



ROCKHAMPTON REGIONAL COUNCIL
APPROVED PLANS
 These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/96-2024
Dated: 16 December 2024



Client
PeaceField Egg Farms

Discipline
Building Design

Status
Preliminary

Revisions

Rev	Description	Date	Drawn	Check
1	Revision 1	Date 1		

Project
Peacefield Rockhampton

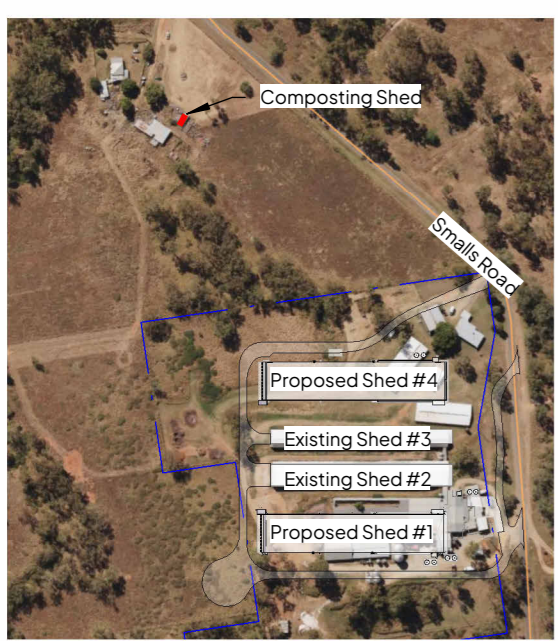
Address
**6 Smalls Road
 Hamilton Creek
 QLD 4714**

Title
Farm Layout

Drawn **DRK** Design **DRK** Check _____

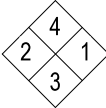
Project Number **3D24006** Scale at A3 **As indicated**

Drawing Number **A101** Revision **1**

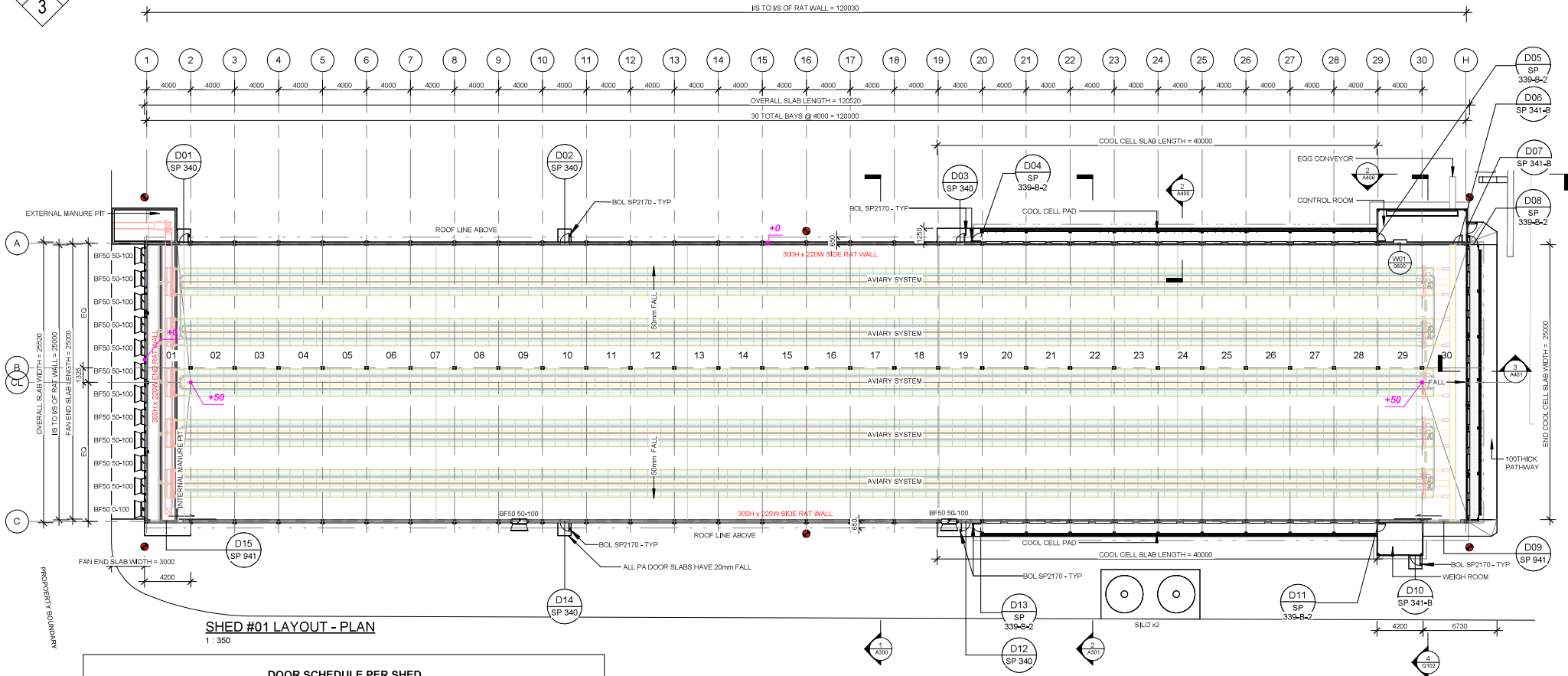


Site Key Layout
 Scale 1: 5000

Site Layout
 Scale 1:1000



SHED #01
 - SHED 4 IS MIRRORED FROM SHED 1



SHED #01 LAYOUT - PLAN
 1 : 350

DOOR SCHEDULE PER SHED

Level	DOOR NUMBER	SP #	DESCRIPTION	Head Height	Clear Opening Width	Above FFL (TOS)
TOS	D01	SP 340	SP 340 - PA DOOR: 1900H x 820W (LEAF SIZE)	2050	820	150
TOS	D02	SP 340	SP 340 - PA DOOR: 1900H x 820W (LEAF SIZE)	2050	820	150
TOS	D03	SP 340	SP 340 - PA DOOR: 1900H x 820W (LEAF SIZE)	2050	820	150
TOS	D04	SP 339-B-2	SP 339-B - PA DOOR: 2040H x 750W (LEAF SIZE) - NO SILL	2040	750	0
TOS	D05	SP 339-B-2	SP 339-B - PA DOOR: 2040H x 750W (LEAF SIZE) - NO SILL	2040	750	0
TOS	D06	SP 341-B	SP 341-B - PA DOOR: 2040H x 820W (LEAF SIZE) - NO SILL	2190	820	150
TOS	D07	SP 341-B	SP 341-B - PA DOOR: 2040H x 820W (LEAF SIZE) - NO SILL	2040	820	0
TOS	D08	SP 339-B-2	SP 339-B - PA DOOR: 2040H x 750W (LEAF SIZE) - NO SILL	2040	750	0
TOS	D09	SP 941	SP 941 - SINGLE SLIDING DOOR: 3000x2400 2	2400	3000	0
TOS	D10	SP 341-B	SP 341-B - PA DOOR: 2040H x 820W (LEAF SIZE) - NO SILL	2040	820	0
TOS	D11	SP 339-B-2	SP 339-B - PA DOOR: 2040H x 750W (LEAF SIZE) - NO SILL	2040	750	0
TOS	D12	SP 340	SP 340 - PA DOOR: 1900H x 820W (LEAF SIZE)	2050	820	150
TOS	D13	SP 339-B-2	SP 339-B - PA DOOR: 2040H x 750W (LEAF SIZE) - NO SILL	2040	750	0
TOS	D14	SP 340	SP 340 - PA DOOR: 1900H x 820W (LEAF SIZE)	2050	820	150
TOS	D15	SP 941	SP 941 - SINGLE SLIDING DOOR: 3000x2400 2	2400	3000	0

DOOR SPECIFICATIONS:

- COLOUR EXTERNAL - WHITE (SURFMIST OR ALIKE).
- COLOUR INTERNAL - WHITE (SURFMIST OR ALIKE).
- COLOUR FRAME - WHITE (SURFMIST OR ALIKE).
- BOLLARDS PROVIDED TO EXTERNAL OPENING DOORS.

WINDOW SCHEDULE PER SHED

Level	WINDOW NUMBER	TYPE	DESCRIPTION	Height	Width	Head Height	Above FFL (TOS)
TOS	W01	0600	SLIDING GLASS WINDOW: 0609 (X.O)	600	600	1800	1200
Grand total: 1							

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PRELIMINARY DRAWINGS



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ABN: 43 124 970 878
 BSA QLD: 1214566
 OCBA SA: 277785
 BC VIC: CB-UJ 44246

Phone: 1300 815 888 (+61) 07 3281 3200
 Fax: 1300 816 888 (+61) 07 3281 8295
 Email: enquires@santrev.com.au
 Web: www.santrev.com.au

GENERAL NOTES

- ALL DIMENSIONS ARE IN mm (millimetres) UNLESS NOTED OTHERWISE
- WALL BRACING (WB) ON BAYS 14 AND 25
- DRAIN IN SIDE WALLS - BAY #18, 12, 16, 20, 24, 28, 32, 36, 40 AND 2 AT EACH END WALL
- ALL SIDE PA DOORS TO BE IN CENTER OF BAY (X.O)
- ALL PA DOOR TO HAVE 20mm FALL

