13 ENDEAVOUR ROAD, CARINGBAH

LOCALITY PLAN

NOT TO SCALE - COURTESY OF SIX MAPS

NOT TO SCALE

DRAWING SCHEDULE

DA1101	COVER PAGE & DRAWING SCHEDULE
DA1201	SPECIFICATIONS SHEET
DA1301	KEY PLAN
DA1401	PROPOSED UTILITIES PLAN
DA1501	CONSTRUCTION MANAGEMENT PLAN SHEET 1
DA1502	CONSTRUCTION MANAGEMENT PLAN SHEET 2
DA1503	CONSTRUCTION MANAGEMENT PLAN SHEET 3
DA2101	CONCEPT SEDIMENT & EROSION CONTROL PLAN SHEET 1
DA2102	CONCEPT SEDIMENT & EROSION CONTROL PLAN SHEET 2
DA2103	CONCEPT SEDIMENT & EROSION CONTROL PLAN SHEET 3
DA3101	CONCEPT BULK EARTHWORKS CUT TO FILL PLAN
DA3501	CONCEPT BULK EARTHWORKS SECTIONS SHEET 1
DA3502	CONCEPT BULK EARTHWORKS SECTIONS SHEET 2
DA4101	CONCEPT STORMWATER & GRADING PLAN - SHEET 1
DA4102	CONCEPT STORMWATER & GRADING PLAN - SHEET 2
DA4301	CONCEPT STORMWATER CATCHMENT PLAN - GENERAL
DA4302	CONCEPT STORMWATER CATCHMENT PLAN - WSUD
DA4303	EXISTING CATCHMENT PLAN - WOOLOOWARE BAY
DA4304	CONCEPT CATCHMENT PLAN - WOOLOOWARE BAY
DA4501	CONCEPT SECTIONS
DA4701	CONCEPT STORMWATER MANAGEMENT DETAILS
DA4801	CONCEPT STORMWATER LONGTITUDINAL SECTIONS - SHEET 1
DA4802	CONCEPT STORMWATER LONGTITUDINAL SECTIONS - SHEET 2
DA4803	CONCEPT STORMWATER LONGTITUDINAL SECTIONS - SHEET 3
DA4804	CONCEPT STORMWATER LONGTITUDINAL SECTION - SHEET 4
DA4121	CONCEPT STORMWATER & GRADING PLAN
DA4131	CONCEPT STORMWATER & GRADING PLAN
DA4141	CONCEPT STORMWATER & GRADING PLAN
DA4151	CONCEPT STORMWATER & GRADING PLAN - SHEET 1
DA4152	CONCEPT STORMWATER & GRADING PLAN - SHEET 2
DA4153	CONCEPT STORMWATER & GRADING PLAN - SHEET 3
DA4161	CONCEPT STORMWATER & GRADING PLANS - SHEET 1
DA4162	CONCEPT STORMWATER & GRADING PLANS - SHEET 2

DEVELOPMENT APPLICATION ISSUE

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10.02.25	RESPONSE TO COUNCIL COMMENTS	MY	D

KEY PLAN

STRUCTURAL
-

MECHANICAL
-

ELECTRICAL
-

CIVIL
SPARKS & PARTNERS CONSULTING ENGINEERS

BUILDER

CLIENT
Aliro

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PROJECT
13 ENDEAVOUR ROAD, CARINGBAH

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DRAWING TITLE
MASTER PLAN
COVER PAGE & DRAWING SCHEDULE

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW
PROJECT No 23106	SCALE 1:100	SIZE A1	REVISION D
	DRAWING No DA1101		

SURVEY

1. LEVELS BASED ON SURVEY PREPARED BY:
   LANDPARTNERS, REF: SY074865.000.1.6, DATE: 06/07/2023

APPROVAL AUTHORITY

1. CIVIL DESIGN IS SUBJECT TO APPROVAL FROM THE FOLLOWING AUTHORITIES:
   1.1. SUTHERLAND SHIRE COUNCIL

STORMWATER DESIGN CRITERIA

1. DESIGN CRITERIA.
   1.1. ROOF DRAINAGE - 1:20YR ARI
   1.2. PIPED DRAINAGE - 1:20YR ARI
   1.3. OVERLAND FLOWS - GAP FLOW BETWEEN 1:20YR ARI & 1:100YR ARI

DESIGN GUIDES

1. SUTHERLAND SHIRE DEVLOPMENT CONTROL PLAN 2015
2. SUTHERLAND SHIRE LOCAL ENVIRONMENTAL PLAN 2015
3. SUTHERLAND SHIRE ENVIRONMENTAL SPECIFICATION 2009 - STORMWATER MANAGEMENT
4. AS1428.1:2009 DESIGN FOR ACCESS AND MOBILITY, PART 1: GENERAL REQUIREMENTS FOR ACCESS - NEW BUILDING WORK
5. AS2032:2006 INSTALLATION OF PVC PIPE SYSTEMS
6. AS2865:2009 CONFINED SPACES
7. AS2890.1:2004 PARKING FACILITIES, PART 1: OFF-STREET CAR PARKING
8. AS2890.2:2002 PARKING FACILITIES, PART 2: OFF-STREET COMMERCIAL VEHICLE FACILITIES
9. AS2890.6:2009 PARKING FACILITIES, PART 6: OFF-STREET PARKING FOR PEOPLE WITH DISABILITIES
10. AS3500.3:2018 PLUMBING AND DRAINAGE, PART 3: STORMWATER DRAINAGE
11. AS3600:2018 CONCRETE STRUCTURES
12. AS3725:2007 DESIGN FOR INSTALLATION OF BURIED CONCRETE PIPES
13. AS3798:2007 GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS
14. AS4678:2002 EARTH RETAINING STRUCTURES

DEVELOPMENT APPLICATION (DA) STAGE

1. DOCUMENTS ARE PROVIDED FOR DA APPROVAL PURPOSES ONLY AND ARE NOT TO BE USED FOR CONSTRUCTION
2. STORMWATER DESIGN SHOWN IS CONCEPTUAL ONLY AND SUBJECT TO FINAL DESIGN AT CONSTRUCTION CERTIFICATE STAGE
3. FINISHED LEVELS SHOWN ARE CONCEPTUAL ONLY AND SUBJECT TO DETAILED DESIGN AT CONSTRUCTION CERTIFICATE STAGE. FINAL FINISHED LEVELS TO BE ±0.5m FROM LEVELS SHOWN

SAFETY IN DESIGN

1. CONTRACTOR SHALL ENSURE ALL ACCESS TO THE TANKS & CHAMBERS ARE COMPLETE WITH RELEVANT CONFINED SPACE SIGNAGE.
2. ALL PERSONNEL REQUIRED TO INSPECT AND MAINTAIN SERVICES WITHIN THESE AREAS SHALL BE TRAINED IN ACCORDANCE WITH WHS/OH&S REQUIREMENTS.
3. REFER TO RELEVANT SAFETY IN DESIGN REPORT FOR CONSTRUCTION RISK MATRIX

SITE WORKS - GENERAL

1. ALL WORKS ARE TO BE UNDERTAKEN IN ACCORDANCE WITH LOCAL COUNCIL, AUSTRALIAN AND AUTHORITY STANDARDS.
2. ALL TRENCHING WORKS ARE TO BE RESTORED TO ORIGINAL CONDITION.
3. THE INTEGRITY OF ALL EXISTING AND NEW SERVICES IS TO BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
4. ALL PLANS ARE TO BE READ IN CONJUNCTION WITH APPROVED ARCHITECTS, STRUCTURAL ENGINEERS AND OTHER CONSULTANT'S PLANS. ANY DISCREPANCIES ARE TO BE NOTIFIED TO THE ENGINEER FOR CLARIFICATION.
5. THE ENGINEER SHALL BE GIVEN A MIN. OF 48 HOURS NOTICE FOR ALL STORMWATER DRAINAGE AND PAVEMENT INSPECTIONS. CONCRETE SHALL NOT BE DELIVERED UNTIL ENGINEERS APPROVAL IS OBTAINED.

SITE WORKS - ACCESS AND SAFETY

1. ALL WORKS ARE TO BE UNDERTAKEN IN A SAFE MANNER IN ACCORDANCE WITH ALL STATUTORY AND INDUSTRIAL RELATION REQUIREMENTS.
2. ACCESS TO ADJACENT BUILDINGS AND PROPERTIES SHALL BE MAINTAINED AT ALL TIMES.
3. WHERE NECESSARY SAFE PASSAGE SHALL BE PROVIDED FOR VEHICLES AND PEDESTRIANS THROUGH OR ADJACENT TO THE SITE.

EXISTING UTILITIES

1. UTILITY INFORMATION SHOWN ON PLAN DOES NOT DEPICT ANY MORE THAN THE PRESENCE OF A SERVICE BASED ON AVAILABLE DOCUMENTARY EVIDENCE
2. THE PRESENCE OF A UTILITY SERVICE, SIZE AND LOCATION SHOULD BE CONFIRMED BY FIELD INSPECTION PRIOR TO THE COMMENCEMENT OF ROAD WORKS, AND THE RELATED UTILITY PLANS OBTAINED BY DIALING 110 OR FAX 130 652 077 (DIAL BEFORE YOU DIG)
3. UTILITY LOCATION,SIZE AND DEPTH TO BE CONFIRMED BY SERVICE LOCATING OR NON-DESTRUCTIVE EXCAVATION PRIOR TO CONSTRUCTION. ALL CLASHES WITH PROPOSED SERVICES ARE TO BE RESOLVED
4. CAUTION SHOULD BE EXERCISED WHEN WORKING IN THE VICINITY OF ALL UTILITY SERVICES
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE RELEVANT SERVICES AUTHORITIES OF THE WORKS AND VERIFY THE LOCATION OF ALL EXISTING SERVICES PRIOR TO ANY CONSTRUCTION ACTIVITIES COMMENCING
6. THE CONTRACTOR SHALL LIAISE AND COORDINATE THE TIMING OF THE CONSTRUCTION OF THE WORKS WITH THE RELEVANT SERVICES CONCURRENTLY AT THIS SITE
7. THE CONSTRUCTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE CAUSED TO EXISTING SERVICES AS A RESULT OF THE CONSTRUCTION WORKS

SEDIMENT AND EROSION CONTROL

1. THE CONTRACTOR SHALL INSTIGATE ALL SEDIMENT AND EROSION CONTROL MEASURES IN ACCORDANCE WITH COUNCIL AND THE "BLUE BOOK" (MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION, PRODUCED BY THE DEPARTMENT OF HOUSING). THESE MEASURES ARE TO BE REGULARLY INSPECTED AND MAINTAINED.
2. THE SEDIMENT & EROSION CONTROL PLAN PRESENTS CONCEPTS ONLY, THE CONTRACTOR SHALL AT ALL TIMES BE RESPONSIBLE FOR THE ESTABLISHMENT & MANAGEMENT OF A DETAILED SCHEME MEETING COUNCIL'S DESIGN, AND ALL OTHER REGULATORY AUTHORITY REQUIREMENTS.
3. WHERE PRACTICAL, THE SOIL EROSION HAZARD ON THE SITE SHALL BE KEPT AS LOW AS POSSIBLE. TO THIS END, WORKS SHOULD BE UNDERTAKEN IN THE FOLLOWING SEQUENCE:
   a. INSTALL ALL TEMPORARY SEDIMENT FENCES AND BARRIER FENCES. WHERE FENCES ARE ADJACENT TO EACH OTHER THE SEDIMENT FENCE CAN BE INCORPORATED INTO THE BARRIER FENCE.
   b. CONSTRUCT TEMPORARY STABILISED SITE ACCESS. INCLUDING SHAKE DOWN AND WASH PAD.
   c. INSTALL SEDIMENT CONTROL MEASURES AS OUTLINED ON THESE SEDIMENT AND CONTROL PLANS (ONCE APPROVED)
4. THE CONTRACTOR SHALL UNDERTAKE SITE DEVELOPMENT WORKS SO THAT LAND DISTURBANCE IS CONFINED TO AREAS OF MINIMUM WORKABLE SIZE.
5. AT ALL TIMES AND IN PARTICULAR DURING WINDY AND DRY WEATHER, LARGE, UNPROTECTED AREAS WILL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL. TACIFIERS MAY BE USED TO CONTROL DUST DURING EXTENDED PERIODS OF DRY WEATHER.
6. ANY SAND USED IN THE CONCRETE CURING PROCESS (SPREAD OVER THE SURFACE) SHALL BE REMOVED AS SOON AS POSSIBLE AND WITHIN 10 WORKING DAYS FROM PLACEMENT.
7. WATER SHALL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS THE CATCHMENT AREA HAS BEEN STABILISED AND/OR ANY LIKELY SEDIMENT HAS BEEN FILTERED OUT.
8. TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES SHALL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE STABILISED / REHABILITATED.
9. THE CONTRACTOR SHALL ALLOW FOR THE ESTABLISHMENT OF ANY OTHER EROSION PROTECTION MEASURES (IF APPLICABLE).
10. THE CONTRACTOR SHALL REGULARLY INSPECT (MINIMUM TWICE PER WEEK) ALL EROSION AND SEDIMENT CONTROL MEASURES TO ENSURE THEY ARE OPERATING EFFECTIVELY. REPAIRS AND/OR MAINTENANCE SHALL BE UNDERTAKEN REGULARLY AND AS REQUIRED, PARTICULARLY FOLLOWING STORM EVENTS.
11. ACCEPTABLE RECEPTORS SHALL BE USED FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER. WASTE FROM THESE RECEPTORS SHALL BE DISPOSED OF IN ACCORDANCE WITH REGULATORY AUTHORITY REQUIREMENTS. PAY ALL FEES AND PROVIDE EVIDENCE OF SAFE DISPOSAL.

SEDIMENT BASIN ASSESSMENT

ASSESSMENT AS PER SECTION 4.4, SECTION 6.3.2 (D) AND APPENDIX A OF THE BLUE BOOK.

ASSESSMENT OF EROSION HAZARD
R-FACTOR - 2,000 TO 2,500 MAP 10, APPENDIX B
SITE GRADIENT - (2.9/80) 3.625%
SITE CLASSED AS LOW EROSION HAZARD BASED ON A-LINE IN FIGURE 4.6 - THEREFORE BASIC MEASURES CAN BE IMPLEMENTED.

ASSESSMENT OF EXPORT SOIL VOLUME
R = 2500
K = 0.075
LS = 0.65
P = 1.2
C = 1
A = 146.25 T/Ha/YR
DENSITY OF SEDIMENT = 1.9 T/m^3
SITE AREA = 0.275Ha
SOIL VOLUME = 21.2m^3/YR < 150CU.M/YR WHICH IS THE TRIGGER VALUE FOR A SEDIMENT BASIN

STORMWATER

1. ALL WORKS ARE TO BE UNDERTAKEN IN ACCORDANCE WITH THE FOLLOWING AUSTRALIAN STANDARDS AS2032, AS3500 AND AS3725 AS A MINIMUM.
2. ALL PIPES LESS THAN OR EQUAL TO Ø300mm IN SIZE ARE TO BE SOLVENT WELD-JOINTED uPVC CLASS SN6 U.N.O.
3. ALL PIPES Ø375mm OR GREATER IN SIZE ARE TO BE MIN. CLASS 2 REINFORCED CONCRETE PIPE (RCP) WITH SPIGGOT AND SOCKETED JOINT OR VANTAGE PIPE PLUS (VPIPE+) FIBRE REINFORCED CONCRETE (FRC) WITH VANTAGE PIPE PLUS JOINT U.N.O.
4. ALL PIPES ARE TO BE LAID AT MIN. 1.0% GRADE U.N.O.
5. PIPE BEDDING IS TO BE HS2 UNDER ROADS AND TRAFFICKED AREAS AND SHALL BE H2 IN LANDSCAPED AND PEDESTRIAN TRAFFICKED AREAS U.N.O.
6. ALL PIPE BENDS AND JUNCTIONS ARE TO BE MADE WITH EITHER PURPOSE MADE FITTINGS OR STORMWATER DRAINAGE PITS.
7. MINIMUM COVER FROM THE OBVERT OF THE STORMWATER PIPE OF 300mm IS TO BE PROVIDED IN LANDSCAPED AREAS AND 300mm IN VEHICULAR TRAFFICKED AREAS U.N.O.
8. WHERE MINIMUM COVER CANNOT BE ACHIEVED, CONCRETE ENCASEMENT OF THE AFFECTED PIPE MAY BE UNDERTAKEN WITH 20MPa CONCRETE WITH A MIN. COVER OF 150mm TO ALL SIDES OF THE PIPE. THE CONTRACTOR SHALL CONFIRM THIS REQUIREMENT WITH THE ENGINEER OR SUPERINTENDENT.
9. LAID PIPELINES ARE TO HAVE THE FOLLOWING CONSTRUCTED TOLERANCES:
   a. HORIZONTAL-1:300 ANGULAR DEVIATION FROM REQUIRED ALIGNMENT;
   b. VERTICAL-1:300 ANGULAR DEVIATION FROM REQUIRED ALIGNMENT.
10. ALL DRAINAGE PITS ARE TO BE CAST IN-SITU. PRECAST DRAINAGE PITS MAY BE USED WITH APPROVAL FROM THE ENGINEER. THE CONTRACTOR SHALL SUBMIT A PRECAST PIT INSTALLATION WORK METHOD STATEMENT FOR ASSESSMENT BY THE ENGINEER FOR APPROVAL.
11. DRAINAGE PIT COVERS ARE TO BE EITHER GALVANISED STEEL OR CAST IRON CLASS 'B' IN LANDSCAPED AND PEDESTRIAN TRAFFICKED AREAS AND CLASS 'D' IN ALL VEHICULAR TRAFFICKED AREAS U.N.O.
12. DRAINAGE PIT COVERS ARE TO BE 'HEELSAFE' TYPE IN ALL PEDESTRIAN TRAFFICKED AREAS U.N.O.
13. EXISTING STORMWATER PIT LOCATIONS AND INVERT LEVELS TO BE CONFIRMED PRIOR TO COMMENCING WORKS ON SITE.
14. PROVIDE CLEANING EYES (RODDING POINTS) TO PIPES AT ALL CORNERS AND T-JUNCTIONS WHERE NO PITS ARE PRESENT.
15. DOWN PIPES CONNECTED DIRECT TO PIPES TO BE CONNECTED AT 45° TO THE FLOW DIRECTION WITH A CLEANING EYE PROVIDED AT GROUND LEVEL.

FINISHED LEVELS

1. LEVELS BASED ON SITE SURVEY INFORMATION. THE CONTRACTOR SHALL VERIFY LEVELS PRIOR TO CONSTRUCTION COMMENCEMENT, ANY DISCREPANCIES SHALL BE NOTIFIED TO THE ENGINEER OR SUPERINTENDENT FOR CLARIFICATION
2. CARPARK & SERVICE AREA LAYOUT AND GRADES TO COMPLY WITH AS2890.
3. DRIVEWAY LAYOUT AND DESIGN TO COMPLY WITH APPROVAL AUTHORITY ACCESS DRIVEWAY DESIGN AND CONSTRUCTION SPECIFICATION.
4. ALL CONTOUR LINES & SPOT LEVELS INDICATE FINISHED PAVEMENT LEVELS U.N.O. ON PLAN.
5. PERMANENT BATTER SLOPES ARE TO HAVE A MAXIMUM GRADE OF 1V:3H.
6. ALL FOOTPATHS ARE TO FALL AWAY FROM THE BUILDING AT 2.5% NOMINAL. GRADE.
7. ALL PAVEMENTS ARE TO BE SET AT 50mm BELOW THE FINISHED FLOOR LEVEL OF THE WAREHOUSE AND OFFICE AREAS U.N.O

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KEY PLAN

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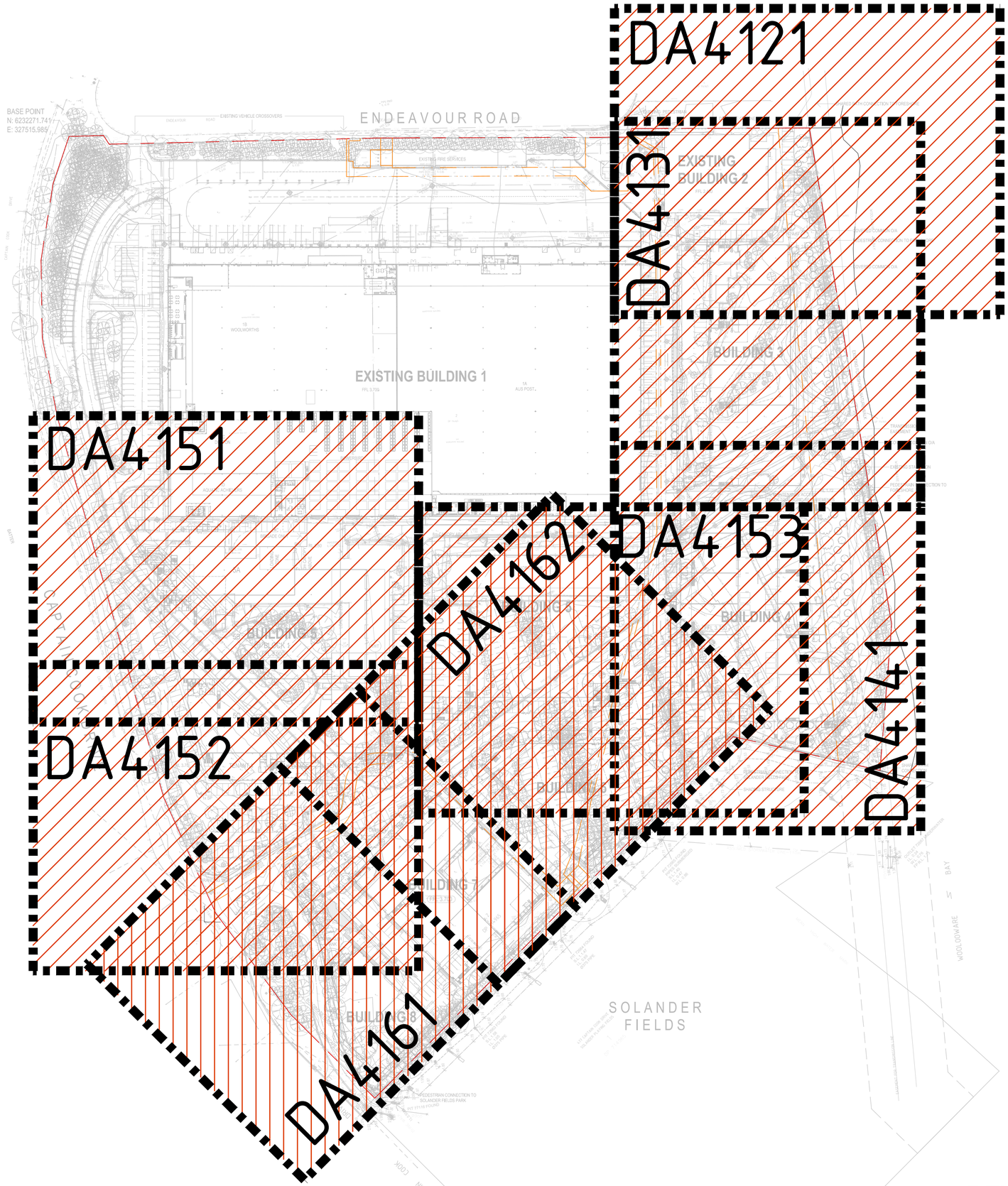
DRAWING TITLE
MASTER PLAN
SPECIFICATIONS SHEET

