PLANNING APPLICATION
WILTON PARK ROAD, WILTON, NSW, 2571
CIVIL WORKS PACKAGE

DRAWING LIST

DRAWING NO.	DRAWING TITLE
C014502.01-SK 100	DRAWING LIST AND LOCALITY PLAN
C014502.01-SK 300	BULK EARTHWORKS PLAN
C014502.01-SK 310	CUT/FILL PLAN
C014502.01-SK 350	BULK EARTHWORKS SECTIONS - SHEET 1
C014502.01-SK 351	BULK EARTHWORKS SECTIONS - SHEET 2
C014502.01-SK 400	STORMWATER DRAINAGE KEY PLAN
C014502.01-SK 410	PRE-DEVELOPMENT CATCHMENTS
C014502.01-SK 411	POST-DEVELOPMENT CATCHMENTS
C014502.01-SK 450	STORMWATER MANAGEMENT DETAILS - SHEET 1
C014502.01-SK 451	STORMWATER MANAGEMENT DETAILS - SHEET 2
C014502.01-SK 452	STORMWATER MANAGEMENT DETAILS - SHEET 3
C014502.01-SK 600	PRELIMINARY RETAINING WALLS

B

GENERAL NOTES:

1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCY SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
2. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT AND CURRENT STANDARDS AUSTRALIA CODES AND WITH THE BY-LAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITIES EXCEPT WHERE VARIED BY THE PROJECT SPECIFICATION.
3. ALL DIMENSIONS SHOWN SHALL BE VERIFIED BY THE BUILDER ON SITE. ENGINEER'S DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS. ENGINEER'S DRAWINGS ISSUED IN ANY ELECTRONIC FORMAT MUST NOT BE USED FOR DIMENSIONAL SETOUT. REFER TO THE ARCHITECT'S DRAWINGS FOR ALL DIMENSIONAL SETOUT INFORMATION.
4. DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED. TEMPORARY BRACING SHALL BE PROVIDED BY THE BUILDER TO KEEP THE WORKS AND EXCAVATIONS STABLE AT ALL TIMES.
5. UNLESS NOTED OTHERWISE ALL LEVELS ARE IN METRES AND ALL DIMENSIONS ARE IN MILLIMETRES.
6. ALL WORKS SHALL BE UNDERTAKEN IN ACCORDANCE WITH ACCEPTABLE SAFETY STANDARDS & APPROPRIATE SAFETY SIGNS SHALL BE INSTALLED AT ALL TIMES DURING THE PROGRESS OF THE JOB.

ELECTRONIC INFORMATION NOTES:

1. THE ISSUED DRAWINGS IN HARD COPY OR PDF FORMAT TAKE PRECEDENCE OVER ANY ELECTRONICALLY ISSUED INFORMATION, LAYOUTS OR DESIGN MODELS.
2. THE CONTRACTOR'S DIRECT AMENDMENT OR MANIPULATION OF THE DATA OR INFORMATION THAT MIGHT BE CONTAINED WITHIN AN ENGINEER-SUPPLIED DIGITAL TERRAIN MODEL AND ITS SUBSEQUENT USE TO UNDERTAKE THE WORKS WILL BE SOLELY AT THE DISCRETION OF AND THE RISK OF THE CONTRACTOR.
3. THE CONTRACTOR IS REQUIRED TO HIGHLIGHT ANY DISCREPANCIES BETWEEN THE DIGITAL TERRAIN MODEL AND INFORMATION PROVIDED IN THE CONTRACT AND/OR DRAWINGS AND IS REQUIRED TO SEEK CLARIFICATION FROM THE SUPERINTENDENT.
4. THE ENGINEER WILL NOT BE LIABLE OR RESPONSIBLE FOR THE POSSIBLE ON-GOING NEED TO UPDATE THE DIGITAL TERRAIN MODEL, SHOULD THERE BE ANY AMENDMENTS OR CHANGES TO THE DRAWINGS OR CONTRACT INITIATED BY THE CONTRACTOR.



SITE LOCATION PLAN
NTS

FOR PLANNING APPLICATION

AMENDMENTS	DATE	ISSUE
ISSUED FOR PLANNING APPLICATION	23.11.22	B
ISSUED FOR INFORMATION	02.11.22	A

ARCHITECT: watson young

CLIENT: ALTIS PROPERTY PARTNERS

PROJECT: ALTIS WILTON PARK ROAD
WILTON PARK ROAD, WILTON, NSW, 2571

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
PR	PR	NOV'22	LDV	A0	AS SHOWN	C014503.01-SK100

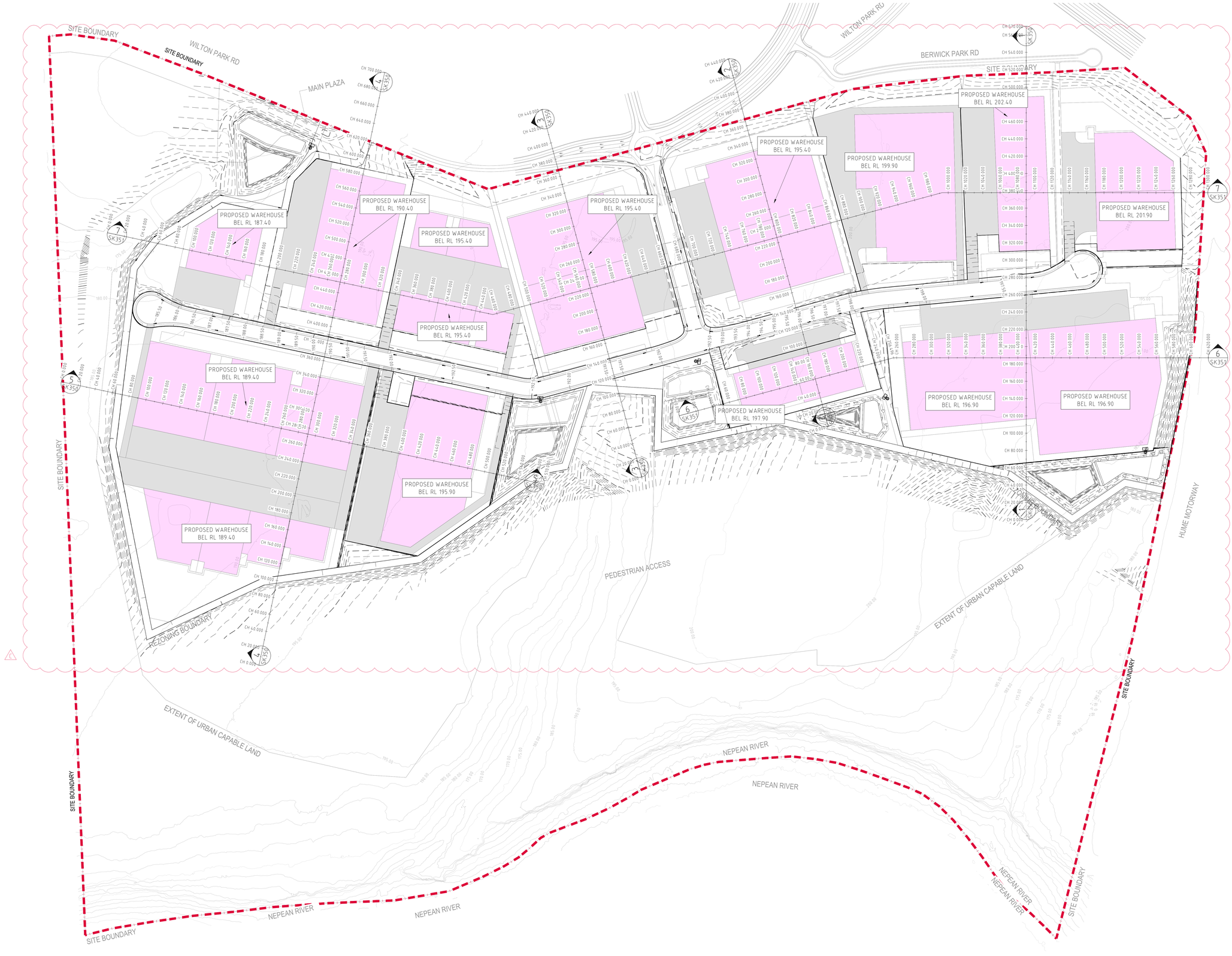
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COSTIN ROE CONSULTING | CIVIL & STRUCTURAL ENGINEERS

DRAWING TITLE: DRAWING LIST AND LOCALITY PLAN

DRAWING NO: C014503.01-SK100 ISSUE: B

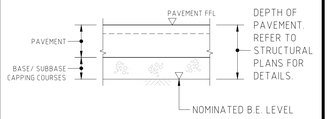


LEGEND:

LEVELS DATUM IS AHD.