THE FOLLOWING TO BE WITH CLIENT PRIOR TO ANY INSTALL

- FAN CONFIGURATION
- MIN-VENT CONFIGURATION
- HEATER POSITIONS
- MINIMUM VENTILATION FAN CONFIGURATION TO BE CONFIRMED



REV	DESCRIPTION	DATE
A	Preliminary Drawings	19/01/2024

PEACEFIELD ROCKHAMPTON

FOR: CLIENT
 PROJECT ADDRESS:
 6 SMALLS ROAD HAMILTON CREEK
 QLD

SHEET TITLE:
SINGLE SHED LAYOUT

JOB No.:
PEAQ-R1

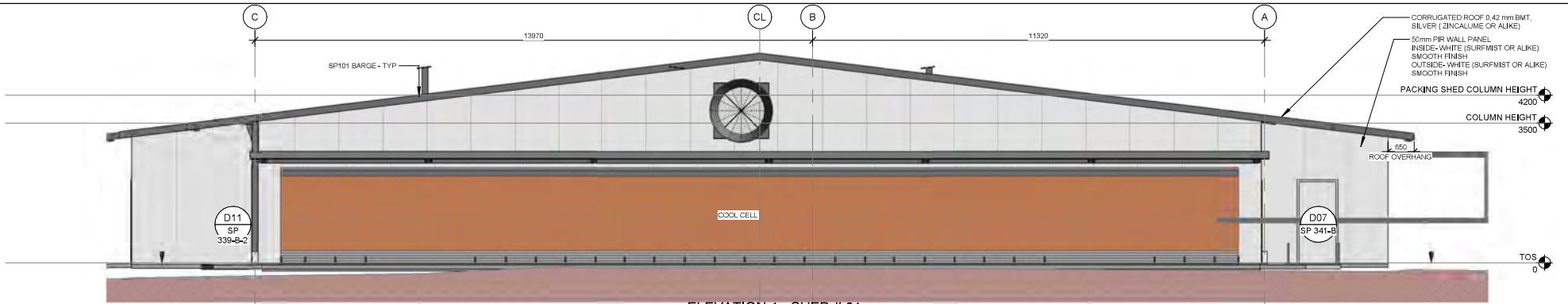
SCALE (A3):
As indicated

DATE:
11/01/2024

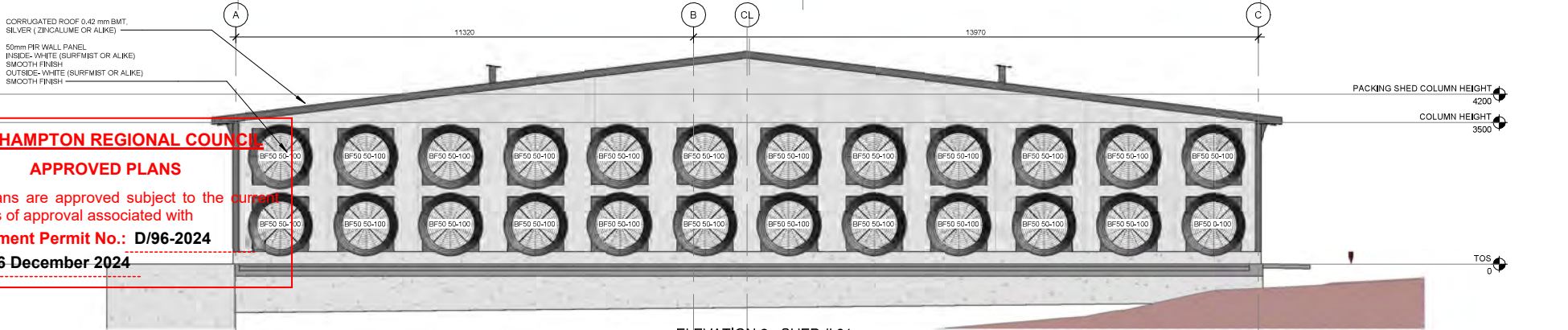
DRAWN BY:
SP

REV:
A

DRG No.:
A102

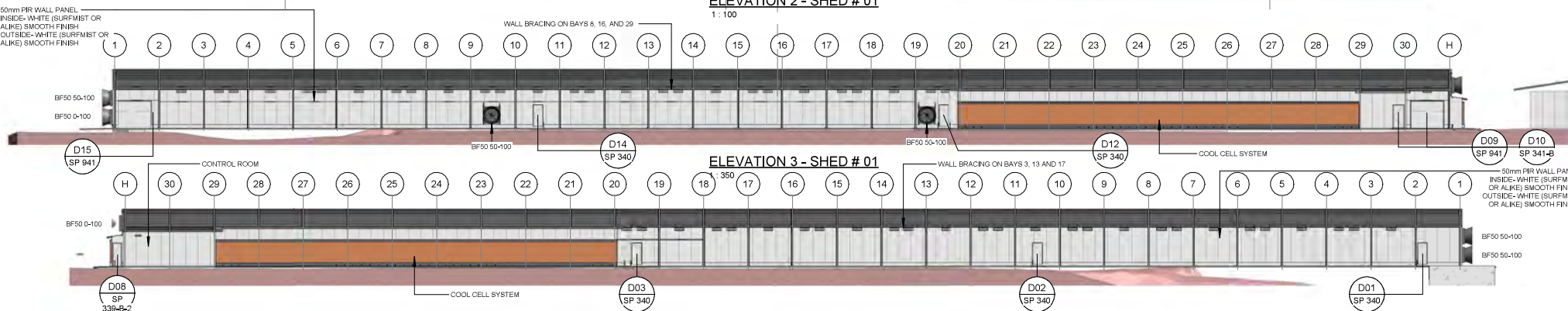


ELEVATION 1 - SHED # 01
1: 100

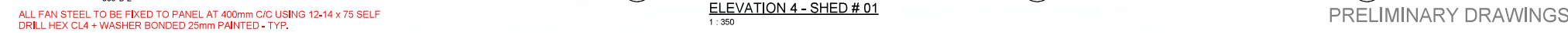


ELEVATION 2 - SHED # 01
1: 100

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ELEVATION 3 - SHED # 01
1: 350



ELEVATION 4 - SHED # 01
1: 350

PRELIMINARY DRAWINGS



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Phone: 1300 815 888 (+61) 07 3281 3200
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Web: www.santrev.com.au

GENERAL NOTES
• ALL DIMENSIONS ARE IN mm (millimetres) UNLESS NOTED OTHERWISE
ALL FAN STEEL TO BE FIXED TO PANEL AT 400mm C/C USING 12-14 x 75 SELF DRILL HEX CL4 + WASHER BONDED 25mm PAINTED - TYP.
25mm PAINTED WASHER-SIDE WALLS: INTERNAL, END WALLS-EXTERNAL.
MIN-VENT INSTALL TO AVOID ANY CLASH BETWEEN DOOR FRAME + MIN-VENT FRAME

REV	DESCRIPTION	DATE
A	Preliminary Drawings	19/01/2024

PEACEFIELD ROCKHAMPTON
FOR: CLIENT
PROJECT ADDRESS:
6 SMALLS ROAD HAMILTON CREEK QLD

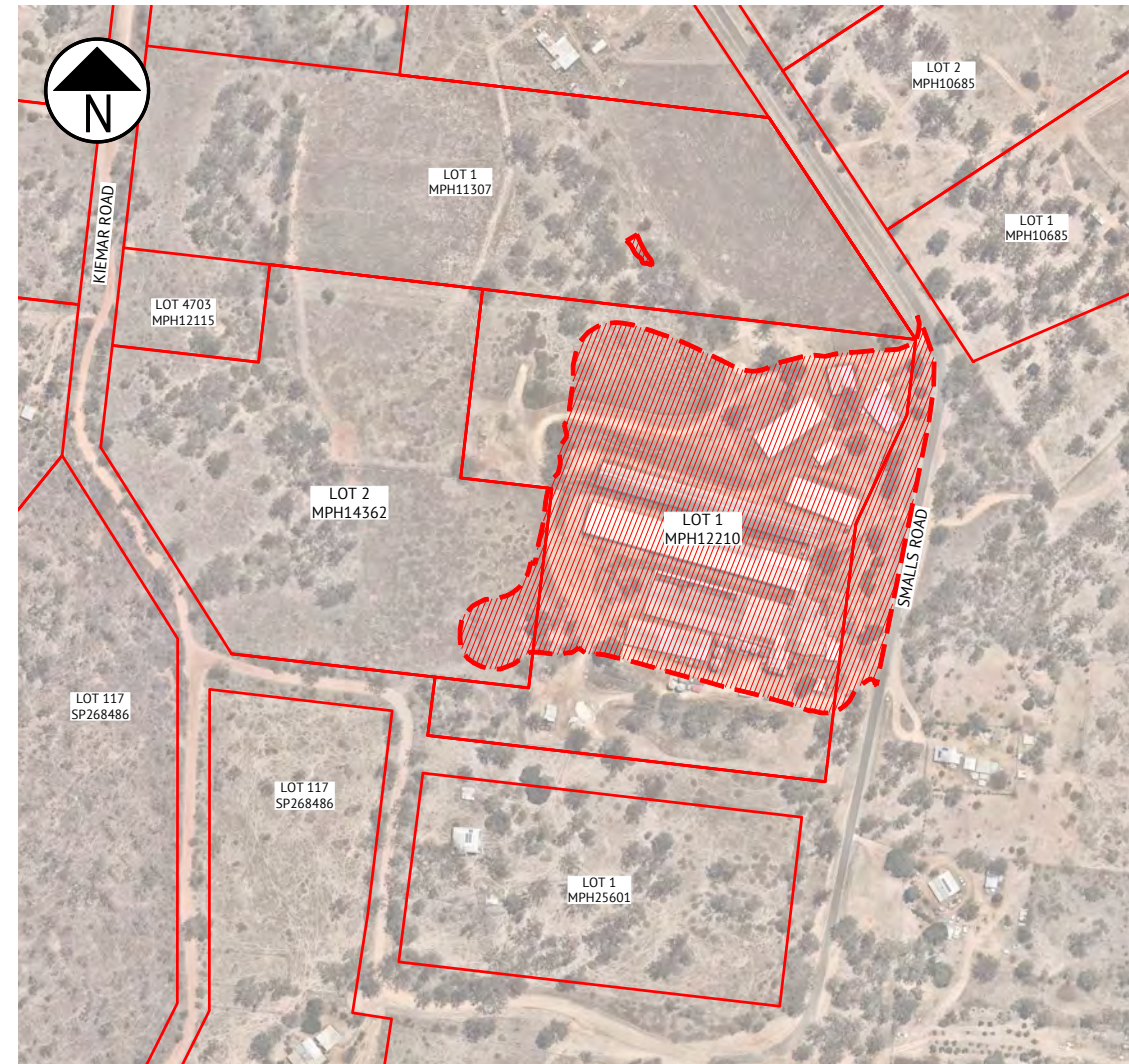
SHEET TITLE:	
SHED ELEVATIONS	
JOB No.: PEAQ-R1	DRAWN BY: SP
SCALE (A3): As indicated	REV: A
DATE: 11/01/2024	DRG No.: A200

PROPOSED EGG FARM EXPANSION

4-6 SMALLS RD, MT MORGAN

FOR SANTREV PTY LTD

ROCKHAMPTON REGIONAL COUNCIL
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LOCALITY PLAN
 ROCKHAMPTON REGIONAL COUNCIL
 LOT 1 ON MPH12210, LOT 2 ON MPH14362 & LOT 1 ON MPH11307

DRAWING SCHEDULE	
DRAWING NO.	DRAWING TITLE
C001	COVER SHEET, LOCALITY PLAN & DRAWING SCHEDULE
C002	SAFETY IN DESIGN REPORT
C003	GENERAL NOTES
C004	EXISTING SITE PLAN
C100	EARTHWORKS LAYOUT PLAN
C101	EARTHWORKS SITE SECTIONS
C200	ROAD GEOMETRY PLAN
C210	ROADWORKS & STORMWATER DRAINAGE PLAN
C220	ROAD LONGITUDINAL SECTION
C230	ROAD CROSS SECTION SHEET 1 OF 7
C231	ROAD CROSS SECTION SHEET 2 OF 7
C232	ROAD CROSS SECTION SHEET 3 OF 7
C233	ROAD CROSS SECTION SHEET 4 OF 7
C234	ROAD CROSS SECTION SHEET 5 OF 7
C235	ROAD CROSS SECTION SHEET 6 OF 7
C236	ROAD CROSS SECTION SHEET 7 OF 7
C600	SOIL EROSION & SEDIMENT CONTROL - LAYOUT PLAN
C601	SOIL EROSION & SEDIMENT CONTROL - DETAILS PLAN



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 CAUSED AS A RESULT OF THE WORKS.

LEVEL AND COORDINATE DATUM INFORMATION

PSM 752941 MGA2020 ZONE 56
 LOCATION: HALL STREET, MOUNT MORGAN
 E: 233582.444 N: 7382336.122 AHD: 253.009m

FOR OPERATIONAL WORKS APPROVAL

DATE	REV	DESCRIPTION	REC	APP
27/06/2024	A	FOR OPERATIONAL WORKS APPROVAL	AB	CWS
05/06/2024	1	PRELIMINARY - NOT FOR CONSTRUCTION	AB	CWS

ROCKHAMPTON OFFICE
 21 EAST STREET
 PO BOX 264
 ROCKHAMPTON, QLD, 4700
 PH: (07) 4829 3660
 WEB: www.premise.com.au

DESIGNED
A.BURGGRAAFF
 CHECKED
C.SHIELDS
 PROJECT MANAGER
CHRIS SHIELDS
 ENGINEERING CERTIFICATION
 CHRIS SHIELDS RPEQ 9347

SCALE
 0 40 80 120m
 SCALE 1:2000 (A1)
 ORIGINAL SHEET SIZE A1

CLIENT
SANTREV PTY LTD

PROJECT
PROPOSED EGG FARM EXPANSION

LOCATION
4-6 SMALLS RD, MOUNT MORGAN

SHEET TITLE
COVER SHEET, LOCALITY PLAN & DRAWING SCHEDULE

JOB CODE
P001540

SHEET NUMBER	REV
C001	A

DESIGN HAZARD SCHEDULE

ITEM	DESIGN HAZARD	POTENTIAL HAZARD	RISK	ELIMINATION / MINIMISATION OF HAZARD / RISK	RESIDUAL RISK
D1	ROAD DESIGN HAZARD	INTERNAL ROADS AND ACCESSES CONNECTING TO THE EXISTING INTERNAL ACCESS ROAD NETWORK MUST BE DESIGNED TO SUIT A 19m SEMI IN THE SOUTHERN AREA AND A 26m B-DOUBLE IN THE NORTHERN AND WESTERN AREAS.	MODERATE	ALL INTERNAL ROADS AND ACCESSES HAVE BEEN DESIGNED TO ACCOMMODATE TURNING MOVEMENTS FOR THE DESIRED VEHICLES.	LOW
D2	SITE DRAINAGE HAZARD	SITE MUST DRAIN EFFECTIVELY IN BOTH MINOR AND MAJOR RAIN EVENTS, ENSURING THAT NEIGHBOURING PROPERTIES AND CATCHMENTS ARE NOT NEGATIVELY IMPACTED.	HIGH	STORMWATER NETWORK AND SITE GRADING HAVE BEEN DESIGNED TO ENSURE THAT ALL STORMWATER FLOWS ARE DIRECTED TO EXISTING DISCHARGE POINTS	LOW
D3	EXISTING UNDERGROUND / OVERHEAD SERVICES HAZARD	EXISTING UNDERGROUND AND/OR OVERHEAD SERVICES HAZARD EXIST ON SITE.	MODERATE	SITE HAS BEEN DESIGNED TO PREVENT THE NEED FOR RELOCATION OF KNOWN EXISTING SERVICES WHERE POSSIBLE. CONTRACTOR IS RESPONSIBLE FOR CONDUCTING FURTHER CHECKS.	LOW

