Report

Addendum 1: Civil Design Report

DATE	03 December 2024
TO	Taylor Construction
ATTN	Att: George Stegnjaic
PROJECT	Blayney Multipurpose Service

Revision Table

REV	DATE	ISSUE DESCRIPTION	PREPARED	REVIEWED
A	03/12/2024	Issued for REF	AV	

Copyright

No part of this document may be reproduced, adapted, transmitted or stored in a retrieval system in any form or by any means without written permission unless otherwise permitted under the Copyright Act, 1968. Enquiries should be addressed to SCP Consulting Pty Ltd

© SCP Consulting Pty Ltd

All intellectual property and copyright reserved.

Contents

1 Introduction 4
2 Flood Risk Management 4
3 Stormwater Design 6
4 Conclusion 8
Appendix 1: Civil Works Drawings 9
Appendix 2: Flood Risk Assessment Report 10
Appendix 3: Civil Design Report 11

Figure 1 Table Drain along the Western Boundary 5
Figure 2: Sub-catchments in the previous design 6
Figure 3: Sub-catchments of Current Design 7

1 Introduction

The purpose of this Addendum is to support the proposed changes to the existing approved Review of Environmental Factors (REF) No. 10/2024 issued by Health Infrastructure (HI) dated 8 August 2024. The current approved REF is for the demolition of existing structures and construction of a new Residential Aged Care (RAC), In-Patient Unit (IPU) and a Health One Facility and associated infrastructure.

This Addendum will build upon the following reports describe changes from a flood management perspective and from a civil and stormwater engineering perspective:

- Flood Risk Assessment Report, Revision 02 by ARUP, dated 27 September 2024, and
- Civil Design Report, Revision 3 by Jacobs, dated 10 August 2023.

2 Flood Risk Management

The project has currently been approved by Heath Infrastructure NSW. Taylor Construction (the contractor) has been engaged and is preparing to commence construction on site. As part of the approval conditions, Health Infrastructure was obliged to undertake a Flood Risk Assessment, and to implement the recommendations of the flood study. The undertaken flood study is:

- Flood Risk Assessment Report, Revision 02 by ARUP, dated 27 September 2024.

As a result of the flood study and resulting flood risk assessment, the Finish Floor Levels (FFL) of each new building was required to be raised by 200mm. The results of the Flood Risk Assessment also required the construction of a perimeter table drain along the western boundary to protect the new building structures by conveying surface floodwater originating from Martha St to the south and the adjacent Blayney Ambulance Station to the south-west to Queen St to the north.

The swale modelled in the TUFLOW flood model was a uniform trapezoidal table drain with a capacity to convey over 600L/s of flood water in the Probably Maximum Flood (PMF) event and ensure that the new RAC building remains flood free. The proposed table drain is documented in the Civil Works Package by SCP found in Appendix 1 below.

The long-fall of the table drain ranges between 1:90 and 1:75 at its steepest point. The grade of the table drain was designed to improve flow and capacity of the drain to match that of the modelled drain in TUFLOW. The calculated capacity of the drain are as follows:

- 0.5m wide table drain (min0.5m high) – **667L/s at 1.3%** grade (top of catchment (southern portion),
- 0.5m wide table drain (min0.5m high) – **1,536L/s at 1.2%** grade (middle portion), and
- 0.5m wide table drain (min0.7m high) – **1,074L/s at 1.1%** grade (northern portion).

A final widening of the drain sag point providing for local ponding around a surcharge pit is documented for the rare events when Council's downstream pit and pipe network are at capacity. In extreme events, this ponding will overtop and flow to the north as described in the Flood Risk Assessment Report.

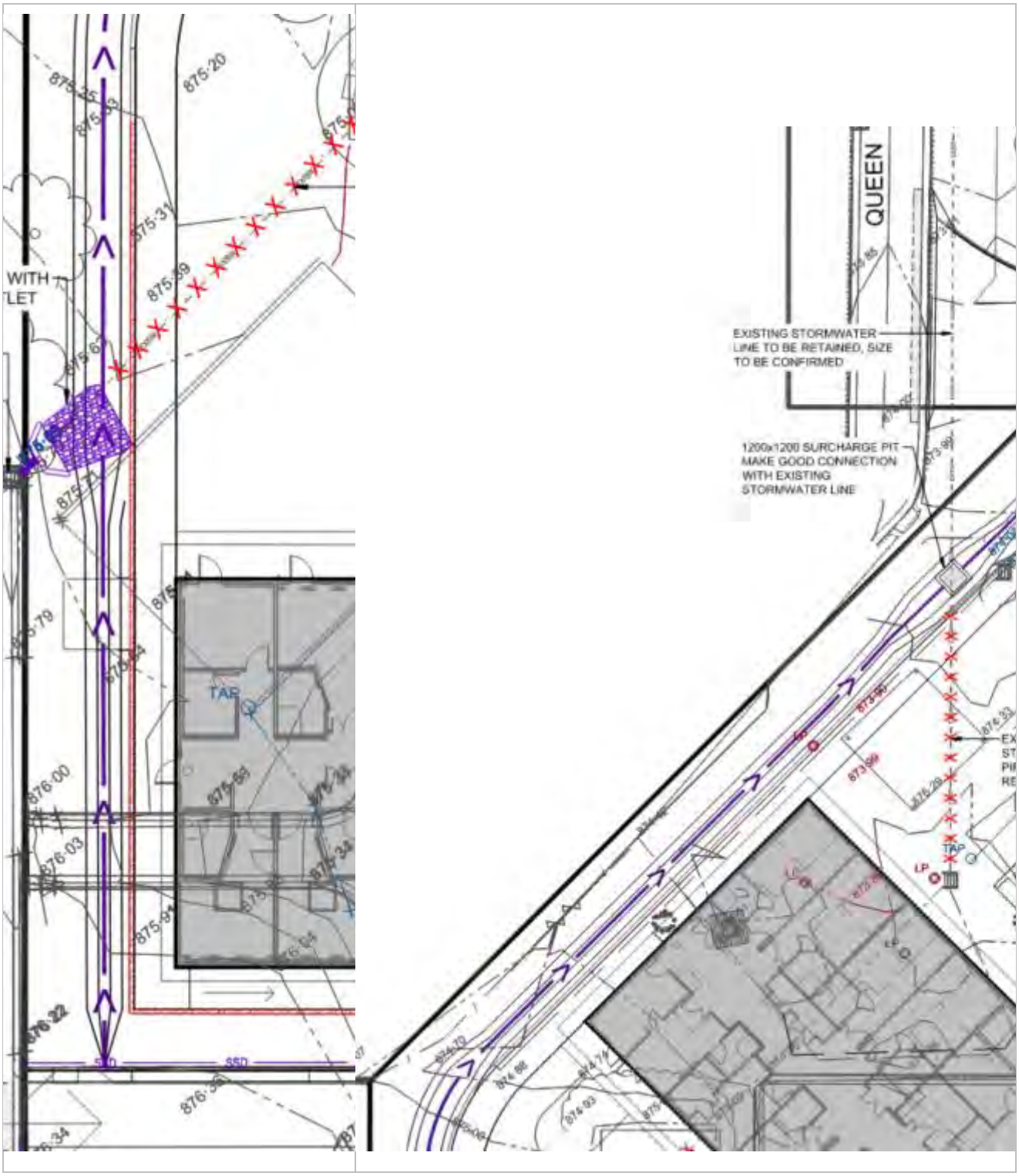


Figure 1 Table Drain along the Western Boundary

3 Stormwater Design

The previous REF was approved using the following documentation:

- Civil Design Report, Revision 3 by Jacobs, dated 10 August 2023

As a result of the recommendations in the Flood Risk Assessment Report (refer to Section 2 above), the approved site stormwater pit and pipe network was altered to accommodate the rising of the existing buildings FFL's and resulting regrading of the site. This resulted in minor changes to the stormwater discharge volumes to each of the site's "Legal Points of Discharge" being the one to Queen St to the north and the other to Osman St to the east. The previous catchment areas contributing to each "Legal Point of Discharge" were as follows:

- Queen St – 4640m^3, and
- Osman St – 9100m^3.

The sub catchments are shown in figure 2 below:

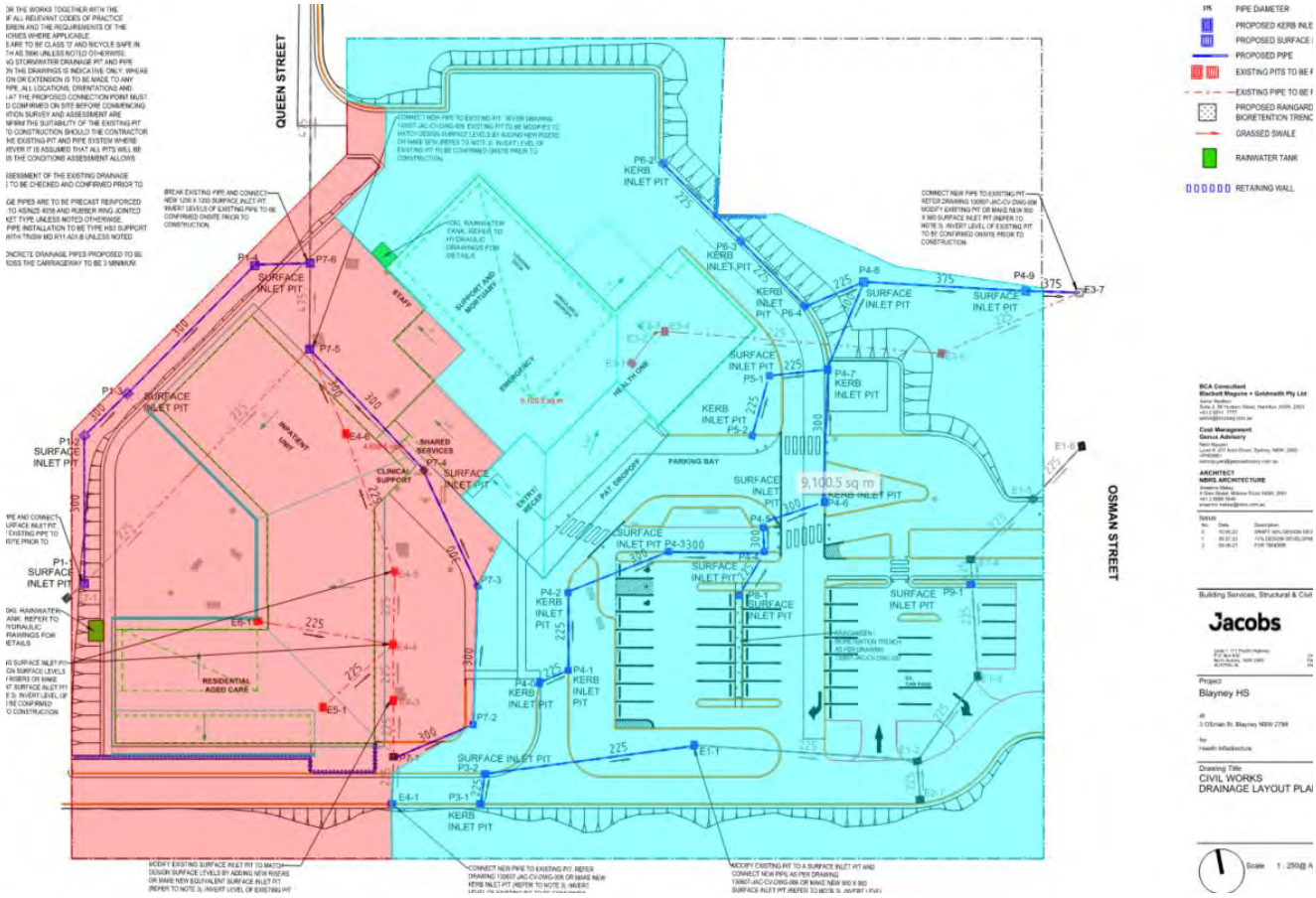


Figure 2: Sub-catchments in the previous design

The updated catchments discharging to each "Legal Point of Discharge" are as follows:

- Queen St – 4652m^3, and
- Osman St – 9094m^3.

The updated catchments are shown in figure 3 below:



Figure 3: Sub-catchments of Current Design

While the pit and pipe networks differ in detail, the in-ground changes together with the changes to the roof generally maintain similar catchment areas for each Legal Point of Discharge.

The discharge rates at their respective "Legal Point of Discharge", from both catchments for the previously approved and current design case for the 20year and 100year as follows:

- Previous Design 5% AEP (20year) – **134L/s**,
- Previous Design 1% AEP (100year) – **346L/s**,
- Current Design 5% AEP (20year) – **135L/s**, and
- Current Design 1% AEP (100year) – **345L/s**.

4 Conclusion

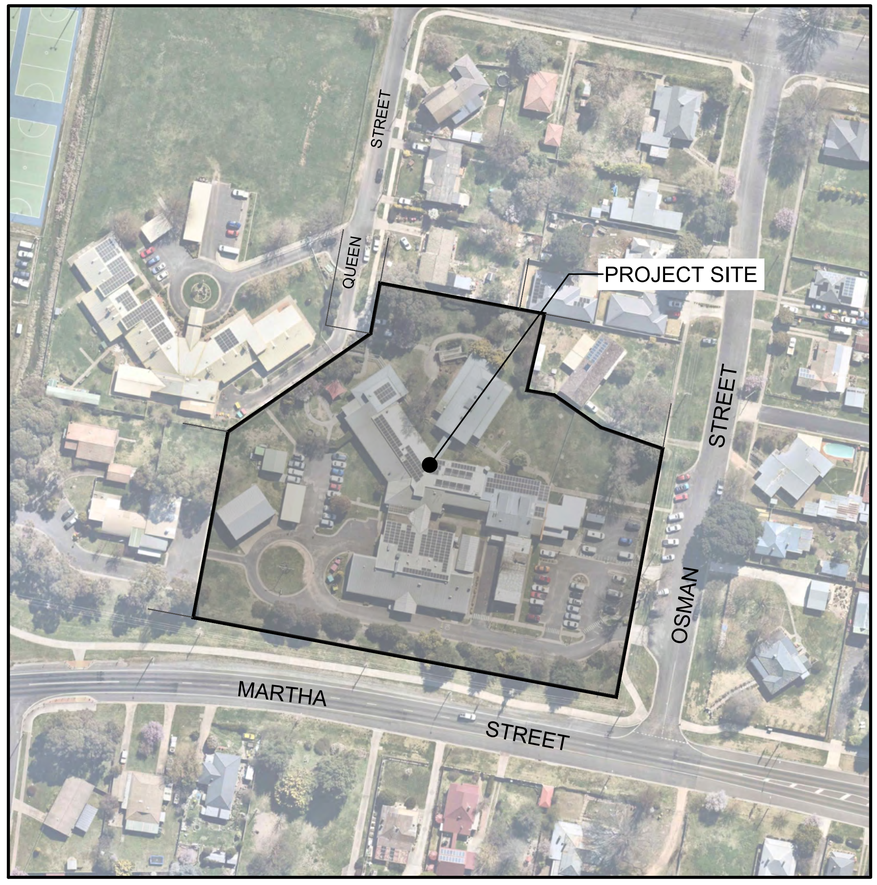
As the calculations have shown, the changes to each are very minor in nature and do not alter previously approved stormwater drainage scheme. The addition of the table drain formalises and controls overland flow in the rare and extreme events.

Appendix 1: Civil Works Drawings

A1

BLAYNEY MULTIPURPOSE SERVICE

CIVIL WORKS PACKAGE



LOCALITY PLAN

DRAWING INDEX	
SHEET NUMBER	SHEET TITLE
130607-HI-CV-DWG-0000	COVER SHEET AND DRAWING INDEX
130607-HI-CV-DWG-0001	SPECIFICATIONS AND NOTES
130607-HI-CV-DWG-0111	LEGENDS
130607-HI-CV-DWG-0200	GENERAL ARRANGEMENT PLAN
130607-HI-CV-DWG-1000	CUT AND FILL PLAN
130607-HI-CV-DWG-1001	BULK EARTHWORKS SECTION
130607-HI-CV-DWG-2101	SITEWORKS GRADING PLAN - SHEET 01
130607-HI-CV-DWG-2102	SITEWORKS GRADING PLAN - SHEET 02
130607-HI-CV-DWG-2103	SITEWORKS GRADING PLAN - SHEET 03
130607-HI-CV-DWG-2104	SITEWORKS GRADING PLAN- SHEET 04
130607-HI-CV-DWG-2201	PAVEMENT PLAN - SHEET 01
130607-HI-CV-DWG-2202	PAVEMENT PLAN - SHEET 02
130607-HI-CV-DWG-2203	PAVEMENT PLAN - SHEET 03
130607-HI-CV-DWG-2204	PAVEMENT PLAN - SHEET 04
130607-HI-CV-DWG-2401	RETAINING WALL LONGITUDINAL SECTIONS
130607-HI-CV-DWG-2601	SITEWORKS DETAILS - SHEET 01
130607-HI-CV-DWG-2602	SITEWORKS DETAILS - SHEET 02
130607-HI-CV-DWG-3001	STORMWATER PLAN - SHEET 01
130607-HI-CV-DWG-3002	STORMWATER PLAN - SHEET 02
130607-HI-CV-DWG-3003	STORMWATER PLAN - SHEET 03
130607-HI-CV-DWG-3004	STORMWATER PLAN - SHEET 04
130607-HI-CV-DWG-3100	STORMWATER PIT SCHEDULE
130607-HI-CV-DWG-3201	SWALE CROSS SECTIONS
130607-HI-CV-DWG-3501	STORMWATER LONGITUDINAL SECTIONS - SHEET 01
130607-HI-CV-DWG-3502	STORMWATER LONGITUDINAL SECTIONS - SHEET 02
130607-HI-CV-DWG-3601	STORMWATER DETAILS - SHEET 01
130607-HI-CV-DWG-3602	STORMWATER DETAILS - SHEET 02
130607-HI-CV-DWG-3603	STORMWATER DETAILS - SHEET 03
130607-HI-CV-DWG-3604	STORMWATER DETAILS - SHEET 04
130607-HI-CV-DWG-3605	STORMWATER DETAILS - SHEET 05
130607-HI-CV-DWG-4001	ROAD DESIGN SETOUT - SHEET 01
130607-HI-CV-DWG-4002	ROAD DESIGN SETOUT - SHEET 01
130607-HI-CV-DWG-4003	ROAD DESIGN SETOUT - SHEET 01
130607-HI-CV-DWG-4004	ROAD DESIGN SETOUT - SHEET 01
130607-HI-CV-DWG-4101	KERB SETOUT TABLES - SHEET 01
130607-HI-CV-DWG-4102	KERB SETOUT TABLES - SHEET 02
130607-HI-CV-DWG-4103	KERB SETOUT TABLES - SHEET 03
130607-HI-CV-DWG-4104	KERB SETOUT TABLES - SHEET 04
130607-HI-CV-DWG-4301	ROAD LONGITUDINAL SECTIONS
130607-HI-CV-DWG-4400	ROAD CROSS SECTIONS
130607-HI-CV-DWG-6001	EROSION AND SEDIMENT CONTROL PLAN - SHEET 01
130607-HI-CV-DWG-6002	EROSION AND SEDIMENT CONTROL PLAN - SHEET 02
130607-HI-CV-DWG-6003	EROSION AND SEDIMENT CONTROL PLAN - SHEET 03
130607-HI-CV-DWG-6003	EROSION AND SEDIMENT CONTROL PLAN - SHEET 04
130607-HI-CV-DWG-6601	EROSION AND SEDIMENT CONTROL DETAILS

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

NORTH

BEFORE YOU DIG www.byda.com.au

Rev	Revision Description	Date
2	ISSUED FOR CONSTRUCTION	18/10/2024
01	FOR CROWN CERTIFICATE	04/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
COVERSHEET AND DRAWING INDEX

Scale:
0 10 20 30 40 50m
1:1000

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-0000	2

File Path: - K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-0000.DWG - 130607-HI-CV-DWG-0000 - DATE PRINTED: 2/12/2024 9:35:37 AM

A1

SITEWORKS NOTES

1. ORIGIN OF LEVELS :- AUSTRALIAN HEIGHT DATUM (A.H.D.)
2. SURVEY SUPPLIED BY PREMISE SURVEYING, DRAWING REFERENCE NUMBER 223032-DS01-DS04 ISSUED 08/05/2023.
3. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK.
4. ALL WORK IS TO BE UNDERTAKEN IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS AND THE SPECIFICATIONS AND THE DIRECTIONS OF THE PRINCIPAL'S REPRESENTATIVE.
5. WHERE NEW WORKS ABUT EXISTING THE CONTRACTOR SHALL ENSURE THAT A SMOOTH EVEN PROFILE, FREE FROM ABRUPT CHANGES IS OBTAINED.
6. THE CONTRACTOR SHALL ARRANGE ALL SURVEY SETOUT TO BE CARRIED OUT BY A REGISTERED SURVEYOR.
7. CARE IS TO BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATIONS ARE TO BE UNDERTAKEN OVER COMMUNICATIONS OR ELECTRICAL SERVICES. HAND EXCAVATE IN THESE AREAS.
8. ALL SERVICE TRENCHES UNDER VEHICULAR PAVEMENTS SHALL BE BACKFILLED WITH AN APPROVED GRANULAR MATERIAL AND COMPACTED TO 98% STANDARD MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS.1289.5.1.1.
9. ALL TRENCH BACKFILL MATERIAL NOT IN PAVEMENTS SHALL BE COMPACTED TO THE SAME DENSITY AS THE ADJACENT MATERIAL.
10. ON COMPLETION OF PIPE INSTALLATION ALL DISTURBED AREAS MUST BE RESTORED TO ORIGINAL, INCLUDING KERBS, FOOTPATHS, CONCRETE AREAS, GRAVEL AND GRASSED AREAS AND ROAD PAVEMENTS.
11. PROVIDE 10mm WIDE EXPANDING CORK JOINTS BETWEEN CONCRETE PAVEMENTS AND ALL BUILDINGS , WALLS, FOOTINGS, COLUMNS, KERBS, DISHDRAINS, GRATED DRAINS, BOLLARD FOOTINGS ETC
12. CONTRACTOR TO OBTAIN ALL AUTHORITY APPROVALS.
13. ALL BATTERS TO BE GRASSED LINED IN ACCORDANCE WITH LANDSCAPE ARCHITECTS SPECIFICATION.
14. MAKE SMOOTH TRANSITION TO EXISTING SERVICES AND MAKE GOOD.
15. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY DIVERSION DRAINS AND MOUNDS TO ENSURE THAT AT ALL TIMES EXPOSED SURFACES ARE FREE DRAINING AND WHERE NECESSARY EXCAVATE SUMPS AND PROVIDE PUMPING EQUIPMENT TO DRAIN EXPOSED AREAS.
16. THESE PLANS SHALL BE READ IN CONJUNCTION WITH THE APPROVED LANDSCAPE, STRUCTURAL, HYDRAULIC, MECHANICAL, ELECTRICAL AND TELECOMMUNICATION DRAWINGS AND SPECIFICATIONS.
17. TRENCHES THROUGH EXISTING ROAD AND CONCRETE PAVEMENTS SHALL BE SAWCUT TO FULL DEPTH OF CONCRETE AND A MIN 50mm IN BITUMINOUS PAVING.
18. ON COMPLETION OF WORKS ALL DISTURBED AREAS MUST BE RESTORED TO ORIGINAL INCLUDING, BUT NOT LIMITED TO, KERBS, FOOTPATHS, CONCRETE AREAS, GRASS AND LANDSCAPED AREAS.

EXISTING SERVICES AND FEATURES

1. EXISTING SERVICES HAVE BEEN PLOTTED FROM SUPPLIED DATA AND AS SUCH THEIR ACCURACY CANNOT BE GUARANTEED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH THE LOCATION AND LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE SERVICE AUTHORITY.
2. THE CONTRACTOR SHALL ALLOW FOR THE CAPPING OFF, EXCAVATION, REMOVAL AND DISPOSAL IF REQUIRED OF ALL EXISTING SERVICES IN AREAS AFFECTED BY WORKS WITHIN THE CONTRACT AREA, AS SHOWN ON THE DRAWINGS UNLESS DIRECTED OTHERWISE BY THE SERVICE AUTHORITY.
3. THE CONTRACTOR SHALL ENSURE THAT AT ALL TIMES SERVICES TO ALL BUILDINGS NOT AFFECTED BY THE WORKS ARE NOT DISRUPTED.
4. PRIOR TO COMMENCEMENT OF ANY WORKS THE CONTRACTOR SHALL GAIN WRITTEN APPROVAL OF HIS PROGRAMME FOR THE RELOCATION/CONSTRUCTION OF TEMPORARY SERVICES.
5. EXISTING BUILDINGS, EXTERNAL STRUCTURES, AND TREES SHOWN ON THESE DRAWINGS ARE FEATURES EXISTING PRIOR TO ANY DEMOLITION WORKS.
6. CONTRACTOR SHALL CONSTRUCT TEMPORARY SERVICES TO MAINTAIN EXISTING SUPPLY TO BUILDINGS REMAINING IN OPERATION DURING WORKS TO THE SATISFACTION AND APPROVAL OF THE SERVICE AUTHORITY. ONCE DIVERSION IS COMPLETE AND COMMISSIONED THE CONTRACTOR SHALL REMOVE ALL SUCH TEMPORARY SERVICES AND MAKE GOOD TO THE SATISFACTION OF THE SERVICE AUTHORITY AND THE RELEVANT SERVICE AUTHORITY.
7. INTERRUPTION TO SUPPLY OF EXISTING SERVICES SHALL BE DONE SO AS NOT TO CAUSE ANY INCONVENIENCE TO THE PRINCIPAL. CONTRACTOR TO GAIN APPROVAL OF SERVICE AUTHORITY FOR TIME OF INTERRUPTION. THE CONTRACTOR IS RESPONSIBLE FOR ALL LIAISON.
8. CLEARANCE AND COVER REQUIREMENTS SHALL BE OBTAINED FROM THE COUNCIL AND RELEVANT SERVICE AUTHORITY BEFORE COMMENCEMENT OF WORKS AND SHALL BE ADHERED TO AT ALL TIMES.
9. CARE IS TO BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATIONS ARE TO BE UNDERTAKEN OVER TELECOM OR ELECTRICAL SERVICES. HAND EXCAVATE IN THESE AREAS ONLY.

ROADWORKS NOTES

1. ALL BASECOURSE AND SUB-BASECOURSE MATERIALS SHALL CONFORM WITH THE SPECIFICATIONS AND AUSTRALIAN STANDARDS.
2. ALL BASECOURSE AND SUB-BASE MATERIALS SHALL BE COMPACTED TO ACHIEVE A MINIMUM OF 100% STANDARD MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT OF +OR- 2% IN ACCORDANCE WITH AS1289 E1.1.
3. ALL WEARING SURFACES SHALL BE ASPHALTIC CONCRETE LAID TO THE THICKNESS SPECIFIED AND IN ACCORDANCE WITH THE SPECIFICATION.
4. CONCRETE FOR KERB SHALL HAVE A CONCRETE STRENGTH OF 20MPa AT 28 DAYS, MINIMUM SLUMP OF 80mm AND MAXIMUM AGGREGATE SIZE OF 40mm.

STORMWATER NOTES

1. ALL DRAINAGE PIPES GREATER THAN DN375 SHALL BE CLASS 2 APPROVED SPIGOT AND SOCKET REINFORCED CONCRETE PIPES WITH RUBBER RING JOINTS (UNO).
2. MINIMUM COVER TO ALL NEW STORMWATER PIPES SHOULD BE 600 UNLESS SHOWN OTHERWISE. STORMWATER PIPES WITH LESS THAN 600mm COVER SHOULD BE CONCRETE ENCASED
3. WHERE DRAINAGE LINE PASS UNDER VEHICULAR PAVEMENTS PIPES SHALL BE CLASS 4 APPROVED SPIGOT AND SOCKET REINFORCED CONCRETE PIPES WITH RUBBER RING JOINTS (UNO).
4. ALL NEW DRAINAGE PIPES LESS THAN OR EQUAL TO Ø300mm SHALL BE uPVC DWV GRADE CLASS SN8 IN ACCORDANCE WITH AS/NZS1260:2009-PVC-U PIPES AND FITTINGS FOR DRAIN, WASTE AND VENT APPLICATION WITH SOLVENT WELDED JOINTS.
5. EQUIVALENT STRENGTH REINFORCED CONCRETE OR FIBROUS REINFORCED CONCRETE MAY BE USED SUBJECT TO APPROVAL BY THE PRINCIPALS REPRESENTATIVE.
6. PIPES FOR SUB-SOIL DRAINS SHALL BE SLOTTED 100mm DIAMETER CLASS 1000 WRAPPED IN GEOFABRIC, UNO, COMPLYING WITH THE REQUIREMENTS OF AS 2439. ALL SUBSOIL PIPES SHALL BE FACTORY SLOTTED HDPE, MINIMUM 100mm DIAMETER SN8 CLASS, SIMILAR OR EQUAL TO VINIDEX DRAINCOIL, CERTIFIED UPVC, IN ACCORDANCE WITH AS1260, AS2032 (PIPE) & AS3789 (JOINTING) INSTALLED ON GEOTEXTILE FABRIC WITH 150mm SURROUND OF 25MM BLUE METAL AGGREGATE. UNO
7. ALL PIPE JUNCTIONS UP TO AND INCLUDING 300 DIA. AND TAPERS SHALL BE VIA PURPOSE MADE FITTINGS.
8. ALL MILD STEEL FIXTURES INCLUDING GRATES, FRAMES, STEP IRONS, LADDERS, ETC., SHALL BE HOT DIP GALVANISED. GALVANISING SHALL COMPLY WITH THE REQUIREMENTS OF AS 1214 OR AS 1650, AS APPROPRIATE.
9. MINIMUM GRADE TO STORMWATER LINES TO BE 1%. (U.N.O.)
10. CONTRACTOR TO SUPPLY AND INSTALL ALL FITTINGS AND SPECIALS INCLUDING VARIOUS PIPE ADAPTORS TO ENSURE PROPER CONNECTION BETWEEN DISSIMILAR PIPEWORK.
11. ALL CONNECTIONS TO EXISTING DRAINAGE PITS SHALL BE MADE IN A TRADESMAN-LIKE MANNER AND THE INTERNAL WALL OF THE PIT AT THE POINT OF ENTRY SHALL BE CEMENT RENDERED TO ENSURE A SMOOTH FINISH.
12. PRECAST PITS SHALL NOT BE USED UNLESS WRITTEN APPROVAL IS OBTAINED FROM THE SERVICE AUTHORITY.
13. WHERE TRENCHES ARE IN ROCK, THE PIPE SHALL BE BEDDED ON A MIN. 50MM CONCRETE BED (OR 75MM THICK BED OF 12mm BLUE METAL) UNDER THE BARREL OF THE PIPE. THE PIPE COLLAR AT NO POINT SHALL BEAR ON THE ROCK. IN OTHER THAN ROCK, PIPES SHALL BE LAID ON A 75MM THICK SAND BED. IN ALL CASES BACKFILL THE TRENCH WITH SAND TO 200MM ABOVE THE PIPE. WHERE THE PIPE IS UNDER PAVEMENTS BACKFILL REMAINDER OF TRENCH WITH SAND OR APPROVED GRANULAR BACKFILL COMPACTED IN 150MM LAYERS TO 98% STANDARD MAX. DRY DENSITY.
14. BEDDING SHALL BE (U.N.O) TYPE H2 (NOT UNDER ROADWAYS) OR HS2 (UNDER ROADWAYS) IN ACCORDANCE WITH CURRENT RELEVANT AUSTRALIAN STANDARDS.
15. BACKFILL TRENCH WITH SAND OR APPROVED GRANULAR BACKFILL TO 300mm(MIN) ABOVE THE PIPE. WHERE THE PIPE IS UNDER PAVEMENTS BACKFILL REMAINDER OF TRENCH TO PAVEMENT SUBGRADE WITH SAND OR APPROVED GRAVEL SUB-BASE COMPACTED IN 150mm LAYERS TO 98% STANDARD MAXIMUM DRY DENSITY. THE CONTRACTOR IS TO ENSURE COMPACTION EQUIPMENT IS APPROPRIATE FOR THE PIPE CLASS USED.
16. WHERE STORMWATER LINES PASS UNDER FLOOR SLABS DWV GRADE uPVC RUBBER RING JOINTS ARE TO BE USED (UNO).
17. WHERE SUBSOIL DRAINAGE LINES PASS UNDER VEHICULAR PAVEMENTS, UNSLOTTED uPVC DWV GRADE CLASS SN8 PIPE SHALL BE USED.
18. 100mm DIA. SUBSOIL DRAINAGE PIPE 3m LONG WRAPPED IN FILTER SOCK TO BE PROVIDED IN PIPE TRENCHES UPSTREAM OF ALL PITS.
19. PITS DEEPER THAN 900mm SHALL HAVE ACCESS LADDERS OR STEP IRONS INSTALLED AND SHALL BE IN ACCORDANCE WITH THE LOCAL OR STATUTORY AUTHORITY REQUIREMENTS.
20. ALL FRAMES, COVERS AND GRATINGS FOR PITS, SUMPS, DRAINS, GRATED DRAINS ETC MUST BE PROVIDED TO SUIT CLASS D DUTIES AND ALL GRATES SHALL BE SLIP RESISTANT AND HEELGUARD UNO IN ACCORDANCE WITH AS3996.
21. WHERE A PIT IS IDENTIFIED AS A CONFINED SPACE, PIT COVERS SHALL BE PROVIDED WITH STANDARD CONFINED SPACE SIGNAGE
22. SUBSOIL DRAINAGE LINES SHALL BE INSTALLED AT THE BASE OF ALL RETAINING WALLS AND FOR ALL STORMWATER PITS. ALL SUBSOIL LINES SHALL BE CONNECTED TO DRAIN TO THE STORMWATER DRAINAGE SYSTEM.
23. CAPPED FLUSHING POINTS MUST BE PROVIDED FOR ALL SUBSOIL AND SEEPAGE DRAINAGE SYSTEMS AT THE END OF EACH PIPE, AT 30M SPACING AND AT CHANGES IN DIRECTIONS.
24. INSPECTION OPENINGS AND CLEAROUTS MUST BE PROVIDED AT EVERY JUNCTION, BEND, CHANGE OF DIRECTION AND AT THE BASE OF ALL DOWNPIPES IMMEDIATELY ABOVE WHERE THE DOWNPIPE PENETRATES THE GROUND OR SLAB ON GROUND.

