

THE SANCTUARY STAGE 9

LOT 733, DP 1314774 - JOHN OXLEY DRIVE, THRUMSTER

CONSTRUCTION DOCUMENTATION

Job No. 7197

JULY 2026

DA 2022-822

DRAWING SCHEDULE

NO.	DRAWING TITLE	REVISION
00	- COVER	C
01	- ENGINEERING NOTES	C
02	- EROSION & SEDIMENT CONTROL NOTES	C
03	- SITE CONTEXT PLAN	C
04	- SUBDIVISION LAYOUT PLAN	C
05	- SITE ESTABLISHMENT & DEMOLITION PLAN	C
06	- BULK EARTHWORKS CUT & FILL PLAN	C
07	- RETAINING WALL PLAN	C
08	- STORMWATER, SEWER AND WATER PLAN	C
09	- STORMWATER LONGITUDINAL SECTION - LINE 03 & 13	C
10	- SEWER LONGITUDINAL SECTION - LINE C & D	C
11	- STORMWATER CATCHMENT PLAN	C
12	- STORMWATER CALCULATIONS SHEET & RESULTS	C
13	- LANDSCAPE PLAN	C
14	- LANDSCAPE DETAILS 01	C
15	- LANDSCAPE DETAILS 02	C
16	- LANDSCAPING NOTES	C

These are the plans referred to under
Section 305-307 of the Water Management Act, 2000
LETTER OF ACCEPTANCE No.:

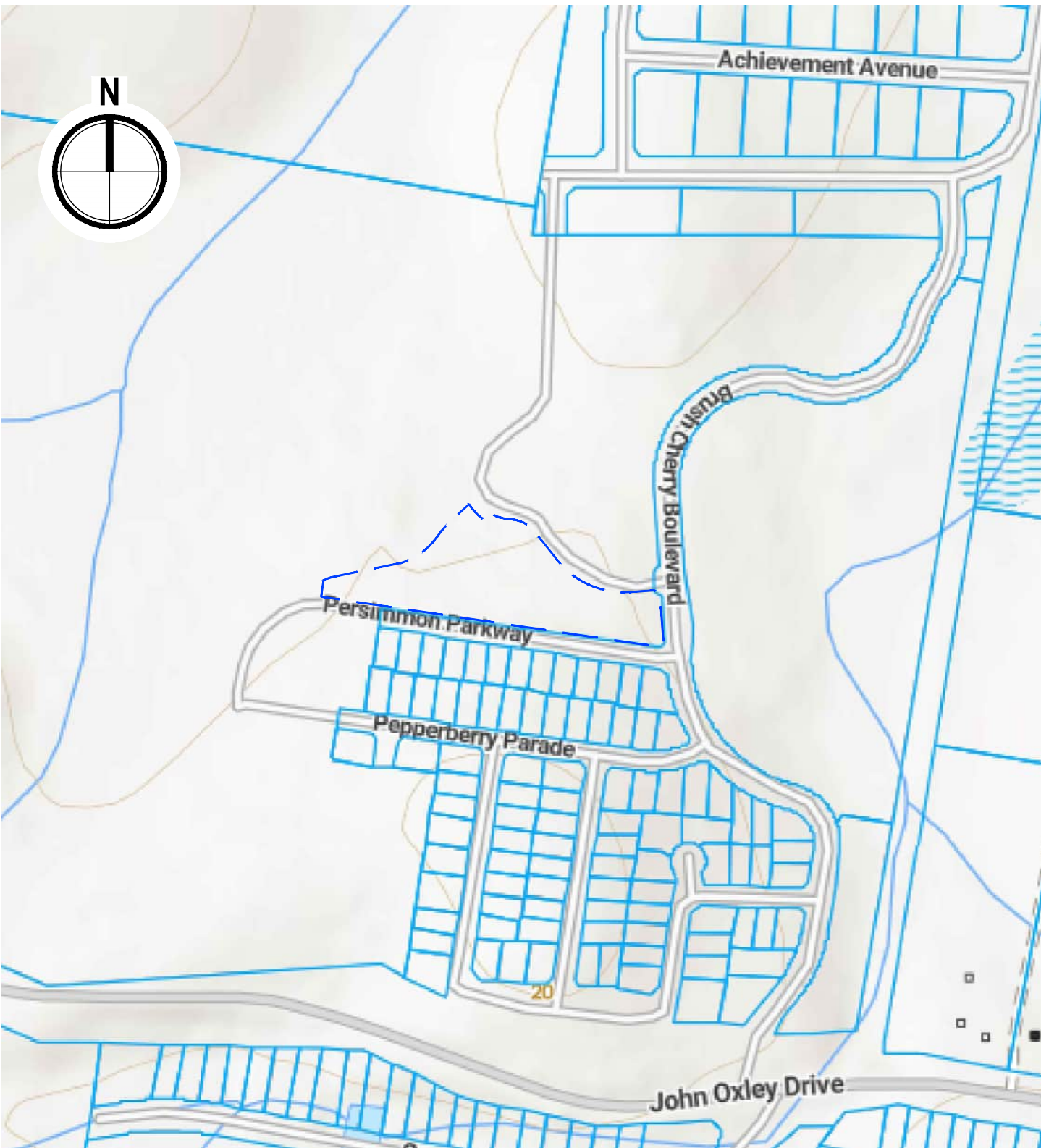
2023 251.8
Customer Ref: L1.67867.TT

and are determined as APPROVED on: 31 July 2026
PORT MACQUARIE-HASTINGS COUNCIL

These are the plans referred to in
Subdivision Works Certificate Application No.:

17.2022.822.1

and determined as APPROVED on: 3 August 2026
PORT MACQUARIE-HASTINGS COUNCIL



LOCALITY PLAN

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

prepared for

BIRD IN THE HAND 2 PTY LTD.

KING + CAMPBELL

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NOT TO BE USED FOR CONSTRUCTION UNLESS CONSTRUCTION CERTIFICATE ISSUED FOR THE WORKS

CAUTION

1. UNDERGROUND SERVICES HAVE BEEN LOCATED TO A QUALITY OF CLASS C ONLY IN ACCORDANCE WITH AS5488.1-2019. THE CONTRACTOR IS RESPONSIBLE FOR INCREASING THE QUALITY TO CLASS A PRIOR TO CONSTRUCTION.

2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN CURRENT INFORMATION WITH REGARD TO ALL UNDERGROUND SERVICES & TO LOCATE THEM PRIOR TO COMMENCEMENT OF CONSTRUCTION.

3. WHERE LOCATION IS CRITICAL TO THE DESIGN IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND LEVEL THE APPROPRIATE SERVICE PRIOR TO CONSTRUCTION

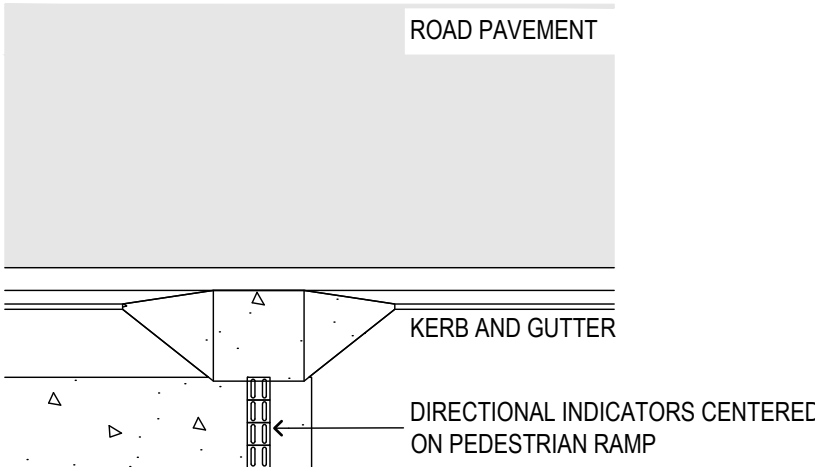
4. ANY DIFFERENCES WITH SERVICES SHOWN ON THE DESIGN ARE TO BE REFERRED TO THE SUPERINTENDENT.

GENERAL NOTES

- 1. ALL WORK TO BE CARRIED OUT TO THE REQUIREMENTS AND SPECIFICATIONS OF AUS-SPEC DESIGN AND CONSTRUCTION GUIDELINES - PORT MACQUARIE HASTINGS COUNCIL VERSION.
- 2. SUBSOIL DRAINAGE SHALL BE PROVIDED AS SHOWN ON THE PLAN, AS DIRECTED BY THE SUPERINTENDENT'S REPRESENTATIVE AND OTHERWISE GENERALLY WHERE THE SUBGRADE LEVEL IS MORE THAN 400mm BELOW NATURAL SURFACE LEVELS, AS PER D4.06 & ASD 307.
- 3. PROVIDE TURFING TO A MINIMUM OF 900mm BEHIND KERB WHERE NOT SPECIFIED ON LANDSCAPING PLANS.
- 4. ALL LANDSCAPING IS TO BE TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT.
- 5. ALL TRENCHING & CONDUIT WORK FOR ESSENTIAL ENERGY IS TO BE IN ACCORDANCE WITH THE ESSENTIAL ENERGY MANUAL FOR NON-ELECTRICAL WORKS REQUIREMENTS.
- 6. PUBLIC LIGHTING TO BE IN ACCORDANCE WITH AS1158 - PUBLIC LIGHTING CODE.
- 7. TRAFFIC CONTROL PLAN (IN ACCORDANCE WITH AS1742.3) TO BE PREPARED, SUBMITTED AND APPROVED BY COUNCIL PRIOR TO CONSTRUCTION.
- 8. PROVIDE TACTILE INDICATORS ON FOOTPATHS ABOVE PRAM RAMPS IN ACCORDANCE WITH AS 1428.4.2002 AND AS SHOWN ON THIS PAGE.
- 9. EXISTING ACCESS TO BE MAINTAINED DURING CONSTRUCTION.
- 10. PERMISSION TO ENTER PROPERTIES TO BE SOUGHT FROM OWNERS BEFORE CONSTRUCTION WORK BEGINS.

SITE REGRADING NOTES

- 1. ALL SITE REGRADING IS TO BE CARRIED OUT IN ACCORDANCE WITH AUS-SPEC DESIGN SPEC D6.
- 2. TOPSOIL TO BE STRIPPED, STOCKPILED AND TO BE USED ON SITE AS DIRECTED. NO TOPSOIL TO BE REMOVED FROM SITE.
- 3. CUT AND FILL SITE, COMPACT FILL TO ACHIEVE A RELATIVE DENSITY IN ACCORDANCE WITH AS3798 GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS.
- 4. ENSURE EROSION CONTROL AND FILTER FENCES MAINTAINED AT ALL TIMES.
- 5. SUBSOIL DRAINAGE REQUIREMENTS ARE TO BE VERIFIED WITH THE GEOTECHNICAL ENGINEER PRIOR TO FILLING WORK COMMENCING.
- 6. NO WORK TO COMMENCE UNTIL CONTRACTOR HAS DISCUSSED REQUIREMENTS WITH APPOINTED GEOTECHNICAL ENGINEER.



01 PEDESTRIAN RAMP DIRECTIONAL INDICATORS PLAN NTS

TREE PROTECTION NOTES

- 1. ALL TREES RETAINED TO BE ADEQUATELY PROTECTED BY APPROPRIATE BARRIER FENCING CONSTRUCTED FROM STAR PICKETS AND FLUORESCENT FENCING AT ALL TIMES DURING CONSTRUCTION. THE BARRIER FENCING SHOULD EXTEND TO THE EXTENT OF THE DRIP LINE OF THE TREE WHERE PRACTICABLE.
- 2. WHERE PRACTICABLE NO COMPACTION OF THE ROOTS IS TO BE PERMITTED DURING THE COURSE OF CONSTRUCTION.
- 3. THE EXISTING LEVEL AT THE BASE OF THE TRUNK OF ALL THE LISTED TREES IS TO BE MAINTAINED FOR AT LEAST 1.5m FROM THE BASE OF THE TREES.
- 4. THE REMOVAL OF ANY TREE IS TO FOLLOW THE RECOMMENDATIONS CONTAINED WITHIN THE ECOLOGICAL REPORT AND ASSOCIATED REVIEW OF ENVIRONMENTAL FACTORS. OFFSET PLANTING TO BE UNDERTAKEN IN ACCORDANCE WITH THE ECOLOGICAL REPORT.
- 5. PRIOR TO ANY TREE REMOVAL PRE-CLEARING CHECKS ARE TO BE UNDERTAKEN BY A SUITABILITY QUALIFIED ECOLOGIST.

ABORIGINAL HERITAGE NOTES

- 1. IF ABORIGINAL OBJECTS ARE UNCOVERED DURING GROUND SURFACE WORKS, ALL WORKS MUST CEASE AND HERITAGE NSW SHOULD BE CONTACTED TO DETERMINE A COURSE OF ACTION.
- 2. IF SUSPECTED HUMAN REMAINS ARE FOUND, ALL WORK MUST CEASE, THE SITE SHOULD BE SECURED AND THE NSW POLICE NOTIFIED. NO FURTHER WORKS CAN BE UNDERTAKEN UNTIL THE NSW POLICE PROVIDE WRITTEN ADVICE. IF THE REMAINS ARE DEEMED TO REQUIRE ARCHAEOLOGICAL INVESTIGATION BY THE NSW POLICE OR NSW CORONER, THEN THE NSW HERITAGE AND THE RELEVANT ABORIGINAL PARTIES MUST BE NOTIFIED.
- 3. AS PART OF ANY SITE INDUCTION, THE CONTACT TELEPHONE NUMBERS OF HERITAGE NSW REGIONAL ARCHAEOLOGIST AND ENVIROLINE 131 555 SHOULD BE GIVEN TO ALL SITE WORKERS AND PERSONNEL, IN CASE UNKNOWN OBJECTS OR ITEMS ARE UNCOVERED DURING EXCAVATION.

GENERAL INFORMATION

THE NATIONAL PARKS AND WILDLIFE ACT 1974 (NPW ACT) PROTECTS ABORIGINAL OBJECTS AND ABORIGINAL PLACES IN NSW. IT HAS BEEN AMENDED BY THE NATIONAL PARKS AND WILDLIFE REGULATION 2009 (NPW REGULATION). UNDER THE NPW ACT, THE FOLLOWING ARE OFFENCES UNLESS AN EXEMPTION OR DEFENCE IS PROVIDED FOR UNDER THE ACT:

- A PERSON MUST NOT KNOWINGLY HARM OR DESECRATE AN ABORIGINAL OBJECT (KNOWING OFFENCE)
- A PERSON MUST NOT HARM OR DESECRATE AN ABORIGINAL OBJECT OR ABORIGINAL PLACE (STRICT LIABILITY OFFENCE)

HARM INCLUDES ACTS OR OMISSIONS THAT "DESTROY, DEFACE OR DAMAGE" AN ABORIGINAL OBJECT OR ABORIGINAL PLACE, AND IN RELATION TO AN OBJECT, MOVE THE OBJECT FROM THE LAND ON WHICH IT HAS BEEN SITUATED.

SECTION 91 OF THE ACT ALSO OBLIGES ANY PERSON WHO DISCOVERS AN ABORIGINAL OBJECT TO REPORT IT TO THE HERITAGE NSW FOR IT TO BE ENTERED ON THE ABORIGINAL HERITAGE INFORMATION MANAGEMENT SYSTEMS (AHIMS).

STANDARD DOCUMENTS

MANAGING URBAN STORMWATER - SOILS & CONSTRUCTION VOL. 1.

AUS-SPEC - DESIGN & CONSTRUCTION PORT MACQUARIE HASTINGS COUNCIL VERSION.

PORT MACQUARIE HASTINGS COUNCIL STANDARD DRAWINGS.

APPLICABLE AUSTRALIAN STANDARDS AS MENTIONED IN THIS DRAWING SET.

WATER SUPPLY CODE OF AUSTRALIA WSA 03-2011

GRAVITY SEWERAGE CODE OF AUSTRALIA WSA 02-2014

SURVEY AND PRESERVATION OF SURVEY MARKS

- 1. THE UNAUTHORISED REMOVAL, DISTURBANCE OR DESTRUCTION OF STATE SURVEY MARKS (PM, SSM, TS) OR BOUNDARY REFERENCE MARKS IS COSTLY TO THE COMMUNITY.
- 2. SECTION 24(1) OF THE SURVEYING AND SPATIAL INFORMATION ACT 2020 STATES THAT A PERSON MUST NOT REMOVE, DAMAGE, DESTROY, DISPLACE, OBLITERATE OR DEFACE ANY SURVEY MARK UNLESS AUTHORISED TO DO SO BY THE SURVEYOR GENERAL. THERE ARE SIGNIFICANT PENALTIES IF MARKS ARE REMOVED WITHOUT APPROVAL.
- 3. THERE ARE PROCEDURES IN PLACE IF A SURVEY MARK HAS TO BE REMOVED AND REPLACED. THE SURVEYOR GENERAL HAS GUIDELINES FOR THE REPLACEMENT OF SURVEY MARKS (SURVEYOR GENERAL'S DIRECTIONS NO. 11 PRESERVATION OF SURVEY INFRASTRUCTURE).
- 4. THE CONTRACTOR SHALL CHECK SUSTAINABILITY OF THE STATED COORDINATES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION
- 5. ONLY ESTABLISHED STATE SURVEY MARKS ARE TO BE USED TO ESTABLISH HORIZONTAL AND HEIGHT CONTROL UNLESS THE MARK HAS BEEN APPROVED BY THE SUPERINTENDENT PRIOR TO CONSTRUCTION

WATER MAIN NOTES

- 1. DESIGN AND CONSTRUCTION WORK TO BE CARRIED OUT IN ACCORDANCE WITH THE WATER SUPPLY CODE OF AUSTRALIA (WSAA) 03 AND THE PMHC SUPPLEMENT TO THE WSAA.
- 2. PIPES IN PUBLIC ROAD PAVEMENTS ARE TO BE CLASS 16/PN16, SERIES II, RRJ mPVC TO AS/NZS 4765 OR OPVC TO AS/NZS 4441 OR HDPE PE100 PN16. PIPES TO BE LIGHT BLUE IN COLOUR OR BLACK STRIPE FOR HDPE.
- 3. ALL MAINS ARE TO BE LAID BETWEEN 0.5 AND 1.2 METRES BEHIND THE KERB UNLESS OTHERWISE SHOWN ON THE PLANS.
- 4. LOT CORNERS ARE TO BE MARKED BY THE SUPERVISING CONSULTANT TO ENSURE CORRECT LOCATION OF SERVICES.
- 5. MINIMUM COVER IN FOOTPATH AREAS IS 450mm AND UNDER ROAD PAVEMENT AREAS AND IN EASEMENTS IS TO BE 600mm.
- 6. ALL PIPES ARE TO BE LAID WITH CONTINUOUS 200mm PLASTIC MESH WITH COPPER OR STAINLESS STEEL TRACE WIRE FOR RADIO LOCATION.
- 7. ALL FITTINGS ARE TO BE FBE COATED DUCTILE IRON TO AS2280 WITH FBE LINING.
- 8. ALL BENDS, TEES, END CAPS, TAPERS AND VALVES ARE TO BE ANCHORED WITH THRUST BLOCKS - REFER TO ASD 433.
- 9. HYDRANT FITTINGS CONSIST OF A HYDRANT TEE WITH SPRING HYDRANT TO AS 3952 AND SPACERS AS APPROPRIATE. HYDRANT FITTINGS ARE TO HAVE AN APPROVED THERMAL BONDED COATING - REFER TO ASD 440.
- 10. STOP VALVES ARE TO BE RESILIENT SEATED AND HAVE AN APPROVED THERMAL BONDED COATING AND MANUFACTURED TO AS 2638. STOP VALVES SHALL BE CLOCKWISE CLOSING - REFER TO ASD 441.
- 11. VALVE AND HYDRANT COVERS ARE TO IN ACCORDANCE WITH ASD 440 AND 441.
- 12. MARKINGS ARE TO BE IN ACCORDANCE WITH ASD 460, ASD 461 & ASD 462.
- 13. SERVICE CONNECTIONS ARE TO BE IN ACCORDANCE WITH ASD 450, ASD 451 & ASD 452.
- 14. WHEREVER THERE IS A PAVEMENT OVER A WATER MAIN SERVICE TAPPING, A CAST IRON BOX (OR APPROVED EQUIVALENT) WILL BE REQUIRED.
- 15. CONNECTION TO, ADJUSTMENT OF, OR RELOCATION OF EXISTING MAINS ARE TO BE ARRANGED WITH COUNCIL AT CONTRACTOR'S COST.
- 16. WATER MAINS ARE TO BE DISINFECTED IN ACCORDANCE WITH DPW&S STANDARD PROCEDURES PRIOR TO BEING COMMISSIONED.
- 17. THE CONTRACTOR MUST PLACE BENDS IN THE POSITIONS GENERALLY AS SHOWN ON THE PLANS AND NOT TO DELETE A BEND WITHOUT EXPRESS APPROVAL OF COUNCIL'S DEVELOPMENT SUPERVISOR.

SEWER NOTES

- 1. ALL WORK TO BE IN ACCORDANCE WITH THE REQUIREMENTS AND SPECIFICATIONS OF GRAVITY SEWERAGE CODE OF AUSTRALIA (WSAA) 02 AND PMHC SUPPLEMENT TO WSAA. REFER ALSO TO ASD 500 SERIES (COUNCIL STD DWGS)
- 2. MANHOLE NUMBERS TO BE PAINTED ON LIDS.
- 3. JUNCTION PEGS 0.6M LONG MARKED "J" TO BE PLACED AT EACH JUNCTION CONSTRUCTED. REFER TO ASD 502.
- 4. CONCRETE PROTECTION OTHER THAN SHOWN ON SECTIONS MAY BE REQUIRED FOR PROTECTION FROM TREE ROOTS, SHALLOW TRENCHES, STEEP GRADES, SCOURING, ETC AS DIRECTED BY THE SUPERVISING CONSULTANT.
- 5. ALL PIPES ARE TO BE SEWERPRO, uPVC TYPE SN8 OR AS SPECIFIED ON PLANS AND SECTIONS.
- 6. BOUNDARY CUT CHAINAGES ARE TO BE OBTAINED BY THE CONTRACTOR FROM THE SUPERVISING CONSULTANTS TO ENSURE CORRECT LOCATION OF HOUSE SERVICE JUNCTIONS.
- 7. MANHOLE LIDS TO BE CONSTRUCTED TO A LEVEL ABOVE THE FINISHED SURFACE LEVEL IN ACCORDANCE WITH ASD 504 UNLESS OTHERWISE NOTED (75MM FOR NEW SUBDIVISION) AND GRADED PARALLEL TO SLOPE OF LAND AND INSTALLED IN ACCORDANCE WITH ASD 504.
- 8. STEP IRONS ARE TO BE PROVIDED IN ALL MANHOLES DEEPER THAN 1.2M (MEASURED FROM THE TOP OF BENCHING TO GROUND LEVEL).
- 9. WHERE MULTIPLE INVERT LEVELS ARE SHOWN AT MANHOLES THEY REFER TO INLET AND/OR OUTLET LEVELS RESPECTIVELY AT THE WALL OF THE MANHOLE.
- 10. TRENCH STOPS ARE TO BE PROVIDED ON GRADES IN EXCESS OF 10%. REFER TO ASD 513. GRADES IN EXCESS OF 15% REQUIRE BULKHEAD INSTALLATION. REFER ASD 514.
- 11. ALL CONCRETE TO BE MANUFACTURED FROM TYPE D CEMENT.
- 12. ALL TRENCHES UNDER ROADWAYS TO BE FILLED WITH SAND.
- 13. ALL JUNCTIONS ARE TO BE BROUGHT TO WITHIN 1.5 METRES FROM FINISHED SURFACE.
- 14. SIDE LINES ARE TO BE 150mm EXTENSIONS CONSTRUCTED OFF AND AT THE LEVEL OF THE SEWER MAIN. WHERE RISERS ARE REQUIRED, THEY ARE TO BE LOCATED WITHIN THE PROPERTY SERVED. REFER TO ASD 501 & 502.
- 15. CONNECTION TO COUNCIL'S SEWER IS TO BE CARRIED OUT UNDER COUNCIL SUPERVISION.
- 16. GRADE IS CALCULATED FROM INSIDE FACE OF MANHOLES. DEPTH TO INVERT IS CALCULATED FROM TOP OF MANHOLE (75mm ABOVE FINISHED SURFACE R.L.) ENSURE MANHOLES ARE CONSTRUCTED TO LEVELS AS SHOWN.
- 17. A CCTV INSPECTION OF ALL NEW AND MODIFIED SEWER INFRASTRUCTURE IS TO BE UNDERTAKEN IN ACCORDANCE WITH CONDUIT INSPECTION REPORTING CODE OF AUSTRALIA (WSA05) BY SUITABLY QUALIFIED PERSON.