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CONSTRUCTION HAZARD SCHEDULE

ITEM	POTENTIAL HAZARD	POSSIBLE PREVENTATIVE 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	WORKS NEAR RAIL, AIRPORTS AND ROADS HAZARD	ALL REQUIRED PERMITS, APPROVALS AND SAFETY REQUIREMENTS FROM THE RELEVANT AUTHORITY SHOULD BE OBTAINED PRIOR TO COMMENCING WORK. A REPRESENTATIVE OF THE RELEVANT AUTHORITY SHALL REMAIN ON SITE DURING CONSTRUCTION WHILE THE HAZARD REMAINS.
C5	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.
C6	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.
C7	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.
C8	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.
C9	ASBESTOS HAZARD	ALL PERSONNEL SHOULD BE ADVISED OF THE POTENTIAL PRESENCE OF ASBESTOS AND AN IDENTIFICATION AND ACTION PLAN SHALL BE PUT IN PLACE. SAMPLING AND IDENTIFICATION IS TO BE UNDERTAKEN IN ACCORDANCE WITH WORKPLACE HEALTH AND SAFETY REGULATIONS. IF SAMPLING CONFIRMS THE PRESENCE OF ASBESTOS THEN THE ACTION PLAN IS TO BE IMPLEMENTED TO REMEDIATE THE SITE.
C10	POTENTIAL ROCK FALL	LAND ABOVE THE SITE HAS BEEN CLEARED AND SOME EARTHWORKS HAS BEEN UNDERTAKEN CREATING A POTENTIAL ROCK FALL HAZARD. SUITABLE PERSONNEL SHALL BE RESPONSIBLE FOR IDENTIFYING ANY POTENTIAL HAZARD AND THE CONTRACTOR SHALL TAKE APPROPRIATE ACTION TO ELIMINATE THE HAZARD.

DESIGN HAZARD NOTES:

- 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.
- THIS REPORT SUMMARISES AN INTERNAL REVIEW OF THE PREMISE DETAILED DESIGN DRAWINGS FOR DESIGN SAFETY.
- 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.
- 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 ON THE PREMISE DRAWINGS.
- 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:

- 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.
- PURSUANT TO THE WORK HEALTH AND SAFETY ACT 2011 WE HEREBY ADVISE THAT OUR DESIGN SAFETY REVIEW HAS IDENTIFIED UNUSUAL OR 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 EFFECTS OR INABILITY TO CONTINUE	HUGE FINANCIAL OR TIME LOSS
4 - MAJOR	EXTENSIVE INJURIES, OR ONSET OF SEVERE OR LIFE THREATENING HEALTH EFFECTS TO SINGLE PERSON ONSITE. MULTIPLE PERSONS WITH ONSET OF IRREVERSIBLE HEALTH EFFECTS. PERMANENT INJURY TO PERSON ONSITE.	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 EVENT <u>SHOULD</u> 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 <u>MAY</u> OCCUR IN EXCEPTIONAL CIRCUMSTANCES	LESS THAN ONCE IN 30 YEARS

RISK ANALYSIS MATRIX

		CONSEQUENCE				
		1 - INSIGNIFICANT	2 - MINOR	3 - MODERATE	4 - MAJOR	5 - CATASTROPHIC
LIKELIHOOD	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

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

FOR OPERATIONAL WORKS APPROVAL

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05/06/2024	1	PRELIMINARY - NOT FOR CONSTRUCTION	AB	CWS



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 WEB: www.premise.com.au

DESIGNED
A.BURGGRAFF
 CHECKED
C.SHIELDS
 PROJECT MANAGER
CHRIS SHIELDS
 ENGINEERING CERTIFICATION
 CHRIS SHIELDS RPEQ 9347

SCALE
 ORIGINAL SHEET SIZE A1

CLIENT
SANTREV PTY LTD
 PROJECT
PROPOSED EGG FARM EXPANSION
 LOCATION
4-6 SMALLS RD, MOUNT MORGAN
 SHEET TITLE
SAFETY IN DESIGN REPORT

JOB CODE
P001540
 SHEET NUMBER
C002
 REV
A

GENERAL

1.0 EXISTING SERVICES
THE CONTRACTOR SHALL ESTABLISH THE EXTENT AND LOCATION OF ALL EXISTING SERVICES WITHIN THE WORKS AREA. ALL SERVICES SHALL BE PROTECTED AGAINST ACCIDENTAL DAMAGE DURING THE CONSTRUCTION OF THE WORKS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS INCURRED DUE TO DAMAGE TO EXISTING SERVICES.

2.0 INSPECTIONS
A MINIMUM OF 24 HOURS NOTICE OF ALL REQUIRED INSPECTIONS SHALL BE GIVEN BY THE CONTRACTOR TO THE CLIENT/SUPERINTENDENT / ENGINEER. THE ENGINEER REQUIRES INSPECTIONS AT THE FOLLOWING STAGES OF CONSTRUCTION.

- a. AT SUBGRADE LEVEL
- b. BASE COURSE FINAL
- c. ALL STORMWATER PRIOR TO BACKFILLING

CHECK LEVELS AND TESTING RESULTS WILL BE REQUIRED PRIOR TO INSPECTIONS WHERE APPLICABLE.

EARTHWORKS AND ROADWORKS

1.0 EARTHWORKS

1.1 TOPSOIL
THE CONTRACTOR SHALL STRIP TOPSOIL FROM THE WHOLE OF THE WORKS AREA IN PRIVATE PROPERTY TO A DEPTH OF 100mm OR AS DIRECTED BY THE SUPERINTENDENT / ENGINEER AND STOCKPILE IT IN THE NOMINATED STOCKPILE AREA PRIOR TO COMMENCING BULK EARTHWORKS. THE CONTRACTOR SHALL BE REQUIRED TO CARRY OUT TEMPORARY STABILISING MEASURES TO MINIMISE THE TRANSPORTATION OF AIRBORNE MATERIAL THAT MAY CAUSE NUISANCE TO NEIGHBOURING PROPERTIES.

1.2 BULK FILLING

1.3.1 ROADS
PRIOR TO ANY FILLING THE AREA TO BE FILLED SHALL BE PROOF ROLLED BY FOUR PASSES OF A 10 TONNE MINIMUM STATIC MASS ROLLER / LOADED WATER TRUCK. THE FINAL PASS SHALL BE TREATED AS TEST ROLLING IN ACCORDANCE WITH TESTING CLAUSE 5.4 OF AS 3798 WITH INSPECTION CARRIED OUT BY THE APPROVED GEOTECHNICAL TESTING AUTHORITY OR THE SUPERINTENDENT / ENGINEER. THE COST OF PROOF AND TEST ROLLING SHALL BE DEEMED TO BE INCLUDED IN THE CONTRACT LUMP SUM. FILLING SHALL BE PLACED IN LAYERS OF NOT MORE THAN 200mm LOOSE THICKNESS AND COMPACTED TO A MINIMUM STANDARD MAXIMUM DRY DENSITY AS DETERMINED BY AS 1289, E1.1 AND SPECIFIED IN THIS SPECIFICATION. TEST FREQUENCY SHALL BE AS STATED IN THE QUALITY ASSURANCE TESTING TABLE A. AT ALL TIMES DURING BULK EARTHWORKS THE CONTRACTOR SHALL ENSURE THAT THE WORKS ARE KEPT IN A STATE SO AS NOT TO ALLOW PONDING ON THE WORKS OR EROSION FROM THE WORKS IN THE EVENT OF RAIN. THE MOISTURE CONTENT OF THE FILL SHALL BE MAINTAINED AS CLOSE AS IS PRACTICAL TO OPTIMUM MOISTURE CONTENT DURING THE COMPACTION OF THE FILL.

1.3.2 SELECT FILL
SELECT FILL MATERIAL SHALL BE IN ACCORDANCE WITH THE BELOW SPECIFICATION TO ENSURE MOISTURE INGRESS UNDER THE SLAB IS MINIMISED.
GRADING COEFFICIENT SHALL BE BETWEEN 16 AND 34, WHEREBY GRADING COEFFICIENT IS:

$((\% \text{PASSING } 26.5\text{MM SIEVE} - \% \text{PASSING } 2.0\text{MM SIEVE}) \times (\% \text{PASSING } 4.75\text{MM SIEVE}) / 100)$

SHRINKAGE PRODUCT SHALL BE BETWEEN THE RANGE OF 100 TO 300, WHEREBY THE SHRINKAGE PRODUCT IS:
(LINEAR SHRINKAGE X %PASSING 0.425MM SIEVE).

SOIL TESTING CONFIRMING MATERIAL COMPLIANCE IS TO BE PROVIDED BY THE CONTRACTOR.

ALL EARTHWORKS FILL ON LOTS IS TO BE LEVEL 1 CERTIFIED IN ACCORDANCE WITH AS3798-1996 WITH EXTENTS SHOWN ON EARTHWORKS PLAN. CERTIFICATION SHALL STATE THAT FILL IS SIMILAR TO THAT DEFINED IN SECTION 6.1.2 OF AS2870.1-1996 AND CAN THUS BE CLASSIFIED AS "CONTROLLED FILL".

1.4 DUST CONTROL
THE CONTRACTOR SHALL ENSURE THAT DUST RESULTING FROM THE EARTHWORKS OPERATIONS IS KEPT TO A MINIMUM BY THE APPLICATION OF WATER TO THE WORKS AREA OR BY OTHER APPROVED METHODS AS DIRECTED BY THE ENGINEER/SUPERINTENDENT DURING ALL PERIODS OF CONSTRUCTION.

1.5 WATER FOR CONSTRUCTION PURPOSES
THE PRINCIPAL SHALL NOT SUPPLY WATER FOR USE IN CONSTRUCTION OF THE WORKS. THE CONTRACTOR SHALL MAKE HIS OWN ARRANGEMENTS FOR OBTAINING WATER FOR THESE PURPOSES. WATER CAN BE PURCHASED FROM COUNCIL WITH PRIOR CONSENT.

1.6 REPLACEMENT OF UNSOUND MATERIAL
IF DURING PROOF ROLLING OF THE FILL/PAVEMENT AREAS OR IN THE CONSTRUCTION OF CUTS, UNSOUND OR UNSUITABLE MATERIAL IS ENCOUNTERED WHICH IN THE OPINION OF THE ENGINEER IS NOT SUITABLE FOR INCLUSION IN THE FILL, THE CONTRACTOR SHALL EXCAVATE AND REMOVE TO SPOIL AS DIRECTED ON SITE SUCH UNSUITABLE MATERIAL. THE CONTRACTOR SHALL THEN REPLACE THE UNSOUND MATERIAL WITH SUITABLE MATERIAL DRAWN FROM THE CUTTING OPERATION ON SITE (IF AVAILABLE), OR FROM A SUITABLE SUPPLIER.

1.7 REPLACEMENT OF TOPSOIL
AT THE COMPLETION OF THE BULK EARTHWORKS, ROADWORKS AND SERVICES INSTALLATION AND FOLLOWING APPROVAL OF THE FINISHED SURFACE OF FOOTPATHS AND OTHER FILLED AREAS, THE CONTRACTOR SHALL LIGHTLY TINE UP THE FILL SURFACE AND REPLACES THE STOCKPILED TOPSOIL IN THE AREAS NOMINATED BY THE SUPERINTENDENT.
THE FINISHED SURFACE OF THE TOPSOIL SHALL BE LIGHTLY STATIC ROLLED AND WATERED TO PRODUCE AN EVEN SURFACE SUITABLE FOR SEEDING AND FERTILISING.

