Civic Centre 45 Princes Highway, Werribee, Victoria 3030, Australia
Postal PO Box 197, Werribee, Victoria 3030, Australia

Telephone (03) 9742 0777
Facsimile (03) 9741 6237
Email mail@wyndham.vic.gov.au
www.wyndham.vic.gov.au

DX 30258 Werribee Vic
ABN: 38 393 903 860

Your Ref:

Our Ref: SDW3676/24
WYP13902/22

Enquiries: *Rabin Khad Thakuri*
Tel: *(03) 8754 4999*

25 March 2025

Spiire Australia Pty Ltd
L 6 414 La Trobe St
MELBOURNE VIC 3000

Dear Rafe Wilson

RE: HARLOW STAGE 6 - CONSTRUCTION PLAN APPROVAL

Please be advised that the road and drainage construction plans submitted to Council for Harlow Stage 6 are approved subject to the following conditions:-

1. **Prior to the issue of a Statement of Compliance (SOC) for the stage 6, the signalised intersection at Derrimut Road and the east-west connector Road must be constructed to the satisfaction of Responsible Authority and relevant Road Authority**
2. Prior to the placement of concrete kerb and channel, all constructed drainage lines, including easement drains and AG drains, must undergo inspection by an independent testing organisation using closed circuit television (CCTV). Report must be provided to Council as per Wyndham City Council's Technical Specification Section 701 – Underground Stormwater Drains.
3. **Prior to commencement of works, an on-site pre-commencement meeting must be held between Council, the Engineering Consultant and the Contractor. Please contact Robert Troiano from Council on 0407802834 to book a precommencement meeting.**
4. **Prior to installation of any Tactile Ground Surface Indicators, the proposed product must be inspected and approved by Council. Please notify Councils construction supervisor to book an inspection prior to installation.**
5. **Prior to commencement of works, the Plan of Subdivision must be certified by Council.**
6. **Prior to commencement of approved works within ANY existing road reserves, the consultant/contractor MUST apply for consent to work within the road reserves from Council or any other relevant responsible authorities. The Contractor will be responsible for maintain all existing assets within the limit of works as demonstrated on the approved plans.**
7. **A free-flowing drainage outlet must be established and maintained throughout the entirety of construction works. No road boxing works are to commence in the absence of a free-flowing drainage outlet.**
8. Prior to commencement of works, the consultant/contractor shall provide to Council the following information:-

- source of quarry material; and
- optimum moisture content and maximum modified dry density of the F.C.R to be used (from N.A.T.A. approved laboratory).

If the source of the quarry material is changed during the course of the works, new test results shall be provided.

9. Please provide a Site Environment Management Plan (SEMP) to Council for approval. To submit a SEMP, complete Wyndham Council's online form after following the instructions on the website.
10. Construction is to commence within twelve (12) months of approval, otherwise construction plans and specifications are to comply with design standards current at the time of re-submission.
11. Filled allotments shall be compacted in 150mm maximum layers, with compaction tests being taken at not more than 300mm lift on all allotments and filled areas. The test results and location of the tests on each allotment shall be forwarded to Council.
12. Wyndham City Council Specifications and standard details shall be read in conjunction with the approved plans.
13. Prior to Council issuing a Statement of Compliance, pursuant to the Subdivision Act 1988, your firm shall provide to Council the following:
    - Payment of construction supervision fees amounting to 2.5% of the total cost of road and drainage works;
    - Payment of a maintenance bond amounting to 5% of the total cost of road and drainage works;
    - An electronic copy of all as constructed drawings and relevant files in both AutoCad DWG and Adobe PDF file formats, to either subdiveng@wyndham.vic.gov.au or via Objective Connect. Please note that the minimum resolution of PDF files required is 300dpi;
    - An electronic copy of drainage catchment plans and detailed computations in Adobe PDF file format to either subdiveng@wyndham.vic.gov.au or via Objective Connect;
    - As constructed asset information for drainage and related assets in digital format in accordance with "D-Spec" to either subdiveng@wyndham.vic.gov.au or via Objective Connect; and
    - As-constructed asset information for assets within the road reserve in digital format in accordance with "R-Spec" to either subdiveng@wyndham.vic.gov.au or via Objective Connect; and
    - The A.H.D levels and M.G.A co-ordinates of the high stability P.S.Ms.
    - For futher information please see: https://www.wyndham.vic.gov.au/subdivisionguidelines
14. Easements are to be created to cover all servics which cross any part of private allotments.
15. During construction of works under this permit, access to and egress from the subject land must be via a route designed and approved by the Council. Where practical this access should be remote from established residential areas.
16. Provide Landscaping Plan for approval by Council. Please contact subdivlud@wyndham.vic.gov.au to arrange a pre-application meeting prior to the submission of landscape plans for municipal reserves and/or public open space.
17. WorkSafe Victoria is to be advised via E-mail (construction@workcover.vic.gov.au) of these Subdivisional works with the following details:
    - Name of the principal contractor
    - Name and phone contact of relevant Engineering Consultants supervisor dealing with the works
    - Brief description of the works
    - Locality/address of the works
    - Estimated commencement date of the works, and
    - Expected completion date of the works.

18. In undertaking the construction works, the developer shall ensure all works are undertaken in accordance with the OH & S Act, Regulation and Codes, and shall maintain a safe workplace for Council's staff undertaking inspections. The supervision of works by Council staff only extends to the quality of Council's future infrastructure and does not include ensuring that the works are undertaken safely.

Please find a set of stamped approved plans attached.

Yours sincerely,

KABI CHAPAGAIN
TEAM LEADER DEVELOPMENT ENGINEER
Encl: (1) Stamped approved plans

HARLOW ESTATE
STAGE 6
SIG GROUP

WYNDHAM CITY COUNCIL GENERAL NOTES:

SURVEY

1. ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUM AND ALL COORDINATES ARE TO MAP GRID OF AUSTRALIA (MGA) 94, ZONE 55.
2. ALL EXISTING SURFACE LEVELS SHOWN ON THE ENGINEERING DRAWINGS HAVE BEEN INTERPOLATED FROM A DIGITAL TERRAIN MODEL. THESE LEVELS HAVE BEEN USED AS THE BASIS FOR ALL ENGINEERING DESIGN AND DETERMINATION OF QUANTITIES AND ARE ACCURATE TO WITHIN ±0.05m.
3. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH AS2124-1992 GENERAL CONDITIONS OF CONTRACT, THE ROAD & DRAINAGE SPECIFICATION, APPROVED MUNICIPALITY SPECIFICATIONS AND STANDARD DRAWINGS AND TO THE SATISFACTION OF THE SUPERINTENDENT AND THE MUNICIPAL ENGINEER OR THEIR REPRESENTATIVE.
4. ROAD CHAINAGES REFER TO ROAD CENTRELINES. CHAINAGES FOR INTERSECTIONS AND CUL-DE-SACS REFER TO THE LIP OF KERB

EARTHWORKS

5. THE LOCATION OF EXISTING SERVICES SHOULD BE DETERMINED BY THE CONTRACTOR PRIOR TO COMMENCING ANY EXCAVATION BY CONTACTING ALL LOCAL SERVICE AUTHORITIES. ANY EXISTING SERVICES SHOWN ON THESE DRAWINGS ARE OFFERED AS A GUIDE ONLY AND ARE NOT GUARANTEED AS CORRECT.
6. WHERE REQUIRED ANY BUILDINGS, TROUGHS, FENCES AND OTHER STRUCTURES ON SITE ARE TO BE REMOVED AS DIRECTED BY THE ENGINEER. THE COST OF REMOVAL IS TO BE INCLUDED IN THE OVERALL EARTHWORKS FIGURE UNLESS A SPECIFIC ITEM FOR REMOVAL IS DENOTED IN THE SCHEDULE.
7. ALL EXCAVATED ROCK AND SURPLUS SPOIL TO BE REMOVED AND DISPOSED OFF SITE UNLESS NOTED OTHERWISE.
8. ALL FILLING ON LOTS AND WITHIN ROAD RESERVES GREATER THAN 200mm IS TO BE UNDERTAKEN USING LEVEL 1 SUPERVISION AND BE COMPLETED IN ACCORDANCE WITH AS 3798-2007. FILL AREAS ARE TO BE STRIPPED OF TOPSOIL, FILLED AND REPLACED WITH TOPSOIL (WHERE REQUIRED) TO OBTAIN THE FINAL LEVELS SHOWN ON THE DRAWINGS.
9. FILLING MATERIAL IS TO BE IN ACCORDANCE WITH THE SPECIFICATION, AS 3798-2007 & TO THE SATISFACTION OF COUNCIL AND THE SUPERINTENDENT.
10. ALL BATTERS SHALL BE 1 IN 6, UNLESS OTHERWISE SHOWN.
11. NO FILL OR STOCKPILING OF MATERIAL IS TO BE PLACED ON ANY RESERVE FOR PUBLIC OPEN SPACE UNLESS OTHERWISE DIRECTED OR APPROVED BY THE SUPERINTENDENT.
12. TBM'S TO BE RE-ESTABLISHED BY THE LICENSED SURVEYOR IF FOUND TO BE MISSING AT THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR CARE AND MAINTENANCE OF T.B.M.'S THEREAFTER.
13. AT LEAST 3 DAYS PRIOR TO COMMENCING WORK ON EXCAVATIONS IN EXCESS OF 1.50m DEEP, A NOTIFICATION FORM MUST BE SENT TO WORKSAFE. THE CONTRACTOR IS TO COMPLY WITH WORKSAFE, THE MINES (TRENCHES) REGULATION 1982, THE MINES ACT 1958 AND OCCUPATIONAL HEALTH AND SAFETY ACT 1985, 2004.
14. ALL SERVICE TRENCHES UNDER DRIVEWAYS, FOOTPATHS AND PARKING BAYS TO BE BACKFILLED WITH CLASS 2 CRUSHED ROCK. SERVICE TRENCHES LESS THAN 750mm BEHIND KERB AND CHANNEL OR PAVED TRAFFIC AREAS ARE ALSO TO BE BACKFILLED WITH COMPACTED CLASS 2 CRUSHED ROCK.
15. WHERE REQUIRED, ALL EXISTING DAMS, DEPRESSIONS AND DRAINS ARE TO BE BREACHED, DRAINED, DESLUDGED AND SHALL BE EXCAVATED TO A CLEAN FIRM BASE. THE SURFACE SHALL BE INSPECTED, APPROVED AND LEVELED BY THE ENGINEER PRIOR TO COMMENCEMENT OF FILLING. THE FILL SHALL BE APPROVED SELECTED ON SITE MATERIAL OR APPROVED IMPORTED MATERIAL. THE FILL SHALL BE PLACED UNDER CONTROLLED MOISTURE CONDITIONS IN ACCORDANCE WITH THE SPECIFICATION
16. NO BLASTING TO BE CARRIED OUT WITHIN THE MUNICIPALITY WITHOUT OBTAINING COUNCILS PERMISSION.

SERVICES

17. GAS AND WATER CONDUITS ARE TO BE ,
    Ø50mm . CLASS 12 P.V.C. - SINGLE SERVICE
    Ø100mm . CLASS 12 P.V.C. - DUAL SERVICE (DRINKING AND NON DRINKING WATER)

    WITH THE FOLLOWING MINIMUM COVER TO FINISHED SURFACE LEVELS:
    ROAD PAVEMENT - 0.80m
    VERGE, FOOTPATHS - 0.45m
18. ALL SERVICE CONDUIT TRENCHES UNDER ROAD PAVEMENTS TO BE BACKFILLED IN ACCORDANCE WITH RELEVANT MUNICIPALITY OR ROAD AUTHORITY SPECIFICATION.
19. GAS AND WATER CONDUITS TO BE LOCATED AS SHOW, REFER TO WATER DESIGN FOR CONDUIT OFFSETS
20. TELSTRA ARE TO BE NOTIFIED 7 DAYS PRIOR TO PLACEMENT OF CONCRETE WORKS.

STORM WATER DRAINAGE

21. AG/SUBSOIL DRAIN TO BE LAID BEHIND KERB WHERE REQUIRED IN ACCORDANCE WITH THE COUNCIL STANDARD DRAWINGS AND CONNECTED TO UNDERGROUND DRAINAGE.
22. ALL STORMWATER DRAINS ARE TO BE CLASS '2' R.C. PIPES UNLESS OTHERWISE SHOWN.
    ALL PIPES UP TO AND INCLUDING 750mm DIAMETER TO BE RUBBER RING JOINTED (R.R.J.) UNLESS STATED OTHERWISE.
23. CENTRELINES OF ALL EASEMENT DRAINS ARE OFFSET 1.0m OR 2.2m (WHERE OUTSIDE OF SEWER) FROM THE PROPERTY LINE UNLESS SHOWN OTHERWISE.
24. WHERE CURVED PIPES ARE SHOWN ON THE FACE PLANS THEY ARE TO BE LAID PARALLEL TO THE BACK OF KERB, EXCEPT WHERE A RADIUS HAS BEEN SPECIFICALLY NOMINATED. CURVED PIPES ARE TO BE APPROVED BY COUNCIL AND IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.
25. HOUSE DRAINS NOT OUT OF PIT TO BE OFFSET IN ACCORDANCE WITH COUNCIL STANDARDS UNLESS NOTED OTHERWISE.
26. AFTER THE COMPLETION OF THE LOWER SUB BASE PAVEMENT LAYERS AND/OR CAPPING LAYER AND PRIOR TO THE PLACEMENT OF CONCRETE KERB AND CHANNEL, ALL DRAINAGE LINES INCLUDING EASEMENT DRAINS CONSTRUCTED MUST BE INSPECTED BY AN INDEPENDENT TESTING ORGANISATION USING CCTV AND RELEVANT WORKS MUST BE PROVIDED TO THE SATISFACTION OF COUNCIL.

PAVEMENT

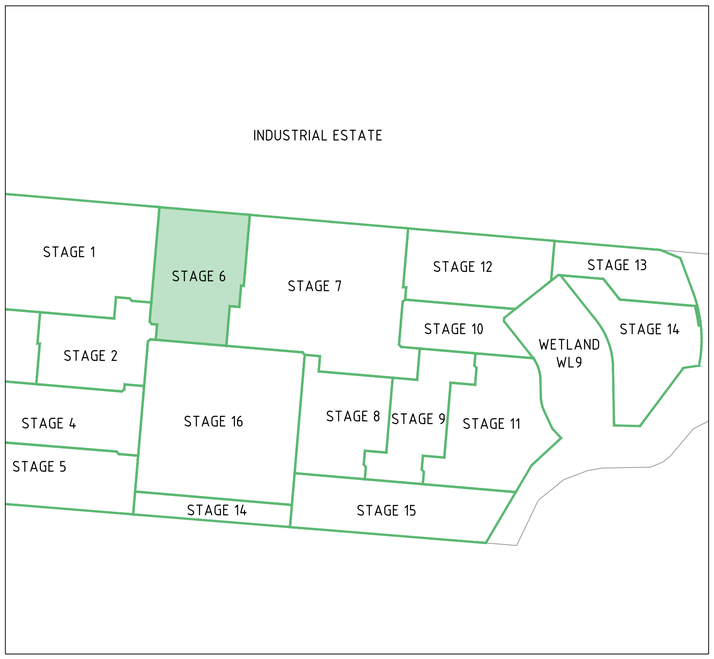
27. PAVEMENT DEPTHS MAY BE MODIFIED AS DIRECTED BY THE SUPERINTENDENT. PAVEMENT TO BE BOXED OUT TO MINIMUM DEPTH DENOTED, INSPECTED AND IF SUBGRADE IS IN QUESTION, FURTHER TESTING CARRIED OUT TO DETERMINE FINAL PAVEMENT DEPTH.
28. WHERE PAVEMENT IS CONSTRUCTED ON FILLING, FILL MATERIAL IS TO BE APPROVED BY THE SUPERINTENDENT AND COUNCIL. FILLING TO BE CONSTRUCTED IN LAYERS 150mm THICK WITH COMPACTION ACHIEVING 95% AUSTRALIAN STANDARD DENSITY.
29. WHEN PAVEMENT EXCAVATION IS IN ROCK ALL LOOSE MATERIAL (INCLUDING ROCKS AND CLAY) MUST BE REMOVED. THE SUB-GRADE MUST THEN BE REGULATED WITH COUNCIL APPROVED MATERIAL.

SIGNAGE AND LINEMARKING

30. LINEMARKING AND SIGNAGE TO BE INSTALLED IN ACCORDANCE WITH AS 1742 SERIES UNLESS NOTED OTHERWISE. STREET SIGNS ARE TO BE INSTALLED IN ACCORDANCE WITH COUNCIL STANDARDS.
31. ALL TEMPORARY WARNING SIGNS USED DURING CONSTRUCTION SHALL BE SUPPLIED AND MAINTAINED IN ACCORDANCE WITH AS 1742-3.
32. TACTILE GROUND SURFACE INDICATORS ARE TO BE INSTALLED IN ACCORDANCE WITH THE DISABILITY DISCRIMINATION ACT AND RELEVANT COUNCIL STANDARD DRAWINGS.

ENVIRONMENTAL

33. CONTRACTOR TO PROVIDE AN ENVIRONMENTAL MANAGEMENT PLAN INCLUDING SILT AND SEDIMENT RUNOFF PROTECTION ETC. PRIOR TO THE COMMENCEMENT OF WORKS.
34. ALL TREES AND SHRUBS ARE TO BE RETAINED UNLESS OTHERWISE SHOWN. IF ROAD AND DRAINAGE CONSTRUCTION NECESSITATES THEIR REMOVAL, WRITTEN PERMISSION MUST BE OBTAINED FROM THE SUPERINTENDENT.
35. TREES NOT SPECIFIED FOR REMOVAL ARE TO BE PROTECTED WITH APPROPRIATE EXCLUSION FENCING PRIOR TO COMMENCEMENT OF ANY WORKS.
36. THE CONTRACTOR IS REQUIRED TO OBTAIN A 'PERMIT TO WORK' FROM MELBOURNE WATER'S SURVEILLANCE OFFICER AT THE PRE-COMMENCEMENT MEETING. THE CONTRACTOR IS REQUIRED TO ENSURE THAT THE 'PERMIT TO WORK' IS KEPT UP TO DATE FOR THE DURATION OF THE CONTRACT.



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MGA 94
ZONE 55

LOCALITY PLAN

H 1:4000 SCALE @ A1 — 0 40 80 120 160 200

DRAWING SCHEDULE

DRAWING	DESCRIPTION	SHEET No.	REVISION
CR100	FACE SHEET	1	0
CR200	FACE PLAN - SHEET 1	2	0
CR201	FACE PLAN - SHEET 2	3	0
CR202	SERVICES PLAN - SHEET 1	4	0
CR203	SERVICES PLAN - SHEET 2	5	0
CR300	ROAD LONG SECTIONS - SHEET 1	6	0
CR301	ROAD LONG SECTIONS - SHEET 2	7	0
CR400	ROAD CROSS SECTIONS - SHEET 1	8	0
CR401	ROAD CROSS SECTIONS - SHEET 2	9	0
CR402	ROAD CROSS SECTIONS - SHEET 3	10	0
CR500	INTERSECTION DETAILS	11	0
CR600	DRAINAGE LONG SECTIONS - SHEET 1	12	0
CR601	DRAINAGE LONG SECTIONS - SHEET 2	13	0
CR602	DRAINAGE LONG SECTIONS - SHEET 3	14	0
CR603	DRAINAGE PIT SCHEDULE	15	0
CR700	PAVEMENT AND TYPICAL DETAILS	16	0
CR800	SIGNAGE AND LINEMARKING	17	0

LEGEND

DESCRIPTION	EXISTING	PROPOSED
WATER MAIN, VALVE AND HYDRANT	DW	DW
WATER RECYCLED	NDW	NDW
UNDERGROUND ELECTRICITY	E	E
OPTIC FIBRE	OF	OF
GAS MAIN	G	G
SEWER & MAINTENANCE STRUCTURE	S	S
CENTRAL INVERT		
COUNCIL STORMWATER DRAIN AND PIT		
STORM WATER DRAINAGE PROPERTY INLETS		
HOUSE DRAIN	H	H
AG DRAIN AND FLUSHER	AG	AG
STORM WATER DRAINAGE PIT NUMBER	Ex.47	1
GAS & WATER CONDUITS	GW	GW
CONCRETE VEHICLE CROSSING		
RIDGE / CHANGE OF GRADE LINE		
SURFACE CONTOUR MINOR	- 169.00 -	169.00
SURFACE CONTOUR MAJOR	- 168.90 -	168.90
SURFACE LEVEL	E123.45	F124.68
BATTER LEVEL (TOP / TOE)	T124.80	T124.80
EARTHWORKS GRADE		1 in 150
SIGN AND POST		
LIGHT & POLE (BY OTHERS)		
STREET SIGN		
PERMANENT SURVEY MARK		
TEMPORARY BENCH MARK		
BOLLARD		
ROAD CHAINAGES	CH116.57 (L/R)TP CH116.57	CH116.57 (L/R)TP CH116.57
LOT CHAINAGES	CH20.06	CH20.06
SETOUT POINT		A2
LIMIT OF WORKS		
BATTER		
EXCAVATION GREATER THAN 0.20m		
FILLING GREATER THAN 0.20m		
FENCES		
TREE TO BE REMOVED		
PROPOSED TREE		
FOOTPATH		
TACTILE GROUND SURFACE INDICATOR		B2 SM2
KERB TRANSITION		
TO BE REMOVED		

Planning and Environment Act 1987
Wyndham Planning Scheme

Approved Plan As Required
under Condition 63
Permit No WYP13902/22
Date 25/03/2025

BEFORE YOU DIG www.byda.com.au
Zero Damage - Zero Harm

WARNING
BEWARE OF UNDERGROUND/OVERHEAD SERVICES
THE LOCATION OF SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN. SPECIAL CONSIDERATION SHOULD BE GIVEN TO CONSTRUCTION PROCEDURES UNDER OVERHEAD ELECTRICITY TRANSMISSION LINES.

Rev	Amendments	Approved	Date
0	ISSUED FOR CONSTRUCTION	G.K	19/03/25
D	AMENDED AS PER COUNCIL COMMENTS	G.K	28/01/25
C	LOT LAYOUT AMENDED & AMENDMENTS AS PER COUNCIL COMMENTS	G.K	18/12/24
B	ISSUED FOR TENDER	G.K	16/12/24
A	ISSUED TO COUNCIL	G.K	01/11/24

Scale

dlca ISO 9001 certified ISO 45001 certified ISO 14001 certified
System Certified

spiire
L6 414 LA TROBE STREET PO BOX 16084 MELBOURNE
VICTORIA 8007 AUSTRALIA T 61 3 9993 7888
spiire.com.au ABN 55 050 029 635

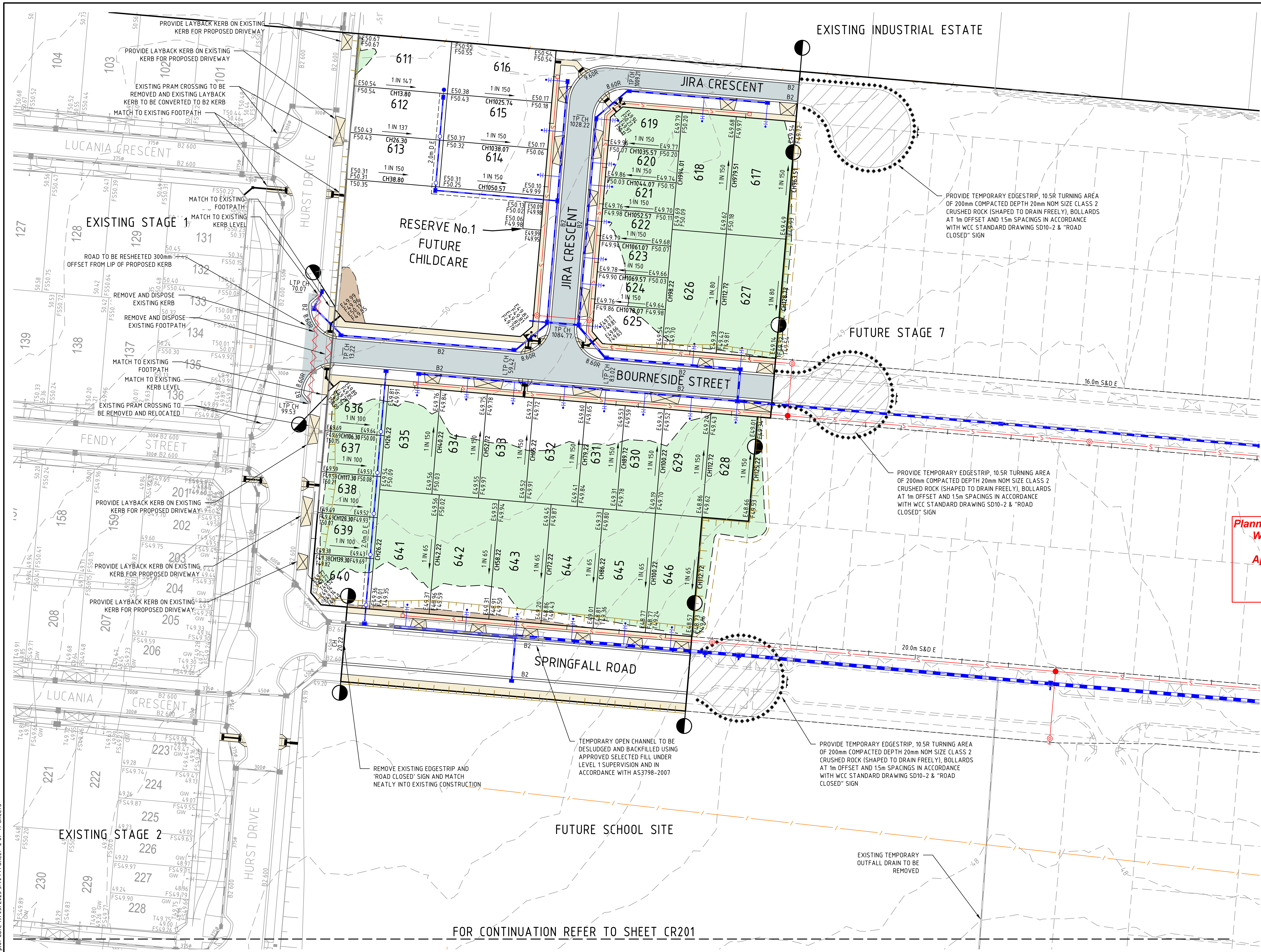
Harlow TARNEIT

Designed	Checked
T. NGUYEN	G. KOHLMAN
Authorised	Date
G. KOHLMAN	01/11/24

HARLOW ESTATE
STAGE 6
ROAD AND DRAINAGE
FACE SHEET
WYNDHAM CITY COUNCIL
SIG GROUP

CONSTRUCTION Drg No **309442CR100** Rev **0**

file name: 309442CR100.dwg, layout name: CR100, plotted by: Thanh Nguyen
file location: G:\30\309442\CAD\WIP\CAD plot date: 19/03/2025 3:40 PM, Sheet 1 of 17 Sheets



Planning and Environment Act 1987
Wyndham Planning Scheme

Approved Plan As Required
under Condition 63
Permit No WYP13902/22
Date 25/03/2025

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file name 309442CR200.dwg layout name CR200 plotted by Thanh Nguyen
file location G:\30\309442\Civil\ACAD plot date 19/03/2025 3:40 PM Sheet 2 of 17 Sheets

Rev	Amendments	Approved	Date
0	ISSUED FOR CONSTRUCTION	G.K	19/03/25
D	LOT NO & SWD ALIGNMENT AMENDED, BATTER ADDED	G.K	28/01/25
C	LOT LAYOUT, LEVELS & NOTES AMENDED; PRAM CROSSING & TGSIS ADDED	G.K	18/12/24
B	ISSUED FOR TENDER	G.K	16/12/24
A	ISSUED TO COUNCIL	G.K	01/11/24

Scale
H 1:500
SCALE @ A1
0 5 10 15 20 25

System Certified

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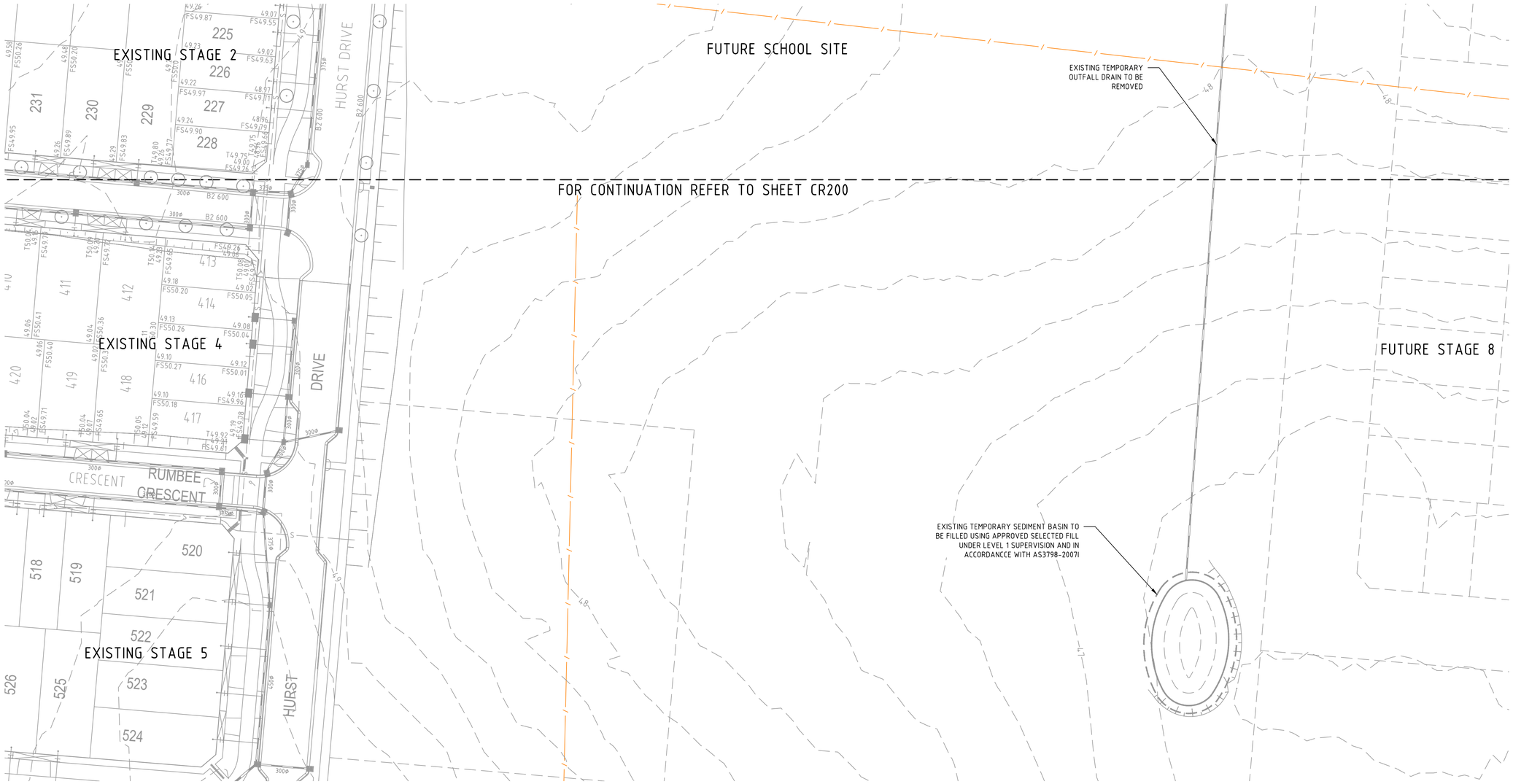
spiire.com.au ABN 55 050 029 635

Harlow TARNEIT

Designed: T. NGUYEN
Checked: G. KOHLMAN
Authorised: G. KOHLMAN
Date: 01/11/24

HARLOW ESTATE
STAGE 6
ROAD AND DRAINAGE
FACE PLAN - SHEET 1
WYNDHAM CITY COUNCIL
SIG GROUP

CONSTRUCTION
Drg No 309442CR200
Rev 0



Planning and Environment Act 1987
Wyndham Planning Scheme

Approved Plan As Required under Condition 63
Permit No WYP13902/22
Date 25/03/2025

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Rev	Amendments	Approved	Date
0	ISSUED FOR CONSTRUCTION	G.K	19/03/25
B	ISSUED FOR TENDER	G.K	16/12/24
A	ISSUED TO COUNCIL	G.K	01/11/24

Scale
H 1:500
SCALE @ A1
0 5 10 15 20 25

dlcs ISO 9001 certified ISO 45001 certified ISO 14001 certified
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spiire.com.au ABN 55 050 029 635

Harlow TARNEIT

Designed	Checked
T. NGUYEN	G. KOHLMAN
Authorised	Date
G. KOHLMAN	01/11/24

HARLOW ESTATE
STAGE 6
ROAD AND DRAINAGE
FACE PLAN - SHEET 2
WYNDHAM CITY COUNCIL
SIG GROUP

CONSTRUCTION

Drg No **309442CR201** Rev **0**

file name 309442CR200.dwg layout name CR201 plotted by Thanh Nguyen
file location G:\30\309442\Civil\ALAD plot date 19/03/2025 3:40 PM Sheet 3 of 17 Sheets

EXISTING INDUSTRIAL ESTATE

N
MGA 94
ZONE 55

JIRA CRESCENT

LUCANIA CRESCENT

HURST DRIVE

FENDY STREET

LUCANIA CRESCENT

HURST DRIVE

EXISTING SEWER PROPERTY CONNECTIONS TO BE ABANDONED

EXISTING STAGE 1

EXISTING GW SERVICE CONDUITS TO BE ABANDONED

EXISTING SEWER PROPERTY CONNECTIONS TO BE ABANDONED

EXISTING ELEC AND OPTIC UNDER PROPOSED INTERSECTION TO BE LOWERED TO ACHIEVE REQUIRED COVER

EXISTING ELEC TEE JOINT TO BE RELOCATED

WATER AND GAS SERVICES TO BE BORED UNDER HURST DRIVE

EXISTING SWD PIT TO BE REMOVED & SWD PIPE TO BE CAPPED AND MADE REDUNDANT

EXISTING SEWER PROPERTY CONNECTIONS TO BE ABANDONED

EXISTING SEWER PROPERTY CONNECTION TO BE ABANDONED

EXISTING LIGHTPOLE TO BE RELOCATED

EXISTING GW SERVICE CONDUIT TO BE ABANDONED

RESERVE No.1
FUTURE
CHILDCARE

DRAINAGE TO BE BORED UNDER EXISTING ELECTRICAL & OPTIC AND OVER EXISTING SEWER. CONTRACTOR TO DETERMINE EXACT LOCATION AND LEVELS ON SITE

BLANK OFF ENDPIPE WITH MARINE GRADE PLYWOOD

BOURNESIDE STREET

FUTURE STAGE 7

SPRINGFALL ROAD

BREAKOUT EXISTING PIT TO ACCOMMODATE PROPOSED 675ø PIPE

BREAK INTO EXISTING PIPE AND CONSTRUCT PIT

PROVIDE 300ø STUB AT IL46.480 FOR FUTURE CONNECTION. BLANK OFF WITH MARINE GRADE PLY BOARD

PROVIDE 300ø STUB AT IL46.469 FOR FUTURE CONNECTION. BLANK OFF WITH MARINE GRADE PLY BOARD

PROVIDE 300ø STUB AT IL46.017 FOR FUTURE CONNECTION. BLANK OFF WITH MARINE GRADE PLY BOARD

EXISTING STAGE 2

FUTURE SCHOOL SITE

FOR CONTINUATION REFER TO SHEET CR203

Planning and Environment Act 1987
Wyndham Planning Scheme

Approved Plan As Required
under Condition 63
Permit No WYP13902/22
Date 25/03/2025

SERVICE LOCATION TABLE

ROAD NAME	POTABLE WATER		RECYCLED WATER		GAS		NBN (TELECOM)		ELECTRICITY			
									POLE		U/G CABLE	
	SIDE	OFFSET	SIDE	OFFSET	SIDE	OFFSET	SIDE	OFFSET	SIDE	OFFSET	SIDE	OFFSET
BOURNESIDE STREET	S	3.00	S	2.50	S	2.10	N	1.85	N	0.90 x	N	2.60
JIRA CRESCENT (N/S)	W	3.00	W	2.50	W	2.10	E	1.85	E	0.90 x	E	2.60
JIRA CRESCENT (E/W)	S	3.25	S	2.75	S	2.25	S	1.85	N	0.90 x	N	1.00
SPRINGFALL ROAD	N	3.10	N	2.50	N	2.00	S	2.35	S	0.90 x	S	2.95

1. TELECOMMUNICATIONS AND ELECTRICITY CABLES TO BE CONSTRUCTED IN A COMMON TRENCH IN ACCORDANCE WITH ELECTRICITY AUTHORITY STANDARD DRG's.
2. GAS AND WATER MAINS TO BE CONSTRUCTED IN A COMMON TRENCH.
3. x = OFFSET FROM BACK OF KERB

NOTE: TREE LOCATIONS SHOWN ARE INDICATIVE ONLY. REFER TO LANDSCAPE ARCHITECT PLANS FOR FINAL LOCATIONS

WARNING

BEWARE OF UNDERGROUND/OVERHEAD SERVICES

THE LOCATION OF SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN. SPECIAL CONSIDERATION SHOULD BE GIVEN TO CONSTRUCTION PROCEDURES UNDER OVERHEAD ELECTRICITY TRANSMISSION LINES.