STORMWATER NOTES

- 1. ALL STORMWATER PITS ARE TO INCLUDE 3m OF SUBSOIL DRAINAGE TO BE INSTALLED ON THE UPSTREAM SIDE OF ALL DRAINAGE PITS WITH AN UPSTREAM PIPE. THE UPSTREAM PIPE IS TO BE SEALED AND ENCLOSED IN A SEAMLESS TUBULAR FILTER FABRIC IN ACCORDANCE WITH "AUSPEC".
- 2. PIT SIZES ARE TO BE AS SET OUT IN THE SCHEDULE AND ARE TO BE IN ACCORDANCE WITH AS 3500 AND "AUSPEC".
- 3. PIT GRATES ARE TO BE SUITABLE FOR TRAFFIC LOADING WHERE APPLICABLE & TO CONFORM TO SURFACE CROSSFALLS.
- 4. MAIN STORMWATER LINES ARE TO BE AS SHOWN ON THE LONGITUDINAL SECTIONS.
- 5. FOR STORMWATER PIPE SIZE & CLASS SEE STORMWATER LONGITUDINAL SECTIONS. STORMWATER MAIN LINES PIPE TO BE STORMPRO OR EQUIVALENT CONCRETE PIPE. STORMWATER INTERALLOTMENT AND PROPERTY CONNECTIONS TO BE uPVC OR STORMPRO.
- 6. CHANNELISE THE BASE OF PITS CONTAINING PIPES 525mm OR GREATER.
- 7. ALL HEADWALLS TO HAVE RIPRAP OUTLET PROTECTION TO ASD 308/309

STORMWATER SUPPORT DETAIL

- FOR CLEARANCES LESS THAN 1m BETWEEN A SEWER / WATER PIPE UNDER A 375mm STORMWATER PIPE OR GREATER, BRIDGING IS REQUIRED
- THE BRIDGED SEWER / WATER PIPE IS TO BE WRAPPED IN COMPRESSIBLE MEMBRANE WITH SUPPORTS
- CONCRETE PIERS LENGTH TO BE 250mm BEYOND EACH SIDE OF PIPE BEING SUPPORTED (IE PIPE O.D. + 500mm)

WORK AS EXECUTED INFORMATION

THIS INFORMATION IS TO BE FORWARDED TO KING & CAMPBELL PTY LTD UPON COMPLETION OF SEWER & DRAINAGE WORKS.

SEWER

1. A MARKER IS TO BE PLACED DIRECTLY ABOVE ALL SEWER DEAD ENDS (AT GROUND LEVEL), WITH A DISTANCE DOWN TO THE INVERT OF THE PIPE.

2. THE DISTANCE FROM THE DOWNSTREAM MANHOLE, A DEPTH BELOW FINISHED SURFACE AND A LENGTH OF PIPE FOR ALL SEWER SIDELINES AND JUNCTIONS IS TO BE WRITTEN ON A COPY OF THE FINAL ENGINEERING PLANS. IT SHOULD ALSO BE INDICATED WHETHER THE SIDELINE IS AT 45° OR 90° TO THE MAIN SEWER LINE.

3. IT MUST BE INDICATED IF A RISER HAS BEEN USED.

INTERLOT DRAINAGE

1. A MARKER IS TO BE PLACED DIRECTLY ABOVE ALL INTERLOT DRAINAGE DEAD ENDS (AT GROUND LEVEL), WITH A DISTANCE DOWN TO THE INVERT OF THE PIPE.

2. THE DISTANCE FROM THE DOWNSTREAM PIT AND A DEPTH BELOW FINISHED SURFACE OF ALL INTERLOT DRAINAGE JUNCTIONS IS TO BE WRITTEN ON A COPY OF THE FINAL ENGINEERING PLANS. IT SHOULD ALSO BE INDICATED WHETHER THE JUNCTION IS AT 45° OR 90° TO THE MAIN DRAINAGE LINE.

STORMWATER

1. A CCTV INSPECTION OF ALL NEW AND MODIFIED STORMWATER INFRASTRUCTURE IS TO BE UNDERTAKEN IN ACCORDANCE WITH CONDUIT INSPECTION REPORTING CODE OF AUSTRALIA (WSA05) BY SUITABLY QUALIFIED PERSON.

2. INSPECTION TO BE PROVIDED TO COUNCIL PRIOR TO ACCEPTANCE OF WORKS INTO THE NOMINATED 'INTO MAINTENANCE PERIOD'.

These are the plans referred to under Section 305-307 of the Water Management Act, 2000 LETTER OF ACCEPTANCE No.:

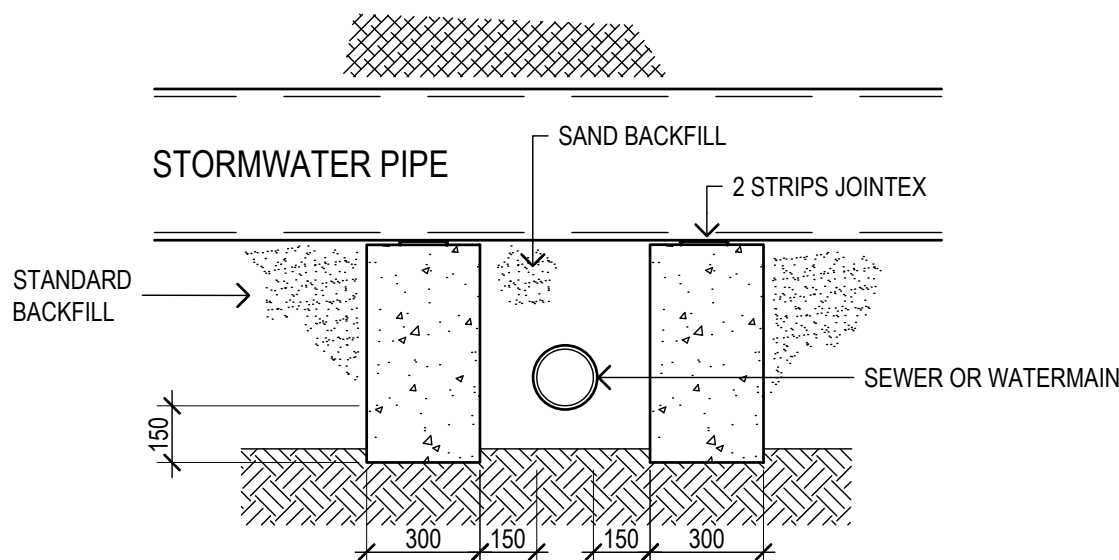
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02 STORMWATER SUPPORT DETAIL SECTION NTS

REV.	DATE	DESCRIPTION	
A	27.01.2026	ISSUED FOR SWC	AJC
B	04.02.2026	MINOR AMENDMENTS	AJC
C	30.06.2026	MINOR AMENDMENTS	

PROJECT NO:	7197	DRAWING TITLE:	ENGINEERING NOTES
DA NO.:	2022-822		
DESIGNED BY:	JSC/CJC	PROJECT:	THE SANCTUARY STAGE 9 LOT 733, DP 1314774 - JOHN OXLEY DRIVE, THURMSTER
DRAWN BY:	JSC/CJC/AJC		
CHECKED BY:	CJC/ISM	CLIENT:	BIRD IN THE HAND 2 PTY LTD.
DATE CREATED:	JULY 2025		
		DRAWING NO:	7197_Stage 9_SWC_Plan
		SHEET:	01 OF 16
		REVISION:	C



THIS DRAWING INCLUDES INFORMATION IN COLOUR. IF YOU HAVE A BLACK AND WHITE COPY YOU DON'T HAVE ALL THE INFORMATION. THIS NOTE IS COLOURED RED.

STANDARD NOTES & DRAWINGS

EROSION CONTROL NOTES

1. ALL EROSION & SEDIMENTATION CONTROL MEASURES ARE TO BE CARRIED OUT IN ACCORDANCE WITH AUS-SPEC DESIGN SPEC D7 & CONSTRUCTION SPEC C211 (FROM "SOILS & CONSTRUCTION - VOL 1" (BLUE BOOK))
2. ALL EROSION & SILTATION CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN GRADING.
3. ALL STORMWATER & SEWER LINES NOT IN STREETS ARE TO BE MULCHED & SEEDED WITHIN 15 DAYS AFTER BACKFILL.
4. ELECTRIC POWER & TELEPHONE TRENCHES ARE TO BE COMPACTED, SEEDED & MULCHED WITHIN 15 DAYS AFTER BACKFILL.
5. ALL TEMPORARY EARTH BANKS, DIVERSIONS & SEDIMENT DAM EMBANKMENTS ARE TO BE MACHINE COMPACTED, SEEDED & MULCHED FOR TEMPORARY VEGETATIVE COVER WITHIN 10 DAYS AFTER GRADING. STRAW OR HAY MULCH IS REQUIRED.
6. ALL FILLS ARE TO BE LEFT WITH A LIP AT THE TOP OF THE SLOPE AT THE END OF EACH DAYS OPERATION.
7. ALL CUT & FILL SLOPES ARE TO BE SEEDED & MULCHED IMMEDIATELY UPON COMPLETION OF GRADING AND AFTER TOPSOILING MAXIMUM BATTER SLOPES TO BE 1 : 3.
8. CONTRACTOR TO TAKE APPROPRIATE DUST SUPPRESSION MEASURES AS NECESSARY TO PREVENT DISTURBANCE TO ADJOINING RESIDENTS.
9. ALL AREAS PROPOSED TO HAVE EITHER TEMPORARY OR PERMANENT VEGETATION COVER ESTABLISHED, ARE TO BE TOPSOILED PRIOR TO CARRYING OUT THE REVEGETATION.
10. ALL DISTURBED AREAS TO BE STABILISED AND/OR REVEGETATED WITHIN 14 DAYS OF EARTHWORKS COMPLETION, USING TURF OR THE FOLLOWING SEED AND FERTILISER MIXTURE :

	SPRING/SUMMER	AUTUMN/WINTER
JAPANESE MILLET	15 kg/ha	5 kg/ha
RYECORN/OATES	5 kg/ha	15 kg/ha
COUCH GRASS	10 kg/ha	8 kg/ha
RHODES GRASS #	10 kg/ha	8 kg/ha
PERENNIAL RYEGRASS	5 kg/ha	10 kg/ha

STARTER FERTILISER (SOWING)	300 kg/ha	300 kg/ha
MAINTENANCE FERTILISER (FOLLOWING SPRING / AUTUMN)	100 kg/ha	100 kg/ha

NOT USED ADJACENT TO BUSHLAND AREAS

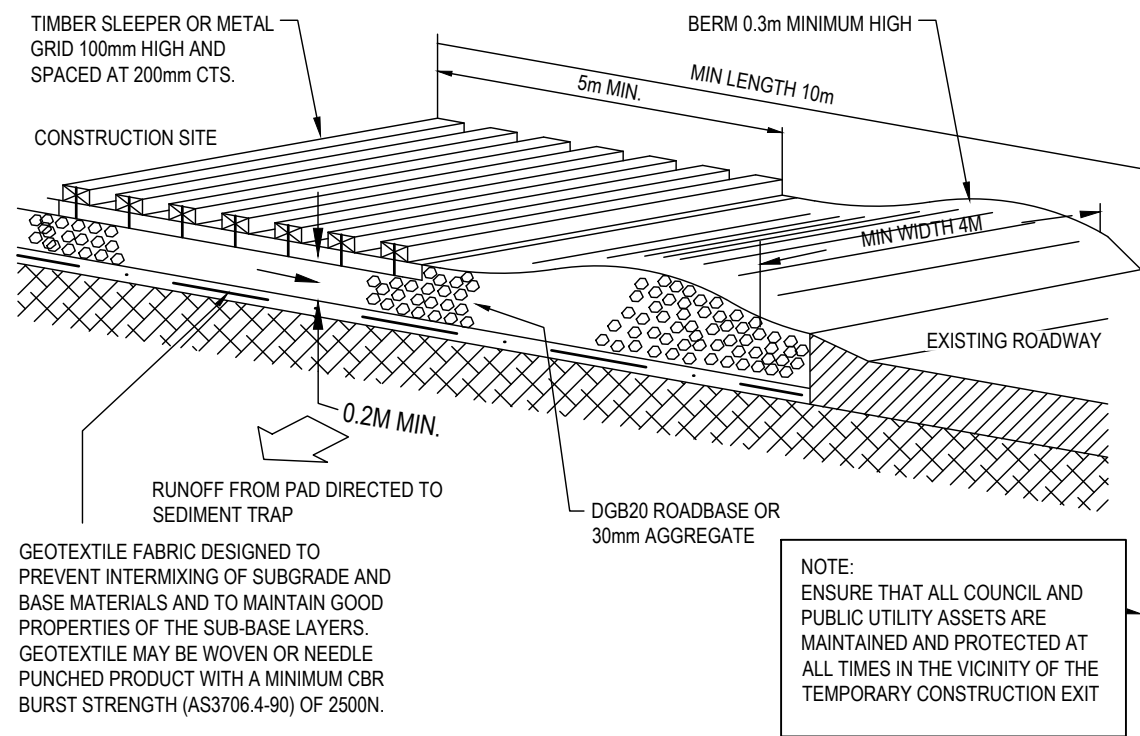
TEMPORARY STABILISED CONSTRUCTION EXIT

CONSTRUCTION NOTES

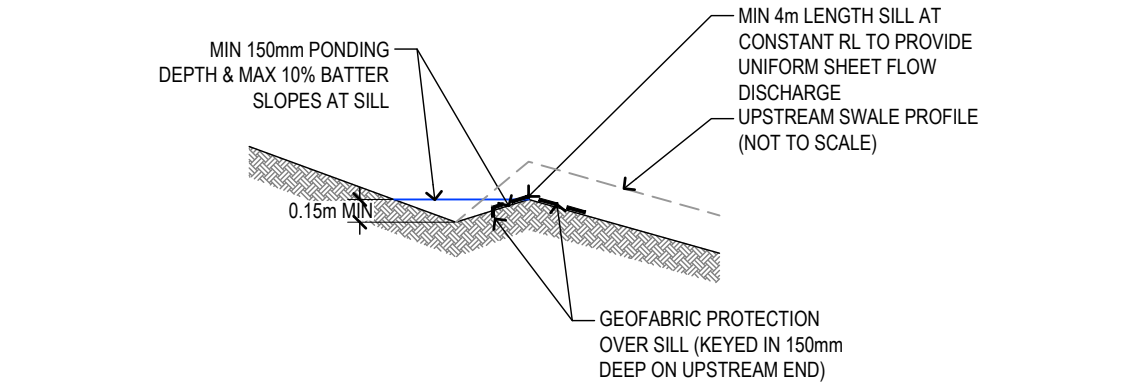
1. STRIP TOPSOIL AND LEVEL SITE.
2. COMPACT SUBGRADE.
3. COVER AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
4. CONSTRUCT 200mm THICK PAD OVER GEOTEXTILE USING ROADBASE OR 30mm AGGREGATE.
5. CONSTRUCT HUMP IMMEDIATELY WITHIN BOUNDARY TO DIVERT WATER TO A SEDIMENT FENCE OR OTHER SEDIMENT TRAP WHERE THE SEDIMENT IS COLLECTED AND REMOVED.

MAINTENANCE NOTES

THE EXIT SHALL BE MAINTAINED IN A CONDITION WHICH PREVENTS TRACKING OR FLOWING OF SEDIMENT OFF THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL GRAVEL AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED OFF THE CONSTRUCTION SITE MUST BE REMOVED IMMEDIATELY.



LEVEL SPREADER DETAIL SECTION

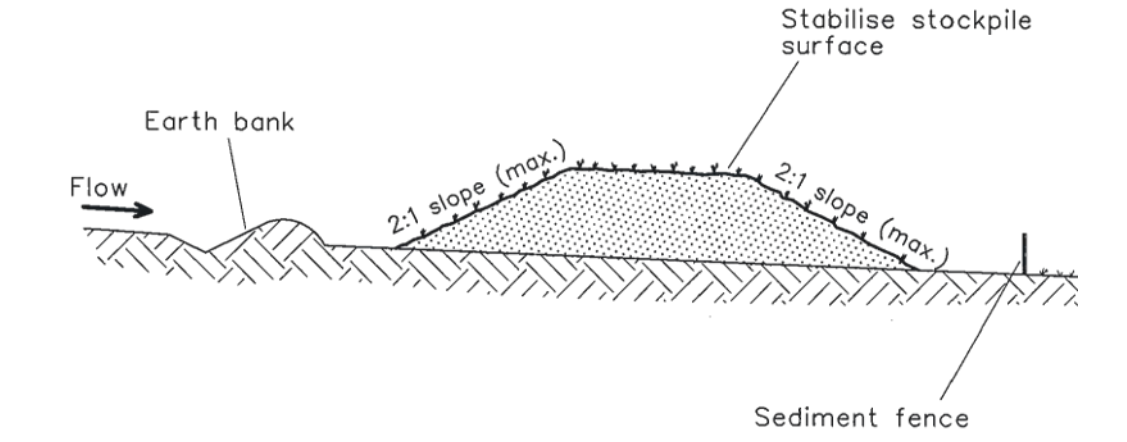


MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTION VOLUME 1 - STANDARD DRAWINGS

STOCKPILES (SD 4-1)

CONSTRUCTION NOTES

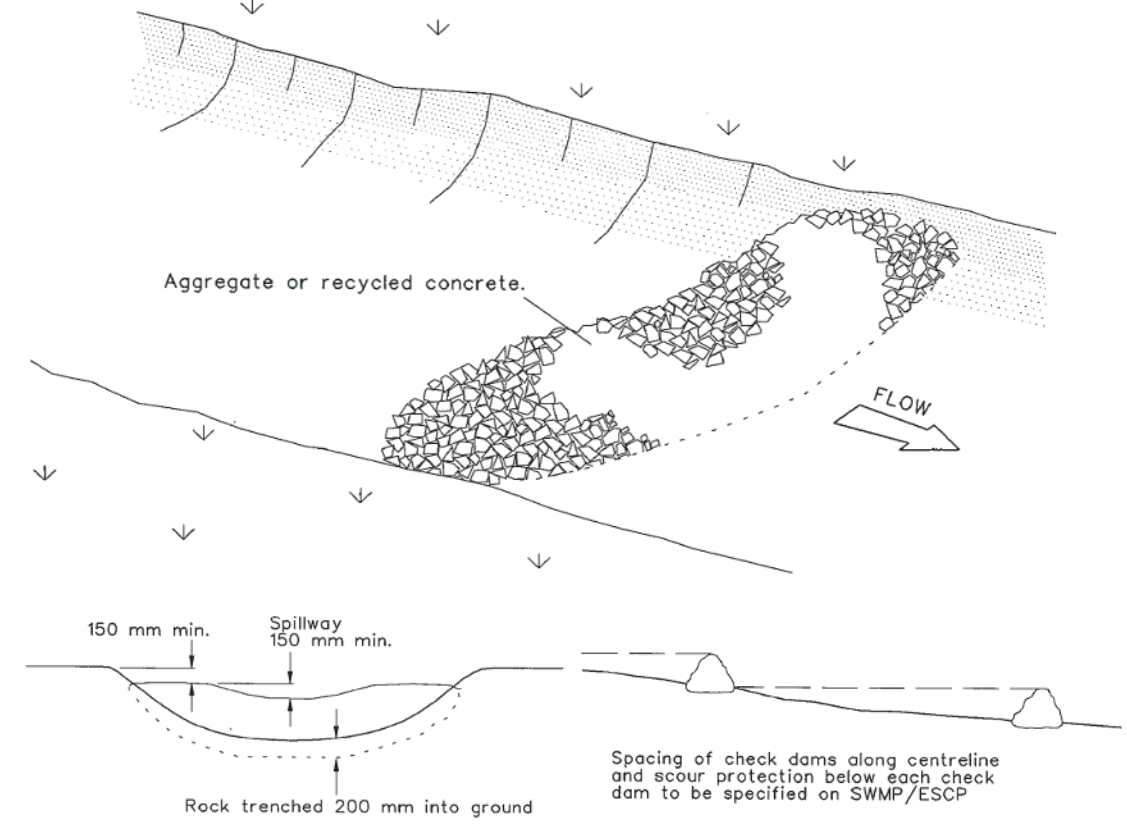
1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT.
4. WHERE THEY ARE TO BE IN PLACE FOR MORE THAN 10 DAYS, STABILISE FOLLOWING THE APPROVED ESCP OR SWMP TO REDUCE THE C-FACTOR TO LESS THAN 0.10.
5. CONSTRUCT EARTH BANKS (STANDARD DRAWING 5-5) ON THE UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES (STANDARD DRAWING 6-8) 1 TO 2 METRES DOWNSLOPE.



ROCK CHECK DAM (SD 5-4)

CONSTRUCTION NOTES

1. CHECK DAMS CAN BE BUILT WITH VARIOUS MATERIALS, INCLUDING ROCKS, LOGS, SANDBAGS AND STRAW BALES. THE MAINTENANCE PROGRAM SHOULD ENSURE THEIR INTEGRITY IS RETAINED, ESPECIALLY WHERE CONSTRUCTED WITH STRAW BALES. IN THE CASE OF BALES, THIS MIGHT REQUIRE THEIR REPLACEMENT EACH TWO TO FOUR MONTHS.
2. TRENCH THE CHECK DAM 200mm INTO THE GROUND ACROSS ITS WHOLE WIDTH. WHERE ROCK IS USED, FILL THE TRENCHES TO AT LEAST 100mm ABOVE THE GROUND SURFACE TO REDUCE THE RISK OF UNDERCUTTING.
3. NORMALLY, THEIR MAXIMUM HEIGHT SHOULD NOT EXCEED 600mm ABOVE THE GULLY FLOOR. THE CENTRE SHOULD ACT AS A SPILLWAY, BEING AT LEAST 150mm LOWER THAN THE OUTER EDGES.
4. SPACE THE DAMS SO THE TOE OF THE UPSTREAM DAM IS LEVEL WITH THE SPILLWAY OF THE NEXT DOWNSTREAM DAM.

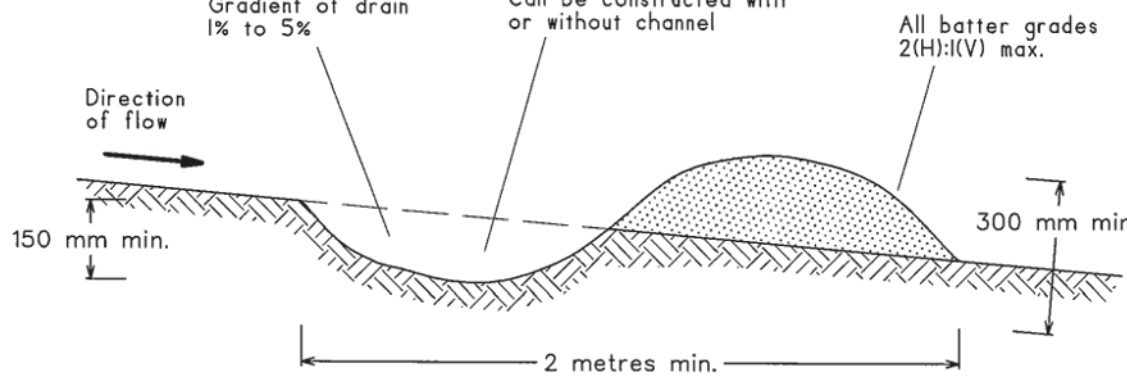


EARTH BANK - LOW FLOW (SD 5-5)

CONSTRUCTION NOTES

1. BUILD WITH GRADIENTS BETWEEN 1 PERCENT AND 5 PERCENT.
2. AVOID REMOVING TREES AND SHRUBS IF POSSIBLE - WORK AROUND THEM.
3. ENSURE THE STRUCTURES ARE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT COULD IMPEDE WATER FLOW.
4. BUILD THE DRAINS WITH CIRCULAR, PARABOLIC OR TRAPEZOIDAL CROSS SECTIONS, NOT V SHAPE.
5. ENSURE THE BANKS ARE PROPERLY COMPACTED TO PREVENT FAILURE.
6. COMPLETE PERMANENT OR TEMPORARY STABILISATION WITHIN 10 DAYS OF CONSTRUCTION.