2.0 PAVEMENT

2.1 PAVEMENT MATERIAL
THE PAVEMENT MATERIAL SHALL BE WELL GRADED AND CONTAIN NO ORGANIC MATTER. ALL PAVEMENT MATERIAL MUST BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT. TEST RESULTS SHALL BE MADE AVAILABLE TO PROVE COMPLIANCE WITH THIS SPECIFICATION. THE BASE COURSE MATERIAL SHALL BE TMR TYPE 2.3.

2.2
NO PAVING MATERIAL SHALL BE PLACED IN AN AREA UNTIL ALL SERVICE CONDUITS, DRAINAGE PIPES, HAVE BEEN COMPLETED TESTED AND BACKFILLED UNLESS APPROVED BY THE SUPERINTENDENT / ENGINEER.

2.3
THE MINIMUM COMPACTION TEST REQUIREMENTS SHALL BE AS FOLLOWS:

- a. STANDARD SUBGRADE 98%
- b. STANDARD BASE 100%

2.4
AFTER COMPACTION OF THE SUBGRADE IS COMPLETED, THE SUBGRADE SHALL BE PROOF ROLLED IN THE PRESENCE OF THE ENGINEER IF REQUIRED AND ANY AREAS OF UNSUITABLE MATERIAL SHALL BE REMOVED AS DIRECTED.

2.5
THE TOLERANCE REQUIREMENTS ON THE FINISHED SURFACE LEVEL OF ROADS AND KERB AND CHANNEL SHALL BE AS FOLLOWS:
SUBGRADE SURFACE +0MM TO -25MM
PAVEMENT THICKNESS +20MM TO -10MM
WEARING COURSE THICKNESS +10MM TO -0MM

FINISHED ROAD
a. HORIZONTAL ALIGNMENT +50MM
b. VERTICAL/GEOMETRIC TOLERANCE
c. PRIMARY TOLERANCE ±10MM
d. DEVIATION FROM 3M STRAIGHT EDGE 5MM
e. CROSSFALL +0.2%
f. RATE OF CHANGE OF CROSSFALL ±0.02% PER METRE.

STORMWATER DRAINAGE

1.0 PIPES
ALL PIPES SHALL BE PRECAST CONCRETE PIPE MANUFACTURED TO COMPLY WITH AS4058:1992 OR FIBRE REINFORCED CONCRETE PIPES TO COMPLY WITH AS4139. ALL PRECAST CONCRETE PIPES SHALL BE CLASS 2 UNLESS NOTED OTHERWISE ON THE DRAWINGS. ALL PIPES SHALL HAVE FLUSH JOINTS AND BE INSTALLED WITH EXTERNAL RUBBER BANDS UNLESS NOTED OTHERWISE ON THE DRAWINGS.

ALL POLYVINYL CHLORIDE (UPVC) PIPES AND FITTINGS TO COMPLY WITH AS 1254, AS/NZS 1260, AS 1273, AS/NZS 1477, AS/NZS 2179.2 AND AS 2032.

ALL PIPES INSTALLED SHALL BE NEW AND FREE FROM ANY DAMAGE OR CRACKS.

2.0 EXCAVATION AND BACKFILLING
THE PIPE TRENCHES SHALL BE EXCAVATED TO ALLOW A MINIMUM 100MM OF APPROVED BEDDING TO THE BOTTOM AND ALL SIDES AND TOP OF THE PIPE. ALL BEDDING, SURROUNDS, AND BACKFILL MATERIAL SHALL BE COMPACTED IN MAXIMUM 150MM THICK LAYERS AND A MINIMUM 95% MAXIMUM DRY DENSITY AS DETERMINED BY AS 1289 E.1.1 OR DENSITY INDEX OF MINIMUM 70% AS DETERMINED BY AS 1289 E.G.1. ALL BACKFILL UNDER ROAD PAVEMENTS SHALL HAVE A MINIMUM OF 97% MAXIMUM DRY DENSITY AS DETERMINED BY AS 1289 E.1.1.

ALL CONCRETE OR REINFORCED FIBRE PIPES TO BE INSTALLED IN ACCORDANCE WITH CMDG REQUIREMENTS

ALL REINFORCED CONCRETE BOX CULVERTS TO BE INSTALLED IN ACCORDANCE WITH CMDG REQUIREMENTS

3.0 LAYING AND JOINTING
PIPE LAYING SHALL BEGIN AT THE DOWN STREAM END OF THE LINE WITH THE GROOVED ENDS OF THE PIPE FACING UPSTREAM. THE END OF THE PIPE SHALL BE CLEANED PRIOR TO THE INSTALLATION OF THE EXTERNAL RUBBER BAND FOR RCP PIPES. LIFTING HOLES IN PIPES SHALL BE SECURELY PLUGGED WITH MANUFACTURER PLUGS OR DRY PACK MORTAR PRIOR TO BACKFILLING. ALL DRAINAGE LINES SHALL BE CONSTRUCTED WITH A TOLERANCE OF + 15MM IN LINE FROM THE ALIGNMENT SHOWN ON THE DRAWINGS OVER ANY 30M LENGTH. ALL PIPES MUST FALL IN THE REQUIRED DIRECTION.

4.0 CONCRETE WORK

4.1
CONCRETE WORK, SIDE DRAINS, SEEPAGE DRAINS, AND OTHER ITEMS NOT SPECIFICALLY COVERED IN THIS JOBS SPECIFICATION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE RELEVANT DRAWINGS AND/OR ATTACHED SPECIFICATION.

4.2
ALL CAST INSITU CONCRETE WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS. NOTWITHSTANDING ANYTHING TO THE CONTRARY, NO SEPARATE PAYMENT WILL BE MADE FOR REINFORCING STEEL AND THE COST SHALL BE DEEMED TO BE INCLUDED IN THE VARIOUS CONCRETE ITEMS.

ALL CONCRETE WORK SHALL BE CLASS N32 UNLESS OTHERWISE SPECIFIED.

5.0 INLETS & ACCESS CHAMBERS
ALL FIELD INLETS SHALL BE PRECAST CONCRETE PITS OR APPROVED EQUIVALENT AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS' SPECIFICATIONS. ANY INSITU CONCRETE WORK SHALL COMPLY WITH AS3600. FIELD INLETS TO BE INSTALLED IN ACCORDANCE WITH CMDG SPECIFICATIONS

ALL NEW FIELD INLETS TO HAVE GALVANIZED STEEL GRATES WITH MINIMUM CLASS D LIDS IN TRAFFICABLE AREAS AND CLASS B MINIMUM WITHIN GRASSED/LANDSCAPED AREAS.

INSTALLATION OF PRECAST ROAD GULLY UNITS IS TO BE IN ACCORDANCE WITH CMDG SPECIFICATIONS,

INSTALLATION OF PRECAST ACCESS CHAMBERS IS TO BE IN ACCORDANCE WITH CMDG SPECIFICATIONS,

QUALITY ASSURANCE TESTING TABLE A:

SUBGRADE
FIELD DENSITY
1 TEST PER 50m OF ROADWAY OR AS NOMINATED BY THE ENGINEER.
SOAKED CBR
1 ON EACH REPRESENTATIVE SAMPLE AS DIRECTED BY THE ENGINEER.
PREPARATION
INSPECTION AND APPROVAL BY ENGINEER PRIOR TO COMMENCEMENT OF PAVING.
SURVEY LEVELS
PROVIDED BY CONTRACTOR AT DESIGN CHAINAGES PRIOR TO JOINT COUNCIL AND ENGINEER INSPECTION.

SUB-BASE
PARTICLE SIZE DISTRIBUTION
1 NO REQUIRED OF COMPACTED SAMPLE IF REQUESTED.
DISTRIBUTION
SAMPLE IF REQUESTED.
ATTERBERG LIMITS
1 NO REQUIRED OF COMPACTED SAMPLE IF REQUESTED.
SOAKED CBR1
1 PER SOURCE.

FIELD DENSITY
1 TEST PER 50M OF ROADWAY OR AS NOMINATED BY THE ENGINEER.

CONFIRMATION OF INSITU COMPACTED DEPTH BY LEVEL SURVEY PROVIDED BY THE CONTRACTOR AT DESIGN CHAINAGES PRIOR TO INSPECTION BY ENGINEER.

BASE
PARTICLE SIZE DISTRIBUTION
1 NO REQUIRED OF COMPACTED SAMPLE IF REQUESTED.
ATTERBERG LIMITS
1 NO REQUIRED OF COMPACTED SAMPLE IF REQUESTED.
SOAKED CBR
1 PER SOURCE.
FIELD DENSITY
1 TEST PER 50m OF ROADWAY OR AS NOMINATED BY THE ENGINEER.

CONFIRMATION OF INSITU COMPACTED DEPTH BY LEVEL SURVEY PROVIDED BY THE CONTRACTOR AT DESIGN CHAINAGES PRIOR TO INSPECTION BY ENGINEER.

ASPHALT TESTS BY MANUFACTURER
AGGREGATE GRADING
BITUMEN CONTENT
COMPACTED DENSITY
MAXIMUM DENSITY
STABILITY
FLOW
STIFFNESS
VOIDS IN AGGREGATE
VOIDS FILLED
1 SERIES OF TESTS PER 50 LINEAR METRES LAID.

STORMWATER
SAND BEDDING, ALIGNMENT AND LEVEL
INSPECTION AND APPROVAL BY SUPERINTENDENT / ENGINEER OF BEDDING AND LAYING OF STORMWATER PIPE. LEVELS SUPPLIED BY CONTRACTOR AND APPROVED BY SUPERINTENDENT / ENGINEER.

TRENCH BACKFILL
1 FIELD DENSITY TEST PER SECTION OF TRENCH.

EROSION CONTROL
ALL DISTURBED AREAS OUTSIDE SEALED OR CONCRETED PAVEMENT AREAS ARE TO BE STABILISED WITH TOPSOIL AND HYDROMULCH OR TURF OR LANDSCAPING BY OTHERS UPON COMPLETION. REFER TO EROSION AND SEDIMENT CONTROL PLAN FOR DETAILS.

AS-CONSTRUCTED INFORMATION

THE BUILDER SHALL PROVIDE LEVELS AND DIMENSION INFORMATION SUITABLE TO CONFIRM TO THE SATISFACTION OF THE SUPERINTENDENT THAT THE WORKS HAVE BEEN CONSTRUCTED TO THE LEVELS AND DIMENSIONS SHOWN ON THE DRAWING. THE BUILDER SHALL PROVIDE ALL AS-CONSTRUCTED INFORMATION NECESSARY FOR THE PREPARATION OF THE AS-CONSTRUCTED PLANS TO COUNCIL REQUIREMENTS. THE MINIMUM INFORMATION REQUIREMENTS ARE AS FOLLOWS:

- a. DRAINAGE EXTENTS;
- b. LOCATIONS OF MANHOLES, GULLY PITS AND CULVERTS;
- c. INVERT LEVELS OF INLET AND OUTLET PIPES AT MANHOLES AND GULLY PITS ON LAYOUT PLAN;
- d. TOP OF MANHOLE AND GULLY PIT LEVELS AT THE CENTRE POINT ON LAYOUT PLAN.
- e. INDICATE ACTUAL PIPE SIZES, CLASSES AND GRADES ON THE LAYOUT PLAN;
- f. LOCATIONS AND DEPTHS OF ALL SERVICES (E.G. WATER AND DRAINAGE PIPES).
- g. ALL DIMENSIONS SHALL BE PROVIDED IN METRES CORRECT TO 2 DECIMAL PLACES. ALL LEVELS SHALL BE ON AUSTRALIAN HEIGHT DATUM (AHD) AND THE AS CONSTRUCTED SURVEY ON GDA94 COORDINATE SYSTEM IN METRES CORRECT TO 3 DECIMAL PLACES;
- h. THE "AS CONSTRUCTED" INFORMATION FOR ROADWORKS AND DRAINAGE SHALL BE PROVIDED WITHIN FOURTEEN (14) DAYS ON COMPLETION OF THE WORKS.