EXISTING SITE LEVELS AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY ON POINT UTILITY LOCATING PTY LTD DATED 10/06/22.

- 55.00 – EXISTING CONTOUR (5.0m INTERVAL)
- 57.50 – B.E.L. CONTOUR (MAJOR 2.5m)
- 55.00 – B.E.L. CONTOUR (MINOR 0.50m)
- +58.00 – B.E.L. SPOT LEVEL



NOMINATED B.E.L. DETAIL
NTS

EARTHWORK ESTIMATES

SITE AREA	= 55.5Ha
TOPSOIL STRIP (200mm OVER 55.5 Ha)	=(~111,000m³) (TO BE EXPORTED/REUSED)
CUT	= ~595,000m³
FILL	= +706,000m³
ALLOWANCES	
DETAILED EXCAVATION (2,000m³/Ha)	= ~111,000m³
DIFFERENCE	= 0m³ (i.e. CUT OVER FILL)

NOTE:
VOLUMES BASED ON 200mm TOPSOIL STRIP OVER THE NOMINATED AREA.

EARTHWORKS VOLUMES ARE APPROXIMATE ONLY.

NO ALLOWANCE HAS BEEN MADE FOR DELETERIOUS MATERIAL, EROSION AND SEDIMENT CONTROL, BULKING OR COMPACTION OF FILLED SOILS, THE REMOVAL OF UNCONTROLLED OR CONTAMINATED MATERIAL OR ANY OTHER UNSPECIFIED EXCAVATION RELATED TO CONSTRUCTION ACTIVITIES. NO ALLOWANCE HAVE BEEN MADE FOR RETAINING WALLS.

DETAILED EXCAVATION ALLOWANCE IS APPROXIMATE ONLY AND ACCOUNTS FOR STORMWATER/SERVICES TRENCHING AND FOUNDATIONS. THE DETAILED EXCAVATION VOLUMES ARE TO BE CONFIRMED BY THE CONTRACTOR. REFER ANY CONCERNS TO ENGINEER.

NOTE:
THE CIVIL ENGINEERING DESIGN, INCLUDING STORMWATER LAYOUT, STORMWATER MANAGEMENT ELEMENTS, LEVELS AND EARTHWORKS, ARE CONCEPTUAL IN NATURE ONLY. THE INTENT OF THE PRESENTED ENGINEERING DESIGN PACKAGE IS TO DEMONSTRATE THAT A SUITABLE ENGINEERING SOLUTION CAN BE ACHIEVED ON THE SUBJECT LAND. ALL ELEMENTS ARE SUBJECT TO FURTHER DESIGNS AND ASSESSMENTS TO BE COMPLETED AS PART OF FUTURE DEVELOPMENT APPLICATIONS, OR OTHER DESIGN/ APPROVAL PHASES OF THE DEVELOPMENT

MASTERPLAN BULK EARTHWORKS PLAN
SCALE 1:1500

15m 0 15 30 45 60 75 90 105 120 135 150m
SCALE 1:1500 AT A0 SIZE SHEET

FOR PLANNING APPLICATION

AMENDMENTS	DATE	ISSUE
UPDATED ARCHITECTURAL LAYOUT	21.04.23	C
ISSUED FOR PLANNING APPLICATION, REVISED EARTHWORKS QUANTITIES	24.11.22	B
ISSUED FOR INFORMATION	02.11.22	A

ARCHITECT: watson young

CLIENT: ALTIS PROPERTY PARTNERS

PROJECT: ALTIS WILTON PARK ROAD
WILTON PARK ROAD, WILTON, NSW, 2571

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
PR	PR	NOV'22	LDV	A0	AS SHOWN	C014503.01-SK300

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CRC COSTIN ROE CONSULTING — CIVIL & STRUCTURAL ENGINEERS

DRAWING TITLE: BULK EARTHWORKS PLAN

DRAWING No: C014503.01-SK300 ISSUE: C

DEPTH RANGE

No.	FROM DEPTH	TO DEPTH	COLOUR	DEPTH RANGE VOLUME
1	-15.000	-10.000		164m³
2	-10.000	-5.000		18131m³
3	-5.000	0.000		632815m³
4	0.000	5.000		560077m³
5	5.000	10.000		83007m³
6	10.000	15.000		5809m³

SITE BOUNDARY
WILTON PARK RD
MAIN PLAZA
BERWICK PARK RD
HUME MOTORWAY
EXTENT OF URBAN CAPABLE LAND
NEPEAN RIVER
PROPOSED BEL RL 187.40
PROPOSED BEL RL 189.40
PROPOSED BEL RL 190.40
PROPOSED BEL RL 195.40
PROPOSED BEL RL 195.90
PROPOSED BEL RL 196.90
PROPOSED BEL RL 197.90
PROPOSED BEL RL 199.90
PROPOSED BEL RL 201.90
PROPOSED BEL RL 202.40

LEGEND:

LEVELS DATUM IS AHD.

EXISTING SITE LEVELS AND DETAILS BASED ON LIDAR INFORMATION OBTAINED FROM ELVIS (ELEVATION AND DEPTH - FOUNDATION SPATIAL DATA)

- 50.00 – EXISTING CONTOUR (1.0m INTERVAL)
- 55.00 – B.E.L. CONTOUR (MAJOR 5.0m)
- 51.00 – B.E.L. CONTOUR (MINOR 1.0m)
- PROPOSED BEL RL 83.00 – PROPOSED PAD EARTHWORKS LEVEL
- – PRECINCT BOUNDARY

NOTE:
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MASTERPLAN CUT/FILL PLAN
SCALE 1:1500

FOR PLANNING APPLICATION

15m 0 15 30 45 60 75 90 105 120 135 150m
SCALE 1:1500 AT A0 SIZE SHEET

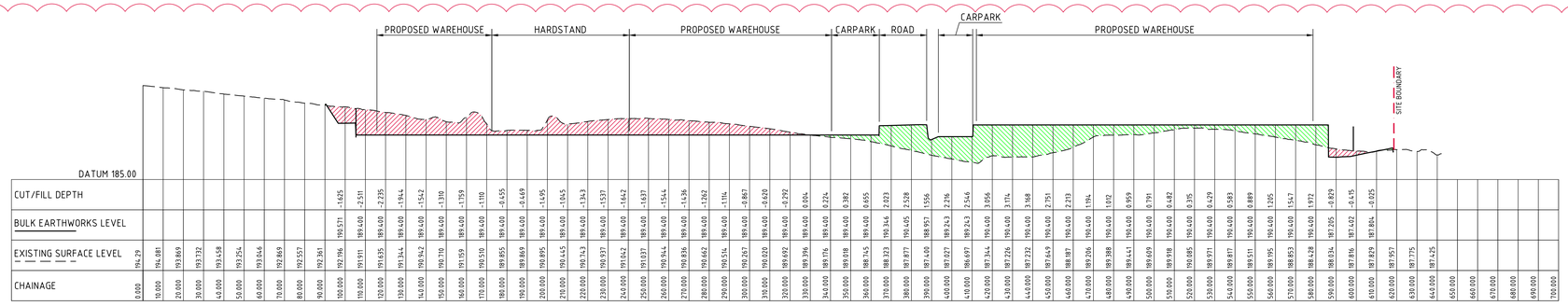
AMENDMENTS	DATE	ISSUE
UPDATED ARCHITECTURAL LAYOUT	21.04.23	C
UPDATED LEVELS ACCROSS SITE, ISSUED FOR PLANNING APPLICATION	24.11.22	B
ISSUED FOR INFORMATION	02.11.22	A

ARCHITECT: watson young
CLIENT: ALTIS PROPERTY PARTNERS
PROJECT: ALTIS WILTON PARK ROAD
WILTON PARK ROAD, WILTON, NSW, 2571

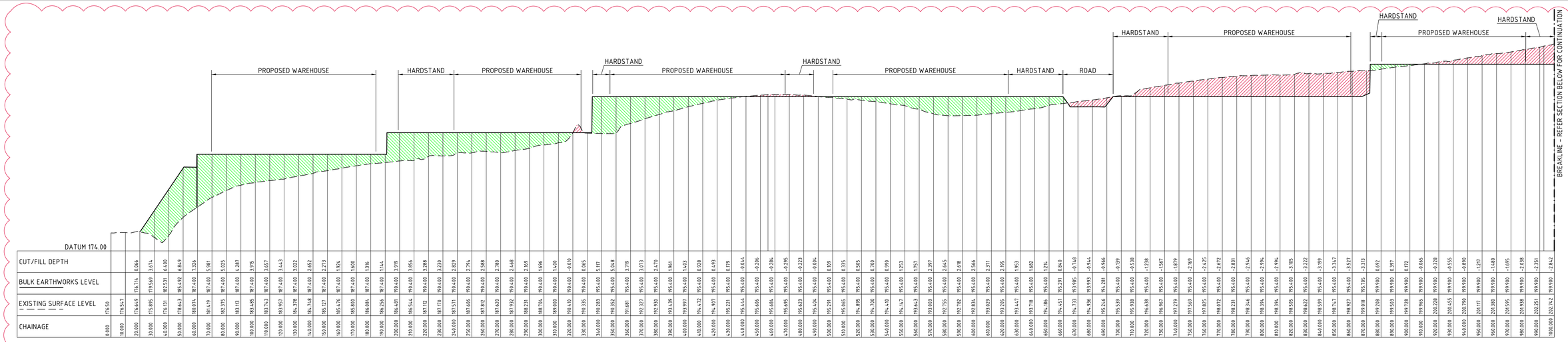
DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF
PR	PR	NOV'22	LDV	A0	AS SHOWN	C014503.01-SK310