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

SCALE	SIZE	REVISION
1:100	A1	C

PROJECT No 23106
DRAWING No DA1201



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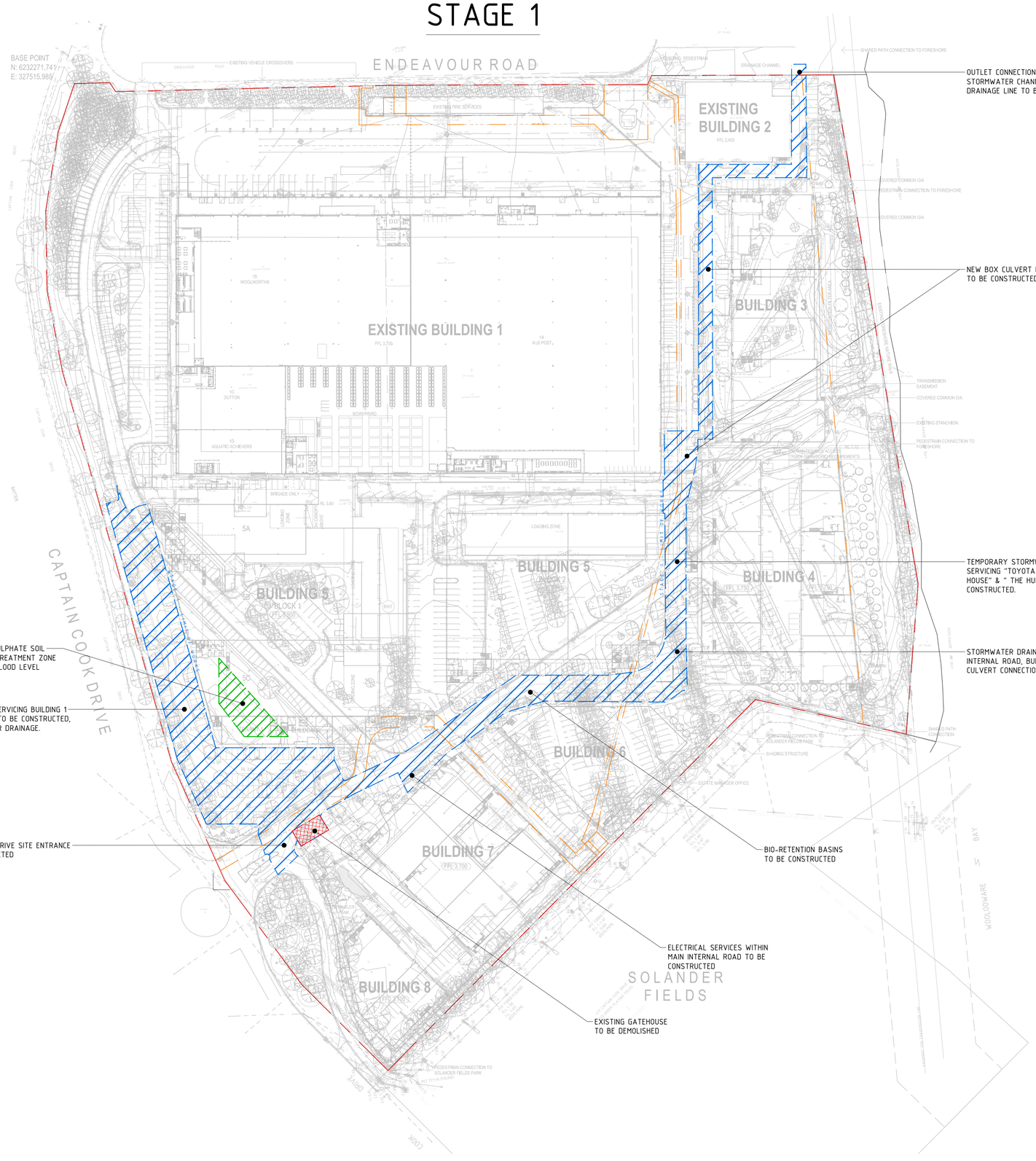
DRAWING TITLE
MASTER PLAN
KEY PLAN

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

PROJECT No	SCALE	SIZE	REVISION
23106	1:100	A1	C

DRAWING No DA1301

STAGE 1



NOT TO SCALE

LEGEND

- LIMIT OF WORKS
- COMPLETED WORKS
- DEMOLITION WORKS
- ACID SULPHATE SOILS NEUTRALIZATION ZONE

NOTES

1. REFER TO DA2101 - DA2103 FOR SEDIMENT & EROSION CONTROL PLANS
2. REFER TO DA4101 - DA2103 FOR STORMWATER & GRADING PLAN
3. ALL WORKS ARE TO ALLOW FOR TREE PROTECTION MEASURES AS PER THE ARBORICULTURAL IMPACT ASSESSMENT PREPARED BY GREEN TREE CONSULTANCY, REF AIA-P107-V2.0 SECTION 9.
4. ACID SULPHATE SOILS MANAGEMENT PLAN (ASSMP) PROCEDURES ARE TO BE IMPLEMENTED AS PER THE RECOMMENDATIONS BY JBS&G AUSTRALIA PTY LTD RE: ACID SULPHATE MANAGEMENT PLAN, REF: 58037-130619, 22 JULY 2020.

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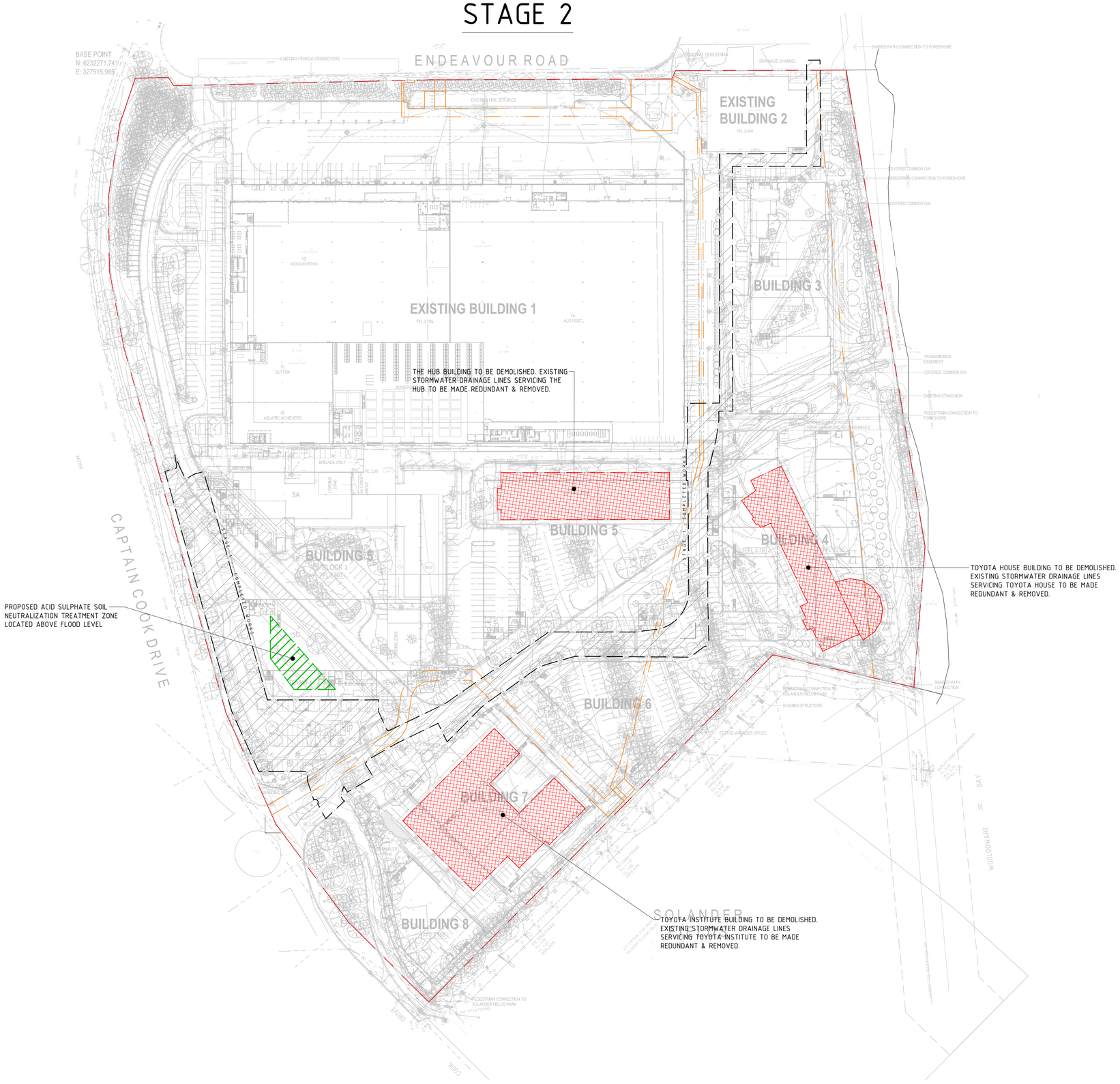
DRAWING TITLE
MASTER PLAN
CONSTRUCTION MANAGEMENT
PLAN SHEET 1

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

PROJECT No	SCALE	SIZE	REVISION
23106	1:100	A1	C

DRAWING No DA1501

STAGE 2



NOTES

1. REFER TO DA1501 FOR LEGENDS & GENERAL NOTES

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DRAWING TITLE
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CONSTRUCTION MANAGEMENT
PLAN SHEET 2

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SCALE	SIZE	REVISION
1:100	A1	C

PROJECT No 23106

DRAWING No DA1502

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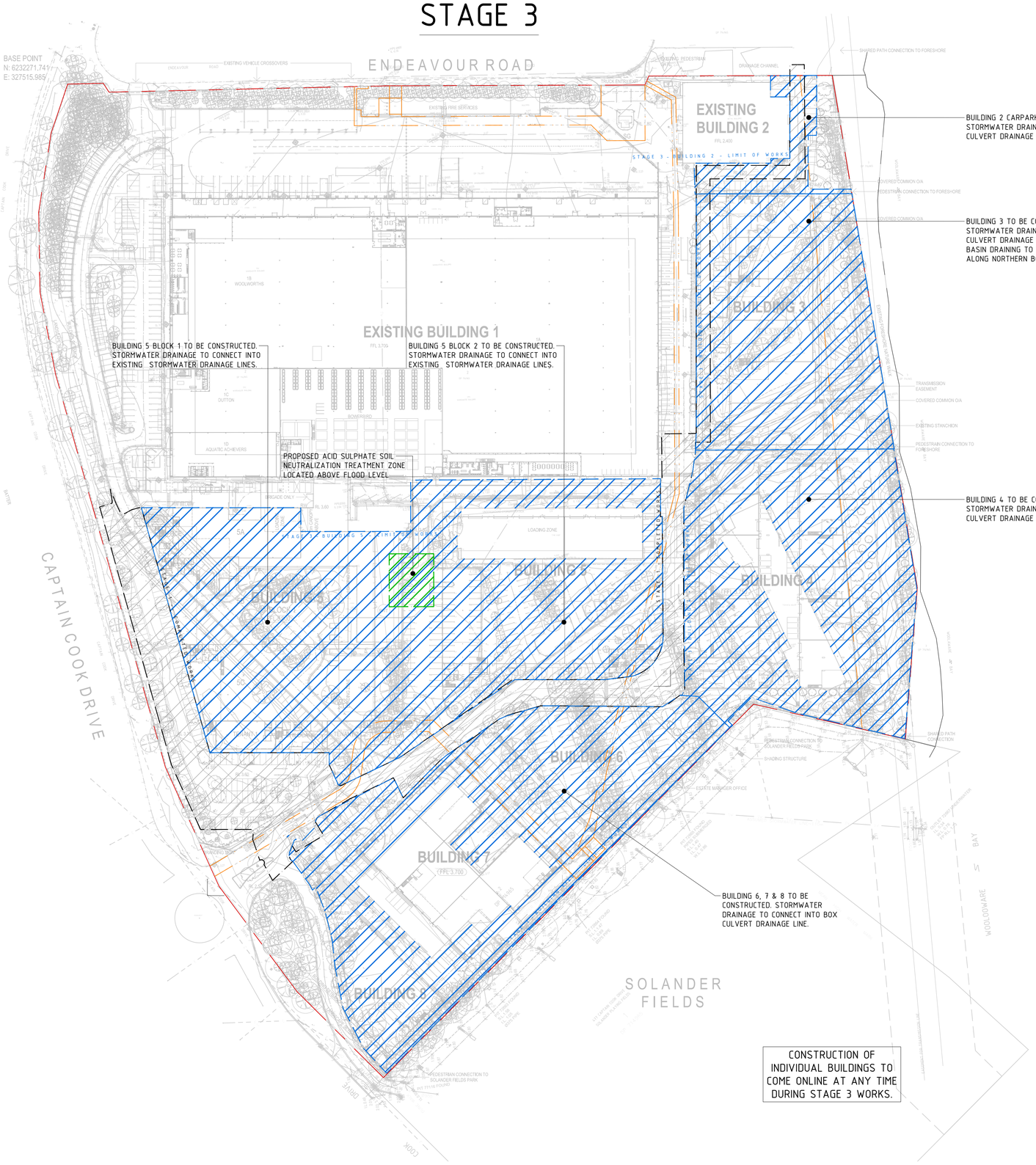
DEVELOPMENT APPLICATION ISSUE

STAGE 3



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22.08.23	90% ISSUE	MW	1
15.09.23	DA ISSUE	MY	A
11.10.24	RESPONSE TO COUNCIL COMMENTS	MY	B
10.02.25	RESPONSE TO COUNCIL COMMENTS	MY	C

KEY PLAN

STRUCTURAL
–

MECHANICAL
–

ELECTRICAL
–

CIVIL
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BUILDER

CLIENT
Aliro

ARCHITECT
watson young

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13 ENDEAVOUR ROAD, CARINGBAH

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DRAWING TITLE
MASTER PLAN
CONSTRUCTION MANAGEMENT
PLAN SHEET 3

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

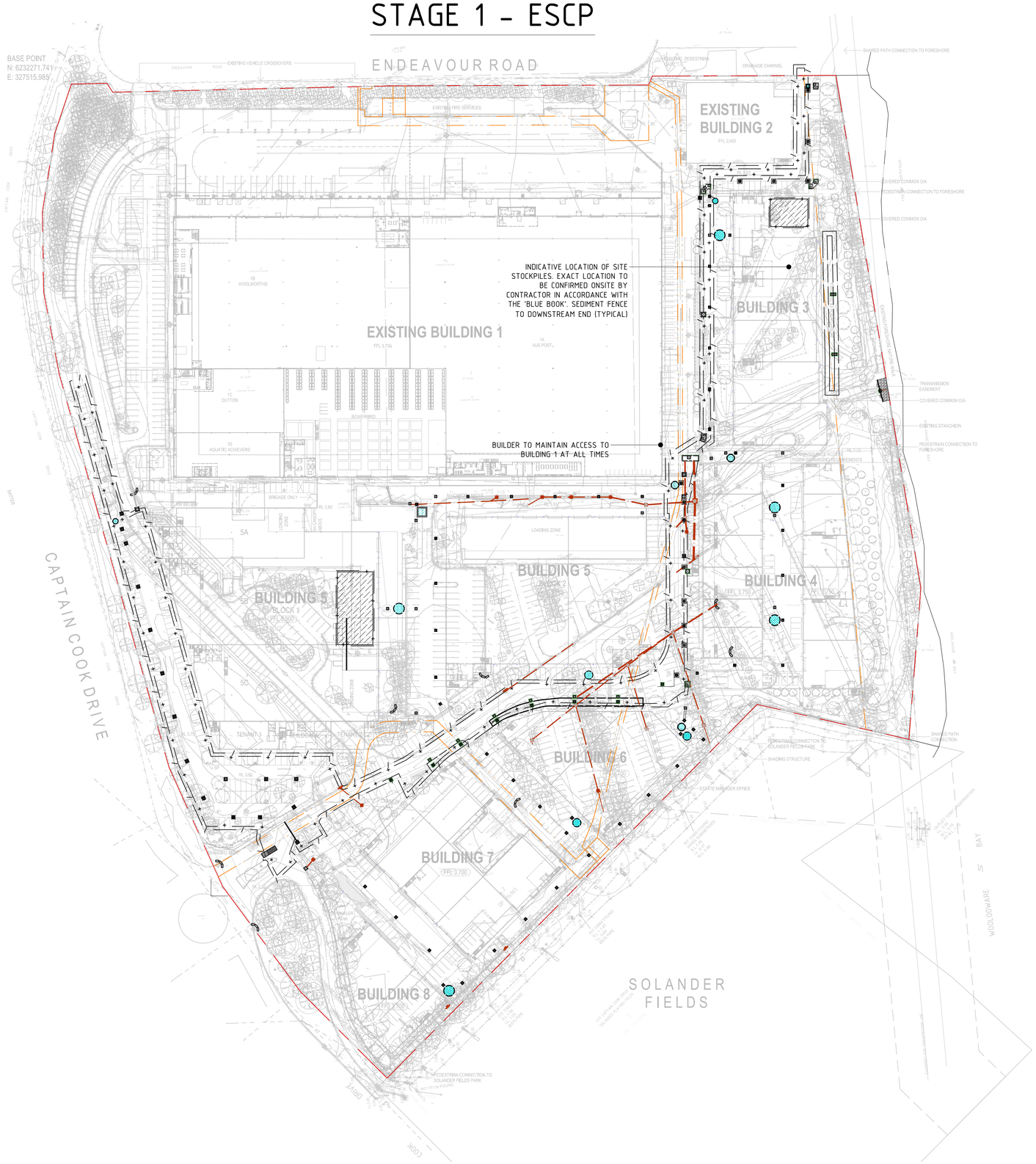
SCALE	SIZE	REVISION
1:100	A1	C

PROJECT No 23106

DRAWING No DA1503

DEVELOPMENT APPLICATION ISSUE

STAGE 1 - ESCP



LEGEND

- SITE SECURITY FENCE
- SEDIMENT FENCE
- STABILISED SITE ACCESS
- SITE STOCKPILE
- MESH AND GRAVEL INLET FILTER
- GEOTEXTILE INLET FILTER

NOT TO SCALE

DEVELOPMENT APPLICATION ISSUE

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10.02.25	RESPONSE TO COUNCIL COMMENTS	MY	C

KEY PLAN

STRUCTURAL
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MECHANICAL
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ELECTRICAL
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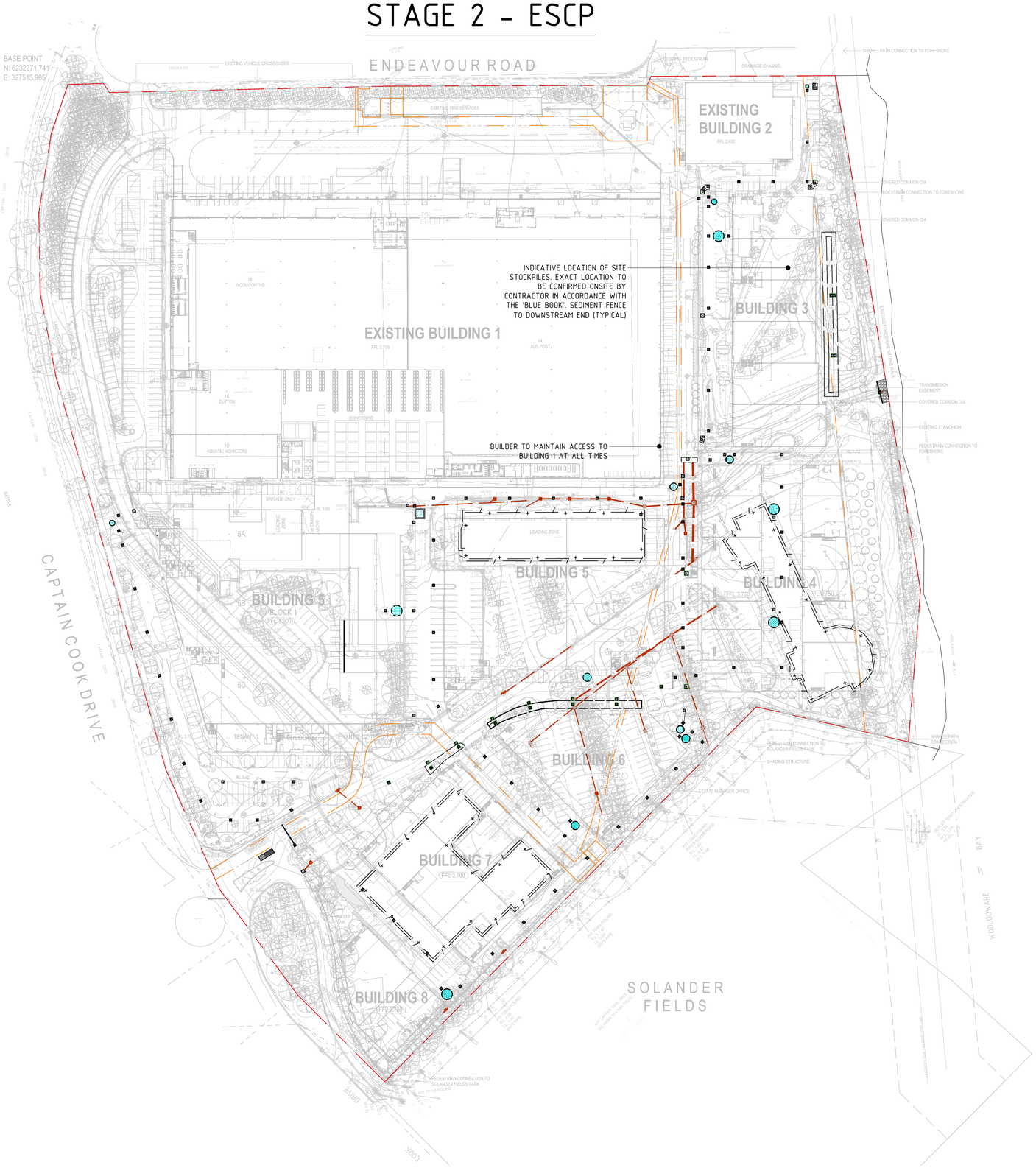
DRAWING TITLE
MASTER PLAN
CONCEPT SEDIMENT & EROSION CONTROL PLAN SHEET 1

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

SCALE	SIZE	REVISION
1:100	A1	C

PROJECT No	DRAWING No
23106	DA2101

STAGE 2 - ESCP



NOTES

1. REFER TO DA2101 FOR LEGENDS & GENERAL NOTES

NOT TO SCALE

DEVELOPMENT APPLICATION ISSUE

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KEY PLAN

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-

MECHANICAL
-

ELECTRICAL
-

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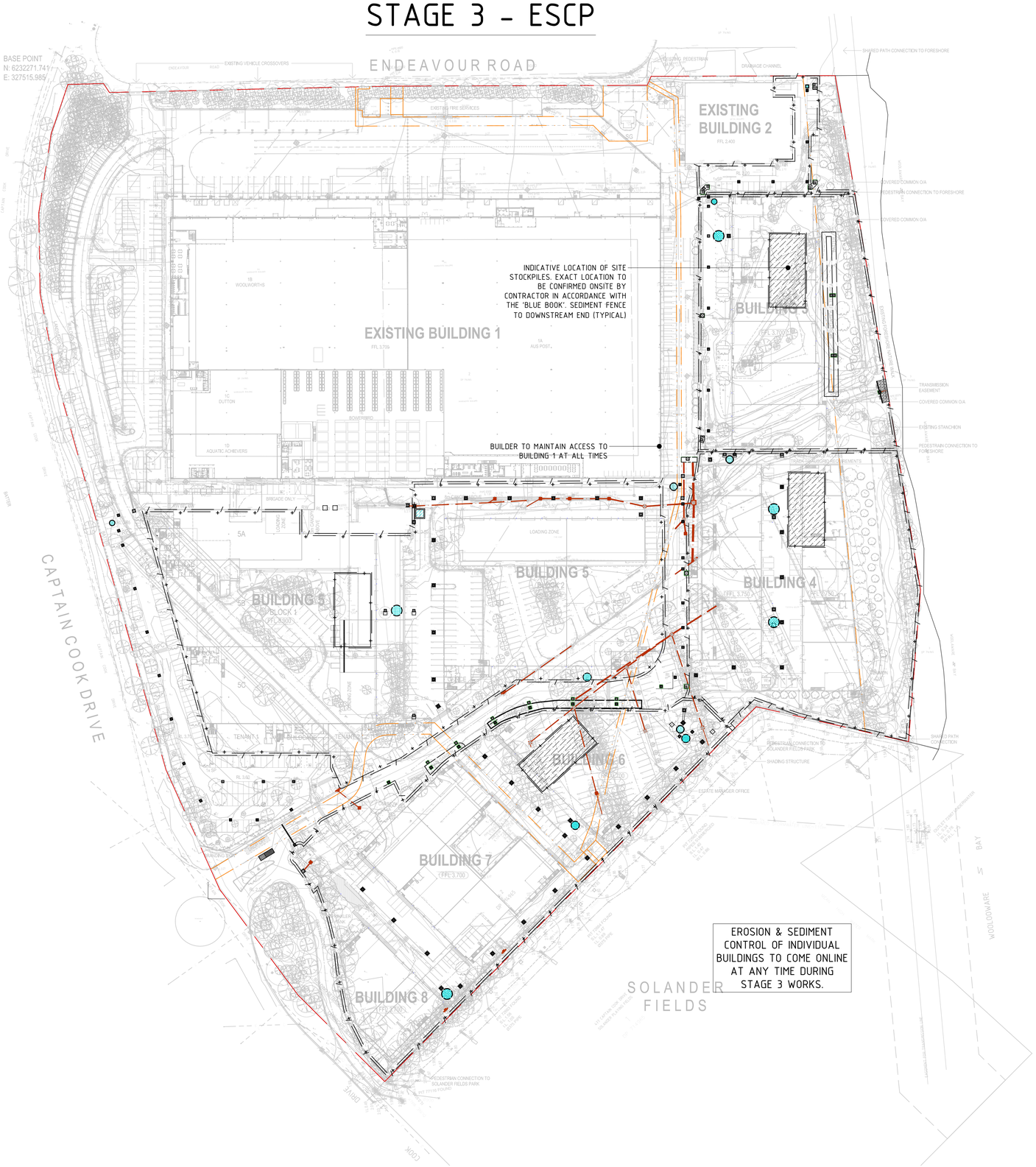
DRAWING TITLE
MASTER PLAN
CONCEPT SEDIMENT & EROSION CONTROL PLAN SHEET 2

