WOODLINKS VILLAGE STAGE 11

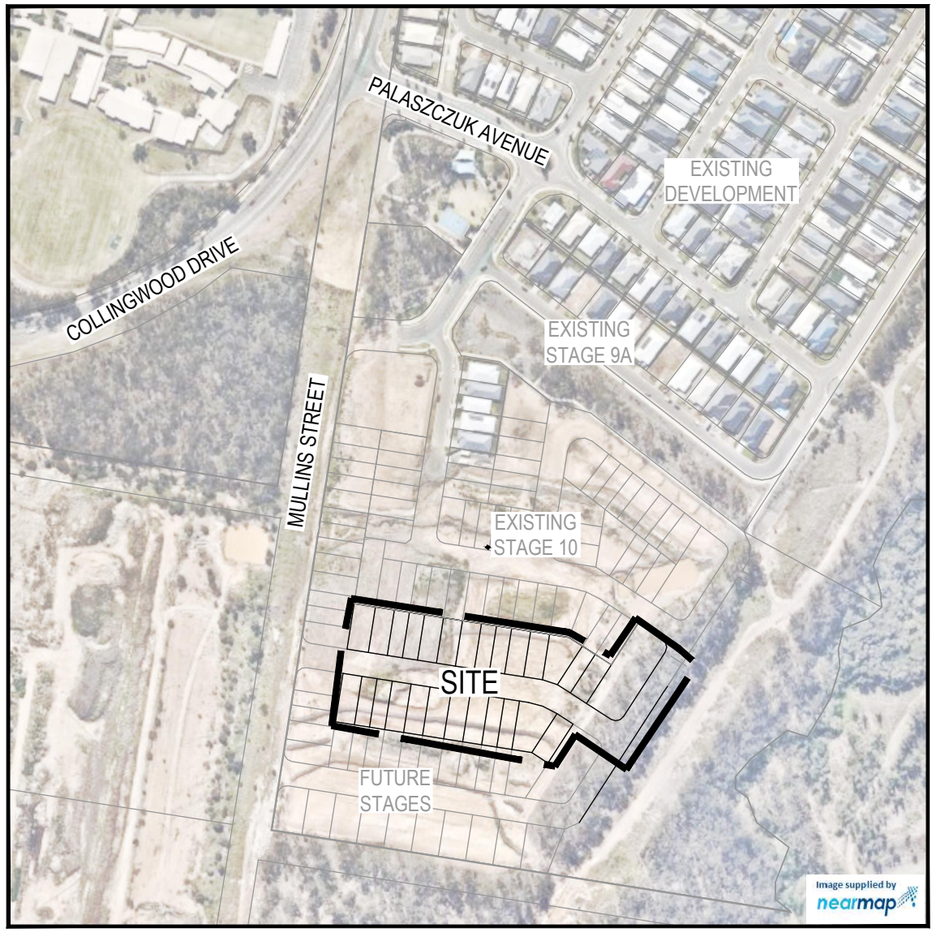
COLLINGWOOD DRIVE, COLLINGWOOD PARK

FOR 'CANBERRA ESTATES CONSORTIUM NO.36 PTY LTD'

DRAWING LIST

EARTHWORKS, ROADWORKS AND DRAINAGE

SEWERAGE AND WATER RETICULATION



LOCALITY PLAN
SCALE 1:2000 (A1)
SCALE 1:4000 (A3)

N

PROJECT INFORMATION SUMMARY:
No. OF LOTS = 27
AREA OF SITE = 1.501 ha
RP DESCRIPTION LOT 1 ON SP 266990
DATUM LEVEL AND LOCATION P.M. 110122 RL 40.320 AHD
LOCAL AUTHORITY: IPSWICH CITY COUNCIL
COUNCIL REFERENCE NUMBER: 2558/2014/MAMC

NOTE:
THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH:
- VEGETATION MANAGEMENT PLAN
- LANDSCAPE ARCHITECT'S PLANS
- ELECTRICAL, COMMUNICATIONS AND GAS CONSULTANT'S PLANS
- SEDIMENT AND EROSION HAZARD ASSESSMENT
- SAFETY IN DESIGN REPORT
- SITE BASED MANAGEMENT PLAN
- STORMWATER MANAGEMENT PLAN REPORT

AS-CONSTRUCTED CERTIFICATION
Signature: ..... Date: 29/09/23
DANIEL COLLINS RPEQ No. 18631
For and on behalf of Colliers International engineering & design pty ltd

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	09.02.23	CL	AK	ISSUED FOR CONSTRUCTION
B	29.09.23	CL	BP	AS CONSTRUCTED

DRAWN
DESIGN
STATUS: AS CONSTRUCTED
APPROVED: DANIEL COLLINS RPEQ 18631
FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE: 1:2000 / 1:4000 — 20 0 20 40 60 80 100 — A1 / A3

CLIENT: CANBERRA ESTATES CONSORTIUM NO. 36 PTY LIMITED

ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP PH: 1300 123 744

PROJECT NAME: WOODLINKS VILLAGE - STAGE 11
COOLINGWOOD DRIVE, COOLINGWOOD PARK

DRAWING TITLE: COVER PLAN

PROJECT No.	DRAWING No.	REVISION
22-0173	100	B

GENERAL NOTES:

1. THE CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIALS, PLANT AND EQUIPMENT TO CONSTRUCT THE WORKS AS DOCUMENTED AND STRICTLY IN ACCORDANCE WITH THE RELEVANT AUTHORITY STANDARDS, SPECIFICATIONS AND REQUIREMENTS.
2. THE EXISTING SERVICES THAT ARE SHOWN ON THE DRAWINGS ARE PROVIDED FOR INFORMATION PURPOSES ONLY. NO RESPONSIBILITY IS TAKEN BY THE SUPERINTENDENT OR THE PRINCIPAL FOR INFORMATION THAT HAS BEEN SUPPLIED BY OTHERS, OR ANY EXISTING SERVICES THAT MAY BE PRESENT NOT SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL VERIFY THE POSITION OF ANY UNDERGROUND SERVICES WITHIN THE AREAS OF WORKS AND SHALL BE RESPONSIBLE FOR MAKING GOOD ANY DAMAGE THERETO. ANY ALTERATION WORKS TO SERVICES WILL BE CARRIED OUT ONLY BY THE SERVICE OWNER AUTHORITY UNLESS APPROVED OTHERWISE.
3. ALL CONSTRUCTION ACTIVITIES UNDERTAKEN SHALL COMPLY WITH CURRENT WORKPLACE HEALTH AND SAFETY REQUIREMENTS AND LEGISLATION.
4. PRIOR TO COMMENCING WORK, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL RELEVANT LOCAL AUTHORITY PERMITS.
5. THE CONTRACTOR SHALL NOT COMMENCE THE DEMOLITION OF ANY EXISTING BUILDINGS AND/OR STRUCTURES WITHOUT APPROVAL FROM THE SUPERINTENDENT.
6. THE CONTRACTOR SHALL APPLY INDUSTRY BEST PRACTICE SO WORKS SHALL NOT DISTURB OR AFFECT NEARBY RESIDENTS EITHER BY DUST, NOISE, FLOODING OR DISCONNECTION OF SERVICES. CONTRACTOR TO ENSURE THAT ACCESS AND SERVICES TO EXISTING PROPERTIES ARE AVAILABLE AT ALL TIMES.
7. THE CONTRACTOR SHALL VERIFY LEVELS OF EXISTING SERVICE CROSSINGS AND CONNECTION POINTS PRIOR TO COMMENCEMENT OF WORKS AND NOTIFY SUPERINTENDENT OF ANY DISCREPANCIES BETWEEN ACTUAL AND PROPOSED DESIGN LEVELS.
8. THESE ENGINEERING DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE APPROVED VEGETATION MANAGEMENT PLAN, WHERE APPLICABLE. WHEN IN DOUBT, ALL EXISTING TREES ARE TO REMAIN UNLESS DIRECTED OTHERWISE.
9. HOLD POINT: ONCE THE BASE OF MANHOLES, INSPECTION PITS, GULLIES AND FIELD INLETS FOR STORMWATER DRAINAGE AND SEWER RETICULATION HAVE BEEN POURED, CONSTRUCTION SHALL ONLY RE-COMMENCE ONCE THE SUPERINTENDENT AND/OR ENGINEER HAVE INSPECTED THE WORKS.
10. THE CONTRACTOR SHALL NOTE DURING THE COURSE OF THE WORKS WHEN JOINT INSPECTIONS WITH THE AUTHORITY AND THE SUPERINTENDENT ARE REQUIRED. THESE INCLUDE PRE-STARTS, SUBGRADES, PRE-SEALS, CLEARING, AND OTHER SUCH INSPECTIONS AS NOMINATED IN THE APPROVAL AND THE SPECIFICATIONS. THE CONTRACTOR SHALL ENSURE NO WORKS PROCEED PAST THE INSPECTION POINT UNTIL THE JOINT INSPECTION HAS BEEN SUCCESSFULLY COMPLETED.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A SAFE MOVEMENT OF TRAFFIC AND THE PROTECTION OF PERSON AND PROPERTY THROUGH AND AROUND THE SITE. THE CONTRACTOR IS RESPONSIBLE FOR ALL TRAFFIC MANAGEMENT INCLUDING THE DESIGN, CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY ROADWAYS, DETOURS, SIGNS, LIGHTS AND BARRIER AS REQUIRED STRICTLY IN ACCORDANCE WITH THE RELEVANT AUTHORITY REQUIREMENTS.

BULK EARTHWORKS NOTES

1. NOTWITHSTANDING THE EXTENTS OF CUTTING AND FILLING SHOWN ON DRAWINGS, THE SUPERINTENDENT RESERVES THE RIGHT TO ADJUST THE FINISHED SURFACE LEVELS AND EARTHWORKS EXTENTS THROUGH WRITTEN DIRECTION.
2. THE CONTRACTOR SHALL UNDERTAKE ALL CLEARING USING INDUSTRY BEST PRACTICE INCLUDING CONSIDERATION OF FAUNA RELOCATION.
3. THE CONTRACTOR SHALL UNDERTAKE ALL EARTHWORKS IN ACCORDANCE WITH AS3798-2007 AND LOCAL AUTHORITY REQUIREMENTS. LEVEL 1 SUPERVISION IS REQUIRED.
4. THE CONTRACTOR SHALL CONSIDER LOADS GENERATED BY THE EARTHWORKS OPERATIONS SO AS TO AVOID DAMAGE TO ALL PIPES, SERVICES AND STRUCTURES.
5. THE EARTHWORKS DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE PROJECT'S SEDIMENT AND EROSION CONTROL PLAN, WHERE APPLICABLE.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PLANNING, DESIGN, CERTIFICATION, IMPLEMENTATION AND MAINTENANCE OF AN EROSION AND SEDIMENT CONTROL PLAN THAT IS COMPLIANT WITH THE INTERNATIONAL EROSION CONTROL ASSOCIATION (IECA) GUIDELINE 'BEST PRACTICE EROSION AND SEDIMENT CONTROL' AND RELEVANT COUNCIL POLICIES.
7. ALLOTMENT FINISHED SURFACE LEVELS, SHOWN ON THE LAYOUT PLAN, INDICATE THE FINISHED SURFACE LEVEL AFTER TOPSOIL PLACEMENT.

ROADWORKS AND DRAINAGE NOTES

1. ALL WORKS SHALL BE IN ACCORDANCE WITH THE RELEVANT AUTHORITY'S STANDARD DRAWINGS, METHODS AND SPECIFICATIONS.
2. NOTWITHSTANDING THE EXTENTS OF CUTTING AND FILLING SHOWN ON DRAWINGS, THE SUPERINTENDENT RESERVES THE RIGHT TO ADJUST THE FINISHED SURFACE LEVELS AND EARTHWORKS EXTENTS THROUGH WRITTEN DIRECTION.
3. NEW CONSTRUCTION SHALL BE NEATLY JOINED TO EXISTING FORMATION. WHERE REQUIRED, THE EXISTING FORMATION SHALL BE SAW CUT IN ACCORDANCE WITH IPWEAQ STD DRG RS-170. LEVELS AND GRADIENTS AT CONNECTIONS WITH EXISTING WORKS MAY BE VARIED AS REQUIRED TO ACHIEVE A SMOOTH CONNECTION.
4. THE CONTRACTOR SHALL UNDERTAKE ALL EARTHWORKS IN ACCORDANCE WITH AS3798-2007 AND LOCAL AUTHORITY REQUIREMENTS. LEVEL 1 SUPERVISION IS REQUIRED.
5. THE CONTRACTOR SHALL SUPPLY THE SUPERINTENDENT WITH THE SUBGRADE TEST RESULTS NECESSARY FOR ALL PAVEMENT DESIGN.
6. THE CONTRACTOR SHALL ENSURE A MINIMUM OF 75mm TOPSOIL TO ALL VERGE AND BATTER AREAS (AND STABILISATION AS ORDERED)
7. THE CONTRACTOR SHALL INSTALL ALL FOOTPATH AND PRAM RAMPS IN COMPLIANCE WITH THE AUTHORITY'S STANDARD DRAWINGS. PRAM RAMPS ARE TO BE LOCATED CLEAR OF DRAINAGE GULLY PITS AND FUTURE DRIVEWAY POSITIONS INDICATED ON THE LAYOUT PLANS.
8. RETAINING WALL SUBSOIL DRAIN CONNECTION INTO KERB SUBSOIL DRAIN IS NOT ACCEPTABLE TO COUNCIL.
9. THE CONTRACTOR SHALL ENSURE THAT ALL RETAINING WALL SUBSOIL DRAINS ARE NOT CONNECTED TO KERB SUBSOIL DRAINS. CONTRACTOR TO DEMONSTRATE TO SUPERINTENDENT THAT SUITABLE CONNECTIONS HAVE BEEN PROVIDED FOR ALL WALLS.
10. ALL STORMWATER DRAINAGE MATERIALS, BEDDING, JOINTING AND STEP IRON REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE RELEVANT AUTHORITIES STANDARD DRAWINGS, METHODS AND SPECIFICATIONS.
11. THE STORMWATER PIPE CLASSES HAVE BEEN DESIGNED FOR SERVICE LOADS ONLY. THE CONTRACTOR SHALL ASSESS THE SUITABILITY OF MACHINERY USED ON SITE AND THE ANTICIPATED CONSTRUCTION LOADS, AND UPGRADE THE PIPE CLASSES IF NECESSARY IN ACCORDANCE WITH AS3725-2007.
12. THE TERM D_{50} DOCUMENTED ON THE DRAWINGS, IN RELATION TO ROCK ARMORING, CORRESPONDS TO THE REQUIRED MEDIAN DIAMETER OF THE PLACED ROCKS. THE ROCKS USED SHALL NOT VARY IN SIZE BY +/- 30% OF THE PROPOSED D_{50} SIZE.

ROOFWATER NOTES

1. THE GEOMETRIC CENTRE SHALL BE TAKEN AS THE SETOUT POINT FOR ALL STRUCTURES, UNLESS DETAILED OTHERWISE.
2. ROOFWATER ALIGNMENT, COVER, MATERIALS, BEDDING, JOINTING AND STEP IRON REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE RELEVANT AUTHORITY'S STANDARD DRAWINGS, METHODS AND SPECIFICATIONS.
3. ALL PVC PIPES ARE TO BE MINIMUM CLASS SN8.
4. END CAPS SHALL BE INSTALLED ON ENDS OF ALL PIPES AND STUBS.
5. WHERE ROOFWATER PIPES ARE ALIGNED BEHIND PROPOSED RETAINING WALLS, THE CONTRACTOR IS TO REFER TO THE SPECIFIC PROJECT DESIGN DETAILS AND CONFIRM CLEARANCES WITH THE SUPERINTENDENT PRIOR TO LAYING OF THE PIPES.
6. PROPERTY CONNECTIONS SHALL BE 150Ø UNLESS SHOWN OTHERWISE. THE CONTRACTOR SHALL EXTEND CONNECTIONS A MINIMUM OF 1.0m BEYOND ADJACENT SEWER LINES, WHERE APPLICABLE.
7. IN INSTANCES WHERE REAR ALLOTMENT DRAINAGE IS NOT PROVIDED, THE CONTRACTOR SHALL INSTALL A ROOFWATER CONNECTION TO EACH PROPERTY BY ONE OF THE FOLLOWING METHODS, AS SHOWN ON THE LAYOUT PLAN:
   - TWO ROOFWATER KERB ADAPTOR 500mm FROM THE DOWNSTREAM BOUNDARY (UNLESS SHOWN ON A DIFFERENT ALIGNMENT). WHERE THERE IS A CONCRETE FOOTPATH, A ROOFWATER PIPE SHALL BE INSTALLED FROM THE PROPERTY BOUNDARY CONNECTED TO THE KERB ADAPTOR AT 1.25% MINIMUM GRADE IN ACCORDANCE WITH COUNCIL'S STANDARDS.
   - ONE 150Ø ROOFWATER PIPE CONNECTED TO PROPOSED STORMWATER GULLY PIT OR MANHOLE AT MINIMUM 1.0% GRADE WITH 1.0m COVER.

AS-CONSTRUCTED CERTIFICATION

Signature: ..... Date: 29/09/23

DANIEL COLLINS RPEQ No. 18631

For and on behalf of Colliers International engineering & design pty ltd

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DRAWN

DESIGN

STATUS: **AS CONSTRUCTED**

APPROVED: DANIEL COLLINS RPEQ 18631

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE

CLIENT: **CANBERRA ESTATES CONSORTIUM NO. 36 PTY LIMITED**

ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP PH: 1300 123 744

PROJECT NAME: **WOODLINKS VILLAGE - STAGE 11**

COOLINGWOOD DRIVE, COOLINGWOOD PARK

DRAWING TITLE: **GENERAL NOTES**

PROJECT No.	DRAWING No.	REVISION
22-0173	101	B

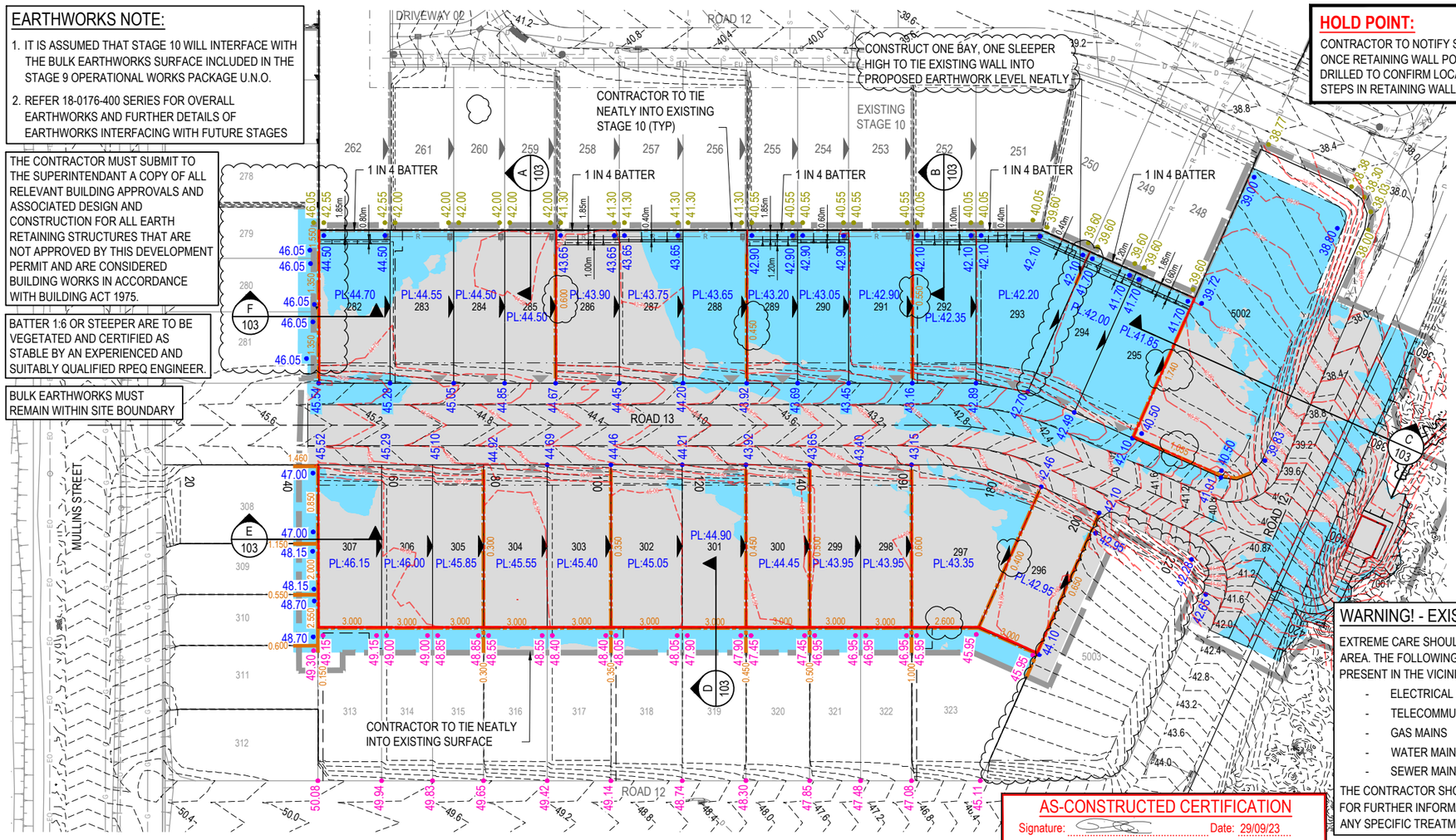
EARTHWORKS NOTE:

1. IT IS ASSUMED THAT STAGE 10 WILL INTERFACE WITH THE BULK EARTHWORKS SURFACE INCLUDED IN THE STAGE 9 OPERATIONAL WORKS PACKAGE U.N.O.
2. REFER 18-0176-400 SERIES FOR OVERALL EARTHWORKS AND FURTHER DETAILS OF EARTHWORKS INTERFACING WITH FUTURE STAGES

THE CONTRACTOR MUST SUBMIT TO THE SUPERINTENDANT A COPY OF ALL RELEVANT BUILDING APPROVALS AND ASSOCIATED DESIGN AND CONSTRUCTION FOR ALL EARTH RETAINING STRUCTURES THAT ARE NOT APPROVED BY THIS DEVELOPMENT PERMIT AND ARE CONSIDERED BUILDING WORKS IN ACCORDANCE WITH BUILDING ACT 1975.

BATTER 1:6 OR STEEPER ARE TO BE VEGETATED AND CERTIFIED AS STABLE BY AN EXPERIENCED AND SUITABLY QUALIFIED RPEQ ENGINEER.

BULK EARTHWORKS MUST REMAIN WITHIN SITE BOUNDARY



HOLD POINT:

CONTRACTOR TO NOTIFY SUPERINTENDANT ONCE RETAINING WALL POST HOLES ARE DRILLED TO CONFIRM LOCATION OF REQUIRED STEPS IN RETAINING WALL SLEEPERS.

LEGEND

- PROPOSED AREA OF WORKS
- 24.0 PROPOSED SURFACE CONTOUR
- 24.0 EXISTING SURFACE CONTOUR
- PROPOSED EARTHWORKS PAD SETBACK LINE
- PROPOSED SLEEPER RETAINING WALL
- 0.600 AVERAGE RETAINING WALL HEIGHT
- EXISTING SLEEPER RETAINING WALL
- 24.60 PROPOSED PAD LEVEL (PL) (INCLUDES TOPSOIL PLACEMENT)
- 24.60 EXISTING SURFACE LEVEL (ESL)
- 24.60 FUTURE SURFACE LEVEL
- PROPOSED AREA OF CUT
- PROPOSED AREA OF FILL
- INDICATIVE DRIVEWAY LOCATIONS
- ZERO LOT BOUNDARY
- EXISTING STORMWATER DRAINAGE PIPE
- EXISTING ROOFWATER DRAINAGE PIPE
- EXISTING SEWERAGE MAIN
- EXISTING WATER MAIN
- EXISTING WATER CONDUIT
- EXISTING ELECTRICAL CABLE O/H
- EXISTING GAS MAIN
- EXISTING DRAINAGE SWALE

N

ASCON LEGEND

40.00 AS CONSTRUCTED CONTOUR

WARNING! - EXISTING SERVICES

EXTREME CARE SHOULD BE TAKEN WHEN EXCAVATING IN THIS AREA. THE FOLLOWING EXISTING SERVICES ARE LIKELY TO BE PRESENT IN THE VICINITY OF THE SITE:

- ELECTRICAL CABLES
- TELECOMMUNICATIONS CABLES
- GAS MAINS
- WATER MAINS
- SEWER MAINS

THE CONTRACTOR SHOULD CONTACT THE SERVICE PROVIDER FOR FURTHER INFORMATION AND SATISFY THEMSELVES OF ANY SPECIFIC TREATMENT OR REQUIREMENTS.

AS-CONSTRUCTED CERTIFICATION

Signature: Date: 29/09/23

DANIEL COLLINS RPEQ No. 18631

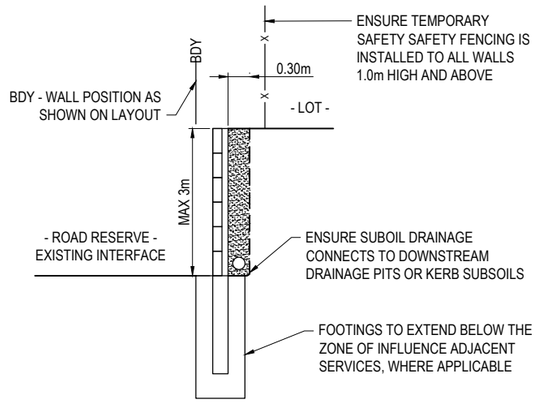
For and on behalf of Colliers International engineering & design pty ltd

EARTHWORKS VOLUMES

CUT:	-9,528m³
FILL:	4,261m³
BAL:	-5,267m³ (SPOIL)

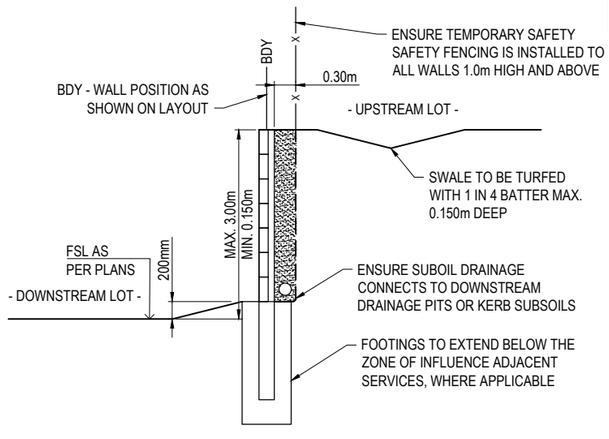
NOTE:

1. VOLUMES SHOWN ARE SOLID VALUES ONLY. NO ALLOWANCES FOR BULKING, COMPACTION, ROAD BOXING, UNSUITABLE MATERIALS.



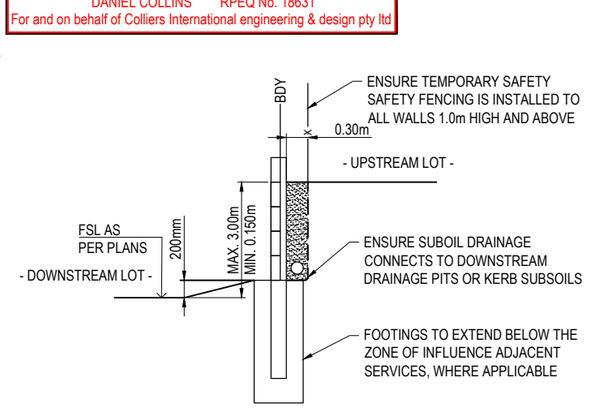
CONCRETE SLEEPER RETAINING WALL TYPICAL DETAIL (FRONTING ROAD RESERVE OR EXISTING INTERFACE) DOWNSTREAM

SCALE 1:25 (A1)



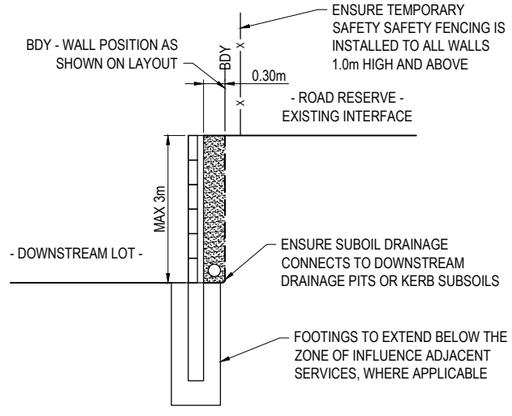
CONCRETE SLEEPER RETAINING WALL - TYPICAL DETAIL (BETWEEN ALLOTMENTS - REAR WALL)

SCALE 1:25 (A1)



CONCRETE SLEEPER RETAINING WALL - TYPICAL DETAIL (BETWEEN ALLOTMENTS - SIDE WALL)

SCALE 1:25 (A1)



CONCRETE SLEEPER RETAINING WALL TYPICAL DETAIL (FRONTING ROAD RESERVE OR EXISTING INTERFACE) UPSTREAM

SCALE 1:25 (A1)

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	09.02.23	CL	AK	ISSUED FOR CONSTRUCTION
B	11.04.23	CL	AK	LOT 280 LEVEL UPDATED. WALL BETWEEN LOT 280 AND 281 REMOVED
C	17.04.23	CL	AK	LEVEL AND RETAINING WALL AVERAGE HEIGHT AMENDMENTS. WALL BETWEEN LOT 293 AND 294 REMOVED
D	29.09.23	CL	BP	AS CONSTRUCTED

DRAWN

DESIGN

STATUS: AS CONSTRUCTED

APPROVED: DANIEL COLLINS RPEQ 18631

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE

1:25 0.25 0 0.25 0.5 0.75 1.0 1.25 A1
1:50 A3
1:500 10 5 0 10 20 A1
1:1000 A3

CLIENT: CANBERRA ESTATES CONSORTIUM NO. 36 PTY LIMITED

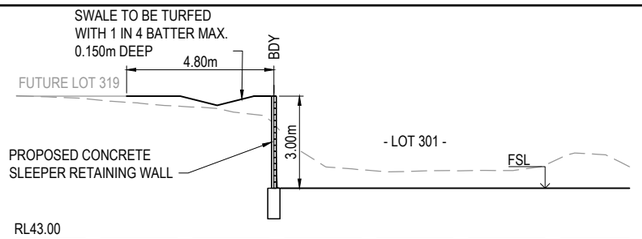
ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP PH: 1300 123 744

PROJECT NAME: WOODLINKS VILLAGE - STAGE 11

COOLINGWOOD DRIVE, COOLINGWOOD PARK

DRAWING TITLE: BULK EARTHWORKS LAYOUT PLAN

PROJECT No.	DRAWING No.	REVISION
22-0173	102	D



SECTION D
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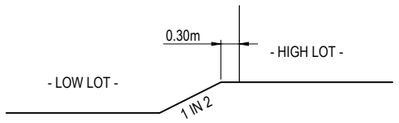
102



TYPICAL STEP BETWEEN LOTS DETAIL
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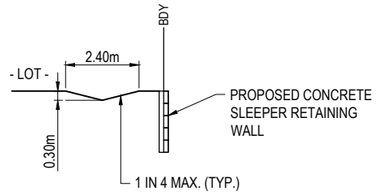
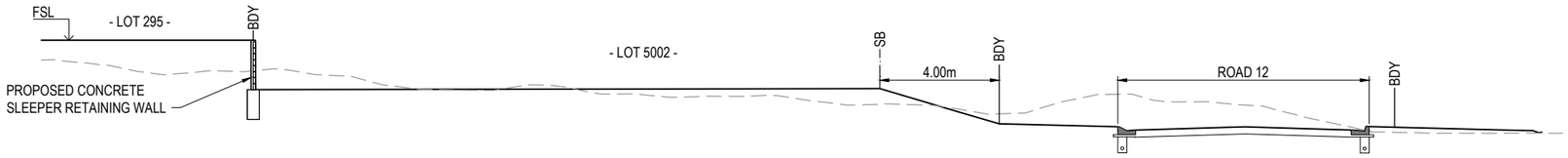


TYPICAL REAR ALLOTMENT SWALE DETAIL
SCALE 1:00 (A1)

RETAINING WALL NOTES:

1. ALL RETAINING WALLS ARE TO BE STRUCTURALLY DESIGNED AND CERTIFIED. FORMS 15 AND 16 ARE TO BE PROVIDED.
2. DESIGN OF WALLS TO CONSIDER ALL LOADS (FENCES, DWELLINGS ETC) AND ASSOCIATED IMPACTS FROM ANY ADJACENT SERVICES - FOOTING DEPTHS TO BE EXTENDED AS REQUIRED.
3. GEOTECHNICAL CONDITIONS ARE TO BE CONFIRMED AND APPROPRIATELY CONSIDERED FOR ALL WALLS.
4. REFER LANDSCAPE DRAWINGS FOR FURTHER INFORMATION ON RETAINING WALLS, PARTICULARLY RELATING TO FINISHES.
5. TEMPORARY SAFETY FENCING TO BE INSTALLED BEHIND ALL WALLS 1.0m HIGH AND GREATER.
6. WALLS TO BE DESIGNED TO ACCOMMODATE A SURCHARGE SUITABLE FOR A RESIDENTIAL HOUSE IMMEDIATELY BEHIND THE WALL. REFER TYPICAL DETAIL.