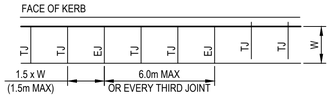
SUBSOIL DRAINAGE NOTES

1. DN100 SLOTTED uPVC SUBSOIL DRAINAGE WRAPPED IN GEOFABRIC SHALL BE PROVIDED IN THE FOLLOWING LOCATIONS AND CONNECTED TO THE SITE STORMWATER DRAINAGE SYSTEM (U.N.O):
   - UNDER KERBS ADJACENT TO ALL PAVEMENTS
   - AT THE BASE OF THE HIGH SIDE OF ALL RETAINING WALLS

CONCRETE JOINTING NOTES

PEDESTRIAN FOOTPATH JOINTING:

1. DOWELED JOINTS ARE TO BE LOCATED WHERE POSSIBLE AT TANGENT POINTS OF CURVES AND ELSEWHERE AT MAX 6.0m CENTRES.
2. TOOLED JOINTS ARE TO BE LOCATED AT A MAX 1.5 x WIDTH OF THE PAVEMENT.
3. WHERE POSSIBLE JOINTS SHOULD BE LOCATED TO MATCH KERBING AND/OR ADJACENT PAVEMENT JOINTS.
4. ALL PEDESTRIAN FOOTPATH JOINTING LAYOUTS AS FOLLOWS (UNO)



ALL RAMPED CROSSINGS SHALL BE DOWELED INTO ADJOINING PATH PAVEMENT

EARTHWORKS NOTES

1. ALL WORK SHALL COMPLY WITH AS3798 (2007) - GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS.
2. ALL WORK SHALL COMPLY WITH THE PROJECT GEOTECHNICAL REPORT -

   DOUGLAS PARTNERS - REPORT ON GEOTECHNICAL INVESTIGATION
   REF:86694.17 (OCTOBER 2021)
3. AFTER DEMOLITION STRIP REMAINING TOPSOIL THROUGHOUT TO EXPOSE NATURALLY OCCURRING AND ENGINEERING MATERIAL AND STOCKPILE ON SITE FOR REUSE AS DIRECTED BY THE PRINCIPAL'S REPRESENTATIVE.
4. EXCAVATE TO SUBGRADE LEVELS, SEGREGATING AND STOCKPILING MATERIALS FOR LATER REUSE.
5. PROOF ROLL ALL SOFT OR WET AREAS SHALL BE DRIED TO OPTIMUM MOISTURE AND RE-COMPACTED TO 95% MMDD, WHERE MATERIAL IS DEEMED UNSUITABLE BY THE PRINCIPAL AND CANNOT BE USED ON SITE SHALL REMOVED FROM SITE.
6. ALL FILL MATERIAL SHALL BE FROM A SOURCE APPROVED BY THE PRINCIPAL AND SHALL COMPLY WITH THE FOLLOWING -
   a. FREE FROM ORGANIC AND PERISHABLE MATTER,
   b. MAXIMUM PARTICLE SIZE 75mm,
   c. PLASTICITY INDEX - BETWEEN 2% AND 15%.
7. ALL FILL MATERIAL SHALL BE PLACED IN MAXIMUM 200mm THICK LAYERS AND COMPACTED AT OPTIMUM MOISTURE CONTENT (+ OR - 2%) TO ACHIEVE A DRY DENSITY DETERMINED IN ACCORDANCE WITH AS1289.5.1.1-2003-METHODS OF TESTING SOILS FOR ENGINEERING PURPOSES OF NOT LESS THAN THE FOLLOWING STANDARD MAXIMUM DRY DENSITY -

LOCATION	STANDARD MAXIMUM DRY DENSITY (SMDD)
UNDER BUILDING SLABS	98%
VEHICULAR PAVED AREAS	100%
NON-VEHICULAR PAVED AREAS	98%
LANDSCAPED AREAS	95%

8. THE CONTRACTOR SHALL PROGRAM THE EARTHWORKS OPERATION SO THAT THE WORKING AREAS ARE ADEQUATELY DRAINED DURING THE PERIOD OF CONSTRUCTION. THE SURFACE SHALL BE GRADED AND SEALED OFF TO REMOVE DEPRESSIONS, ROLLER MARKS AND SIMILAR WHICH WOULD ALLOW WATER TO POND AND PENETRATE THE UNDERLYING MATERIAL. ANY DAMAGE RESULTING FROM THE CONTRACTOR NOT OBSERVING THESE REQUIREMENTS SHALL BE RECTIFIED BY THE CONTRACTOR AT THEIR OWN EXPENSE.
9. TESTING OF THE FILL MATERIAL SHALL BE CARRIED OUT BY AN APPROVED NATA REGISTERED LABORATORY AT THE CONTRACTORS EXPENSE.
10. ROCK LEVELS SHOWN ON BULK EARTHWORKS PLANS AND SECTIONS ARE INFERRED. CONTRACTOR TO CONFIRM DEPTH ON SITE. TYP. INFERRED ROCK LEVELS BASED ON GEOTECHNICAL INVESTIGATION.
11. PROPOSED BULK EARTHWORKS SURFACE LEVEL SHOWN DOES NOT INCLUDE THE LANDSCAPE TOPSOIL SETDOWNS.
12. EXISTING SURFACE LEVEL SHOWN DOES NOT INCLUDE STRIPPING.

CONCRETE NOTES

1. ALL WORKMANSHIP AND MATERIALS SHALL COMPLY WITH COUNCIL CONSTRUCTION SPECIFICATIONS AND AS 3600 CURRENT EDITIONS WITH AMENDMENTS, AND THE ACSE CONCRETE SPECIFICATION EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
2. VERIFY ALL SETTING OUT DIMENSIONS WITH THE SURVEY.
3. DO NOT OBTAIN DIMENSIONS BY SCALING THE DRAWINGS.
4. IN CASE OF DOUBT - ASK.

CONCRETE

1. PLACE CONCRETE OF THE FOLLOWING CHARACTERISTIC COMPRESSIVE STRENGTH F'C AS DEFINED IN AS.3600 OR M.R. FORM 609. ADD WATER REDUCING ADMIXTURE EQUAL TO WRDA.

LOCATION	AS.3600 F'c MPa AT 28 DAYS	SPECIFIED SLUMP	NOMINAL AGG. SIZE
ALL KERB PIT	25	80	20
VEHICULAR PAVEMENTS	32	80	20

2. USE "A.C.S.E. SPECIFICATION TYPE A" CEMENT.
3. ALL CONCRETE SHALL BE SUBJECT TO PROJECT CONTROL SAMPLE AND TESTING TO AS.3600.
4. CONSOLIDATE BY VIBRATION.

REINFORCEMENT

1. FIX REINFORCEMENT AS SHOWN ON DRAWINGS. THE TYPE AND GRADE IS INDICATED BY A SYMBOL AS SHOWN BELOW. ON THE DRAWING N IS FOLLOWED BY A NUMERAL WHICH INDICATES THE SIZE IN MILLIMETRES. A MARK NUMERAL (IF USED) FOLLOWS THIS NUMERAL.
   N. HOT ROLLED DEFORMED BAR, GRADE 410Y
   S. HOT ROLLED DEFORMED BAR, GRADE 230S
   R. PLAIN ROUND BAR, GRADE 230R
   SL. HARD DRAWN WIRE FABRIC.
2. PROVIDE BAR SUPPORTS OR SPACERS TO GIVE THE FOLLOWING CONCRETE COVER TO ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

   FOOTINGS
   - 75 BOTTOM, 65 TOP AND SIDES SLABS
   - 2O TOP AND BOTTOM, 30 WHEN EXPOSED TO WEATHER.

   BEAMS
   - 50 BOTTOM AND SIDES (TO STIRRIPS) TOP COVER AS DETAILED COLUMNS
   - 40 TO TIES AND SPIRALS 50 WHEN EXPOSED TO WEATHER

   WALLS
   - 25 GENERALLY 30 WHEN CAST IN FORMS BUT LATER EXPOSED TO WEATHER OR GROUND.
   - 65 WHEN CAST DIRECTLY IN CONTACT WITH GROUND.

CURING

1. CURE ALL CONCRETE IN ACCORDANCE BY IMPERMEABLE MEMBRANE OR WATER CURING METHODS.

EROSION AND SEDIMENT CONTROL NOTES

SEDIMENT CONTROL INSTRUCTIONS

1. SEDIMENT FENCES WILL BE INSTALLED AS SHOWN ON THE PLAN AND ELSEWHERE AT THE DISCRETION OF THE SITE SERVICE AUTHORITY TO CONTAIN SOIL AS NEAR AS POSSIBLE TO THEIR SOURCE.
2. SEDIMENT FENCES WILL NOT HAVE CATCHMENT AREAS EXCEEDING 900 SQUARE METRES AND HAVE A STORAGE DEPTH OF AT LEAST 0.6 METRES.
3. SEDIMENT REMOVED FROM ANY TRAPPING DEVICES WILL BE RELOCATED WHERE FURTHER POLLUTION TO DOWNSLOPE LANDS AND WATERWAYS CANNOT OCCUR.
4. STOCKPILES ARE NOT TO BE LOCATED WITHIN 5 METRES OF HAZARD AREAS INCLUDING AREAS OF HIGH VELOCITY FLOWS SUCH AS WATERWAYS, PAVED AREAS AND DRIVEWAYS.
5. WATER WILL BE PREVENTED FROM DIRECTLY ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS THE CATCHMENT AREA HAS BEEN PERMANENTLY LANDSCAPED AND/OR WATER HAS BEEN TREATED BY AN APPROVED DEVICE. 6. TEMPORARY SEDIMENT TRAPS WILL REMAIN IN PLACE UNTIL AFTER THE LANDS THEY ARE PROTECTING ARE COMPLETELY REHABILITATED.
6. ACCESS TO SITES SHOULD BE STABILISED TO REDUCE THE LIKELIHOOD OF VEHICLES TRACKING SOIL MATERIALS ONTO PUBLIC ROADS AND ENSURE ALL-WEATHER ENTRY/EXIT.

SOIL EROSION CONTROL INSTRUCTIONS

1. EARTH BATTERS WILL BE CONSTRUCTED WITH AS LOW A GRADIENT AS PRACTICABLE BUT NO STEEPER, UNLESS OTHERWISE NOTED, THAN:
   a. 2(H):1(V) WHERE SLOPE LENGTH LESS THAN 12 METRES
   b. 2.5(H):1(V) WHERE SLOPE LENGTH BETWEEN 12 AND 16 METRES.
   c. 3(H):1(V) WHERE SLOPE LENGTH BETWEEN 16 AND 20 METRES.
   d. 4(H):1(V) WHERE SLOPE LENGTH GREATER THAN 20 METRES.
2. ALL WATERWAYS, DRAINS, SPILLWAYS AND THEIR OUTLETS WILL BE CONSTRUCTED TO BE STABLE IN AT LEAST THE 1:20 YEAR ARI, TIME OF CONCENTRATION STORM EVENT.
3. WATERWAYS AND OTHER AREAS SUBJECT TO CONCENTRATED FLOWS AFTER CONSTRUCTION ARE TO HAVE A MAXIMUM GROUNDCOVER C-FACTOR OF 0.05 (70% GROUND COVER) WITHIN 10 WORKING DAYS FROM COMPLETION OF FORMATION. FLOW VELOCITIES ARE TO BE LIMITED TO THOSE SHOWN IN TABLE 5-1 OF "MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTION", DEPT OF HOUSING 1998 (BLUE BOOK). FOOT AND VEHICULAR TRAFFIC WILL BE PROHIBITED IN THESE AREAS.
4. STOCKPILES AFTER CONSTRUCTION ARE TO HAVE A MAXIMUM GROUND-COVER C-FACTOR OF 0.1 (60% GROUND-COVER) WITHIN 10 WORKING DAYS FROM COMPLETION OF FORMATION.
5. ALL LANDS, INCLUDING WATERWAYS AND STOCKPILES, DURING CONSTRUCTION ARE TO HAVE A MAXIMUM GROUND-COVER C-FACTOR OF 0.15 (50% GROUND COVER) WITHIN 20 WORKING DAYS FROM INACTIVITY EVEN THOUGH WORKS MAY CONTINUE LATER.
6. FOR AREAS OF SHEET FLOW USE THE FOLLOWING GROUND COVER PLANT SPECIES FOR TEMPORARY COVER: JAPANESE MILLET 20 KG/HA AND OATS 20 KG/HA.
7. PERMANENT REHABILITATION OF LANDS AFTER CONSTRUCTION WILL ACHIEVE A GROUND-COVER C-FACTOR OF LESS THAN 0.1 AND LESS THAN 0.05 WITHIN 60 DAYS. NEWLY PLANTED LANDS WILL BE WATERED REGULARLY UNTIL AN EFFECTIVE COVER IS ESTABLISHED AND PLANTS ARE GROWING VIGOROUSLY. FOLLOW-UP SEED AND FERTILISER WILL BE APPLIED AS NECESSARY.
8. RE-VEGETATION SHOULD BE AIMED AT RE-ESTABLISHING NATURAL SPECIES. NATURAL SURFACE SOILS SHOULD BE REPLACED AND NON-PERSISTANT ANNUAL COVER CROPS SHOULD BE USED.

WASTE CONTROL INSTRUCTIONS

1. ACCEPTABLE BINS WILL BE PROVIDED FOR ANY CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHING, LIGHTWEIGHT WASTE MATERIALS AND LITTER. CLEARANCE SERVICES WILL BE PROVIDED AT LEAST WEEKLY. DISPOSAL OF WASTE WILL BE IN A MANNER APPROVED BT THE SITE SERVICE AUTHORITY.
2. ALL POSSIBLE POLLUTANT MATERIALS ARE TO BE STORED WELL CLEAR OF ANY POORLY DRAINED AREAS, FLOOD PRONE AREAS, STREAMBANKS, CHANNELS AND STORMWATER DRAINAGE AREAS. STORE SUCH MATERIALS IN A DESIGNATED AREA UNDER COVER WHERE POSSIBLE AND WITHIN CONTAINMENT BUNDS.
3. ALL SITE STAFF AND SUB-CONTACTORS ARE TO BE INFORMED OF THEIR OBLIGATION TO USE WASTE CONTROL FACILITIES PROVIDED.
4. 4. ANY DE-WATERING ACTIVITIES ARE TO BE CLOSELY MONITORED TO ENSURE THAT WATER IS NOT POLLUTED BY SEDIMENT, TOXIC MATERIALS OR PETROLEUM PRODUCTS.
5. PROVIDE DESIGNATED VEHICULAR WASHDOWN AND MAINTENANCE AREAS WHICH ARE TO HAVE CONTAINMENT BUNDS.

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

BEFORE YOU DIG www.byda.com.au

Rev	Revision Description	Date
2	ISSUED FOR CONSTRUCTION	18/10/2024
01	FOR CROWN CERTIFICATE	04/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients: NSW GOVERNMENT Health Infrastructure; TAYLOR; NBRS

Project: BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title: SPECIFICATIONS AND NOTES

Scale:

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-0001	2

File Path: K:\S230099 BLAYNEY MPS\07_CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-0001.DWG - 130607-HI-CV-DWG-0001 - DATE PRINTED: 2/12/2024 9:35:22 AM

A1

SERVICES LEGEND (TYP.)

G	GAS LINE
S	SEWER LINE
W	WATER LINE
E	ELECTRICAL LINE
FI	FIRE LINE
C	COMMUNICATION LINE
T	TELECOMS LINE
EX/G	EXISTING GAS LINE
EX/S	EXISTING SEWER LINE
EX/W	EXISTING WATER LINE
EX/E	EXISTING ELECTRICAL LINE
EX/FI	EXISTING FIRE LINE
EX/C	EXISTING COMMUNICATION LINE
EX/T	EXISTING TELECOMS LINE
EX/SW	EXISTING STORMWATER DRAINAGE LINE
X	REDUNDANT SERVICE LINE
?	UNKNOWN SERVICE LINE
X X X X X X X X	TO BE DEMOLISHED/REDUNDANT

SITEWORKS LEGEND

	LIMIT OF WORKS BOUNDARY
	SITE WORKS BOUNDARY
	CHAIN WIRE FENCE
	SITE FENCE
RW	RETAINING WALL AND NUMBER
	SAWCUT JOINT
31.0	EXISTING CONTOUR
31.0	DESIGN CONTOUR
P63.45	PROPOSED SURFACE LEVEL
E63.45	EXISTING SURFACE LEVEL
FFL180.00	FINISHED FLOOR LEVEL
B1	BOLLARD FIXED (B1), REMOVABLE (B2)
1 / 4	BATTER SLOPE 1(VER.):4(HOR.)
	WHEEL STOP
K&G	KERB AND GUTTER
KO	KERB ONLY

PAVEMENT JOINTING LEGEND

SCJ	SAWN CONTRACT JOINT
EJ	EXPANSION JOINT
TJ	TOOLED JOINT
DCJ	DOWELLED CONSTRUCTION JOINT
IJ	ISOLATION JOINT
CJD	DOWELLED CONTRACTION JOINT
ET	EDGE THICKENING
TB	TRIMMER BAR

SIGNAGE LEGEND

	SIGN POST
	STREET SIGN POST

STORMWATER DRAINAGE LEGEND

SW	STORMWATER DRAINAGE LINE
SSD	SUBSOIL DRAINAGE LINE WITH CLEAR OUT
	GRASS LINED SWALE DRAIN
	GRATED PITS (VARIES IN SIZES)
	JUNCTION PITS (VARIES IN SIZES)
	KERB INLET PITS (VARIES IN TYPE & SIZES)
	GRATED DRAIN (VARIES IN TYPE & SIZES)
	HEADWALL (VARIES IN TYPE & SIZES)

STORMWATER DRAINAGE LINE WITH:

SW

Ø375mm RCP2 .....*(PIPE SIZE AND CLASS)*
15.0m @ 1.0% .....*(PIPE GRADE)*
10m .....*(PIPE LENGTH)*
US/IL: .....*(UP STREAM INVERT LEVEL)*
DS/IL: .....*(DOWN STREAM INVERT LEVEL)*

Ø375 SW — *FLOW DIRECTION*

PIPE DIAMETER

A-00 — STORMWATER DRAINAGE STRUCTURE NUMBER

PIT NUMBER

STORMWATER LINE NUMBER

SW DP ..... DOWNPIPE CONNECTION (Ø150uPVC U.N.O)

EROSION & SEDIMENT LEGEND

	SEDIMENT FENCE
	TEMPORARY CONSTRUCTION ACCESS
	KERB INLET PROTECTION
	GEOTEXTILE INLET SEDIMENT FILTER
	STRAW BALE SEDIMENT FILTERS

ABBREVIATIONS (ROAD)

K&G	KERB AND GUTTER
K&T	KERB AND TOE
KO	KERB ONLY
IK	INTEGRAL KERB
MK	MOUNTABLE KERB
IMK	INTEGRAL MOUNTABLE KERB
RK&G	ROLL KERB AND GUTTER
RK&T	ROLL KERB AND TOE
LK	LAYBACK KERB
FK	FLUSH KERB
PK	PRECAST KERB
BDD	BRICK DISH DRAIN
BK	BRICK KERB
TK	TIMBER KERB
CES	CONCRETE EDGE STRIP
TES	TIMBER EDGE STRIP
BES	BRICK EDGE STRIP
PR	PRAM RAMP
VC	VEHICULAR CROSSING
FSL	FINISHED SURFACE LEVEL
ESL	EXISTING SURFACE LEVEL
FFL	FINISHED FLOOR LEVEL

ABBREVIATIONS (STORMWATER)

S.G.G.P	SINGLE GRATED GULLY PIT
E.K.I.	EXTENDED KERB INLET
G.S.I.P.	GRATED SURFACE INLET PIT
G.D.	GRATED DRAIN
J.P.	JUNCTION PIT
MH	MANHOLE
H.W.	HEADWALL
RCP	REINFORCED CONCRETE PIPE
RRJ	RUBBER RING JOINT
C2, C3, C4	PIPE CLASSIFICATIONS
RCBC	REINFORCED CONCRETE BOX CULVERT
A.D.D.	APRON DISH DRAIN
G.R.P.	GLASS REINFORCED POLYMER
DP	DOWNPIPE
HER	HIGH END RISER
IR	INTERMEDIATE RISER
CO	CLEAROUT
DP	DOWNPIPE
FRP	FIBRE REINFORCED POLYMER
SQID	STORMWATER QUALITY IMPROVEMENT DEVICE
SP	SURCHARGE PIT

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

BEFORE YOU DIG www.byda.com.au

Rev	Revision Description	Date
2	ISSUED FOR CONSTRUCTION	18/10/2024
01	FOR CROWN CERTIFICATE	04/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
LEGENDS

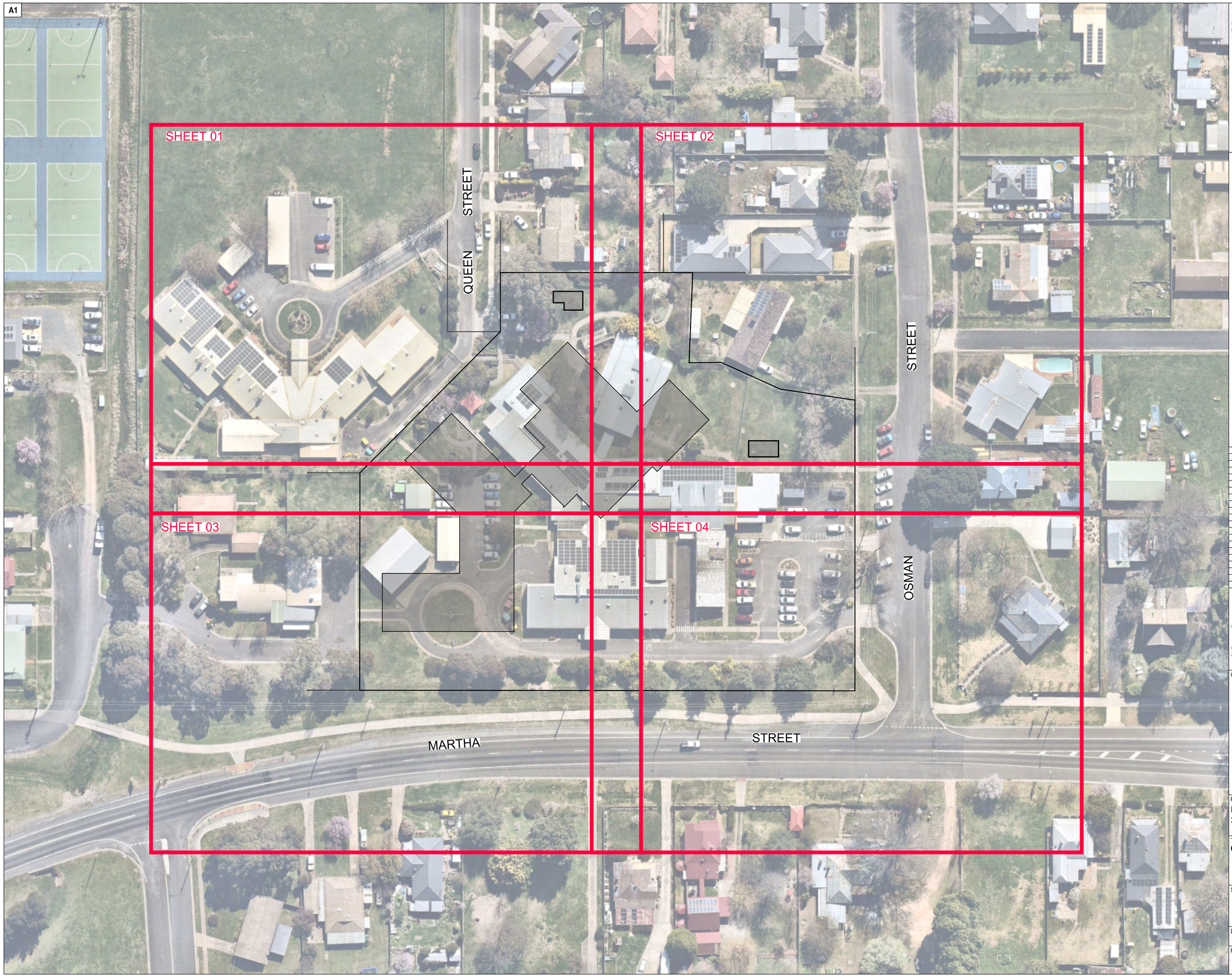
Scale:

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-0111	2

File Path: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-0111.DWG - 130607-HI-CV-DWG-0111 - DATE PRINTED: 2/12/2024 9:51:30 AM

A1



THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

NORTH

BEFORE YOU DIG www.byda.com.au

Rev	Revision Description	Date
2	ISSUED FOR CONSTRUCTION	18/10/2024
01	FOR CROWN CERTIFICATE	04/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
GENERAL ARRANGEMENT PLAN

Scale:
0 5 10 15 20 25m
1:500

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-0200	2

File Path: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-0200.DWG - 130607-HI-CV-DWG-0200 - DATE PRINTED: 2/12/2024 9:51:41 AM

INDICATIVE VOLUME ESTIMATES

CUT	-1448.055m^3
FILL	1679.941 m^3
BALANCE (EXCLUDE STRIPPING)	231.886m^3
EXISTING SURFACE STRIPPING 150mm	1134.864m^3

NOTES

1. VOLUMES PROVIDED ARE ESTIMATES ONLY.
2. THE SITE SHALL BE STRIPPED (TREES, VEGETATION AND TOPSOIL) TO A MINIMUM DEPTH OF 150mm PRIOR TO BULK EARTHWORKS STRIPPING VOLUMES.
3. CALCULATIONS COMPLETED ASSUMING EXISTING BUILDING FFL WITH A SLAB THICKNESS OF 400mm
4. CUT VOLUMES ESTIMATES ARE IN-SITU MATERIAL VOLUMES, NOT POST-EXCAVATION VOLUMES. FILL VOLUMES DO NOT INCLUDE COMPACTION FACTORS.
5. EXTRA OVER EXCAVATION FOR TREATMENT OF SUBGRADE BELOW PAVEMENTS NOT INCLUDED IN BULK EARTHWORKS VOLUMES. REMEDIATION FOR POOR SUBGRADES AND "SOFT SPOTS" SHALL BE AS PER THE CIVIL SPECIFICATION.
6. BULK EARTHWORKS VOLUMES DO NOT INCLUDE DETAILED EXCAVATIONS SUCH AS FOR TRENCHING, IN-GROUND STRUCTURES, FOOTING EXCAVATIONS, AND BOXING OUT FOR LANDSCAPING.
7. NO ALLOWANCE FOR COMPACTION FACTORS WITHIN VOLUMES.
8. ALLOW FOR EXTRA OVER EXCAVATION FOR AREAS WHERE ROCK MY BE ENCOUNTERED.
9. REFER TO THE PROJECT GEOTECHNICAL REPORT(S) FOR INFORMATION ON SUB-SURFACE CONDITIONS PRIOR TO CONSTRUCTION. GEOTECHNICAL REPORTS SHALL BE REVIEWED BY THE SUBCONTRACTOR DURING TENDER AND SUITABLE ALLOWANCES MADE WITHIN THE TENDER RESPONSE.
10. REFER TO THE PROJECT ENVIRONMENTAL REPORTS FOR INFORMATION ON SUB-SURFACE CONDITIONS PRIOR TO CONSTRUCTION.
11. THE BULK EARTHWORKS DESIGN DOES NOT CONSIDER THE POTENTIAL FOR SUB-SURFACE ANOMOLIES. ANY SUB-SURFACE GEOTECHNICAL FEATURES (E.G. VOIDS, ROCK PINNICLES, OR THE LIKE) ARE TO BE IDENTIFIED ON SITE PRIOR TO CONSTRUCTION. REMEDIATION OF SUCH FEATURES SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEERS REQUIREMENTS.
12. ANY DISCREPANCIES RELATING TO GEOTECHNICAL AND ENVIRONMENTAL FEATURES IDENTIFIED ON SITE ARE TO BE REPORTED TO THE MANAGING CONTRACTOR'S REPRESENTATIVE IN WRITING AND HOLD PROCEEDING WORKS UNTIL DIRECTION IS RECEIVED FROM THE MANAGING CONTRACTOR IN WRITING.