Rev	Amendments	Approved	Date
0	ISSUED FOR CONSTRUCTION	G.K	19/03/25
D	NOTES, SWD SIZE & SWD ALIGNMENT AMENDED	G.K	28/01/25
C	LOT LAYOUT, SERVICES CONNECTIONS, NOTES, SWD & SEWER AMENDED; TREES & EXISTING TREES ADDED	G.K	18/12/24
B	ISSUED FOR TENDER	G.K	16/12/24
A	ISSUED TO COUNCIL	G.K	01/11/24

Scale
H 1:500
SCALE @ A1
0 5 10 15 20 25

dlcs ISO 9001 certified ISO 45001 certified ISO 14001 certified
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VICTORIA 8007 AUSTRALIA T 61 3 9993 7888
spiire.com.au ABN 55 050 029 635

Harlow TARNEIT

Designed T. NGUYEN
Checked G. KOHLMAN
Authorised G. KOHLMAN
Date 01/11/24

HARLOW ESTATE
STAGE 6
ROAD AND DRAINAGE
SERVICES PLAN - SHEET 1
WYNDHAM CITY COUNCIL
SIG GROUP

CONSTRUCTION Drg No 309442CR202 Rev 0

file name 309442CR200.dwg layout name CR202 plotted by Thanh Nguyen
file location G:\30\309442\Civil\XLAD\plot date 19/03/2025 3:40 PM Sheet 4 of 17 Sheets

FUTURE STAGE 7
FUTURE STAGE 8
FUTURE STAGE 9
FUTURE STAGE 10
FUTURE STAGE 11
FUTURE STAGE 13
FUTURE STAGE 14
EXISTING WETLAND WL9
FUTURE BOURNESIDE STREET
FUTURE TEASEL WAY
FOR CONTINUATION REFER TO SHEET CR202
MGA 94
ZONE 55
N
PROVIDE PIT DEFLECTOR IN WALL
PROVIDE 375ø STUB AT IL46.343 FOR FUTURE CONNECTION. BLANK OFF WITH MARINE GRADE PLY BOARD
PROVIDE 450ø STUB AT IL45.837 FOR FUTURE CONNECTION. BLANK OFF WITH MARINE GRADE PLY BOARD
PROVIDE PIT DEFLECTOR IN WALL
PROVIDE 300ø STUB AT IL44.620 FOR FUTURE CONNECTION. BLANK OFF WITH MARINE GRADE PLY BOARD
PROVIDE 300ø STUB AT IL45.571 FOR FUTURE CONNECTION. BLANK OFF WITH MARINE GRADE PLY BOARD
PROVIDE 750ø STUB AT IL44.812 FOR FUTURE CONNECTION. BLANK OFF WITH MARINE GRADE PLY BOARD
PROVIDE 900ø STUB AT IL45.005 FOR FUTURE CONNECTION. BLANK OFF WITH MARINE GRADE PLY BOARD
EXISTING FENCE TO BE REMOVED
PROVIDE 300ø STUB AT IL45.433 FOR FUTURE CONNECTION. BLANK OFF WITH MARINE GRADE PLY BOARD
PROVIDE 375ø STUB AT IL44.701 FOR FUTURE CONNECTION. BLANK OFF WITH MARINE GRADE PLY BOARD
REMOVING EXISTING 1050ø STUB, BREAK INTO PIT AND CONNECT 1350ø DRAINAGE OUTFALL
EXISTING FENCE TO BE REMOVED
16.0m S&D E
18.0m S&D E
17.5m D E
1350 RCP F.J. CURVED PIPE RADII 121.0m
1350 RCP F.J. SPLAY PIPE RADII 70.0m (MIN 72.5 (1050 x 0.4))
Planning and Environment Act 1987
Wyndham Planning Scheme
Approved Plan As Required
under Condition 63
Permit No WYP13902/22
Date 25/03/2025
WARNING
BEWARE OF UNDERGROUND/OVERHEAD SERVICES
THE LOCATION OF SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN. SPECIAL CONSIDERATION SHOULD BE GIVEN TO CONSTRUCTION PROCEDURES UNDER OVERHEAD ELECTRICITY TRANSMISSION LINES.

SERVICE LOCATION TABLE

ROAD NAME	POTABLE WATER		RECYCLED WATER		GAS		NBN (TELECOM)		ELECTRICITY			
									POLE		U/G CABLE	
	SIDE	OFFSET	SIDE	OFFSET	SIDE	OFFSET	SIDE	OFFSET	SIDE	OFFSET	SIDE	OFFSET
BOURNESIDE STREET	S	3.00	S	2.50	S	2.10	N	1.85	N	0.90 x	N	2.60
JIRA CRESCENT (N/S)	W	3.00	W	2.50	W	2.10	E	1.85	E	0.90 x	E	2.60
JIRA CRESCENT (E/W)	S	3.25	S	2.75	S	2.25	S	1.85	N	0.90 x	N	1.00
SPRINGFALL ROAD	N	3.10	N	2.50	N	2.00	S	2.35	S	0.90 x	S	2.95

1. TELECOMMUNICATIONS AND ELECTRICITY CABLES TO BE CONSTRUCTED IN A COMMON TRENCH IN ACCORDANCE WITH ELECTRICITY AUTHORITY STANDARD DRG's.
2. GAS AND WATER MAINS TO BE CONSTRUCTED IN A COMMON TRENCH.
3. × = OFFSET FROM BACK OF KERB

Rev	Amendments	Approved	Date
0	ISSUED FOR CONSTRUCTION	G.K	19/03/25
D	NOTES AMENDED	G.K	28/01/25
C	NOTES, SEWER ALIGNMENT AND SWD SIZES AMENDED	G.K	18/12/24
B	ISSUED FOR TENDER	G.K	16/12/24
A	ISSUED TO COUNCIL	G.K	01/11/24

Scale
H 1:500
SCALE @ A1
0 5 10 15 20 25

System Certified

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spiire.com.au ABN 55 050 029 635

Harlow
TARNEIT

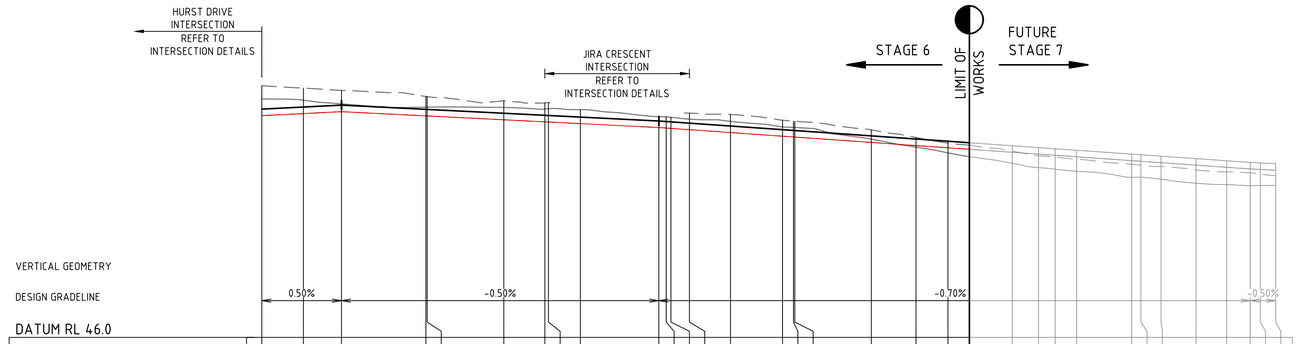
Designed: T. NGUYEN	Checked: G. KOHLMAN
Authorised: G. KOHLMAN	Date: 01/11/24

HARLOW ESTATE
STAGE 6
ROAD AND DRAINAGE SERVICES PLAN - SHEET 2

WYNDHAM CITY COUNCIL
SIG GROUP

CONSTRUCTION Drg No 309442CR203 Rev 0

file name 309442CR200.dwg layout name CR203 plotted by Thanh Nguyen
file location G:\30\309442\Civil\ACAD plot date 19/03/2025 3:40 PM Sheet 5 of 17 Sheets



DATUM RL 46.0

DESIGN CENTRELINE	49.726	49.760	49.791	49.722	49.721	49.658	49.625	49.622	49.596	49.532	49.524
LEFT DESIGN LIP OF KERB	49.619	49.653	49.684	49.615	49.614	49.552	49.518				
RIGHT DESIGN LIP OF KERB	49.619	49.653	49.684	49.615	49.614	49.552	49.518	49.515	49.489	49.425	49.417
EX SURFACE LEFT BOUNDARY	50.107	50.069	50.031	49.933	49.930	49.862	49.829	49.832			
EX SURFACE RIGHT BOUNDARY	49.894	49.871	49.811	49.758	49.758	49.753	49.727	49.731	49.717	49.603	49.600
CHAINAGE	13.218	20.000	26.218	40.000	40.218	52.718	59.418	60.000	65.218	78.018	79.218

DESIGN CENTRELINE	49.518	49.497	49.450	49.391	49.378	49.377	49.289	49.238	49.202	49.177	49.128
LEFT DESIGN LIP OF KERB		49.390	49.343	49.284	49.271	49.270	49.182	49.131	49.095	49.070	49.021
RIGHT DESIGN LIP OF KERB	49.411	49.390	49.343	49.284	49.271	49.270	49.182	49.131	49.095	49.070	49.021
EX SURFACE LEFT BOUNDARY		49.661	49.640	49.544	49.529	49.527	49.388	49.263	49.170	49.135	49.041
EX SURFACE RIGHT BOUNDARY	49.593	49.563	49.526	49.436	49.427	49.426	49.236	49.106	49.012	48.951	48.842
CHAINAGE	80.000	83.018	89.718	98.218	100.000	100.218	112.718	120.000	125.218	128.718	135.718

DESIGN CENTRELINE	49.098	49.079	49.055	48.992	48.981	48.958	48.918	48.883	48.856	48.848	48.835
LEFT DESIGN LIP OF KERB	48.991	48.972	48.948	48.885	48.874	48.851	48.811	48.776	48.750	48.741	48.729
RIGHT DESIGN LIP OF KERB	48.991	48.972	48.948	48.885	48.874	48.851	48.811	48.776	48.750	48.741	48.729
EX SURFACE LEFT BOUNDARY	48.965	48.944	48.909	48.827	48.810	48.791	48.731	48.703	48.685	48.667	48.639
EX SURFACE RIGHT BOUNDARY	48.771	48.746	48.712	48.613	48.615	48.583	48.516	48.494	48.477	48.479	48.481
CHAINAGE	140.000	142.718	146.218	155.218	156.718	160.000	165.718	170.718	174.558	176.218	178.718

BOURNESIDE STREET

Planning and Environment Act 1987
Wyndham Planning Scheme

Approved Plan As Required
under Condition 63
Permit No WYP13902/22
Date 25/03/2025

DATUM RL 46.5

DESIGN CENTRELINE	49.008	49.020	49.040	49.073	49.091	49.142	49.149	49.176	49.248	49.318	49.486	49.542
LEFT DESIGN LIP OF KERB	48.931	48.943	48.963	48.996	49.014	49.066	49.073	49.099	49.172	49.241	49.409	49.465
RIGHT DESIGN LIP OF KERB	48.931	48.943	48.963	48.996	49.014	49.066	49.073	49.099	49.172	49.241	49.409	49.465
EX SURFACE LEFT BOUNDARY	49.214	49.227	49.249	49.284	49.304	49.344	49.348	49.361	49.390	49.415	49.519	49.544
EX SURFACE RIGHT BOUNDARY	49.557	49.562	49.572	49.567	49.565	49.572	49.574	49.580	49.595	49.618	49.668	49.685
CHAINAGE	913.512	916.012	920.000	926.512	930.152	937.012	937.652	940.000	945.152	949.512	960.000	963.512

DESIGN CENTRELINE	49.798	49.806	50.004	50.028	50.085	50.085	50.096	50.087	50.078	50.062	50.024	49.995	49.994
LEFT DESIGN LIP OF KERB	49.721	49.729	49.928	49.952	50.008	50.009	50.019	50.010	50.001				
RIGHT DESIGN LIP OF KERB	49.721	49.729	49.928	49.952	50.008	50.009	50.019	50.010	50.001				
EX SURFACE LEFT BOUNDARY	49.678	49.683	49.803	49.792	49.844	49.847	49.877	49.907	49.928	49.966	49.956	49.948	49.948
EX SURFACE RIGHT BOUNDARY	49.867	49.992	50.153	50.053	50.007	50.008	50.062	50.207	50.387	50.669	50.229	50.173	50.174
CHAINAGE	979.512	980.000	992.397	994.012	999.897	1000.000	1003.826	1007.397	1009.212	1012.412	1020.000	1025.740	1025.921

DESIGN CENTRELINE	49.983	49.946	49.933	49.924	49.903	49.871	49.861	49.824	49.818	49.776	49.733	49.724	49.700
LEFT DESIGN LIP OF KERB	49.876	49.839	49.827	49.817	49.797	49.764	49.754	49.717	49.712	49.669	49.627	49.617	49.593
RIGHT DESIGN LIP OF KERB	49.876	49.839	49.827	49.817	49.797	49.764	49.754	49.717	49.712	49.669	49.627	49.617	49.593
EX SURFACE LEFT BOUNDARY	49.973	49.956	49.933	49.909	49.857	49.791	49.760	49.786	49.791	49.785	49.761	49.748	49.719
EX SURFACE RIGHT BOUNDARY	50.181	50.187	50.173	50.161	50.138	50.100	50.088	49.991	49.976	49.882	49.837	49.850	49.831
CHAINAGE	1028.221	1035.571	1038.071	1040.000	1044.071	1050.571	1052.571	1060.000	1061.071	1069.571	1078.071	1080.000	1084.771

JIRA CRESCENT

file name 309442CR300.dwg layout name CR300 plotted by Thanh Nguyen
file location G:\30\309442\Civil\ACAD plot date 19/03/2025 3:41 PM Sheet 6 of 17 Sheets

Rev	Amendments	Approved	Date
0	ISSUED FOR CONSTRUCTION	G.K	19/03/25
C	ROAD LONG SECTION AMENDED	G.K	18/12/24
B	ISSUED FOR TENDER	G.K	16/12/24
A	ISSUED TO COUNCIL	G.K	01/11/24

Scale
H 1:500 — 0 5 10 15 20 25
SCALE @ A1
V 1:50 — 0 0.5 1 1.5 2 2.5

dlcs ISO 9001 certified ISO 45001 certified ISO 14001 certified
System Certified

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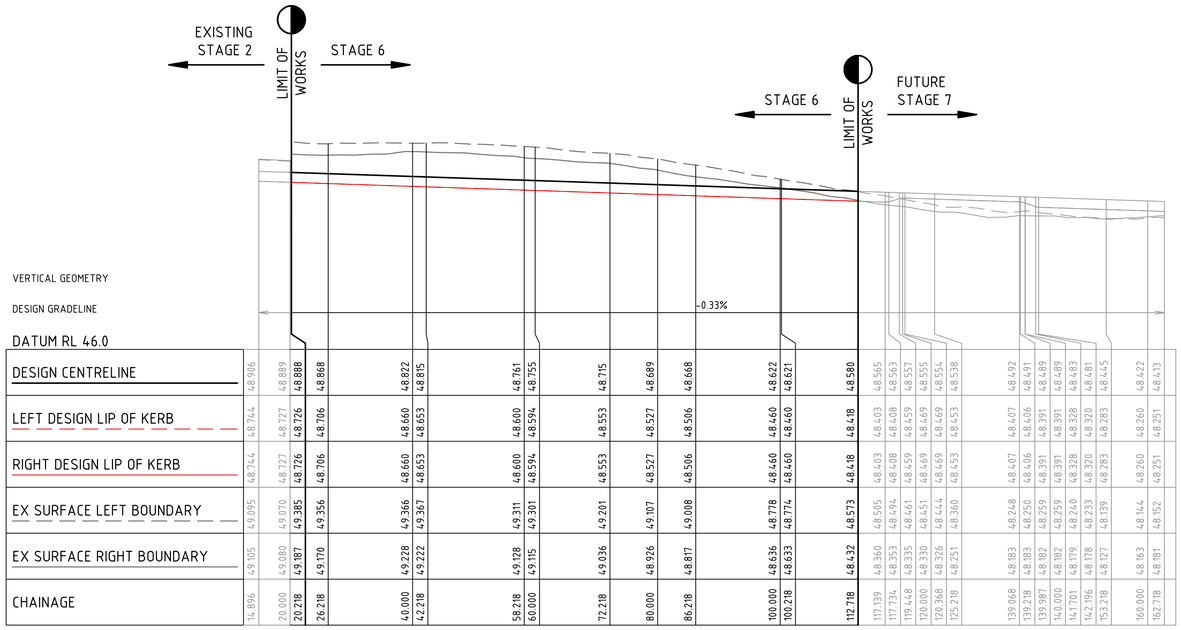
VICTORIA 8007 AUSTRALIA T 61 3 9993 7888
spiire.com.au ABN 55 050 029 635

Harlow
T A R N E I T

Designed	Checked
T. NGUYEN	G. KOHLMAN
Authorised	Date
G. KOHLMAN	01/11/24

HARLOW ESTATE
STAGE 6
ROAD AND DRAINAGE
ROAD LONG SECTIONS - SHEET 1
WYNDHAM CITY COUNCIL
SIG GROUP

CONSTRUCTION
Drg No **309442CR300**
Rev **0**



DESIGN CENTRELINE	48.906	48.889	48.888	48.868	48.822	48.815	48.761	48.755	48.715	48.689	48.668	48.622	48.621	48.580
LEFT DESIGN LIP OF KERB	48.744	48.727	48.726	48.706	48.660	48.653	48.600	48.594	48.553	48.527	48.506	48.460	48.460	48.418
RIGHT DESIGN LIP OF KERB	48.744	48.727	48.726	48.706	48.660	48.653	48.600	48.594	48.553	48.527	48.506	48.460	48.460	48.418
EX SURFACE LEFT BOUNDARY	49.095	49.070	49.385	49.356	49.366	49.367	49.311	49.301	49.201	49.107	49.008	48.778	48.774	48.573
EX SURFACE RIGHT BOUNDARY	49.105	49.080	49.187	49.170	49.228	49.222	49.128	49.115	49.036	48.926	48.817	48.636	48.633	48.432
CHAINAGE	14.896	20.000	20.218	26.218	40.000	42.218	58.218	60.000	72.218	80.000	86.218	100.000	100.218	112.718

DESIGN CENTRELINE	48.565	48.563	48.557	48.555	48.554	48.538	48.492	48.491	48.489	48.489	48.483	48.481	48.445	48.422	48.413
LEFT DESIGN LIP OF KERB	48.403	48.408	48.459	48.469	48.469	48.453	48.407	48.406	48.391	48.391	48.328	48.320	48.283	48.260	48.251
RIGHT DESIGN LIP OF KERB	48.403	48.408	48.459	48.469	48.469	48.453	48.407	48.406	48.391	48.391	48.328	48.320	48.283	48.260	48.251
EX SURFACE LEFT BOUNDARY	48.505	48.494	48.461	48.451	48.444	48.360	48.248	48.250	48.259	48.259	48.240	48.233	48.139	48.144	48.152
EX SURFACE RIGHT BOUNDARY	48.360	48.353	48.335	48.330	48.326	48.251	48.183	48.183	48.182	48.182	48.179	48.178	48.127	48.163	48.181
CHAINAGE	117.139	117.734	119.448	120.000	120.368	125.218	139.068	139.218	139.987	140.000	141.701	142.196	153.218	160.000	162.718

SPRINGFALL ROAD

Planning and Environment Act 1987
Wyndham Planning Scheme

Approved Plan As Required
under Condition 63
Permit No WYP13902/22
Date 25/03/2025

file name 309442CR300.dwg layout name CR301 plotted by Thanh Nguyen
file location G:\30\309442\Civil\ACAD plot date 19/03/2025 3:41 PM Sheet 7 of 17 Sheets

Rev	Amendments	Approved	Date
0	ISSUED FOR CONSTRUCTION	G.K	19/03/25
C	ROAD LONG SECTION AMENDED	G.K	18/12/24
B	ISSUED FOR TENDER	G.K	16/12/24
A	ISSUED TO COUNCIL	G.K	01/11/24

Scale
H 1:500
SCALE @ A1
V 1:50

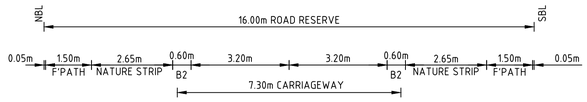
System Certified

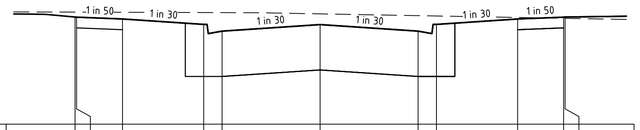
L6 414 LA TROBE STREET PO BOX 16084 MELBOURNE
VICTORIA 8007 AUSTRALIA T 61 3 9993 7888
spiire.com.au ABN 55 050 029 635

Designed
T. NGUYEN
Checked
G. KOHLMAN
Authorised
G. KOHLMAN
Date
01/11/24

HARLOW ESTATE
STAGE 6
ROAD AND DRAINAGE
ROAD LONG SECTIONS - SHEET 2
WYNDHAM CITY COUNCIL
SIG GROUP

CONSTRUCTION
Drg No
309442CR301
Rev
0





FILLING NOTE
ALL FILLING WITHIN ROAD RESERVES IS TO BE UNDERTAKEN USING LEVEL 1 SUPERVISION AND BE COMPLETED IN ACCORDANCE WITH AS 3798-2007 AND TO THE SATISFACTION OF COUNCIL AND THE SUPERINTENDENT. FILL AREAS ARE TO BE STRIPPED OF TOPSOIL, FILLED AND REPLACED WITH TOPSOIL (WHERE REQUIRED) TO OBTAIN THE FINAL LEVELS SHOWN ON THE DRAWINGS.

▨ STRUCTURAL FILL IN ACCORDANCE WITH AS3798-2007, LEVEL 1

DATUM R.L.48.0

DESIGN SURFACE LEVEL	49.748	49.747	49.717	49.628	49.518	49.625	49.518	49.628	49.717	49.747	49.748	
EXISTING SURFACE LEVEL	49.829	49.829	49.826	49.822	49.821	49.800	49.771	49.766	49.742	49.728	49.727	
OFFSET	-8.000	-7.950	-6.450	-3.800	-3.200	0.000	3.200	3.800	6.450	7.950	8.000	

BOURNESIDE STREET

CH 59.42

DATUM R.L.47.0

DESIGN SURFACE LEVEL	49.544	49.318	49.316	49.286	49.180	49.070	49.177	49.070	49.180	49.286	49.316	49.318	
EXISTING SURFACE LEVEL	49.151	49.135	49.135	49.117	49.085	49.078	49.040	49.004	48.997	48.968	48.951	48.951	
OFFSET	-9.356	-8.000	-7.950	-6.450	-3.800	-3.200	0.000	3.200	3.800	6.450	7.950	8.000	

BOURNESIDE STREET

CH 128.72

DATUM R.L.48.0

DESIGN SURFACE LEVEL	49.844	49.842	49.812	49.724	49.614	49.721	49.614	49.724	49.812	49.842	49.844	
EXISTING SURFACE LEVEL	49.930	49.929	49.910	49.877	49.870	49.809	49.774	49.773	49.769	49.759	49.758	
OFFSET	-8.000	-7.950	-6.450	-3.800	-3.200	0.000	3.200	3.800	6.450	7.950	8.000	

BOURNESIDE STREET

CH 40.22

DATUM R.L.47.0

DESIGN SURFACE LEVEL	49.812	49.430	49.428	49.398	49.292	49.182	49.289	49.182	49.292	49.398	49.428	49.430	
EXISTING SURFACE LEVEL	49.405	49.388	49.388	49.375	49.354	49.349	49.317	49.284	49.278	49.252	49.236	49.236	
OFFSET	-10.289	-8.000	-7.950	-6.450	-3.800	-3.200	0.000	3.200	3.800	6.450	7.950	8.000	

BOURNESIDE STREET

CH 112.72

Planning and Environment Act 1987
Wyndham Planning Scheme

Approved Plan As Required
under Condition 63
Permit No WYP13902/22
Date 25/03/2025

DATUM R.L.48.0

DESIGN SURFACE LEVEL	49.849	49.848	49.818	49.729	49.619	49.726	49.619	49.729	49.818	49.848	49.849	
EXISTING SURFACE LEVEL	50.107	50.107	50.091	50.064	50.058	50.013	49.965	49.956	49.917	49.895	49.894	
OFFSET	-8.000	-7.950	-6.450	-3.800	-3.200	0.000	3.200	3.800	6.450	7.950	8.000	

BOURNESIDE STREET

CH 13.22

DATUM R.L.48.0

DESIGN SURFACE LEVEL	49.638	49.636	49.606	49.500	49.390	49.497	49.390	49.500	49.606	49.636	49.638	
EXISTING SURFACE LEVEL	49.661	49.660	49.647	49.626	49.622	49.603	49.586	49.583	49.570	49.563	49.563	
OFFSET	-8.000	-7.950	-6.450	-3.800	-3.200	0.000	3.200	3.800	6.450	7.950	8.000	

BOURNESIDE STREET

CH 83.02

file name 309442CR400.dwg layout name CR400 plotted by Thanh Nguyen
file location G:\30\309442\Civil\ACAD plot date 19/03/2025 3:41 PM Sheet 8 of 17 Sheets

Rev	Amendments	Approved	Date
0	ISSUED FOR CONSTRUCTION	G.K	19/03/25
C	ROAD CROSS SECTIONS AMENDED	G.K	18/12/24
B	ISSUED FOR TENDER	G.K	16/12/24
A	ISSUED TO COUNCIL	G.K	01/11/24

Scale
H 1:100
SCALE @ A1
V 1:50
0 1 2 3 4 5
0 0.5 1 1.5 2 2.5

dlcs ISO 9001 certified ISO 45001 certified ISO 14001 certified
System Certified

spiire
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spiire.com.au ABN 55 050 029 635

Harlow
TARNEIT

Designed	Checked
T. NGUYEN	G. KOHLMAN
Authorised	Date
G. KOHLMAN	01/11/24

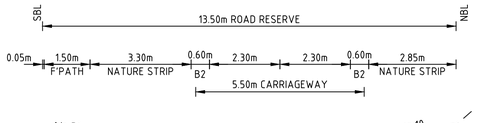
HARLOW ESTATE
STAGE 6
ROAD AND DRAINAGE
ROAD CROSS SECTIONS - SHEET 1
WYNDHAM CITY COUNCIL
SIG GROUP

CONSTRUCTION
Drg No **309442CR400**
Rev **0**

FILLING NOTE

ALL FILLING WITHIN ROAD RESERVES IS TO BE UNDERTAKEN USING LEVEL 1 SUPERVISION AND BE COMPLETED IN ACCORDANCE WITH AS 3798-2007 AND TO THE SATISFACTION OF COUNCIL AND THE SUPERINTENDENT. FILL AREAS ARE TO BE STRIPPED OF TOPSOIL, FILLED AND REPLACED WITH TOPSOIL (WHERE REQUIRED) TO OBTAIN THE FINAL LEVELS SHOWN ON THE DRAWINGS.

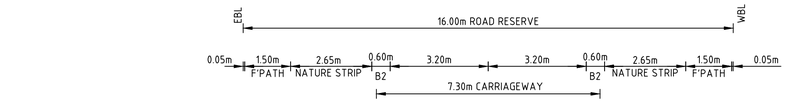
STRUCTURAL FILL IN ACCORDANCE WITH AS3798-2007, LEVEL 1



DATUM R.L.48.0

DESIGN SURFACE LEVEL	50.253	50.251	50.221	50.111	50.001	50.078	50.001	50.111	50.387
EXISTING SURFACE LEVEL	49.928	49.928	49.929	50.017	50.032	49.988	50.064	50.110	50.387
OFFSET	-7.750	-7.700	-6.200	-2.900	-2.300	0.000	2.300	2.900	5.750

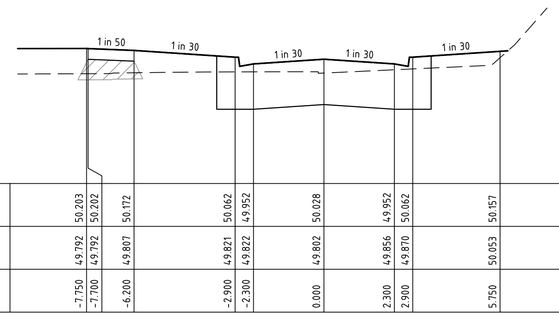
JIRA CRESCENT CH 1009.21



DATUM R.L.48.0

DESIGN SURFACE LEVEL	49.823	49.822	49.792	49.703	49.593	49.700	49.593	49.703	49.792	49.822	49.823
EXISTING SURFACE LEVEL	49.719	49.719	49.735	49.760	49.764	49.800	49.816	49.818	49.826	49.831	49.831
OFFSET	-8.000	-7.950	-6.450	-3.800	-3.200	0.000	3.200	3.800	6.450	7.950	8.000

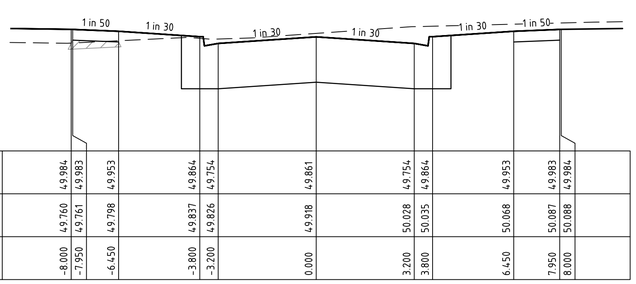
JIRA CRESCENT CH 1084.77



DATUM R.L.48.0

DESIGN SURFACE LEVEL	50.203	50.202	50.172	50.062	49.952	50.028	49.952	50.062	50.157
EXISTING SURFACE LEVEL	49.792	49.792	49.807	49.821	49.822	49.802	49.856	49.870	50.053
OFFSET	-7.750	-7.700	-6.200	-2.900	-2.300	0.000	2.300	2.900	5.750

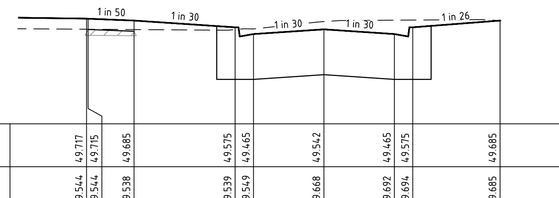
JIRA CRESCENT CH 994.01



DATUM R.L.48.0

DESIGN SURFACE LEVEL	49.984	49.983	49.953	49.864	49.754	49.861	49.754	49.864	49.953	49.983	49.984
EXISTING SURFACE LEVEL	49.760	49.761	49.798	49.837	49.826	49.918	50.028	50.035	50.068	50.087	50.088
OFFSET	-8.000	-7.950	-6.450	-3.800	-3.200	0.000	3.200	3.800	6.450	7.950	8.000

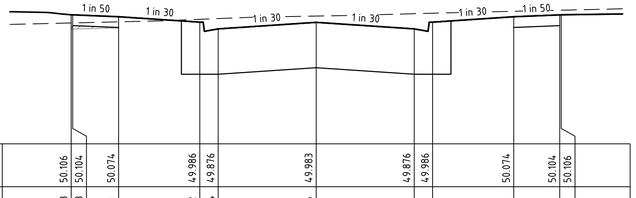
JIRA CRESCENT CH 1052.57



DATUM R.L.48.0

DESIGN SURFACE LEVEL	49.717	49.715	49.685	49.575	49.465	49.542	49.465	49.575	49.685
EXISTING SURFACE LEVEL	49.544	49.544	49.538	49.539	49.549	49.668	49.692	49.694	49.685
OFFSET	-7.750	-7.700	-6.200	-2.900	-2.300	0.000	2.300	2.900	5.750

JIRA CRESCENT CH 963.51



DATUM R.L.48.0

DESIGN SURFACE LEVEL	50.106	50.104	50.074	49.986	49.876	49.983	49.876	49.986	50.074	50.104	50.106
EXISTING SURFACE LEVEL	49.973	49.973	49.991	50.032	50.044	50.085	50.124	50.132	50.163	50.180	50.181
OFFSET	-8.000	-7.950	-6.450	-3.800	-3.200	0.000	3.200	3.800	6.450	7.950	8.000

JIRA CRESCENT CH 1028.22

Planning and Environment Act 1987
Wyndham Planning Scheme

Approved Plan As Required under Condition 63
Permit No WYP13902/22
Date 25/03/2025

Rev	Amendments	Approved	Date
0	ISSUED FOR CONSTRUCTION	G.K	19/03/25
C	ROAD CROSS SECTIONS AMENDED	G.K	18/12/24
B	ISSUED FOR TENDER	G.K	16/12/24
A	ISSUED TO COUNCIL	G.K	01/11/24

Scale
H 1:100 SCALE @ A1
V 1:50
0 1 2 3 4 5
0 0.5 1 1.5 2 2.5

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VICTORIA 8007 AUSTRALIA T 61 3 9993 7888
spiire.com.au ABN 55 050 029 635

Harlow TARNEIT

Designed T. NGUYEN
Checked G. KOHLMAN
Authorised G. KOHLMAN
Date 01/11/24

HARLOW ESTATE
STAGE 6
ROAD AND DRAINAGE
ROAD CROSS SECTIONS - SHEET 2
WYNDHAM CITY COUNCIL
SIG GROUP

CONSTRUCTION Drg No **309442CR401** Rev **0**

file name 309442CR400.dwg, layout name CRL01 plotted by Thanh Nguyen
file location G:\301-309442\Civil\ACAD plot date 19/03/2025 3:41 PM Sheet 9 of 17 Sheets

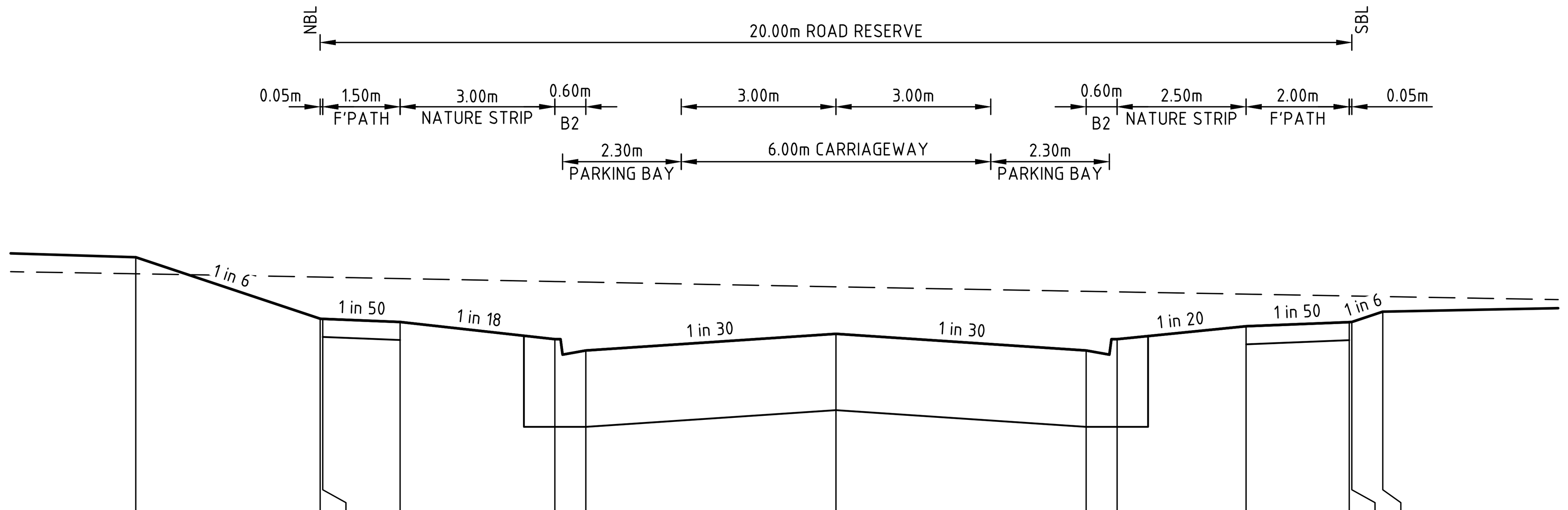
FILLING NOTE

ALL FILLING WITHIN ROAD RESERVES IS TO BE UNDERTAKEN USING LEVEL 1 SUPERVISION AND BE COMPLETED IN ACCORDANCE WITH AS 3798-2007 AND TO THE SATISFACTION OF COUNCIL AND THE SUPERINTENDENT. FILL AREAS ARE TO BE STRIPPED OF TOPSOIL, FILLED AND REPLACED WITH TOPSOIL (WHERE REQUIRED) TO OBTAIN THE FINAL LEVELS SHOWN ON THE DRAWINGS.