WHERE EARTH RETAINING STRUCTURES FACE THE PUBLIC REALM THAT THEY ARE CONSTRUCTED EITHER OF A-GRADE SAWCUT SANDSTONE BLOCKS OR CONCRETE SLEEPERS WHICH ARE PROVIDED WITH TEXTURED FINISH AND FULL DEPTH COLOUR TREATMENT



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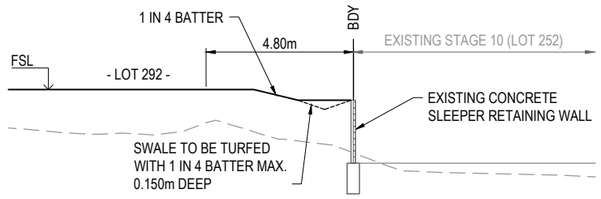

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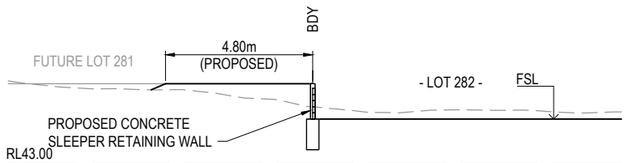
102



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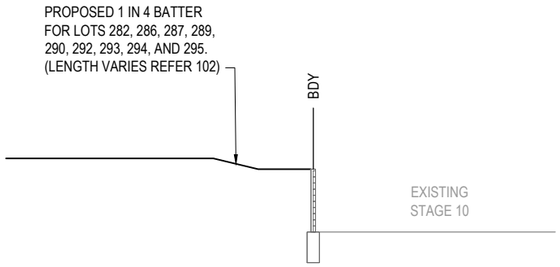
102



TYPICAL STEP IN EXISTING LOTS DETAIL
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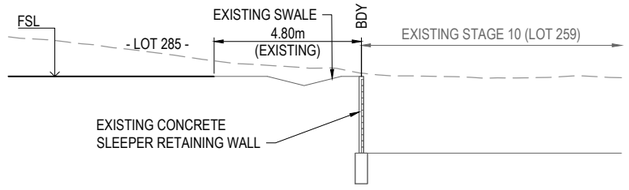

SECTION A
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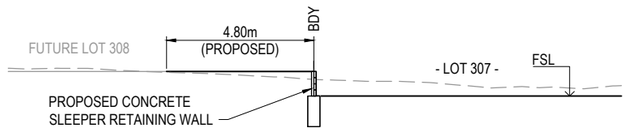
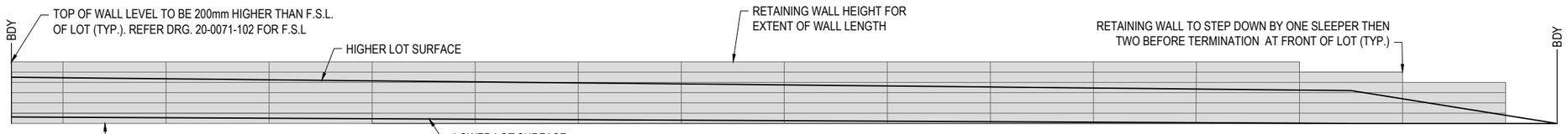
102



SECTION E
SCALE 1:100 (A1)
SCALE 1:200 (A3)
102

AS-CONSTRUCTED CERTIFICATION
Signature: ..... Date: 29/09/23
DANIEL COLLINS RPEQ No. 18631
For and on behalf of Colliers International engineering & design pty ltd



TYPICAL INTER-ALLOTMENT WALL HEIGHT DETAIL
SCALE 1:50 (A1)
SCALE 1:100 (A3)

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Colliers

SCALE
1:100 1 0 1 2 3 4 5 A1
1:200 A3

CLIENT
CANBERRA ESTATES CONSORTIUM NO. 36 PTY LIMITED

ASSOCIATED CONSULTANT
SAUNDERS HAVILL GROUP
PH: 1300 123 744

PROJECT NAME
WOODLINKS VILLAGE - STAGE 11
COOLINGWOOD DRIVE,
COOLINGWOOD PARK

DRAWING TITLE
BULK EARTHWORKS TYPICAL SECTIONS

PROJECT No.	DRAWING No.	REVISION
22-0173	103	B

LEGEND

- PROPOSED AREA OF WORKS
- PROPOSED ROAD CONTROL LINE
- EXISTING ROAD CROWN
- PROPOSED CONCRETE PATH AND PRAM RAMP
- PROPOSED NEW ROAD PAVEMENT
- INDICATIVE DRIVEWAY LOCATION
- ZERO LOT BOUNDARY
- SURFACE CONTOUR
- PROPOSED STORMWATER DRAINAGE PIPE
- EXISTING STORMWATER DRAINAGE PIPE
- PROPOSED ROOFWATER DRAINAGE PIPE
- EXISTING ROOFWATER DRAINAGE PIPE
- EXISTING DRAINAGE SWALE
- PROPOSED DRAINAGE SWALE
- PROPOSED ROOFWATER KERB ADAPTOR
- PROPOSED ROOFWATER KERB ADAPTOR WITH PIPE CONNECTION TO ALLOTMENT
- RETAINING WALL SUBSOIL PIPE
- PROPOSED SLEEPER RETAINING WALL
- EXISTING SLEEPER RETAINING WALL
- PROPOSED SEWERAGE MAIN
- EXISTING SEWERAGE MAIN
- PROPOSED WATER MAIN
- EXISTING WATER MAIN
- PROPOSED WATER CONDUIT
- EXISTING WATER CONDUIT
- EXISTING ELECTRICAL CABLE O/H
- EXISTING GAS MAIN

ASCON LEGEND

- STORMWATER DRAINAGE PIPE
- STORMWATER MANHOLE
- STORMWATER HEADWALL
- STORMWATER PIT
- EDGE OF ROAD
- FOOTPATH

AS-CONSTRUCTED CERTIFICATION

Signature: ..... Date: 29/09/23

DANIEL COLLINS RPEQ No. 18631

For and on behalf of Colliers International engineering & design pty ltd

ROOFWATER CONNECTION NOTE:

THE CONTRACTOR SHALL INSTALL A ROOFWATER CONNECTION TO EACH PROPERTY BY ONE OF THE FOLLOWING METHODS, AS SHOWN ON THE LAYOUT PLAN:

- TWO ROOFWATER KERB ADAPTOR 500mm FROM THE DOWNSTREAM BOUNDARY (UNLESS SHOWN ON A DIFFERENT ALIGNMENT). WHERE THERE IS A CONCRETE FOOTPATH, A ROOFWATER PIPE SHALL BE INSTALLED FROM THE PROPERTY BOUNDARY CONNECTED TO THE KERB ADAPTOR AT 1.25% MINIMUM GRADE, IN ACCORDANCE WITH THE LOCAL AUTHORITY STANDARDS.
- ONE 150Ø ROOFWATER PIPE CONNECTED TO PROPOSED STORMWATER GULLY PIT OR MANHOLE AT MINIMUM 1.0% GRADEWITH 1.0m COVER.

ROOFWATER CONNECTION NOTE:

THE CONTRACTOR SHALL INSTALL ROOFWATER CONNECTIONS TO EACH PROPERTY BY ONE OF THE FOLLOWING METHODS, AS SHOWN ON THE LAYOUT PLAN:

METHOD 1:

ONE ROOFWATER KERB ADAPTOR 500mm FROM THE DOWNSTREAM BOUNDARY PLUS ONE ROOFWATER KERB ADAPTOR 6.0m FROM DOWNSTREAM BOUNDARY.

WHERE THERE IS A CONCRETE FOOTPATH, A ROOFWATER PIPE SHALL BE INSTALLED FROM THE PROPERTY BOUNDARY CONNECTED TO THE KERB ADAPTOR AT 1.25% MINIMUM GRADE.

METHOD 2:

ONE 150Ø ROOFWATER PIPE CONNECTED TO PROPOSED STORMWATER GULLY PIT OR MANHOLE AT MINIMUM 1.0% GRADE WITH 1.0m COVER.

WARNING! - EXISTING SERVICES

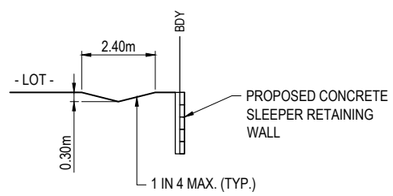
EXTREME CARE SHOULD BE TAKEN WHEN EXCAVATING IN THIS AREA. THE FOLLOWING EXISTING SERVICES ARE LIKELY TO BE PRESENT IN THE VICINITY OF THE SITE:

- ELECTRICAL CABLES
- TELECOMMUNICATIONS CABLES
- GAS MAINS
- WATER MAINS
- SEWER MAINS

THE CONTRACTOR SHOULD CONTACT THE SERVICE PROVIDER FOR FURTHER INFORMATION AND SATISFY THEMSELVES OF ANY SPECIFIC TREATMENT OR REQUIREMENTS.

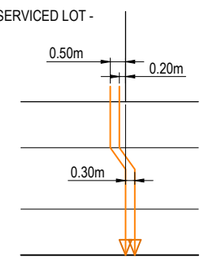
KERB TYPES NOTE:

REFER TO THE SURVEY SETOUT ENGINEERING DRAWING FOR KERB TYPES AND TRANSITION LOCATIONS



TYPICAL REAR ALLOTMENT SWALE DETAIL

SCALE 1:00 (A1)



TYPICAL KERB ADAPTOR SETOUT DETAIL

SCALE 1:100 (A1)

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	09.02.23	CL	AK	ISSUED FOR CONSTRUCTION
B	29.09.23	CL	BP	AS CONSTRUCTED

DRAWN

DESIGN

STATUS: **AS CONSTRUCTED**

APPROVED: DANIEL COLLINS RPEQ 18631 DATE: 9.02.23

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE

1:500 10 5 0 10 20 A1
1:1000 A3
1:100 1 0 1 2 3 4 5 A1
1:200 A3
1:25 0.25 0 0.25 0.5 0.75 1.0 1.25 A1
1:50 A3

CLIENT: **CANBERRA ESTATES CONSORTIUM NO. 36 PTY LIMITED**

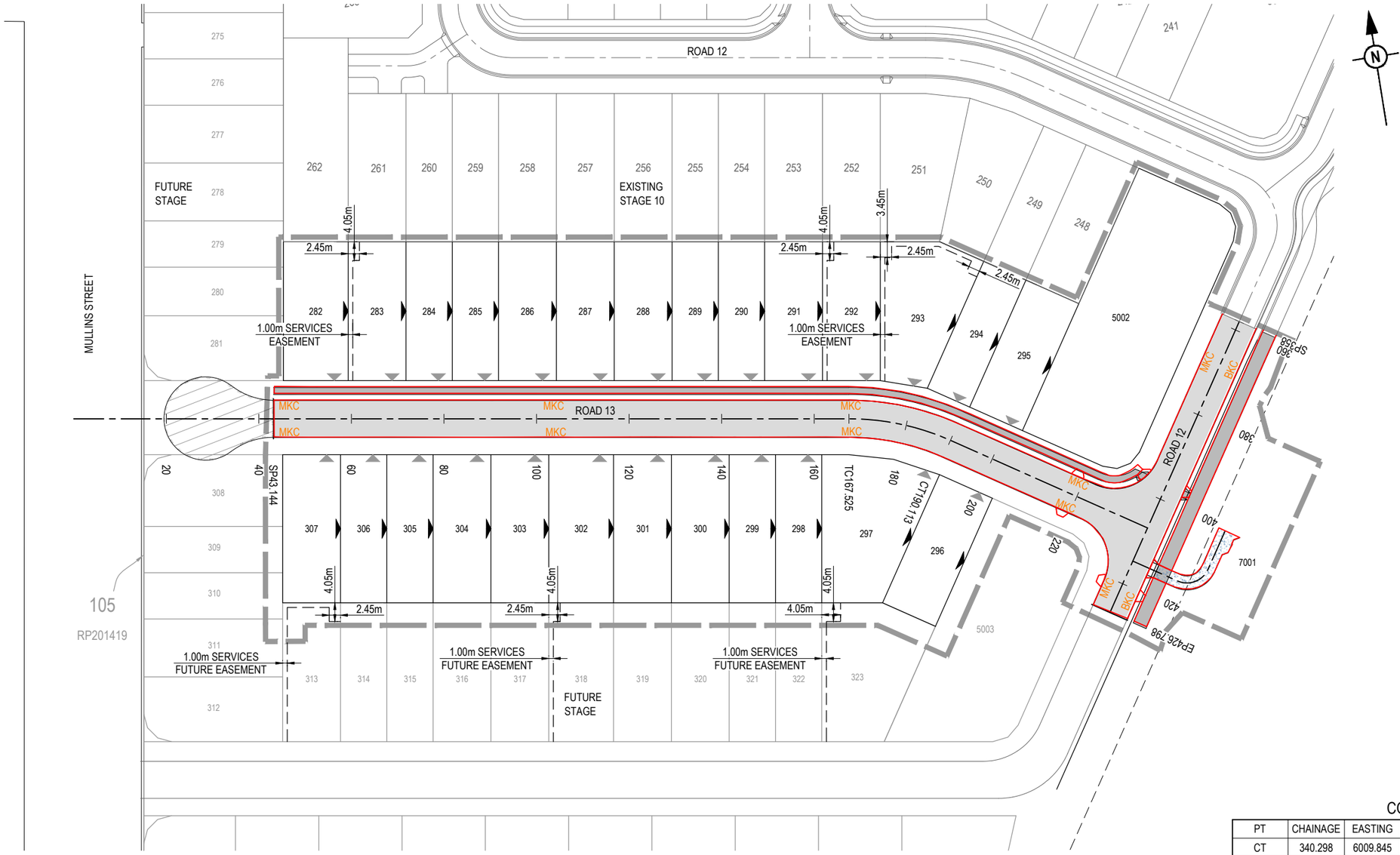
ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP PH: 1300 123 744

PROJECT NAME: **WOODLINKS VILLAGE - STAGE 11**

COOLINGWOOD DRIVE, COOLINGWOOD PARK

DRAWING TITLE: **ROADWORKS AND DRAINAGE LAYOUT PLAN**

PROJECT No.	DRAWING No.	REVISION
22-0173	104	B



LEGEND

- PROPOSED AREA OF WORKS
- PROPOSED NEW ROAD PAVEMENT
- PROPOSED ROAD CONTROL LINE
- MKC — PROPOSED MOUNTABLE KERB AND CHANNEL 'TYPE M1'
- BKC — PROPOSED BARRIER KERB AND CHANNEL 'TYPE B1'
- PROPOSED KERB TRANSITION LOCATION
- PROPOSED CONCRETE PATH AND PRAM RAMP
- INDICATIVE DRIVEWAY LOCATION
- ZERO LOT BOUNDARY

ASCON LEGEND

- EDGE OF ROAD
- FOOTPATH

AS-CONSTRUCTED CERTIFICATION
Signature: ..... Date: 29/09/23
DANIEL COLLINS RPEQ No. 18631
For and on behalf of Colliers International engineering & design pty ltd

CONTROL LINE SETOUT - ROAD 12

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
CT	340.298	6009.845	3331.262	37.919	212°53'01.07"			
TC	458.355	5945.748	3232.121	44.312	212°53'01.07"			
IP 6	465.443	5941.408	3225.409	44.733		R = 12.300	14.176	66°01'59.01"
CT	472.531	5933.512	3226.648	45.135	278°55'00.08"			

CONTROL LINE SETOUT - ROAD 13

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	5748.159	3334.683		98°55'00.13"			
TC	167.525	5913.659	3308.717	42.943	98°55'00.13"			
IP 2	178.819	5924.982	3306.940	42.677		R = 54.000	22.588	23°58'00.94"
CT	190.113	5934.607	3300.717	42.410	122°53'01.07"			
IP 3	236.712	5973.740	3275.417	40.760	122°53'01.07"			

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	09.02.23	CL	AK	ISSUED FOR CONSTRUCTION
B	29.09.23	CL	BP	AS CONSTRUCTED

DRAWN
DESIGN
STATUS: **AS CONSTRUCTED**
APPROVED: DANIEL COLLINS RPEQ 18631
FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE
1:500 10 5 0 10 20 A1
1:1000 A3

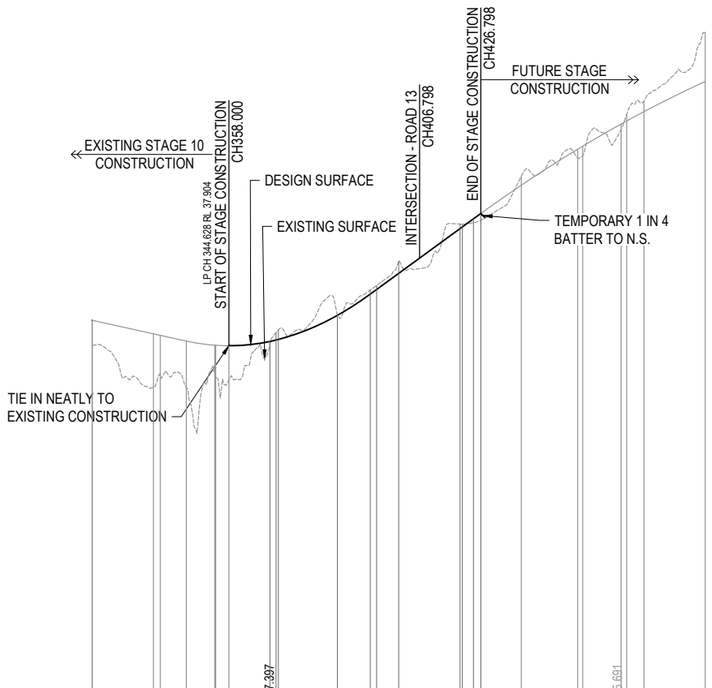
CLIENT: **CANBERRA ESTATES CONSORTIUM NO. 36 PTY LIMITED**

ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP PH: 1300 123 744

PROJECT NAME: **WOODLINKS VILLAGE - STAGE 11**
COOLINGWOOD DRIVE, COOLINGWOOD PARK

DRAWING TITLE: **SURVEY SETOUT AND KERB TYPES LAYOUT PLAN**

PROJECT No.	DRAWING No.	REVISION
22-0173	105	B



~~ASSUMED PAVEMENT DETAILS (SUBJECT TO CBR TESTING)~~

ROAD	ROAD CLASSIFICATION	DESIGN ESAs	ASSUMED CBR	SURFACING	BASE	SUB BASE	LOWER SUB BASE	TOTAL DEPTH
~~ROAD 12~~	~~ACCESS STREET~~	~~1.0 x 10^5~~	~~3~~	~~35mm~~	~~125mm~~	~~100mm~~	~~160mm~~	~~420mm~~

NOTE: ~~THIS PAVEMENT DESIGN IS PRELIMINARY ONLY BASED ON AN ASSUMED CBR. THE CONTRACTOR SHALL SUPPLY THE SUPERINTENDENT WITH SUBGRADE TEST RESULTS NECESSARY FOR FINAL PAVEMENT DESIGN.~~

PAVEMENT DESIGN SUBJECT TO COUNCIL APPROVAL FOLLOWING INSITU CBR TESTING.

AS-CONSTRUCTED PAVEMENT DETAILS

LOCATION	SECTION	ROAD CLASS	DESIGN CBR	TOTAL PAVEMENT DEPTH	A C	BASE COURSE TYPE (2.1)	UPPER SUB-BASE TYPE (2.3)	LOWER SUB-BASE TYPE (2.5)	SUBGRADE TREATEMENT
ROAD 12	CH358 - CH390	A1	3.5%	395mm	35mm	125mm	100mm	135mm	-
ROAD 12	CH390 - CH427	A1	4.0%	375mm	35mm	125mm	100mm	115mm	-

DATUM RL 20.0

CHAINAGES	300.000	300.073	320.000	322.234	330.733	340.000	340.298	344.628	358.000	360.000	360.733	380.000	390.733
CUT (-) / FILL	0.810	0.810	1.746	1.316	1.499	0.940	1.048	1.102	0.087	-0.241	-0.305	-0.022	-0.135
LHS LIP LEVEL	EXISTING STAGE									37.985	38.005	38.788	39.480
RHS LIP LEVEL										37.979	38.000	38.783	39.475
DESIGN SURFACE	38.733	38.731	38.293	38.244	38.057	37.921	37.919	37.904	38.046	38.091	38.109	38.895	39.587
EXISTING SURFACE	37.923	37.922	36.547	36.928	36.558	36.981	36.871	36.802	37.959	38.332	38.414	38.916	39.722
HORIZONTAL CURVES				R11.500									

CHAINAGES	392.798	400.000	420.000	420.798	424.356	426.798	440.000	458.355	460.000	472.531	474.356	480.000	500.000
CUT (-) / FILL	-0.133	-0.385	-0.148	-0.087	0.127	0.223	-0.296	0.286	0.305	0.173	-0.213	-0.334	-1.597
LHS LIP LEVEL	39.631	40.157	41.617	41.675	41.935	42.112	FUTURE WORKS						
RHS LIP LEVEL	#				41.930	42.107							
DESIGN SURFACE	39.738	40.263	41.723	41.782	42.041	42.219	43.139	44.312	44.412	45.135	45.235	45.538	46.519
EXISTING SURFACE	39.871	40.648	41.871	41.868	41.914	41.996	43.435	44.026	44.106	44.961	45.448	45.872	48.116
HORIZONTAL CURVES									R12.300				

\# REFER INTERSECTION DRAWINGS FOR LIP LEVELS

ROAD 12

AS-CONSTRUCTED CERTIFICATION

Signature: Date: 29/09/23

DANIEL COLLINS RPEQ No. 18631

For and on behalf of Colliers International engineering & design pty ltd

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	09.02.23	CL	AK	ISSUED FOR CONSTRUCTION
B	29.09.23	CL	BP	AS CONSTRUCTED

DRAWN

DESIGN

STATUS
AS CONSTRUCTED

APPROVED
DANIEL COLLINS RPEQ 18631

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

SCALE
1:1000 / 1:2000 HORIZONTAL 10 0 10 20 30 40 50 A1 / A3
1:100 / 1:200 VERTICAL 2 1 0 2 4 A1 / A3

CLIENT
CANBERRA ESTATES CONSORTIUM NO. 36 PTY LIMITED

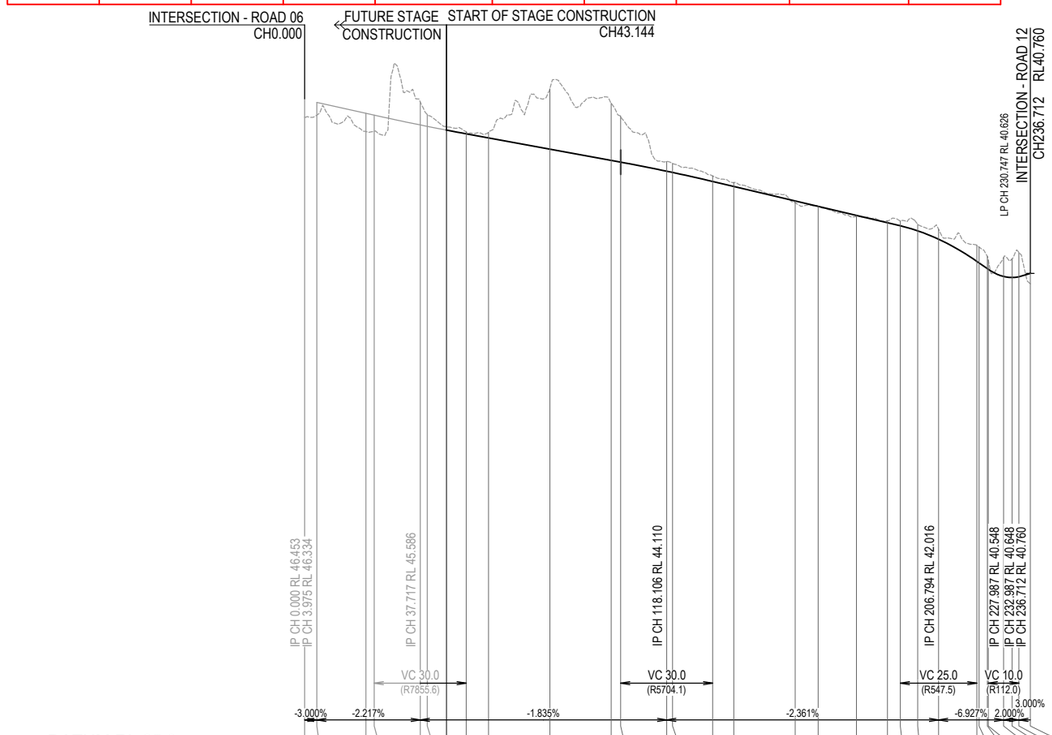
ASSOCIATED CONSULTANT
SAUNDERS HAVILL GROUP
PH: 1300 123 744

PROJECT NAME
WOODLINKS VILLAGE - STAGE 11

COOLINGWOOD DRIVE,
COOLINGWOOD PARK

DRAWING TITLE
ROAD 12 LONGITUDINAL SECTION AND CROSS SECTIONS

PROJECT No.	DRAWING No.	REVISION
22-0173	106	B



~~ASSUMED PAVEMENT DETAILS (SUBJECT TO CBR TESTING)~~

~~ROAD~~	~~ROAD CLASSIFICATION~~	~~DESIGN ESAs~~	~~ASSUMED CBR~~	~~SURFACING~~	~~BASE~~	~~SUB BASE~~	~~LOWER SUB BASE~~	~~TOTAL DEPTH~~
~~ROAD 13~~	~~ACCESS STREET~~	~~1.0 x 10^5~~	~~3~~	~~35mm~~	~~125mm~~	~~100mm~~	~~160mm~~	~~420mm~~

NOTE: ~~THIS PAVEMENT DESIGN IS PRELIMINARY ONLY BASED ON AN ASSUMED CBR. THE CONTRACTOR SHALL SUPPLY THE SUPERINTENDENT WITH SUBGRADE TEST RESULTS NECESSARY FOR FINAL PAVEMENT DESIGN~~

PAVEMENT DESIGN SUBJECT TO COUNCIL APPROVAL FOLLOWING INSITU CBR TESTING.

AS-CONSTRUCTED PAVEMENT DETAILS

LOCATION	SECTION	ROAD CLASS	DESIGN CBR	TOTAL PAVEMENT DEPTH	A C	BASE COURSE TYPE (2.1)	UPPER SUB-BASE TYPE (2.3)	LOWER SUB-BASE TYPE (2.5)	SUBGRADE TREATEMENT
ROAD 13	CH43 - CH100	A1	5.0%	360mm	35mm	125mm	100mm	100mm	-
ROAD 13	CH100 - CH200	A1	4.5%	360mm	35mm	125mm	100mm	100mm	-
ROAD 13	CH200 - CH237	A1	4.0%	375mm	35mm	125mm	100mm	115mm	-

DATUM RL 25.0

CUT (-) / FILL	0.602	0.415	0.591	0.525	-0.750	-0.387		-0.064	-0.187	-1.969	-1.865
LHS LIP LEVEL	FUTURE WORK							45.199	45.065	44.698	44.331
RHS LIP LEVEL								45.199	45.065	44.698	44.331
DESIGN SURFACE	46.453	46.334	45.978	45.918	45.600	45.554		45.310	45.177	44.810	44.443
EXISTING SURFACE	45.851	45.919	45.387	45.394	46.350	45.941		45.374	45.363	46.779	46.308
CHAINAGES	0.000	3.975	20.000	22.717	37.717	40.000	43.144	52.717	60.000	80.000	100.000
HORIZONTAL CURVES											

CUT (-) / FILL	-1.502	-0.318	-0.294	-0.180	-0.128	0.054	-0.005	0.030	-0.065	-0.163
LHS LIP LEVEL	44.274	43.979	43.939	43.644	43.481	43.009	42.832	42.537	42.298	42.199
RHS LIP LEVEL	44.274	43.979	43.939	43.644	43.481	43.009	42.832	42.537	42.298	42.199
DESIGN SURFACE	44.386	44.090	44.050	43.756	43.593	43.121	42.943	42.649	42.410	42.311
EXISTING SURFACE	45.888	44.408	44.345	43.936	43.722	43.067	42.948	42.619	42.474	42.474
CHAINAGES	103.106	118.106	120.000	133.106	140.000	160.000	167.525	180.000	190.113	194.294
HORIZONTAL CURVES								R54.000		

CUT (-) / FILL	-0.216	-0.324	-0.521	-0.519	-0.403	-0.298	-0.615	-0.605	-0.798	0.342
LHS LIP LEVEL	42.035	41.761	41.038	40.989	40.801	#				
RHS LIP LEVEL	42.035	41.761	41.038	40.989						
DESIGN SURFACE	42.147	41.873	41.150	41.101	40.913	40.894	40.660	40.626	40.648	40.760
EXISTING SURFACE	42.363	42.197	41.671	41.620	41.315	41.193	41.275	41.231	41.446	40.418
CHAINAGES	200.000	206.794	219.294	220.000	222.721	222.987	227.987	230.747	232.987	236.712
HORIZONTAL CURVES										

\# REFER INTERSECTION DRAWINGS FOR LIP LEVELS

ROAD 13

AS-CONSTRUCTED CERTIFICATION

Signature: .... Date: 29/09/23

DANIEL COLLINS RPEQ No. 18631

For and on behalf of Colliers International engineering & design pty ltd

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	09.02.23	CL	AK	ISSUED FOR CONSTRUCTION
B	29.09.23	CL	BP	AS CONSTRUCTED

DRAWN

DESIGN

STATUS
AS CONSTRUCTED

APPROVED
DANIEL COLLINS RPEQ 18631

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

SCALE
1:1000 / 1:2000 — 10 0 10 20 30 40 50 — A1 / A3 — HORIZONTAL
1:100 / 1:200 — 2 1 0 2 4 — A1 / A3 — VERTICAL

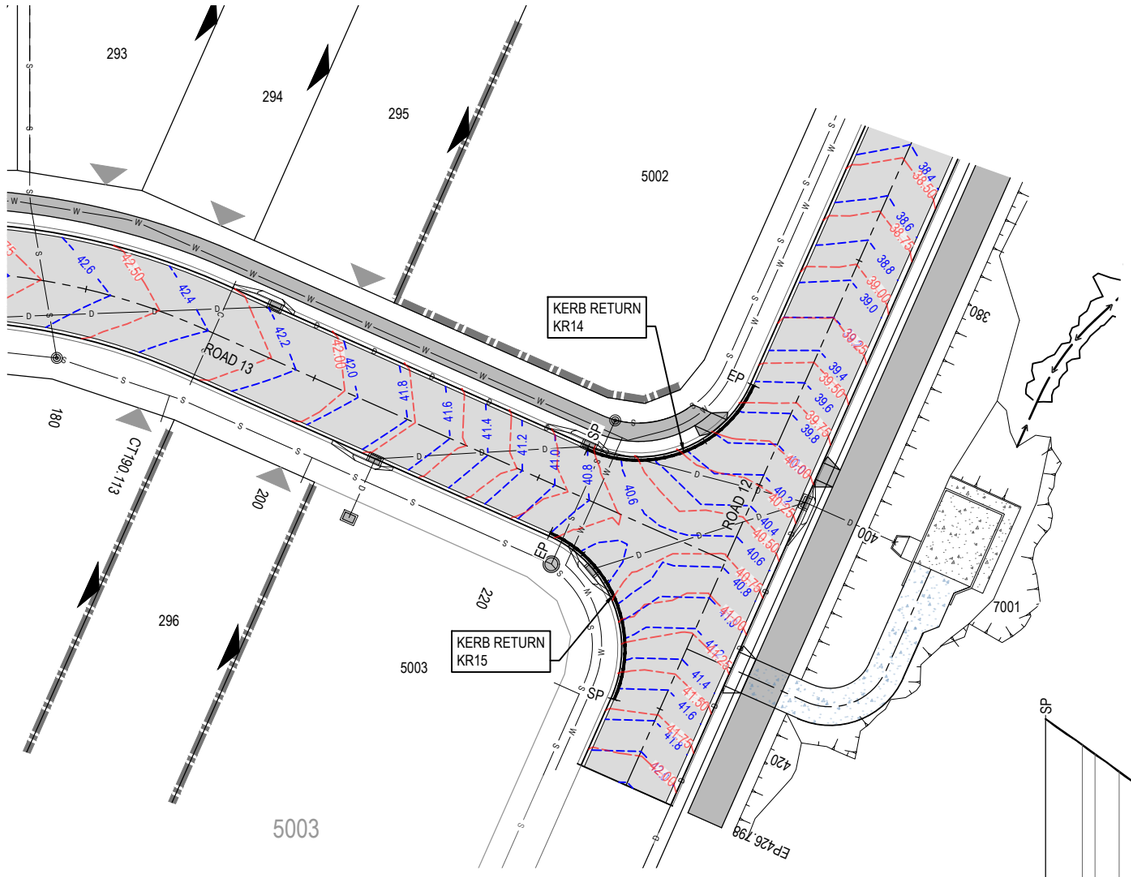
CLIENT
CANBERRA ESTATES CONSORTIUM NO. 36 PTY LIMITED

ASSOCIATED CONSULTANT
SAUNDERS HAVILL GROUP
PH: 1300 123 744

PROJECT NAME
WOODLINKS VILLAGE - STAGE 11
COOLINGWOOD DRIVE,
COOLINGWOOD PARK

DRAWING TITLE
ROAD 13 LONGITUDINAL SECTION AND CROSS SECTIONS

PROJECT No. 22-0173
DRAWING No. 107
REVISION B



LEGEND

- PROPOSED ROAD CONTROL LINE
- PROPOSED KERB INVERT LINE
- PROPOSED CONCRETE PATH AND PRAM RAMP
- PROPOSED NEW ROAD PAVEMENT
- INDICATIVE DRIVEWAY LOCATION
- 53.4 PROPOSED PAVEMENT CONTOUR (0.2m INTERVAL)
- PROPOSED KERB SETOUT LINE
- SP PROPOSED KERB SETOUT START POINT
- EP PROPOSED KERB SETOUT END POINT
- PROPOSED SLEEPER RETAINING WALL
- PROPOSED SWALE
- EXISTING DRAIN
- PROPOSED STORMWATER DRAINAGE PIPE
- EXISTING STORMWATER DRAINAGE PIPE
- PROPOSED SEWERAGE MAIN
- EXISTING SEWERAGE MAIN
- PROPOSED WATER MAIN
- EXISTING WATER MAIN
- PROPOSED WATER CONDUIT

ASCON LEGEND

- 40.00 AS CONSTRUCTED CONTOUR

KERB TYPES NOTE:

REFER TO THE SURVEY SETOUT ENGINEERING DRAWING FOR KERB TYPES AND TRANSITION LOCATIONS

WARNING! - EXISTING SERVICES

EXTREME CARE SHOULD BE TAKEN WHEN EXCAVATING IN THIS AREA. THE FOLLOWING EXISTING SERVICES ARE LIKELY TO BE PRESENT IN THE VICINITY OF THE SITE:

- ELECTRICAL CABLES
- TELECOMMUNICATIONS CABLES
- GAS MAINS
- WATER MAINS
- SEWER MAINS

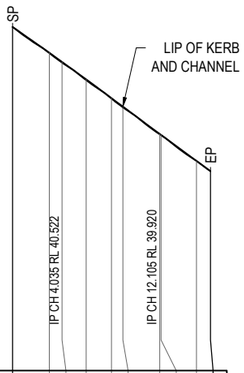
THE CONTRACTOR SHOULD CONTACT THE SERVICE PROVIDER FOR FURTHER INFORMATION AND SATISFY THEMSELVES OF ANY SPECIFIC TREATMENT OR REQUIREMENTS.

