAGE 7B
SIGNAGE & LINE MARKING PLAN SHEET 1

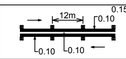
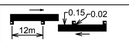
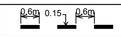
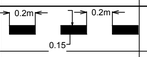
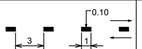
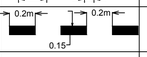
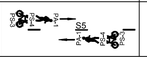
PROJECT No: 9985-12

SHEET No: CC5801

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5801 | B

Plotted: 20 January , 2022 4:26:32 PM File Name: J:\9985D\CC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCTS\5 - Precinct 7B\9985-12-CC5801.dwg

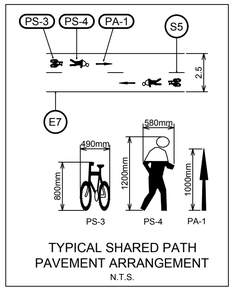
PAVEMENT MARKING SCHEDULE

CODE	USE	STYLE	COLOUR & TYPE
BB	Barrier line where sight is restricted in both directions or approach to median island		Reflectorised white type 'YY' pavement markers bi-directional reflective yellow
C3	Kerbside Linemarking for No-Stopping Restrictions		Reflectorised yellow
E4	Outline of traffic island or freeway ramp gore		Reflectorised white type 'Y' OR 'R' pavement markers mono-directional reflective yellow or red
TB	Give way line (Used with Signs)		Reflectorised white
TB1	Give way line (Used on right side of side)		Reflectorised white
TBB	Give way line on Path		Reflectorised white
S4	Bicycle lane continuous separation line for off-road bike path		Reflectorised white
S5	Bicycle lane separation line for off-road bike path (straight sections)		Reflectorised white
TBB	Give way line on Path		Reflectorised white
C	Shared Path		Reflectorised white

NOTES

1. ALL PAVEMENT MARKINGS, CHEVRONS AND REFLECTORS ARE TO BE IN ACCORDANCE WITH AUSTROADS GUIDE TO TRAFFIC MANAGEMENT PART 6 AND AUSTRALIAN STANDARDS. AS1742-9 AND AS1743.
2. ALL SIGNS TO BE IN ACCORDANCE WITH CURRENT AUSTRALIAN STANDARD; AS 1743 - ROAD SIGNS AND COUNCIL'S SPECIFICATION UNLESS OTHERWISE SHOWN.
3. ROAD SIGNS ARE SIZE 'B', UNLESS OTHERWISE SHOWN. LOCATE OUTSIDE OF CLEAR ZONES.
4. ALL NEW PAVEMENT MARKINGS ARE TO BE INSTALLED IN WHITE, REFLECTIVE, THERMOPLASTIC PAINT.
5. KERBSIDE LANE WIDTHS INCLUDE THE WIDTH OF THE GUTTER.
6. RE-MARK EXISTING PAVEMENT MARKINGS AS DIRECTED BY THE COUNCIL'S ENGINEER.
7. PAVEMENT MARKINGS THAT FORM NO PART OF THE FINAL WORKS ARE TO BE REMOVED BY SAND BLASTING OR OTHER METHOD AS APPROVED BY THE PROJECT MANAGER.
8. ALL MEASUREMENTS ARE IN METRES UNLESS OTHERWISE SHOWN.