STRUCTURAL FILL IN ACCORDANCE WITH AS3798-2007, LEVEL 1

Planning and Environment Act 1987
Wyndham Planning Scheme

Approved Plan As Required under Condition 63
Permit No WYP13902/22
Date 25/03/2025

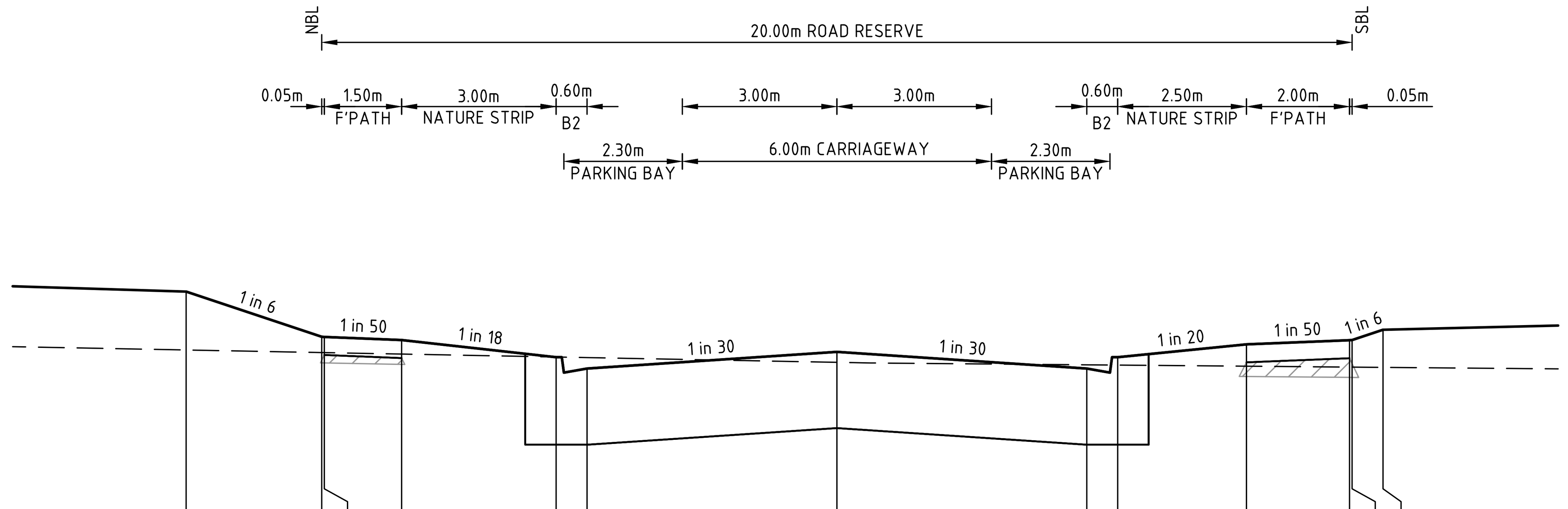


DATUM R.L.47.0

DESIGN SURFACE LEVEL	49.504	48.908	48.906	48.876	48.710	48.600	48.761	48.600	48.710	48.835	48.875	48.876	48.976
EXISTING SURFACE LEVEL	49.343	49.311	49.311	49.297	49.268	49.263	49.217	49.173	49.168	49.146	49.128	49.128	49.123
OFFSET	-13.574	-10.000	-9.950	-8.450	-5.450	-4.850	0.000	4.850	5.450	7.950	9.950	10.000	10.600

SPRINGFALL ROAD

CH 58.22

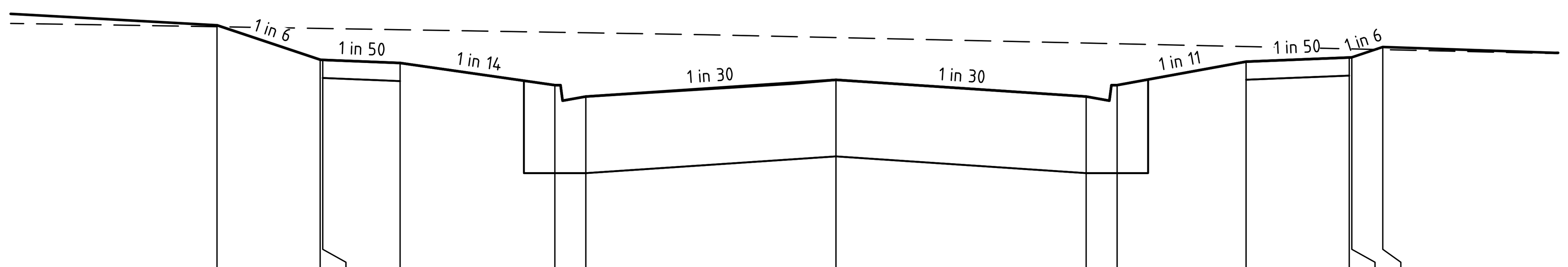


DATUM R.L.47.0

DESIGN SURFACE LEVEL	49.165	48.726	48.725	48.695	48.528	48.418	48.580	48.418	48.528	48.653	48.693	48.695	48.795
EXISTING SURFACE LEVEL	48.598	48.573	48.573	48.558	48.530	48.524	48.478	48.454	48.451	48.441	48.432	48.432	48.429
OFFSET	-12.632	-10.000	-9.950	-8.450	-5.450	-4.850	0.000	4.850	5.450	7.950	9.950	10.000	10.600

SPRINGFALL ROAD

CH 112.72

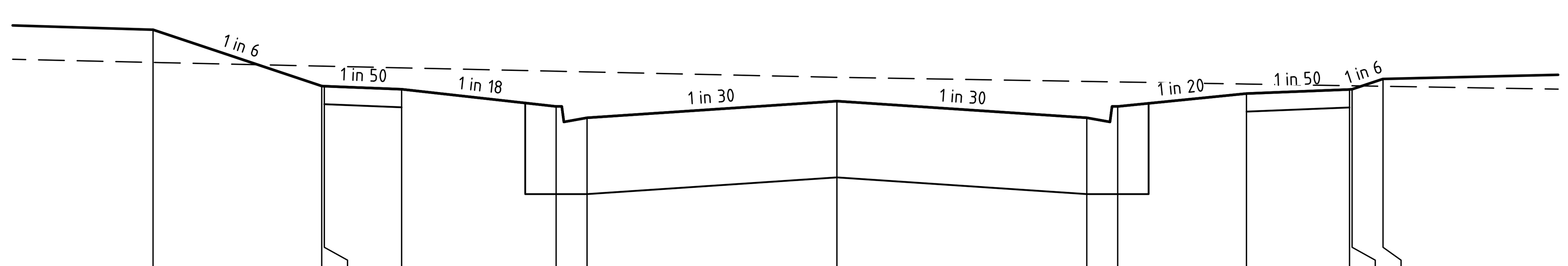


DATUM R.L.47.0

DESIGN SURFACE LEVEL	49.416	49.082	49.081	49.051	48.836	48.726	48.888	48.726	48.836	49.063	49.103	49.105	49.205
EXISTING SURFACE LEVEL	49.401	49.385	49.384	49.372	49.348	49.343	49.296	49.243	49.237	49.209	49.187	49.187	49.180
OFFSET	-12.000	-10.000	-9.950	-8.450	-5.450	-4.850	0.000	4.850	5.450	7.950	9.950	10.000	10.600

SPRINGFALL ROAD

CH 20.22



DATUM R.L.47.0

DESIGN SURFACE LEVEL	49.360	48.815	48.813	48.783	48.616	48.506	48.668	48.506	48.616	48.741	48.781	48.783	48.883
EXISTING SURFACE LEVEL	49.043	49.008	49.007	48.991	48.958	48.951	48.899	48.859	48.854	48.834	48.817	48.817	48.812
OFFSET	-13.274	-10.000	-9.950	-8.450	-5.450	-4.850	0.000	4.850	5.450	7.950	9.950	10.000	10.600

SPRINGFALL ROAD

CH 86.22

file name 309442CR400.dwg layout name CR402 plotted by Thanh Nguyen
file location G:\30\309442\Civil\ACAD plot date 19/03/2025 3:41 PM Sheet 10 of 17 Sheets

Rev	Amendments	Approved	Date
0	ISSUED FOR CONSTRUCTION	G.K	19/03/25
D	ROAD CROSS SECTIONS AMENDED	G.K	28/01/25
C	ROAD CROSS SECTIONS AMENDED	G.K	18/12/24
B	ISSUED FOR TENDER	G.K	16/12/24
A	ISSUED TO COUNCIL	G.K	01/11/24

Scale
H 1:100 SCALE @ A1 V 1:50
0 1 2 3 4 5
0 0.5 1 1.5 2 2.5

System Certified

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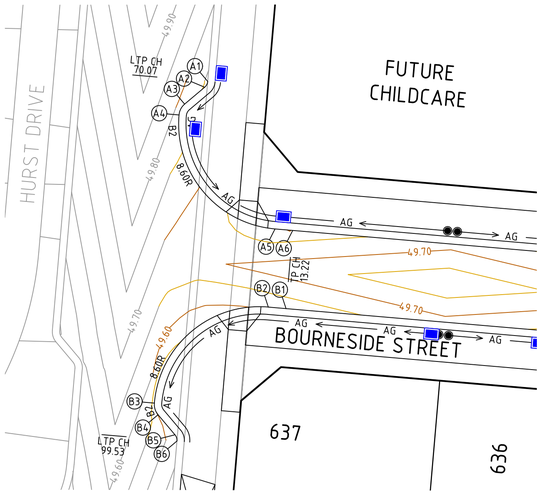
spiire.com.au ABN 55 050 029 635

Harlow TARNEIT

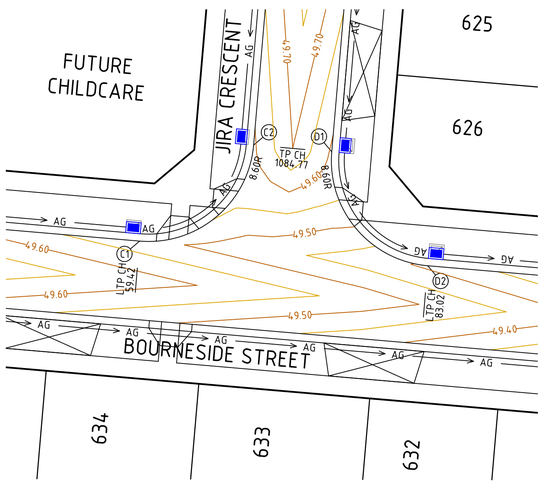
Designed	Checked
T. NGUYEN	G. KOHLMAN
Authorised	Date
G. KOHLMAN	01/11/24

HARLOW ESTATE
STAGE 6
ROAD AND DRAINAGE
ROAD CROSS SECTIONS - SHEET 3
WYNDHAM CITY COUNCIL
SIG GROUP

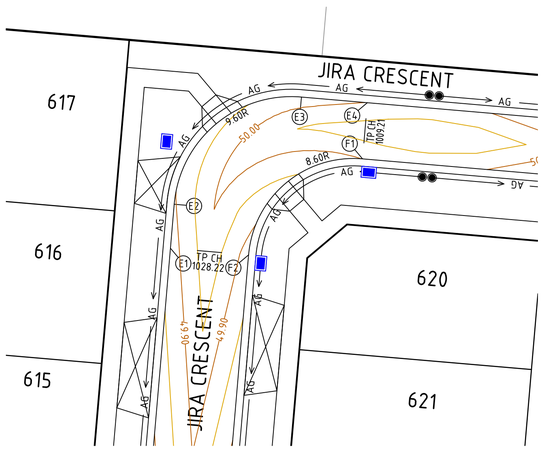
CONSTRUCTION Drg No **309442CR402** Rev **0**



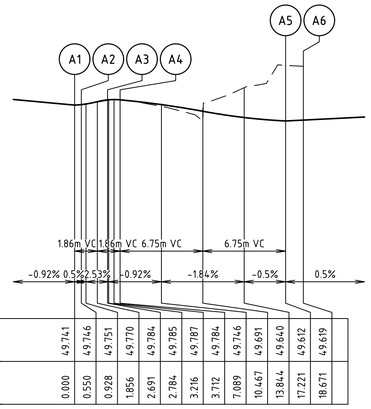
INTERSECTION OF HURST DRIVE & BOURNESIDE STREET



INTERSECTION OF BOURNESIDE STREET & JIRA CRESCENT



JIRA CRESCENT BEND



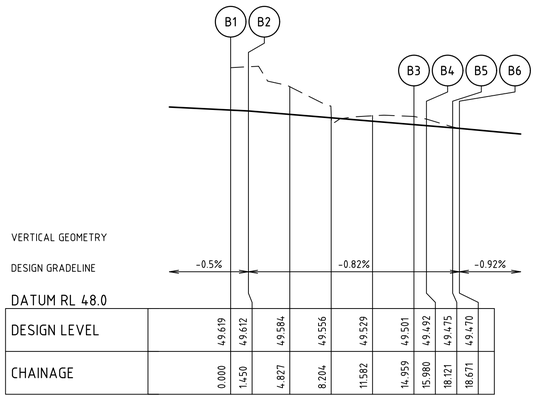
DESIGN LEVEL	49.741	49.746	49.751	49.770	49.784	49.785	49.787	49.784	49.746	49.691	49.640	49.612	49.619
CHAINAGE	0.000	0.550	0.928	1.856	2.691	2.784	3.216	3.712	7.089	10.467	13.844	17.221	18.611

ALIGNMENT A

ALIGNMENT A

POINT NO	EASTING	NORTHING	RL
A1	297803.347	5812745.583	49.741
A2	297803.100	5812745.108	49.746
A3	297801.463	5812743.728	49.784
A4	297801.005	5812742.845	49.784
1/4	297801.377	5812739.510	49.746
1/2	297802.996	5812736.571	49.691
3/4	297805.617	5812734.476	49.640
A5	297808.840	5812733.543	49.612
A6	297810.285	5812733.419	49.619

CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
A1-A2	0.700	0.550	0.536	0.053	0.013
A3-A4	1.300	1.021	0.995	0.099	-0.025
A4-A5	8.600	13.509	12.162	2.519	-0.655



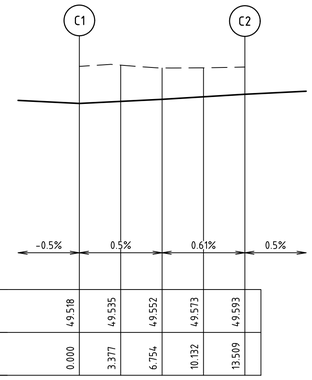
DESIGN LEVEL	49.619	49.612	49.584	49.556	49.529	49.501	49.492	49.475	49.470
CHAINAGE	0.000	1.450	4.827	8.204	11.582	14.959	15.980	18.121	18.671

ALIGNMENT B

ALIGNMENT B

POINT NO	EASTING	NORTHING	RL
B1	297809.740	5812727.043	49.619
B2	297808.295	5812727.166	49.612
1/4	297804.960	5812726.794	49.584
1/2	297802.021	5812725.175	49.556
3/4	297799.926	5812722.554	49.529
B3	297798.993	5812719.331	49.501
B4	297799.294	5812718.382	49.492
B5	297800.674	5812716.744	49.475
B6	297800.836	5812716.234	49.470

CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
B2-B3	8.600	13.509	12.162	2.519	-0.655
B3-B4	1.300	1.021	0.995	0.099	-0.025
B5-B6	0.700	0.550	0.536	0.053	0.013



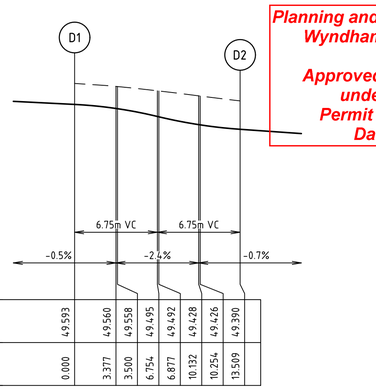
DESIGN LEVEL	49.518	49.535	49.552	49.573	49.593
CHAINAGE	0.000	3.377	6.754	10.132	13.509

ALIGNMENT C

ALIGNMENT C

POINT NO	EASTING	NORTHING	RL
C1	297856.317	5812729.481	49.518
1/4	297859.652	5812729.853	49.535
1/2	297862.591	5812731.473	49.552
3/4	297864.686	5812734.094	49.573
C2	297865.619	5812737.317	49.593

CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
C1-C2	8.600	13.509	12.162	2.519	-0.655



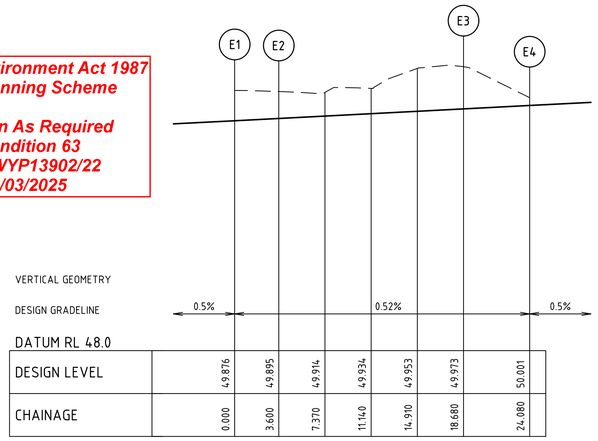
DESIGN LEVEL	49.593	49.560	49.558	49.495	49.492	49.428	49.426	49.390
CHAINAGE	0.000	3.377	3.500	6.754	6.877	10.132	10.254	13.509

ALIGNMENT D

ALIGNMENT D

POINT NO	EASTING	NORTHING	RL
D1	297871.996	5812736.771	49.593
1/4	297872.367	5812733.437	49.560
1/2	297873.987	5812730.498	49.495
3/4	297876.608	5812728.402	49.428
D2	297879.831	5812727.470	49.390

CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
D1-D2	8.600	13.509	12.162	2.519	-0.655



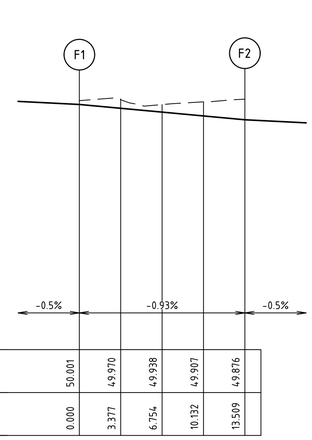
DESIGN LEVEL	49.876	49.895	49.914	49.934	49.953	49.973	50.001
CHAINAGE	0.000	3.600	7.370	11.140	14.910	18.680	24.080

ALIGNMENT E

ALIGNMENT E

POINT NO	EASTING	NORTHING	RL
E1	297870.439	5812793.661	49.876
E2	297870.746	5812797.248	49.895
1/4	297871.787	5812800.846	49.914
1/2	297874.126	5812803.772	49.934
3/4	297877.407	5812805.580	49.953
E3	297881.129	5812805.995	49.973
E4	297886.510	5812805.535	50.001

CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
E2-E3	9.600	15.080	13.576	2.812	0.731



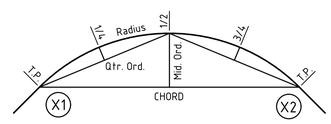
DESIGN LEVEL	50.001	49.970	49.938	49.907	49.876
CHAINAGE	0.000	3.377	6.754	10.132	13.509

ALIGNMENT F

ALIGNMENT F

POINT NO	EASTING	NORTHING	RL
F1	297886.117	5812800.951	50.001
1/4	297882.783	5812800.580	49.970
1/2	297879.844	5812798.960	49.938
3/4	297877.749	5812796.339	49.907
F2	297876.816	5812793.116	49.876

CURVE	RADIUS	ARC L	CHORD	MID ORD	QTR ORD
F1-F2	8.600	13.509	12.162	2.519	-0.655



KERB RETURN SETOUT DETAIL

Planning and Environment Act 1987
Wyndham Planning Scheme

Approved Plan As Required under Condition 63
Permit No WYP13902/22
Date 25/03/2025

Rev	Amendments	Approved	Date
0	ISSUED FOR CONSTRUCTION	G.K	19/03/25
B	ISSUED FOR TENDER	G.K	16/12/24
A	ISSUED TO COUNCIL	G.K	01/11/24

Scale

DETAIL PLAN
H 1:250 SCALE @ A1 — 0 2.5 5 7.5 10 12.5

LIP PROFILE
H 1:250 SCALE @ A1 — 0 2.5 5 7.5 10 12.5
V 1:25 — 0 0.25 0.50 0.75 1.00 1.25

dlca ISO 9001 certified ISO 45001 certified ISO 14001 certified
System Certified

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L6 414 LA TROBE STREET PO BOX 16084 MELBOURNE
VICTORIA 8007 AUSTRALIA T 61 3 9993 7888
spiire.com.au ABN 55 050 029 635

Harlow TARNEIT

Designed	Checked
T. NGUYEN	G. KOHLMAN
Authorised	Date
G. KOHLMAN	01/11/24

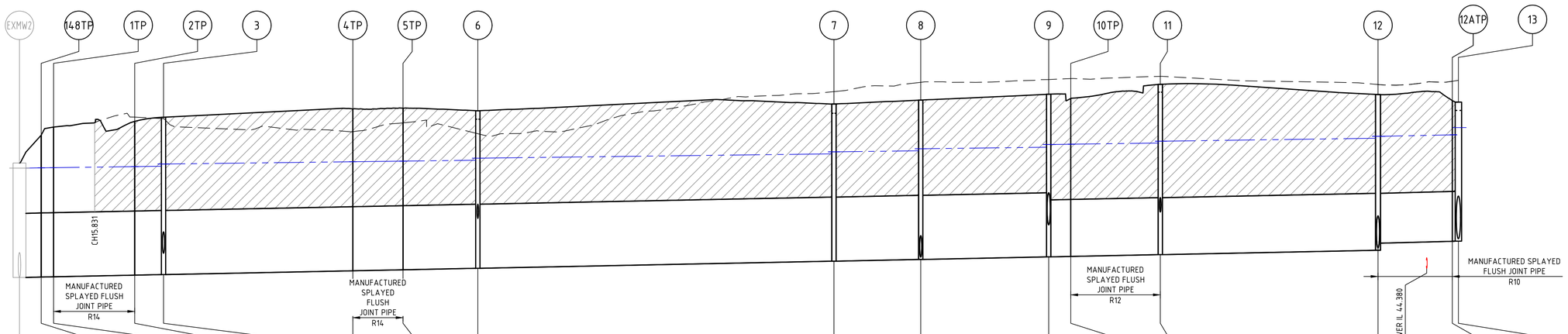
HARLOW ESTATE
STAGE 6
ROAD AND DRAINAGE
INTERSECTION DETAILS
WYNDHAM CITY COUNCIL
SIG GROUP

CONSTRUCTION

Drg No **309442CR500** Rev **0**

file name:309442CR500.dwg layout name:CR500 plotted by:Thanh Nguyen
file location:G:\301\309442\Civil\CAD plot date:19/03/2025 3:41 PM Sheet 11 of 17 Sheets

▨ CRUSHED ROCK BACKFILL



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Pipe Class		Class 2	Class 2	Class 2	Class 2	Class 2	Class 2	Class 2	Class 2	Class 2	Class 2	Class 2	Class 2	Class 2	Class 2	Class 2
Pipe Grade		1 in 500	1 in 500	1 in 500	1 in 500	1 in 500	1 in 500	1 in 500	1 in 500	1 in 500	1 in 500	1 in 500	1 in 500	1 in 500	1 in 400	1 in 400
Velocity (m/s)		Vf=1.668	Vf=1.668	Vf=1.668	Vf=1.668	Vf=1.668	Vf=1.668	Vf=1.668	Vf=1.668	Vf=1.668	Vf=1.668	Vf=1.542	Vf=1.542	Vf=1.542	Vf=1.577	Vf=1.577
Pipe Flow (m3/s)		Qa=1.937	Qa=1.937	Qa=1.937	Qa=1.937	Qa=1.868	Qa=1.868	Qa=1.868	Qa=1.853	Qa=1.861	Qa=1.827	Qa=1.399	Qa=1.399	Qa=1.435	Qa=1.215	Qa=1.215
Pipe Capacity (m3/s)		Qcap=2.388	Qcap=2.388	Qcap=2.388	Qcap=2.388	Qcap=2.388	Qcap=2.388	Qcap=2.388	Qcap=2.388	Qcap=2.388	Qcap=2.388	Qcap=1.744	Qcap=1.744	Qcap=1.744	Qcap=1.366	Qcap=1.366
DATUM		41.00														
DEPTH TO INVERT	2.411	2.411 2.987	2.987 3.153	3.153 3.239	3.239 3.313	3.313 3.409	3.409 3.404	3.404 3.318	3.318 3.310	3.310 3.357	3.357 3.426	3.426 3.328	3.328 3.587	3.587 3.281	3.131 2.963	2.963 2.928
DESIGN INVERT LEVEL	44.190	44.190 44.199	44.199 44.204	44.204 44.239	44.239 44.251	44.251 44.330	44.330 44.352	44.352 44.383	44.383 44.533	44.533 44.570	44.570 44.624	44.624 44.633	44.633 44.671	44.671 44.762	44.912 44.952	44.952 44.955
HYDRAULIC GRADE LEVEL	46.493	46.499	46.502	46.525	46.533	46.579 46.627	46.640	46.659	46.703 46.793	46.836 46.858	46.901 46.933	46.991 46.997	47.021	47.060 47.122	47.163 47.194	47.197 47.347
FINISHED SURFACE LEVEL	46.601	47.187	47.358	47.477	47.564	47.739	47.756	47.701	47.843	47.926	48.049	47.960	48.258	48.043	47.914	47.883
EXISTING SURFACE LEVEL	46.601	47.187	47.358	47.567	47.534	47.260	47.445	47.218	48.104	48.300	48.358	48.378	48.425	48.254	48.322	48.342
CHAINAGE	0.000	L=4.568m 4.568	L=2.609m 7.177	L=17.091m 24.268	L=6.066m 30.334	L=39.871m 70.205	L=10.567m 80.772	L=15.759m 96.531	L=75.000m 171.531	L=18.279m 189.810	L=26.950m 216.760	L=4.650m 221.410	L=18.857m 240.267	L=45.850m 286.117	L=15.726m 301.842	L=1.279m 303.121

Planning and Environment Act 1987
Wyndham Planning Scheme

Approved Plan As Required
under Condition 63
Permit No WYP13902/22
Date 25/03/2025

file name 309442CR600.dwg layout name CR600 plotted by Thanh Nguyen
file location G:\30\309442\Civil\ACAD plot date 19/03/2025 3:41 PM Sheet 12 of 17 Sheets

Rev	Amendments	Approved	Date
0	ISSUED FOR CONSTRUCTION	G.K	19/03/25
D	DRAINAGE LONG SECTIONS AMENDED	G.K	28/01/25
C	DRAINAGE LONG SECTIONS AMENDED	G.K	18/12/24
B	ISSUED FOR TENDER	G.K	16/12/24
A	ISSUED TO COUNCIL	G.K	01/11/24

Scale
H 1:500 0 5 10 15 20 25
SCALE @ A1
V 1:50 0 0.5 1 1.5 2 2.5

dlcs ISO 9001 certified ISO 45001 certified ISO 14001 certified
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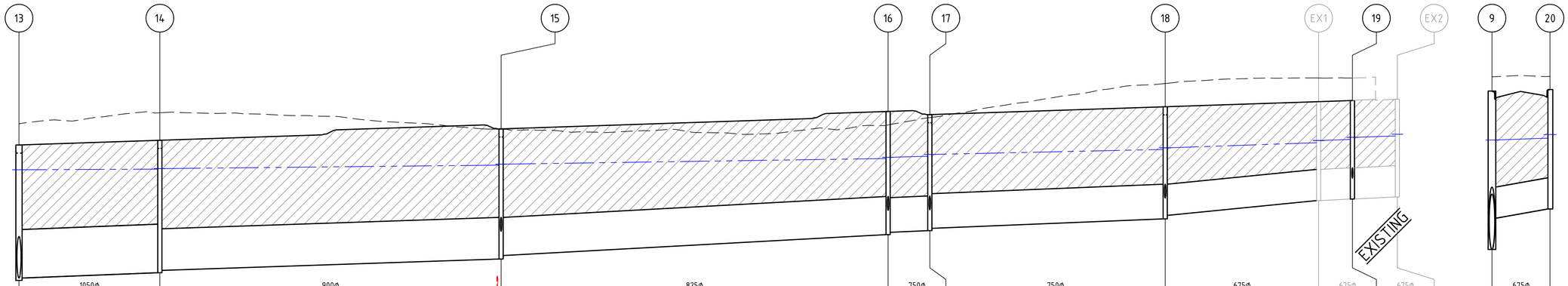
spiire.com.au ABN 55 050 029 635

Harlow
TARNEIT

Designed
T. NGUYEN
Checked
G. KOHLMAN
Authorised
G. KOHLMAN
Date
01/11/24

HARLOW ESTATE
STAGE 6
ROAD AND DRAINAGE
DRAINAGE LONG SECTIONS - SHEET 1
WYNDHAM CITY COUNCIL
SIG GROUP

CONSTRUCTION
Drg No **309442CR600**
Rev **0**



	13		14		15		16		17		18		EX1		19		EX2
Pipe Diameter		1050Ø		900Ø		825Ø		750Ø		750Ø		675Ø		675Ø		675Ø	
Pipe Class		Class 2		Class 2		Class 2		Class 2		Class 2		Class 3		Class 3		Class 3	
Pipe Grade		1 in 263		1 in 300		1 in 185		1 in 250		1 in 249		1 in 104		1 in 213		1 in 213	
Velocity (m/s)		Vf=1.944		Vf=1.644		Vf=1.975		Vf=1.594		Vf=1.598		Vf=2.308		Vf=1.611		Vf=1.611	
Pipe Flow (m3/s)		Qa=0.578		Qa=0.577		Qa=0.548		Qa=0.549		Qa=0.513		Qa=0.487		Qa=0.476		Qa=0.466	
Pipe Capacity (m3/s)		Qcap=1.683		Qcap=1.046		Qcap=1.056		Qcap=0.704		Qcap=0.706		Qcap=0.826		Qcap=0.576		Qcap=0.576	
DATUM		43.00															
DEPTH TO INVERT	2.928 2.878		2.864 2.814		2.814 2.739		2.664 2.614		2.510 2.460		2.425 2.350		2.140 2.140		2.130 2.130		2.114
DESIGN INVERT LEVEL	44.955 45.005		45.120 45.170		45.417 45.492		45.944 45.994		46.030 46.080		46.285 46.360		46.680 46.680		46.714 46.714		46.760
HYDRAULIC GRADE LEVEL	47.197 47.347		47.361 47.372		47.447 47.468		47.590 47.617		47.639 47.678		47.786 47.821		47.932 47.980		48.003 48.048		48.078 48.115
FINISHED SURFACE LEVEL	47.883		47.985		48.231		48.608		48.540		48.710		48.820		48.845		48.874
EXISTING SURFACE LEVEL	48.342		48.579		48.223		48.317		48.475		49.213		49.333		49.333		48.874
CHAINAGE	303.117	L=30.471m	333.588	L=73.828m	407.417	L=83.722m	491.138	L=9.028m	500.167	L=50.922m	551.088	L=33.189m	584.277	L=7.311m	591.588	L=9.722m	601.310

	9		20
Pipe Diameter		675Ø	
Pipe Class		Class 2	
Pipe Grade		1 in 63	
Velocity (m/s)		Vf=2.970	
Pipe Flow (m3/s)		Qa=0.470	
Pipe Capacity (m3/s)		Qcap=1.063	
DATUM		42.00	
DEPTH TO INVERT	3.426 2.751		2.583
DESIGN INVERT LEVEL	44.624 45.299		45.499
HYDRAULIC GRADE LEVEL	46.933 46.991		47.030 47.109
FINISHED SURFACE LEVEL	48.049		48.083
EXISTING SURFACE LEVEL	48.358		48.367
CHAINAGE	0.000	L=12.555m	12.555

	20		21		22		23		24		25		26		27
Pipe Diameter		600Ø		600Ø		600Ø		525Ø		525Ø		525Ø		300Ø	
Pipe Class		Class 2		Class 2		Class 3		Class 3		Class 3		Class 3		Class 3	
Pipe Grade		1 in 100		1 in 65		1 in 276		1 in 270		1 in 300		1 in 300		1 in 89	
Velocity (m/s)		Vf=2.173		Vf=2.691		Vf=1.307		Vf=1.209		Vf=1.147		Vf=1.147		Vf=1.454	
Pipe Flow (m3/s)		Qa=0.472		Qa=0.335		Qa=0.247		Qa=0.246		Qa=0.238		Qa=0.215		Qa=0.042	
Pipe Capacity (m3/s)		Qcap=0.614		Qcap=0.761		Qcap=0.370		Qcap=0.262		Qcap=0.248		Qcap=0.248		Qcap=0.103	
DATUM		43.00													
DEPTH TO INVERT	2.583 2.508		2.452 2.402		2.153 2.103		2.072 1.997		2.041 1.991		2.106 2.056		2.284 2.059		1.602
DESIGN INVERT LEVEL	45.499 45.574		45.687 45.737		46.118 46.168		46.199 46.274		46.411 46.461		46.693 46.743		46.978 47.203		48.168
HYDRAULIC GRADE LEVEL	47.030 47.109		47.176 47.375		47.449 47.578		47.592 47.650		47.771 47.804		48.017 48.048		48.224 48.324		48.484 48.572
FINISHED SURFACE LEVEL	48.083		48.139		48.271		48.271		48.452		48.799		49.263		49.770
EXISTING SURFACE LEVEL	48.367		48.463		48.589		48.657		48.728		48.500		49.144		49.808
CHAINAGE	12.555	L=11.338m	23.893	L=24.800m	48.693	L=8.500m	57.193	L=37.058m	94.251	L=69.540m	163.791	L=70.702m	234.493	L=85.500m	319.993

Planning and Environment Act 1987
Wyndham Planning Scheme

Approved Plan As Required
under Condition 63
Permit No WYP13902/22
Date 25/03/2025

file name 309442CR600.dwg layout name CR601 plotted by Thanh Nguyen
file location \\spiire\meldata\Data\30\309442\Civil\ACAD plot date 19/03/2025 3:41 PM Sheet 13 of 17 Sheets

Rev	Amendments	Approved	Date
0	ISSUED FOR CONSTRUCTION	G.K	19/03/25
D	DRAINAGE LONG SECTIONS AMENDED	G.K	28/01/25
C	DRAINAGE LONG SECTIONS AMENDED	G.K	18/12/24
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Scale
H 1:500
SCALE @ A1
V 1:50
0 5 10 15 20 25
0 0.5 1 1.5 2 2.5