NOTE: ALL WORKS ARE TO BE IN ACCORDANCE WITH THE CMDG GUIDELINES AND AUSTRALIAN STANDARDS UNLESS OTHERWISE APPROVED.

ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

These plans are approved subject to the current conditions of approval associated with **Development Permit No.: D/96-2024**

Dated: 16 December 2024

FOR OPERATIONAL WORKS APPROVAL				 <p>ROCKHAMPTON OFFICE 21 EAST STREET PO BOX 264 ROCKHAMPTON, QLD, 4700 PH: (07) 4829 3660 WEB: www.premise.com.au</p>	DESIGNED A.BURGGRAAFF	SCALE	SANTREV PTY LTD		JOB CODE
27/06/2024	A	FOR OPERATIONAL WORKS APPROVAL	AB		CWS		CHECKED C.SHIELDS	PROJECT PROPOSED EGG FARM EXPANSION	P001540
05/06/2024	1	PRELIMINARY - NOT FOR CONSTRUCTION	AB	CWS	PROJECT MANAGER CHRIS SHIELDS	LOCATION 4-6 SMALLS RD, MOUNT MORGAN	SHEET NUMBER		REV
DATE	REV	DESCRIPTION	REC	APP	ENGINEERING CERTIFICATION  CHRIS SHIELDS RPEQ 9347		SHEET TITLE GENERAL NOTES	C003	A
REVISIONS				ORIGINAL SHEET SIZE A1					



FOR CONTINUATION - REFER TO INSET

LEGEND

- PROPOSED BUILDING
- PROPOSED ROAD
- TOP OF BATTER
- TOE OF BATTER
- CADASTRE BOUNDARY
- NATURAL SURFACE CONTOUR
- FINISHED SURFACE CONTOUR
- PROPOSED TABLE DRAIN
- PROPOSED CULVERT

STORMWATER NOTES

- ALL CULVERTS TO BE TWIN-WALLED CORRUGATED POLYPROPYLENE (CPP) PIPES WITH PRECAST HEADWALLS ON BOTH ENDS
- TABLE DRAINS TO BE CUT AT MIN. 0.5% LONGITUDINAL GRADE TO THE WEST

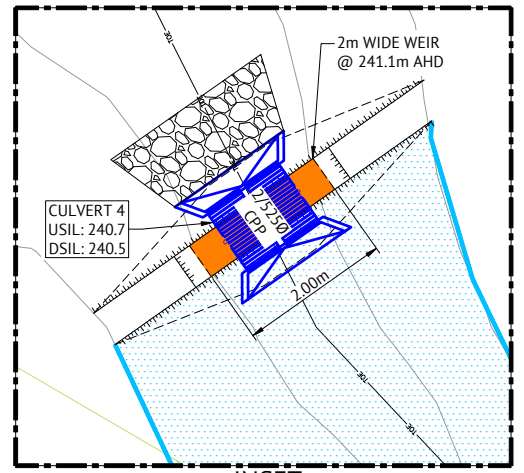
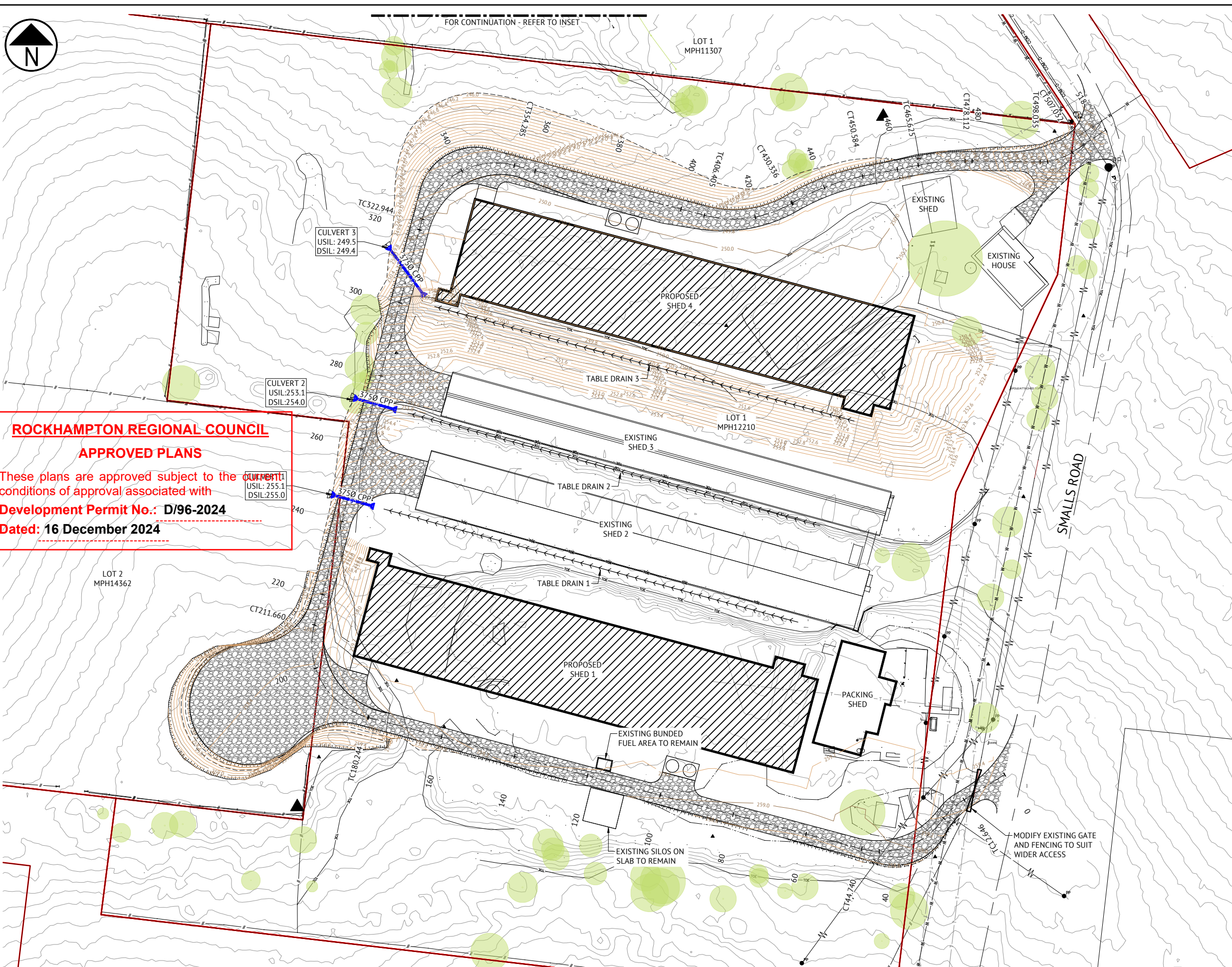
ROADWORKS NOTES

TYPICAL INTERNAL ACCESS ROAD IS 5m WIDE WITH 300mm DEPTH OF TYPE 2.3 UNSEALED PAVEMENT OR APPROVED EQUIVALENT.

ROCKHAMPTON REGIONAL COUNCIL

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INSET
SCALE 1:50



THIS DRAWING INCLUDES COLOURED INFORMATION. IF YOU HAVE A BLACK AND WHITE COPY YOU DO NOT HAVE ALL THE INFORMATION. THIS NOTE IS COLOURED RED.

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 CAUSED AS A RESULT OF THE WORKS.

FOR OPERATIONAL WORKS APPROVAL

DATE	REV	DESCRIPTION	REVISIONS	AB	CWS
27/06/2024	A	FOR OPERATIONAL WORKS APPROVAL		AB	CWS
05/06/2024	1	PRELIMINARY - NOT FOR CONSTRUCTION		AB	CWS

ROCKHAMPTON OFFICE
 21 EAST STREET
 PO BOX 264
 ROCKHAMPTON, QLD, 4700
 PH: (07) 4829 3660
 WEB: www.premise.com.au

DESIGNED
A.BURGGRAAFF
 CHECKED
C.SHIELDS
 PROJECT MANAGER
CHRIS SHIELDS
 ENGINEERING CERTIFICATION
 CHRIS SHIELDS RPEQ 9347

SCALE
0 10 20 30m
 SCALE 1:500 (A1)
 ORIGINAL SHEET SIZE A1

CLIENT
SANTREV PTY LTD

PROJECT
PROPOSED EGG FARM EXPANSION

LOCATION
4-6 SMALLS RD, MOUNT MORGAN

SHEET TITLE
ROADWORKS & STORMWATER DRAINAGE PLAN

JOB CODE
P001540

SHEET NUMBER
C210

REV
A



Site-Based Stormwater Management Plan

6 Smalls Road, Mount Morgan

20 June 2024

J10721 v1.0



ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

These plans are approved subject to the current conditions of approval associated with

Development Permit No.: D/96-2024

Dated: 16 December 2024

Job No: J10721 v1.0

Job Name: 6 Smalls Road, Mount Morgan

Report Name	Date	Report No.
Site-Based Stormwater Management Plan	20 June 2024	J10721 v1.0

Project Engineer: Jack Hu
BE Civil (Hons), MIEAust, CPEng, NER, RPEQ
E jack@stormw.com.au

Reviewed By: Steve Hughes
BE Civil, MIEAust, CPEng, NER, RPEQ 16468

Storm Water Consulting Pty Ltd

ACN 105 078 377

1/820 Old Cleveland Rd, Carina QLD 4152

07 3398 4992

www.stormw.com.au

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1.0 INTRODUCTION

Storm Water Consulting Pty Ltd was commissioned by Santrev Pty Ltd to prepare a Site-Based Stormwater Management Plan for the proposed development on 6 Smalls Road, Mount Morgan.

This report has been prepared to address the issues of lawful point of discharge and stormwater quantity management for the proposed development.

2.0 SITE CONDITIONS

2.1 Existing Site

Multiple buildings and sheds are located on the site. The balance of the site is vegetated by maintained grass with scattered trees. The site is bound by Smalls Road to the east and by rural properties in all other directions. An existing site plan is presented in Figure 1, Appendix A. A locality plan is presented in Figure 2.1 below. Survey plans of the site are presented in Appendix E.



Figure 2.1 – Locality Plan (Source: Google Earth)

2.2 Developed Site

It is proposed to demolish some of the existing buildings and sheds on the site and to construct 2 new large sheds, as well as a smaller packing shed. New sealed roads are also proposed around the site. A developed site plan is presented in Figure 2, Appendix A. Development plans are presented in Appendix E.

3.0 LAWFUL POINT OF DISCHARGE

A natural gully is located on the adjoining site to the north, i.e. 4 Smalls Road (refer Figure 3.1 below). The site to the north is also understood to be owned by the developer. This gully currently receives flows from the subject site and conveys flows northward toward Keimar Road. It is considered that this natural gully is the lawful point of discharge for the existing site.