THESE SIGNAGE AND LINEMARKING PLANS ARE SUBJECT TO APPROVAL BY BLACKTOWN CITY COUNCIL TRAFFIC COMMITTEE

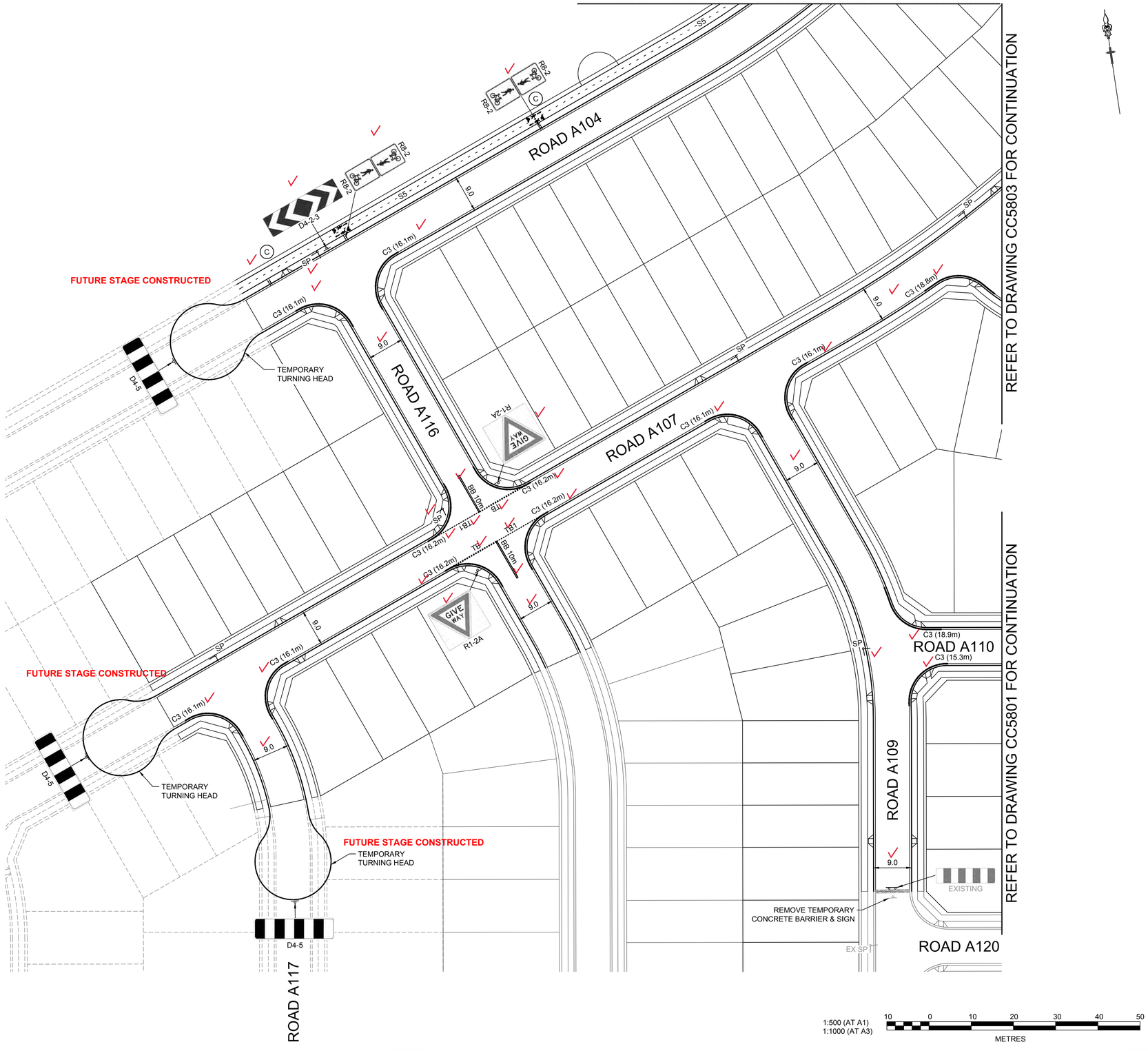


TYPICAL SHARED PATH PAVEMENT ARRANGEMENT
N.T.S.

I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature.....
PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 24/02/2023 REF 20260-7



1:500 (AT A1)
1:1000 (AT A3)
10 0 10 20 30 40 50
METRES

B	C3' LINEMARKING ADDED	DG	NDW	DG	KE	20/01/22
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

J. WYNDHAM PRINCE
CONSULTING CIVIL INFRASTRUCTURE ENGINEERS & PROJECT MANAGERS
PO Box 4366 PENRITH WESTFIELD NSW 2750
P 02 4720 3300 W www.jwprince.com.au E jwp@jwprince.com.au

CLIENT: WINTEN PROPERTY GROUP

STATUS: ISSUE FOR CONSTRUCTION APPROVAL
THIS DRAWING MUST NOT BE USED FOR CONSTRUCTION UNLESS SIGNED AS PART OF AN APPROVED CONSTRUCTION CERTIFICATE.

NEWPARK
PRECINCT 7, STAGE 7B
SIGNAGE & LINE MARKING PLAN SHEET 2

PROJECT No: 9985-12
SHEET No: CC5802

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5802 | B

Plotted: 20 January, 2022 4:26:14 PM File Name: J:\9985D\CC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCT\SI5 - Precinct 7B\9985-12-CC5802.dwg

REFER TO DRAWING CC5804 FOR CONTINUATION

REFER TO DRAWING CC5802 FOR CONTINUATION

ROAD A104
ROAD A105
ROAD A107
ROAD A109
ROAD A121
ROAD A127
ROAD A147
ROAD A118
ROAD A102

REFER TO DRAWING CC5801 FOR CONTINUATION

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Signature.....
PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 24/02/2023 REF 20260-7

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NOTE: REFER TO CC5802 FOR LEGEND AND NOTES.

1:500 (AT A1)
1:1000 (AT A3)

10 0 10 20 30 40 50
METRES

B	C3' LINEMARKING ADDED	DG	NDW	DG	KE	20/01/22
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

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NEWPARK
PRECINCT 7, STAGE 7B
SIGNAGE & LINE MARKING PLAN SHEET 3

PROJECT No: 9985-12
SHEET No: CC5803

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5803 | B

Plotted: 20 January , 2022 4:25:56 PM File Name: J:\9985D\CC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCTS\5 - Precinct 7B\9985-12-CC5803.dwg