AS-CONSTRUCTED CERTIFICATION

Signature: ..... Date: 29/09/23

DANIEL COLLINS RPEQ No. 18631

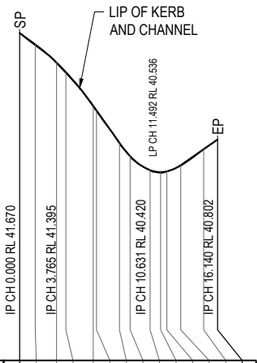
For and on behalf of Colliers International engineering & design pty ltd



DATUM RL 38.0

LIP LEVEL	40.802	40.591	40.517	40.374	40.221	40.152	39.930	39.922	39.709	39.626
NORTHING	3286.146	3284.906	3284.668	3284.501	3284.729	3284.965	3286.260	3286.319	3288.275	3289.196
EASTING	5964.006	5966.725	5967.732	5969.687	5971.741	5972.640	5975.335	5975.421	5977.542	5978.213
CHAINAGES	0.000	3.000	4.035	6.000	8.070	9.000	12.000	12.105	15.000	16.140
HORIZONTAL CURVES		R-10.275								

KR14



DATUM RL 39.0

LIP LEVEL	41.670	41.578	41.430	41.352	41.077	41.040	40.775	40.668	40.552	40.536	40.542	40.593	40.723	40.802
NORTHING	3265.683	3266.784	3268.402	3269.144	3271.364	3271.629	3273.478	3274.317	3275.830	3276.584	3277.012	3277.913	3279.219	3279.890
EASTING	5963.011	5963.630	5964.251	5964.437	5964.657	5964.650	5964.415	5964.192	5963.586	5963.171	5962.897	5962.214	5960.882	5959.961
CHAINAGES	0.000	1.265	3.000	3.765	6.000	6.265	8.131	9.000	10.631	11.492	12.000	13.131	15.000	16.140
HORIZONTAL CURVES		R-10.275												

KR15

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	09.02.23	CL	AK	ISSUED FOR CONSTRUCTION
B	29.06.23	CL	BP	AS CONSTRUCTED

DRAWN

DESIGN

STATUS: **AS CONSTRUCTED**

APPROVED: DANIEL COLLINS RPEQ 18631

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE

1:250 5 0 5 10 A1

1:500 A3

CLIENT: **CANBERRA ESTATES CONSORTIUM NO. 36 PTY LIMITED**

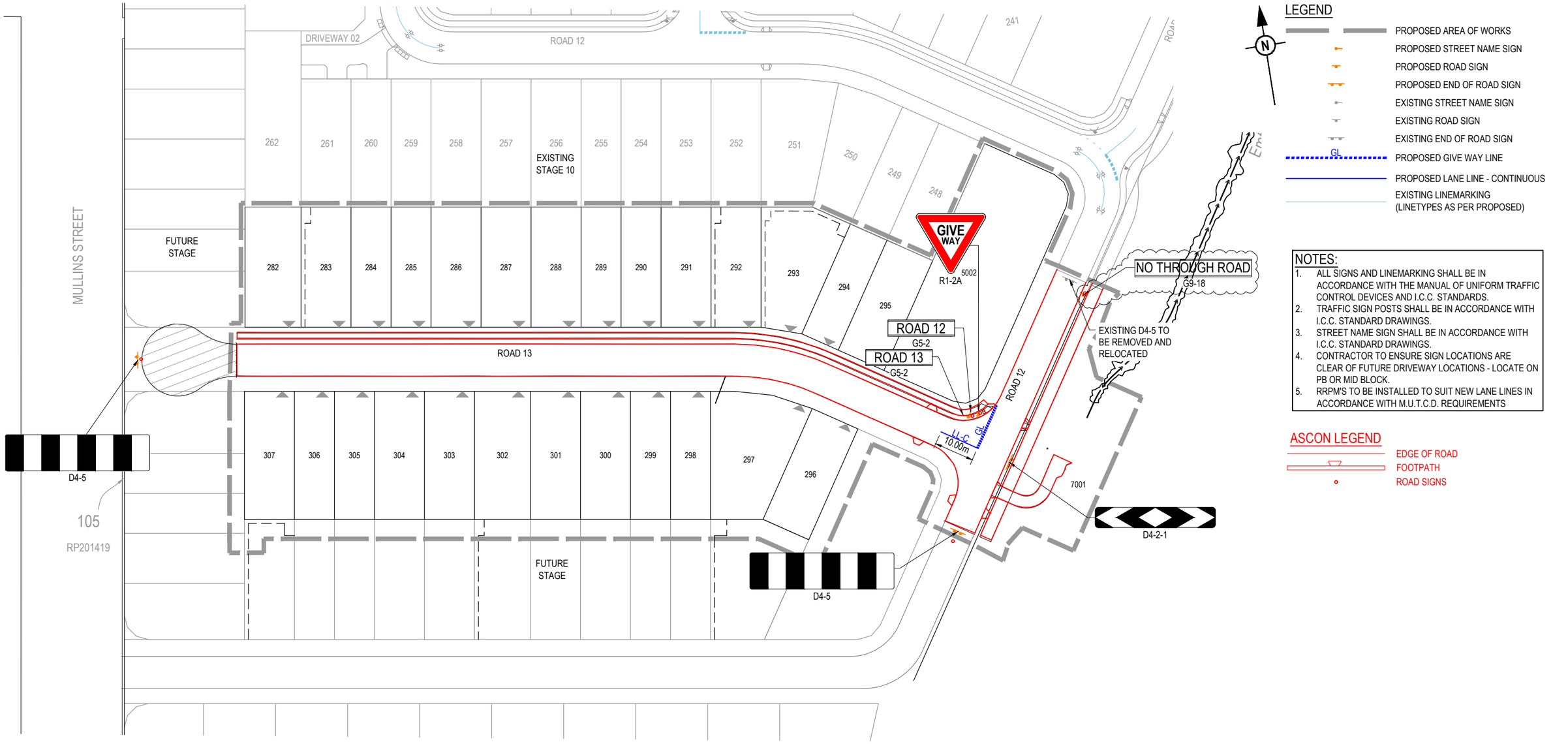
ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP PH: 1300 123 744

PROJECT NAME: **WOODLINKS VILLAGE - STAGE 11**

COOLINGWOOD DRIVE, COOLINGWOOD PARK

DRAWING TITLE: **INTERSECTION DETAILS LAYOUT PLAN**

PROJECT No.	DRAWING No.	REVISION
22-0173	108	B



NOTES:

1. ALL SIGNS AND LINEMARKING SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND I.C.C. STANDARDS.
2. TRAFFIC SIGN POSTS SHALL BE IN ACCORDANCE WITH I.C.C. STANDARD DRAWINGS.
3. STREET NAME SIGN SHALL BE IN ACCORDANCE WITH I.C.C. STANDARD DRAWINGS.
4. CONTRACTOR TO ENSURE SIGN LOCATIONS ARE CLEAR OF FUTURE DRIVEWAY LOCATIONS - LOCATE ON PB OR MID BLOCK.
5. RRPM'S TO BE INSTALLED TO SUIT NEW LANE LINES IN ACCORDANCE WITH M.U.T.C.D. REQUIREMENTS

ASCON LEGEND

- EDGE OF ROAD
- FOOTPATH
- ROAD SIGNS

AS-CONSTRUCTED CERTIFICATION

Signature: ..... Date: 29/09/23

DANIEL COLLINS RPEQ No. 18631

For and on behalf of Colliers International engineering & design pty ltd

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	09.02.23	CL	AK	ISSUED FOR CONSTRUCTION
B	29.09.23	CL	BP	AS CONSTRUCTED

DRAWN

DESIGN

STATUS: **AS CONSTRUCTED**

APPROVED: DANIEL COLLINS RPEQ 18631

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE: 1:500 / 1:1000 — 10 5 0 10 20 — A1 / A3

CLIENT: **CANBERRA ESTATES CONSORTIUM NO. 36 PTY LIMITED**

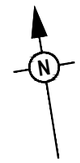
ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP PH: 1300 123 744

PROJECT NAME: **WOODLINKS VILLAGE - STAGE 11**

COOLINGWOOD DRIVE, COOLINGWOOD PARK

DRAWING TITLE: **SIGNS AND LINEMARKING LAYOUT PLAN**

PROJECT No.	DRAWING No.	REVISION
22-0173	109	B



LEGEND

- G1/11 — CATCHMENT NAME
- CATCHMENT BOUNDARY
- FUTURE STAGE CATCHMENT BOUNDARY
- EXISTING STAGE CATCHMENT BOUNDARY
- PROPOSED STORMWATER DRAINAGE PIPE
- EXISTING STORMWATER DRAINAGE PIPE
- PROPOSED ROOFWATER DRAINAGE PIPE
- EXISTING ROOFWATER DRAINAGE PIPE
- PROPOSED SWALE DRAIN
- EXISTING SWALE DRAIN
- 24.0 — FINISHED SURFACE CONTOUR
- CATCHMENT FLOW DIRECTION ARROW

CATCHMENT NAME	CATCHMENT AREA (ha)	RUNOFF COEFF MINOR	RUNOFF COEFF MAJOR	IMPERVIOUS CATCHMENT AREA MINOR (ha)	IMPERVIOUS CATCHMENT AREA MAJOR (ha)
G6/10	0.318	0.75	0.75	0.229	0.313
G5/10	0.22	0.75	0.75	0.158	0.216
G4/10	0.452	0.75	0.75	0.326	0.444
G3/10	0.151	0.73	1	0.108	0.151
G2/10	0.048	0.71	0.71	0.034	0.048
G1/10	0.153	0.75	0.75	0.111	0.153
G1/11	0.036	0.75	0.75	0.026	0.036
G1/12	0.072	0.75	0.75	0.052	0.071
F1/13	0.115	0.67	0.95	0.077	0.109
G1/13	0.128	0.75	0.75	0.093	0.126
G1/14	0.077	0.73	1	0.056	0.077
F11/15	0.037	0.67	0.95	0.027	0.037
F10/15	0.03	0.67	0.95	0.021	0.03
F9/15	0.03	0.67	0.95	0.021	0.03
F8/15	0.037	0.67	0.95	0.027	0.037
F7/15	0.038	0.67	0.95	0.027	0.037
F6/15	0.042	0.67	0.95	0.03	0.042
F5/15	0.037	0.67	0.95	0.027	0.037
F4/15	0.038	0.67	0.95	0.027	0.037
F3/15	0.03	0.67	0.95	0.021	0.03
F2/15	0.03	0.67	0.95	0.021	0.03
F1/15	0.057	0.67	0.95	0.041	0.057

AS-CONSTRUCTED CERTIFICATION

Signature: ..... Date: 29/09/23

DANIEL COLLINS RPEQ No. 18631

For and on behalf of Colliers International engineering & design pty ltd

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	09.02.23	CL	AK	ISSUED FOR CONSTRUCTION
B	29.09.23	CL	BP	AS CONSTRUCTED

DRAWN

DESIGN

STATUS: **AS CONSTRUCTED**

APPROVED: DANIEL COLLINS RPEQ 18631

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE

1:500 10 5 0 10 20 A1

1:1000 A3

CLIENT: **CANBERRA ESTATES CONSORTIUM NO. 36 PTY LIMITED**

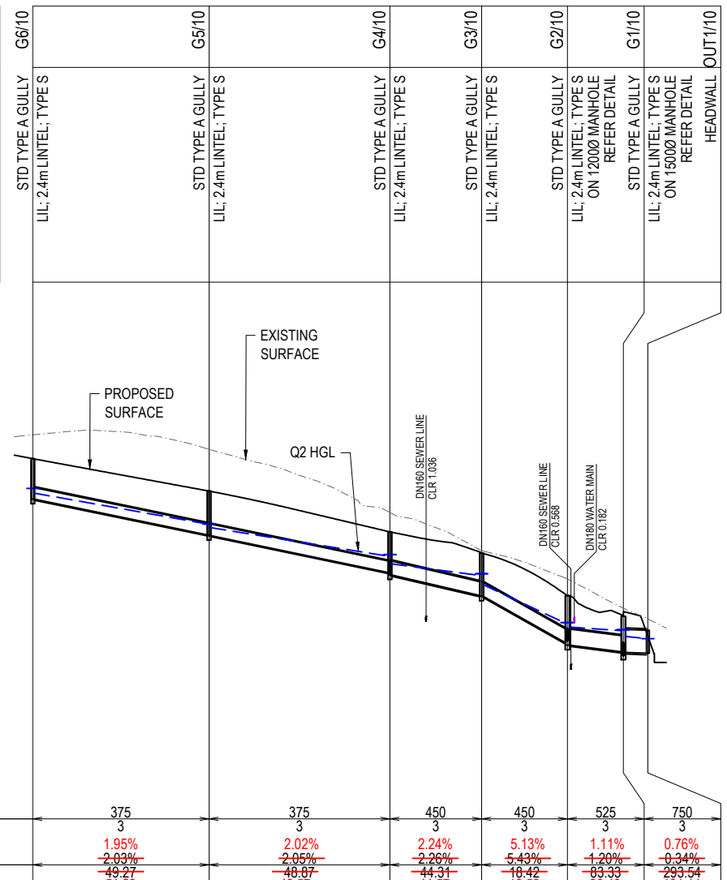
ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP PH: 1300 123 744

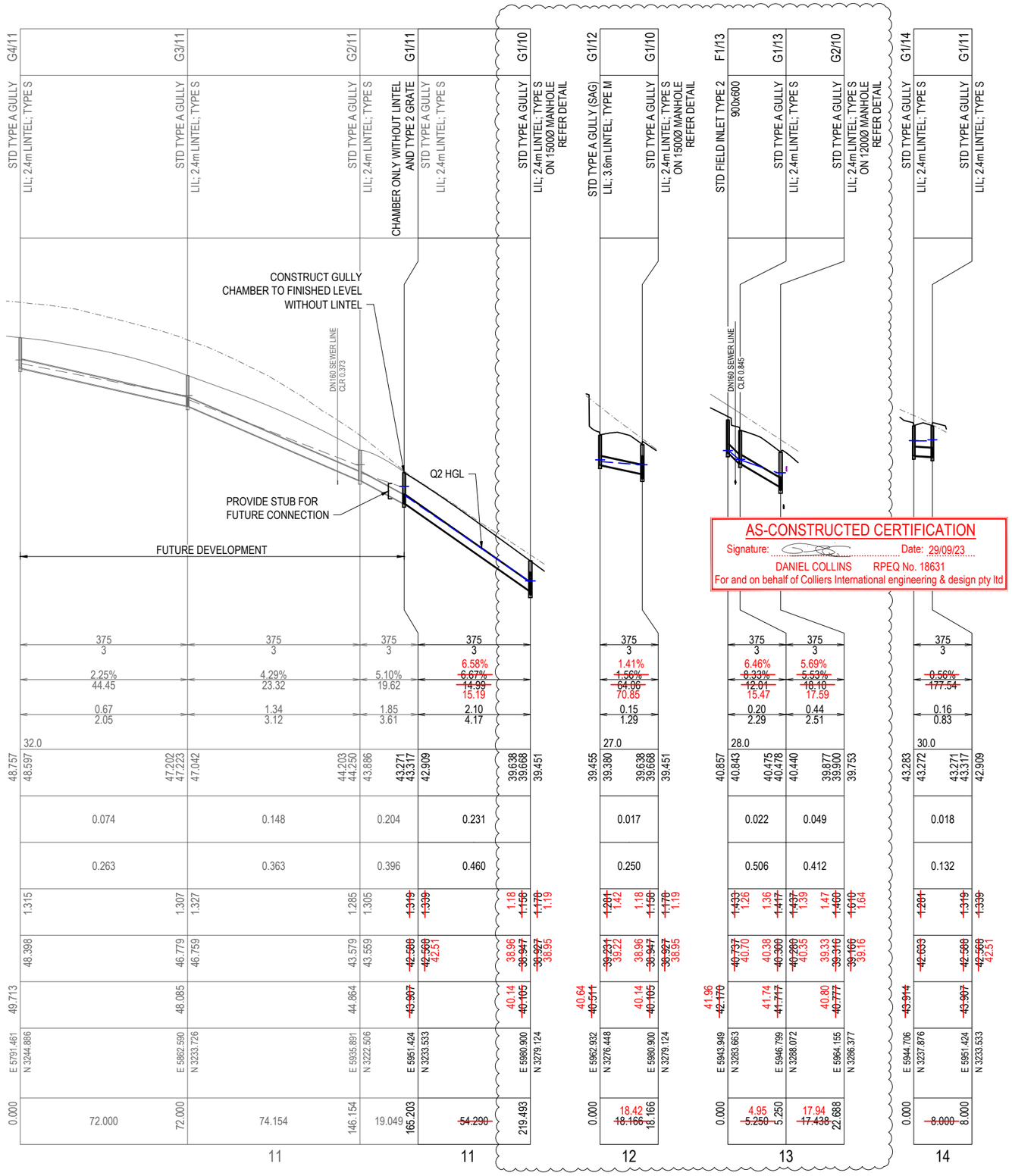
PROJECT NAME: **WOODLINKS VILLAGE - STAGE 11**

COOLINGWOOD DRIVE, COOLINGWOOD PARK

DRAWING TITLE: **STORMWATER DRAINAGE CATCHMENT LAYOUT PLAN**

PROJECT No.	DRAWING No.	REVISION
22-0173	110	B





STORMWATER STRUCTURE NOTE:

STANDARD ROUND MANHOLES LESS THAN 3.0m DEEP:
CONSTRUCT IN ACCORDANCE WITH THE LOCAL AUTHORITY STANDARDS.

STANDARD ROUND MANHOLES 3.0m > 5.3m DEEP:
CONSTRUCT IN ACCORDANCE WITH TMR STD DRAWINGS 1307 AND 1308.

STANDARD ROUND MANHOLES GREATER THAN 5.3m DEEP:
SHALL BE STRUCTURALLY DESIGNED (CERTIFIED) AND CONSTRUCTED BY CONTRACTOR ON A CASE BY CASE BASIS.

ROUND EXTENDED (900mm MAX) MANHOLES:
CONSTRUCT IN ACCORDANCE WITH PEAK URBAN STD DRAWINGS S-101 & S-102.

RECTANGULAR STRUCTURE (SPECIAL):
SHALL BE STRUCTURALLY DESIGNED (CERTIFIED) AND CONSTRUCTED BY CONTRACTOR ON A CASE BY CASE BASIS.

AS-CONSTRUCTED CERTIFICATION

Signature: Date: 29/09/23
DANIEL COLLINS RPEQ No. 18631
For and on behalf of Colliers International engineering & design pty ltd

STRUCTURE NAME	G6/10		G5/10		G4/10		G3/10		G2/10		G1/10		OUT1/10
STRUCTURE DESCRIPTION	STD TYPE A GULLY LIL; 2.4m LINTEL; TYPE S		STD TYPE A GULLY LIL; 2.4m LINTEL; TYPE S		STD TYPE A GULLY LIL; 2.4m LINTEL; TYPE S		STD TYPE A GULLY LIL; 2.4m LINTEL; TYPE S		STD TYPE A GULLY LIL; 2.4m LINTEL; TYPE S ON 1200Ø MANHOLE REFER DETAIL		STD TYPE A GULLY LIL; 2.4m LINTEL; TYPE S ON 1500Ø MANHOLE REFER DETAIL		HEADWALL
PIPE SIZE (mm)		375		375		450		450		525		750	
PIPE CLASS		3		3		3		3		3		3	
PIPE GRADE (%)		1.95% ~~2.03%~~		2.02% ~~2.05%~~		2.24% ~~2.26%~~		5.13% ~~5.43%~~		1.11% ~~1.20%~~		0.76% ~~0.34%~~	
PIPE SLOPE (1 in X)		~~49.27~~ 51.29		~~48.87~~ 49.57		~~44.31~~ 44.57		~~18.42~~ 19.50		~~83.33~~ 90.40		~~293.54~~ 131.14	
FULL PIPE VELOCITY (m/s)		0.65		1.11		1.65		1.84		1.58		1.34	
PART FULL VELOCITY (m/s)		1.96		2.26		2.83		4.05		2.37		1.67	
DATUM RL	29.0												
H.G.L IN PIPE & (Q2 EVENT) W.S.E IN STRUCTURE	44.274 44.121		43.112 43.112 42.997		42.063 42.118 41.815		41.437 41.492 41.138		39.877 39.900 39.753		39.638 39.668 39.451		39.376 39.376 39.376
PIPE FLOW (Cumecs)		0.072		0.123		0.262		0.293		0.342		0.592	
PIPE CAPACITY AT GRADE (Cumecs)		0.250		0.251		0.428		0.665		0.471		0.653	
DEPTH TO INVERT	~~1.319~~ 1.36		1.44 ~~1.429~~ ~~1.449~~ 1.46		1.30 ~~1.326~~ ~~1.401~~ 1.41		1.38 ~~1.384~~ ~~1.404~~ 1.44		1.50 ~~1.535~~ ~~1.610~~ 1.64		1.18 ~~1.158~~ ~~1.178~~ 1.19		1.23 ~~0.750~~ ~~0.750~~ 1.23
INVERT LEVEL OF DRAIN	~~43.925~~ 43.91		42.79 ~~42.758~~ ~~42.738~~ 42.77		41.57 ~~41.531~~ ~~41.456~~ 41.46		40.79 ~~40.781~~ ~~40.761~~ 40.73		39.30 ~~39.241~~ ~~39.166~~ 39.16		38.96 ~~38.947~~ ~~38.927~~ 38.95		38.88 ~~38.900~~ ~~38.900~~ 38.88
DESIGN SURFACE LEVEL	45.27 ~~45.245~~		44.23 ~~44.187~~		42.87 ~~42.857~~		42.17 ~~42.164~~		40.80 ~~40.777~~		40.14 ~~40.105~~		40.11 ~~39.650~~
SETOUT COORDINATES	E 5795.847 N 3323.152		E 5852.652 N 3314.239		E 5910.940 N 3305.099		E 5940.645 N 3301.577		E 5964.155 N 3286.377		E 5980.900 N 3279.124		E 5987.614 N 3274.782
RUNNING CHAINAGE	0.000	57.45 ~~57.500~~	57.500	59.48 ~~59.000~~	116.500	29.86 ~~29.914~~	146.414	27.88 ~~27.995~~	174.409	18.08 ~~18.248~~	192.657	9.18 ~~7.996~~	200.653
LINE							10						

STRUCTURE NAME	G4/11		G3/11		G2/11		G1/11		G1/10
STRUCTURE DESCRIPTION	STD TYPE A GULLY LIL; 2.4m LINTEL; TYPE S		STD TYPE A GULLY LIL; 2.4m LINTEL; TYPE S		STD TYPE A GULLY LIL; 2.4m LINTEL; TYPE S		CHAMBER ONLY WITHOUT LINTEL AND TYPE 2 GRATE STD TYPE A GULLY LIL; 2.4m LINTEL; TYPE S		STD TYPE A GULLY LIL; 2.4m LINTEL; TYPE S ON 1500Ø MANHOLE REFER DETAIL
PIPE SIZE (mm)		375		375		375		375	
PIPE CLASS		3		3		3		3	
PIPE GRADE (%)		2.25%		4.29%		5.10%		6.58% ~~6.67%~~	
PIPE SLOPE (1 in X)		44.45		23.32		19.62		~~14.99~~ 15.19	
FULL PIPE VELOCITY (m/s)		0.67		1.34		1.85		2.10	
PART FULL VELOCITY (m/s)		2.05		3.12		3.61		4.17	
DATUM RL	32.0								
H.G.L IN PIPE & (Q2 EVENT) W.S.E IN STRUCTURE	48.757 48.597		47.202 47.223 47.042		44.203 44.250 43.886		43.271 43.317 42.909		39.638 39.668 39.451
PIPE FLOW (Cumecs)		0.074		0.148		0.204		0.231	
PIPE CAPACITY AT GRADE (Cumecs)		0.263		0.363		0.396		0.460	
DEPTH TO INVERT	1.315		1.307 1.327		1.285 1.305		~~1.319~~ ~~1.339~~		1.18 ~~1.158~~ ~~1.178~~ 1.19
INVERT LEVEL OF DRAIN	48.398		46.779 46.759		43.579 43.559		~~42.588~~ ~~42.568~~ 42.51		38.96 ~~38.947~~ ~~38.927~~ 38.95
DESIGN SURFACE LEVEL	49.713		48.085		44.864		~~43.907~~		40.14 ~~40.105~~
SETOUT COORDINATES	E 5791.461 N 3244.886		E 5862.590 N 3233.726		E 5935.891 N 3222.506		E 5951.424 N 3233.533		E 5980.900 N 3279.124
RUNNING CHAINAGE	0.000	72.000	72.000	74.154	146.154	19.049	165.203	~~54.290~~	219.493
LINE				11				11	

STRUCTURE NAME	G1/12		G1/10
STRUCTURE DESCRIPTION	STD TYPE A GULLY (SAG) LIL; 3.6m LINTEL; TYPE M		STD TYPE A GULLY LIL; 2.4m LINTEL; TYPE S ON 1500Ø MANHOLE REFER DETAIL
PIPE SIZE (mm)		375	
PIPE CLASS		3	
PIPE GRADE (%)		1.41% ~~1.56%~~	
PIPE SLOPE (1 in X)		~~64.06~~ 70.85	
FULL PIPE VELOCITY (m/s)		0.15	
PART FULL VELOCITY (m/s)		1.29	
DATUM RL	27.0		
H.G.L IN PIPE & (Q2 EVENT) W.S.E IN STRUCTURE	39.455 39.380		39.638 39.668 39.451
PIPE FLOW (Cumecs)		0.017	
PIPE CAPACITY AT GRADE (Cumecs)		0.250	
DEPTH TO INVERT	~~1.281~~ 1.42		1.18 ~~1.158~~ ~~1.178~~ 1.19
INVERT LEVEL OF DRAIN	~~39.231~~ 39.22		38.96 ~~38.947~~ ~~38.927~~ 38.95
DESIGN SURFACE LEVEL	40.64 ~~40.511~~		40.14 ~~40.105~~
SETOUT COORDINATES	E 5962.932 N 3276.448		E 5980.900 N 3279.124
RUNNING CHAINAGE	0.000	18.42 ~~18.166~~	18.166
LINE		12	

STRUCTURE NAME	F1/13		G1/13		G2/10
STRUCTURE DESCRIPTION	STD FIELD INLET TYPE 2 900x600		STD TYPE A GULLY LIL; 2.4m LINTEL; TYPE S		STD TYPE A GULLY LIL; 2.4m LINTEL; TYPE S ON 1200Ø MANHOLE REFER DETAIL
PIPE SIZE (mm)		375		375	
PIPE CLASS		3		3	
PIPE GRADE (%)		6.46% ~~8.33%~~		5.69% ~~5.53%~~	
PIPE SLOPE (1 in X)		~~12.01~~ 15.47		~~18.10~~ 17.59	
FULL PIPE VELOCITY (m/s)		0.20		0.44	
PART FULL VELOCITY (m/s)		2.29		2.51	
DATUM RL	28.0				
H.G.L IN PIPE & (Q2 EVENT) W.S.E IN STRUCTURE	40.857 40.843		40.475 40.478 40.440		39.877 39.900 39.753
PIPE FLOW (Cumecs)		0.022		0.049	
PIPE CAPACITY AT GRADE (Cumecs)		0.506		0.412	
DEPTH TO INVERT	~~1.433~~ 1.26		1.36 ~~1.417~~ ~~1.437~~ 1.39		1.47 ~~1.460~~ ~~1.610~~ 1.64
INVERT LEVEL OF DRAIN	~~40.737~~ 40.70		40.38 ~~40.300~~ ~~40.280~~ 40.35		39.33 ~~39.316~~ ~~39.166~~ 39.16
DESIGN SURFACE LEVEL	41.96 ~~42.170~~		41.74 ~~41.717~~		40.80 ~~40.777~~
SETOUT COORDINATES	E 5943.949 N 3283.663		E 5946.799 N 3288.072		E 5964.155 N 3286.377
RUNNING CHAINAGE	0.000	4.95 ~~5.250~~	5.250	17.94 ~~17.438~~	22.688
LINE			13		

STRUCTURE NAME	G1/14		G1/11
STRUCTURE DESCRIPTION	STD TYPE A GULLY LIL; 2.4m LINTEL; TYPE S		STD TYPE A GULLY LIL; 2.4m LINTEL; TYPE S
PIPE SIZE (mm)		375	
PIPE CLASS		3	
PIPE GRADE (%)		~~0.56%~~	
PIPE SLOPE (1 in X)		~~177.54~~	
FULL PIPE VELOCITY (m/s)		0.16	
PART FULL VELOCITY (m/s)		0.83	
DATUM RL	30.0		
H.G.L IN PIPE & (Q2 EVENT) W.S.E IN STRUCTURE	43.283 43.272		43.271 43.317 42.909
PIPE FLOW (Cumecs)		0.018	
PIPE CAPACITY AT GRADE (Cumecs)		0.132	
DEPTH TO INVERT	~~1.281~~		~~1.319~~ ~~1.339~~
INVERT LEVEL OF DRAIN	~~42.633~~		~~42.588~~ ~~42.568~~ 42.51
DESIGN SURFACE LEVEL	~~43.914~~		~~43.907~~
SETOUT COORDINATES	E 5944.706 N 3237.876		E 5951.424 N 3233.533
RUNNING CHAINAGE	0.000	~~8.000~~	8.000
LINE		14	

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	09.02.23	CL	AK	ISSUED FOR CONSTRUCTION
B	28.03.23	CL	CL	LINE 11, 12, 13 UPDATED
C	29.09.23	CL	BP	AS CONSTRUCTED

DRAWN
DESIGN

STATUS
AS CONSTRUCTED

APPROVED
DANIEL COLLINS RPEQ 18631
FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE
1:1000 / 1:2000 HORIZONTAL A1 / A3
10 0 10 20 30 40 50
1:100 / 1:200 VERTICAL A1 / A3
2 1 0 2 4

CLIENT
CANBERRA ESTATES CONSORTIUM NO. 36 PTY LIMITED

ASSOCIATED CONSULTANT
SAUNDERS HAVILL GROUP
PH: 1300 123 744

PROJECT NAME
WOODLINKS VILLAGE - STAGE 11
COOLINGWOOD DRIVE,
COOLINGWOOD PARK

DRAWING TITLE
STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 1 OF 2

PROJECT No. 22-0173
DRAWING No. 111
REVISION C

STRUCTURE NAME	F11/15	F10/15	F9/15	F8/15	F7/15	F6/15	F5/15	F4/15	F3/15	F2/15	F1/15	1/15	G4/10
STRUCTURE DESCRIPTION	STD FIELD INLET TYPE 2 900x600	STD FIELD INLET TYPE 2 900x600	STD FIELD INLET TYPE 2 900x600	STD FIELD INLET TYPE 2 900x600	STD FIELD INLET TYPE 2 900x600	STD FIELD INLET TYPE 2 900x600	STD FIELD INLET TYPE 2 900x600	STD FIELD INLET TYPE 2 900x600	STD FIELD INLET TYPE 2 900x600	STD FIELD INLET TYPE 2 900x600	STD FIELD INLET TYPE 2 900x600	900x600 OVER 1200mm MANHOLE	ROOFWATER PIT 900 DIA	STD TYPE A GULLY LIL; 2.4m LINTEL; TYPE S
PIPE SIZE (mm)	225	225	225	225	225	225	225	225	225	225	225	300	375
PIPE CLASS	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	3
PIPE GRADE (%)	1.21% ~~1.50%~~	2.14% ~~2.59%~~	2.76% ~~2.40%~~	1.65% ~~1.43%~~	1.89% ~~2.50%~~	1.36% ~~1.52%~~	4.23% ~~4.50%~~	3.67% ~~4.00%~~	3.16% ~~4.00%~~	11.18% ~~15.10%~~	1.49% ~~1.52%~~	5.04% ~~5.45%~~	
PIPE SLOPE (1 in X)	~~66.67~~ 82.83	~~38.56~~ 46.76	~~41.67~~ 36.23	~~69.99~~ 60.52	~~40.00~~ 53.04	~~65.76~~ 73.29	~~22.22~~ 23.66	~~25.00~~ 27.22	~~25.00~~ 31.69	~~6.62~~ 8.94	~~65.64~~ 67.07	~~18.34~~ 19.83	
FULL PIPE VELOCITY (m/s)	0.22	0.39	0.56	0.77	0.98	1.22	1.43	1.63	1.80	1.96	1.28	0.81	
PART FULL VELOCITY (m/s)	1.01	1.45	1.56	1.40	1.83	1.57	2.50	2.46	2.51	4.27	1.86	2.97	
DATUM RL	32.0												
H.G.L IN PIPE & (Q2 EVENT) W.S.E IN STRUCTURE	48.384	48.368 ~~48.239~~	48.239 ~~48.224~~	48.224 ~~47.990~~	47.990 ~~47.990~~	47.614	47.492 ~~47.492~~	47.492 ~~47.435~~	47.435 ~~47.203~~	47.203 ~~47.122~~	47.122 ~~46.977~~	46.977 ~~46.977~~	46.885 ~~46.421~~	46.421 ~~46.421~~	46.312 ~~46.013~~	46.013 ~~46.013~~	45.906 ~~45.609~~	45.609 ~~45.609~~	45.490 ~~44.890~~	42.915 ~~42.693~~	42.194 ~~42.197~~	42.143 ~~42.063~~	42.118 ~~41.815~~
PIPE FLOW (Cumecs)	0.009	0.015	0.022	0.031	0.039	0.048	0.057	0.065	0.072	0.078	0.091	0.090	
PIPE CAPACITY AT GRADE (Cumecs)	0.055	0.072	0.070	0.054	0.071	0.055	0.095	0.090	0.090	0.175	0.119	0.410	
DEPTH TO INVERT	~~0.700~~ 0.87	~~0.85~~ 0.700	~~0.729~~ 0.87	~~0.94~~ 0.937	~~0.857~~ 0.96	~~1.01~~ 0.857	~~0.932~~ 1.03	~~1.11~~ 0.961	~~0.981~~ 1.14	~~1.08~~ 0.981	~~1.001~~ 1.11	~~1.06~~ 1.041	~~1.061~~ 1.10	~~1.23~~ 1.175	~~1.193~~ 1.26	~~1.04~~ 1.093	~~1.104~~ 1.08	~~1.44~~ 1.504	~~1.524~~ 1.47	~~0.81~~ 1.015	~~3.341~~ 3.46	~~1.25~~ 1.299	~~1.374~~ 1.33	~~1.28~~ 1.326	~~1.401~~ 1.41	~~1.295~~	~~1.307~~ 1.327
INVERT LEVEL OF DRAIN	~~46.292~~ 48.27	~~48.15~~ 48.142	~~48.122~~ 48.13	~~47.92~~ 47.963	~~47.943~~ 47.90	~~47.55~~ 47.543	~~47.468~~ 47.53	~~47.32~~ 47.289	~~47.269~~ 47.29	~~47.03~~ 46.919	~~46.899~~ 47.00	~~46.83~~ 46.709	~~46.089~~ 46.79	~~46.26~~ 46.127	~~46.107~~ 46.23	~~45.87~~ 45.707	~~45.696~~ 45.83	~~45.51~~ 45.296	~~45.276~~ 45.48	~~45.13~~ 44.785	~~42.459~~ 42.48	~~42.03~~ 41.999	~~41.924~~ 41.95	~~41.59~~ 41.531	~~41.456~~ 41.46	~~47.084~~	~~46.779~~ 46.759
DESIGN SURFACE LEVEL	49.14 ~~49.000~~	~~49.00~~ 48.850	~~48.86~~ 48.700	~~48.56~~ 48.400	~~48.43~~ 48.250	~~48.11~~ 47.900	~~47.89~~ 47.750	~~47.49~~ 47.300	~~46.91~~ 46.800	~~46.95~~ 46.800	~~45.94~~ 45.800	~~43.28~~ 43.297	~~42.87~~ 42.857	~~46.379~~	~~48.085~~
SETOUT COORDINATES	E 5796.783 N 3285.603	E 5806.662 N 3284.053	E 5816.542 N 3282.503	E 5828.891 N 3280.565	E 5841.239 N 3278.628	E 5855.070 N 3276.458	E 5867.419 N 3274.521	E 5879.768 N 3272.583	E 5889.647 N 3271.033	E 5899.526 N 3269.483	E 5902.737 N 3268.979	E 5907.418 N 3298.814	E 5910.940 N 3305.099	E 5855.633 N 3242.915	E 5862.590 N 3233.726
RUNNING CHAINAGE	0.000	9.94 ~~10.000~~ 10.000	9.82 ~~10.000~~ 20.000	12.68 ~~12.500~~ 32.500	12.71 ~~12.500~~ 45.000	13.79 ~~14.000~~ 59.000	12.46 ~~12.500~~ 71.500	12.54 ~~12.500~~ 84.000	9.80 ~~10.000~~ 94.000	10.14 ~~10.000~~ 104.000	3.13 ~~3.250~~ 107.250	30.18 ~~30.200~~ 137.450	7.14 ~~7.205~~ 144.655	0.000	11.526
LINE	15													16	

STRUCTURE NAME	G1/16	G3/11
STRUCTURE DESCRIPTION	STD TYPE A GULLY LIL; 2.4m LINTEL; TYPE S	STD TYPE A GULLY LIL; 2.4m LINTEL; TYPE S
PIPE SIZE (mm)	375	
PIPE CLASS	3	
PIPE GRADE (%)	2.65% ~~2.65%~~	
PIPE SLOPE (1 in X)	~~37.79~~	
FULL PIPE VELOCITY (m/s)	0.17	
PART FULL VELOCITY (m/s)	1.47	
DATUM RL	35.0	
H.G.L IN PIPE & (Q2 EVENT) W.S.E IN STRUCTURE	47.197	47.182 ~~47.202~~ 47.223 ~~47.042~~
PIPE FLOW (Cumecs)	0.019	
PIPE CAPACITY AT GRADE (Cumecs)	0.285	
DEPTH TO INVERT	~~1.295~~	~~1.307~~ 1.327
INVERT LEVEL OF DRAIN	~~47.084~~	~~46.779~~ 46.759
DESIGN SURFACE LEVEL	~~46.379~~	~~48.085~~
SETOUT COORDINATES	E 5855.633 N 3242.915	E 5862.590 N 3233.726
RUNNING CHAINAGE	0.000	~~11.526~~ 11.526
LINE	16	

STORMWATER STRUCTURE NOTE:

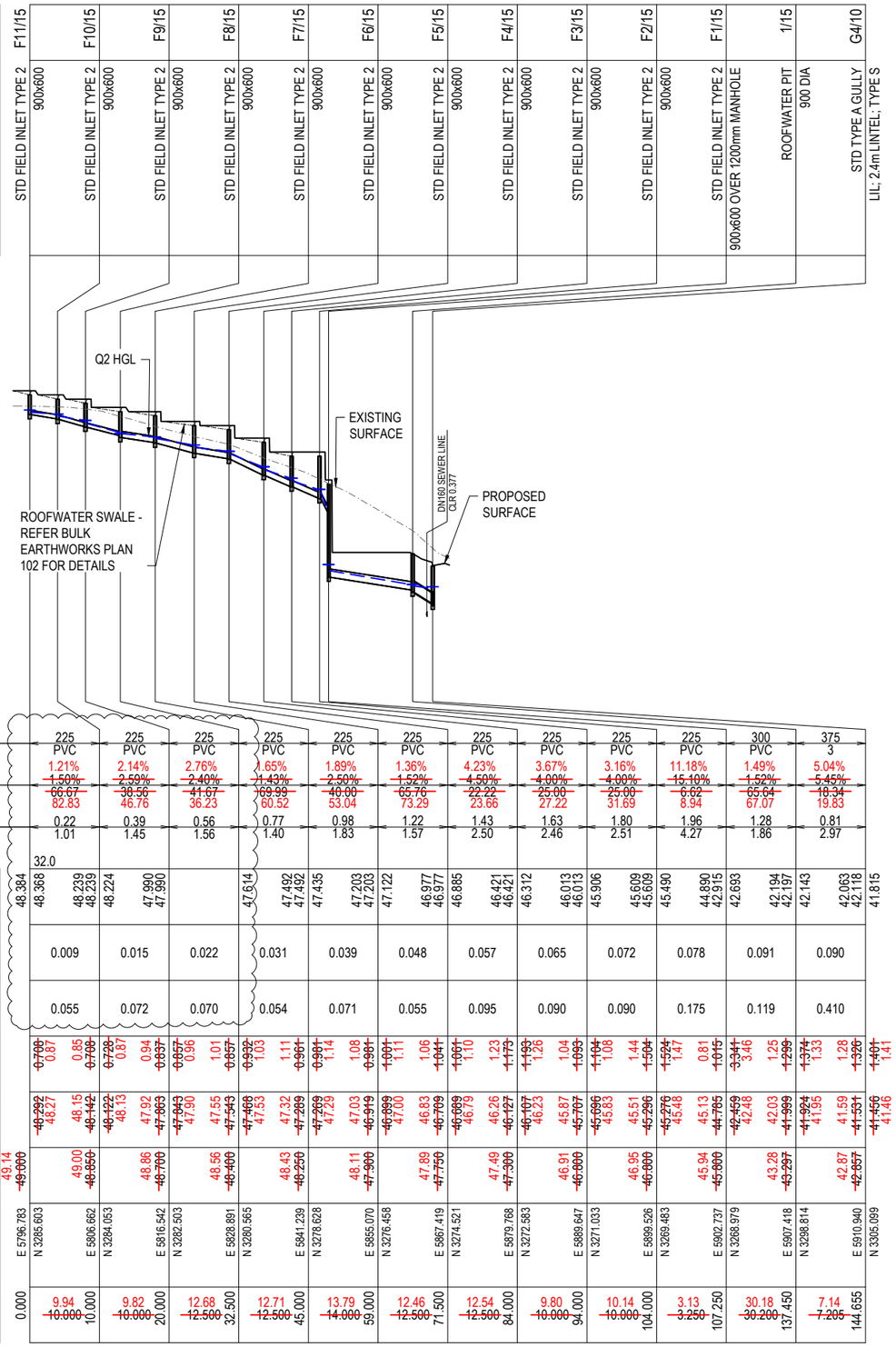
STANDARD ROUND MANHOLES LESS THAN 3.0m DEEP:
CONSTRUCT IN ACCORDANCE WITH THE LOCAL AUTHORITY STANDARDS.