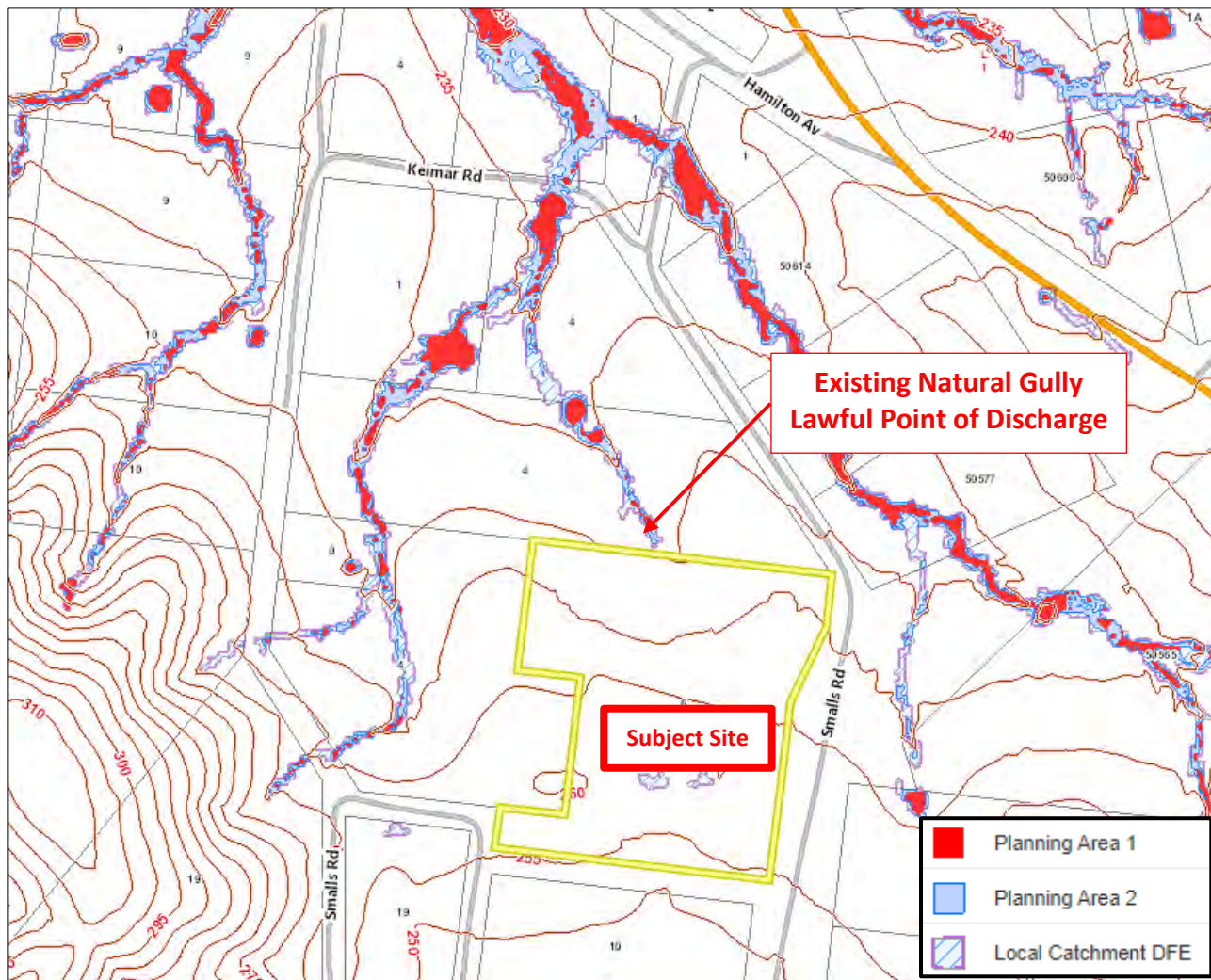


Figure 3.1 – Extract from RRPS 2015 v4.4 Interactive Mapping

The natural gully has been mapped as being located within the “Local Catchment DFE”, as shown in the figure above. The natural gully is also considered to be the lawful point of discharge for the proposed works.

A section of the upstream end of the natural gully is proposed to be modified through earthworks to form a detention basin. The detention basin would attenuate the increase in runoff created by the proposed works. Details of the detention basin and its associated hydrologic modelling are presented in the following section.

4.0 HYDROLOGIC MODELLING

Hydrologic analysis and modelling were undertaken to assess the stormwater quantity impacts at the lawful point of discharge and to size the necessary mitigation measures in order to minimise impacts. Details of the calculations, modelling and results are presented below.

4.1 Rational Method Calculations

The catchment discharging to Point-1, the lawful point of discharge nominated in the natural gully, is 3.85 hectares in area (refer to catchment plan in Figure 3, Appendix A). Rational Method calculations were undertaken for the catchment. These calculations have been completed in accordance with the parameters recommended in the Queensland Urban Drainage Manual (QUDM, 2016). A summary of the resulting flows is presented in Table 4.1 below. Detailed Rational Method calculations are presented in Appendix C.

Table 4.1 – Rational Method Calculation Flow Summary

AEP %	Peak Discharge m ³ /s
63	0.458
50	0.539
20	0.784
10	0.958
5	1.139
2	1.449
1	1.666

4.2 Existing URBS Model

URBS hydrologic modelling was undertaken to assess the peak flows at Point-1. A schematic of the existing URBS model is presented in Figure 4, Appendix A. URBS model data files are presented in Appendix D. A summary of the adopted URBS parameters is presented in Table 4.2 below.

Table 4.2 – URBS Model Parameters

AEP %	Storage Coefficient α	Non-Linearity Index m	Initial Rainfall Loss mm	Continuing Rainfall Loss mm/hr
63	1.2	0.8	15	2.5
50	1.2	0.8	15	2.5
20	1.2	0.8	15	2.5
10	1.2	0.8	15	2.5

5	1.2	0.8	15	2.5
2	1.2	0.8	15	2.5
1	1.2	0.8	0	2.5

A comparison of the Rational Method flows and the existing URBS flows is presented in Table 4.3 below.

Table 4.3 – Comparison of Flows (Rational Method v URBS)

AEP %	Rational Method m ³ /s	Existing URBS m ³ /s	Difference m ³ /s	Difference %
63	0.458	0.488	0.030	6.6
50	0.539	0.557	0.018	3.3
20	0.784	0.780	0.004	0.5
10	0.958	1.037	0.079	8.2
5	1.139	1.207	0.068	6.0
2	1.449	1.438	0.011	0.8
1	1.666	1.630	0.036	2.2

The results above show that the URBS flows compare favourably with the Rational Method flows and are therefore suitable for assessing the effects of the proposed development at the lawful point of discharge.

4.3 Developed URBS Model (Unmitigated)

A schematic of the developed (unmitigated) URBS model is presented in Figure 5, Appendix A. The developed URBS model reflected the change in fraction impervious on the site due to the proposed removal of existing buildings and sheds, as well as the construction of new sheds and the new road. All other model parameters and inputs remained the same as the existing URBS model. A comparison of the existing URBS flows and the developed (unmitigated) URBS flows is presented in Table 4.4 below.

Table 4.4 – Comparison of URBS Flows (Existing v Developed Unmitigated)

AEP %	Existing URBS m ³ /s	Developed URBS Unmitigated m ³ /s	Increase m ³ /s	Increase %
63	0.488	0.493	0.005	1.0
50	0.557	0.561	0.004	0.7
20	0.780	0.802	0.022	2.8
10	1.037	1.043	0.006	0.6
5	1.207	1.212	0.005	0.4

2	1.438	1.441	0.003	0.2
1	1.630	1.633	0.003	0.2

The above results indicate that peak flows are marginally increased due to the proposed works. Mitigation of peak flows would be required to minimise downstream impacts. The following section presents the specifications of the proposed detention basin and the associated hydrologic modelling results.

4.4 Developed URBS Model (Mitigated)

A schematic of the developed (mitigated) URBS model is presented in Figure 6, Appendix A. The developed URBS model was modified to include a detention basin, located within the natural gully and formed by constructing an earth embankment. Pipes are proposed at the base of the earth embankment to control the flows discharging from the detention basin. A conceptual design of the basin is presented in Figure 7, Appendix A. Table 4.5 below presents a summary of the detention basin specifications adopted in the model.

Table 4.5 – Detention Basin Specification

Detail	Specification		
Volume	216 m ³		
Surface Area	390 m ²		
Depth	1 m		
Level-Area-Storage Relationship	Level (m AHD)	Area (m ²)	Cumulative Storage (m ³)
	240.5	43	0
	241.0	215	65
	241.5	390	216
Outflow Control	<ul style="list-style-type: none"> 2 / 525 mm dia. RCP @ IL (240.5 m AHD) 2 metre wide weir @ IL + 0.6 m (241.1 m AHD) 		

A comparison of the existing URBS flows and the developed (mitigated) URBS flows is presented in Table 4.6 below.

Table 4.6 – Comparison of URBS Flows (Existing v Developed Mitigated)

AEP %	Existing URBS m ³ /s	Developed URBS Mitigated m ³ /s	Increase m ³ /s	Increase %
63	0.488	0.479	-0.009	-1.8
50	0.557	0.538	-0.019	-3.4
20	0.780	0.770	-0.010	-1.3

10	1.037	1.019	-0.018	-1.7
5	1.207	1.187	-0.020	-1.7
2	1.438	1.412	-0.026	-1.8
1	1.630	1.598	-0.032	-2.0

The results presented above indicate that the proposed detention basin effectively mitigates all AEP events (up to and including the 1% AEP event) to the existing flow rate. The proposed works are therefore not considered to result in a material worsening on downstream properties.

Detailed URBS modelling results are presented in Appendix D. A conceptual stormwater layout plan is presented in Figure 7, Appendix A. The final location of stormwater pipes and the detention basin will be confirmed during the detailed design stage of the project.

5.0 CONCLUSIONS

This report has been prepared to address the issues of lawful point of discharge and stormwater quantity management for the proposed development on 6 Smalls Road, Mount Morgan.

A natural gully is located on the adjoining site to the north, i.e. 4 Smalls Road. The site to the north is also understood to be owned by the developer. This gully currently receives flows from the subject site and conveys flows northward toward Keimar Road. The natural gully has been mapped as being located within the “Local Catchment DFE”. The natural gully is considered to be the lawful point of discharge for the proposed works.

The model results indicate that peak flows are marginally increased due to the proposed works. Mitigation of peak flows would be required to minimise downstream impacts. A detention basin is proposed, which is located within the natural gully and formed by constructing an earth embankment. Pipes are proposed at the base of the earth embankment to control the flows discharging from the detention basin. The model results indicate that the proposed detention basin effectively mitigates all AEP events (up to and including the 1% AEP event) to the existing flow rate. The proposed works are therefore not considered to result in a material worsening on downstream properties.

A conceptual stormwater layout plan is presented in Figure 7, Appendix A. The final location of stormwater pipes and the detention basin will be confirmed during the detailed design stage of the project.



Steve Hughes
BE Civil, MIE Aust, CPEng, RPEQ 16468

LIST OF APPENDICIES

APPENDIX A – Figures

APPENDIX B – Photographs

APPENDIX C – Rational Method Calculations


APPENDIX D – URBS Data

APPENDIX E – Plans


APPENDIX A

Figures




 1/820 Old Cleveland Rd Carina QLD 4152 Phone (07) 3398 4992	Drawn	JH	6 Smalls Road, Mount Morgan		Figure 1
	Checked	SNH			
	Date	19/06/24	Job No.	J10721	Existing Site Plan
	Scale	1:2,000 (A4)			




 1/820 Old Cleveland Rd Carina QLD 4152 Phone (07) 3398 4992	Drawn	JH	6 Smalls Road, Mount Morgan		Figure 2
	Checked	SNH			
	Date	19/06/24	Job No.	J10721	Developed Site Plan
	Scale	1:2,000 (A4)			