System Certified

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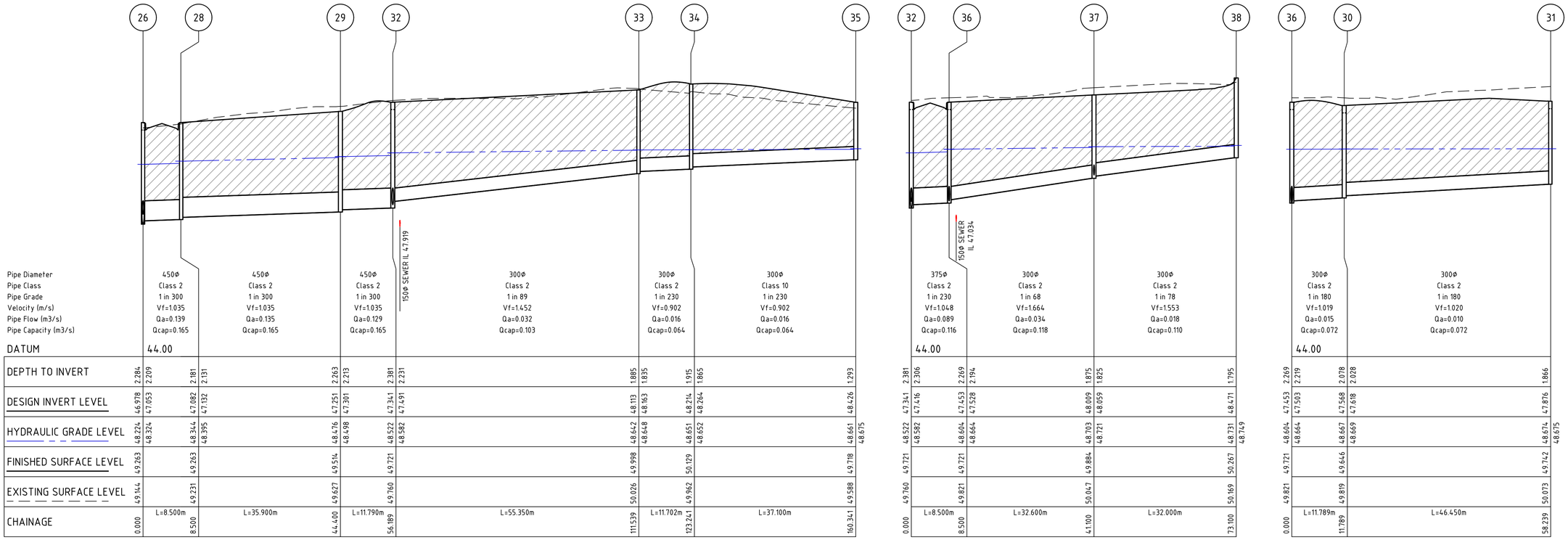
VICTORIA 8007 AUSTRALIA T 61 3 9993 7888
spiire.com.au ABN 55 050 029 635

Designed: T. NGUYEN
Checked: G. KOHLMAN
Authorised: G. KOHLMAN
Date: 01/11/24

HARLOW ESTATE
STAGE 6
ROAD AND DRAINAGE
DRAINAGE LONG SECTIONS - SHEET 2
WYNDHAM CITY COUNCIL
SIG GROUP

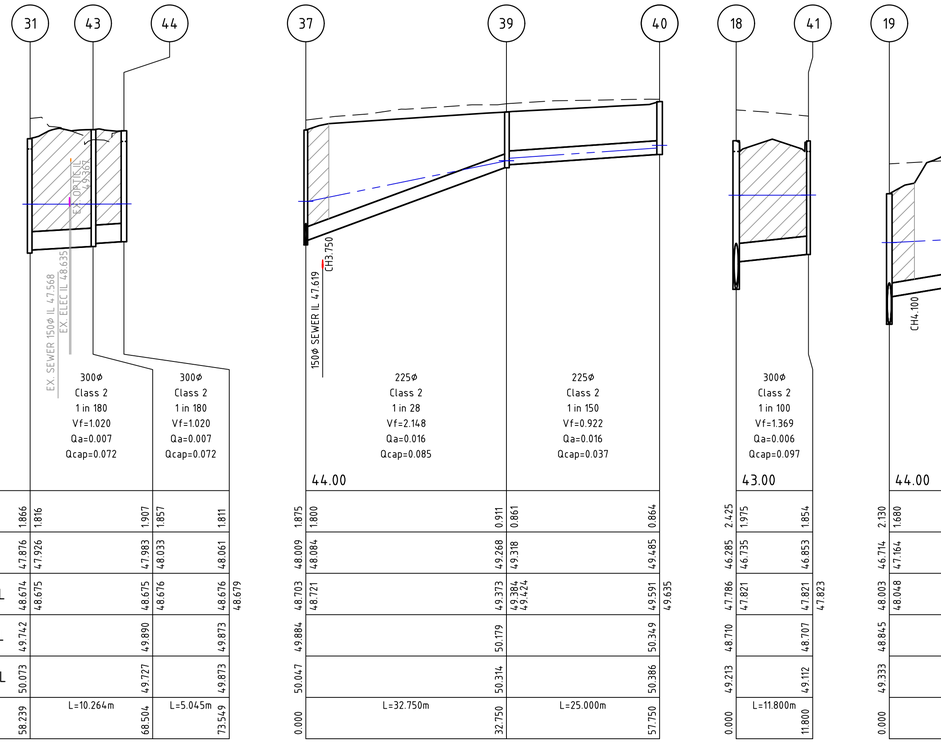
CONSTRUCTION
Drg No: 309442CR601
Rev: 0



Pipe Diameter		450Φ	450Φ	450Φ	300Φ	300Φ	300Φ
Pipe Class		Class 2	Class 2	Class 2	Class 2	Class 2	Class 10
Pipe Grade		1 in 300	1 in 300	1 in 300	1 in 89	1 in 230	1 in 230
Velocity (m/s)		Vf=1.035	Vf=1.035	Vf=1.035	Vf=1.452	Vf=0.902	Vf=0.902
Pipe Flow (m3/s)		Qa=0.139	Qa=0.135	Qa=0.129	Qa=0.032	Qa=0.016	Qa=0.016
Pipe Capacity (m3/s)		Qcap=0.165	Qcap=0.165	Qcap=0.165	Qcap=0.103	Qcap=0.064	Qcap=0.064
DATUM		44.00					
DEPTH TO INVERT	2.284	2.209	2.181	2.131	2.263	2.213	2.381	2.231	1.885	1.835	1.915	1.865	1.293
DESIGN INVERT LEVEL	46.978	47.053	47.082	47.132	47.251	47.301	47.341	47.491	48.113	48.163	48.214	48.264	48.426
HYDRAULIC GRADE LEVEL	48.224	48.324	48.344	48.395	48.476	48.498	48.522	48.582	48.642	48.648	48.651	48.652	48.661	48.675
FINISHED SURFACE LEVEL	49.263		49.263		49.514		49.721		49.998		50.129		49.718
EXISTING SURFACE LEVEL	49.144		49.231		49.627		49.760		50.026		49.962		49.588
CHAINAGE	0.000	L=8.500m	8.500	L=35.900m	44.400	L=11.790m	56.189	L=55.350m	111.539	L=11.702m	123.241	L=37.100m	160.341

Pipe Diameter	375Φ	300Φ	300Φ	
Pipe Class	Class 2	Class 2	Class 2	
Pipe Grade	1 in 230	1 in 68	1 in 78	
Velocity (m/s)	Vf=1.048	Vf=1.664	Vf=1.553	
Pipe Flow (m3/s)	Qa=0.089	Qa=0.034	Qa=0.018	
Pipe Capacity (m3/s)	Qcap=0.116	Qcap=0.118	Qcap=0.110	
DATUM	44.00			
DEPTH TO INVERT	2.381	2.306	2.269	2.194	1.875	1.825	1.795
DESIGN INVERT LEVEL	47.341	47.416	47.453	47.528	48.009	48.059	48.471
HYDRAULIC GRADE LEVEL	48.522	48.582	48.604	48.664	48.703	48.721	48.731	48.749
FINISHED SURFACE LEVEL	49.721		49.721		49.884		50.267
EXISTING SURFACE LEVEL	49.760		49.821		50.047		50.169
CHAINAGE	0.000	L=8.500m	8.500	L=32.600m	41.100	L=32.000m	73.100

Pipe Diameter	300Φ	300Φ	
Pipe Class	Class 2	Class 2	
Pipe Grade	1 in 180	1 in 180	
Velocity (m/s)	Vf=1.019	Vf=1.020	
Pipe Flow (m3/s)	Qa=0.015	Qa=0.010	
Pipe Capacity (m3/s)	Qcap=0.072	Qcap=0.072	
DATUM	44.00		
DEPTH TO INVERT	2.269	2.219	2.078	2.028	1.866
DESIGN INVERT LEVEL	47.453	47.503	47.568	47.618	47.876
HYDRAULIC GRADE LEVEL	48.604	48.664	48.667	48.669	48.674	48.675
FINISHED SURFACE LEVEL	49.721		49.646		49.742
EXISTING SURFACE LEVEL	49.821		49.819		50.073
CHAINAGE	0.000	L=11.789m	11.789	L=46.450m	58.239



Pipe Diameter	300Φ	300Φ	
Pipe Class	Class 2	Class 2	
Pipe Grade	1 in 180	1 in 180	
Velocity (m/s)	Vf=1.020	Vf=1.020	
Pipe Flow (m3/s)	Qa=0.007	Qa=0.007	
Pipe Capacity (m3/s)	Qcap=0.072	Qcap=0.072	
DATUM			
DEPTH TO INVERT	1.866	1.816	1.907	1.857	1.811
DESIGN INVERT LEVEL	47.876	47.926	47.983	48.033	48.061
HYDRAULIC GRADE LEVEL	48.674	48.675	48.675	48.676	48.676	48.679
FINISHED SURFACE LEVEL	49.742		49.890		49.873
EXISTING SURFACE LEVEL	50.073		49.727		49.873
CHAINAGE	58.239	L=10.264m	68.504	L=5.045m	73.549

Pipe Diameter	225Φ	225Φ	
Pipe Class	Class 2	Class 2	
Pipe Grade	1 in 28	1 in 150	
Velocity (m/s)	Vf=2.148	Vf=0.922	
Pipe Flow (m3/s)	Qa=0.016	Qa=0.016	
Pipe Capacity (m3/s)	Qcap=0.085	Qcap=0.037	
DATUM	44.00		
DEPTH TO INVERT	1.875	1.800	0.911	0.861	0.864
DESIGN INVERT LEVEL	48.009	48.084	49.268	49.318	49.485
HYDRAULIC GRADE LEVEL	48.703	48.721	49.373	49.384	49.424	49.591	49.635
FINISHED SURFACE LEVEL	49.884		50.179		50.349
EXISTING SURFACE LEVEL	50.047		50.314		50.386
CHAINAGE	0.000	L=32.750m	32.750	L=25.000m	57.750

Pipe Diameter	300Φ		
Pipe Class	Class 2		
Pipe Grade	1 in 100		
Velocity (m/s)	Vf=1.369		
Pipe Flow (m3/s)	Qa=0.006		
Pipe Capacity (m3/s)	Qcap=0.097		
DATUM	43.00		
DEPTH TO INVERT	2.425	1.975	1.854
DESIGN INVERT LEVEL	46.285	46.735	46.853
HYDRAULIC GRADE LEVEL	47.786	47.821	47.821	47.823
FINISHED SURFACE LEVEL	48.710		48.707
EXISTING SURFACE LEVEL	49.213		49.112
CHAINAGE	0.000	L=11.800m	11.800

Pipe Diameter	225Φ		
Pipe Class	Class 3		
Pipe Grade	1 in 60		
Velocity (m/s)	Vf=1.455		
Pipe Flow (m3/s)	Qa=0.016		
Pipe Capacity (m3/s)	Qcap=0.058		
DATUM	44.00		
DEPTH TO INVERT	2.130	1.680	1.515
DESIGN INVERT LEVEL	46.714	47.164	48.289
HYDRAULIC GRADE LEVEL	48.003	48.048	48.394	48.436
FINISHED SURFACE LEVEL	48.865		49.804
EXISTING SURFACE LEVEL	49.333		49.877
CHAINAGE	0.000	L=67.850m	67.850

Pipe Diameter	225Φ		
Pipe Class	Class 2		
Pipe Grade	1 in 100		
Velocity (m/s)	Vf=1.130		
Pipe Flow (m3/s)	Qa=0.034		
Pipe Capacity (m3/s)	Qcap=0.045		
DATUM	44.00		
DEPTH TO INVERT	2.269	2.119	2.172
DESIGN INVERT LEVEL	47.453	47.603	47.650
HYDRAULIC GRADE LEVEL	48.604	48.664	48.691
FINISHED SURFACE LEVEL	49.721		49.822
EXISTING SURFACE LEVEL	49.821		49.836
CHAINAGE	0.000	L=4.750m	4.750

Planning and Environment Act 1987
Wyndham Planning Scheme

Approved Plan As Required under Condition 63
Permit No WYP13902/22
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Scale
H 1:500 SCALE @ A1 V 1:50
0 5 10 15 20 25
0 0.5 1 1.5 2 2.5

dlca ISO 9001 certified ISO 45001 certified ISO 14001 certified
System Certified

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VICTORIA 8007 AUSTRALIA T 61 3 9993 7888
spiire.com.au ABN 55 050 029 635

Harlow TARNEIT

Designed T. NGUYEN
Checked G. KOHLMAN
Authorised G. KOHLMAN
Date 01/11/24

HARLOW ESTATE STAGE 6
ROAD AND DRAINAGE
DRAINAGE LONG SECTIONS - SHEET 3
WYNDHAM CITY COUNCIL
SIG GROUP

CONSTRUCTION
Drg No 309442CR602
Rev 0

file name 309442CR600.dwg Layout name CR602 plotted by Thanh Nguyen
file location \\spiire\melbdata\Data 3\309442_Civil\ACAD plot date 19/03/2025 3:41 PM Sheet 14 of 17 Sheets

DRAINAGE PIT SCHEDULE

PIT		INTERNAL		INLET		OUTLET		PIT		REMARKS
NAME	TYPE	WIDTH	LENGTH	DIA	INV LEVEL	DIA	INV LEVEL	FS LEVEL	DEPTH	
EX1	JUNCTION PIT	900	900	675	46.680	675	46.680	48.820	2.140	REMOVE TEMPORARY EXISTING OUTFALL DRAIN. BREAKOUT EXISTING PIT TO ACCOMMODATE PROPOSED 675ø PIPE
EXMW2	JUNCTION PIT	4000	2700	1350	44.190	1500	44.294	46.601	2.411	REMOVE EXISTING 1050ø STUB, BREAK INTO PIT & CONNECT 1350ø SWD PIPE
3	JUNCTION PIT	1650	900	1350	44.251	1350	44.251	47.564	3.313	REFER TO EDCM STANDARD DRAWING 607. TO BE HAUNCHED UNDER ROAD
				450	44.701					
6	JUNCTION PIT	1650	900	1350	44.383	1350	44.383	47.701	3.318	REFER TO EDCM STANDARD DRAWING 607. TO BE CONVERTED TO GSEP IN FUTURE STAGE. TO BE HAUNCHED UNDER ROAD
				300	45.433					
7	JUNCTION PIT	1650	900	1350	44.533	1350	44.533	47.843	3.310	REFER TO EDCM STANDARD DRAWING 607. TO BE CONVERTED TO GSEP IN FUTURE STAGE. TO BE HAUNCHED UNDER ROAD
8	JUNCTION PIT	1650	900	1350	44.570	1350	44.570	47.926	3.357	REFER TO EDCM STANDARD DRAWING 607. TO BE CONVERTED TO GSEP IN FUTURE STAGE. TO BE HAUNCHED UNDER ROAD
				450	44.620					
9	JUNCTION PIT	1650	1200	1200	44.624	1350	44.624	48.049	3.426	REFER TO EDCM STANDARD DRAWING 607. TO BE HAUNCHED UNDER ROAD
				675	45.299					
11	JUNCTION PIT	1500	900	1200	44.671	1200	44.671	48.258	3.587	REFER TO EDCM STANDARD DRAWING 607. PROVIDE CLASS D HEAVY DUTY COVER. TO BE CONVERTED TO GSEP IN FUTURE STAGE. TO BE HAUNCHED UNDER ROAD
				300	45.571					
12	JUNCTION PIT	1650	1500	1050	44.912	1200	44.762	48.043	3.281	REFER TO MW STD 7251/08/408 & MW STD 7251/08/409. TO BE HAUNCHED UNDER ROAD
				750	44.812					
13	JUNCTION PIT	1650	1650	1050	45.005	1050	44.955	47.883	2.928	REFER TO MW STD 7251/08/408 & MW STD 7251/08/409. TO BE HAUNCHED UNDER ROAD. TO BE CONVERTED TO GSEP IN FUTURE STAGE.
				900	45.005					
14	JUNCTION PIT	1350	900	900	45.170	1050	45.120	47.985	2.864	REFER TO EDCM STANDARD DRAWING 607. TO BE CONVERTED TO GSEP IN FUTURE STAGE. TO BE HAUNCHED UNDER ROAD
15	JUNCTION PIT	1050	900	825	45.492	900	45.417	48.231	2.814	REFER TO EDCM STANDARD DRAWING 607. TO BE CONVERTED TO GSEP IN FUTURE STAGE. TO BE HAUNCHED UNDER ROAD
				300	46.017					
16	JUNCTION PIT	1050	900	750	45.994	825	45.944	48.608	2.664	REFER TO EDCM STANDARD DRAWING 607
				300	46.469					
17	JUNCTION PIT	1050	900	750	46.080	750	46.030	48.540	2.510	REFER TO EDCM STANDARD DRAWING 607. TO BE CONVERTED TO GSEP IN FUTURE STAGE
				300	46.480					
18	GRATED SIDE ENTRY PIT	1050	900	675	46.360	750	46.285	48.710	2.425	REFER TO EDCM STANDARD DRAWING 607
				300	46.735					
19	JUNCTION PIT	900	900	675	46.714	675	46.714	48.845	2.130	REFER TO EDCM STANDARD DRAWING 607. BREAK INTO EXISTING PIPE AND CONSTRUCT PIT
				225	47.164					
20	JUNCTION PIT	900	1200	600	45.574	675	45.499	48.083	2.583	REFER TO EDCM STANDARD DRAWING 607
21	JUNCTION PIT	900	900	600	45.737	600	45.687	48.139	2.452	REFER TO EDCM STANDARD DRAWING 607
				450	45.837					
22	JUNCTION PIT	900	900	600	46.168	600	46.118	48.271	2.153	REFER TO EDCM STANDARD DRAWING 607. PROVIDE PIT DEFLECTOR IN FLOOR. TO BE CONVERTED TO GSEP IN FUTURE STAGE
				375	46.343					
23	JUNCTION PIT	750	900	525	46.274	600	46.199	48.271	2.072	REFER TO EDCM STANDARD DRAWING 607. PROVIDE PIT DEFLECTOR IN FLOOR. TO BE CONVERTED TO GSEP IN FUTURE STAGE
24	JUNCTION PIT	750	900	525	46.461	525	46.411	48.452	2.041	REFER TO EDCM STANDARD DRAWING 607. TO BE CONVERTED TO GSEP IN FUTURE STAGE
25	JUNCTION PIT	750	900	525	46.743	525	46.693	48.799	2.106	REFER TO EDCM STANDARD DRAWING 607. TO BE CONVERTED TO GSEP IN FUTURE STAGE
26	GRATED SIDE ENTRY PIT	750	900	300	47.203	525	46.978	49.263	2.284	REFER TO EDCM STANDARD DRAWING 601 & 607
				450	47.053					
27	GRATED SIDE ENTRY PIT	600	900			300	48.168	49.770	1.602	REFER TO EDCM STANDARD DRAWING 601 & 605
28	JUNCTION PIT	600	900	450	47.132	450	47.082	49.263	2.181	REFER TO EDCM STANDARD DRAWING 605
29	JUNCTION PIT	900	900	450	47.301	450	47.251	49.514	2.263	REFER TO EDCM STANDARD DRAWING 607
30	GRATED SIDE ENTRY PIT	750	900	300	47.618	300	47.568	49.646	2.078	REFER TO EDCM STANDARD DRAWING 601 & 607
31	GRATED SIDE ENTRY PIT	600	900	300	47.926	300	47.876	49.742	1.866	REFER TO EDCM STANDARD DRAWING 601 & 605
32	GRATED SIDE ENTRY PIT	900	900	300	47.491	450	47.341	49.721	2.381	REFER TO EDCM STANDARD DRAWING 601 & 607
				375	47.416					
33	GRATED SIDE ENTRY PIT	600	900	300	48.163	300	48.113	49.998	1.885	REFER TO EDCM STANDARD DRAWING 605
34	JUNCTION PIT	600	900	300	48.264	300	48.214	50.129	1.915	REFER TO EDCM STANDARD DRAWING 605
35	JUNCTION PIT	600	900			300	48.426	49.718	1.293	REFER TO EDCM STANDARD DRAWING 605
36	GRATED SIDE ENTRY PIT	750	900	300	47.528	375	47.453	49.721	2.269	REFER TO EDCM STANDARD DRAWING 601 & 607. TO BE HAUNCHED UNDER ROAD
				300	47.503					
				225	47.603					
36AEP	ENDPIPE					225	47.650	49.822	2.172	BLANK OFF ENDPIPE WITH MARINE GRADE PLY BOARD FOR FUTURE CONNECTION
37	JUNCTION PIT	600	900	300	48.059	300	48.009	49.884	1.875	REFER TO EDCM STANDARD DRAWING 605
				225	48.084					
38	JUNCTION PIT	600	900			300	48.471	50.267	1.795	REFER TO EDCM STANDARD DRAWING 605
39	JUNCTION PIT	600	900	225	49.318	225	49.268	50.179	0.911	REFER TO EDCM STANDARD DRAWING 605
40	JUNCTION PIT	600	900			225	49.485	50.349	0.864	REFER TO EDCM STANDARD DRAWING 605
41	GRATED SIDE ENTRY PIT	600	900			300	46.853	48.707	1.854	REFER TO EDCM STANDARD DRAWING 601 & 605
42	JUNCTION PIT	600	900			225	48.289	49.804	1.515	REFER TO EDCM STANDARD DRAWING 605
43	JUNCTION PIT	600	900	300	48.033	300	47.983	49.890	1.907	REFER TO EDCM STANDARD DRAWING 605
44	GRATED SIDE ENTRY PIT	600	900			300	48.061	49.873	1.811	REFER TO EDCM STANDARD DRAWING 601 & 605

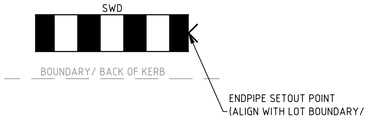
NOTE: ALL HAUNCHED PITS TO BE HAUNCHED UNDER NATURE STRIP UNLESS SPECIFIED IN PIT SCHEDULE

PIT SETOUT CO-ORDINATES

NAME	POINT	EASTING	NORTHING
3	B	298313.493	5812714.127
6	B	298256.646	5812687.756
7	B	298181.919	5812694.149
8	B	298163.707	5812695.707
9	B	298136.855	5812698.004
11	B	298119.243	5812687.467
12	B	298115.335	5812641.784
13	B	298103.244	5812632.781
14	B	298072.884	5812635.379
15	B	297999.324	5812641.672
16	B	297915.908	5812648.808
17	B	297906.912	5812649.578
20	B	298137.580	5812706.473
21	B	298117.652	5812708.178
22	B	298092.943	5812710.292
23	B	298092.218	5812701.822
24	B	298055.295	5812704.981
25	B	297986.008	5812710.909
36AEP	C	297859.891	5812738.409
38	A	297870.130	5812802.369
39	A	297833.323	5812756.339
40	A	297836.903	5812798.186
42	B	297821.607	5812724.974
43	A	297802.346	5812741.692

PIPE SPLAY SCHEDULE

DOWNSTREAM NO.	UPSTREAM NO.	DIAMETER	RADIUS	ANGLE	TOTAL ARC LENGTH	PIPE UNIT EFFECTIVE LENGTH	MIN NO. OF PIPES	JOINTING METHOD
1TP	2TP	1350	14	69.95	17.091	2.136	8	FLUSH JOINT
5TP	4TP	1350	14	43.25	10.567	2.113	5	FLUSH JOINT
10TP	11	1200	12	90.00	18.857	2.357	8	FLUSH JOINT
12	12ATP	1050	10	90.00	15.721	2.246	7	FLUSH JOINT



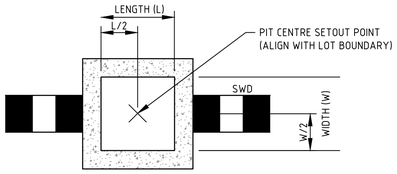
TYPICAL DRAINAGE SETOUT POINT C'

ENDPIPE

NOT TO SCALE

Planning and Environment Act 1987
Wyndham Planning Scheme

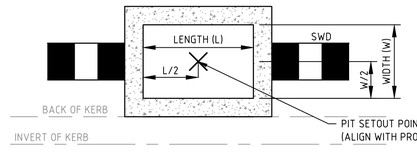
Approved Plan As Required under Condition 63
Permit No WYP13902/22
Date 25/03/2025



TYPICAL DRAINAGE PIT SETOUT POINT 'A'

JUNCTION PIT/ EASEMENT PIT

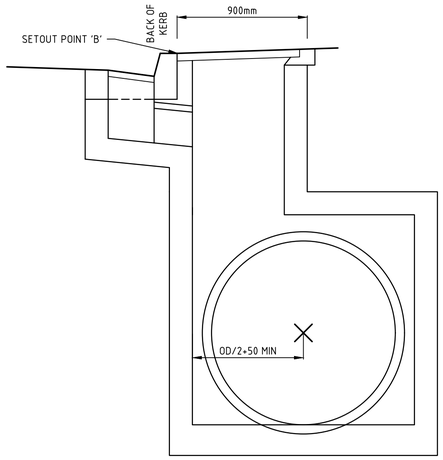
NOT TO SCALE



TYPICAL DRAINAGE PIT SETOUT POINT 'B'

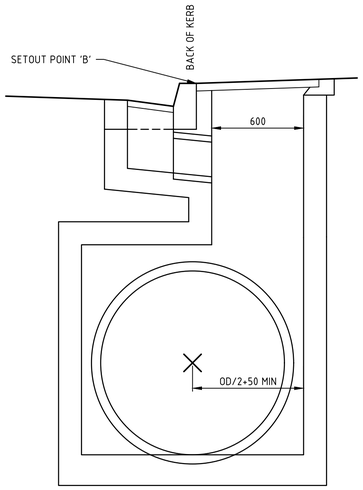
SIDE ENTRY PIT / JUNCTION PIT

NOT TO SCALE



HAUNCHED PITS UNDER NATURE STRIP

NOT TO SCALE



HAUNCHED PITS UNDER PAVEMENT

NOT TO SCALE

Rev	Amendments	Approved	Date
0	ISSUED FOR CONSTRUCTION	G.K	19/03/25
D	DRAINAGE PIT SCHEDULE & SETOUT COORDINATES AMENDED	G.K	28/01/25
C	DRAINAGE PIT SCHEDULE & PIT SETOUT COORDINATES AMENDED; PIPE SPLAY SCHEDULE & TYPICAL SETOUT ADDED	G.K	18/12/24
B	ISSUED FOR TENDER	G.K	16/12/24
A	ISSUED TO COUNCIL	G.K	01/11/24

Scale
H 1:500 SCALE @ A1
V 1:50
0 5 10 15 20 25
0 0.5 1 1.5 2 2.5

dlcs ISO 9001 Certified ISO 45001 Certified ISO 14001 Certified
System Certified

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Harlow TARNEIT

Designed T. NGUYEN
Checked G. KOHLMAN
Authorised G. KOHLMAN
Date 01/11/24

HARLOW ESTATE STAGE 6
ROAD AND DRAINAGE
DRAINAGE PIT SCHEDULE
WYNDHAM CITY COUNCIL
SIG GROUP

CONSTRUCTION Drg No **309442CR603** Rev **0**

file name 309442CR600.dwg layout name CR603 plotted by Thanh Nguyen
file location \\spiire\media\Data\309442\CAD\LAND plot date 19/03/2025 3:42 PM Sheet 15 of 17 Sheets

DESIGN PAVEMENT PROFILE

PAVEMENT LAYER	DESCRIPTION	DEPTH (mm) TYPE A
ASPHALT WEARING COURSE	SIZE 10 TYPE N C320	30
ASPHALT BASE COURSE	SIZE 10 TYPE N C320	30
PRIMECOAT	PRIME & 10mm SAMI (S 18RF)	10
BASE COURSE	VICROADS CLASS 2 FCR (20mm)	130
UPPER SUBBASE	VICROADS CLASS 3 FCR (20mm)	120
LOWER SUBBASE	VICROADS CLASS 4 FCR (20mm)	120
CAPPING LAYER	VICROADS TYPE A CAPPING LAYER OR APPROVED ALTERNATIVE AS PER TABLE 5 (CBR≥10%, SWELL<1.5%, K<5X10^{-9}m/sec)	150
CONSTRUCTION LAYER	VICROADS TYPE A CAPPING LAYER OR APPROVED ALTERNATIVE AS PER TABLE 5 (CBR≥10%, SWELL<1.5%, K<5X10^{-9}m/sec)	150
	TOTAL PAVEMENT DEPTH	740

ROAD NAME	TYPE
BOURNESIDE STREET	ACCESS STREET LEVEL 1
JETTA CRESCENT	ACCESS STREET LEVEL 1
SPRINGFALL ROAD	ACCESS STREET LEVEL 1

PAVEMENT DETAILS CBR 2.0%

NOTES:

1. SUBGRADE TO CONSIST OF UNIT 3 NATURAL RESIDUAL CLAYS OR CONTROLLED (ENGINEERED) FILL (CBR≥2.0%)

PAVEMENT DETAILS

THE PAVEMENT DESIGNS SHOWN HERE HAVE BEEN DESIGNED/PROVIDED BY GROUND SCIENCE PTY LTD WHO ARE RESPONSIBLE FOR THE GEOTECHNICAL WORK ON THIS PROJECT. SPIIRE IS NOT RESPONSIBLE FOR THE WORK OF GROUND SCIENCE PTY LTD.

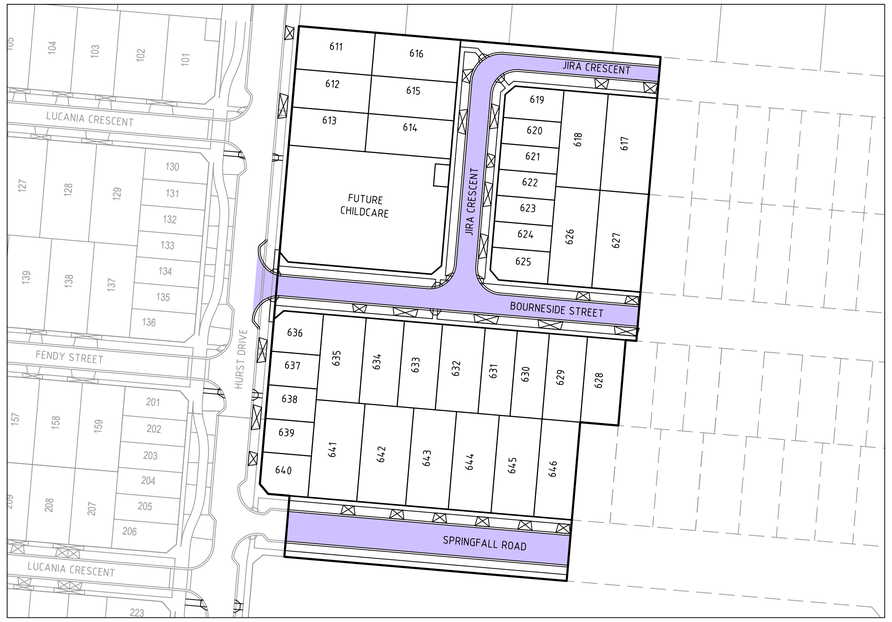
THE DESIGN HAS BEEN EXTRACTED FROM THE "GEOTECHNICAL INVESTIGATION" REPORT ON "GEOTECHNICAL INVESTIGATION FOR 860 DERRIMUT ROAD, TARNEIT (DATED 18 OCTOBER 2021, REPORT REFERENCE G4572.1 AA)" THIS DOCUMENT SHOULD BE REVIEWED TO ENSURE THAT THE DESIGN HAS BEEN ACCURATELY REPRODUCED.

A COPY OF THE DOCUMENT WILL BE PROVIDED ON REQUEST.

SPIIRE DOES NOT ACCEPT ANY RESPONSIBILITY FOR THE ACCURACY, ADEQUACY OR APPROPRIATENESS OF THE GEOTECHNICAL WORK AND PAVEMENT DESIGNS.
ANY QUERIES IN RESPECT TO THE GEOTECHNICAL WORK AND PAVEMENT DESIGNS SHOULD BE ADDRESSED TO GROUND SCIENCE PTY LTD AND COPIED TO SPIIRE.

Planning and Environment Act 1987
Wyndham Planning Scheme

Approved Plan As Required under Condition 63
Permit No WYP13902/22
Date 25/03/2025



PAVEMENT PLAN

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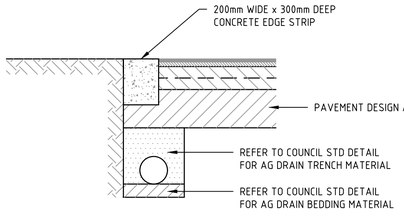
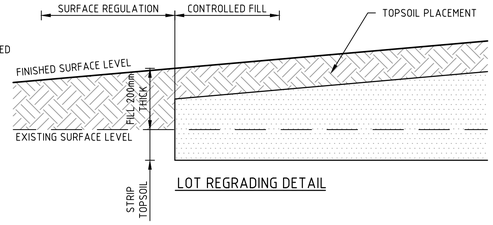
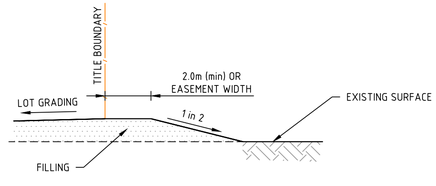


LIMIT OF WORKS CONCRETE EDGE STRIP & PAVEMENT INTERFACE DETAIL

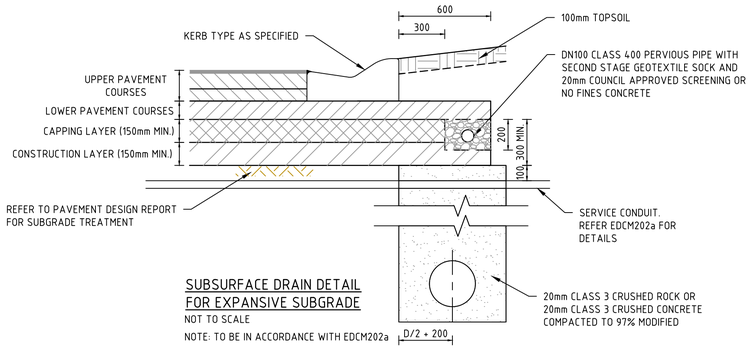


LOT REGRADING DETAIL



LOT FILLING AT STAGE BOUNDARY

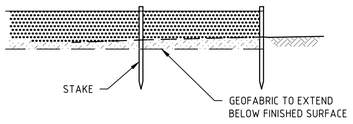
NOT TO SCALE



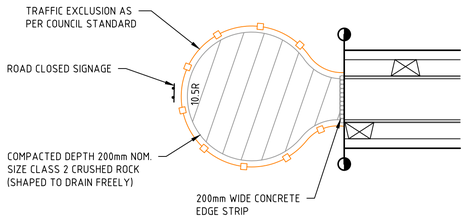
SUBSURFACE DRAIN DETAIL FOR EXPANSIVE SUBGRADE

NOT TO SCALE

NOTE: TO BE IN ACCORDANCE WITH EDCM202a

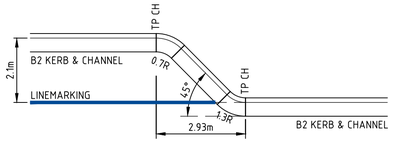


SILT CONTROL FOR LOTS
GEOFABRIC SILT FENCE

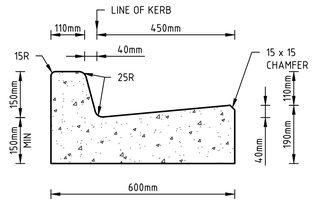


TEMPORARY TURNING AREA DETAIL

NOT TO SCALE



TYPICAL PARKING BAY DETAIL
NOT TO SCALE



600 B2 EDGESTRIP

STANDARD KERB PROFILES

NOTE: ALL KERB & CHANNEL AS PER EDCM STD DRAWING EDCM 301

H 1:100 SCALE @ A1 0 1 2 3 4 5

Rev	Amendments	Approved	Date
0	ISSUED FOR CONSTRUCTION	G.K	19/03/25
C	ROAD TYPE TABLE & SPRINGFALL ROAD PAVEMENT TYPE AMENDED	G.K	18/12/24
B	ISSUED FOR TENDER	G.K	16/12/24
A	ISSUED TO COUNCIL	G.K	01/11/24

Scale

dtcs ISO 9001 certified ISO 45001 certified ISO 14001 certified
System Certified

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Harlow TARNEIT

Designed T. NGUYEN
Checked G. KOHLMAN
Authorised G. KOHLMAN
Date 01/11/24

HARLOW ESTATE
STAGE 6
ROAD AND DRAINAGE
PAVEMENT AND TYPICAL DETAILS
WYNDHAM CITY COUNCIL
SIG GROUP

CONSTRUCTION Drg No **309442CR700** Rev **0**

file name 309442CR700.dwg layout name CR700 plotted by Thanh Nguyen
file location G:\3D\309442\Civil\CAD plot date 19/03/2025 3:42 PM Sheet 16 of 17 Sheets

SIGNAGE SCHEDULE

REFERENCE NO.	SIGN	COMMENTS
1	STREET NAME	STREET NAME PLATES TO BE IN ACCORDANCE WITH HCC SD408 & SD412, INCLUDING "NO THROUGH ROAD" NOMINATION WHERE APPLICABLE
2	GIVE WAY	R1-2
3	ROAD CLOSED	G9-20
4		D4-5
5		W3-4
6		D4-1-1(R)
7		D4-1-1(L)
8		R5-35(R)

NOTE: STREET SIGNS ARE TO BE MOUNTED ON LIGHT POLES, WITH A COUNCIL APPROVED BRACKET, IN LIEU OF SIGN POLES WHERE THE TWO POLES ARE IN CLOSE PROXIMITY AND WHERE THE STREET SIGN WOULD NOT BE COMPROMISED IN ITS PURPOSE BY THE RELOCATION.