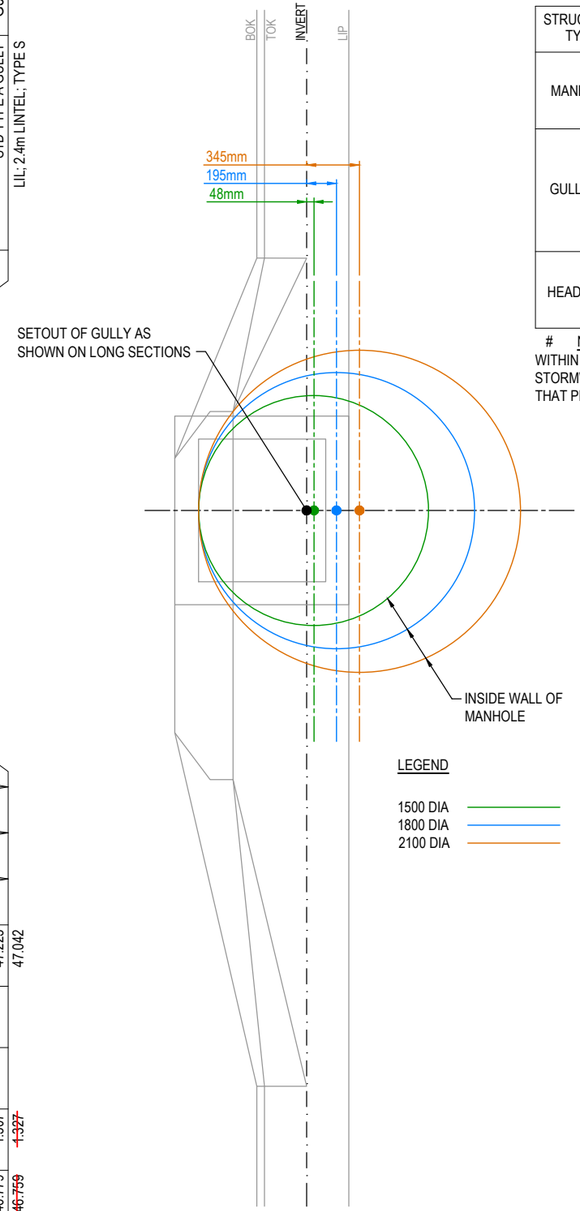
STANDARD ROUND MANHOLES 3.0m > 5.3m DEEP:
CONSTRUCT IN ACCORDANCE WITH TMR STD DRAWINGS 1307 AND 1308.

STANDARD ROUND MANHOLES GREATER THAN 5.3m DEEP:
SHALL BE STRUCTURALLY DESIGNED (CERTIFIED) AND CONSTRUCTED BY CONTRACTOR ON A CASE BY CASE BASIS.

ROUND EXTENDED (900mm MAX) MANHOLES:
CONSTRUCT IN ACCORDANCE WITH PEAK URBAN STD DRAWINGS S-101 & S-102.

RECTANGULAR STRUCTURE (SPECIAL):
SHALL BE STRUCTURALLY DESIGNED (CERTIFIED) AND CONSTRUCTED BY CONTRACTOR ON A CASE BY CASE BASIS.





STRUCTURE SETOUT REFERENCE POINT

STRUCTURE TYPE	HORIZONTAL	VERTICAL
MANHOLE	℄ MAIN SHAFT	FINISHED SURFACE LEVEL
GULLY PIT	INTERSECTION OF ℄ PIT AND KERB INVERT LNE # (INCLUDING MANHOLES UNDER GULLIES)	KERB INVERT LEVEL
HEADWALL	INTERSECTION OF HEADWALL FACE & PIPE CENTRE LINE	TOP OF HEADWALL

NOTE:
WITHIN GULLY PIT CHAMBER, CONTRACTOR TO ENSURE STORMWATER PIPES ARE OFFSET AS REQUIRED SO THAT PIPES ENTER WHOLLY WITHIN A SIDE WALL

TYPICAL MANHOLE UNDER GULLY SETOUT - MOUNTABLE K&C - STANDARD TYPE A GULLY
1:20 (A1)
1:40 (A3)

NOTE:
THE CENTRE OF 1050, 1200 & 1350 DIA MANHOLES ARE THE SAME SETOUT POINTS AS THEIR RESPECTIVE GULLY PITS.

AS-CONSTRUCTED CERTIFICATION
Signature: Date: 29/09/23
DANIEL COLLINS RPEQ No. 18631
For and on behalf of Colliers International engineering & design pty ltd

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	09.02.23	CL	AK	ISSUED FOR CONSTRUCTION
B	29.09.23	CL	BP	AS CONSTRUCTED

DRAWN
DESIGN
STATUS: AS CONSTRUCTED
APPROVED: DANIEL COLLINS RPEQ 18631
FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

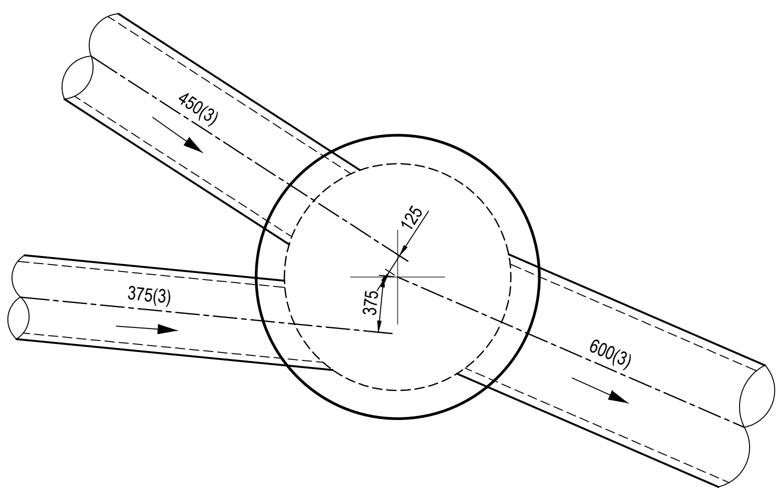
SCALE
1:1000 1:2000 HORIZONTAL 10 0 10 20 30 40 50 A1 A3
1:100 1:200 VERTICAL 2 1 0 2 4 A1 A3
1:20 1:40 0.2 0 0.2 0.4 0.6 0.8 1 A1 A3

CLIENT: CANBERRA ESTATES CONSORTIUM NO. 36 PTY LIMITED
ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP PH: 1300 123 744
PROJECT NAME: WOODLINKS VILLAGE - STAGE 11
COOLINGWOOD DRIVE, COOLINGWOOD PARK
DRAWING TITLE: STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 2 OF 2
PROJECT No. 22-0173
DRAWING No. 112
REVISION B

MINOR Q2 CALCULATION TABLE

LOCATION: 1 DESIGN ARI MINOR (Yrs)	1 DESIGN ARI MAJOR (Yrs)	2 STRUCTURE No.	3 DRAIN SECTION	4 SUB-CATCHMENTS CONTRIBUTING	TIME: 5 SURFACE CONDITIONS (LAND USE)	6 SLOPE OF CATCHMENT (%)	7 tc SUB CATCHMENT TIME OF CONCENTRATION (min.)	SUBCATCHMENT RUNOFF: 8 I RAINFALL INTENSITY From Intensity Chart MINOR (mm/hr)	8 I MAJOR (mm/hr)	9 C COEFFICIENT OF RUNOFF MINOR	9 C MAJOR	10 A SUB-CATCHMENT AREA (Ha)	11 (CxA) EQUIVALENT AREA 9 x 10 MINOR (Ha)	11 9 x 10 MAJOR (Ha)	12 ∑(CxA) SUM OF CONTRIBUTING EQUIVALENT AREAS ∑11 MINOR (Ha)	12 ∑11 MAJOR (Ha)	13 Q SUB-CATCHMENT DISCHARGE (8 x 12)/360 MINOR (m^3/s)	13 (8 x 12)/360 MAJOR (m^3/s)	14 FLOW PAST PREVIOUS GULLIES ∑25 (m^3/s)	INLET DESIGN: 15 FLOW IN K&C (INCLUDING BYPASS) 13 + 14 (m^3/s)	16 ROAD GRADE AT INLET (%)	17 K - K WIDTH (m)	18 Wf FLOW WIDTH (m)	19 dg FLOW DEPTH AT INVERT (m)	20 Vg GUTTER FLOW VELOCITY (m/s)	21 dg xVg 20 x 19 (m^2/s)	22 INLET NUMBER	23 INLET TYPE Refer Legend	24 Qg FLOW INTO INLET From Charts (m^3/s)	25 BYPASS FLOW 15 - 24 (m^3/s)
2	100	G6/10	G6/10 to G5/10	2		2.5	5	116	287	0.75	0.75	0.318	0.229	0.313	0.229	0.313	0.074	0.25		0.074	1.9	8	2.301	0.081	0.949	0.077	G6/10	AL2D	0.072	0.001
2	100	G5/10	G5/10 to G4/10	4		2.5	5	116	287	0.75	0.75	0.22	0.158	0.216	0.158	0.216	0.051	0.173	0.002	0.053	1.87	8	2.013	0.073	0.875	0.064	G5/10	AL2D	0.053	
2	100	G4/10	G4/10 to G3/10	28		2.5	5	116	287	0.75	0.75	0.226	0.163	0.222	0.163	0.222	0.052	0.177		0.052	2.36	8	0.975	0.039	2.764	0.107	G4/10	AL2D	0.052	
2	100	G3/10	G3/10 to G2/10	30		2.5	5	116	287	0.73	1	0.151	0.108	0.151	0.108	0.151	0.035	0.12		0.035	2.36	8	1.623	0.062	0.875	0.054	G3/10	AL2D	0.035	
2	100	G2/10	G2/10 to G1/10	35		2.5	5	116	287	0.71	1	0.024	0.017	0.024	0.017	0.024	0.005	0.019		0.005	7.2	8	0.488	0.03	0.918	0.027	G2/10	AL2D-MH1200	0.005	
2	100	G1/10	G1/10 to OUT1/10	51		2.5	5	116	287	0.73	1	0.051	0.037	0.051	0.037	0.051	0.012	0.041		0.012	7.3	8	0.554	0.04	1.188	0.047	G1/10	AL2D-MH1200	0.012	
2	100	OUT1/10				2.5															1						OUT1/10	HW		
2	100	G1/11	G1/11 to G1/10	12		2.5	5	116	287	0.73	1	0.018	0.013	0.018	0.013	0.018	0.004	0.015	0.008	0.012	6.16	8	0.612	0.042	1.095	0.045	G1/11	AL2D	0.012	
2	100	G1/12	G1/12 to G1/10	2		2.5	5	116	287	0.75	0.75	0.072	0.052	0.071	0.052	0.071	0.017	0.056		0.017	5.46						G1/12	SAL3D	0.017	
2	100	F1/13	F1/13 to G1/13	1		2.5	8	103	251	0.67	0.95	0.115	0.077	0.109	0.077	0.109	0.022	0.076		0.022	1	8		0.039			F1/13	SF2 600x900	0.022	
2	100	G1/13	G1/13 to G2/10	3		2.5	5	116	287	0.75	0.75	0.128	0.093	0.126	0.093	0.126	0.03	0.1		0.03	4.54	8	1.326	0.053	1.086	0.058	G1/13	AL2D	0.03	
2	100	G1/14	G1/14 to G1/11	2		2.5	5	116	287	0.73	1	0.077	0.056	0.077	0.056	0.077	0.018	0.062		0.018	6.05	8	0.998	0.044	1.076	0.047	G1/14	AL2D	0.018	
2	100	F11/15	F11/15 to F10/15	2		2.5	5	116	287	0.67	0.95	0.037	0.027	0.037	0.027	0.037	0.009	0.03		0.009	1			0.015			F11/15	SF2 600x900	0.009	
2	100	F10/15	F10/15 to F9/15	4		2.5	5	116	287	0.67	0.95	0.03	0.021	0.03	0.021	0.03	0.007	0.024		0.007	1			0.012			F10/15	SF2 600x900	0.007	
2	100	F9/15	F9/15 to F8/15	6		2.5	5	116	287	0.67	0.95	0.03	0.021	0.03	0.021	0.03	0.007	0.024		0.007	1			0.012			F9/15	SF2 600x900	0.007	
2	100	F8/15	F8/15 to F7/15	8		2.5	5	116	287	0.67	0.95	0.037	0.027	0.037	0.027	0.037	0.009	0.03		0.009	1			0.015			F8/15	SF2 600x900	0.009	
2	100	F7/15	F7/15 to F6/15	10		2.5	5	116	287	0.67	0.95	0.038	0.027	0.037	0.027	0.037	0.009	0.03		0.009	1			0.015			F7/15	SF2 600x900	0.009	
2	100	F6/15	F6/15 to F5/15	12		2.5	5	116	287	0.67	0.95	0.042	0.03	0.042	0.03	0.042	0.01	0.033		0.01	1			0.017			F6/15	SF2 600x900	0.01	
2	100	F5/15	F5/15 to F4/15	14		2.5	5	116	287	0.67	0.95	0.037	0.027	0.037	0.027	0.037	0.009	0.03		0.009	1			0.015			F5/15	SF2 600x900	0.009	
2	100	F4/15	F4/15 to F3/15	16		2.5	5	116	287	0.67	0.95	0.038	0.027	0.037	0.027	0.037	0.009	0.03		0.009	1			0.015			F4/15	SF2 600x900	0.009	
2	100	F3/15	F3/15 to F2/15	18		2.5	5	116	287	0.67	0.95	0.03	0.021	0.03	0.021	0.03	0.007	0.024		0.007	1			0.012			F3/15	SF2 600x900	0.007	
2	100	F2/15	F2/15 to F1/15	20		2.5	5	116	287	0.67	0.95	0.03	0.021	0.03	0.021	0.03	0.007	0.024		0.007	1			0.012			F2/15	SF2 600x900	0.007	
2	100	F1/15	F1/15 to 1/15	22		2.5	5	116	287	0.67	0.95	0.057	0.041	0.057	0.041	0.057	0.013	0.045		0.013	1			0.023			F1/15	SF2 600x900	0.013	
2	100	1/15	1/15 to G4/10	22		2.5															1						1/15	RW PIT 900 DIA		

STRUCTURE No.	DRAIN DESIGN: 26 tc CRITICAL TIME OF CONC. (min)	27 I RAINFALL INTENSITY MINOR (mm/hr)	27 I MAJOR (mm/hr)	28 ∑(CxA) TOTAL CONTRIBUTING EQUIVALENT AREA ∑12 (U/S) MINOR (Ha)	28 MAJOR (Ha)	29 Qt MAJOR TOTAL FLOW (27 x 28)/360 (m^3/s)	30 Qm MAJOR SURFACE FLOW CAPACITY (m^3/s)	31 Qs MAJOR SURFACE FLOW (m^3/s)	32 Qo FLOW IN PIPE MINOR (m^3/s)	32 Qo MAJOR (m^3/s)	33 L REACH LENGTH (m)	34 S PIPE GRADE (%)	35 PIPE/BOX DIMENSIONS (mm)	36 V FLOW VELOCITY 32/Area of Sect. (m/s)	37 T TIME OF FLOW IN REACH 33/(36 x 60) (min)	HEADLOSSES: 38 Ku METHOD	39 Ku CHART	40 $V^2/2g$ VELOCITY HEAD (36 x 36)/2g (m)	41 Ku U/S HEADLOSS COEFF. FROM QUDM VOL. 2	42 hu U/S PIPE STRUCTURE HEADLOSS 40 x 41 (m)	43 K_L LAT. HEADLOSS COEFFICIENT FROM QUDM VOL. 2	44 h_L LAT. PIPE STRUCTURE HEADLOSS (m)	45 Kw W.S.E. COEFFICIENT FROM QUDM VOL. 2	46 hw CHANGE IN W.S.E. (m)	47 Sf FRICTION SLOPE FROM SECT. 14.5.7 A.R.R. VOL. 1 1987 (%)	48 hf PIPE FRICTION HEADLOSS (m)	PART FULL: 49 DEPTH (m)	50 Vp VELOCITY (m/s)	DESIGN LEVELS: 51 OBVERT LEVELS U/S (m)	51 OBVERT LEVELS D/S (m)	52 DRAIN SECTION HGL U/S (m)	52 DRAIN SECTION HGL D/S (m)	53 U/S HGL (m)	54 LATERAL HGL (m)	55 WSE (m)	56 SURFACE or K&C INVERT LEVEL (m)	57 FREEBOARD (m)	58 STRUCTURE No.
G6/10	5	116	287	0.229	0.313	0.25	1.23	0.37	0.072	0.127	57.5	2.03	375	0.65	1.47436	Ku,Kw - Missouri/Hare Charts	G1	0.02	7	0.15				0.153	1.75	1.064	0.138	1.957	44.3	43.133	44.121	43.112	44.274		44.274	45.245	0.971	G6/10
G5/10	5.48	114.08	280.77	0.388	0.531	0.414	1.23	0.415	0.123	0.234	59	2.05	375	1.11	0.88589	Ku,Kw - Missouri/Hare Charts	T1	0.06	1.83	0.12				0.116	1.58	0.987	0.185	2.26	43.113	41.906	42.997	42.063	43.112		43.112	44.187	1.075	G5/10
G4/10	5.97	112.12	274.38	0.841	1.156	0.881	1.395	0.583	0.262	0.368	29.914	2.26	450	1.65	0.30216	Ku,Kw - Missouri/Hare Charts	T3/T6	0.14	1.79	0.25			2.19	0.303	1.27	0.429	0.254	2.827	41.906	41.231	41.815	41.437	42.118		42.118	42.857	0.739	G4/10
G3/10	6.22	110.9	271.36	0.951	1.31	0.987	1.395	0.583	0.293	0.434	27.995	5.43	450	1.84	0.25358	Ku,Kw - Missouri/Hare Charts	T3/T6	0.17	1.72	0.3			2.04	0.353	4.5	1.303	0.209	4.045	41.211	39.691	41.138	39.877	41.492		41.492	42.164	0.672	G3/10
G2/10	6.45	109.73	268.56	1.122	1.546	1.153	2.403	0.674	0.342	0.595	18.248	1.2	525	1.58	0.19249	Ku,Kw - Missouri/Hare Charts	T1/T3	0.13	0.98	0.12			1.15	0.147	0.63	0.115	0.332	2.373	39.691	39.472	39.753	39.638	39.9		39.9	40.777	0.876	G2/10
G1/10	6.61	108.97	266.73	1.957	2.688	1.992	2.45	1.338	0.592	0.653	7.996	0.34	750	1.34	0.09945	Ku,Kw - Missouri/Hare Charts	T3/T6	0.09	2.04	0.19			2.37	0.217	0.94	0.035	0.562	1.667	39.677	39.65	39.451	39.376	39.668		39.668	40.105	0.437	G1/10
OUT1/10																																	39.376		39.376	39.65		OUT1/10
G1/11	6.38	110.12	269.48	0.757	1.035	0.775	2.45	0.497	0.231	0.397	54.29	6.87	375	2.1	0.43087	Ku,Kw - Missouri/Hare Charts	T3/T6	0.22	1.61	0.36			1.82	0.408	6.03	3.293	0.188	4.168	42.943	39.214	42.909	39.638	43.317		43.317	43.907	0.59	G1/11
G1/12	5	116	287	0.052	0.071	0.056			0.017	0.143	18.166	2.04	375	0.15	2.01844	Ku,Kw - Missouri/Hare Charts	G2		9.7	0.01				0.011	0.01	0.002	0.066	1.287	39.606	39.236	39.639	39.638	39.651		39.651	40.511	0.861	G1/12
F1/13	8	103	251	0.077	0.109	0.076	2.4	0.65	0.022	0.072	5.25	8.33	375	0.2	0.4375	Ku,Kw - Missouri/Hare Charts	G1		7	0.01				0.014	7	0.396	0.053	2.291	41.112	40.675	40.843	40.475	40.857		40.857	42.17	1.313	F1/13
G1/13	8.04	102.85	250.56	0.171	0.236	0.164	2.4	0.65	0.049	0.234	17.438	5.53	375	0.44	0.66053	Ku,Kw - Missouri/Hare Charts	G2/T6/T9	0.01	3.57	0.04			3.8	0.038	3.22	0.613	0.087	2.508	40.655	39.691	40.44	39.877	40.478		40.478	41.717	1.239	G1/13
G1/14	5	116	287	0.056	0.077	0.062	2.45	0.497	0.018	0.052	8	0.56	375	0.16	0.83333	Ku,Kw - Missouri/Hare Charts	G2		8.44	0.01				0.011	0.01	0.001	0.094	0.834	43.008	42.963	43.272	43.271	43.283		43.283	43.914	0.631	G1/14
F11/15	5	116	287	0.027	0.037	0.03			0.009	0.014	10	1.5	150	0.49	0.34014	Ku,Kw - Missouri/Hare Charts	G1	0.01	6.78	0.08				0.082	0.66	0.089	0.072	1.035	48.442	48.292	48.378	48.311	48.46		48.46	49	0.54	F11/15
F10/15	5.08	115.67	285.92	0.048	0.067	0.053			0.015	0.016	10	2.59	150	0.88	0.18939	Ku,Kw - Missouri/Hare Charts	T1	0.04	1.9	0.07				0.074	1.5	0.168	0.086	1.468	48.272	48.013	48.237	48.088	48.311		48.311	48.85	0.539	F10/15
F9/15	5.17	115.33	284.83	0.07	0.097	0.077			0.022	0.02	12.5	2.4	150	1.26	0.16534	Ku,Kw - Missouri/Hare Charts	T1	0.08	1.36	0.11				0.111	2.55	0.292	0.116	1.519	47.993	47.693	47.977	47.659	48.088		48.088	48.7	0.612	F9/15
F8/15	5.27	114.92	283.48	0.096	0.134	0.106			0.031	0.042	12.5	1.43	225	0.77	0.27056	Ku,Kw - Missouri/Hare Charts	T1	0.03	0.04					0.001	0.98	0.152	0.122	1.396	47.693	47.514	47.614	47.492	47.616		47.616	48.4	0.784	F8/15
F7/15	5.38	114.5	283.21	0.123	0.171	0.135			0.039	0.059	14	2.5	225	0.98	0.2381	Ku,Kw - Missouri/Hare Charts	T1	0.05	1.16	0.06				0.057	1.65	0.261	0.119	1.829	47.494	47.144	47.435	47.203	47.492		47.492	48.25	0.758	F7/15
F6/15	5.49	114.03	281.69	0.153	0.213	0.166			0.048	0.047	12.5	1.52	225	1.22	0.17077	Ku,Kw - Missouri/Hare Charts	T1	0.08	1.07	0.08				0.081	1.16	0.145	0.163	1.57	47.124	46.934	47.122	46.977	47.203		47.203	47.9	0.697	F6/15
F5/15	5.51	113.95	280.34	0.179	0.25	0.195			0.057	0.068	12.5	4.5	225	1.43	0.14569	Ku,Kw - Missouri/Hare Charts	T1	0.1	0.88	0.09				0.092	3.71	0.481	0.125	2.5	46.914	46.352	46.885	46.421	46.977		46.977	47.75	0.773	F5/15
F4/15	5.62	113.53	278.98	0.206	0.287	0.223			0.065	0.081	10	4	225	1.63	0.10225	Ku,Kw - Missouri/Hare Charts	T1	0.14	0.8	0.11				0.11	2.99	0.311	0.142	2.461	46.332	45.932	46.312	46.013	46.421		46.421	47.3	0.879	F4/15
F3/15	5.7	113.2	278.98	0.227	0.316	0.245			0.072	0.069	10	4	225	1.8	0.09259	Ku,Kw - Missouri/Hare Charts	T1	0.17	0.65	0.11				0.107	2.97	0.306	0.152	2.507	45.921	45.521	45.906	45.609	46.013		46.013	46.8	0.787	F3/15
F2/15	5.78	112.87	277.9	0.249	0.346	0.267			0.078	0.14	3.25	15.1	225	1.96	0.02764	Ku,Kw - Missouri/Hare Charts	T1	0.2	0.61	0.12				0.119	18.45		0.105	4.266	45.501	45.01	45.49	44.89	45.609		45.609	46.8	1.191	F2/15
F1/15	5.73	113.09	277.55	0.289	0.403	0.31			0.091	0.21	30.2	1.52	300	1.28	0.39323	Ku,Kw - Missouri/Hare Charts	T10	0.08	2.06	0.17			2.64	0.222	1.65	0.442	0.196	1.858	42.759	42.299	42.693	42.194	42.915		42.915	45.8	2.885	F1/15
1/15	5.98	112.08	274.28	0.289	0.403	0.307			0.09	0.207	7.205	5.45	375	0.81	0.14825	Ku,Kw - Missouri/Hare Charts	T1/T3	0.03	1.36	0.05			1.58	0.053	1.12	0.138	0.119	2.972	42.299	41.906	42.143	42.063	42.197		42.197	43.297	1.1	1/15

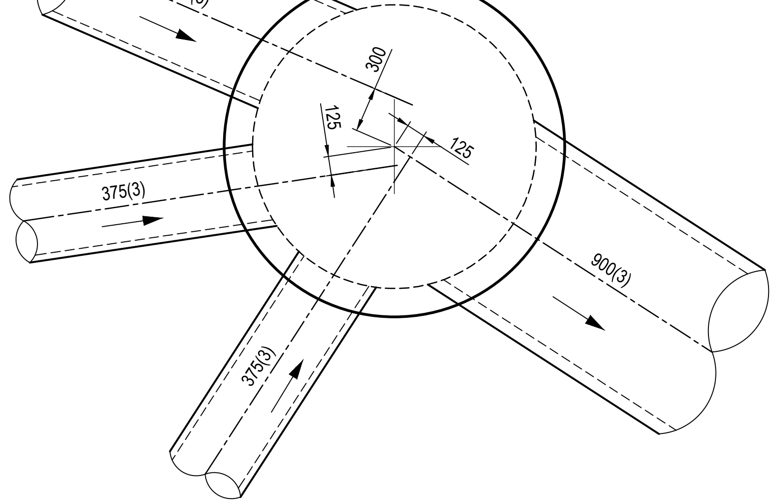


G2/10 - 1200mm STANDARD MANHOLE UNDER GULLY

1:25 (A1)
1:50 (A3)

G1/10 - 1500mm STANDARD MANHOLE UNDER GULLY

1:25 (A1)
1:50 (A3)



AS-CONSTRUCTED CERTIFICATION

Signature: [signature] Date: 29/09/23

DANIEL COLLINS RPEQ No. 18631

For and on behalf of Colliers International engineering & design pty ltd

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	09.02.23	CL	AK	ISSUED FOR CONSTRUCTION
B	29.09.23	CL	BP	AS CONSTRUCTED

DRAWN

DESIGN

STATUS: **AS CONSTRUCTED**

APPROVED: DANIEL COLLINS RPEQ 18631

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE: 1:25 0.25 0 0.25 0.5 0.75 1.0 1.25 A1; 1:50 A3

CLIENT: **CANBERRA ESTATES CONSORTIUM NO. 36 PTY LIMITED**

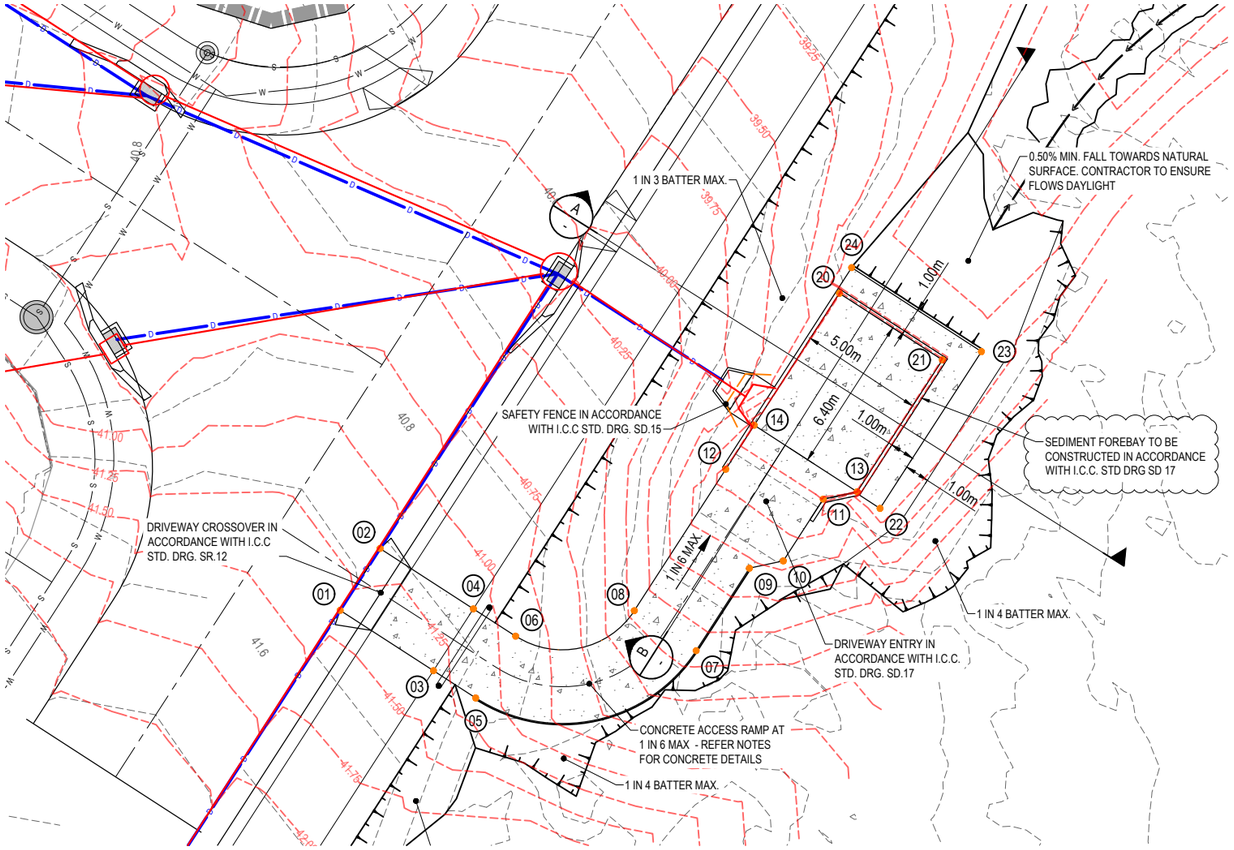
ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP PH: 1300 123 744

PROJECT NAME: **WOODLINKS VILLAGE - STAGE 11**

COOLINGWOOD DRIVE, COOLINGWOOD PARK

DRAWING TITLE: **STORMWATER DRAINAGE CALCULATIONS TABLE**

PROJECT No. 22-0173 | DRAWING No. 113 | REVISION B



FOREBAY SETOUT TABLE

NUMBER	EASTING	NORTHING
20	5992.389	3278.329
21	5996.588	3275.614
22	5994.045	3269.563
23	5998.178	3275.955
24	5992.887	3279.376

DRIVEWAY SETOUT TABLE

NUMBER	EASTING	NORTHING	ELEVATION
01	5972.034	3265.410	41.288
02	5973.662	3267.930	41.092
03	5975.838	3262.951	41.271
04	5977.466	3265.470	41.271
05	5977.559	3261.838	41.017
06	5979.188	3264.357	41.017
07	5986.547	3263.767	39.890
08	5984.028	3265.396	39.890
09	5988.719	3267.126	39.317
10	5990.101	3267.423	39.169
11	5991.730	3269.942	38.748
12	5987.753	3271.159	38.900
13	5993.113	3270.239	38.600
14	5988.914	3272.954	38.600

LEGEND

- PROPOSED BATTER LINE
- PROPOSED SLEEPER RETAINING WALL
- 01 PROPOSED SETOUT POINT
- 62.0 PROPOSED FINISHED SURFACE LEVEL
- PROPOSED STORMWATER DRAINAGE PIPE
- PROPOSED FENCING TO LANDSCAPE ARCHITECT'S DETAILS
- PROPOSED LOCKABLE RAIL TO COUNCIL STANDARDS

ASCON LEGEND

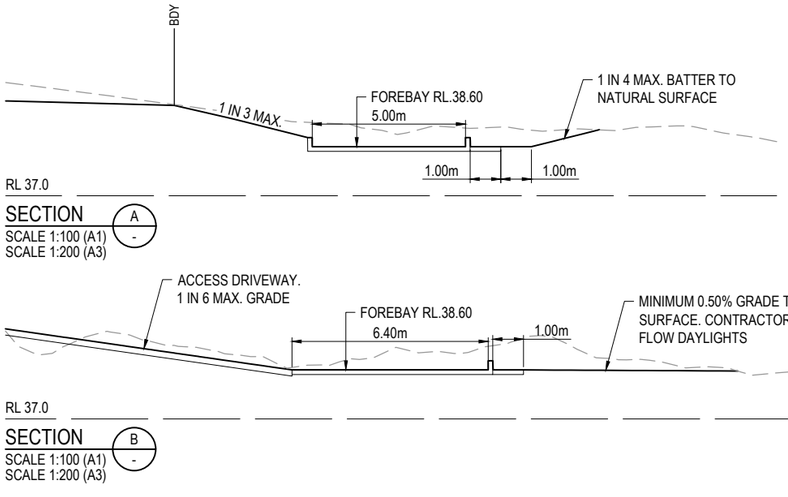
- STORMWATER DRAINAGE PIPE
- STORMWATER MANHOLE
- STORMWATER HEADWALL
- STORMWATER PIT
- 40.00 AS CONSTRUCTED CONTOUR