Lower Value		Upper Value		Colour
-2.5	to	-99	m	
-2.25	to	-2.5	m	
-2	to	-2.25	m	
-1.75	to	-2	m	
-1.5	to	-1.75	m	
-1.25	to	-1.5	m	
-1	to	-1.25	m	
-0.75	to	-1	m	
-0.5	to	-0.75	m	
-0.25	to	-0.5	m	
0	to	-0.25	m	
0	to	0.25	m	
0.25	to	0.5	m	
0.5	to	0.75	m	
0.75	to	1	m	
1	to	1.25	m	
1.25	to	1.5	m	
1.5	to	1.75	m	
1.75	to	2	m	
2	to	2.25	m	
2.25	to	2.5	m	
2.5	to	999	m	



THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

NORTH

BEFORE YOU DIG www.byda.com.au

Rev	Revision Description	Date
2	ISSUED FOR CONSTRUCTION	18/10/2024
01	FOR CROWN CERTIFICATE	04/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients: NSW Government Health Infrastructure; TAYLOR; NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
CUT AND FILL PLAN

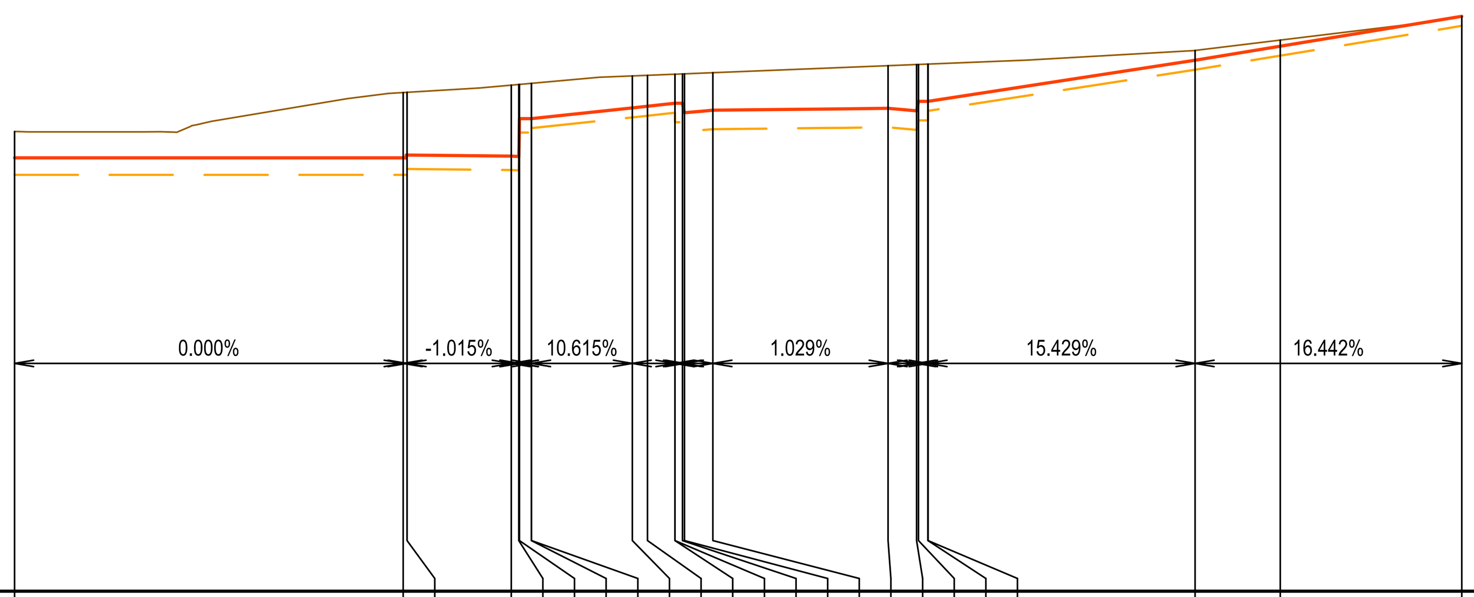
Scale: 1:250 (0 2.5 5 7.5 10 12.5m)

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-1000	2

File Path: K:\S230099 BLAYNEY MPS\07_CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-1000.DWG - 130607-HI-CV-DWG-1000 - DATE PRINTED: 2/12/2024 9:51:51 AM

A1



CHAINAGE	DESIGN SURFACE LEVELS	BULK EARTHWORKS LEVELS	EXISTING LEVELS	CUT / FILL DEPTHS
0.00	874.850	874.580	875.266	-0.686
6.14	874.850	874.580	875.882	-1.302
6.20	874.893		875.886	-1.212
7.85	874.877	874.657	875.998	-1.341
7.97	874.873	874.653	876.008	-1.357
7.98	875.469	875.249	876.009	-0.76
8.17	875.469		876.026	-0.777
8.17	875.469	875.319	876.026	-0.707
9.76	875.638	875.488	876.143	-0.655
10.00	875.665	875.515	876.153	-0.638
10.43	875.713	875.563	876.170	-0.608
10.43	875.713	875.413	876.170	-0.758
10.55	875.713	875.413	876.175	-0.762
10.58	875.563	875.263	876.176	-0.914
11.03	875.603	875.303	876.194	-0.892
13.80	875.631	875.331	876.306	-0.974
14.25	875.592	875.292	876.324	-1.032
14.28	875.742	875.442	876.325	-0.883
14.43	875.742	875.592	876.331	-0.889
14.43	875.742	875.592	876.331	-0.739
18.65	876.393	876.243	876.546	-0.303
20.00	876.614	876.464	876.710	-0.246
22.87	877.086		877.086	-0.15

SECTION - BE01

Vertical scale 1:100
Horizontal scale 1:100

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

BEFORE YOU DIG www.byda.com.au

Rev	Revision Description	Date
2	ISSUED FOR CONSTRUCTION	18/10/2024
01	FOR CROWN CERTIFICATE	04/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients
NSW GOVERNMENT Health Infrastructure
TAYLOR
NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
BULK EARTHWORKS SECTION

Scale: 0 1 2 3 4 5m 1:100

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-1001	2

File Path: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-1001.DWG - 130607-HI-CV-DWG-1001 - DATE PRINTED: 2/12/2024 9:51:25 AM

A1

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

NORTH

BEFORE YOU DIG www.byda.com.au

01 02 03 04

QUEEN STREET

NEW KERB RAMP. REFER DETAIL ON DRAWING 2602.

NEW DRIVEWAY AND LAYBACK. REFER DETAIL ON DRAWING 2602.

SAWCUT TO EXISTING PAVEMENT AND MATCH IN WITH EXISTING PAVEMENT LEVELS

NEW GRASS SWALE. REFER DETAIL ON DRAWING 3604.

NEW CONCRETE DOWNTURN. REFER TO DRAWING 2601 FOR DETAIL.

REFER DRAWING 130607-HI-CV-DWG-2102 FOR CONTINUATION

REFER DRAWING 130607-HI-CV-DWG-2103 FOR CONTINUATION

Rev	Revision Description	Date
2	ISSUED FOR CONSTRUCTION	14/11/2024
1	ISSUED FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
SITEWORKS GRADING PLAN - SHEET 01

Scale: 0 2 4 6 8 10m
1:200

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-2101	2

File Path: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-2100.DWG - 130607-HI-CV-DWG-2101 - DATE PRINTED: 2/12/2024 9:53:43 AM

A1

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

NORTH

BEFORE YOU DIG www.byda.com.au

01 02 03 04

REFER DRAWING 130607-HI-CV-DWG-2101 FOR CONTINUATION

NEW BLOCK RETAINING WALL. REFER DRAWING 2401 FOR LONGSECTION.

NEW ESHOLZ KERB AND GUTTER. REFER DRAWING 2601 FOR DETAIL.

ESHOLZ KERB AND GUTTER

ON HOLD

REFER DRAWING 130607-HI-CV-DWG-2104 FOR CONTINUATION

STREET

OSMAN

Rev	Revision Description	Date
2	ISSUED FOR CONSTRUCTION	14/11/2024
1	ISSUED FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
SITEWORKS GRADING PLAN - SHEET 02

Scale:
0 2 4 6 8 10m
1:200

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-2102	2

File Path: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-2100.DWG - 130607-HI-CV-DWG-2102 - DATE PRINTED: 2/12/2024 10:25:04 AM

A1

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

NORTH

BEFORE YOU DIG www.byda.com.au

01 02 03 04

NEW CONCRETE DOWNTURN. REFER TO DRAWING 2601 FOR DETAIL.

REFER DRAWING 130607-HI-CV-DWG-2101 FOR CONTINUATION

NEW GRASS SWALE. REFER DETAIL ON DRAWING 3604.

NEW BLOCK RETAINING WALL. REFER DRAWING 2401 FOR LONGSECTION.

TIE NEW KERB AND GUTTER TIE INTO EXISTING AND MAKE GOOD

CONSTRUCT NEW KERB AND GUTTER

NEW CONCRETE DOWNTURN. REFER TO DRAWING 2601 FOR DETAIL.

SAWCUT TO EXISTING PAVEMENT AND MATCH IN WITH EXISTING PAVEMENT LEVELS

MC01
130607-HI-CV-DWG-4400

TIE NEW KERB AND GUTTER INTO EXISTING

SAWCUT TO EXISTING PAVEMENT AND MATCH IN WITH EXISTING PAVEMENT LEVELS

LOCALLY TRIM EXISTING BATTER TO NEW LEVELS

REFER DRAWING 130607-HI-CV-DWG-2104 FOR CONTINUATION

MARTHA STREET

Rev	Revision Description	Date
2	ISSUED FOR CONSTRUCTION	18/10/2024
2	FOR CROWN CERTIFICATE	04/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
SITEWORKS GRADING PLAN - SHEET 03

Scale:
0 2 4 6 8 10m
1:200

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-2103	2

File Path: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-2100.DWG - 130607-HI-CV-DWG-2103 - DATE PRINTED: 2/12/2024 10:25:37 AM

A1

REFER DRAWING 130607-HI-CV-DWG-2102 FOR CONTINUATION

REFER DRAWING 130607-HI-CV-DWG-2103 FOR CONTINUATION

TIE INTO EXISTING SURFACE.

NEW ACCESSIBLE PARKING LINEMARKING TO AS2890.6

NEW BOLLARD. REFER DETAIL ON DRAWING 2601.

NEW PARKING SPACE LINEMARKING TO AS2890.1

5.40m TYP.

6.16m

2.60m TYP.

NEW WHEEL STOPS TO AS2890.1

TIE NEW KERB ONLY INTO EXISTING AND MAKE GOOD

SAWCUT TO EXISTING PAVEMENT AND MATCH IN WITH EXISTING PAVEMENT LEVELS

SAWCUT TO EXISTING PAVEMENT AND MATCH IN WITH EXISTING PAVEMENT LEVELS

SAWCUT TO EXISTING PAVEMENT AND MATCH IN WITH EXISTING PAVEMENT LEVELS

OSMAN STREET

MARTHA STREET

NORTH

BEFORE YOU DIG www.byda.com.au

01 02 03 04

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

Rev	Revision Description	Date
1	ISSUED FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
SITEWORKS GRADING PLAN - SHEET 04

Scale:
0 2 4 6 8 10m
1:200

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-2104	1

File Path: K:\S230099 BLAYNEY MPS\07_CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-2100.DWG - 130607-HI-CV-DWG-2104 - DATE PRINTED: 21/2/2024 9:53:58 AM

A1

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

NORTH

BEFORE YOU DIG www.byda.com.au

01 02 03 04

ACCESS ROAD PAVEMENT 'TYPE A' 'A'
MEDIUM DUTY FLEXIBLE PAVEMENT

QUEEN STREET

CARPARKING LINEMARKING IN ACCORDANCE WITH AS2890.1

REFER DRAWING 130607-HI-CV-DWG-2202 FOR CONTINUATION

REFER DRAWING 130607-HI-CV-DWG-2203 FOR CONTINUATION

REFER DRAWING 13060-HI-CV-DWG-2601 FOR TYPICAL FOOTPATH JOINTING DETAIL

Rev	Revision Description	Date
1	ISSUED FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients
NSW GOVERNMENT Health Infrastructure
TAYLOR
NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
PAVEMENT PLAN - SHEET 01

Scale: 1:200 (0 2 4 6 8 10m)

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-2201	1

File Path: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-2200.DWG - 130607-HI-CV-DWG-2201 - DATE PRINTED: 2/12/2024 9:54:11 AM

A1

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

NORTH

BEFORE YOU DIG www.byda.com.au

01 02 03 04

'A' ACCESS ROAD PAVEMENT 'TYPE A'
MEDIUM DUTY FLEXIBLE PAVEMENT

'B' ACCESS ROAD PAVEMENT 'TYPE B'
LIGHT DUTY FLEXIBLE PAVEMENT

'B' ACCESS ROAD PAVEMENT 'TYPE B'
LI(REFER DRAWING 130607-HI-CV-DWG-2204 FOR CONTINUATION

REFER DRAWING 130607-HI-CV-DWG-2201 FOR CONTINUATION

CARPARKING LINEMARKING IN ACCORDANCE WITH AS2890.1

REFER DRAWING 13060-HI-CV-DWG-2601 FOR TYPICAL FOOTPATH JOINTING DETAIL

REFER DRAWING 13060-HI-CV-DWG-2601

PEDESTRIAN CROSSING

STREET

OSMAN

Rev	Revision Description	Date
1	ISSUED FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
PAVEMENT PLAN - SHEET 02

Scale:
0 2 4 6 8 10m
1:200

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-2202	1

File Path: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-2200.DWG - 130607-HI-CV-DWG-2202 - DATE PRINTED: 2/12/2024 9:54:17 AM

A1

REFER DRAWING 130607-HI-CV-DWG-2201 FOR CONTINUATION

REFER DRAWING
13060-HI-CV-DWG-2601
FOR TYPICAL FOOTPATH
JOINTING DETAIL

ACCESS ROAD PAVEMENT 'TYPE B' 'B'
LIGHT DUTY FLEXIBLE PAVEMENT

MARTHA

ACCESS ROAD PAVEMENT 'TYPE B' 'B'
LIGHT DUTY FLEXIBLE PAVEMENT

STREET

REFER DRAWING 130607-HI-CV-DWG-2204 FOR CONTINUATION

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

NORTH

BEFORE YOU DIG www.byda.com.au

01 02 03 04

Rev	Revision Description	Date
1	ISSUED FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure
TAYLOR
NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
PAVEMENT PLAN - SHEET 03

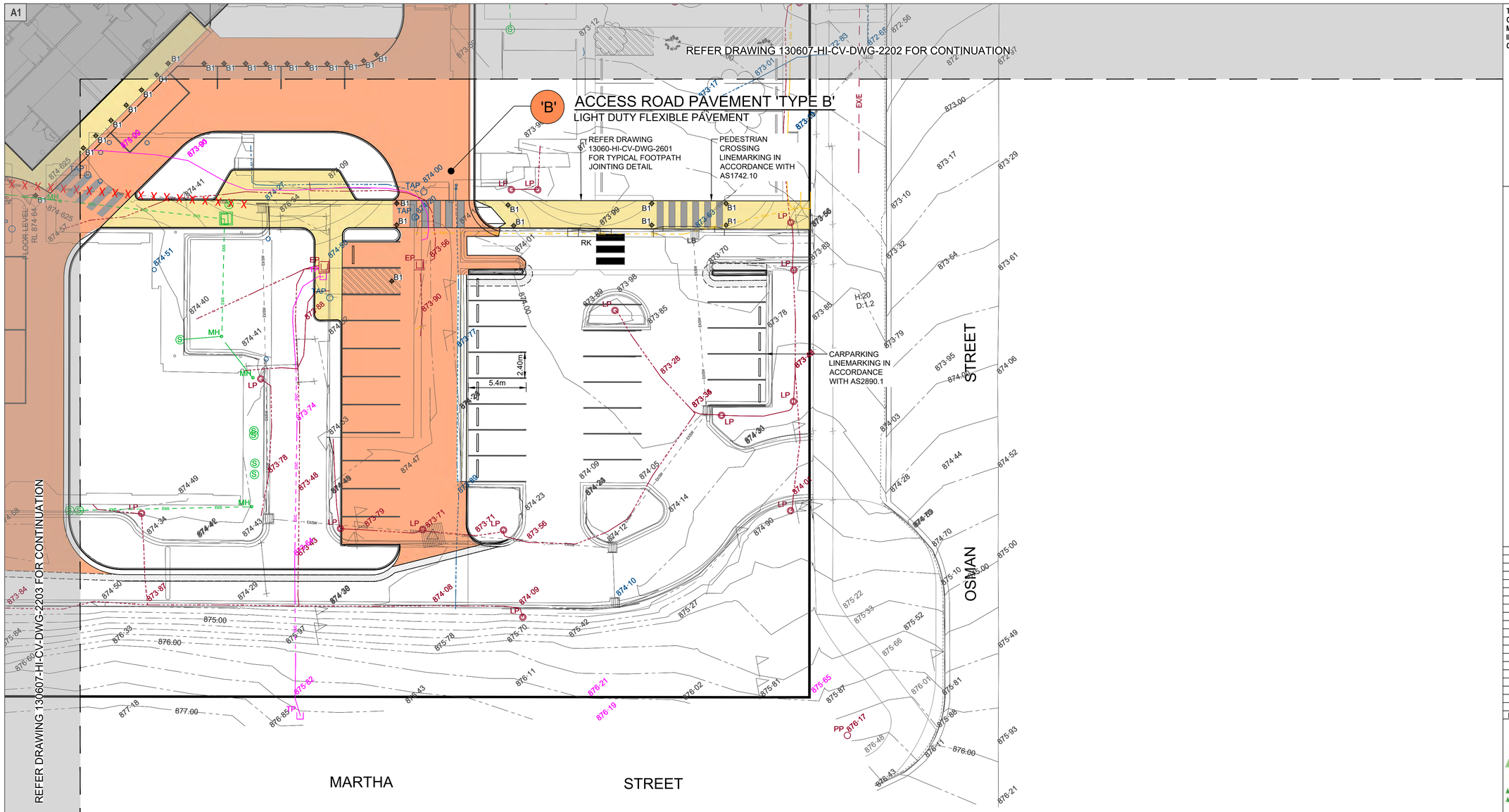
Scale:
0 2 4 6 8 10m
1:200

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-2203	1

File Path: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-2200.DWG - 130607-HI-CV-DWG-2203 - DATE PRINTED: 2/12/2024 9:54:23 AM

A1



THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

NORTH

BEFORE YOU DIG www.byda.com.au

01 02 03 04

Rev	Revision Description	Date
1	ISSUED FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
PAVEMENT PLAN - SHEET 04

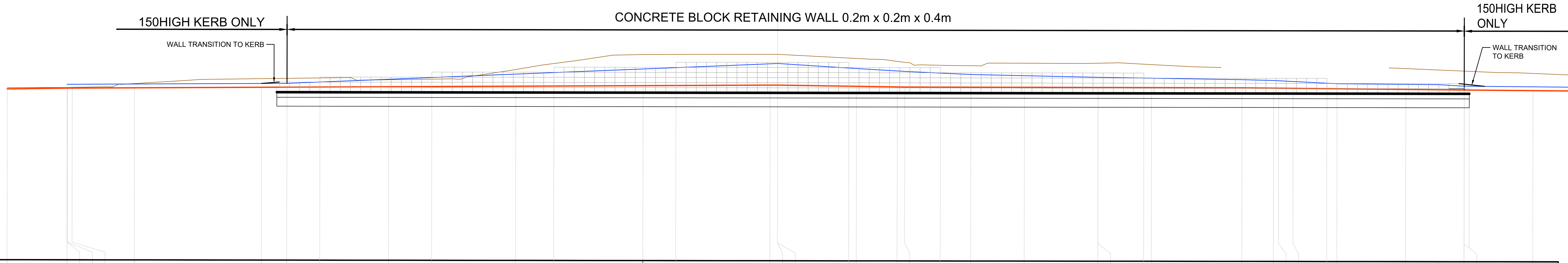
Scale:
0 2 4 6 8 10m
1:200

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-2204	1

File Path: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-2200.DWG - 130607-HI-CV-DWG-2204 - DATE PRINTED: 21/2/2024 9:54:29 AM

A1

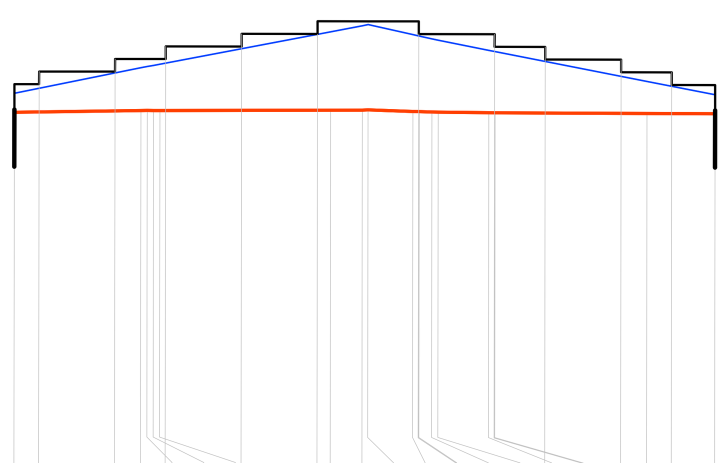


DATUM (m) 868.00

CHAINAGE	TOP OF WALL LEVELS	DESIGN SURFACE LEVELS (BACK OF WALL)	BASE OF WALL LEVELS (FOOTPATH)	TOP OF FOOTING LEVELS	EXISTING LEVELS
0.000			874.720		874.769
2.355			874.755		874.780
2.356			874.755		874.780
2.365			874.755		874.780
2.555		874.906	874.756		874.786
5.000		874.920	874.770		874.936
10.000		874.947	874.797		875.135
11.000	875.005	874.953	874.803	874.605	875.149
12.295	875.005 875.205	875.007	874.810	874.605	875.167
15.000		875.120	874.825	874.605	875.102
16.695	875.205 875.405	875.191	874.835	874.605	875.127
20.000		875.329	874.853	874.605	875.509
21.495	875.405 875.605	875.392	874.861	874.605	875.748
25.000		875.539	874.881	874.605	876.105
26.295	875.605 875.805	875.593	874.905	874.605	876.111
30.000		875.748	874.908	874.605	876.119
30.296		875.760	874.910	874.605	876.120
30.296		875.760	874.910	874.605	876.120
33.095	875.805	875.585	874.871	874.605	
33.396	875.605	875.567		874.605	875.961
35.000		875.473	874.844	874.605	875.850
35.296		875.456	874.840	874.605	875.811
36.695	875.605 875.405	875.392	874.839	874.605	875.698
37.896		875.338	874.838	874.605	875.684
40.000		875.294	874.836	874.605	875.784
42.896		875.234	874.834	874.605	875.788
42.896		875.234	874.834	874.605	875.788
44.695	875.405	875.207		874.605	
45.000	875.205	875.202	874.833	874.605	875.737
48.557		875.148	874.830	874.605	
49.796		875.118	874.818	874.605	
50.000		875.107	874.816	874.605	
50.566		875.079	874.810	874.605	
51.895	875.205	875.015			
52.296	875.005	874.996	874.796	874.605	
55.000		874.974	874.774	874.605	875.593
56.296		874.963	874.763	874.605	875.539
57.296		874.905	874.755	874.605	875.497
57.296		874.905	874.755		875.497
60.000		874.883	874.733		875.409

LONGITUDINAL SECTION RW01

SCALE 1:100 H
1:100 V



DATUM (m) 867.00

TOP OF WALL LEVELS: 873.275, 873.475, 873.475, 873.675, 873.675, 873.875, 873.875, 874.075, 874.075, 874.275, 874.275, 874.075, 873.875, 873.675, 874.075, 873.875, 873.675, 873.475, 873.475, 873.275, 873.275

CHAINAGE	DESIGN SURFACE LEVELS (BACK OF WALL)	BASE OF WALL LEVELS (EXISTING LEVELS)	TOP OF FOOTING LEVELS	EXISTING LEVELS
0.000	873.131	872.831	872.672	872.831
2.000	873.537	872.862	872.672	872.862
2.100	873.557	872.862	872.672	872.862
2.200	873.575	872.862	872.672	872.862
2.300	873.594	872.862	872.672	872.862
5.000	874.109	872.870	872.672	872.870
5.500	874.205	872.872	872.672	872.872
5.590	874.226	872.876	872.672	872.876
6.300	874.066	872.852	872.672	872.852
6.400	874.044	872.849	872.672	872.849
6.600	874.000	872.843	872.672	872.843
6.700	873.979	872.841	872.672	872.841
7.500	873.819	872.834	872.672	872.834
7.600	873.799	872.833	872.672	872.833
10.000	873.332	872.826	872.672	872.826
11.077				872.822

LONGITUDINAL SECTION RW02

SCALE 1:100 H
1:100 V

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

BEFORE YOU DIG
www.byda.com.au

Rev	Revision Description	Date

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients
NSW GOVERNMENT Health Infrastructure
TAYLOR
NBRS

Project
BLAYNEY HS
3 OSMAN ST, BLANEY NSW 2799

Title
RETAINING WALL LONGITUDINAL SECTIONS

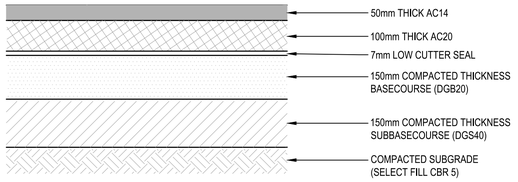
Scale: 0 0.5 1 1.5 2 2.5m 1:50
0 2.5 5 7.5 10 12.5m 1:250

Drawn	Designed	Checked	Approved
LC	LC	DY	BA

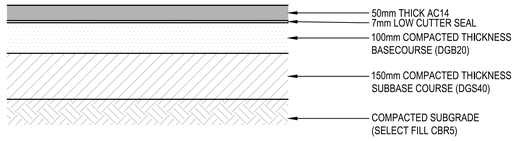
Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-2401	

File Path:: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-2400.DWG - 130607-HI-CV-DWG-2401 - DATE PRINTED: 2/12/2024 9:54:35 AM

A1



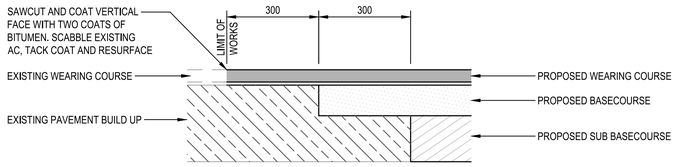
ROAD PAVEMENT TYPE 'A'
MEDIUM DUTY FLEXIBLE PAVEMENT
SCALE 1:10



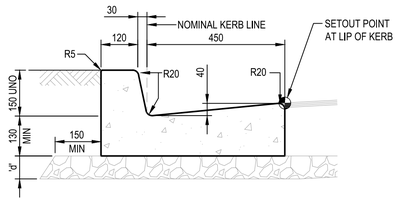
ROAD PAVEMENT TYPE B
LIGHT DUTY FLEXIBLE PAVEMENT
SCALE 1:10



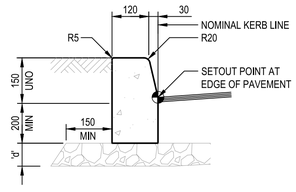
FOOTPATH PAVEMENT
SCALE 1:10



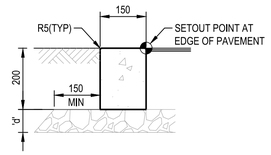
SAWCUT CONNECTION TO EXISTING PAVEMENT
SCALE 1:10



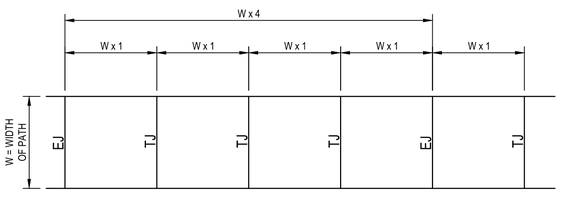
KERB AND GUTTER (K&G)
SCALE 1:10
NOTE:
'd' = SUBBASE THICKNESS TO MATCH DEPTH OF PAVEMENT SUBBASE, BUT NOT LESS THAN 75



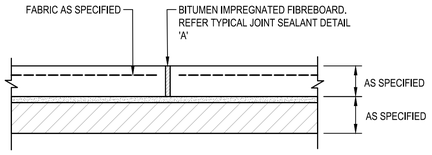
KERB ONLY (KO)
SCALE 1:10
NOTE:
'd' = SUBBASE THICKNESS TO MATCH DEPTH OF PAVEMENT SUBBASE, BUT NOT LESS THAN 75



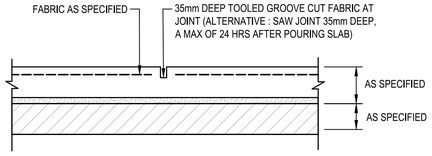
FLUSH KERB (FK)
SCALE 1:10
NOTE:
'd' = SUBBASE THICKNESS TO MATCH DEPTH OF PAVEMENT SUBBASE, BUT NOT LESS THAN 75



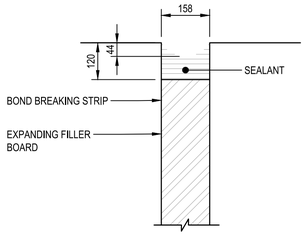
TYPICAL JOIN PLAN FOR FOOTPATHS
FOOTPATH NOTE
NTS
CONCRETE TO HAVE BROOM FINISH WITH SMOOTH TROWELLED EDGES.
TJ - FOOTPATH TOOLED JOINT. REFER DETAIL
EJ - FOOTPATH EXPANSION JOINT. REFER DETAIL



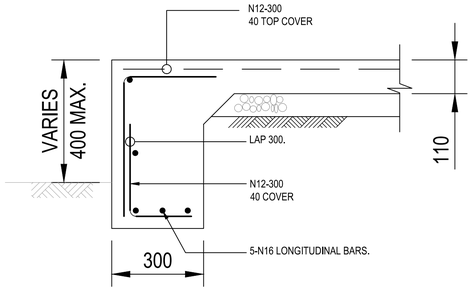
FOOTPATH EXPANSION JOINT 'EJ'
SCALE 1:10



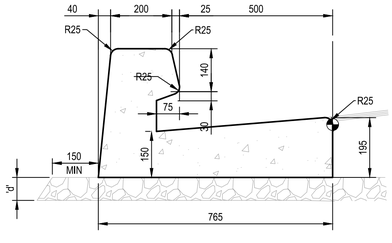
FOOTPATH TOOLED JOINT 'TJ'
SCALE 1:10



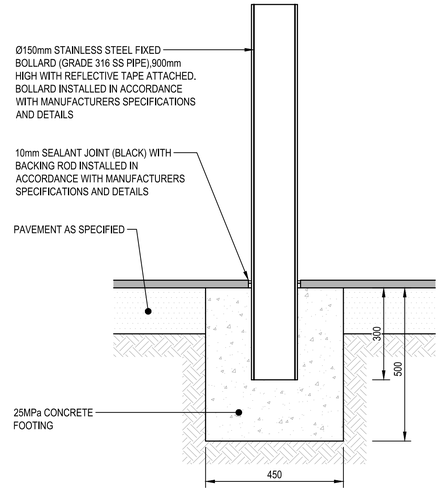
TYPICAL JOINT SEALANT 'A'
SCALE 1:10



CONCRETE DOWNTURN (DT)
SCALE 1:10



ELSHOLZ KERB AND GUTTER (EK)
SCALE 1:10
NOTE:
'd' = SUBBASE THICKNESS TO MATCH DEPTH OF PAVEMENT SUBBASE, BUT NOT LESS THAN 75



BOLLARD 'B'
PROVIDE 600mm CLEARANCE TO FACE OF KERB / TRAVEL LANE
SCALE 1:10

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

BEFORE YOU DIG www.byda.com.au

Rev	Revision Description	Date
2	ISSUED FOR CONSTRUCTION	18/10/2024
2	FOR CROWN CERTIFICATE	04/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients
NSW GOVERNMENT Health Infrastructure
TAYLOR
NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
SITEWORKS DETAILS - SHEET 01

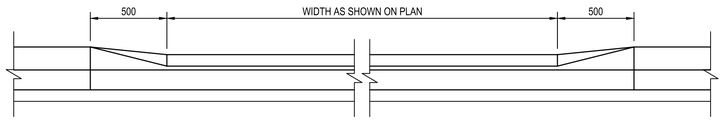
Scale:
0 0.1 0.2 0.3 0.4 0.5m
1:10

Drawn	Designed	Checked	Approved
EE	LC	AV	AV

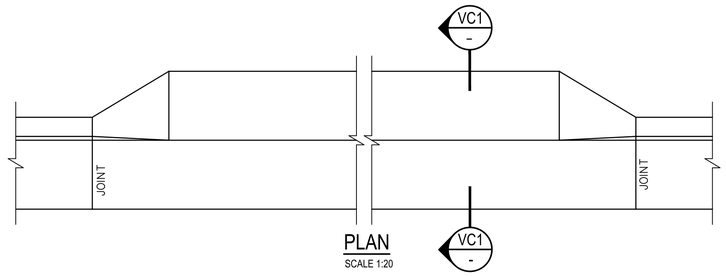
Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-2601	2

File Path: - K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-2600.DWG - 130607-HI-CV-DWG-2601 - DATE PRINTED: 2/12/2024 9:54:42 AM

