PROPOSED DEVELOPMENT - STAGE 1 (11 LOTS)

420 SOUTH PINE ROAD - EVERTON PARK

FOR MIRVAC QUEENSLAND PTY LTD

GENERAL NOTES

- ALL DIMENSIONS GIVEN ON THESE DRAWINGS
 ARE IN METRES LINI ESS NOTED OTHERWISE
- ALL NEW WORK AND MATERIALS SHALL COMPLY WITH THE PROJECT DRAWING SPECIFICATION AND CURRENT RELEVANT COUNCIL STANDARDS AND SPECIFICATIONS.
- ALL WORK SHALL BE JOINED NEATLY TO EXISTING CONSTRUCTION.
- 4. THE CONTRACTOR IS TO LOCATE, IDENTIFY AND ESTABLISH THE CONNECTIVITY OF ALL EXISTING SERVICES WITHIN THE LIMITS OF PROPOSED WORKS AND CONFIRM THIS INFORMATION WITH THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK
- 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL MEASURING DEVICES, SAFETY EQUIPMENT AND MACHINERY REQUIRED TO CARRY OUT INSPECTIONS/MEETINGS AS SPECIFIED OR REQUESTED BY THE ENGINEER.
- 5. PROOF ROLLING NOMINATED SHALL BE CARRIED OUT USING A SINGLE AXLE HIGHWAY TRUCK WITH A REAR AXLE LOAD NOT LESS THAN 10 TONNES AND TYRES INFLATED TO 550kPa OR APPROVED EQUIVALENT. EQUIPMENT LABOUR AND LOADING REQUIRED FOR PROOF ROLLING IS TO BE PROVIDED BY THE CONTRACTOR.
- THESE NOTES SHALL APPLY TO ALL PORTIONS OF WORK.
- THE DRAWINGS ARE TO BE READ IN
 CONJUNCTION WITH THE SPECIFICATIONS. ANY
 POINT OF CONFLICT WILL BE RESOLVED BY THE
 SUPERINTENDENT

NOISE

1. ALL PLANT AND EQUIPMENT SHALL BE CONTROLLED TO MINIMISE NOISE EMISSION IN ACCORDANCE WITH AS2436 (GUIDE TO NOISE CONTROL ON CONSTRUCTION, MAINTENANCE AND DEMOLITION). THE SITE WORKING HOURS SHOULD BE IN ACCORDANCE WITH LOCAL AUTHORITY REQUIREMENTS. WHERE NOT SPECIFIED THE HOURS SHALL BE:

MONDAY - SATURDAY 6:30am to 6:30pm SUNDAY OR PUBLIC HOLIDAY NO WORK PERMITTED

PRE-CONSTRUCTION & APPROVALS

- NO LOCATING/ POTHOLING OF EXISTING SERVICES HAS BEEN CARRIED OUT. THE CONTRACTOR IS TO DETERMINE THE LOCATION AND DEPTH OF ALL EXISTING SERVICES WHICH AFFECT THE WORKS AND REPORT ANY POTENTIAL CLASHES TO THE SUPERINTENDENT PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION WORKS.
- 2. THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING WITH THE APPROPRIATE AUTHORITY FOR LOCATING EXISTING SERVICES AND FOR ANY MODIFICATIONS TO EXISTING SERVICES REQUIRED AS A RESULT OF THE WORKS
- THE CONTRACTOR IS RESPONSIBLE TO PROTECT ALL EXISTING SERVICES FROM DAMAGE.
- ANY WORKS DAMAGED AS A RESULT OF CONSTRUCTION ARE TO BE REINSTATED TO RELEVANT AUTHORITY'S REQUIREMENTS AT THE CONTRACTORS COST.
- FINISHED SURFACE LEVELS ARE TO BE GRADED UNIFORMLY BETWEEN LEVELS INDICATED ON THE DRAWINGS.

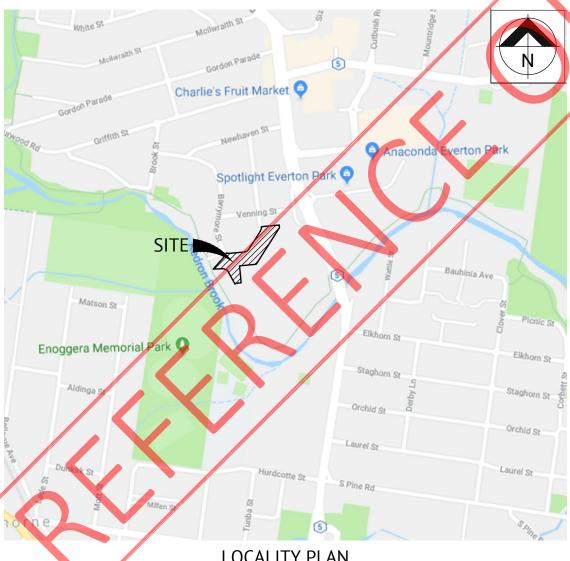
WORKPLACE HEALTH AND SAFETY

- THE CONTRACTOR SHALL BE THE PRINCIPAL CONTRACTOR AS DESIGNATED BY THE WORK HEALTH AND SAFETY ACT (2011).
 THE CONTRACTOR SHALL PREPARE AND
- THE CONTRACTOR SHALL PREPARE AND IMPLEMENT A WORKPLACE HEALTH AND SAFETY PLAN AS REQUIRED BY THE WORK HEALTH AND SAFETY ACT (2011).

SETOUT NOTES

- 1. THE LEVEL DATUM FOR WORKS IS A.H.D
- (AUSTRALIAN HEIGHT DATUM).
 2. SETOUT SHALL BE MADE BY DIGITAL
- ENGINEERING DATA AND CONFIRMED ONSITE PRIOR TO CONSTRUCTION BY A SURVEYOR.

FOR CONSTRUC





Premise

C003 STAGING PLAN C100 ROADWORKS AND DRAINAGE LAYOUT PLAN C101 ASHMORE STREET GENERAL ARRANGEMENT PLAN C200 BULK EARTHWORKS LAYOUT PLAN - PHASE A C201 BULK EARTHWORKS AND FINISHED SURFACE SECTIONS - PHASE A C202 BULK EARTHWORKS LAYOUT PLAN - PHASE B - SHEET 1 C203 BULK EARTHWORKS LAYOUT PLAN - PHASE B - SHEET 2 C204 BULK EARTHWORKS AND FINISHED SURFACE SECTIONS - PHASE B C205 BULK FARTHWORKS LAYOUT PLAN - PHASE C C206 BULK FARTHWORKS AND FINISHED SURFACE SECTIONS - PHASE C C210 BULK FARTHWORKS NOTES AND DETAILS - SHEET 1 C211 BULK FARTHWORKS NOTES AND DETAILS - SHEET 2 C212 TMR FARTHWORKS CROSS SECTIONS - PHASE A - SHEET 1 C213 TMR EARTHWORKS CROSS SECTIONS - PHASE A - SHEET 2 C214 TMR EARTHWORKS CROSS SECTIONS - PHASE A - SHEET 3 C220 RETAINING WALL SETOUT FOR LOT 1 LAYOUT PLAN C300 ROADWORKS NOTES AND DETAILS C310 ROAD LONGITUDINAL SECTIONS C311 ASHMORE STREET CROSS SECTIONS C312 ROAD 1 AND DRIVEWAY 1 LONG AND CROSS SECTIONS C320 INTERSECTION DETAILS PLAN C330 PAVEMENT MARKINGS AND SIGNAGE LAYOUT EXTERNAL PAVEMENT MARKINGS AND SIGNAGE LAYOUT - SHEET 1 C331 C332 EXTERNAL PAVEMENT MARKINGS AND SIGNAGE LAYOUT - SHEET 2 C333 EXTERNAL PAVEMENT MARKINGS AND SIGNAGE LAYOUT - SHEET 3 C400 STORMWATER DRAINAGE CATCHMENT PLAN C410 STORMWATER DRAINAGE LONG SECTIONS - SHEET 1 C411 STORMWATER DRAINAGE LONG SECTIONS - SHEET 2 C420 STORMWATER DRAINAGE NOTES AND DETAILS STORMWATER DRAINAGE STRUCTURE DETAILS C430 STORMWATER CALCULATIONS 10% AEP STORM - SHEET 1 C440 STORMWATER CALCULATIONS 10% AEP STORM - SHEET 2 C441 C442 STORMWATER CALCULATIONS 1% AFP STORM - SHEET 1 C443 STORMWATER CALCULATIONS 1% AFP STORM - SHEET 2 C700 FROSION AND SEDIMENT CONTROL - CLEAR AND GRUB PHASE C710 FROSION AND SEDIMENT CONTROL - BUILK FARTHWORKS PHASE C720 FROSION AND SEDIMENT CONTROL - STABILISATION PHASE C730 FROSION SEDIMENT CONTROL NOTES AND DETAILS - SHEET 1 OF 5 C731 FROSION SEDIMENT CONTROL NOTES AND DETAILS - SHEET 2 OF 5 C732 FROSION SEDIMENT CONTROL NOTES AND DETAILS - SHEET 3 OF 5 C733 FROSION SEDIMENT CONTROL NOTES AND DETAILS - SHEET 4 OF 5 C734 EROSION SEDIMENT CONTROL NOTES AND DETAILS - SHEET 5 OF 5

EROSION AND SEDIMENT CONTROL - EROSION RISK ASSESSMENT

TRAFFIC FUNCTIONAL

SHEET LIST TABLE

SHEET TITLE

COVER SHEET LOCALITY PLAN & DRAWING SCHEDULE

SAFETY IN DESIGN SHEET

SHEET NO.

C002

C740

C900

SURVEY ORIGIN

TBM - PM106537 R.L - 29.906m A.H.D

SITE AREA

REAL PROPERTY DESCRIPTION

LOTS 82, 83, 84, 85, 86, 87, 88, 89, 90, 91 ON RP72156 AND LOT 100 on SP 155725

INDEMNITY - EXISTING SERVICES

NOT WITHSTANDING THAT EXISTING SERVICES MAY OR MAY NOT BE SHOWN ON THESE DRAWINGS, NO RESPONSIBILITY IS TAKEN BY THE ENGINEER OR THE PRINCIPAL FOR THIS INFORMATION WHICH HAS BEEN SUPPLIED BY OTHERS. THE DETAILS ARE PROVIDED FOR INFORMATION ONLY. THE CONTRACTOR SHALL ASCERTAIN THE POSITION OF ALL UNDERGROUND SERVICES PRIOR TO EXCAVATION AND SHALL BE RESPONSIBLE FOR THE COST OF REPAIRS TO DAMAGES CALISED AS A RESULT OF THE WORKS

	ENGINEERING CERTIFICATION	DATE	JOB CODE	SHEET NUMBER	REVISION
TION			17BNE-0071	C001	D
TION	PATRICK BRADY	RPEQ 7112			

DESIGN HAZARD SCHEDULE

ITEM	DESIGN HAZARD	POTENTIAL HAZARD	RISK	ELIMINATION / MINIMISATION OF HAZARD / RISK	RESIDUAL RISK
D1	URBAN LAYOUT HAZARD	THE URBAN LAYOUT IS DESIGNED AROUND A PARTICULAR HAZARD: FLOODING OF KEDRON BROOK	HIGH	THE HAZARD HAS BEEN REDUCED/ELIMINATED BY : PROVIDING LOT DESIGN HIGHER THAN Q100 FLOOD LEVEL IN ACCORDANCE WITH BCC FLOOD PLANNING POLICIES AND STANDARDS	LOW
D2	EMBANKMENT AND SLOPE STABILITY HAZARD	ALLOTMENTS HAVE BEEN BENCHED FOR HOUSE PADS WHICH HAVE CREATED STEEP EMBANKMENTS WHICH WILL HAVE A LONG TERM SLOPE STABILITY ISSUE AND THE EMBANKMENTS ARE GREATER THAN 1M HIGH.	HIGH	A RETAINING WALL IS TO BE CONSTRUCTED ALONG THE BOUNDARY TO ELIMINATE THE UNSTABLE SLOPE HAZARD AND THE CONTRACTOR IS TO BE ADVISED TO MITIGATE THE HEIGHT HAZARD DURING CONSTRUCTION.	MODERATE
D3	EXISTING UNDERGROUND / OVERHEAD SERVICES HAZARD	EXISTING UNDERGROUND AND/OR OVERHEAD SERVICES HAZARD EXIST ON SITE AND NEEDS TO BE REMOVED AND RELOCATED.	HIGH	THE DESIGN OF THE STRUCTURE HAS INCORPORATED THE RELOCATION OF THESE EXISTING SERVICES AND THE CONTRACTOR IS TO BE MADE AWARE OF THESE EXISTING SERVICES AND TAKE ALL ACTIONS NECESSARY TO MITIGATE THIS HAZARD DURING CONSTRUCTION.	MODERATE
D4	DEEP EXCAVATION HAZARD	DEEP EXCAVATION IS REQUIRED TO INSTALL SEWER TO SERVICE STRUCTURE.	HIGH	THE DEEP EXCAVATION HAZARD CANNOT BE AVOIDED AND THE CONTRACTOR WILL NEED TO TAKE ALL ACTIONS NECESSARY TO ADDRESS THIS HAZARD DURING CONSTRUCTION.	MODERATE
D5	EXISTING STRUCTURE HAZARD	AN EXISTING STRUCTURE IS LOCATED IN CLOSE PROXIMITY TO THE NEW STRUCTURE .	MODERATE	THE DESIGN OF THE NEW STRUCTURE HAS ENSURED THE EXISTING STRUCTURE HAZARD IS NOT COMPROMISED BY - MAINTAINING SUFFICIENT DISTANCE - RELOCATING EXISTING SEWER MAINS TO NEW ALIGNMENT IN LOT 32 VERGE	LOW
D6	EXISTING WETLAND	THE TOP OF BANK OF EXISTING WETLAND HAS BEEN LOCATED BY SURVEY AND THERE IS NO ACCESS OR CLEARING AREA ALLOWED WITHIN THIS AREA.	MODERATE	THE SURVEYED TOP OF BANK IS INDICATED ON THE DRAWINGS AND THE STRUCTURE HAS BEEN DESIGNED TO AVOID THESE AREAS UNLESS ABSOLUTELY NECESSARY FOR PUBLIC INFRASTRUCTURE. THE CONTRACTOR WILL NEED TO TAKE ALL NECESSARY MEASURES TO ENSURE NO CLEARING OR MACHINERY ENTERS BEYOND THE EXISTING WETLAND AREA EXTENT.	Low

CONSTRUCTION HAZARD SCHEDULE

ITEM	POTENTIAL	POSSIBLE PREVENTATIVE ACTION
IILI	HAZARD	TOSSIBLE I REVEATATIVE ACTION
C1	DEEP EXCAVATION HAZARD	ALL STEPS MUST BE TAKEN TO OBTAIN CURRENT UNDERGROUND SERVICES INFORMATION BEFORE EXCAVATION WORKS COMMENCE. EXCAVATION WORK MUST BE UNDERTAKEN BY APPROPRIATELY EXPERIENCED AND QUALIFIED PERSONNEL. EXCAVATIONS SHALL BE ADEQUATELY SHORED AND APPROPRIATE BARRICADES AND SIGNAGE ERECTED, IF REQUIRED.
C2	OVERHEAD POWER HAZARD	WARNING SIGNS AND MARKERS SHALL BE ERECTED ADVISING OF THE PRESENCE OF LIVE OVERHEAD CABLES. A REPRESENTATIVE OF THE SUPPLY AUTHORITY SHALL REMAIN ON SITE DURING EARTHWORKS AND ANY OTHER HIGH RISK WORKS, IF REQUIRED.
C3	UNDERGROUND ELECTRICAL, TELECOMMUNICATION, GAS AND WATER MAIN HAZARD	WARNING SIGNS AND MARKERS SHALL BE ERECTED ADVISING OF THE PRESENCE OF THE EXISTING SERVICE. THE SERVICE SHALL BE IDENTIFIED AND MARKED BY THE SUPPLY AUTHORITY PRIOR TO THE COMMENCEMENT OF EXCAVATION. A REPRESENTATIVE OF THE SUPPLY AUTHORITY SHALL REMAIN ON SITE DURING THE EXCAVATION WORK, IF REQUIRED.
C4	PEDESTRIAN ACCESS HAZARD	WORK WITHIN OR ADJACENT TO AREAS WHICH THE PUBLIC REQUIRES PEDESTRIAN ACCESS MUST HAVE APPROPRIATE BARRICADES AND SIGNAGE ERECTED AT ALL TIMES.
C5	POTENTIAL VEHICLE HAZARD	SITE PERSONNEL SHALL BE ADVISED OF THE POTENTIAL HAZARDS AND THE APPROPRIATE PROCEDURES FOR WORKING ADJACENT TO OPERATING PUBLIC ROADS. APPROPRIATE SAFETY CLOTHING SHALL BE WORN AND THE REQUIRED SIGNAGE SHALL BE ERECTED. THE WORKS SHALL BE UNDERTAKEN IN A MANNER WHICH DOES NOT COMPROMISE THE SAFETY OF THE VEHICLE OCCUPANTS OR THE SITE PERSONNEL.
C6	DEMOLITION AND CLEARING HAZARD	SUITABLE QUALIFIED AND EXPERIENCED PERSONNEL SHALL BE RESPONSIBLE FOR THE DEMOLITION AND CLEARING WORKS FOR THE PROJECT AT ALL TIMES. THE CONTRACTORS WORK METHOD STATEMENT SHALL ALSO GIVE CONSIDERATION TO FALLING DEBRIS, COLLAPSE AND DANGEROUS AIRBORNE AGENTS.
C7	TRAFFIC MANAGEMENT HAZARD	SUITABLE QUALIFIED AND EXPERIENCED PERSONNEL SHALL BE RESPONSIBLE FOR THE SAFE AND ORDERLY PASSAGE OF VEHICULAR AND PEDESTRIAN TRAFFIC THROUGH THE PROJECT AT ALL TIMES. THE CONTRACTOR SHALL DEVELOP A TRAFFIC MANAGEMENT PLAN (TMP) FOR THE PROJECT TO ESTABLISH APPROPRIATE CONTROLS IN ACCORDANCE WITH THE MANUAL FOR UNIFORM TRAFFIC CONTROL.

DESIGN HAZARD NOTES:

- 1. PREMISE AUSTRALIA PTY LTD (PREMISE), HAVING BEEN COMMISSIONED TO CARRY OUT DETAILED DESIGN AND DOCUMENTATION OF THESE WORKS, CONFIRM THAT THE PREMISE DRAWING SET HAS BEEN INTERNALLY REVIEWED FOR DESIGN SAFETY IN ACCORDANCE WITH SECTION 22 OF THE WORK HEALTH AND SAFETY ACT 2011 QLD.
- HEALTH AND SAFETY ACT 2011 QLD.

 2. THIS REPORT SUMMARISES AN INTERNAL REVIEW OF THE PREMISE DETAILED DESIGN DRAWINGS FOR DESIGN SAFETY.

 3. THIS REPORT IN NO WAY RELIEVES THE PRINCIPAL, CONTRACTOR OR ANY OTHER PARTY OF THEIR OWN OBLIGATIONS AND RESPONSIBILITIES UNDER THE WORK HEALTH AND SAFETY ACT 2011 QLD, INCLUDING (BUT NOT LIMITED TO) CONSULTATION WITH THE DESIGNER UNDER SECTION 294 OF THE ACT, THE PREPARATION OF SATISFACTORY SAFE WORK METHOD STATEMENTS AND DUTIES OF CARE.

 4. IT IS A REQUIREMENT UNDER SECTION 296 OF THE WORK HEALTH AND SAFETY ACT 2011 QLD, THAT A COPY OF THIS REPORT BE PROVIDED TO THE CONTRACTOR BY THE ENTITY COMMISSIONING THE WORK SHOWN OF THE PREMISE DRAWINGS.

 5. AS PER THE DEPARTMENT OF JUSTICE AND THE ATTORNEY-GENERAL-WORKPLACE HEALTH AND SAFETY QUEENSLAND, A WRITTEN REPORT IS NOT REQUIRED FOR DESIGNS THAT HAVE TYPICAL FEATURES.

CONSTRUCTION HAZARD NOTES:

- 1. UNDER THE QUEENSLAND WORK HEALTH AND SAFETY ACT 2011, THE WORK HEALTH AND SAFETY REGULATION 2011 AND OTHER LEGISLATION AND GUIDELINES, THE PRINCIPAL CONTRACTOR HAS SPECIFIC OBLIGATIONS IN RELATION TO THE SAFE OPERATION OF THE SITE AND OF THE WORKS. TO ASSIST THE PRINCIPAL CONTRACTOR IN COMPLYING WITH THESE OBLIGATIONS THE PROJECT DESIGNERS HAVE IDENTIFIED BY DRAWING NOTES, AREAS WHERE POTENTIAL HAZARDS MAY ARISE. THESE NOTES OR ADVICE, SHALL NOT NECESSARILY BE CONSIDERED COMPLETE AND ARE BASED UPON THE DESIGNERS' UNDERSTANDING OF THE SAFETY RISKS ASSOCIATED WITH THE WORKS.

 THESE NOTES OR ADVICE SHALL NOT RELIEVE THE PRINCIPAL CONTRACTOR OF ANY OBLIGATION UNDER THE RELEVANT LEGISLATION OR GUIDELINE. THE PRINCIPAL CONTRACTOR SHALL REMAIN RESPONSIBLE FOR THE PREPARATION OF AN APPROPRIATE WORK HEALTH SAFETY MANAGEMENT PLAN AND SAFE WORK METHOD STATEMENTS FOR THE SITE.

 2. PURSUANT TO THE WORK HEALTH AND SAFETY ACT 2011 WE HEREBY ADVISE THAT OUR DESIGN SAFETY REVIEW HAS IDENTIFIED UNUSUAL OR ATVOICED DESIGN DESIGN FAILURG THE CONSTRUCTION PLASE AND THESE ARE LISTED IN
- ATYPICAL DESIGN FEATURES THAT MAY PRESENT ADDITIONAL HAZARDS OR RISKS DURING THE CONSTRUCTION PHASE AND THESE ARE LISTED IN THE CONSTRUCTION HAZARD SCHEDULE.