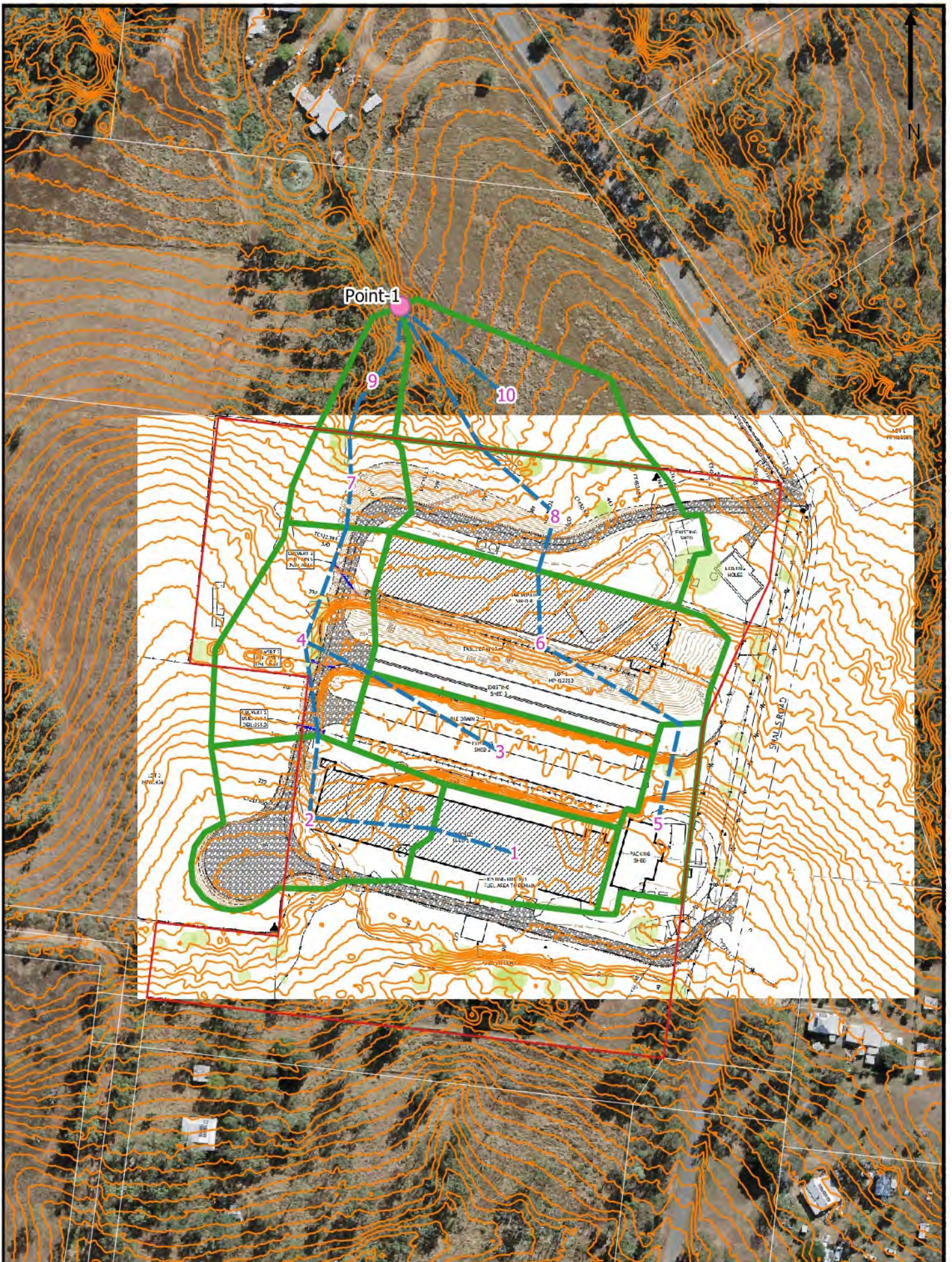



Catchment
3.93 ha

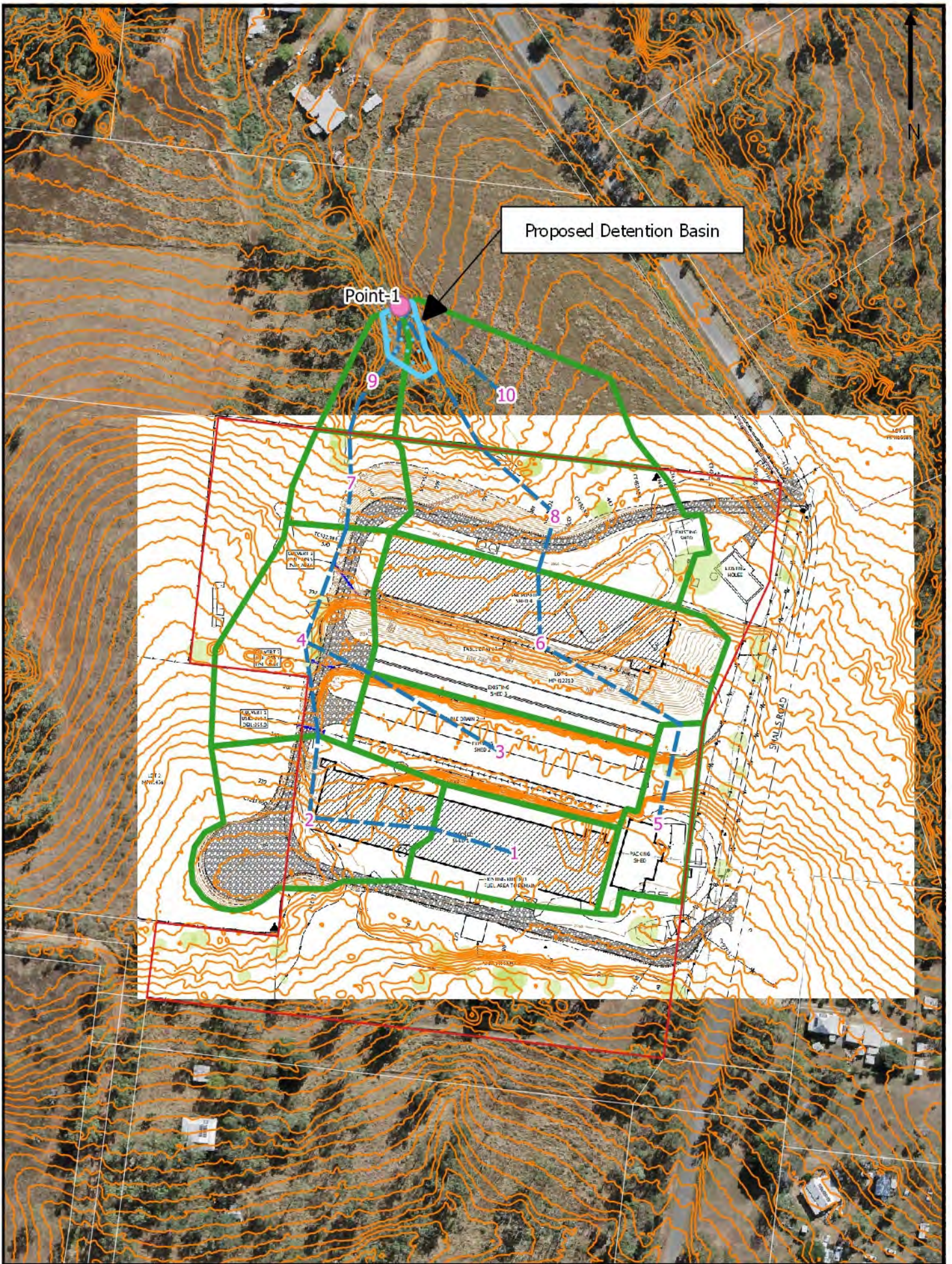
 1/820 Old Cleveland Rd Carina QLD 4152 Phone (07) 3398 4992	Drawn	JH	6 Smalls Road, Mount Morgan		Figure 3
	Checked	SNH			
	Date	19/06/24	Job No.	J10721	Catchment Plan
	Scale	1:2,000 (A4)			




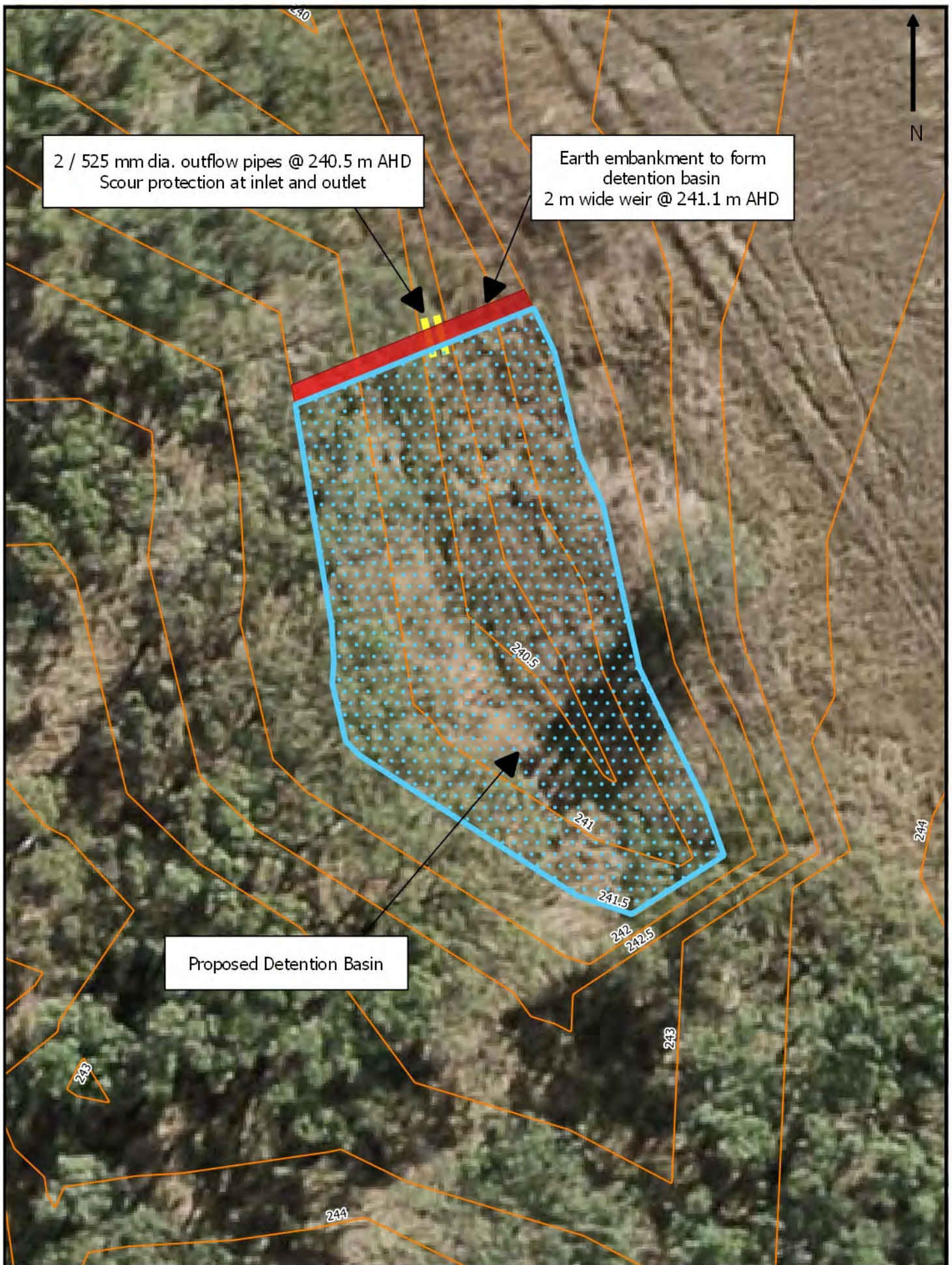
 1/820 Old Cleveland Rd Carina QLD 4152 Phone (07) 3398 4992	Drawn	JH	6 Smalls Road, Mount Morgan		Figure 4
	Checked	SNH			
	Date	19/06/24	Job No.	J10721	Existing URBS Model
	Scale	1:2,000 (A4)			



 1/820 Old Cleveland Rd Carina QLD 4152 Phone (07) 3398 4992	Drawn	JH	6 Smalls Road, Mount Morgan		Figure 5
	Checked	SNH			
	Date	19/06/24	Job No.	J10721	
	Scale	1:2,000 (A4)			




 1/820 Old Cleveland Rd Carina QLD 4152 Phone (07) 3398 4992	Drawn	JH	6 Smalls Road, Mount Morgan		Figure 6
	Checked	SNH			
	Date	19/06/24	Job No.	J10721	
	Scale	1:2,000 (A4)			



2 / 525 mm dia. outflow pipes @ 240.5 m AHD
Scour protection at inlet and outlet

Earth embankment to form
detention basin
2 m wide weir @ 241.1 m AHD

Proposed Detention Basin

 1/820 Old Cleveland Rd Carina QLD 4152 Phone (07) 3398 4992	Drawn	JH	6 Smalls Road, Mount Morgan		Figure 7 Conceptual Stormwater Layout Plan
	Checked	SNH			
	Date	19/06/24	Job No.	J10721	
	Scale	1:250 (A4)			