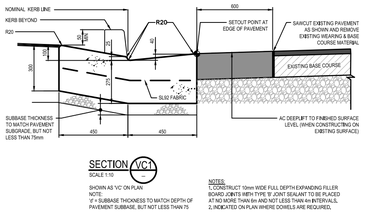
A1



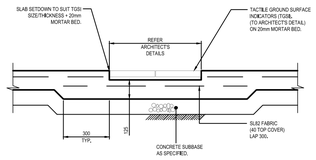
ELEVATION
SCALE 1:20



PLAN
SCALE 1:20

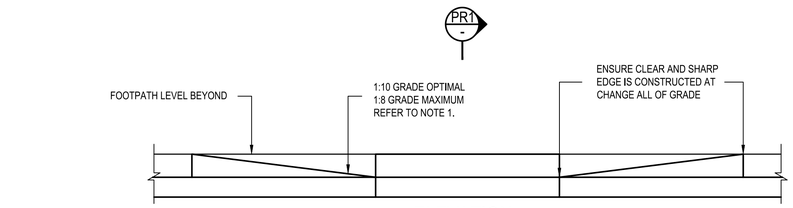


VEHICULAR CROSSING



SLAB THICKENING/SETDOWN FOR TGSI

REFER ARCHITECT'S PLANS FOR LOCATIONS

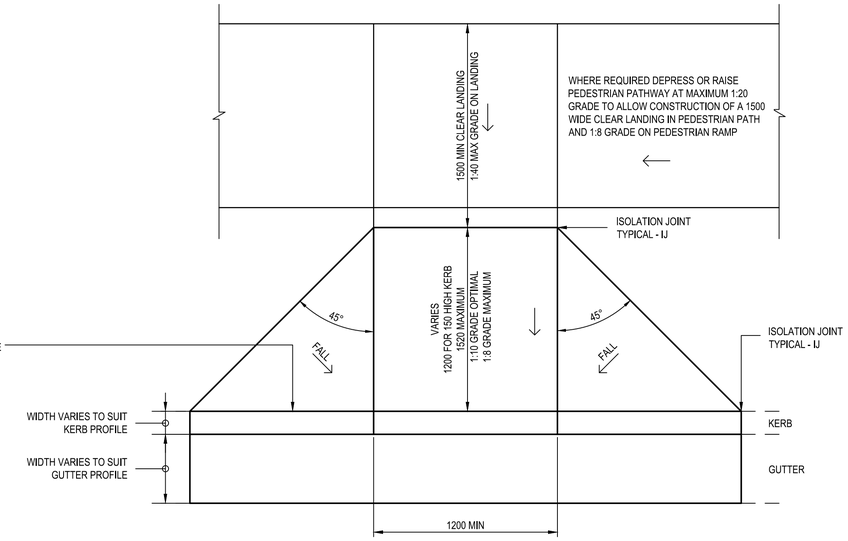


ELEVATION

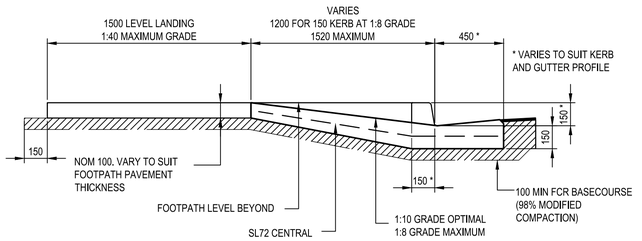
NOTE 1: GRADE AT 1:8 UP TO A MAXIMUM OF 1:4 GRADE IF REQUIRED TO ALLOW CONSTRUCTION OF FOOTPATH CLEAR LANDING IN CONSTRAINED AREAS. GREATER THAN 1:8 GRADE ONLY ALLOWABLE WHERE RAMP DOES NOT FORM PART OF THE PEDESTRIAN PATHWAY. 1:4 GRADE ON RAMP SPLAY REQUIRES HANDRAIL TO AS/NZS 1428.1

NOTE 2: REFER TO AS/NZS 1428.4 FOR TACTILE INDICATOR REQUIREMENTS

NOTE 3: RAMPS SHALL BE ALIGNED IN THE DIRECTION OF TRAVEL. REFER TO AS1428.1



PLAN



SECTION PR1
SCALE 1:20

KERB RAMP DETAIL (KR)

SCALE 1:20

NOTE : RAMPS SHALL BE CONSTRUCTED STRICTLY IN ACCORDANCE WITH AS1428.1

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

BEFORE YOU DIG www.byda.com.au

Rev	Revision Description	Date

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients
NSW GOVERNMENT Health Infrastructure
TAYLOR
NBRS

Project
BLAYNEY HS
3 OSMAN ST, BLANEY NSW 2799

Title
SITEWORKS DETAILS - SHEET 02

Scale:

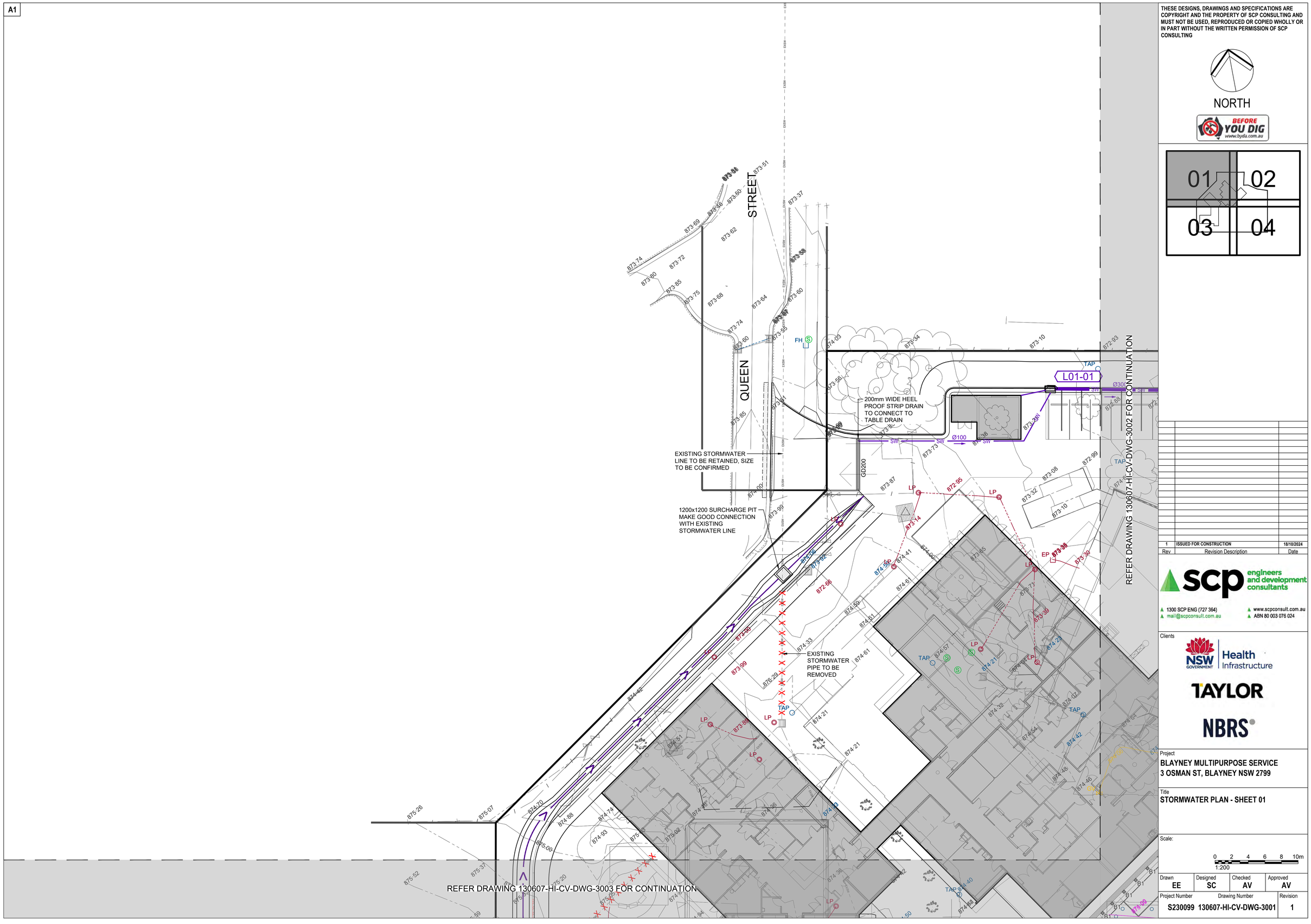
Drawn	Designed	Checked	Approved
LC	LC	DY	BA

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-2602	

File Path: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-2600.DWG - 130607-HI-CV-DWG-2602 - DATE PRINTED: 2/12/2024 9:54:43 AM

A1

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING



Rev	Revision Description	Date
1	ISSUED FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
STORMWATER PLAN - SHEET 01

Scale:
0 2 4 6 8 10m
1:200

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-3001	1

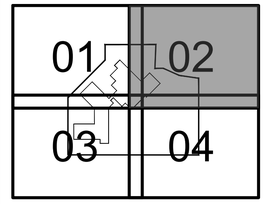
File Path: K:\S230099 BLAYNEY MPS\07_CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-3000.DWG - 130607-HI-CV-DWG-3001 - DATE PRINTED: 2/12/2024 9:56:02 AM

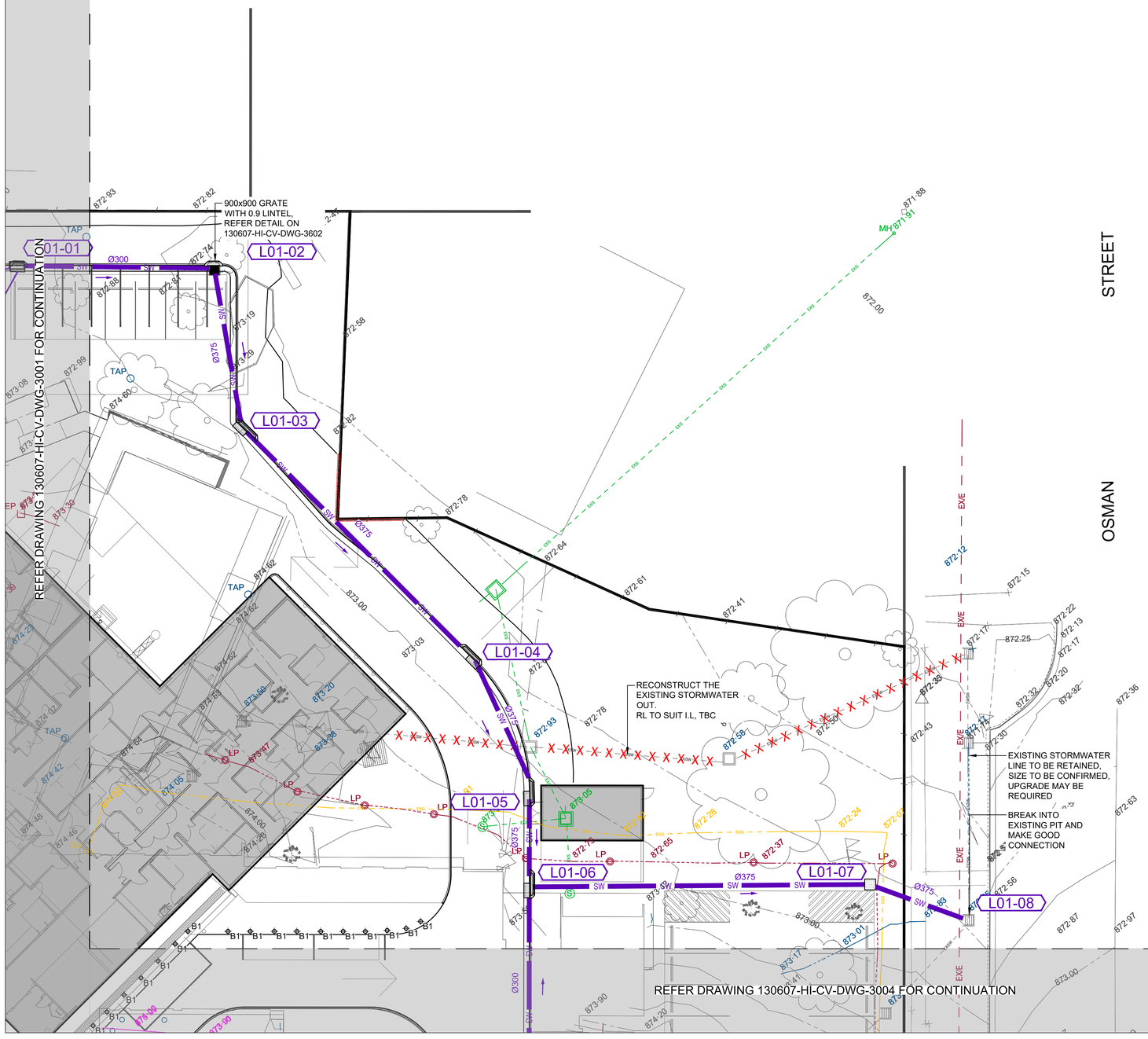
A1

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

NORTH

BEFORE YOU DIG www.byda.com.au





Rev	Revision Description	Date
1	ISSUED FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
STORMWATER PLAN - SHEET 02

Scale:
0 2 4 6 8 10m
1:200

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-3002	1

File Path: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-3000.DWG - 130607-HI-CV-DWG-3002 - DATE PRINTED: 21/2/2024 9:56:07 AM

A1

REFER DRAWING 130607-HI-CV-DWG-3001 FOR CONTINUATION

EXISTING STORMWATER PIPE TO BE REMOVED

NEW Ø375 PIPE WITH HEADWALL OUTLET

EXISTING PIT TO BE RETAINED

L05-01

L02-01

L02-02

L02-03

EXISTING STORMWATER PIPE TO BE REMOVED

CONNECT NEW SUBSOIL DRAIN TO THE NEW STORMWATER INLET PIT

CONSTRUCT NEW KERB INLET PIT OVER THE EXISTING PIPE WITH A 1.2m LINTEL AND HINGED GALVANISED GATE

EXISTING STORMWATER PIPE TO BE RETAINED

EXISTING PIT TO BE RETAINED

FLOOR LEVEL RL 874.64

MARTHA

STREET

REFER DRAWING 130607-HI-CV-DWG-3004 FOR CONTINUATION

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

NORTH

BEFORE YOU DIG www.byda.com.au

01 02 03 04

Rev	Revision Description	Date
1	ISSUED FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
STORMWATER PLAN - SHEET 03

Scale:
0 2 4 6 8 10m
1:200

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-3003	1

File Path: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-3000.DWG - 130607-HI-CV-DWG-3003 - DATE PRINTED: 2/12/2024 9:56:13 AM

A1

REFER DRAWING 130607-HI-CV-DWG-3002 FOR CONTINUATION

REFER DRAWING 130607-HI-CV-DWG-3003 FOR CONTINUATION

MARTHA STREET

OSMAN STREET

L01-06 L01-07 L01-08 L02-05 L02-06 L02-07 L02-03 L02-04 L04-01 L03-01 L03-02 L03-03

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

NORTH

BEFORE YOU DIG www.byda.com.au

01 02 03 04

Rev	Revision Description	Date
1	ISSUED FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
STORMWATER PLAN - SHEET 04

Scale:
0 2 4 6 8 10m
1:200

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-3004	1

File Path: K:\S230099 BLAYNEY MPS\07_CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-3000.DWG - 130607-HI-CV-DWG-3004 - DATE PRINTED: 21/2/2024 9:56:18 AM

A1

PIT SCHEDULE

NAME	TYPE	EASTING	NORTHING	WIDTH	LENGTH	DIAMETER	UPSTREAM INVERT LEVEL	DOWNSTREAM INVERT LEVEL	SETOUT RL	DEPTH
L01-1	1.2m KIP L	708997.694	6286887.717	0.600	1.200			873.200	873.950	0.750
L01-2	900SQ SIP	709013.893	6286883.906	0.900	0.900	300.000	873.100	873.050	873.710	0.660
L01-3	1.8m KIP L	709013.755	6286870.852	0.600	1.800	375.000	872.950	872.900	873.970	1.070
L01-4	1.8m KIP L	709028.567	6286849.156	0.600	1.800	375.000	872.650	872.600	874.070	1.470
L01-5	1.8m KIP L	709031.560	6286837.178	0.600	1.800	375.000	872.500	872.450	874.020	1.570
L01-6	1.8m KIP L	709030.065	6286829.152	0.600	1.800	375.000	872.350	872.300	873.990	1.690
L01-7	900SQ SIP	709057.940	6286824.138	0.900	0.900	375.000	872.000	871.900	872.770	0.870
L01-8	900SQ SIP	709065.413	6286819.716	0.900	0.900	375.000	871.800		872.710	0.910
L02-1	1.8m KIP L	708959.044	6286791.548	0.600	1.800			873.850	874.280	0.430
L02-2	600SQ SIP	708976.241	6286813.826	0.600	0.600	225.000	873.700	873.680	874.270	0.590
L02-3	1.8m KIP L	708988.6	6286812	0.600	1.800	300.000	873.590	873.590	874.244	0.644
L02-4	600SQ SIP	709006.589	6286809.894	0.600	0.600	300.000	873.480	873.460	874.380	0.920
L02-5	600 x 900 V	709007.682	6286816.659	0.900	0.600	300.000	873.420	873.400	874.160	0.760
L02-6	1.8m KIP L	709018.547	6286814.616	0.600	1.800	300.000	873.300	873.250	874.050	0.800
L02-7	1.8m KIP L	709027.200	6286813.935	0.600	1.800	300.000	873.200	873.150	873.930	0.780
L01-6	1.8m KIP L	709030.065	6286829.152	0.600	1.800	300.000	872.940		873.990	1.690
L03-1	1.8m KIP L	708992.639	6286784.601	0.600	1.800			873.650	874.340	0.690
L03-2	1.8m KIP L	709010.665	6286781.207	0.600	1.800	225.000	873.550	873.550	874.220	0.670
L03-3	600SQ SIP	709033.726	6286779.066	0.600	0.600	225.000	873.400		874.120	0.720
L04-1	600 x 900 V	709024.483	6286805.464	0.900	0.600			873.330	873.990	0.660
L02-7	1.8m KIP L	709027.200	6286813.935	0.600	1.800	300.000	873.250		873.930	0.780
L05-1	900SQ SIP	708917.325	6286824.924	0.900	0.900			874.600	875.690	1.090
HW	HEADWALL	708921.075	6286827.263	0.900	0.900	375.000	874.560		875.520	0.960

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

NORTH

BEFORE YOU DIG www.byda.com.au

Rev	Revision Description	Date
1	ISSUED FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
STORMWATER PIT SCHEDULE

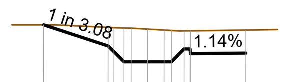
Scale:
0 2 4 6 8 10m
1:200

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-3100	1

File Path: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-3100.DWG - 130607-HI-CV-DWG-3100 - DATE PRINTED: 2/12/2024 9:56:23 AM

A1

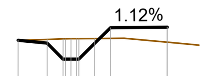


Datum 871

FINISHED SURFACE LEVEL	875.655	874.992	874.811	874.492	874.492	874.492	874.492	874.492	874.9	874.9	874.75	874.77
DEPTH CUT -/ FILL +	0.00	-0.59	-0.76	-1.07	-1.06	-1.03	-1.00	-0.99	-0.57	-0.57	-0.72	-0.73
EXISTING SURFACE LEVEL	875.655	875.578	875.570	875.560	875.553	875.526	875.497	875.484	875.471	875.474	875.474	875.501
OFFSET FROM CENTERLINE	-3.29	-1.25	-1.069	-0.75	-0.522	0	0.522	0.75	1.15	1.34	1.35	3.103

SCALE 1: 200 (H)
1: 200 (V)

CH 30.000



Datum 870.5

FINISHED SURFACE LEVEL	874.433	874.344	873.844	873.844	873.844	873.844	873.844	874.344	874.83	874.85	874.85
DEPTH CUT -/ FILL +	0.00	-0.12	-0.64	-0.64	-0.64	-0.64	-0.64	-0.15	0.33	0.47	0.47
EXISTING SURFACE LEVEL	874.433	874.462	874.483	874.484	874.486	874.487	874.488	874.494	874.499	874.380	874.380
OFFSET FROM CENTERLINE	-1.669	-0.75	-0.25	-0.176	0	0.176	0.25	0.75	1.25	3.039	3.044

SCALE 1: 200 (H)
1: 200 (V)

CH 70.000



Datum 870.5

FINISHED SURFACE LEVEL	873.873	874.26	873.895	873.76	873.76	873.76	873.76	873.76	873.895	874.26	874.169	874.3
DEPTH CUT -/ FILL +	0.00	0.23	-0.13	-0.26	-0.26	-0.26	-0.26	-0.26	-0.13	0.23	0.10	-0.10
EXISTING SURFACE LEVEL	873.873	874.028	874.026	874.025	874.024	874.023	874.023	874.022	874.021	874.025	874.071	874.405
OFFSET FROM CENTERLINE	-3.558	-0.75	-0.385	-0.25	-0.109	0	0.109	0.25	0.385	0.75	1.499	7.58

SCALE 1: 200 (H)
1: 200 (V)

CH 100.000

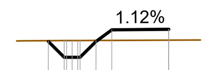


Datum 871.5

FINISHED SURFACE LEVEL	875.866	875.144	874.644	874.644	874.644	874.644	874.644	875.144	875.159	875.159	874.831	874.85	874.85
DEPTH CUT -/ FILL +	0.00	-0.58	-1.06	-1.05	-1.05	-1.04	-1.03	-0.51	-0.48				
EXISTING SURFACE LEVEL	875.866	875.727	875.703	875.694	875.691	875.688	875.679	875.655	875.636				
OFFSET FROM CENTERLINE	-3.299	-0.75	-0.25	-0.067	0	0.067	0.25	0.75	1.14	1.33	1.34	3.091	3.096

SCALE 1: 200 (H)
1: 200 (V)

CH 20.000

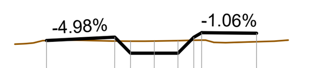


Datum 870.5

FINISHED SURFACE LEVEL	874.459	873.959	873.959	873.959	873.959	873.959	874.459	874.83	874.85	874.85
DEPTH CUT -/ FILL +	-0.03	-0.53	-0.53	-0.53	-0.53	-0.53	-0.03	0.33	0.34	0.34
EXISTING SURFACE LEVEL	874.484	874.487	874.487	874.488	874.489	874.490	874.492	874.495	874.506	874.506
OFFSET FROM CENTERLINE	-0.75	-0.25	-0.176	0	0.176	0.25	0.75	1.25	3.041	3.046

SCALE 1: 200 (H)
1: 200 (V)

CH 60.000



Datum 870.5

FINISHED SURFACE LEVEL	874.084	874.192	873.692	873.692	873.692	874.192	874.339	874.321
DEPTH CUT -/ FILL +	0.00	0.12	-0.38	-0.38	-0.40	0.09	0.24	0.26
EXISTING SURFACE LEVEL	874.084	874.072	874.069	874.072	874.088	874.098	874.103	874.056
OFFSET FROM CENTERLINE	-3.408	-1.25	-0.75	0	0.75	1.25	1.497	3.233

SCALE 1: 200 (H)
1: 200 (V)

CH 91.498

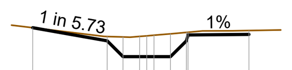


Datum 871.5

FINISHED SURFACE LEVEL	876.021	875.274	874.774	874.774	874.774	874.774	874.774	875.274	875.34	875.34	874.838	874.866	874.85
DEPTH CUT -/ FILL +	0.00	-0.54	-1.01	-1.00	-1.00	-0.99	-0.98	-0.45	-0.36	-0.34	-0.85	-0.70	-0.72
EXISTING SURFACE LEVEL	876.021	875.819	875.786	875.774	875.769	875.765	875.753	875.720	875.698	875.685	875.685	875.569	875.569
OFFSET FROM CENTERLINE	-3.348	-0.75	-0.25	-0.067	0	0.067	0.25	0.75	1.089	1.279	1.289	3.041	3.046

SCALE 1: 200 (H)
1: 200 (V)

CH 10.000

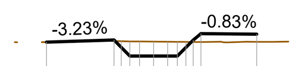


Datum 871

FINISHED SURFACE LEVEL	874.989	874.579	874.079	874.079	874.079	874.079	874.079	874.579	874.766	874.785
DEPTH CUT -/ FILL +	0.00	-0.13	-0.62	-0.64	-0.66	-0.68	-0.72	-0.27	-0.09	-0.13
EXISTING SURFACE LEVEL	874.989	874.713	874.700	874.719	874.738	874.757	874.801	874.847	874.852	874.912
OFFSET FROM CENTERLINE	-3.598	-1.25	-0.75	-0.227	0	0.227	0.75	1.25	1.302	3.226

SCALE 1: 200 (H)
1: 200 (V)

CH 50.000



Datum 870.5

FINISHED SURFACE LEVEL	874.116	874.185	873.955	873.685	873.685	873.685	873.685	873.685	873.955	874.185	874.388	874.373
DEPTH CUT -/ FILL +	0.00	0.03	-0.19	-0.46	-0.45	-0.45	-0.45	-0.45	-0.17	0.06	0.26	0.24
EXISTING SURFACE LEVEL	874.116	874.152	874.147	874.141	874.138	874.136	874.133	874.131	874.129	874.128	874.126	874.134
OFFSET FROM CENTERLINE	-3.381	-1.25	-1.021	-0.75	-0.443	0	0.443	0.75	1.021	1.25	1.496	3.254

SCALE 1: 200 (H)
1: 200 (V)

CH 90.000

Datum 873

FINISHED SURFACE LEVEL	876.231	876.093
DEPTH CUT -/ FILL +	0.00	-0.15
EXISTING SURFACE LEVEL	876.231	876.247
OFFSET FROM CENTERLINE	-3.402	0

SCALE 1: 200 (H)
1: 200 (V)

CH 0.000

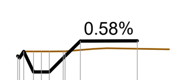


Datum 871

FINISHED SURFACE LEVEL	875.363	874.7	874.519	874.2	874.2	874.2	874.2	874.2	874.819	874.819	874.669	874.689
DEPTH CUT -/ FILL +	0.00	-0.60	-0.78	-1.09	-1.09	-1.08	-1.07	-1.07	-0.45	-0.44	-0.59	-0.53
EXISTING SURFACE LEVEL	875.363	875.301	875.296	875.290	875.287	875.281	875.274	875.271	875.265	875.260	875.260	875.217
OFFSET FROM CENTERLINE	-3.291	-1.25	-1.069	-0.75	-0.522	0	0.522	0.75	1.15	1.34	1.35	3.097

SCALE 1: 200 (H)
1: 200 (V)

CH 40.000

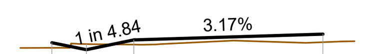


Datum 870.5

FINISHED SURFACE LEVEL	874.237	874.179	874.382	873.737	873.737	873.737	874.179	874.237	874.71	874.72
DEPTH CUT -/ FILL +			0.00	-0.65	-0.65	-0.65	-0.21	-0.15	0.28	0.25
EXISTING SURFACE LEVEL			874.382	874.383	874.383	874.383	874.384	874.387	874.429	874.469
OFFSET FROM CENTERLINE	-0.75	-0.691	-0.557	-0.25	0	0.25	0.691	0.75	1.233	3.033

SCALE 1: 200 (H)
1: 200 (V)

CH 80.000



Datum 870.5

FINISHED SURFACE LEVEL	874.02	873.8	874.11	874.3
DEPTH CUT -/ FILL +	0.16	-0.18	0.15	0.25
EXISTING SURFACE LEVEL	873.857	873.978	873.962	874.048
OFFSET FROM CENTERLINE	-1.093	0	1.501	7.486

SCALE 1: 200 (H)
1: 200 (V)

CH 105.005

SWALE 01 CROSS SECTIONS

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

BEFORE YOU DIG www.byda.com.au

Rev	Revision Description	Date

scp engineers and development consultants

1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients
NSW GOVERNMENT Health Infrastructure
TAYLOR
NBRS

Project
BLAYNEY HS
3 OSMAN ST, BLANEY NSW 2799

Title
SWALE CROSS SECTIONS

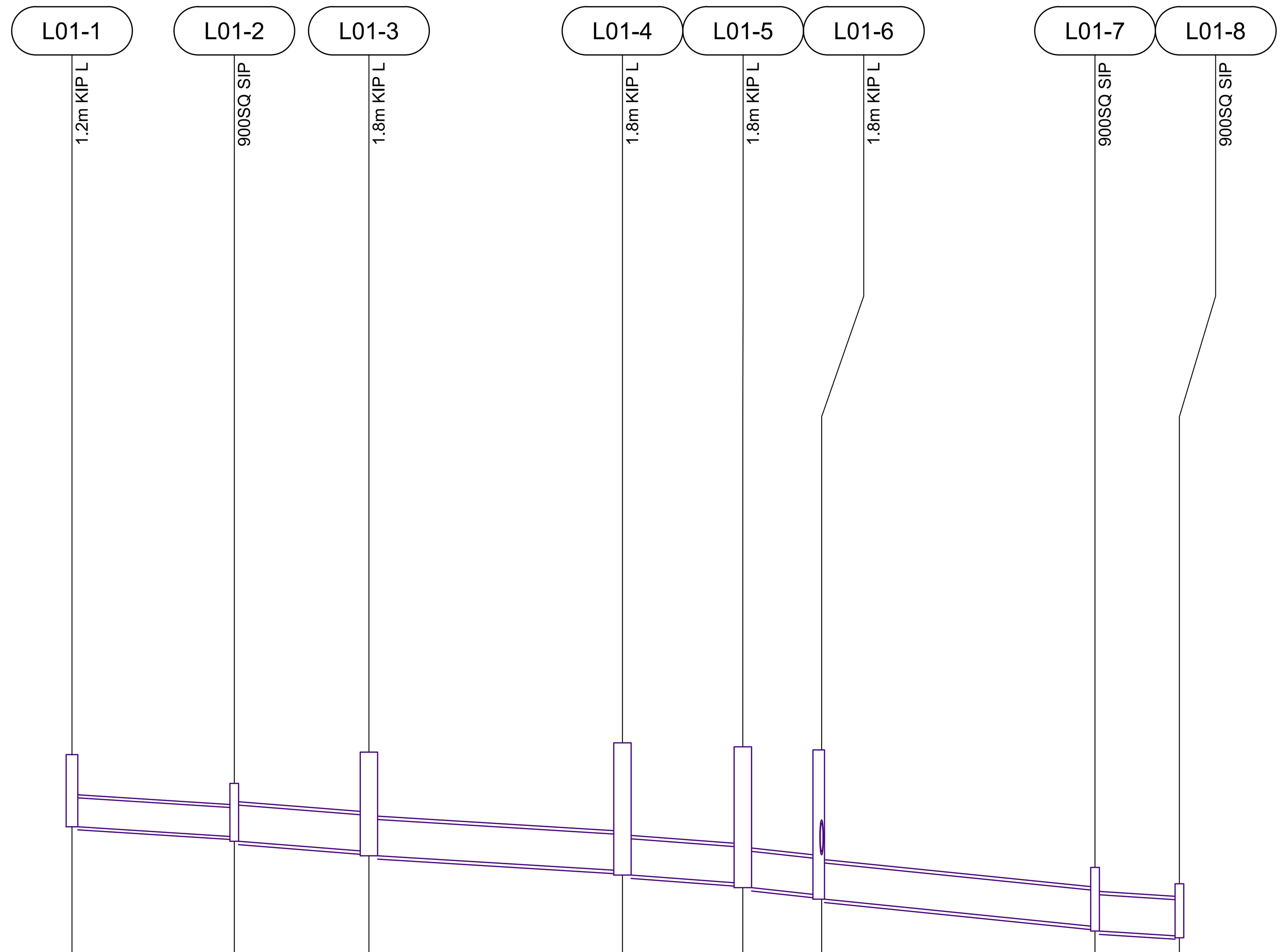
Scale:
0 2 4 6 8 10m
1:200

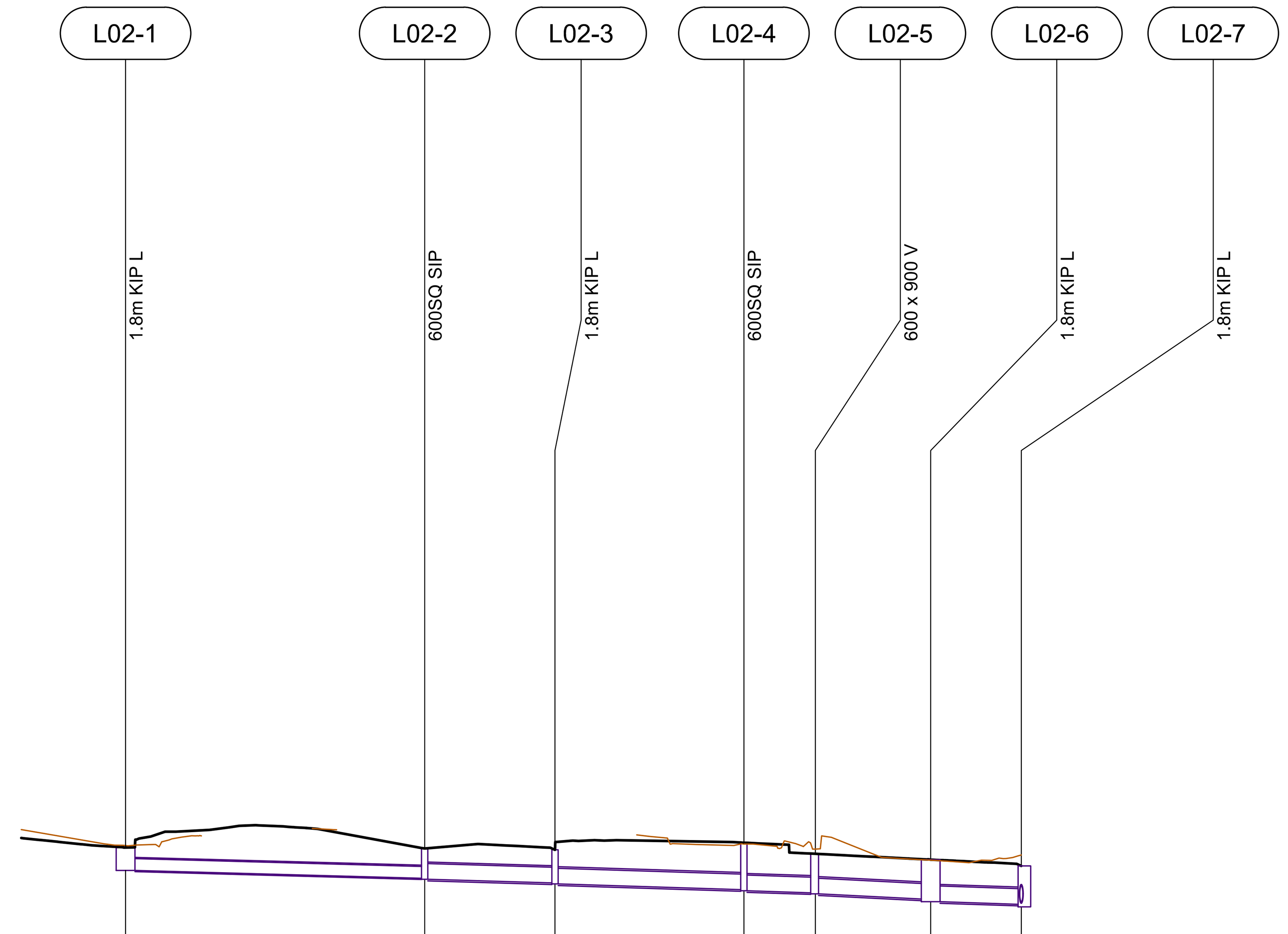
Drawn	Designed	Checked	Approved
LC	LC	DY	BA