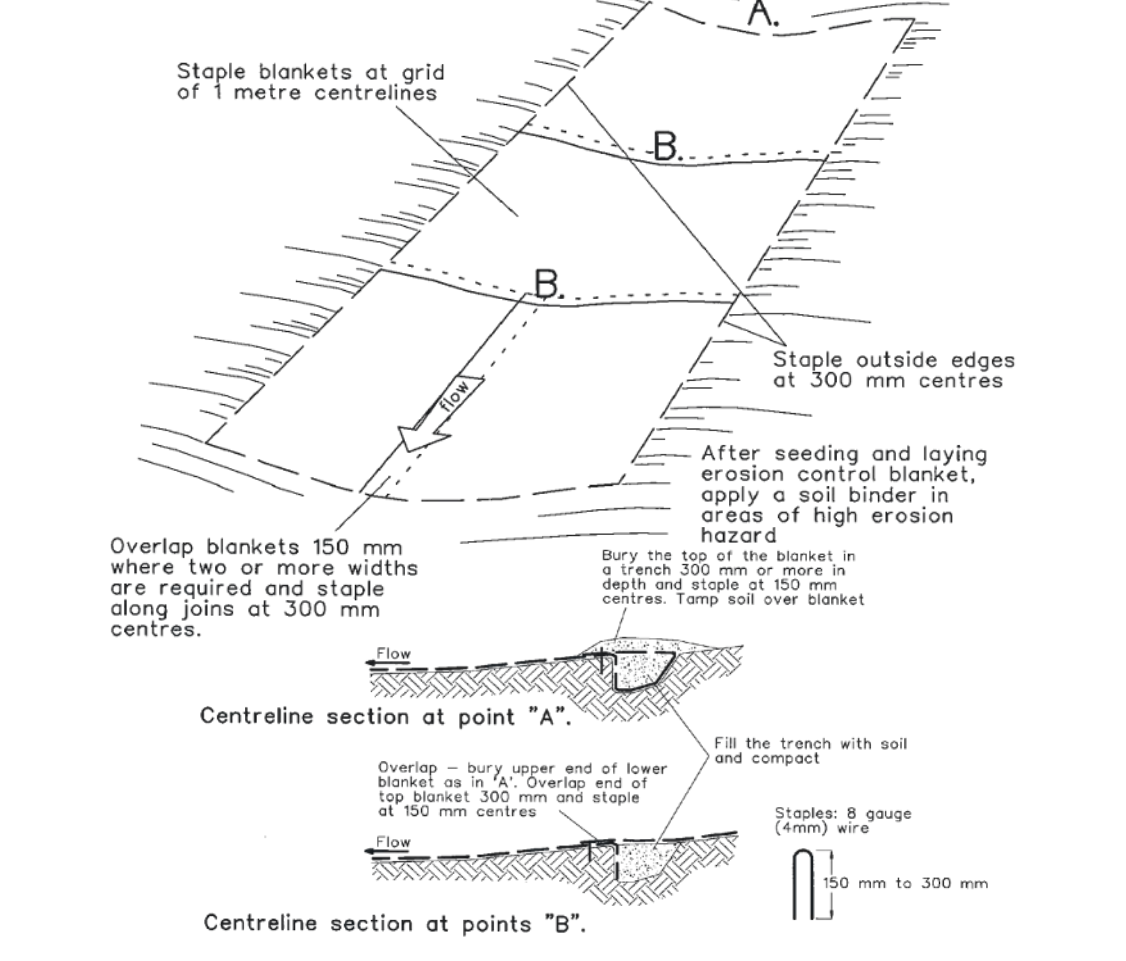
NOTE: ONLY TO BE USED AS TEMPORARY BANK WHERE MAXIMUM SLOPE LENGTH IS 80m.



CONCENTRATED FLOW (SD 5-7)

CONSTRUCTION NOTES

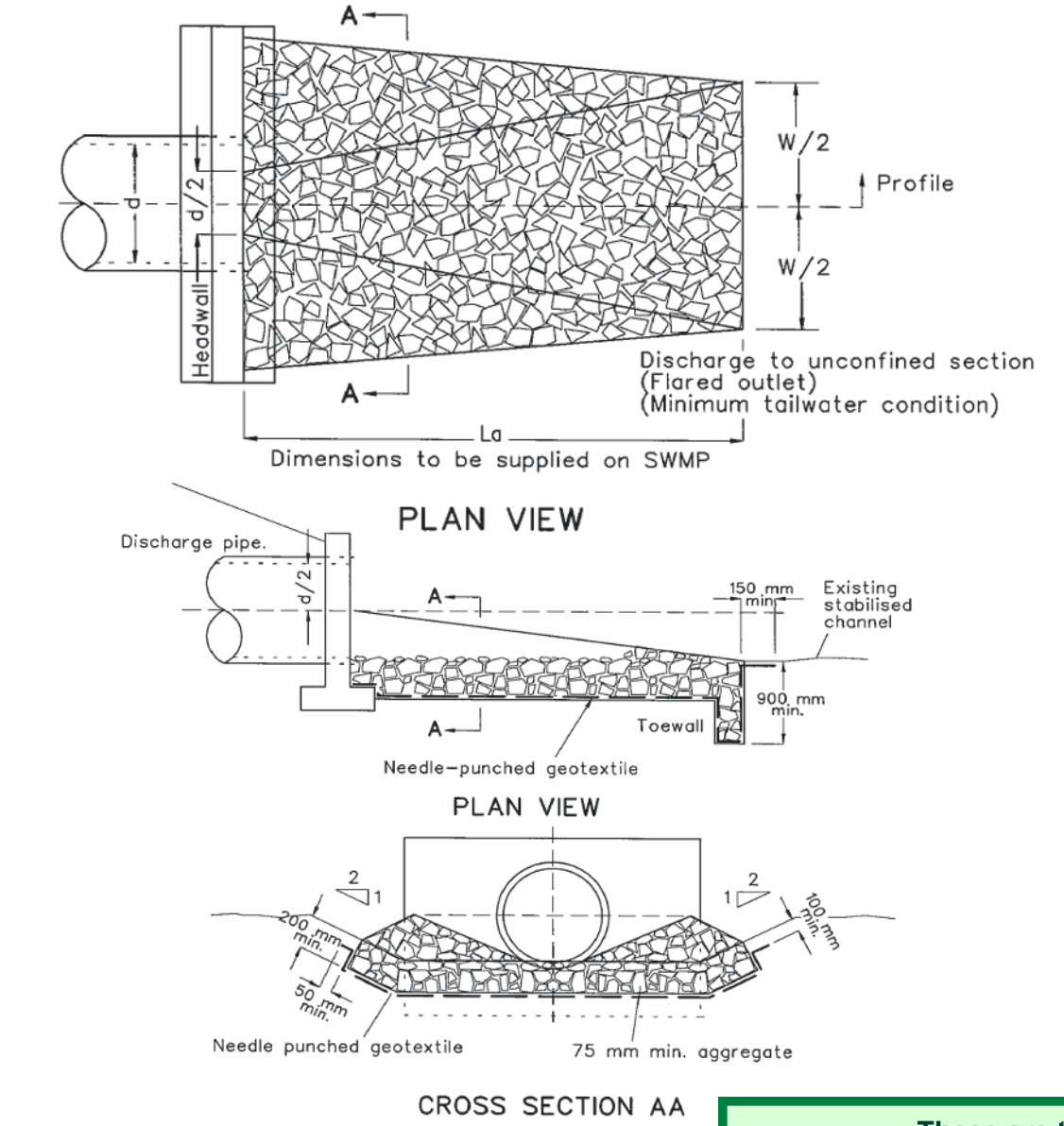
1. REMOVE ANY ROCKS, CLODS, STICKS OR GRASS FROM THE SURFACE BEFORE LAYING MATTING.
2. ENSURE THAT TOPSOIL IS AT LEAST 75mm DEEP.
3. COMPLETE FERTILISING AND SEEDING BEFORE LAYING THE MATTING.
4. ENSURE FABRIC WILL BE CONTINUOUSLY IN CONTACT WITH THE SOIL BY GRADING THE SURFACE CAREFULLY FIRST.
5. LAY THE FABRIC IN "SHINGLE-FASHION", WITH THE END OF EACH UPSTREAM ROLL OVERLAPPING THOSE DOWNSTREAM. ENSURE EACH ROLL IS ANCHORED PROPERLY AT ITS UPSLOPE END (STANDARD DRAWING 5-7b).
6. ENSURE THAT THE FULL WIDTH OF FLOW IN THE CHANNEL IS COVERED BY THE MATTING UP TO THE DESIGN STORM EVENT, USUALLY IN THE 10-YEAR ARI TIME OF CONCENTRATION STORM EVENT.
7. DIVERT WATER FROM THE STRUCTURE UNTIL VEGETATION IS STABILISED PROPERLY.



ENERGY DISSIPATER (SD 5-8)

CONSTRUCTION NOTES

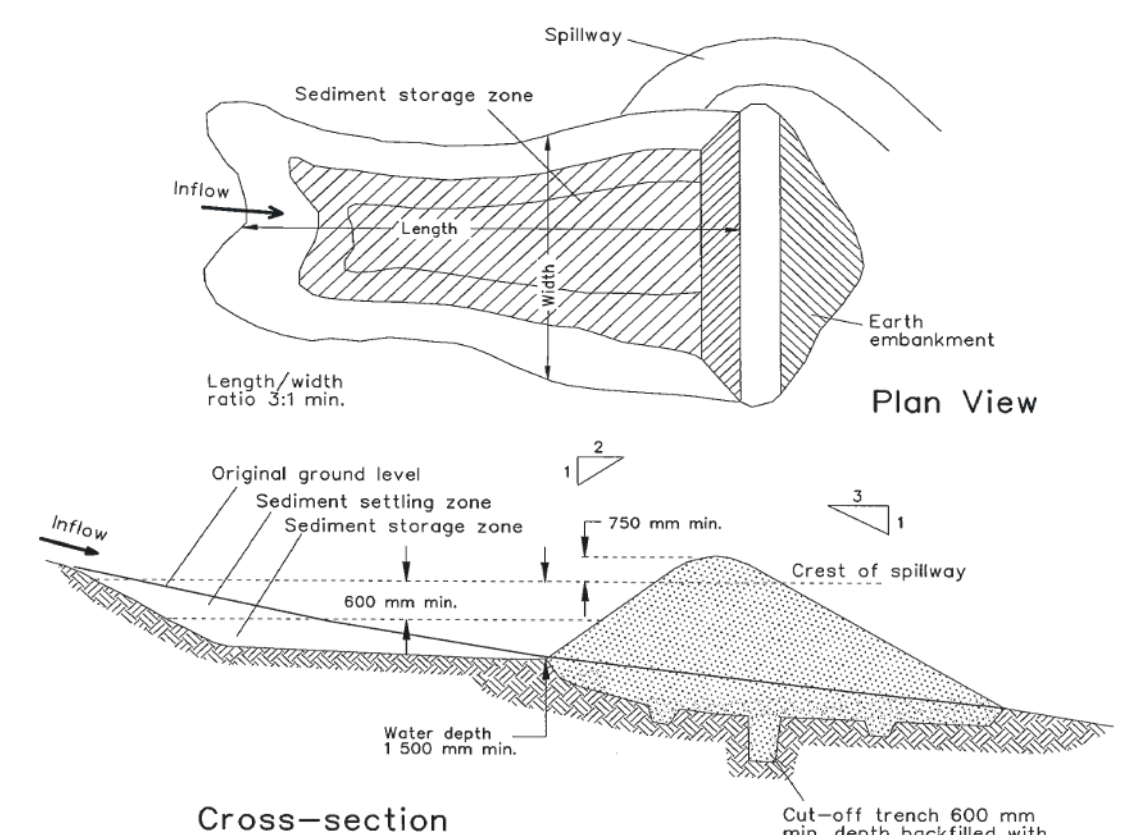
1. COMPACT THE SUBGRADE FILL TO THE DENSITY OF THE SURROUNDING UNDISTURBED MATERIAL.
2. PREPARE A SMOOTH, EVEN FOUNDATION FOR THE STRUCTURE THAT WILL ENSURE THAT THE NEEDLE-PUNCHED GEOTEXTILE DOES NOT SUSTAIN SERIOUS DAMAGE WHEN COVERED WITH ROCK.
3. SHOULD ANY MINOR DAMAGE TO THE GEOTEXTILE OCCUR, REPAIR IT BEFORE SPREADING ANY AGGREGATE. FOR REPAIRS, PATCH ONE PIECE OF FABRIC OVER THE DAMAGE, MAKING SURE THAT ALL JOINTS AND PATCHES OVERLAP MORE THAN 300mm.
4. LAY ROCK FOLLOWING THE DRAIN, ACCORDING TO TABLE 5.2 OF LANDCOM (2004) AND WITH A MINIMUM DIAMETER OF 75mm.
5. ENSURE THAT ANY CONCRETE OR RIPRAP USED FOR THE ENERGY DISSIPATER OR THE OUTLET PROTECTION CONFORMS TO THE GRADING LIMITS SPECIFIED ON THE SWMP.



EARTH BASIN - WET (SD 6-4)

CONSTRUCTION NOTES

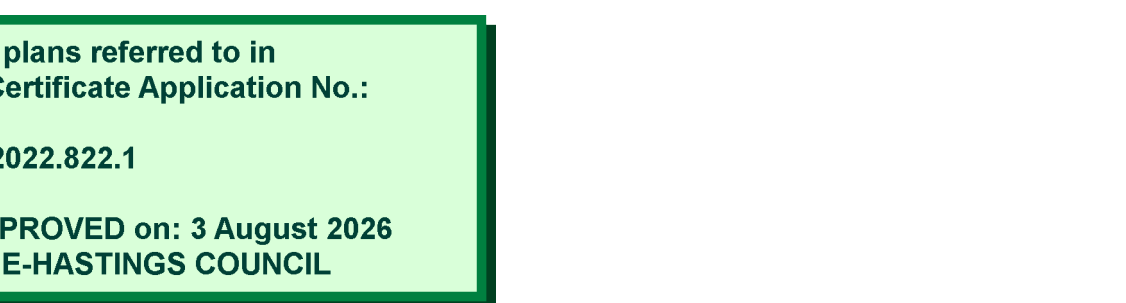
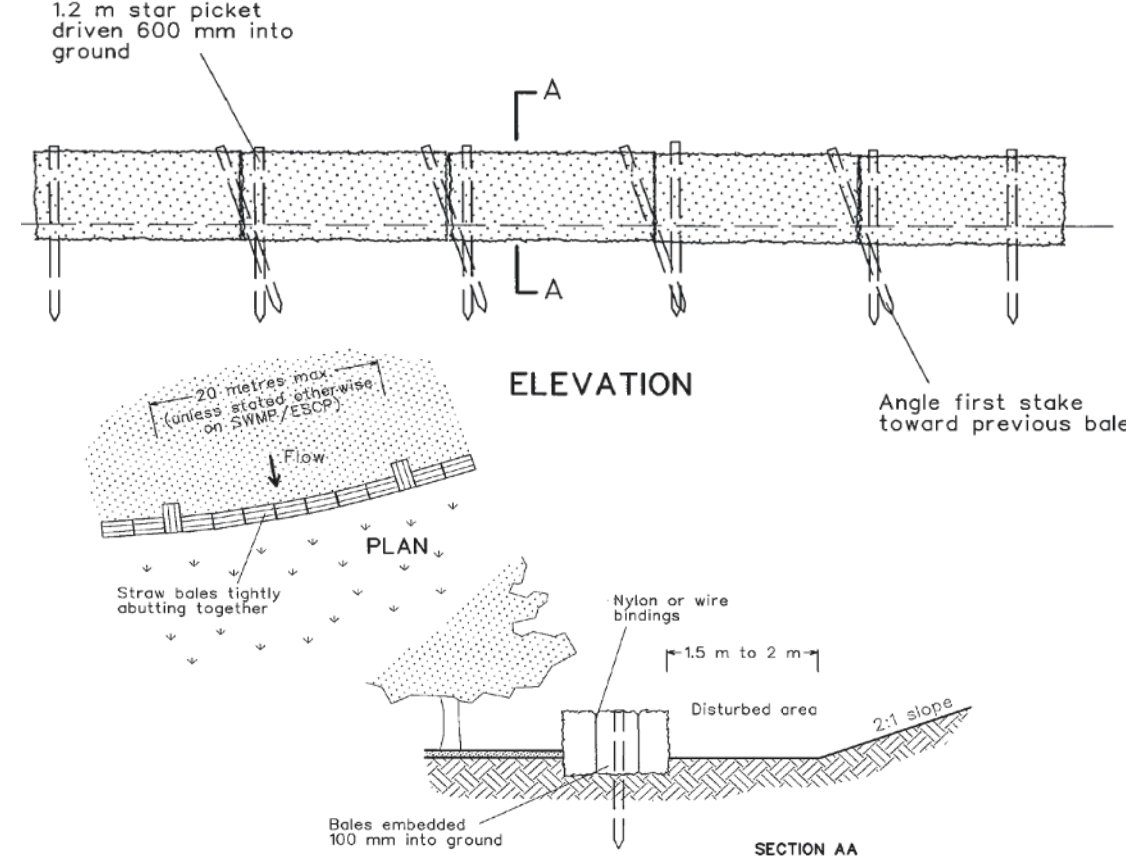
1. REMOVE ALL VEGETATION AND TOPSOIL FROM UNDER THE DAM WALL AND FROM WITHIN THE STORAGE AREA.
2. CONSTRUCT A CUT-OFF TRENCH 500 mm DEEP AND 1200 mm WIDE ALONG THE CENTRELINE OF THE EMBANKMENT EXTENDING TO A POINT ON THE GULLY WALL LEVEL WITH THE RISER CREST.
3. MAINTAIN THE TRENCH FREE OF WATER AND RECOMPACT THE MATERIALS WITH EQUIPMENT AS SPECIFIED IN THE SWMP TO 95 % STANDARD PROCTOR DENSITY.
4. SELECT FILL FOLLOWING THE SWMP THAT IS FREE OF ROOTS, WOOD, ROCK, LARGE STONE OR FOREIGN MATERIAL.
5. PREPARE THE SITE UNDER THE EMBANKMENT BY RIPPING TO AT LEAST 100 mm TO HELP BOND COMPACTED FILL TO THE EXISTING SUBSTRATE.
6. SPREAD THE FILL IN 100 mm TO 150 mm LAYERS AND COMPACT IT AT OPTIMUM MOISTURE CONTENT FOLLOWING THE SWMP.
7. CONSTRUCT THE EMERGENCY SPILLWAY.
8. REHABILITATE THE STRUCTURE FOLLOWING THE SWMP.



STRAW BALE FILTER (SD 6-7)

CONSTRUCTION NOTES

1. CONSTRUCT THE STRAW BALE FILTER AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE.
2. PLACE BALES LENGTHWISE IN A ROW WITH ENDS TIGHTLY ABUTTING. USE STRAW TO FILL ANY GAPS BETWEEN BALES. STRAWS ARE TO BE PLACED PARALLEL TO GROUND.
3. ENSURE THE MAXIMUM HEIGHT OF THE FILTER IS ONE BALE.
4. EMBED EACH BALE IN THE GROUND 75mm TO 100mm AND ANCHOR WITH TWO 1.2m STAR PICKETS OR STAKES. ANGLE THE FIRST STAR PICKET OR STAKE IN EACH BALE TOWARDS THE PREVIOUSLY LAID BALE. DRIVE THEM 600mm INTO THE GROUND AND, IF POSSIBLE, FLUSH WITH THE TOP OF THE BALES. WHERE STAR PICKETS ARE USED AND THEY PROTRUDE ABOVE THE BALES, ENSURE THEY ARE FITTED WITH SAFETY CAPS.
5. WHERE A STRAW BALE FILTER IS CONSTRUCTED DOWNSLOPE FROM A DISTURBED BATTER, ENSURE THE BALES ARE PLACED 1 TO 2m DOWNSLOPE FROM THE TOE.
6. ESTABLISH A MAINTENANCE PROGRAM THAT ENSURES THE INTEGRITY OF THE BALES IS RETAINED - THEY COULD REQUIRE REPLACEMENT EACH TWO TO FOUR MONTHS.



CATCHMENTS AND CREEKS

MULCH FILTER BERMS (MB-01)

MATERIALS

1. MULCH MUST COMPLY WITH THE REQUIREMENTS OF AS454.
2. MAXIMUM SOLUBLE SALT CONCENTRATION OF 650mg/l.
3. MOISTURE CONTEXT OF 30 TO 50% PRIOR TO APPLICATION.

CONSTRUCTION NOTES

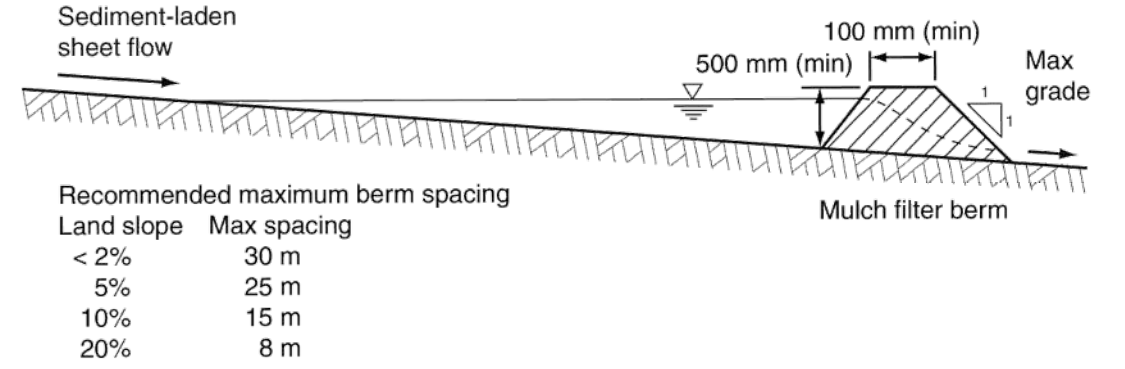
1. REFER TO APPROVED PLANS FOR LOCATION AND EXTENT. IF THERE ARE QUESTIONS OR PROBLEMS WITH THE LOCATION, EXTENT, MATERIAL TYPE, OR METHOD OF INSTALLATION CONTACT THE ENGINEER OR RESPONSIBLE ON-SITE OFFICER FOR ASSISTANCE.
2. WHEN SELECTING THE LOCATION OF A MULCH FILTER BERM, TO THE MAXIMUM DEGREE PRACTICAL, ENSURE THE BERM IS LOCATED:
- i) TOTALLY WITHIN THE PROPERTY BOUNDARIES;
 - ii) ALONG A LINE OF CONSTANT ELEVATION (PREFERRED, BUT NOT ALWAYS PRACTICAL);
 - iii) AT LEAST 1m, IDEALLY 3m, FROM THE TOE OF A FILL EMBANKMENT;
 - iv) AWAY FROM AREAS OF CONCENTRATED FLOW.
3. ENSURE THE BERM IS INSTALLED IN A MANNER THAT AVOIDS THE CONCENTRATION OF FLOW ALONG THE BERM, OR THE UNDESIRABLE DISCHARGE OF WATER AROUND THE END OF THE BERM.
4. ENSURE THE BERM HAS BEEN PLACED SUCH THAT PONDING UP-SLOPE OF THE BERM IS MAXIMISED.
5. ENSURE BOTH ENDS OF THE BERM ARE ADEQUATELY TURNED UP THE SLOPE TO PREVENT FLOW BYPASSING PRIOR TO WATER PASSING OVER THE BERM.
6. ENSURE 100% CONTACT WITH THE SOIL SURFACE.
7. WHERE SPECIFIED, TAKE APPROPRIATE STEPS TO VEGETATE THE BERM.

MAINTENANCE NOTES

1. DURING THE CONSTRUCTION PERIOD, INSPECT ALL BERMS AT LEAST WEEKLY AND AFTER ANY SIGNIFICANT RAIN. MAKE NECESSARY REPAIRS IMMEDIATELY.
2. REPAIR OR REPLACE ANY DAMAGED SECTIONS.
3. WHEN MAKING REPAIRS, ALWAYS RESTORE THE SYSTEM TO ITS ORIGINAL CONFIGURATION UNLESS AN AMENDED LAYOUT IS REQUIRED OR SPECIFIED.
4. REMOVE ACCUMULATED SEDIMENT IF THE SEDIMENT DEPOSIT EXCEEDS A DEPTH OF 100mm OR 1/3 THE HEIGHT OF THE BERM.
5. DISPOSE OF SEDIMENT IN A SUITABLE MANNER THAT WILL NOT CAUSE AN EROSION OR POLLUTION HAZARD.