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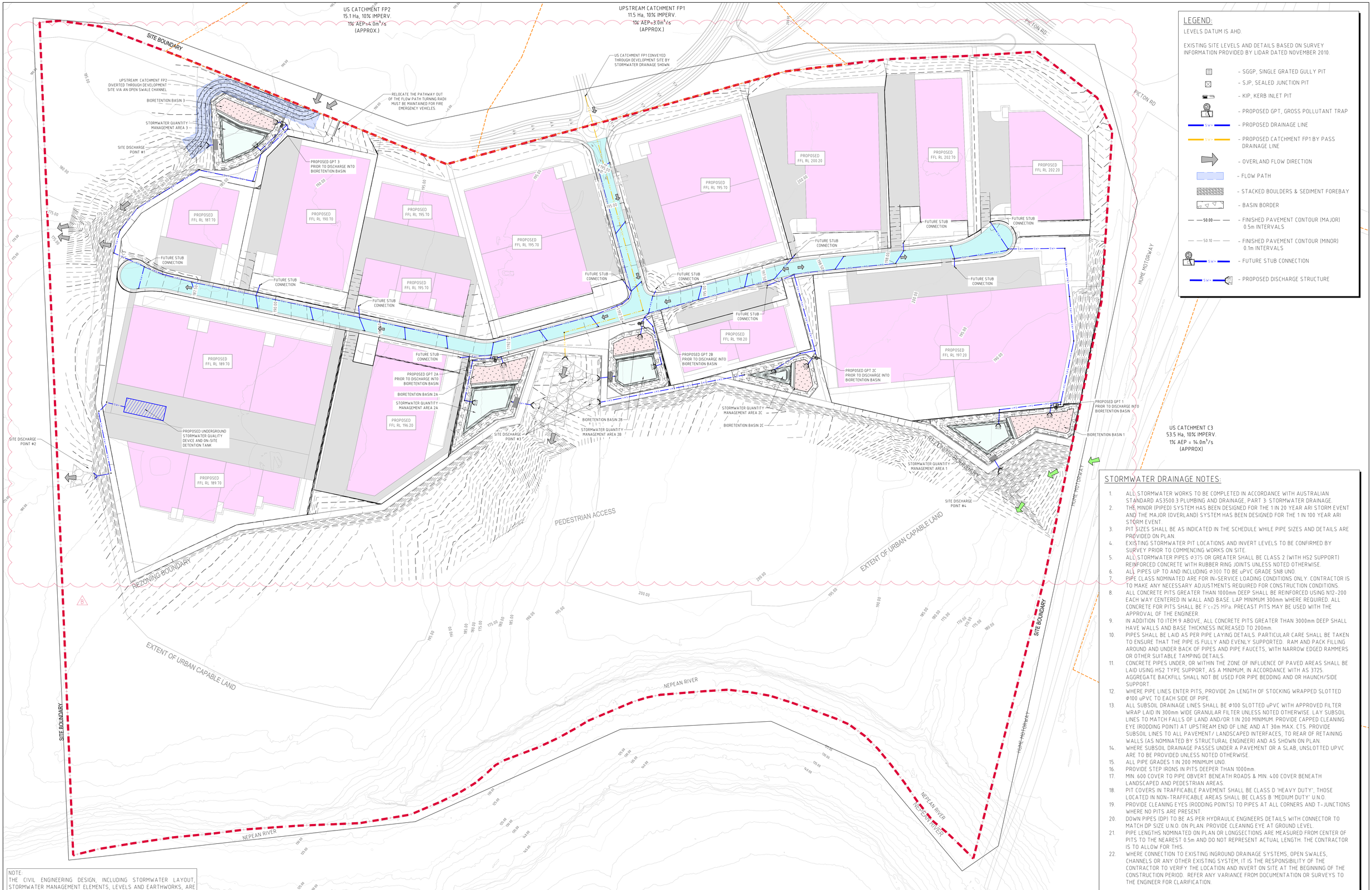
DRAWING TITLE: CUT/FILL PLAN
DRAWING NO: C014503.01-SK310
ISSUE: C


PROPOSED WAREHOUSE
HARDSTAND
PROPOSED WAREHOUSE
CARPARK
ROAD
CARPARK
PROPOSED WAREHOUSE
SITE BOUNDARY

| DATUM 185.00 | | |


PROPOSED WAREHOUSE
HARDSTAND
PROPOSED WAREHOUSE
HARDSTAND
PROPOSED WAREHOUSE
HARDSTAND
PROPOSED WAREHOUSE
HARDSTAND
ROAD
HARDSTAND
PROPOSED WAREHOUSE
HARDSTAND
PROPOSED WAREHOUSE
HARDSTAND
BREAKLINE - REFER SECTION BELOW FOR CONTINUATION
DATUM 174.00

| | | |



LEGEND:

LEVELS DATUM IS AHD.

EXISTING SITE LEVELS AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY LIDAR DATED NOVEMBER 2010.

- SGGP, SINGLE GRATED GULLY PIT
- SJP, SEALED JUNCTION PIT
- KIP, KERB INLET PIT
- PROPOSED GPT, GROSS POLLUTANT TRAP
- PROPOSED DRAINAGE LINE
- PROPOSED CATCHMENT FP1 BY PASS DRAINAGE LINE
- OVERLAND FLOW DIRECTION
- FLOW PATH
- STACKED BOULDERS & SEDIMENT FOREBAY
- BASIN BORDER
- 50.00 – FINISHED PAVEMENT CONTOUR (MAJOR) 0.5m INTERVALS
- 50.10 – FINISHED PAVEMENT CONTOUR (MINOR) 0.1m INTERVALS
- FUTURE STUB CONNECTION
- PROPOSED DISCHARGE STRUCTURE

STORMWATER DRAINAGE NOTES:

1. ALL STORMWATER WORKS TO BE COMPLETED IN ACCORDANCE WITH AUSTRALIAN STANDARD AS3500.3 PLUMBING AND DRAINAGE, PART 3: STORMWATER DRAINAGE
2. THE MINOR (PIPED) SYSTEM HAS BEEN DESIGNED FOR THE 1 IN 20 YEAR ARI STORM EVENT AND THE MAJOR (OVERLAND) SYSTEM HAS BEEN DESIGNED FOR THE 1 IN 100 YEAR ARI STORM EVENT.
3. PIT SIZES SHALL BE AS INDICATED IN THE SCHEDULE WHILE PIPE SIZES AND DETAILS ARE PROVIDED ON PLAN.
4. EXISTING STORMWATER PIT LOCATIONS AND INVERT LEVELS TO BE CONFIRMED BY SURVEY PRIOR TO COMMENCING WORKS ON SITE.
5. ALL STORMWATER PIPES Ø375 OR GREATER SHALL BE CLASS 2 (WITH HS2 SUPPORT) REINFORCED CONCRETE WITH RUBBER RING JOINTS UNLESS NOTED OTHERWISE.
6. ALL PIPES UP TO AND INCLUDING Ø300 TO BE uPVC GRADE SN8 UNO.
7. PIPE CLASS NOMINATED ARE FOR IN-SERVICE LOADING CONDITIONS ONLY. CONTRACTOR IS TO MAKE ANY NECESSARY ADJUSTMENTS REQUIRED FOR CONSTRUCTION CONDITIONS.
8. ALL CONCRETE PITS GREATER THAN 1000mm DEEP SHALL BE REINFORCED USING N12-200 EACH WAY CENTERED IN WALL AND BASE. LAP MINIMUM 300mm WHERE REQUIRED. ALL CONCRETE FOR PITS SHALL BE F'_c=25 MPa. PRECAST PITS MAY BE USED WITH THE APPROVAL OF THE ENGINEER.
9. IN ADDITION TO ITEM 9 ABOVE, ALL CONCRETE PITS GREATER THAN 3000mm DEEP SHALL HAVE WALLS AND BASE THICKNESS INCREASED TO 200mm.
10. PIPES SHALL BE LAID AS PER PIPE LAYING DETAILS. PARTICULAR CARE SHALL BE TAKEN TO ENSURE THAT THE PIPE IS FULLY AND EVENLY SUPPORTED. RAM AND PACK FILLING AROUND AND UNDER BACK OF PIPES AND PIPE FAUCETS, WITH NARROW EDGED RAMMERS OR OTHER SUITABLE TAMPING DETAILS.
11. CONCRETE PIPES UNDER, OR WITHIN THE ZONE OF INFLUENCE OF PAVED AREAS SHALL BE LAID USING HS2 TYPE SUPPORT, AS A MINIMUM, IN ACCORDANCE WITH AS 3725. AGGREGATE BACKFILL SHALL NOT BE USED FOR PIPE BEDDING AND OR HAUNCH/SIDE SUPPORT.
12. WHERE PIPE LINES ENTER PITS, PROVIDE 2m LENGTH OF STOCKING WRAPPED SLOTTED Ø100 uPVC TO EACH SIDE OF PIPE.
13. ALL SUBSOIL DRAINAGE LINES SHALL BE Ø100 SLOTTED uPVC WITH APPROVED FILTER WRAP LAID IN 300mm WIDE GRANULAR FILTER UNLESS NOTED OTHERWISE. LAY SUBSOIL LINES TO MATCH FALLS OF LAND AND/OR 1 IN 200 MINIMUM. PROVIDE CAPPED CLEANING EYE (RODDING POINT) AT UPSTREAM END OF LINE AND AT 30m MAX. CTS. PROVIDE SUBSOIL LINES TO ALL PAVEMENT/ LANDSCAPED INTERFACES, TO REAR OF RETAINING WALLS (AS NOMINATED BY STRUCTURAL ENGINEER) AND AS SHOWN ON PLAN.
14. WHERE SUBSOIL DRAINAGE PASSES UNDER A PAVEMENT OR A SLAB, UNSLOTTED UPVC ARE TO BE PROVIDED UNLESS NOTED OTHERWISE.
15. ALL PIPE GRADES 1 IN 200 MINIMUM UNO.
16. PROVIDE STEP IRONS IN PITS DEEPER THAN 1000mm.
17. MIN. 600 COVER TO PIPE OBVERT BENEATH ROADS & MIN. 400 COVER BENEATH LANDSCAPED AND PEDESTRIAN AREAS.
18. PIT COVERS IN TRAFFICABLE PAVEMENT SHALL BE CLASS D 'HEAVY DUTY', THOSE LOCATED IN NON-TRAFFICABLE AREAS SHALL BE CLASS B 'MEDIUM DUTY' U.N.O.
19. PROVIDE CLEANING EYES (RODDING POINTS) TO PIPES AT ALL CORNERS AND T-JUNCTIONS WHERE NO PITS ARE PRESENT.
20. DOWN PIPES (DP) TO BE AS PER HYDRAULIC ENGINEERS DETAILS WITH CONNECTOR TO MATCH DP SIZE U.N.O. ON PLAN. PROVIDE CLEANING EYE AT GROUND LEVEL.
21. PIPE LENGTHS NOMINATED ON PLAN OR LONGSECTIONS ARE MEASURED FROM CENTER OF PITS TO THE NEAREST 0.5m AND DO NOT REPRESENT ACTUAL LENGTH. THE CONTRACTOR IS TO ALLOW FOR THIS.
22. WHERE CONNECTION TO EXISTING INGROUND DRAINAGE SYSTEMS, OPEN SWALES, CHANNELS OR ANY OTHER EXISTING SYSTEM, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION AND INVERT ON SITE AT THE BEGINNING OF THE CONSTRUCTION PERIOD. REFER ANY VARIANCE FROM DOCUMENTATION OR SURVEYS TO THE ENGINEER FOR CLARIFICATION.

NOTE:
THE CIVIL ENGINEERING DESIGN, INCLUDING STORMWATER LAYOUT, STORMWATER MANAGEMENT ELEMENTS, LEVELS AND EARTHWORKS, ARE CONCEPTUAL IN NATURE ONLY. THE INTENT OF THE PRESENTED ENGINEERING DESIGN PACKAGE IS TO DEMONSTRATE THAT A SUITABLE ENGINEERING SOLUTION CAN BE ACHIEVED ON THE SUBJECT LAND. ALL ELEMENTS ARE SUBJECT TO FURTHER DESIGNS AND ASSESSMENTS TO BE COMPLETED AS PART OF FUTURE DEVELOPMENT APPLICATIONS, OR OTHER DESIGN/ APPROVAL PHASES OF THE DEVELOPMENT.

BULK EARTHWORKS PLAN
SCALE 1:1500

15m 0 15 30 45 60 75 90 105 120 135 150m
SCALE 1:1500 AT A0 SIZE SHEET

FOR PLANNING APPLICATION

AMENDMENTS	DATE	ISSUE
UPDATED ARCHITECTURAL LAYOUT	21.04.23	B
ISSUED FOR PLANNING APPLICATION	24.11.22	A

ARCHITECT: watson young

CLIENT: ALTIS PROPERTY PARTNERS

PROJECT: ALTIS WILTON PARK ROAD
WILTON PARK ROAD, WILTON, NSW, 2571

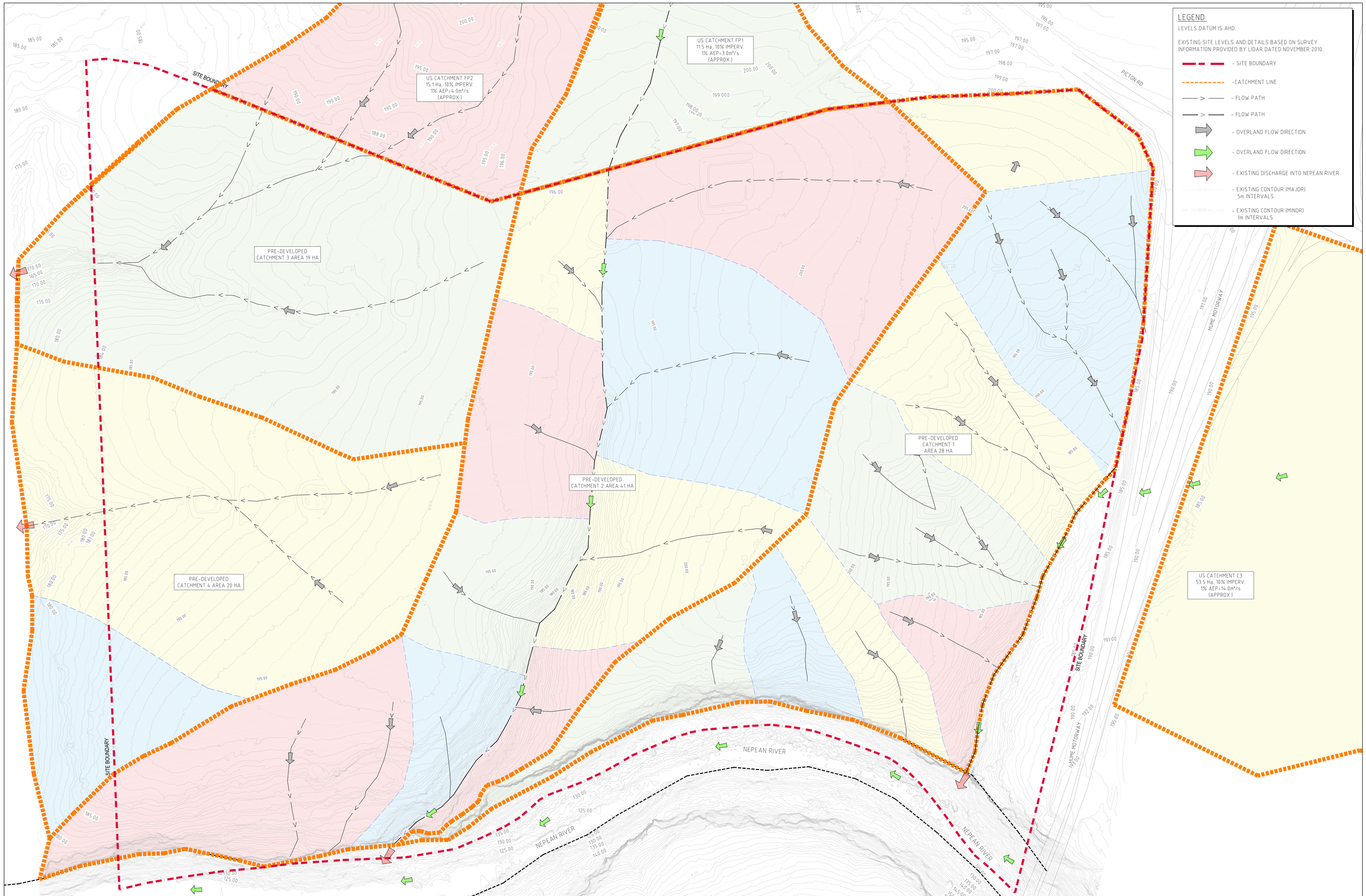
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COSTIN ROE CONSULTING
CIVIL & STRUCTURAL ENGINEERS