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-3201	

File Path:: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-3200.DWG - 130607-HI-CV-DWG-3201 - DATE PRINTED: 2/12/2024 9:56:29 AM

A1





LINE L01

DATUM RL 862.000

Pit	Pit type	Pit setout	Depth to invert	Invert level	Design surface level	Existing surface level	Chainage
L01-1	1.2m KIP L	708997.694E 6286887.717N	0.75	873.2	873.95	873.11	0.00
L01-2	900SQ SIP	709014.219E 6286884.602N	0.55 / 0.60	873.1 / 873.05	873.65	872.67	16.82
L01-3	1.8m KIP L	709013.755E 6286870.852N	1.02 / 1.07	872.95 / 872.9	873.97	872.97	30.76
L01-4	1.8m KIP L	709028.567E 6286849.156N	1.32 / 1.37	872.75 / 872.7	874.07	872.86	57.03
L01-5	1.8m KIP L	709031.560E 6286837.178N	1.41 / 1.46	872.62 / 872.57	874.03	873.07	69.51
L01-6	1.8m KIP L	709030.065E 6286829.152N	1.50 / 1.55	872.5 / 872.45	874.00	873.20	77.67
L01-7	900SQ SIP	709057.940E 6286824.138N	0.61 / 0.66	872.17 / 872.12	872.78	872.78	105.99
L01-8	900SQ SIP	709065.413E 6286819.716N	0.54 / 0.56	872.07 / 872.05	872.72	872.72	114.74

Pipe	Pipe size	Pipe class	Pipe grade (%)	Length
L01-1 – L01-2	300	RCP CLASS 4 CONCRETE ENCASED	0.63%	15.8
L01-2 – L01-3	375	RCP CLASS 4 CONCRETE ENCASED	0.79%	12.6
L01-3 – L01-4	375	BLACKMAX	0.61%	24.5
L01-4 – L01-5	375	BLACKMAX	0.75%	10.7
L01-5 – L01-6	375	RCP CLASS 4 CONCRETE ENCASED	1.10%	6.4
L01-6 – L01-7	375	RCP CLASS 4 CONCRETE ENCASED	1.02%	27.6
L01-7 – L01-8	375	RCP CLASS 4 CONCRETE ENCASED	0.64%	7.8

LINE L02

DATUM RL 851.000

Pit	Pit type	Pit setout	Depth to invert	Invert level	Design surface level	Existing surface level	Chainage
L02-1	1.8m KIP L	708959.044E 6286791.548N	0.44	873.85	874.29	874.33	0.00
L02-2	600SQ SIP	708976.241E 6286813.826N	0.57 / 0.59	873.7 / 873.68	874.27	874.27	28.68
L02-3	1.8m KIP L	708988.592E 6286811.926N	0.63 / 0.65	873.61 / 873.59	874.24	874.24	41.17
L02-4	600SQ SIP	709006.589E 6286809.894N	0.90 / 0.92	873.48 / 873.46	874.38	874.35	59.29
L02-5	600 x 900 V	709007.682E 6286816.659N	0.75 / 0.77	873.42 / 873.4	874.17	874.26	66.14
L02-6	1.8m KIP L	709018.547E 6286814.616N	0.75 / 0.80	873.3 / 873.25	874.06	874.05	77.20
L02-7	1.8m KIP L	709027.200E 6286813.935N	0.74	873.2	873.94	874.15	85.88

Pipe	Pipe size	Pipe class	Pipe grade (%)	Length
L02-1 – L02-2	225	BLACKMAX	0.55%	27.5
L02-2 – L02-3	300	RCP CLASS 4 CONCRETE ENCASED	0.59%	11.9
L02-3 – L02-4	300	BLACKMAX	0.63%	17.5
L02-4 – L02-5	300	RCP CLASS 4	0.66%	6.1
L02-5 – L02-6	300	BLACKMAX	1.01%	9.9
L02-6 – L02-7	300	RCP CLASS 4	0.67%	7.5

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

BEFORE YOU DIG www.byda.com.au

Rev	Revision Description	Date
1	ISSUED FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients
NSW GOVERNMENT Health Infrastructure
TAYLOR
NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
STORMWATER LONGITUDINAL SECTIONS - SHEET 01

Scale:
0 10 20 30 40 50m
1:1000

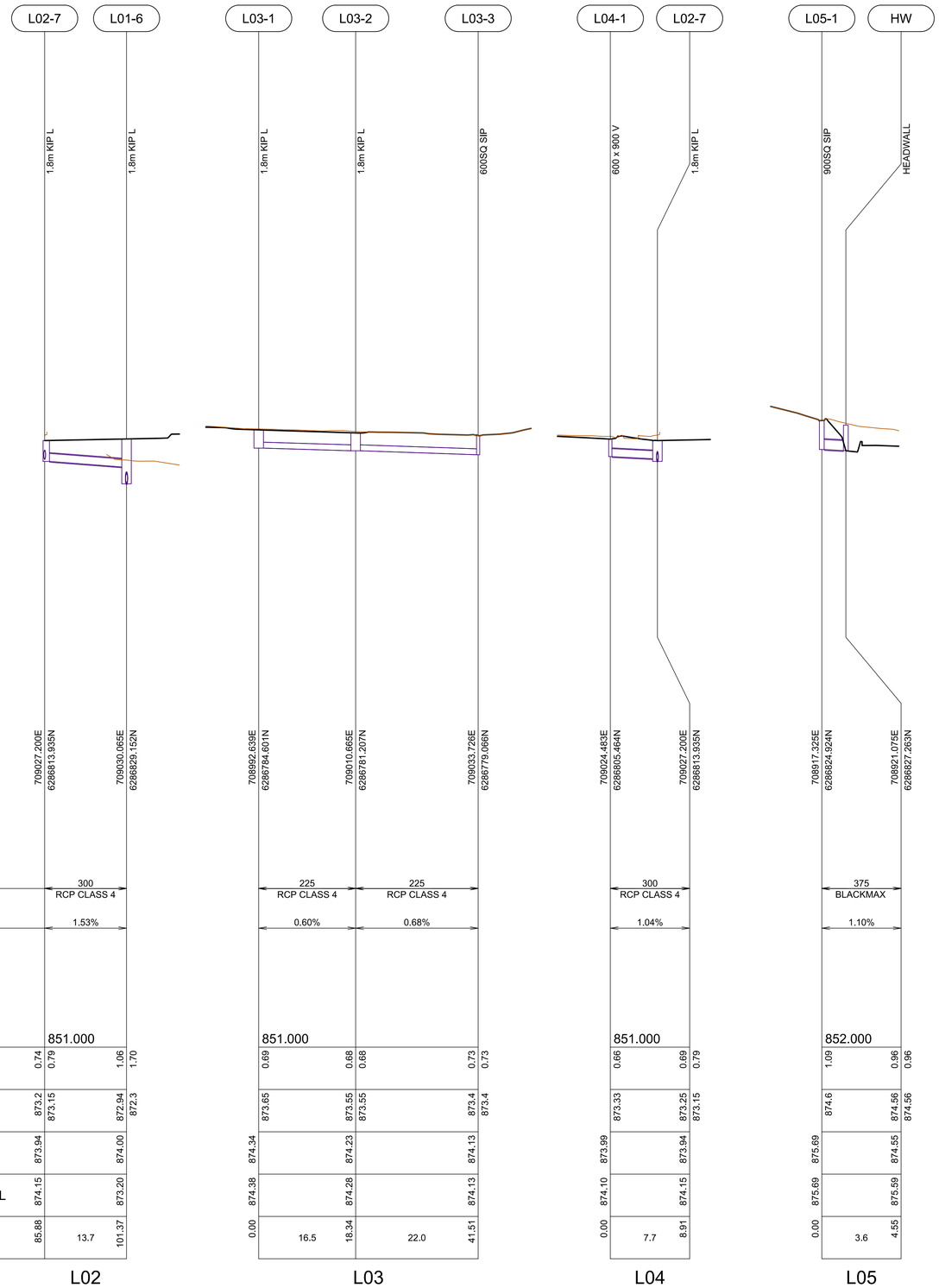
Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-3501	1

File Path: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-3500.DWG - 130607-HI-CV-DWG-3501 - DATE PRINTED: 2/12/2024 9:56:35 AM

A1

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING



PIT SETOUT																							
	709027.200E	6286813.935N			709030.065E	6286829.152N	708992.639E	6286784.601N			709010.665E	6286781.207N			709033.726E	6286779.066N	709024.483E	6286805.464N			709027.200E	6286813.935N	708917.325E	6286824.924N			708921.075E	6286827.263N
PIPE SIZE		300						225				225						300						375				
PIPE CLASS		RCP CLASS 4						RCP CLASS 4				RCP CLASS 4						RCP CLASS 4						BLACKMAX				
PIPE GRADE (%)		1.53%						0.60%				0.68%						1.04%						1.10%				
DATUM RL		851.000						851.000										851.000						852.000				
DEPTH TO INVERT	0.74	0.79			1.06	1.70	0.69				0.68	0.68			0.73	0.73	0.66				0.69	0.79	1.09				0.96	0.96
INVERT LEVEL	873.2	873.15			872.94	872.3	873.65				873.55	873.55			873.4	873.4	873.33				873.25	873.15	874.6				874.56	874.56
DESIGN SURFACE LEVEL	873.94				874.00		874.34				874.23				874.13		873.99				873.94		875.69				874.55	
EXISTING SURFACE LEVEL	874.15				873.20		874.38				874.28				874.13		874.10				874.15		875.69				875.59	
CHAINAGE	85.88		13.7		101.37		0.00		16.5		18.34		22.0		41.51		0.00		7.7		8.91		0.00		3.6		4.55	
LINE	L02						L03										L04						L05					

Rev	Revision Description	Date
1	ISSUED FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
STORMWATER LONGITUDINAL SECTIONS - SHEET 02

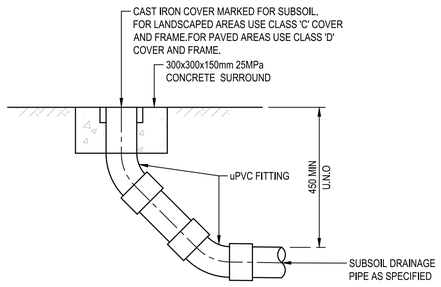
Scale:
0 10 20 30 40 50m
1:1000

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

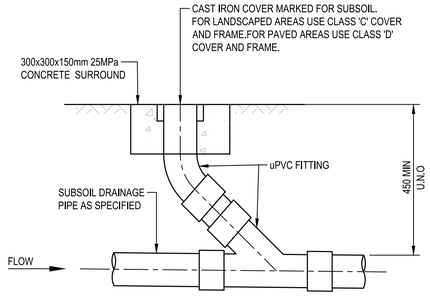
Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-3502	1

File Path: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-3500.DWG - 130607-HI-CV-DWG-3502 - DATE PRINTED: 2/12/2024 9:56:36 AM

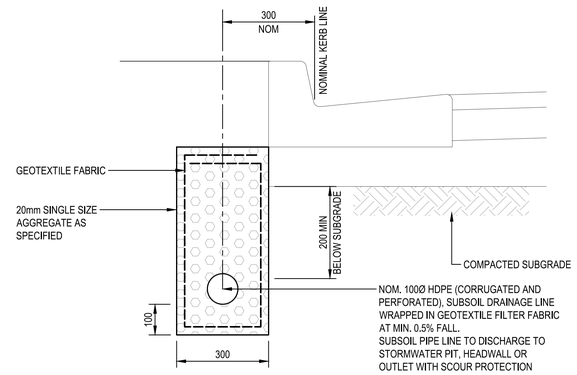
A1



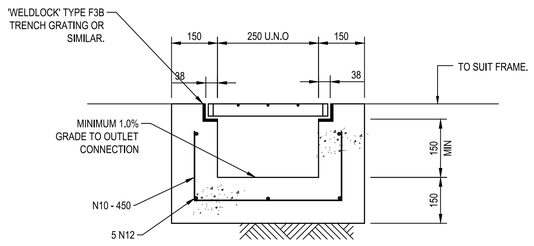
HIGH END RISER (FLUSHING POINT)
SCALE 1:10



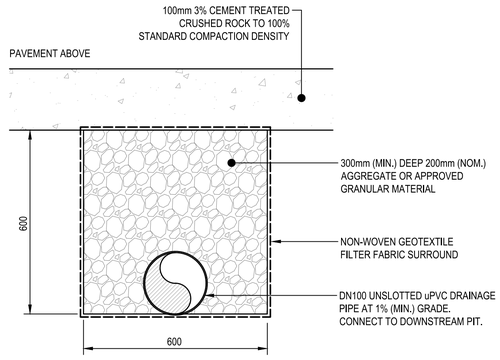
INTERMEDIATE RISER (FLUSHING POINT)
SUBSOIL FLUSHING POINTS TO BE PROVIDED AT 50m MAX INTERVALS ALONG SUBSOIL LINES (U.N.O), AT CHANGES IN DIRECTION OF SUBSOIL LINES, AND AT INTERSECTIONS OF SUBSOIL LINES.
SCALE 1:10



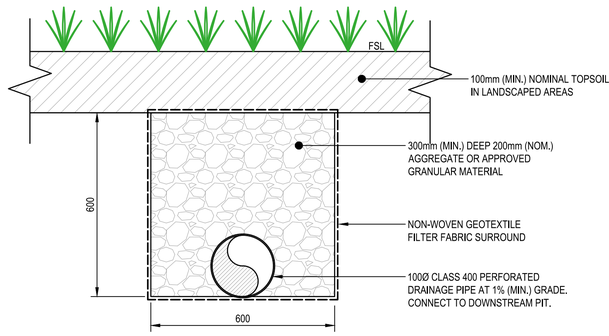
SUBSOIL DRAINAGE ADJACENT TO ROADS/PAVEMENTS
SCALE 1:10



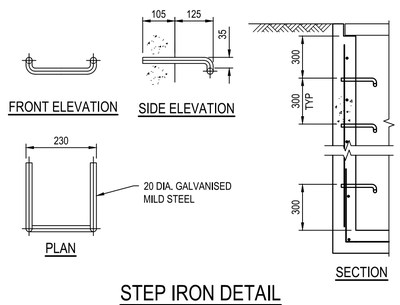
GRATED DRAIN TYPE 'B'
SCALE 1:10



SUBSOIL UNDER PAVEMENT
SCALE 1:10



SUBSOIL UNDER LANDSCAPE
SCALE 1:10



STEP IRON DETAIL
N.T.S.

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

BEFORE YOU DIG www.byda.com.au

Rev	Revision Description	Date
2	ISSUED FOR CONSTRUCTION	18/10/2024
01	FOR CROWN CERTIFICATE	04/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
STORMWATER DETAILS - SHEET 01

Scale:
0 0.1 0.2 0.3 0.4 0.5m
1:10

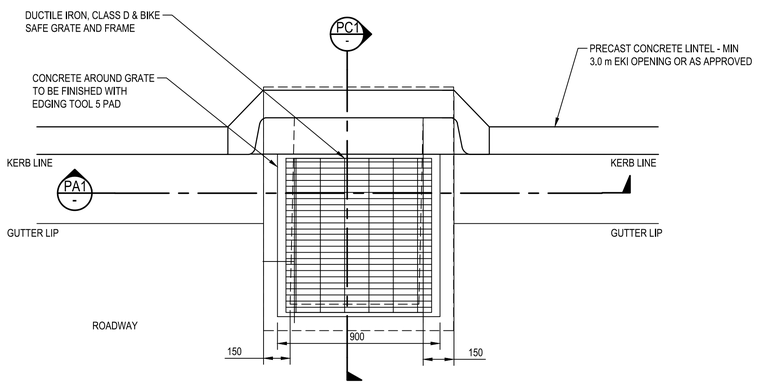
Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-3601	2

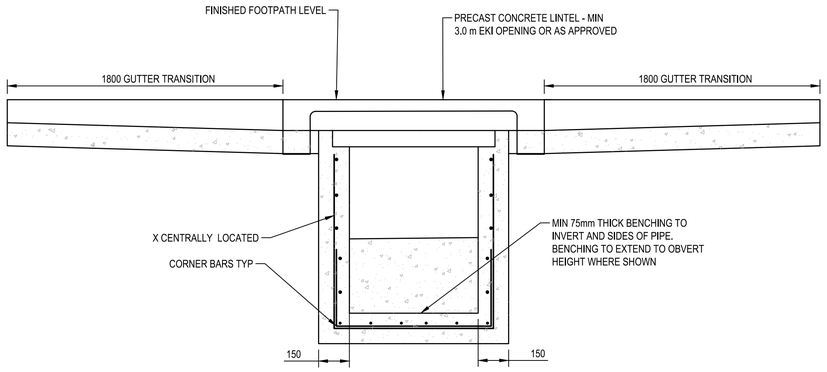
File Path: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-3600.DWG - 130607-HI-CV-DWG-3601 - DATE PRINTED: 2/12/2024 9:56:42 AM

A1

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING



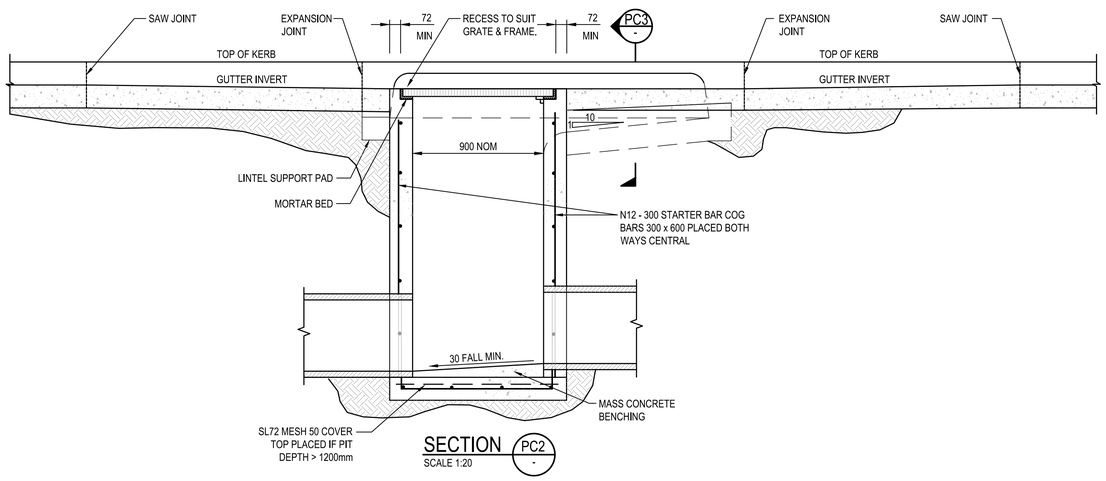
PLAN



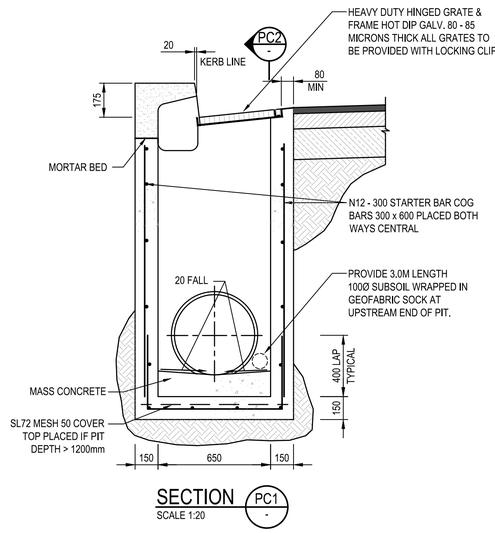
SECTION PA1 -
SCALE 1:20

900x900 GRATED PIT WITH 900mm LINTEL

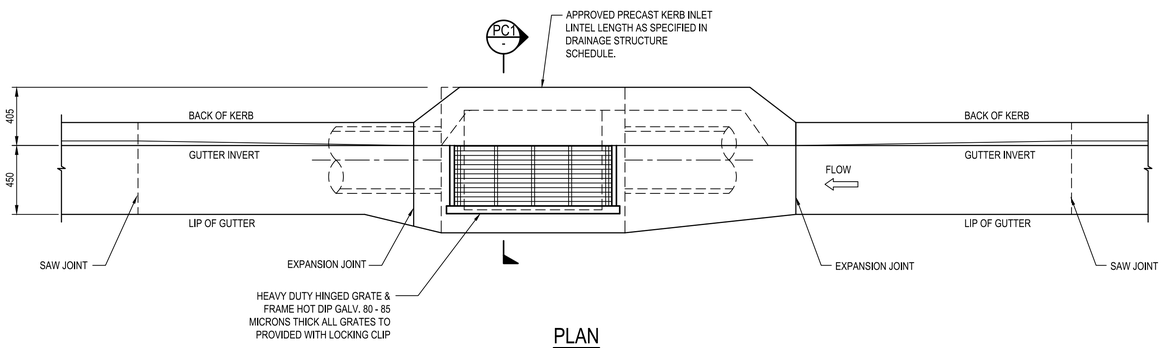
SCALE 1:20



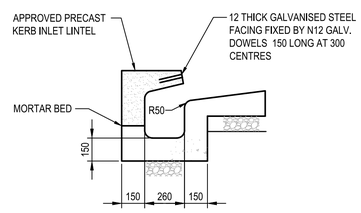
SECTION PC2 -
SCALE 1:20



SECTION PC1 -
SCALE 1:20



PLAN



SECTION PC3 -
SCALE 1:20

KERB INLET PIT PIT TYPE 'C'

SCALE 1:20

Rev	Revision Description	Date
1	ISSUED FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
STORMWATER DETAILS - SHEET 02

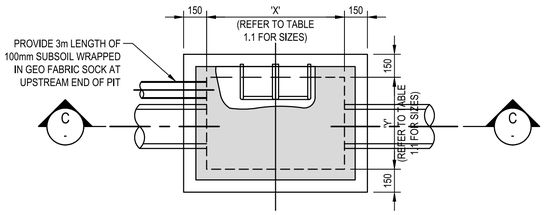
Scale:
0 0.2 0.4 0.6 0.8 1m
1:20

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

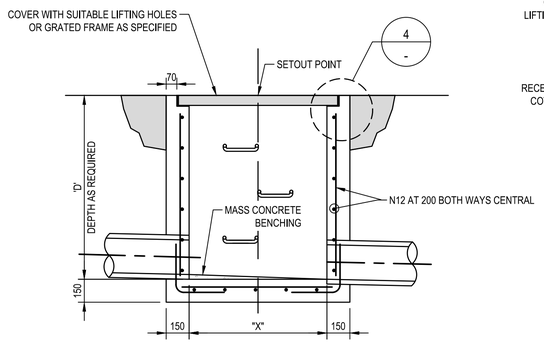
Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-3602	1

File Path: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-3600.DWG - 130607-HI-CV-DWG-3602 - DATE PRINTED: 2/12/2024 9:56:44 AM

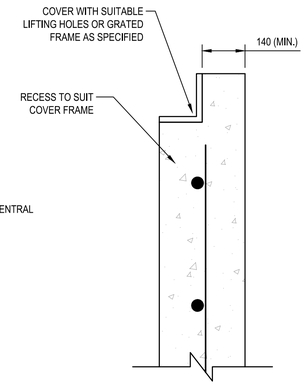
A1



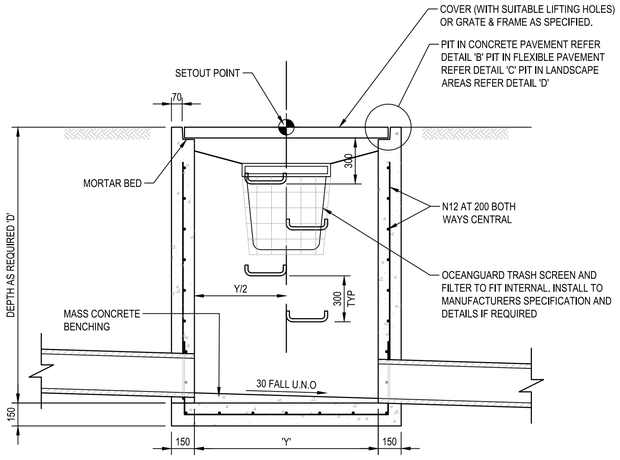
SURFACE INLET/JUNCTION PIT (TYP.)
NTS



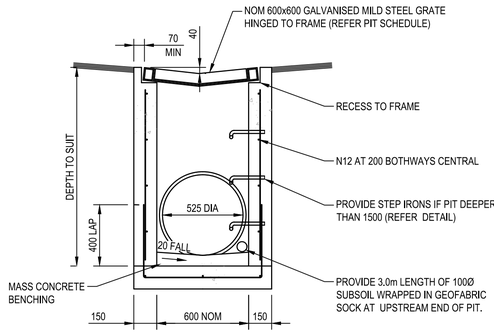
SECTION C/-
SCALE 1:20



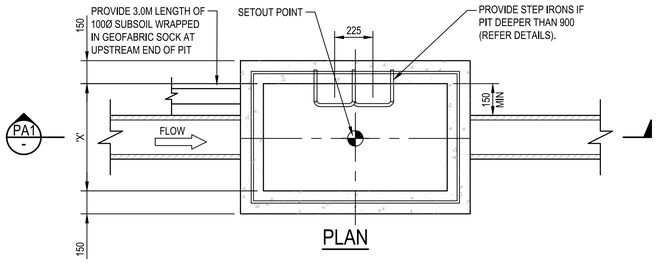
PIT EDGE DETAIL 4/-
SCALE 1:10



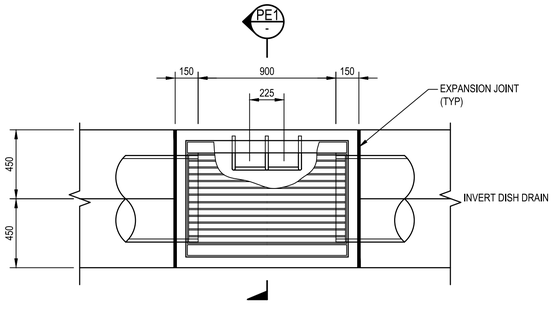
SECTION PA1/-
SCALE 1:20



SECTION PE1/-
SCALE 1:20



SURFACE INLET/JUNCTION PIT WITH ENVIROPODS PIT TYPE 'A'
SCALE 1:20



DISH DRAIN PIT TYPE 'E'
SCALE 1:20

MINIMUM INTERNAL PIT DIMENSIONS

'D'	'X'	'Y'
D ⩽ 600	450	450*
D ⩽ 900	600	600*
D ⩽ 1200	600	900
D > 1200	900	900

NOTE: PITS DENOTED * SHALL BE USED ONLY WHERE SPECIFIED IN DRAINAGE SCHEDULE OR ON PLAN.

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

BEFORE YOU DIG www.byda.com.au

Rev	Revision Description	Date
1	ISSUED FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients
NSW GOVERNMENT Health Infrastructure
TAYLOR
NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
STORMWATER DETAILS - SHEET 03

Scale:
0 0.2 0.4 0.6 0.8 1m
1:20

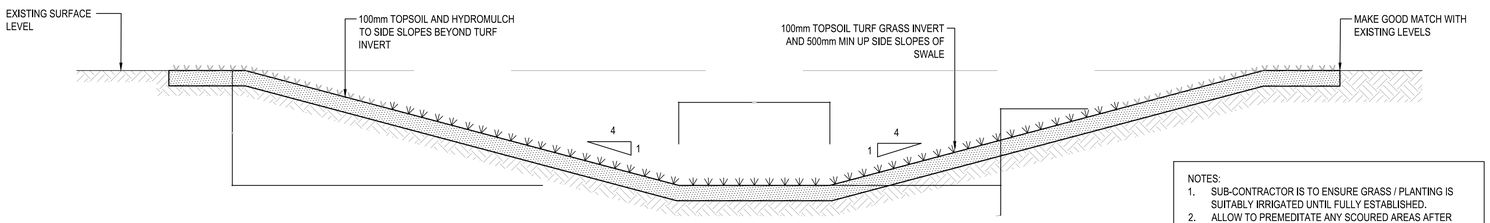
Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-3603	1

File Path: - K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-3600.DWG - 130607-HI-CV-DWG-3603 - DATE PRINTED: 2/12/2024 9:56:47 AM

A1

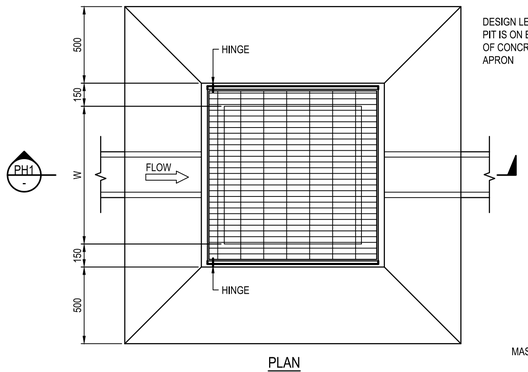
THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING



SWALE TYPE 'A' TYPICAL DETAIL - TURF LINED INVERT

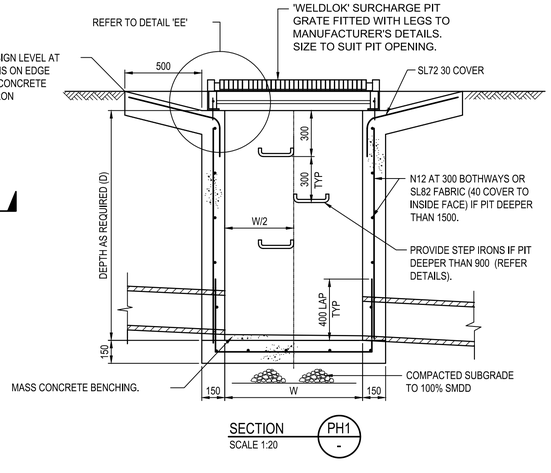
SCALE 1:20

NOTES:
1. SUB-CONTRACTOR IS TO ENSURE GRASS / PLANTING IS SUITABLY IRRIGATED UNTIL FULLY ESTABLISHED.
2. ALLOW TO PREMEDITATE ANY SCOURED AREAS AFTER RAINFALL EVENTS.
3. SWALE LONGITUDINAL GRADIENTS AND SIDE SLOPES IN ACCORDANCE WITH CIVIL DRAWINGS.
4. BATTERS SHALL BE MAX SLOPE 1(V) IN 4(H) UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS.