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

SCALE	SIZE	REVISION
1:100	A1	C

PROJECT No	DRAWING No
23106	DA2102

STAGE 3 - ESCP



NOT TO SCALE

NOTES

1. REFER TO DA2101 FOR LEGENDS & GENERAL NOTES

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KEY PLAN

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DRAWING TITLE
MASTER PLAN
CONCEPT SEDIMENT & EROSION
CONTROL PLAN SHEET 3

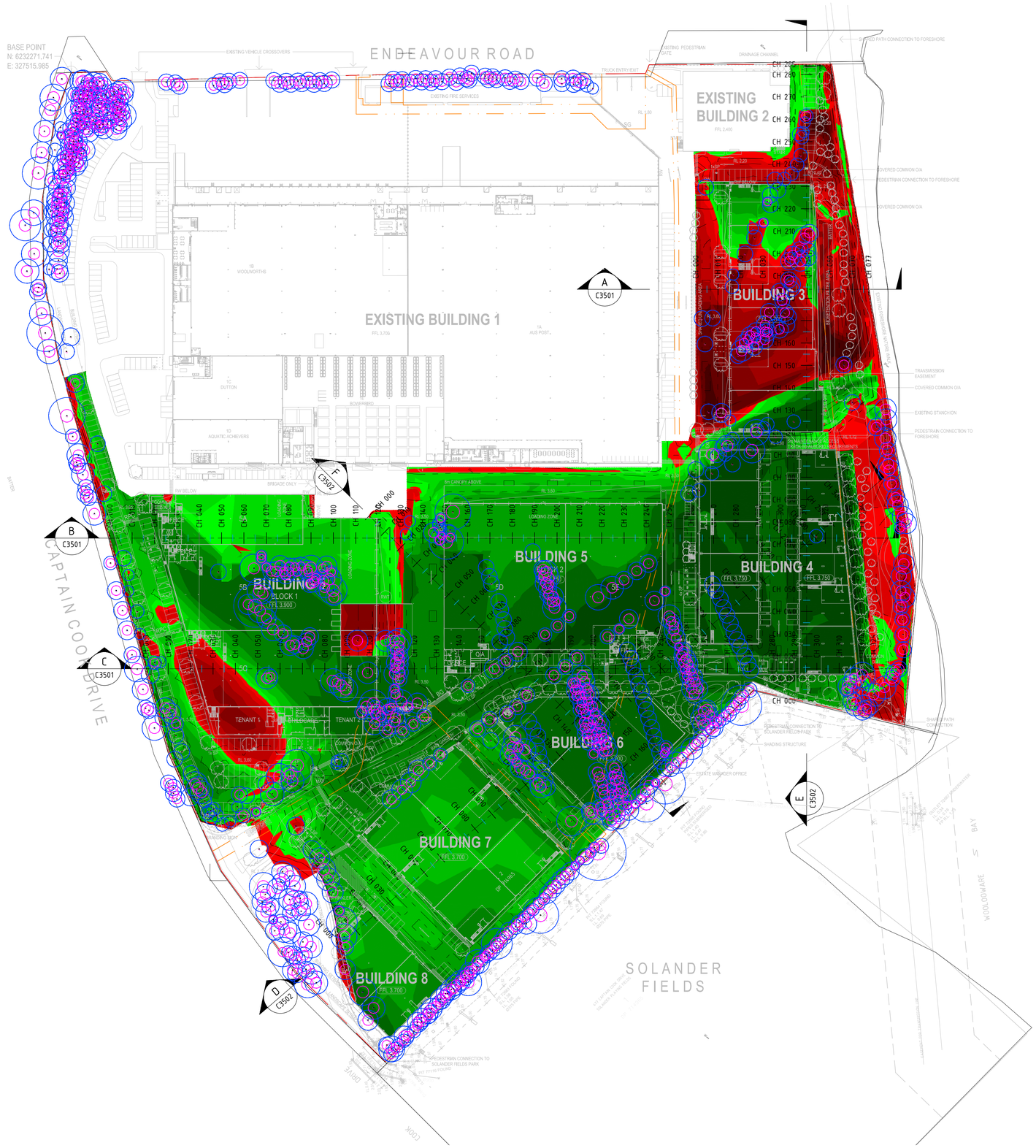
DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

SCALE	SIZE	REVISION
1:100	A1	C

PROJECT No 23106

DRAWING No DA2103

DEVELOPMENT APPLICATION ISSUE



NOT TO SCALE

LEGEND

CUT:	FILL:
-5.0 TO -2.5m	0.0 TO 0.1m
-2.5 TO -1.5m	0.1 TO 0.25m
-1.5 TO -1.0m	0.25 TO 0.5m
-1.0 TO -0.75m	0.5 TO 0.75m
-0.75 TO -0.5m	0.75 TO 1.0m
-0.5 TO -0.25m	1.0 TO 1.5m
-0.25 TO -0.1m	1.5 TO 2.5m
-0.1 TO 0.0m	2.5 TO 5.0m

BULK EARTHWORKS NOTES

1. BULK EARTHWORKS ARE TO BE TO BE UNDERTAKEN IN ACCORDANCE WITH AS3798-2007, GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS.
2. THE CONTRACTOR SHALL REFER TO THE GEOTECHNICAL INVESTIGATION REPORT FOR SPECIFIC SITE CONDITIONS AND WORKS METHODOLOGY.
3. CUT TO FILL DEPTHS SHOWN ARE BASED ON LEVELS AND PAVEMENT THICKNESS' IN COMPARISON TO SURVEY REFERENCED IN C1201 RESULTING IN THE FOLLOWING CUT TO FILL VOLUMES:

   CUT = 6,420m³
   FILL = 46,443m³
   TOTAL CUT / FILL = 40,022m³

4. STRIPPING OF THE FOLLOWING SURFACES HAS BEEN TAKEN INTO ACCOUNT IN THE ABOVE VOLUME CALCULATIONS:
   - EXISTING EXTERNAL HARDSTAND = 200mm
   - EXISTING WAREHOUSE/OFFICE SLABS = 200mm
   - EXISTING VEGETATION = 200mm
5. VOLUMES DETAILED ABOVE DO NOT TAKE INTO ACCOUNT BULKING & COMPACTION OF THE MATERIAL, TEMPORARY SEDIMENT BASIN, DETAILED EXCAVATION, TRENCHING EXCAVATION, GROUND IMPROVEMENT WORKS, OR PAVEMENT PRE-LOADING
6. VOLUMES BASED ON THE FOLLOWING PAVEMENT THICKNESS' TAKEN FROM FINISHED SURFACE:
   - WAREHOUSE BUILDING PAD
     270mm (170mm SLAB + 100mm SUB-BASE)
   - OFFICE BUILDING PAD
     270mm (170mm SLAB + 100mm SUB-BASE)
   - HARDSTAND AREA
     270mm (170mm SLAB + 100mm SUB-BASE)
   - LANDSCAPE AREAS
     300mm (TOPSOIL OR OTHER LANDSCAPING)
   - ASPHALT ROAD AREA
     410mm (30mm ASPHALT + 180mm BASE + 200mm SUB-BASE)
6. THE CONTRACTOR SHALL VERIFY LEVELS PRIOR TO CONSTRUCTION COMMENCEMENT, ANY DISCREPANCIES SHALL BE NOTIFIED TO THE ENGINEER OR SUPERINTENDENT FOR CLARIFICATION.
7. REFER TO C3501 FOR BULK EARTHWORKS SECTIONS

DEVELOPMENT APPLICATION ISSUE

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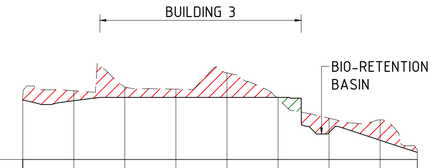
DRAWING TITLE
MASTER PLAN
CONCEPT BULK EARTHWORKS CUT TO FILL PLAN

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

SCALE	SIZE	REVISION
1:100	A1	C

PROJECT No 23106

DRAWING No DA3101

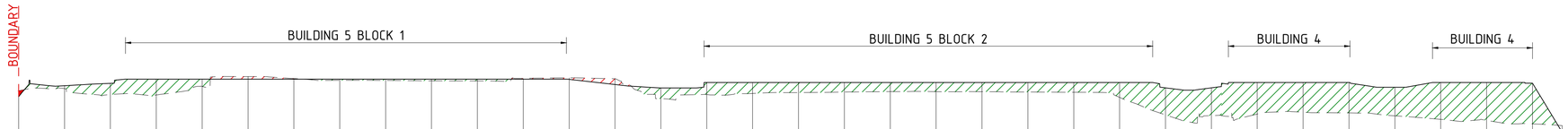


DATUM R.L. 1.000

BULK EARTHWORKS DESIGN SURFACE LEVEL	3.330	3.302	3.430	3.430	3.430	3.430	2.055	1.752	1.277
EXISTING SURFACE LEVEL	3.535	3.692	3.832	3.753	4.391	3.372	2.614	2.548	1.377
CHAINAGE	0.000	10.000	20.000	30.000	40.000	50.000	60.000	70.000	77.283

BULK EARTHWORKS SECTION (A / C3101)

HOZ SCALE 1:600
VERT SCALE 1:100

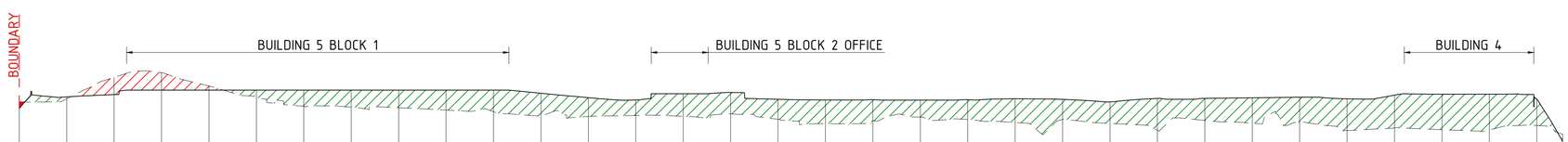


DATUM R.L. 1.000

BULK EARTHWORKS DESIGN SURFACE LEVEL	2.867	3.342	3.444	3.630	3.630	3.630	3.630	3.630	3.630	3.630	3.630	3.630	3.617	3.394	3.241	3.480	3.480	3.480	3.480	3.480	3.480	3.480	3.480	3.480	3.480	3.249	3.247	3.480	3.480	3.480	3.275	3.480	3.480	3.450	1.300
EXISTING SURFACE LEVEL	3.115	3.214	2.957	2.936	3.310	3.740	3.653	3.576	3.572	3.557	3.552	3.661	3.683	3.644	2.771	2.958	3.002	3.042	3.066	3.083	3.084	3.082	3.063	3.055	2.831	2.066	2.034	2.102	2.184	2.153	2.026	1.870	1.825	1.673	1.595
CHAINAGE	0.000	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	180.000	190.000	200.000	210.000	220.000	230.000	240.000	250.000	260.000	270.000	280.000	290.000	300.000	310.000	320.000	330.000	336.489

BULK EARTHWORKS SECTION (B / C3101)

HOZ SCALE 1:600
VERT SCALE 1:100



DATUM R.L. 1.000

BULK EARTHWORKS DESIGN SURFACE LEVEL	2.857	3.345	3.443	3.630	3.630	3.630	3.630	3.630	3.630	3.630	3.630	3.497	3.313	3.216	3.480	3.531	3.243	3.214	3.227	3.210	3.227	3.264	3.241	3.131	3.281	3.282	3.306	3.330	3.262	3.417	3.457	3.457	3.247	1.480
EXISTING SURFACE LEVEL	3.137	3.263	4.169	4.367	3.803	3.351	2.941	2.912	2.886	2.787	2.717	2.534	2.519	2.560	2.523	2.629	2.403	2.221	2.332	2.489	2.390	2.264	2.392	2.221	1.933	2.350	2.234	2.281	1.927	2.033	1.960	1.951	2.137	1.777
CHAINAGE	0.000	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	180.000	190.000	200.000	210.000	220.000	230.000	240.000	250.000	260.000	270.000	280.000	290.000	300.000	310.000	320.000	325.439

BULK EARTHWORKS SECTION (C / C3101)

HOZ SCALE 1:600
VERT SCALE 1:100

LEGEND

- BULK EARTHWORKS - CUT AREA
- BULK EARTHWORKS - FILL AREA

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MECHANICAL
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DRAWING TITLE
MASTER PLAN
CONCEPT BULK EARTHWORKS
SECTIONS SHEET 1

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

PROJECT No	SCALE	SIZE	REVISION
23106	1:100	A1	C

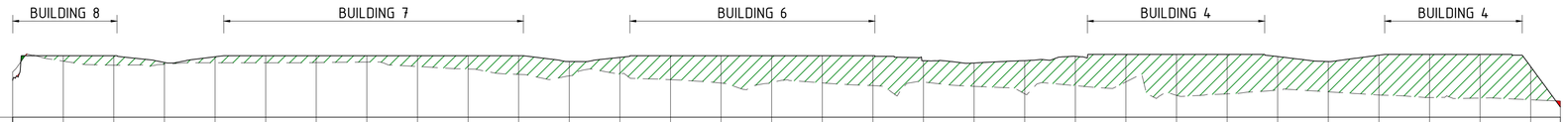
DRAWING No DA3501

DEVELOPMENT APPLICATION ISSUE

0 0.4 1 2
1:20

LEGEND

- BULK EARTHWORKS - CUT AREA
- BULK EARTHWORKS - FILL AREA

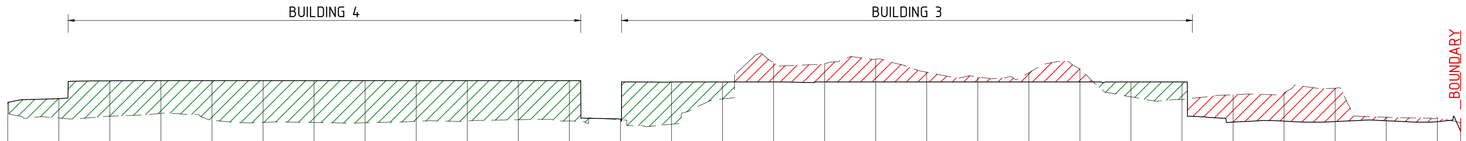


DATUM R.L. 1.000

BULK EARTHWORKS DESIGN SURFACE LEVEL	2.451	3.430	3.430	3.159	3.387	3.430	3.430	3.430	3.430	3.430	3.430	3.198	3.359	3.430	3.430	3.430	3.430	3.430	3.229	3.139	3.234	3.404	3.480	3.480	3.480	3.392	3.197	3.449	3.480	3.480	2.995	1.400
EXISTING SURFACE LEVEL	2.787	3.212	3.051	3.089	3.148	3.148	3.155	3.175	3.000	2.901	2.689	2.631	2.704	2.482	2.345	2.364	2.354	2.247	2.386	2.217	1.922	2.244	2.393	1.861	1.917	2.069	2.001	1.877	1.775	1.754	1.686	1.637
CHAINAGE	0.000	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	180.000	190.000	200.000	210.000	220.000	230.000	240.000	250.000	260.000	270.000	280.000	290.000	300.000	305.858

BULK EARTHWORKS SECTION D / C3101

HOZ SCALE 1:600
VERT SCALE 1:100

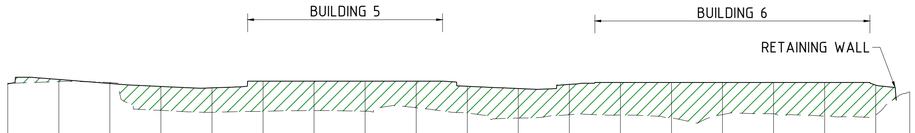


DATUM R.L. 1.000

BULK EARTHWORKS DESIGN SURFACE LEVEL	2.626	2.772	3.471	3.480	3.480	3.480	3.480	3.480	3.480	3.480	3.480	3.480	1.974	3.430	3.430	3.430	3.430	3.430	3.430	3.430	3.430	3.430	3.430	3.430	1.855	1.892	1.874	1.908	1.873	1.495
EXISTING SURFACE LEVEL	2.584	2.016	2.084	2.195	1.923	1.844	1.841	1.828	1.885	1.891	1.947	1.899	1.950	1.770	2.763	4.182	4.142	4.321	3.808	3.626	3.783	3.931	2.841	2.743	2.927	2.998	3.182	2.045	2.022	1.764
CHAINAGE	0.000	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	180.000	190.000	200.000	210.000	220.000	230.000	240.000	250.000	260.000	270.000	280.000	284.580

BULK EARTHWORKS SECTION E / C3101

HOZ SCALE 1:600
VERT SCALE 1:100



DATUM R.L. 1.000

BULK EARTHWORKS DESIGN SURFACE LEVEL	3.371	3.547	3.388	3.272	3.217	3.480	3.480	3.480	3.480	3.279	3.191	3.355	3.430	3.430	3.430	3.430	3.430	3.325	
EXISTING SURFACE LEVEL	3.393	3.463	3.427	2.336	2.257	2.298	2.324	2.299	2.440	2.233	2.033	2.166	2.152	2.049	2.169	2.204	2.109	2.154	3.054
CHAINAGE	0.000	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	176.673

BULK EARTHWORKS SECTION F / C3101

HOZ SCALE 1:600
VERT SCALE 1:100

0 0.4 1 2
1:20

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22.08.23	90% ISSUE	MW	1
15.09.23	DA ISSUE	MY	A
11.10.24	RESPONSE TO COUNCIL COMMENTS	MY	B
10.02.25	RESPONSE TO COUNCIL COMMENTS	MY	C

KEY PLAN

STRUCTURAL
-

MECHANICAL
-

ELECTRICAL
-

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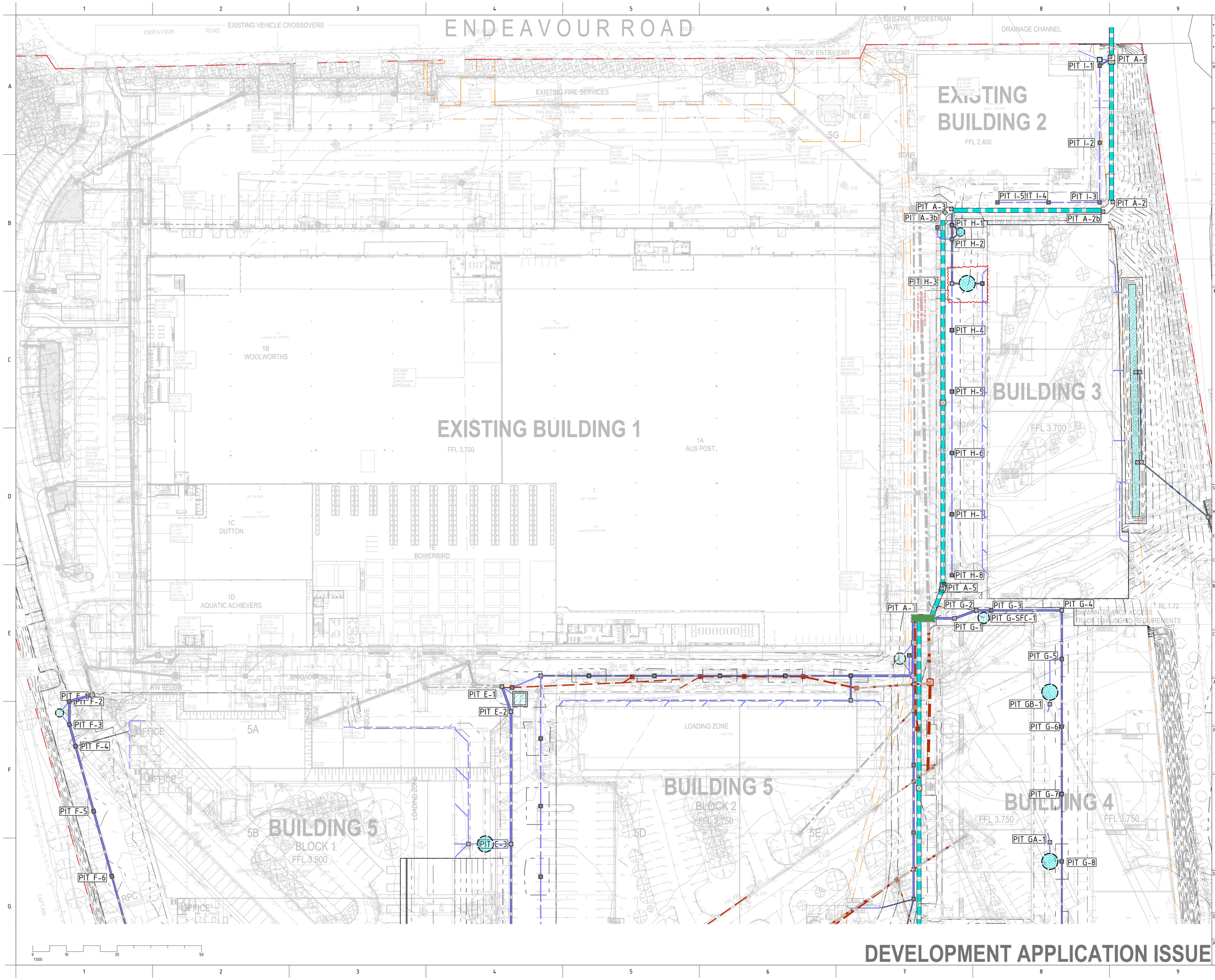
DRAWING TITLE
MASTER PLAN
CONCEPT BULK EARTHWORKS
SECTIONS SHEET 2

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

PROJECT No	SCALE	SIZE	REVISION
23106	1:100	A1	C

DRAWING No DA3502



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10.07.23	50% ISSUE	JK	3
28.07.23	75% ISSUE	JK	4
22.08.23	90% ISSUE	MW	5
15.09.23	DA ISSUE	MY	A
11.10.24	RESPONSE TO COUNCIL COMMENTS	MY	B
10.02.25	RESPONSE TO COUNCIL COMMENTS	MY	C