LINEMARKING LEGEND

SYMBOL	DESCRIPTION	REMARK
	CONTINUOUS LANE LINE	100mm WIDE
GW	HOLDING LINE (GIVEWAY)	600mm LINE, 600mm GAP, 300mm WIDE
	UNI-DIRECTIONAL RRPM	REFER AS1742.2 - 2009
	TACTILE GROUND SURFACE INDICATORS	REFER AS1428.4.1 - 2009

Planning and Environment Act 1987
Wyndham Planning Scheme

Approved Plan As Required
under Condition 63
Permit No WYP13902/22
Date 25/03/2025

Rev	Amendments	Approved	Date
0	ISSUED FOR CONSTRUCTION	G.K	19/03/25
D	SIGNAGE ADDED	G.K	28/01/25
C	LINEMARKING LEGEND AMENDED	G.K	18/12/24
B	ISSUED FOR TENDER	G.K	16/12/24
A	ISSUED TO COUNCIL	G.K	01/11/24

Scale
H 1:500
SCALE @ A1
0 5 10 15 20 25

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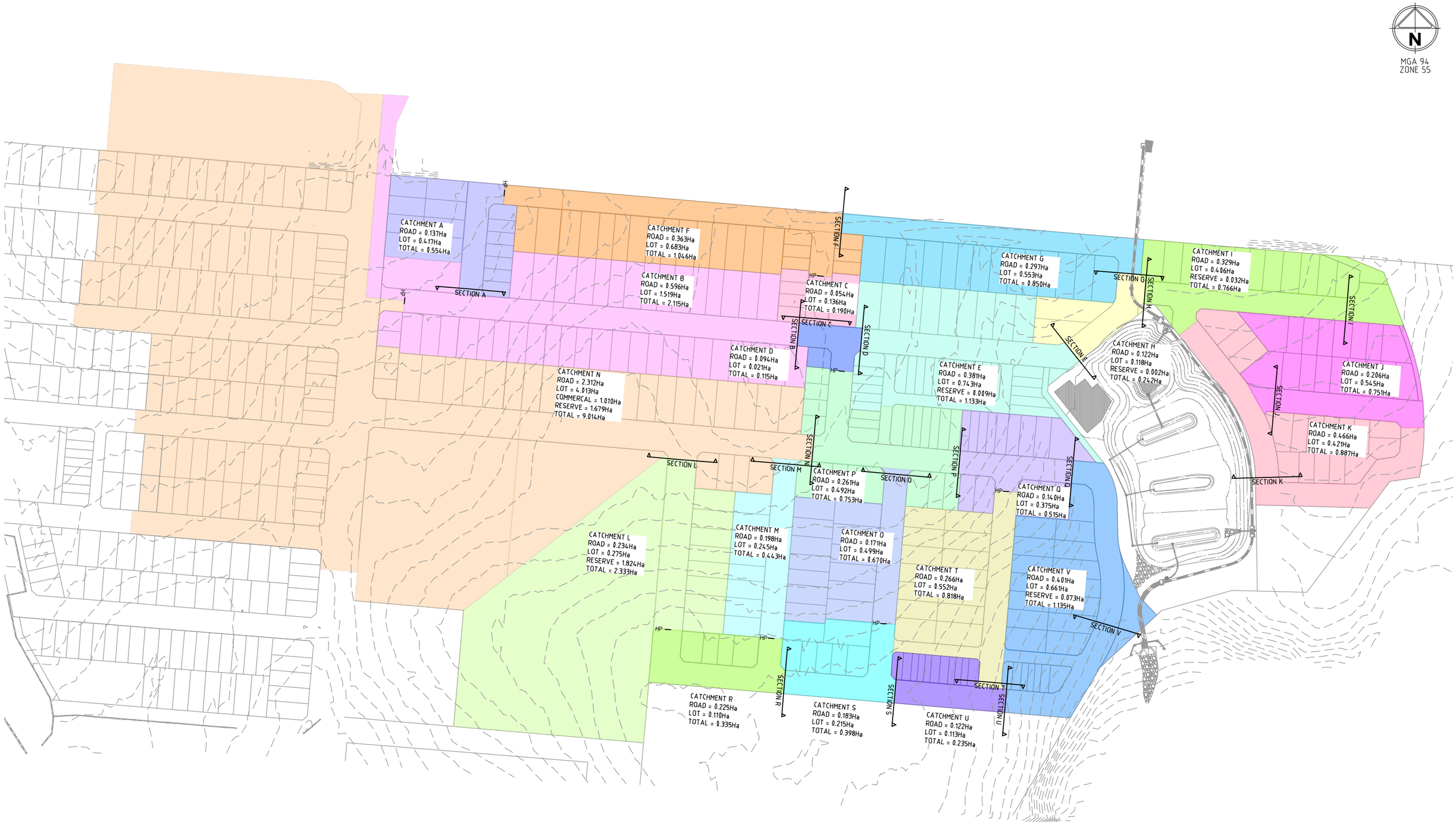
Harlow TARNEIT

Designed T. NGUYEN | Checked G. KOHLMAN
Authorised G. KOHLMAN | Date 01/11/24

HARLOW ESTATE
STAGE 6
ROAD AND DRAINAGE
SIGNAGE AND LINEMARKING
WYNDHAM CITY COUNCIL
SIG GROUP

CONSTRUCTION Drg No **309442CR800** Rev **0**

file name 309442CR800.dwn layout name CR800 plotted by Thanh Nguyen
file location G:\309442\Civil\ACAD plot date 19/03/2025 3:42 PM Sheet 17 of 17 Sheets



Rev	Amendments	Approved	Date
C	CATCHMENTS C, D, F & P AMENDED	G.K	28/01/25
B	CATCHMENTS AMENDED	G.K	18/12/24
A	ISSUED TO COUNCIL	G.K	01/11/24

Scale
H 1:1250
SCALE @ A1
0 12.5 25 37.5 50 62.5

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Harlow TARNEIT

Designed	Checked
T. NGUYEN	G. KOHLMAN
Authorised	Date
G. KOHLMAN	01/11/24

HARLOW ESTATE STAGE 6

DRAINAGE COMPUTATIONS

100YR CATCHMENT PLAN

WYNDHAM CITY COUNCIL
SIG GROUP

PRELIMINARY

Drg No 309442CD500
Rev C

file name 309442CD500.dwg layout name CD500 plotted by Thanh Nguyen
file location G:\309\309442\Civil\ACAD plot date 18/03/2025 10:57 AM Sheet 1 of 1 Sheets

Fraction Impervious		C100	C5	C10
Road Runoff f =	0.6	0.709	0.561	0.591
Residential Lot Runoff f =	0.8	0.894	0.708	0.745
Commerical Runoff f =	0.9	0.987	0.782	0.823
Open Space Runoff f =	0.7	0.802	0.635	0.668

	AREA (Ha)					Fraction	Weighted Runoff	Weighted Runoff	Weighted Runoff
Catchment	Road	Lots	Commerical	Open Space	TOTAL	Impervious (f)	C100	C5	C10
A	0.14	0.42			0.55	0.75	0.849	0.672	0.707
B	0.60	1.52			2.12	0.74	0.842	0.667	0.702
C	0.05	0.14			0.19	0.74	0.842	0.666	0.701
D	0.09	0.02			0.12	0.64	0.743	0.588	0.619
E	0.38	0.74		0.009	1.13	0.73	0.831	0.658	0.693
F	0.36	0.68			1.05	0.73	0.830	0.657	0.692
G	0.30	0.55			0.85	0.73	0.830	0.657	0.691
H	0.12	0.12		0.002	0.24	0.70	0.800	0.633	0.667
I	0.33	0.41		0.032	0.77	0.71	0.811	0.642	0.676
J	0.21	0.55			0.75	0.75	0.844	0.668	0.703
K	0.47	0.42			0.89	0.69	0.797	0.631	0.664
L	0.23	0.28		1.82	2.33	0.70	0.803	0.636	0.669
M	0.20	0.25			0.44	0.71	0.811	0.642	0.676
N	2.31	4.01	1.01	1.68	9.01	0.74	0.840	0.665	0.700
O	0.17	0.50			0.67	0.75	0.847	0.671	0.706
P	0.26	0.49			0.75	0.73	0.830	0.657	0.692
Q	0.14	0.38			0.52	0.75	0.844	0.668	0.703
R	0.23	0.11			0.34	0.67	0.770	0.609	0.642
S	0.18	0.22			0.40	0.71	0.809	0.641	0.674
T	0.27	0.55			0.82	0.73	0.834	0.660	0.695
U	0.12	0.11			0.24	0.70	0.798	0.632	0.665
V	0.40	0.66		0.07	1.14	0.72	0.823	0.651	0.686

Annual Exceedance Probability (%)

ARI	1	2	5	10	20	50	100
C0	0.30852	0.44522	0.8061217	1.0110151	1.190063	1.4027599	1.5511954
C1	0.71811	0.70162	0.6798835	0.66928446	0.659043	0.6401919	0.6328916
C2	0.11054	0.12434	0.1372764	0.14462879	0.153391	0.1754506	0.18463588
C3	-0.09473	-0.09741	-0.096018	-0.0965306	-0.09872	-0.108387	-0.11294799
C4	0.02157	0.02135	0.0195062	0.01904607	0.019171	0.0212029	0.022312067
C5	-0.00209	-0.002	-0.001683	-0.0015911	-0.00158	-0.001782	-0.0019084
C6	7.37E-05	6.82E-05	5.25E-05	4.77E-05	4.64E-05	5.42E-05	5.95E-05

100yr URBAN ARI Drainage Calculations

DEVELOPED CATCHMENT

Catchment	Section	Additional Catchments				Area (ha)	∑A (ha)	C100	C5	Ae 100 (ha)	Ae 5 (ha)	∑C100	∑C5	∑Ae 100 (ha)	∑Ae 5 (ha)	Flow Length (m)	Velocity 100y (m/s)	Velocity 5y (m/s)	Tc 100 (mins)	Tc 5 (mins)	Int 100 (mm/hr)	Int 5 (mm/hr)	Q100 m3/s	Q5 m3/s	Q5gap m3/s	Comments
A	A					0.554	0.554	0.85	0.67	0.47	0.37	0.85	0.67	0.47	0.37	129	0.62	1.5	8.45	6.43	146.80	78.23	0.192	0.081	0.111	
B	B	A				2.115	2.669	0.84	0.67	1.78	1.41	0.84	0.67	2.25	1.78	436	0.87	1.5	13.37	9.84	117.78	64.95	0.737	0.322	0.415	Includes Catchment A
C	C					0.190	0.190	0.84	0.67	0.16	0.13	0.84	0.67	0.16	0.13	55	1.13	1.5	5.81	5.61	170.59	82.46	0.076	0.029	0.047	
D	D	B	C			0.115	2.974	0.74	0.59	0.09	0.07	0.84	0.66	2.50	1.98	44	0.74	1.5	14.37	10.33	113.40	63.46	0.786	0.348	0.438	Includes Catchments A-C
E	E	D				1.133	4.107	0.83	0.66	0.94	0.75	0.84	0.66	3.44	2.72	146	0.85	1.5	17.22	11.96	102.67	59.02	0.981	0.446	0.534	Includes Catchments A-D
F	F					1.046	1.046	0.83	0.66	0.87	0.69	0.83	0.66	0.87	0.69	272	0.73	1.5	11.18	8.02	128.96	71.33	0.311	0.136	0.175	
G	G	F				0.850	1.896	0.83	0.66	0.71	0.56	0.83	0.66	1.57	1.25	199	1.21	1.5	13.91	10.23	115.38	63.76	0.504	0.221	0.284	Includes Catchment F
H	H	E	G			0.242	6.245	0.80	0.63	0.19	0.15	0.83	0.66	5.21	4.12	89	0.64	1.5	19.53	12.94	95.54	56.65	1.381	0.648	0.733	Includes Catchments A-G
I	I	H				0.767	7.012	0.81	0.64	0.62	0.49	0.83	0.66	5.83	4.61	175	0.64	1.5	24.07	14.89	84.37	52.56	1.366	0.674	0.692	Includes Catchments A-H
J	J					0.751	0.751	0.84	0.67	0.63	0.50	0.84	0.67	0.63	0.50	151	0.67	1.5	8.75	6.68	144.56	77.07	0.254	0.107	0.147	
K	K	J				0.887	1.638	0.80	0.63	0.71	0.56	0.82	0.65	1.34	1.06	60	1.02	1.5	9.73	7.34	137.76	74.09	0.513	0.218	0.295	Includes Catchment J
L	L					2.333	2.333	0.80	0.64	1.87	1.48	0.80	0.64	1.87	1.48	274	0.94	1.5	9.88	8.04	136.77	71.24	0.712	0.294	0.418	
M	M					0.443	0.443	0.81	0.64	0.36	0.28	0.81	0.64	0.36	0.28	143	0.57	1.5	9.15	6.59	141.69	77.49	0.141	0.061	0.080	
N	N	L	M			9.014	11.790	0.84	0.66	7.57	5.99	0.83	0.66	9.80	7.76	796	0.68	1.5	24.42	13.84	83.61	54.67	2.277	1.179	1.099	Includes Catchments L & M
O	O					0.670	0.670	0.85	0.67	0.57	0.45	0.85	0.67	0.57	0.45	180	0.67	1.5	9.47	7.00	139.50	75.60	0.220	0.094	0.126	
P	P	N	O			0.753	13.213	0.83	0.66	0.63	0.49	0.83	0.66	11.00	8.71	105	0.62	1.5	27.25	15.01	78.15	52.33	2.387	1.266	1.122	Includes Catchments L-O
Q	Q	P				0.515	13.728	0.84	0.67	0.43	0.34	0.83	0.66	11.43	9.05	78	1.47	1.5	28.13	15.88	76.61	50.74	2.433	1.276	1.157	Includes Catchments L-P
R	R					0.335	0.335	0.77	0.61	0.26	0.20	0.77	0.61	0.26	0.20	108	0.57	1.5	8.14	6.20	149.24	79.38	0.107	0.045	0.062	
S	S	R				0.398	0.733	0.81	0.64	0.32	0.25	0.79	0.63	0.58	0.46	77	1.21	1.5	9.20	7.06	141.38	75.35	0.228	0.096	0.132	Includes Catchment R
T	T					0.818	0.818	0.83	0.66	0.68	0.54	0.83	0.66	0.68	0.54	183	1.72	1.5	6.77	7.03	160.96	75.45	0.305	0.113	0.192	
U	U	S	T			0.235	1.786	0.80	0.63	0.19	0.15	0.81	0.64	1.45	1.15	76	1.44	1.5	10.08	7.90	135.53	71.81	0.546	0.229	0.317	Includes Catchments R-T
V	V	Q	U			1.135	16.649	0.82	0.65	0.93	0.74	0.83	0.66	13.82	10.94	121	0.81	1.5	30.62	17.22	72.61	48.48	2.787	1.473	1.314	Includes Catchments L-U

Rev	Amendments	Approved	Date
A	ISSUED TO COUNCIL	G.K	01/11/24

Scale
H 1:1000 0 10 20 30 40 50
SCALE @ A1

spiire
L6 414 LA TROBE STREET PO BOX 16084 MELBOURNE
VICTORIA 8007 AUSTRALIA T 61 3 9993 7888
spiire.com.au ABN 55 050 029 635

Harlow TARNEIT

Designed	Checked
T. NGUYEN	G. KOHLMAN
Authorised	Date
G. KOHLMAN	01/11/24

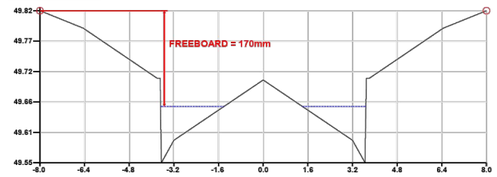
HARLOW ESTATE
STAGE 6
DRAINAGE COMPUTATIONS
100YR CATCHMENT CALCULATIONS
WYNDHAM CITY COUNCIL
SIG GROUP

PRELIMINARY

Drg No 309442CD501 Rev A

PROJECT: SECTION A
JIRA CRESCENT (CH1084.77)
Print-out date: 18/03/2025 - Time: 9:44
Data File: G:\30\309442\Civil\12D\PC CONVEY\SECTION A.dat

1. CROSS-SECTION:



2. DISCHARGE INFORMATION:

100 year (1%) storm event

Total discharge = 0.111 cumecs

There is no pipe discharge
Overland / Channel / Watercourse discharge = 0.111 cumecs

3. RESULTS: Water surface elevation = 49.653m

High Flow Channel grade = 1 in 200, Main Channel / Low Flow Channel grade = 1 in 200.

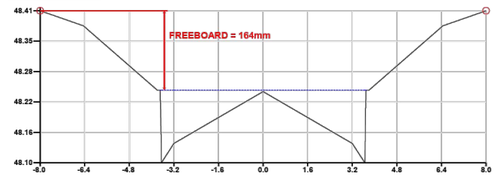
	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (cumecs):	0.00	0.11	0.00	0.11
D(Max) = Max. Depth (m):	0.00	0.10	0.00	0.10
D(Ave) = Ave. Depth (m):	0.00	0.04	0.00	0.04
V = Ave. Velocity (m/s):	0.00	0.62	0.00	0.62
D(Max) x V (cumecs/m):	0.00	0.06	0.00	0.06
D(Ave) x V (cumecs/m):	0.00	0.03	0.00	0.03
Froude Number:	0.00	0.99	0.00	N/A
Area (m^2):	0.00	0.18	0.00	0.18
Wetted Perimeter (m):	0.00	4.70	0.00	4.70
Flow Width (m):	0.00	4.54	0.00	4.54
Hydraulic Radius (m):	0.00	0.04	0.00	0.04
Composite Manning's n:	0.000	0.013	0.000	N/A
Split Flow?	-	-	-	Yes

4. CROSS-SECTION DATA:

SEGMENT NO.	LEFT HAND POINT CHAINAGE (m)	LEFT HAND POINT R.L. (m)	RIGHT HAND POINT CHAINAGE (m)	RIGHT HAND POINT R.L. (m)	MANNING'S N
1	-8.000	49.823	-7.950	49.822	0.035
2	-7.950	49.822	-6.450	49.792	0.013
3	-6.450	49.792	-3.800	49.703	0.035
4	-3.800	49.703	-3.690	49.703	0.013
5	-3.690	49.703	-3.650	49.553	0.013
6	-3.650	49.553	-3.200	49.593	0.013
7	-3.200	49.593	0.000	49.700	0.013
8	0.000	49.700	3.200	49.593	0.013
9	3.200	49.593	3.650	49.553	0.013
10	3.650	49.553	3.690	49.703	0.013
11	3.690	49.703	3.800	49.703	0.013
12	3.800	49.703	6.450	49.792	0.035
13	6.450	49.792	7.950	49.822	0.013
14	7.950	49.822	8.000	49.823	0.035

PROJECT: SECTION B
BOURNESIDE STREET (CH297.42)
Print-out date: 31/10/2024 - Time: 4:21
Data File: G:\30\309442\Civil\12D\PC CONVEY\SECTION B.dat

1. CROSS-SECTION:



2. DISCHARGE INFORMATION:

100 year (1%) storm event

Total discharge = 0.415 cumecs

There is no pipe discharge
Overland / Channel / Watercourse discharge = 0.415 cumecs

3. RESULTS: Water surface elevation = 48.245m

High Flow Channel grade = 1 in 200, Main Channel / Low Flow Channel grade = 1 in 200.

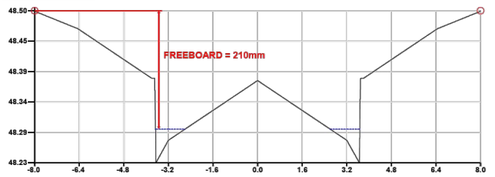
	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (cumecs):	0.00	0.42	0.00	0.42
D(Max) = Max. Depth (m):	0.00	0.15	0.00	0.15
D(Ave) = Ave. Depth (m):	0.00	0.07	0.00	0.07
V = Ave. Velocity (m/s):	0.00	0.87	0.00	0.87
D(Max) x V (cumecs/m):	0.00	0.13	0.00	0.13
D(Ave) x V (cumecs/m):	0.00	0.06	0.00	0.06
Froude Number:	0.00	1.08	0.00	1.08
Area (m^2):	0.00	0.48	0.00	0.48
Wetted Perimeter (m):	0.00	7.62	0.00	7.62
Flow Width (m):	0.00	7.38	0.00	7.38
Hydraulic Radius (m):	0.00	0.06	0.00	0.06
Composite Manning's n:	0.000	0.013	0.000	0.013
Split Flow?	-	-	-	No

4. CROSS-SECTION DATA:

SEGMENT NO.	LEFT HAND POINT CHAINAGE (m)	LEFT HAND POINT R.L. (m)	RIGHT HAND POINT CHAINAGE (m)	RIGHT HAND POINT R.L. (m)	MANNING'S N
1	-8.000	48.409	-7.950	48.408	0.035
2	-7.950	48.408	-6.450	48.378	0.013
3	-6.450	48.378	-3.800	48.245	0.035
4	-3.800	48.245	-3.690	48.245	0.013
5	-3.690	48.245	-3.650	48.095	0.013
6	-3.650	48.095	-3.200	48.135	0.013
7	-3.200	48.135	0.000	48.242	0.013
8	0.000	48.242	3.200	48.135	0.013
9	3.200	48.135	3.650	48.095	0.013
10	3.650	48.095	3.690	48.245	0.013
11	3.690	48.245	3.800	48.245	0.013
12	3.800	48.245	6.450	48.378	0.035
13	6.450	48.378	7.950	48.408	0.013
14	7.950	48.408	8.000	48.409	0.035

PROJECT: SECTION C
LILIUM WAY (CH11.80)
Print-out date: 14/01/2025 - Time: 4:55
Data File: G:\30\309443\Civil\12D\PC CONVEY\SECTION C.dat

1. CROSS-SECTION:



2. DISCHARGE INFORMATION:

100 year (1%) storm event

Total discharge = 0.047 cumecs

There is no pipe discharge
Overland / Channel / Watercourse discharge = 0.047 cumecs

3. RESULTS: Water surface elevation = 48.291m

High Flow Channel grade = 1 in 28.571, Main Channel / Low Flow Channel grade = 1 in 28.571.

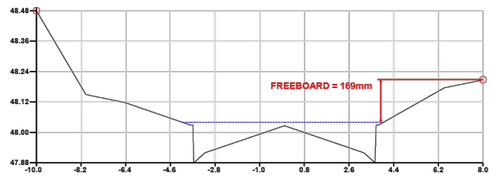
	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (cumecs):	0.00	0.06	0.00	0.06
D(Max) = Max. Depth (m):	0.00	0.06	0.00	0.06
D(Ave) = Ave. Depth (m):	0.00	0.02	0.00	0.02
V = Ave. Velocity (m/s):	0.00	1.13	0.00	1.13
D(Max) x V (cumecs/m):	0.00	0.07	0.00	0.07
D(Ave) x V (cumecs/m):	0.00	0.03	0.00	0.03
Froude Number:	0.00	2.38	0.00	N/A
Area (m^2):	0.00	0.05	0.00	0.05
Wetted Perimeter (m):	0.00	2.24	0.00	2.24
Flow Width (m):	0.00	2.14	0.00	2.14
Hydraulic Radius (m):	0.00	0.02	0.00	0.02
Composite Manning's n:	0.000	0.013	0.000	N/A
Split Flow?	-	-	-	Yes

4. CROSS-SECTION DATA:

SEGMENT NO.	LEFT HAND POINT CHAINAGE (m)	LEFT HAND POINT R.L. (m)	RIGHT HAND POINT CHAINAGE (m)	RIGHT HAND POINT R.L. (m)	MANNING'S N
1	-8.000	48.501	-7.950	48.499	0.035
2	-7.950	48.499	-6.450	48.469	0.013
3	-6.450	48.469	-3.800	48.381	0.035
4	-3.800	48.381	-3.690	48.381	0.013
5	-3.690	48.381	-3.650	48.231	0.013
6	-3.650	48.231	-3.200	48.271	0.013
7	-3.200	48.271	0.000	48.377	0.013
8	0.000	48.377	3.200	48.271	0.013
9	3.200	48.271	3.650	48.231	0.013
10	3.650	48.231	3.690	48.381	0.013
11	3.690	48.381	3.800	48.381	0.013
12	3.800	48.381	6.450	48.469	0.035

PROJECT: SECTION D
BOURNESIDE STREET (CH341.02)
Print-out date: 14/01/2025 - Time: 4:38
Data File: G:\30\309443\Civil\12D\PC CONVEY\SECTION D.dat

1. CROSS-SECTION:



2. DISCHARGE INFORMATION:

100 year (1%) storm event

Total discharge = 0.438 cumecs

There is no pipe discharge
Overland / Channel / Watercourse discharge = 0.438 cumecs

3. RESULTS: Water surface elevation = 48.037m

High Flow Channel grade = 1 in 200, Main Channel / Low Flow Channel grade = 1 in 200.

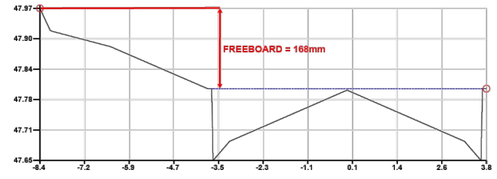
	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (cumecs):	0.00	0.44	0.00	0.44
D(Max) = Max. Depth (m):	0.00	0.16	0.00	0.16
D(Ave) = Ave. Depth (m):	0.00	0.07	0.00	0.07
V = Ave. Velocity (m/s):	0.00	0.77	0.00	0.77
D(Max) x V (cumecs/m):	0.00	0.12	0.00	0.12
D(Ave) x V (cumecs/m):	0.00	0.05	0.00	0.05
Froude Number:	0.00	0.94	0.00	0.94
Area (m^2):	0.00	0.56	0.00	0.56
Wetted Perimeter (m):	0.00	8.32	0.00	8.32
Flow Width (m):	0.00	8.08	0.00	8.08
Hydraulic Radius (m):	0.00	0.07	0.00	0.07
Composite Manning's n:	0.000	0.015	0.000	0.015
Split Flow?	-	-	-	No

4. CROSS-SECTION DATA:

SEGMENT NO.	LEFT HAND POINT CHAINAGE (m)	LEFT HAND POINT R.L. (m)	RIGHT HAND POINT CHAINAGE (m)	RIGHT HAND POINT R.L. (m)	MANNING'S N
1	-9.992	48.479	-8.000	48.147	0.013
2	-8.000	48.147	-7.950	48.146	0.035
3	-7.950	48.146	-6.450	48.116	0.013
4	-6.450	48.116	-3.800	48.027	0.035
5	-3.800	48.027	-3.690	48.027	0.013
6	-3.690	48.027	-3.650	47.877	0.013
7	-3.650	47.877	-3.200	47.917	0.013
8	-3.200	47.917	0.000	48.024	0.013
9	0.000	48.024	3.200	47.917	0.013
10	3.200	47.917	3.650	47.877	0.013
11	3.650	47.877	3.690	48.027	0.013
12	3.690	48.027	3.800	48.027	0.013
13	3.800	48.027	6.450	48.174	0.035
14	6.450	48.174	7.950	48.204	0.013
15	7.950	48.204	8.000	48.206	0.035

PROJECT: SECTION E
BOURNESIDE STREET (CH486.85)
Print-out date: 14/01/2025 - Time: 5:01
Data File: G:\30\309443\Civil\12D\PC CONVEY\SECTION E.dat

1. CROSS-SECTION:



2. DISCHARGE INFORMATION:

100 year (1%) storm event

Total discharge = 0.534 cumecs

There is no pipe discharge
Overland / Channel / Watercourse discharge = 0.534 cumecs

3. RESULTS: Water surface elevation = 47.798m

High Flow Channel grade = 1 in 200, Main Channel / Low Flow Channel grade = 1 in 200.

	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (cumecs):	0.00	0.42	0.00	0.42
D(Max) = Max. Depth (m):	0.00	0.15	0.00	0.15
D(Ave) = Ave. Depth (m):	0.00	0.07	0.00	0.07
V = Ave. Velocity (m/s):	0.00	0.87	0.00	0.87
D(Max) x V (cumecs/m):	0.00	0.13	0.00	0.13
D(Ave) x V (cumecs/m):	0.00	0.06	0.00	0.06
Froude Number:	0.00	1.08	0.00	1.08
Area (m^2):	0.00	0.48	0.00	0.48
Wetted Perimeter (m):	0.00	7.62	0.00	7.62
Flow Width (m):	0.00	7.38	0.00	7.38
Hydraulic Radius (m):	0.00	0.06	0.00	0.06
Composite Manning's n:	0.000	0.013	0.000	0.013
Split Flow?	-	-	-	No

4. CROSS-SECTION DATA:

SEGMENT NO.	LEFT HAND POINT CHAINAGE (m)	LEFT HAND POINT R.L. (m)	RIGHT HAND POINT CHAINAGE (m)	RIGHT HAND POINT R.L. (m)	MANNING'S N
1	-8.368	47.966	-8.089	47.920	0.013
2	-8.089	47.920	-8.035	47.918	0.035
3	-8.035	47.918	-6.450	47.886	0.013
4	-6.450	47.886	-3.800	47.798	0.035
5	-3.800	47.798	-3.690	47.798	0.013
6	-3.690	47.798	-3.650	47.648	0.013
7	-3.650	47.648	-3.200	47.688	0.013
8	-3.200	47.688	0.000	47.795	0.013
9	0.000	47.795	3.200	47.688	0.013
10	3.200	47.688	3.650	47.648	0.013
11	3.650	47.648	3.690	47.798	0.013
12	3.690	47.798	3.800	47.798	0.013

PROJECT: SECTION F
JIRA CRESCENT (CH771.21)
Print-out date: 15/01/2025 - Time: 8:43
Data File: G:\30\309443\Civil\12D\PC CONVEY\SECTION F.dat

1. CROSS-SECTION:

2. DISCHARGE INFORMATION:

100 year (1%) storm event

Total discharge = 0.175 cumecs

There is no pipe discharge
Overland / Channel / Watercourse discharge = 0.175 cumecs

3. RESULTS: Water surface elevation = 48.163m

High Flow Channel grade = 1 in 200, Main Channel / Low Flow Channel grade = 1 in 200.

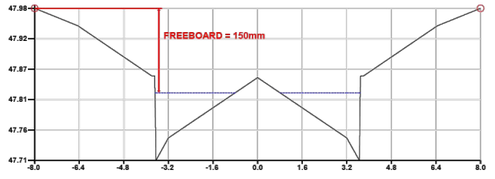
	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (cumecs):	0.00	0.21	0.00	0.21
D(Max) = Max. Depth (m):	0.00	0.12	0.00	0.12
D(Ave) = Ave. Depth (m):	0.00	0.05	0.00	0.05
V = Ave. Velocity (m/s):	0.00	0.74	0.00	0.74
D(Max) x V (cumecs/m):	0.00	0.09	0.00	0.09
D(Ave) x V (cumecs/m):	0.00	0.04	0.00	0.04
Froude Number:	0.00	1.04	0.00	1.04
Area (m^2):	0.00	0.29	0.00	0.29
Wetted Perimeter (m):	0.00	5.75	0.00	5.75
Flow Width (m):	0.00	5.56	0.00	5.56
Hydraulic Radius (m):	0.00	0.05	0.00	0.05
Composite Manning's n:	0.000	0.013	0.000	0.013
Split Flow?	-	-	-	No

4. CROSS-SECTION DATA:

SEGMENT NO.	LEFT HAND POINT CHAINAGE (m)	LEFT HAND POINT R.L. (m)	RIGHT HAND POINT CHAINAGE (m)	RIGHT HAND POINT R.L. (m)	MANNING'S N
1	-7.750	48.334	-7.700	48.333	0.035
2	-7.700	48.333	-6.200	48.303	0.013
3	-6.200	48.303	-2.900	48.193	0.035
4	-2.900	48.193	-2.790	48.193	0.013
5	-2.790	48.193	-2.750	48.043	0.013
6	-2.750	48.043	-2.300	48.083	0.013
7	-2.300	48.083	0.000	48.159	0.013
8	0.000	48.159	2.300	48.083	0.013
9	2.300	48.083	2.750	48.043	0.013
10	2.750	48.043	2.790	48.193	0.013
11	2.790	48.193	2.900	48.193	0.013
12	2.900	48.193	5.750	48.545	0.035

PROJECT: SECTION G
JIRA CRESCENT (CH557.41)
Print-out date: 15/01/2025 - Time: 8:46
Data File: G:\30\309443\Civil\12D\PC CONVEY\SECTION G.dat

1. CROSS-SECTION:



2. DISCHARGE INFORMATION:

100 year (1%) storm event

Total discharge = 0.284 cumecs

There is no pipe discharge
Overland / Channel / Watercourse discharge = 0.284 cumecs

3. RESULTS: Water surface elevation = 47.826m

High Flow Channel grade = 1 in 70.061, Main Channel / Low Flow Channel grade = 1 in 70.061.

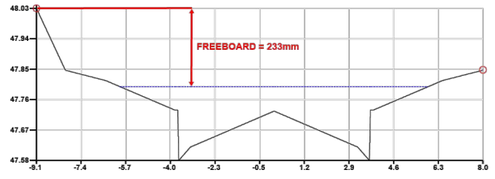
	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (cumecs):	0.00	0.35	0.00	0.35
D(Max) = Max. Depth (m):	0.00	0.12	0.00	0.12
D(Ave) = Ave. Depth (m):	0.00	0.05	0.00	0.05
V = Ave. Velocity (m/s):	0.00	1.21	0.00	1.21
D(Max) x V (cumecs/m):	0.00	0.15	0.00	0.15
D(Ave) x V (cumecs/m):	0.00	0.06	0.00	0.06
Froude Number:	0.00	1.74	0.00	N/A
Area (m^2):	0.00	0.29	0.00	0.29
Wetted Perimeter (m):	0.00	5.94	0.00	5.94
Flow Width (m):	0.00	5.75	0.00	5.75
Hydraulic Radius (m):	0.00	0.05	0.00	0.05
Composite Manning's n:	0.000	0.013	0.000	N/A
Split Flow?	-	-	-	Yes

4. CROSS-SECTION DATA:

SEGMENT NO.	LEFT HAND POINT CHAINAGE (m)	LEFT HAND POINT R.L. (m)	RIGHT HAND POINT CHAINAGE (m)	RIGHT HAND POINT R.L. (m)	MANNING'S N
1	-8.000	47.976	-7.950	47.975	0.035
2	-7.950	47.975	-6.450	47.945	0.013
3	-6.450	47.945	-3.800	47.856	0.035
4	-3.800	47.856	-3.690	47.856	0.013
5	-3.690	47.856	-3.650	47.706	0.013
6	-3.650	47.706	-3.200	47.746	0.013
7	-3.200	47.746	0.000	47.853	0.013
8	0.000	47.853	3.200	47.746	0.013
9	3.200	47.746	3.650	47.706	0.013
10	3.650	47.706	3.690	47.856	0.013
11	3.690	47.856	3.800	47.856	0.013
12	3.800	47.856	6.450	47.945	0.035

PROJECT: SECTION H
HELIOTROPE COURT (CH11.80)
Print-out date: 15/01/2025 - Time: 8:49
Data File: G:\30\309443\Civil\12D\PC CONVEY\SECTION H.dat

1. CROSS-SECTION:



2. DISCHARGE INFORMATION:

100 year (1%) storm event

Total discharge = 0.733 cumecs

There is no pipe discharge
Overland / Channel / Watercourse discharge = 0.733 cumecs

3. RESULTS: Water surface elevation = 47.799m

High Flow Channel grade = 1 in 200, Main Channel / Low Flow Channel grade = 1 in 200.