PLAN

SCALE 1:20

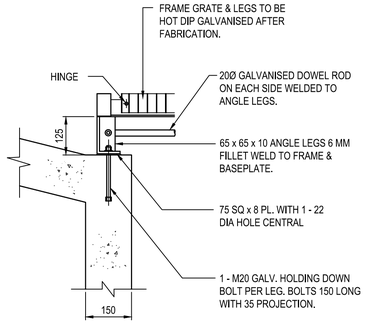


SECTION PH1 -

SCALE 1:20

LETTERBOX PIT (LBP)

SCALE 1:20



DETAIL 'EE'

SCALE 1:10

Rev	Revision Description	Date
01	ISSUED FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
STORMWATER DETAILS - SHEET 04

Scale:

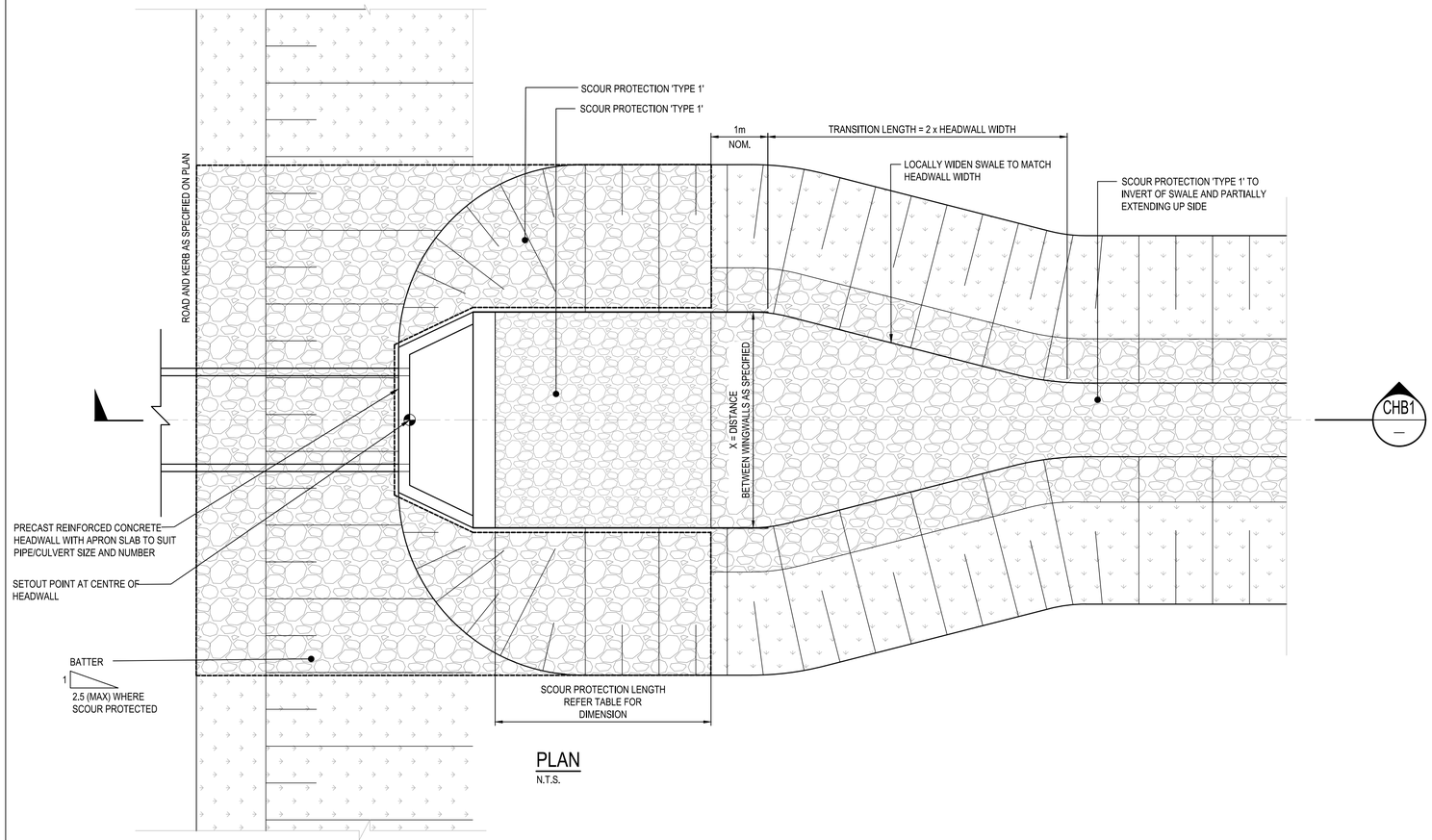
0 0.2 0.4 0.6 0.8 1m
1:20

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

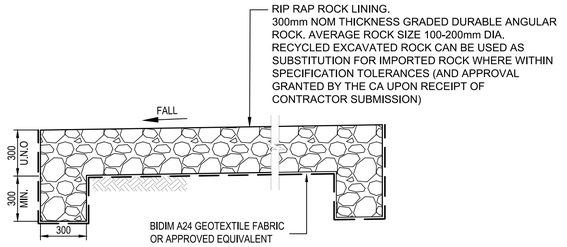
Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-3604	01

File Path: - K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-3600.DWG - 130607-HI-CV-DWG-3604 - DATE PRINTED: 2/12/2024 9:56:52 AM

A1



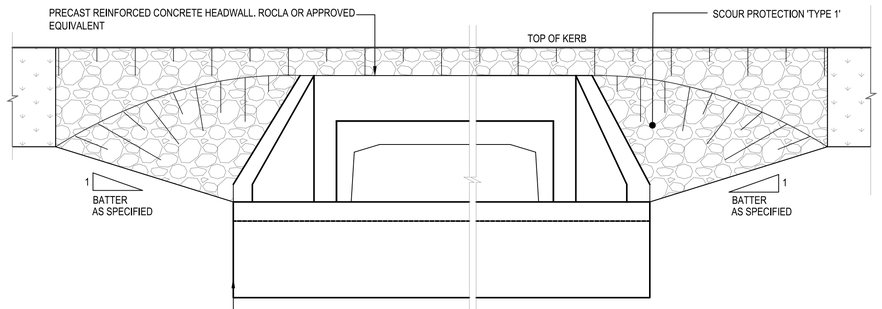
PLAN
N.T.S.



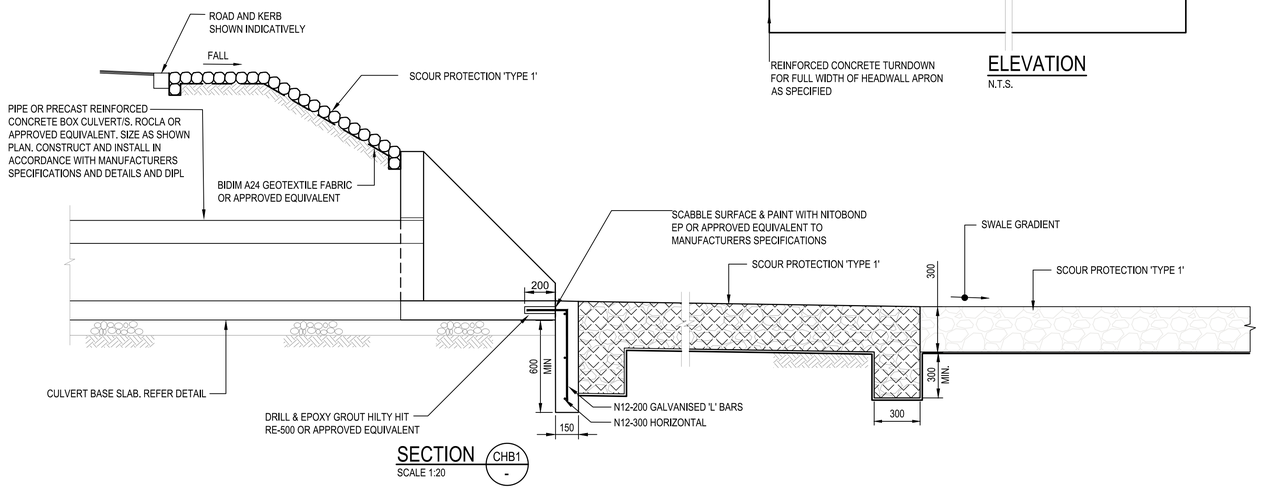
SCOUR PROTECTION 'TYPE 1' RIP RAP
SCALE 1:20

TYPICAL CULVERT AND HEADWALL DETAIL

SCOUR PROTECTION TYPE 3 DIMENSION TABLE		
CULVERT HEIGHT OR PIPE DIAMETER (mm)	MINIMUM LENGTH (m)	TYPE
375	2.5	AS SPECIFIED
450	3	AS SPECIFIED
600	4	AS SPECIFIED
750	6	AS SPECIFIED
900	6	AS SPECIFIED



ELEVATION
N.T.S.



SECTION CHB1
SCALE 1:20

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

BEFORE YOU DIG www.byda.com.au

Rev	Revision Description	Date
01	ISSUED FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients
NSW GOVERNMENT Health Infrastructure
TAYLOR
NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
STORMWATER DETAILS - SHEET 05

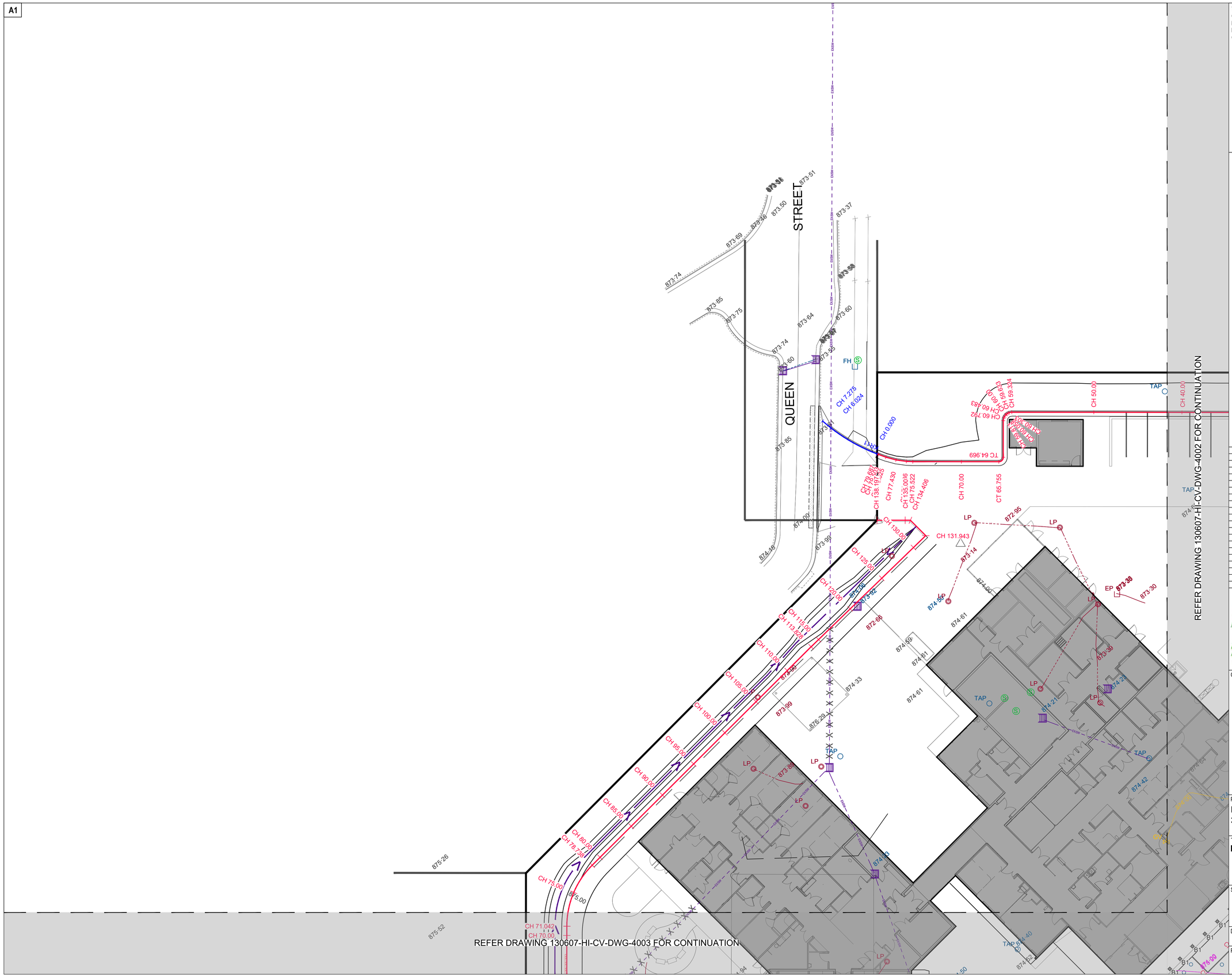
Scale:
0 0.2 0.4 0.6 0.8 1m
1:20

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-3605	01

File Path:: K:\S230099 BLAYNEY MPS\07- CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-3600.DWG - 130607-HI-CV-DWG-3605 - DATE PRINTED: 21/12/2024 9:56:58 AM

A1



THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

NORTH

BEFORE YOU DIG www.byda.com.au

01 02 03 04

Rev	Revision Description	Date
1	ISSUED FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure
TAYLOR
NBRS

Project
BLAYNEY MULITPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
ROAD DESIGN SETOUT PLAN - SHEET 01

Scale: 1:200 (0 2 4 6 8 10m)

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-4001	1

File Path: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-4000.DWG - 130607-HI-CV-DWG-4001 - DATE PRINTED: 2/12/2024 9:57:54 AM

A1

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

NORTH

BEFORE YOU DIG www.byda.com.au

01 02 03 04

REFER DRAWING 130607-HI-CV-DWG-4001 FOR CONTINUATION

REFER DRAWING 130607-HI-CV-DWG-4004 FOR CONTINUATION

STREET

OSMAN

RW02

Rev	Revision Description	Date
1	ISSUED FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BALNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
ROAD DESIGN SET OUT PLAN - SHEET 02

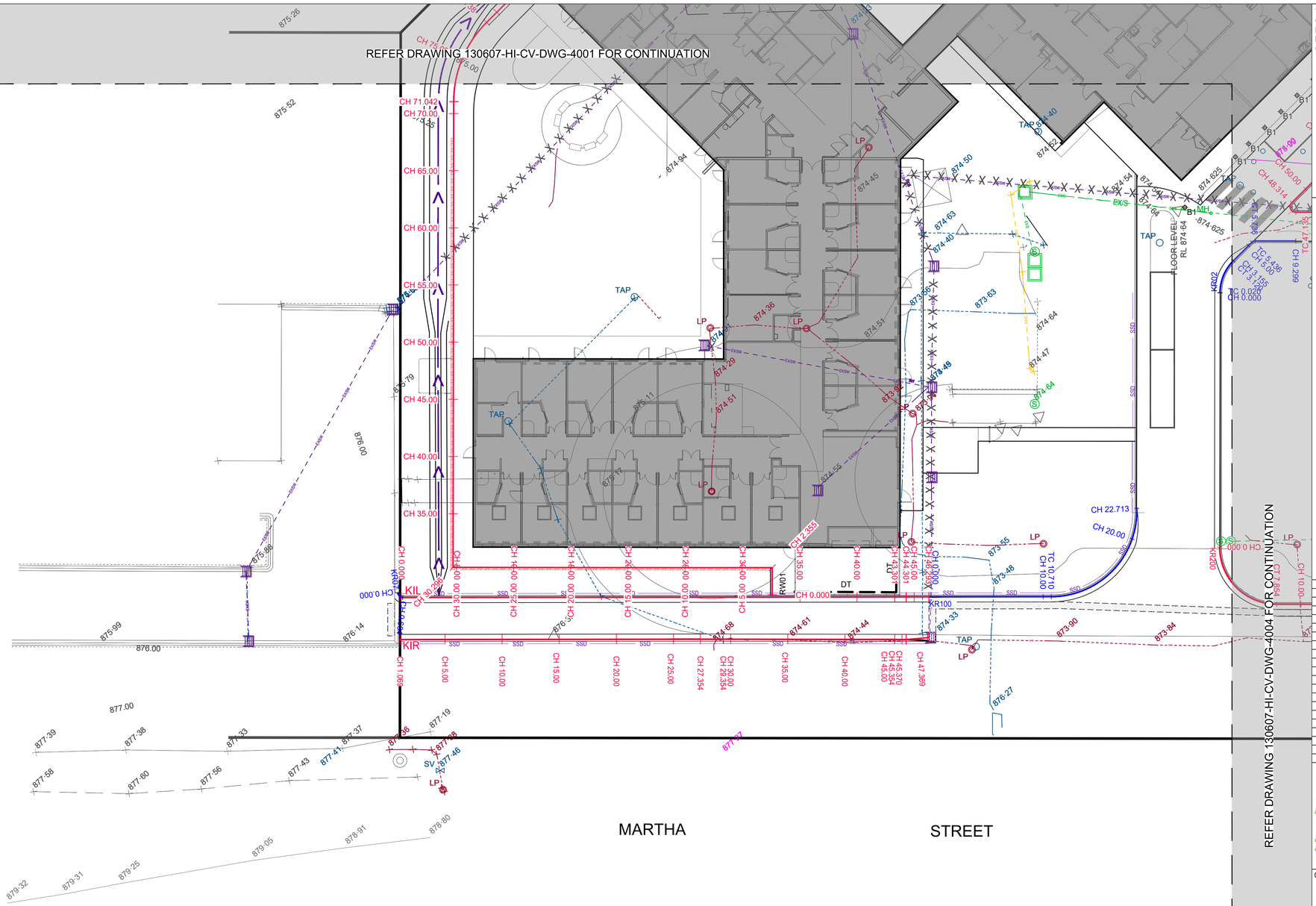
Scale:
0 2 4 6 8 10m
1:200

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-4002	1

File Path: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-4000.DWG - 130607-HI-CV-DWG-4002 - DATE PRINTED: 2/12/2024 9:57:58 AM

A1



MC01 KERB INV->KIL HORIZONTAL POINTS - KIL

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING
IP 1	0.000	708913.359	6286800.032	876.101	100°31'18.13"
IP 2	43.301	708955.931	6286792.125	874.288	
IP 3	43.301	708955.932	6286792.125	874.288	
IP 4	44.301	708956.915	6286791.943	874.288	
IP 5	44.301	708956.915	6286791.943	874.288	
IP 6	46.293	708958.873	6286791.579	874.288	
IP 7	46.293	708958.873	6286791.579		100°31'04.20"

MC01 KERB INV->KIR HORIZONTAL POINTS - KIR

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING
IP 1	1.069	708912.689	6286796.425	876.129	100°31'18.13"
IP 2	27.354	708938.532	6286791.625	874.907	
IP 3	29.354	708940.498	6286791.258	874.814	
IP 4	44.370	708955.252	6286788.468	874.353	
IP 5	44.370	708955.252	6286788.468	874.353	
IP 6	45.354	708956.219	6286788.284	874.333	
IP 7	45.370	708956.234	6286788.281	874.332	
IP 8	45.370	708956.235	6286788.281	874.332	
IP 9	47.361	708958.216	6286788.083	874.296	
IP 10	47.369	708958.224	6286788.082	874.295	
IP 11	47.369	708958.224	6286788.082	874.295	95°42'15.52"

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

NORTH

BEFORE YOU DIG www.byda.com.au

01 02 03 04

Rev	Revision Description	Date
1	ISSUED FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULITPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
ROAD DESIGN SETOUT PLAN - SHEET 03

Scale:
0 2 4 6 8 10m
1:200

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-4003	1

File Path: K:\S230099 BLAYNEY MPS\07_CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-4000.DWG - 130607-HI-CV-DWG-4003 - DATE PRINTED: 21/2/2024 9:58:02 AM

A1

REFER DRAWING 130607-HI-CV-DWG-4002 FOR CONTINUATION

REFER DRAWING 130607-HI-CV-DWG-4003 FOR CONTINUATION

OSMAN STREET

MARTHA STREET

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

NORTH

BEFORE YOU DIG www.byda.com.au

01 02 03 04

Rev	Revision Description	Date
1	ISSUED FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
ROAD DESIGN SETOUT PLAN - SHEET 04

Scale:
0 2 4 6 8 10m
1:200

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-4004	1

File Path: - K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-4000.DWG - 130607-HI-CV-DWG-4004 - DATE PRINTED: 2/12/2024 9:58:05 AM

A1

ALIGN/KR->KR01 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	709022.790	6286857.628	874.111	325°39'35.64"			
IP 2	0.265	709022.640	6286857.846	874.112		R = -5.000	0.529	6°03'46.10"
CT	0.529	709022.469	6286858.048	874.113	319°35'49.54"			
TC	4.485	709019.905	6286861.060	874.131	319°35'49.54"			
IP 3	5.290	709019.381	6286861.675	874.135		R = 10.000	1.611	9°13'53.12"
IP 4	6.096	709018.963	6286862.366	874.124				
TC	15.149	709014.258	6286870.101	873.988	328°41'16.62"			
IP 5	15.282	709014.190	6286870.214	873.986		R = -5.000	0.265	3°02'06.78"
CT	15.414	709014.115	6286870.323	873.984	325°39'09.83"			
IP 6	17.028	709013.204	6286871.656	873.960				
IP 7	17.609	709013.312	6286872.227	873.947				
IP 8	19.265	709013.615	6286873.854	873.910				
IP 9	28.990	709015.415	6286883.411	873.693				
IP 10	29.299	709015.412	6286883.721	873.686				
IP 11	29.479	709015.364	6286883.894	873.682				
IP 12	29.721	709015.254	6286884.110	873.676				
IP 13	29.954	709015.101	6286884.285	873.671				
IP 14	30.146	709014.948	6286884.402	873.667				
IP 15	30.458	709014.659	6286884.518	873.660				
IP 16	59.324	708986.293	6286889.864	874.154				
IP 17	59.633	708985.983	6286889.861	874.159				
IP 18	59.813	708985.810	6286889.813	874.163				
IP 19	60.058	708985.591	6286889.702	874.167				
IP 20	60.303	708985.409	6286889.539	874.171				
IP 21	60.483	708985.301	6286889.395	874.175				
IP 22	60.792	708985.185	6286889.108	874.180				
IP 23	64.969	708984.412	6286885.003	874.096				
IP 24	65.362	708984.320	6286884.512	874.089		R = 0.500	0.785	89°59'47.19"
CT	65.755	708983.828	6286884.604	874.081	280°39'45.50"			
IP 25	75.522	708974.230	6286886.412	873.885				
IP 26	76.236	708973.533	6286886.570	873.871				
IP 27	77.429	708972.402	6286886.949	873.847				
IP 28	78.625	708971.325	6286887.468	873.823				
IP 29	79.503	708970.572	6286887.919	873.806				
IP 30	79.687	708970.414	6286888.015	873.802	301°12'07.66"			

ALIGN/KR->KR02 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	708988.801	6286813.032	874.235	10°40'08.38"			
TC	0.020	708988.805	6286813.052	874.235	10°40'08.38"			
IP 2	1.570	708989.107	6286814.659	874.259		R = 3.938	3.100	45°06'05.68"
CT	3.120	708990.459	6286815.579	874.283	55°46'14.06"			
IP 3	3.155	708990.488	6286815.599	874.283				
TC	5.436	708992.375	6286816.882	874.318	55°46'23.48"			
IP 4	5.586	708992.506	6286816.971	874.320		R = 0.383	0.300	44°53'20.50"
CT	5.736	708992.661	6286816.942	874.319	100°39'43.98"			
IP 5	9.299	708996.163	6286816.282	874.302	100°39'43.98"			

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

BEFORE YOU DIG www.byda.com.au

Rev	Revision Description	Date
2	ISSUED FOR CONSTRUCTION	18/10/2024
01	FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
KERB SETOUT TABLES - SHEET 01

Scale:

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-4101	2

File Path: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-4100.DWG - 130607-HI-CV-DWG-4101 - DATE PRINTED: 2/12/2024 9:58:11 AM

A1

ALIGN/KR->KR03 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	709011.632	6286781.024	874.219	100°37'33.98"			
IP 2	1.764	709013.762	6286780.625	874.245		R = -2.408	3.529	83°56'39.82"
IP 3	3.529	709014.383	6286782.700	874.271				
IP 4	3.640	709014.415	6286782.807	874.272		R = -2.502	0.223	5°05'45.62"
IP 5	3.751	709014.438	6286782.916	874.274				
IP 6	3.762	709014.440	6286782.926	874.274				
IP 7	9.162	709009.133	6286783.925	874.355				
TC	29.512	709012.898	6286803.924	874.254	10°39'44.08"			
IP 8	29.909	709012.992	6286804.425	874.249		R = -0.500	0.795	91°07'19.57"
CT	30.307	709012.489	6286804.509	874.245	279°32'24.51"			
TC	31.815	709011.002	6286804.759	874.227	279°32'24.51"			
IP 9	32.214	709010.497	6286804.844	874.223		R = 0.500	0.797	91°21'41.40"
CT	32.613	709010.594	6286805.347	874.218	10°54'05.91"			
TC	39.283	709011.855	6286811.897	874.143	10°54'05.91"			
IP 10	40.386	709012.121	6286813.278	874.150		R = -1.400	2.205	90°14'21.83"
IP 11	41.488	709010.739	6286813.538	874.157	280°39'44.08"			

ALIGN/KR->KR04 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	709022.814	6286829.086	874.179	40°04'33.73"			
IP 2	1.269	709023.650	6286830.080	874.140		R = -4.866	2.539	29°53'27.64"
IP 3	2.539	709023.880	6286831.358	874.102	10°11'06.09"			

ALIGN/KR->KR05 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	709014.324	6286811.501	874.127	100°39'46.52"			
IP 2	4.710	709018.953	6286810.629	874.061				
IP 3	5.227	709019.600	6286810.503	874.063		R = -0.655	1.033	90°21'15.50"
CC	5.743	709019.722	6286811.151	874.065	10°39'47.45"			
IP 4	6.259	709019.844	6286811.799	874.067		R = -0.655	1.033	90°21'15.50"
IP 5	6.776	709019.196	6286811.917	874.069				
TC	10.737	709015.305	6286812.664	874.109	280°52'14.39"			
IP 6	11.219	709014.765	6286812.767	874.114		R = -0.800	0.963	69°00'09.10"
IP 7	11.701	709014.475	6286812.300	874.119				
IP 8	12.514	709014.324	6286811.501	874.127	190°39'54.25"			

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

BEFORE YOU DIG www.byda.com.au

Rev	Revision Description	Date
01	ISSUED FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
KERB SETOUT TABLES - SHEET 02

Scale:

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-4102	01

File Path: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-4100.DWG - 130607-HI-CV-DWG-4102 - DATE PRINTED: 2/12/2024 9:58:12 AM

A1

ALIGN/KR->KR06 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	709005.007	6286823.714	874.285	100°39'44.08"			
IP 2	10.328	709015.158	6286821.803	874.104				
IP 3	10.625	709015.447	6286821.741	874.101				
IP 4	14.123	709019.270	6286820.872	874.081		R = 6.225	6.998	64°24'39.66"
IP 5	17.622	709020.137	6286817.048	874.062				
IP 6	19.414	709020.382	6286815.273	874.051				
IP 7	20.060	709020.477	6286814.426	874.048		R = 0.777	1.292	95°17'48.89"
IP 8	20.706	709019.625	6286814.410	874.044				
TC	23.855	709016.530	6286814.993	874.077	280°39'44.08"			
IP 9	24.092	709016.278	6286815.040	874.080		R = 0.500	0.473	54°14'55.39"
IP 10	24.329	709016.169	6286815.272	874.083				
TC	27.034	709015.274	6286817.825	874.119	340°40'01.98"			
IP 11	27.296	709015.178	6286818.097	874.123		R = -0.500	0.523	59°57'19.80"
IP 12	27.557	709014.895	6286818.151	874.126				
TC	36.792	709005.821	6286819.867	874.210	280°42'42.06"			
IP 13	37.054	709005.538	6286819.921	874.210		R = -0.500	0.524	60°02'04.91"
IP 14	37.316	709005.349	6286819.702	874.211				
TC	39.984	709003.610	6286817.678	874.214	220°40'37.23"			
IP 15	40.229	709003.436	6286817.476	874.215		R = 0.500	0.490	56°09'35.56"
IP 16	40.474	709003.171	6286817.508	874.215				
TC	47.135	708996.625	6286818.740	874.277	280°39'44.08"			
IP 17	47.430	708996.296	6286818.802	874.277		R = 0.500	0.589	67°32'52.13"
CC	47.725	708996.228	6286819.129	874.277	348°12'36.21"			
IP 18	48.019	708996.160	6286819.457	874.277		R = 0.500	0.589	67°32'52.13"
IP 19	48.314	708996.436	6286819.645	874.276				
IP 20	54.162	709001.271	6286822.934	874.241				
IP 21	56.120	709002.978	6286824.096	874.229		R = 5.000	3.916	44°52'40.86"
IP 22	58.078	709005.007	6286823.714	874.217	100°39'05.30"			

ALIGN/KR->KR07 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	708913.241	6286800.498	876.128	183°41'20.80"			
IP 2	0.332	708913.216	6286800.108	876.109		R = -0.500	0.664	76°08'22.98"
IP 3	0.664	708913.590	6286799.990	876.090	107°32'57.82"			

ALIGN/KR->KR08 HORIZONTAL POINTS (CLOSED)

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	709052.547	6286801.695	873.712				
IP 2	0.501	709052.456	6286801.203	873.712				
IP 3	5.318	709047.713	6286802.043	873.684				
IP 4	5.537	709047.437	6286802.091	873.684		R = 0.276	0.438	90°50'37.00"
CC	5.756	709047.488	6286802.366	873.684	10°35'21.41"			
IP 5	5.975	709047.540	6286802.642	873.682		R = 0.276	0.438	90°50'37.00"
IP 6	6.194	709047.814	6286802.586	873.683				
IP 7	11.009	709052.547	6286801.696	873.712				

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

BEFORE YOU DIG www.byda.com.au

Rev	Revision Description	Date
01	ISSUED FOR COONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
KERB SETOUT TABLES - SHEET 03

Scale:

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-4103	01

File Path:: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-4100.DWG - 130607-HI-CV-DWG-4103 - DATE PRINTED: 21/12/2024 9:58:13 AM

A1

ALIGN/KR->KR09 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	709025.280	6286806.356	874.019	100°34'03.20"			
IP 2	4.818	709030.016	6286805.472	873.988				
IP 3	5.037	709030.291	6286805.419	873.989		R = -0.276	0.438	90°50'37.00"
CC	5.255	709030.339	6286805.695	873.989	10°01'46.58"			
IP 4	5.474	709030.388	6286805.971	873.990		R = -0.276	0.438	90°50'37.00"
IP 5	5.693	709030.112	6286806.016	873.991				
IP 6	10.508	709025.369	6286806.849	874.132				
IP 7	11.010	709025.280	6286806.355		190°16'18.20"			

ALIGN/KR->KR10 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	709027.033	6286813.050	873.932	189°06'51.18"			
IP 2	2.010	709026.657	6286810.703	873.955		R = -3.000	4.020	76°46'55.60"
IP 3	4.020	709028.855	6286809.800	873.978	112°19'55.58"			