APPENDIX B

Photographs



Photograph 1 – Existing sheds on the site



Photograph 2 – Existing site condition at the location of proposed Shed 4

APPENDIX C

Rational Method Calculations

APPENDIX D

URBS Data

URBS Data Files – Existing Model

```
"Index", "Area", "UR", "UL", "I"
#1,0.00298,1.00,0.00,0.89
#2,0.00515,1.00,0.00,0.19
#3,0.00410,1.00,0.00,0.60
#4,0.00482,1.00,0.00,0.27
#5,0.00184,1.00,0.00,0.65
#6,0.00793,1.00,0.00,0.52
#7,0.00165,1.00,0.00,0.05
#8,0.00548,1.00,0.00,0.27
#9,0.00117,1.00,0.00,0.05
#10,0.00422,1.00,0.00,0.05
```

```
SmallsRd - Existing
MODEL: Basic
USES: L, U
Default Parameters: alpha=1.20 m=0.8
Catchment File=10721_Ex.dat

Rain #1 L=0.034
Route thru #2 L=0.051
Add Rain #2 L=0.033
Route thru #4 L=0.039
Store.
Rain #3 L=0.062
Route thru #4 L=0.029
Get.
Add Rain #4 L=0.049
Route thru #7 L=0.018
Add Rain #7 L=0.020
Route thru #9 L=0.023
Add Rain #9 L=0.034
Store.
Rain #5 L=0.042
Route thru #6 L=0.065
Add Rain #6 L=0.030
Route thru #8 L=0.024
Add Rain #8 L=0.040
Route thru #10 L=0.067
Store.
Rain #10 L=0.056
Get.
Get.
Print. POINT-1
end of catchment details.
```

URBS Data Files – Developed Model (Unmitigated)

```
"Index", "Area", "UR", "UL", "I"
#1,0.00298,1.00,0.00,0.72
#2,0.00515,1.00,0.00,0.63
#3,0.00410,1.00,0.00,0.60
#4,0.00482,1.00,0.00,0.41
#5,0.00184,1.00,0.00,0.65
#6,0.00793,1.00,0.00,0.72
#7,0.00165,1.00,0.00,0.19
#8,0.00548,1.00,0.00,0.35
#9,0.00117,1.00,0.00,0.05
#10,0.00422,1.00,0.00,0.05
```

```
SmallsRd - Development
MODEL: Basic
USES: L, U
Default Parameters: alpha=1.20 m=0.8
Catchment File=10721_Dev.dat

Rain #1 L=0.034
Route thru #2 L=0.051
Add Rain #2 L=0.033
Route thru #4 L=0.039
Store.
Rain #3 L=0.062
Route thru #4 L=0.029
Get.
Add Rain #4 L=0.049
Route thru #7 L=0.018
Add Rain #7 L=0.020
Route thru #9 L=0.023
Add Rain #9 L=0.034
Store.
Rain #5 L=0.042
Route thru #6 L=0.065
Add Rain #6 L=0.030
Route thru #8 L=0.024
Add Rain #8 L=0.040
Route thru #10 L=0.067
Store.
Rain #10 L=0.056
Get.
Get.
Print. POINT-1
end of catchment details.
```

URBS Data Files – Developed Model (Mitigated)

```
"Index", "Area", "UR", "UL", "I"
#1,0.00298,1.00,0.00,0.72
#2,0.00515,1.00,0.00,0.63
#3,0.00410,1.00,0.00,0.60
#4,0.00482,1.00,0.00,0.41
#5,0.00184,1.00,0.00,0.65
#6,0.00793,1.00,0.00,0.72
#7,0.00165,1.00,0.00,0.19
#8,0.00548,1.00,0.00,0.35
#9,0.00117,1.00,0.00,0.05
#10,0.00422,1.00,0.00,0.05
```

```
SmallsRd - Development1
MODEL: Basic
USES: L, U
Default Parameters: alpha=1.20 m=0.8
Catchment File=10721_Dev1.dat

Rain #1 L=0.034
Route thru #2 L=0.051
Add Rain #2 L=0.033
Route thru #4 L=0.039
Store.
Rain #3 L=0.062
Route thru #4 L=0.029
Get.
Add Rain #4 L=0.049
Route thru #7 L=0.018
Add Rain #7 L=0.020
Route thru #9 L=0.023
Add Rain #9 L=0.034
Store.
Rain #5 L=0.042
Route thru #6 L=0.065
Add Rain #6 L=0.030
Route thru #8 L=0.024
Add Rain #8 L=0.040
Route thru #10 L=0.067
Store.
Rain #10 L=0.056
Get.
Get.
Print. B1-IN
DAM ROUTE VBF=0 NUMBER=26
0.000000 0.000000
0.012900 0.064762
0.025800 0.129524
0.038700 0.212857
0.051600 0.349524
0.064500 0.461905
0.094750 0.594286
0.125000 0.821193
0.155250 1.095741
0.185500 1.408671
0.215750 1.761924
0.264000 2.169466
0.312250 2.601511
0.360500 3.064595
0.408750 3.523067
0.457000 4.003636
0.525250 4.514286
0.593500 5.063236
0.661750 5.635081
0.730000 6.228844
0.798250 6.843665
0.892250 7.478775
0.986250 8.114440
1.080250 8.769083
1.174250 9.442137
1.268250 10.13308
{}
{}
Print. B1-OUT
Print. POINT-1
end of catchment details.
```

Detention Basin Results

AEP	URBS Basin				Discharge		Inundation	
	Inflow	Outflow	Level	Depth	Pipe	Weir	Area	Volume
	m ³ /s	m ³ /s	m AHD	m	m ³ /s	m ³ /s	m ²	m ³
6320	0.49	0.48	241.01	0.51	0.48	0.00	219.4	68.3
5000	0.56	0.54	241.06	0.56	0.54	0.00	235.1	81.9
2000	0.80	0.77	241.18	0.68	0.69	0.08	277.2	118.2
1000	1.04	1.02	241.27	0.77	0.78	0.23	310.2	146.8
0500	1.21	1.19	241.33	0.83	0.83	0.36	330.3	164.1
0200	1.44	1.41	241.40	0.90	0.88	0.53	355.3	185.8
0100	1.63	1.60	241.45	0.95	0.92	0.68	373.8	201.7

22 July 2024

Peacefield Egg Farms Pty Ltd
 360 Allambie Lane
 Gumlow QLD 4815

Attention: Barry Shonhan

ROCKHAMPTON REGIONAL COUNCIL

APPROVED PLANS

These plans are approved subject to the current conditions of approval associated with

Development Permit No.: D/96-2024

Dated: 16 December 2024

Dear Barry,

RE: PROPOSED LAYER FARM EXTENSION – SIGHT DISTANCE ASSESSMENT

PSA Consulting has been engaged by Peacefield Egg Farms to provide traffic engineering advice regarding the access driveway for the proposed upgrades to the existing layer farm at 6 Smalls Road, Hamilton Creek. This technical note outlines the sight distance requirements concerning the northern access to the development. The assessment of sight distance has been undertaken on a desktop basis only, relying on aerial imagery and Google Streetview. No site visit has been undertaken to verify the findings.

According to the Capricorn Municipal Development Guidelines, the location of the intersection shall be evaluated for conformance with the criteria for Approach Sight Distance (ASD), Minimum Gap Sight Distance (MGSD), and Safe Intersection Distance (SISD). Table outlines the required ASD, MGSD, and SISD for the intersection with a speed limit of 50km/hr and a corresponding design speed of 60km/hr.

Table 1: Developments along Raff Lane Trip Generation (Source: PSA)

Design Speed	ASD	MGSD	SISD
60 km/hr	73 m	83 m	123 m

To achieve the required approach sight distance (ASD), it is necessary to prune the tree located north of the access, as its canopy encroaches upon the sight envelope, as shown in Figure 1.



Figure 1: Approach Sight Distance (Source: Nearmap, PSA)

As illustrated in Figure 2, there are no conflicts within the sight envelope required to achieve minimum gap sight distance (MGSD). Therefore, no further mitigation measures are required.

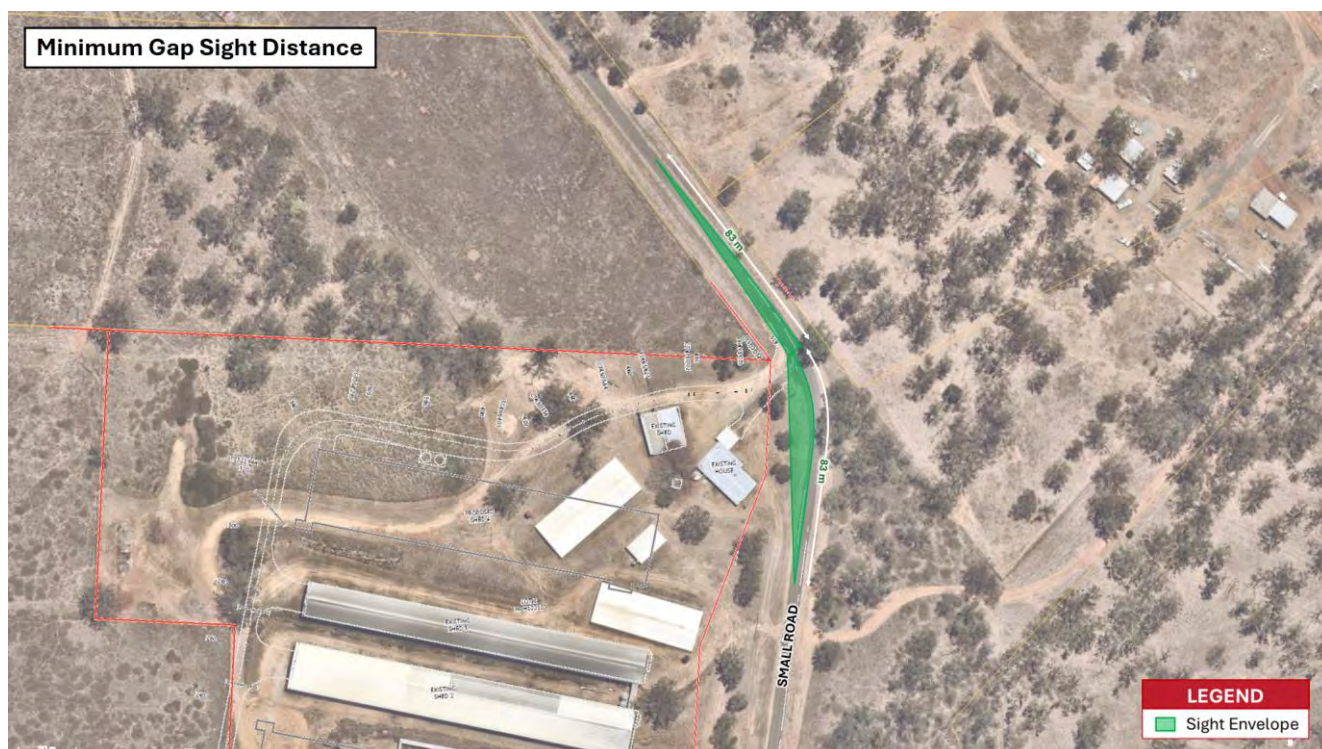


Figure 2: Minimum Gap Sight Distance (Source: Nearmap, PSA)

The required sight envelope to achieve safe intersection sight distance (SISD) is shown in Figure 3.



Figure 3: Safe Intersection Sight Distance (Source: Nearmap, PSA)

Figure 4 demonstrates that the first tree south of the access has high branches and a narrow trunk, which will not obstruct the sight lines of the road. However, it is recommended to remove branches lower than 1.1m in height to ensure there is no obstruction present within the driver's sight line. Furthermore, the second and third tree must be removed to fully achieve required safe intersection sight distance (SISD).



Figure 4: Sight Distance Looking to the South (Source: Google Streetview)



In summary, it has been observed that while trees are within the sight envelope of required sight distances, there are no permanent obstructions that would prevent achieving the necessary sight distance. It is recommended to perform tree pruning and removal of the aforementioned vegetation to ensure safety at the site access.

I trust the above meets your requirements. If you have any questions, please don't hesitate to contact the undersigned.

Yours sincerely,

Tim Boxall
RPEQ 26741
Senior Traffic and Transport Engineer
PSA Consulting (Australia) Pty Ltd

VERSION	DATE	DETAILS	AUTHOR	AUTHORISATION
1	22 July 2024	FINAL	Daina Ruth Aliboso	 Tim Boxall RPEQ 26741