CONSEQUENCE TABLE

LEVEL	CONSEQUENCE	COST/TIME
5 - CATASTROPHIC	FATALITY OR MULTIPLE PERSONS ONSITE WITH LIFE THREATENING HEALTH EFFECT OR INABILITY TO CONTINUE	HUGE FINANCIAL OR TIME LOSS
4 - MAJOR	EXTENSIVE INJURIES, OR ONSET OF SEVERE OR LIFE THREATENING HEALTH EFFECT TO SINGLE PERSON ONSITE. MULTIPLE PERSONS WITH ONSET OF IRREVERSIBLE HEALTH EFFECTS. PREMANENT INJURT TO PERSON INSITE.	MAJOR FINANCIAL OR TIME LOSS
3 - MODERATE	MEDICAL TREATMENT REQUIRED. IRREVERSIBLE HEALTH EFFECT TO A SINGLE PERSON. MULTIPLE PERSONS ONSITE WITH REVERSIBLE HEALTH EFFECTS.	HIGH FINANCIAL OR TIME LOSS
2 - MINOR	FIRST AID, SINGLE OR MULTIPLE INJURIES AMONGST PERSONS ONSITE. SINGLE PERSON ONSITE WITH MODERATE SHORT TERM REVERSIBLE HEALTH EFFECTS.	MEDIUM FINANCIAL OR TIME LOSS
1 - INSIGNIFICANT	NO INJURIES. OVER EXPOSURE TO A SINGLE PERSON ONSITE, BUT NO REPORTED HEALTH EFFECTS.	LOW FINANCIAL OR TIME LOSS

LIKELIHOOD TABLE

LEVEL	DESCRIPTION	QUANTIFICATION GUIDE
A - ALMOST CERTAIN	THE EVENT <u>IS</u> EXPECTED TO OCCUR IN MOST CERTAIN CIRCUMSTANCES	MORE THAN ONCE PER YEAR
B - LIKELY	THE EVENT <u>WILL</u> PROBABLY OCCUR IN MOST CIRCUMSTANCES	AT LEAST ONCE IN 5 YEARS
C - POSSIBLE	THE EVEN T SHOULD OCCUR AT SOME TIME	AT LEAST ONCE IN 10 YEARS
D - UNLIKELY	THE EVENT <u>COULD</u> OCCUR AT SOME TIME	AT LEAST ONCE IN 30 YEARS
E - RARE	THE EVENT MAY OCCUR IN EXCEPTIONAL CIRCUMSTANCES	LESS THAN ONCE IN 30 YEARS

RISK EVALUATION TABLE

RISK LEVEL	ACTION REQUIRED
EXTREME	UNACCEPTABLE RISK. RE-DESIGN REQUIRED. DO NOT PROCEED WITHOUT ADDITIONAL CONTROLS.
HIGH	UNACCEPTABLE RISK, ADDITIONAL CONTROLS NEEDED. CONSIDER FURTHER REVIEW AND CONSIDER RE-DESIGN
MODERATE	RISK MAY BE ACCEPTABLE. MANAGEMENT TO DETERMINE ACTIONS REQUIRED
LOW	ACCEPTABLE. MANAGE RISK THROUGH ROUTINE PROCEDURES AND OTHER ADMINISTRATIVE CONTROLS

RISK ANALYSIS MATRIX

		CONSEQUENCE					
		1 - INSIGNIFICANT	2 - MINOR	3 - MODERATE	4 - MAJOR	5 - CATASTROPHIC	
IKELIHOOD	A - ALMOST CERTAIN	MODERATE	HIGH	EXTREME	EXTREME	EXTREME	
	B - LIKELY	MODERATE	HIGH	HIGH	EXTREME	EXTREME	
	C - POSSIBLE	LOW	MODERATE	HIGH	EXTREME	EXTREME	
	D - UNLIKELY	LOW	LOW	MODERATE	HIGH	EXTREME	
	E - RARE	LOW	LOW	MODERATE	HIGH	HIGH	

APPROVAL ISSUE - NOT FOR CONSTRUCTION					
26/06/19	Α	ORIGINAL ISSUE	NTT	JCS	
DATE	REV	DESCRIPTION	REC	APP	
		REVISIONS			

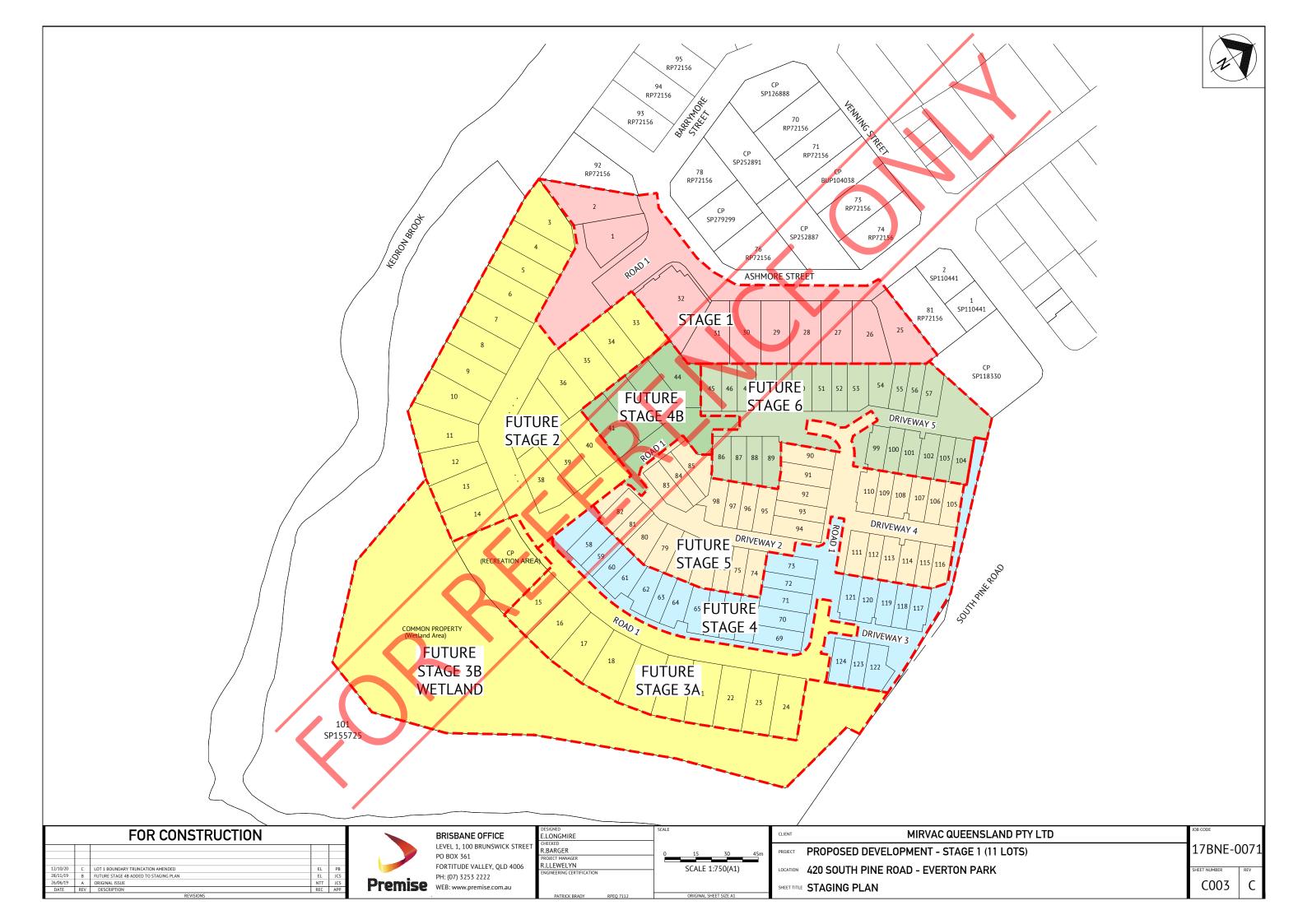


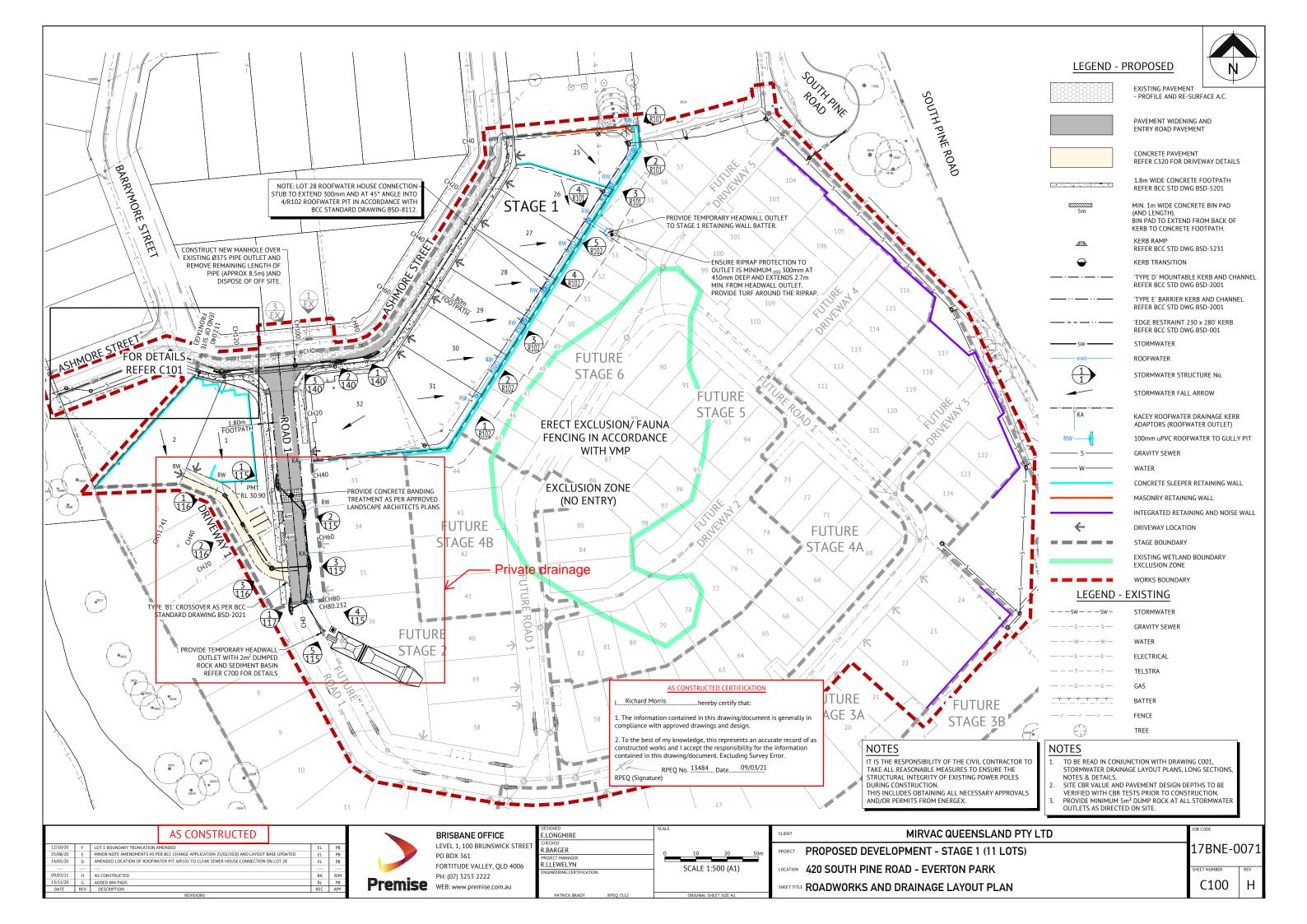
BRISBANE OFFICE LEVEL 1, 100 BRUNSWICK STREET PO BOX 361 FORTITUDE VALLEY, QLD 4006 PH: (07) 3253 2222 Premise WEB: www.premise.com.au

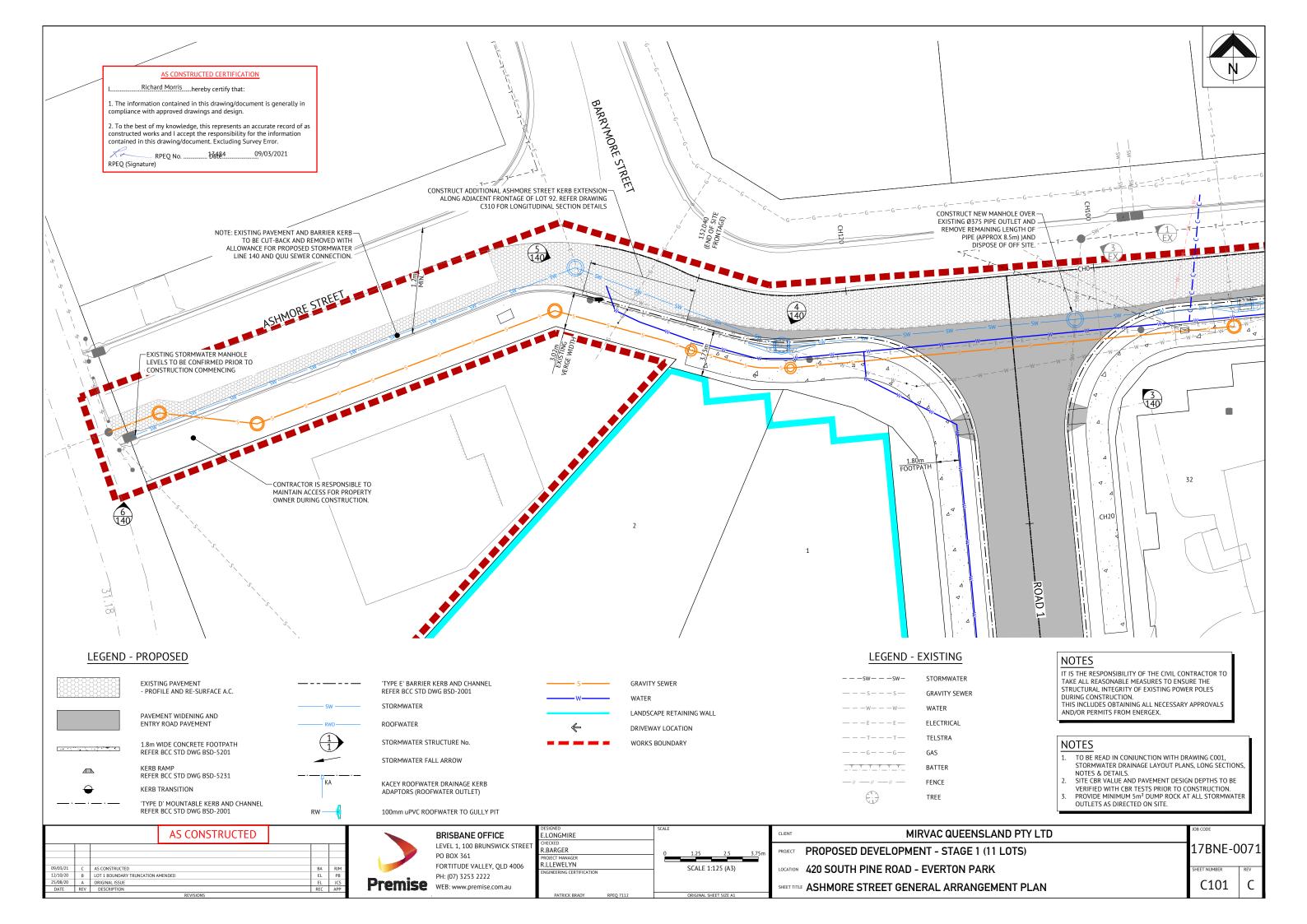
DESIGNED		SCALE
E.LONGMIRE		
CHECKED		
R.BARGER		
PROJECT MANAGER		
T.ZETTL		
ENGINEERING CERTIFICATION		
PATRICK BRADY	RPEQ 7112	ORIGINAL SHEET SIZE A1

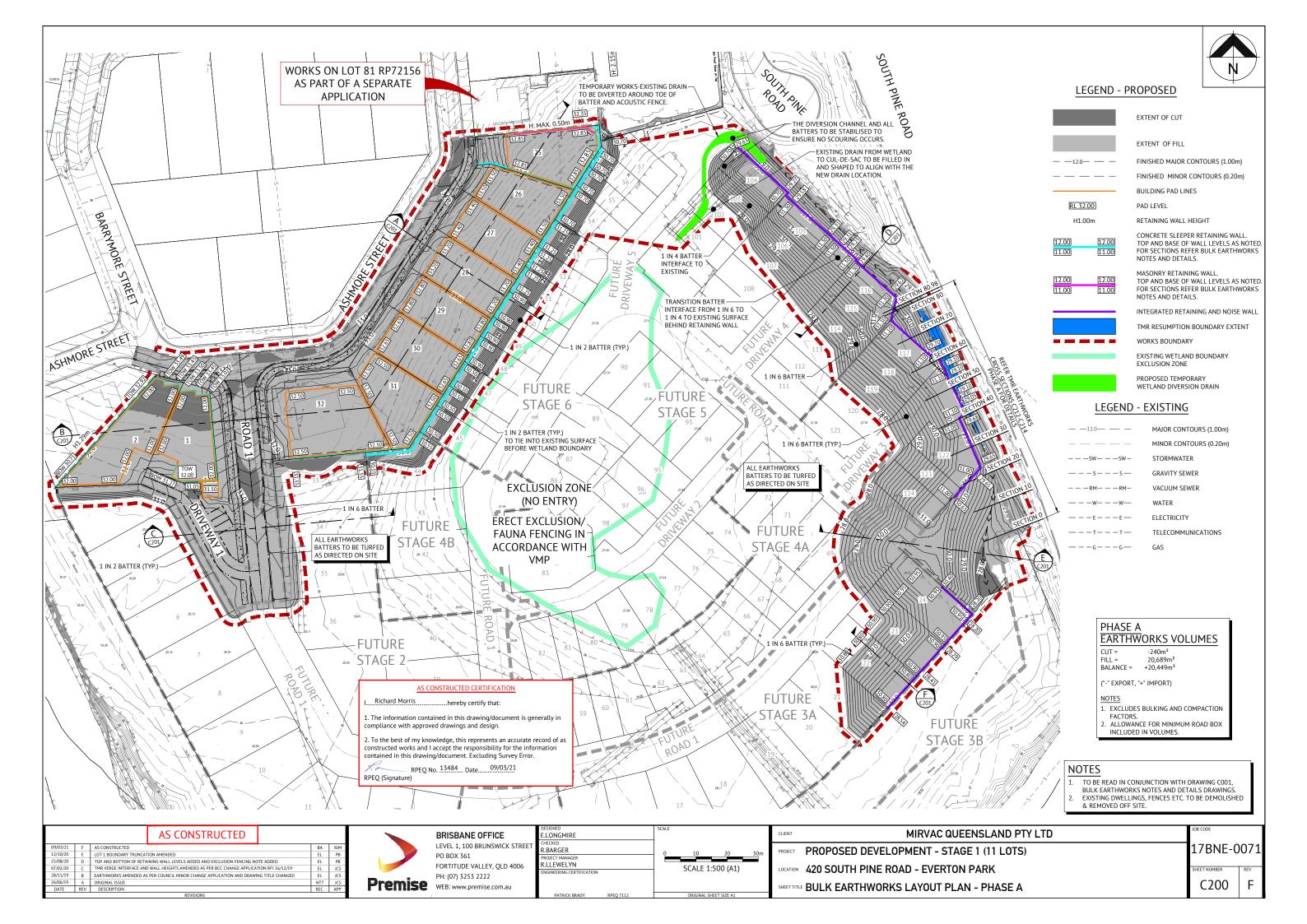
MIRVAC QUEENSLAND PTY LTD PROPOSED DEVELOPMENT - STAGE 1 (11 LOTS) LOCATION 420 SOUTH PINE ROAD - EVERTON PARK SHEET TITLE SAFETY IN DESIGN SHEET