KEY PLAN

STRUCTURAL
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MECHANICAL
-

ELECTRICAL
-

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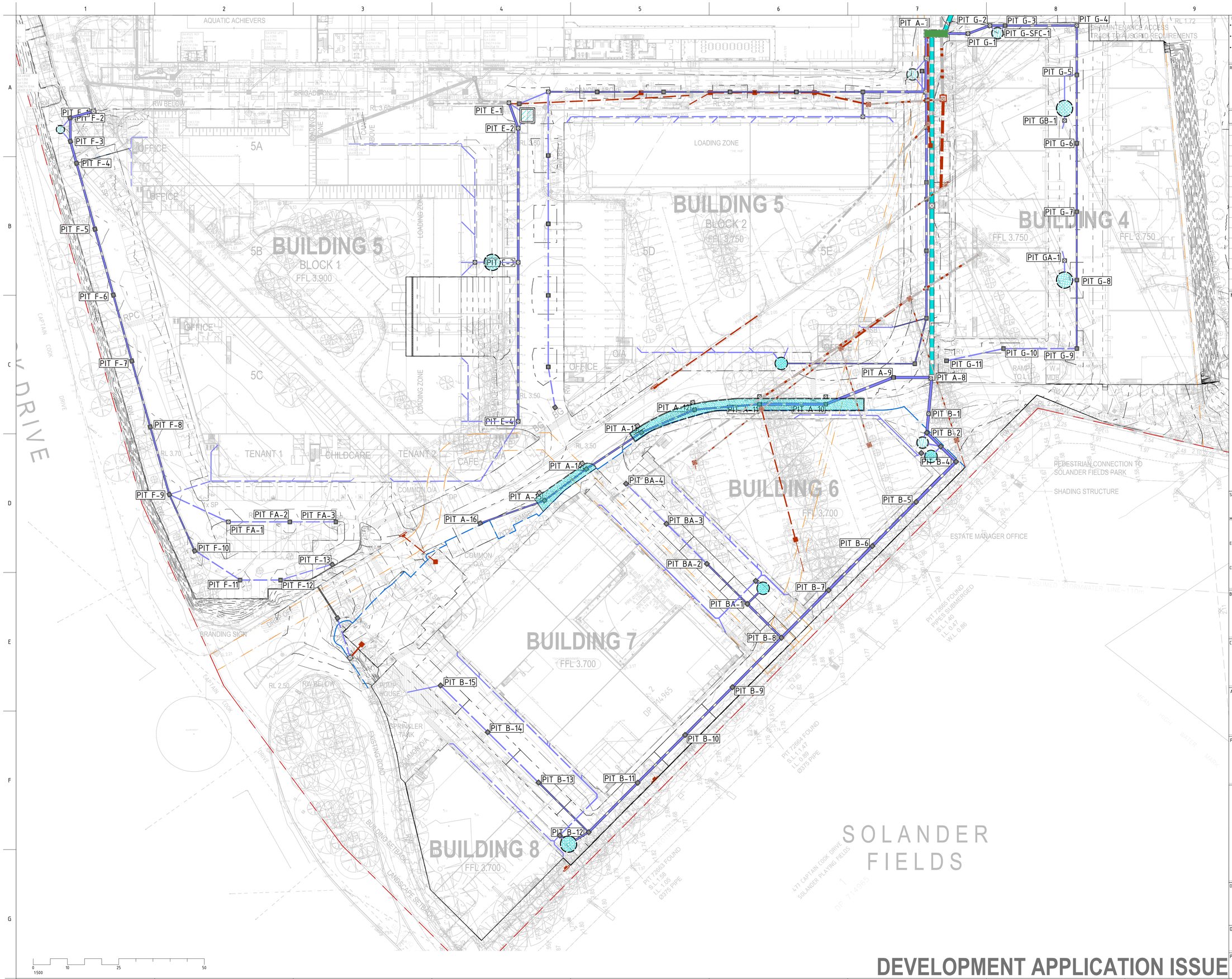
DRAWING TITLE
MASTER PLAN
CONCEPT STORMWATER &
GRADING PLAN - SHEET 1

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW
	SCALE 1:500	SIZE A1	REVISION
PROJECT No 23106	DRAWING No DA4101		C

DEVELOPMENT APPLICATION ISSUE



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REFERENCES

DATE	AMENDMENT	INIT	REV
11.10.24	RESPONSE TO COUNCIL COMMENTS	MY	1
10.02.25	RESPONSE TO COUNCIL COMMENTS	MY	A

KEY PLAN

STRUCTURAL
-

MECHANICAL
-

ELECTRICAL
-

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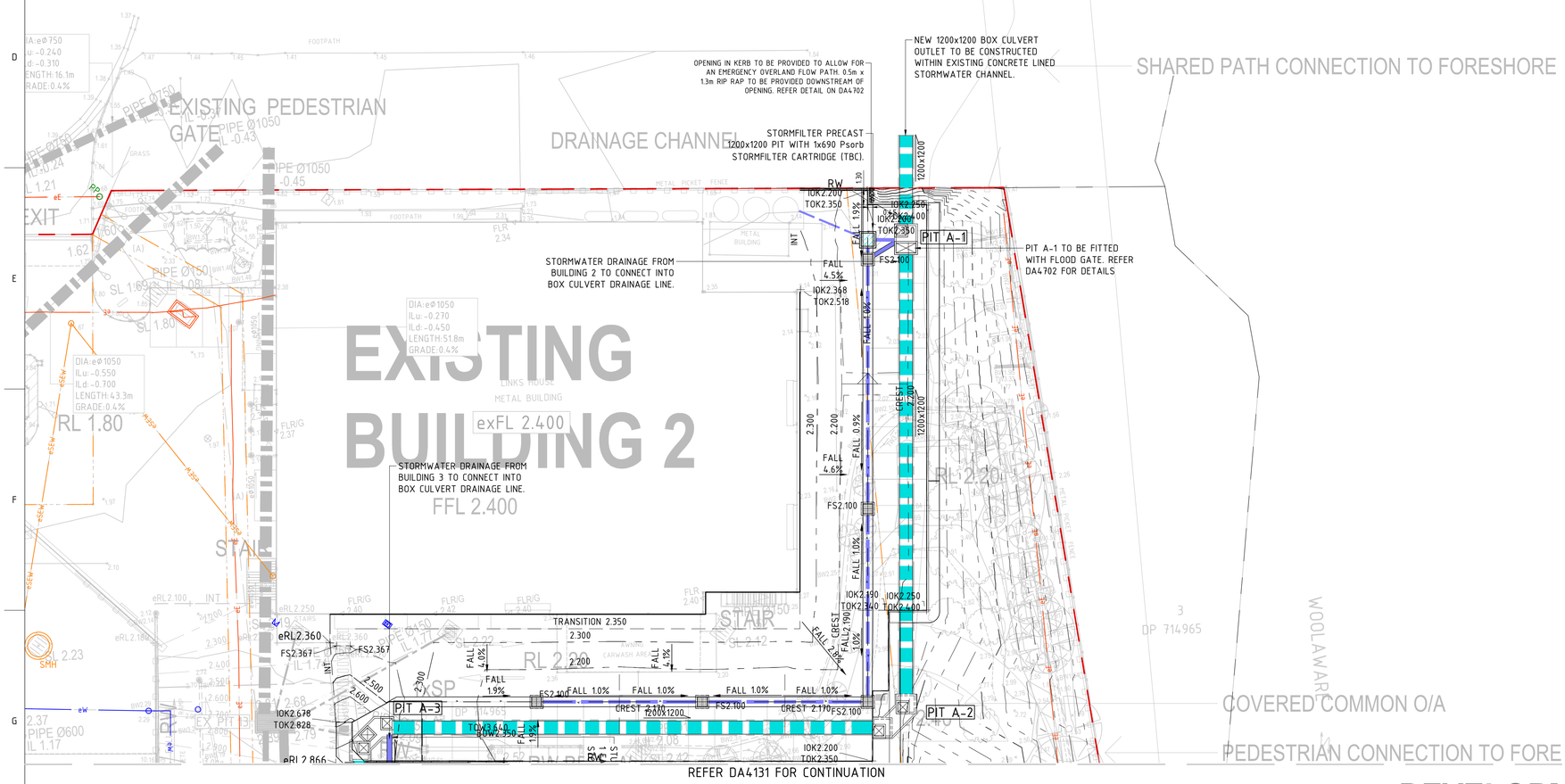
DRAWING TITLE
MASTER PLAN
CONCEPT STORMWATER &
GRADING PLAN - SHEET 2

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

PROJECT No	SCALE	SIZE	REVISION
23106	1:500	A1	A

DRAWING No DA4102

DEVELOPMENT APPLICATION ISSUE



LEGEND

20.000	FINISHED SURFACE MAJOR CONTOUR LINE
20.100	FINISHED SURFACE MINOR CONTOUR LINE
20.150	FINISHED SURFACE CREST/TRANSITION LINE
20.100	EXISTING CONTOUR LINE
exFL 25.000	FLOOR LEVEL OF EXISTING BUILDING
+ FS55.555	FINISHED SURFACE LEVEL
+ eRL55.555	EXISTING REDUCED SURFACE LEVEL
+ TOW55.555	TOP OF WALL LEVEL
+ BOW55.555	BOTTOM OF WALL LEVEL
+ TOK55.555	TOP OF KERB LEVEL
+ IOK55.555	INVERT OF KERB LEVEL
	PROPERTY BOUNDARY LINE
	EASEMENT BOUNDARY LINE
IK	PROPOSED INTEGRAL KERB - REFER DETAIL
FALL 5.0%	DIRECTION OF SURFACE FALL
FALL 1:20	
RW	RETAINING WALL
	LIMIT OF WORKS
INT	PAVEMENT INTERFACE - MATCH NEATLY TO EXISTING LEVELS
	PROPOSED STORMWATER PIPE (≤Ø300)
	EXISTING STORMWATER PIPE
	EXISTING STORMWATER PIPE TO BE REMOVED OR REDUNDANT
	PROPOSED STORMWATER BOX CULVERT
	DRAINAGE SWALE
	PROPOSED STORMWATER INLET PIT (GRATED COVER)
	PROPOSED STORMWATER JUNCTION PIT (SEALED COVER)
	EXISTING KERB INLET PIT
	EXISTING STORMWATER INLET PIT (LEFT: GRATED COVER - RIGHT:SEALED COVER)
	EXISTING STORMWATER PIT TO BE REMOVED
	TREATMENT FILTER CHAMBER/DEVICE
Ø225	PIPE FLOW DIRECTION AND SIZE

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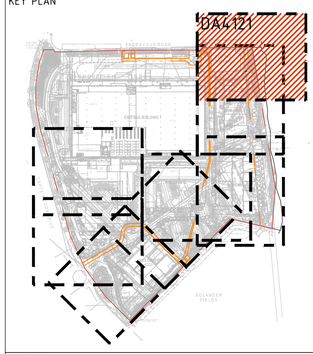
22.08.23	90% ISSUE	MW	5
25.08.23	90% ISSUE	MY	6
15.09.23	DA ISSUE	MY	A
12.08.24	PIT NAMES ADDED	MW	B
11.10.24	RESPONSE TO COUNCIL COMMENTS	MY	C

KEY PLAN



STRUCTURAL
-

MECHANICAL
-

ELECTRICAL
-

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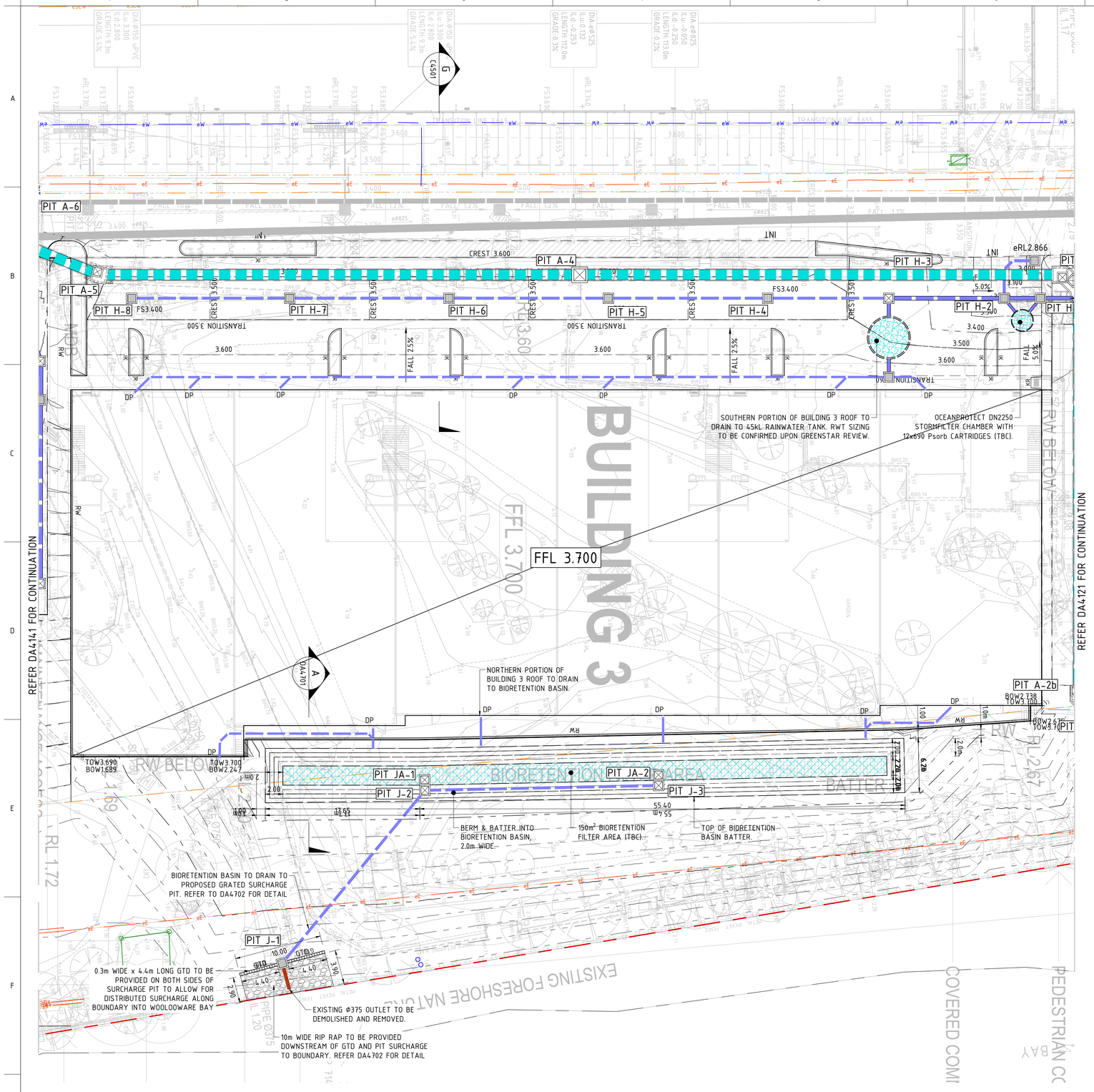
DRAWING TITLE
BUILDING 2
CONCEPT STORMWATER &
GRADING PLAN

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

PROJECT No	SCALE	SIZE	REVISION
23106	1:250	A1	C

DRAWING No DA4121

DEVELOPMENT APPLICATION ISSUE



LEGEND

20.000	FINISHED SURFACE MAJOR CONTOUR LINE
20.100	FINISHED SURFACE MINOR CONTOUR LINE
20.150	FINISHED SURFACE CREST/TRANSITION LINE
20.100	EXISTING CONTOUR LINE
exFL 25.000	FLOOR LEVEL OF EXISTING BUILDING
+ FS55.555	FINISHED SURFACE LEVEL
+ eRL55.555	EXISTING REDUCED SURFACE LEVEL
+ TOW55.555	TOP OF WALL LEVEL
+ BOW55.555	BOTTOM OF WALL LEVEL
+ TOK55.555	TOP OF KERB LEVEL
+ IOK55.555	INVERT OF KERB LEVEL
	PROPERTY BOUNDARY LINE
	EASEMENT BOUNDARY LINE
IK	PROPOSED INTEGRAL KERB - REFER DETAIL
FALL 5.0% / FALL 1:20	DIRECTION OF SURFACE FALL
RW	RETAINING WALL
	LIMIT OF WORKS
INT	PAVEMENT INTERFACE - MATCH NEATLY TO EXISTING LEVELS
	PROPOSED STORMWATER PIPE (≤Ø300)
	EXISTING STORMWATER PIPE
	EXISTING STORMWATER PIPE TO BE REMOVED OR REDUNDANT
	PROPOSED STORMWATER BOX CULVERT
	DRAINAGE SWALE
	PROPOSED STORMWATER INLET PIT (GRATED COVER)
	PROPOSED STORMWATER JUNCTION PIT (SEALED COVER)
	EXISTING KERB INLET PIT
	EXISTING STORMWATER INLET PIT (LEFT: GRATED COVER - RIGHT:SEALED COVER)
	EXISTING STORMWATER PIT TO BE REMOVED
	TREATMENT FILTER CHAMBER/DEVICE
Ø225	PIPE FLOW DIRECTION AND SIZE

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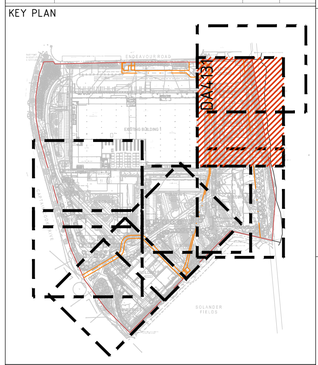
28.07.23	75% ISSUE	JK	4
22.08.23	90% ISSUE	MW	5
25.08.23	90% ISSUE	MY	6
15.09.23	DA ISSUE	MY	A
12.08.24	PIT NAMES ADDED	MW	B
11.10.24	RESPONSE TO COUNCIL COMMENTS	MY	C

KEY PLAN



STRUCTURAL
-

MECHANICAL
-

ELECTRICAL
-

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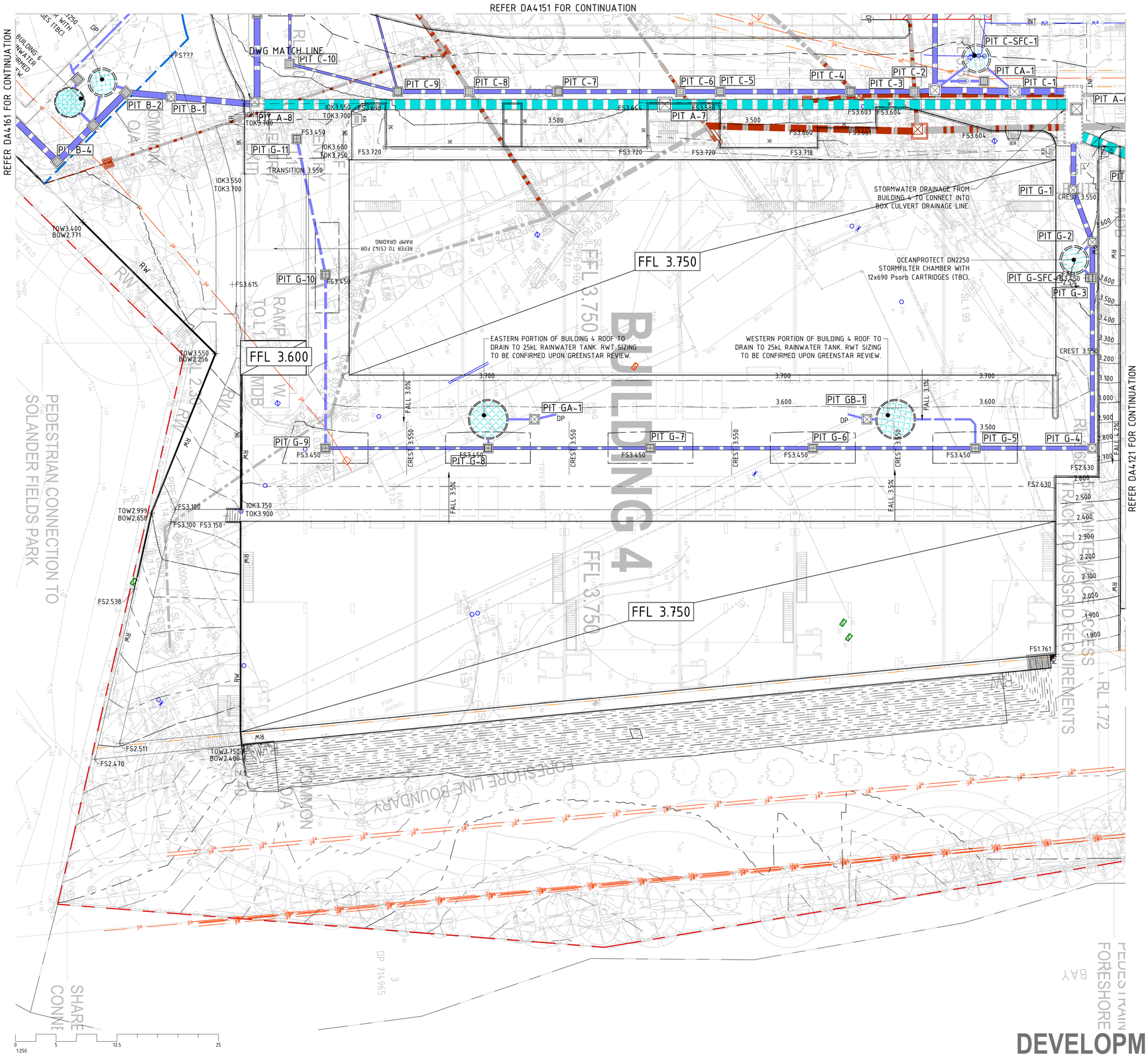
DRAWING TITLE
BUILDING 3
CONCEPT STORMWATER &
GRADING PLAN

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

PROJECT No	SCALE	SIZE	REVISION
23106	1:250	A1	C

DRAWING No DA4131

DEVELOPMENT APPLICATION ISSUE



LEGEND

20.000	FINISHED SURFACE MAJOR CONTOUR LINE
20.100	FINISHED SURFACE MINOR CONTOUR LINE
20.150	FINISHED SURFACE CREST/TRANSITION LINE
20.100	EXISTING CONTOUR LINE
exFL 25.000	FLOOR LEVEL OF EXISTING BUILDING
+ FS55.555	FINISHED SURFACE LEVEL
+ eRL55.555	EXISTING REDUCED SURFACE LEVEL
+ TOW55.555	TOP OF WALL LEVEL
+ BOW55.555	BOTTOM OF WALL LEVEL
+ TOK55.555	TOP OF KERB LEVEL
+ IOK55.555	INVERT OF KERB LEVEL
	PROPERTY BOUNDARY LINE
	EASEMENT BOUNDARY LINE
IK	PROPOSED INTEGRAL KERB - REFER DETAIL
FALL 5.0% / FALL 1:20	DIRECTION OF SURFACE FALL
RW	RETAINING WALL
	LIMIT OF WORKS
INT	PAVEMENT INTERFACE - MATCH NEATLY TO EXISTING LEVELS
	PROPOSED STORMWATER PIPE (≤Ø300)
	EXISTING STORMWATER PIPE
	EXISTING STORMWATER PIPE TO BE REMOVED OR REDUNDANT
	PROPOSED STORMWATER BOX CULVERT
	DRAINAGE SWALE
	PROPOSED STORMWATER INLET PIT (GRATED COVER)
	PROPOSED STORMWATER JUNCTION PIT (SEALED COVER)
	EXISTING KERB INLET PIT
	EXISTING STORMWATER INLET PIT (LEFT: GRATED COVER - RIGHT:SEALED COVER)
	EXISTING STORMWATER PIT TO BE REMOVED
	TREATMENT FILTER CHAMBER/DEVICE
Ø225	PIPE FLOW DIRECTION AND SIZE

IMPORTANT

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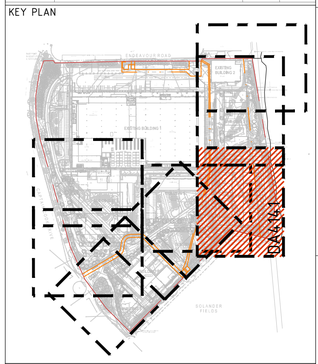
25.08.23	90% ISSUE	MY	6
15.09.23	DA ISSUE	MY	A
12.08.24	PIT NAMES ADDED	MW	B
11.10.24	RESPONSE TO COUNCIL COMMENTS	MY	C