DRAWING TITLE: STORMWATER DRAINAGE KEY PLAN

DRAWING No: C014503.01-SK400 ISSUE: B



BULK EARTHWORKS PLAN
SCALE 1:1500

FOR PLANNING APPLICATION

15m 0 15 30 45 60 75 90 105 120 135 150m
SCALE 1:1500 AT A0 SIZE SHEET

AMENDMENTS	DATE	ISSUE
ISSUED FOR PLANNING APPLICATION	23.11.22	A

ARCHITECT: watson young

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PROJECT: ALTIS WILTON PARK ROAD
WILTON PARK ROAD, WILTON, NSW, 2571

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
PB	PB	NOV'22	LDV	A0	AS SHOWN	C014503.01-SK 410

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CRC COSTIN ROE CONSULTING
CIVIL & STRUCTURAL ENGINEERS

DRAWING TITLE: PRE-DEVELOPMENT CATCHMENTS

DRAWING NO: C014503.01-SK 410 ISSUE: A

SITE BOUNDARY
WILTON PARK RD
MAIN PLAZA
BERWICK PARK RD
WILTON PAL
PICTON RD
HUME MOTORWAY
PEDESTRIAN ACCESS
REZONING BOUNDARY
EXTENT OF URBAN CAPABLE LAND
NEPEAN RIVER

US CATCHMENT FP2
DIVERTED THROUGH DEVELOPMENT
SITE VIA AN OPEN SWALE CHANNEL

US CATCHMENT FP2
15.1 Ha, 10% IMPERV.
1% AEP=4.0m³/s
(APPROX.)

RELOCATE THE PATHWAY OUT OF THE FLOW PATH TURNING RADII MUST BE MAINTAINED FOR FIRE EMERGENCY VEHICLES.

US CATCHMENT FP1
11.5 Ha, 10% IMPERV.
1% AEP=3.0m³/s
(APPROX.)

US CATCHMENT FP1
TO BE CONVEYED THROUGH DEVELOPMENT SITE BY STORMWATER DRAINAGE SHOWN

PROPOSED DISCHARGE FROM CATCHMENT 3 INTO EXISTING DRAINAGE SWALE TO NEPEAN RIVER

PROPOSED FFL RL 187.70
PROPOSED FFL RL 190.70
PROPOSED FFL RL 195.70
PROPOSED FFL RL 195.70
PROPOSED FFL RL 195.70
PROPOSED FFL RL 198.20
PROPOSED FFL RL 200.20
PROPOSED FFL RL 202.70
PROPOSED FFL RL 202.20
PROPOSED FFL RL 197.20
PROPOSED FFL RL 189.70
PROPOSED FFL RL 189.70
PROPOSED FFL RL 196.20

POST DEVELOPMENT CATCHMENT 3 AREA= 8.75 Ha
POST DEVELOPMENT CATCHMENT 2A AREA = 9.70 Ha EXCL. BIORETENTION BASINS
POST DEVELOPMENT CATCHMENT 2B AREA = 6.70 Ha EXCL. BIORETENTION BASINS
POST DEVELOPMENT CATCHMENT 2C AREA = 4.80 Ha EXCL. BIORETENTION BASINS
POST DEVELOPMENT CATCHMENT 4, AREA = 8.23 Ha
POST DEVELOPMENT CATCHMENT 5 AREA = 55.80 Ha CATCHMENT REMAIN UNDEVELOPED

PIPE FOR UPSTREAM FLOW CONVEYANCE (1950mm) BYPASSES ALL ESTATE TREATMENT SYSTEMS

PROPOSED UNDERGROUND STORMWATER QUALITY STORAGE DEVISE

PROPOSED DISCHARGE FROM CATCHMENT 2A INTO EXISTING DRAINAGE SWALE TO NEPEAN RIVER
PROPOSED DISCHARGE FROM CATCHMENT 2B INTO EXISTING DRAINAGE SWALE TO NEPEAN RIVER
PROPOSED DISCHARGE FROM CATCHMENT 2C INTO EXISTING DRAINAGE SWALE TO NEPEAN RIVER
PROPOSED DISCHARGE FROM CATCHMENT 4 INTO EXISTING DRAINAGE SWALE TO NEPEAN RIVER
PROPOSED DISCHARGE FROM CATCHMENT 1 INTO EXISTING DRAINAGE SWALE TO NEPEAN RIVER

LEGEND:

LEVELS DATUM IS AHD.

EXISTING SITE LEVELS AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY LIDAR DATED NOVEMBER 2010.

- SITE BOUNDARY
- RIDGE LINE
- EXISTING DISCHARGE INTO NEPEAN RIVER
- OVERLAND FLOW DIRECTION
- EXISTING CONTOUR (MAJOR) 5m INTERVALS
- EXISTING CONTOUR (MINOR) 1m INTERVALS
- SGGP, SINGLE GRATED GULLY PIT
- SJP, SEALED JUNCTION PIT
- KIP, KERB INLET PIT
- PROPOSED GPT, GROSS POLLUTANT TRAP
- PROPOSED DRAINAGE LINE
- PROPOSED CATCHMENT FP1 BY PASS DRAINAGE LINE
- FLOW PATH
- STACKED BOULDERS & SEDIMENT FOREBAY
- BASIN BORDER
- FUTURE STUB CONNECTION
- PROPOSED DISCHARGE STRUCTURE

NOTE:
THE CIVIL ENGINEERING DESIGN, INCLUDING STORMWATER LAYOUT, STORMWATER MANAGEMENT ELEMENTS, LEVELS AND EARTHWORKS, ARE CONCEPTUAL IN NATURE ONLY. THE INTENT OF THE PRESENTED ENGINEERING DESIGN PACKAGE IS TO DEMONSTRATE THAT A SUITABLE ENGINEERING SOLUTION CAN BE ACHIEVED ON THE SUBJECT LAND. ALL ELEMENTS ARE SUBJECT TO FURTHER DESIGNS AND ASSESSMENTS TO BE COMPLETED AS PART OF FUTURE DEVELOPMENT APPLICATIONS, OR OTHER DESIGN/ APPROVAL PHASES OF THE DEVELOPMENT

BULK EARTHWORKS PLAN
SCALE 1:1500

FOR PLANNING APPLICATION

15m 0 15 30 45 60 75 90 105 120 135 150m
SCALE 1:1500 AT A0 SIZE SHEET

AMENDMENTS	DATE	ISSUE
UPDATED ARCHITECTURAL LAYOUT	21.04.23	B
ISSUED FOR PLANNING APPLICATION	24.11.22	A

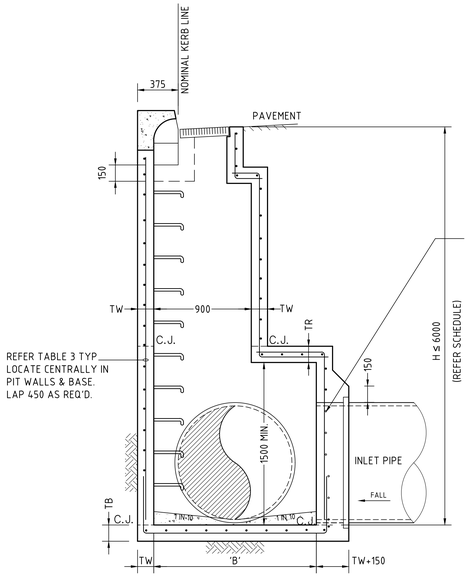
ARCHITECT: watson young
CLIENT: ALTIS PROPERTY PARTNERS
PROJECT: ALTIS WILTON PARK ROAD
WILTON PARK ROAD, WILTON, NSW, 2571

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
PR	PR	NOV '22	LDV	A0	AS SHOWN	C014503.01-SK 411