REMOVAL NOTES

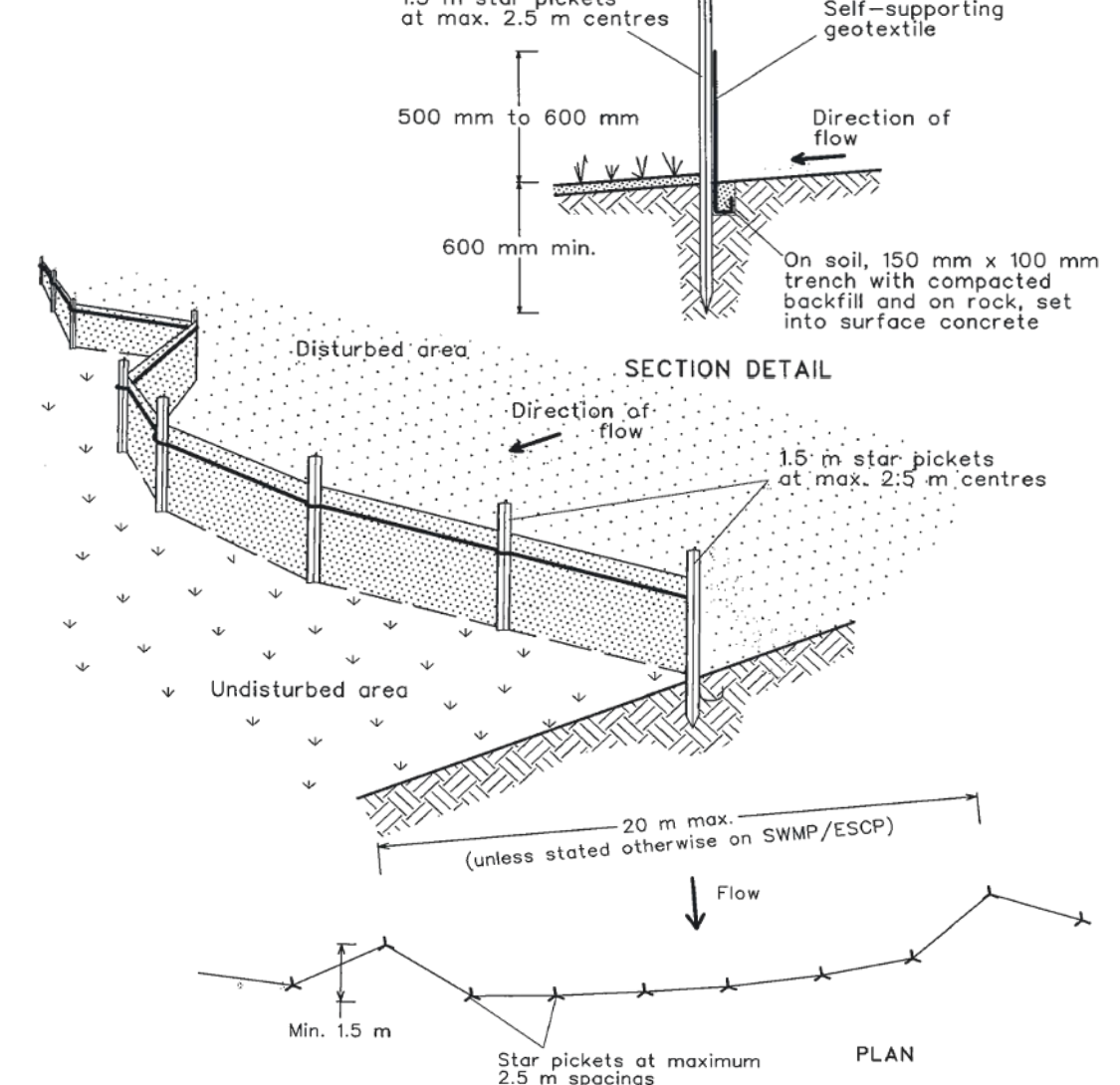
1. WHEN DISTURBED AREAS UP-SLOPE OF THE BERM ARE SUFFICIENTLY STABILISED TO RESTRAIN EROSION, THE BERM MAYBE REMOVED.
2. REMOVE ANY COLLECTED SEDIMENT AND DISPOSE OF IN A SUITABLE MANNER THAT WILL NOT CAUSE AN EROSION OR POLLUTION HAZARD.
3. REHABILITATE/REVEGETATE THE DISTURBED GROUND AS NECESSARY TO MINIMISE THE EROSION HAZARD.



SEDIMENT FENCE (SD 6-8)

CONSTRUCTION NOTES

1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.
2. CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
3. DRIVE 1.5m LONG STAR PICKETS INTO THE GROUND AT 2.5m INTERVALS (MAX) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
4. FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.



REV.	DATE	DESCRIPTION	
A	27.01.2026	ISSUED FOR SWC	AJC
B	04.02.2026	MINOR AMENDMENTS	AJC
C	30.06.2026	MINOR AMENDMENTS	AJC

PROJECT TITLE:	EROSION & SEDIMENT CONTROL NOTES
PROJECT:	THE SANCTUARY STAGE 9 LOT 733, DP 1314774 - JOHN OXLEY DRIVE, THRUMSTER
CLIENT:	BIRD IN THE HAND 2 PTY LTD.
DRAWING NO:	7197_Stage 9_SWC_Plan
SHEET:	02 OF 04
REVISION:	C

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IMAGE: NEARMAP 7 SEPTEMBER 2025

- LEGEND**
- EXISTING BOUNDARY
 - PROPOSED STAGE 9 BOUNDARY
 - PROPOSED FUTURE STAGES
 - LAND ZONING BOUNDARY
 - STAGE 9 RESIDENTIAL LOTS & PUBLIC RESERVE LOT
 - THE SANCTUARY STAGE BOUNDARIES
 - EXISTING BIODIVERSITY CERTIFICATION AGREEMENT AREA BOUNDARY (PLOTTED FROM PDF)

These are the plans referred to in
Subdivision Works Certificate Application No.:
17.2022.822.1
and determined as **APPROVED** on: **3 August 2026**
PORT MACQUARIE-HASTINGS COUNCIL



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1:3000 @ A3

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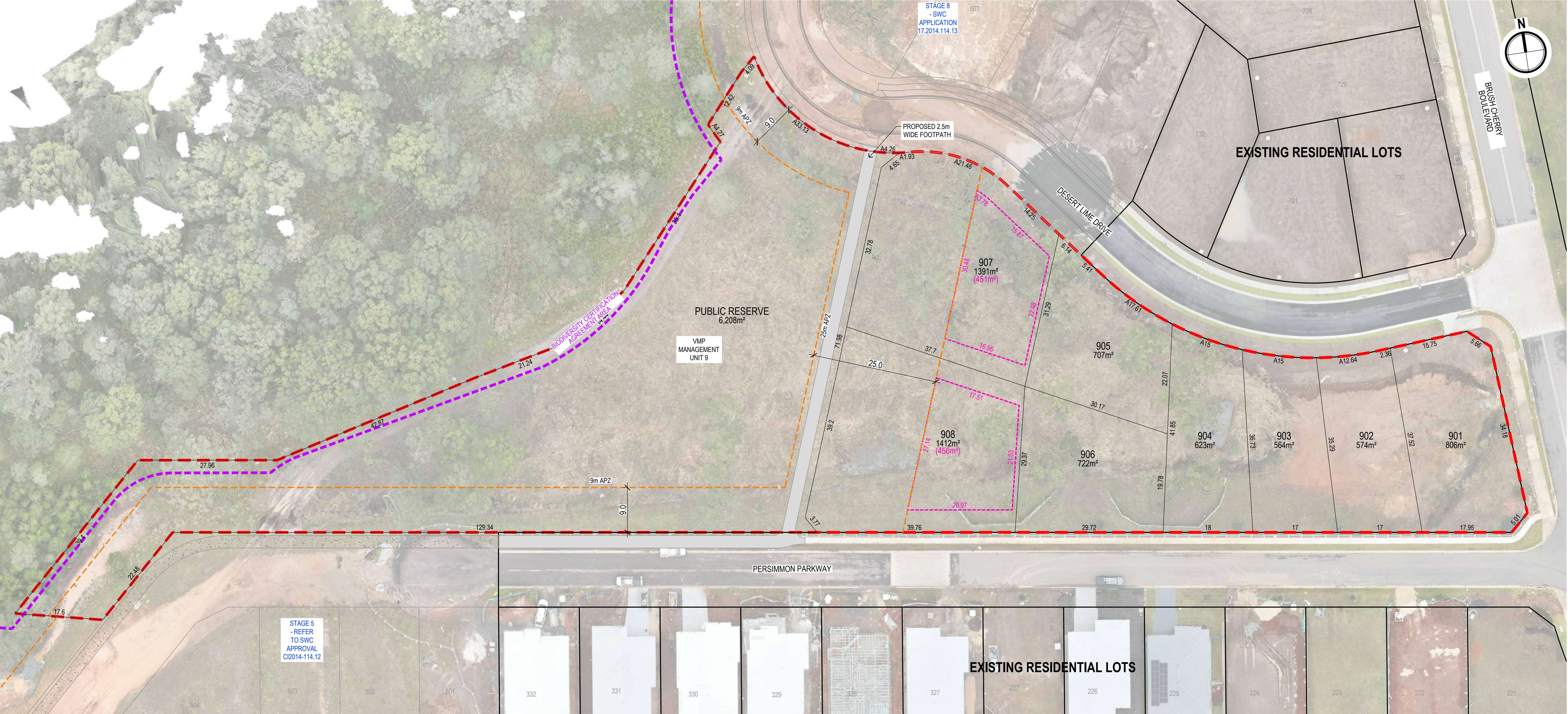
PROJECT NO:	7197
DA NO.:	2022-822
DESIGNED BY:	JSC/CJC
DRAWN BY:	JSC/CJC/AJC
CHECKED BY:	CJC/SM
DATE CREATED:	JULY 2025

DRAWING TITLE:	SITE CONTEXT PLAN
PROJECT:	THE SANCTUARY STAGE 9 LOT 733, DP 1314774 - JOHN OXLEY DRIVE, THURMSTER
CLIENT:	BIRD IN THE HAND 2 PTY LTD.

DRAWING NO:	SHEET:	REVISION:
7197_Stage 9_SWC_Plan	03 OF 16	C

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LEGEND

- EXISTING BOUNDARY
- PROPOSED STAGE 9 BOUNDARY
- PROPOSED FUTURE STAGES
- STAGE 9 RESIDENTIAL LOTS & PUBLIC RESERVE LOT
- EXISTING BIODIVERSITY CERTIFICATION AGREEMENT AREA BOUNDARY (PLOTTED FROM PDF)
- PROPOSED ASSET PROTECTION ZONES (APZ)
- NOMINAL BUILDING ENVELOPE WITH DIMENSIONS (SETBACKS USED: 4.5m FRONT, 0.9m EAST SIDE, 4m REAR, & APZ TO WEST)
- PROPOSED LOT NUMBERS AND AREAS (NOMINAL BUILDING ENVELOPE AREAS PROVIDED IN BRACKETS FOR WESTERN APZ AFFECTED LOTS)

908
1412m²
(456m²)

These are the plans referred to in
Subdivision Works Certificate Application No.:

17.2022.822.1

and determined as APPROVED on: 3 August 2026
PORT MACQUARIE-HASTINGS COUNCIL



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B	04.02.2026	MINOR AMENDMENTS	AJC
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DATUM: AHD
SCALE: 1:400 @ A1
(1:800 @ A3)

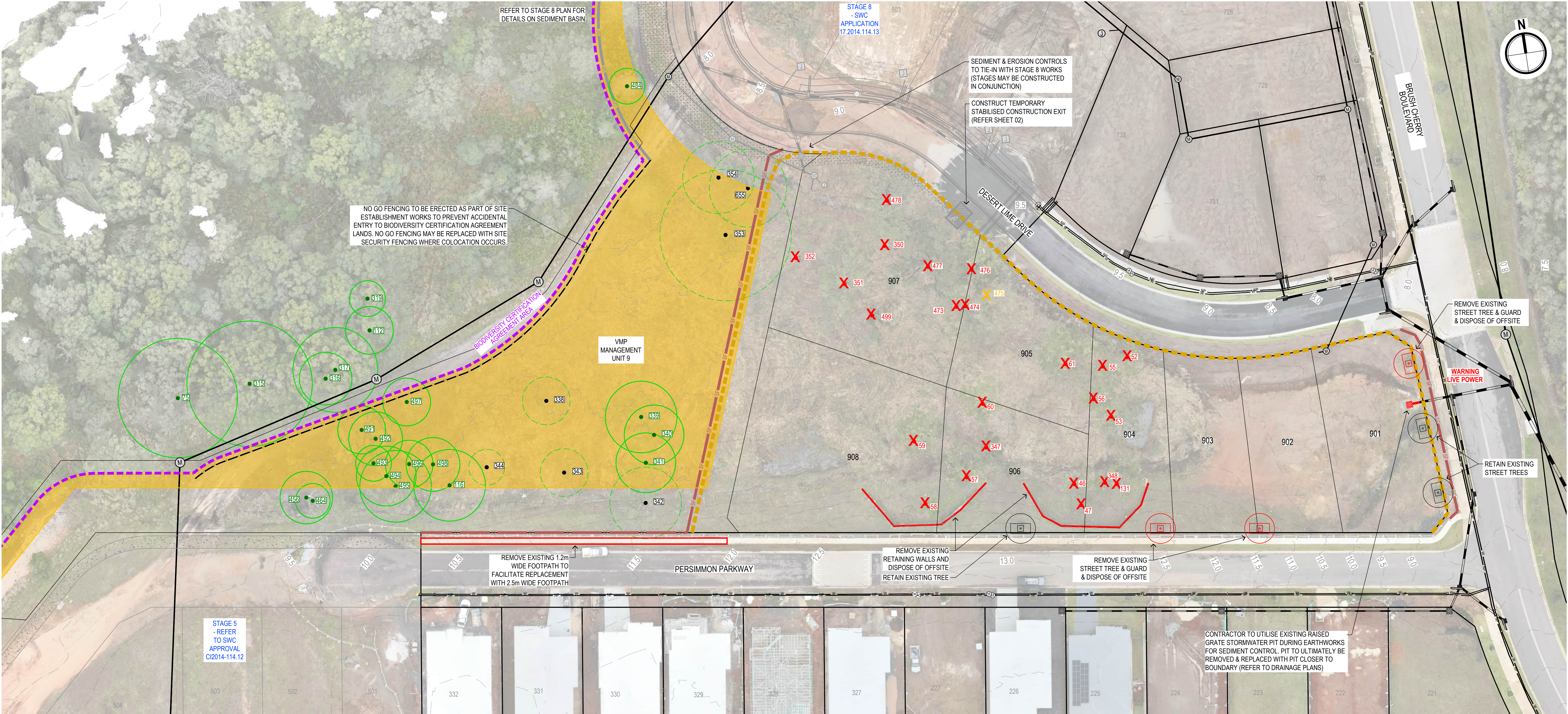
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PROJECT NO:	7197	DRAWING TITLE:	SUBDIVISION LAYOUT PLAN
DA NO.:	2022-822	PROJECT:	THE SANCTUARY STAGE 9 LOT 733, DP 1314774 - JOHN OXLEY DRIVE, THURMSTER
DESIGNED BY:	JSC/CJC	CLIENT:	BIRD IN THE HAND 2 PTY LTD.
DRAWN BY:	JSC/CJC/AJC	DRAWING NO:	7197_Stage 9_SWC_Plan
CHECKED BY:	CJC/ISM	SHEET:	04 OF 16
DATE CREATED:	JULY 2025	REVISION:	C

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LEGEND

	EXISTING BOUNDARY		EXISTING SEWER LINE WITH MANHOLE, JUNCTION & MAINTENANCE SHAFT
	PROPOSED STAGE 9 BOUNDARY		PROPOSED SEWER LINE WITH MANHOLE, JUNCTION & MAINTENANCE SHAFT (STAGE 8)
	PROPOSED FUTURE STAGES		EXISTING POTABLE WATER MAIN WITH HYDRANT & STOP VALVE
	EXISTING BIODIVERSITY CERTIFICATION AGREEMENT AREA BOUNDARY (PLOTTED FROM PDF)		EXISTING NON POTABLE WATER MAIN WITH HYDRANT & STOP VALVE
	EXISTING SURFACE CONTOURS (0.5m INTERVALS)		PROPOSED POTABLE WATER MAIN WITH HYDRANT & STOP VALVE (STAGE 8)
	KOALA FOOD TREE (TP2) WITH TAG (K&C SURVEY JANUARY TO MARCH 2025)		PROPOSED NON POTABLE WATER MAIN WITH HYDRANT & STOP VALVE (STAGE 8)
	NON KOALA FOOD TREE (TP2) WITH TAG (K&C SURVEY JANUARY TO MARCH 2025)		PROPOSED MULCH FILTER BERM IN ACCORDANCE WITH 'CATCHMENTS & CREEKS' REFER TO SHEET 02 FOR DETAIL
	KOALA FOOD TREE TO BE REMOVED AS PART OF STAGE 9 WORKS		PROPOSED SEDIMENT FENCE IN ACCORDANCE WITH MANAGING URBAN STORMWATER - SOILS & CONSTRUCTION VOL.1, SD 6-8. REFER TO SHEET 02 FOR DETAIL
	NON KOALA FOOD TREE TO BE REMOVED AS PART OF STAGE 9 WORKS		EXISTING RETAINING WALL & FOOTPATH TO BE REMOVED
	PROPOSED KOALA FOOD TREE COMPENSATORY PLANTING AREA - REFER TO VMP		EXISTING STORMWATER PIT & PIPE TO BE REMOVED REFER TO SHEET 08 - STORMWATER, SEWER AND WATER PLAN FOR NEW PIT LOCATION
	EXISTING STORMWATER LINE WITH PIT & HEADWALL		EXISTING STREET TREE AND GUARD TO BE RETAINED
	PROPOSED STORMWATER LINE WITH PIT & HEADWALL (STAGE 8)		EXISTING STREET TREE AND GUARD TO BE REMOVED
	PROPOSED 'NO GO' FENCING		

IMPORTANT NOTES

- THE CONTRACTOR IS TO REMOVE ALL VEGETATION WITHIN THE PROPOSED RESIDENTIAL LOTS 901 TO 908, INCLUDING STUMPS (EXCLUDING THE STREET TREES IDENTIFIED ON THIS PLAN FOR RETENTION). THE CONTRACTOR IS TO ALSO REMOVE ANY OTHER MINOR ITEMS THAT MAY ENCOUNTERED SUCH AS FENCING, CONCRETE, OR BUILDING WASTE, WITHIN THE DEVELOPMENT FOOTPRINT THAT IS REQUIRED TO BE REMOVED TO FACILITATE THE PROPOSED WORKS.
- THE TAG NUMBERS OF TREES TO BE REMOVED AS PART OF STAGE 9 WORKS ARE: 46, 47, 52, 53, 55, 56, 57, 58, 59, 60, 61, 131, 347, 348, 350, 351, 352, 473, 474, 475, 476, 477, 478, 499. MULCH FROM TREES SHOULD BE RETAINED FOR INSTALLING MULCH BUNDS ON EACH LOT AT THE COMPLETION OF WORKS. TREES WHICH ARE TO BE RETAINED, MUST BE PROTECTED BY THE CONTRACTOR THROUGHOUT ALL CONSTRUCTION WORKS. REFER TO SHEET 01 FOR TREE PROTECTION AND REMOVAL NOTES.
- THE CONTRACTOR IS RESPONSIBLE FOR ADJUSTING, MAINTAINING, AND ADDING ADDITIONAL EROSION AND SEDIMENT CONTROLS TO FACILITATE THEIR PROPOSED STAGING OF CONSTRUCTION WORKS. THE CONTRACTOR IS TO ENSURE SEDIMENT DOES NOT ESCAPE FROM THE SITE IN ACCORDANCE WITH THE REQUIREMENTS OF 'MANAGING URBAN STORMWATER - SOILS & CONSTRUCTION - VOLUME 1'. REFER TO SHEET 02 FOR STANDARD EROSION AND SEDIMENT CONTROL NOTES. SEDIMENT FENCING IS TO BE MAINTAINED UNTIL GROUND COVER IS RE-ESTABLISHED. ALL EXISTING STORMWATER PITS TO HAVE INLET PROTECTION DURING CONSTRUCTION.

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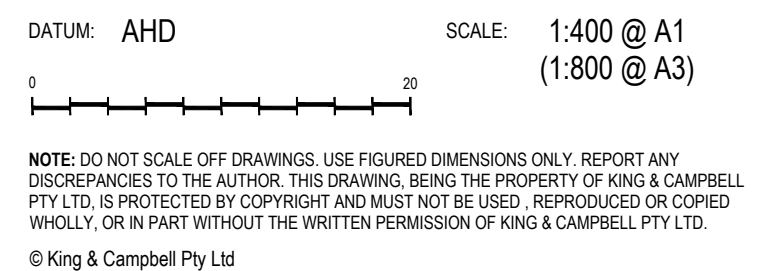


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PROJECT NO:	7197	DRAWING TITLE:	SITE ESTABLISHMENT & DEMOLITION PLAN
DA NO.:	2022-822	PROJECT:	THE SANCTUARY STAGE 9 LOT 733, DP 1314774 - JOHN OXLEY DRIVE, THURMSTER
DESIGNED BY:	JSC/CJC	CLIENT:	BIRD IN THE HAND 2 PTY LTD.
DRAWN BY:	JSC/CJC/AJC	DRAWING NO:	7197_Stage 9_SWC_Plan
CHECKED BY:	CJC/SM	SHEET:	05 OF 16
DATE CREATED:	JULY 2025	REVISION:	C

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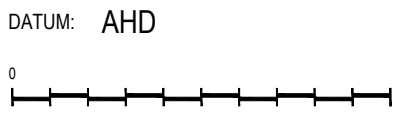


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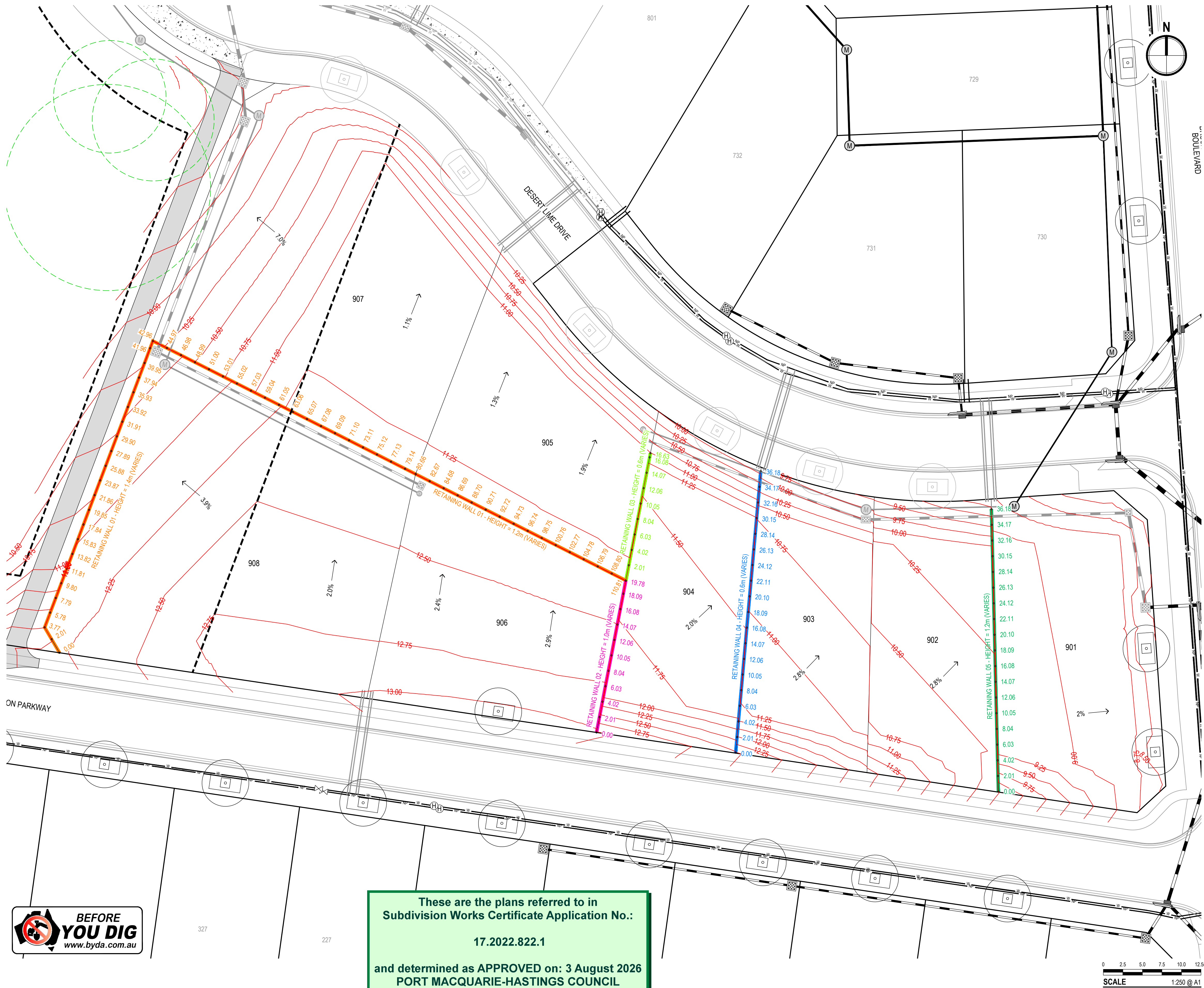
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DA NO.:	2022-822
DESIGNED BY:	JSC/CJC
DRAWN BY:	JSC/CJC/AJC
CHECKED BY:	CJC/SM
DATE CREATED:	JULY 2025

DRAWING TITLE:	RETAINING WALL PLAN
PROJECT:	THE SANCTUARY STAGE 9 LOT 733, DP 1314774 - JOHN OXLEY DRIVE, THURMSTER
CLIENT:	BIRD IN THE HAND 2 PTY LTD.