KEY PLAN



STRUCTURAL
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MECHANICAL
-

ELECTRICAL
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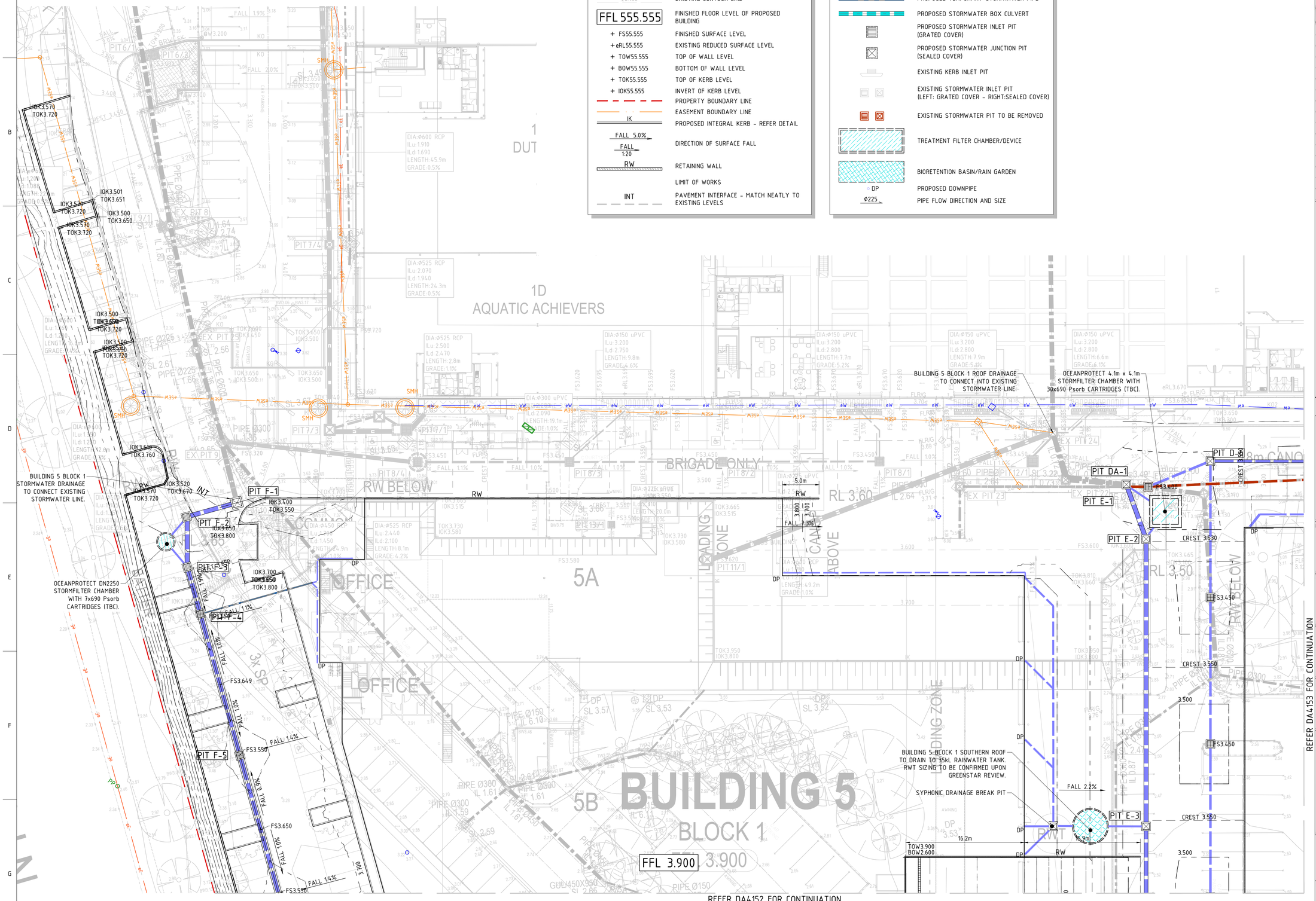
DRAWING TITLE
BUILDING 4
CONCEPT STORMWATER &
GRADING PLAN

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

PROJECT No	SCALE	SIZE	REVISION
23106	1:250	A1	C

DRAWING No DA4141

DEVELOPMENT APPLICATION ISSUE



LEGEND

20.000	FINISHED SURFACE MAJOR CONTOUR LINE
20.100	FINISHED SURFACE MINOR CONTOUR LINE
20.150	FINISHED SURFACE CREST/TRANSITION LINE
20.100	EXISTING CONTOUR LINE
FFL 555.555	FINISHED FLOOR LEVEL OF PROPOSED BUILDING
+ FS55.555	FINISHED SURFACE LEVEL
+ eRL55.555	EXISTING REDUCED SURFACE LEVEL
+ TOW55.555	TOP OF WALL LEVEL
+ BOW55.555	BOTTOM OF WALL LEVEL
+ TOK55.555	TOP OF KERB LEVEL
+ IOK55.555	INVERT OF KERB LEVEL
	PROPERTY BOUNDARY LINE
	EASEMENT BOUNDARY LINE
IK	PROPOSED INTEGRAL KERB - REFER DETAIL
FALL 5.0% / FALL 1:20	DIRECTION OF SURFACE FALL
RW	RETAINING WALL
	LIMIT OF WORKS
INT	PAVEMENT INTERFACE - MATCH NEATLY TO EXISTING LEVELS

LEGEND - CONTINUED

	PROPOSED STORMWATER PIPE (≤Φ300)
	EXISTING STORMWATER PIPE
	EXISTING STORMWATER PIPE TO BE REMOVED OR REDUNDANT
	PROPOSED TEMPORARY STORMWATER PIPE
	PROPOSED STORMWATER BOX CULVERT
	PROPOSED STORMWATER INLET PIT (GRATED COVER)
	PROPOSED STORMWATER JUNCTION PIT (SEALED COVER)
	EXISTING KERB INLET PIT
	EXISTING STORMWATER INLET PIT (LEFT: GRATED COVER - RIGHT:SEALED COVER)
	EXISTING STORMWATER PIT TO BE REMOVED
	TREATMENT FILTER CHAMBER/DEVICE
	BIORETENTION BASIN/RAIN GARDEN
DP	PROPOSED DOWNPIPE
Φ225	PIPE FLOW DIRECTION AND SIZE

LEGEND - CONTINUED

GTD	PROPOSED GRATED TRENCH DRAIN
	RAINWATER TANK

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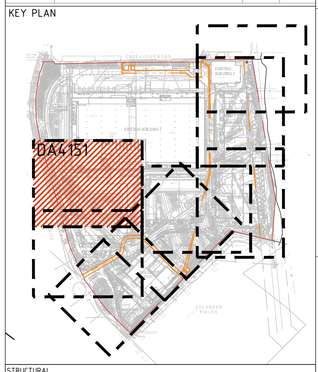
KEY PLAN



STRUCTURAL
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MECHANICAL
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ELECTRICAL
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DRAWING TITLE
BUILDING 5
CONCEPT STORMWATER &
GRADING PLAN - SHEET 1

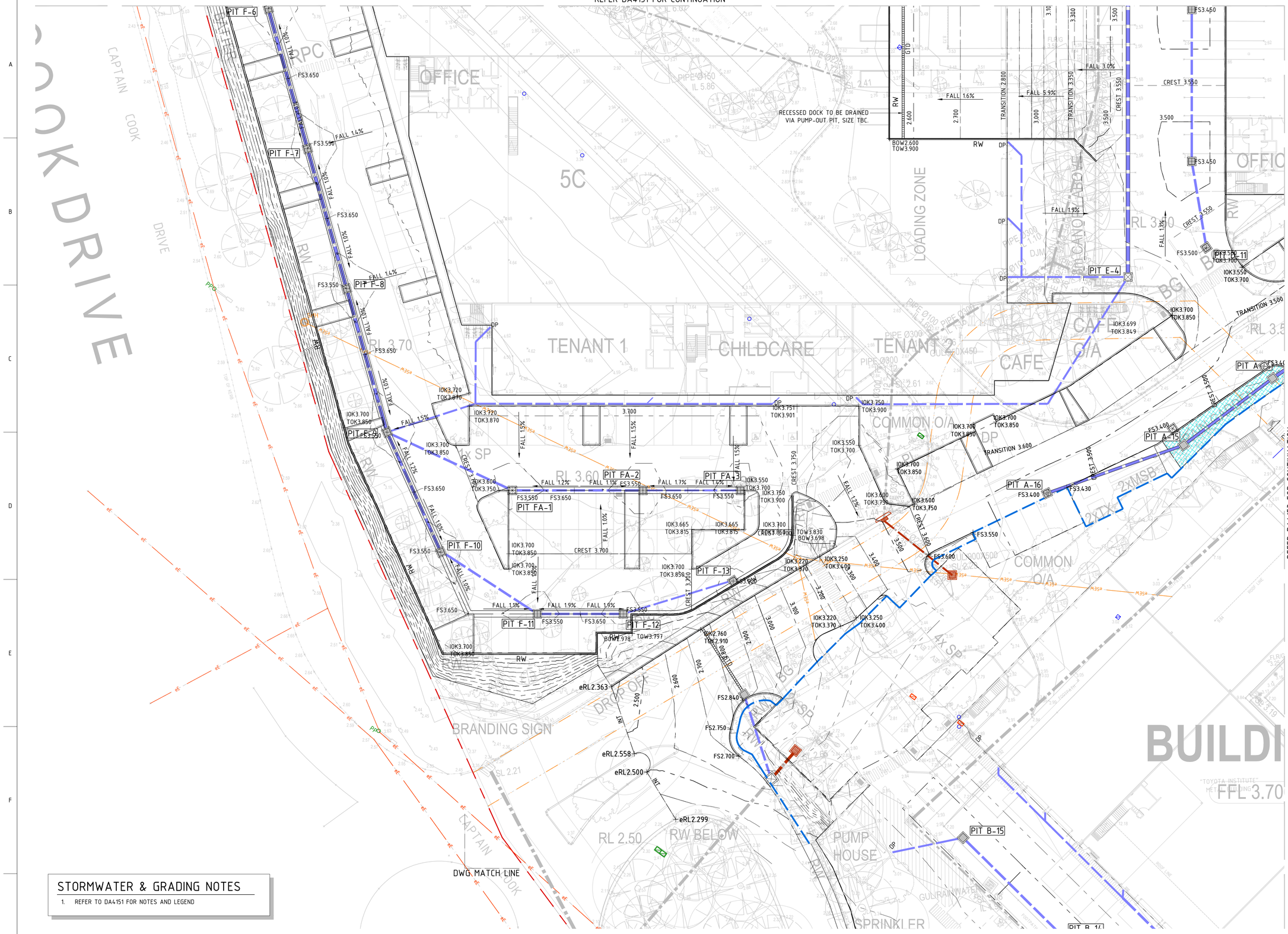
DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

PROJECT No	SCALE	SIZE	REVISION
23106	1:250	A1	C

DRAWING No DA4151

DEVELOPMENT APPLICATION ISSUE

REFER DA4151 FOR CONTINUATION



STORMWATER & GRADING NOTES

1. REFER TO DA4151 FOR NOTES AND LEGEND

0 5 12.5 25
1:250

DEVELOPMENT APPLICATION ISSUE

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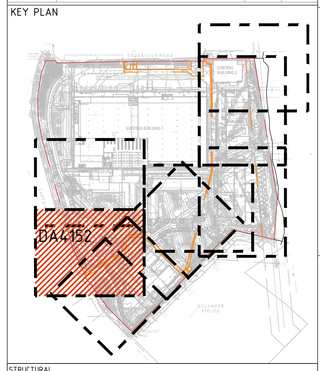
25.08.23	90% ISSUE	MY	6
15.09.23	DA ISSUE	MY	A
12.08.24	PIT NAMES ADDED	MW	B
11.10.24	RESPONSE TO COUNCIL COMMENTS	MY	C

KEY PLAN



STRUCTURAL
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MECHANICAL
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ELECTRICAL
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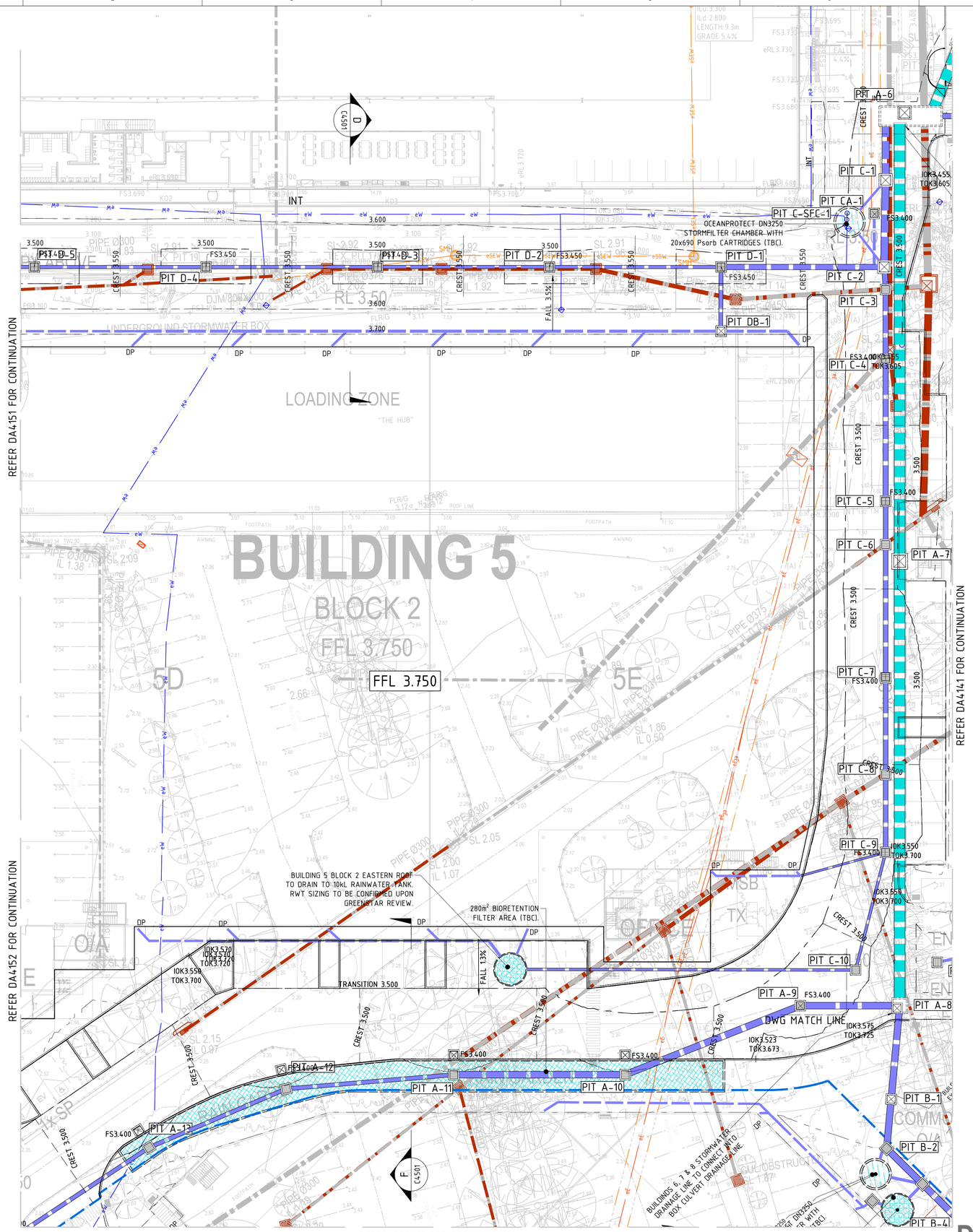
DRAWING TITLE
BUILDING 5
CONCEPT STORMWATER &
GRADING PLAN - SHEET 2

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

SCALE	SIZE	REVISION
1:250	A1	C

PROJECT No 23106

DRAWING No DA4152



STORMWATER & GRADING NOTES

1. REFER TO DA4151 FOR NOTES AND LEGEND

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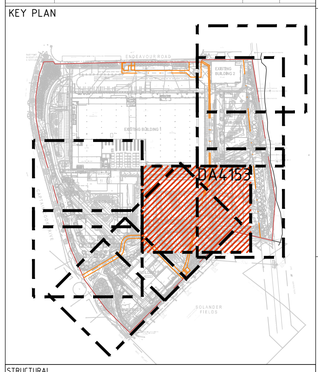
16.06.23	20% ISSUE	JK	1
29.06.23	REVISED SITE GRADING	MY	2
10.07.23	50% ISSUE	JK	3
28.07.23	75% ISSUE	JK	4
22.08.23	90% ISSUE	MW	5
25.08.23	90% ISSUE	MY	6
15.09.23	DA ISSUE	MY	A
12.08.24	PIT NAMES ADDED	MW	B
11.10.24	RESPONSE TO COUNCIL COMMENTS	MY	C

KEY PLAN



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DRAWING TITLE
BUILDING 5
CONCEPT STORMWATER &
GRADING PLAN - SHEET 3

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

SCALE	SIZE	REVISION
1:250	A1	C

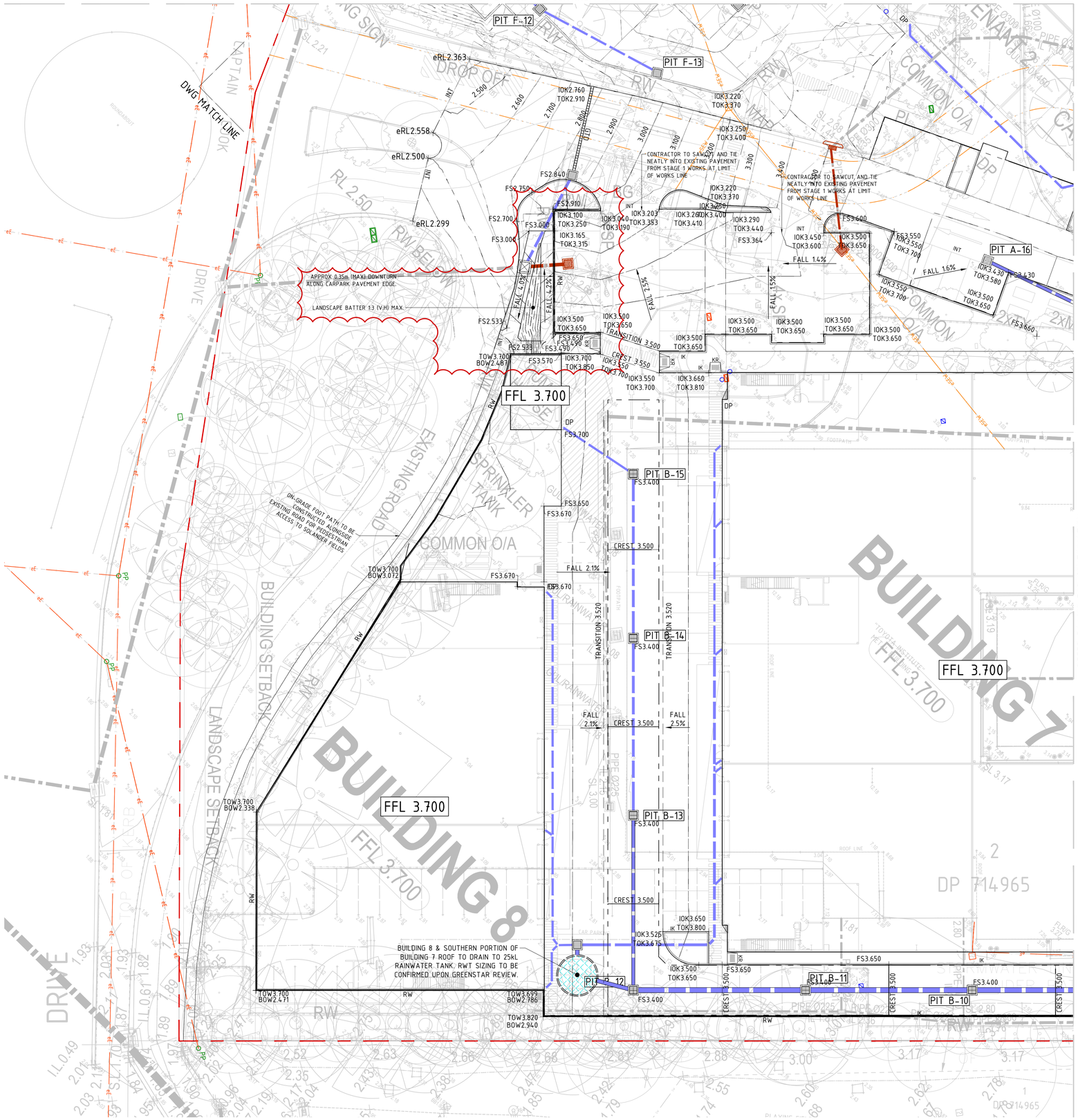
PROJECT No 23106

DRAWING No DA4153

1:250 0 5 12.5 25

DEVELOPMENT APPLICATION ISSUE

REFER DA4152 FOR CONTINUATION



LEGEND

20.000	FINISHED SURFACE MAJOR CONTOUR LINE
20.100	FINISHED SURFACE MINOR CONTOUR LINE
20.150	FINISHED SURFACE CREST/TRANSITION LINE
20.100	EXISTING CONTOUR LINE
exFL 25.000	FLOOR LEVEL OF EXISTING BUILDING
+ FS55.555	FINISHED SURFACE LEVEL
+ eRL55.555	EXISTING REDUCED SURFACE LEVEL
+ TOW55.555	TOP OF WALL LEVEL
+ BOW55.555	BOTTOM OF WALL LEVEL
+ TOK55.555	TOP OF KERB LEVEL
+ IOK55.555	INVERT OF KERB LEVEL
	PROPERTY BOUNDARY LINE
	EASEMENT BOUNDARY LINE
IK	PROPOSED INTEGRAL KERB - REFER DETAIL
FALL 5.0%	DIRECTION OF SURFACE FALL
FALL 1:20	
RW	RETAINING WALL
	LIMIT OF WORKS
INT	PAVEMENT INTERFACE - MATCH NEATLY TO EXISTING LEVELS
	PROPOSED STORMWATER PIPE (≤Ø300)
	EXISTING STORMWATER PIPE
	EXISTING STORMWATER PIPE TO BE REMOVED OR REDUNDANT
	PROPOSED STORMWATER BOX CULVERT
	DRAINAGE SWALE
	PROPOSED STORMWATER INLET PIT (GRATED COVER)
	PROPOSED STORMWATER JUNCTION PIT (SEALED COVER)
	EXISTING KERB INLET PIT
	EXISTING STORMWATER INLET PIT (LEFT: GRATED COVER - RIGHT:SEALED COVER)
	EXISTING STORMWATER PIT TO BE REMOVED
	TREATMENT FILTER CHAMBER/DEVICE
Ø225	PIPE FLOW DIRECTION AND SIZE

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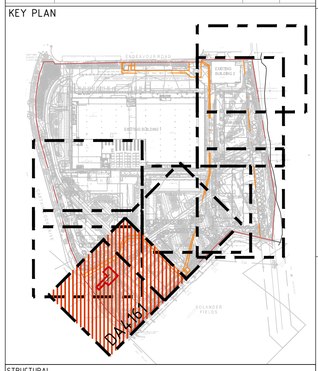
22.08.23	90% ISSUE	MW	5
25.08.23	90% ISSUE	MY	6
15.09.23	DA ISSUE	MY	A
12.08.24	PIT NAMES ADDED	MW	B
11.10.24	RESPONSE TO COUNCIL COMMENTS	MY	C

KEY PLAN



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DRAWING TITLE
BUILDING 6 7 8
CONCEPT STORMWATER &
GRADING PLANS - SHEET 1

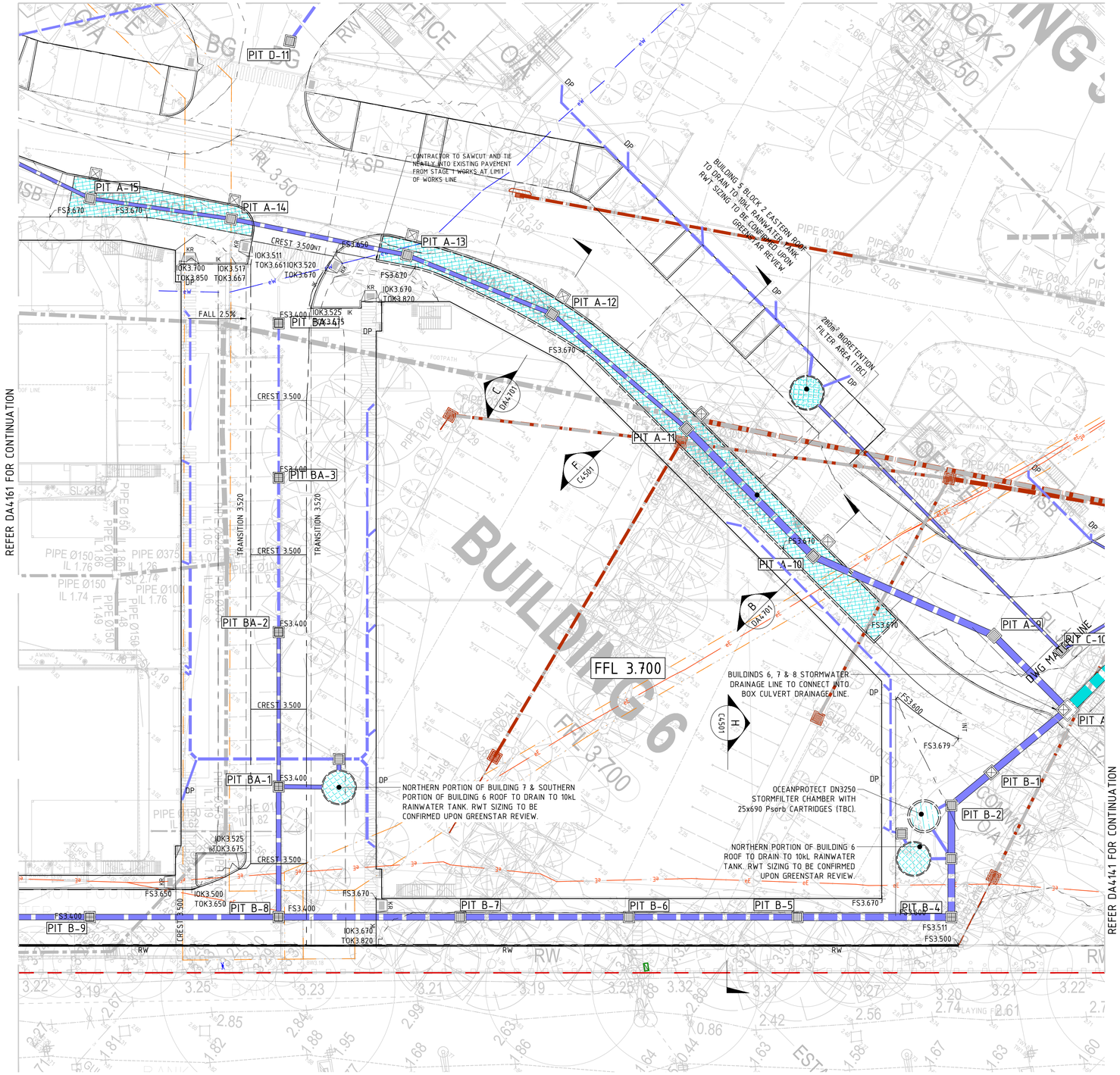
DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