	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (cumecs):	0.00	0.75	0.00	0.75
D(Max) = Max. Depth (m):	0.00	0.22	0.00	0.22
D(Ave) = Ave. Depth (m):	0.00	0.10	0.00	0.10
V = Ave. Velocity (m/s):	0.00	0.64	0.00	0.64
D(Max) x V (cumecs/m):	0.00	0.14	0.00	0.14
D(Ave) x V (cumecs/m):	0.00	0.06	0.00	0.06
Froude Number:	0.00	0.65	0.00	0.65
Area (m^2):	0.00	1.16	0.00	1.16
Wetted Perimeter (m):	0.00	12.06	0.00	12.06
Flow Width (m):	0.00	11.82	0.00	11.82
Hydraulic Radius (m):	0.00	0.10	0.00	0.10
Composite Manning's n:	0.000	0.023	0.000	0.023
Split Flow?	-	-	-	No

4. CROSS-SECTION DATA:

SEGMENT NO.	LEFT HAND POINT CHAINAGE (m)	LEFT HAND POINT R.L. (m)	RIGHT HAND POINT CHAINAGE (m)	RIGHT HAND POINT R.L. (m)	MANNING'S N
1	-9.098	48.032	-8.000	47.849	0.013
2	-8.000	47.849	-7.950	47.847	0.035
3	-7.950	47.847	-6.450	47.817	0.013
4	-6.450	47.817	-3.800	47.729	0.035
5	-3.800	47.729	-3.690	47.729	0.013
6	-3.690	47.729	-3.650	47.579	0.013
7	-3.650	47.579	-3.200	47.619	0.013
8	-3.200	47.619	0.000	47.726	0.013
9	0.000	47.726	3.200	47.619	0.013
10	3.200	47.619	3.650	47.579	0.013
11	3.650	47.579	3.690	47.729	0.013
12	3.690	47.729	3.800	47.729	0.013
13	3.800	47.729	6.450	47.817	0.035
14	6.450	47.817	7.950	47.847	0.013
15	7.950	47.847	8.000	47.849	0.035

Rev			
A	ISSUED TO COUNCIL	G.K	01/11/24
Rev	Amendments	Approved	Date

Scale
H 1:1000
SCALE @ A1
0 10 20 30 40 50

spiire
L6 414 LA TROBE STREET PO BOX 16084 MELBOURNE
VICTORIA 8007 AUSTRALIA T 61 3 9993 7888
spiire.com.au ABN 55 050 029 635

Harlow TARNEIT

Designed	Checked
T. NGUYEN	G. KOHLMAN
Authorised	Date
G. KOHLMAN	01/11/24

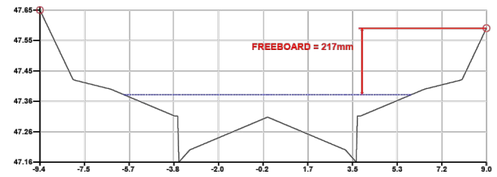
HARLOW ESTATE
STAGE 6
DRAINAGE COMPUTATIONS
100YR PC CONVEY SECTIONS - SHEET 1
WYNDHAM CITY COUNCIL
SIG GROUP

PRELIMINARY

Drg No 309442CD502 Rev A

PROJECT: SECTION I
HELIOTROPE COURT (CH154.38)
Print-out date: 15/01/2025 - Time: 8:50
Data File: G:\30\309443\Civil\12D\PC CONVEY\SECTION I.dat

1. CROSS-SECTION:



2. DISCHARGE INFORMATION:

100 year (1%) storm event

Total discharge = 0.692 cumecs

There is no pipe discharge
Overland / Channel / Watercourse discharge = 0.692 cumecs

3. RESULTS: Water surface elevation = 47.377m

High Flow Channel grade = 1 in 200, Main Channel / Low Flow Channel grade = 1 in 200.

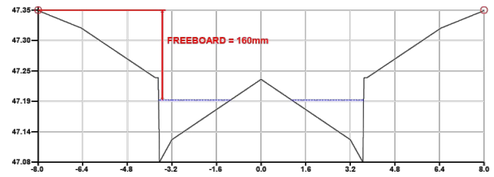
	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (cumecs):	0.00	0.75	0.00	0.75
D(Max) = Max. Depth (m):	0.00	0.22	0.00	0.22
D(Ave) = Ave. Depth (m):	0.00	0.10	0.00	0.10
V = Ave. Velocity (m/s):	0.00	0.64	0.00	0.64
D(Max) x V (cumecs/m):	0.00	0.14	0.00	0.14
D(Ave) x V (cumecs/m):	0.00	0.06	0.00	0.06
Froude Number:	0.00	0.65	0.00	0.65
Area (m^2):	0.00	1.16	0.00	1.16
Wetted Perimeter (m):	0.00	12.06	0.00	12.06
Flow Width (m):	0.00	11.82	0.00	11.82
Hydraulic Radius (m):	0.00	0.10	0.00	0.10
Composite Manning's n:	0.000	0.023	0.000	0.023
Split Flow?	-	-	-	No

4. CROSS-SECTION DATA:

SEGMENT NO.	LEFT HAND POINT CHAINAGE (m)	LEFT HAND POINT R.L. (m)	RIGHT HAND POINT CHAINAGE (m)	RIGHT HAND POINT R.L. (m)	MANNING'S N
1	-9.357	47.653	-8.000	47.427	0.013
2	-8.000	47.427	-7.950	47.425	0.035
3	-7.950	47.425	-6.450	47.395	0.013
4	-6.450	47.395	-3.800	47.307	0.035
5	-3.800	47.307	-3.690	47.307	0.013
6	-3.690	47.307	-3.650	47.157	0.013
7	-3.650	47.157	-3.200	47.197	0.013
8	-3.200	47.197	0.000	47.304	0.013
9	0.000	47.304	3.200	47.197	0.013
10	3.200	47.197	3.650	47.157	0.013
11	3.650	47.157	3.690	47.307	0.013
12	3.690	47.307	3.800	47.307	0.013
13	3.800	47.307	6.450	47.395	0.035
14	6.450	47.395	7.950	47.425	0.013
15	7.950	47.425	8.000	47.427	0.035
16	8.000	47.427	9.000	47.594	0.035

PROJECT: SECTION J
TOMATILLO CIRCUIT (CH19.132)
Print-out date: 14/10/2024 - Time: 12:45
Data File: G:\30\309442\Civil\12D\PC CONVEY\SECTION J.dat

1. CROSS-SECTION:



2. DISCHARGE INFORMATION:

100 year (1%) storm event

Total discharge = 0.147 cumecs

There is no pipe discharge
Overland / Channel / Watercourse discharge = 0.147 cumecs

3. RESULTS: Water surface elevation = 47.193m

High Flow Channel grade = 1 in 200, Main Channel / Low Flow Channel grade = 1 in 200.

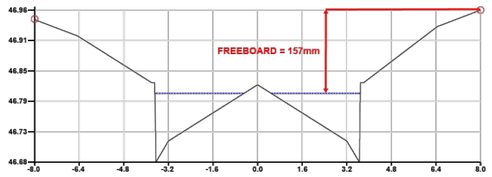
	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (cumecs):	0.00	0.15	0.00	0.15
D(Max) = Max. Depth (m):	0.00	0.11	0.00	0.11
D(Ave) = Ave. Depth (m):	0.00	0.04	0.00	0.04
V = Ave. Velocity (m/s):	0.00	0.67	0.00	0.67
D(Max) x V (cumecs/m):	0.00	0.07	0.00	0.07
D(Ave) x V (cumecs/m):	0.00	0.03	0.00	0.03
Froude Number:	0.00	1.01	0.00	N/A
Area (m^2):	0.00	0.23	0.00	0.23
Wetted Perimeter (m):	0.00	5.32	0.00	5.32
Flow Width (m):	0.00	5.15	0.00	5.15
Hydraulic Radius (m):	0.00	0.04	0.00	0.04
Composite Manning's n:	0.000	0.013	0.000	N/A
Split Flow?	-	-	-	Yes

4. CROSS-SECTION DATA:

SEGMENT NO.	LEFT HAND POINT CHAINAGE (m)	LEFT HAND POINT R.L. (m)	RIGHT HAND POINT CHAINAGE (m)	RIGHT HAND POINT R.L. (m)	MANNING'S N
1	-8.000	47.353	-7.950	47.351	0.035
2	-7.950	47.351	-6.450	47.321	0.013
3	-6.450	47.321	-3.800	47.233	0.035
4	-3.800	47.233	-3.690	47.233	0.013
5	-3.690	47.233	-3.650	47.083	0.013
6	-3.650	47.083	-3.200	47.123	0.013
7	-3.200	47.123	0.000	47.230	0.013
8	0.000	47.230	3.200	47.123	0.013
9	3.200	47.123	3.650	47.083	0.013
10	3.650	47.083	3.690	47.233	0.013
11	3.690	47.233	3.800	47.233	0.013
12	3.800	47.233	6.450	47.321	0.035
13	6.450	47.321	7.950	47.351	0.013
14	7.950	47.351	8.000	47.353	0.035

PROJECT: SECTION K
TOMATILLO CIRCUIT (CH262.50)
Print-out date: 01/11/2024 - Time: 9:05
Data File: G:\30\309442\Civil\12D\PC CONVEY\SECTION K.dat

1. CROSS-SECTION:



2. DISCHARGE INFORMATION:

100 year (1%) storm event

Total discharge = 0.295 cumecs

There is no pipe discharge
Overland / Channel / Watercourse discharge = 0.295 cumecs

3. RESULTS: Water surface elevation = 46.806m

High Flow Channel grade = 1 in 111.29, Main Channel / Low Flow Channel grade = 1 in 111.29.

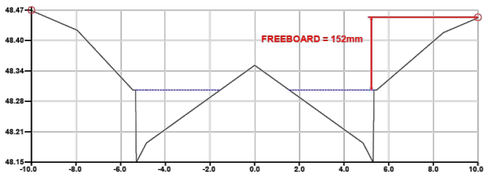
	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (cumecs):	0.00	0.36	0.00	0.36
D(Max) = Max. Depth (m):	0.00	0.13	0.00	0.13
D(Ave) = Ave. Depth (m):	0.00	0.05	0.00	0.05
V = Ave. Velocity (m/s):	0.00	1.02	0.00	1.02
D(Max) x V (cumecs/m):	0.00	0.13	0.00	0.13
D(Ave) x V (cumecs/m):	0.00	0.06	0.00	0.06
Froude Number:	0.00	1.40	0.00	N/A
Area (m^2):	0.00	0.35	0.00	0.35
Wetted Perimeter (m):	0.00	6.61	0.00	6.61
Flow Width (m):	0.00	6.40	0.00	6.40
Hydraulic Radius (m):	0.00	0.05	0.00	0.05
Composite Manning's n:	0.000	0.013	0.000	N/A
Split Flow?	-	-	-	Yes

4. CROSS-SECTION DATA:

SEGMENT NO.	LEFT HAND POINT CHAINAGE (m)	LEFT HAND POINT R.L. (m)	RIGHT HAND POINT CHAINAGE (m)	RIGHT HAND POINT R.L. (m)	MANNING'S N
1	-8.000	46.946	-7.950	46.944	0.035
2	-7.950	46.944	-6.450	46.914	0.013
3	-6.450	46.914	-3.800	46.826	0.035
4	-3.800	46.826	-3.690	46.826	0.013
5	-3.690	46.826	-3.650	46.676	0.013
6	-3.650	46.676	-3.200	46.716	0.013
7	-3.200	46.716	0.000	46.822	0.013
8	0.000	46.822	3.200	46.716	0.013
9	3.200	46.716	3.650	46.676	0.013
10	3.650	46.676	3.690	46.826	0.013
11	3.690	46.826	3.800	46.826	0.013
12	3.800	46.826	6.450	46.932	0.035
13	6.450	46.932	7.950	46.962	0.013
14	7.950	46.962	8.000	46.963	0.035

PROJECT: SECTION L
DAYLILY ROAD (CH1093.07)
Print-out date: 10/12/2024 - Time: 3:08
Data File: G:\30\309442\Civil\12D\PC CONVEY\SECTION L.dat

1. CROSS-SECTION:



2. DISCHARGE INFORMATION:

100 year (1%) storm event

Total discharge = 0.418 cumecs

There is no pipe discharge
Overland / Channel / Watercourse discharge = 0.418 cumecs

3. RESULTS: Water surface elevation = 48.300m

High Flow Channel grade = 1 in 166.667, Main Channel / Low Flow Channel grade = 1 in 166.667.

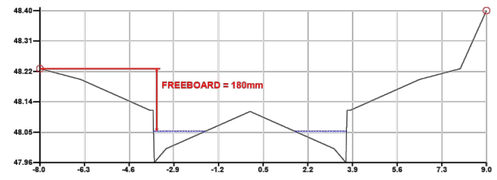
	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (cumecs):	0.00	0.45	0.00	0.45
D(Max) = Max. Depth (m):	0.00	0.15	0.00	0.15
D(Ave) = Ave. Depth (m):	0.00	0.06	0.00	0.06
V = Ave. Velocity (m/s):	0.00	0.94	0.00	0.94
D(Max) x V (cumecs/m):	0.00	0.14	0.00	0.14
D(Ave) x V (cumecs/m):	0.00	0.06	0.00	0.06
Froude Number:	0.00	1.18	0.00	N/A
Area (m^2):	0.00	0.49	0.00	0.49
Wetted Perimeter (m):	0.00	7.80	0.00	7.80
Flow Width (m):	0.00	7.57	0.00	7.57
Hydraulic Radius (m):	0.00	0.06	0.00	0.06
Composite Manning's n:	0.000	0.013	0.000	N/A
Split Flow?	-	-	-	Yes

4. CROSS-SECTION DATA:

SEGMENT NO.	LEFT HAND POINT CHAINAGE (m)	LEFT HAND POINT R.L. (m)	RIGHT HAND POINT CHAINAGE (m)	RIGHT HAND POINT R.L. (m)	MANNING'S N
1	-10.000	48.467	-9.950	48.465	0.035
2	-9.950	48.465	-7.950	48.425	0.013
3	-7.950	48.425	-5.450	48.300	0.035
4	-5.450	48.300	-5.340	48.300	0.013
5	-5.340	48.300	-5.300	48.150	0.013
6	-5.300	48.150	-4.850	48.190	0.013
7	-4.850	48.190	0.000	48.352	0.013
8	0.000	48.352	4.850	48.190	0.013
9	4.850	48.190	5.300	48.150	0.013
10	5.300	48.150	5.340	48.300	0.013
11	5.340	48.300	5.450	48.300	0.013
12	5.450	48.300	8.450	48.420	0.035
13	8.450	48.420	9.950	48.450	0.013
14	9.950	48.450	10.000	48.452	0.035

PROJECT: SECTION M
SALVIAS ROAD (CH148.29)
Print-out date: 20/01/2025 - Time: 10:38
Data File: G:\30\309443\Civil\12D\PC CONVEY\SECTION M.dat

1. CROSS-SECTION:



2. DISCHARGE INFORMATION:

100 year (1%) storm event

Total discharge = 0.08 cumecs

There is no pipe discharge
Overland / Channel / Watercourse discharge = 0.080 cumecs

3. RESULTS: Water surface elevation = 48.052m

High Flow Channel grade = 1 in 200, Main Channel / Low Flow Channel grade = 1 in 200.

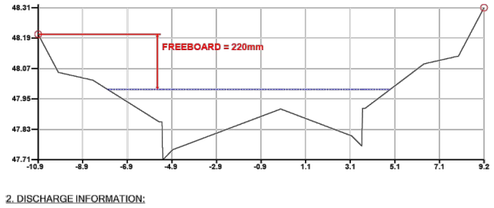
	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (cumecs):	0.00	0.08	0.00	0.08
D(Max) = Max. Depth (m):	0.00	0.09	0.00	0.09
D(Ave) = Ave. Depth (m):	0.00	0.04	0.00	0.04
V = Ave. Velocity (m/s):	0.00	0.57	0.00	0.57
D(Max) x V (cumecs/m):	0.00	0.05	0.00	0.05
D(Ave) x V (cumecs/m):	0.00	0.02	0.00	0.02
Froude Number:	0.00	0.97	0.00	N/A
Area (m^2):	0.00	0.14	0.00	0.14
Wetted Perimeter (m):	0.00	4.08	0.00	4.08
Flow Width (m):	0.00	3.94	0.00	3.94
Hydraulic Radius (m):	0.00	0.03	0.00	0.03
Composite Manning's n:	0.000	0.013	0.000	N/A
Split Flow?	-	-	-	Yes

4. CROSS-SECTION DATA:

SEGMENT NO.	LEFT HAND POINT CHAINAGE (m)	LEFT HAND POINT R.L. (m)	RIGHT HAND POINT CHAINAGE (m)	RIGHT HAND POINT R.L. (m)	MANNING'S N
1	-8.000	48.232	-7.950	48.231	0.035
2	-7.950	48.231	-6.450	48.201	0.013
3	-6.450	48.201	-3.800	48.112	0.035
4	-3.800	48.112	-3.690	48.112	0.013
5	-3.690	48.112	-3.650	47.962	0.013
6	-3.650	47.962	-3.200	48.002	0.013
7	-3.200	48.002	0.000	48.109	0.013
8	0.000	48.109	3.200	48.002	0.013
9	3.200	48.002	3.650	47.962	0.013
10	3.650	47.962	3.690	48.112	0.013
11	3.690	48.112	3.800	48.112	0.013
12	3.800	48.112	6.450	48.201	0.035
13	6.450	48.201	7.950	48.231	0.013
14	7.950	48.231	8.000	48.232	0.035

PROJECT: SECTION N
SPRINGFALL ROAD (CH314.29)
Print-out date: 10/12/2024 - Time: 3:21
Data File: G:\30\309442\Civil\12D\PC CONVEY\SECTION N.dat

1. CROSS-SECTION:



2. DISCHARGE INFORMATION:

100 year (1%) storm event

Total discharge = 1.1 cumecs

There is no pipe discharge
Overland / Channel / Watercourse discharge = 1.099 cumecs

3. RESULTS: Water surface elevation = 47.986m

High Flow Channel grade = 1 in 300, Main Channel / Low Flow Channel grade = 1 in 300.

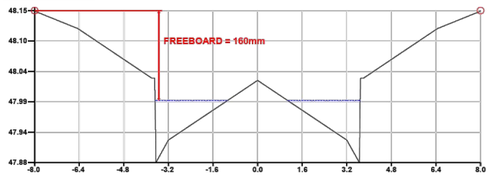
	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (cumecs):	0.00	1.11	0.00	1.11
D(Max) = Max. Depth (m):	0.00	0.28	0.00	0.28
D(Ave) = Ave. Depth (m):	0.00	0.13	0.00	0.13
V = Ave. Velocity (m/s):	0.00	0.68	0.00	0.68
D(Max) x V (cumecs/m):	0.00	0.19	0.00	0.19
D(Ave) x V (cumecs/m):	0.00	0.09	0.00	0.09
Froude Number:	0.00	0.61	0.00	0.61
Area (m^2):	0.00	1.63	0.00	1.63
Wetted Perimeter (m):	0.00	12.95	0.00	12.95
Flow Width (m):	0.00	12.71	0.00	12.71
Hydraulic Radius (m):	0.00	0.13	0.00	0.13
Composite Manning's n:	0.000	0.021	0.000	0.021
Split Flow?	-	-	-	No

4. CROSS-SECTION DATA:

SEGMENT NO.	LEFT HAND POINT CHAINAGE (m)	LEFT HAND POINT R.L. (m)	RIGHT HAND POINT CHAINAGE (m)	RIGHT HAND POINT R.L. (m)	MANNING'S N
1	-10.910	48.206	-10.000	48.054	0.013
2	-10.000	48.054	-9.950	48.053	0.035
3	-9.950	48.053	-8.450	48.023	0.013
4	-8.450	48.023	-5.450	47.856	0.035
5	-5.450	47.856	-5.340	47.856	0.013
6	-5.340	47.856	-5.300	47.706	0.013
7	-5.300	47.706	-4.850	47.746	0.013
8	-4.850	47.746	0.000	47.908	0.013
9	0.000	47.908	3.200	47.801	0.013
10	3.200	47.801	3.650	47.761	0.013
11	3.650	47.761	3.690	47.911	0.013
12	3.690	47.911	3.800	47.911	0.013
13	3.800	47.911	6.450	48.088	0.035
14	6.450	48.088	7.950	48.118	0.013
15	7.950	48.118	8.000	48.119	0.035
16	8.000	48.119	9.155	48.312	0.035

PROJECT: SECTION O
LUMPINI ROAD (CH148.29)
Print-out date: 10/12/2024 - Time: 3:24
Data File: G:\30\309442\Civil\12D\PC CONVEY\SECTION O.dat

1. CROSS-SECTION:



2. DISCHARGE INFORMATION:

100 year (1%) storm event

Total discharge = 0.126 cumecs

There is no pipe discharge
Overland / Channel / Watercourse discharge = 0.126 cumecs

3. RESULTS: Water surface elevation = 47.992m

High Flow Channel grade = 1 in 200, Main Channel / Low Flow Channel grade = 1 in 200.

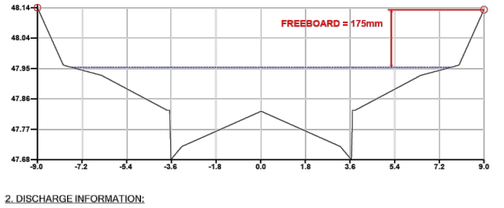
	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (cumecs):	0.00	0.16	0.00	0.16
D(Max) = Max. Depth (m):	0.00	0.11	0.00	0.11
D(Ave) = Ave. Depth (m):	0.00	0.04	0.00	0.04
V = Ave. Velocity (m/s):	0.00	0.67	0.00	0.67
D(Max) x V (cumecs/m):	0.00	0.07	0.00	0.07
D(Ave) x V (cumecs/m):	0.00	0.03	0.00	0.03
Froude Number:	0.00	1.01	0.00	N/A
Area (m^2):	0.00	0.23	0.00	0.23
Wetted Perimeter (m):	0.00	5.36	0.00	5.36
Flow Width (m):	0.00	5.19	0.00	5.19
Hydraulic Radius (m):	0.00	0.04	0.00	0.04
Composite Manning's n:	0.000	0.013	0.000	N/A
Split Flow?	-	-	-	Yes

4. CROSS-SECTION DATA:

SEGMENT NO.	LEFT HAND POINT CHAINAGE (m)	LEFT HAND POINT R.L. (m)	RIGHT HAND POINT CHAINAGE (m)	RIGHT HAND POINT R.L. (m)	MANNING'S N
1	-8.000	48.152	-7.950	48.150	0.035
2	-7.950	48.150	-6.450	48.120	0.013
3	-6.450	48.120	-3.800	48.032	0.035
4	-3.800	48.032	-3.690	48.032	0.013
5	-3.690	48.032	-3.650	47.882	0.013
6	-3.650	47.882	-3.200	47.922	0.013
7	-3.200	47.922	0.000	48.028	0.013
8	0.000	48.028	3.200	47.922	0.013
9	3.200	47.922	3.650	47.882	0.013
10	3.650	47.882	3.690	48.032	0.013
11	3.690	48.032	3.800	48.032	0.013
12	3.800	48.032	6.450	48.120	0.035
13	6.450	48.120	7.950	48.150	0.013
14	7.950	48.150	8.000	48.152	0.035

PROJECT: SECTION P
SPRINGFALL ROAD (CH415.00)
Print-out date: 15/01/2025 - Time: 9:00
Data File: G:\30\309443\Civil\12D\PC CONVEY\SECTION P.dat

1. CROSS-SECTION:



2. DISCHARGE INFORMATION:

100 year (1%) storm event

Total discharge = 1.12 cumecs

There is no pipe discharge
Overland / Channel / Watercourse discharge = 1.122 cumecs

3. RESULTS: Water surface elevation = 47.955m

High Flow Channel grade = 1 in 300, Main Channel / Low Flow Channel grade = 1 in 300.

	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (cumecs):	0.00	1.18	0.00	1.18
D(Max) = Max. Depth (m):	0.00	0.28	0.00	0.28
D(Ave) = Ave. Depth (m):	0.00	0.12	0.00	0.12
V = Ave. Velocity (m/s):	0.00	0.62	0.00	0.62
D(Max) x V (cumecs/m):	0.00	0.17	0.00	0.17
D(Ave) x V (cumecs/m):	0.00	0.08	0.00	0.08
Froude Number:	0.00	0.56	0.00	0.56
Area (m^2):	0.00	1.91	0.00	1.91
Wetted Perimeter (m):	0.00	15.54	0.00	15.54
Flow Width (m):	0.00	15.30	0.00	15.30
Hydraulic Radius (m):	0.00	0.12	0.00	0.12
Composite Manning's n:	0.000	0.023	0.000	0.023
Split Flow?	-	-	-	No

4. CROSS-SECTION DATA:

SEGMENT NO.	LEFT HAND POINT CHAINAGE (m)	LEFT HAND POINT R.L. (m)	RIGHT HAND POINT CHAINAGE (m)	RIGHT HAND POINT R.L. (m)	MANNING'S N
1	-9.035	48.136	-8.000	47.963	0.013
2	-8.000	47.963	-7.950	47.961	0.035
3	-7.950	47.961	-6.450	47.931	0.013
4	-6.450	47.931	-3.800	47.825	0.035
5	-3.800	47.825	-3.690	47.825	0.013
6	-3.690	47.825	-3.650	47.675	0.013
7	-3.650	47.675	-3.200	47.715	0.013
8	-3.200	47.715	0.000	47.822	0.013
9	0.000	47.822	3.200	47.715	0.013
10	3.200	47.715	3.650	47.675	0.013
11	3.650	47.675	3.690	47.825	0.013
12	3.690	47.825	3.800	47.825	0.013
13	3.800	47.825	6.450	47.931	0.035
14	6.450	47.931	7.950	47.961	0.013
15	7.950	47.961	8.000	47.963	0.035
16	8.000	47.963	9.003	48.130	0.035

Rev	Amendments	Approved	Date
A	ISSUED TO COUNCIL	G.K	01/11/24

Scale
H 1:1000
SCALE @ A1
0 10 20 30 40 50

spiire
L6 414 LA TROBE STREET PO BOX 16084 MELBOURNE
VICTORIA 8007 AUSTRALIA T 61 3 9993 7888
spiire.com.au ABN 55 050 029 635

Harlow TARNEIT

Designed: T. NGUYEN
Checked: G. KOHLMAN
Authorised: G. KOHLMAN
Date: 01/11/24

HARLOW ESTATE STAGE 6
DRAINAGE COMPUTATIONS
100YR PC CONVEY SECTIONS - SHEET 2
WYNDHAM CITY COUNCIL
SIG GROUP

PRELIMINARY

Drg No: 309442CD503
Rev: A

file name 309442CD500.dwg layout name CD503 plotted by Thanh Nguyen
file location G:\30\309442\Civil\ACAD plot date 18/09/2025 10:58 AM Sheet 1 of 1 Sheets

PROJECT: SECTION Q
SPRINGFALL ROAD (CH492.72)
Print-out date: 15/01/2025 - Time: 9:04
Data File: G:\30\309443\Civil\12D\PC CONVEY\SECTION Q.dat

1. CROSS-SECTION:

2. DISCHARGE INFORMATION:

100 year (1%) storm event

Total discharge = 1.16 cumecs

There is no pipe discharge
Overland / Channel / Watercourse discharge = 1.157 cumecs

3. RESULTS: Water surface elevation = 46.607m

High Flow Channel grade = 1 in 41.667, Main Channel / Low Flow Channel grade = 1 in 41.667.

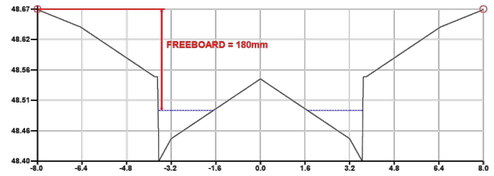
	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (cumecs):	0.00	1.23	0.00	1.23
D(Max) = Max. Depth (m):	0.00	0.19	0.00	0.19
D(Ave) = Ave. Depth (m):	0.00	0.09	0.00	0.09
V = Ave. Velocity (m/s):	0.00	1.47	0.00	1.47
D(Max) x V (cumecs/m):	0.00	0.28	0.00	0.28
D(Ave) x V (cumecs/m):	0.00	0.13	0.00	0.13
Froude Number:	0.00	1.61	0.00	1.61
Area (m^2):	0.00	0.84	0.00	0.84
Wetted Perimeter (m):	0.00	10.04	0.00	10.04
Flow Width (m):	0.00	9.80	0.00	9.80
Hydraulic Radius (m):	0.00	0.08	0.00	0.08
Composite Manning's n:	0.000	0.020	0.000	0.020
Split Flow?	-	-	-	No

4. CROSS-SECTION DATA:

	LEFT HAND POINT		RIGHT HAND POINT		
SEGMENT NO.	CHAINAGE (m)	R.L. (m)	CHAINAGE (m)	R.L. (m)	MANNING'S N
1	-9.200	46.904	-8.000	46.704	0.013
2	-8.000	46.704	-7.950	46.703	0.035
3	-7.950	46.703	-6.450	46.673	0.013
4	-6.450	46.673	-3.800	46.567	0.035
5	-3.800	46.567	-3.690	46.567	0.013
6	-3.690	46.567	-3.650	46.417	0.013
7	-3.650	46.417	-3.200	46.457	0.013
8	-3.200	46.457	0.000	46.563	0.013
9	0.000	46.563	3.200	46.457	0.013
10	3.200	46.457	3.650	46.417	0.013
11	3.650	46.417	3.690	46.567	0.013
12	3.690	46.567	3.800	46.567	0.013
13	3.800	46.567	6.450	46.655	0.035
14	6.450	46.655	7.950	46.685	0.013
15	7.950	46.685	8.000	46.687	0.035
16	8.000	46.687	9.000	46.853	0.035

PROJECT: SECTION R
HUMMELO ROAD (CH867.89)
Print-out date: 10/12/2024 - Time: 3:39
Data File: G:\30\309442\Civil\12D\PC CONVEY\SECTION R.dat

1. CROSS-SECTION:



2. DISCHARGE INFORMATION:

100 year (1%) storm event

Total discharge = 0.062 cumecs

There is no pipe discharge
Overland / Channel / Watercourse discharge = 0.062 cumecs

3. RESULTS: Water surface elevation = 48.491m

High Flow Channel grade = 1 in 200, Main Channel / Low Flow Channel grade = 1 in 200.

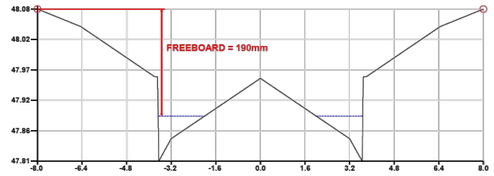
	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (cumecs):	0.00	0.08	0.00	0.08
D(Max) = Max. Depth (m):	0.00	0.09	0.00	0.09
D(Ave) = Ave. Depth (m):	0.00	0.04	0.00	0.04
V = Ave. Velocity (m/s):	0.00	0.57	0.00	0.57
D(Max) x V (cumecs/m):	0.00	0.05	0.00	0.05
D(Ave) x V (cumecs/m):	0.00	0.02	0.00	0.02
Froude Number:	0.00	0.97	0.00	N/A
Area (m^2):	0.00	0.14	0.00	0.14
Wetted Perimeter (m):	0.00	4.11	0.00	4.11
Flow Width (m):	0.00	3.97	0.00	3.97
Hydraulic Radius (m):	0.00	0.03	0.00	0.03
Composite Manning's n:	0.000	0.013	0.000	N/A
Split Flow?	-	-	-	Yes

4. CROSS-SECTION DATA:

	LEFT HAND POINT		RIGHT HAND POINT		
SEGMENT NO.	CHAINAGE (m)	R.L. (m)	CHAINAGE (m)	R.L. (m)	MANNING'S N
1	-8.000	48.671	-7.950	48.669	0.035
2	-7.950	48.669	-6.450	48.639	0.013
3	-6.450	48.639	-3.800	48.551	0.035
4	-3.800	48.551	-3.690	48.551	0.013
5	-3.690	48.551	-3.650	48.401	0.013
6	-3.650	48.401	-3.200	48.441	0.013
7	-3.200	48.441	0.000	48.547	0.013
8	0.000	48.547	3.200	48.441	0.013
9	3.200	48.441	3.650	48.401	0.013
10	3.650	48.401	3.690	48.551	0.013
11	3.690	48.551	3.800	48.551	0.013
12	3.800	48.551	6.450	48.639	0.035
13	6.450	48.639	7.950	48.669	0.013
14	7.950	48.669	8.000	48.671	0.035

PROJECT: SECTION S
HUMMELO ROAD (CH791.89)
Print-out date: 20/01/2025 - Time: 10:54
Data File: G:\30\309443\Civil\12D\PC CONVEY\SECTION S.dat

1. CROSS-SECTION:



2. DISCHARGE INFORMATION:

100 year (1%) storm event

Total discharge = 0.132 cumecs

There is no pipe discharge
Overland / Channel / Watercourse discharge = 0.132 cumecs

3. RESULTS: Water surface elevation = 47.888m

High Flow Channel grade = 1 in 37.6598, Main Channel / Low Flow Channel grade = 1 in 37.6598.

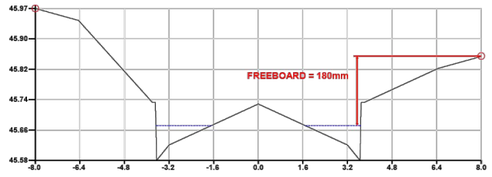
	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (cumecs):	0.00	0.13	0.00	0.13
D(Max) = Max. Depth (m):	0.00	0.08	0.00	0.08
D(Ave) = Ave. Depth (m):	0.00	0.03	0.00	0.03
V = Ave. Velocity (m/s):	0.00	1.21	0.00	1.21
D(Max) x V (cumecs/m):	0.00	0.10	0.00	0.10
D(Ave) x V (cumecs/m):	0.00	0.04	0.00	0.04
Froude Number:	0.00	2.19	0.00	N/A
Area (m^2):	0.00	0.10	0.00	0.10
Wetted Perimeter (m):	0.00	3.46	0.00	3.46
Flow Width (m):	0.00	3.34	0.00	3.34
Hydraulic Radius (m):	0.00	0.03	0.00	0.03
Composite Manning's n:	0.000	0.013	0.000	N/A
Split Flow?	-	-	-	Yes

4. CROSS-SECTION DATA:

	LEFT HAND POINT		RIGHT HAND POINT		
SEGMENT NO.	CHAINAGE (m)	R.L. (m)	CHAINAGE (m)	R.L. (m)	MANNING'S N
1	-8.000	48.078	-7.950	48.077	0.035
2	-7.950	48.077	-6.450	48.047	0.013
3	-6.450	48.047	-3.800	47.958	0.035
4	-3.800	47.958	-3.690	47.958	0.013
5	-3.690	47.958	-3.650	47.808	0.013
6	-3.650	47.808	-3.200	47.848	0.013
7	-3.200	47.848	0.000	47.955	0.013
8	0.000	47.955	3.200	47.848	0.013
9	3.200	47.848	3.650	47.808	0.013
10	3.650	47.808	3.690	47.958	0.013
11	3.690	47.958	3.800	47.958	0.013
12	3.800	47.958	6.450	48.047	0.035
13	6.450	48.047	7.950	48.077	0.013
14	7.950	48.077	8.000	48.078	0.035

PROJECT: SECTION T
ROMANESCO ROAD (CH11.80)
Print-out date: 14/10/2024 - Time: 3:18
Data File: G:\30\309442\Civil\12D\PC CONVEY\SECTION T.dat

1. CROSS-SECTION:



2. DISCHARGE INFORMATION:

100 year (1%) storm event

Total discharge = 0.192 cumecs

There is no pipe discharge
Overland / Channel / Watercourse discharge = 0.192 cumecs

3. RESULTS: Water surface elevation = 45.671m

High Flow Channel grade = 1 in 22.222, Main Channel / Low Flow Channel grade = 1 in 22.222.