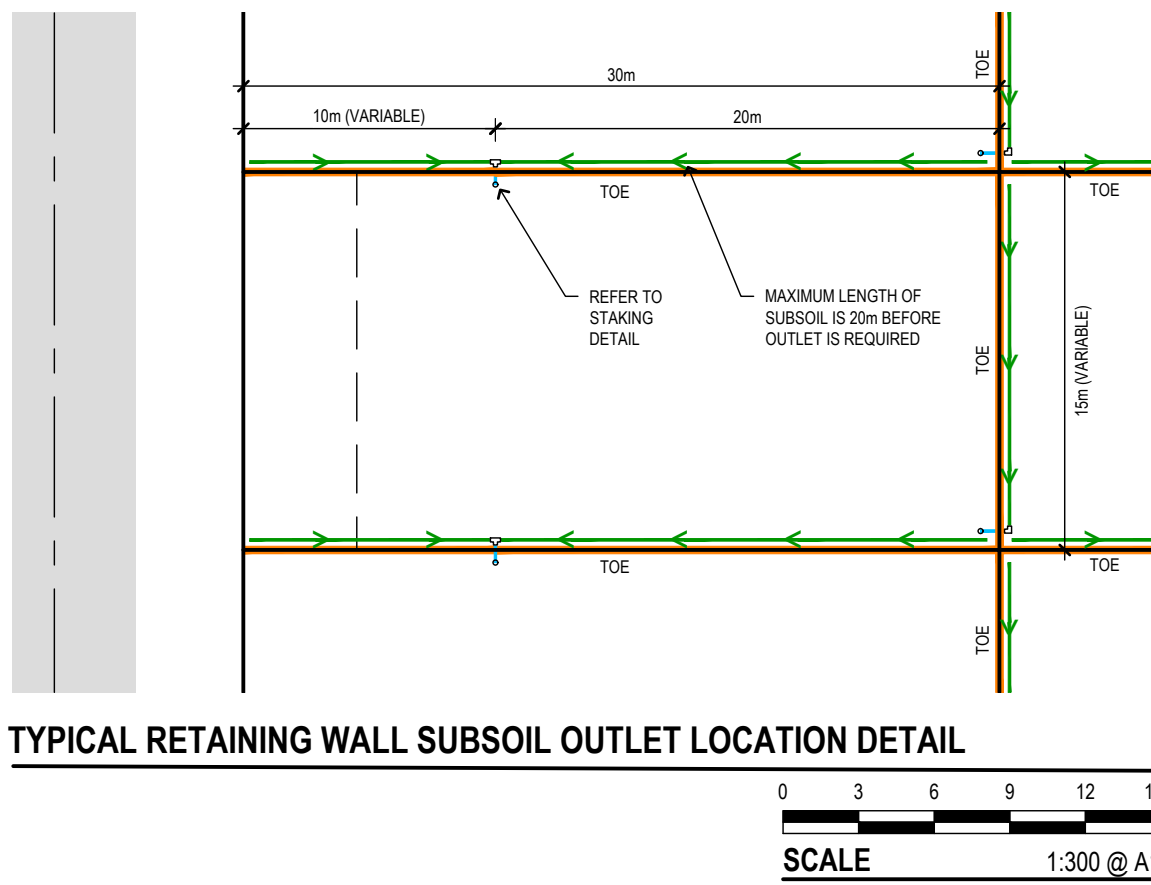
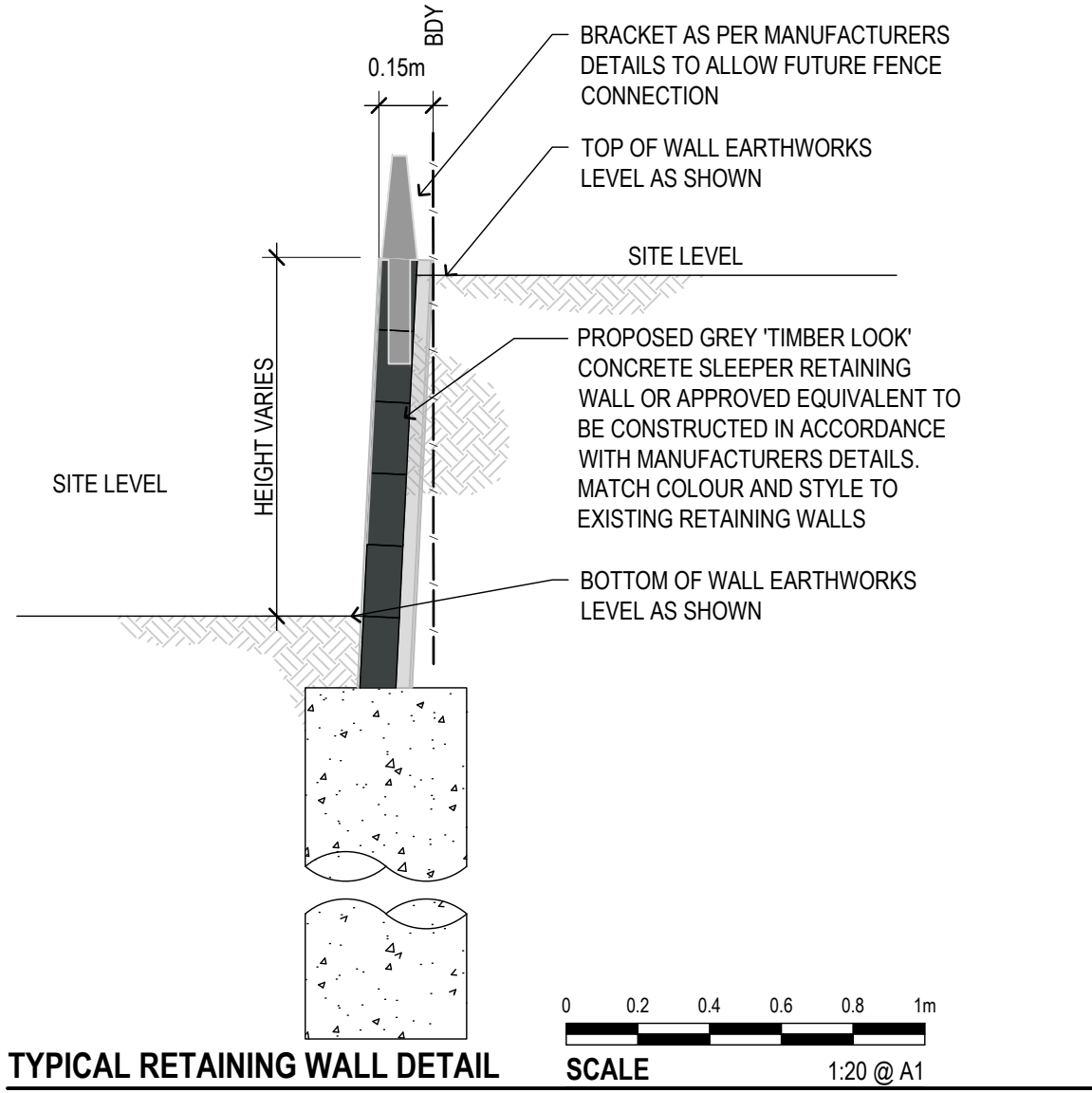
DRAWING NO:	7197_Stage 9_SWC_Plan	SHEET:	07 OF 16	REVISION:	C
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NOT TO BE USED FOR CONSTRUCTION UNLESS SUBDIVISION WORKS CERTIFICATE ISSUED FOR THE WORKS



LEGEND	
	EXISTING BOUNDARY
	PROPOSED STAGE 9 BOUNDARY
	PROPOSED FUTURE STAGES
	ASSET PROTECTION ZONE BOUNDARY
	DESIGN SURFACE CONTOURS (0.25m INTERVALS)
	PROPOSED CONCRETE SLEEPER RETAINING WALL 01
	PROPOSED CONCRETE SLEEPER RETAINING WALL 02
	PROPOSED CONCRETE SLEEPER RETAINING WALL 03
	PROPOSED CONCRETE SLEEPER RETAINING WALL 04
	PROPOSED CONCRETE SLEEPER RETAINING WALL 05
	LOT PAD GRADES

- NOTES**
- CONCRETE SLEEPER RETAINING WALLS TO BE GREY WITH THE TIMBER TEXTURE TO MATCH ADJACENT SUBDIVISION WORKS.
 - RETAINING WALLS TO CONTINUE BEYOND THE EARTHWORKS PAD EXTENT TOWARD THE ROADWAY TO A LENGTH THAT ALLOWS GRADES EITHER SIDE TO BE < 25%.
 - RETAINING WALL DESIGN AND CERTIFICATION TO BE COMPLETED BY A SUITABLY QUALIFIED STRUCTURAL ENGINEER IN ACCORDANCE WITH PORT MACQUARIE HASTINGS COUNCIL AUSPEC. DESIGN TO BE PROVIDED AND APPROVED BY THE PRINCIPAL PRIOR TO CONSTRUCTION COMMENCING. STRUCTURAL ENGINEER TO PROVIDE AS BUILT CERTIFICATION ON COMPLETION OF THE WORKS.



THIS DRAWING INCLUDES INFORMATION IN COLOUR. IF YOU HAVE A BLACK AND WHITE COPY YOU DON'T HAVE ALL THE INFORMATION. THIS NOTE IS COLOURED RED.

NOTES

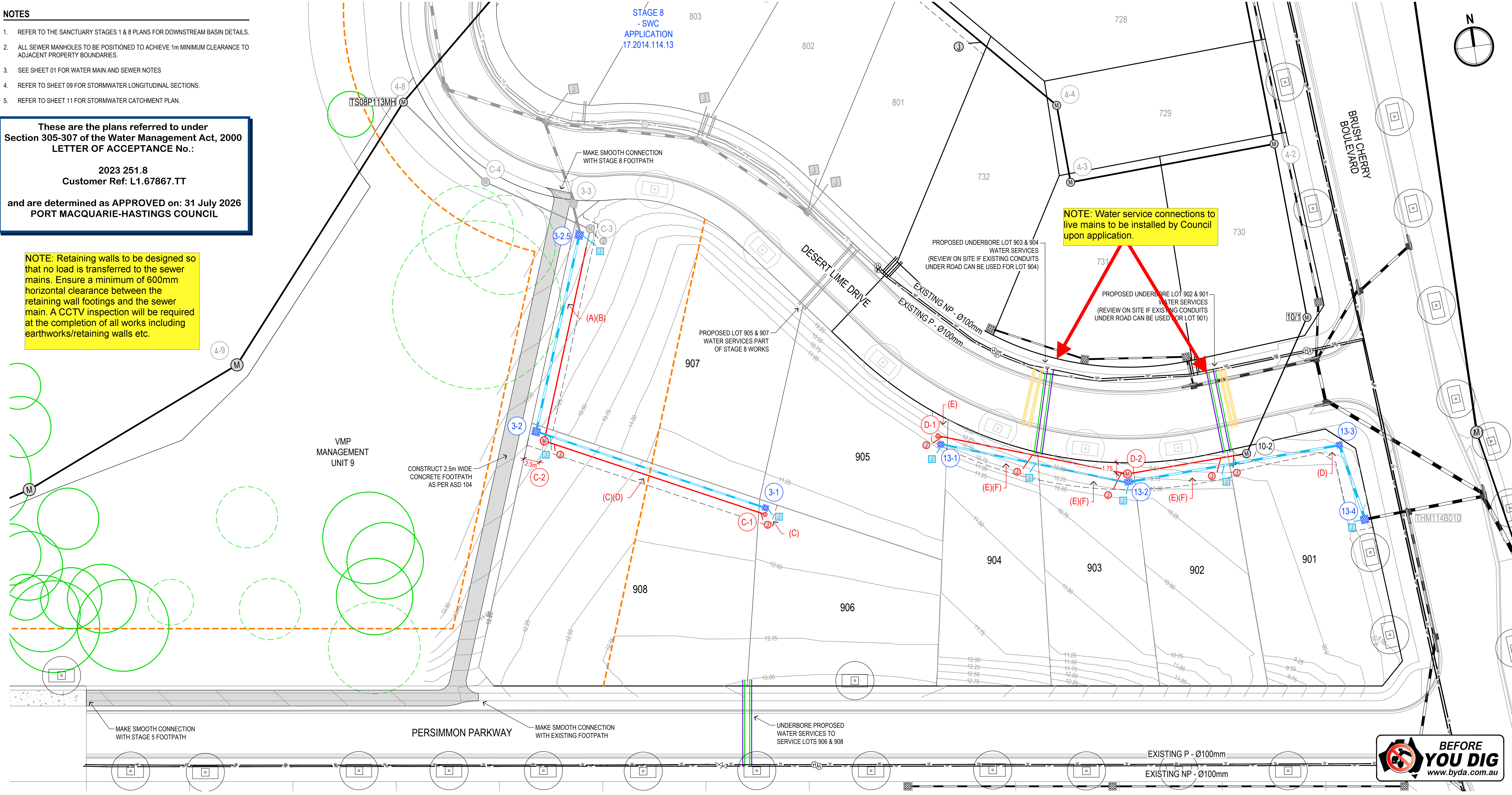
1. REFER TO THE SANCTUARY STAGES 1 & 8 PLANS FOR DOWNSTREAM BASIN DETAILS.
2. ALL SEWER MANHOLES TO BE POSITIONED TO ACHIEVE 1m MINIMUM CLEARANCE TO ADJACENT PROPERTY BOUNDARIES.
3. SEE SHEET 01 FOR WATER MAIN AND SEWER NOTES
4. REFER TO SHEET 09 FOR STORMWATER LONGITUDINAL SECTIONS.
5. REFER TO SHEET 11 FOR STORMWATER CATCHMENT PLAN.

These are the plans referred to under
Section 305-307 of the Water Management Act, 2000
LETTER OF ACCEPTANCE No.:

2023 251.8
Customer Ref: L1.67867.TT

and are determined as APPROVED on: 31 July 2026
PORT MACQUARIE-HASTINGS COUNCIL

NOTE: Retaining walls to be designed so that no load is transferred to the sewer mains. Ensure a minimum of 600mm horizontal clearance between the retaining wall footings and the sewer main. A CCTV inspection will be required at the completion of all works including earthworks/retaining walls etc.

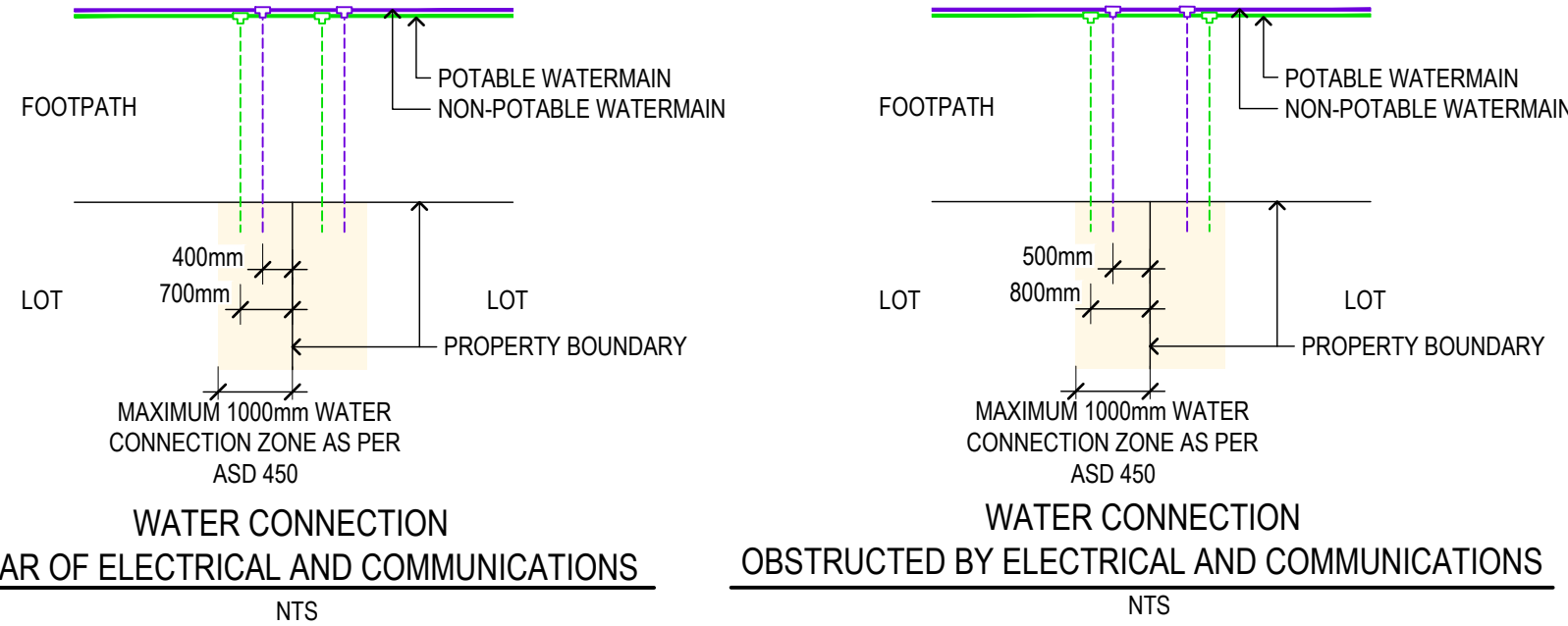


LEGEND

EXISTING BOUNDARY	EXISTING STORMWATER LINE WITH PIT & HEADWALL	EXISTING POTABLE WATER MAIN WITH HYDRANT & STOP VALVE
PROPOSED STAGE 9 BOUNDARY	PROPOSED STORMWATER LINE WITH PIT & HEADWALL (STAGE 8)	EXISTING NON POTABLE WATER MAIN WITH HYDRANT & STOP VALVE
PROPOSED FUTURE STAGES	PROPOSED STORMWATER LINE WITH PIT & JUNCTION (STAGE 9)	EXISTING CONDUIT FOR WATER PROPERTY SERVICE CONNECTION
ASSET PROTECTION ZONE BOUNDARY	PROPOSED STORMWATER PIT LABELS	PROPOSED 20mm WATER PROPERTY SERVICE UNLESS NOTED OTHERWISE (POTABLE & NON POTABLE) INC TAPPING BANDS AND PROVISION FOR FUTURE METERS (STAGE 8)
DESIGN SURFACE CONTOURS (0.25m INTERVALS)	EXISTING SEWER LINE WITH MANHOLE, JUNCTION & MAINTENANCE SHAFT	20mm WATER PROPERTY SERVICE UNLESS NOTED OTHERWISE (POTABLE & NON POTABLE) INC TAPPING BANDS AND PROVISION FOR FUTURE METERS. TO BE IN 100mm CONDUIT WHERE UNDER ROAD PAVEMENT (STAGE 9)
PROPOSED 2.5m WIDE CONCRETE FOOTPATH	PROPOSED SEWER LINE WITH MANHOLE, JUNCTION & MAINTENANCE SHAFT (STAGE 8)	
EXISTING KOALA FOOD TREE (TPZ) (K&C SURVEY JANUARY TO MARCH 2025)	PROPOSED SEWER LINE WITH MANHOLE, JUNCTION & MAINTENANCE SHAFT (STAGE 9)	
EXISTING NON KOALA FOOD TREE (TPZ) WITH TAG (K&C SURVEY JANUARY TO MARCH 2025)	PROPOSED SEWER MANHOLE LABEL	
EXISTING STREET TREE		
PROPOSED STREET TREE		

STAGE 9 EASEMENTS

- (A) PROPOSED EASEMENT TO DRAIN SEWER 3.5m WIDE & VARIABLE
- (B) PROPOSED EASEMENT TO DRAIN WATER 3.5m WIDE & VARIABLE
- (C) PROPOSED EASEMENT TO DRAIN SEWAGE 3.5m WIDE
- (D) PROPOSED EASEMENT TO DRAIN WATER 3.5m WIDE
- (E) PROPOSED EASEMENT TO DRAIN SEWAGE 4.2m WIDE
- (F) PROPOSED EASEMENT TO DRAIN WATER 4.2m WIDE



These are the plans referred to in
Subdivision Works Certificate Application No.:

17.2022.822.1

and determined as APPROVED on: 3 August 2026
PORT MACQUARIE-HASTINGS COUNCIL

KING + CAMPBELL

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E: info@kingcampbell.com.au

REV.	DATE	DESCRIPTION	BY
A	27.01.2026	ISSUED FOR SWC	AJC
B	04.02.2026	MINOR AMENDMENTS	AJC
C	30.06.2026	MINOR AMENDMENTS	AJC

DATUM: AHD

SCALE: 1:300 @ A1
(1:600 @ A3)

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PROJECT NO:	7197
DA NO.:	2022-822
DESIGNED BY:	JSC/CJC
DRAWN BY:	JSC/CJC/AJC
CHECKED BY:	CJC/ISM
DATE CREATED:	JULY 2025

DRAWING TITLE: STORMWATER, SEWER AND WATER PLAN

PROJECT: THE SANCTUARY STAGE 9
LOT 733, DP 1314774 - JOHN OXLEY DRIVE, THRUMSTER

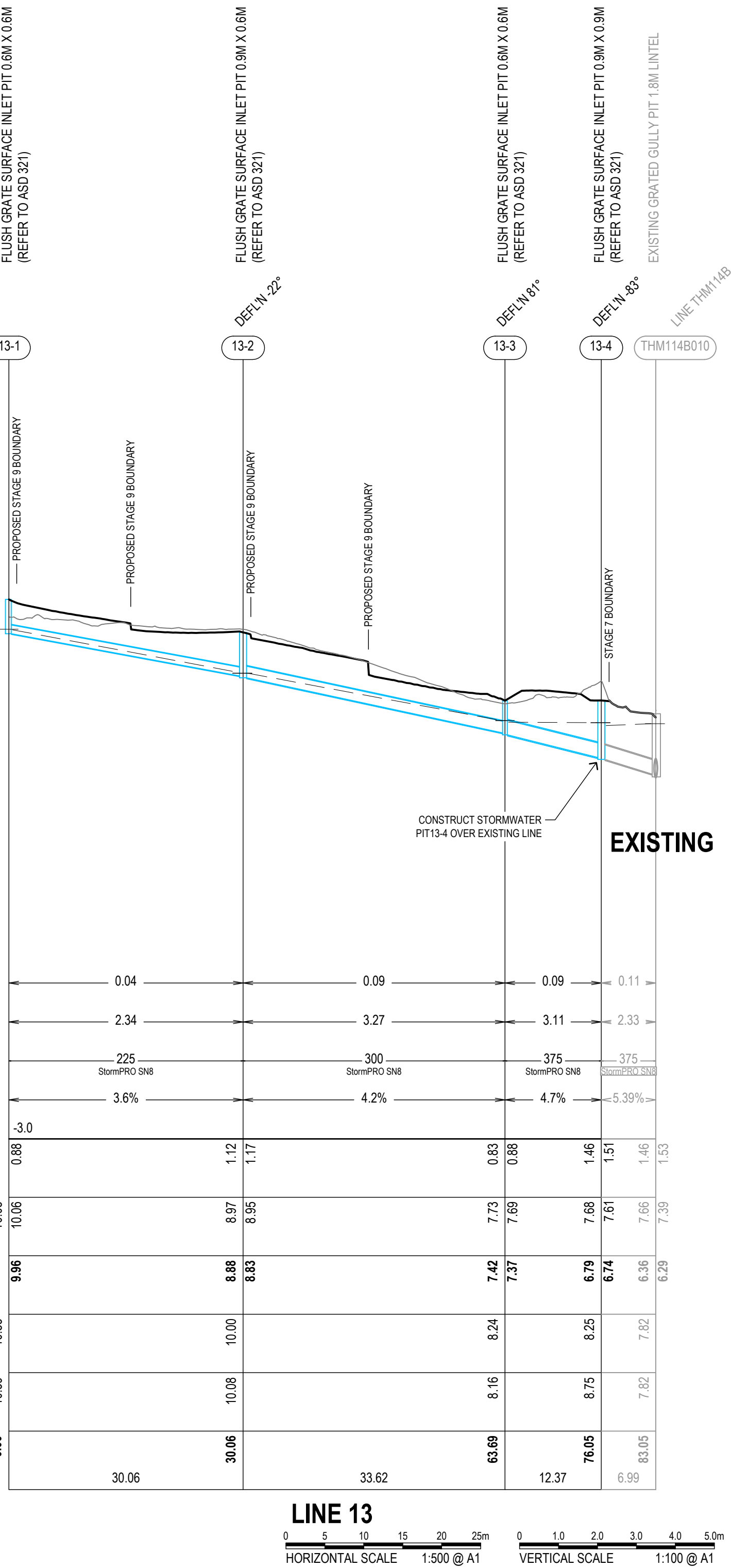
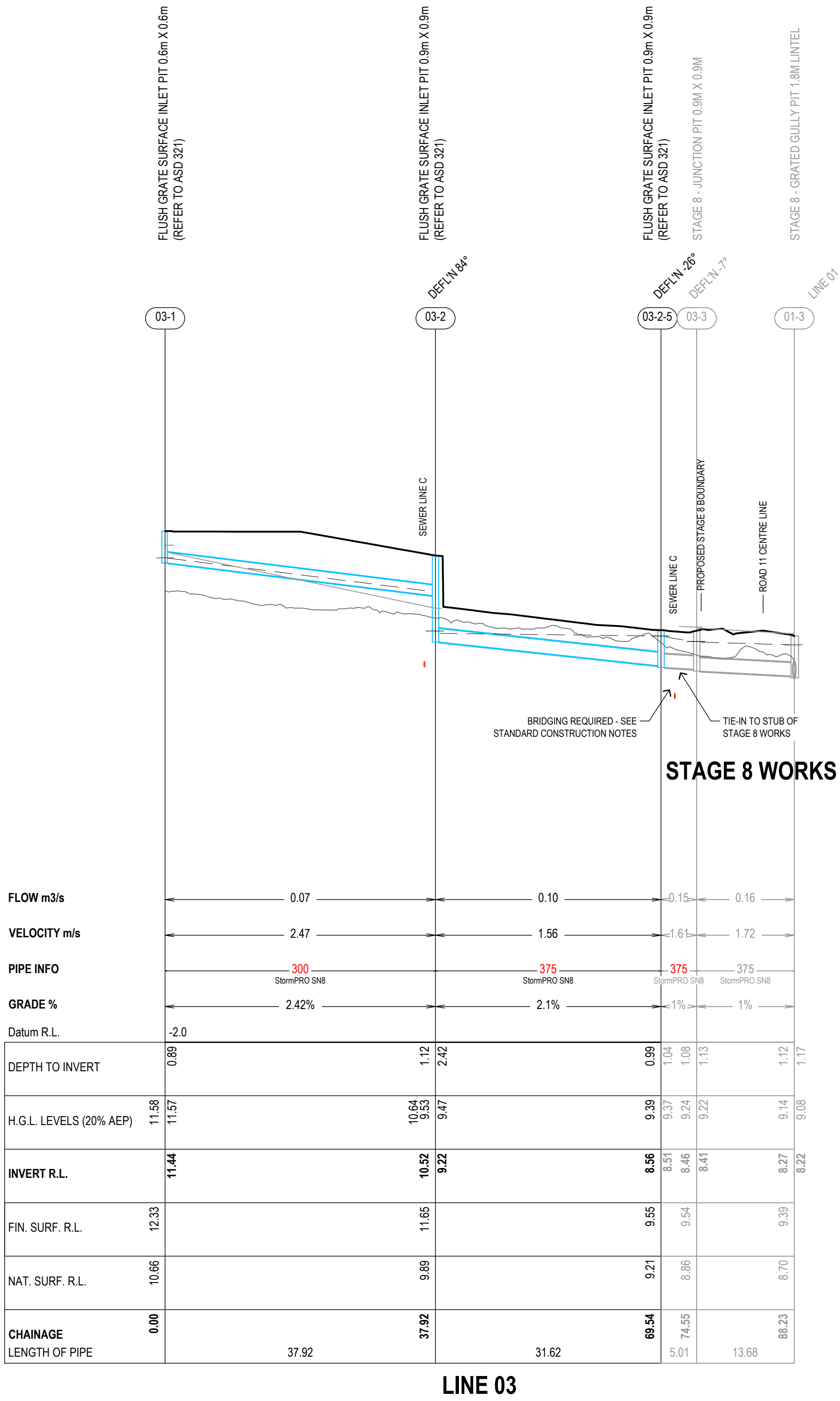
CLIENT: BIRD IN THE HAND 2 PTY LTD.