AS-CONSTRUCTED CERTIFICATION

Signature: ..... Date: 29/09/23

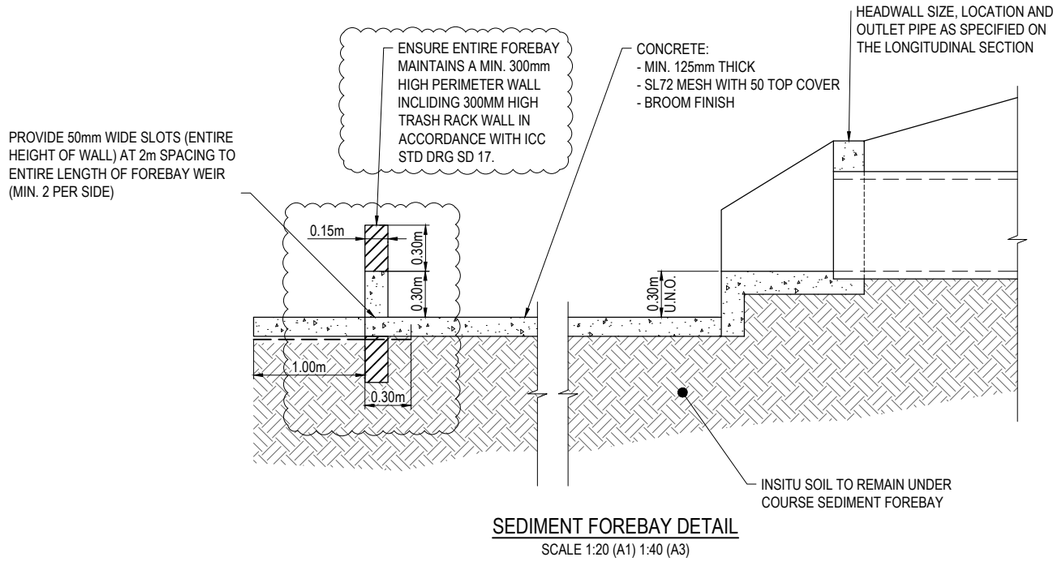
DANIEL COLLINS RPEQ No. 18631

For and on behalf of Colliers International engineering & design pty ltd



SECTION A
SCALE 1:100 (A1)
SCALE 1:200 (A3)

SECTION B
SCALE 1:100 (A1)
SCALE 1:200 (A3)



SEDIMENT FOREBAY DETAIL

SCALE 1:20 (A1) 1:40 (A3)

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	09.02.23	CL	AK	ISSUED FOR CONSTRUCTION
B	29.09.23	CL	BP	AS CONSTRUCTED

DRAWN

DESIGN

STATUS: **AS CONSTRUCTED**

APPROVED: DANIEL COLLINS RPEQ 18631

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE: 1:250 / 1:500 — 5 0 5 10 — A1 / A3

CLIENT: **CANBERRA ESTATES CONSORTIUM NO. 36 PTY LIMITED**

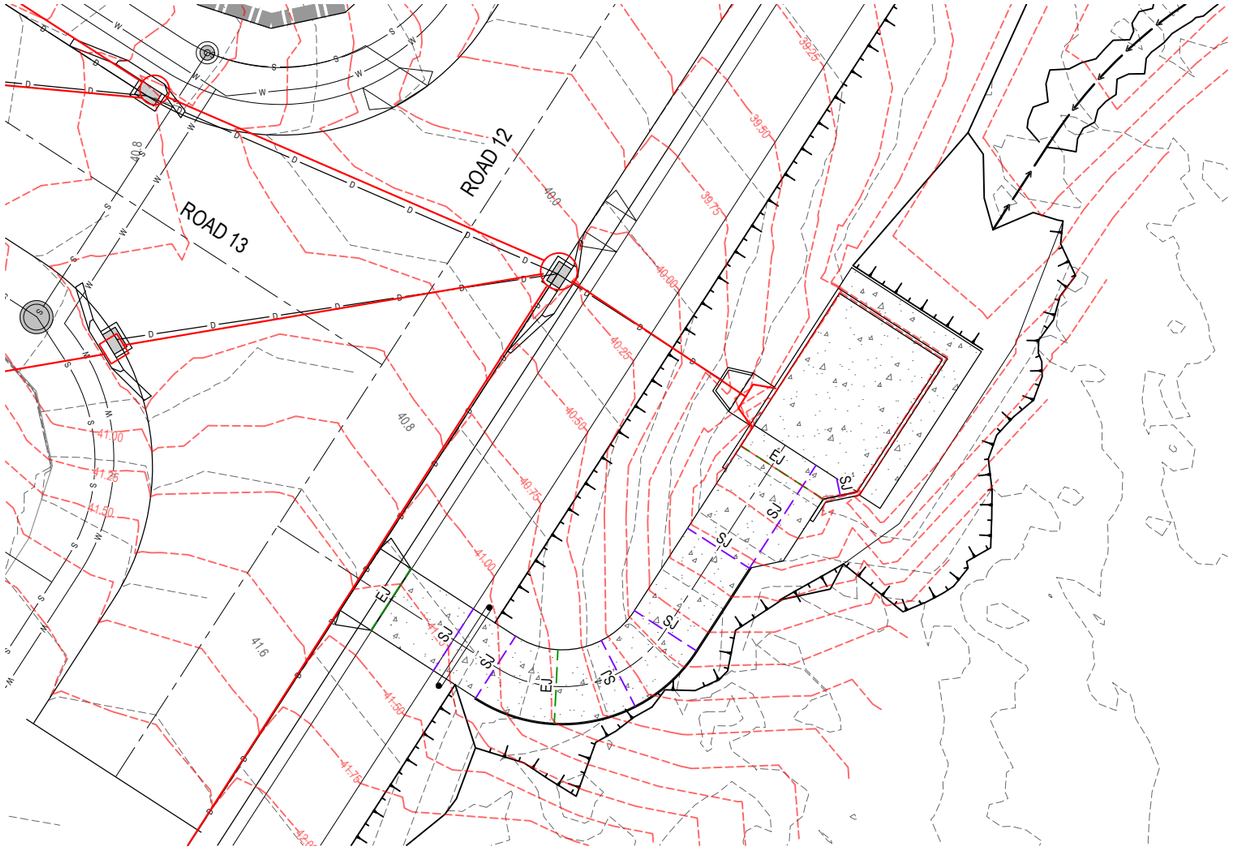
ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP PH: 1300 123 744

PROJECT NAME: **WOODLINKS VILLAGE - STAGE 11**

COOLINGWOOD DRIVE, COOLINGWOOD PARK

DRAWING TITLE: **SEDIMENT FOREBAY LAYOUT PLAN AND DETAILS**

PROJECT No. **22-0173** | DRAWING No. **114** | REVISION **B**



STEP 1:

INITIAL CUT TO DEPTH 'T'/4 ('T'/3 FOR STEEL FIBRE REINFORCED CONCRETE AS SOON AS POSSIBLE AND WITHIN 18 HOURS OF POURING CONCRETE. INSERT POLYURETHANE BACKING ROD TO PREVENT INGRESS OF DIRT UNTIL SEALANT APPLIED (MIN 28 DAYS LATER). ROD DIAMETER TO BE MIN. 1.25 x CUT WIDTH.

STEP 2:

REMOVE ALL DIRT FROM SAW CUT, USING HIGH PRESSURED COMPRESSED AIR. REPLACE BACKING ROD WITH LARGER DIAMETER IF LOOSE. PUSH BACKING ROD INTO SAW CUT 1mm BELOW DEPTH 'D'. IF NECESSARY, REMOVE AND REPLACE BACKING ROD. WIDEN SAW CUT TO WIDTH 'W' AND DEPTH 'D' WITH ADDITIONAL SAW CUTS.
REMOVE ALL FOREIGN MATERIAL USING HIGH PRESSURE WATER WASH. DRY USING HIGH PRESSURE COMPRESSED AIR AND ALLOW ADDITIONAL 16 HRS TO DRY THOROUGHLY.
INSTALL POLYETHYLENE BOND BREAKER TAPE.
PRIME FACES OF CUT CONCRETE (REFER TABLE)
INSTALL SEALANT AS SPECIFIED (REFER TABLE) IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

DRIVEWAY CONCRETE NOTES:

- DRIVEWAY CONCRETE TO BE 175mm THICK (N32), SL72 MESH WITH 50 TOP COVER, ON 150mm THICK BASE COURSE TYPE 2.3 (CBR45) FINISHED TO LANDSCAPE ARCHITECT PLANS

LOCATION	SEALANT	PRIMER
AREAS SUBJECT TO FUEL SPILLAGE	THIOFLEX 600	FOSROC PRIMER 14
OTHER EXTERNAL PAVEMENTS	EMER-ROAD SEAL SL	FOSROC PRIMER 10

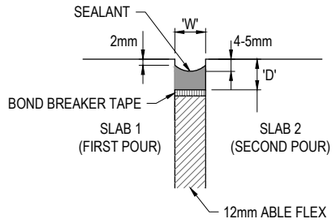
ALTERNATIVE SEALANTS MUST HAVE
- MOVEMENT ACCOMMODATION FACTOR +/- 50%
- PRIMER TO MANUFACTURER'S SPECIFICATION
- INSTALLATION TO MANUFACTURER'S RECOMMENDATIONS
- PRIOR APPROVAL BY SUPERINTENDENT.

ASCON LEGEND

- STORMWATER DRAINAGE PIPE
- STORMWATER MANHOLE
- STORMWATER HEADWALL
- STORMWATER PIT
- 40.00 AS CONSTRUCTED CONTOUR

AS-CONSTRUCTED CERTIFICATION

Signature: ..... Date: 29/09/23
DANIEL COLLINS RPEQ No. 18631
For and on behalf of Colliers International engineering & design pty ltd



EXPANSION/ CONSTRUCTION JOINT SEALANT DETAILS

1:1 (A1)
1:2 (A3)

STEPS:

1. AFTER SLAB CURING PERIOD (MIN 28 DAYS), REMOVE TEARAWAY PORTION OF ABLE FLEX AND WASH OUT REBATE USING HIGH PRESSURE WATER. DRY USING HIGH PRESSURE COMPRESSED AIR AND ALLOW ADDITIONAL 16 HRS TO DRY THOROUGHLY.
2. INSTALL POLYETHYLENE BOND BREAKER TAPE FOR FULL WIDTH 'W'.
3. PRIME FACES OF SIDES OF REBATE (REFER TABLE).
4. INSTALL SEALANT AS SPECIFIED (REFER TABLE) IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

KERB TYPES NOTE:

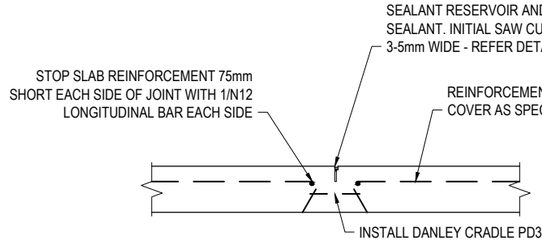
REFER TO THE SURVEY SETOUT ENGINEERING DRAWING FOR KERB TYPES AND TRANSITION LOCATIONS

LEGEND

- PROPOSED BATTER LINE
- PROPOSED STORMWATER DRAINAGE PIPE
- PROPOSED FENCING TO LANDSCAPE ARCHITECT'S DETAILS
- PROPOSED LOCKABLE RAIL TO COUNCIL STANDARDS
- EJ PROPOSED EXPANSION/CONSTRUCTION JOINT
- SJ PROPOSED SAWN CONTRACTION JOINT

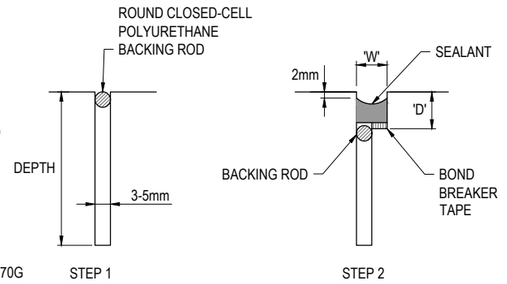
CONCRETE NOTES:

1. MATERIALS AND WORKMANSHIP SHALL COMPLY WITH AS3600.
2. PREPARATION OF SUB-BASE LEVEL WITH UTS SYSTEM.
3. CONCRETE STRENGTH N32 CONCRETE.
4. MAXIMUM DRYING SHRINKAGE STRAIN - 600 MICROSTRAIN AT 56 DAYS.
5. CONCRETE TO BE PLACED ON A LAYER OF FORTECON.
6. CONCRETE TO HAVE SOFT BRISTLE BROOMED FINISH.
7. CONCRETE TO BE CURED UNDER LAYER OF FORTECON/ BUILDERS PLASTIC TO REDUCE MOISTURE LOSS.
8. REINFORCING TO BE WETTED DOWN IMMEDIATELY PRIOR TO CONCRETE POUR AS REQUIRED DUE TO HIGH TEMPERATURE WEATHER CONDITIONS.



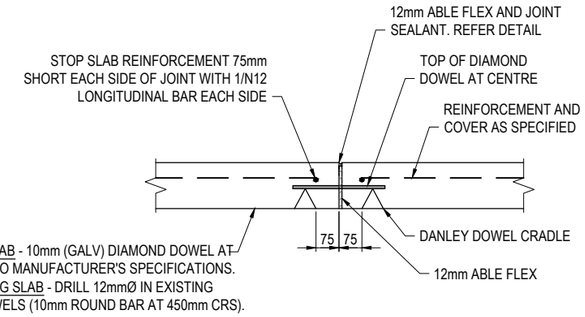
SAWN CONTRACTION JOINT (SJ)

1:10 (A1)
1:20 (A3)



SAW CUT AND JOINT SEALANT DETAILS

1:1 (A1)
1:2 (A3)



1. NEW SLAB TO NEW SLAB - 10mm (GALV) DIAMOND DOWEL AT 450 CRS. INSTALLED TO MANUFACTURER'S SPECIFICATIONS.
2. NEW SLAB TO EXISTING SLAB - DRILL 12mmØ IN EXISTING SLAB AND PLACE DOWELS (10mm ROUND BAR AT 450mm CRS).

EXPANSION/ CONSTRUCTION JOINT DETAIL (EJ)

1:10 (A1)
1:20 (A3)

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	09.02.23	CL	AK	ISSUED FOR CONSTRUCTION
B	29.09.23	CL	BP	AS CONSTRUCTED

DRAWN
DESIGN

STATUS: **AS CONSTRUCTED**

APPROVED: DANIEL COLLINS RPEQ 18631
FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE: 1:250 / 1:500 — 5 0 5 10 — A1 / A3

CLIENT: **CANBERRA ESTATES CONSORTIUM NO. 36 PTY LIMITED**

ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP PH: 1300 123 744

PROJECT NAME: **WOODLINKS VILLAGE - STAGE 11**
COOLINGWOOD DRIVE, COOLINGWOOD PARK

DRAWING TITLE: **SEDIMENT FOREBAY DRIVEWAY DETAILS AND LAYOUT PLAN**

PROJECT No.	DRAWING No.	REVISION
22-0173	115	B

WOODLINKS VILLAGE STAGE 11

COLLINGWOOD DRIVE, COLLINGWOOD PARK

FOR 'CANBERRA ESTATES CONSORTIUM NO.36 PTY LTD'

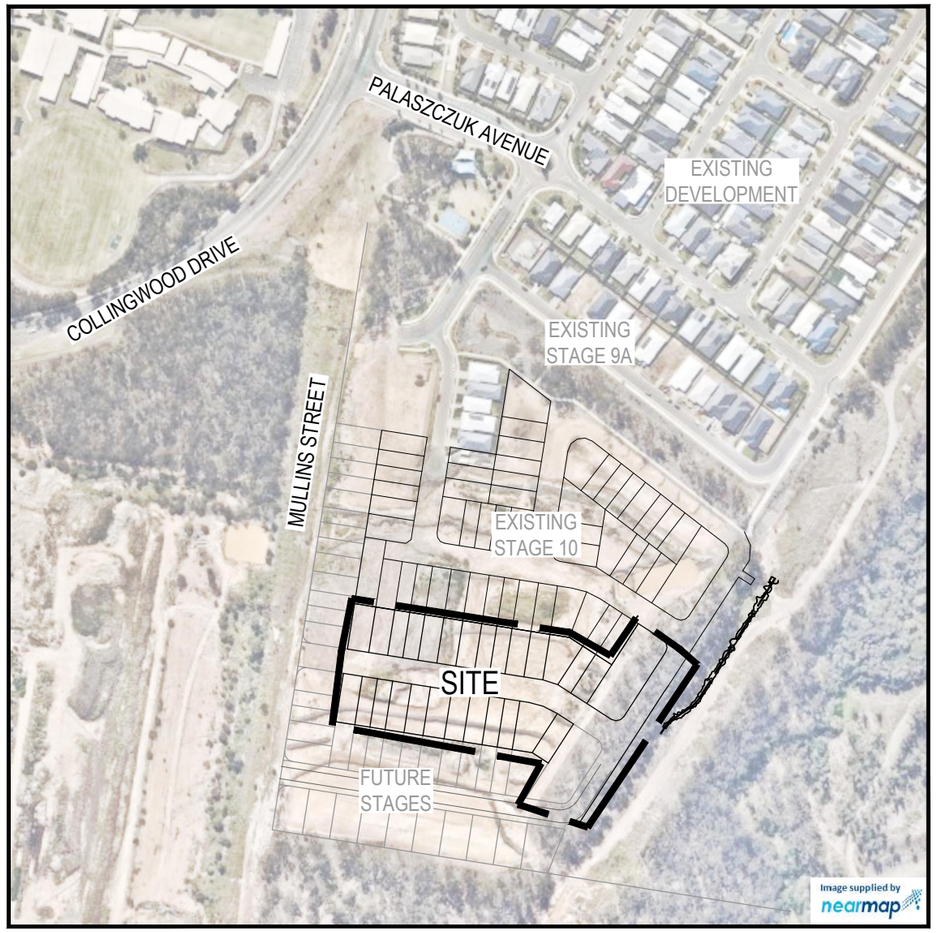
DRAWING LIST

ENGINEER'S CERTIFICATION

I, Dan Collins, hereby certify that:

1. The information contained in this drawing / document is in compliance with approved drawings and design.
2. The new water and sewerage works defined by this drawing have been designed and constructed in accordance with the SEQ code.
3. This generally represents an accurate record of as-constructed works
4. I accept responsibility for the information contained in this drawing / document.

RPEQ (signature) RPEQ No. 18631 Date: 29/09/23



LOCALITY PLAN
SCALE 1:2500 (A1)
SCALE 1:5000 (A3)

ESTATE/STAGE				WOODLINKS VILLAGE STAGE 11	
CLIENT				CANBERRA ESTATES CONSORTIUM NO.36 PTY LIMITED	
URBAN UTILITIES APPLICATION No.				22-PNT-62638	
URBAN UTILITIES APPROVAL DATE					
No. OF ALLOTMENTS				27	
ASSET REGISTER - SEWERAGE					
MAINS	DIAMETER	MATERIAL		LENGTH	
		DESIGN	CONST	DESIGN	CONST
	DN110	PE100 PN16	-	~~49m~~	57m
	DN160	PE100 PN16	-	~~795m~~	589m
ASSET REGISTER - WATER RETICULATION					
MAINS	DIAMETER	MATERIAL		LENGTH	
		DESIGN	CONST	DESIGN	CONST
	DN125	PE100 PN16	-	~~183~~	177m
	DN180	PE100 PN16	-	~~78~~	72m
	DN180	PE100 PN16	-	-	-
SERVICES	DIAMETER	MATERIAL		LENGTH	
		DESIGN	CONST	DESIGN	CONST
	DN25	PE100 PN16	-	~~35m~~	33m
	DN32	PE100 PN16	-	~~24m~~	23m
	DN40	PE100 PN16	-	~~75m~~	72m
METERS	DIAMETER	MATERIAL		NUMBER	
		DESIGN	CONST	DESIGN	CONST
	20Ø	PE100 PN16	-	~~27m~~	28m
	25Ø	PE100 PN16	-	-	-
	32Ø	PE100 PN16	-	-	-
WATER SERVICE DETAILS					
NO	SIZE	LOT NUMBERS			
14	DN25	282-295			
12	DN32	◯ 296-307			

URBAN UTILITIES REF. NUMBER. : 22-PNT-62638

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
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DRAWN

DESIGN

STATUS: **AS CONSTRUCTED**

APPROVED: DANIEL COLLINS RPEQ 18631

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE: 1:2500 / 1:5000 — 50 0 50 100 — A1 / A3

CLIENT: **CANBERRA ESTATES CONSORTIUM NO. 36 PTY LIMITED**

ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP PH: 1300 123 744

PROJECT NAME: **WOODLINKS VILLAGE - STAGE 11**

COOLINGWOOD DRIVE, COOLINGWOOD PARK

DRAWING TITLE: **SEWERAGE AND WATER RETICULATION COVER PLAN**

PROJECT No.	DRAWING No.	REVISION
22-0173	300	B

GENERAL NOTES:

1. THE CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIALS, PLANT AND EQUIPMENT TO CONSTRUCT THE WORKS AS DOCUMENTED AND STRICTLY IN ACCORDANCE WITH THE RELEVANT AUTHORITY STANDARDS, SPECIFICATIONS AND REQUIREMENTS.
2. EXISTING SERVICES RELEVANT TO THE PROJECT HAVE BEEN CONSIDERED THROUGHOUT DESIGN AND IS BASED ON SURVEY INFORMATION PROVIDED BY THE SURVEYOR AND THE CONTRACTOR. THE RPEQ WHO CERTIFIED THE DESIGN OR THE PRINCIPAL'S CONSTRUCTION RPEQ HAVE RELIED UPON THIS INFORMATION TO INFORM THE DESIGN. THE CONTRACTOR SHALL VERIFY THE POSITION OF ANY UNDERGROUND SERVICES WITHIN THE AREAS OF WORKS AND SHALL BE RESPONSIBLE FOR MAKING GOOD ANY DAMAGE THERETO. ANY ALTERATION WORKS TO SERVICES WILL BE CARRIED OUT ONLY BY THE SERVICE OWNER AUTHORITY UNLESS APPROVED OTHERWISE.
3. ALL DESIGN AND CONSTRUCTION ACTIVITIES UNDERTAKEN SHALL COMPLY WITH CURRENT WORKPLACE HEALTH AND SAFETY REQUIREMENTS AND LEGISLATION.
4. PRIOR TO COMMENCING WORK, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL RELEVANT LOCAL AUTHORITY PERMITS.
5. THE CONTRACTOR SHALL NOT COMMENCE THE DEMOLITION OF ANY EXISTING BUILDINGS AND/OR STRUCTURES WITHOUT APPROVAL FROM THE SUPERINTENDENT.
6. THE CONTRACTOR SHALL APPLY INDUSTRY BEST PRACTICE SO WORKS SHALL NOT DISTURB OR AFFECT NEARBY RESIDENTS EITHER BY DUST, NOISE, FLOODING OR DISCONNECTION OF SERVICES. CONTRACTOR TO ENSURE THAT ACCESS AND SERVICES TO EXISTING PROPERTIES ARE AVAILABLE AT ALL TIMES.
7. THE CERTIFICATION OF THIS DESIGN IS BASED ON SURVEY AND POTHOLE INFORMATION PROVIDED BY THE SURVEYOR AND/OR CONTRACTOR AT THE TIME OF DESIGN. PRIOR TO COMMENCEMENT OF WORKS, THE CONTRACTOR SHALL VERIFY LEVELS OF EXISTING SERVICE CROSSINGS AND CONNECTION POINTS AND NOTIFY THE RPEQ WHO CERTIFIED THE DESIGN OR THE PRINCIPAL'S CONSTRUCTION RPEQ OF ANY DISCREPANCIES BETWEEN ACTUAL AND PROPOSED DESIGN LEVELS. THE CERTIFICATION OF THIS DESIGN IS BASED ON SURVEY AND POTHOLE INFORMATION PROVIDED BY THE SURVEYOR AND CONTRACTOR AT THE TIME OF DESIGN.
8. HOLD POINT: ONCE THE BASE OF MANHOLES HAVE BEEN POURED, CONSTRUCTION SHALL ONLY RE-COMMENCE ONCE THE SUPERINTENDENT AND/OR ENGINEER HAVE INSPECTED THE WORKS.
9. THE CONTRACTOR SHALL NOTE DURING THE COURSE OF THE WORKS WHEN JOINT INSPECTIONS WITH THE AUTHORITY AND THE SUPERINTENDENT ARE REQUIRED. THESE INCLUDE PRE-STARTS, SUBGRADES, PRE-SEALS, CLEARING, AND OTHER SUCH INSPECTIONS AS NOMINATED DURING THE PRE-START, IN THE APPROVAL AND THE SPECIFICATIONS. THE CONTRACTOR SHALL ENSURE NO WORKS PROCEED PAST THE INSPECTION POINT UNTIL THE JOINT INSPECTION HAS BEEN SUCCESSFULLY COMPLETED.
10. THE CONTRACTOR SHALL VERIFY LEVELS OF EXISTING SERVICE CROSSINGS AND CONNECTION POINTS PRIOR TO COMMENCEMENT OF WORKS AND NOTIFY THE RPEQ WHO CERTIFIED THE DESIGN OR THE PRINCIPAL'S CONSTRUCTION RPEQ OF ANY DISCREPANCIES BETWEEN ACTUAL AND PROPOSED DESIGN LEVELS. THE CERTIFICATION OF THIS DESIGN IS BASED ON SURVEY AND POTHOLE INFORMATION PROVIDED BY THE SURVEYOR AND CONTRACTOR AT THE TIME OF DESIGN.
11. THESE ENGINEERING DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE APPROVED VEGETATION MANAGEMENT PLAN, WHERE APPLICABLE. WHEN IN DOUBT, ALL EXISTING TREES ARE TO REMAIN UNLESS DIRECTED OTHERWISE.

ENVIRONMENTAL CONDITIONS

VEGETATION PROTECTION

A. TREES LOCATED ALONG THE FOOTPATH SHALL BE, TRANSPLANTED PRIOR TO CONSTRUCTION, OR REPLACED IF DESTROYED.
B. WHEN WORKING WITHIN 4m OF TREES, RUBBER OR HARDWOOD GIRDLES SHALL BE CONSTRUCTED WITH 1.8m BATTENS CLOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL. GIRDLES SHALL BE STRAPPED TO TREES PRIOR TO CONSTRUCTION AND REMAIN UNTIL COMPLETION.
C. TREE ROOTS SHALL BE TUNNELED UNDER, RATHER THAN SEVERED. IF ROOTS ARE SEVERED THE DAMAGED AREA SHALL BE TREATED WITH A SUITABLE FUNGICIDE. CONTACT RELEVANT COUNCIL ARBORIST FOR FURTHER ADVICE.
D. ANY TREE LOPPING REQUIRED SHOULD BE UNDERTAKEN BY AN APPROVED ARBORIST.

CREEK CROSSINGS

A. SILTATION CONTROL MEASURES SHALL BE PLACED DOWNSTREAM OF ANY EXCAVATION WORK.
B. APPROPRIATE SEDIMENT CONTROLS SHALL BE USED TO PREVENT SEDIMENT FROM ENTERING THE CREEK.
C. NO SOIL SHALL BE STOCKPILED WITHIN 5m OF THE CREEK.

REHABILITATION

A. PREDISTURBANCE SOIL PROFILES AND COMPACTION LEVELS SHALL BE REINSTATED.
B. PREDISTURBANCE VEGETATION PATTERNS SHALL BE RESTORED.

SEWERAGE NOTES

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT WSAA GRAVITY SEWERAGE CODE OF AUSTRALIA SPECIFICATIONS AND STANDARD - SOUTH EAST QUEENSLAND SERVICE PROVIDERS EDITION.
2. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
3. THE DESIGN HAS BEEN UNDERTAKEN TO COMPLY WITH CURRENT URBAN UTILITIES STANDARDS AND THE WSAA GRAVITY SEWERAGE CODE OF AUSTRALIA SPECIFICATIONS AND STANDARD - SOUTH EAST QUEENSLAND SERVICE PROVIDERS EDITION
4. THE CONSTRUCTION OF THE SEWERAGE WORK SHOWN ON THIS DRAWING SHALL BE SUPERVISED BY AN ENGINEER WHO HAS RPEQ REGISTRATION. SEWERAGE WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT INTO THE URBAN UTILITIES SEWERAGE SYSTEM.
5. ALL LIVE WORK SHALL BE UNDERTAKEN BY THE CONTRACTOR IN ACCORDANCE WITH A VALID WORKS PERMIT, UNDER THE SUPERVISION OF URBAN UTILITIES, AT THE DEVELOPER'S COST.
6. ALL PIPES AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE "ACCEPTED PRODUCTS AND MATERIALS" LIST, UNLESS APPROVED BY URBAN UTILITIES.
7. BENCH MARK AND LEVELS TO AHD.
8. WHERE PIPES ARE LAID IN FILL, THE FILLING SHALL BE CARRIED OUT IN LAYERS NOT EXCEEDING 300mm (LOOSE) IN DEPTH AND SHALL BE COMPACTED UNTIL THE COMPACTION IS NOT LESS THAN 95% OF THE MATERIALS MAXIMUM COMPACTION WHEN TESTED IN ACCORDANCE WITH A.S.1289 (MODIFIED COMPACTION). TESTING SHALL BE CARRIED OUT AFTER EACH ALTERNATE LAYER. IN ALL SUCH CASES APPROVAL OF CONSTRUCTED SEWERS WILL NOT BE ISSUED BY URBAN UTILITIES UNLESS CERTIFICATES ARE PRODUCED CERTIFYING THAT THE REQUIRED COMPACTION HAS BEEN ACHIEVED.
9. SEWERS SHALL BE DISUSED/ABANDONED IN ACCORDANCE WITH PROCEDURE SET OUT IN THE GRAVITY SEWER CODE.
10. CONSTRUCT EMBEDMENT AND TRENCHFILL TO SEQ-SEW-1200-1, 1200-2, 1201-1 TO 1205-1 AND COUNCIL STANDARDS FOR ROADWAYS.
11. CONSTRUCT BULKHEADS AND TRENCH STOPS TO SEQ-1206-1 AND TRENCH DRAINS TO SEQ-SEW-1207-1.
12. EACH ALLOTMENT SHALL BE SERVED BY A DN110 PE PROPERTY CONNECTION. FOR ALLOTMENTS OTHER THAN SINGLE RESIDENTIAL, A DN160 PE PROPERTY CONNECTION SHALL BE PROVIDED. PROPERTY CONNECTIONS SHALL BE LOCATED WITHIN THE PROPERTY AS SHOWN IN THE DRAWINGS AND SHALL EXTEND INTO THE PROPERTY A MINIMUM OF 300mm AND A MAXIMUM OF 750mm. REFER SEQ-SEW-1106-1 TO 1106-6.
13. CONSTRUCT MH'S TO SEQ-SEW-1301-1 TO 1301-5 (TYPE G), 1301-8 TO 1301-11 (TYPE F), 1301-14 TO 1301-25 (TYPE X), 1301-26 (TOP SLAB), 1301-27 (LADDERS), 1304-1, 1305-1, 1307-4 (STUB CUT IN), 1313-1 (CONNECTION).
14. CONSTRUCT MH INSERTIONS AND REPAIRS TO 1501-1 (JUNCTIONS) AND 1502-1 (INSET MS).
15. CONSTRUCT MAINTENANCE SHAFTS AND TERMINAL ENTRY POINTS TO SEQ-SEW 1315-1, 1316-1 AND 1502-1 (INSERT MS).
16. INSTALL MH/MS TYPE B COVERS TO SEQ-SEW-1308-2 TO 1308-7.
17. INSTALL MH/MS TYPE D COVERS TO SEQ-SEW-1308-8 TO 1308-11.
18. INSTALL DETECTABLE MARKER TAPE ON ALL SEWER MAINS AND PROPERTY CONNECTIONS.
19. THE UNDERSIDE OF ALL MAINTENANCE HOLE ASPROS MUST BE PE LINED AS PER STD DRG SEQ-SEW-1301-26.
20. CONCRETE FOR MH CONSTRUCTION SHALL BE SPECIAL CLASS TO WSA PS-358 WITH REQUIREMENTS FOR CALCEREOUS AGGREGATE.

WATER RETICULATION NOTES

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT WSAA WATER SUPPLY CODE OF AUSTRALIA SPECIFICATIONS AND STANDARD - SOUTH EAST QUEENSLAND SERVICE PROVIDERS EDITION.
2. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
3. THE DESIGN HAS BEEN UNDERTAKEN TO COMPLY WITH CURRENT SOUTH EAST QUEENSLAND WATER CODE AND URBAN UTILITIES STANDARDS.
4. THE CONSTRUCTION OF THE WATER RETICULATION WORK SHOWN ON THIS DRAWING MUST BE SUPERVISED BY AN ENGINEER WHO HAS RPEQ REGISTRATION. WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT TO THE RETICULATION SYSTEM.
5. ALL MATERIALS USED IN THE WORKS SHALL COMPLY WITH URBAN UTILITIES ACCEPTED PRODUCTS AND MATERIALS LIST OR BE APPROPRIATELY SHOWN, LISTED AND DEFINED IN THE ENGINEERING SUBMISSION SO THAT THE ALTERNATIVE PRODUCT OR MATERIAL CAN BE ASSESSED AND IF APPROPRIATE, APPROVED BY URBAN UTILITIES.
6. ADOPT LIP OF KERB OR SHOULDER OF ROAD AS PERMANENT LEVEL.
7. COVER ON MAINS FROM PERMANENT LEVEL TO BE AS SHOWN IN SEQ-WAT-1200-2.
8. CONSTRUCT EMBEDMENT AND TRENCH FILL TO SEQ-WAT-1200-1 TO 1204-1 AND COUNCIL STANDARDS FOR ROADWAY CROSSINGS.
9. PROVIDE BULKHEADS / TRENCH STOPS IN ACCORDANCE WITH SEQ WATER SUPPLY CODE TABLE 7.5 AND SEQ-WAT-1209-1 AND 1210-1.
10. CONSTRUCT THRUST BLOCKS ON ALL UNRESTRAINED VALVES, BENDS, TEES, TAPERS, DEAD ENDS TO SEQ-WAT-1205-1, 1206-1 AND 1207-1 AND WHERE OTHER PIPES CONNECT TO PE PIPE.
11. INSTALL DETECTABLE MARKER TAPE ON ALL WATER MAINS AND PROPERTY SERVICES.
12. CONSTRUCT FIRE HYDRANTS AND STOP VALVES TO SEQ-WAT-1301-1, 1302-1, 1303-2, 1305-1, 1306-1 AND 1409-1.
13. CONSTRUCT SCOURS TO SEQ-WAT-1307-2 (ONLY MAINS DN315 AND LARGER). SCOURS MUST DISCHARGE INTO AN OPEN STORMWATER GULLY PIT. DISCHARGE TO THE FACE OF KERB AND CHANNEL IS NOT ACCEPTABLE TO URBAN UTILITIES.
14. INSTALL ROAD AND PAVEMENT MARKERS TO SEQ-WAT-1107-1, 1107-2, 1300-1 AND 1300-2.
15. CONSTRUCT HYDRANTS AT THE ENDS OF ALL NEW MAINS BEFORE THE SCOUR AND WHERE REQUIRED FOR COMMISSIONING PURPOSES. URBAN UTILITIES PREFERENCE IS TO AVOID TAPPING BANDS FOR TEST POINTS AND PROVIDE EITHER A TEMPORARY DUCKFOOT HYDRANT OR FLANGED SHORT PIPE WITH A TEMPORARY TAPPED BLANK FLANGE. TESTING AGAINST LIVE MAINS AND VALVES IS NOT PERMITTED.
16. TESTING LOCATIONS AND TEMPORARY FITTINGS ARE REQUIRED ON SERVICES OVER 10m LONG UNLESS APPROVED IN WRITING FOR WORKS TO BE UNDERTAKEN AS LIVE WORKS. TESTING AND AS -CONSTRUCTED REQUIREMENTS TO BE DOCUMENTED ON DRAWINGS.
17. 316SS BACKING RINGS SHALL BE USED WITH FULL-FACE PE FLANGES. PE STUB-FLANGES ARE NOT ACCEPTED. WHEN JOINING TO EXISTING UNRESTRAINED PIPELINES, PROVIDE A DICL SHORT PIPE WITH THRUST FLANGE AND THRUST BLOCK. BOLT ON UNI FLANGES SHALL NOT BE USED AS THRUST FLANGES. THRUST (PUDDLE) FLANGES SHALL BE AN APPROVED PREFABRICATED DICL/MSCL SHORT PIPE WITH PREFABRICATED THRUST FLANGE.
18. ALL DISUSED SERVICES SHALL BE PLUGGED AT THE MAIN AND FERRULE CLOSED OR TAPPING BAND REMOVED AND SECTION OF MAIN SUBSTITUTED AS LIVE WORKS. LARGE DIAMETER SERVICES SHALL BE DISUSED BY REMOVING ANY PROPERTY SERVICE PIPEWORK AT THE POINT OF CONNECTION TO THE MAIN, AND INSTALLING A BLANK FLANGE DIRECTLY ON THE TEE.
19. AC MAINS SHALL BE REPLACED COLLAR-COLLAR.
20. CONSTRUCT PROPERTY SERVICES TO SEQ-WAT-1107-1 AND 1107-3.
21. PROVIDE DN40 PE100 WATER SERVICES FOR ROAD CROSSINGS SERVICING TWO DWELLINGS. PROVIDE DN32 PE100 WATER SERVICES FOR ROAD CROSSINGS SERVICING A SINGLE DWELLING. IF THE LONG TERM STATIC HEAD OF THE PROPERTY SERVICE IS LESS THAN 350 kPA (35m) OR IF PRIVATE BOOSTER IS REQUIRED, THE MINIMUM SIZE OF PROPERTY SERVICE SHALL BE DN40 PE100.
22. WATER SERVICE UNDER ROADS MUST BE PLACED WITHIN 100mm DIA. CONDUITS, REFER SEW-WAT-1107-1.
23. A WATER METER SUPPLIED AT THE DEVELOPER'S COST, IS TO BE INSTALLED AT THE SERVICE POINT OF EACH LOT IN ACCORDANCE WITH THE URBAN UTILITIES STANDARD DRAWING.
24. WATER METER AND FIRE HYDRANTS MUST BE LOCATED MINIMUM 1.1m CLEAR OF ENERGEX PILLARS.