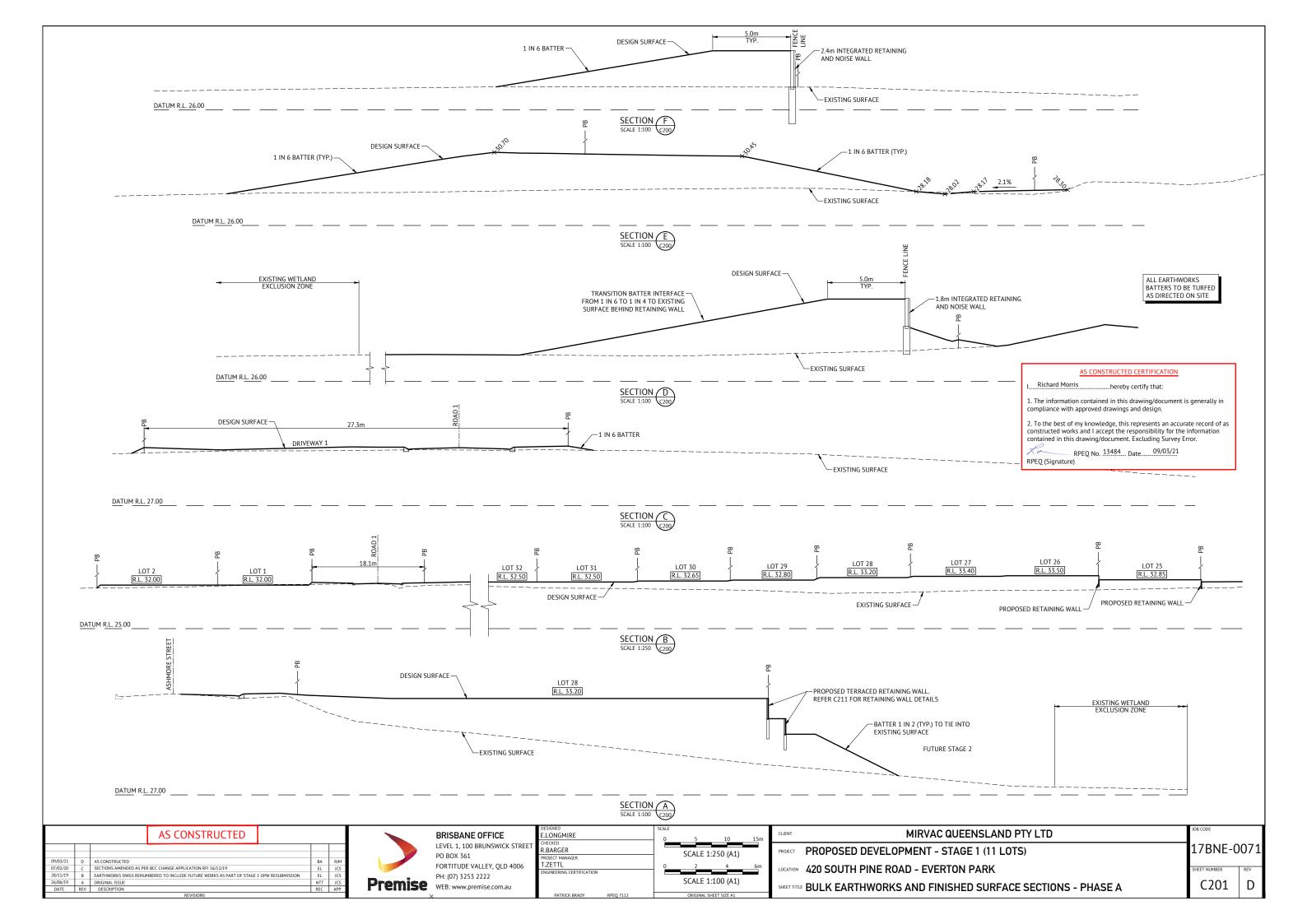
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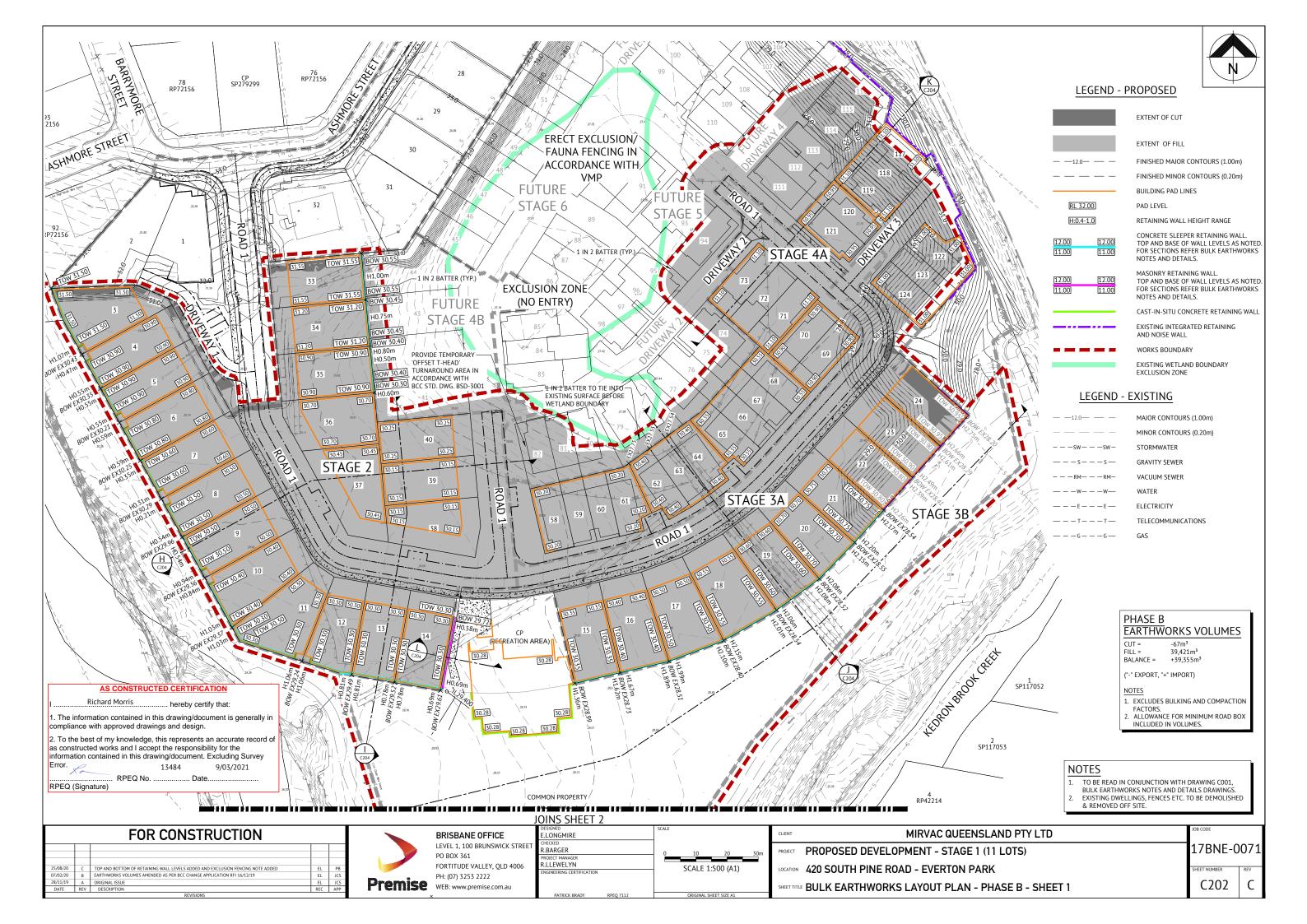


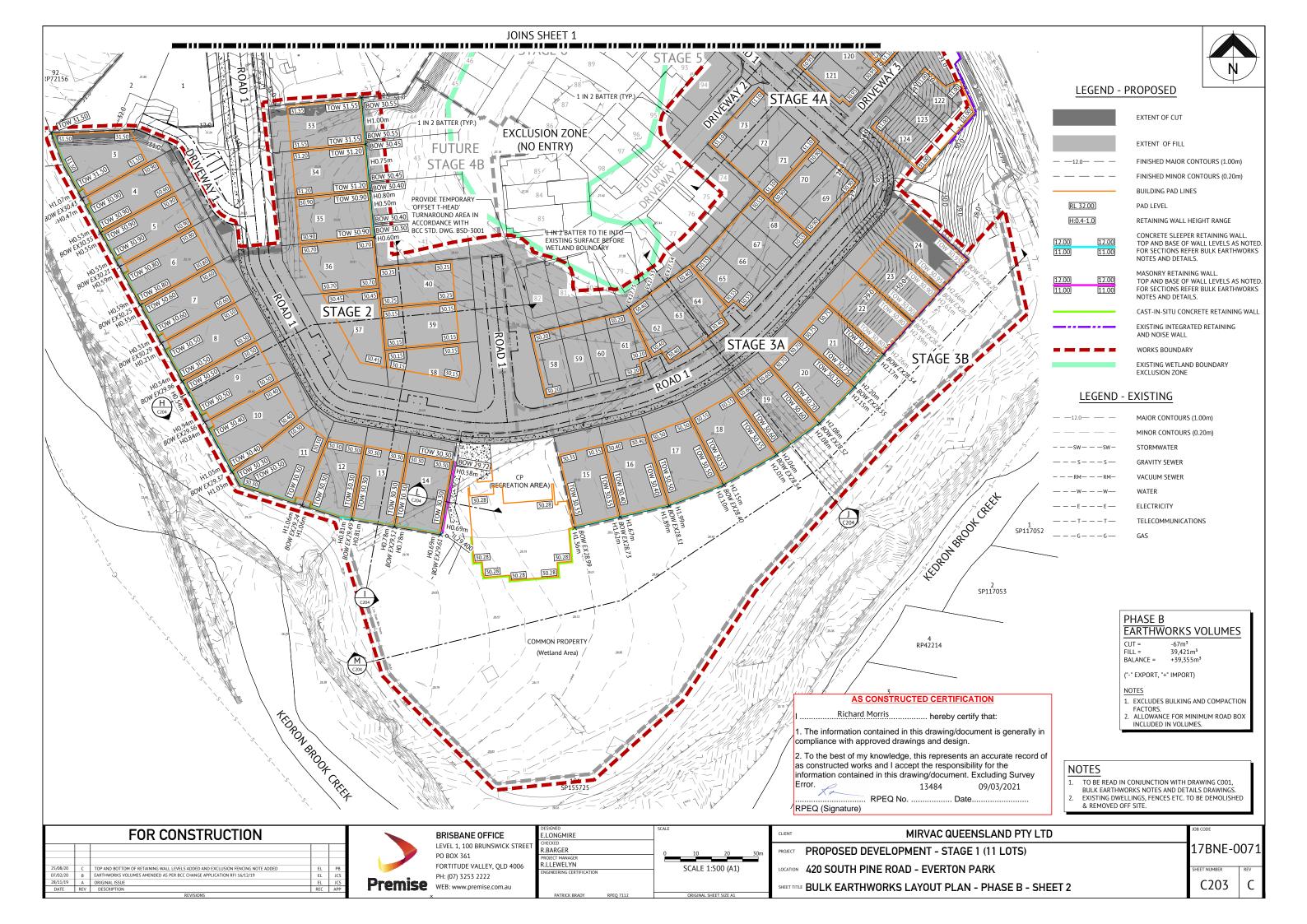












NOTES

- EARTHWORKS DRAWINGS ARE TO BE READ IN CONJUNCTION WITH DRAWING C001, EROSION AND SEDIMENT CONTROL LAYOUT PLANS AND EROSION AND SEDIMENT CONTROL NOTES AND DETAILS.
- ALL EARTHWORKS TO BE CARRIED OUT UNDER 'LEVEL ONE' GEOTECHNICAL CONTROL IN ACCORDANCE WITH LOCAL AUTHORITIES AND AS3798.
- EXCESS CUT TO BE STOCKPILED IN THE LOCATION SHOWN OR
- ALL BATTERS ARE 1 IN 4 UNLESS SHOWN OTHERWISE.

TESTING

THE SUPERINTENDENT MAY ORDER ADDITIONAL TESTS. REFER TO THE LOCAL AUTHORITIES SPECIFICATION FOR STANDARDS OF COMPACTION AND MATERIAL STANDARDS.

EARTHWORKS TESTING

COMPACTION TESTS

COMPACTION TESTS	
LOCATION	AREA PER TEST
FINISHED LEVEL OR ROAD SUBGRAD (IN CUT OR FILL)	ÞΕ
LOWEST TWO LEVELS OF EMBANKMENT (PER LAYER)	REFER TO THE LOCAL AUTHORITY
OTHER LAYERS OF EMBANKMENT (PER LAYER)	SPECIFICATION
PREPARED NATURAL GROUND UNDER EMBANKMENT	

OUALITY TESTS QUALITY TESTS OF IMPORTED MATERIAL ARE REQUIRED AS SET OUT BY LOCAL AUTHORITY.

THE NUMBER AND LOCATION OF PAVEMENT SUBGRADE TESTS SHALL BE AS DETERMINED BY THE SUPERINTENDENT WHO SHALL RECOMMEND CBR VALUES TO BE USED IN ROAD PAVEMENT DESIGN. THE NUMBER AND TYPES OF CBR TESTS SHALL BE DETERMINED BY THE SOIL STESTING CONSULTANT TO BEST REPRESENT THE CONDITION OF THE SUBGRADE EXPECTED IN SERVICE.

DUST

- NO VISIBLE DUST EMISSIONS MUST OCCUR AT THE BOUNDARIES OF THE SITE DURING EARTHWORKS AND CONSTRUCTION ACTIVITIES ON THE SITE
- THE CONTRACTOR TO PROVIDE A WATER TRUCK AS REQUIRED TO ELIMINATE THE DUST PROBLEM CAUSED BY SITE TRAFFIC.

CONDUITS

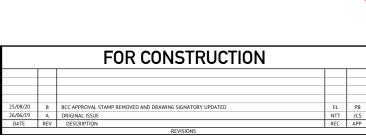
THE CONTRACTOR IS TO CONFIRM THE LOCATION OF SERVICE CONDUITS WITH THE SUPERINTENDENT PRIOR TO LAYING.

FILL MANAGEMENT

- ALL FILL MATERIAL WILL BE PLACED IN ACCORDANCE WITH THE APPROVED SPECIFICATION.
- THE FILL MATERIAL WILL COMPRISE ONLY OF NATURAL EARTH AND ROCK AND SHALL BE FREE OF ALL CONTAMINATES, NOXIOUS, HAZARDOUS, DELETERIOUS AND ORGANIC MATERIAL. ALL SITE PREPARATION WORK SHOULD GENERALLY BE CARRIED
- OUT IN ACCORDANCE WITH AS3798 'GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL
- DEVELOPMENTS'.
 THE SITE SHOULD BE STRIPPED OF ANY TOPSOIL FROM CUT AND FILL AREAS, ROAD ALIGNMENTS AND CARPARKING AREAS, AND STOCKPILED FOR LATER USE.
- PRIOR TO THE PLACEMENT OF ANY STRUCTURAL FILL THE SITE SHOULD BE PROOF ROLLED USING A MINIMUM 10 TONNE (STATIC WEIGHT) PADFOOT ROLLER. ANY LOOSE OR SOFT AREAS SHOULD BE REMOVED AND RECOMPACTED OR REPLACED USING A COMPACTED SELECT FILL.
- DEPRESSIONS FORMED BY THE REMOVAL OR VEGETATION,
 EXISTING STRUCTURES, UNDERGROUND SERVICES ETC, SHOULD HAVE ALL DISTURBED SOIL CLEANED OUT AND BE BACKFILLED WITH COMPACTED SELECT FILL MATERIAL.
- ANY STRUCTURAL CLAY FILL SHOULD BE PLACED IN LOOSE LAYERS NOT GREATER THAN 200mm THICK AT A MOISTURE CONTENT IN THE RANGE -2% TO +3% OF THE STANDARD OPTIMUM MOISTURE CONTENT, AND BE COMPACTED TO A MINIMUM DRY DENSITY RATIO OF 98% UNDER STANDARD COMPACTION AS PER (AS1289 5.1.1/5.2.1). CLAY FILL SHOULD BE COMPACTED USING A MINIMUM 10 TONNE VIBRATING PADFOOT ROLLER. MEASURES SHOULD BE ADOPTED TO ENSURE THAT CLAY FILL MATERIAL IS NOT ALLOWED TO DRY OUT PRIOR TO THE PLACEMENT OF SUCCEEDING LAYERS OF FILL AND FINAL COVERING WITH BUILDING SLABS AND ROAD PAVEMENTS.

- ANY STRUCTURAL, FREE DRAINING SAND FILL SHOULD BE PLACED IN LOOSE LAYERS NOT GREATER THAN 200mm THICK, FLOODED, IF NECESSARY, AND COMPACTED TO A MINIMUM DENSITY INDEX OF 70% AS PER AS1289 5 5 1 LISING A STATIC SMOOTH ROLLER DRUM NOT LESS THAN 10 TONNE IN STATIC
- THE PLACEMENT OF ALL STRUCTURAL FILL TO BE INSPECTED, TESTED AND CERTIFIED BY A GEOTECHNICAL ENGINEER TO A LEVEL 1 REQUIREMENT DURING THE EARTHWORKS OPERATIONS TO ENSURE THAT ALL FILL IS PLACED IN A 'CONTROLLED MANNER', IN ACCORDANCE WITH AS3798 'GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS'.
- THE PLACEMENT OF FILL TO BE EXECUTED SUCH THAT TO BE FREE DRAINING AT ALL TIMES AND NOT TO BE A NUISANCE OR PONDING TO ADJOINING PROPERTY OR ROADS.

 NO DEMOLITION MATERIAL TO BE USED AS FILL MATERIAL.
- WHERE UNSUITABLE MATERIAL IN AREAS OF FILL IS ENCOUNTERED, THIS WILL BE TREATED AS SET OUT IN THE EARTHWORK SPECIFICATION.
- ALL VEHICLES EXITING FROM THE SITE TO BE CLEAN TO PREVENT MATERIAL BEING TRACKED OR DEPOSITED ON THE ADJOINING PUBLIC ROADS, REFER ENVIRONMENTAL MANAGEMENT NOTES ON DRAWING C701.
- ACCESS TRACKS THROUGH THE SITE WILL BE LIMITED TO THOSE DETERMINED BY THE SUPERINTENDENT AND THE CONTRACTOR PRIOR TO ANY WORK COMMENCING.

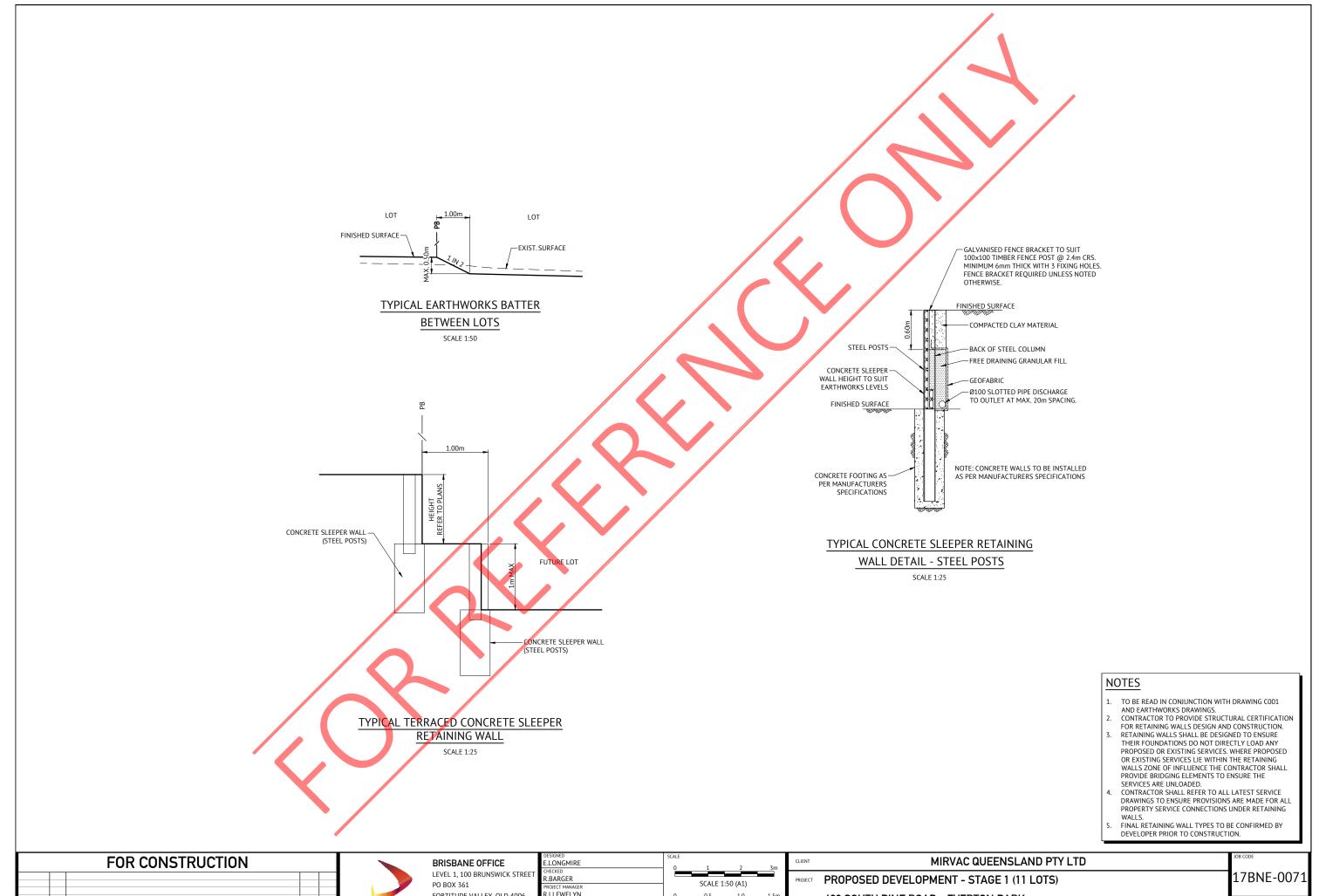




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DESIGNED		SCALE
E.LONGMIRE		
CHECKED		
R.BARGER		
PROJECT MANAGER		
R.LLEWELYN		
ENGINEERING CERTIFICATION	1	
PATRICK BRADY	RPEQ 7112	ORIGINAL SHEET SIZE A1

CLIENT	MIRVAC QUEENSLAND PTY LTD	JOB CODE	
PROJECT	PROPOSED DEVELOPMENT - STAGE 1 (11 LOTS)	17BNE-0	071
LOCATION	420 SOUTH PINE ROAD - EVERTON PARK	SHEET NUMBER	REV
SHEET TIT	□ BULK EARTHWORKS NOTES AND DETAILS - SHEET 1	C210	В