DRAWING NO:	SHEET:	REVISION:
7197_Stage 9_SWC_Plan	08 OF 16	C

A1

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K:\C-REF\c17197_the sanctuary\22_engineering\pages 6 and 93.dwg 9 swc7197_Stage 9_SWC_Sections.dwg 4/1/2021 9 July 2026 crag



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REV.	DATE	DESCRIPTION	
A	27.01.2026	ISSUED FOR SWC	AJC
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PROJECT NO:	7197	DRAWING TITLE:	STORMWATER LONGITUDINAL SECTION - LINE 03 & 13			
DA NO.:	2022-822					
DESIGNED BY:	JSC/CJC	PROJECT:	THE SANCTUARY STAGE 9 LOT 733, DP 1314774 - JOHN OXLEY DRIVE, THURMSTER			
DRAWN BY:	JSC/CJC/AJC					
CHECKED BY:	CJC/SM	CLIENT:	BIRD IN THE HAND 2 PTY LTD.			
DATE CREATED:	JULY 2025					
		DRAWING NO:	7197_Stage 9_SWC_Sections	SHEET:	09 OF 16	REVISION:
						C

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A1

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SEWER CONSTRUCTION NOTES:
*GRADE IS CALCULATED FROM INSIDE FACE OF MANHOLES.
DEPTH TO INVERT IS CALCULATED FROM TOP OF MANHOLE (75mm ABOVE FINISHED SURFACE R.L.).
ENSURE MANHOLES ARE CONSTRUCTED TO LEVELS AS SHOWN.

EQUIVALENT TENEMENTS
MINIMUM
MAXIMUM

PIPE INFO

GRADE %

Datum R.L.

DEPTH TO INVERT	1.35	3.23	2.08	1.88	1.33	1.85
INVERT R.L.	11.08	8.54	7.71	7.22	6.80	6.27
TOP OF MANHOLE LEVEL	12.43	11.79	9.79	9.13	8.13	
CHAINAGE	0.00	36.52	70.58	88.57	106.56	
LENGTH OF PIPE	35.87	33.06	16.99	16.99		

LINE C

STAGE 8 WORKS

LINE D

EXISTING

HORIZONTAL SCALE 1:500 @ A1
VERTICAL SCALE 1:100 @ A1

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Subdivision Works Certificate Application No.:

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and determined as APPROVED on: 3 August 2026
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LETTER OF ACCEPTANCE No.:

2023 251.8
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REV.	DATE	DESCRIPTION	
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C	30.06.2026	MINOR AMENDMENTS	AJC

DATUM: AHD

SCALE: AS SHOWN @ A1

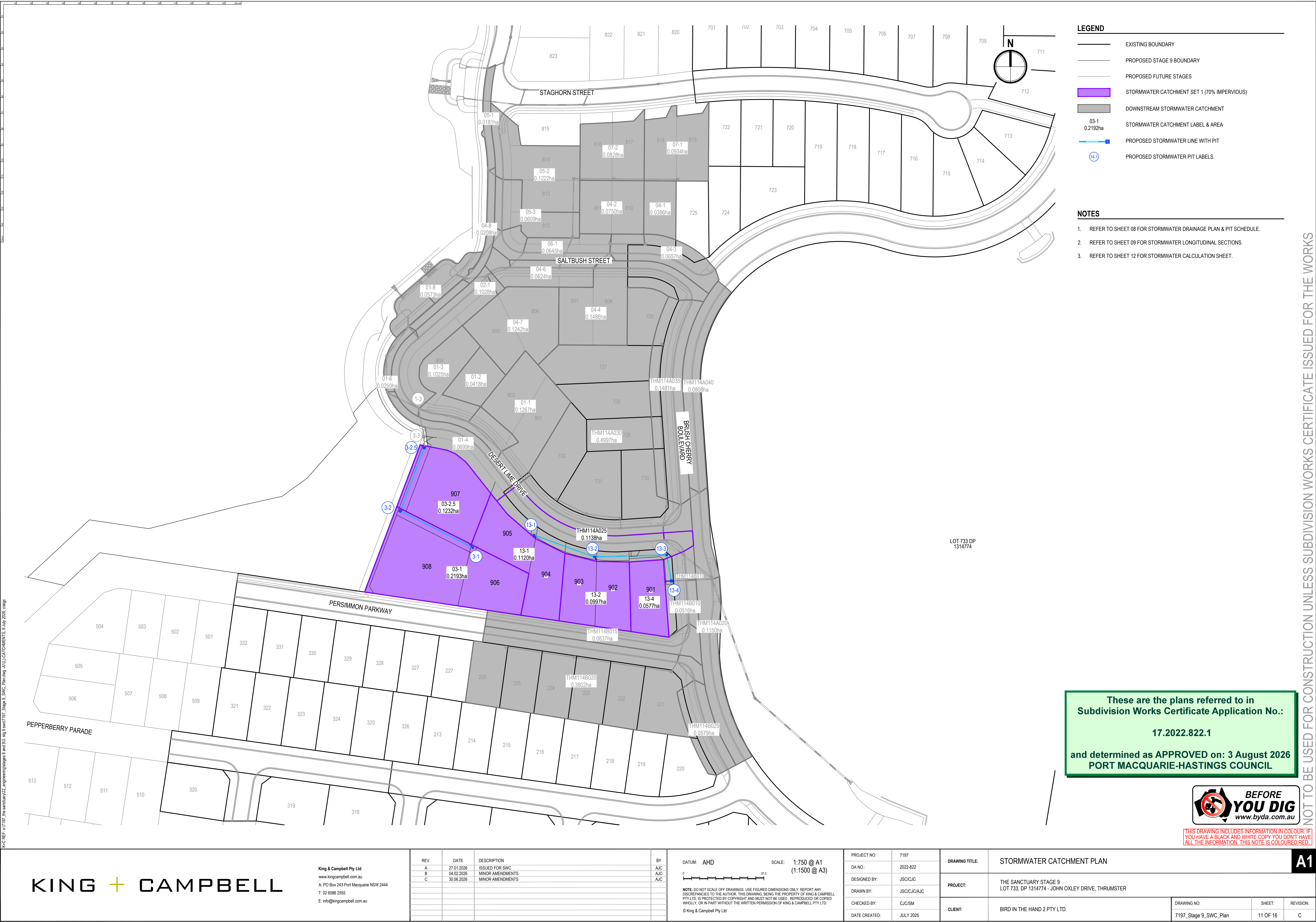
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PROJECT NO:	7197	DRAWING TITLE:	SEWER LONGITUDINAL SECTION - LINE C & D			
DA NO.:	2022-822	PROJECT:	THE SANCTUARY STAGE 9 LOT 733, DP 1314774 - JOHN OXLEY DRIVE, THURMSTER			
DESIGNED BY:	JSC/CJC	CLIENT:	BIRD IN THE HAND 2 PTY LTD.	DRAWING NO:	SHEET:	REVISION:
DRAWN BY:	JSC/CJC/AJC			7197_Stage 9_SWC_Sections	10 OF 16	C
CHECKED BY:	CJC/ISM					
DATE CREATED:	JULY 2025					

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A1

K:\C-REF-017197_The Sanctuary\02_engineering\pages 8 and 93.dwg 9 swc7197_Stage 9_SWC_Plan.dwg 41\1-CATCHMENTS 9 July 2026, cmg



10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450 460 470 480 490 500 510 520 530 540 550 560 570 580 590 600 610 620 630 640 650 660 670 680 690 700 710 720 730 740 750 760 770 780 790 800 810 820 830 840 850 860 870 880 890 900 910 920 930 940 950 960 970 980 990 1000

12d Dynamic Drainage Hydrology & Hydraulics Results

RUNOFF METHOD ILSAX 2
RETURN PERIOD 5
AEP/ARI AEP
EVENT MINOR
STORM DURATIONS RUN 90 60 45 30 25 20 15 10
NOTES All Results are maximums and Flows are in L/s
Negative Flow Values Indicate Reverse Flows

NODE		CATCHMENTS (ha)			% IMPERVIOUS			Tc (min)						CATCHMENT FLOW (L/s)			APPROACH FLOW (L/s)	INLET CAPTURED FLOW (L/s)	EFFICIENCIES				UNCAPTURED FLOW (L/s)	BYPASS NODE	BYPASS FLOW (L/s)	BYPASS HGL (m)	MID CH DEPTH (m)	NODE				LOST FLOW (L/s)	LINK HGL		Ku (AT MAX HEADLOSS)	Ku HEADLOSS
NAME	TYPE	AREA 1	AREA 2	AREA 3	AREA 1	AREA 2	AREA 3	IMPERV 1	PERV 1	IMPERV 2	PERV 2	IMPERV 3	PERV 3	SET 1	SET 2	SET 3			MINOR SAG (%)	MINOR ONGRADE (%)	MAJOR SAG (%)	MAJOR ONGRADE (%)						HGL (m)	GRADE LEVEL (m)	INVERT LEVEL (m)	DEPTH (m)		UPTREAM (m)	DOWNSTREAM (m)		
01-3	Grated Gully Pit 1.8m Lintel	0.1025			70	10		6	6					53			61	46	80	90	80	90	16	02-1	15	9.451	0.061	9.144	9.391	8.22	1.171		9.084	8.964		1.3
03-1	Flush Grate Surface Inlet Pit 0.6m x 0.6m	0.2193			70	10		6	6					113			113	73	80	90	80	90	38	03-2	38	12.423	0.089	11.581	12.334	11.44	0.894		11.573	10.643		1.5
03-2	Flush Grate Surface Inlet Pit 0.9m x 0.9m				70	10											38	32	80	90	80	90	6		6	11.652	0.005	9.532	11.647	9.224	2.423		9.466	9.391		2.2
03-2-5	Flush Grate Surface Inlet Pit 0.9m x 0.9m	0.1232			70	10		6	6					62			62	50	80	100	80	100	12		12	9.566	0.013	9.391	9.553	8.51	1.043		9.366	9.239		1.5
03-3	Junction Pit 0.9m x 0.9m				70	10											12	11	80	90	80	90		1	1	9.543	0.002	9.239	9.541	8.407	1.134		9.22	9.144		0.5
13-1	Flush Grate Surface Inlet Pit 0.6m x 0.6m	0.112			70	10		6	6					57			57	42	80	90	80	90	16	THM114A	15	10.88	0.035	10.077	10.845	9.963	0.883		10.064	8.97		6.7
13-2	Flush Grate Surface Inlet Pit 0.9m x 0.6m	0.0997			70	10		6	6					50			50	41	80	90	80	90	10	THM114A	9	10.027	0.028	8.949	9.998	8.83	1.168		8.949	7.734		1.9
13-3	Flush Grate Surface Inlet Pit 0.6m x 0.6m				70	10											0	0	80	90	80	90	0			8.245	0	7.734	8.245	7.368	0.876		7.692	7.68		1.6
13-4	Flush Grate Surface Inlet Pit 0.9m x 0.9m	0.0577			70	10		6	6					30			30	30	80	90	80	90	0			8.251	0	7.68	8.251	6.737	1.514		7.606	7.655		2.1

5% AEP STORM EVENT CHECKS

12d Dynamic Drainage Hydrology & Hydraulics Results

RUNOFF METHOD ILSAX 2
RETURN PERIOD 5
AEP/ARI AEP
EVENT MINOR

NODE	OUTLET PIPE											PIT	BYPASS	PIT				
NAME	NAME	DIAMETER (mm)	NUMBER OF PIPES	SEPARATION (m)	TYPE	LENGTH (m)	MIN COVER (M)	FLOW (L/s)	CAPACITY DEPTH RATIO	VELOCITY (m/s)	FREEBOARD (m)	FLOW (L/s)	U/S WIDTH (m)	D/S WIDTH (m)	U/S Vd RATIO	D/S Vd RATIO	FLOW DEPTH (m)	
01-3	01-3 to 01-4	450	1	0.1	StormPRO SN8	16.93	0.69	268	0.74	1.75	0.19	15	1.38	2.03	0.03	0.02	0.06	
03-1	03-1 to 03-2	300	1	0.1	StormPRO SN8	37.92	0.57	72	0.33	2.46	0.75	38	6	6	0.01	0.01	0.09	
03-2	03-2 to 03-2.5	375	1	0.1	StormPRO SN8	31.62	0.55	103	0.28	1.52	2.12	6	6	6	0	0	0	
03-2-5	03-2.5 to 03-3	375	1	0.1	StormPRO SN8	5.01	0.62	147	0.6	1.54	0.16	12	6	6	0	0	0.01	
03-3	03-3 to 01-3	375	1	0.1	StormPRO SN8	13.68	0.68	156	0.62	1.42	0.3	1	6	6	0	0	0	
13-1	13-1 to 13-2	225	1	0.1	StormPRO SN8	30.06	0.44	42	0.33	2.34	0.77	15	0.87	2.81	0.04	0.01	0.04	
13-2	13-2 to 13-3	300	1	0.1	StormPRO SN8	33.62	0.42	85	0.3	3.21	1.05	9	0.69	2.81	0.03	0.01	0.03	
13-3	13-3 to 13-4	375	1	0.1	StormPRO SN8	12.36	0.51	86	0.16	3	0.44						0	
13-4	13-4 to THM114B010	375	1	0.1	StormPRO SN8	6.99	1.04	112	0.19	1.06	0.57							

1% AEP STORM EVENT CHECKS

12d Dynamic Drainage Hydrology & Hydraulics Results

RUNOFF METHOD ILSAX 2
RETURN PERIOD 1
AEP/ARI AEP
EVENT MAJOR

NODE		OUTLET PIPE										PIT FREEBOARD (m)	BYPASS FLOW (L/s)	U/S WIDTH (m)	D/S WIDTH (m)	PIT		
NAME	NAME	DIAMETER (mm)	NUMBER OF PIPES	SEPARATION (m)	TYPE	LENGTH (m)	MIN COVER (M)	FLOW (L/s)	CAPACITY DEPTH RATIO	VELOCITY (m/s)	U/S Vd RATIO					D/S Vd RATIO	FLOW DEPTH (m)	
01-3	01-3 to 01-4	450	1	0.1	StormPRO SN8	16.93	0.69	295	0.81	1.87	0.03	29	1.79	2.82	0.04	0.03	0.07	
03-1	03-1 to 03-2	300	1	0.1	StormPRO SN8	37.92	0.57	92	0.42	2.59	0.73	57	6	6	0.01	0.01	0.09	
03-2	03-2 to 03-2.5	375	1	0.1	StormPRO SN8	31.62	0.55	142	0.39	1.29	1.76	9	6	6	0	0	0.01	
03-2-5	03-2.5 to 03-3	375	1	0.1	StormPRO SN8	5.01	0.62	165	0.66	1.51	-0.06	158	6	6	0.03	0.03	0.06	
03-3	03-3 to 01-3	375	1	0.1	StormPRO SN8	13.68	0.68	172	0.68	1.56	-0.03	126	6	6	0.02	0.02	0.03	
13-1	13-1 to 13-2	225	1	0.1	StormPRO SN8	30.06	0.44	53	0.42	2.41	0.75	23	1.01	8.84	0.05	0.01	0.04	
13-2	13-2 to 13-3	300	1	0.1	StormPRO SN8	33.62	0.42	106	0.37	3.18	1.01	15	0.81	8.84	0.04	0.01	0.03	
13-3	13-3 to 13-4	375	1	0.1	StormPRO SN8	12.36	0.51	106	0.19	1.01	0.01						0	
13-4	13-4 to THM114B0	375	1	0.1	StormPRO SN8	6.99	1.04	143	0.25	1.31	0.13						0	

These are the plans referred to in
Subdivision Works Certificate Application No.:

17.2022.822.1

and determined as APPROVED on: 3 August 2026
PORT MACQUARIE-HASTINGS COUNCIL

KING + CAMPBELL

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REV.	DATE	DESCRIPTION	BY
A	27.01.2026	ISSUED FOR SWC	AJC
B	04.02.2026	MINOR AMENDMENTS	AJC
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DATUM: AHD

SCALE:

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PROJECT NO:	7197	DRAWING TITLE:	STORMWATER CALCULATIONS SHEET & RESULTS			
DA NO.:	2022-822					
DESIGNED BY:	JSC/CJC	PROJECT:	THE SANCTUARY STAGE 9 LOT 733, DP 1314774 - JOHN OXLEY DRIVE, THURMSTER			
DRAWN BY:	JSC/CJC/AJC					
CHECKED BY:	CJC/ISM	CLIENT:	BIRD IN THE HAND 2 PTY LTD.		DRAWING NO:	SHEET:
DATE CREATED:	JULY 2025				7197_Stage 9_SWC_Stormwater Calcs	12 OF 16
						REVISION:
						C

NOT TO BE USED FOR CONSTRUCTION UNLESS CONSTRUCTION CERTIFICATE ISSUED FOR THE WORKS

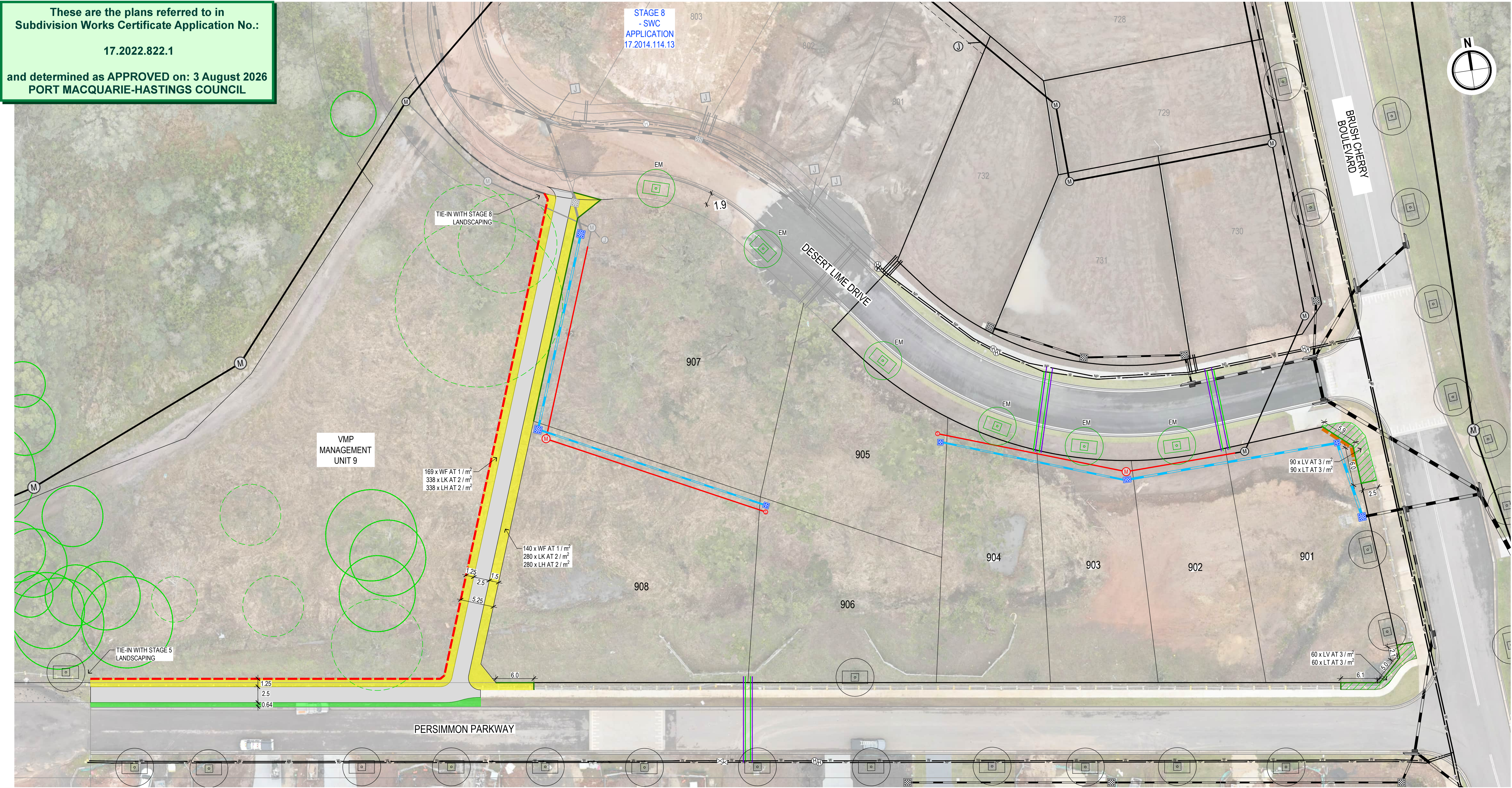
M:\C-REF-017197_the sanctuary\02_engineering\pages 8 and 03_swc 9 swc7197_Stage 9_SWC_Stormwater Calcs.dwg 41(L)-MINOR CALCS 5 May 2022 mwpj

These are the plans referred to in
Subdivision Works Certificate Application No.:

17.2022.822.1

and determined as APPROVED on: 3 August 2026
PORT MACQUARIE-HASTINGS COUNCIL

STAGE 8
- SWC
APPLICATION
17.2014.114.13



LEGEND

EXISTING BOUNDARY	EXISTING STORMWATER LINE WITH PIT & HEADWALL	EXISTING POTABLE WATER MAIN WITH HYDRANT & STOP VALVE	PROPOSED GARDEN BED PLANTING (SHARED PATH) - REFER TO LANDSCAPE DETAIL SHEET
PROPOSED STAGE 9 BOUNDARY	PROPOSED STORMWATER LINE WITH PIT & HEADWALL (STAGE 8)	EXISTING NON POTABLE WATER MAIN WITH HYDRANT & STOP VALVE	PROPOSED TURF - REFER TO LANDSCAPE DETAIL SHEET
PROPOSED FUTURE STAGES	PROPOSED STORMWATER LINE WITH PIT & JUNCTION (STAGE 9)	PROPOSED 20mm WATER PROPERTY SERVICE UNLESS NOTED OTHERWISE (POTABLE & NON POTABLE) INC TAPPING BANDS AND PROVISION FOR FUTURE METERS (STAGE 8)	PROPOSED GARDEN BED FEATURE FENCE PLANTING REFER TO LANDSCAPE DETAIL SHEET
PROPOSED 2.5m WIDE CONCRETE FOOTPATH	PROPOSED STORMWATER PIT LABELS	20mm WATER PROPERTY SERVICE UNLESS NOTED OTHERWISE (POTABLE & NON POTABLE) INC TAPPING BANDS AND PROVISION FOR FUTURE METERS. TO BE IN 100mm CONDUIT WHERE UNDER ROAD PAVEMENT (STAGE 9)	PROPOSED KOALA FENCE - REFER TO LANDSCAPE DETAIL SHEET
EXISTING KOALA FOOD TREE (TPZ) (K&C SURVEY JANUARY TO MARCH 2025)	EXISTING SEWER LINE WITH MANHOLE, JUNCTION & MAINTENANCE SHAFT		PROPOSED TIMBER GARDEN EDGE - REFER TO LANDSCAPE DETAIL SHEET
EXISTING NON KOALA FOOD TREE (TPZ) WITH TAG (K&C SURVEY JANUARY TO MARCH 2025)	PROPOSED SEWER LINE WITH MANHOLE, JUNCTION & MAINTENANCE SHAFT (STAGE 8)		PROPOSED TIMBER FEATURE FENCE (LOCATED WITHIN LOT) REFER TO LANDSCAPE DETAIL SHEET
EXISTING STREET TREE	PROPOSED SEWER LINE WITH MANHOLE, JUNCTION & MAINTENANCE SHAFT (STAGE 9)		PROPOSED STREET TREE - REFER TO LANDSCAPE DETAIL SHEET
	PROPOSED SEWER MANHOLE LABEL		

NOTES

- REFER TO SHEET 15 FOR PLANT SCHEDULE
- REFER TO SHEETS 14 AND 15 FOR LANDSCAPE DETAILS



THIS DRAWING INCLUDES INFORMATION IN COLOUR. IF YOU HAVE A BLACK AND WHITE COPY YOU DON'T HAVE ALL THE INFORMATION. THIS NOTE IS COLOURED RED.