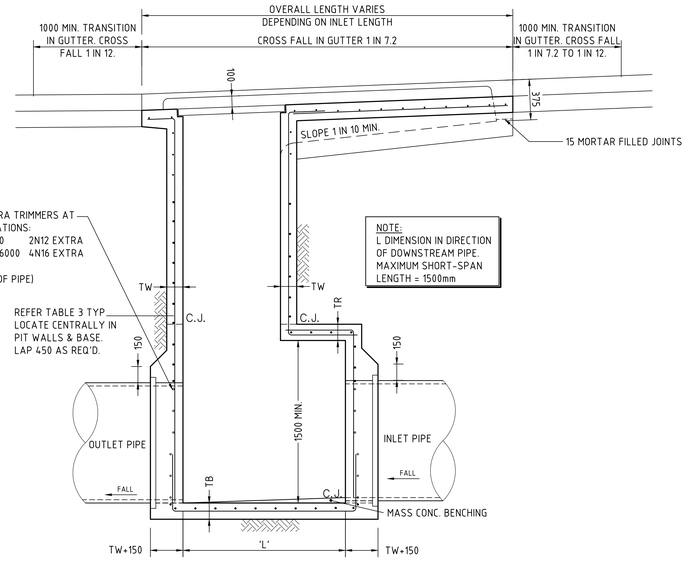
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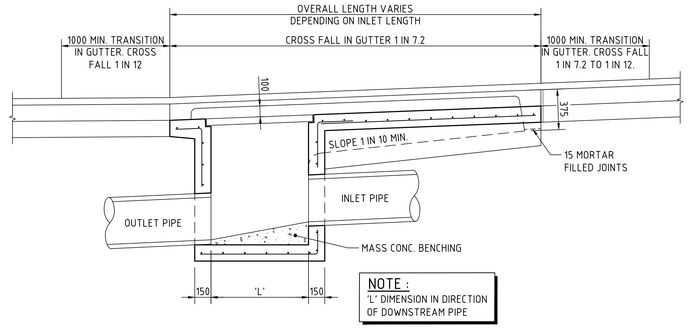
DRAWING TITLE: POST-DEVELOPMENT CATCHMENTS
DRAWING NO: C014503.01-SK 411
ISSUE: B



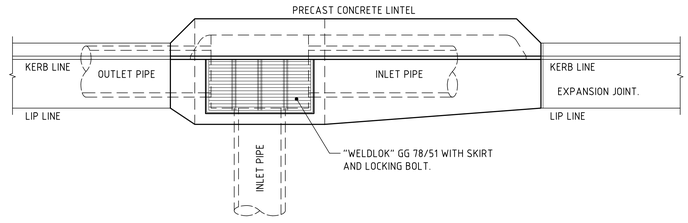
CROSS SECTION.
SCALE 1:20



LONG SECTION.
SCALE 1:20



LONG SECTION
SCALE 1:20



PLAN
SCALE 1:20

PLAN
SCALE 1:20

TAPERED KERB INLET PIT - KIP

SUBSOIL NOT SHOWN
FOR CLARITY.

TABLE 3 - TAPERED CLASS D PIT REINFORCEMENT & WALL THICKNESS						
DEPTH 'H'	WALL THICKNESS 'TW'	WALL REINFORCEMENT	ROOF THICKNESS 'TR'	ROOF REINFORCEMENT	BASE THICKNESS 'TB'	BASE REINFORCEMENT
<1.5m	150mm	N12-200 EACH WAY	150mm	N12-200 EACH WAY	150mm	N12-200 EACH WAY
1.5m-3.0m	150mm	N12-200 EACH WAY	150mm	N12-200 EACH WAY	150mm	N12-200 EACH WAY
3.0m-4.5m	200mm	N16-200 EACH WAY	200mm	N16-200 EACH WAY	200mm	N12-200 EACH WAY
4.5-6.0	250mm	N16-200 EACH WAY	250mm	N16-200 EACH WAY	250mm	N16-200 EACH WAY

CONCRETE QUALITY					
ELEMENT	SLUMP	AGGREGATE (MAX. SIZE)	CEMENT TYPE	ADMIXTURE	F'c (MPa)
PIT	80	20	GP	NIL	25

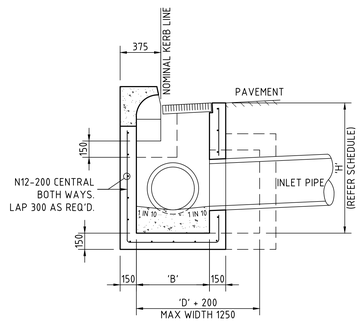
NOTES:

1. WHERE GULLY PIT IS LOCATED ON KERB RETURNS OR BULB OF CUL-DE-SACS PROVIDE CURVED PRECAST CONCRETE LINTELS.
2. SAG PITS SHALL HAVE LINTEL PLACED CENTRALLY ABOUT THE GRATE.
3. ALL REINFORCING TO HAVE 30 MIN. CLEAR CONCRETE COVER.
4. FOR PITS DEEPER THAN 1200mm STEP IRONS SHALL BE PROVIDED.
5. FOR ALL PITS IN ITV PAVEMENT AREAS, PIT WALLS ARE TO BE INCREASED IN THICKNESS BY 50mm AND REINFORCEMENT TO BE N16 BARS IN LIEU OF N12

KERB INLET PIT - KIP

NOTE :

1. WHERE GULLY PIT IS LOCATED ON KERB RETURNS OR BULB OF CUL-DE-SACS PROVIDE CURVED PRECAST CONCRETE LINTELS.
2. SAG PITS SHALL HAVE LINTEL PLACED CENTRALLY ABOUT THE GRATE.
3. ALL REINFORCING TO HAVE 30 MIN. CLAER CONCRETE COVER.
4. FOR PITS DEEPER THAN 1000mm CLIMB RAILS SHALL BE PROVIDED.



CROSS SECTION
SCALE 1:20

CONCRETE QUALITY					
ELEMENT	SLUMP	AGGREGATE (MAX. SIZE)	CEMENT TYPE	ADMIXTURE	F'c (MPa)
PIT	80	20	GP	NIL	32

200mm 0 500 1000 1500 2000mm
SCALE 1:20 AT B1 SIZE SHEET

FOR PLANNING APPLICATION

AMENDMENTS	DATE	ISSUE
ISSUED FOR PLANNING APPLICATION	23.11.22	A

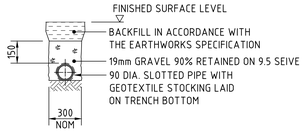
ARCHITECT: watson young
CLIENT: ALTIS PROPERTY PARTNERS
PROJECT: ALTIS WILTON PARK ROAD
WILTON PARK ROAD, WILTON, NSW, 2571

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF
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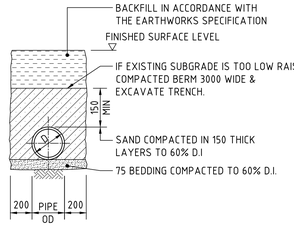
DRAWING TITLE: STORMWATER MANAGEMENT DETAILS SHEET 1
DRAWING No: C014503.01-SK450
ISSUE: A



SUPPORT TO AGRICULTURAL DRAIN

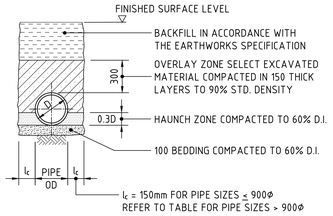
SCALE 1:20

SIDE ZONE MATERIAL GRADING	
SIEVE SIZE (mm)	WEIGHT PASSING (%)
19.0	100
9.5	100 TO 50
2.6	100 TO 30
0.60	50 TO 15
0.075	25 TO 0



SUPPORT TO uPVC PIPES (<300mm)

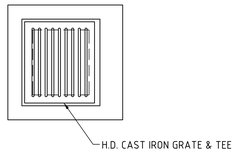
SCALE 1:20



TYPE H1 SUPPORT TO CONCRETE PIPES AT LANDSCAPED AREAS

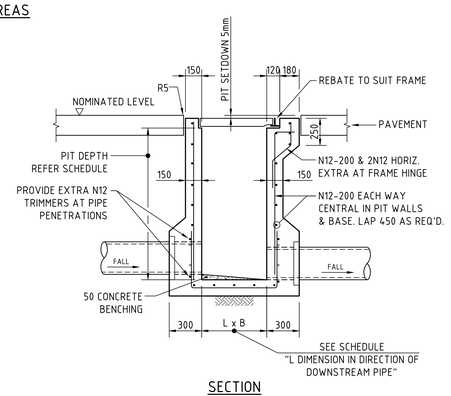
SCALE 1:20

BEDDING & HAUNCH MATERIAL GRADING	
SIEVE SIZE (mm)	WEIGHT PASSING (%)
19.0	100
2.36	100 TO 50
0.60	90 TO 20
0.30	60 TO 10
0.15	20 TO 0