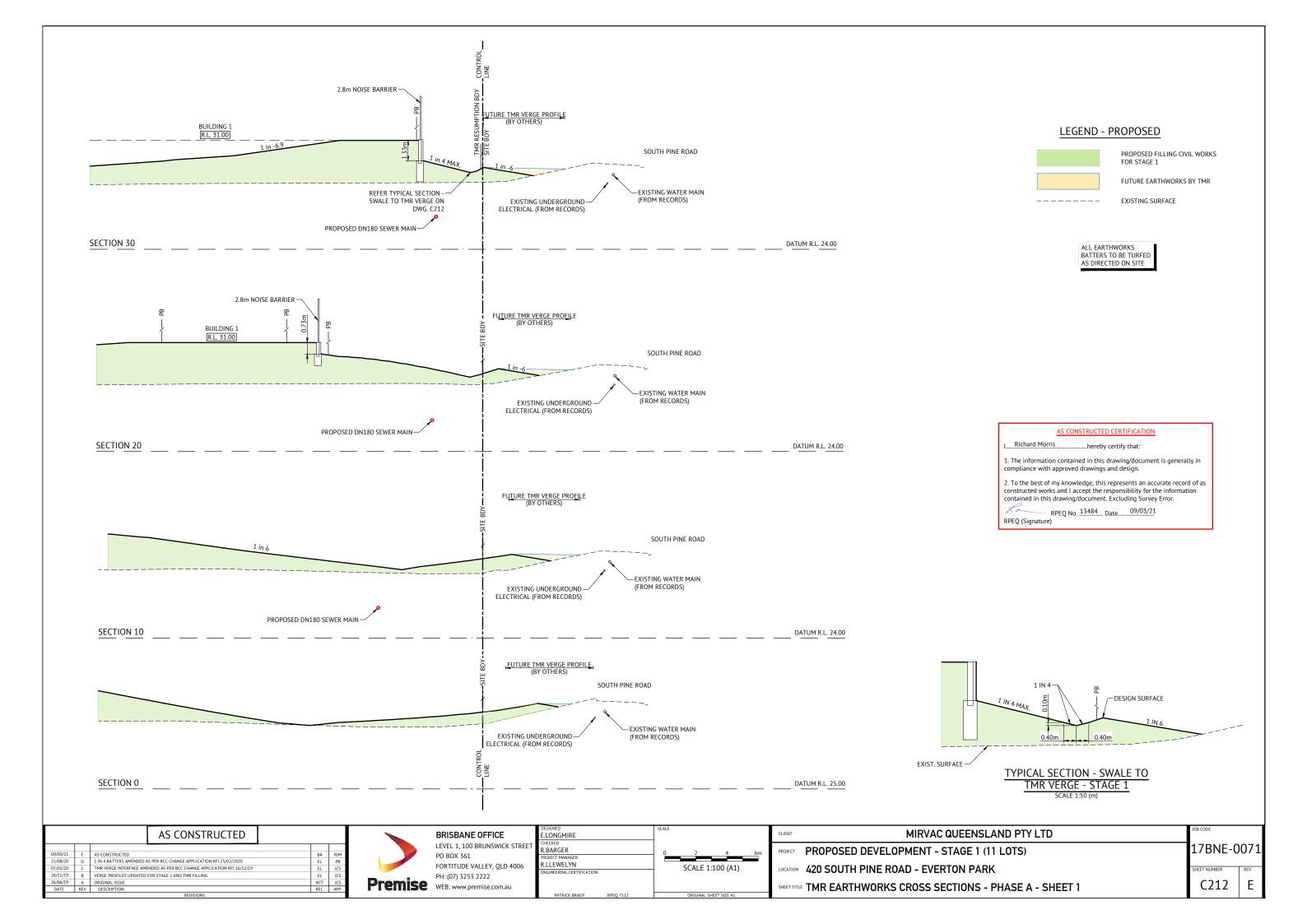
	FOR CONSTRUCTION				
25/08/20	C	BCC APPROVAL STAMP REMOVED AND DRAWING SIGNATORY UPDATED	EL	PB	
28/11/19	В	RETAINING WALL DIMENSION AMENDED	EL	JCS	
26/06/19	Α	ORIGINAL ISSUE	NTT	JCS	
DATE	REV	DESCRIPTION	REC	APP	

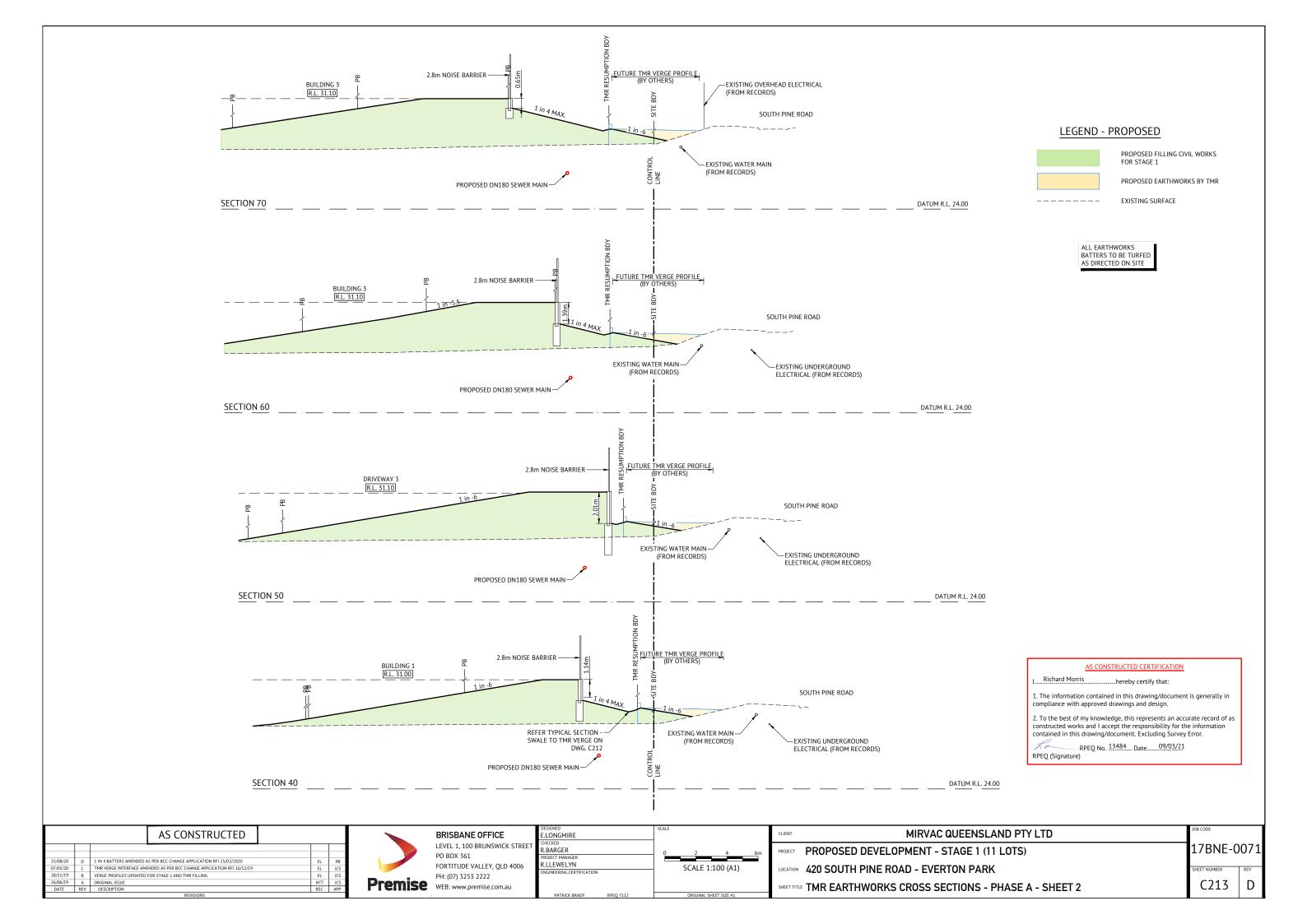


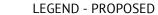
FORTITUDE VALLEY, QLD 4006 PH: (07) 3253 2222 Premise WEB: www.premise.com.au

	DESIGNED		SCALE			
	E.LONGMIRE		_	1	2	3m
т	CHECKED		<u> </u>			3111
. 1	R.BARGER		l '	SCALE 1	EO (A1)	
	PROJECT MANAGER		l	SCALE 1	.50 (AI)	
	R.LLEWELYN		0	0.5	1.0	1.5m
	ENGINEERING CERTIFICATION					
				SCALE 1	:25 (A1)	
	PATRICK BRADY	RPEO 7112		ORIGINAL SH	IEET SIZE A1	

LOCATION 420 SOUTH PINE ROAD - EVERTON PARK SHEET TITLE BULK EARTHWORKS NOTES AND DETAILS - SHEET 2

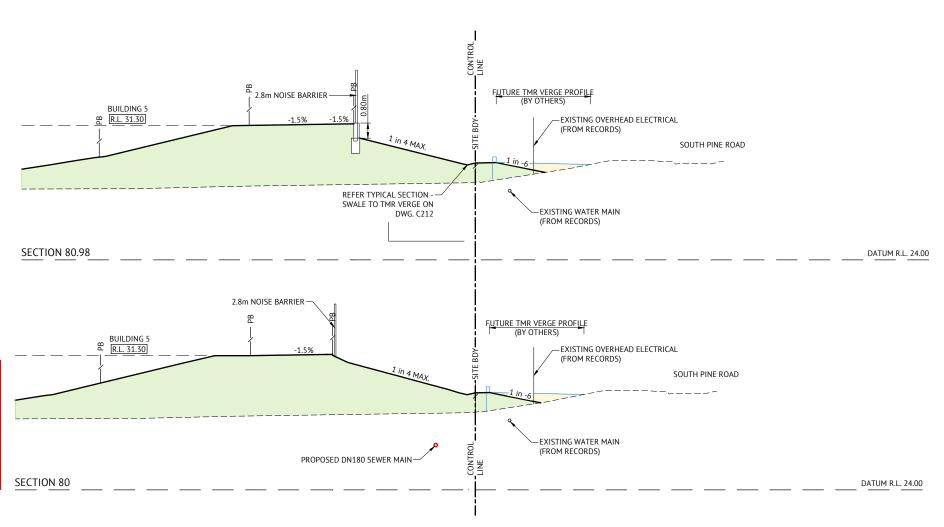






PROPOSED FILLING CIVIL WORKS FOR STAGE 1 PROPOSED EARTHWORKS BY TMR EXISTING SURFACE

ALL EARTHWORKS BATTERS TO BE TURFED AS DIRECTED ON SITE



			AS CONSTRUCTED		
25/08/20	D	D 1 IN 4 BATTERS AMENDED AS PER BCC CHANGE APPLICATION RFI 25/02/2020 EL			PB
07/02/20	С	TMR VERGE INTERFACE AMENDED AS PER BCC CHANGE APPLICATION RFI 16/12/19			JCS
28/11/19	В	VERGE PROFILES UPDATED FOR STAGE 1 AND TMR FILLING			JCS
26/06/19	Α	ORIGINAL ISSUE			JCS
DATE	REV	DESCRIPTION		REC	APP

AS CONSTRUCTED CERTIFICATION

1. The information contained in this drawing/document is generally in compliance with approved drawings and design.

To the best of my knowledge, this represents an accurate record of as constructed works and I accept the responsibility for the information contained in this drawing/document. Excluding Survey Error.

. RPEQ No. <u>13484</u> Date......09/03/21

Richard Morris

RPEQ (Signature)

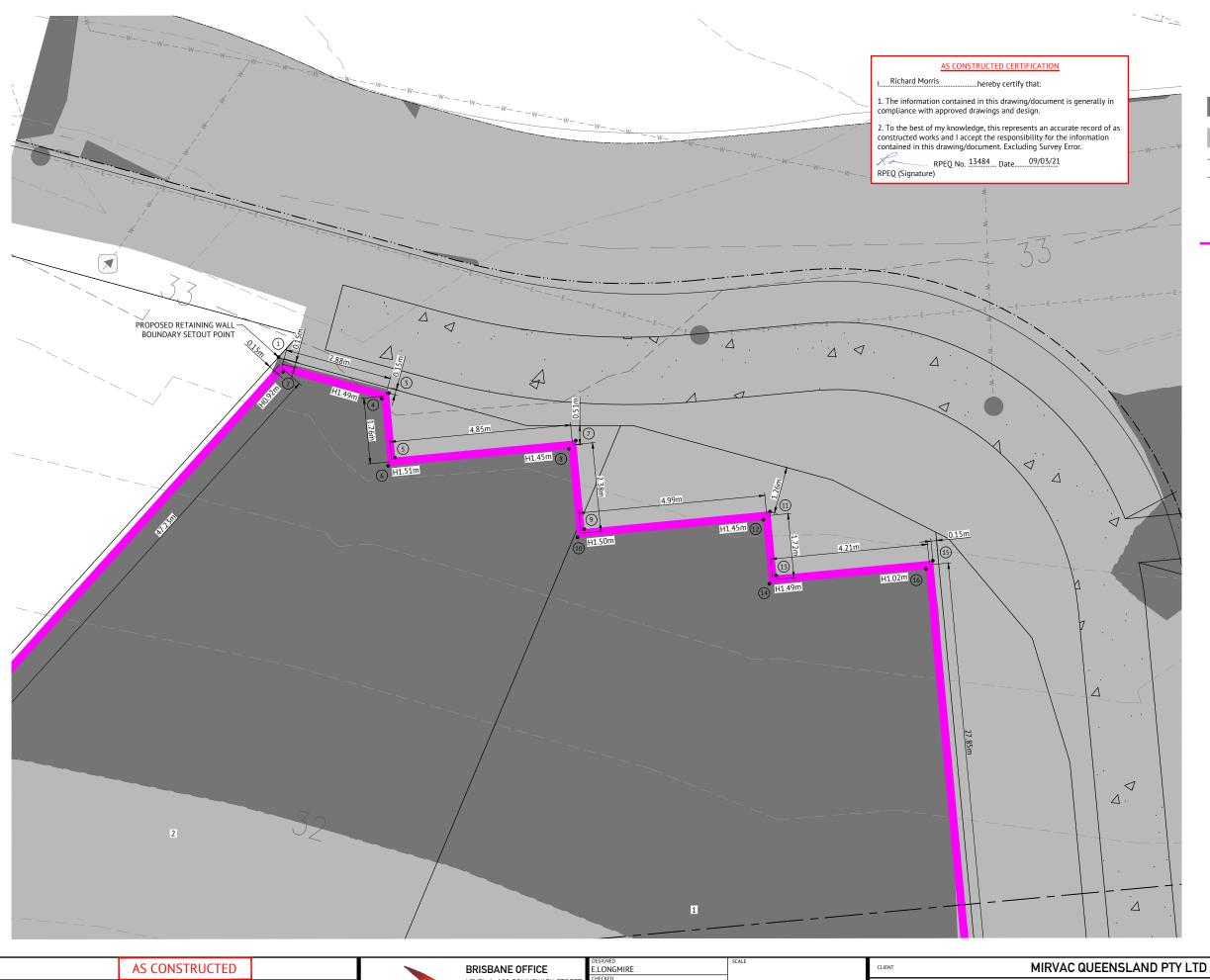


BRISBANE OFFICE LEVEL 1, 100 BRUNSWICK STREET PO BOX 361 FORTITUDE VALLEY, QLD 4006 PH: (07) 3253 2222 Premise WEB: www.premise.com.au

SIGNED _ONGMIRE		SCALE
ECKED BARGER		0 2 4 6m
DIECT MANAGER LLEWELYN		SCALE 1:100 (A1)
GINEERING CERTIFICATION		SCALL 1.100 (A1)
PATRICK BRADY	RPEQ 7112	ORIGINAL SHEET SIZE A1

MIRVAC QUEENSLAND PTY LTD PROPOSED DEVELOPMENT - STAGE 1 (11 LOTS) LOCATION 420 SOUTH PINE ROAD - EVERTON PARK SHEET TITLE TMR EARTHWORKS CROSS SECTIONS - PHASE A - SHEET 3

17BNE-0071 C214



LEGEND - PROPOSED

EXTENT OF FILL FINISHED MAJOR CONTOURS (1.00m)

FINISHED MINOR CONTOURS (0.20m)

PAD LEVEL

EXTENT OF CUT

H1.00m RETAINING WALL HEIGHT

RL 32.00

LANDSCAPE MASONRY RETAINING WALL. FOR SECTIONS REFER BULK EARTHWORKS NOTES AND DETAILS.

LEGEND - EXISTING

MAJOR CONTOURS (1.00m) MINOR CONTOURS (0.20m) GRAVITY SEWER VACUUM SEWER WATER ELECTRICITY TELECOMMUNICATIONS

POINT	EASTING	NORTHING	LEVEL
1	8936.599	7968.881	32.922
2	8936.714	7968.487	32.000
3	8939.548	7967.921	33.485
4	8939.362	7967.764	32.000
5	8939.712	7966.191	33.511
6	8939.532	7965.973	32.000
7	8944.548	7966.649	33.451
8	8944.368	7966.431	32.000
9	8944.772	7964.279	33.496
10	8944.592	7964.061	32.000
11	8949.742	7964.750	33.451
12	8949.562	7964.532	32.000
13	8949.944	7963.041	33.485
14	8949.725	7962.820	32.000
15	8954.094	7963.435	33.020
16	8953.914	7963.217	32.000

NOTES

- TO BE READ IN CONJUNCTION WITH DRAWING CO01, BULK EARTHWORKS NOTES AND DETAILS DRAWINGS. EXISTING DWELLINGS, FENCES ETC. TO BE DEMOLISHED & REMOVED OFF SITE.

			AS CONSTRUCTED		
09/03/21	C	AS CONSTRUCTED		BA	RJM
12/10/20	В	LOT 1 BOUNDARY TRUNCAT	ION AMENDED	EL	PB
	Α	ORIGINAL ISSUE		EL	PB
DATE	REV	DESCRIPTION		REC	APP

LEVEL 1, 100 BRUNSWICK STREET PO BOX 361 FORTITUDE VALLEY, QLD 4006 PH: (07) 3253 2222 Premise WEB: www.premise.com.au

IGNED ONGMIRE		SCALE			
CKED		\dashv			
ARGER		0	1	2	31
JECT MANAGER					
LEWELYN			SCALE 1	·50 (A1)	
INEERING CERTIFICATION	1		JCALL I	.50 (A1)	
PATRICK BRADY	RPEQ 7112		ORIGINAL SI	HEET SIZE A1	

PROPOSED DEVELOPMENT - STAGE 1 (11 LOTS) LOCATION 420 SOUTH PINE ROAD - EVERTON PARK

SHEET TITLE RETAINING WALL SETOUT FOR LOT 1 LAYOUT PLAN

17BNE-0071

NOTES

- 1. ROADWORKS DRAWINGS ARE TO BE READ IN CONJUNCTION WITH DRAWING CO01, ROADWORKS LAYOUT PLANS, LONG SECTIONS, NOTES & DETAILS.
- ALL WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH BRISBANE CITY COUNCIL STANDARD DRAWINGS AND SPECIFICATIONS.
- NOTWITHSTANDING THE LIMITS OF CUTTING AND FILLING SHOWN ON THE DRAWINGS, THE ACTUAL LIMITS SHALL BE DETERMINED ON SITE BY THE SUPERINTENDENT DURING CONSTRUCTION AND SIMILARLY THE FINISHED SURFACE CONTOURS MAY BE ADJUSTED BY WRITTEN DIRECTION OF THE SUPERINTENDENT DURING CONSTRUCTION.
- THE CONTRACTOR IS TO ASCERTAIN THE EXACT LOCATION OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL BE RESPONSIBLE FOR THE COST OF RECTIFICATION OF ANY DAMAGES TO EXISTING SERVICES WHICH MAY OCCUR. THE LOCATION OF EXISTING SERVICES SHOWN ON THESE DRAWINGS ARE APPROXIMATE ONLY.
- SUBGRADE TEST RESULTS TO BE FORWARDED TO SUPERINTENDENT FOR DETERMINATION OF BOX DEPTHS PRIOR TO EXCAVATION. TESTS SHALL INCLUDE SOAKED CBR AND/OR OTHER TESTS AS REQUESTED BY THE SUPERINTENDENT.
- ALLOTMENT FILLING TO BE COMPACTED TO 95% (min) OF THE R.D.D. (AS 1289 TESTS E1.1, E4.1).
 LEVELS AND SETOUT INFORMATION FOR KERB AND CHANNEL CONSTRUCTION IS GIVEN TO LIP OF KERB. I EVELS AND GRADIENTS AT IUNCTIONS WITH EXISTING WORKS MAY BE VARIED AS APPROVED BY THE
- SUPERINTENDENT TO ACHIEVE SATISFACTORY CONNECTION TO THE EXISTING WORKS.
- SIDE DRAINS AND MITRE DRAINS TO BE CONSTRUCTED ADJACENT TO ALL KERB AND CHANNEL PROVIDE FLUSH POINTS TO SUBSOIL DRAINS, LOCATIONS TO BE CONFIRMED ON SITE.
- 11. HAZARD MARKERS (D4-4A) TO BE PLACED AT THE END OF NEW WORKS AS DIRECTED BY
- 12. SITE CBR VALUE AND PAVEMENT DESIGN AND DEPTHS TO BE VERIFIED WITH CBR TESTS PRIOR TO CONSTRUCTION.
- 13. LOCATION & LEVELS OF ALL EXISTING SERVICES TO BE CONFIRMED ON SITE BY CONTRACTOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- 14. TO BE READ IN CONJUNCTION WITH ALL STORMWATER DRAINAGE LAYOUT PLANS & ROADWORKS

ROADWORKS NOTES

- GEOTECHNICAL TESTING FOR PAVEMENT CONSTRUCTION IS TO BE CARRIED OUT IN ACCORDANCE WITH THE PROJECT SPECIFICATION. TEST CERTIFICATES ARE TO BE PREPARED BY A REGISTERED N.A.T.A. LABORATORY AT THE CONTRACTORS COST AND SHALL BE PROVIDED TO THE ENGINEER PROGRESSIVELY THROUGH THE WORKS. THE CONTRACTOR IS TO NOTIFY THE ENGINEER OF ANY NON-CONFORMANCES. ALL NON CONFORMING WORK IS TO BE RECTIFIED AS DIRECTED BY THE ENGINEER.
- FULL DEPTH PAVEMENT CONSTRUCTION SHALL EXTEND BEHIND ALL KERB AND KERB AND CHANNEL FOR A DISTANCE WHICH IS THE GREATER OF 150mm FROM THE BACK OF KERB OR ACROSS TO THE
- OUTER LIMIT OF SIDE DRAIN FILTER MATERIAL. TRANSITION KERB AND CHANNEL TO BARRIER KERB SMOOTHLY OVER MIN. 1.0m LENGTH.
- PAVEMENT THICKNESSES NOMINATED ON THESE DRAWINGS ARE PROVISIONAL ONLY AND MAY BE VARIED BY THE SUPERINTENDENT SUBJECT TO INSITU PAVEMENT SUBGRADE TESTING. PAVEMENT SUBGRADES ARE TO BE INITIALLY CONSTRUCTED TO THE UNDERSIDE OF THE NOMINATED LOWER SUBBASE COURSE WITHIN FILL AREAS, AND TO THE UNDERSIDE OF THE NOMINATED UPPER SUBBASE COURSE WITHIN CUT AREAS. INSITU SUBGRADE CBR TESTING AS SPECIFIED FOR PAVEMENT DESIGN VERIFICATION IS TO BE CARRIED OUT AT THESE LEVELS
- REPAIR ANY DAMAGE TO EXISTING KERB AND CHANNEL, FOOTPATH OR ROADWAY (INCLUDING REMOVAL OF CONCRETE SLURRY FROM FOOTPATHS, ROADS, KERB AND CHANNEL AND STORMWATER GULLIES AND SIDEDRAINS) THAT MAY OCCUR DURING ANY WORKS CARRIED OUT.