KING + CAMPBELL

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REV.	DATE	DESCRIPTION	BY
A	27.01.2026	ISSUED FOR SWC	AJC
B	04.02.2026	MINOR AMENDMENTS	AJC
C	30.06.2026	MINOR AMENDMENTS	AJC

DATUM: AHD
SCALE: 1:300 @ A1
(1:600 @ A3)
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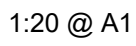
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DA NO.:	2022-822	PROJECT:	THE SANCTUARY STAGE 9 LOT 733, DP 1314774 - JOHN OXLEY DRIVE, THURMSTER
DESIGNED BY:	JSC/CJC	CLIENT:	BIRD IN THE HAND 2 PTY LTD.
DRAWN BY:	JSC/CJC/AJC	DRAWING NO:	7197_Stage 9_SWC_Plan
CHECKED BY:	CJC/ISM	SHEET:	13 OF 16
DATE CREATED:	JULY 2025	REVISION:	C

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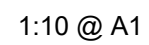
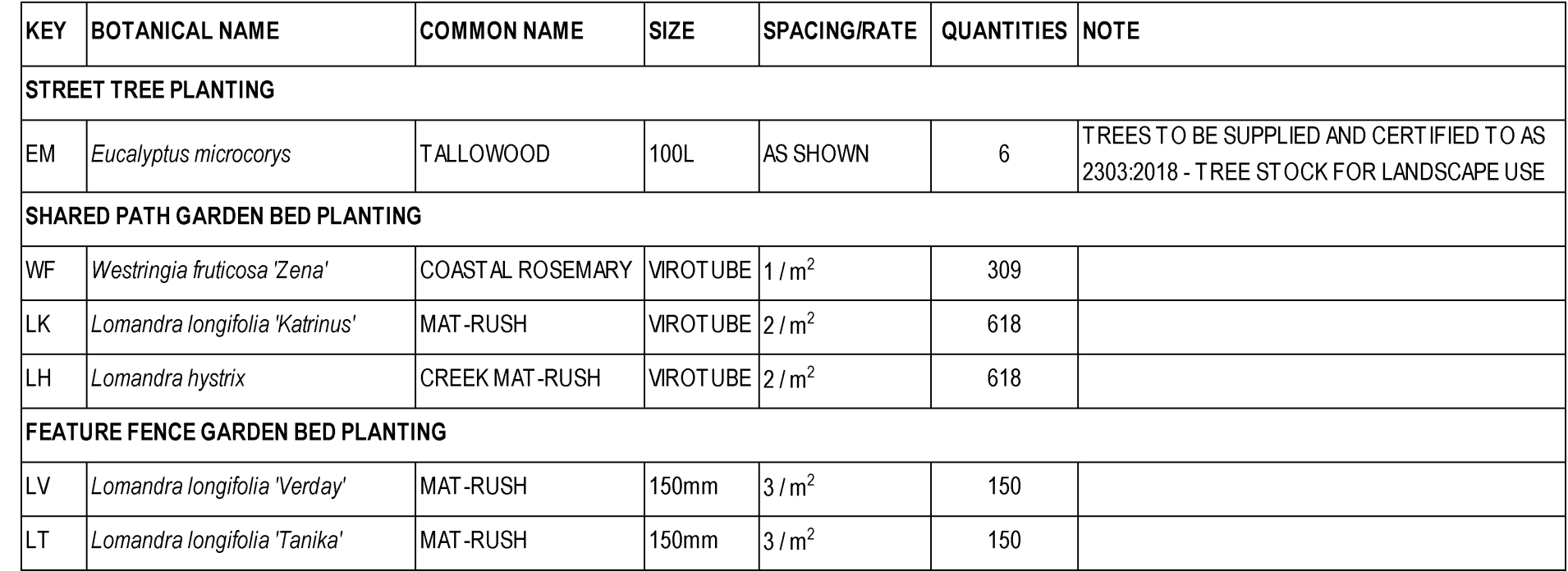
A1

and determined as APPROVED on: 3 August 2026
PORT MACQUARIE-HASTINGS COUNCIL

1:20 @A1



1:50 @ A1



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LANDSCAPE - TECHNICAL SPECIFICATION

1. GENERAL REQUIREMENTS

SCOPE AND EXTENT OF WORK

THE EXTENT OF THE LANDSCAPE WORKS IS INDICATED IN THE DRAWINGS. IT INCLUDES CARRYING OUT ALL ANCILLARY WORK NECESSARY FOR PROPER COMPLETION OF THE WORKS.

WHERE WORKS ARE ADJACENT TO EXISTING WORKS, MAKE THE PROPER JUNCTIONS BETWEEN NEW AND EXISTING WORKS AND MAKE GOOD ANY DAMAGE CAUSED TO ADJOINING EXISTING AND RETAINED WORKS.

SETOUT AND LEVELS

SETOUT AND POINT INFORMATION TO BE PROVIDED IN ELECTRONIC FORMAT UPON REQUEST TO THE CONSTRUCTION SURVEYOR AT THE TIME OF CONSTRUCTION. ALL SETOUT TO BE UNDERTAKEN FROM THE ELECTRONIC FILE.

ENVIRONMENTAL MANAGEMENT

THE IMPACT ON THE ENVIRONMENT SHALL BE MINIMISED. NO VEGETATION SHALL BE REMOVED WITHOUT PRIOR APPROVAL FROM THE PRINCIPAL UNLESS NOTED ON THE DRAWINGS OR SCHEDULED IN THE REVIEW OF ENVIRONMENTAL FACTORS (REF). WORKS SHALL NOT BE UNDERTAKEN WITHOUT CONSIDERATION OF THE REF.

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL BY THE PRINCIPAL (OR PRINCIPALS REPRESENTATIVE) AN ENVIRONMENTAL MANAGEMENT PLAN THAT OUTLINES THE FOLLOWING AS A MINIMUM:

- SEDIMENT INTERCEPTION BY THE PLACEMENT OF TEMPORARY SILT FENCING AND GRAVEL
- FILLED GEOTEXTILE SAUSAGES ACROSS DRAINAGE LINES AND AT INTERCEPTION POINTS FOR BOTH THE CONSTRUCTION AND STOCKPILE AREAS;
- INSTALLATION OF SEDIMENT TRAPS AT GRATED PITS AND KERB INLET PITS;
- METHODS OF MANAGING AND MINIMISING AIR AND NOISE POLLUTION.

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL BY THE PRINCIPAL (OR PRINCIPALS REPRESENTATIVE) A TRAFFIC CONTROL PLAN (IN ACCORDANCE WITH AS1742.3), PRIOR TO COMMENCEMENT OF CONSTRUCTION.

WORKMANSHIP AND MATERIAL QUALITY

MATERIALS AND WORKMANSHIP ARE TO CONFORM TO THE CURRENT EDITION OF APPLICABLE AUSTRALIAN STANDARD SPECIFICATIONS AND CODES. ANY WORK OR MATERIALS, WHICH, IN THE OPINION OF THE PRINCIPAL (OR THEIR REPRESENTATIVE), DO NOT MEET APPROPRIATE INDUSTRY STANDARDS OF WORKMANSHIP OR QUALITY, WILL BE REJECTED. REJECTED WORK SHALL BE REMOVED AND REINSTALL TO AN ACCEPTABLE STANDARD AT NO ADDITIONAL COST TO THE PRINCIPAL.

WORKMANSHIP & INSTALLATION SAMPLES

WHERE SPECIFIED, PROVIDE SAMPLES OF FINISHED INSTALLED WORKS FOR APPROVAL BY THE PRINCIPAL (OR THEIR REPRESENTATIVE) PRIOR TO PROCEEDING. INCLUDE TYPICAL JUNCTIONS, JOINTS, CUTS, FINISHES AND COLOURS OF THE NOMINATED SAMPLE. IF NOT APPROVED, SAMPLES ARE TO BE RECTIFIED OR REMOVED AND REPLACED AS REQUIRED BY THE CONTRACT MANAGER. APPROVED SAMPLES MAY BE RETAINED TO FORM A PART OF THE COMPLETED WORKS. ALL REMAINING WORKS ARE TO MEET AND MATCH THE QUALITY OF THE APPROVED SAMPLE.

2. CLEARING, DEMOLITION AND SITE PREPARATION

STRIPPING AND STOCKPILING TOPSOIL

STRIPPING OF TOPSOIL SHOULD OCCUR IMMEDIATELY BEFORE BULK EARTHWORKS AND DONE IN SUCH A MANNER AS TO MINIMISE EROSION AND SEDIMENT LOSS FROM SITE. SOIL MOISTURE CONTENT SHOULD BE MONITORED TO ENSURE THE SOIL STRUCTURE IS NOT ADVERSELY IMPACTED THROUGH EXCAVATION DURING EXTREMELY WET OR DRY CONDITIONS. AVOID THE INCLUSION OF SUBSOIL. IN THE TOPSOIL STRIPPING, STRIP TOPSOIL TO A DEPTH RECOMMENDED BASED ON SOIL TESTING RESULTS.

STOCKPILES SHOULD BE NO HIGHER THAN 2m IN DEPTH AND LOCATED 5M OR MORE FROM CONCENTRATED WATER FLOWS. PROTECT STOCKPILE UPSLOPE USING DIVERSION DRAINS. DOWNSLOPE SEDIMENT LOSS SHOULD BE MINIMISED THOUGH THE USE OF SILT FENCING OR OTHER APPROVED METHODS. LABEL STOCKPILE WITH ORIGIN AND DATE. IF STOCKPILES ARE TO BE IN PLACE FOR LONGER THAN 3 MONTHS, SOW WITH A SEASONALLY APPROPRIATE ANNUAL COVER CROP.

FINE TRIMMING AND GRADING

GRADE AND TRIM BULK SUBGRADE SURFACES TO A DEPTH BELOW FINISHED SURFACE LEVELS AS DETERMINED BY THE SPECIFIED DEPTHS OF COVERING MATERIALS. BERMS, SWALES AND BATTERS MAY REQUIRE FINE GRADING AND SHAPING TO THE LANDSCAPE ARCHITECT'S DIRECTION. SHAPING SHALL BE CARRIED OUT BY AN EXPERIENCED MACHINE OPERATOR OR SHAPER. SUCH WORK SHALL INCLUDE:

- ROUNDING OF RIDGE LINE PROFILES;
- GRADUATING RIDGE LINES AND FORMATION OF TRANSITION CURVES AT TOP AND BOTTOM OF BATTERS;
- TRIMMING TO REDUCE BULK EXCAVATION SLOPE STEEPNESS;
- GRADUAL TAPERING TO INTERSECTIONS WITH WALLS AND PAVEMENTS;
- GRADING TRANSITIONS TO FENCE LINES;
- GRADING TRANSITIONS TO MEET BACK OF ROAD EDGES AND KERBS.

UNLESS OTHERWISE NOTED FINAL GRADING SHALL ACHIEVE 1 IN 100 MINIMUM FALLS TO DRAINAGE.

SITE SUBGRADE PREPARATION

BEFORE LAYING TOPSOIL, THE FOLLOWING SUBGRADE TREATMENT MUST BE APPLIED TO ALL FINISHED SUBGRADE AREAS:

- REMOVE ROCKS >100mm DIAMETER;
- REMOVE RUBBISH SUCH AS CONSTRUCTION GENERATED WASTE, PLASTICS, METALS AND GLASS;
- APPLY ADDITIVES TO AMELIORATE THE SUBGRADE IN ACCORDANCE WITH THE RECOMMENDATIONS FROM THE SOIL TEST REPORT;
- CHISEL, DISC PLOUGH OR USE AN EXCAVATOR WITH A TYNE ATTACHMENT TO LOOSEN THE SUBGRADE AND MIX THE AMELIORANTS TO 200mm DEPTH TO INCORPORATE;
- HARROW TO BREAK UP CLODS BUT DO NOT SMOOTH (LEAVE THE SURFACE 'KEYED' TO ACCEPT THE TOPSOIL);
- PROTECT SUBGRADE FROM TRAFFICKING, COMPACTION AND CRUST FORMATION UNTIL THE TOPSOIL PLANTING SOIL SPREAD IS SPREAD.

SUBSOIL DRAINAGE

PROVIDE SUBSOIL DRAINAGE IN ACCORDANCE WITH THE DRAWINGS AND DETAILS. WITH SUITABLE FALLS AND CONNECTION TO BIO-RETENTION AREA, STORMWATER PITS OR OTHER APPROVED RECEIVING DRAINAGE DEVICE.

3. HARDSCAPE

PAVEMENT FINISHES GENERALLY

PAVEMENTS ARE TO BE CONSTRUCTED TRUE TO THE DOCUMENTED LINE AND LEVELS WITHOUT LOCAL IRREGULARITIES. FOR PAVEMENTS:

- CURVED EDGES ARE TO HAVE SMOOTH TRANSITIONS FREE FROM KINKS;
- LEVEL DIFFERENCE LESS THAN 3mm BETWEEN DIFFERENT PAVING SURFACES OR PAVERS (UNLESS SPECIFICALLY INDICATED ON GRADING PLAN);
- MAXIMUM DEVIATION FROM A 3m STRAIGHT EDGE PLACED ANYWHERE ON SURFACE OF 12mm;
- LESS THAN 10mm DEPTH OF WATER PONDING (15 MINUTES AFTER RAIN HAS STOPPED);
- NO MOVEMENT OR HOLLOW SOUND WHEN WALKED UPON.

PAVING UNITS AND EXPANSION JOINTS, CRACK CONTROL JOINTS ARE TO BE LAID OUT AS INDICATED ON THE DRAWINGS. UNLESS OTHERWISE DOCUMENTED, CUTS ARE TO BE CARRIED OUT TO ACHIEVE A GAP OF NO MORE THAN 3mm BETWEEN ADJOINING PAVING UNITS OR OTHER ADJOINING SURFACES OR STRUCTURES. ENSURE POSITIVE DRAINAGE TO THE ADJOINING GARDENS, KERB AND DRAINAGE INLET GRATES TO PREVENT PONDING.

EACH DIFFERENT PAVEMENT TYPE IS TO HAVE A UNIFORM FINISH AND COLOUR. UNLESS OTHERWISE DOCUMENTED STEPS ARE TO HAVE A CONSTANT TREAD & RISER HEIGHT FOR EACH SET/FLIGHT.

SLIP RESISTANCE

UNLESS OTHERWISE SPECIFIED, ALL LANDSCAPE PATHWAYS AND PAVING (A POTENTIALLY ACCESSIBLE WALL COPINGS) SHALL COMPLY WITH THE FOLLOWING MINIMUM SLIP RESISTANCE RATINGS IN ACCORDANCE WITH ASINZS 4586:2013. (APPENDIX A - WET PENDULUM TEST)

GENERAL PATHWAYS AND PEDESTRIAN PAVEMENTS (TYPICALLY SLOPES LESS THAN 1:50)
WET PENDULUM TEST = P3, P4 OR P5 (CLASS X,W OR V-UNDER 2003 VERSION)
OIL-WET RAMP TEST = R11, R12 OR R13

GENERAL PATHWAYS AND PEDESTRIAN PAVEMENTS (TYPICALLY UP TO SLOPES OF 1:20)
WET PENDULUM TEST = P4 OR P5 (CLASS W OR V-UNDER 2003 VERSION)
OIL-WET RAMP TEST = R12 OR R13

GENERAL PATHWAYS AND PEDESTRIAN PAVEMENTS (FOR SLOPES BETWEEN 1:20 AND 1:14, OR ABOVE)
WET PENDULUM TEST = P5 (CLASS V- UNDER 2003 VERSION)
OIL-WET RAMP TEST = R13

INFORMATIONAL NOTE: WOOD FLOAT OR BROOM FINISHED INSITU CONCRETE WILL TYPICALLY PROVIDE A CLASS P5 RATING USING WET PENDULUM TEST AND CLASS C FOR WET BARE FOOT TEST AND R13.

UNLESS OTHERWISE SPECIFIED ALL PAVING AROUND SWIMMING POOLS OR WATER PLAY AREAS SHALL COMPLY WITH THE FOLLOWING SLIP RESISTANCE RATINGS IN ACCORDANCE WITH ASINZS 4586:2004. (WET BAREFOOT RAMP TEST):-
CLASS C FOR WATER PLAY AREAS OR SWIMMING POOL SURROUNDS.

APPLICABLE TEST METHODS

- WET PENDULUM TEST - APPENDIX A ASINZS 4586:2013 SHALL TYPICALLY BE USED AS THE TEST METHOD FOR PEDESTRIAN PATHWAYS AND RAMPS;
- WET BAREFOOT RAMP TEST - APPENDIX C ASINZS 4586:2013 SHALL ONLY BE USED AS THE TEST FOR SWIMMING POOL AND WATER PLAY AREA SURROUNDS;
- OIL-WET RAMP TEST - APPENDIX C ASINZS 4586:2013 SHALL TYPICALLY NOT BE USED FOR LANDSCAPE APPLICATIONS.

CONCRETE PAVING & FOOTINGS

FOUNDATIONS & PREPARATION
FOUNDATIONS FOR CONCRETE STRUCTURES SHALL BE EXCAVATED TO NEAT LINES AND FORMED AT THE REQUIRED DEPTH BELOW THE SURFACE LEVEL. ALL SOFT, YIELDING AND OTHERWISE UNSUITABLE MATERIAL SHALL BE REMOVED AND REPLACED WHERE NECESSARY WITH APPROVED MATERIAL, AND THE FOUNDATIONS SHALL BE THOROUGHLY COMPACTED AND FINISHED TO A FIRM SMOOTH SURFACE OF UNIFORM BEARING VALUE. UNLESS OTHERWISE PERMITTED, EXCAVATED MATERIAL SHALL NOT BE DEPOSITED ON EXISTING GRASSSED AREAS. EXCAVATION SHALL BE DEEP ENOUGH TO ALLOW FOR THE TOP SURFACE OF THE SLAB TO FINISH JUST BELOW OR FLUSH WITH THE TOP OF ADJOINING GRASS SURFACES AND PAVEMENT LEVELS (OR 25-50mm BELOW ADJOINING GARDEN LEVELS).

FORMWORK
FORMWORK FOR CONCRETE PAVING SHALL BE FIXED BOARDS OF SEASONED, DRESSED TIMBER PLANKS OR EQUIVALENT. FORMS SHALL BE DESIGNED AND CONSTRUCTED SO THAT THEY CAN BE REMOVED WITHOUT INJURING THE CONCRETE AND SHALL BE BUILT TRUE TO LINE AND BRACED IN A SUBSTANTIAL AND UNYIELDING MANNER. FORMS SHALL BE FREE OF WARPS, KINKS OR BENDS.

REINFORCEMENT - PEDESTRIAN PAVEMENTS
REINFORCEMENT SHALL BE SLE2 MESH UNLESS OTHERWISE NOTED. REINFORCEMENT IS TO BE PLACED 30mm BELOW THE TOP SURFACE OF THE PAVEMENT AND NOT CLOSER THAN 40MM TO THE SIDES. REINFORCEMENT SHALL BE SECURED AGAINST DISPLACEMENT ARISING FROM THE FLOW OR WORKING OF THE CONCRETE, AND SHALL BE TIED WITH NO. 16 SWG BLACK IRON WIRE OR TACK WELDED AT ALL CROSSINGS.

STRENGTH
UNLESS OTHERWISE NOTED, CONCRETE SHALL BE A MINIMUM STRENGTH OF 25 MPa AND SHALL BE PROPERLY COMPACTED VIA VIBRATING SCREEDS OR POKERS.

FALLS AND FINISH
UNLESS OTHERWISE DETAILED, FOOTPATHS SHALL BE CONSTRUCTED WITH A MINIMUM 2% (1:50) CROSS FALL, FALLING WITH GENERAL GRADES OF THE AREA. LONGITUDINAL GRADES NORMALLY SHALL BE IN THE RANGE OF 0.5% TO 2.5%. IF COLOURED CONCRETE IS SPECIFIED IT SHALL BE INTEGRALLY AND FULL-THICKNESS COLOURED.

AFTER PLACING AND COMPACTION, CONCRETE SHALL BE FINISHED TO A SMOOTH EVEN SURFACE BY MEANS OF STEEL FLOATS AND OTHER SUITABLE EQUIPMENT. ON COMPLETION OF STEEL FLOATING AND BEFORE INITIAL SET, THE SURFACES OF CONCRETE PATHS SHALL BE EITHER WOOD FLOATED OR BROOMED TO A 'NON-SKID' TEXTURE. THIS SHALL BE ACHIEVED BY DRAWING A MOISTENED NYLON BROOM LIGHTLY ACROSS THE SURFACE AT RIGHT ANGLES TO THE DIRECTION OF THE PATH OR PAVING. EDGES SHALL BE TOOLED TO CREATE A 5m PENCIL ROUND EDGE.

CONTRACTION JOINTS SHALL BE FORMED BY MAKING A CUT 3mm WIDE FOR AT LEAST ONE QUARTER OF THE DEPTH OF THE PAVING. UNLESS OTHERWISE SPECIFIED OR DETAILED, THE SPACING OF CONTRACTION JOINTS SHALL BE APPROXIMATE TO THE WIDTH OF THE PATH WITH MINOR ADJUSTMENTS TO AVOID SHORT CLOSING LENGTHS. JOINT SPACING SHALL NOT TYPICALLY NORMALLY EXCEED THREE (3) METRES.

EXPANSION JOINTS SHALL BE CONSTRUCTED FOR THE FULL DEPTH OF THE PAVING USING 15mm WIDE BITUMINOUS EXPANSION JOINTS. THEY SHALL BE PROVIDED WHEREVER THE PAVING ABUTS FIXED STRUCTURES, SUCH AS BUILDINGS AND MANHOLES, TRANSVERSELY AT MAXIMUM INTERVALS OF 15 METRES ALONG THE LENGTH OF THE PATHWAY AND AT PATH INTERSECTIONS. JOINT ARISES ABUTTING BITUMINOUS EXPANSION JOINTS SHALL BE TOOLED OFF.

PROTECT GREEN CONCRETE FROM RAIN, FLOWING WATER AND, WHERE POSSIBLE, GRAFFITI. PROVIDE PROTECTION AS NECESSARY TO PREVENT CRACKING OF THE CONCRETE DUE TO TEMPERATURE CHANGES DURING THE CURING PERIOD. REINSTATE ADJACENT SURFACES AFTER STRIPPING OF FORMWORK.

EDGING

EDGES ARE TO BE CONSTRUCTED TRUE TO THE DOCUMENTED LINE AND LEVELS WITHOUT LOCAL IRREGULARITIES. FOR EDGES:-

- CURVED EDGES ARE TO HAVE SMOOTH TRANSITIONS FREE FROM KINKS;
- VERTICAL ALIGNMENT CURVES ARE TO HAVE SMOOTH TRANSITIONS FREE FROM KINKS AND SUDDEN CHANGES FOLLOWING THE ADJOINING DESIGNED GRADES AND LEVELS.