ALL WATER AND SEWERAGE CONSTRUCTION SHALL COMPLY WITH ALL QUEENSLAND LEGISLATION

ALL ENVIRONMENTAL PROTECTION MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY CONSTRUCTION WORK COMMENCING, INCLUDING CLEARING

THIS DESIGN PACKAGE SHOWS CONNECTIONS TO INFRASTRUCTURE THAT HAS NOT BEEN ACCEPTED 'ON-MAINTENANCE' BY URBAN UTILITIES LIVE-WORKS CANNOT COMMENCE UNTIL THE PRECEDING WORKS HAVE BEEN ACCEPTED 'ON MAINTENANCE' BY URBAN UTILITIES

PROPERTY CONNECTIONS HAVE BEEN DESIGNED TO CONTROL THE REQUIRED SERVICE AREA OF EACH LOT AT A GRADE OF 1:60 AND A MAXIMUM DEPTH OF PROPERTY CONNECTION AT 1.5m UNLESS OTHERWISE STATED. FOR JUNCTION DETAILS REFER SEQ-SEW-1106-1 TO SEQ-SEW-1106-6.

ENGINEER'S CERTIFICATION

I, Dan Collins, hereby certify that:

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3. This generally represents an accurate record of as-constructed works
4. I accept responsibility for the information contained in this drawing / document.

RPEQ (signature) RPEQ No. 18631 Date: 29/09/23

URBAN UTILITIES REF. NUMBER. : 22-PNT-62638

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	09.02.23	CL	AK	ISSUED FOR CONSTRUCTION
B	29.09.23	CL	BP	AS CONSTRUCTED

DRAWN

DESIGN

STATUS: **AS CONSTRUCTED**

APPROVED: DANIEL COLLINS RPEQ 18631

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE

CLIENT: **CANBERRA ESTATES CONSORTIUM NO. 36 PTY LIMITED**

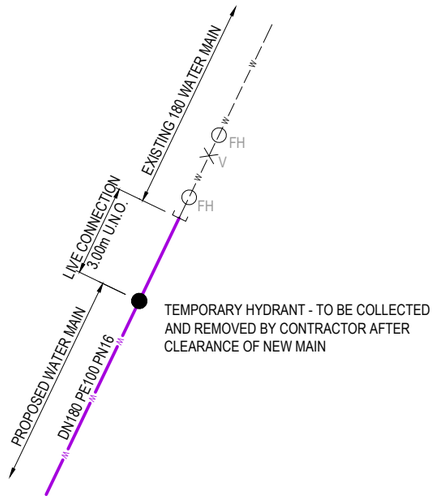
ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP PH: 1300 123 744

PROJECT NAME: **WOODLINKS VILLAGE - STAGE 11**

COOLINGWOOD DRIVE, COOLINGWOOD PARK

DRAWING TITLE: **SEWERAGE AND WATER RETICULATION GENERAL NOTES**

PROJECT No.	DRAWING No.	REVISION
22-0173	301	B



LIVE CONNECTION 1 DETAIL
NOT TO SCALE

WATER RETICULATION LIVE CONNECTIONS

CONNECTION 1			
STREET	ROAD 12 NEAR CH358		
LOCATION	FRONT OF 5002		
LENGTH	3.00m	TYPE OF MAIN	DN180 PE100
DATE COMMENCED		DATE COMPLETED	
SIGNATURE			

LIVE WORKS NOTES:
1. ALL LIVE WORKS SHALL BE UNDERTAKEN BY THE CONTRACTOR IN ACCORDANCE WITH AN APPROVED NETWORKS ACCESS PERMIT, UNDER THE SUPERVISION OF URBAN UTILITIES, AT THE DEVELOPERS EXPENSE.
2. PRE-CHLORINATED FITTINGS SHALL BE USED FOR ALL DRINKING WATER LIVE WORKS CONNECTIONS.

LIVE WORKS NOTES:
1. ALL LIVE WORKS SHALL BE UNDERTAKEN BY THE CONTRACTOR IN ACCORDANCE WITH AN APPROVED NETWORKS ACCESS PERMIT, UNDER THE SUPERVISION OF URBAN UTILITIES, AT THE DEVELOPERS EXPENSE.
2. LIVE WORKS CANNOT COMMENCE UNTIL ALL RELEVANT TEST CERTIFICATES HAVE BEEN PROVIDED AND ACCEPTED BY URBAN UTILITIES.

LIVE SEWER WORKS

No.	DESCRIPTION	DIA. SEWER	EXISTING ASSET ID AT CONNECTION	MH/MS TYPE	COVER TYPE	LOT & PLAN No.	F.S.L.	E.S.L.	CONNECTION I.L.	CONNECTION DEPTH TO INVERT	ALTERATION TO EXISTING MH BENCHING REQUIRED (Y/N)
1 (A)	CONSTRUCTOR TO CONSTRUCT NEW MAIN FROM END OF EXISTING TEMPORARY END.	DN160 PE100	-	LINE	-	303	~~38.103~~	~~38.103~~	~~36.138~~	~~1.965~~	N
1 (B)	CONSTRUCTOR TO LAY NEW SEWERS. AFTER CLEANSING, TESTING AND INSPECTION, NOTIFY URBAN UTILITIES.						38.14		36.21	1.93	

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URBAN UTILITIES REF. NUMBER. : 22-PNT-62638

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	09.02.23	CL	AK	ISSUED FOR CONSTRUCTION
B	17.03.23	CL	CL	DN180 CHANGED TO DN160
C	14.04.23	CL	CL	SEWER LIVE CONNECTION DETAIL AMENDED
D	29.09.23	CL	BP	AS CONSTRUCTED

DRAWN
DESIGN
STATUS: **AS CONSTRUCTED**
APPROVED: DANIEL COLLINS RPEQ 18631
FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD.

Colliers

SCALE

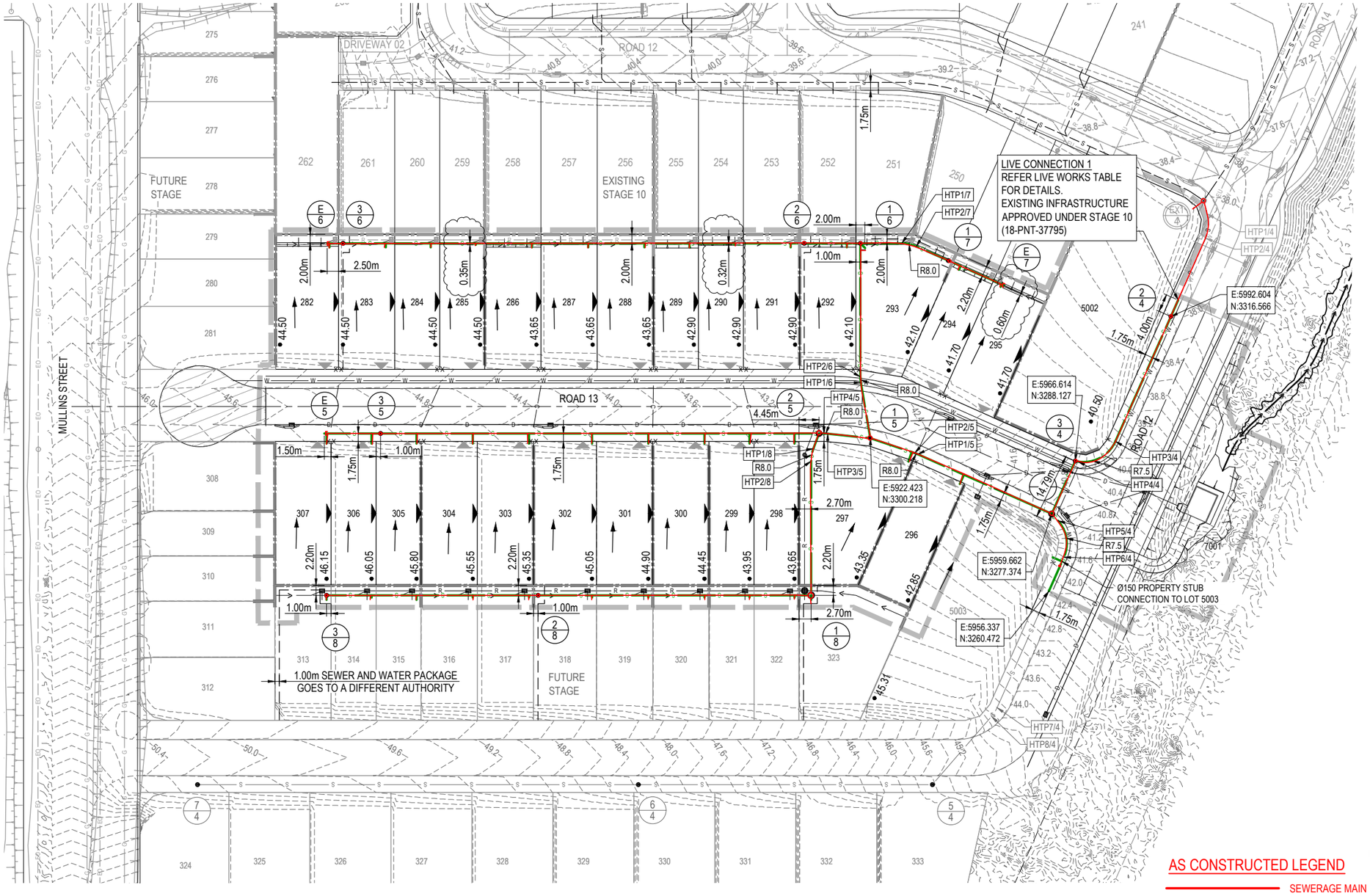
CLIENT: **CANBERRA ESTATES CONSORTIUM NO. 36 PTY LIMITED**

ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP PH: 1300 123 744

PROJECT NAME: **WOODLINKS VILLAGE - STAGE 11**
COOLINGWOOD DRIVE, COOLINGWOOD PARK

DRAWING TITLE: **SEWERAGE AND WATER RETICULATION LIVE WORKS DETAILS**

PROJECT No.	DRAWING No.	REVISION
22-0173	302	D



LEGEND

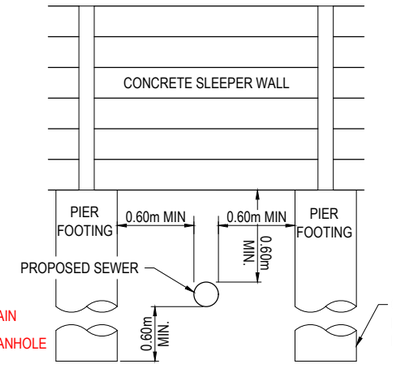
- PROPOSED AREA OF WORKS
- PROPOSED SEWER MAIN
- EXISTING SEWER MAIN
- •24.60 SEWER LOT CONTROL SURFACE LEVEL
- INDICATIVE DRIVEWAY LOCATION
- ZERO LOT BOUNDARY
- 24.6 FINISHED SURFACE CONTOUR
- PROPOSED STORMWATER DRAINAGE PIPE
- EXISTING STORMWATER DRAINAGE PIPE
- PROPOSED ROOFWATER DRAINAGE PIPE
- EXISTING ROOFWATER DRAINAGE PIPE
- PROPOSED WATER MAIN
- EXISTING WATER MAIN
- x PROPOSED WATER SERVICE POINT
- PROPOSED RETAINING WALL
- EXISTING RETAINING WALL
- EXISTING ELECTRICAL CABLE U/G
- EXISTING ELECTRICAL CABLE O/H
- EXISTING GAS MAIN

WARNING! - EXISTING SERVICES

EXTREME CARE SHOULD BE TAKEN WHEN EXCAVATING IN THIS AREA. THE FOLLOWING EXISTING SERVICES ARE LIKELY TO BE PRESENT IN THE VICINITY OF THE SITE:

- ELECTRICAL CABLES
- TELECOMMUNICATIONS CABLES
- GAS MAINS
- WATER MAINS
- SEWER MAINS

THE CONTRACTOR SHOULD CONTACT THE SERVICE PROVIDER FOR FURTHER INFORMATION AND SATISFY THEMSELVES OF ANY SPECIFIC TREATMENT OR REQUIREMENTS.



TYPICAL SLEEPER WALL SERVICE CROSSING
N.T.S

AS CONSTRUCTED LEGEND

- SEWERAGE MAIN
- SEWERAGE MANHOLE
- REDUCER
- END OF LINE

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RPEQ (signature) RPEQ No. 18631 Date: 29/09/23

NOTE - SETOUT:
REFER TO THE LONGITUDINAL SECTIONS FOR EASTING AND NORTHING SETOUT OF SEWER STRUCTURES, ENDS AND BENDS.

RP DESCRIPTION
LOT 1 ON SP 266990

DATUM LEVEL AND LOCATION:
P.M. 110122
RL 40.320 AHD

URBAN UTILITIES REF. NUMBER. : 22-PNT-62638

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	09.02.23	CL	AK	ISSUED FOR CONSTRUCTION
B	13.03.23	CL	CL	AMENDMENTS TO LINE 6, 7 AND 8
C	14.04.23	CL	CL	STRUCTURE 2/4 AMENDED
D	24.05.23	CL	AK	SEWER HOUSE CONNECTIONS AMENDED FOR LOTS 285, 290 AND 295
E	29.09.23	CL	BP	AS CONSTRUCTED

DRAWN
DESIGN
STATUS: AS CONSTRUCTED
APPROVED: DANIEL COLLINS RPEQ 18631
FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE: 1:500 / 1:1000 — 10 5 0 10 20 — A1 / A3

CLIENT: CANBERRA ESTATES CONSORTIUM NO. 36 PTY LIMITED

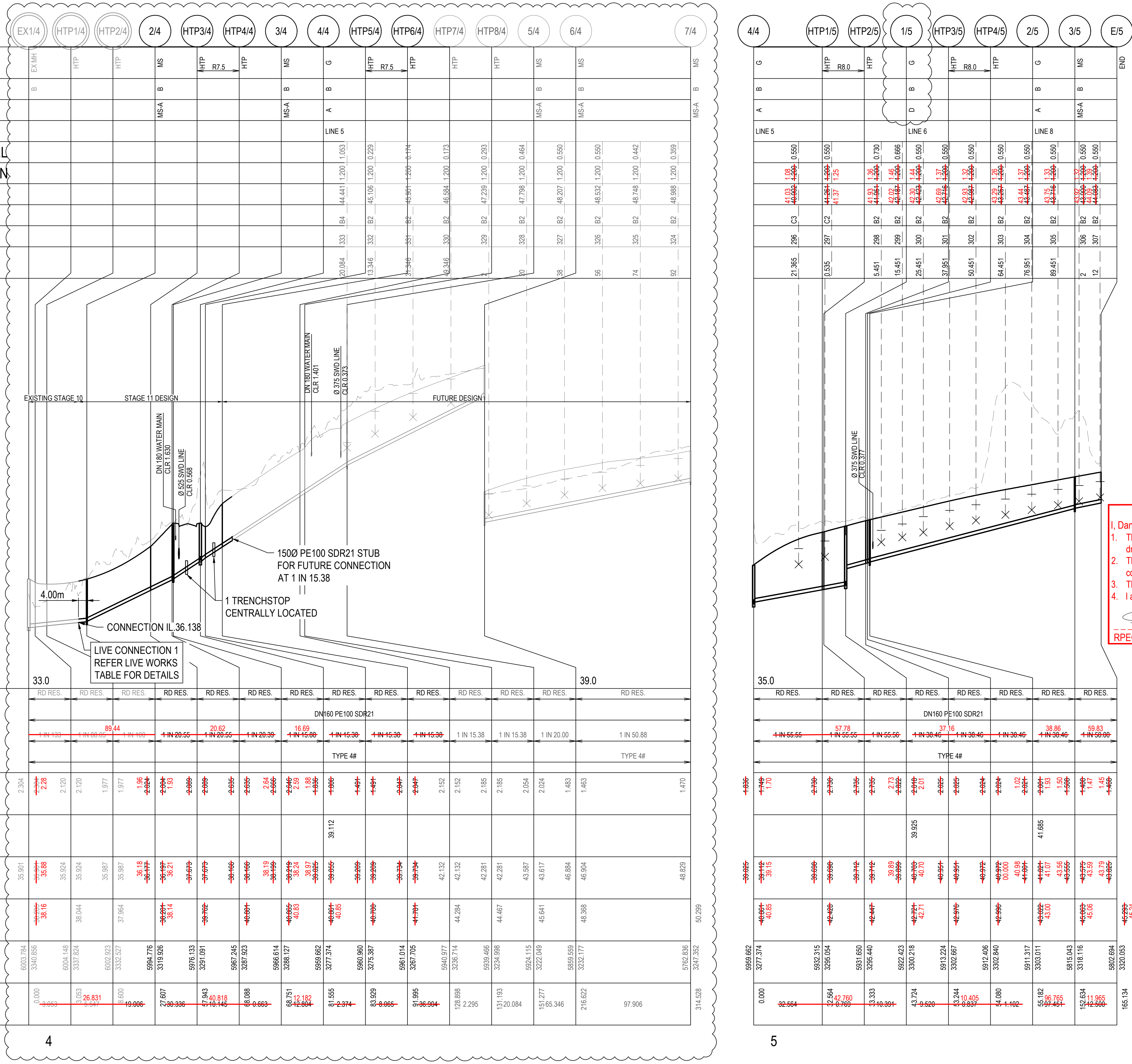
ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP PH: 1300 123 744

PROJECT NAME: WOODLINKS VILLAGE - STAGE 11
COOLINGWOOD DRIVE, COOLINGWOOD PARK

DRAWING TITLE: SEWERAGE LAYOUT PLAN

PROJECT No.	DRAWING No.	REVISION
22-0173	303	E

STRUC/ BEND/ END NAME
STRUCTURE TYPE
STRUCTURE LID TYPE
STRUCTURE DROP TYPE
JUNCTION LINE
DEPTH TO LOT CONTROL LEVEL
DEPTH TO HOUSE CONNECTION
HC INVERT LEVEL
HC TYPE
HC LOT No
CH. FROM D/S STRUC/ BEND



STRUCTURE TYPES
G = CONCRETE 0.900Ø
F = CONCRETE 1.200Ø
X = CONCRETE 1.200Ø
MS = PE 0.600Ø
MH DROP TYPES:
AS PER SEQ STD DRG SEQ-SEW-1301 SERIES
MS DROP TYPES:
MS-A = 20mm DROP THROUGH BULB
MS-B = >750mm DROP INTO RISER
LID TYPES
B = NON-TRAFFICABLE
D = TRAFFICABLE
D(BD) = TRAFFICABLE WITH BOLT DOWN

NOTE: PE LINING OF MANHOLES:
MAINTENANCE HOLES ≥ 1500Ø IN DIA OR ≥ 4.0m IN DEPTH, REQUIRE PE LINED PROTECTIVE COATING

EMBEDMENT NOTE:
PIPE EMBEDMENT & TRENCHFILL SHALL BE IN ACCORDANCE WITH SEQ-SEW-1200-2, 1201-1 TO 1201-5. TYPE 3 SUPPORT IS PROPOSED UNTIL FINAL GEOTECHNICAL INVESTIGATIONS ARE COMPLETED PRIOR TO CONSTRUCTION.

* STORMWATER BRIDGING NOTE:
WHERE A STORMWATER PIPE >= 600mm DIA CROSSES OVER A SEWER, THE STORMWATER PIPE SHALL BE SUPPORTED BY A BRIDGE STRUCTURE THAT SPANS THE SEWER TRENCH. REFER PEAK URBAN STD DRG S-100.

DATUM R.L.
LAND USE
DIAMETER
GRADE
EMBEDMENT TYPE
DEPTH TO INVERT
JUNCTION INVERT LEVEL
SEWER INVERT LEVEL
DESIGN SURFACE LEVEL
SETOUT
RUNNING CHAINAGE
LINE

ENGINEER'S CERTIFICATION

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RPEQ (signature) RPEQ No. 18631 Date: 29/09/23

URBAN UTILITIES REF. NUMBER. : 22-PNT-62638

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	09.02.23	CL	AK	ISSUED FOR CONSTRUCTION
B	14.04.23	CL	CL	LINE 4 UPDATED, STRUCTURE 1/5 DROP TYPE AMENDED TO "D"
C	29.09.23	CL	BP	AS CONSTRUCTED

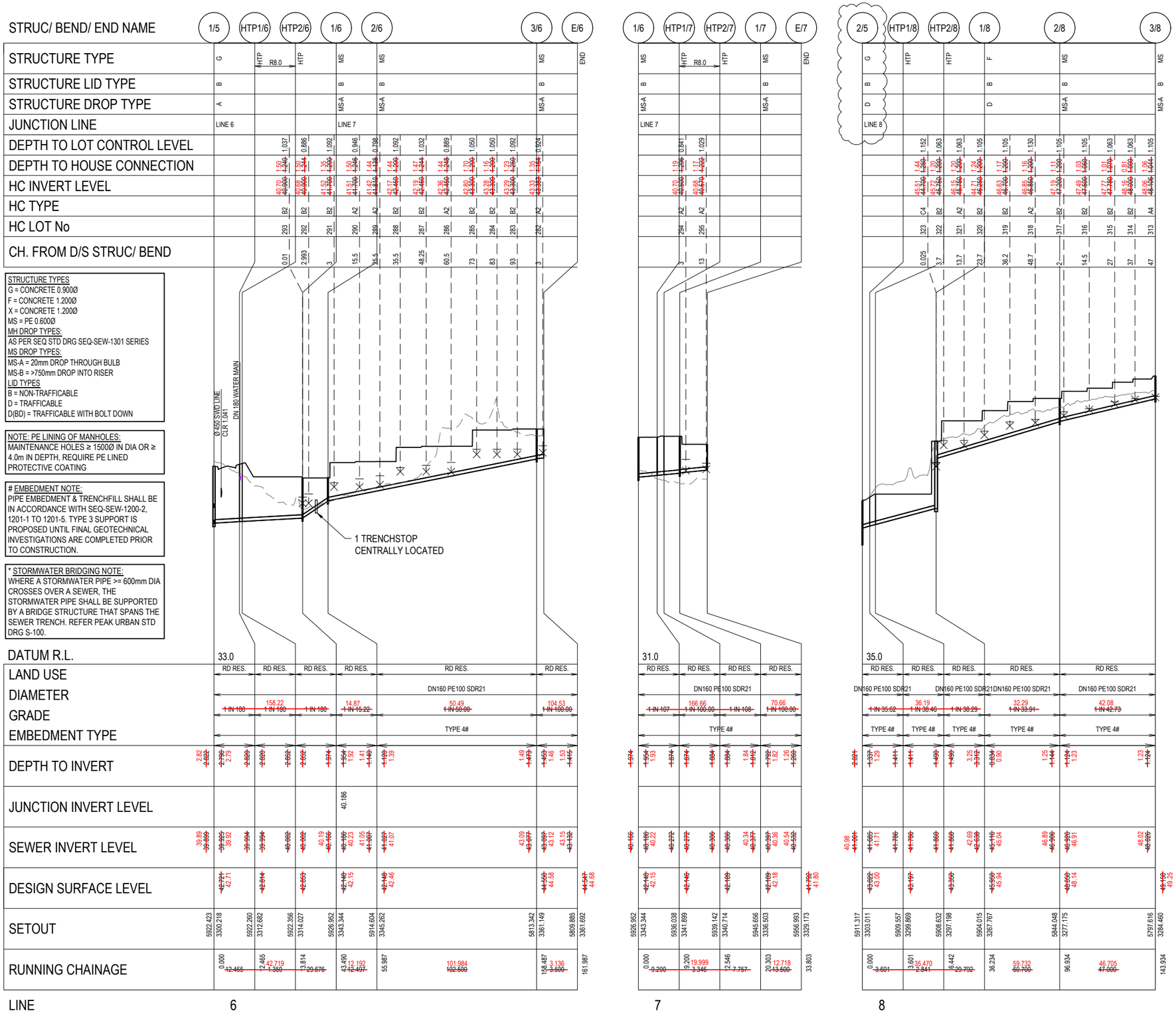
DRAWN
DESIGN
STATUS: AS CONSTRUCTED
APPROVED: DANIEL COLLINS RPEQ 18631
FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

SCALE: 1:1000 A1 / 1:2000 A3 HORIZONTAL; 1:100 A1 / 1:200 A3 VERTICAL

CLIENT: CANBERRA ESTATES CONSORTIUM NO. 36 PTY LIMITED
ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP PH: 1300 123 744

PROJECT NAME: WOODLINKS VILLAGE - STAGE 11
COOLINGWOOD DRIVE, COOLINGWOOD PARK

DRAWING TITLE: SEWERAGE LONGITUDINAL SECTIONS SHEET 1 OF 2
PROJECT No. 22-0173
DRAWING No. 304
REVISION C



STRUCTURE TYPES
G = CONCRETE 0.900Ø
F = CONCRETE 1.200Ø
X = CONCRETE 1.200Ø
MS = PE 0.600Ø
MH DROP TYPES:
AS PER SEQ STD DRG SEQ-SEW-1301 SERIES
MS DROP TYPES:
MS-A = 20mm DROP THROUGH BULB
MS-B = >750mm DROP INTO RISER
LID TYPES
B = NON-TRAFFICABLE
D = TRAFFICABLE
D(BD) = TRAFFICABLE WITH BOLT DOWN

NOTE: PE LINING OF MANHOLES:
MAINTENANCE HOLES ≥ 1500Ø IN DIA OR ≥ 4.0m IN DEPTH, REQUIRE PE LINED PROTECTIVE COATING

EMBEDMENT NOTE:
PIPE EMBEDMENT & TRENCHFILL SHALL BE IN ACCORDANCE WITH SEQ-SEW-1200-2, 1201-1 TO 1201-5. TYPE 3 SUPPORT IS PROPOSED UNTIL FINAL GEOTECHNICAL INVESTIGATIONS ARE COMPLETED PRIOR TO CONSTRUCTION.

* STORMWATER BRIDGING NOTE:
WHERE A STORMWATER PIPE >= 600mm DIA CROSSES OVER A SEWER, THE STORMWATER PIPE SHALL BE SUPPORTED BY A BRIDGE STRUCTURE THAT SPANS THE SEWER TRENCH. REFER PEAK URBAN STD DRG S-100.

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URBAN UTILITIES REF. NUMBER. : 22-PNT-62638

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	09.02.23	CL	AK	ISSUED FOR CONSTRUCTION
B	13.03.23	CL	CL	AMENDMENTS TO LINE 6, 7 AND 8
C	24.03.23	CL	CL	LINE 6 AMENDED TO BE 1 IN 180
D	28.03.23	CL	CL	LINE 8 HOUSE CONNECTION AMENDED
E	14.04.23	CL	CL	STRUCTURE 2/5 AMENDED TO "G" MH
F	29.09.23	CL	BP	AS CONSTRUCTED

DRAWN
DESIGN

STATUS: **AS CONSTRUCTED**

APPROVED: DANIEL COLLINS RPEQ 18631

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE
1:1000 10 0 10 20 30 40 50 A1
1:2000 A3
HORIZONTAL
1:100 2 1 0 2 4 A1
1:200 A3
VERTICAL

CLIENT: **CANBERRA ESTATES CONSORTIUM NO. 36 PTY LIMITED**

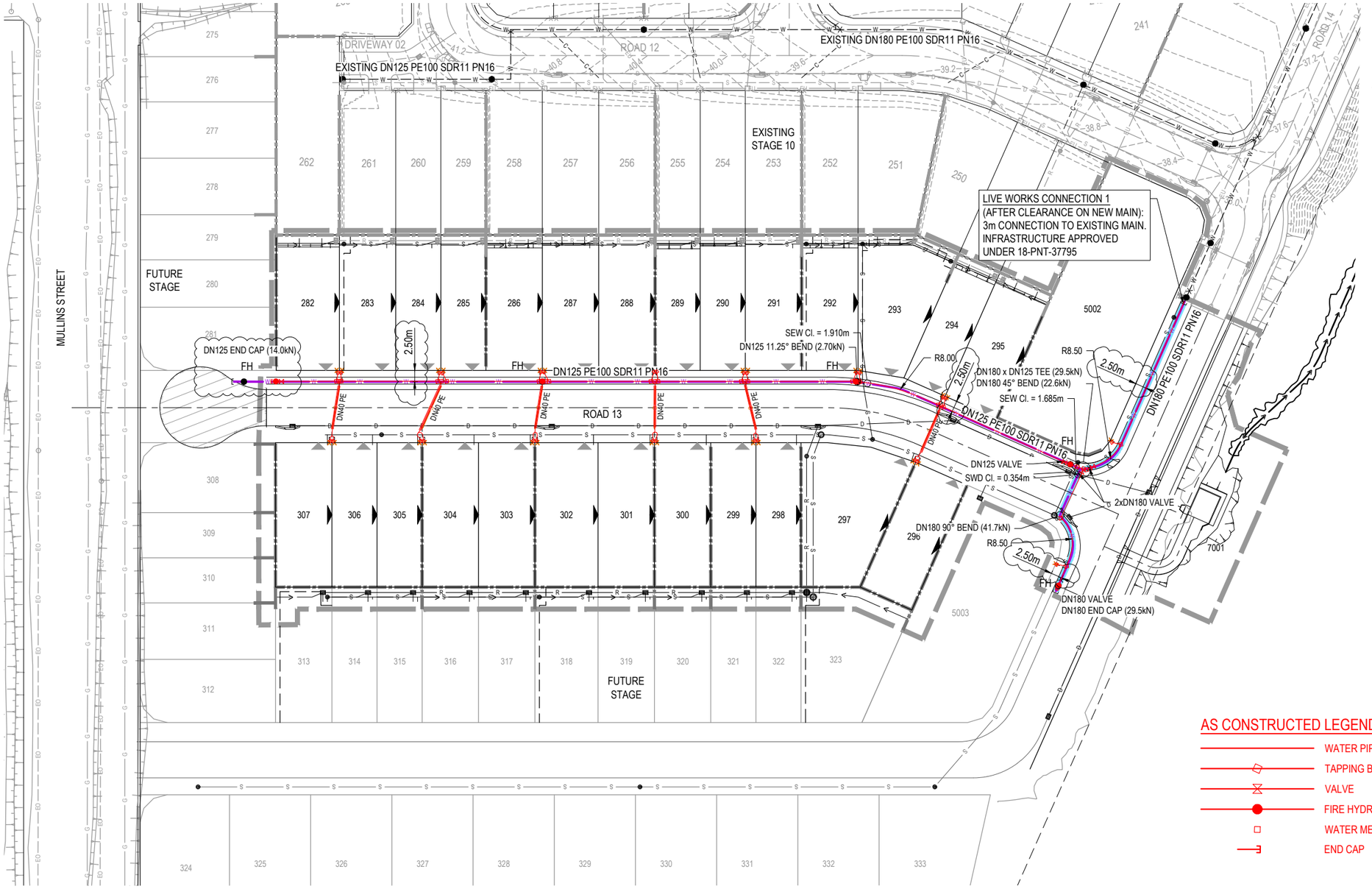
ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP PH: 1300 123 744

PROJECT NAME: **WOODLINKS VILLAGE - STAGE 11**

COOLINGWOOD DRIVE, COOLINGWOOD PARK

DRAWING TITLE: **SEWERAGE LONGITUDINAL SECTIONS SHEET 2 OF 2**

PROJECT No.	DRAWING No.	REVISION
22-0173	305	F



LEGEND

- PROPOSED AREA OF WORKS
- PROPOSED WATER MAIN
- PROPOSED MAIN REQUIRING TRENCHSTOPS IN ACCORDANCE WITH SEW-WAT-1209-1
- EXISTING WATER MAIN
- PROPOSED WATER CONDUIT
- EXISTING WATER CONDUIT
- PROPOSED ROAD CONTOUR
- INDICATIVE DRIVEWAY LOCATION
- ZERO LOT BOUNDARY
- PROPOSED STORMWATER DRAINAGE PIPE
- EXISTING STORMWATER DRAINAGE PIPE
- PROPOSED ROOFWATER DRAINAGE PIPE
- EXISTING ROOFWATER DRAINAGE PIPE
- PROPOSED SEWER MAIN
- EXISTING SEWER MAIN
- EXISTING GAS MAIN
- EXISTING ELECTRICAL CABLE O/H

WATER FITTINGS LEGEND

PROPOSED:

- FIRE HYDRANT
- ISOLATION VALVE
- DEAD END
- REDUCER
- WATER SERVICE POINT

EXISTING:

- FIRE HYDRANT
- ISOLATION VALVE
- DEAD END
- REDUCER
- WATER SERVICE POINT

AS CONSTRUCTED LEGEND

- WATER PIPE
- TAPPING BAND
- VALVE
- FIRE HYDRANT
- WATER METER
- END CAP

WARNING! - EXISTING SERVICES

EXTREME CARE SHOULD BE TAKEN WHEN EXCAVATING IN THIS AREA. THE FOLLOWING EXISTING SERVICES ARE LIKELY TO BE PRESENT IN THE VICINITY OF THE SITE:

- ELECTRICAL CABLES
- TELECOMMUNICATIONS CABLES
- GAS MAINS
- WATER MAINS
- SEWER MAINS

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4. I accept responsibility for the information contained in this drawing / document.

RPEQ (signature) RPEQ No. 18631 Date: 29/09/23

NOTE:

- WATER MAINS MUST CROSS OVER SERVICES WITH MINIMUM COVER PER SEQ Cl. 7.4.2. AND CLEARANCES PER SEQ CODE TABLE 5.5.
- ALL VALVES TO BE FULLY RESTRAINED IN ACCORDANCE WITH THE SEQ CODE.
- MARKERS FOR PROPERTY SERVICES SHALL BE IN ACCORDANCE WITH SEQ-WAT-1106-1108. MARKERS FOR WATER MAIN CROSSINGS, HYDRANTS AND VALVES SHALL BE IN ACCORDANCE WITH SEQ-WAT-1300-1.