CONCRETE PAVEMENT

- THE CONCRETE PAVEMENT HAS BEEN DESIGNED BASED ON A CBR 5 AND IS SUBJECT TO CONFIRMATION UPON RECEIPT OF CBR TEST RESULT AT TIME OF CONSTRUCTION.
- CONCRETE PAVEMENT SPECIFICATION:

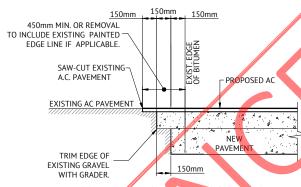
COMPRESSIVE STRENGTH: FLEXURAL STRENGTH: 3.5 MPa @28 DAYS MAXIMUM AGGREGATE SIZE: SLUMP 80mm+15mm SL82, 50 TOP COVER

REDDING: 100mm MIN CBR 15 BEDDING

- MATERIALS AND WORKMANSHIP SHALL COMPLY WITH AS1379, AS3600 AND AS3610.
 PROJECT ASSESSMENT OF STRENGTH IN ACCORDANCE WITH AS3600 SHALL BE ADOPTED FOR SAMPL
- AND TESTING. THE CONTRACTOR SHALL PAY ALL TESTING COSTS. CONSTRUCTION JOINTS SHALL BE MADE ONLY AT APPROVED LOCATIONS.
- ALL JOINTS ARE TO BE SEALED JUST PRIOR TO HANDOVER WITH DOW CORNING '888 FALANT INSTALLED IN ACCORDANCE WITH MANUFACTURING RECOMMENDATIONS.
- JOINTS ARE TO BE INSPECTED AND SEALANT REGULARLY REPLACED IF REQUIRED.
 DIMENSIONAL TOLERANCES OF AS3600, MODIFIED BY AS3610, SHALL APPLY UNLESS OTHERW NOTED. SLAB SURFACE FLATNESS TOLERANCE SHALL BE 5mm MAXIMUM DEVIATION FOR A 3m STRAIGHT EDGE
- CONCRETE PAVEMENTS ARE TO BE BROOM FINISHED. SLAB THICKNESSES NOTED ARE EXCLUS APPLIED FINISHES
- 10. CURE ALL CONCRETE BY AN APPROVED METHOD FOR 7 DAYS AFTER HARDEN IG. PVA AND RESIN BASED CURING COMPOUNDS SHALL NOT BE USED.

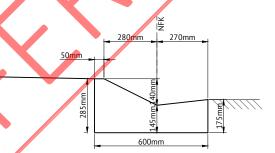
CONCRETE PAVEMENT MAINTENANCE NOTES

- NOTE THAT UPKEEP AND REPLACEMENT OF SEALANTS IS PART OF THE ONGOING MAINTENANCE REQUIREMENTS FOR THIS SITE
- NOTE THAT SHRINKAGE CRACKS OF WIDTH < 1.5mm MAY OCCUR IN CONCRETE PAVEMENTS WITHIN 12 MONTHS OF INITIAL CASTING.
 NOTE THAT THE PAVEMENT WILL NOT BE MAINTENANCE FREE FOR ITS DESIGN LIFE.
- INSPECT FLUSH SIDE DRAINS AND SUBSOIL DRAINS EVERY 12 MONTHS.

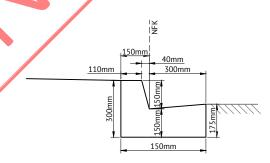


TYPICAL PAVEMENT CUT-BACK DETAIL

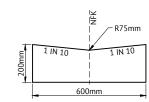
NOTE - PAVEMENT 'KEY' TIE-IN SHOWN ASSUMES FULL DEPTH NOTE - PAVEMENT REY TIE-IN SHOWN ASSUMES FULL DEP IT
PAVEMENT & PAVEMENT CONDITION SUITABLE FOR USE ALONG
SHOULDER / EDGE OP BITUMEN. THIS DETAIL MAY VARY BASED ON
GEOTECHNICAL OR PAVEMENT INVESTIGATION AND ALTERNATIVE
DESIGN ENGINEERING SHALL BE ADVISED IF FOUND EXISTING



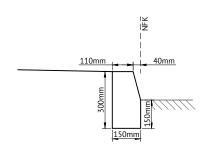
BCC STANDARD MOUNTABLE KERB AND CHANNEL TYPE 'D'



BCC STANDARD BARRIER KERB AND CHANNEL TYPE 'E'



BCC STANDARD KERB INVERT



BCC STANDARD BARRIER KERB ONLY TYPE 'E'

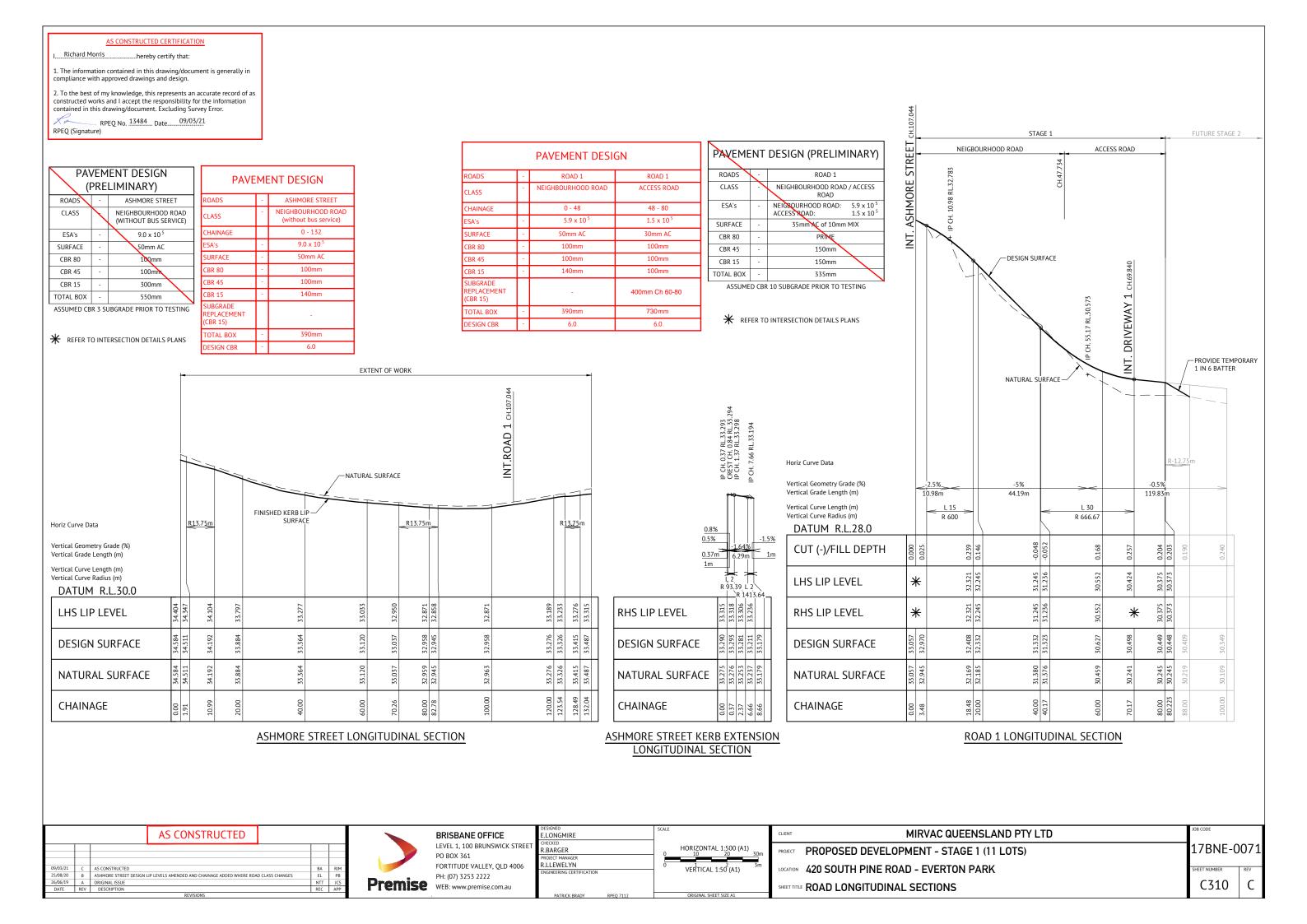
APPROVAL ISSUE - NOT FOR CONSTRUCTION REV DESCRIPTION

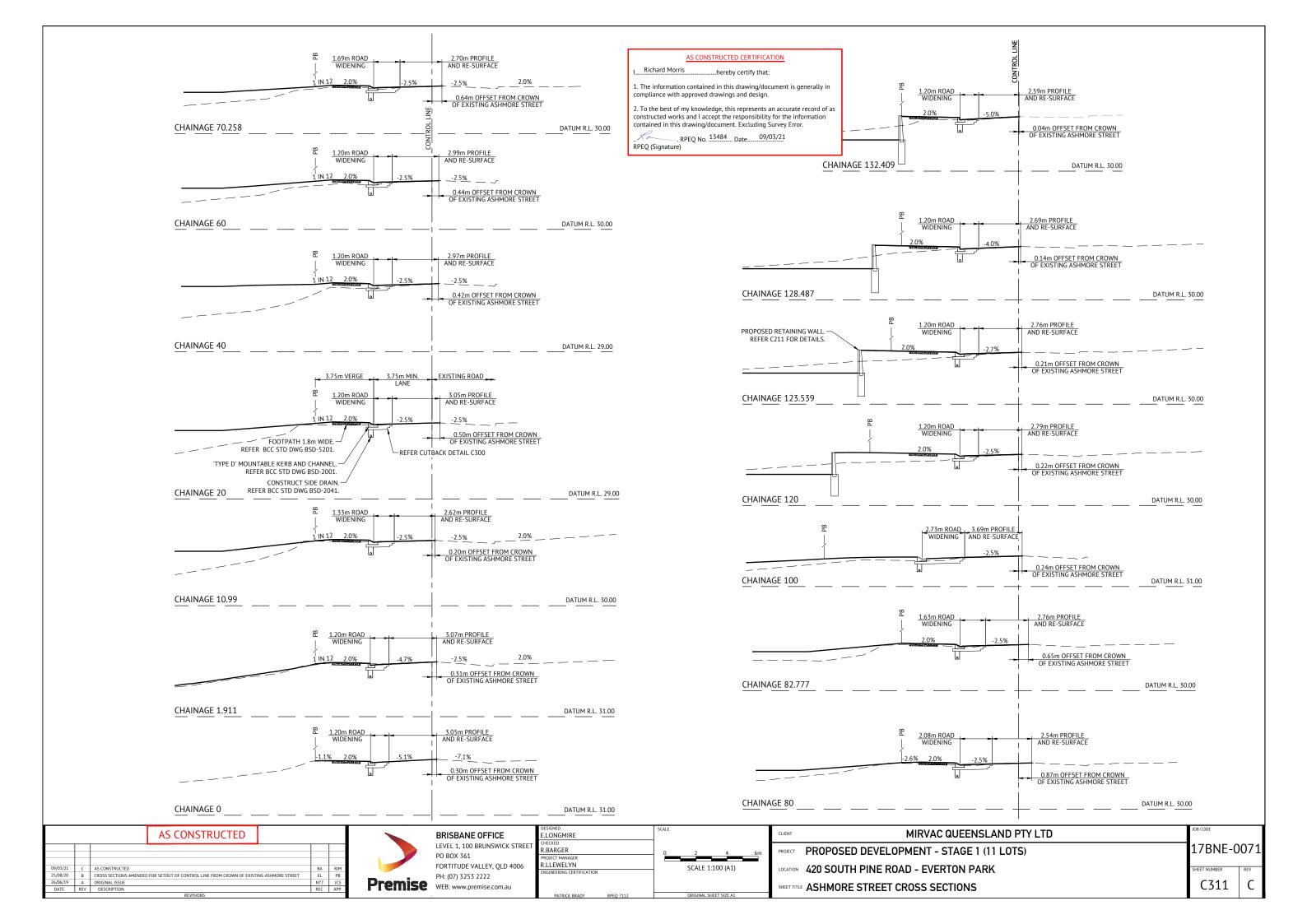


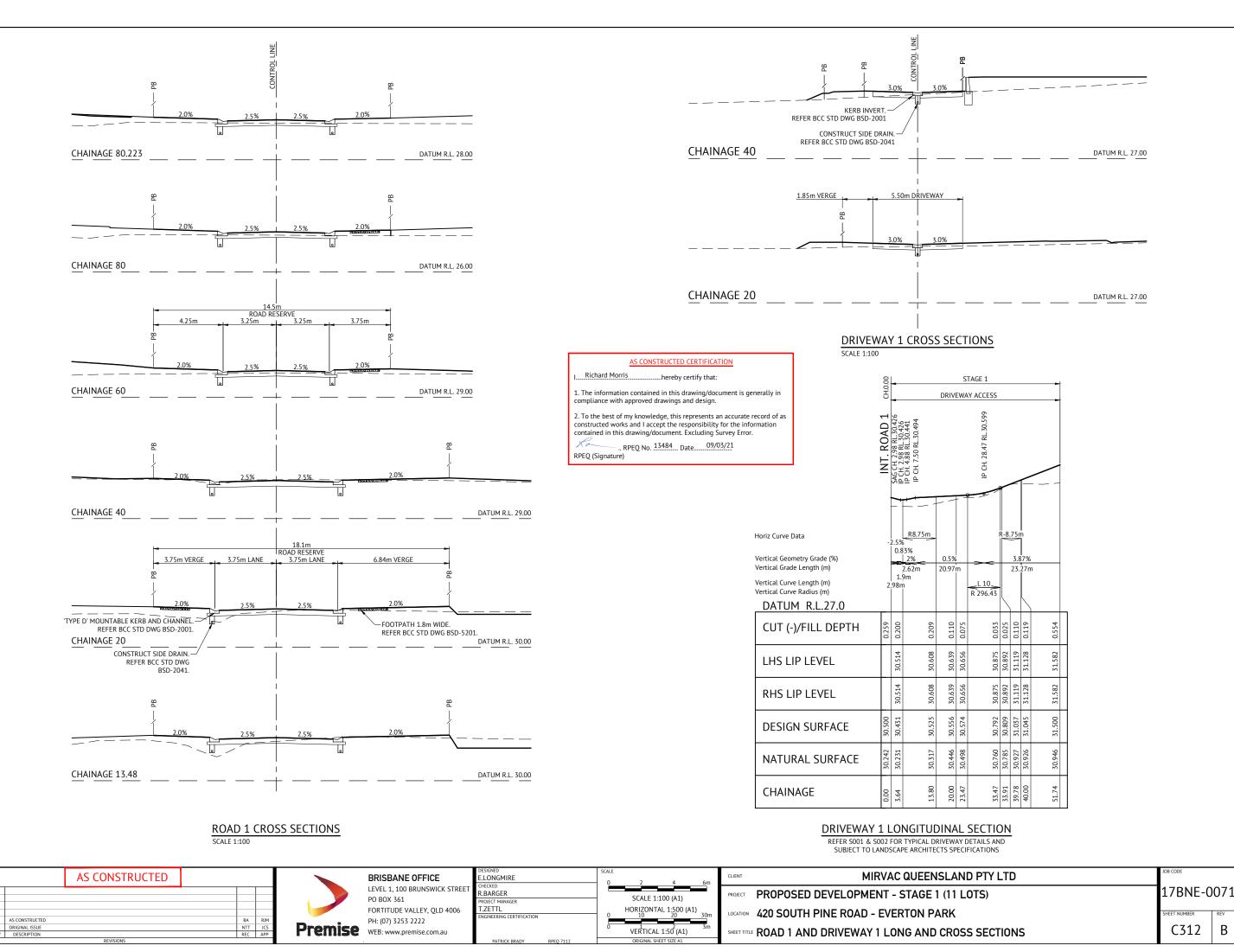
BRISBANE OFFICE LEVEL 1, 100 BRUNSWICK STREET PO BOX 361 FORTITUDE VALLEY, QLD 4006 PH: (07) 3253 2222 Premise WEB: www.premise.com.au

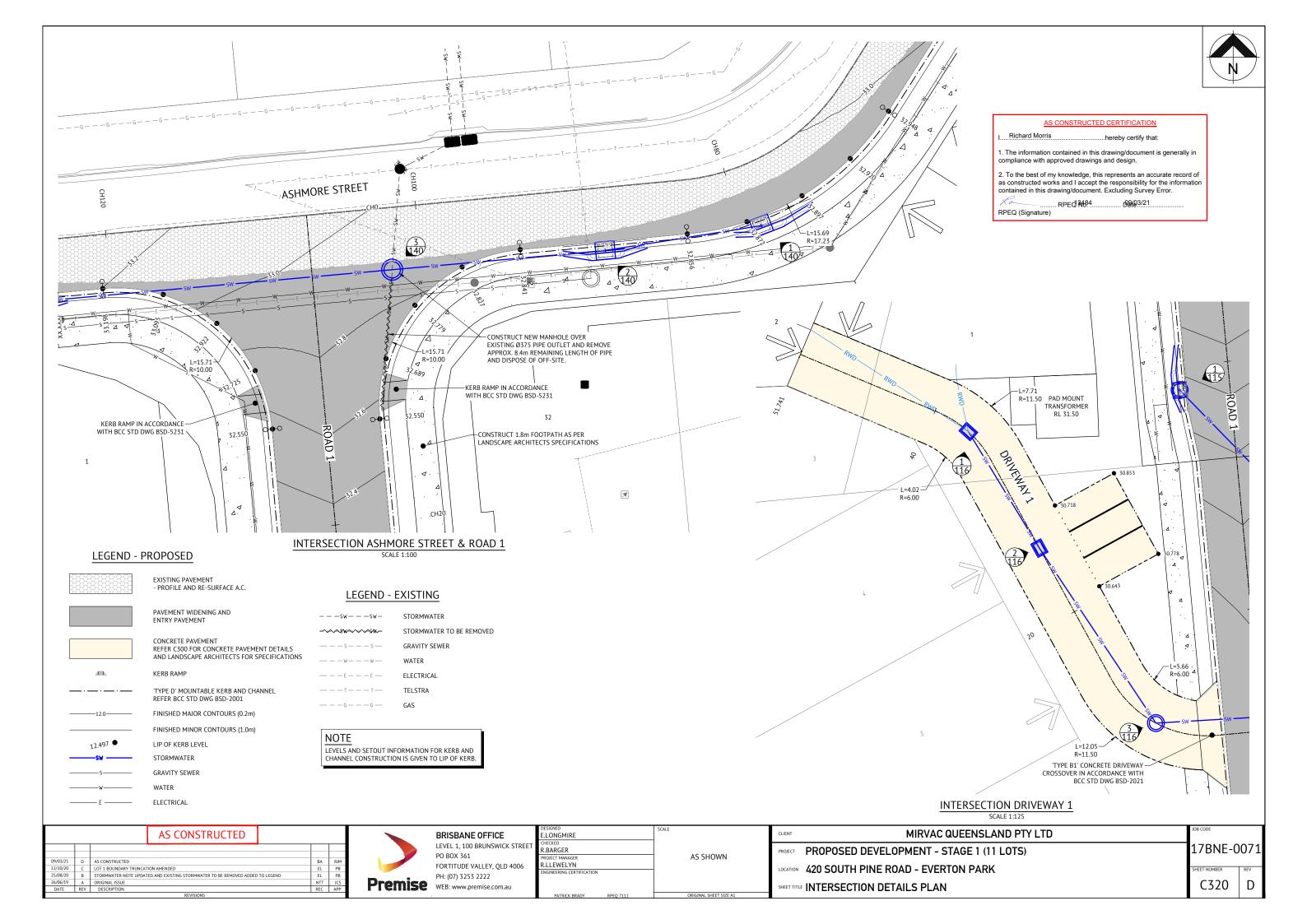
DESIGNED		SCALE
E.LONGMIRE		
CHECKED		
R.BARGER		
PROJECT MANAGER		
T.ZETTL		
ENGINEERING CERTIFICATION		
PATRICK BRADY	RPEQ 7112	ORIGINAL SHEET SIZE A1