FENCING

FENCES ARE TO BE CONSTRUCTED TRUE TO THE DOCUMENTED LINE AND LEVELS AND VERTICAL WITH SUFFICIENT RIGIDITY AND DEPTH OF POST AND FOOTINGS TO WITHSTAND NORMALLY EXPECTED USE AND LATERAL FORCES. UNLESS OTHERWISE SPECIFIED OR DETAILED POSTS SHALL BE MAXIMUM SPACING OF 2.4m AND BE EMBEDDED WITHIN THE GROUND TO AT LEAST ¼ THE HEIGHT OF THE FENCE HEIGHT.

WALL FINISHES

WALLS ARE TO BE CONSTRUCTED TRUE TO THE DOCUMENTED LINE AND LEVELS AND VERTICAL (UNLESS OTHERWISE DOCUMENTED). WALLS ARE TO BE LESS THAN 1% FROM VERTICAL. HORIZONTAL WALL MEMBERS AND RUNS ARE TO NOT SAG. CAPPING IS TO BE LEVEL IN BOTH DIRECTIONS. THERE IS TO BE NO MORE THAN 2mm DIFFERENCE IN HEIGHT BETWEEN ADJOINING FACING SEGMENTS OR BETWEEN ADJOINING CAPPING SEGMENTS. EXPANSION JOINTS, FACING AND COPING SEGMENTS ARE TO BE SET OUT AS INDICATED ON THE DRAWINGS AND AS DIRECTED ON SITE BY THE CONTRACT MANAGER. UNLESS OTHERWISE DOCUMENTED, CUTS ARE TO BE CARRIED OUT TO ACHIEVE A GAP OF NO MORE THAN 3MM BETWEEN ADJOINING SEGMENTS OR OTHER ADJOINING SURFACES OR STRUCTURES. SLIP RESISTANCE FOR THE CAPPING IS TO COMPLY WITH ASINZS 4586:2013 WHERE IT IS REASONABLE TO ANTICIPATE IT BEING ACCESSIBLE TO PEDESTRIANS. SELECT MATERIALS AND INCLUDE ADMIXTURES WITHIN CONCRETES AND MORTARS TO PREVENT THE OCCURRENCE OF EFFLORESCENCE.

4. SOFTSCAPE

MULCH

ANY SOIL CONDITIONERS SHALL COMPLY WITH AS4454-2003 COMPOSTS, SOIL CONDITIONERS AND MULCHES. UNLESS OTHERWISE NOTED MULCH SHALL BE A MINIMUM OF 50mm DEPTH AND A MAXIMUM OF 75mm DEPTH. MULCH TYPES SHALL BE:-

- 15mm GRADED AGED HORTICULTURAL PINE BARK FINES. (ALL AREAS EXCEPT BIOFILTERS/ DETENTION BASINS);
- RECYCLED WOOD WASTE SUCH AS ANL FOREST BLEND OR APPROVED EQUIVALENT. (ALL AREAS EXCEPT BIOFILTERS/ DETENTION BASINS);
- BIOFILTER / DETENTION BASINS SHALL BE ROUNDED 20mm DIAMETER NEPEAN RIVER GRAVEL OR APPROVED EQUIVALENT.

HERBICIDES

GENERAL USE HERBICIDES SHALL BE:-

- A GLYPHOSATE BASED NON-RESIDUAL HERBICIDE SUCH AS "ROUNDUP® BIACTIVE™"

SUBMIT DETAILS OF ANY OTHER PROPOSED HERBICIDES PRIOR TO USE. FOLLOW ALL PUBLISHED SAFETY AND MATERIAL HANDLING DATA AND PROPERLY STORE ALL CHEMICALS USED ON SITE. HERBICIDES SHALL BE DILUTED TO MANUFACTURER'S RECOMMENDATIONS IN CLEAN WATER WITH COLOURED DYE ADDED.

FERTILISERS & WETTING AGENTS

UNLESS OTHERWISE NOTED SPECIFIED FERTILISER SHALL BE A SLOW RELEASE PELLETISED FORM SUITABLE FOR USE WITH AUSTRALIAN NATIVE PLANTS:-

- OSMOCOTE™ PLUS TRACE ELEMENTS - TOTAL ALL PURPOSE SLOW RELEASE FERTILISER OR
- OSMOCOTE® PLUS TRACE ELEMENTS - NATIVE GARDENS SLOW RELEASE FERTILISER FOR PHOSPHOROUS SENSITIVE NATIVE PLANTING.

UNLESS OTHERWISE NOTED, THE APPLICATION RATE FOR THE ABOVE SHALL BE 50g/m².

UNLESS OTHERWISE NOTED THE SOIL WETTING AGENT SHALL BE:-

- AMGROW "WETTASOIL" GRANULAR SOIL WETTING AGENT BROADCAST ONTO THE SURFACE OF GARDEN AREAS OR LAWN AREAS PRIOR TO PLANTING.

UNLESS OTHERWISE NOTED, THE APPLICATION RATE FOR THE ABOVE SHALL BE:-

- 30g/m² FOR CLAY SOILS;
- 40g/m² FOR LOAM AND ORGANIC SOIL BLENDS;
- 50g/m² FOR SANDS AND SANDY SOILS.

SOIL CONDITIONERS

UNLESS OTHERWISE NOTED SPECIFIED SOIL CONDITIONERS SHALL BE SUPPLIED BY TERRACOTTEM, PROVIDE GROWTH STIMULANTS, AND INCREASE THE NUTRIENT AND WATER HOLDING CAPACITY OF THE SOIL:-

- TERRACOTTEM ARBOR SHALL BE USED IN ALL GARDEN BEDS AND APPLIED AT A RATE OF 200g PER m²;
- TERRACOTTEM TURF SHALL BE USED IN ALL TURF AREAS AND APPLIED AT A RATE OF 150g PER m².

TREE PLANTING, GARDEN AND LAWN AREA PREPARATION

ENSURE THE INSTALLED, OR NATURAL, SUB GRADES, ARE NOT TOXIC TO NORMAL PLANT GROWTH OR UNNATURALLY OVERLY COMPACTED. NOTIFY CONTRACT MANAGER IMMEDIATELY IF THERE ARE ANY CONCERNS WITH REGARD TO THE SUBSOIL CONDITIONS.

SOIL

SITE WON TOPSOIL SHALL BE TESTED BY SESL AUSTRALIA OR AN APPROVED SOIL LABORATORY AND REUSED ONSITE WHERE POSSIBLE. SITE WON SOIL SHOULD BE AMELIORATED IN ACCORDANCE WITH THE LABORATORY RECOMMENDATIONS FOR THE INTENDED PLANT SPECIES MIX AND PLANTING APPLICATION. IMPORTED SOILS SHOULD BE USED WHERE SITE SOILS ARE NOT SUITABLE FOR REUSE OR THE VOLUME REQUIRED IS INSUFFICIENT.

ALL IMPORTED PLANTING SOIL IS TO COMPLY WITH REQUIREMENTS OF AS 4419-2003 SOILS FOR LANDSCAPING AND GARDEN USE. ALL PLANTING SOIL SHALL BE FREE OF MATERIALS, RUBBISH, DEBRIS AND SUBSTANCES THAT ARE TOXIC TO LIVING ORGANISMS, OR WOULD OTHERWISE BE DECLARED CONTAMINATED. ALL IMPORTED GARDEN SOIL SHALL BE FREE OF WEED SEEDS.

ALL PLANTING SOIL TO BE CONSOLIDATED BUT NOT COMPACTED AND HAVE PARTICLE SIZES GREATER THAN THE SUBSOIL.

THE PHYSICAL AND CHEMICAL PROPERTIES OF EACH SOIL TYPE SHALL BE WITHIN THE ACCEPTABLE RANGES SPECIFIED IN THE 'SOIL PROPERTIES SPECIFICATION TABLE' AND SUPPORTED BY COMPREHENSIVE DATA SHEETS AND TEST RESULTS. TEST RESULTS MUST BE SUBMITTED TO THE CONTRACT MANAGER TO DEMONSTRATE COMPLIANCE PRIOR TO USE.

ISOLATED TREE PLANTING PIT EXCAVATION AND SPOIL

UNLESS OTHERWISE SPECIFIED OR DIRECTED, SURPLUS EXCAVATED MATERIAL MUST BE IMMEDIATELY REMOVED FROM THE SITE. THIS INCLUDES DEBRIS RESULTING FROM SITE CLEARANCE AND EXCAVATED MATERIAL NOT RE-USABLE AS TOPSOIL, FILLING, MULCH OR THE LIKE. EXCAVATE TO AN EQUIVALENT DEPTH OF THE NEW TREE ROOTBALL MEASURED FROM THE UNDERSIDE OF ANY CONCRETE BASE SLABS OR PAVEMENT, OR AS SHOWN ON THE DETAILS. DO NOT DISTURB EXISTING SERVICES, AND EXCAVATE BY HAND AROUND ANY EXISTING SERVICES AS REQUIRED. ALLOW ADDITIONAL DEPTH TO ACHIEVE SPECIFIED FALLS FOR SUBSOIL DRAINAGE LINES AND TO SATISFY FINISHED LEVELS.

SAFETY PRECAUTIONS MUST BE IN PLACE TO PREVENT PUBLIC ENTRY TO WORKSITE AREA/ EXCAVATED TREES PITS WHEN IN PUBLIC STREETS.

PLANTS, PLANTING AND FERTILISING

ALL TREES SHALL COMPLY WITH AUSTRALIAN STANDARD 2303:2015 'TREE STOCK FOR LANDSCAPE USE'. INSPECT AND APPROVE ALL PLANTS IMMEDIATELY AFTER BEING UNLOADED TO CHECK FOR QUANTITY, QUALITY, VIGOUR, HEALTH, AND OTHER REQUIREMENTS. TREES SUPPLIED IN CONTAINERS 100L OR GREATER SHALL INDICATE THE NORTHERLY ASPECT DURING GROWING IN THE NURSERY AND ENSURE IT IS CLEARLY MARKED UNTIL IT IS PLACED IN THAT SAME ORIENTATION IN ITS FINAL POSITION IN THE PLANTING HOLE. PREPARE PLANTING AREAS AND INSTALL SOIL AS DETAILED. IF NOT OTHERWISE SHOWN ON DETAILED DRAWINGS, TYPICALLY EXCAVATE THE PLANTING HOLES A MINIMUM OF THREE TIMES THE DIAMETER OF THE CONTAINER ROOT BALL AND FOR 25L TO 75L CONTAINERS 100mm DEEPER THAN THE ROOT BALL UNLESS OTHERWISE DETAILED. BREAK UP AND LOOSEN COMPACTED SIDES OF THE HOLE TO PREVENT CONFINEMENT OF ROOT GROWTH. ALL TREES 100L AND LARGER SHALL HAVE THE OUTER 5-10mm OF ROOTS SHAVED OFF THE ROOTBALL PRIOR TO BACKFILLING.

THOROUGHLY WATER ALL PLANTS IMMEDIATELY AFTER UNLOADING ONSITE AT A RATE OF 50% OF THE ROOTBALL VOLUME EG. 100L FOR 200L TREES TO ENSURE THE ROOTBALL THOROUGHLY WETTED. CONTINUE DAILY WATERING AT THE RATE OF 25% OF ROOTBALL VOLUME UNTIL PLANTED. WHEN THE HOLE IS THE CORRECT SIZE AND NOT BEFORE, REMOVE THE PLANT FROM THE CONTAINER WITH MINIMUM DISTURBANCE TO THE ROOT BALL AND THEN PLACE IT IN ITS FINAL POSITION, AT THE CENTRE OF THE HOLE. ENSURE THAT TOPSOIL IS NOT PLACED OVER THE TOP OF THE ROOT BALL. THE PLANT STEM SHALL REMAIN THE SAME HEIGHT ABOVE GROUND LEVEL AS IT WAS IN THE CONTAINER. SOIL IS TO BE LIGHTLY TAMPED DURING BACKFILLING TO AVOID EXCESSIVE AIR POCKETS FORMING OR LATER SUBSIDENCE. THOROUGHLY WATER AT A RATE OF 50% OF ROOTBALL VOLUME IMMEDIATELY AFTER PLANTING. LIGHTLY RAKE REMAINING GARDEN AREAS TO AN EVEN GRADE SO THAT THE SOIL LEVEL WILL BE 50-75mm BELOW ADJACENT FINISHED LEVELS, TO ACCOMMODATE THE ADDITION OF MULCH AND FORM TEMPORARY WATERING BUNDS AROUND PLANTS, AS DETAILED.

PLACE SLOW RELEASE ORGANIC FERTILISER AROUND THE SOIL SURFACE OF THE PLANTS AT TIME OF PLANTING, PRIOR TO MULCHING AT THE RATE SPECIFIED.

SUSPEND ALL PLANTING DURING UNSATISFACTORY WEATHER CONDITIONS INCLUDING THE FOLLOWING:-

- DURING VERY HIGH WIND CONDITIONS (ESPECIALLY WHEN HOT / DRY);
- IN PERIODS OF EXTREME HEAT (IE. > 35°C);
- WHEN SOIL IS EXTREMELY WET OR WATERLOGGED; AND
- DURING PERIODS OF EXPECTED FROST.

AFTER PLANTING, REMOVE ALL RUBBISH, PLANT TAGS AND NURSERY STAKES AND CONTAINERS FROM THE SITE.

TEMPORARY STAKING OF TREES

ALL TREES SUPPLIED ARE TO BE SELF SUPPORTING AS SPECIFIED. ALL NURSERY STAKES AND TIES ARE TO BE REMOVED PRIOR TO PLANTING. ONLY STAKE TREES IF IT IS DETAILED OR OTHERWISE SPECIFIED. IF PREVAILING ENVIRONMENTAL FACTORS SUCH AS VERY STRONG WINDS OR POTENTIAL DAMAGE OR VANDALISM DICTATE, THE PLANTS MAY BE STAKED AS PER METHODS DESCRIBED BELOW.

ONLY AT THE DIRECTION OF THE CONTRACT MANAGER, IF ANY PLANTS ARE FOUND TO NOT BE SELF SUPPORTING, AND ARE NOT REJECTED, THE PLANTS SHALL BE STAKED AT THE CONTRACTORS EXPENSE. TREES (100L AND OVER) SHALL BE STAKED WITH TWO 50 X 50 X 1800mm HARDWOOD STAKES SPACED ON EITHER SIDE OF THE TREE. ALL OTHER SMALL TREES (25L - 75L) SHALL BE STAKED USING TWO 38 X 38 X 1500mm HARDWOOD STAKES, OR EQUIVALENT.

TIE EACH PLANT TO THE STAKES IN A LOOSE FIGURE "8" USING A 50mm WIDE HESSIAN STRAP. ENSURE THE TIE IS SLACK TO FACILITATE MOVEMENT OF THE STEM. STAKES ARE NOT TO BE DRIVEN THROUGH THE ROOTBALL AND ARE TO BE LOCATED ON THE WINDWARD SIDE OF THE TREE, IF WINDS HAVE A PREVAILING DIRECTION.

ALL STAKES AND TIES SHALL BE REMOVED PRIOR TO FINAL COMPLETION. IF TREES ARE STILL NOT SELF SUPPORTING AT THIS TIME THEY SHALL BE REPLACED, AT THE CONTRACTORS EXPENSE, WITH SELF SUPPORTING SPECIMENS OF THE SAME SIZE AND SPECIES AS ORIGINALLY SPECIFIED.

TURF PLACEMENT

THE CONTRACTOR SHALL LAY TURF AS INDICATED ON DRAWINGS AND AS SPECIFIED IN THE SCHEDULE. ALL TURF WILL BE LAID AS SOON AS IT ARRIVES ON SITE. PREPARE TURF UNDERLAY, USING THE SPECIFIED SOIL MIX SPREAD AND COMPACTED TO AN EXTENT WHERE EXCESSIVE HEAL PRINTS ARE AVOIDED WHEN IT IS WALKED OVER. FINAL SHAPING AND SMOOTHING OF THE LAWN AREA WILL BE CONDUCTED USING AN APPROPRIATE TOPDRESSING "FLOAT", TO THE FINISHED LEVELS. CARE SHOULD BE TAKEN TO REMOVE ALL SURFACE IMPERFECTIONS AND LARGE SOIL LUMPS.

A HEADER COURSE OF SODS WILL BE LAID PARALLEL AND ADJACENT TO ALL EDGES TO THE TURF AREA. THE TURF SODS SHALL THEN BE PLACED HORIZONTALLY ACROSS THE SLOPE IN A 'STRETCHER' BOND PATTERN, WITH ALL JOINTS BUTTED FIRMLY TOGETHER AND NEATLY CUT IN. ANY DAMAGED OR SUB-STANDARD AREAS SHALL BE CUT OUT AND REPLACED. ANY REMAINING SMALL GAPS BETWEEN TURF SODS ARE TO BE FILLED IN WITH TURF UNDERLAY SOIL. ON STEEP SLOPES, OR DRAINAGE CHANNELS, PEG THE TURF AS NECESSARY TO PREVENT DOWN SLOPE MOVEMENT, AND REMOVE THE PEGS WHEN THE TURF IS ESTABLISHED.

HIGH POINTS OR IMPERFECTIONS MAY BE LIGHTLY TAMPED OUT UPON COMPLETION OF LAYING TO FORM AN EVEN SURFACE. ALL TURF IS TO FINISH FLUSH WITH ADJACENT SURFACES. ALL TURF SHALL BE WATERED THE SAME DAY IT IS LAID. TOPDRESSING OR ROLLING SHALL NOT BE UNDERTAKEN UNTIL LAWN IS ESTABLISHED.

BOARDS, PLANKS OR OTHER MEANS WILL BE EMPLOYED TO AVOID DAMAGE TO THE BASE COURSE SLOPED AND NEWLY LAYED TURF DURING THE LAYING PROCESS. PROTECTION WILL ALSO BE PROVIDED TEMPORARILY TO PREVENT DAMAGE LIKELY TO BE CAUSED BY PEDESTRIAN OR VEHICULAR MOVEMENT AND ONGOING BUILDING WORKS. THIS WILL NOT BE LEFT IN PLACE LONGER THAN IS NECESSARY TO PREVENT DAMAGE AND WILL BE REMOVED AT THE CONCLUSION OF EACH WORKING DAY.

ALLOW FOR REPLACING ALL AREAS WHERE THE TURF HAS FAILED TO PROVIDE A HEALTHY COVER WITHIN 30 DAYS FROM THE DATE OF LAYING. CONTRACTOR SHALL PROVIDE COMMENT AS TO WHY THE TURF MAY HAVE FAILED SO THAT RECTIFICATION MEASURES CAN BE TAKEN PRIOR TO RE-TURFING. TOPDRESSING, SHOULD IT BE DEEMED NECESSARY BY THE CONTRACT MANAGER, WILL NOT BE CONDUCTED WITHIN 6 WEEKS OF LAYING THE TURF. TOPDRESSING SHALL ONLY BE CONDUCTED TO REMOVE APPARENT SURFACE DEPRESSIONS AND WILL NOT CONSTITUTE AN ADDITION COST. TOPDRESSING SOIL SHALL BE THE SAME SOIL MIX AS THAT USED FOR THE TURF AREA BASE COURSE TO AVOID LAYERING OF THE SOIL PROFILE. TOPDRESSING WILL BE LIGHTLY APPLIED DRY AND LEVELLED AND WORKED INTO THE LAWN USING AN APPROPRIATE TOPDRESSING "FLOAT".

6. ESTABLISHMENT MAINTENANCE

EXTENT & TASKS

THE CONTRACTOR SHALL MONITOR AND MAINTAIN ALL PLANTING AND ASSOCIATED LANDSCAPING WORKS FOR THE DURATION OF THE MAINTENANCE PERIOD. THIS SHALL GENERALLY INCLUDE WATERING, FAILED PLANT REPLACEMENTS, PEST AND DISEASE CONTROL, WEED CONTROL AND MONITORING. MAINTENANCE IS TO BE CARRIED OUT TO ALL AREAS WHERE NEW PLANTING, IS INSTALLED. WEEDING SHALL EXTEND AROUND AND IN BETWEEN INDIVIDUAL PLANTS AND UP TO PATH, KERBS OR OTHER DEFINING EDGES. CARRY OUT ALL MAINTENANCE ACTIVITIES FOR ALL NEW GARDEN AND LAWN AREAS AS REQUIRED TO ENSURE THE PLANTS AND TURF BECOME ESTABLISHED WITHIN THE MAINTENANCE PERIOD AND ARE KEPT IN A HEALTHY AND TIDY STATE IN ACCORDANCE WITH BEST HORTICULTURAL PRACTICES.

WATERING

PLANTS ARE TO BE WATERED UPON COMPLETION OF PLANTING AND THEN MONITORED FOR WATER STRESS BY THE CONTRACTOR. WATERING REQUIREMENTS WILL BE SUBJECT TO SEASON AND PREVAILING WEATHER CONDITIONS. PLANTS THAT FAIL DUE TO WILTING AND WATER STRESS SHALL BE REPLACED AT THE CONTRACTORS EXPENSE. REFER TO ADVANCED TREE WATERING SCHEDULE FOR MINIMUM WATERING REQUIREMENTS FOR TREES GREATER THAN OR EQUAL TO 45L CONTAINER SIZE.

PESTS AND DISEASES

ALL TREES ARE TO BE VISUALLY INSPECTED FOR THE PRESENCE OF PERSISTENT AND DAMAGING INSECT PESTS OR DISEASES AT LEAST ONCE EVERY 4 WEEKS, OR UPON WRITTEN NOTIFICATION FROM THE CONTRACT MANAGER OF A POTENTIAL PROBLEM. THE PEST AND / OR DISEASE AND ITS EXTENT AND PREVALENCE IS TO BE IDENTIFIED AND RECORDED ALONG WITH THE RECOMMENDED CONTROL AND ACTION TO BE TAKEN.

WEEDING

ALL AREAS ARE TO BE VISUALLY INSPECTED BY THE CONTRACTOR FOR THE PRESENCE OF WOODY AND HERBACEOUS WEED SPECIES ONCE EVERY 4 WEEKS. ALL OCCURRENCES OF WEEDS ARE TO BE SPOT SPRAYED USING A GLYPHOSATE BASED HERBICIDE NO LATER THAN 7 DAYS AFTER BEING IDENTIFIED. WEEDS ARE TO BE RE-INSPECTED BY THE CONTRACTOR 7 DAYS AFTER SPRAYING AND RETREATED IF REQUIRED.

WEEDS HIGHER THAN 200mm IN HEIGHT SHALL BE REMOVED BY HAND BEFORE GENERAL HERBICIDE TREATMENT. SMALLER WEEDS SHALL BE ALLOWED TO WITHER AND ROT IN PLACE.

PLANT REPLACEMENTS

THE COST OF REPLACEMENT PLANTS THAT HAVE FAILED DUE TO FAILURE OF THE CONTRACTOR TO PERFORM ADEQUATE MAINTENANCE, OR IMPLEMENTING INAPPROPRIATE HANDLING PROCEDURES OR PLANTING OPERATIONS SHALL BE AT BORN BY THE CONTRACTOR. REPLACEMENTS SHALL BE UNDERTAKEN WITHIN 7 DAYS OF THE PLANT BEING IDENTIFIED AS FAILED OR UNACCEPTABLY DAMAGED. NOTE, SEVERE WILTING OR WATER LOGGING LEADING TO DEATH OF FOLIAGE, BREAKAGE OR WOUNDING OF MAIN STEM, DAMAGE TO APICAL LEADERS OR DAMAGE TO SIGNIFICANT SECOND ORDER BRANCHES SHALL BE DEEMED TO CONSTITUTE FAILURE.

THE COST OF PLANTS THAT ARE DAMAGED OR KILLED BY ENVIRONMENTAL FACTORS OUTSIDE THE CONTRACTORS CONTROL, SUCH AS SEVERE STORMS, HIGH WINDS, HAIL, FLOODING, VEHICULAR ACCIDENT, OR ARE STOLEN OR MALICIOUSLY DAMAGED SHALL BE BORN BY CONTRACTOR IF PRIOR TO PRACTICAL COMPLETION. THE CONTRACTOR IS ADVISED TO TAKE OUT ALL NECESSARY CONSTRUCTION INSURANCE TO COVER ALL THE COSTS ASSOCIATED WITH RE-SUPPLY, DELIVERY AND REPLANTING PRIOR TO THIS TIME. THE COSTS OF REPLACING DAMAGED, STOLEN OR MALICIOUSLY DAMAGED PLANTS SHALL BE COVERED BY THE PRINCIPAL AFTER PRACTICAL COMPLETION HAS BEEN GAINED.

7. HOLDINSPECTION POINTS

THE CONTRACTOR SHALL PROVIDE 48 HOURS NOTICE PRIOR TO A HOLDINSPECTION POINT. REFER TO HOLDINSPECTION POINT SCHEDULE.

These are the plans referred to in
Subdivision Works Certificate Application No.:

17.2022.822.1

and determined as APPROVED on: 3 August 2026
PORT MACQUARIE-HASTINGS COUNCIL

THIS DRAWING INCLUDES INFORMATION IN COLOUR. IF YOU HAVE A BLACK AND WHITE COPY YOU DON'T HAVE ALL THE INFORMATION. THIS NOTE IS COLOURED RED.

KING + CAMPBELL