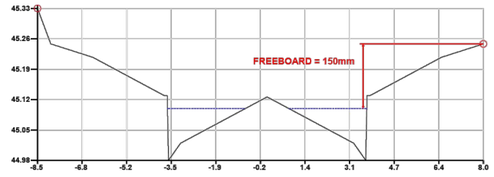
	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (cumecs):	0.00	0.24	0.00	0.24
D(Max) = Max. Depth (m):	0.00	0.09	0.00	0.09
D(Ave) = Ave. Depth (m):	0.00	0.04	0.00	0.04
V = Ave. Velocity (m/s):	0.00	1.72	0.00	1.72
D(Max) x V (cumecs/m):	0.00	0.15	0.00	0.15
D(Ave) x V (cumecs/m):	0.00	0.06	0.00	0.06
Froude Number:	0.00	2.92	0.00	N/A
Area (m^2):	0.00	0.14	0.00	0.14
Wetted Perimeter (m):	0.00	4.11	0.00	4.11
Flow Width (m):	0.00	3.97	0.00	3.97
Hydraulic Radius (m):	0.00	0.03	0.00	0.03
Composite Manning's n:	0.000	0.013	0.000	N/A
Split Flow?	-	-	-	Yes

4. CROSS-SECTION DATA:

	LEFT HAND POINT		RIGHT HAND POINT		
SEGMENT NO.	CHAINAGE (m)	R.L. (m)	CHAINAGE (m)	R.L. (m)	MANNING'S N
1	-8.000	45.974	-7.950	45.973	0.035
2	-7.950	45.973	-6.450	45.943	0.013
3	-6.450	45.943	-3.800	45.731	0.035
4	-3.800	45.731	-3.690	45.731	0.013
5	-3.690	45.731	-3.650	45.581	0.013
6	-3.650	45.581	-3.200	45.621	0.013
7	-3.200	45.621	0.000	45.727	0.013
8	0.000	45.727	3.200	45.621	0.013
9	3.200	45.621	3.650	45.581	0.013
10	3.650	45.581	3.690	45.731	0.013
11	3.690	45.731	3.800	45.731	0.013
12	3.800	45.731	6.450	45.819	0.035
13	6.450	45.819	7.950	45.849	0.013
14	7.950	45.849	8.000	45.851	0.035

PROJECT: SECTION U
HUMMELO ROAD (CH715.89)
Print-out date: 10/12/2024 - Time: 3:49
Data File: G:\30\309442\Civil\12D\PC CONVEY\SECTION U.dat

1. CROSS-SECTION:



2. DISCHARGE INFORMATION:

100 year (1%) storm event

Total discharge = 0.317 cumecs

There is no pipe discharge
Overland / Channel / Watercourse discharge = 0.317 cumecs

3. RESULTS: Water surface elevation = 45.098m

High Flow Channel grade = 1 in 50, Main Channel / Low Flow Channel grade = 1 in 50.

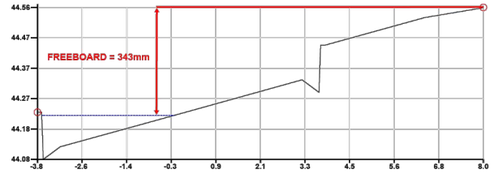
	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (cumecs):	0.00	0.41	0.00	0.41
D(Max) = Max. Depth (m):	0.00	0.12	0.00	0.12
D(Ave) = Ave. Depth (m):	0.00	0.05	0.00	0.05
V = Ave. Velocity (m/s):	0.00	1.44	0.00	1.44
D(Max) x V (cumecs/m):	0.00	0.17	0.00	0.17
D(Ave) x V (cumecs/m):	0.00	0.07	0.00	0.07
Froude Number:	0.00	2.06	0.00	N/A
Area (m^2):	0.00	0.29	0.00	0.29
Wetted Perimeter (m):	0.00	5.94	0.00	5.94
Flow Width (m):	0.00	5.75	0.00	5.75
Hydraulic Radius (m):	0.00	0.05	0.00	0.05
Composite Manning's n:	0.000	0.013	0.000	N/A
Split Flow?	-	-	-	Yes

4. CROSS-SECTION DATA:

	LEFT HAND POINT		RIGHT HAND POINT		
SEGMENT NO.	CHAINAGE (m)	R.L. (m)	CHAINAGE (m)	R.L. (m)	MANNING'S N
1	-8.491	45.330	-8.000	45.248	0.013
2	-8.000	45.248	-7.950	45.247	0.035
3	-7.950	45.247	-6.450	45.217	0.013
4	-6.450	45.217	-3.800	45.128	0.035
5	-3.800	45.128	-3.690	45.128	0.013
6	-3.690	45.128	-3.650	44.978	0.013
7	-3.650	44.978	-3.200	45.018	0.013
8	-3.200	45.018	0.000	45.125	0.013
9	0.000	45.125	3.200	45.018	0.013
10	3.200	45.018	3.650	44.978	0.013
11	3.650	44.978	3.690	45.128	0.013
12	3.690	45.128	3.800	45.128	0.013
13	3.800	45.128	6.450	45.217	0.035
14	6.450	45.217	7.950	45.247	0.013

PROJECT: SECTION V
TUMERIC ROAD (CH640.44)
Print-out date: 20/01/2025 - Time: 10:42
Data File: G:\30\309443\Civil\12D\PC CONVEY\SECTION V.dat

1. CROSS-SECTION:



2. DISCHARGE INFORMATION:

100 year (1%) storm event

Total discharge = 1.31 cumecs

There is no pipe discharge
Overland / Channel / Watercourse discharge = 1.314 cumecs

3. RESULTS: Water surface elevation = 44.220m

High Flow Channel grade = 1 in 200, Main Channel / Low Flow Channel grade = 1 in 200.

	LEFT OVERBANK	MAIN CHANNEL	RIGHT OVERBANK	TOTAL CROSS-SECTION
Discharge (cumecs):	0.00	0.17	0.00	0.17
D(Max) = Max. Depth (m):	0.00	0.14	0.00	0.14
D(Ave) = Ave. Depth (m):	0.00	0.06	0.00	0.06
V = Ave. Velocity (m/s):	0.00	0.81	0.00	0.81
D(Max) x V (cumecs/m):	0.00	0.11	0.00	0.11
D(Ave) x V (cumecs/m):	0.00	0.05	0.00	0.05
Froude Number:	0.00	1.06	0.00	1.06
Area (m^2):	0.00	0.21	0.00	0.21
Wetted Perimeter (m):	0.00	3.62	0.00	3.62
Flow Width (m):	0.00	3.51	0.00	3.51
Hydraulic Radius (m):	0.00	0.06	0.00	0.06
Composite Manning's n:	0.000	0.013	0.000	0.013
Split Flow?	-	-	-	No

4. CROSS-SECTION DATA:

	LEFT HAND POINT		RIGHT HAND POINT		
SEGMENT NO.	CHAINAGE (m)	R.L. (m)	CHAINAGE (m)	R.L. (m)	MANNING'S N
1	-3.800	44.230	-3.690	44.230	0.013
2	-3.690	44.230	-3.650	44.080	0.013
3	-3.650	44.080	-3.200	44.120	0.013
4	-3.200	44.120	0.000	44.226	0.013
5	0.000	44.226	3.200	44.333	0.013
6	3.200	44.333	3.650	44.293	0.013
7	3.650	44.293	3.690	44.443	0.013
8	3.690	44.443	3.800	44.443	0.013
9	3.800	44.443	6.450	44.531	0.035
10	6.450	44.531	7.950	44.561	0.013
11	7.950	44.561	8.000	44.563	0.035

Rev	Amendments	Approved	Date
A	ISSUED TO COUNCIL	G.K	01/11/24

Scale
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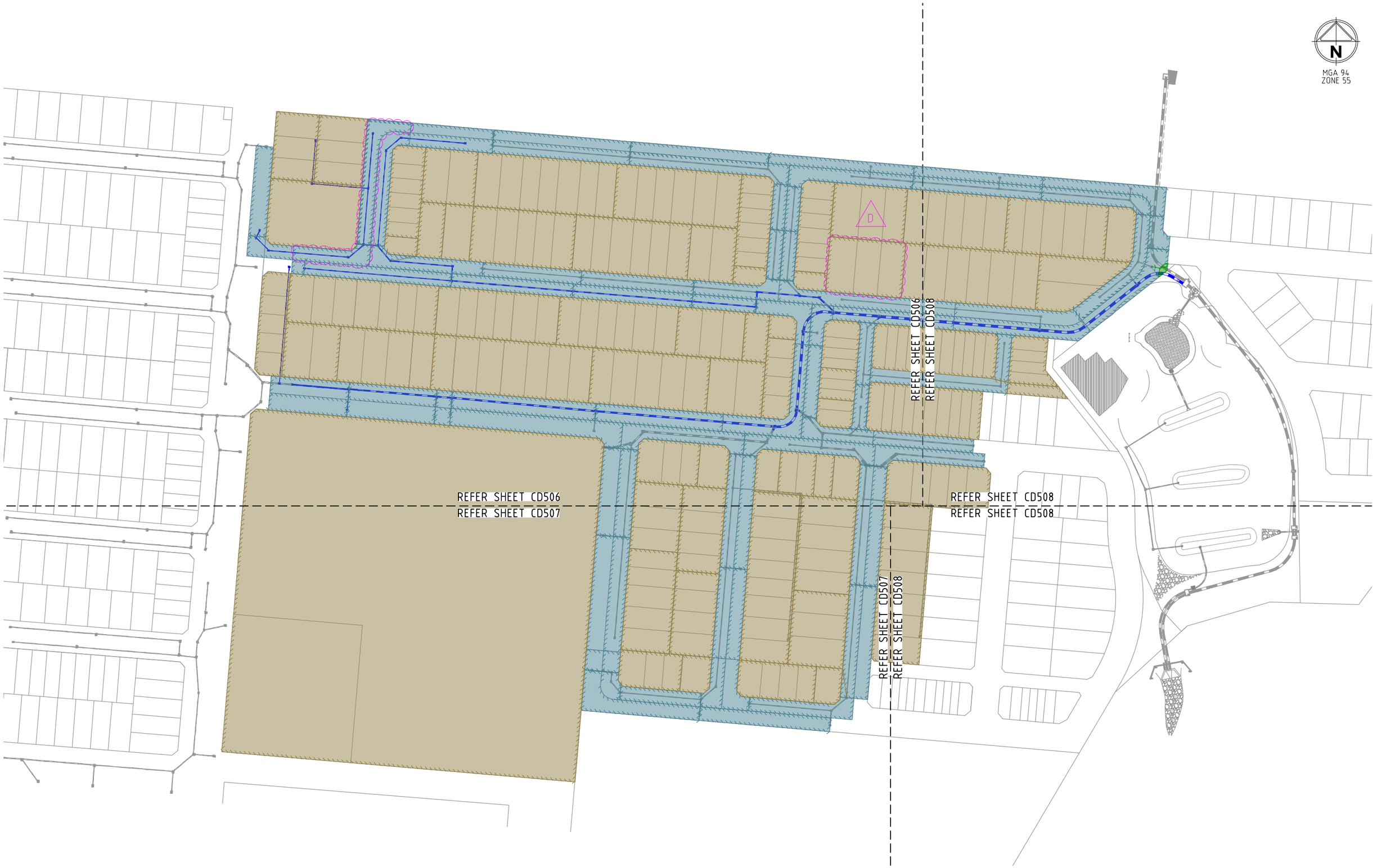
spiire.com.au ABN 55 050 029 635

Harlow TARNEIT

Designed	Checked
T. NGUYEN	G. KOHLMAN
Authorised	Date
G. KOHLMAN	01/11/24

HARLOW ESTATE
STAGE 6
DRAINAGE COMPUTATIONS
100YR PC CONVEY SECTIONS - SHEET 3
WYNDHAM CITY COUNCIL
SIG GROUP

PRELIMINARY Drg No **309442CD504** Rev **A**



Rev	Amendments	Approved	Date
D	CATCHMENTS AMENDED	G.K	18/03/25
C	CATCHMENTS AMENDED	G.K	28/01/25
B	CATCHMENTS AMENDED	G.K	18/12/24
A	ISSUED TO COUNCIL	G.K	01/11/24

Scale

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Harlow TARNEIT

Designed T. NGUYEN
Checked G. KOHLMAN
Authorised G. KOHLMAN
Date 01/11/24

HARLOW ESTATE STAGE 6

DRAINAGE COMPUTATIONS

5YR CATCHMENT PLAN - SHEET 1

WYNDHAM CITY COUNCIL

SIG GROUP

PRELIMINARY

Drg No 309442CD505

Rev D

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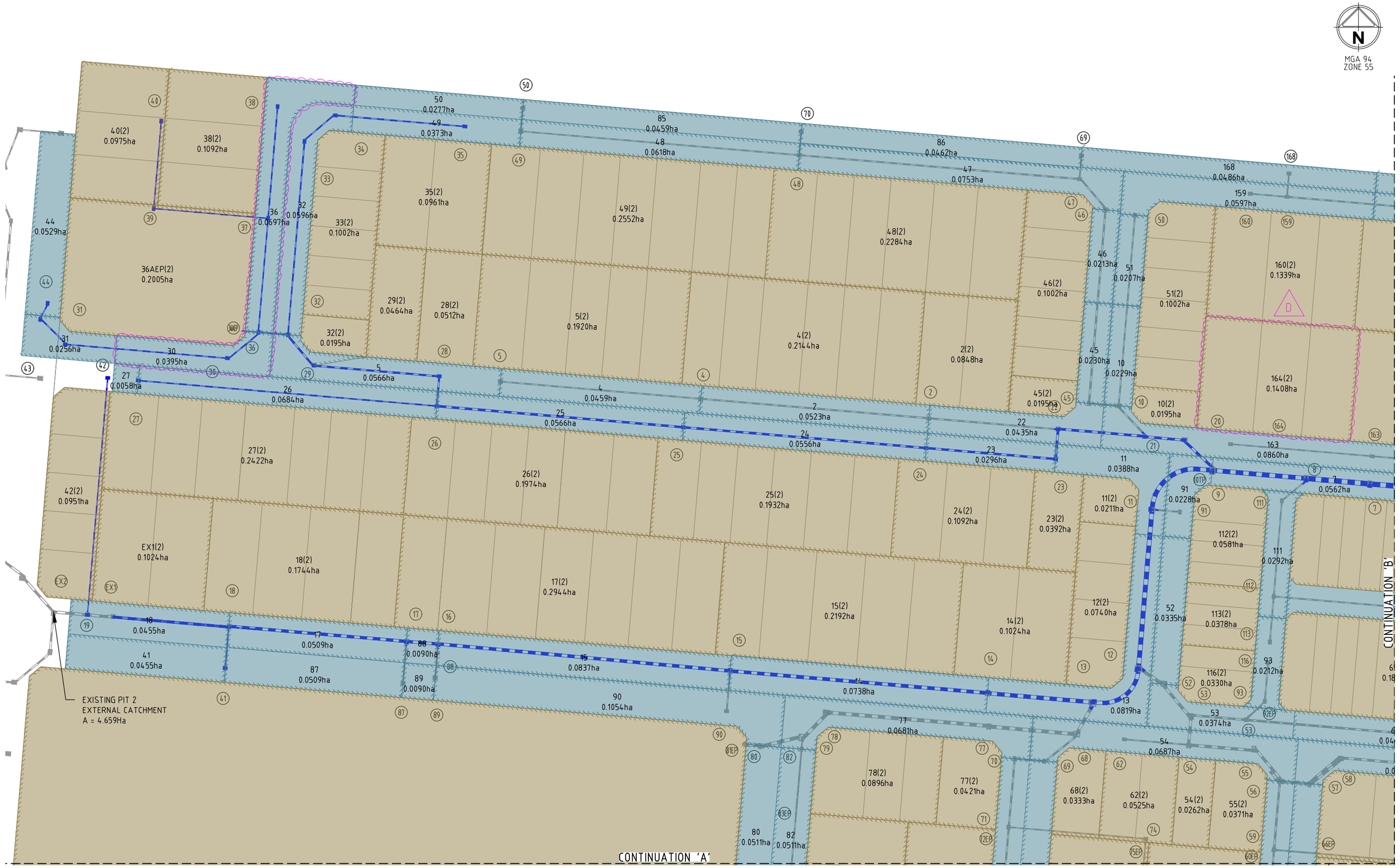
file location G:\30\309442\Civil\ACAD plot date 18/03/2025 10:58 AM Sheet 1 of 1 Sheets



Rev	Amendments	Approved	Date
D	CATCHMENTS AMENDED	G.K	18/03/25
C	CATCHMENTS AMENDED	G.K	28/01/25
B	CATCHMENTS AMENDED	G.K	18/12/24
A	ISSUED TO COUNCIL	G.K	01/11/24

Scale
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Harlow TARNEIT

Designed	Checked
T. NGUYEN	G. KOHLMAN
Authorised	Date
G. KOHLMAN	01/11/24

HARLOW ESTATE STAGE 6

DRAINAGE COMPUTATIONS

5YR CATCHMENT PLAN - SHEET 2

WYNDHAM CITY COUNCIL

SIG GROUP

PRELIMINARY

Drg No 309442CD506

Rev D

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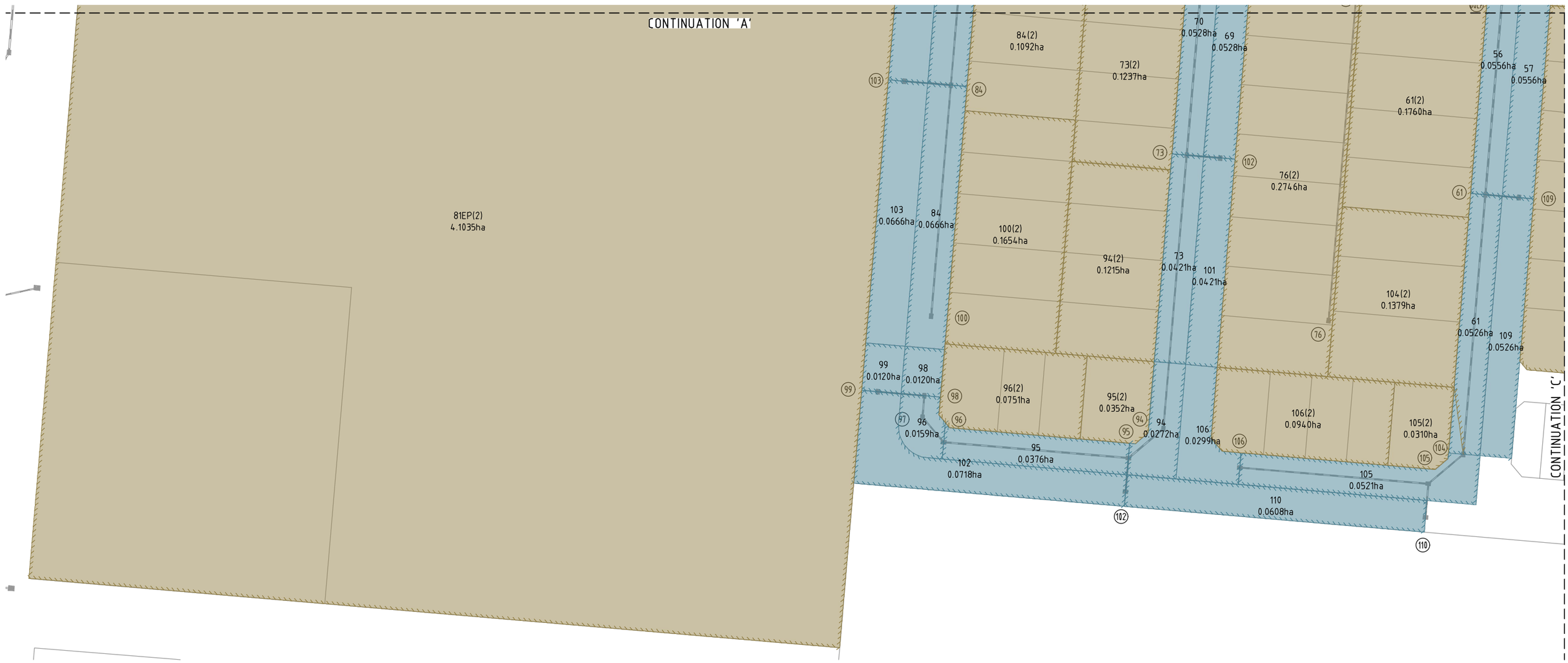
file location G:\30\309442\Civil\ACAD plot date 18/03/2025 10:58 AM Sheet 1 of 1 Sheets



Rev	Amendments	Approved	Date
A	ISSUED TO COUNCIL	G.K	01/11/24

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Harlow TARNEIT

Designed	Checked
T. NGUYEN	G. KOHLMAN
Authorised	Date
G. KOHLMAN	01/11/24

HARLOW ESTATE STAGE 6

DRAINAGE COMPUTATIONS
5YR CATCHMENT PLAN - SHEET 3
WYNDHAM CITY COUNCIL
SIG GROUP

PRELIMINARY

Drg No 309442CD507
Rev A

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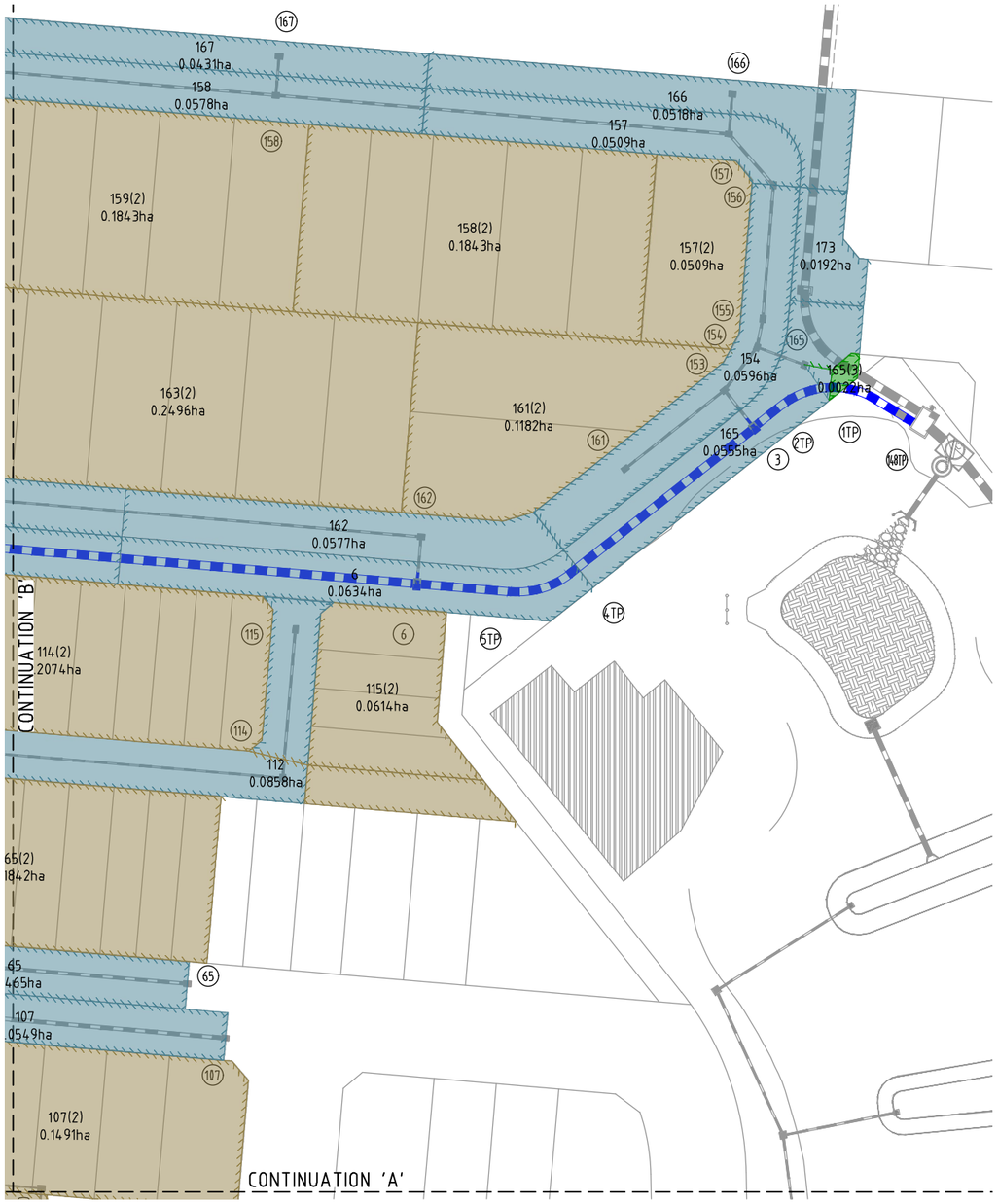

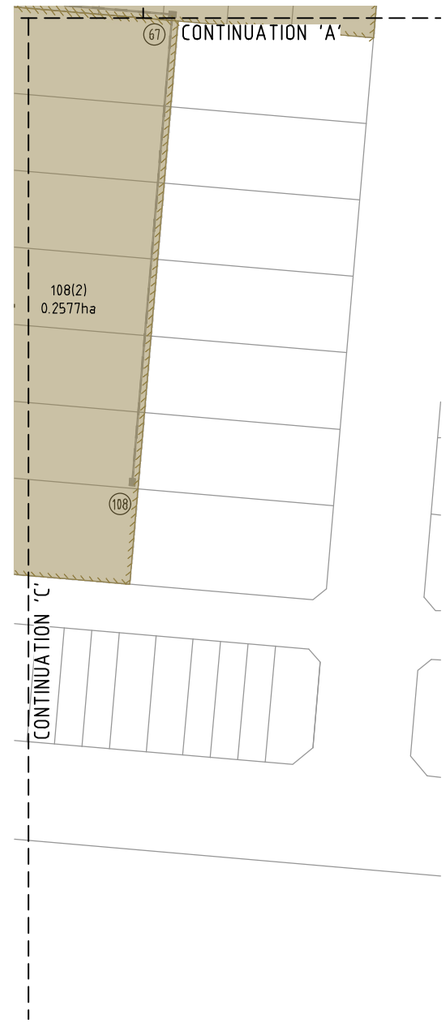

Rev	Amendments	Approved	Date
B	CATCHMENTS AMENDED	G.K	18/12/24
A	ISSUED TO COUNCIL	G.K	01/11/24

Scale
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SCALE @ A1
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Harlow TARNEIT

Designed T. NGUYEN
Checked G. KOHLMAN
Authorised G. KOHLMAN
Date 01/11/24

HARLOW ESTATE STAGE 6

DRAINAGE COMPUTATIONS

5YR CATCHMENT PLAN - SHEET 4
WYNDHAM CITY COUNCIL
SIG GROUP

PRELIMINARY

Drg No 309442CD508
Rev B

file name 309442CD508.dwg layout name CD508 plotted by Thanh Nguyen
file location G:\30\309442\Civil\ACAD plot date 18/03/2025 10:58 AM Sheet 1 of 1 Sheets