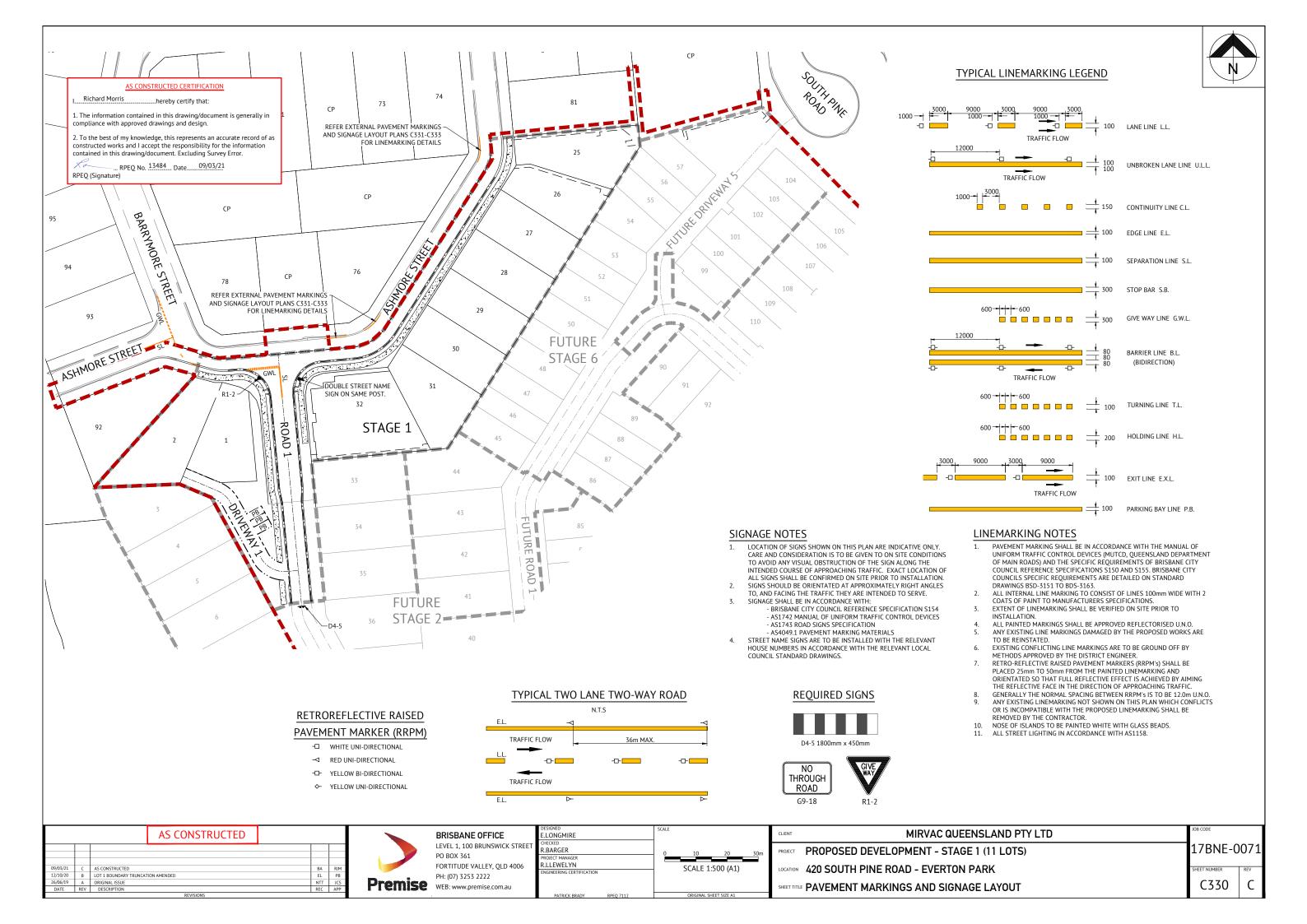
CLIENT	MIRVAC QUEENSLAND PTY LTD	JOB CODE	
PROJECT	PROPOSED DEVELOPMENT - STAGE 1 (11 LOTS)	17BNE-0	071
LOCATION	420 SOUTH PINE ROAD - EVERTON PARK	SHEET NUMBER	REV
SHEET TITL	ROADWORKS NOTES AND DETAILS	C300	Α

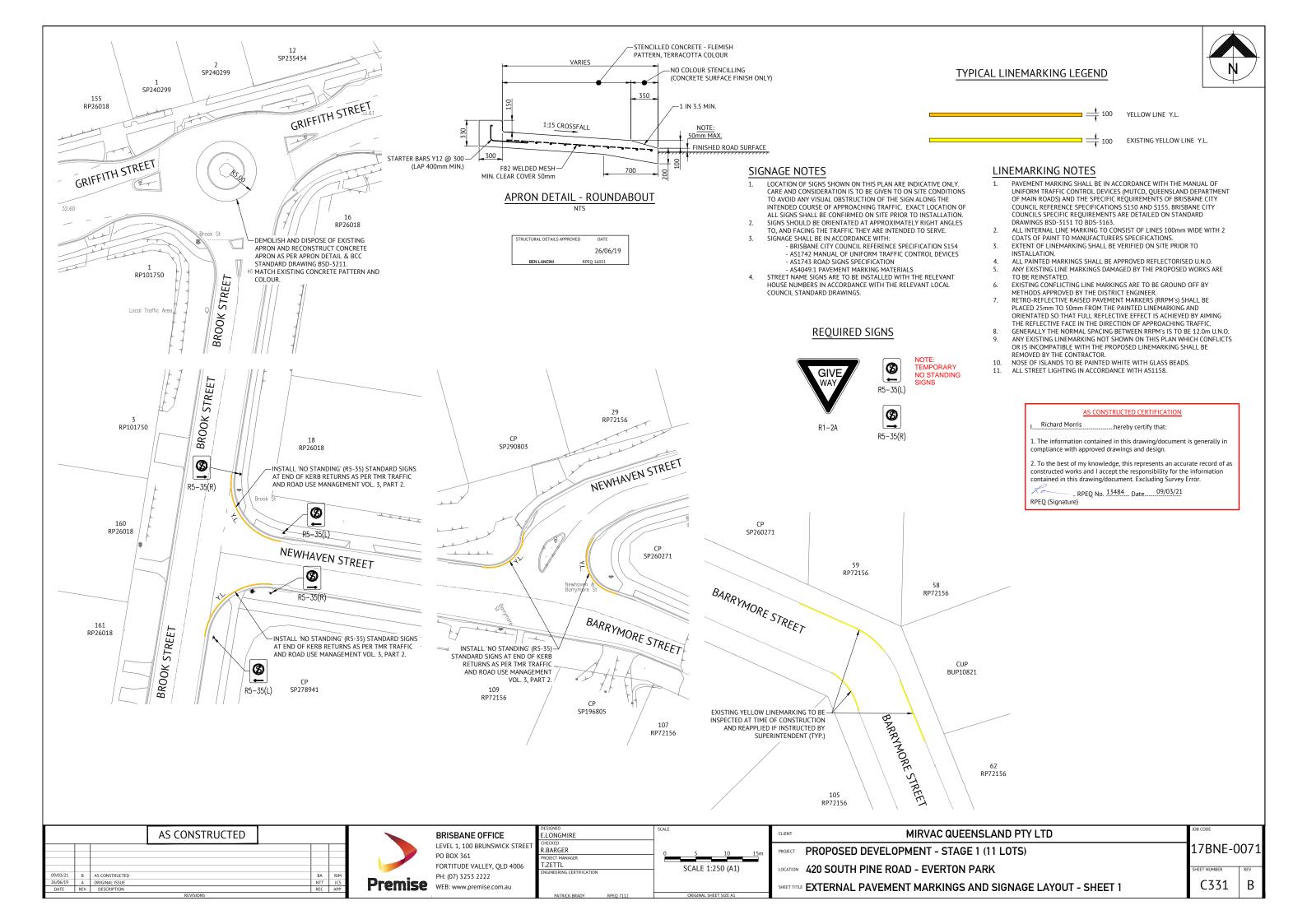


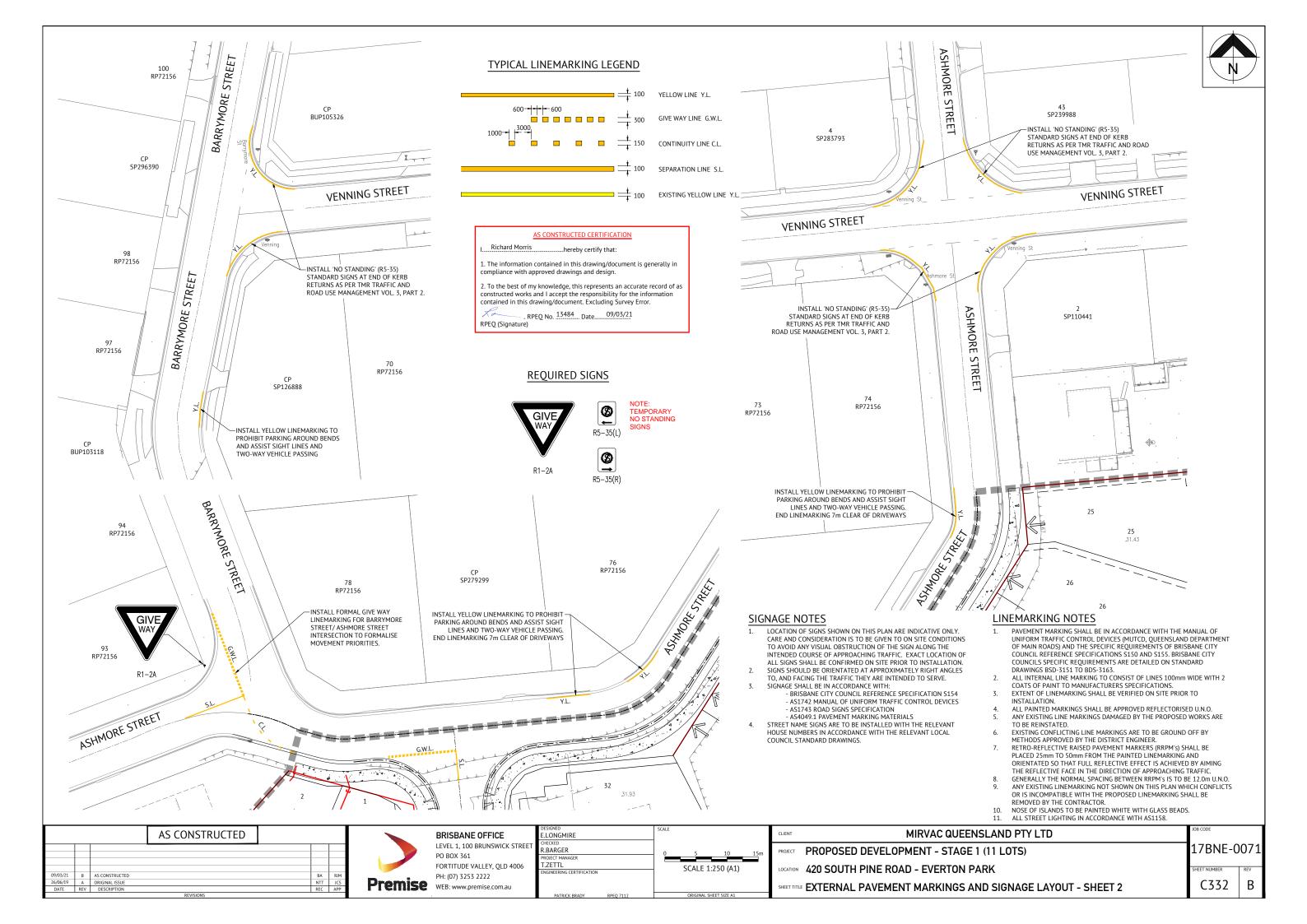


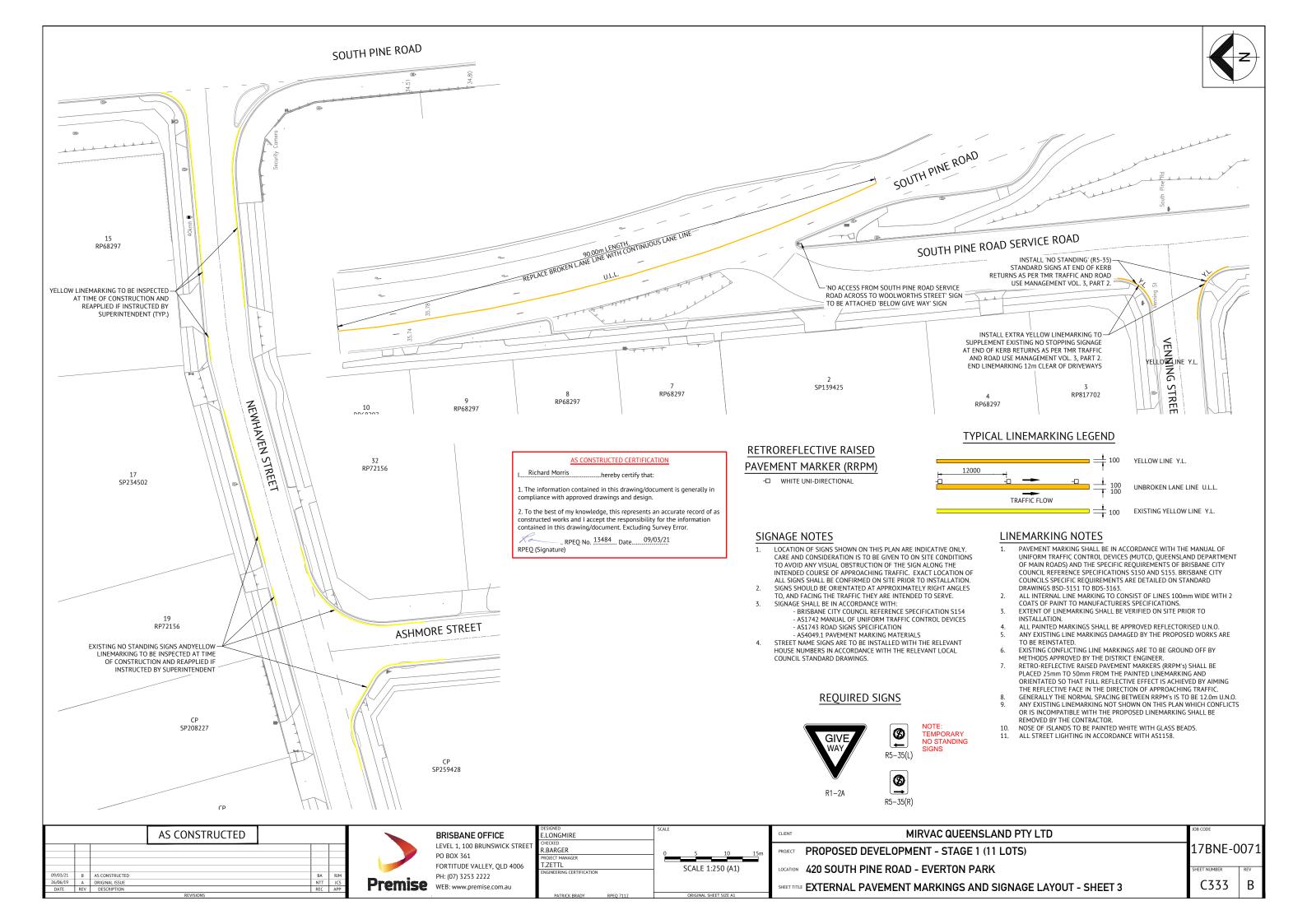


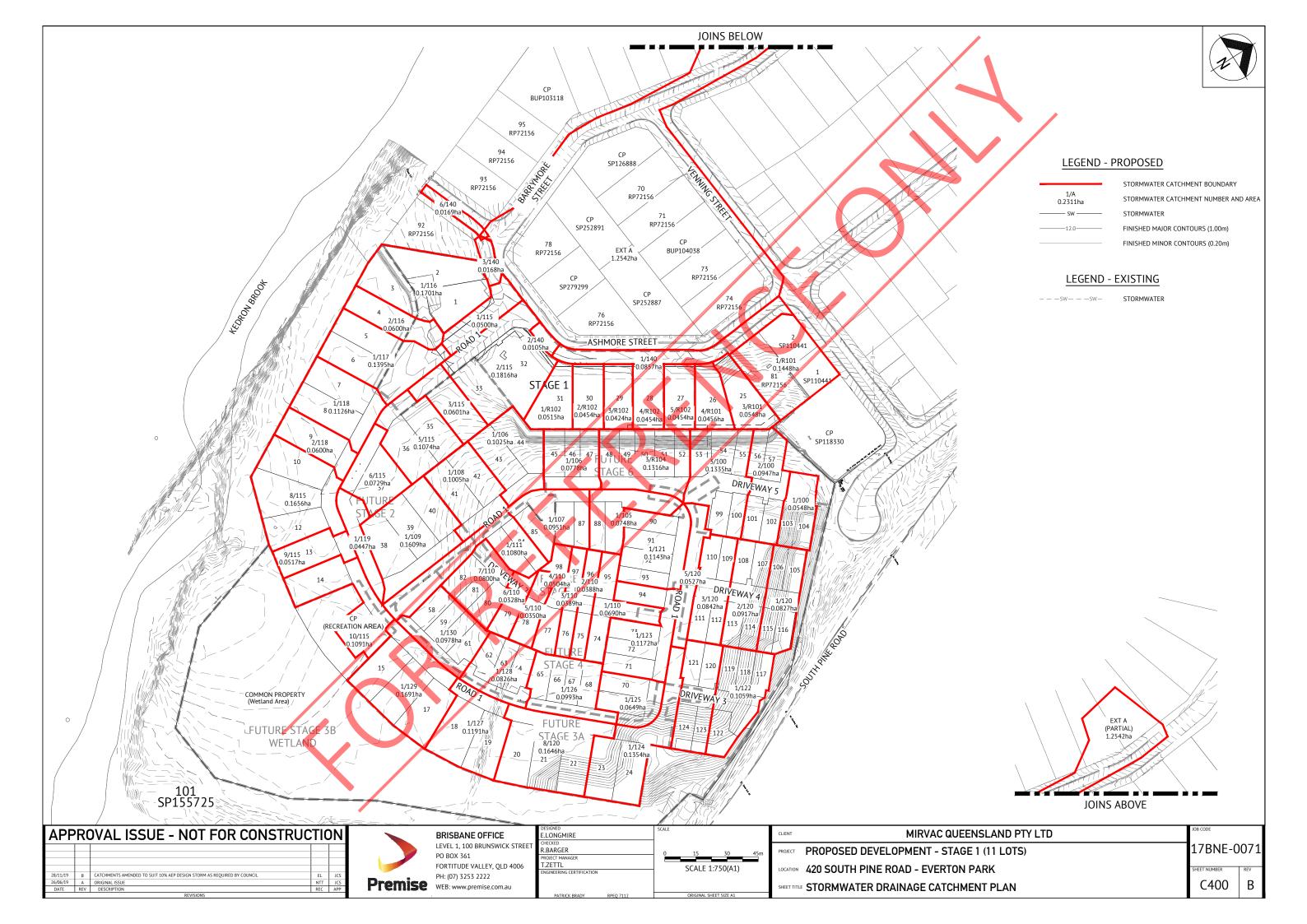


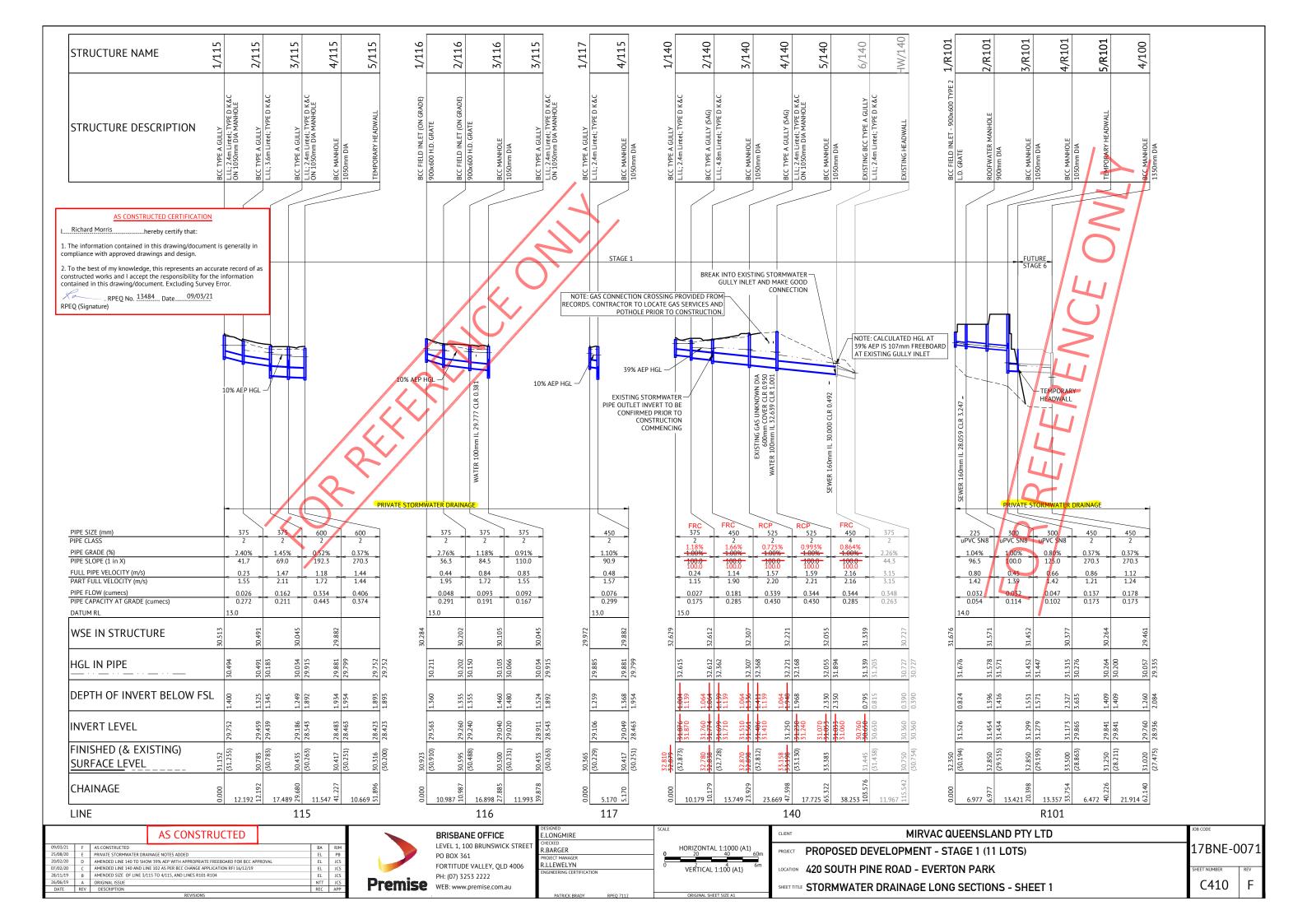


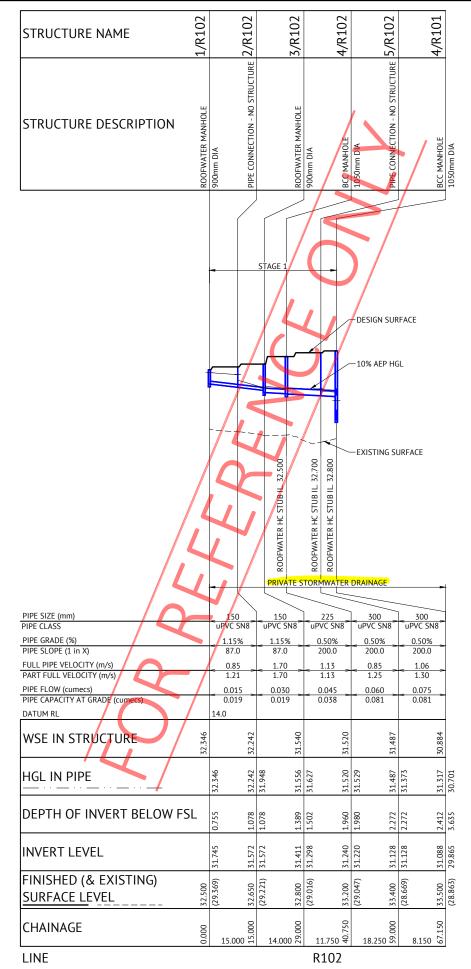












AS CONSTRUCTED CERTIFICATION

Richard Morris hereby certify that:

 $1. \ The information contained in this drawing/document is generally in compliance with approved drawings and design.\\$

2. To the best of my knowledge, this represents an accurate record of as constructed works and I accept the responsibility for the information contained in this drawing/document. Excluding Survey Error.