PROJECT No	SCALE	SIZE	REVISION
23106	1:250	A1	C

DRAWING No DA4161

DEVELOPMENT APPLICATION ISSUE

REFER DA4153 FOR CONTINUATION



DEVELOPMENT APPLICATION ISSUE

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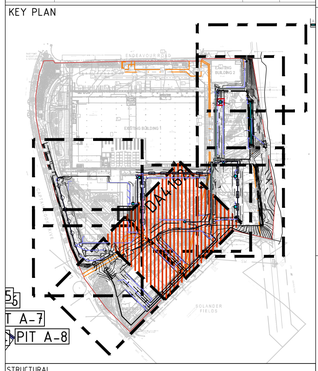
11.10.24	RESPONSE TO COUNCIL COMMENTS	MY	C

KEY PLAN



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DRAWING TITLE
BUILDING 6 7 8
CONCEPT STORMWATER &
GRADING PLANS - SHEET 2

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

SCALE	SIZE	REVISION
1:250	A1	C

PROJECT No 23106

DRAWING No DA4162

LEGEND

BUILDING 2 CATCHMENT AREAS

IMPERVIOUS CATCHMENT AREA = 1,187m²

PERVIOUS CATCHMENT AREA = 27m²

TOTAL BUILDING 2 CATCHMENT AREA = 1,214m²

IMPERVIOUS BYPASS AREA = 166m²

LANDSCAPE BYPASS AREA = 560m²

TOTAL BUILDING 2 BYPASS AREA = 726m²

TOTAL BUILDING 2 DEVELOPMENT AREA = 1,940m²

BUILDING 3 CATCHMENT AREAS

IMPERVIOUS CATCHMENT AREA = 1,453m²

PERVIOUS CATCHMENT AREA = 67m²

ROOF CATCHMENT AREA = 1,888m²

ROOF TO RWT CATCHMENT AREA = 2,527m²

TOTAL BUILDING 3 CATCHMENT AREA = 5,935m²

IMPERVIOUS BYPASS AREA = 789m²

LANDSCAPE BYPASS AREA = 1,919m²

TOTAL BUILDING 3 BYPASS AREA = 2708m²

TOTAL BUILDING 3 DEVELOPMENT AREA = 8,643m²

BUILDING 4 CATCHMENT AREAS

IMPERVIOUS CATCHMENT AREA = 3,748m²

ROOF CATCHMENT AREA = 27m²

ROOF TO RWT CATCHMENT AREA =3,274m²

TOTAL BUILDING 4 CATCHMENT AREA = 7,049m²

IMPERVIOUS BYPASS AREA = 955m²

LANDSCAPE BYPASS AREA = 3,451m²

TOTAL BUILDING 4 BYPASS AREA = 4,406m²

TOTAL BUILDING 4 DEVELOPMENT AREA = 11,455m²

LEGEND - CONTINUED

BUILDING 5 CATCHMENT AREAS

IMPERVIOUS CATCHMENT AREA = 6,954m²

PERVIOUS CATCHMENT AREA =1,077m²

ROOF CATCHMENT AREA= 9,670m²

ROOF TO RWT CATCHMENT AREA = 7,450m²

TOTAL BUILDING 5 CATCHMENT AREA = 25,151m²

IMPERVIOUS BYPASS AREA = 22m²

LANDSCAPE BYPASS AREA = 51m²

TOTAL BUILDING 5 BYPASS AREA = 73m²

TOTAL BUILDING 5 DEVELOPMENT AREA = 25,224m²

BUILDING 6, 7 & 8 CATCHMENT AREAS

IMPERVIOUS CATCHMENT AREA = 4,309m²

PERVIOUS CATCHMENT AREA = 1,079m²

ROOF CATCHMENT AREA = 54m²

ROOF TO RWT CATCHMENT AREA = 8,519m²

TOTAL BUILDING 6, 7 & 8 CATCHMENT AREA = 13,961m²

IMPERVIOUS BYPASS AREA =207m²

LANDSCAPE BYPASS AREA = 341m²

TOTAL BUILDING 6, 7 & 8 BYPASS AREA = 548m²

TOTAL BUILDING 6, 7 & 8 DEVELOPMENT AREA = 14,509m²

MAIN ROAD CATCHMENT AREAS

IMPERVIOUS CATCHMENT AREA = 3,845m²

PERVIOUS CATCHMENT AREA = 664m²

TOTAL MAIN ROAD CATCHMENT AREA = 4,509m²

IMPERVIOUS BYPASS AREA = 274m²

TOTAL MAIN ROAD BYPASS AREA = 274m²

TOTAL MAIN ROAD DEVELOPMENT AREA = 4,783m²

DEVELOPMENT APPLICATION ISSUE

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11.10.24	RESPONSE TO COUNCIL COMMENTS	MY	B
10.02.25	RESPONSE TO COUNCIL COMMENTS	MY	C

KEY PLAN

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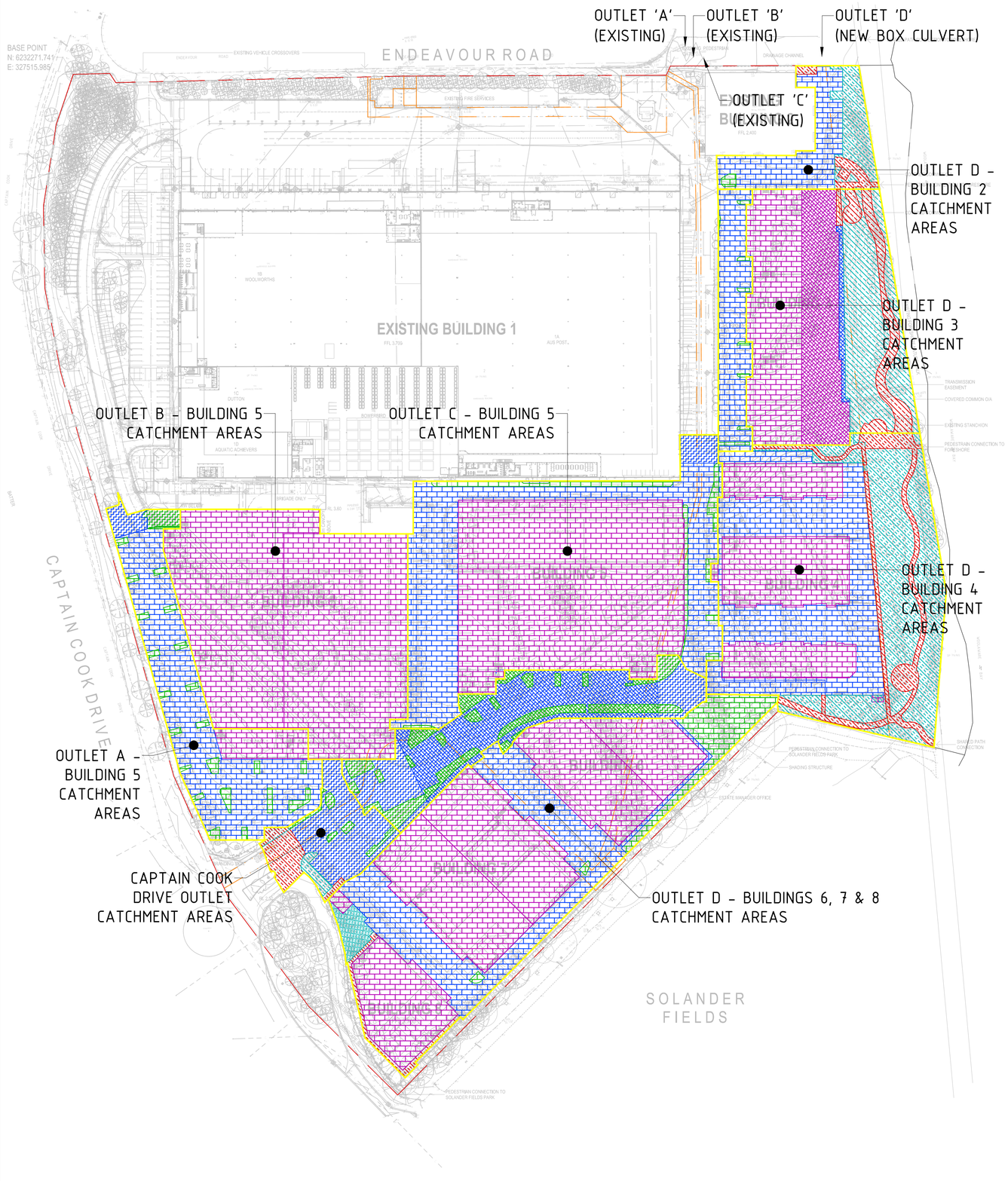
DRAWING TITLE
MASTER PLAN
CONCEPT STORMWATER
CATCHMENT PLAN - GENERAL

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

PROJECT No	SCALE	SIZE	REVISION
23106	1:100	A1	C

DRAWING No DA4301



LEGEND

OUTLET A, BUILDING 5 CATCHMENTS

- IMPERVIOUS AREA TO FILTER BASKET = 171m²
- PERVIOUS AREA TO FILTER BASKET = 112m²
- IMPERVIOUS AREA TO FILTER CHAMBER = 3,367m²
- PERVIOUS AREA TO FILTER CHAMBER = 359m²
- ROOF AREA TO FILTER CHAMBER = 519m²

TOTAL CATCHMENT AREA = 4,527m²

OUTLET B, BUILDING 5 CATCHMENTS

- ROOF AREA TO FILTER CHAMBER = 9,226m²

TOTAL CATCHMENT AREA = 9,226m²

OUTLET C, BUILDING 5 CATCHMENTS

- IMPERVIOUS AREA TO FILTER CHAMBER = 4,012m²
- PERVIOUS AREA TO FILTER CHAMBER = 473m²
- ROOF AREA TO FILTER CHAMBER = 7,344m²

TOTAL CATCHMENT AREA = 11,829m²

OUTLET D, BUILDING 2 CATCHMENTS

- IMPERVIOUS AREA TO FILTER CHAMBER = 1,208m²
- PERVIOUS AREA TO FILTER CHAMBER = 31m²

TOTAL CATCHMENT AREA = 1,239m²

- IMPERVIOUS BYPASS AREA = 166m²
- PERVIOUS BYPASS AREA = 560m²

TOTAL BYPASS AREA = 726m²

OUTLET D, BUILDING 3 CATCHMENTS

- IMPERVIOUS AREA TO FILTER CHAMBER = 1,440m²
- PERVIOUS AREA TO FILTER CHAMBER = 67m²
- ROOF AREA TO FILTER CHAMBER = 2,535m²
- IMPERVIOUS AREA TO BIO-BASIN = 160m²
- ROOF AREA TO BIO-BASIN = 1,892m²

TOTAL CATCHMENT AREA = 6,129m²

- IMPERVIOUS BYPASS AREA = 629m²
- PERVIOUS BYPASS AREA = 1,919m²

TOTAL BYPASS AREA = 2,514m²

LEGEND - CONTINUED

OUTLET D, BUILDING 4 CATCHMENTS

- IMPERVIOUS AREA TO FILTER CHAMBER = 3,770m²
- ROOF AREA TO FILTER CHAMBER = 3,288m²

TOTAL CATCHMENT AREA = 7,058m²

- IMPERVIOUS BYPASS AREA = 955m²
- PERVIOUS BYPASS AREA = 3,466m²

TOTAL BYPASS AREA = 4,421m²

OUTLET D, BUILDING 6,7,8 CATCHMENTS

- IMPERVIOUS AREA TO FILTER CHAMBER = 3,219m²
- PERVIOUS AREA TO FILTER CHAMBER = 922m²
- ROOF AREA TO FILTER CHAMBER = 8,578m²

TOTAL CATCHMENT AREA = 12,719m²

- IMPERVIOUS BYPASS AREA = 176m²
- PERVIOUS BYPASS AREA = 245m²

TOTAL BYPASS AREA = 421m²

OUTLET D, MAIN ROAD CATCHMENTS

- IMPERVIOUS AREA TO FILTER BASKET = 907m²
- PERVIOUS AREA TO FILTER BASKET = 223m²
- IMPERVIOUS AREA TO BIO-BASIN = 2,004m²
- ROOF AREA TO BIO-BASIN = 638m²

TOTAL CATCHMENT AREA = 3,772m²

CAPTAIN COOK DRIVE OUTLET CATCHMENTS

- IMPERVIOUS AREA TO FILTER BASKET = 1,159m²
- PERVIOUS AREA TO FILTER BASKET = 101m²

TOTAL CATCHMENT AREA = 1,260m²

- IMPERVIOUS BYPASS AREA = 328m²
- PERVIOUS BYPASS AREA = 151m²

TOTAL BYPASS AREA = 479m²

DEVELOPMENT APPLICATION ISSUE

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KEY PLAN

STRUCTURAL
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DRAWING TITLE
MASTER PLAN
CONCEPT STORMWATER
CATCHMENT PLAN - WSUD

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

SCALE	SIZE	REVISION
1:100	A1	C

PROJECT No	DRAWING No
23106	DA4302

EXISTING WOOLOOWARE BAY CATCHMENT PLAN

SCALE 1:1000

LEGEND

- WOOLOOWARE BAY EXISTING NORTHERN SHEET FLOW CATCHMENT AREA = 5,327m²
- WOOLOOWARE BAY EXISTING 375Φ OUTLET CATCHMENT AREA = 4,564m²
- WOOLOOWARE BAY EXISTING SOUTHERN SHEET FLOW CATCHMENT AREA = 5,916m²

TOTAL AREA DRAINING TO WOOLOOWARE BAY = 15,807m²

0 20 50 100
1:1000

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17.10.24	RESPONSE TO COUNCIL COMMENTS	MY	B
10.02.25	RESPONSE TO COUNCIL COMMENTS	MY	C

KEY PLAN

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DRAWING TITLE
MASTER PLAN
EXISTING CATCHMENT PLAN -
WOOLOOWARE BAY

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

SCALE	SIZE	REVISION
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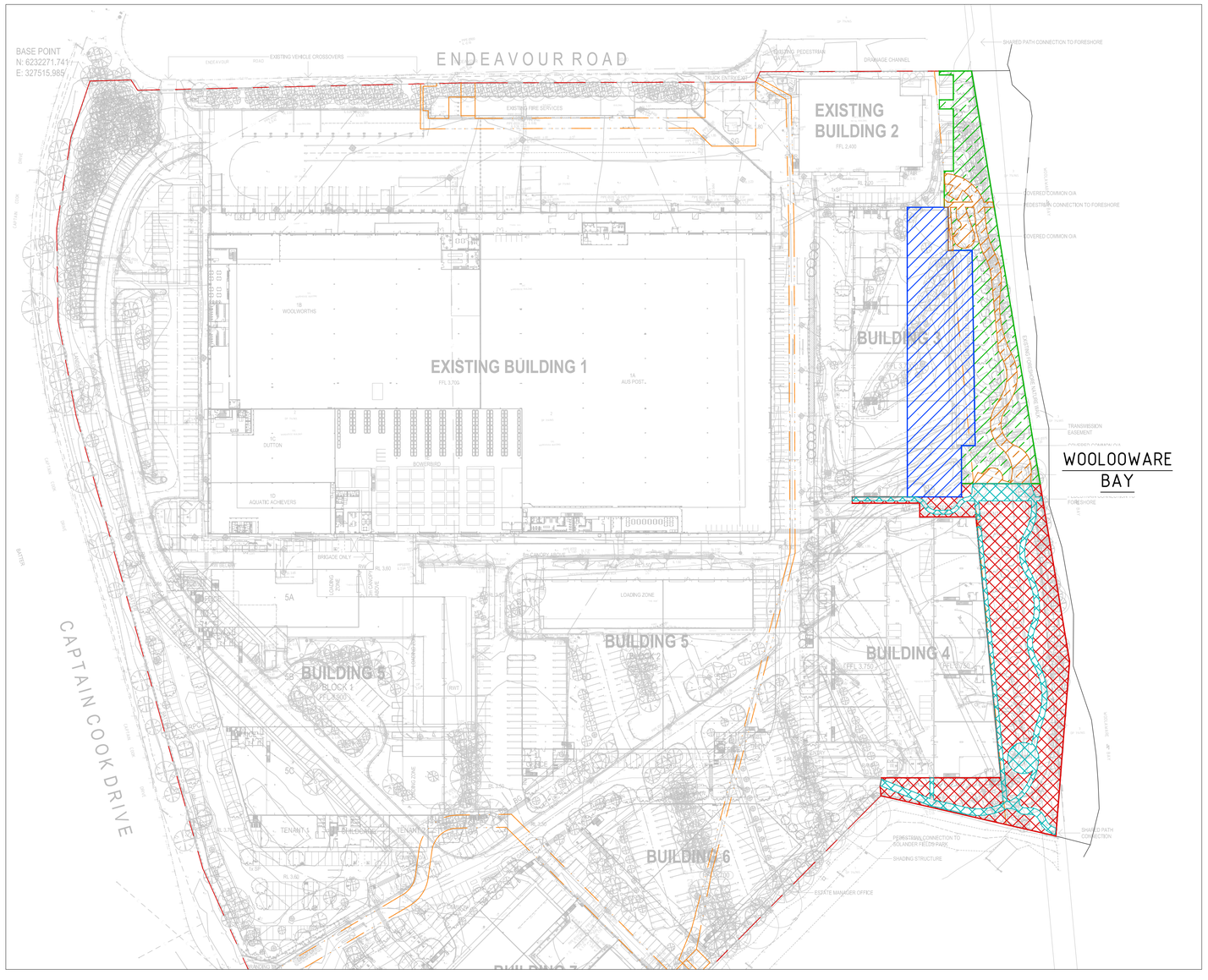
PROJECT No 23106

DRAWING No DA4303



WOOLOOWARE BAY CATCHMENT PLAN
SCALE 1:1000

LEGEND

- WOOLOOWARE BAY NORTHERN SHEET FLOW CATCHMENT AREA (PERVIOUS)= 1,950m²
- WOOLOOWARE BAY NORTHERN SHEET FLOW CATCHMENT AREA (IMPERVIOUS)= 750m²
- WOOLOOWARE BAY 375Φ OUTLET CATCHMENT AREA (IMPERVIOUS) = 2,605m²
- WOOLOOWARE BAY SOUTHERN SHEET FLOW CATCHMENT AREA (PERVIOUS) = 3,465m²
- WOOLOOWARE BAY SOUTHERN SHEET FLOW CATCHMENT AREA (IMPERVIOUS) = 956m²

TOTAL AREA DRAINING TO WOOLOOWARE BAY = 9,726m²

WOOLOOWARE BAY NORTHERN SHEET FLOW

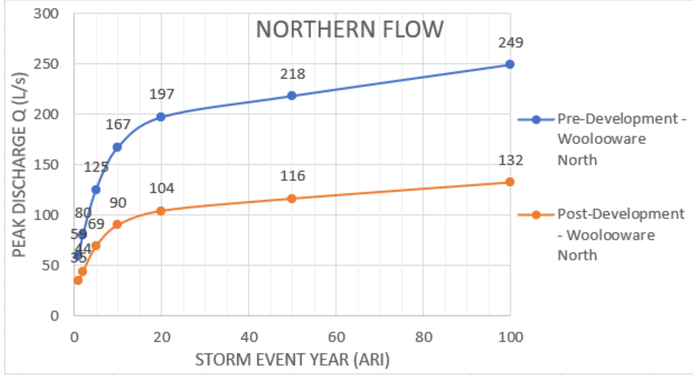
STORM EVENT (ARI)	PRE DEVELOPMENT PEAK Q (L/s)	POST DEVELOPMENT PEAK Q (L/s)	DIFFERENCE PEAK Q (L/s)
1	59	35	-24
2	80	44	-36
5	125	69	-56
10	167	90	-77
20	197	104	-93
50	218	116	-102
100	249	132	-117

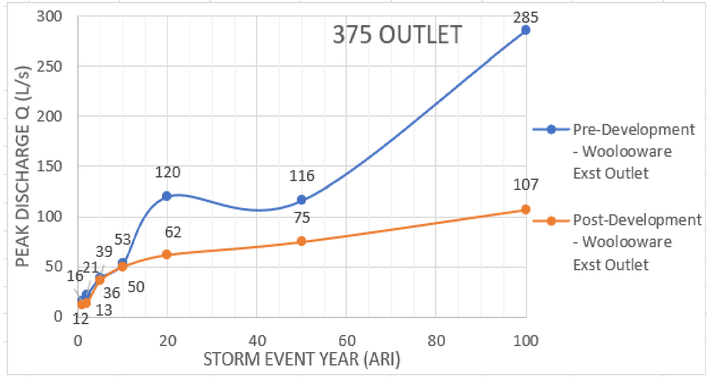
WOOLOOWARE BAY EXISTING 375 OUTLET

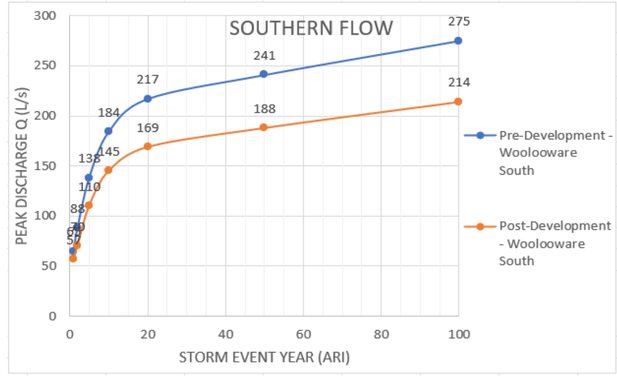
STORM EVENT (ARI)	PRE DEVELOPMENT PEAK Q (L/s)	POST DEVELOPMENT PEAK Q (L/s)	DIFFERENCE PEAK Q (L/s)	PRE-DEV VELOCITY (m/s)	POST-DEV VELOCITY (m/s)
1	16	12	-4	1.30	0.20
2	21	13	-8	1.40	0.20
5	39	36	-3	1.60	0.40
10	53	50	-3	1.70	0.40
20	120	62	-58	1.30	0.50
50	116	75	-41	1.20	0.50
100	285	107	-178	1.50	0.50

WOOLOOWARE BAY SOUTHERN SHEET FLOW

STORM EVENT (ARI)	PRE DEVELOPMENT PEAK Q (L/s)	POST DEVELOPMENT PEAK Q (L/s)	DIFFERENCE PEAK Q (L/s)
1	65	57	-8
2	88	70	-18
5	138	110	-28
10	184	145	-39
20	217	169	-48
50	241	188	-53
100	275	214	-61







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18.10.24	DA ISSUE	MY	A
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25.02.25	RESPONSE TO COUNCIL COMMENTS	MY	C