			SUB-CATCHMENT RUNOFF						DRAIN DESIGN														HEADLOSSES							PART FULL		DESIGN LEVELS				
			C	A	C	A	C	A	Q	tc	i	A	C	CA	Qp	L	S	T	Qcap	Qa/Qcap	Vcap		V2/2g	Ku	hu	Kw	hw	Sf	hf							
STRUCTURE No.	DOWNSTREAM STRUCTURE No.	PIT TYPE	CO-EFFIECIENT OF RUNOFF	SUB-CATCHMENT AREA (ROAD)	CO-EFFIECIENT OF RUNOFF	SUB-CATCHMENT AREA (LOT)	CO-EFFIECIENT OF RUNOFF	SUB-CATCHMENT AREA (MISC)	SUB-CATCHMENT DISCHARGE	CRITICAL TIME OF CONCENTRATION	RAINFALL INTENSITY	CUMULATIVE CATCHMENT AREA	EFFECTIVE CO-EFFICIENT OF RUNOFF	TOTAL (C x A)	PIPE FLOW	REACH LENGTH	PIPE GRADE	PIPE DIAMETER	PIPE GRADE CAPACITY	Q(actual) / Q(capacity)	CAPACITY VELOCITY (Qcap/AREA)	TIME IN PIPE	PIPE VELOCITY HEAD	U/S PIT HEADLOSS COEFF	U/S PIT PRESSURE HEADLOSS	W.S.E. COEFF	CHAINGE IN W.S.E.	PIPE FRICTION SLOPE	PIPE FRICTION (HEADLOSS L*Sf)	NORMAL DEPTH	NORMAL DEPTH VELOCITY	UPSTREAM PIPE H.G.L.	DOWNSTREAM PIPE H.G.L.	PIT GRATE LEVEL	CALCULATED FREEBOARD	STRUCTURE
				ha		ha		ha	l/s	min	mm/hr	ha		ha	l/s	m	(1 in)	mm	l/s	%	m/s	min.	m		m		m	%	m	m	m/s	m	m	m	m	
148TP	1	TANGENT POINT								12.05	59.529	18.169	0.638	11.593	1937	4.57	500	1350	2388	80	1.668	0.046	0.092	0.00	0.000		0.000	0.129	0.006	0.916	1.85	46.499	46.493	47.741	1.242	
1TP	148TP	TANGENT POINT								12.03	59.592	18.169	0.638	11.593	1937	2.61	500	1350	2388	80	1.668	0.026	0.092	0.00	0.000		0.000	0.129	0.003	0.917	1.85	46.502	46.499	47.693	1.190	
2TP	1TP	TANGENT POINT								11.86	60.006	18.169	0.638	11.593	1937	17.09	500	1350	2388	81	1.668	0.171	0.093	0.00	0.000		0.000	0.131	0.022	0.921	1.86	46.525	46.502	47.478	0.953	
3	2TP	JUNCTION PIT							0	11.80	60.152	18.169	0.638	11.593	1937	6.07	500	1350	2388	81	1.668	0.061	0.093	0.50	0.047		0.047	0.132	0.008	0.923	1.86	46.533	46.525	47.564	0.985	
4TP	3	TANGENT POINT								11.40	61.116	17.090	0.637	10.890	1868	39.87	500	1350	2388	77	1.668	0.398	0.085	0.00	0.000		0.000	0.120	0.048	0.892	1.84	46.627	46.579	47.739	1.112	
5TP	4TP	TANGENT POINT								11.29	61.372	17.090	0.637	10.890	1868	10.57	500	1350	2388	78	1.668	0.106	0.086	0.00	0.000		0.000	0.121	0.013	0.895	1.84	46.640	46.627	47.756	1.116	
6	5TP	JUNCTION PIT	0.561	0.063					8	11.14	61.753	17.090	0.637	10.890	1868	15.76	500	1350	2388	78	1.668	0.157	0.087	0.50	0.043		0.043	0.122	0.019	0.899	1.85	46.659	46.640	47.523	0.820	
7	6	JUNCTION PIT	0.561	0.056					8	10.39	63.566	16.493	0.636	10.497	1853	75.00	500	1350	2388	78	1.668	0.749	0.086	0.50	0.043		0.043	0.120	0.090	0.894	1.84	46.793	46.703	47.648	0.812	
8	7	JUNCTION PIT							0	10.20	64.008	16.437	0.637	10.466	1861	18.28	500	1350	2388	78	1.668	0.183	0.086	0.50	0.043		0.043	0.121	0.022	0.896	1.84	46.858	46.836	47.926	1.025	
9	8	JUNCTION PIT							0	9.51	66.620	15.514	0.637	9.875	1827	26.95	500	1350	2388	77	1.668	0.269	0.083	0.70	0.058		0.058	0.117	0.032	0.885	1.84	46.933	46.901	48.049	1.058	
10TP	9	TANGENT POINT								9.88	64.999	12.211	0.626	7.644	1399	4.65	500	1200	1744	79	1.542	0.050	0.076	0.00	0.000		0.000	0.125	0.006	0.806	1.71	46.997	46.991	47.975	0.978	
11	10TP	JUNCTION PIT	0.561	0.039	0.708	0.021			9	9.68	65.876	12.211	0.626	7.644	1399	18.86	500	1200	1744	80	1.542	0.204	0.078	0.50	0.039		0.039	0.129	0.024	0.814	1.71	47.021	46.997	48.093	1.033	
12	11	JUNCTION PIT			0.708	0.074			13	9.18	68.006	12.128	0.626	7.594	1435	45.85	500	1200	1744	82	1.542	0.495	0.082	0.50	0.041		0.041	0.135	0.062	0.829	1.72	47.122	47.060	48.043	0.880	
12ATP	12	TANGENT POINT								9.02	68.720	10.254	0.620	6.359	1215	15.73	400	1050	1366	89	1.577	0.166	0.100	0.00	0.000		0.000	0.197	0.031	0.771	1.78	47.194	47.163	47.914	0.720	
13	12ATP	JUNCTION PIT	0.561	0.082					11	9.00	68.779	10.254	0.620	6.359	1215	1.28	400	1050	1366	89	1.578	0.014	0.100	1.50	0.151		0.151	0.198	0.003	0.771	1.78	47.197	47.194	47.708	0.361	
14	13	JUNCTION PIT	0.561	0.074	0.708	0.102			27	12.65	58.096	6.121	0.585	3.579	578	30.47	263	1050	1683	34	1.944	0.261	0.023	0.50	0.011		0.011	0.045	0.014	0.424	1.76	47.361	47.347	47.810	0.437	
15	14	JUNCTION PIT	0.561	0.084	0.708	0.219			48	11.90	59.907	5.945	0.583	3.465	577	73.83	300	900	1046	55	1.644	0.749	0.042	0.50	0.021		0.021	0.101	0.075	0.477	1.68	47.447	47.372	48.056	0.588	
16	15	JUNCTION PIT							0	11.19	61.617	5.536	0.579	3.204	548	83.72	185	825	1056	52	1.975	0.706	0.054	0.50	0.027		0.027	0.146	0.122	0.422	1.99	47.590	47.468	48.608	0.991	
17	16	JUNCTION PIT	0.561	0.051	0.708	0.294			57	11.10	61.845	5.518	0.579	3.194	549	9.03	250	750	704	78	1.594	0.094	0.079	0.50	0.039		0.039	0.243	0.022	0.498	1.76	47.639	47.617	48.365	0.687	
18	17	GRATED SIDE ENTRY PIT	0.561	0.046	0.708	0.174			36	10.57	63.130	5.122	0.572	2.928	513	50.92	249	750	706	73	1.598	0.531	0.069	0.50	0.034		0.034	0.213	0.108	0.475	1.74	47.786	47.678	48.535	0.714	
EX1	18	JUNCTION PIT			0.708	0.102			17	10.33	63.710	4.856	0.567	2.754	487	33.19	104	675	826	59	2.308	0.240	0.095	0.50	0.047		0.047	0.336	0.111	0.373	2.40	47.932	47.821	48.820	0.841	
19	EX1	JUNCTION PIT							0	10.25	63.894	4.754	0.564	2.681	476	7.31	213	675	576	83	1.611	0.076	0.090	0.50	0.045		0.045	0.320	0.023	0.468	1.80	48.003	47.980	48.845	0.796	
EX2	19	JUNCTION PIT	0.561	4.659					466	10.15	64.137	4.659	0.561	2.614	466	9.72	213	675	576	81	1.611	0.101	0.086	0.43	0.037		0.037	0.307	0.030	0.460	1.79	48.078	48.048	48.874	0.759	
20	9	JUNCTION PIT							0	8.80	69.655	3.641	0.667	2.428	470	12.55	63	675	1063	44	2.970	0.070	0.088	0.90	0.079		0.079	0.312	0.039	0.314	2.88	47.030	46.991	48.083	0.973	
21	20	JUNCTION PIT							0	8.71	70.029	3.641	0.667	2.428	472	11.34	100	600	614	77	2.173	0.087	0.142	1.40	0.199		0.199	0.591	0.067	0.395	2.40	47.176	47.109	48.139	0.764	
22	21	JUNCTION PIT	0.561	0.044					6	8.70	70.108	2.561	0.671	1.719	335	24.80	65	600	761	44	2.691	0.154	0.072	1.80	0.129		0.129	0.297	0.074	0.279	2.60	47.449	47.375	48.098	0.520	
23	22	JUNCTION PIT	0.561	0.030	0.708	0.039			11	8.66	70.273	1.882	0.673	1.267	247	8.50	276	600	370	67	1.307	0.108	0.039	1.50	0.059		0.059	0.162	0.014	0.359	1.40	47.592	47.578	48.098	0.448	
24	23	JUNCTION PIT	0.561	0.056	0.708	0.109			26	8.15	72.469	1.813	0.674	1.222	246	37.06	270	525	262	94	1.209	0.511	0.066	0.50	0.033		0.033	0.327	0.121	0.405	1.37	47.771	47.650	48.284	0.479	
25	24	JUNCTION PIT	0.561	0.057	0.708	0.193			40	7.57	74.962	1.690	0.676	1.143	238	69.54	300	525	248	96	1.147	1.010	0.062	0.50	0.031		0.031	0.306	0.213	0.412	1.31	48.017	47.804	48.631	0.583	
26	25	GRATED SIDE ENTRY PIT	0.561	0.068	0.708	0.197			43	6.54	79.378	1.441	0.676	0.974	215	70.70	300	525	248	86	1.147	1.027	0.050	2.00	0.100		0.100	0.249	0.176	0.377	1.29	48.224	48.048	49.095	0.770	
27	26	GRATED SIDE ENTRY PIT	0.561	0.006	0.708	0.242			42	5.00	86.000	0.248	0.705	0.175	42	85.50	89	300	103	41	1.454	0.980	0.018	5.00	0.089		0.089	0.186	0.159	0.133	1.38	48.484	48.324	49.605	1.033	
28	26	JUNCTION PIT			0.708	0.051			9	6.85	78.025	0.955	0.670	0.640	139	8.50	300	450	165	84	1.035	0.137	0.039	1.30	0.050		0.050	0.237	0.020	0.317	1.16	48.344	48.324	49.263	0.868	
29	28	JUNCTION PIT			0.708	0.046			8	6.36	80.163	0.908	0.668	0.607	135	35.90	300	450	165	82	1.035	0.578	0.037	0.60	0.022		0.022	0.224	0.081	0.310	1.16	48.476	48.395	49.514	1.016	
32	29	GRATED SIDE ENTRY PIT	0.561	0.060	0.708	0.020			11	6.17	80.979	0.861	0.666	0.574	129	11.79	300	450	165	78	1.035	0.190	0.034	1.80	0.060		0.060	0.205	0.024	0.300	1.15	48.522	48.498	49.556	0.974	
33	32	JUNCTION PIT			0.708	0.100			17	5.90	82.125	0.196	0.708	0.139	32	55.35	89	300	103	31	1.452	0.635	0.010	0.60	0.006		0.006	0.107	0.059	0.115	1.28	48.642	48.582	49.998	1.350	
34	33	JUNCTION PIT							0	5.69	83.054	0.096	0.708	0.068	16	11.70	230	300	64	25	0.902	0.216	0.003	0.60	0.002		0.002	0.026	0.003	0.101	0.75	48.651	48.648	50.129	1.477	
35	34	JUNCTION PIT			0.708	0.096			16	5.00	86.000	0.096	0.708	0.068	16	37.10	230	300	64	25	0.902	0.685	0.003	5.00	0.013		0.013	0.024	0.010	0.103	0.75	48.661	48.652	49.718	1.044	
36	32	GRATED SIDE ENTRY PIT	0.561	0.070					9	5.95	81.908	0.591	0.662	0.391	89	8.50	230	375	116	77	1.048	0.135	0.033	1.80	0.060		0.060	0.257	0.022	0.247	1.15	48.604	48.582	49.556	0.893	
37	36	JUNCTION PIT							0	5.71	82.965	0.207	0.708	0.146	34	32.60	68	300	118	29	1.664	0.327	0.012	1.50	0.017		0.017	0.122	0.040	0.110	1.44	48.703	48.664	49.884	1.164	
38	37	JUNCTION PIT			0.708	0.109			18	5.00	86.000	0.109	0.708	0.077	18	32.00	78	300	110	17	1.553	0.343	0.003	5.00	0.017		0.017	0.033	0.011	0.083	1.15	48.731	48.721	50.267	1.518	
30	36	GRATED SIDE ENTRY PIT	0.561	0.040					5	6.01	81.661	0.118	0.561	0.066	15	11.79	180	300	72	21	1.019	0.193	0.002	0.90	0.002		0.002	0.024	0.003	0.093	0.80	48.667	48.664	49.481	0.813	
31	30	GRATED SIDE ENTRY PIT	0.561	0.026					3	5.25	84.925	0.079	0.561	0.044	10	46.45	180	300	72	14	1.020	0.759	0.001	0.80	0.001		0.001	0.012	0.005	0.077	0.73	48.674	48.669	49.575	0.900	
43	31	JUNCTION PIT							0	5.08	85.646	0.053	0.561	0.030	7	10.26	180	300	72	10	1.020	0.168	0.001	1.00	0.001		0.001	0.005	0.001	0.063	0.65	48.675	48.675	49.890	1.214	
44	43	GRATED SIDE ENTRY PIT	0.561	0.053					7	5.00	86.000	0.053	0.561	0.030	7	5.05	180	300	72	10	1.020	0.082	0.001	5.00	0.003		0.003	0.005	0.000	0.064	0.65	48.676	48.676	49.698	1.020	
39	37	JUNCTION PIT							0	5.45	84.058	0.097	0.708	0.069	16	32.75	28	225	85	19	2.148	0.254	0.008	1.30	0.011		0.011	1.991	0.684	0.066	1.65	49.373	48.721	50.179	0.795	
40	39	JUNCTION PIT			0.708	0.097			16	5.00	86.000	0.097	0.708	0.069	16	25.00	150	225	37	45	0.922	0.452	0.009	5.00	0.044		0.044	0.667	0.167	0.106	0.90	49.591	49.424	50.349	0.714	
41	18	GRATED SIDE ENTRY PIT	0.561	0.046					6	5.00	86.000	0.046	0.561	0.026	6	11.80	100	300	97	6	1.369	0.144	0.000	5.00	0.002		0.002	0.004	0.000	0.051	0.76	47.821	47.821	48.535	0.711	
42	19	JUNCTION PIT			0.708	0.095			16	5.00	86.000	0.095	0.708	0.067	16	67.85	60	225	58	28	1.455	0.777	0.008	5.00	0.042		0.042	0.510	0.378	0.081	1.25	48.394	48.048	49.804	1.369	
36AEP	36	ENDPIPE			0.708	0.201			34	5.00	86.000	0.201	0.708	0.142	34	4.75	100	225	45	75	1.130	0.070	0.037	0.00	0.000		0.000	0.570	0.027	0.146	1.24	48.691	48.664	49.822	1.131	
2	22	GRATED SIDE ENTRY PIT	0.561	0.052	0.708	0.085			21	6.87	77.952	0.646	0.673	0.435	94	37.06	100	375	175	54	1.587	0.389	0.037	0.50	0.019		0.019	0.288	0.107	0.196	1.61	47.685	47.578	48.284	0.580	
4	2	GRATED SIDE ENTRY PIT	0.561	0.046	0.708	0.214			42	5.89	82.187	0.509	0.678	0.345	79	65.34	206	375	122	65	1.106	0.985	0.026	2.10	0.055		0.055	0.202	0.132	0.219	1.17	47.835	47.703	48.610	0.721	
5	4	GRATED SIDE ENTRY PIT	0.561	0.057	0.708	0.192			40	5.00	86.000	0.249	0.675	0.168	40	57.40	161	300	76	53	1.079	0.887	0.016	5.33	0.087		0.087	0.171	0.098	0.154	1.09	47.988	47.890	48.972	0.897	
10	21	GRATED SIDE ENTRY PIT	0.561	0.023	0.708	0.020			6	8.49	70.998	1.105	0.657	0.726	143	11.81	250	450	180	79	1.134	0.174	0.041	0.90	0.037		0.037	0.252	0.030	0.303	1.26	47.405	47.375	48.244	0.802	
45	10	GRATED SIDE ENTRY PIT	0.561	0.023	0.708	0.020			6	8.44	71.209	0.941	0.655	0.617	122	8.50	38	450	461	26	2.897	0.049	0.030	1.50	0.045		0.045	0.183	0.016	0.158	2.45	47.458	47.442	48.244	0.741	
46	45	GRATED SIDE ENTRY PIT	0.561	0.021	0.708	0.100			20	7.63	74.706	0.899	0.656	0.590	122	55.35	250	450	180	68	1.134	0.813	0.030	0.90	0.027		0.027	0.184	0.102	0.272	1.22	47.605	47.503	48.393	0.760	
47	46	JUNCTION PIT	0.561	0.075					10	7.45	75.458	0.777	0.652	0.507	106	11.78	200	375	124	86	1.123	0.175	0.047	0.90	0.043		0.043	0.367	0.043	0.267	1.26	47.676	47.632	48.465	0.747	
48	47	GRATED SIDE ENTRY PIT	0.561	0.062	0.708	0.228			47	6.17	80.961	0.656	0.669	0.439	99	80.30	231	375	116	85	1.046	1.280	0.041	2.10	0.086		0.086	0.317	0.254	0.267	1.17	47.972	47.718	48.702	0.644	
49	48	GRATED SIDE ENTRY PIT	0.561	0.037	0.708	0.255			48	5.00	86.000	0.320	0.678	0.217	52	79.80	145	300	80	65	1.135	1.172	0.027	1.50	0.041		0.041	0.287	0.229	0.175	1.21	48.287	48.058	49.297	0.969	
50	49	GRATED SIDE ENTRY PIT	0.561	0.028					4	5.00	86.000	0.028	0.561	0.016	4	6.70	100	300	97	4	1.369	0.082	0.000	5.00	0.001		0.001	0.001	0.000	0.040	0.66	48.328	48.328	49.297	0.969	
51	10	GRATED SIDE ENTRY PIT	0.561	0.021	0.708	0.100			20	5.00	86.000	0.121	0.683	0.083	20	54.60	59	300	126	16	1.785	0.510	0.004	5.00	0.020		0.020	0.042	0.023	0.080	1.30	47.465	47.442	48.397	0.911	
52	12	GRATED SIDE ENTRY PIT	0.561	0.034					4	7.25	76.320	1.753	0.657	1.153	244	9.32	150	750	909	27	2.058	0.075	0.016	0.60	0.009		0.009	0.048	0.004	0.266	1.75	47.168	47.163	47.861	0.684	
53	52	GRATED SIDE ENTRY PIT	0.561	0.037					5	7.12	76.903	1.720	0.659	1.134	242	11.86	300	750	643	38	1.455	0.136	0.015	0.90	0.014		0.014	0.047	0.006	0.319	1.35	47.182	47.177	47.675	0.479	
54	53	GRATED SIDE ENTRY PIT	0.561	0.069	0.708	0.026			14	7.28	76.186	1.419	0.659	0.935	198	8.50	300	750	643	31	1.455	0.097	0.010	1.60	0.016		0.016	0.032	0.003	0.286	1.28	47.199	47.196	47.675	0.460	
55	54	JUNCTION PIT			0.708	0.037			6	7.07	77.106	1.272	0.661	0.841	180	18.70	300	750	643	28	1.455	0.214	0.008	0.90	0.008		0.008	0.026	0.005	0.272	1.25	47.220	47.215	47.940	0.712	
56	55	GRATED SIDE ENTRY PIT	0.561	0.056					7	6.94	77.676	1.234	0.660	0.815	176	11.79	251	675	531	33	1.483	0.133	0.012	0.90	0.011		0.011	0.044	0.005	0.268	1.33	47.233	47.228	47.885	0.641	
57	56	GRATED SIDE ENTRY PIT	0.561	0.056					7	5.84	82.401	0.260	0.645	0.168	38	8.50	300	675	485	8	1.357	0.104	0.001	0.90	0.001		0.001	0.002	0.000	0.128	0.81	47.244	47.244	47.885	0.640	
58	57	JUNCTION PIT							0	5.68	83.074	0.204	0.668	0.136	31	11.79	300	600	355	9	1.254	0.157	0.001	0.90	0.001		0.001	0.003	0.000	0.121	0.77	47.245	47.245	47.943	0.697	
59	56	JUNCTION PIT							0	6.79	78.313	0.919	0.670	0.616	134	19.60	66	450	351	38	2.205	0.148	0.036	0.90	0.033		0.033	0.221	0.043	0.193	2.06	47.287	47.244	48.148	0.828	
60EP	59	ENDPIPE							0	6.94	77.652	0.671	0.655	0.440	99	2.00	200	375	124	76	1.123	0.030	0.038	0.00	0.000		0.000	0.292	0.006	0.246	1.24	47.326	47.320	48.158	0.832	
61	60EP	GRATED SIDE ENTRY PIT	0.561	0.053	0.708	0.176			37	6.23	80.712	0.671	0.655	0.440	99	47.95	200	375	124	79	1.123	0.712	0.041	1.30	0.053		0.053	0.316	0.151	0.253	1.25	47.477	47.326	48.232	0.702	
62	54	JUNCTION PIT			0.708	0.052			9	5.00	86.000	0.052	0.708	0.037	9	18.40	23	375	368	2	3.330	0.092	0.000	5.00	0.002		0.002	0.003	0.000	0.040	1.40	47.216	47.215	47.903	0.685	
63	53	JUNCTION PIT							0	6.05	81.465	0.285	0.673	0.192	43	15.78	40	450	452	10	2.844	0.092	0.004	0.50	0.002		0.002	0.023	0.004	0.094	1.80	47.200	47.196	47.922	0.720	
64EP	63	ENDPIPE							0	5.64	83.255	0.231	0.678	0.157	37	28.32	250	450	180	20	1.134	0.416	0.003	0.00	0.000		0.000	0.016	0.005	0.137	0.89	47.206	47.202	47.941	0.735	
65	64EP	GRATED SIDE ENTRY PIT	0.561	0.047	0.708	0.184			37	5.00	86.000	0.231	0.678	0.157	37	43.45	250	450	180	21	1.134	0.638	0.003	5.00	0.014		0.014	0.017	0.007	0.139	0.89	47.214	47.206	47.628	0.400	
66EP	59	ENDPIPE							0	6.42	79.915	0.258	0.708	0.182	41	13.25	45	300	144	28	2.040	0.108	0.017	0.00	0.000		0.000	0.175	0.023	0.109	1.75	47.343	47.320	48.419	1.076	
67	66EP	JUNCTION PIT							0	6.20	80.828	0.258	0.708	0.182	41	26.00	45	300	144	28	2.040	0.212	0.017	1.30	0.022		0.022	0.179	0.047	0.109	1.76	47.390	47.343	48.440	1.028	
68	13	JUNCTION PIT			0.708	0.033			6	8.89	69.269	5.843	0.640	3.739	719	11.26	300	900	1046	69	1.644	0.114	0.065	1.60	0.104		0.104	0.158	0.018	0.549	1.77	47.365	47.347	47.950	0.480	
69	68	GRATED SIDE ENTRY PIT	0.561	0.053					7	7.24	76.379	0.967	0.654	0.633	134	11.86	300	450	165	82	1.035	0.191	0.036	0.90	0.033		0.033	0.222	0.026	0.309	1.15	47.496	47.469	47.965	0.437	
70	69	GRATED SIDE ENTRY PIT	0.561	0.053					7	7.10	76.967	0.914	0.660	0.603	129	8.50	300	450	165	78	1.035	0.137	0.034	1.50	0.050		0.050	0.205	0.017	0.300	1.15	47.546	47.528	47.965	0.369	
71	70	JUNCTION PIT							0	6.97	77.535	0.871	0.665	0.580	125	19.60	300	450	165	76	1.035	0.316	0.031	1.00	0.031		0.031	0.192	0.038	0.293	1.14	47.634	47.596	48.237	0.571	
72EP	71	ENDPIPE							0	7.00	77.421	0.599	0.646	0.386	86	2.00	180	375	131	64	1.184	0.028	0.029	0.00	0.000		0.000	0.225	0.004	0.217	1.25	47.670	47.665	48.249	0.579	
73	72EP	GRATED SIDE ENTRY PIT	0.561	0.042	0.708	0.124			27	6.37	80.112	0.599	0.646	0.386	86	44.45	180	375	131	66	1.184	0.626	0.031	1.10	0.034		0.034	0.240	0.107	0.222	1.26	47.776	47.670	48.350	0.540	
74	71	JUNCTION PIT							0	5.75	82.790	0.275	0.708	0.194	45	39.25	80	300	108	41	1.530	0.428	0.020	1.30	0.027		0.027	0.214	0.084	0.134	1.46	47.749	47.665	48.524	0.748	
75EP	74	ENDPIPE							0	5.73	82.866	0.275	0.708	0.194	46	2.00	52	300	134	33	1.898	0.018	0.020	0.00	0.000		0.000	0.214	0.004	0.119	1.71	47.780	47.775	48.536	0.756	
76	75EP	JUNCTION PIT			0.708	0.275			46	5.00	86.000	0.275	0.708	0.194	46	83.00	52	300	134	35	1.898	0.729	0.022	5.00	0.110		0.110	0.467	0.433	0.122	1.72	48.167	47.780	48.934	0.657	
77	68	GRATED SIDE ENTRY PIT	0.561	0.068	0.708	0.042			16	8.71	70.030	4.813	0.636	3.064	596	24.81	148	900	1488	40	2.338	0.177	0.045	0.50	0.022		0.022	0.108	0.027	0.396	2.21	47.496	47.469	47.883	0.364	
78	77	JUNCTION PIT			0.708	0.090			15	8.33	71.698	4.703	0.637	2.996	597	46.85	200	900	1281	47	2.013	0.388	0.045	0.60	0.027		0.027	0.109	0.051	0.432	1.98	47.569	47.519	48.215	0.619	
79	78	JUNCTION PIT							0	8.20	72.230	4.613	0.636	2.932	588	10.56	400	900	906	65	1.423	0.124	0.044	0.90	0.039		0.039	0.106	0.011	0.529	1.51	47.608	47.596	48.364	0.717	
80	79	GRATED SIDE ENTRY PIT	0.561	0.051					7	8.06	72.843	4.155	0.634	2.634	533	12.19	400	900	906	59	1.423	0.143	0.036	0.60	0.021		0.021	0.087	0.011	0.497	1.48	47.657	47.647	48.154	0.475	

A	ISSUED TO COUNCIL	G.K	01/11/24
Rev	Amendments	Approved	Date

Scale
H 1:500
SCALE @ A1
0 5 10 15 20 25

System Certified

spiire
L6 414 LA TROBE STREET PO BOX 16084 MELBOURNE
VICTORIA 8007 AUSTRALIA T 61 3 9993 7888
spiire.com.au ABN 55 050 029 635

Harlow
TARNEIT

Designed
T. NGUYEN
Checked
G. KOHLMAN
Authorised
G. KOHLMAN
Date
01/11/24

HARLOW ESTATE
STAGE 6
DRAINAGE COMPUTATIONS
5YR CATCHMENT CALCULATIONS - SHEET 1
WYNDHAM CITY COUNCIL
SIG GROUP

PRELIMINARY
Drg No **309442CD509**
Rev **A**

			SUB-CATCHMENT RUNOFF						DRAIN DESIGN														HEADLOSSES							PART FULL		DESIGN LEVELS				
			C	A	C	A	C	A	Q	tc	i	A	C	CA	Qp	L	S	T	Qcap	Qa/Qcap	Vcap		V2/2g	Ku	hu	Kw	hw	Sf	hf							
STRUCTURE No.	DOWNSTREAM STRUCTURE No.	PIT TYPE	CO-EFFIECIENT OF RUNOFF	SUB-CATCHMENT AREA (ROAD)	CO-EFFIECIENT OF RUNOFF	SUB-CATCHMENT AREA (LOT)	CO-EFFIECIENT OF RUNOFF	SUB-CATCHMENT AREA (MISC)	SUB-CATCHMENT DISCHARGE	CRITICAL TIME OF CONCENTRATION	RAINFALL INTENSITY	CUMULATIVE CATCHMENT AREA	EFFECTIVE CO-EFFICIENT OF RUNOFF	TOTAL (C x A)	PIPE FLOW	REACH LENGTH	PIPE GRADE	PIPE DIAMETER	PIPE GRADE CAPACITY	Q(actual) / Q(capacity)	CAPACITY VELOCITY (Qcap/AREA)	TIME IN PIPE	PIPE VELOCITY HEAD	U/S PIT HEADLOSS COEFF	U/S PIT PRESSURE HEADLOSS	W.S.E. COEFF	CHAINGE IN W.S.E.	PIPE FRICTION SLOPE	PIPE FRICTION (HEADLOSS L*Sf)	NORMAL DEPTH	NORMAL DEPTH VELOCITY	UPSTREAM PIPE H.G.L.	DOWNSTREAM PIPE H.G.L.	PIT GRATE LEVEL	CALCULATED FREEBOARD	STRUCTURE
				ha		ha		ha	l/s	min	mm/hr	ha		ha	l/s	m	(1 in)	mm	l/s	%	m/s	min.	m		m		m	%	m	m	m/s	m	m	m	m	
81EP	80	ENDPIPE			0.635	4.103			529	8.00	73.100	4.103	0.635	2.606	529	5.10	400	900	906	58	1.423	0.060	0.035	0.00	0.000		0.000	0.085	0.004	0.494	1.48	47.683	47.679	48.476	0.793	
82	79	GRATED SIDE ENTRY PIT	0.561	0.051					7	6.38	80.076	0.459	0.649	0.298	66	2.92	200	300	68	97	0.968	0.050	0.045	0.50	0.022		0.022	0.469	0.014	0.238	1.10	47.661	47.647	48.154	0.471	
83EP	82	ENDPIPE							0	6.12	81.196	0.408	0.660	0.269	62	19.12	125	300	87	70	1.224	0.260	0.038	0.00	0.000		0.000	0.394	0.075	0.185	1.32	47.758	47.683	48.436	0.678	
84	83EP	GRATED SIDE ENTRY PIT	0.561	0.067	0.708	0.109			27	5.68	83.066	0.408	0.660	0.269	62	31.95	125	300	87	72	1.224	0.435	0.039	2.20	0.087		0.087	0.412	0.132	0.188	1.33	47.890	47.758	48.460	0.483	
85	48	GRATED SIDE ENTRY PIT	0.561	0.046					6	5.00	86.000	0.046	0.561	0.026	6	6.70	95	300	99	6	1.401	0.080	0.000	5.00	0.002		0.002	0.004	0.000	0.051	0.78	48.058	48.058	48.702	0.642	
86	47	GRATED SIDE ENTRY PIT	0.561	0.046					6	5.00	86.000	0.046	0.561	0.026	6	6.70	100	300	97	6	1.369	0.082	0.000	5.00	0.002		0.002	0.004	0.000	0.051	0.77	47.718	47.718	48.300	0.580	
87	17	GRATED SIDE ENTRY PIT	0.561	0.051					7	5.00	86.000	0.051	0.561	0.029	7	11.80	41	300	151	5	2.137	0.092	0.000	5.00	0.002		0.002	0.005	0.001	0.043	1.08	47.679	47.678	48.365	0.684	
88	16	GRATED SIDE ENTRY PIT	0.561	0.009					1	5.06	85.733	0.018	0.561	0.010	2	2.30	50	300	137	2	1.936	0.020	0.000	0.50	0.000		0.000	0.001	0.000	0.028	0.74	47.617	47.617	48.411	0.794	
89	88	GRATED SIDE ENTRY PIT	0.561	0.009					1	5.00	86.000	0.009	0.561	0.005	1	7.20	50	300	137	1	1.936	0.062	0.000	5.00	0.000		0.000	0.000	0.000	0.020	0.60	47.617	47.617	48.411	0.794	
90	15	GRATED SIDE ENTRY PIT	0.561	0.105					14	5.00	86.000	0.105	0.561	0.059	14	11.80	27	300	187	8	2.650	0.074	0.002	5.00	0.010		0.010	0.021	0.003	0.056	1.56	47.471	47.468	48.056	0.575	
91	11	GRATED SIDE ENTRY PIT	0.561	0.023					3	5.00	86.000	0.023	0.561	0.013	3	8.50	50	300	137	2	1.936	0.073	0.000	5.00	0.000		0.000	0.001	0.000	0.031	0.79	47.060	47.060	48.093	1.032	
92EP	63	ENDPIPE							0	5.12	85.503	0.054	0.650	0.035	8	6.08	17	300	235	4	3.319	0.031	0.001	0.00	0.000		0.000	0.007	0.000	0.039	1.56	47.202	47.202	48.179	0.976	
93	92EP	JUNCTION PIT	0.561	0.021					3	5.11	85.539	0.054	0.650	0.035	8	1.64	17	300	235	4	3.319	0.008	0.001	1.39	0.001		0.001	0.007	0.000	0.039	1.56	47.202	47.202	48.078	0.875	
94	73	GRATED SIDE ENTRY PIT	0.561	0.027	0.708	0.121			24	5.95	81.920	0.407	0.645	0.262	60	69.24	180	300	72	83	1.020	1.131	0.036	1.70	0.062		0.062	0.381	0.264	0.208	1.14	48.074	47.810	48.614	0.478	
95	94	GRATED SIDE ENTRY PIT	0.561	0.038	0.708	0.035			11	5.77	82.709	0.258	0.624	0.161	37	11.53	230	375	116	32	1.047	0.183	0.006	1.90	0.011		0.011	0.045	0.005	0.146	0.93	48.141	48.136	48.522	0.370	
96	95	GRATED SIDE ENTRY PIT	0.561	0.016	0.708	0.075			15	5.00	86.000	0.114	0.658	0.075	18	46.85	180	300	72	25	1.020	0.765	0.003	0.90	0.003		0.003	0.034	0.016	0.102	0.85	48.168	48.152	48.756	0.585	
97	96	JUNCTION PIT							0	5.23	85.001	0.024	0.561	0.013	3	8.27	180	300	72	4	1.020	0.135	0.000	0.20	0.000		0.000	0.001	0.000	0.043	0.51	48.171	48.171	49.094	0.923	
98	97	GRATED SIDE ENTRY PIT	0.561	0.012					2	5.14	85.382	0.024	0.561	0.013	3	5.43	180	300	72	4	1.020	0.089	0.000	1.50	0.000		0.000	0.001	0.000	0.043	0.51	48.171	48.171	48.820	0.649	
99	98	GRATED SIDE ENTRY PIT	0.561	0.012					2	5.00	86.000	0.012	0.561	0.007	2	11.80	100	300	97	2	1.369	0.144	0.000	5.00	0.000		0.000	0.000	0.000	0.027	0.51	48.171	48.171	48.820	0.649	
100	84	JUNCTION PIT			0.708	0.165			28	5.00	86.000	0.165	0.708	0.117	28	58.50	92	300	101	28	1.429	0.682	0.008	5.00	0.040		0.040	0.084	0.049	0.108	1.22	48.026	47.977	48.979	0.914	
101	73	GRATED SIDE ENTRY PIT	0.561	0.042					6	5.00	86.000	0.042	0.561	0.024	6	8.50	180	300	72	8	1.020	0.139	0.000	5.00	0.002		0.002	0.003	0.000	0.057	0.61	47.811	47.810	48.350	0.538	
102	95	GRATED SIDE ENTRY PIT	0.561	0.072					10	5.00	86.000	0.072	0.561	0.040	10	8.50	28	300	183	5	2.594	0.055	0.001	5.00	0.005		0.005	0.010	0.001	0.047	1.37	48.153	48.152	48.522	0.364	
103	84	GRATED SIDE ENTRY PIT	0.561	0.067					9	5.00	86.000	0.067	0.561	0.037	9	11.80	95	300	99	9	1.401	0.140	0.001	5.00	0.004		0.004	0.009	0.001	0.061	0.87	47.978	47.977	48.460	0.478	
104	61	GRATED SIDE ENTRY PIT			0.708	0.138			23	5.76	82.727	0.406	0.656	0.266	61	65.74	230	375	116	53	1.047	1.046	0.016	1.70	0.027		0.027	0.122	0.080	0.194	1.06	47.610	47.530	48.236	0.599	
105	104	GRATED SIDE ENTRY PIT	0.561	0.052	0.708	0.031			12	5.58	83.516	0.268	0.630	0.169	39	11.53	230	375	116	34	1.047	0.183	0.006	1.90	0.012		0.012	0.050	0.006	0.150	0.95	47.642	47.637	48.142	0.487	
106	105	GRATED SIDE ENTRY PIT	0.561	0.030	0.708	0.094			20	5.00	86.000	0.124	0.673	0.083	20	47.80	99	300	97	20	1.379	0.578	0.004	5.00	0.020		0.020	0.042	0.020	0.092	1.08	47.675	47.655	48.381	0.686	
107	58	GRATED SIDE ENTRY PIT	0.561	0.055	0.708	0.149			33	5.00	86.000	0.204	0.668	0.136	33	51.20	600	355	9	1.254	0.680	0.001	5.00	0.003		0.003	0.003	0.001	0.123	0.78	47.247	47.246	47.602	0.351	
108	67	JUNCTION PIT			0.708	0.258			44	5.00	86.000	0.258	0.708	0.182	44	76.50	167	300	75	58	1.060	1.203	0.019	5.00	0.097		0.097	0.203	0.155	0.164	1.10	47.567	47.412	48.056	0.392	
109	61	GRATED SIDE ENTRY PIT	0.561	0.053					7	5.00	86.000	0.053	0.561	0.030	7	8.50	14	300	259	3	3.669	0.039	0.001	5.00	0.003		0.003	0.005	0.000	0.034	1.59	47.530	47.530	48.232	0.699	
110	105	GRATED SIDE ENTRY PIT	0.561	0.061					8	5.00	86.000	0.061	0.561	0.034	8	8.50	100	300	97	8	1.369	0.104	0.001	5.00	0.003		0.003	0.007	0.001	0.059	0.83	47.655	47.655	48.142	0.483	
111	8	GRATED ENTRY PIT	0.561	0.029					4	6.11	81.229	0.475	0.672	0.319	72	9.24	50	450	403	18	2.536	0.061	0.010	0.90	0.009		0.009	0.064	0.006	0.129	1.92	46.907	46.901	48.143	1.227	
112	111	GRATED ENTRY PIT	0.561	0.086	0.708	0.058			21	5.92	82.048	0.446	0.680	0.303	69	27.40	56	450	381	18	2.398	0.190	0.010	1.60	0.015		0.015	0.059	0.016	0.130	1.82	46.932	46.916	48.280	1.332	
113	112	JUNCTION PIT			0.708	0.038			6	5.00	86.000	0.038	0.708	0.027	6	13.00	12	375	513	1	4.647	0.047	0.000	5.00	0.001		0.001	0.001	0.000	0.029	1.59	46.948	46.948	48.304	1.356	
114	112	JUNCTION PIT			0.708	0.207			35	5.00	86.000	0.264	0.708	0.187	45	79.95	120	375	160	28	1.450	0.919	0.008	1.50	0.012		0.012	0.065	0.052	0.135	1.24	47.000	46.948	48.044	1.032	
115	114	JUNCTION PIT			0.708	0.061			10	5.00	86.000	0.061	0.708	0.043	10	25.00	230	375	116	9	1.047	0.398	0.000	5.00	0.002		0.002	0.004	0.001	0.076	0.65	47.013	47.012	47.917	0.902	
116	93	JUNCTION PIT			0.708	0.033			6	5.00	86.000	0.033	0.708	0.023	6	11.00	64	300	121	5	1.709	0.107	0.000	3.68	0.001		0.001	0.003	0.000	0.044	0.87	47.204	47.203	48.243	1.038	
153	3	JUNCTION PIT							0	7.95	73.299	1.075	0.652	0.701	143	8.50	100	450	285	50	1.793	0.079	0.041	1.90	0.078		0.078	0.250	0.021	0.225	1.79	46.601	46.579	47.624	0.946	
154	153	GRATED SIDE ENTRY PIT	0.561	0.071					10	7.90	73.546	0.956	0.645	0.617	126	9.05	37	375	290	43	2.624	0.057	0.066	0.70	0.047		0.047	0.516	0.047	0.173	2.53	46.725	46.679	47.423	0.652	
155	154	JUNCTION PIT							0	7.83	73.814	0.828	0.659	0.545	112	4.85	150	375	143	78	1.297	0.062	0.052	0.20	0.010		0.010	0.406	0.020	0.249	1.43	46.792	46.772	47.607	0.805	
156	155	JUNCTION PIT							0	7.58	74.927	0.828	0.659	0.545	113	22.51	120	375	160	71	1.450	0.259	0.054	0.60	0.032		0.032	0.419	0.094	0.233	1.57	46.896	46.802	47.758	0.829	
157	156	GRATED SIDE ENTRY PIT	0.561	0.040	0.708	0.051			14	7.41	75.649	0.828	0.659	0.545	115	11.32	200	375	124	92	1.123	0.168	0.055	0.90	0.049		0.049	0.427	0.048	0.285	1.27	46.977	46.929	47.747	0.721	
158	157	GRATED SIDE ENTRY PIT	0.561	0.058	0.708	0.184			39	6.19	80.867	0.708	0.665	0.471	106	76.25	230	375	116	91	1.047	1.214	0.047	1.10	0.051		0.051	0.363	0.277	0.282	1.19	47.303	47.026	47.878	0.524	
159	158	GRATED SIDE ENTRY PIT	0.561	0.060	0.708	0.184			39	5.10	85.564	0.426	0.671	0.286	68	75.00	230	375	116	59	1.047	1.194	0.019	1.30	0.025		0.025	0.150	0.113	0.207	1.09	47.467	47.354	48.003	0.511	
160	159	JUNCTION PIT			0.708	0.134			23	5.00	86.000	0.134	0.708	0.095	23	10.49	63	300	122	19	1.723	0.102	0.005	5.00	0.026		0.026	0.055	0.006	0.088	1.32	47.498	47.492	48.236	0.711	
161	153	JUNCTION PIT			0.708	0.118			20	5.00	86.000	0.118	0.708	0.084	20	21.22	50	300	137	15	1.936	0.183	0.004	5.00	0.020		0.020	0.043	0.009	0.078	1.38	46.688	46.679	47.730	1.022	
162	6	GRATED SIDE ENTRY PIT	0.561	0.058					8	6.12	81.190	0.486	0.665	0.323	73	8.50	100	300	97	75	1.369	0.104	0.054	1.50	0.081		0.081	0.567	0.048	0.194	1.50	46.751	46.703	47.523	0.691	
163	162	GRATED SIDE ENTRY PIT	0.561	0.086	0.708	0.250			54	5.00	86.000	0.428	0.678	0.291	69	75.00	150	300	79	88	1.117	1.119	0.049	2.00	0.098		0.098	0.515	0.386	0.218	1.26	47.219	46.832	47.648	0.331	
164	163	JUNCTION PIT			0.708	0.141			21	7.00	77.400	0.141	0.708	0.100	21	41.08	59	300	126	17	1.784	0.384	0.005	5.00	0.023		0.023	0.049	0.020	0.084	1.33	47.337	47.317	48.018	0.658	
165	154	GRATED SIDE ENTRY PIT	0.561	0.056			0.304	0.002	8	5.00	86.000	0.058	0.551	0.032	8	8.49	50	300	137	6	1.936	0.073	0.001	5.00	0.003		0.003	0.006	0.001	0.048	1.04	46.772	46.772	47.423	0.648	
166	157	GRATED SIDE ENTRY PIT	0.561	0.029					4	5.00	86.000	0.029	0.561	0.017	4	6.70	16	300	245	2	3.461	0.032	0.000	5.00	0.001		0.001	0.002	0.000	0.027	1.28	47.026	47.026	47.747	0.720	
167	158	GRATED SIDE ENTRY PIT	0.561	0.043					6	5.00	86.000	0.043	0.561	0.024	6	6.55	23	300	203	3	2.867	0.038	0.000	5.00	0.002		0.002	0.004	0.000	0.035	1.26	47.355	47.354	47.878	0.522	
168	159	GRATED SIDE ENTRY PIT	0.561	0.049					7	5.00	86.000	0.049	0.561	0.027	7	6.70	180	300	72	9	1.020	0.109	0.000	5.00	0.002		0.002	0.005	0.000	0.061	0.63	47.492	47.492	48.003	0.509	

Rev	Amendments	Approved	Date
A	ISSUED TO COUNCIL	G.K	01/11/24

Scale
H 1:500
SCALE @ A1
0 5 10 15 20 25

spiire
L6 414 LA TROBE STREET PO BOX 16084 MELBOURNE
VICTORIA 8007 AUSTRALIA T 61 3 9993 7888
spiire.com.au ABN 55 050 029 635

Harlow TARNEIT

Designed T. NGUYEN
Checked G. KOHLMAN
Authorised G. KOHLMAN
Date 01/11/24

HARLOW ESTATE STAGE 6

DRAINAGE COMPUTATIONS
5YR CATCHMENT CALCULATIONS - SHEET 2
WYNDHAM CITY COUNCIL
SIG GROUP

PRELIMINARY
Drg No 309442CD510
Rev A