RPEQ (Signature)

BRISBANE OFFICE
LEVEL 1, 100 BRUNSWICK STREET
PO BOX 361
FORTITUDE VALLEY, QLD 4006
PH: (07) 3253 2222
WEB: www.premise.com.au

DESIGNED		SCALE	
E.LONGMIRE			
CHECKED		ĺ	
R.BARGER		_	HORIZONTAL 1:1000 (A1)
PROJECT MANAGER		<u> </u>	20 40 60m
R.LLEWELYN		0	VERTICAL 1:100 (A1) 6m
ENGINEERING CERTIFICATION]	VERTICAL 1:100 (A1)
PATRICK BRADY	RPFO 7112		ORIGINAL SHEET SIZE A1

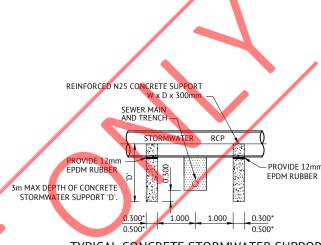
LIENT	MIRVAC QUEENSLAND PTY LTD	JOB CODE	
ROJECT	PROPOSED DEVELOPMENT - STAGE 1 (11 LOTS)	17BNE-0	071
OCATION	420 SOUTH PINE ROAD - EVERTON PARK	SHEET NUMBER	REV
HEET TITL	STORMWATER DRAINAGE LONG SECTIONS - SHEET 2	C411	F

STORMWATER DRAINAGE NOTES

- ALL STORMWATER DRAWINGS ARE TO BE READ IN CONJUNCTION WITH DRAWING C001, STORMWATER LAYOUT PLANS, NOTES AND DETAILS.
- STORMWATER PITS ARE TO BE CONSTRUCTED INSITU IN ACCORDANCE WITH DRAWINGS OR AS VARIED AS NOTED ON THE DRAWING. PREFABRICATED STORMWATER PITS CAN BE USED SUBJECT TO WRITTEN APPROVAL FROM THE SUPERINTENDENT. CLASS D HEAVY DUTY GALVANIZED STEEL GRATES ARE TO BE FITTED IN TRAFFIC AREAS, CLASS B LIGHT DUTY GALVANIZED STEEL GRATES ARE TO BE FITTED IN LANDSCAPE AREAS UNLESS NOTED OTHERWISE.
- ALL DRAINAGE EXCAVATION AND CONSTRUCTION SHALL BE CARRIED OUT IN ACCORDANCE WITH AS3500 AND BRISBANE CITY COUNCIL SPECIFICATIONS AND STANDARD DETAILS.
- ALL MATERIALS SHALL MEET THE REQUIREMENTS OF AS1254 & AS1273. ALL uPVC PIPES SHALL BE CLASS 'SN8' FOR DN150 & DN225, AND CLASS 'SN6' FOR DN100 UNLESS NOTED OTHERWISE.
- PIPES SHALL BE LAID AT MIN. 1% GRADE UNLESS NOTED OTHERWISE. CONTRACTOR MUST VERIFY THAT ALL PIPE LEVELS AND GRADES CAN BE ACHIEVED PRIOR TO CONSTRUCTING DRAIN LINES. ANY CONFLICT SHALL E REPORTED TO THE SUPERINTENDENT FOR ANY NECESSARY ALTERATIONS PRIOR TO ANY CONSTRUCTION OF CONNECTING PIPEWORK.
- WHERE PIPES ARE TO BE LAID WITHIN THE ZONE OF INFLUENCE OF STRUCTURAL LOADINGS (e.g. BUILDING FOOTINGS, RETAINING WALLS...etc). THE BUILDER SHALL PROVIDE ADEQUATE BRIDGING / PROTECTION. WHERE ANY DOUBT MAY EXIST REFERENCE SHALL BE MADE TO THE DESIGNER OF THE STRUCTURE.
- BENCHING OF PIT STRUCTURES SHALL HAVE A SMOOTH FINISHED SURFACE, AND PIPES SHALL NOT PROJECT INSIDE THE SHAFT OF THE PIT.
- WHERE RECTANGULAR PIT STRUCTURES ARE USED, PIPES MUST NOT CONNECT TO THE PIT AT CORNERS.
- ALL CONSTRUCTION AND EXCAVATIONS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT REQUIREMENTS OF THE WORK HEALTH AND SAFETY ACT 2011 AND SUBSEQUENT AMENDMENTS. REFER TO BCC STANDARD DRAWINGS BSD-8023, BSD-8024, BSD-8025 FOR
- TYPICAL ROOF SLAB REINFORCEMENT DETAILS.
 ALL STORMWATER PIPES SHALL BE CLASS '2' (UNO) R.C. PIPES UNLESS AN
- ALTERNATIVE IS APPROVED BY THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
 KACEY GALV. STEEL KERB ADAPTORS ARE TO BE INSTALLED TO THE
- REQUIREMENTS OF THE LOCAL COUNCILS STANDARD DRAWINGS AND **SPECIFICATIONS**
- ALL LOTS SHOWN BOXED TO HAVE ROOFWATER FOOTPATH CROSSINGS TO KERB.
- CROSSINGS ARE TO BE 88.9 DIA. GALV. CHS.TO KACEY KERB ADAPTOR. ALL TEMPORARY ROOFWATER OUTLETS TO BE EXCAVATED AT 1 IN 200 TO NATURAL SURFACE.
- ALL ROOFWATER PIPES CROSSING CONCRETE FOOTPATHS ARE TO BE INSTALLED
- PRIOR TO CONSTRUCTION OF CONCRETE FOOTPATHS.
 GULLIES AND GULLY GRATES SHALL BE TO BCC STANDARD DRAWINGS BSD-8051
- ROOFWATER PITS ARE TO BE 600mm DIAMETER FOR DEPTHS LESS THAN 750mm, 900mm DIAMETER FOR DEPTHS BETWEEN 750mm AND 1500mm DEEP AND 1050mm DIAMETER FOR DEPTHS GREATER THAN 1500mm.
- ALL STORMWATER INLETS AND OUTLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH BCC STD DWG BSD-8101 INCLUDING DOWNTURN NIB WALL UNLESS AN ALTERNATIVE IS APPROVED BY THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- REFER TO BRISBANE CITY COUNCIL STANDARD DRAWINGS FOR PIPE BEDDING

REFERENCE POINT LOCATION FOR DRAINAGE STRUCTURES

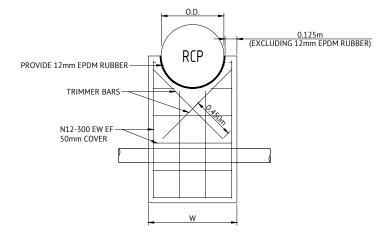
STRUCTURE TYPE	HORIZONTAL CONTROL POINT [REFERENCE POINT LOCATION]	VERTICAL CONTROL REFERENCE LEVEL
MANHOLE	CENTRELINE OF MAIN SHAFT	FINISHED SURFACE LEVEL AT CENTRE OF MAIN SHAFT
GULLY PIT OVER MANHOLE	CENTRE OF GULLY PIT	LIP LEVEL
GULLY PIT (LIP IN LINE)	CENTRE OF GULLY PIT	LIP LEVEL
HEADWALL	INTERSECTION OF HEADWALL FACE AND PIPE CENTRE LINE	INVERT LEVEL
FIELD INLET	CENTRE OF PIT	TOP OF CONCRETE PIT
ROOFWATER PIT	CENTRE OF PIT	TOP OF GRATE



TYPICAL CONCRETE STORMWATER SUPPORT **PLAN VIEW**

CONCRETE STORMWATER SUPPORT NOTES:

- 3m MAX DEPTH OF CONCRETE STORMWATER SUPPORT DESIGN BASED ON ACHIEVING 100kPa OF ULTIMATE LIMITSTATE BEARING CAPACITY. TO BE CONFIRMED BY CONTRACTOR DURING CONSTRUCTION.
- 0.300m* WIDTH UP TO 1050 RCP CLASS 2 0.500m* WIDTH BETWEEN 1050 AND 1800 RCP CLASS 2



TYPICAL CONCRETE STORMWATER SUPPORT SECTION DETAIL

SCALE 1:20

26/06/19

1500 Lg. TYP. TYPICAL DETAIL

GRATED PIT IN CONCRETE PAVEMENT SCALE 1:20

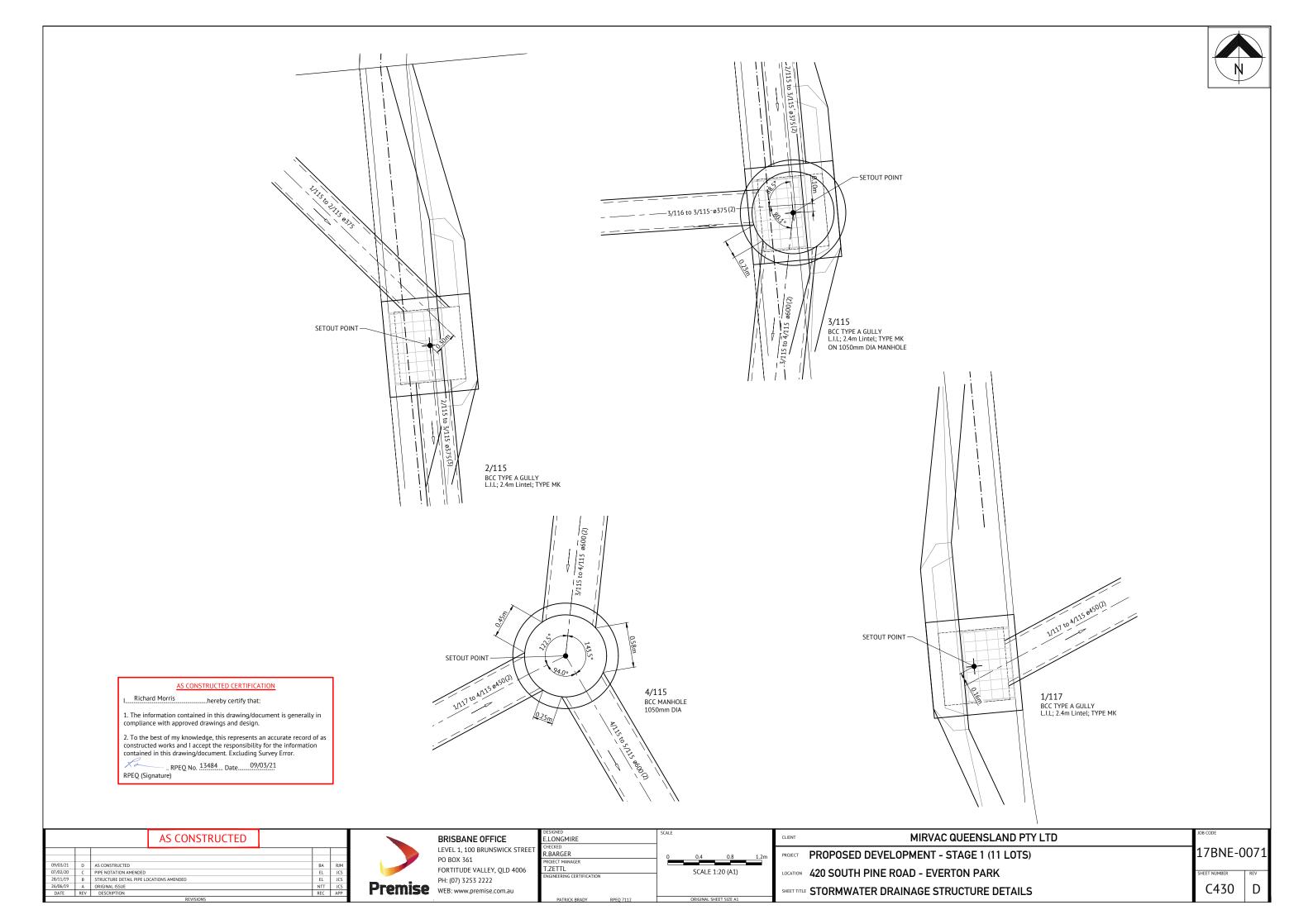
APPROVAL ISSUE - NOT FOR CONSTRUCTION



BRISBANE OFFICE LEVEL 1, 100 BRUNSWICK STREET PO BOX 361 FORTITUDE VALLEY, QLD 4006 PH: (07) 3253 2222 Premise WEB: www.premise.com.au

ESIGNED .LONGMIRE		SCALE			
HECKED		1			
.BARGER		٥	0.4	0.8	1.2
ROJECT MANAGER					
.ZETTL			SCALE 1	·20 (A1)	
NGINEERING CERTIFICATION]	JCALL I	.20 (A1)	
PATRICK BRADY	RPEQ 7112		ORIGINAL SH	EET SIZE A1	

CLIENT	MIRVAC QUEENSLAND PTY LTD	JOB CODE	
PROJECT	PROPOSED DEVELOPMENT - STAGE 1 (11 LOTS)	17BNE-0	C
LOCATION	420 SOUTH PINE ROAD - EVERTON PARK	SHEET NUMBER	F
SHEET TITLE	STORMWATER DRAINAGE NOTES AND DETAILS	C420	



		LOCATION	Т	IME	SUB-0	CATCHME	NT RU	NOFF			INLET DE	SIGN						DR	AIN DES	SIGN							HEAD	LOSSES	;				PA	ART FU	LL			DES	SIGN LEVI	ELS	
			tc	I C	Α	CA	Q				Q	g Qb		tc	ı	CA	(Qp L	S			Vf=Q/A	١		STRUCTU	URE RATIO)S V2/2g	Ku	hu K	w	nw Sf	hf	dn	Vn				=			
STRUCTURE NUMBER	DOWNSTREAM STRUCTURE	SUB-CATCHMENTS CONTRIBUTING	SUB-CATC TIME OF C	RAINFALL INTENSITY CO-EFFICIENT OF RUNOFF	SUB-CATCHMENT	EQUIVALENT AREA		FLOW (INC. E		FLOW DEPTH ROAD GRADE AT INLET	HALF ROAD CAPACITY			CRITICAL TIME OF CONCENTRATION	RAINFALL INTENSITY	TOT.		REACH LENGTH	_	100	CLASS	: 교	TIME OF FLOW	IN REACH CHARTS U	Qg/Qo	Du/Do S/Do	VELOCITY HEA	UPSTREAM HEADLOSS CO-EFFICIENT	UPSTREAM HEADLOSS	W.S.E. CO-ETT	CHANGE IN W.S.E.	PIPE FRIC (L x Sf)	NORMAL DEPTH	NORMAL DEPTH (MINOR STORM)	NORMAL DEPTH VELOCITY (1 YEAR STOR	LEVEL	DOWNSTREAM OBVERT LEVEL	UPSTREAM H.G.L.	DOWNSTREAM H.G.L.	W.S.E.	SURFACE OR GRATE LEVEL STRUCTURE NUMBER
1/115	2/115	1/115	min m	15 0.87	ha 0.050	ha 0.043	l/s 26		_	m % .054 4.80		_		min 5.00		ha .043 0	l/s l	_	_	5 375	-	0.24	m 0.0	nin 08 32	1.00	2 25	0.003	5 94	m 0.017		m % 17 0.02		m 0.078	+		m 127 2	m 9.834	m 30.580	m 30.577	m 30 597	m 31.152 1/115
		1/115 2/115		15 0.87						.105 3.61					215 0			8 17.48	_	375		1.52		15 32 34 37	0.85			2.62			0.02		+						1		30.785 2/115
			3.00	13 0.07	0.162	0.136	74	217 3.	+00 0.	.103 3.01	210 14	2 / 4	3/113	3.00	213 0	.201 0	10	17.40	7 1.430	3/3		1.52	0.1	13 32 34 37	0.83	.00 3.04	0.116	2.02	.308	0.5	0.91	0.100	0.232	2.12	2.01 23	.014 2	9.300	50.209	30.110	30.377	30.763 2/113
3/115	4/115	1/116 2/116 1/115 2/115 3/115	5.00 2	15 0.87	0.060	0.052	31	106 3.	387 0.:	.103 0.90	112 88	17	5/115	5.30	211 0	.452 0	34	4 11.54	7 0.520	0 600	2	1.22	0.1	12 42 46 43 47	0.25 0.	2.63	0.076	1.64	0.124 1.7	9 0.1	36 0.31	0.036	0.397	1.73	1.6 29	.143 2	9.083	29.986	29.950	30.122	30.435 3/115
4/115	5/115	1/117 1/116 2/116 1/115 2/115 3/115												5.42	209 0	.573 0	41	7 10.66	0.370	0 600	2	1.48	0.1	13 37 42	0.00 1.	.00 2.48	0.111	0.78	0.086	0.0	0.46	0.049	0.600	1.48	1.43 29	.063 2	9.023	29.864	29.814	29.950	30.417 4/115
5/115																																								29.814	30.316 5/115
1/116	2/116	1/116	5.00 2	15 0.87	0.170	0.148	88	88 3.	223 0.0	.049 3.88	395 49	40	2/116	5.00	215 0	.148 0	49	10.96	7 2.763	3 375	2	0.44	0.0	07 32	1.00	2.11	0.010	6.56	0.065	0.0	0.08	0.009	0.104	1.96	1.68 29	.938 2	9.635	30.287	30.279	30.352	30.923 1/116
2/116	3/116	1/116 2/116	5.00 2	15 0.87	0.060	0.052	31	71 3.0	616 0.0	.054 1.62	6542 45	26	1/117	5.07	214 0	.200 0	94	16.89	7 1.184	4 375	2	0.85	0.1	16 33 34	0.48 1.	.00 2.77	0.037	1.40	0.051	0.0	0.28	0.048	0.185	1.72	1.45 29	.615 2	9.415	30.227	30.179	30.279	30.595 2/116
																					1																				
3/116	3/115	1/116 2/116												5.23	212 0	.200 0	92	11.99	0.909	9 375	2	0.84	0.1	37 42 43	0.00 1.	.00 3.10	0.036	1.03	0.037 1.1	.1 0.0	0.28	0.033	0.199	1.55	1.32 29	.395 2	9.286	30.143	30.110	30.182	30.500 3/116
																																						1			
																																						1			
1/117	4/115	1/117	5.00 2	15 0.87	0.139	0.121	72	85 3.4	460 0.	.105 0.40	86 77	7	1/118	5.00	215 0	.121 0	77	5.139	1.509	9 450	2	0.49	0.0	04 32	1.00	2.07	0.012	6.73	0.081	0.0	0.07	0.004	0.144	1.77	1.22 29	.556 2	9.478	29.954	29.950	30.035	30.365 1/117
																																						1			
-		1/140	5.00 1		0.086				_	.073 0.53			2/140				27			_	2	0.24	_	1 32	1.00			4.78		0.0		0.002	_	_	1.05 32						32.879 1/140
2/140 3/140		1/140 2/140 1/140 2/140	5.00 1	51 0.75	0.010	0.008	3	154	0.0	.035 0.36	157 15	4 0	LOST	5.11	150 0		18 59 33		_		2	1.14	_	32 33 34 20 33		.83 2.03 .86 1.56		3.78 C		0.2		0.055	0.260				2.011 1.775			32.612 32.307	32.838 2/140 32.898 3/140
4/140		1/140 2/140 4/140	5.00 1	51 0.75	0.017	0.013	5	5	0.0	.000 0.51	110 5	0	1/115		147 0		39 34	_	_	525	2	1.59	_	15 34 37		.00 1.89		0.41 0		0.0		0.117	0.355				1.578			32.221	33.198 4/140
5/140	6/140	1/140 2/140 4/140												5.58	145 0	.085 1	59 34			450	4	2.16	_	36 34 37		.00 2.27		0.67	.161	0.1	61 1.45	0.556			2.11 31		1.100	31.894	31.339	32.055	33.383 5/140
6/140	HW/14 0	1/140 2/140 4/140 6/140	5.00 1	51 0.76	0.017	0.013	5	5 0	277 0.0	.042 3.00	295 5	0	LOST	5.94	142 0	.097 1	59 34	8 11.967	2.256	375	2	3.15	0.0	08 33 34	0.02 1.	.00 1.89	0.506	0.27).135	0.1	35 3.98	0.471	0.375	3.15	3.06 31	.005 3	0.735	31.203	30.727	31.339	31.445 6/140
HW/14 0																																								30.727	30.750 HW/14
			0.00 0		0,000	0.000	0	0	0	.000	390 0	0		5.00	215	.000 3	2 32	6.977	1 074	6 225	uPV	C 0.80	0.0	09 32			0.033	0.00	000	0.0	140	0.061	0125	1 47	1 47 71	751 2	1 679	31 676	31 578	31 676	32.350 _{1/R101}
1/R101 2/R101	2/R101				1.000	1.500			0.0					5.09	-	.000 3		_		0 300		C 0.45	+	14 34 37	0.00 0.	1.75 1.00		0.00													32.850 2/R101
3/R101								1						5.22			7 47					'C 0		15 33			0.023			_											32.850 3/R101
4/R101														6.04	202 0	.000 1	37 13	6.472	0.370	0 450	3110	0.86	0.1	10 46 47	0.00 0.	1.28	0.038	2.09	0.079 2.6	_			_								33.500 4/R101
5/R101																																									31.250 _{5/R101}
1/R102	2/R102													5.00	215 0	.000 1	5 15	15.00	1.150	0 150	15110		0.2	23			0.037	0.00	0.000	0.0	0.69	0.104	0.099	1.21	1.21 31	.895 3	1.722	32.346	32.242		
2/R102	3/R102													5.23	212 0	.000 3	0 30	14.00	1.150	0 150	uPV SN8	1.70	0.2	21 33			0.147	2.00).294	0.2	94 2.81	0.389	0.150	1.70	1.7 31	.722 3	1.561	31.948	31.556		32.650 _{2/R102}
																DESIG	NED				SCALE																			JOB COD	F
AP	PRO	VAL ISSUE -	NOT	FOR	CON	NSTR	UC	ΠΟΝ					SBANE (L 1, 100 B			E.LO	NGMIRE								CLIENT	2000	SED DI	-\/			QUEEN)						SNF-0071