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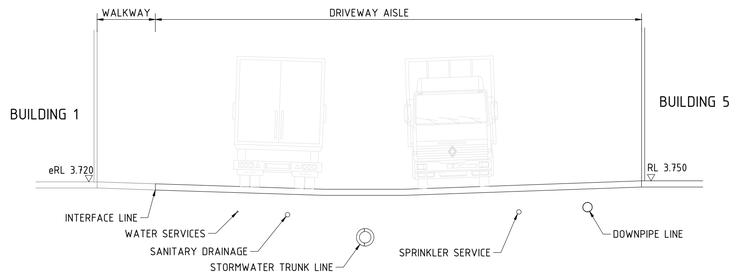
DRAWING TITLE
MASTER PLAN
CONCEPT CATCHMENT PLAN - WOOLOOWARE BAY

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

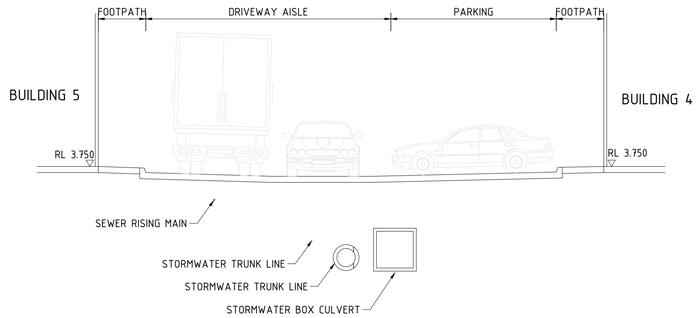
SCALE	SIZE	REVISION
1:100	A1	C

PROJECT No	DRAWING No
23106	DA4304



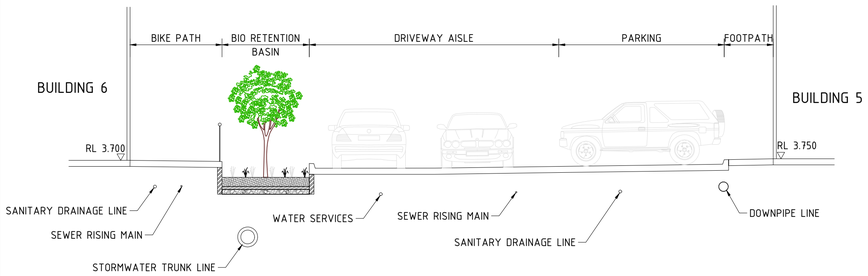
SECTION - B1 TO B5 (D / DA4153)

SCALE 1:100



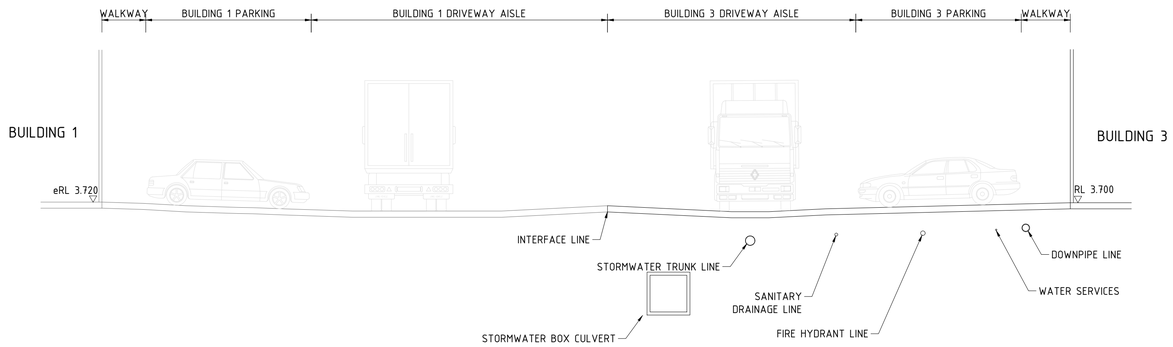
SECTION - B5 TO B4 (E / DA4153)

SCALE 1:100



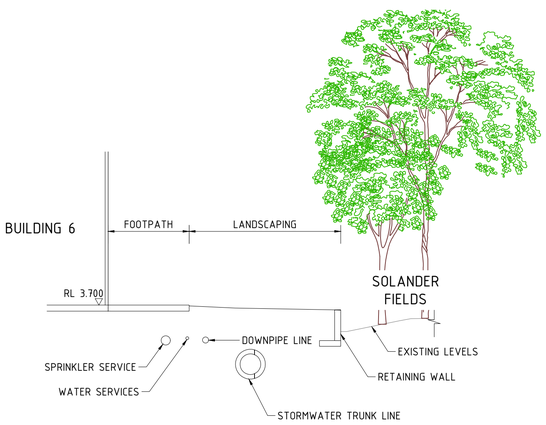
SECTION - B6 TO B5 (F / DA4162)

SCALE 1:100



SECTION - B1 TO B3 (G / DA4131)

SCALE 1:100



SECTION - B6 TO SOLANDER FIELDS (H / DA4162)

SCALE 1:100

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1:100

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25.08.23	90% ISSUE	MY	1
15.09.23	DA ISSUE	MY	A
11.10.24	RESPONSE TO COUNCIL COMMENTS	MY	B
10.02.25	RESPONSE TO COUNCIL COMMENTS	MY	C

KEY PLAN

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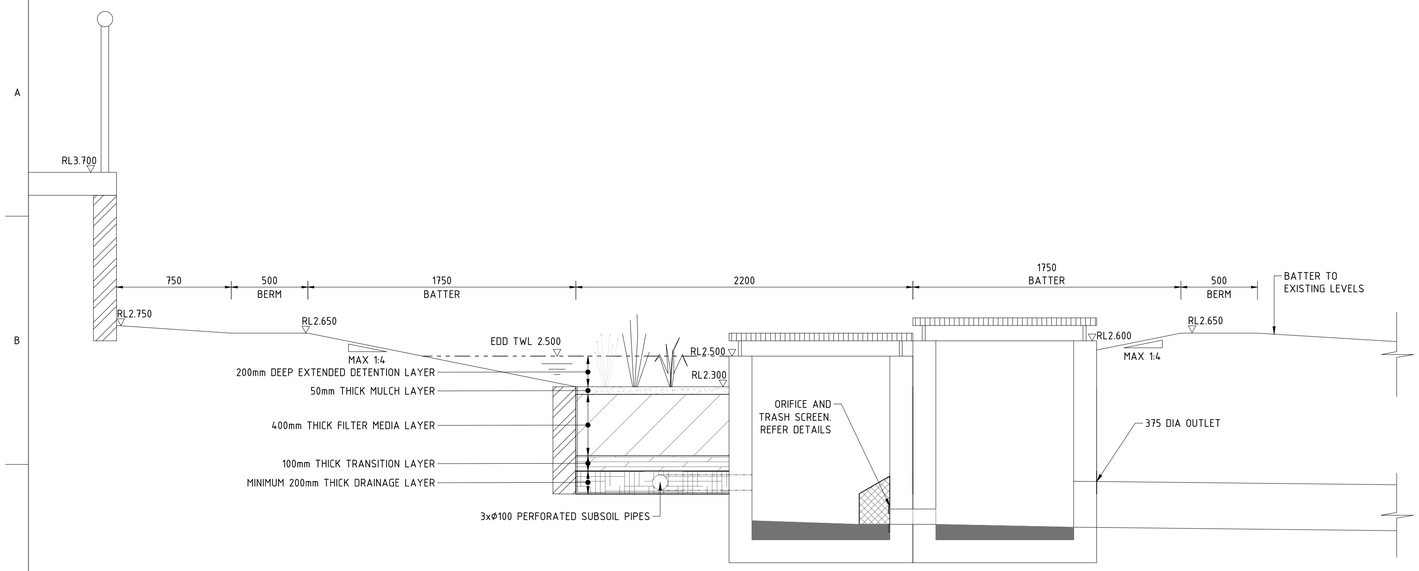
DRAWING TITLE
MASTER PLAN
CONCEPT SECTIONS

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

SCALE	SIZE	REVISION
1:100	A1	C

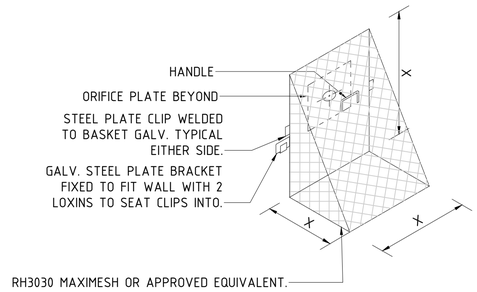
PROJECT No 23106

DRAWING No DA4501



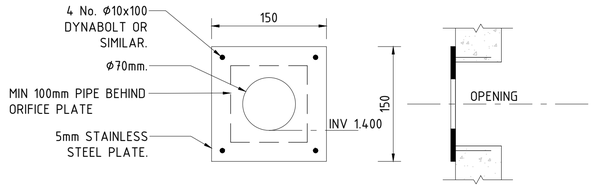
BIO-RETENTION BASIN - BUILDING 3 - TYPICAL SECTION (A / DA4131)

SCALE 1:20



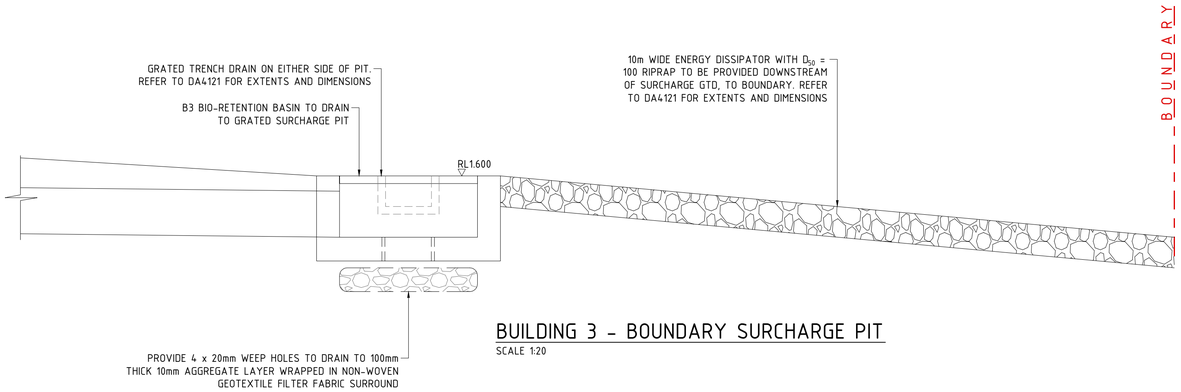
TRASH SCREEN DETAIL

NOT TO SCALE



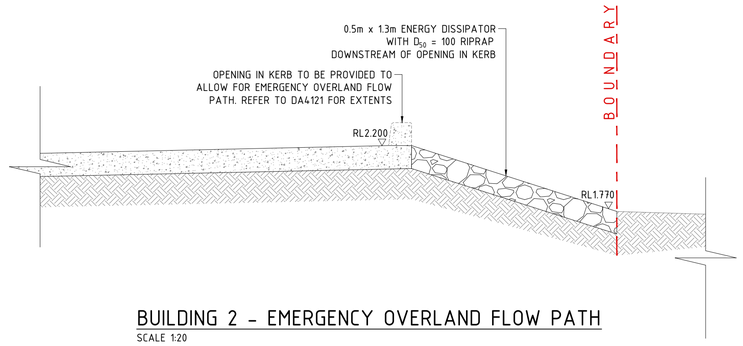
ORIFICE PLATE DETAIL

NOT TO SCALE



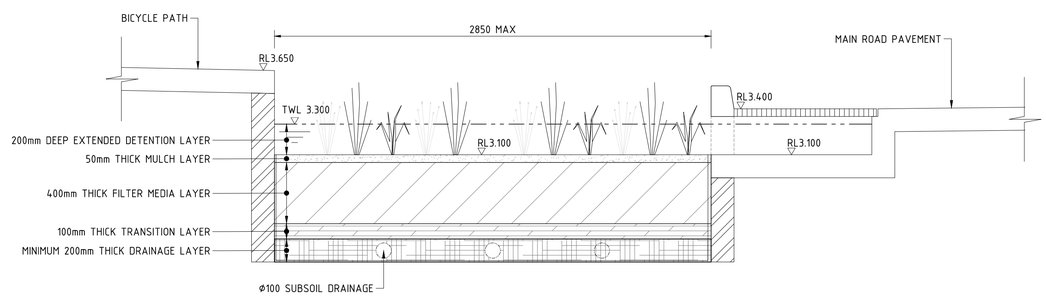
BUILDING 3 - BOUNDARY SURCHARGE PIT

SCALE 1:20



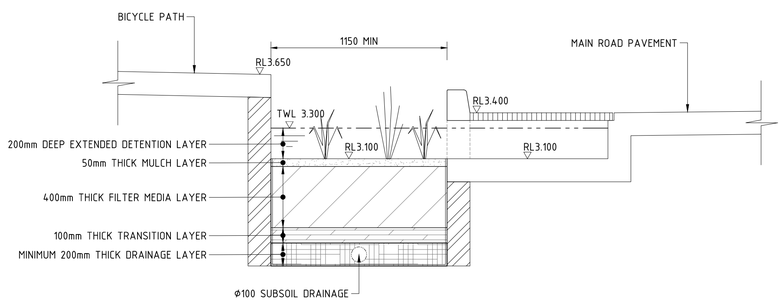
BUILDING 2 - EMERGENCY OVERLAND FLOW PATH

SCALE 1:20



BIO-RETENTION BASIN - MAIN ROAD (MAX WIDTH) - TYPICAL SECTION (B / DA4153)

SCALE 1:20



BIO-RETENTION BASIN - MAIN ROAD (MIN WIDTH) - TYPICAL SECTION (C / DA4153)

SCALE 1:20

0 0.4 1 2
1:20

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28.07.23	75% ISSUE	JK	1
22.08.23	90% ISSUE	MW	2
15.09.23	DA ISSUE	MY	A
11.10.24	RESPONSE TO COUNCIL COMMENTS	MY	B
10.02.25	RESPONSE TO COUNCIL COMMENTS	MY	C
25.02.25	RESPONSE TO COUNCIL COMMENTS	MY	D

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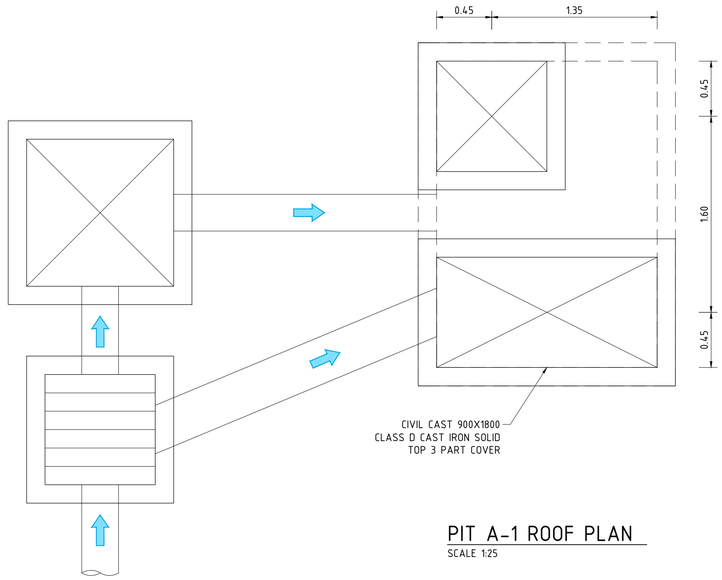
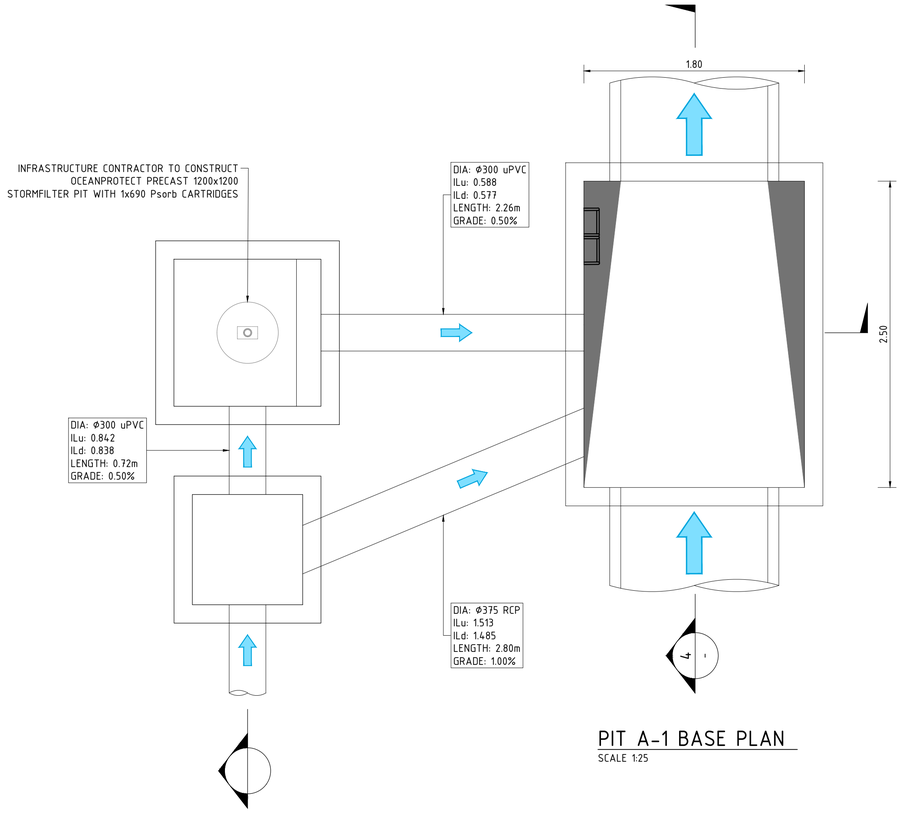
DRAWING TITLE
MASTER PLAN
CONCEPT STORMWATER
MANAGEMENT DETAILS - SHEET 1

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW
SCALE 1:20	SIZE A1	REVISION D	
PROJECT No 23106	DRAWING No DA4701		



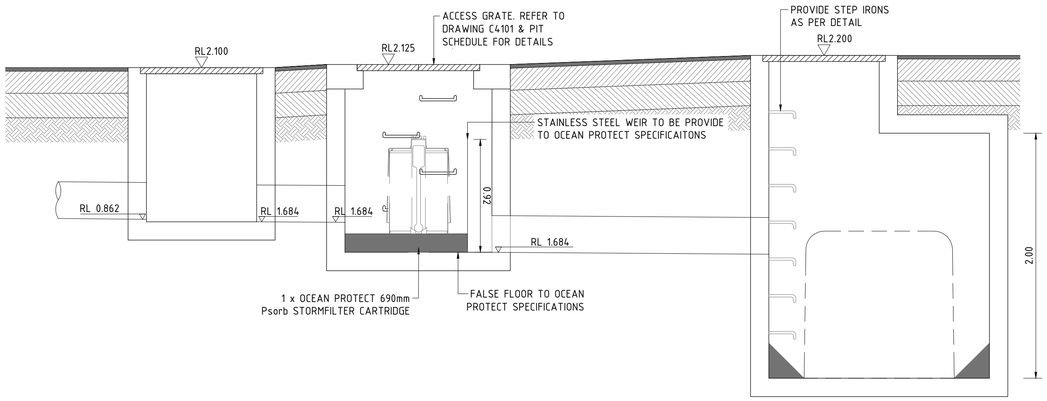
PIT A-1 ROOF PLAN

SCALE 1:25



PIT A-1 BASE PLAN

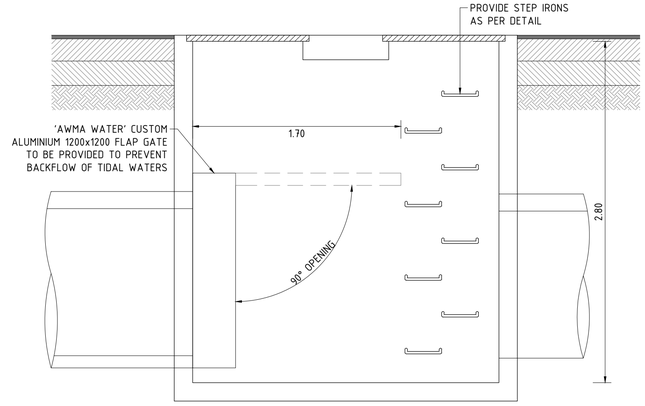
SCALE 1:25



STORMWATER I-SFC-1 - SECTION

3
-

SCALE 1:25



STORMWATER PIT A-1 - SECTION

4
-

SCALE 1:25

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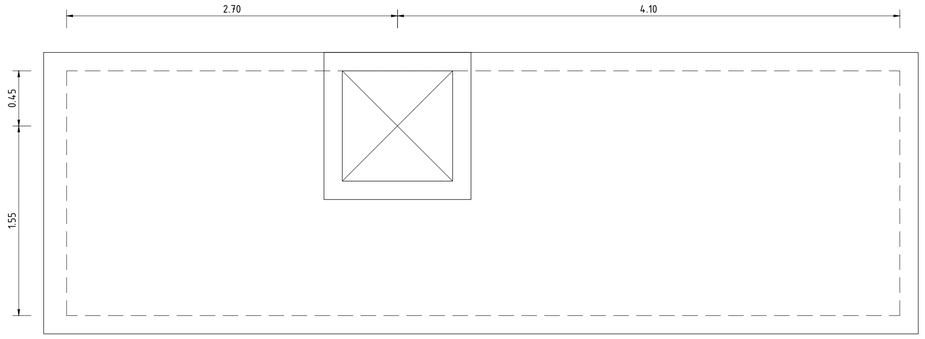
DRAWING TITLE
MASTER PLAN
CONCEPT STORMWATER
MANAGEMENT DETAILS - SHEET 2

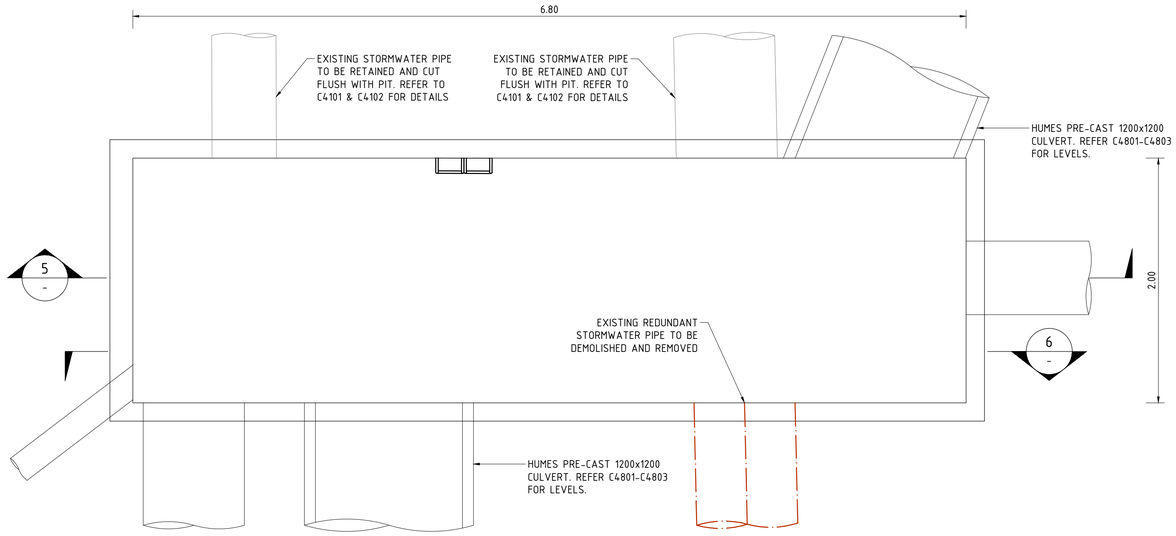
DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