RP DESCRIPTION
LOT 1 ON SP 266990

DATUM LEVEL AND LOCATION:
P.M. 110122
RL 40.320 AHD

URBAN UTILITIES REF. NUMBER. : 22-PNT-62638

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	09.02.23	CL	AK	ISSUED FOR CONSTRUCTION
B	22.03.23	CL	CL	VALVE REMOVED END OF ROAD 13, WATER OFFSET ADDED
C	29.09.23	CL	BP	AS CONSTRUCTED

DRAWN
DESIGN

STATUS: **AS CONSTRUCTED**

APPROVED: DANIEL COLLINS RPEQ 18631

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE
1:500 10 5 0 10 20 A1
1:1000 A3

CLIENT: **CANBERRA ESTATES CONSORTIUM NO. 36 PTY LIMITED**

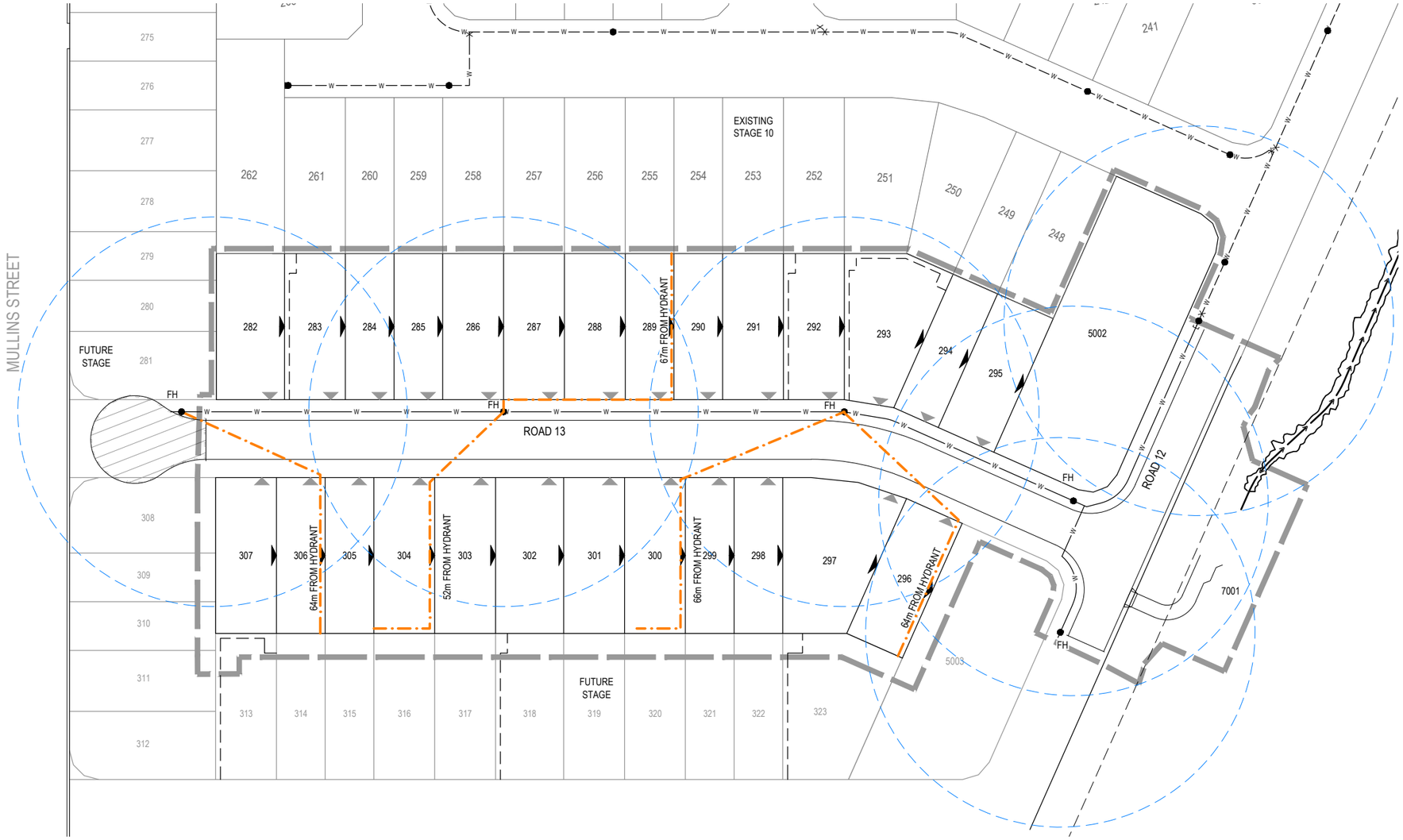
ASSOCIATED CONSULTANT
SAUNDERS HAVILL GROUP
PH: 1300 123 744

PROJECT NAME: **WOODLINKS VILLAGE - STAGE 11**

COOLINGWOOD DRIVE,
COOLINGWOOD PARK

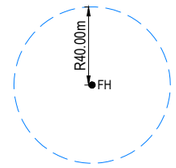
DRAWING TITLE: **WATER RETICULATION LAYOUT PLAN**

PROJECT No.	DRAWING No.	REVISION
22-0173	306	C



LEGEND

- PROPOSED AREA OF WORKS
- PROPOSED WATER MAIN
- EXISTING WATER MAIN
- PROPOSED HYDRANT REACH (WORST CASE ALLOTMENT)
- FIRE HYDRANT SPACING (RADIUS 40m)



FIRE HYDRANT COVERAGE
NOT TO SCALE

NOTE:

ALL FIRE HYDRANT LOCATIONS SHALL MEET CLASS 1 BUILDING COVERAGE REQUIREMENTS OF THE SEQ CODE. FIRE HYDRANT COVERAGE IS AS SHOWN AND DEMONSTRATES THE WORST POSSIBLE LOCATION OF ANY PROPOSED CLASS 1 BUILDING WITHIN 90m OF HYDRANT REACH.

ENGINEER'S CERTIFICATION

I, Dan Collins, hereby certify that:

1. The information contained in this drawing / document is in compliance with approved drawings and design.
2. The new water and sewerage works defined by this drawing have been designed and constructed in accordance with the SEQ code.
3. This generally represents an accurate record of as-constructed works
4. I accept responsibility for the information contained in this drawing / document.

RPEQ (signature) RPEQ No. 18631 Date: 29/09/23

URBAN UTILITIES REF. NUMBER. : 22-PNT-62638

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	09.02.23	CL	AK	ISSUED FOR CONSTRUCTION
B	29.09.23	CL	BP	AS CONSTRUCTED

DRAWN

DESIGN

STATUS: **AS CONSTRUCTED**

APPROVED: DANIEL COLLINS RPEQ 18631

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE: 1:500 / 1:1000 — 10 5 0 10 20 — A1 / A3

CLIENT: **CANBERRA ESTATES CONSORTIUM NO. 36 PTY LIMITED**

ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP PH: 1300 123 744

PROJECT NAME: **WOODLINKS VILLAGE - STAGE 11**

COOLINGWOOD DRIVE, COOLINGWOOD PARK

DRAWING TITLE: **FIRE HYDRANT REACH LAYOUT PLAN**

PROJECT No.	DRAWING No.	REVISION
22-0173	307	B

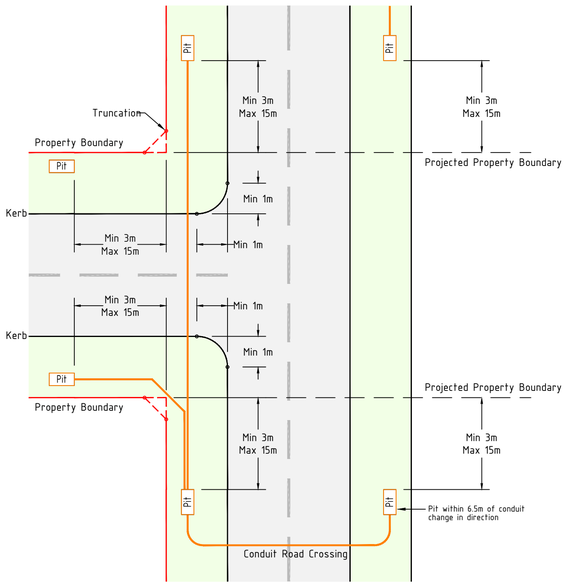
Woodlinks - Stage 11

7001 Collingwood Dr Collingwood Park QLD

NBN Co PIT AND PIPE DESIGN

Pit types

Type	Symbol	Description
P2	PIT-ID 2	Service Drop Access Pit (650mmX280mmX565mm)
P5	PIT-ID 5	Network Boundary/Local Network Pit (Single Lid) (700mmX450mmX650mm)
P6	PIT-ID 6	Distribution/Local Network Connection Pit (Dual Lid) (1360mmX555mmX650mm)
P8	PIT-ID 8	Distribution/Local Network Connection Pit (Dual Lid) (1360mmX555mmX860mm)
P9	PIT-ID 9	Fibre Distribution Hub (FDH) Pit (2000mmX555mmX900mm)
Manhole	MH-ID	Distribution Network manhole (2600mmX1240mmX1490mm)



Pit alignment for crossings/street corners

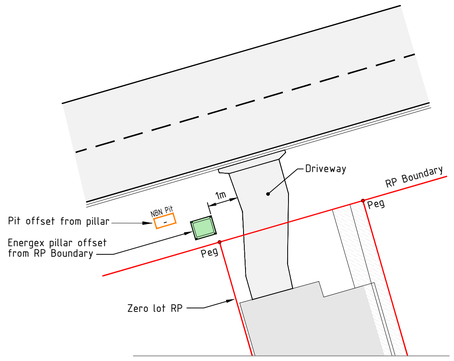
Refer to NBN Document number NBN-TE-CTO-194

Clearances from other carriers and services

Service item		Minimum radial clearances*
Gas pipe	over 110 mm	300 mm
	110 mm or less	150 mm
Power	high voltage	300 mm
	low voltage	100 mm (with protection barrier)
Water mains	high pressure/capacity	300 mm
	local reticulation	150 mm
Sewer	main	300 mm
	connection pipe	150 mm
Other Telecommunications	100 mm without reduced separation agreement	

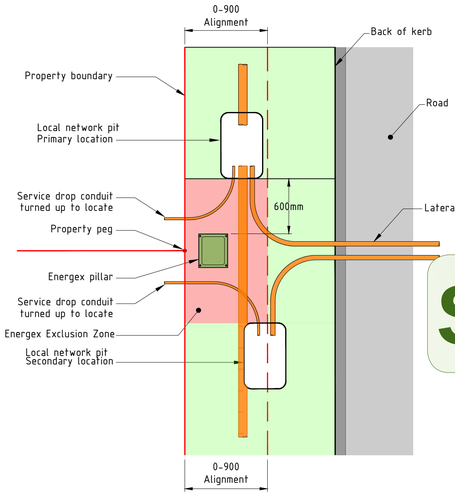
Conduit depths and cover

Location	Minimum Cover
Service Drop conduit - less than 3m from Pit to Boundary	300 mm
Service Drop conduit - more than 3m from Pit to Boundary	450 mm
Verge (walkways, footpaths)	450 mm
Road (non-state or territory)	600 mm
Road crossing	800 mm to 1200mm (typically)



Zero lot boundary configuration

Refer to NBN and Energex manuals for details



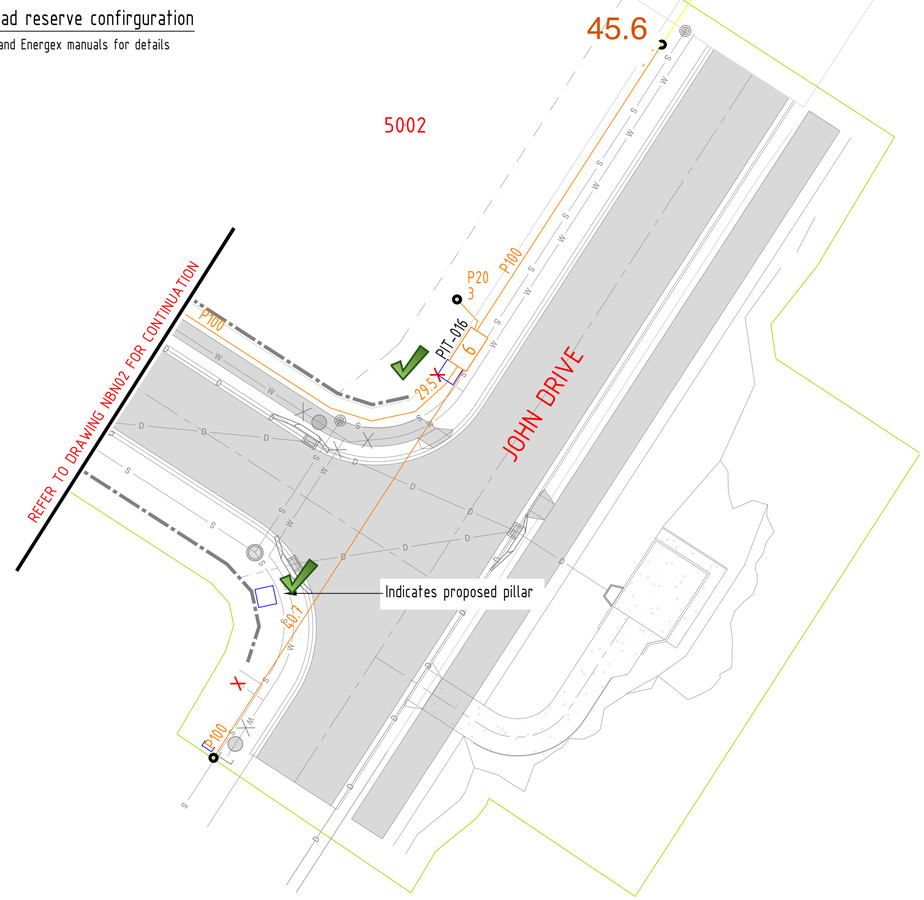
General road reserve configuration

Refer to NBN and Energex manuals for details

Sullivan Underground Services

AS CON
27 Jun 2023

Scott Smith

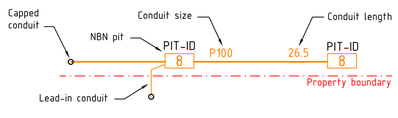


Conduit Configuration Legend

Conduits and ducts are in layer:
< L460 NBN Support – Underground >
and terminology categorized into two groups in the drawings as per below:

1- DUCT — Used with Local Network
2-CONDUIT — Used with Lead-In drops

Attributes attached are as shown



Conduit dimensions white telecommunications	Nominal Size 'Inside Diameter'	Conduit dimensions white telecommunications	Nominal Size 'Inside Diameter'	Conduit dimensions white telecommunications	Nominal Size 'Inside Diameter'
26.7 / 23.3 / 1.7 / Nominal dimensions (in mm.)	20 mm PN 12 AS/NZS 4.77.2006 table 4.2(A)	60.3 / 53.0 / 3.65 / Nominal dimensions (in mm.)	50 mm PN 12 ASPN 12 A 5/NZS 1477:2006 table 4.2(A)	113.9 / 104.9 / 4.5 / Nominal dimensions (in mm.)	100 mm PN 9 AS/ NZS 4.77.2006 table 4.2(A)

FOR CONSTRUCTION

REV	DATE	DRAFTER	DESCRIPTION	APPROVED
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
C	08.05.23	GW	ISSUE FOR CONSTRUCTION	JB
B	10.03.23	GW	TENDER ISSUE	JB
A	07.02.23	GW	PRELIMINARY ISSUE	JB

SAFETY FIRST
SAFETY STARTS WITH YOU

DANGER
LASER BEAM
EYE PROTECTION MUST BE WORN

THIS DRAWING IS TO BE BUILT IN CONJUNCTION WITH AMPFLO ELECTRICAL RETICULATION DRAWINGS

DO NOT CONSTRUCT DRIVEWAYS/CROSSOVERS UNTIL ELECTRICAL WORKS ARE COMPLETED

THE LOCATION OF OTHER AUTHORITIES SERVICES WHICH MAY AFFECT THIS WORK HAVE NOT BEEN OBTAINED BY THE ESTIMATOR. CONSTRUCTOR TO OBTAIN SERVICE INFORMATION BEFORE COMMENCING

CONTRACTOR TO SUBMIT AS-BUILT DESIGNS TO AMPFLO comms@ampflo.com.au TO BE PROCESSED BY NBN

DIAL BEFORE YOU DIG www.1100.com.au

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CONSTRUCTION CONTRACTOR TO DETERMINE IF FIRE ANTS RESTRICTIONS APPLY
CALL 13 25 33

ATTENTION
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NBNCO APPROVAL RECORD: SIGNATURE DATE
DD
WD
AB

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Australia's broadband network

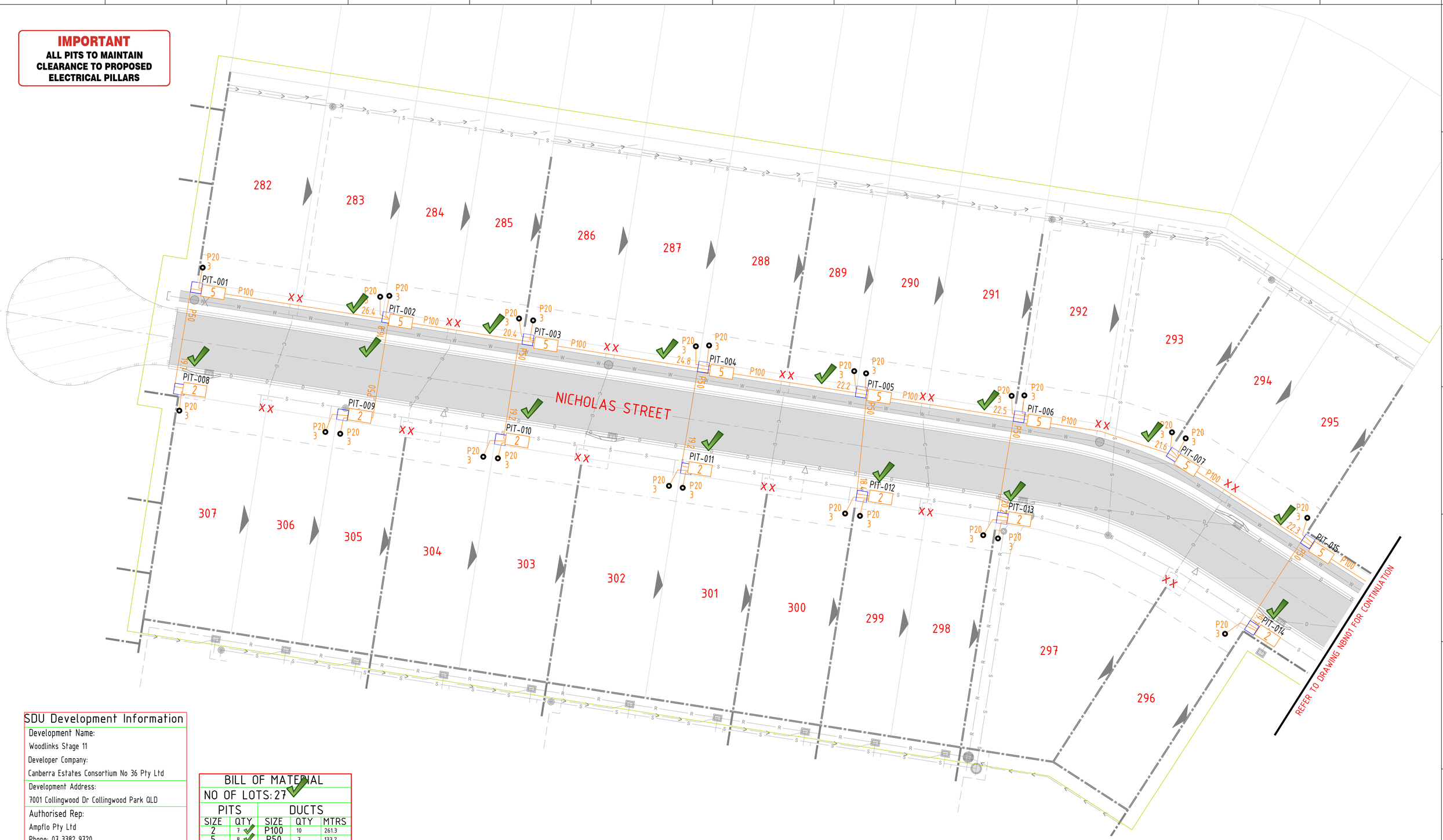
ampflo
ABN 28 111 423 842
Electrical and Telecommunications Consultants
07 3372 9280 comms@ampflo.com.au

N KEY PLAN

DRAWING TITLE: Woodlinks - Stage 11
7001 Collingwood Dr Collingwood Park QLD
NBN Co PIT AND PIPE DESIGN

STATE: QLD | REGION: MGA56
FSA: - | SAM: - | ADA: -
PROJECT No: -
CADREF No: 222116
SCALE 1:250 | SHEET No. 1 OF 2 | REV. C

IMPORTANT
ALL PITS TO MAINTAIN CLEARANCE TO PROPOSED ELECTRICAL PILLARS



SDU Development Information

Development Name: Woodlinks Stage 11	
Developer Company: Canberra Estates Consortium No 36 Pty Ltd	
Development Address: 7001 Collingwood Dr Collingwood Park QLD	
Authorised Rep: Ampflo Pty Ltd Phone: 07 3382 9720 E-Mail: comms@ampflo.com.au	
nbn Reference Number: STG-	Stage Number: 11 Design Revision: C

BILL OF MATERIAL

NO OF LOTS: 27

PITS SIZE	PITS QTY	DUCTS SIZE	DUCTS QTY	DUCTS MTRS
2	7	P100	10	261.3
5	8	P50	7	133.2
6	1	P20	27	81
8	0			
9	0			

TOTAL NUMBER OF PITS: 16
TOTAL NUMBER OF MANHOLES: 0
TOTAL NUMBER OF CONDUITS: 44
TOTAL LENGTH OF CONDUITS: 475.5

Rod & Roping - 409.2mtrs

FOR CONSTRUCTION

REV	DATE	DRAFTER	DESCRIPTION	APPROVED
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
C	08.05.23	GW	ISSUE FOR CONSTRUCTION	JB
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07 3372 9280 comms@ampflo.com.au

N KEY PLAN

DRAWING TITLE: Woodlinks - Stage 11
7001 Collingwood Dr Collingwood Park QLD
NBN Co PIT AND PIPE DESIGN

STATE: QLD	REGION: MGA56		
FSA: -	SAM: -	ADA: -	
PROJECT No: -			
CADREF No: 222116			
SCALE 1:250	SHEET No. 2 OF 2	REV. C	

WOODLINKS - STAGE 11(11A, B & C)
ELECTRICAL RETICULATION

WOODLINKS - KEYPLAN

SCALE: N.T.S.

LEGEND

- EXISTING OVERHEAD CABLE
- PROPOSED OVERHEAD CABLE
- EXISTING UNDERGROUND CABLE
- PROPOSED UNDERGROUND CABLE
- E — PROPOSED ELECTRICAL SERVICE CONDUIT
- ET — PROPOSED ELECTRICAL & COMMUNICATION SERVICE CONDUITS
- POLE TRANSFORMER
- PADMOUNT TRANSFORMER
- HV POLE
- HV / LV POLE
- LV POLE
- HV UNDERGROUND POLE TERMINATION
- LV UNDERGROUND POLE TERMINATION
- AERIAL STAY
- GROUND STAY
- EARTH
- EXISTING PILLAR
- PROPOSED PILLAR
- LINK PILLAR
- D| 240LV — CONDUIT / CABLE CROSS-SECTION
- X — WATER METER
- PROPOSED DRIVEWAY ENTRY
- PROPOSED ZERO LOT IDENTIFIER

LIGHTING LEGEND

NOTE: NOT ALL SYMBOLS MAY BE USED

- LED STREET LIGHT
- S100 HPS STREET LIGHT
- S150 HPS STREET LIGHT
- S250 HPS STREET LIGHT
- EXISTING UNKNOWN STREET LIGHT

GENERAL NOTES

1. NO OTHER SERVICES TO ENCROACH INTO THE STANDARD UNDERGROUND ELECTRICITY CORRIDOR OF 0mm - 900mm FROM RPA.
2. ALL CABLES TO BE INSTALLED IN CONDUIT WITHIN THE STANDARD ELECTRICITY ALIGNMENT ALLOCATED BY THE LOCAL COUNCIL. WHERE CONDUITS VARY FROM THIS AND AT FOOTPATH CROSSING PROTECTIVE STRIP IS TO BE INSTALLED. WHERE PRACTICAL ELECTRICITY CABLES SHALL NOT BE CLOSER THAN 250mm TO THE REAL PROPERTY BOUNDARY.
3. A, B OR C WHEN SHOWN BESIDE LV PILLARS DENOTES SERVICE PHASING.
4. THE CONTRACTOR SHALL MEASURE ACTUAL CABLE LENGTHS REQUIRED ON SITE AFTER INSTALLATION OF CONDUITS THEN NOTIFY ENERGEX/SUPPLIER WHEN CONFIRMING CABLE ORDER.
5. ALL BENDS INSTALLED ON 80mm,100mm AND 125mm RETICULATION CONDUITS MUST BE 1830mm RADIUS UNLESS OTHERWISE SPECIFIED.
6. CONTRACTOR TO SUPPLY ALL LABELS AND SITE ID NUMBERS TO ENERGEX SPECIFICATION.
7. WHEN CROSS ROAD CONDUIT FINISHES OPPOSITE A TRUNCATION PEG, PROPERTY SIDE OF TRENCH TO BE 300mm ALIGNMENT FROM PEG.
8. WHERE CROSS-ROAD ELECTRICITY CONDUITS RUN PARALLEL TO OTHER SERVICES OR CONDUITS, A MINIMUM SEPARATION OF 1.0m MUST BE MAINTAINED.
9. CIVIL CONTRACTOR TO INSTALL ALL CROSS ROAD CONDUITS.
10. CO-ORDINATE CONDUIT INSTALLATION WITH COMMUNICATIONS CARRIER CONTRACTORS.
11. ELECTRICITY PILLARS TO HAVE 600mm EXCLUSION ZONE. NO NON-ENERGEX ASSETS TO BE INSTALLED WITHIN THIS EXCLUSION ZONE.
12. ENERGEX REQUIRE 1.0m CLEARANCE BETWEEN SERVICE PILLARS AND DRIVEWAYS. IF LESS THAN 1.0m SEPARATION THEN PROTECTIVE BOLLARDS MUST BE INSTALLED.

CONSTRUCTION CONTRACTOR

THE CONTRACTOR SHALL BE RATED BY ENERGEX FOR THE FOLLOWING PROCESS.

WCS 2 - UNDERGROUND CONSTRUCTION
WCS 31 - COMMISSIONING AND OPERATION OF THE NETWORK
WCS 34 - EARTHING SYSTEMS
WCS 61 - UNDERGROUND CIVIL CONSTRUCTION

STANDARDS AND SPECIFICATIONS

THIS WORKS PLAN IS TO BE READ IN CONJUNCTION AND COMPLY WITH THE FOLLOWING ENERGEX MANUALS AND SPECIFICATIONS

- UNDERGROUND DISTRIBUTION CONSTRUCTION MANUAL
- WCS 61.1 - UNDERGROUND TRENCHLESS TECHNOLOGY
- NETWORK LABELLING AND SIGNAGE MANUAL

CONSUMER'S INSTALLATION SHALL COMPLY WITH AS/NZS 3000:2018 - SAA WIRING RULES.

FOR DETAILS OF TRENCH CROSS-SECTIONS, REFER TO ENERGEX UNDERGROUND DISTRIBUTION CONSTRUCTION MANUAL.

ON SITE SERVICES CHECKS

UNDERGROUND SERVICES SHOWN ON THIS WORKS PLAN IN THE VICINITY OF PROPOSED EXCAVATION WORKS HAVE BEEN TAKEN FROM ASSET OWNER'S PAPER RECORDS AND ARE INDICATIVE ONLY.

THE CONTRACTOR IS RESPONSIBLE FOR THE REPAIR OF DAMAGE TO ANY EXISTING UNDERGROUND ASSETS CAUSED BY HIS WORKS AND THE RE-ESTABLISHMENT OF ANY SURVEY MARKS DISLODGED.

THE CONTRACTOR SHALL REQUEST ON-SITE IDENTIFICATION AND LOCATION OF EXISTING BURIED SERVICES FROM THE QUEENSLAND DIAL BEFORE YOU DIG SERVICE - PHONE: 1100 WEB: www.1100.com.au (A MINIMUM OF TWO DAYS NOTICE IS REQUIRED)

SEWERAGE, STORMWATER, GAS AND WATER PLANS FOR THE SITE MAY BE OBTAINED ON REQUEST FROM THE PROJECT SERVICE SUPERVISOR.

REINSTATEMENT NOTES

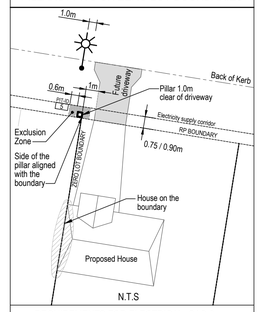
- BACKFILL & REINSTATEMENT OF FOOTPATH AND ROADWAY TO COUNCIL REQUIREMENTS. REFER STANDARD DRAWINGS:
  - SR.43 - TRENCH RESTORATION - VERGES AND PATHS
  - SR.44 - TRENCH RESTORATION - CARRIAGEWAYS

AS CONSTRUCTED
Garry Edwards Date: 17/07/23
INZ ELECTRICAL SERVICES PTY LTD
97 ZILLMERE ROAD
BOONDALL 4034 QLD
PH 3865 2122 FAX 3865 4475

COUNCIL REQUIRE 0.6m CLEARANCE BETWEEN ELECTRICAL PILLARS AND WATER METERS. INSTALL WATER METERS MINIMUM 1.5m FROM BOUNDARY PEG WHERE WATER METERS SHARE A COMMON BOUNDARY WITH ELECTRICAL PILLARS.

FOR CONSTRUCTION
01/03/2023 2:12 PM

PILLARS / PITS ON ZERO LOT BOUNDARIES



REQUIREMENTS FOR ELECTRICAL, GAS & COMMUNICATIONS

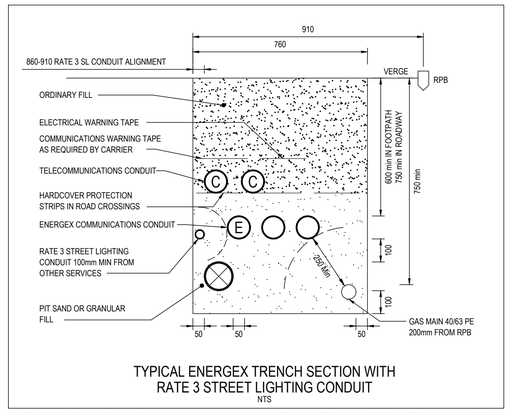
The proposed pillar shall be offset at the zero lot boundary with the side of the pillar being aligned with the lot boundary in order to provide a 1.0m minimum clearance from the future driveway.

A proposed streetlight shall be offset 1.0m from the boundary peg to centre of pole.

COMMUNICATIONS PITS	GAS SERVICE TEE-OFFS
are to remain outside 600mm pillar exclusion zone shall not clash with future driveways	are to remain outside 600mm pillar exclusion zone where a pillar is offset to align on one side with the boundary peg

MATERIALS SUMMARY - S2602364

UNDERGROUND			
MODEL No.	QTY	MODEL No.	QTY
ADE	3	LVSP12-6	6
DSLVF31	2	LVSP2-6SL	2
LV4CMEN	3	LVSP4-6	4
LVPT4C240	2	LVSP4-6SL	4
		LVSPL240	2
TOTAL		SCS820364	530
TRENCH LENGTH	202	SCS820365	126



TYPICAL ENERGEX TRENCH SECTION WITH RATE 3 STREET LIGHTING CONDUIT
NTS

REFER TO DWG S2602400 FOR TARIFF 3 STREET LIGHTING.