THESE SIGNAGE AND LINEMARKING PLANS ARE SUBJECT TO APPROVAL BY BLACKTOWN CITY COUNCIL TRAFFIC COMMITTEE

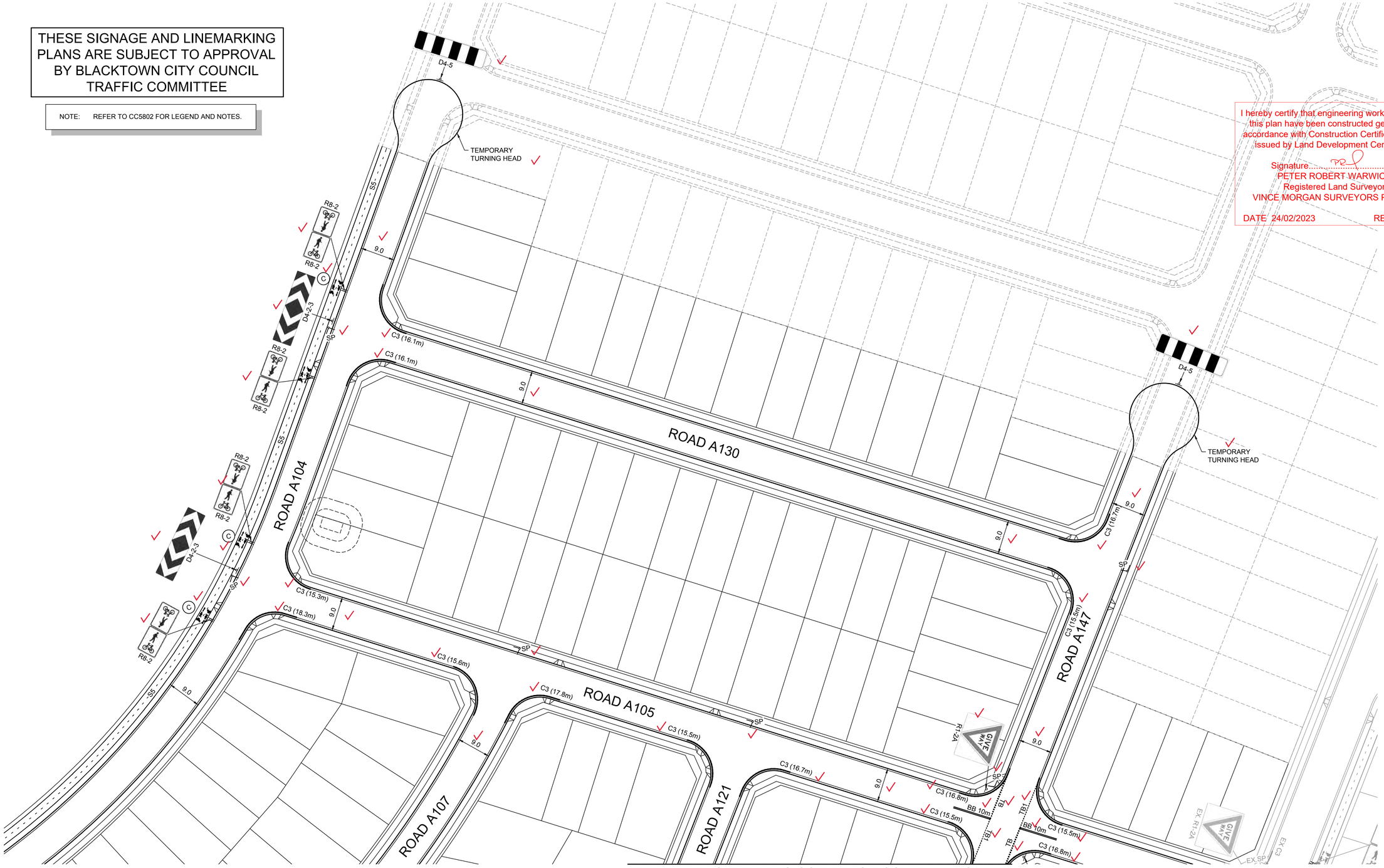
NOTE: REFER TO CC5802 FOR LEGEND AND NOTES.

I hereby certify that engineering works shown on this plan have been constructed generally in accordance with Construction Certificate 16635 issued by Land Development Certificates

Signature.....

PETER ROBERT WARWICK
Registered Land Surveyor
VINCE MORGAN SURVEYORS PTY LTD

DATE 24/02/2023 REF 20260-7



REFER TO DRAWING CC5803 FOR CONTINUATION

1:500 (AT A1)
1:1000 (AT A3)

10 0 10 20 30 40 50
METRES

B	C3' LINEMARKING ADDED	DG	NDW	DG	KE	20/01/22
A	ISSUE FOR APPROVAL	DG	VS	MP	PJM	12/08/21
	AMENDMENT	DES	DRN	CKD	APR	DATE

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STATUS: ISSUE FOR CONSTRUCTION APPROVAL

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NEWPARK
PRECINCT 7, STAGE 7B
SIGNAGE & LINE MARKING PLAN SHEET 4

PROJECT No: 9985-12

SHEET No: CC5804

AZIMUTH: M.G.A.94 | DATUM: A.H.D. | ORIGIN: SSM 1112 | PLAN No: 9985-12-CC5804 | B

Plotted: 20 January , 2022 4:25:22 PM File Name :J:\9985\DICC - Construction Certificate Approval Plans\PK12 WESTERN PRECINCT\SI5 - Precinct 7B\9985-12-CC5804.dwg