PROJECT No	SCALE	SIZE	REVISION
23106	AS SHOWN	A1	A

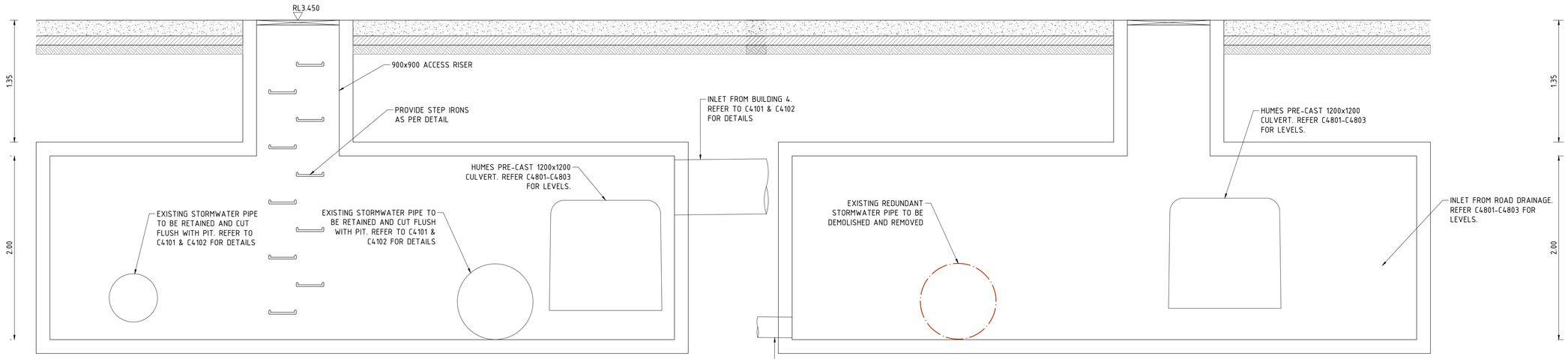
DRAWING No
DA4702



PIT A-6 ROOF PLAN
SCALE 1:25



PIT A-6 BASE PLAN
SCALE 1:25



PIT A-6 SECTION
SCALE 1:25
5
-

PIT A-6 SECTION
SCALE 1:25
6
-

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DRAWING TITLE
MASTER PLAN
CONCEPT STORMWATER
MANAGEMENT DETAILS - SHEET 3

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

SCALE	SIZE	REVISION
AS SHOWN	A1	A

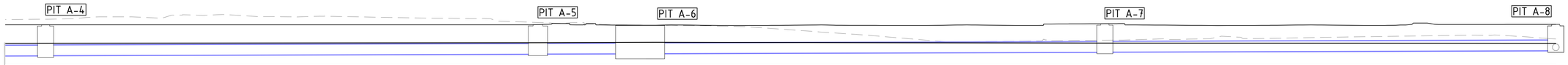
PROJECT No	DRAWING No
23106	DA4703

HYDRAULIC GRADE LINE (HGL)	1.300		1.303	1.328							1.430		1.454								1.488		1.552	
PIPE SIZE & TYPE LENGTH & GRADE		1.2x1.2m BC 8.55m, 0.3%					1.2x1.2m BC 41.21m, 0.3%								1.2x1.2m BC 44.09m, 0.3%									1.2x1.2m BC 53.31m, 0.3%
SURFACE LEVEL			2.193								2.326		2.326								2.553		2.593	
PIPE INVERT LEVEL	-0.434		-0.408	-0.388							-0.264		-0.244								-0.112		-0.092	
DEPTH TO INVERT			2.601								2.590		2.570								2.665		2.685	
CHAINAGE			9.715								52.394		55.453								100.905		104.165	

REFER BELOW FOR CONTINUATION

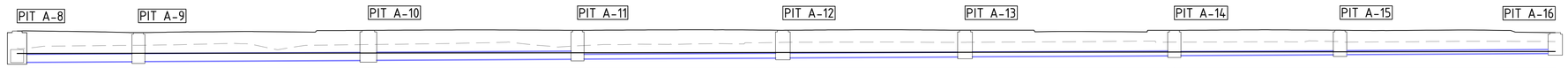
STORMWATER LONGTITUDINAL SECTION - LINE A - TRUNK LINE

SCALE 1:250



REFER ABOVE FOR CONTINUATION

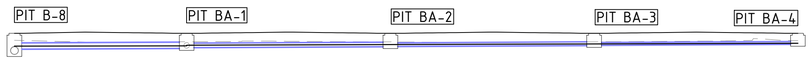
HYDRAULIC GRADE LINE (HGL)	1.472	1.473							1.482	1.482		1.488			1.552						1.484	1.484		1.469
PIPE SIZE & TYPE LENGTH & GRADE				1.2x1.2m BC 53.29m, 0.3%							1.2x1.2m BC 7.92m, 0.3%						1.2x1.2m BC 48.81m, 0.3%						1.2x1.2m BC 48.71m, 0.3%	
SURFACE LEVEL	3.510								3.529			1.665		3.451							3.634			3.548
PIPE INVERT LEVEL	0.068	0.088							0.248	0.268		0.291		0.315							0.461	0.481		0.628
DEPTH TO INVERT	3.442								3.281			3.209		3.555							3.172			2.920
CHAINAGE	158.974								213.783			223.264		226.864							276.910			327.117



HYDRAULIC GRADE LINE (HGL)	1.469		1.470	1.473			1.476	1.479			1.499	1.499			1.502	1.505			1.512	1.518			1.559	1.566			1.600	1.602		1.654
PIPE SIZE & TYPE LENGTH & GRADE		Φ750 RCP 10.03m, 0.5%			Φ750 RCP 20.25m, 0.5%				Φ750 RCP 18.42m, 0.5%				Φ450 RCP 18.05m, 0.5%				Φ450 RCP 15.94m, 0.5%				Φ450 RCP 18.42m, 0.5%				Φ375 RCP 14.38m, 0.5%				Φ375 RCP 18.96m, 0.5%		
SURFACE LEVEL	3.548			3.400				3.610				3.610				3.614				3.616				3.606				3.619			3.400
PIPE INVERT LEVEL	0.648			0.698	0.718			0.819	0.839			0.931	0.951			1.041	1.061			1.141	1.161			1.253	1.273			1.345	1.365		1.460
DEPTH TO INVERT	2.920			2.702				2.791				2.679				2.573				2.475				2.353				2.274			1.940
CHAINAGE	0.000			11.227				32.500				51.866				70.877				87.732				107.103				122.432			142.358

STORMWATER LONGTITUDINAL SECTION - LINE A

SCALE 1:250



HYDRAULIC GRADE LINE (HGL)	2.251				2.359	2.385			2.400	2.402					2.487	2.487					2.546
PIPE SIZE & TYPE LENGTH & GRADE		Φ525 RCP 13.16m, 0.5%				Φ375 RCP 15.73m, 0.5%				Φ300 uPVC 15.73m, 0.5%						Φ225 uPVC 15.73m, 0.5%					
SURFACE LEVEL	3.400				3.400				3.400						3.400						3.400
PIPE INVERT LEVEL	2.096				2.162	2.224			2.303	2.323					2.401	2.421					2.500
DEPTH TO INVERT	1.737				1.238				1.097						0.999						0.900
CHAINAGE	0.000				14.058				30.688						47.318						63.948

STORMWATER LONGTITUDINAL SECTION - LINE BA

SCALE 1:250

0 5 12.5 25
1:250

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REFERENCES

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12.08.24	DA ISSUE	MW	A
11.10.24	RESPONSE TO COUNCIL COMMENTS	MY	B
10.02.25	RESPONSE TO COUNCIL COMMENTS	MY	C

KEY PLAN

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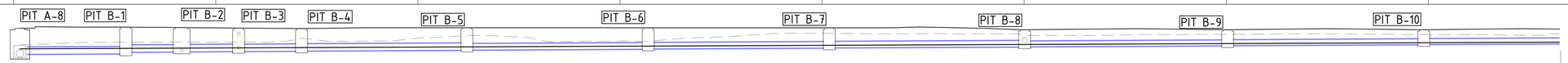
HCAA FPA AUSTRALIA GOLD MEMBER Fire Protection Association Australia DNV·GL ISO 9001 JAS-ANZ

DRAWING TITLE
MASTER PLAN
CONCEPT STORMWATER
LONGTITUDINAL SECTIONS - SHEET 1

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

PROJECT No	SCALE	SIZE	REVISION
23106	1:250	A1	C

DRAWING No
DA4801



DATUM R.L. 0.000

HYDRAULIC GRADE LINE (HGL)	1.469	1.484 1.538	1.549 1.602	1.623 1.636	1.657 1.668	1.694 1.703	1.744 1.793	1.813 1.817	1.850 1.852	1.924 1.924	2.043 2.071
PIPE SIZE & TYPE LENGTH & GRADE	Ø750 RCP 9.41m, 0.5%	Ø750 RCP 4.55m, 0.5%	Ø750 RCP 4.81m, 0.5%	Ø750 RCP 5.41m, 0.5%	Ø750 RCP 15.68m, 0.5%	Ø675 RCP 17.25m, 0.5%	Ø675 RCP 17.25m, 0.5%	Ø675 RCP 18.67m, 0.5%	Ø600 RCP 19.44m, 0.5%	Ø600 RCP 18.76m, 0.5%	Ø600 RCP 18.77m, 0.5%
SURFACE LEVEL	3.654	3.608	3.562	3.511	3.594	3.591	3.587	3.400	3.400	3.400	
PIPE INVERT LEVEL	0.929	0.976 1.141	1.164 1.184	1.206 1.210	1.239 1.259	1.398 1.398	1.444 1.464	1.550 1.570	1.663 1.683	1.781 1.801	1.894 1.914
DEPTH TO INVERT	2.698	2.464	2.362	2.272	2.257	2.147	2.037	1.737	1.619	1.506	
CHAINAGE	10.618	16.205	21.916	28.222	44.799	62.951	81.103	100.675	121.013	140.674	

REFER BELOW FOR CONTINUATION

STORMWATER LONGTITUDINAL SECTION - LINE B

SCALE 1:250

REFER ABOVE FOR CONTINUATION

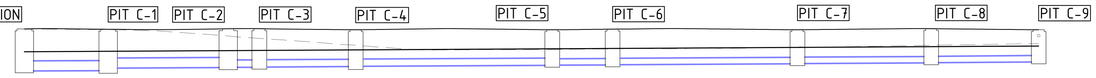
	2.094 2.101		2.155 2.199		2.316 2.317		2.405 2.416		2.532
		Ø600 RCP 19.44m, 0.5%		Ø375 RCP 19.73m, 0.5%		Ø300 uPVC 19.99m, 0.5%		Ø300 uPVC 18.50m, 0.5%	
	3.400		3.400		3.400		3.400		3.878
	2.008 2.028		2.126 2.169		2.268 2.288		2.387 2.407		2.500
	1.392		1.274		1.132		1.013		1.378
	160.340		180.679		201.308		222.203		241.604

DATUM R.L. 0.000

HYDRAULIC GRADE LINE (HGL)	2.300	2.346
PIPE SIZE & TYPE LENGTH & GRADE	Ø300 uPVC 8.19m, 0.5%	
SURFACE LEVEL	3.495	3.400
PIPE INVERT LEVEL	2.020	2.061
DEPTH TO INVERT	1.495	1.400
CHAINAGE	0.000	9.176

STORMWATER LONGTITUDINAL SECTION - LINE DA

SCALE 1:250

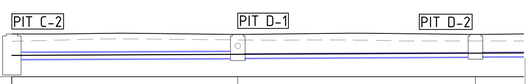


DATUM R.L. -1.000

HYDRAULIC GRADE LINE (HGL)	1.601	1.733 1.733	1.749 1.751	1.762 1.762	1.785 1.812	1.843 1.843	1.856 1.857	1.871 1.885	1.991 1.992	2.068
PIPE SIZE & TYPE LENGTH & GRADE	Ø825 RCP 5.63m, 0.5%	Ø825 RCP 8.60m, 0.5%	Ø600 RCP 1.50m, 0.5%	Ø600 RCP 6.96m, 0.5%	Ø600 RCP 15.15m, 0.5%	Ø525 RCP 4.03m, 0.5%	Ø525 RCP 14.18m, 0.5%	Ø525 RCP 10.02m, 0.5%	Ø525 RCP 7.87m, 0.7%
SURFACE LEVEL	3.461	3.439	3.477	3.483	3.400	3.400	3.447	3.400	3.488	3.400
PIPE INVERT LEVEL	0.035	0.063 0.268	0.311 0.331	0.339 0.359	0.394 0.414	0.489 0.509	0.529 0.549	0.620 0.640	0.690 0.710	0.770
DEPTH TO INVERT	3.426	3.446	3.185	3.144	3.100	2.911	2.918	2.780	2.797	2.630
CHAINAGE	0.000	6.835	16.634	19.176	27.039	43.084	48.010	63.094	74.009	82.784

STORMWATER LONGTITUDINAL SECTION - LINE C

SCALE 1:250



DATUM R.L. 0.000

HYDRAULIC GRADE LINE (HGL)	1.733	1.814 1.874	1.916 1.931
PIPE SIZE & TYPE LENGTH & GRADE	Ø600 RCP 17.39m, 0.4%	Ø375 RCP 18.50m, 0.5%	
SURFACE LEVEL	3.477	3.450	3.450
PIPE INVERT LEVEL	1.384	1.460 1.483	1.576 1.596
DEPTH TO INVERT	3.185	1.990	1.874
CHAINAGE	0.000	18.440	37.840

REFER BELOW FOR CONTINUATION

STORMWATER LONGTITUDINAL SECTION - LINE D

SCALE 1:250

REFER ABOVE FOR CONTINUATION

	1.981 1.984		2.068 2.080		2.173 2.183		2.266 2.300		2.373 2.405		2.478 2.490		2.582 2.595		2.683 2.683		2.727
Ø375 RCP 18.50m, 0.5%		Ø375 RCP 18.50m, 0.5%		Ø375 RCP 18.50m, 0.5%		Ø375 RCP 13.40m, 0.5%		Ø300 uPVC 17.72m, 0.5%		Ø300 uPVC 19.10m, 0.5%		Ø300 uPVC 20.01m, 0.5%		Ø300 uPVC 19.99m, 0.5%		Ø300 uPVC 11.07m, 0.5%	
	3.450		3.450		3.450		3.495		3.450		3.450		3.450		3.450		3.500
	1.688 1.708		1.801 1.821		1.913 1.933		2.000 2.020		2.109 2.129		2.225 2.245		2.345 2.365		2.465 2.485		2.540
	1.762		1.649		1.537		1.495		1.341		1.225		1.105		0.985		0.960
	57.240		76.640		96.040		110.340		128.958		148.958		169.865		190.758		202.777

0 5 12.5 25
1:250

DEVELOPMENT APPLICATION ISSUE

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REFERENCES

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12.08.24	DA ISSUE	MW	A
11.10.24	RESPONSE TO COUNCIL COMMENTS	MY	B
10.02.25	RESPONSE TO COUNCIL COMMENTS	MY	C

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DRAWING TITLE
MASTER PLAN
CONCEPT STORMWATER
LONGTITUDINAL SECTIONS - SHEET 2

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW
PROJECT No 23106	SCALE 1:250	SIZE A1	REVISION C
	DRAWING No DA4802		

DATUM R.L. 0.000

HYDRAULIC GRADE LINE (HGL)	1.700	1.709 1.710	1.719 1.736	1.795 1.800	1.882 1.890	2.046 2.046	2.167 2.168	2.248 2.251	2.393 2.394	2.463 2.475
PIPE SIZE & TYPE LENGTH & GRADE		Φ600 RCP 6.11m, 0.5%	Φ600 RCP 5.95m, 1.9%	Φ600 RCP 5.76m, 0.5%	Φ525 RCP 19.10m, 0.5%	Φ525 RCP 19.10m, 0.5%	Φ450 RCP 19.10m, 0.5%	Φ450 RCP 19.10m, 0.5%	Φ450 RCP 19.62m, 0.5%	Φ375 RCP 17.19m, 0.5%	Φ300 uPVC 15.13m, 0.5%
SURFACE LEVEL	3.400	3.526	3.634	3.550	3.550	3.550	3.550	3.550	3.550	3.550
PIPE INVERT LEVEL	1.406	1.437 1.564	1.679 1.718	1.747 1.767	1.863 1.883	1.978 1.998	2.094 2.114	2.209 2.229	2.325 2.345	2.429 2.449
DEPTH TO INVERT	2.014	2.090	1.956	1.803	1.688	1.572	1.457	1.341	1.225	1.121
CHAINAGE	0.000	7.156	14.009	20.668	40.668	60.668	80.668	100.668	121.190	139.282

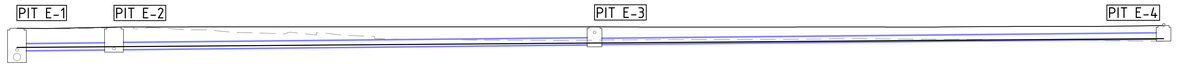
REFER BELOW FOR CONTINUATION

STORMWATER LONGTITUDINAL SECTION - LINE F

SCALE 1:250

HYDRAULIC GRADE LINE (HGL)	2.568 2.568	2.631 2.631	2.730
PIPE SIZE & TYPE LENGTH & GRADE	Φ300 uPVC 10.93m, 0.5%	Φ225 uPVC 14.81m, 0.5%	
SURFACE LEVEL	3.550	3.550	3.550
PIPE INVERT LEVEL	2.584	2.684	2.700
DEPTH TO INVERT	1.026	0.946	0.850
CHAINAGE	155.034	166.859	182.640

REFER ABOVE FOR CONTINUATION

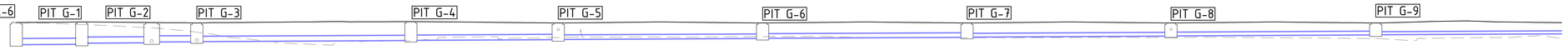


DATUM R.L. 0.000

HYDRAULIC GRADE LINE (HGL)	1.873	1.891 1.977	2.104 2.167	2.598
PIPE SIZE & TYPE LENGTH & GRADE		Φ600 RCP 6.97m, 1.0%	Φ600 RCP 38.32m, 1.0%	Φ525 RCP 45.55m, 1.0%
SURFACE LEVEL	3.442	3.534	3.579	3.668
PIPE INVERT LEVEL	1.596	1.666 1.686	2.076 2.165	2.549
DEPTH TO INVERT	2.643	1.888	1.499	1.119
CHAINAGE	0.000	7.923	47.143	93.591

STORMWATER LONGTITUDINAL SECTION - LINE E

SCALE 1:250



DATUM R.L. 0.000

PIPE SIZE & TYPE LENGTH & GRADE		Φ600 RCP 5.52m, 0.5%	Φ600 RCP 5.89m, 0.5%	Φ600 RCP 3.52m, 0.5%	Φ525 RCP 20.05m, 0.5%	Φ525 RCP 13.52m, 0.5%	Φ450 RCP 19.10m, 0.5%	Φ450 RCP 19.10m, 0.5%	Φ375 RCP 19.06m, 0.5%	Φ375 RCP 19.14m, 0.5%	Φ300 uPVC 20.47m, 0.5%
SURFACE LEVEL	3.491	3.549	3.487	3.450	3.582	3.450	3.450	3.450	3.450	3.450
PIPE INVERT LEVEL	1.331	1.359 1.476	1.506 1.589	1.607 1.627	1.727 1.747	1.815 1.835	1.930 1.950	2.046 2.066	2.161 2.181	2.277 2.297
DEPTH TO INVERT	2.160	2.191	1.982	1.843	1.854	1.635	1.520	1.404	1.289	1.173
CHAINAGE	0.000	6.418	13.255	17.675	38.625	53.043	73.043	93.043	113.003	133.043

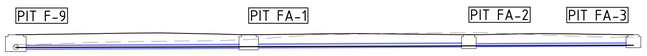
REFER BELOW FOR CONTINUATION

STORMWATER LONGTITUDINAL SECTION - LINE G

SCALE 1:250

HYDRAULIC GRADE LINE (HGL)		Φ300 uPVC 16.16m, 0.5%	
PIPE SIZE & TYPE LENGTH & GRADE	3.450		3.450
SURFACE LEVEL	2.399 2.419		2.500
PIPE INVERT LEVEL	1.051		0.950
DEPTH TO INVERT	154.411		171.488
CHAINAGE			

REFER ABOVE FOR CONTINUATION



DATUM R.L. 0.000

HYDRAULIC GRADE LINE (HGL)	2.505	2.547 2.547	2.606 2.606	2.695
PIPE SIZE & TYPE LENGTH & GRADE		Φ300 uPVC 17.92m, 0.5%	Φ300 uPVC 17.06m, 0.5%	Φ225 uPVC 12.54m, 0.5%
SURFACE LEVEL	3.550	3.550	3.550	3.550
PIPE INVERT LEVEL	2.372	2.462 2.482	2.567 2.587	2.650
DEPTH TO INVERT	1.225	1.088	0.983	0.900
CHAINAGE	0.000	19.009	36.974	50.409

STORMWATER LONGTITUDINAL SECTION - LINE FA

SCALE 1:250

0 5 12.5 25
1:250

DEVELOPMENT APPLICATION ISSUE

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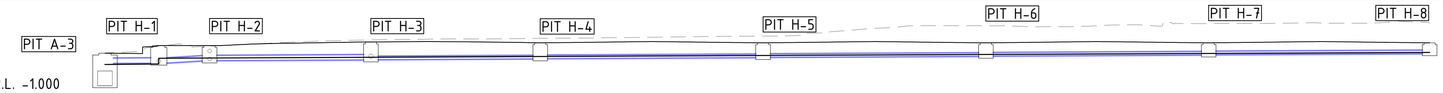
DRAWING TITLE
MASTER PLAN
CONCEPT STORMWATER
LONGTITUDINAL SECTIONS - SHEET 3

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

SCALE	SIZE	REVISION
1:250	A1	C

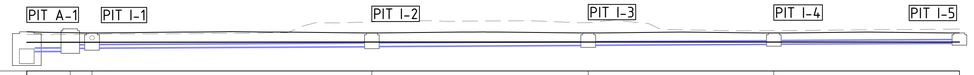
PROJECT No	DRAWING No
23106	DA4803



HYDRAULIC GRADE LINE (HGL)	1.627	1.702 2.142	2.193 2.211	2.249 2.281	2.299 2.310	2.349 2.351	2.439 2.439	2.526 2.526	2.617
PIPE SIZE & TYPE LENGTH & GRADE	Ø450 RCP 3.23m, 0.5%	Ø450 RCP 3.19m, 5.8%	Ø450 RCP 12.27m, 0.5%	Ø300 uPVC 12.87m, 0.5%	Ø300 uPVC 17.19m, 0.5%	Ø300 uPVC 17.18m, 0.5%	Ø300 uPVC 17.19m, 0.5%	Ø300 uPVC 17.04m, 0.5%	
SURFACE LEVEL	3.178	3.175	3.467	3.400	3.400	3.400	3.400	3.400	3.400
PIPE INVERT LEVEL	1.710	1.726 1.726	1.911 1.931	1.993 2.013	2.077 2.097	2.183 2.203	2.289 2.309	2.395 2.415	2.500
DEPTH TO INVERT	1.452	1.264	1.474	1.323	1.217	1.111	1.005	0.900	
CHAINAGE	4.392	8.537	21.705	35.529	53.718	71.901	90.086	108.122	

STORMWATER LONGTITUDINAL SECTION - LINE H

SCALE 1:250



HYDRAULIC GRADE LINE (HGL)	1.334	1.359	1.367	1.365 1.365	1.363 1.363	1.358 1.358	1.362
PIPE SIZE & TYPE LENGTH & GRADE	Ø300 uPVC 2.26m, 0.5%	Ø300 uPVC 21.95m, 0.5%	Ø300 uPVC 16.76m, 0.5%	Ø300 uPVC 14.25m, 0.5%	Ø300 uPVC 14.25m, 0.5%		
SURFACE LEVEL	2.435	2.100	2.100	2.100	2.100	2.100	2.100
PIPE INVERT LEVEL	0.577	0.588 0.882 0.842 0.862	0.971 0.991	1.075 1.095	1.166 1.186	1.258
DEPTH TO INVERT	1.847	1.258	1.129	1.025	0.934	0.842
CHAINAGE	3.547	5.320	28.165	45.825	60.971	76.121

STORMWATER LONGTITUDINAL SECTION - LINE I

SCALE 1:250

REFER ABOVE FOR CONTINUATION

0 5 12.5 25
1:250

DEVELOPMENT APPLICATION ISSUE

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DRAWING TITLE
MASTER PLAN
CONCEPT STORMWATER
LONGTITUDINAL SECTIONS - SHEET 4

DATE	DRAWN	DESIGNED	CHECKED
JUNE 23	JK	JK	MW

PROJECT No	SCALE	SIZE	REVISION
23106	1:250	A1	C

DRAWING No DA4804

REFER BELOW FOR CONTINUATION