PLAN

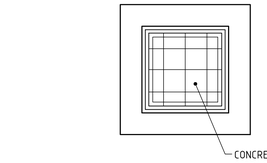
SCALE 1:20



SECTION

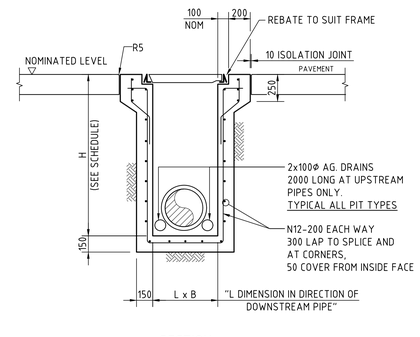
SCALE 1:20

SINGLE GRATED GULLY PIT - SGGP



PLAN

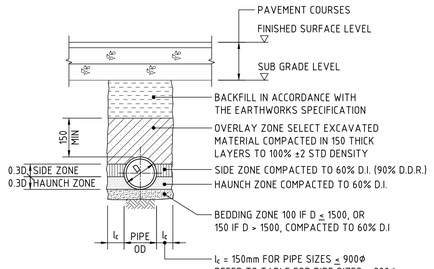
SCALE 1:20



SECTION

SCALE 1:20

SEALED JUNCTION PIT - SJP



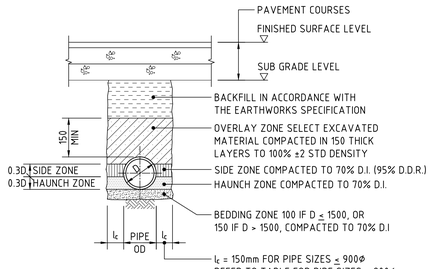
TYPE HS2 SUPPORT TO CONCRETE PIPES UNDER PAVEMENT

SCALE 1:20

D ≤ 1350, MAX FILL = 4.0m

D > 1350, MAX FILL = 3.0m

BEDDING & HAUNCH MATERIAL GRADING	
SIEVE SIZE (mm)	WEIGHT PASSING (%)
19.0	100
2.36	100 TO 50
0.60	90 TO 20
0.30	60 TO 10
0.15	25 TO 0
0.075	10 TO 0



TYPE HS3 SUPPORT TO CONCRETE PIPES UNDER PAVEMENT

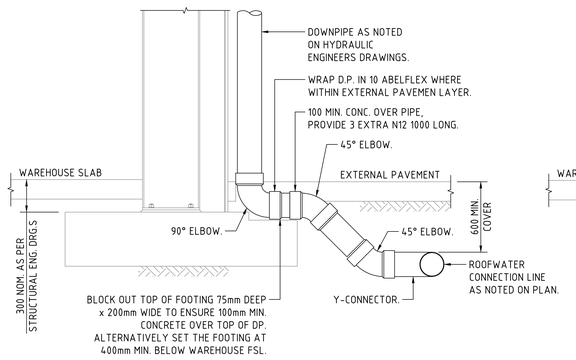
SCALE 1:20

D ≤ 1050, MAX FILL = 6.0m

D > 1050, MAX FILL = 4.8m

SIDE ZONE WIDTH	
PIPE SIZE (mm)	l_c (mm)
≤ 900Φ	150
1050Φ	175
1200Φ	200
1350Φ	225
1500Φ	250
1650Φ	275
1800Φ	300
ENGINEER TO SPECIFY TRENCH WIDTHS FOR PIPE SIZES GREATER THAN 1800Φ	

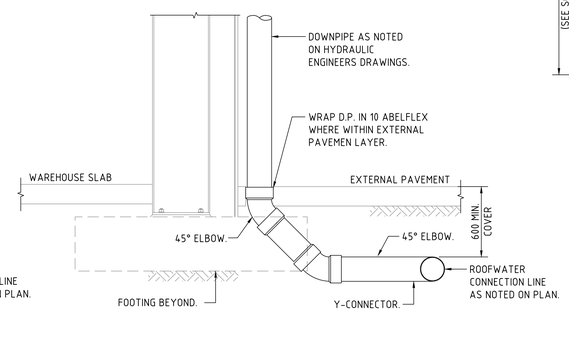
SIDE ZONE MATERIAL GRADING	
SIEVE SIZE (mm)	WEIGHT PASSING (%)
19.0	100
9.5	100 TO 50
2.6	100 TO 30
0.60	50 TO 15
0.075	25 TO 0
SELECT FILL MATERIAL IN ACCORDANCE WITH TABLE 1 AS 3725	



DOWNPIPE TURN-UP DETAIL A

(AT FOOTING LOCATION)

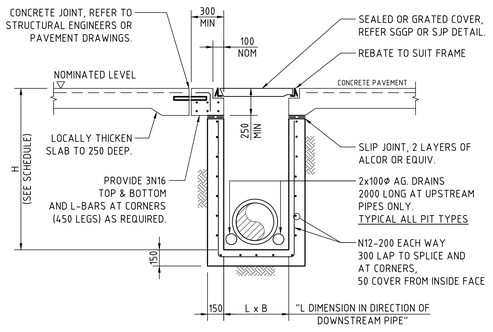
SCALE 1:20



DOWNPIPE TURN-UP DETAIL B

(CLEAR OF FOOTING)

SCALE 1:20

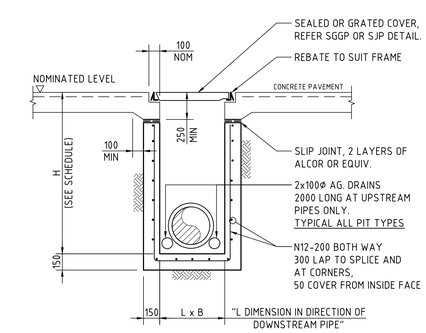


SECTION

SCALE 1:20

SJP/CIS & SGGP/CIS (CAST IN SLAB) PIT DETAIL GRATE/COVER SUPPORT CAST-INTO PAVEMENT SLAB

(ADOPT IN CONCRETE PAVEMENT FOR SGGP's & SJP's, WHERE PITS ARE LOCATED IN THE CORNER OF SLAB PANELS OR ADJACENT TO SLAB PANEL JOINTS)



SECTION

SCALE 1:20

SJP/CIS & SGGP/CIS (CAST IN SLAB) PIT DETAIL GRATE/COVER SUPPORT CAST-INTO PAVEMENT SLAB

(ADOPT IN CONCRETE PAVEMENTS FOR SGGP's & SJP's, WHERE JOINTS ARE NOT LOCATED WITHIN PROXIMITY OF THE GRATE)

FOR PLANNING APPLICATION

200mm 0 500 1000 1500 2000mm

SCALE 1:20 AT B1 SIZE SHEET

AMENDMENTS	DATE	ISSUE
ISSUED FOR PLANNING APPLICATION	23.11.22	A

ARCHITECT: watson young

CLIENT: ALTIS PROPERTY PARTNERS

PROJECT: ALTIS WILTON PARK ROAD
WILTON PARK ROAD, WILTON, NSW, 2571

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF
PR	PR	NOV'22	LDV	A0	AS SHOWN	C014503.01-SK451

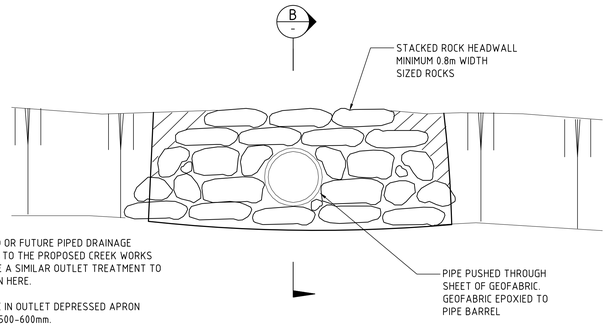
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DRAWING TITLE: STORMWATER MANAGEMENT DETAILS SHEET 2

DRAWING No: C014503.01-SK451 ISSUE: A

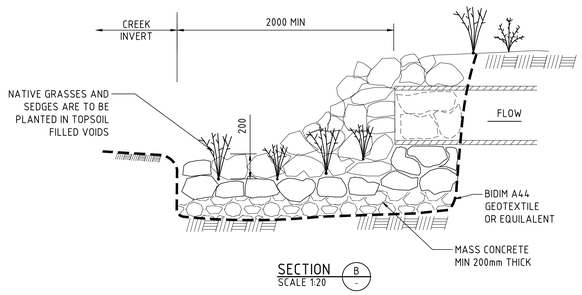


APPLICABILITY:

1) ALL PROPOSED OR FUTURE PIPED DRAINAGE CONNECTIONS TO THE PROPOSED CREEK WORKS SHOULD HAVE A SIMILAR OUTLET TREATMENT TO THOSE SHOWN HERE.

2) MIN. ROCK SIZE IN OUTLET DEPRESSED APRON SHOULD BE ⌀500-600mm.