ALIGN/KR->KR11 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	708970.414	6286888.015	873.802	301°27'27.80"			
IP 2	3.012	708967.826	6286889.598	873.767		R = 20.390	6.024	16°55'40.48"
IP 3	6.024	708965.811	6286891.867	873.732				
IP 4	7.275	708965.009	6286892.827	873.717	320°09'14.25"			

ALIGN/KR->KR30 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	709021.560	6286787.527	874.155	190°59'59.66"			
IP 2	3.867	709020.822	6286783.731	874.190				
TC	3.901	709020.816	6286783.698	874.190	191°00'08.70"			
IP 3	5.401	709020.451	6286781.823	874.202		R = -1.910	3.000	90°00'46.32"
CT	6.901	709022.326	6286781.458	874.220	100°59'22.38"			
IP 4	7.057	709022.479	6286781.429	874.219				
IP 5	8.164	709023.566	6286781.218	874.216				
IP 6	8.170	709023.572	6286781.217	874.216				
IP 7	8.570	709023.974	6286781.174	874.211		R = -2.273	0.800	20°10'12.39"
IP 8	8.970	709024.366	6286781.273	874.204				
IP 9	8.970	709024.366	6286781.273	874.204	75°54'55.79"			

ALIGN/KR->KR100 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	708958.873	6286791.579	874.368	100°31'17.60"			
TC	10.710	708969.403	6286789.623	874.432	100°31'17.60"			
IP 2	16.711	708976.998	6286788.213	874.468		R = -7.500	12.003	91°41'43.93"
IP 3	22.713	708978.184	6286795.846	874.503	8°49'33.67"			

ALIGN/KR->KR200 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	708984.686	6286791.185	874.435	190°40'01.78"			
IP 2	3.927	708983.760	6286786.271	874.406		R = -5.000	7.854	90°00'21.10"
CT	7.854	708988.674	6286785.346	874.378	100°39'40.67"			
IP 3	31.216	709011.632	6286781.024	874.219	100°39'40.67"			

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

BEFORE YOU DIG www.byda.com.au

Rev	Revision Description	Date
01	ISSUED FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
KERB SETOUT TABLES - SHEET 04

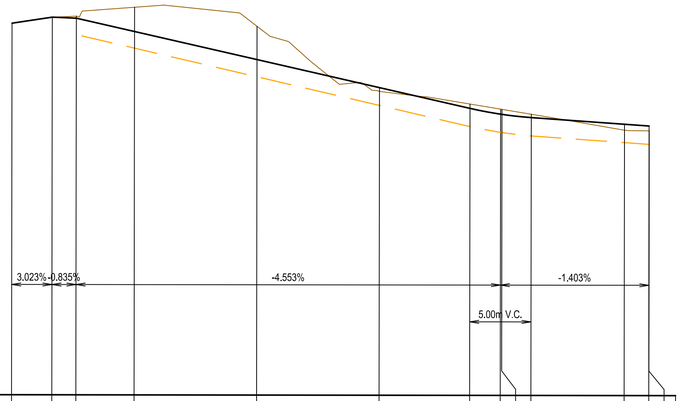
Scale:

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-4104	01

File Path: - K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-4100.DWG - 130607-HI-CV-DWG-4104 - DATE PRINTED: 2/12/2024 9:58:14 AM

A1



VERTICAL GRADE														
VERTICAL CURVE LENGTH (m)														
HORIZONTAL GEOMETRY														
DATUM 870.0														
DESIGN LEVELS	876.064	876.163	876.147	875.931	875.476	875.020	874.684	874.590	874.586	874.535	874.428	874.400		
BULK EARTHWORKS LEVELS				875.659	875.194	874.739	874.386	874.291	874.287	874.235	874.128			
EXISTING LEVELS	876.064	876.163	876.180	876.327	876.018	874.961	874.755	874.672	874.669	874.590	874.331	874.320	874.320	
CUT / FILL DEPTHS	-0	-0	-0.033	-0.396	-0.543	0.059	-0.071	-0.083	-0.082	-0.055	0.097	0.08		
CHAINAGE	0.00	3.29	5.25	10.00	20.00	30.00	37.39	39.89	40.00	42.39	50.00	52.01	52.02	

MC01 LONGITUDINAL SECTION

Vertical scale 1:50
Horizontal scale 1:250

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

BEFORE YOU DIG www.byda.com.au

Rev	Revision Description	Date
2	ISSUED FOR CONSTRUCTION	18/10/2024
01	FOR CROWN CERTIFICATE	04/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
ROAD LONGITUDINAL SECTIONS

Scale:
0 0.5 1 1.5 2 2.5m
1:50
0 2.5 5 7.5 10 12.5m
1:250

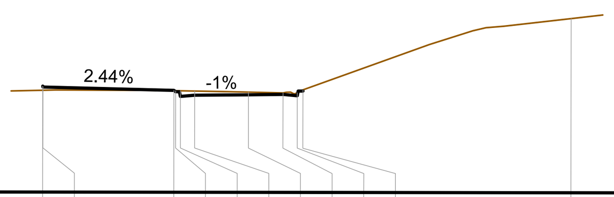
Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-4301	2

File Path - K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-4300.DWG - 130607-HI-CV-DWG-4301 - DATE PRINTED: 2/12/2024 9:58:19 AM

A1

MC01 CROSS SECTIONS

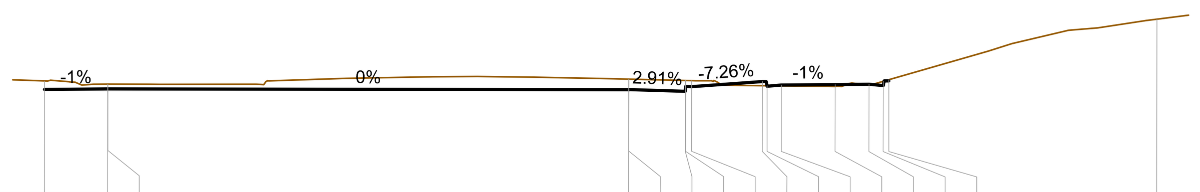


Datum 871.5

FINISHED SURFACE LEVEL	874.85	874.821	874.72	874.679	874.529	874.569	874.586	874.597	874.557	874.707	877.008
DEPTH CUT -/ FILL +	0.13	0.10	0.01	-0.03	-0.18	-0.13	-0.08	-0.05	-0.09	-0.04	0.00
EXISTING SURFACE LEVEL	874.719	874.720	874.710	874.710	874.707	874.701	874.669	874.645	874.652	874.743	877.008
OFFSET FROM CENTERLINE	-6.498	-6.493	-2.355	-2.3	-2.15	-1.7	0	1.091	1.541	1.721	10.189

SCALE 1: 200 (H)
1: 200 (V)

CH 40.000

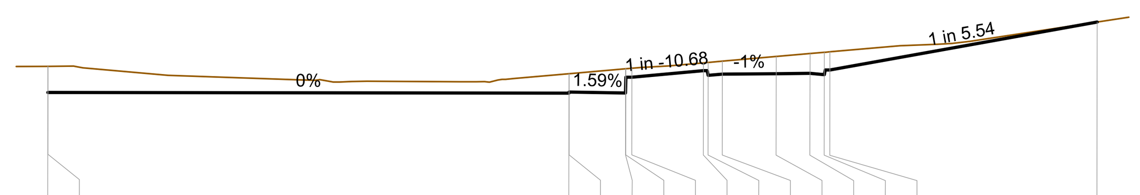


Datum 871.5

FINISHED SURFACE LEVEL	874.83	874.85	874.85	874.85	874.853	874.801	874.951	874.951	875.113	874.963	875.003	875.02	875.031	874.991	875.141	877.109
DEPTH CUT -/ FILL +	-0.27	-0.16	-0.16	-0.33	-0.33	-0.34	-0.19	-0.19	0.13	-0.02	0.03	0.06	0.03	-0.14	-0.04	0.00
EXISTING SURFACE LEVEL	875.101	875.006	875.006	875.184	875.184	875.144	875.144	875.140	874.982	874.980	874.977	874.961	875.001	875.126	875.178	877.109
OFFSET FROM CENTERLINE	-24.986	-22.986	-22.981	-6.522	-6.517	-4.735	-4.725	-4.535	-2.3	-2.15	-1.7	0	1.069	1.519	1.699	10.165

SCALE 1: 200 (H)
1: 200 (V)

CH 30.000

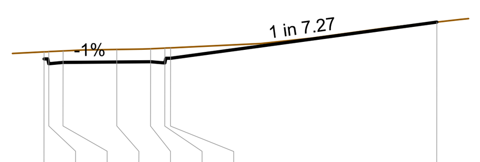


Datum 871.5

FINISHED SURFACE LEVEL	874.85	874.85	874.85	874.885	874.857	875.357	875.357	875.569	875.419	875.459	875.476	875.486	875.446	875.596	877.121
DEPTH CUT -/ FILL +	-0.83	-0.83	-0.62	-0.58	-0.77	-0.27	-0.28	-0.25	-0.41	-0.41	-0.54	-0.63	-0.71	-0.57	0.00
EXISTING SURFACE LEVEL	875.677	875.677	875.465	875.466	875.623	875.624	875.641	875.815	875.828	875.868	876.018	876.113	876.153	876.168	877.121
OFFSET FROM CENTERLINE	-23.015	-23.01	-6.547	-6.542	-4.76	-4.75	-4.56	-2.3	-2.15	-1.7	0	1.069	1.519	1.699	10.14

SCALE 1: 200 (H)
1: 200 (V)

CH 20.000

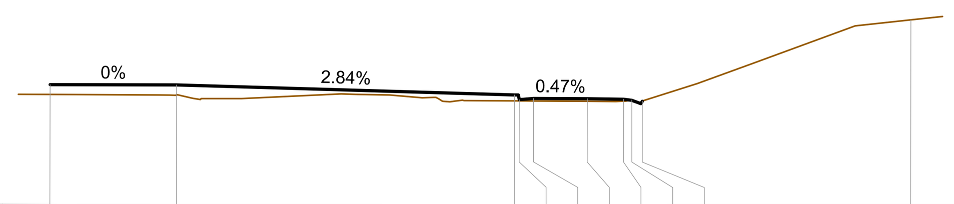


Datum 872.5

FINISHED SURFACE LEVEL	876.024	875.874	875.914	875.931	875.941	875.901	876.051	877.209
DEPTH CUT -/ FILL +	-0.22	-0.38	-0.36	-0.40	-0.41	-0.47	-0.33	0.00
EXISTING SURFACE LEVEL	876.247	876.255	876.278	876.327	876.352	876.374	876.382	877.209
OFFSET FROM CENTERLINE	-2.3	-2.15	-1.7	0	1.069	1.519	1.699	10.115

SCALE 1: 200 (H)
1: 200 (V)

CH 10.000

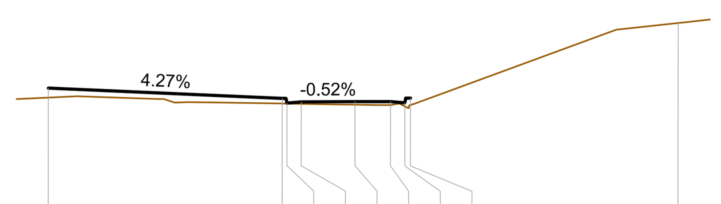


Datum 871

FINISHED SURFACE LEVEL	874.822	874.822	874.518	874.368	874.408	874.4	874.388	874.352	874.324	876.908
DEPTH CUT -/ FILL +	0.31	0.31	0.19	0.04	0.08	0.08	0.06	-0.01	-0.01	0.00
EXISTING SURFACE LEVEL	874.512	874.514	874.331	874.331	874.329	874.320	874.328	874.364	874.334	876.908
OFFSET FROM CENTERLINE	-16.976	-12.978	-2.3	-2.15	-1.7	0	1.148	1.408	1.738	10.219

SCALE 1: 200 (H)
1: 200 (V)

CH 52.000



Datum 871

FINISHED SURFACE LEVEL	874.845	874.529	874.379	874.419	874.428	874.432	874.392	874.542	876.927
DEPTH CUT -/ FILL +	0.30	0.16	0.02	0.06	0.10	0.11	0.11	0.22	0.00
EXISTING SURFACE LEVEL	874.542	874.365	874.363	874.356	874.331	874.320	874.283	874.325	876.927
OFFSET FROM CENTERLINE	-9.697	-2.3	-2.15	-1.7	0	1.125	1.575	1.755	10.214

SCALE 1: 200 (H)
1: 200 (V)

CH 50.000

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

BEFORE YOU DIG www.byda.com.au

Rev	Revision Description	Date
2	ISSUED FOR CONSTRUCTION	18/10/2024
01	FOR CROWN CERTIFICATE	04/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364) | www.scpconsult.com.au
mail@scpconsult.com.au | ABN 80 003 076 024

Clients
NSW GOVERNMENT Health Infrastructure
TAYLOR
NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
ROAD CROSS SECTIONS

Scale:
0 2 4 6 8 10m
1:200

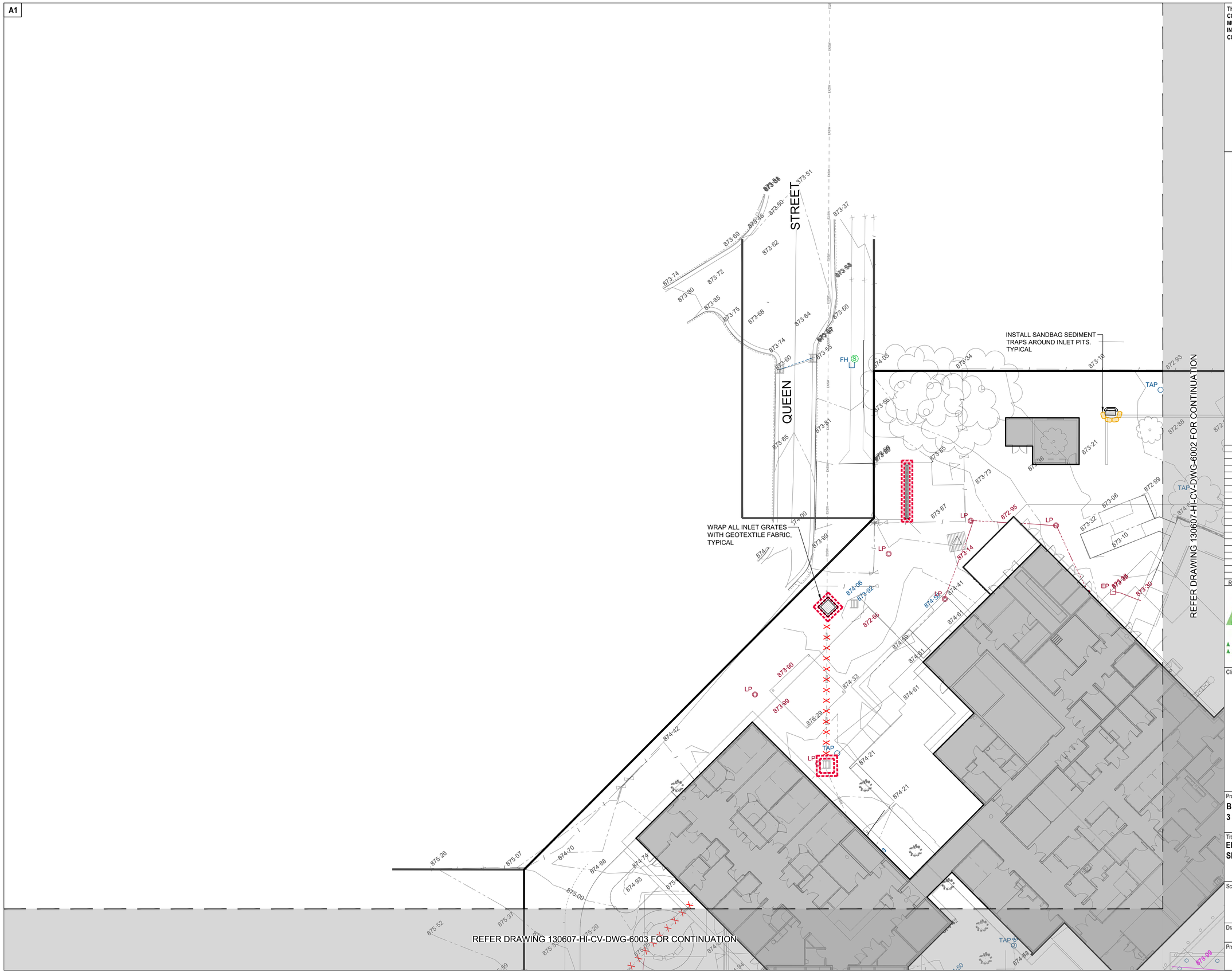
Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-4400	2

File Path:: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-4400.DWG - 130607-HI-CV-DWG-4400 - DATE PRINTED: 2/12/2024 9:58:25 AM

A1

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING



Rev	Revision Description	Date
1	ISSUED FOR CONSTRUCTION	XX/XX/XXXX

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
EROSION AND SEDIMENT CONTROL PLAN
SHEET 01

Scale: 0 2 4 6 8 10m
1:200

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-6001	1

File Path - K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-6000.DWG - 130607-HI-CV-DWG-6001 - DATE PRINTED: 2/12/2024 9:59:29 AM

A1

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

NORTH

BEFORE YOU DIG www.byda.com.au

01 02 03 04

REFER DRAWING 130607-HI-CV-DWG-6001 FOR CONTINUATION

REFER DRAWING 130607-HI-CV-DWG-6004 FOR CONTINUATION

STREET

OSMAN

INSTALL SANDBAG SEDIMENT TRAPS AROUND INLET PITS. TYPICAL

WRAP ALL INLET GRATES WITH GEOTEXTILE FABRIC, TYPICAL

Rev	Revision Description	Date
2	ISSUED FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
EROSION AND SEDIMENT CONTROL PLAN
SHEET 02

Scale:
0 2 4 6 8 10m
1:200

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-6002	1

File Path: K:\S230099 BLAYNEY MPS\07 .CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-6000.DWG - 130607-HI-CV-DWG-6002 - DATE PRINTED: 2/12/2024 9:59:33 AM

A1

REFER DRAWING 130607-HI-CV-DWG-6001 FOR CONTINUATION

INSTALL SANDBAG SEDIMENT TRAPS AROUND INLET PITS. TYPICAL

INSTALL AND MAINTAIN SEDIMENT CONTROL FENCE THROUGHOUT CONSTRUCTION

MARTHA STREET

REFER DRAWING 130607-HI-CV-DWG-6004 FOR CONTINUATION

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

NORTH

BEFORE YOU DIG www.byda.com.au

01 02 03 04

Rev	Revision Description	Date
2	ISSUED FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
EROSION AND SEDIMENT CONTROL PLAN
SHEET 03

Scale:
0 2 4 6 8 10m
1:200

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-6003	1

File Path: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-6000.DWG - 130607-HI-CV-DWG-6003 - DATE PRINTED: 2/12/2024 9:59:37 AM

A1

REFER DRAWING 130607-HI-CV-DWG-6002 FOR CONTINUATION

REFER DRAWING 130607-HI-CV-DWG-6003 FOR CONTINUATION

INSTALL SANDBAG SEDIMENT TRAPS AROUND INLET PITS. TYPICAL

WRAP ALL INLET GRATES WITH GEOTEXTILE FABRIC, TYPICAL

H:20
D:1.2

MARTHA STREET

OSMAN STREET

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

NORTH

BEFORE YOU DIG www.byda.com.au

01 02 03 04

Rev	Revision Description	Date
2	ISSUED FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
EROSION AND SEDIMENT CONTROL PLAN
SHEET 04

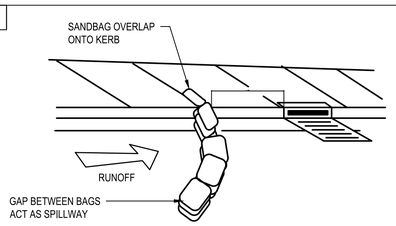
Scale:
0 2 4 6 8 10m
1:200

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-6004	1

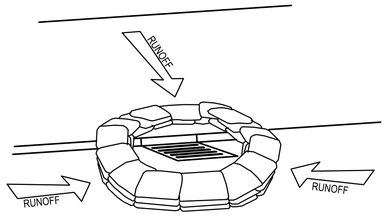
File Path: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-6000.DWG - 130607-HI-CV-DWG-6004 - DATE PRINTED: 2/12/2024 9:59:41 AM

A1



KERB INLET SEDIMENT FILTER (ON GRADE)

NTS

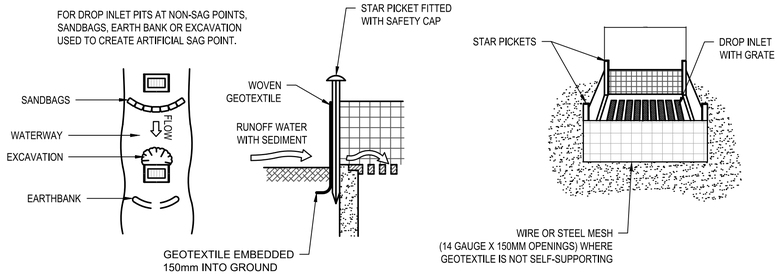


KERB INLET SEDIMENT FILTER - SANDBAG SURROUND

NTS

KERB INLET SEDIMENT FILTER

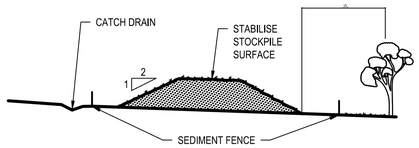
1. REFER TO APPROVED PLANS FOR LOCATIONAND INSTALLATION DETAILS. IF THERE ARE QUESTIONS OR PROBLEMS WITH THE LOCATION,DIMENSIONS, OR METHOD OF INSTALLATION, CONTACT THE ENGINEER OR RESPONSIBLE ON-SITE OFFICER FOR ASSISTANCE.
2. ENSURE THAT THE INSTALLATION OF THE SEDIMENT TRAP WILL NOT CAUSE UNDESIRABLE SAFETY OR FLOODING ISSUES.
3. INSTALL SEDIMENT TRAP IN ACCORDANCE WITH STANDARD DRAWING SUPPLIED WITH THE APPROVED PLAN, OR AS DIRECTED BY THESITE SUPERVISOR.
4. ENSURE THE SEDIMENT TRAP IS CONSTRUCTED UP-SLOPE OF AN ON-GRADE KERB INLET. THE SEDIMENT TRAP MUST NOT SURROUND THE KERB INLET UNLESS SPECIFICALLY DIRECTED BY THE SITE SUPERVISOR.
5. ENSURE THE SEDIMENT TRAP FULLY ENCLOSES THE KERB INLET. USE APPROPRIATE SPACERS TO ENSURE THE SEDIMENT TRAP DOES NOT BLOCK THE SIDE-ENTRY INLET.
6. TAKE ALL NECESSARY MEASURE TO MINIMISE THE SAFETY RISK CAUSED BY THE STRUCTURE



DROP INLET FILTERS

NTS

1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OF STRAW BALES.
2. FOLLOW STANDARD DRAWINGS OF STRAW BALE FILTERS AND SEDIMENT FENCES FOR INSTALLATION PROCEDURES FOR THE STRAW BALES OR GEOFABRIC. REDUCE THE PICKET SPACING TO 1m CENTERS.
3. IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWING.
4. DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.



STOCKPILE

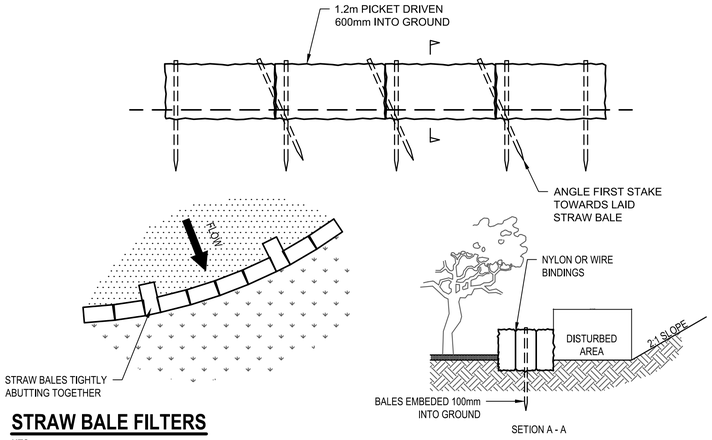
NTS

SOURCE: MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION, THIRD EDITION, AUGUST 1998 PRODUCED BY THE DEPARTMENT OF HOUSING

STOCKPILE

NTS

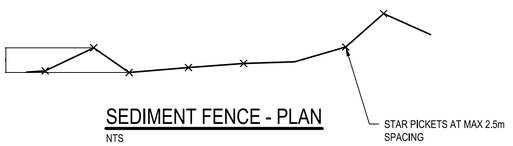
1. PLACE ALL STOCKPILES IN LOCATIONS MORE THAN 5m FROM EXISTING VEGETATION, ROADS & HAZARD AREAS.
2. CONSTRUCT AS LOW, FLAT ELONGATED MOUNDS.
3. SIDE SLOPE TO BE 1V:2H MAX.
4. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2m IN HEIGHT.
5. WHERE STOCKPILES ARE TO BE IN PLACE MORE THAN 10 DAYS, STABILISE USING WOOD CHIP MULCH - 16 TONNE/Ha.
6. CONSTRUCTION SEDIMENT FENCE WITH CATCH DRAIN ON UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES.



STRAW BALE FILTERS

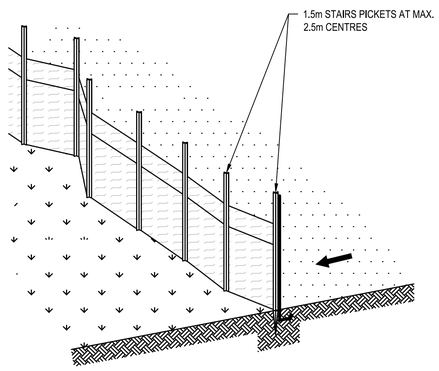
NTS

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



SEDIMENT FENCE - PLAN

NTS



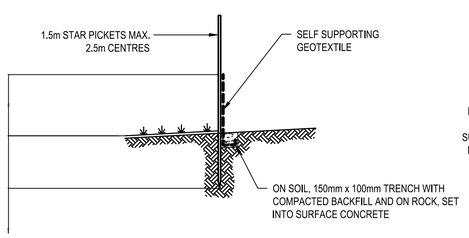
SEDIMENT FENCE

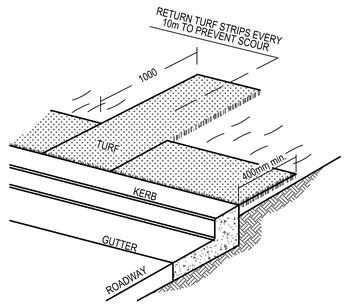
NTS

SEDIMENT FENCE

NTS

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

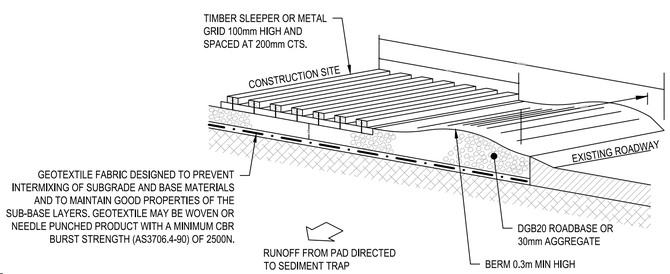




KERBSIDE TURF STRIP

NTS

1. INSTALL A 400mm MINIMUM WIDE ROLL OF TURF ON THE FOOTPATH NEXT TO THE KERB AND AT THE SAME LEVEL AS THE TOP OF THE KERB.
2. LAY 1.4m LONG TURF STRIPS NORMAL TO THE KERB EVERY 10m.
3. REHABILITATE DISTURBED SOIL BEHIND THE TURF STRIP FOLLOWING THE ESCP/SWMP.



TEMPORARY STABALISED CONSTRUCTION EXIT

NTS

CONSTRUCTION NOTES

1. CONTRACTOR SHALL CONDUCT A DIAL BEFORE YOU DIG SEARCH PRIOR TO COMMENCEMENT OF ANY WORK.
2. ENSURE THAT ALL COUNCIL AND PUBLIC UTILITY ASSETS ARE MAINTAINED AND PROTECTED AT ALL TIMES IN THE VICINITY OF THE TEMPORARY CONSTRUCTION EXIT.
3. STRIP TOPSOIL AND LEVEL SITE.
4. COMPACT SUBGRADE.
5. COVER AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
6. CONSTRUCT 200mm THICK PAD OVER GEOTEXTILE USING ROADBASE OR 30mm AGGREGATE.
7. CONSTRUCT HUMP IMMEDIATELY WITHIN BOUNDARY TO DIVERT WATER TO A SEDIMENT FENCE OR OTHER SEDIMENT TRAP WHERE THE SEDIMENT IS COLLECTED AND REMOVED.