Fire Ant Biosecurity Caution Zone 2 For Info Call 13 25 23

DEVELOPERS NOTES

1. DO NOT CONSTRUCT DRIVEWAYS / CROSSOVERS UNTIL ELECTRICAL WORKS HAVE BEEN COMPLETED.
2. ALL KERB OUTLET PIPES TO BE 600mm CLEAR OF THE PROPOSED ELECTRICAL PILLARS

TO BE BUILT IN CONJUNCTION WITH TELECOMMUNICATIONS CABLE PROVISIONING AND JOINT USE GAS

REV	DATE	DETAILS	DRAWN	CHECKED	APPRVD
D	01.03.23	ISSUED FOR CONSTRUCTION	AB	BK	BK
C	27.02.23	REVISED CIVIL (FH) & MOVE PILLAR STN 3	AB	BK	BK
B	15.02.23	ISSUED FOR APPROVAL	AB	BK	BK
A	15.02.23	PRELIMINARY ISSUE	AB	BK	BK

CLIENT: Woodlinks Village

SITE CONTACT DETAILS	
NAME	BEC ASHBY
COMPANY	VILLAGE BUILDING CO
PHONE	-
MOBILE	0421 078 630
EMAIL	-

ALIGNMENTS	
ENERGEX OH	0.7 FR KI
ENERGEX UG	0-0.91
TELSTRA	0.91-1.3
GAS	3.41-3.81
HP GAS	3.41-3.81
WATER	2.21-2.81
STORMWATER	IN ROAD
SEWERAGE	1.3-2.21

PROJECT / SUB PROJECT NO.	S2602364
PARENT PROJECT NO.	-
WORK REQUEST NO.	-
PLANNER & PHONE	SUBDIVISIONS
LOTS	282 - 307, 5002 & 5007
CANCELLING LOTS	5007 ON SP332780
LOCAL AUTHORITY	IPSWICH CITY COUNCIL
PEGGED?	ON REQUEST

ECAAS ISO 9001 CERTIFIED QUALITY MANAGEMENT

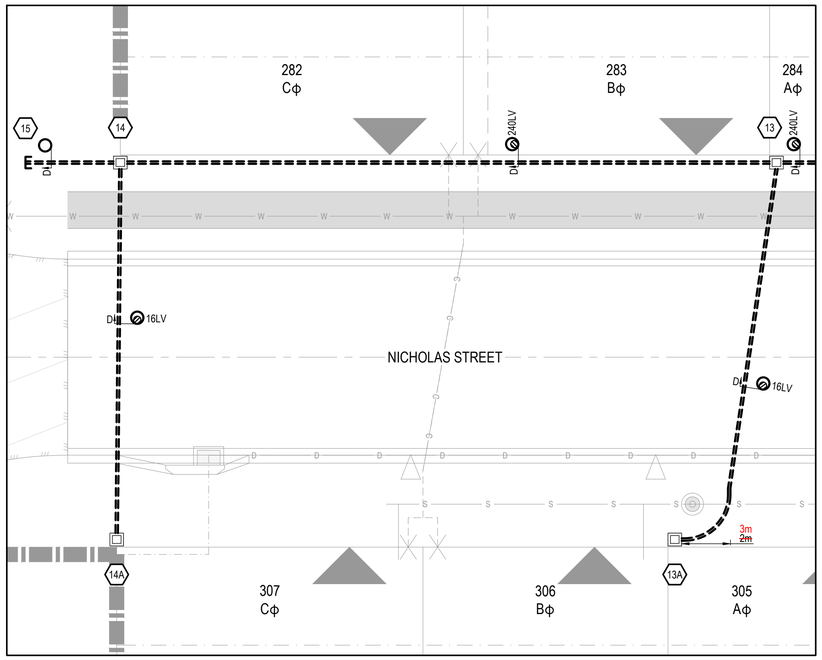
ampflo
ABN 28 111 423 842
Electrical and Telecommunications Consultants
Phone : (07) 3372 9280
Email : projects@ampflo.com.au
Website : ampflo.com.au

CERTIFICATION:
APPROVED: Brad Kunde
RPEQ No: 16286
DATE: 1/03/2023
CHECKED: B.KUNDE
DESIGNER: A.BUI
ISSUE DATE: 01.03.23

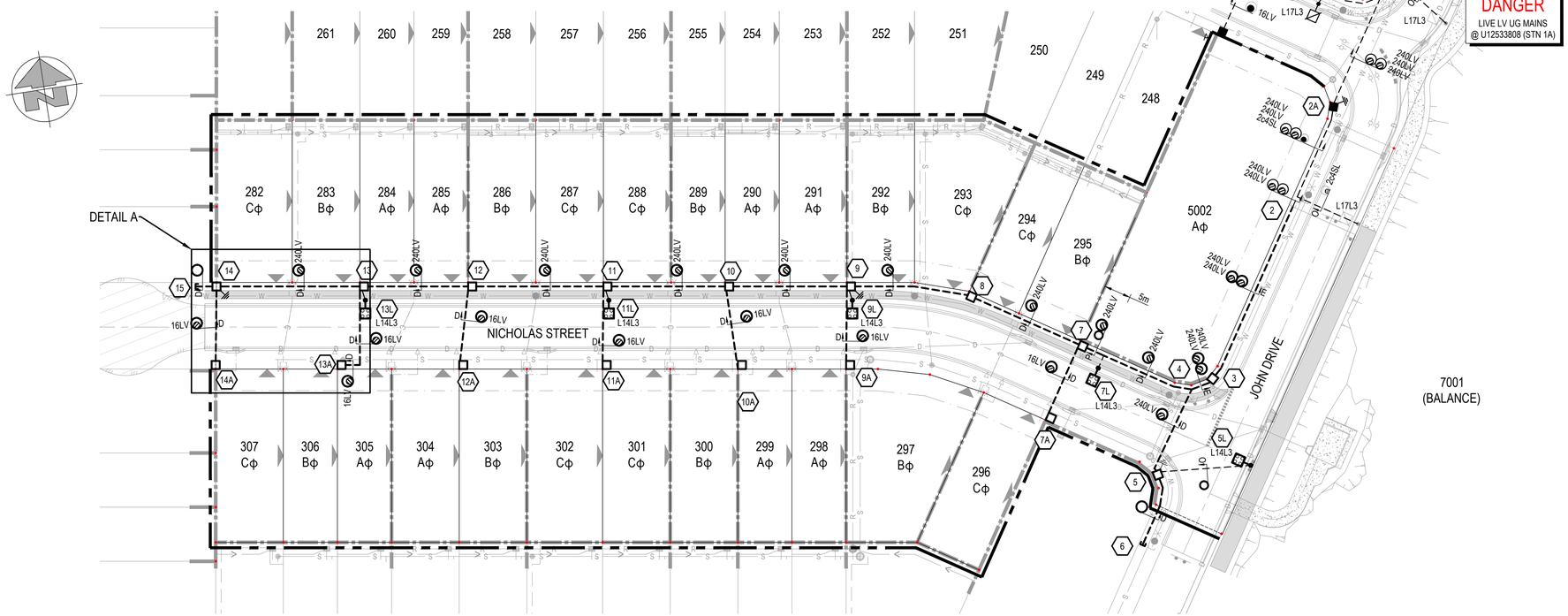
PROJECT
28 LOT RESIDENTIAL SUBDIVISION
WOODLINKS VILLAGE STAGE 11
WOODLINKS STAGING PLAN,
ZERO LOT DETAIL, RATE 3 TRENCH DETAIL,
MATERIAL SUMMARY, LEGEND & NOTES

DRAWING: A222116
PROJECT: 222116
SHEET 1 OF 3
ISSUE: D

FILE: P:\222116 - 7001 COOLINGWOOD DR COOLINGWOOD PARK - WOODLINKS - STAGE 11\01 WORKING\A222116D
PLOT: 1/03/2023 2:12:31 PM



PILLAR CROSSING DETAIL 'A'
SCALE 1:125



10 0 10 20 30 40 50 METRES
SCALE 1:500 (BEFORE REDUCTION)

AS CONSTRUCTED
Garry Edwards Date: 17/07/23
INZ ELECTRICAL SERVICES PTY LTD
97 ZILLMERE ROAD
BOONDALL 4034 QLD
PH 3865 2122 FAX 3865 4475

REV	DATE	DETAILS	DRAWN	CHECKED	APPRVD
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CLIENT
Woodlinks Village

SITE CONTACT DETAILS	
NAME	
BEC ASHBY	
COMPANY	
VILLAGE BUILDING CO	
PHONE	-
MOBILE	0421 078 630
EMAIL	-

ALIGNMENTS	
ENERGEX OH	0.7 FR KI
ENERGEX UG	0-0.91
TELSTRA	0.91-1.3
GAS	3.41-3.81
HP GAS	3.41-3.81
WATER	2.21-2.81
STORMWATER	IN ROAD
SEWERAGE	1.3-2.21

PROJECT / SUB PROJECT NO.	S2602364
PARENT PROJECT NO.	-
WORK REQUEST NO.	-
PLANNER & PHONE	SUBDIVISIONS
LOTS	282 - 307, 5002 & 5007
CANCELLING LOTS	5007 ON SP332780
LOCAL AUTHORITY	IPSWICH CITY COUNCIL
PEGGED?	ON REQUEST

ECAAS ISO 9001 CERTIFIED QUALITY MANAGEMENT

ampflo
ABN 28 111 423 842
Electrical and Telecommunications Consultants
Phone : (07) 3372 9280
Email : projects@ampflo.com.au
Website : ampflo.com.au

CERTIFICATION:
APPROVED: Brad Kunde
RPEQ No: 16286
DATE: 1/03/2023
CHECKED: B.KUNDE
DESIGNER: A.BUI
ISSUE DATE: 01.03.23

PROJECT
28 LOT RESIDENTIAL SUBDIVISION
WOODLINKS VILLAGE STAGE 11
ELECTRICAL RETICULATION PLAN
& PILLAR DETAILS

DRAWING: A222116
ISSUE: D
PROJECT: 222116
SHEET 2 OF 3

PLOT: 1/03/2023 2:12:36 PM
FILE: P:\222116 - 7001 COLLINGWOOD DR COLLINGWOOD PARK - WOODLINKS - STAGE 11\01 WORKING\A222116D

URD CONDUIT SCHEDULE - FOOTPATHS - BY ELECTRICAL CONTRACTOR

LOCATION	STATIONS FROM	TO	CONDUIT LENGTH (m) 50mm HD	No.	100mm LD	No.	125mm LD	No.	EQL 100mm COMMS MD	X-SECTION (m) PVC CABLE PROTECTION (m)	EXCAV /TAPE	TRENCH DETAIL	DRAW WIRE	KERB MARKERS	REMARKS
JOHN DRIVE	1	1A													EXISTING BANK OF CONDUITS
	1A	2A													EXISTING BANK OF CONDUITS
	2	3			36	2					36	E	76		JOIN TO EXISTING AT STN 2
	2A	2													EXISTING CONDUITS
NICHOLAS STREET	7	8			22	1					22	D	24		
	8	9			22	1					22	D	24		
	9	10			22	1					22	D	24		
	10	11			23	1					23	D	25		
	11	12			25	1					25	D	27		
	12	13			20	1					20	D	22		
	13	14			27	1					27	D	29		
	14	15			5	1					5	D	7		CAP CONDUIT
TOTAL					238m						202m		258m		

URD CONDUIT SCHEDULE - ROADWAYS - BY CIVIL CONTRACTOR

LOCATION	STATIONS FROM	TO	CONDUIT LENGTH (m) 50mm HD	No.	100mm LD	No.	125mm LD	No.	EQL 100mm COMMS MD	X-SECTION (m) PVC CABLE PROTECTION (m)	EXCAV /TAPE	TRENCH DETAIL	DRAW WIRE	KERB MARKERS	REMARKS
JOHN DRIVE	3	4			5	2					5	E	14	2	RETAINING WALL
	4	5			18	1				18	18	D	20	2	
	4	7			23	1					23	D	25	2	RETAINING WALL
	5	6			15	1					15	D	17	2	RETAINING WALL & CAP CONDUIT END
NICHOLAS STREET	7	7A			17	1				17	17	D	19	2	
	9	9A			15	1				15	15	D	17	2	
	10	10A			16	1				16	16	D	18	2	
	11	11A			15	1				15	15	D	17	2	
	12	12A			15	1				15	15	D	17	2	
	13	13A			18	1				18	18	D	20	2	
	14	14A			16	1				16	16	D	18	2	
TOTAL					178m					130m	173m		202m	22	

UNDERGROUND CABLE SCHEDULE

LOCATION	STATIONS FROM	TO	VOLTS	EX	REC	IN	CABLE SIZE/TYPE	CU CODE	CABLE LENGTH (m) NEW	REC	REMARKS
JOHN DRIVE	1	2A	LV			*	240mm² Al 4C XLPE/PVC	SCS820364	95		
	1	5	LV			*	240mm² Al 4C XLPE/PVC	SCS820364	170		
	1A	2A	LV		*		240mm² Al 4C XLPE/PVC	SCS820364			RECOVER EXISTING 240LV
	2A	3	LV			*	240mm² Al 4C XLPE/PVC	SCS820364	56		
	3	7	LV			*	240mm² Al 4C XLPE/PVC	SCS820364	34		
NICHOLAS STREET	7	7A	LV			*	16mm² Cu 4C XLPE/PVC	SCS820365	19		
	7	8	LV			*	240mm² Al 4C XLPE/PVC	SCS820364	24		
	8	9	LV			*	240mm² Al 4C XLPE/PVC	SCS820364	24		
	9	9A	LV			*	16mm² Cu 4C XLPE/PVC	SCS820365	17		
	9	10	LV			*	240mm² Al 4C XLPE/PVC	SCS820364	24		
	10	10A	LV			*	16mm² Cu 4C XLPE/PVC	SCS820365	18		
	10	11	LV			*	240mm² Al 4C XLPE/PVC	SCS820364	25		
	11	11A	LV			*	16mm² Cu 4C XLPE/PVC	SCS820365	17		
	11	12	LV			*	240mm² Al 4C XLPE/PVC	SCS820364	27		
	12	12A	LV			*	16mm² Cu 4C XLPE/PVC	SCS820365	17		
	12	13	LV			*	240mm² Al 4C XLPE/PVC	SCS820364	22		
	13	13A	LV			*	16mm² Cu 4C XLPE/PVC	SCS820365	20		
	13	14	LV			*	240mm² Al 4C XLPE/PVC	SCS820364	29		
	14	14A	LV			*	16mm² Cu 4C XLPE/PVC	SCS820365	18		
TOTALS							240mm² Al 4C XLPE/PVC	SCS820364	530		
							16mm² Cu 4C XLPE/PVC	SCS820365	126		

EQUIPMENT SCHEDULE

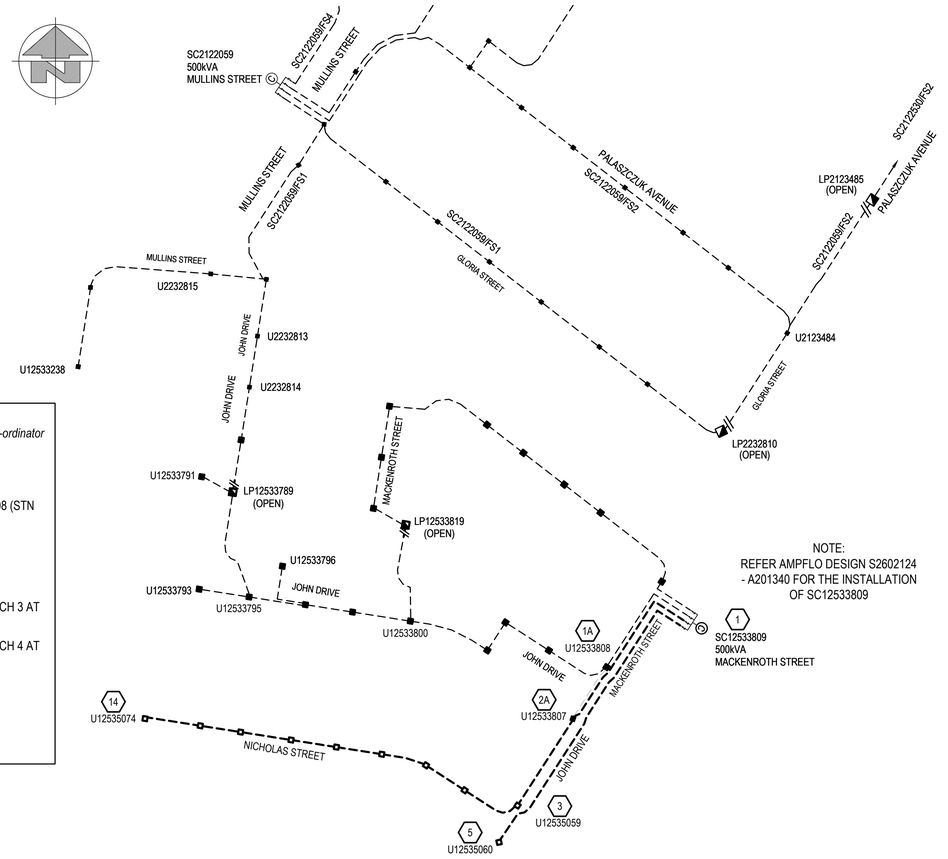
LOCATION	STN No.	SITE I.D.	EX	REC	IN	SIZE AND DESCRIPTION	COMP ID	CU CODE	QTY	REMARKS
JOHN DRIVE	1	SC12533809	*			EXISTING TRANSFORMER TO REMAIN				
					*	LV TERMINATION		LVPT4C240	2	
					*	315A LV FUSE LINK FOR LV BOARD		DSLVF31	2	
	1A	U12533808	*			3 WAY PILLAR				CONVERT TO 2 WAY
	2A	U12533807	*			1 WAY PILLAR				CONVERT TO 2 WAY
					*	240mm 4 CORE CABLE LV LUG SET		LVSPL240	2	1x240LV
	3	U12535059			*	2 WAY PILLAR	PI1	LVSP4-6	1	2x240LV
	5	U12535060			*	1 WAY PILLAR + SL	PI1	LVSP2-6SL	1	1x240LV, 1x4SL
					*	PILLAR MEN EARTHING		LV4CMEN	1	
NICHOLAS STREET	7	U12535061			*	2 WAY PILLAR + SL	PI1	LVSP4-6SL	1	2x240LV, 1x16LV, 1x4SL
	7A	U12535062			*	CROSS-ROAD PILLAR	PI1	LVSP12-6	1	1x16LV
	8	U12535063			*	2 WAY PILLAR	PI1	LVSP4-6	1	2x240LV
	9	U12535064			*	2 WAY PILLAR + SL	PI1	LVSP4-6SL	1	2x240LV, 1x16LV, 1x4SL
					*	PILLAR MEN EARTHING		LV4CMEN	1	
	10	U12535066			*	2 WAY PILLAR	PI1	LVSP4-6	1	2x240LV, 1x16LV
	10A	U12535067			*	CROSS-ROAD PILLAR	PI1	LVSP12-6	1	1x16LV
	11	U12535068			*	2 WAY PILLAR + SL	PI1	LVSP4-6SL	1	2x240LV, 1x16LV, 1x4SL
	11A	U12535069			*	CROSS-ROAD PILLAR	PI1	LVSP12-6	1	1x16LV
	12	U12535070			*	2 WAY PILLAR	PI1	LVSP4-6	1	2x240LV, 1x16LV
	12A	U12535071			*	CROSS-ROAD PILLAR	PI1	LVSP12-6	1	1x16LV
	13	U12535072			*	2 WAY PILLAR + SL	PI1	LVSP4-6SL	1	2x240LV, 1x16LV, 1x4SL
	13A	U12535073			*	CROSS-ROAD PILLAR	PI1	LVSP12-6	1	1x16LV
	14	U12535074			*	1 WAY PILLAR + SL	PI1	LVSP2-6SL	1	1x240LV, 1x16LV, 1x4SL
					*	PILLAR MEN EARTHING		LV4CMEN	1	
	14A	U12535075			*	CROSS-ROAD PILLAR	PI1	LVSP12-6	1	1x16LV
	9A	U12535065				CROSS-ROAD PILLAR	PI1	LVSP12-6	1	1x16LV

SWITCHING & COMMISSIONING PLAN - LV

(subject to site conditions, amendments by switching co-ordinator and approval by LV outage co-ordinator)

SWITCHING

1. BREAK BRIDGES AT U12533808 (STN 1A)
2. RECOVER EXISTING 240LV BETWEEN U12533808 (STN 1A) AND U12533807 (STN 2A)
3. INSTALL LV NETWORK AS PER PLANS
4. OPEN FUSE SWITCH 3 AT SC12533809
5. OPEN FUSE SWITCH 4 AT SC12533809
6. MAKE NEW 240LV CONNECTION TO FUSE SWITCH 3 AT SC12533809 FROM U12533807 (STN 2A)
7. MAKE NEW 240LV CONNECTION TO FUSE SWITCH 4 AT SC12533809 FROM U12535060 (STN 5)
8. CLOSE FUSE SWITCH 4 AT SC12533809
9. CLOSE FUSE SWITCH 3 AT SC12533809
10. TEST AND COMMISSION
11. PERFORM POST COMMISSIONING CHECKS



NOTE:
REFER AMPFLO DESIGN S2602124 - A201340 FOR THE INSTALLATION OF SC12533809

EXISTING & PROPOSED LV SCHEMATIC DIAGRAM

SCALE 1:1500

ALL NEW LV CABLES TO BE 4c 240mm Al XLPE UNO

AT SC12533809

CCT No.	LABEL SIZE	LABEL COLOUR	LETTER SIZE	LABEL INFORMATION
TFMR ISOLATOR	80x35	WB	6mm	TRANSFORMER ISOLATOR
1	80x35	WB	5mm	EXISTING LABEL TO REMAIN
2	80x35	WB	5mm	EXISTING LABEL TO REMAIN
3	80x35	WB	5mm	LV CABLE TO JOHN DRIVE U12533807 DIRECT / THEN NICHOLAS STREET U12535074 AND SERVICES
4	80x35	WB	5mm	LV CABLE TO JOHN DRIVE U12535060 DIRECT

AS CONSTRUCTED
Garry Edwards Date: 17/07/23
INZ ELECTRICAL SERVICES PTY LTD
97 ZILLMERE ROAD
BOONDALL 4034 QLD
PH 3865 2122 FAX 3865 4475

REV	DATE	DETAILS	DRAWN	CHECKED	APPRVD
D	01.03.23	ISSUED FOR CONSTRUCTION	AB	BK	BK
C	27.02.23	REVISED CIVIL (FH) & MOVE PILLAR STN 3	AB	BK	BK
B	15.02.23	ISSUED FOR APPROVAL	AB	BK	BK
A	15.02.23	PRELIMINARY ISSUE	AB	BK	BK

CLIENT: Woodlinks Village

SITE CONTACT DETAILS		ALIGNMENTS		PROJECT / SUB PROJECT NO.	S2602364
NAME	BEC ASHBY	ENERGEX OH	0.7 FR KI	PARENT PROJECT NO.	-
COMPANY	VILLAGE BUILDING CO	ENERGEX UG	0-0.91	WORK REQUEST NO.	-
PHONE	-	TELSTRA	0.91-1.3	PLANNER & PHONE	SUBDIVISIONS
MOBILE	0421 078 630	GAS	3.41-3.81	LOTS	282 - 307, 5002 & 5007
EMAIL	-	HP GAS	3.41-3.81	CANCELLING LOTS	5007 ON SP332780
		WATER	2.21-2.81	LOCAL AUTHORITY	IPSWICH CITY COUNCIL
		STORMWATER	IN ROAD	PEGGED?	ON REQUEST
		SEWERAGE	1.3-2.21		

ECAAS ISO 9001 CERTIFIED QUALITY MANAGEMENT

ampflo
ABN 28 111 423 842
Electrical and Telecommunications Consultants
Phone : (07) 3372 9280
Email : projects@ampflo.com.au
Website : ampflo.com.au

CERTIFICATION:
APPROVED: Brad Kunde
RPEQ No: 16286
DATE: 1/03/2023
CHECKED: B.KUNDE
DESIGNER: A.BUI
ISSUE DATE: 01.03.23

PROJECT
28 LOT RESIDENTIAL SUBDIVISION
WOODLINKS VILLAGE STAGE 11
SCHEDULES,
LV SCHEMATIC, LV PMT LABEL,
& COMMISSIONING PLAN

DRAWING: A222116
PROJECT: 222116
SHEET 3 OF 3
ISSUE: D

SCALE 1:500 (BEFORE REDUCTION)

STREETLIGHTING CERTIFICATION

This lighting design is certified to comply generally with the nominated categories of AS/NZS 1158.1.1:2022 (V Category) and / or AS/NZS 1158.3.1:2020 for (P Category), and AS/NZS 4282:2019 for luminaires supplied on the following road within this design:

JOHN DRIVE	PR5
NICHOLAS STREET	PR5

With the following exceptions:

NIL.

Maintenance Factor:

This lighting design uses the following maintenance factor(s):
Maintenance Factor Calculated : 0.80

These maintenance factor(s) are based on the following nominal maintenance regime:

- Lamp replacement (for non-LED luminaires) at 36 month intervals.
- Cleaning, inspection and maintenance of all luminaires at 36 month intervals
- Service availability maintained at not less than 95%.
- Vegetation kept clear of luminaires.

If the asset owner elects not to adopt this maintenance regime, they shall develop an inspection and maintenance regime such that the overall lighting installation operates in accordance with this design.

CERTIFICATE OF COMPLIANCE

Design Documentation in accordance with the requirements of : Appendix C

Applicable Standard : AS/NZS 1158.3.1:2020 Maintenance Factor: 0.80

Calculation Software : PERFECT LITE v5.06

Lighting Category

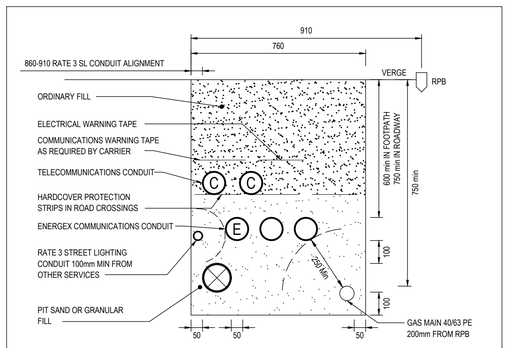
Road Name(s)	JOHN DRIVE & NICHOLAS STREET
Nominated Category	PR5
Road Surface Reflection	-
Road Reserve/ Path Width	AS SHOWN ON PLAN
Mounting Height	5.1m
Overhang/Offset Distance	N/A
Lighting Arrangement	SINGLE
Pole Setback	800 (STN 5L) & 950 IOK
Upcast Angle	0°

Luminaire Details

Lamp Type / Wattage	LED 14W
Luminaire Identification	AVENUE II 4K 14W VW
	DISTRIBUTED BY SCHREDER/SYLVANIA
Lamp Flux (lumens)	1969
I-table Identifier	AVENUE II 4K 14W V2 210729PH.CIE
Lighting Tariff	Rate 2
Power Factor	HPF (≥ 0.9)
Start/run Currents	0.05A / 0.05A
Ip Rating	IP66

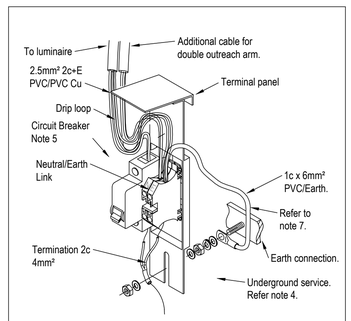
Spacing Calculations

Average Horizontal Illuminance	($\bar{E}_h$)	≥ 0.85 lux
Min Point Horizontal Illuminance	($\bar{E}_{Ph}$)	≥ 0.14 lux
Illuminance Uniformity	(U_{E2})	≤ 10
Min Point Vertical Illuminance	($\bar{E}_{Pv}$)	N/A
Upward Waste Light Ratio (UWLR) %		≤1.0% (calculated 0%)
Road Reserve/ Footpath Design Width (m)		Maximum Spacing (m)
13.45m		52.7m
16.0m		54.8m



TYPICAL ENERGEX TRENCH SECTION WITH RATE 3 STREET LIGHTING CONDUIT

NTS



MOUNTING PLATE DETAIL

(NTS)

TARIFF 3 LED LIGHTING INFORMATION

DESIGN NOTES

SOFTWARE USED - PERFECT LITE - TREVOR CASWELL SOFTWARE.
MAINTENANCE FACTOR - 0.8
CLEANING CYCLE - 36 MONTHS.
MAXIMUM SERVICE LIFE - 50,000 HOURS.

PUBLIC LIGHTING NOTES

REFER TO IPSWICH CITY COUNCIL STANDARD DRAWINGS SL.01 TO SL.08 FOR STANDARD NOTES, INSTALLATION DETAILS AND LABELLING REQUIREMENTS.

CONTRACTOR OBLIGATION

ALL LIGHT FITTINGS SHALL BE CONNECTED TO UNMETERED SUPPLY IN ACCORDANCE WITH ENERGEX TARIFF 3 REQUIREMENTS, AND AS NOTED ON THE DRAWINGS. THE CONTRACTOR SHALL PROVIDE THE DATE OF CONNECTION OF EACH STREET LIGHT ADJACENT TO EACH STATION IN THE STREET LIGHTING SCHEDULE.

THIS SCHEDULE WILL THEN BE USED BY THE CONTRACTOR FOR B2B SUBMISSION.

AS CONSTRUCTED
Garry Edwards Date: 04/08/23
INZ ELECTRICAL SERVICES PTY LTD
97 ZILLMERE ROAD
BOONDALL 4034 QLD
PH 3865 2122 FAX 3865 4475

FOR CONSTRUCTION
01/03/2023 2:12 PM

REV	DATE	DETAILS	DRAWN	CHECKED	APPRVD
D	01.03.23	ISSUED FOR CONSTRUCTION	AB	BK	BK
C	27.02.23	REVISED CIVIL (FH) & MOVE PILLAR STN 3	AB	BK	BK
B	15.02.23	ISSUED FOR APPROVAL	AB	BK	BK
A	15.02.23	PRELIMINARY ISSUE	AB	BK	BK

CLIENT: Woodlinks Village

SITE CONTACT DETAILS		ALIGNMENTS		PROJECT / SUB PROJECT NO.	S2602400
NAME		ENERGEX OH	0.7 FR KI		
BEC ASHBY		ENERGEX UG	0-0.91	PARENT PROJECT NO.	-
COMPANY		TELSTRA	0.91-1.3	WORK REQUEST NO.	-
VILLAGE BUILDING CO		GAS	3.41-3.81	PLANNER & PHONE	SUBDIVISIONS
PHONE	-	HP GAS	3.41-3.81	LOTS	282 - 307, 5002 & 5007
MOBILE	0421 078 630	WATER	2.21-2.81	CANCELLING LOTS	5007 ON SP332780
EMAIL	-	STORMWATER	IN ROAD	LOCAL AUTHORITY	IPSWICH CITY COUNCIL
		SEWERAGE	1.3-2.21	PEGGED?	ON REQUEST

ECAAS ISO 9001 CERTIFIED QUALITY MANAGEMENT

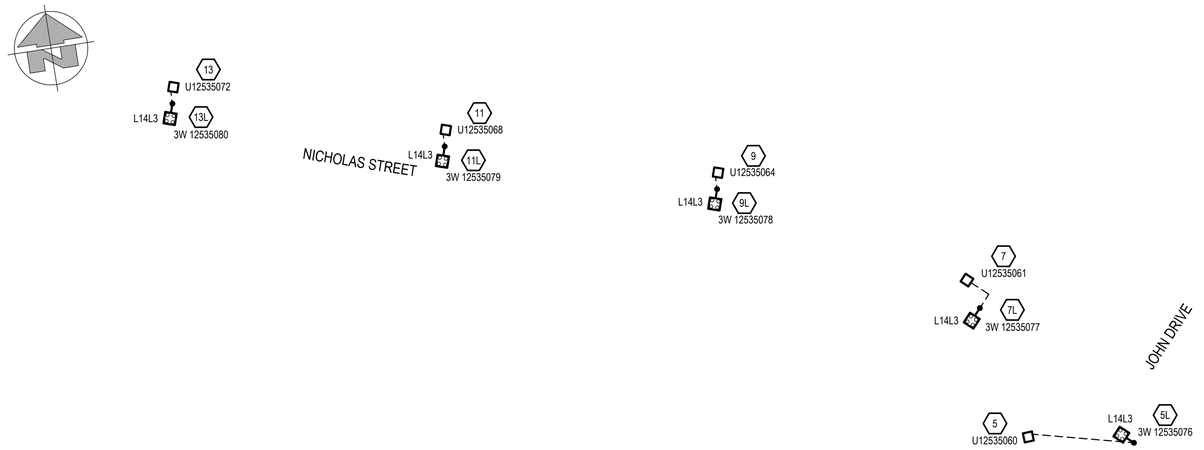
ampflo
ABN 28 111 423 842
Electrical and Telecommunications Consultants
Phone : (07) 3372 9280
Email : projects@ampflo.com.au
Website : ampflo.com.au

CERTIFICATION:
APPROVED: Brad Kunde
RPEQ No: 16286
DATE: 1/03/2023
CHECKED: B.KUNDE
DESIGNER: A.BUI
ISSUE DATE: 01.03.23

PROJECT
28 LOT RESIDENTIAL SUBDIVISION
WOODLINKS VILLAGE STAGE 11
STREETLIGHTING RETICULATION PLAN,
RELEVANT RATE 3 DETAILS & NOTES, STREETLIGHTING CERTIFICATION & CERTIFICATE OF COMPLIANCE

DRAWING: R222116
PROJECT: 222116 SHEET 1 OF 2
ISSUE: D

PLOT: 1/03/2023 2:12:46 PM FILE: P:\222116 - 7001 COLLINGWOOD DR COLLINGWOOD PARK - WOODLINKS - STAGE 11\01 WORKING\R222116D



PROPOSED SL SCHEMATIC DIAGRAM
SCALE N.T.S

RATE 3 MATERIALS SUMMARY

EQUIPMENT	
MODEL No.	QTY
LVC24PVPV	48
SLEDSY01375	5
SLNOS3CI	5
SUGSLPIL	5
TOTAL TRENCH LENGTH	15

RATE 3 CONDUIT SCHEDULE - FOOTPATHS - BY ELECTRICAL CONTRACTOR

LOCATION	STATIONS FROM	TO	CONDUIT LENGTH (m) 50mm HD	No.	PVC CABLE PROTECTION (m)	X-SECTION (m) EXCAV /TAPE	TRENCH DETAIL	DRAW WIRE	KERB MARKERS	REMARKS
NICHOLAS STREET	7	7L	8	1	3	3	P+O	10		
	9	9L	4	1	4	4	O	6		
	11	11L	4	1	4	4	O	6		
	13	13L	4	1	4	4	O	6		
TOTAL			20m		15m	15m		28m		

RATE 3 CONDUIT SCHEDULE - ROADWAYS - BY CIVIL CONTRACTOR

LOCATION	STATIONS FROM	TO	CONDUIT LENGTH (m) 50mm HD	No.	PVC CABLE PROTECTION (m)	X-SECTION (m) EXCAV /TAPE	TRENCH DETAIL	DRAW WIRE	KERB MARKERS	REMARKS
JOHN DRIVE	5	5L	18	1	18	18	O	20	2	
TOTAL			18m		18m	18m		20m	2	

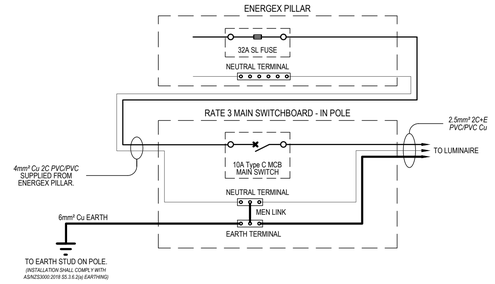
RATE 3 CABLE SCHEDULE

LOCATION	STATIONS FROM	To	EX	REC	In	CABLE SIZE/TYPE	CABLE LENGTH (m)	REMARKS
JOHN DRIVE	5	5L			*	4mm² Cu 2C PVC/PVC	20	
NICHOLAS STREET	7	7L			*	4mm² Cu 2C PVC/PVC	10	
	9	9L			*	4mm² Cu 2C PVC/PVC	6	
	11	11L			*	4mm² Cu 2C PVC/PVC	6	
	13	13L			*	4mm² Cu 2C PVC/PVC	6	
TOTALS						4mm² Cu 2C PVC/PVC	48	

RATE 3 - STREETLIGHT SCHEDULE

LOCATION	STN No.	POLE OR COMPONENTS SITE ID (POLE No.)	COMP ID	EX (m)	REC (m)	ER (m)	POLE CODE	ALIGN (mm)	NORTH	EAST	LANTERN COMP ID	EX	RECOVER LUMIN	RECOVER CUST	DATE DE-ENERG	ERECT LUMIN	ERECT CUST	DATE ENERG	LUMINAIRE CODE	OUTREACH BRACKET EX (m)	REC (m)	ER (m)	CU ID	UPCAST ANGLE	MOUNT HT (m)	REMARKS
JOHN DRIVE	5L	3W 12535076	P01			4.5m BPM	SLNOS3CI	800 IOK			SL1					L14L3	IPSW		SLEDSY01375					0°	5.1	BLACK NOSTALGIA
NICHOLAS STREET	7L	3W 12535077	P01			4.5m BPM	SLNOS3CI	950 IOK			SL1					L14L3	IPSW		SLEDSY01375					0°	5.1	BLACK NOSTALGIA
	9L	3W 12535078	P01			4.5m BPM	SLNOS3CI	950 IOK			SL1					L14L3	IPSW		SLEDSY01375					0°	5.1	BLACK NOSTALGIA
	11L	3W 12535079	P01			4.5m BPM	SLNOS3CI	950 IOK			SL1					L14L3	IPSW		SLEDSY01375					0°	5.1	BLACK NOSTALGIA
	13L	3W 12535080	P01			4.5m BPM	SLNOS3CI	950 IOK			SL1					L14L3	IPSW		SLEDSY01375					0°	5.1	BLACK NOSTALGIA

Electrical Contractor to supply and install a traffolyte label at the MCB in each minor road terminal panel as **"MAIN SWITCH"** .
Electrical Contractor is to to supply and install a traffolyte label **"WARNING RCD PROTECTION NOT INSTALLED"** near the terminal panel at each light.
All internal pole wiring shall contain min. 100mm drip & service loops to prevent ingress of moisture into cable joints and terminals.



RATE 3 SINGLE LIGHT SWITCHBOARD FROM PILLAR DIRECT - TYPICAL DETAIL

AS CONSTRUCTED
Garry Edwards Date: 04/08/23
INZ ELECTRICAL SERVICES PTY LTD
97 ZILLMERE ROAD
BOONDALL 4034 QLD
PH 3865 2122 FAX 3865 4475

REV	DATE	DETAILS	DRAWN	CHECKED	APPRVD
D	01.03.23	ISSUED FOR CONSTRUCTION	AB	BK	BK
C	27.02.23	REVISED CIVIL (FH) & MOVE PILLAR STN 3	AB	BK	BK
B	15.02.23	ISSUED FOR APPROVAL	AB	BK	BK
A	15.02.23	PRELIMINARY ISSUE	AB	BK	BK

CLIENT
Woodlinks Village

SITE CONTACT DETAILS		ALIGNMENTS	
NAME	BEC ASHBY	ENERGEX OH	0.7 FR KI
COMPANY	VILLAGE BUILDING CO	ENERGEX UG	0-0.91
PHONE	-	TELSTRA	0.91-1.3
MOBILE	0421 078 630	GAS	3.41-3.81
EMAIL	-	HP GAS	3.41-3.81
		WATER	2.21-2.81
		STORMWATER	IN ROAD
		SEWERAGE	1.3-2.21

PROJECT / SUB PROJECT NO.	S2602400
PARENT PROJECT NO.	-
WORK REQUEST NO.	-
PLANNER & PHONE	SUBDIVISIONS
LOTS	282 - 307, 5002 & 5007
CANCELLING LOTS	5007 ON SP332780
LOCAL AUTHORITY	IPSWICH CITY COUNCIL
PEGGED?	ON REQUEST

ECAAS ISO 9001 CERTIFIED QUALITY MANAGEMENT

ampflo
ABN 28 111 423 842
Electrical and Telecommunications Consultants
Phone : (07) 3372 9280
Email : projects@ampflo.com.au
Website : ampflo.com.au

CERTIFICATION:
APPROVED: Brad Kunde
RPEQ No: 16286
DATE: 1/03/2023
CHECKED: B.KUNDE
DESIGNER: A.BUI
ISSUE DATE: 01.03.23

PROJECT
28 LOT RESIDENTIAL SUBDIVISION
WOODLINKS VILLAGE STAGE 11
STREETLIGHTING RETICULATION PLAN,
RATE 3 SCHEDULES, MATERIAL SUMMARY,

DRAWING: R222116
PROJECT: 222116
SHEET 2 OF 2
ISSUE D

FILE: P:\222116_7001 COLLINGWOOD DR COLLINGWOOD PARK - WOODLINKS - STAGE 11\01 WORKING\222116D
PLOT: 1/03/2023 2:12:51 PM