APP	RC	OVAL ISSUE - NOT FOR CONSTRUC		N
20/02/20	D	AMENDED STORMWATER CALC TO SHOW 39% AEP FOR BCC APPROVAL	EL	JCS
07/02/20	C	AMENDED AS PER BCC CHANGE APPLICATION RFI 16/12/19	EL	JCS
28/11/19	В	STORMWATER AMENDED TO 10% AEP DESIGN STORM	EL	JCS
26/06/19	Α	ORIGINAL ISSUE	NTT	JCS
DATE	REV	DESCRIPTION	REC	APP



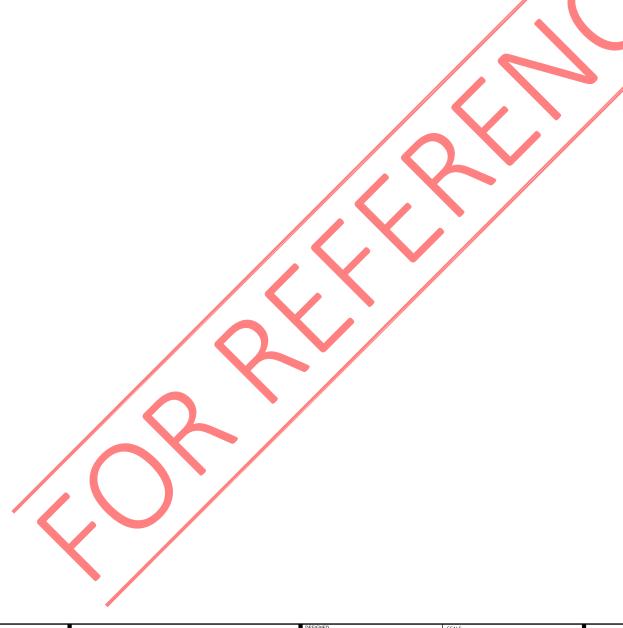
LEVEL 1, 100 BRUNSWICK STREET PO BOX 361 FORTITUDE VALLEY, QLD 4006 PH: (07) 3253 2222 Premise PH: (07) 3253 2222
WEB: www.premise.com.au

	DESIGNED	SCALE
	E.LONGMIRE	
-	CHECKED	1
1	R.BARGER	
	PROJECT MANAGER	1
	T.ZETTL	
	ENGINEERING CERTIFICATION]
	PATRICK BRADY RPEQ 7112	

PROPOSED DEVELOPMENT - STAGE 1 (11 LOTS)

LOCATION 420 SOUTH PINE ROAD - EVERTON PARK SHEET TITLE STORMWATER CALCULATIONS 10% AEP STORM - SHEET 1 17BNE-0071

L	OCATION	TII	1E	SUB-	CATCHM	ENT RU	INOFF			INL	ET DESI	GN							DRAI	N DESIG	iΝ								HEAD	LOSSES	5				´ ı	PART F	ULL			DE	SIGN LE	/ELS		
		tc	С	А	CA	Q					Qg	Qb		tc	I	CA		Qp	L	S			Vf=Q/A			STRU	CTURE R	RATIOS	V2/2g	Ku	hu	Kw	hw S	if hf	d n	n Vr	n Vn							\perp
STRUCTURE NUMBER DOWNSTREAM STRUCTURE	SUB-CATCHMENTS CONTRIBUTING	SUB-CATCHMENT TIME OF CONCENTRATION	CO-EFFICIENT OF RUNOFF	SUB-CATCHMENT AREA	EQUIVALENT AREA	SUB-CATCHMENT DISCHARGE	FLOW IN K&C (INC. BYPASS)	FLOW WIDTH	FLOW DEPTH	KOAD GRADE AT INC	FLOW INTO INLET	BYPASS FLOW	BYPASS STRUCTURE NUMBER	CRITICAL TIME OF CONCENTRATION	RAINFALL INTENSITY	TOTAL (C × A)	SUM ADDITIONAL PIPE FLOW	PIPE FLOW	REACH LENGTH	PIPE GRADE	PIPE/BOX DIMENSIONS	CLASS	FULL PIPE VELOCITY	TIME OF FLOW IN REACH	CHARTS USED	Q9/Qo	Du/Do	S/Do	VELOCITY HEAD	UPSTREAM HEADLOSS	UPSTREAM HEADLOSS	W.S.E. CO-EFFICIENT	CHANGE IN W.S.E.	PIPE FRICTION HEADLOSS	ILX 3I) NORMAL DEPTH	NORMALD	VELOCITY (MINOR STORM) NORMAL DEPTH VELOCITY (1 YEAR STORM)	UPSTREAM OBVERT LEVEL	DOWNSTREAM OBVERT LEVEL	UPSTREAM H.G.L.	DOWNSTREAM H.G.L.	W.S.E.	SURFACE OR GRATE LEVEL	
		min mn	ı/h	ha	ha	l/s	l/s	m	m 9	6 l/	's l/s	l/s		min	mm/h	ha	l/s	l/s	m	%	mm		m/s	min					m		m		m S	% m	m	m/	/s m/s	m	m	m	m	m	m	_
R102 3/R102														5.23	212	0.000	30	30	14.000	1.150	150	uPVC SN8	1.70	0.21	33				0.147	2.00	0.294	C	.294 2.8	0.38	0.150	0 1.70	0 1.7	31.722	31.561	31.948	31.556	32.242	32.650	0
R102 4/R102														5.44	209	0.000	45	45	15.000	0.500	225	uPVC SN8	1.13	0.26	33	0.00	0.67	1.00	0.065	-1.34	0.088		0.088 0.7	2 0.10	0.22	5 1.13	3 1.14	31.540	31.465	31.627	31.520	31.540	32.800	00
R102 5/R102														5.71	206	0.000	60	60	15.000	0.500	300	uPVC SN8	0.85	0.22	33	0.00	0.75	1.00	0.037	-0.25 -	0.009		0.009 0.2	0.04	0.19	2 1.2	5 1.26	31.520	31.445	31.529	31.487	31.520	33.200	00
R102 4/R101														5.93	203	0.000	75	75	8.150	0.500	300	uPVC SN8	1.06	0.12	33				0.057	2.00	0.115	C	.115 0.6	0.04	0.22	8 1.30	0 1.3	31.445	31.404	31.373	31.317	31.487	33.400	0



APF	PRO	DVAL ISSUE - NOT FOR CONSTRUC	TIC	N
07/02/20	С	AMENDED AS PER BCC CHANGE APPLICATION RFI 16/12/19	EL	JCS
28/11/19	В	STORMWATER AMENDED TO 10% AEP DESIGN STORM	EL	JCS
26/06/19	Α	ORIGINAL ISSUE	NTT	JCS
DATE	REV	DESCRIPTION	REC	APP



BRISBANE OFFICE LEVEL 1, 100 BRUNSWICK STREET PO BOX 361
FORTITUDE VALLEY, QLD 4006
PH: (07) 3253 2222
WEB: www.premise.com.au

	DESIGNED		SCALE
	E.LONGMIRE		
т	CHECKED		
'	R.BARGER		
	PROJECT MANAGER		
	T.ZETTL		
	ENGINEERING CERTIFICATION		
	PATRICK BRADY	RPEQ 7112	ORIGINAL SHEET SIZE A1

MIRVAC QUEENSLAND PTY LTD PROPOSED DEVELOPMENT - STAGE 1 (11 LOTS) LOCATION 420 SOUTH PINE ROAD - EVERTON PARK SHEET TITLE STORMWATER CALCULATIONS 10% AEP STORM - SHEET 2

17BNE-0071

	LOCATION		TIME	SU	JB-CATO	CHMEN	NT RUI	NOFF		INLET D	ESIGN						DRAIN	I DESIG	SN .				<u> </u>				HEAD	DLOSSE	ES				PART	FULL		DESIG	SN LEVELS			R	UNOFF		\neg
			I	С	A	CA	Q		Q	<u>Q</u> b		tc	ı	CA		Qр	L	S			Vf=Q/	A		STRU	CTURE R	ATIOS	V2/2g	Ku	hu K	w ł	hw	Sf hf	dn	Vn									
STRUCTURE NUMBER	DOWNSTREAM STRUCTURE SUB-CATCHMENTS CONTRIBUTING	SUB-CATCHMENT TIME OF CONCENTRATION		CO-EFFICIENT OF RUNOFF	SUB-CATCHMENT AREA	EQUIVALENT AREA	SUB-CATCHMENT DISCHARGE	IN K&C YPASS)	ROAD GRADE AT INLE I	PLOW INTO INCE I	BYPASS STRUCTURE NUMBER	CRITICAL TIME OF CONCENTRATION	RAINFALL INTENSITY	TOTAL (C × A)	SUM ADDITIONAL PIPE FLOW	PIPE FLOW	REACH LENGTH	PIPE GRADE	PIPE/BOX DIMENSIONS	CLASS	FULL PIPE VELOCITY	TIME OF FLOW IN REACH	CHARTS USED	Qg/Qo	Du/Do	S/Do	VELOCITY HEAD	UPSTREAM HEADLOSS CO-EFFICIENT	UPSTREAM HEADLOSS	W.5.L. CO-EITICIENT	CHANGE IN W.S.E.	PIPE FRICTION NEADLOSS	NORMAL DEPTH	NORMAL DEPTH VELOCITY UPSTREAM OBVERT	DOWNSTREAM OBVERT	UPSTREAM H.G.L.	DOWNSTREAM H.G.L.	W.S.E.	SURFACE OR GRATE LEVEL	MAJOR SURFACE FLOW CAPACITY	MAJOR SURFACE FLOW	PRODUCT	STRUCTURE NUMBER
		min	mm/h	ı	ha		l/s	l/s s	% l/	/s l/s		min	mm/h	ha	l/s	l/s	m	%	mm		m/s	min					m		m		m	% m	m	m/s m	m	m	m	m	m	l/s	l/s m	m²/s	
1/115	2/115 1/115	5.00	324	1.00 0.0	50 0.0	050 4	45 !	595 4.	80 103	3 492	LOST	5.00	324	0.050	0	103	12.085	2.425	375	2	0.93	0.08	32	1.00		2.83	0.044	4.18	0.185	0.1	185 0.3	0.042	0.160	2.29 30.12	29.83	4 30.627	30.585	30.813	31.152	1234	595 0	0.31	1/115
2/115		5.00	324	1.00 0.1	82 0.1	182 1	163	363 3.	61 59	304	3/115	5.00	324	0.231	0	162	17.489	1.450	375	2	1.46	0.15	34 37	0.37	1.00	3.06	0.109	1.30	0.143	0.1	0.8	0.149	0.246	2.11 29.814	1 29.56	0 30.443	30.294	30.585	30.785	1265	363 0	0.22	2/115
3/115	4/115 1/116 2/116 1/115 2/115 3/115	5.00	324	1.00 0.0	0.0	060 5	54 !	558 0.	90 12	546	5/115	5.36	317	0.522	0	230	11.547	0.520	600	2	0.81	0.12	42 46 43 47	0.05	0.88	2.93	0.034	1.36	0.046 1.5	9 0.0	0.1	4 0.016	0.307	1.58 29.14	3 29.08	3 30.249	30.233	30.302	30.435	586	558 0	0.22	3/115
4/115	5/115 1/117 1/116 2/116 1/115 2/115 3/115											5.42	316	0.659	0	239	10.669	0.370	600	2	0.85	0.13	34 37	0.00	1.00	2.95	0.037	0.64	0.024	0.0	0.1	0.016	0.349	1.40 29.063	3 29.02	3 30.209	30.193	30.233	30.417				4/115
5/115																																						30.193	30.316	678	175		5/115
1/116	2/116 1/116	5.00	324	1.00 0.1	70 0.1	170 1	153	153 3.	88 27	126	2/116	5.00	324	0.170	0	27	10.967	2.763	375	2	0.24	0.07	32	1.00		2.24	0.003	6.01	0.018	0.0	0.0	0.003	0.077	1.65 29.938	3 29.63	5 30.383	30.380	30.401	30.923	182	153 0	0.08	1/116
2/116	3/116 1/116 2/116	5.00	324	1.00 0.0	060 0.0	060 5	54 :	180 1.	62 39	141	1/117	5.07	323	0.230	0	65 3	16.897	1.184	375	2	0.59	0.16	32 33 34	0.59	1.00	3.04	0.018	1.69	0.030	0.0	030 0.1	0.023	0.151	1.56 29.61	5 29.41	5 30.350	30.327	30.380	30.595	181	180 0	0.07	2/116
3/116	3/115 1/116 2/116											5.23	319	0.230	0	63 1	11.993	0.909	375	2	0.57	0.13	37 42 43	0.00	1.00	3.49	0.017	1.02	0.017 1.0	8 0.0	0.18	0.016	0.160	1.41 29.39	5 29.28	6 30.310	30.294	30.328	30.500				3/116
1/117	4/115 1/117	5.00	324	1.00 0.1	39 0.1	139 1	126	487 0.	40 16	471	1/118	5.00 3	324	0.139	0	16	5.139	1.509	450	2	0.10	0.04	3/2	1.00		2.51	0.001	4.88	0.003	0.0	0.03	0.000	0.066	1.12 29.556	5 29.47	8 30.233	30.233	30.235	30.365	488	487 0	0.18	1/117
1/140	2/140 1/140	5.00	324	1.00 0.0	0.0	086 7	77 :	77 0.	53 14	63	2/140	5.00	324	0.086	0	14	10.168	0.401	375	2	0.13	0.17	32	1.00		2.09	0.001	4.62	0.004	0.0	004 0.0	0.001	0.091	0.69 32.436	5 32.39	5 32.839	32.838	32.843	32.879	478	77 0	0.06	1/140
2/140	3/140 1/140 2/140	5.00	324	1.00 0.0	10 0.0	010 9)	72 0.	36 -11	1 83	LOST					-	13.749		_	2	0.02			0.00	1.00	1.05	0.000	0.21	0.000	_			_	0.42 32.375				32.393	32.838	848	72		2/140
3/140	4/140 1/140 2/140											5.40			_					2	1.45			_	_		0.107			_			_	1.45 32.103									3/140
4/140	5/140 1/140 2/140 4/140	5.00	324	1.00 0.0	17 0.0	017 1	15 :	15 0.	51 15	0	1/115									2	1.56	0.29		_	_		0.125			_				1.56 31.988		_				218	15		4/140
5/140 6/140	6/140 1/140 2/140 4/140	-			+							6.08	504	U.113	159	1/1	58.253	2.2/9	5/5	2	1.55	0.27	54 5/	0.00	1.00	1.22	0.122	0.68	U.U85	0.0	2.1	.5 0.856	0.219	2.55 31.897	51.02	5 51.826	31.005	31.908 31.005					5/140 6/140
	2/R101	0.00	0	0.0	00 0.0	000 0)	0	0	0		5.00	324	0.000	98	98	6.977	1.036	225	uPVC	2.46	0.09	32				0.310	0.00	0.000	0.0	000 3.4	2 0.238	0.225	2.46 31.751	31.67	9 31.91	31.677			390	130		1/R101
	3/R101											5.09			98			1.000		2140	1.39		34 37	0.00	0.75		0.098							1.82 31.734									2/R101
3/R101	4/R101											5.22	320	0.000	113	113	13.357	0.800	300	5110	1.60		33	0.00	1.00	1.09	0.130	0.20	0.026	0.0	026 1.0	0.114	0.300	1.60 31.579	31.47	3 31.565	31.431	31.591	32.850			3	3/R101
4/R101	5/R101				\top							6.04	304	0.000	203	203	6.472	0.370	450		1.28	0.10	46 47	0.00	0.94	2.27	0.083	1.90	0.158 2.2	0 0.1	183 0.5	0.033	0.450	1.28 30.315	30.29	1 30.701	30.669	30.884	33.500			4	4/R101
5/R101																																						30.669	31.250	119	118	5	5/R101
1/R102	2/R102											5.00	324	0.000	15	15	15.000	1.150	150	uPVC SN8	0.85	0.23					0.037	0.00	0.000	0.0	0.6	0.104	0.099	1.21 31.895	31.72	2 32.346	32.242	32.346	32.500			1	1/R102
	<u> </u>	1									1							<u> </u>		15,40	1		1	1												1		1					

APP	RC	OVAL ISSUE - NOT FOR CONSTRUC	TIC	N
07/02/20	C	AMENDED AS PER BCC CHANGE APPLICATION RFI 16/12/19	EL	JCS
28/11/19	В	STORMWATER AMENDED TO 1% AEP DESIGN STORM	EL	JCS
26/06/19	Α	ORIGINAL ISSUE	NTT	JCS
DATE	REV	DESCRIPTION	REC	APP

BRISBANE OFFICE LEVEL 1, 100 BRUNSWICK STREET PO BOX 361 FORTITUDE VALLEY, QLD 4006
PH: (07) 3253 2222
WEB: www.premise.com.au

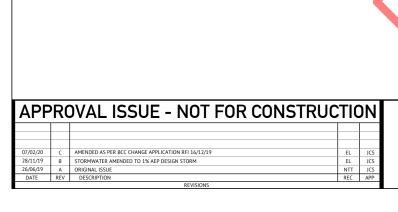
DESIGNED	SC
E.LONGMIRE	
CHECKED	
R.BARGER	
PROJECT MANAGER	
T.ZETTL	
ENGINEERING CERTIFICATION	
PATRICK BRADY RPEQ 7112	

PROPOSED DEVELOPMENT - STAGE 1 (11 LOTS)

MIRVAC QUEENSLAND PTY LTD

LOCATION 420 SOUTH PINE ROAD - EVERTON PARK SHEET TITLE STORMWATER CALCULATIONS 1% AEP STORM - SHEET 1 17BNE-0071

		LOCATION	1	IME	SUB-	-CATCH	MENT F	RUNOFI	F	INL	ET DESIGN					D	RAIN [DESIGN								HEA	DLOSS	ES					PART F	ULL			DESIGN	I LEVELS			RI	INOFF	
			tc	1 (A	CA	Q			Qg	Qb	tc	ı	CA	(Ďb Ι	L	S		Vf	=Q/A		STF	RUCTU	RE RATIOS	V2/2g	Ku	hu	Kw	hw	Sf	hf	dn	Vn									
STRUCTURE NUMBER	DOWNSTREAM STRUCTURE	SUB-CATCHMENTS CONTRIBUTING	SUB-CATCHMENT TIME OF CONCENTRATION	RAINFALL INTENSITY	SUB-CATCHMENT AREA	EOUIVALENT AREA	SUB-CATCHMENT	FLOW IN K&C	ROAD GRADE AT INLET	FLOW INTO INLET	BYPASS FLOW BYPASS STRUCTURE NUMBER	CRITICAL TIME OF CONCENTRATION	RAINFALL INTENSITY	TOTAL (C × A)	SUM ADDITIONAL PIPE FLOW	PIPE FLOW	KEACH LENGIH	PIPE GRADE	PIPE/BOX DIMENSIONS		FULL PIPE VELOCITY TIME OF FLOW	IIN KEACH CHARTS USED	00/00	53. KS	s/po	VELOCITY HEAD	UPSTREAM HEADLOSS CO-EFFICIENT	UPSTREAM HEADLOSS	W.S.E. CO-EFFICIENT	CHANGE IN W.S.E.	N SLOPE	PIPE FRICTION HEADLOSS (L × Sf)	NORMAL DEPTH	NORMAL DEPTH VELOCITY	UPSTREAM OBVERT LEVEL	DOWNSTREAM OBVERT LEVEL	UPSTREAM H.G.L.	DOWNSTREAM H.G.L.	W.S.E.	SURFACE OR GRATE LEVEL	MAJOR SURFACE FLOW CAPACITY	_ ⊥	PRODUCT
			min n	nm/h	ha	ha	l/s	l/s	%	l/s	l/s	min r	mm/h	ha	l/s l	/s r	n	%	mm	r	n/s mii	ı				m		m		m	%	m	m	m/s	m	m	m	m	m	m	l/s	l/s m	m²/s
2/R102	3/R102	2										5.23	319	0.000	30 30	14.0	000 1	.150	150	uPVC SN8 1.7	0.21	33				0.147	2.00	0.294	0.3	294 2	2.81	0.389	0.150	1.70	31.722	31.561	31.948	31.556	32.242	32.650			
3/R102	4/R102	2										5.44 3	315	0.000	45 45	15.0	000 0	.500	225	uPVC SN8 1.1	0.26	33	0.00	0 0.6	7 1.00	0.065	-1.34	-0.088	-0	.088).72	0.108	0.225	1.13	31.540	31.465	31.627	31.520	31.540	32.800			
4/R102	5/R102	2										5.71 3	310	0.000	60 60	15.0	000 0	.500	300	uPVC SN8 0.8	5 0.22	33	0.00	0 0.7	5 1.00	0.037	-0.25	-0.009	-0	.009	0.28	0.041	0.192	1.25	31.520	31.445	31.529	31.487	31.520	33.200			
5/R102	4/R101	1										5.93	306	0.000	75 75	8.15	0 0	.500	300	uPVC SN8 1.0	5 0.12	33				0.057	2.00	0.115	0.:	115 0	0.68	0.042	0.228	1.30	31.445	31.404	31.373	31.317	31.487	33.400			





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DESIGNED		SCALE
E.LONGMIRE		
CHECKED		
R.BARGER		
PROJECT MANAGER		
T.ZETTL		
ENGINEERING CERTIFICATION		
PATRICK BRADY	RPEQ 7112	ORIGINAL SHEE

MIRVAC QUEENSLAND PTY LTD PROPOSED DEVELOPMENT - STAGE 1 (11 LOTS) LOCATION 420 SOUTH PINE ROAD - EVERTON PARK SHEET TITLE STORMWATER CALCULATIONS 1% AEP STORM - SHEET 2

17BNE-0071