TYPICAL STACKED ROCK HEADWALL TREATMENT
SCALE 1:20



SECTION B
SCALE 1:20

BIO-RETENTION NOTES :

FILTER MEDIA TO BE LOAMY SAND WITH A PERMEABILITY NOT LESS THAN 200mm/hr. FILTER MEDIA TO BE FREE OF RUBBISH, DELETERIOUS MATERIAL, TOXICANTS, DECLARED PLANTS AND LOCAL WEEDS, AND IS TO NOT BE HYDROPHOBIC.

FILTER MEDIA TO HAVE THE FOLLOWING COMPOSITION RANGE:

CLAY & SILT (<0.05mm)	<3%
VERY FINE SAND (0.05-0.15mm)	5-30%
FINE SAND (0.15-0.25mm)	10-30%
MEDIUM TO COARSE SAND (0.25-1.00mm)	40-60%
COARSE SAND (1.0-2.0mm)	7-10%
FINE GRAVEL (2.0-3.4mm)	<3%

FILTER MEDIA THAT DOES NOT MEET THE FOLLOWING CRITERIA SHALL BE REJECTED:

a. ORGANIC MATTER CONTENT TO BE IDEALLY WITHIN 1% TO 3% (W/W) AND TO BE NO GREATER THAN 5%(W/W).
b. PH TO BE BETWEEN 5.5 AND 7.5
c. PHOSPHOROUS CONTENT TO BE NO GREATER THAN 35mg/kg

FILTER MEDIA TO BE ASSESSED BY QUALIFIED HORTICULTURALIST TO ENSURE CAPABILITY OF SUPPORTING PLANT LIFE.

DRAINAGE LAYER TO BE CLEAN GRAVEL 5-7mm.

PLANTS TO BE IN ACCORDANCE WITH WHITTLESEA COUNCIL AND MELBOURNE WATER REQUIREMENTS.

PROVIDE 100mm TOPSOIL AND TEMPORARY EROSION PROTECTION (JUTEMASTER OR EQUIV) TO SWALE BATTER SLOPES AND ADJACENT LANDSCAPED AREAS. NOTE THAT NO TOPSOIL IS TO BE PLACED OVER FILTRATION MEDIA. PROVIDE SILT FENCE TO TOP OF BANK UNTIL SUCH TIME AS THIS STABILISING AND VEGETATION HAS BEEN COMPLETED.

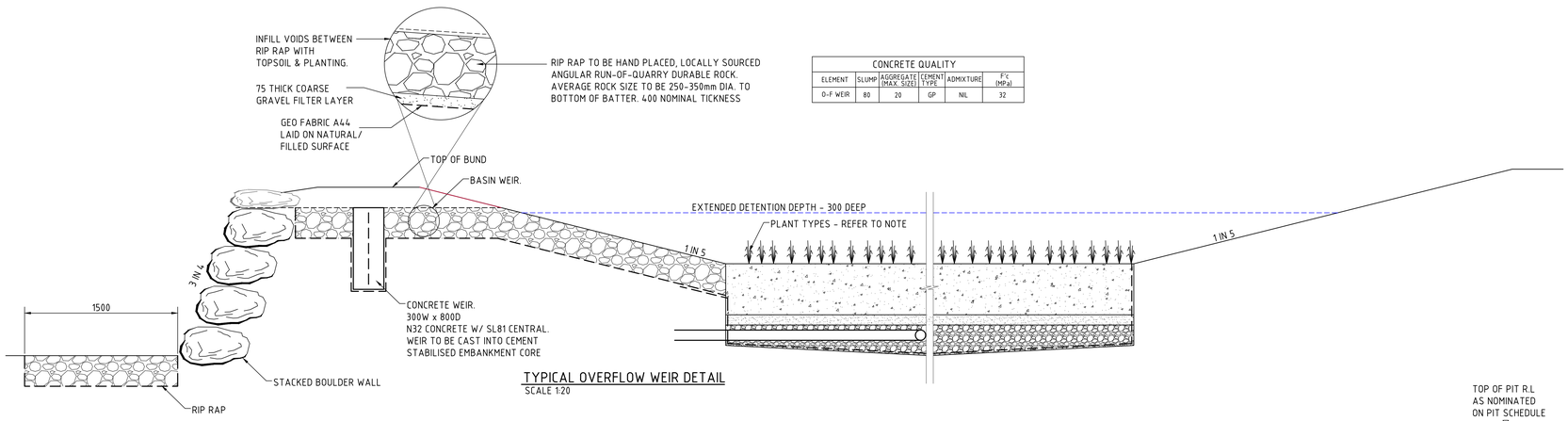
BIO-RETENTION TO BE PARTIALLY INSTALLED, FOLLOWING COMPLETION OF ROADWORKS, WITH THE TOP 75-100mm OF FILTER MEDIA REPLACED WITH A FINE TO COARSE SAND UNDERLAIN WITH A GEOTEXTILE LAYER (REFER TO DETAIL). FOLLOWING COMPLETION OF THE UPSTREAM DEVELOPMENT AND SITE STABILISATION, THE SAND IS TO BE REMOVED, REPLACED WITH FILTER MATERIAL AND PLANTED OUT. REFER TO TEMPORARY BIO-BASIN DETAIL

PRIOR TO PLANTING, THE TOP 100mm OF THE BIORETENTION FILTER MEDIA IS TO BE AMELIORATED WITH APPROPRIATE ORGANIC MATTER, FERTILISER AND TRACE ELEMENTS TO AID PLANT ESTABLISHMENT AS PER THE TABLE BELOW:

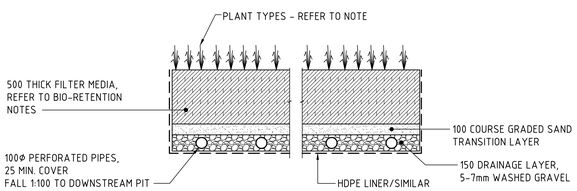
TABLE: RECIPE FOR AMELIORATING TOP 100mm OF BIORETENTION FILTER MEDIA

CONSTITUENT	QUANTITY (kg/m2 OF FILTER AREA)
GRANULATED POULTRY MANURE FINES	50
SUPERPHOSPHATE	2
MAGNESIUM SULPHATE	3
POTASSIUM SULPHATE	2
TRACE ELEMENT MIX	1
FERTILISER NPK (16.4.14)	4
LIME	20

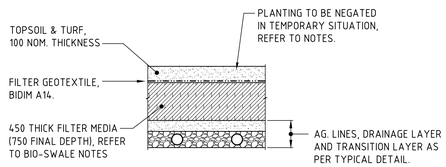
CONCRETE QUALITY					
ELEMENT	SLUMP	AGGREGATE (MAX. SIZE)	CEMENT TYPE	ADMIXTURE	F'c (MPa)
O-F WEIR	80	20	GP	NIL	32



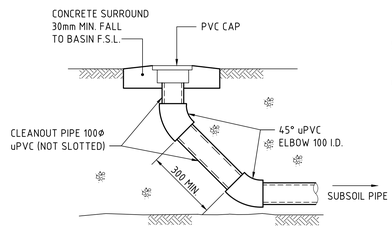
TYPICAL OVERFLOW WEIR DETAIL
SCALE 1:20



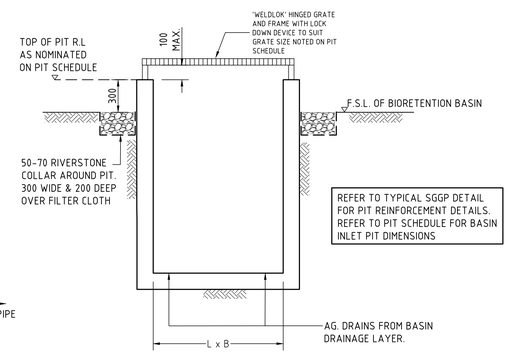
TYPICAL BIO-RETENTION DETAIL
SCALE 1:20



TEMPORARY BIO-RETENTION PROTECTION DETAIL
SCALE 1:20
TEMPORARY CONSTRUCTION REQUIREMENT DETAIL - REFER TO NOTES FOR IMPLEMENTATION PERIODS.



BIORETENTION CLEANOUT EYE ELEVATION
SCALE 1:20
DENOTED C.E. ON PLAN



SECTION
SCALE 1:20

BASIN INLET PIT - BIP

BIO-RETENTION BASIN DETAILS

200mm 0 500 1000 1500 2000mm
SCALE 1:20 AT B1 SIZE SHEET

FOR PLANNING APPLICATION

AMENDMENTS	DATE	ISSUE
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ARCHITECT: watson young

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PROJECT: ALTIS WILTON PARK ROAD
WILTON PARK ROAD, WILTON, NSW, 2571

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
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DRAWING TITLE: STORMWATER MANAGEMENT DETAILS SHEET 3

DRAWING No: C014503.01-SK452 ISSUE: A