MAINTENANCE NOTES

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

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING

BEFORE YOU DIG www.byda.com.au

Rev	Revision Description	Date
2	ISSUED FOR CONSTRUCTION	18/10/2024

scp engineers and development consultants
1300 SCP ENG (727 364)
mail@scpconsult.com.au
www.scpconsult.com.au
ABN 80 003 076 024

Clients

NSW GOVERNMENT Health Infrastructure

TAYLOR

NBRS

Project
BLAYNEY MULTIPURPOSE SERVICE
3 OSMAN ST, BLAYNEY NSW 2799

Title
SEDIMENT EROSION CONTROL DETAILS

Scale: 0 0.1 0.2 0.3 0.4 0.5m 1:10

Drawn	Designed	Checked	Approved
EE	SC	AV	AV

Project Number	Drawing Number	Revision
S230099	130607-HI-CV-DWG-6601	1

File Path: K:\S230099 BLAYNEY MPS\07. CIVIL\BIM\DRAWINGS\130607-HI-CV-DWG-6600.DWG - 130607-HI-CV-DWG-6601 - DATE PRINTED: 2/12/2024 9:59:48 AM

Appendix 2: Flood Risk Assessment Report

ARUP

Health Infrastructure NSW

Blayney Multipurpose Service

Flood Risk Assessment

Reference: MPS-00-HYD-RPT-0001

02 | 27 September 2024



© NSW Health, 2024

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 30409900

Arup Australia Pty Ltd | ABN 76 625 912 665

Arup Australia Pty Ltd
108 Wickham Street
Fortitude Valley
Brisbane
QLD 4006
Australia
arup.com

ARUP

Document Verification

Project title	Blayney Multipurpose Service
Document title	Flood Risk Assessment
Job number	304099-00
Document ref	MPS-00-HYD-RPT-0001
File reference	

Revision	**Date**	**Filename**			
A	12/09/2024	**Description**	Draft Submission – for review		
			Prepared by	**Checked by**	**Approved by**
		Name	Toby Heading	Josh Atkinson	Josh Atkinson
		Signature			
01	27/09/2024	**Filename**			
		Description	Planning submission		
			Prepared by	**Checked by**	**Approved by**
		Name	Toby Heading	Josh Atkinson	Josh Atkinson
		Signature			
02	27.09/2024	**Filename**			
		Description	Updated civil design		
			Prepared by	**Checked by**	**Approved by**
		Name	Toby Heading	Josh Atkinson	Josh Atkinson
		Signature			

Issue Document Verification with Document ☑

Contents

1.	Introduction	1
1.1	Purpose	1
1.2	Current Project Status	2
1.3	Assumptions and limitations	2
2.	Background Information	3
2.1	Blayney Flood Study (Jacobs, 2015)	3
2.2	Addendum-to-Blayney-flood-study (Storm Consulting, 2022)	5
2.3	The Estimation of Probable Maximum Precipitation in Australia: Generalised Short-Duration Method (Bureau of Meteorology, 2003)	6
2.4	LiDAR and Topographic data	7
2.5	Blayney Health Service Emergency Management Plan & Standing Operating Procedures (Western NSW Local Health District, 2021)	7
3.	Planning Requirements	9
3.1	Local Environment Plan 2012	9
3.2	Blayney Development Control Plan 2018	10
3.3	Guidelines for Engineering Works (WBC Strategic Alliance, 2009)	11
3.4	NSW Flood Risk Management Manual (Department of Planning and Environment, 2023)	12
3.5	Update on addressing flood risk in planning decisions (PS 24-001, NSW Government 2024)	12
3.6	NSW Health Infrastructure Requirements	13
3.7	Planning Approval Conditions	13
4.	Consultation	14
4.1	Blayney Sire Council	14
4.2	SES	14
5.	Flood Modelling	15
5.1	Hydrological Modelling	15
5.2	Hydraulic Modelling	17
5.3	Design Inputs	18
5.4	Hydraulic Modelling Results	20
5.5	Rate of Rise and Warning Times	28
5.6	Blockage	32
5.7	Flooding Summary	33
6.	Flood Emergency Response	35
6.1	Emergency response plan modifications	35
6.2	Flood Monitoring	36
6.3	Flood Response	36
6.4	Communications	37
6.5	Flood Plan Documentation	37
7.	Conclusions and Recommendations	39
7.1	Recommendations	39
References		41

Tables

Table 2-1 Typical three-stage evacuation process 8
Table 3-1 Blayney CDP 2018 Stormwater requirements 10
Table 3-2Design Annual Exceedance Probabilities (WBC Strategic Alliance, 2009) 12
Table 5-1: PMP rainfall depth 16
Table 5-2: Design Temporal Distribution of Short Duration PMP (GSDM Calculation Method, BoM 2003) 16
Table 5-3: XP-RAFTS Peak flows at the Mid-Western Highway, directly upstream of the project area 17
Table 5-4: TUFLOW Model Parameters 18
Table 5-5: Comparison in 1% AEP peak flood elevation to previous assessment 23
Table 9 Minimum floor levels 34

Figures

Figure 1-1: Blayney MPS Layout 1
Figure 2-1: 20% AEP Flood Depths and Levels (Jacobs, 2015) 3
Figure 2-2: 1% AEP Flood Depths and Levels (Jacobs, 2015) 4
Figure 2-3: PMF Flood Depths and Levels (Jacobs, 2015) 4
Figure 2-4 1% AEP Flood Depth (Storm Consulting, 2022) 5
Figure 2-5 1% AEP Provisional Flood Hazard (Storm Consulting, 2022). 6
Figure 2-6 Spatial application of the PMP, with the rainfall centred on the contributing catchment (BoM, 2003). 7
Figure 3-1 Land zoning as outlined in the LEP 2012 9
Figure 5-1: Design layout (NBRS, 24 August 2024) 19
Figure 5-2: Assumed overland flow path dimensions. 19
Figure 5-3 Civil grading plan developed by Taylor Consulting Engineers (27 September 2024). 20
Figure 5-4: Existing conditions 1% AEP peak flood behaviour. 21
Figure 5-5: General flood hazard vulnerability curve. 21
Figure 5-6: Existing conditions 1% AEP peak flood hazard. 22
Figure 5-7: Existing conditions PMF peak flood hazard. 23
Figure 5-8: Comparison to previous assessment. 24
Figure 5-9: Design conditions 1% AEP peak flood depth. 26
Figure 5-10: Design conditions PMF depth and velocity. 26
Figure 5-11: Design conditions PMF peak hydraulic hazard. 27
Figure 5-12: Design conditions 1% AEP peak flood impact. 28
Figure 5-13: Reporting locations – Design conditions PMF peak flood depth. 29
Figure 5-14: Rate of rise of PMF event within western courtyard. 29
Figure 5-15: Rate of rise of PMF event at southern boundary of Residential Aged Care facility. 30
Figure 5-16: Rate of rise of PMF event at emergency drop-off zone. 30
Figure 5-17: Rate of rise of PMF event at north-western boundary of Support and Mortuary unit. 31
Figure 5-18 Flow hydrograph at Oldham Place 31
Figure 5-19 Flow hydrograph at the Ambulance Station 32
Figure 5-20: Blockage sensitivity 1% AEP peak flood impact. 33

Figure 6-1 Provisional hydraulic hazard at the site. 35

Appendices

Appendix A A-1
Flood Model Configuration A-1

Appendix B B-1
Existing Conditions Results B-1

Appendix C C-1
Proposed Conditions Results without mitigation C-1

Appendix D D-1
Proposed Conditions Results with mitigation D-1

Appendix E E-1
TUFLOW Sensitivity Testing Results E-1

1. Introduction

This report has been prepared on behalf of Health Infrastructure NSW to identify the flood risk assessment for the Blayney Multipurpose Service (MPS) facility. The report documents the flood risk modelling undertaken for the proposed MPS development in Blayney, NSW. The proposed development shown in Figure 1-1 comprises:

- Residential aged care
- An Inpatient Unit
- An expanded HealthOne, treatment and inpatient areas
- Landscaped courtyards and gardens
- New parking facilities



Figure 1-1: Blayney MPS Layout

1.1 Purpose

This report has been prepared to undertake a detailed and site-specific risk assessment for the proposed MPS development.

The scope of this assessment included the following:

- Review existing Blayney regional flood model for purpose of use in project.
- Update and refine hydrology model specific to Blayney township up to and including the Probable Maximum Precipitation (PMF) event.
- Update and refine hydraulic model latest available LiDAR survey.
- Hydraulic modelling for both existing and post-development scenarios.
- Review of the flood immunity for the proposed MPS development.
- Inform the emergency response requirements for the facility to manage flood and extreme storm events safety.

1.2 Current Project Status

The project has currently been approved by Heath Infrastructure NSW, with a design completed. A construction contractor has been engaged and is preparing to commence construction on site.

As part of the approval conditions, Health Infrastructure is obliged to undertake a Flood Risk Assessment, and to implement the recommendations of this study.

This study has been commissioned by Health Infrastructure NSW to meet the requirements of this Flood Risk Assessment. This study has included:

- A review of the existing flood assessments for the town of Blayney to document the flood risk at the site.
- Undertaking updated, site-specific modelling based on the accepted Council flood study.
- Assess the flood and overland flow risks to occupants of the Blayney MPS
- Identify the potential for off-site impacts.
- Identify measures that may be incorporated into the approved design to reduce or eliminate the risks to occupants and off-site residents.

1.3 Assumptions and limitations

The following flood risk report has considered the flooding and inundation associated with significant flow paths as documented in the Council flood studies (*Blayney Flood Study* and *Addendum-to-Blayney-flood-study*). As such, it has not considered site drainage as this is managed with the civil design developed by Taylor Consulting Engineers.

This study has considered the hydrologic and hydraulic factors with overland flows. Structural design, compliance with the National Construction Code, architecture and building details are considered separately by others.

2. Background Information

To support the development for a site-specific risk assessment, a range of data sources were considered. These are outlined in the following section.

2.1 Blayney Flood Study (Jacobs, 2015)

The objective of the Blayney Flood Study was to define the riverine flood behaviour of the Belubula River and Abattoir Creek as well as the overland flood behaviour in Blayney and their possible combined effects of the town area of Blayney. The study produced information on flood levels, velocities and flows for a full range of riverine and overland flood events under existing catchment conditions. These results supported the identification of possible management options within the Floodplain Risk Management Study and development of a draft Risk Management Plan for Council's consideration.

Peak flood depths and levels are for the site are shown in Figure 2-1, Figure 2-2, and Figure 2-3. These results indicate that the town of Blayney, including the Blayney MPS site, is subject to overland flows for a range of events, including floods as frequent as the 20% AEP flood. The provided results indicate that depths of up to 0.2 m could traverse the site in the 1% AEP storm event, and depths of up to 1 m could be present in a PMF.

However, this study is based on the ARR 1987 hydrology, and has been superseded by the Addendum-to-Blayney-flood-study.

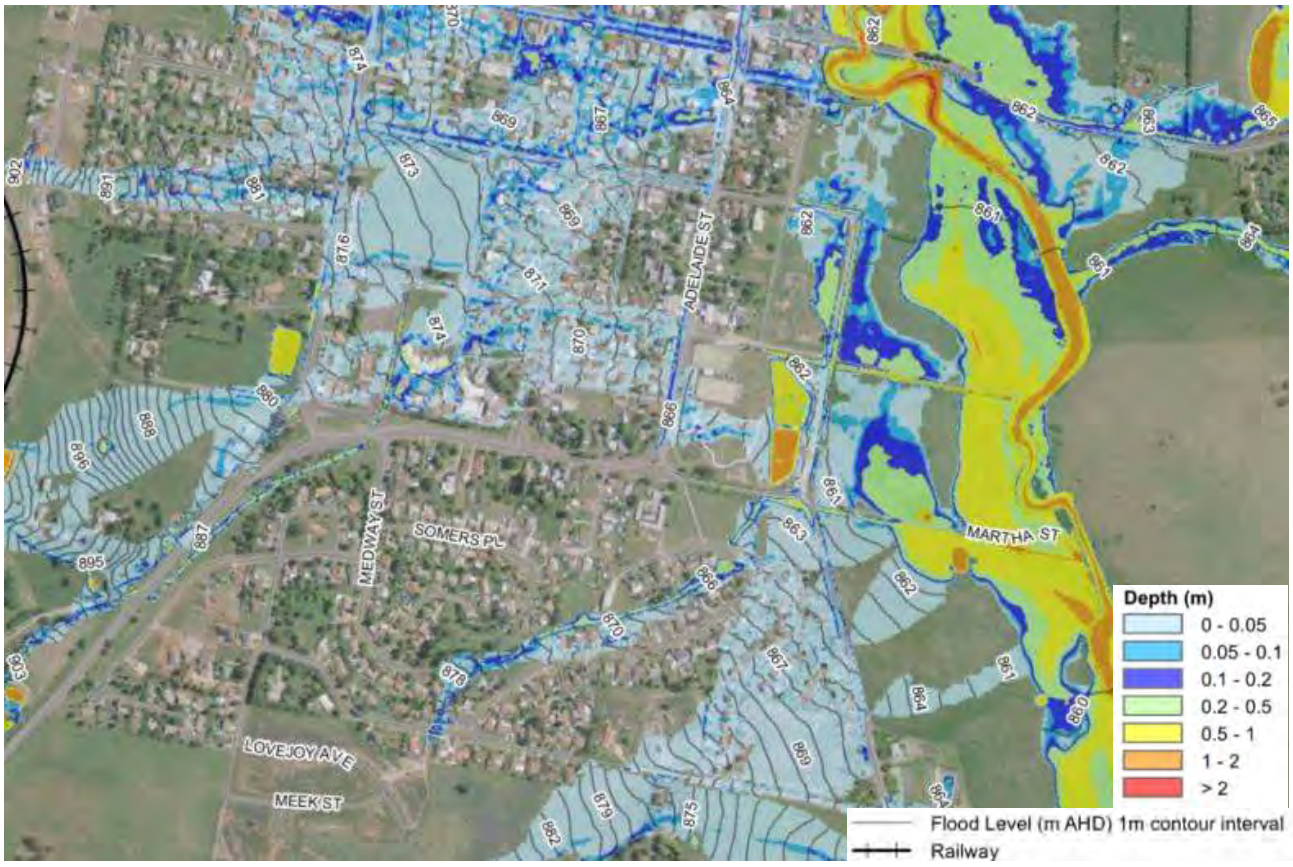


Figure 2-1: 20% AEP Flood Depths and Levels (Jacobs, 2015)

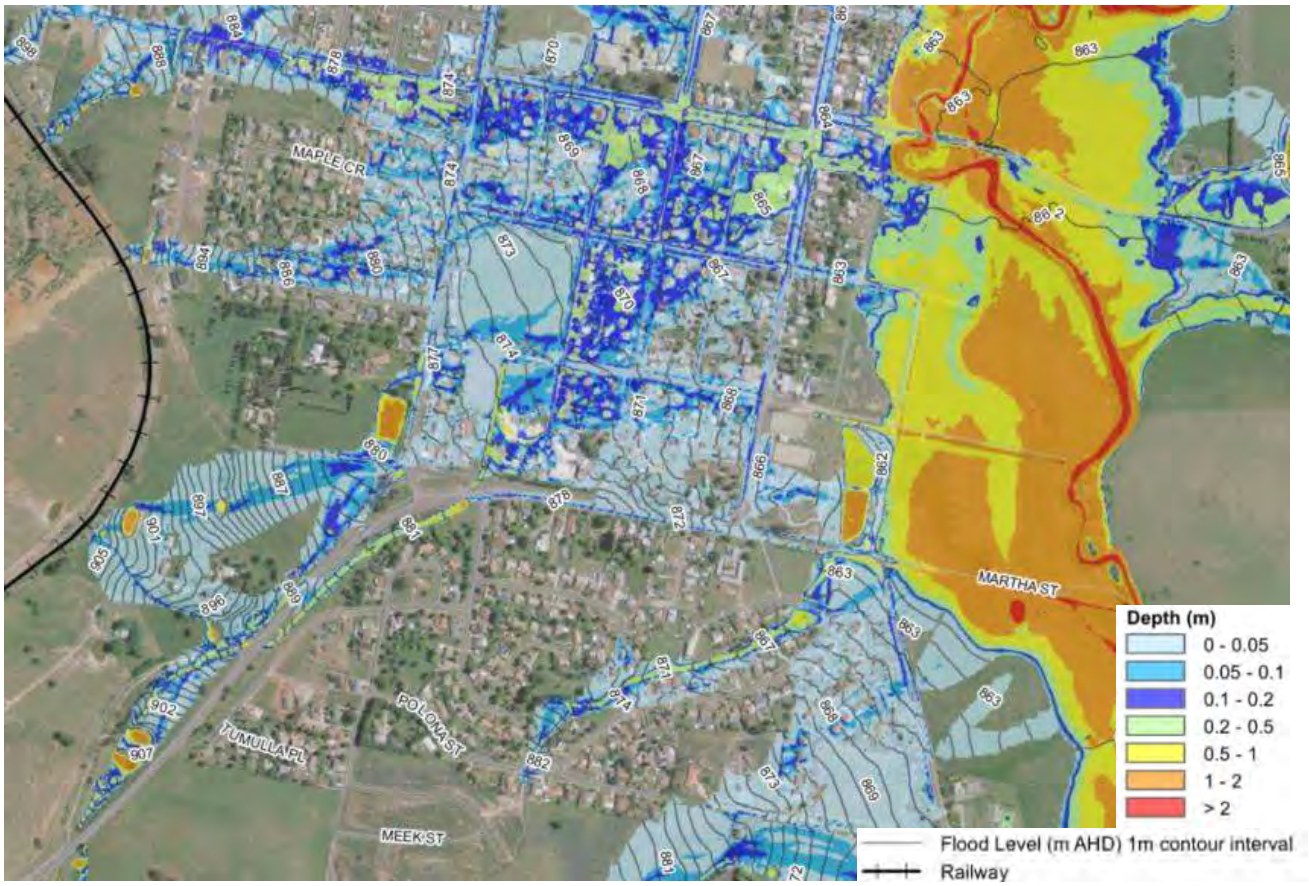


Figure 2-2: 1% AEP Flood Depths and Levels (Jacobs, 2015)

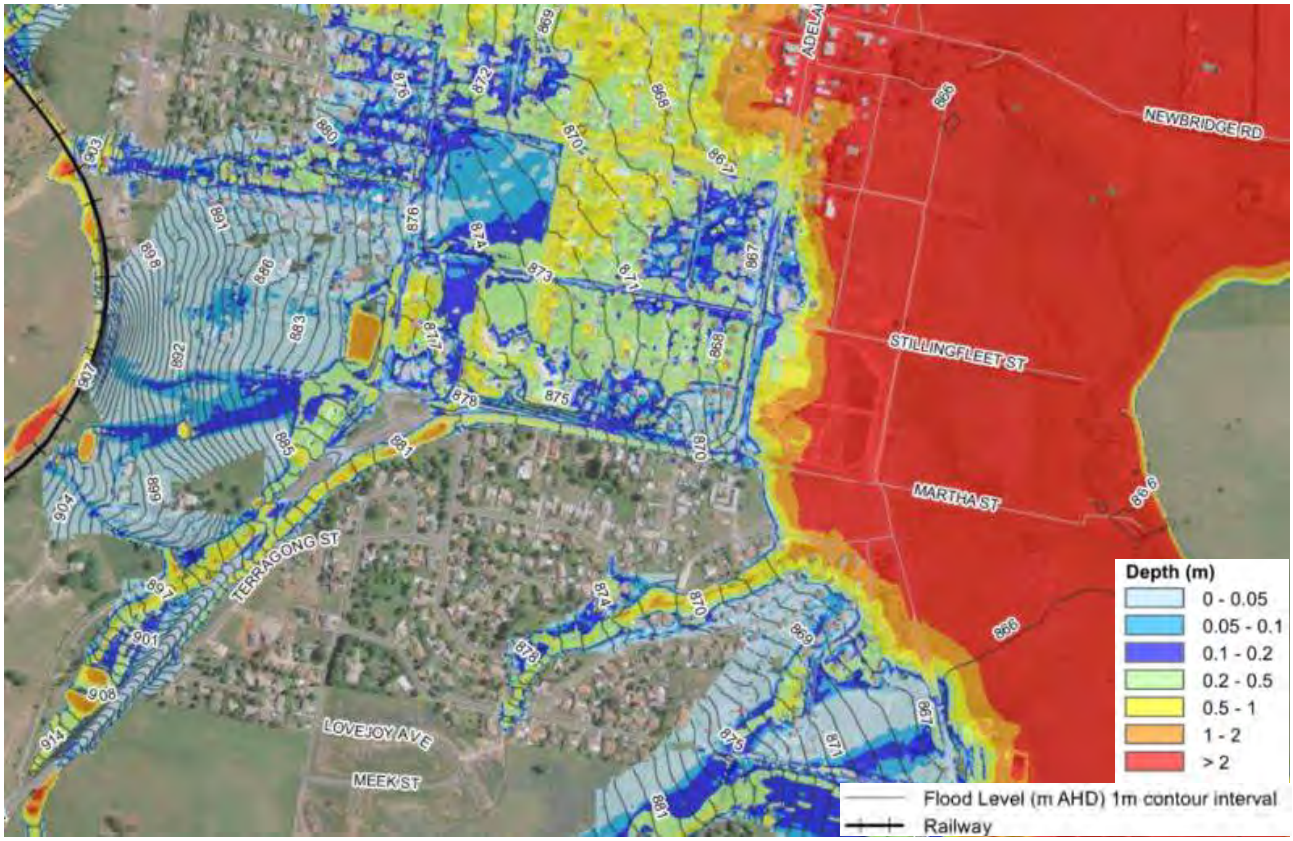


Figure 2-3: PMF Flood Depths and Levels (Jacobs, 2015)

2.2 Addendum-to-Blayney-flood-study (Storm Consulting, 2022)

The addendum flood study is an extension of the original Blayney (Town) Flood Study (Jacobs, 2015). The hydrologic and hydraulic models prepared by Jacobs were updated to be in accordance with ARR19, and as such this study has been adopted as a basis for the modelling undertaken as part of this assessment.

Flood depths are outlined in Figure 2-4, while the provisional flood hazard (as defined in the NSW Floodplain Development Manual, DIPNR, 2005), is shown in Figure 2-5. These demonstrate that the Blayney MPS site is located outside the floodplain associated with the Belubula River. The provisional flood hazard is noted as being low throughout the town, with the exception of the Belubula River and the drainage swales (for example, the swale running along the Mid-Western Highway. This study also identified that this site was outside the extent of local catchment flooding.

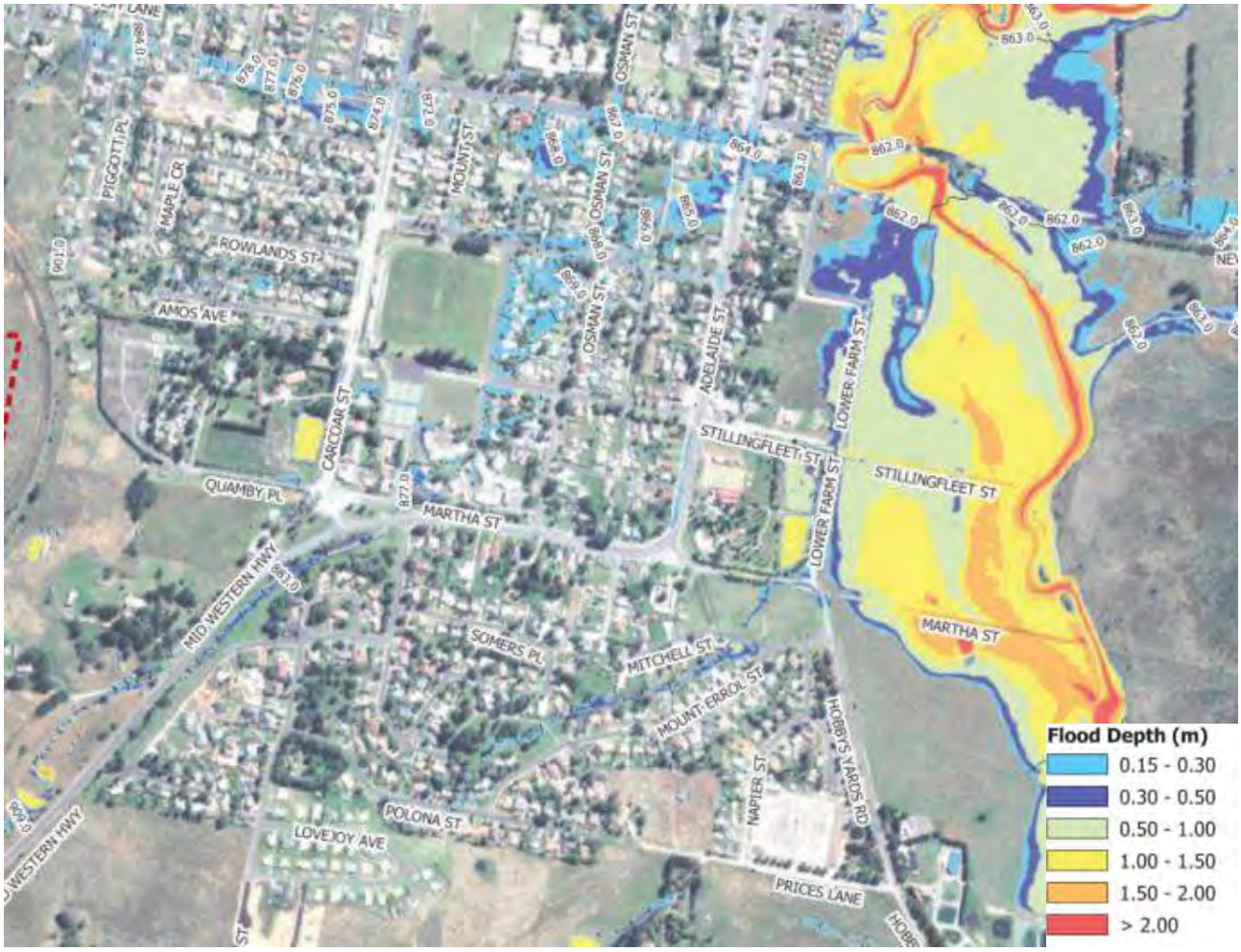


Figure 2-4 1% AEP Flood Depth (Storm Consulting, 2022)

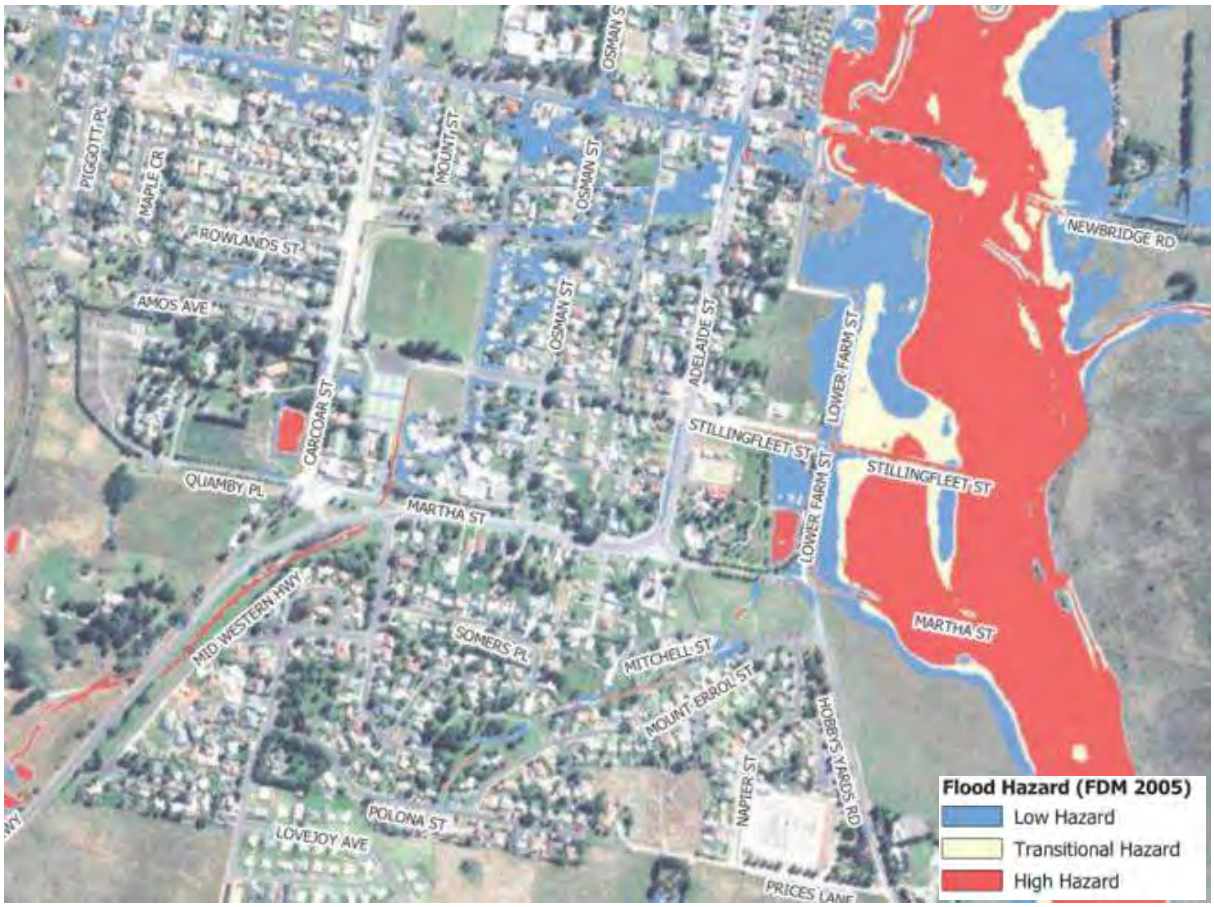


Figure 2-5 1% AEP Provisional Flood Hazard (Storm Consulting, 2022).

2.3 The Estimation of Probable Maximum Precipitation in Australia: Generalised Short-Duration Method (Bureau of Meteorology, 2003)

To assess the risks associated with extreme events such as the Probable Maximum Flood (PMF), the Bureau of Meteorology guide *The Estimation of Probable Maximum Precipitation in Australia: Generalised Short-Duration Method* (2003) was consulted. This guide outlines the procedure for apply a Probable Maximum Precipitation rainfall events, and generating PMF event.

Notably, there is a requirement that the rainfall be centred on the applicable catchment (refer Figure 2-6). In this case the PMF would be centred on the Mid Western Highway south-west of the site. The application of the PMP is outlined in Section 5.1.1.

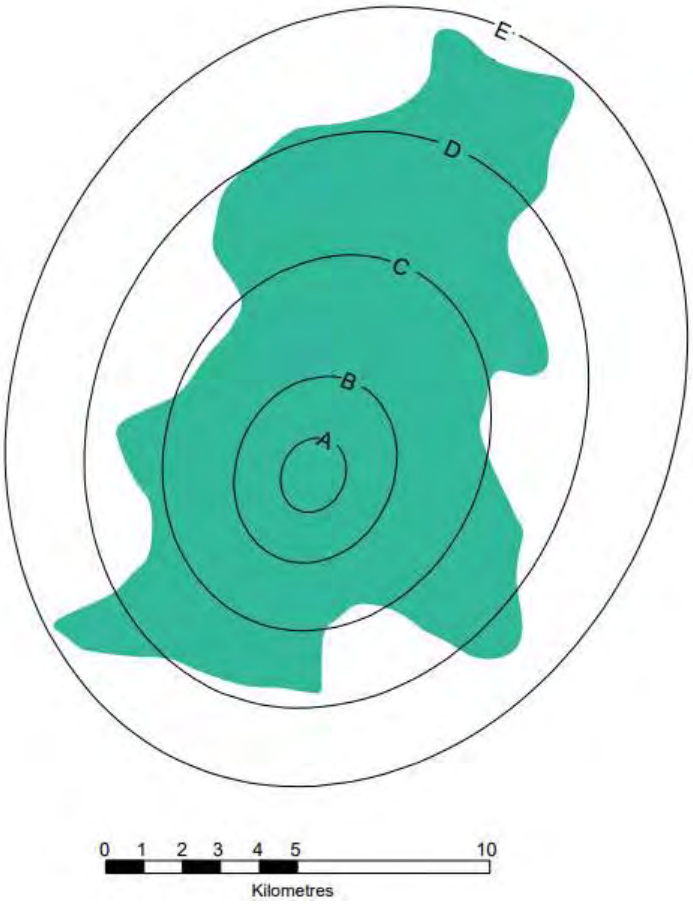


Figure 2-6 Spatial application of the PMP, with the rainfall centred on the contributing catchment (BoM, 2003).

2.4 LiDAR and Topographic data

The Blayney Flood Study have been based on LiDAR captured by Land and Property Information (LPI) on 5 February 2009. However, a revised data set was available from Spatial Services NSW, captured on 11 April 2017. This data set provides greater resolution of key features such as the drainage swales. This data has a notional resolution of 1 m, and a horizonal spatial accuracy of +/-0.80 (@95% confidence interval), and vertical accuracy of +/-0.30 (@95% confidence interval).

2.5 Blayney Health Service Emergency Management Plan & Standing Operating Procedures (Western NSW Local Health District, 2021)

The Blayney Health Service Emergency Management Plan & Standing Operating Procedures (Western NSW Local Health District, 2021) outlines the procedures to response to a range of emergency events that may be encountered at the facility. The response to flooding is outlined in under the *Code Orange* procedures (referred to here as *the plan*). Typically, a three-stage evacuation procedure will be employed (Table 2-1), however in some emergencies it may be necessary to escalate directly to a Stage 3.

The plan has identified an alternative (safer) refuge location as being the Lee Hostel, Queen Street Blayney. Alternative medical facilities which may be used for evacuation include Canowindra (67 km away) and Cowra (68 km away).

Table 2-1 Typical three-stage evacuation process

Stage One	Stage Two	Stage Three
Removal of people from Immediate Danger	**Removal of people to another compartment or area**	**Complete evacuation of the building and/or site**
Depending on the severity of the situation – evacuation may be into another room within the ward or the facility	Removal to another compartment protected by fire/smoke doors or a safer area Severity of the situation may warrant further evacuation – people should be moved to a safer area	Should the emergency necessitate complete evacuation of the building – all staff will be required to assist in the movement and care of the patients/ residents

3. Planning Requirements

3.1 Local Environment Plan 2012

The Local Environment Plan (LEP) documents the overarching planning requirements that apply to the site. Specifically relevant to the site are the land zoning provisions, and the food planning requirements.

3.1.1 Land Zoning

The LEP documents the land zoning that applies to this Local Government Are a (LGA). This is outlined in Figure 3-1. Based o his mapping, the land is zoned R1 (General Residential).



Figure 3-1 Land zoning as outlined in the LEP 2012

3.1.2 Flood Planning

Overarching floodplain management objectives are contained in the Blayney Local Environment Plan 2012:

5.21 Flood planning

1. *The objectives of this clause are as follows—*
   a. *to minimise the flood risk to life and property associated with the use of land,*
   b. *to allow development on land that is compatible with the flood function and behaviour on the land, taking into account projected changes as a result of climate change,*
   c. *to avoid adverse or cumulative impacts on flood behaviour and the environment,*
   d. *to enable the safe occupation and efficient evacuation of people in the event of a flood.*
2. *Development consent must not be granted to development on land the consent authority considers to be within the flood planning area unless the consent authority is satisfied the development—*
   a. *is compatible with the flood function and behaviour on the land, and*
   b. *will not adversely affect flood behaviour in a way that results in detrimental increases in the potential flood affectation of other development or properties, and*

c. *will not adversely affect the safe occupation and efficient evacuation of people or exceed the capacity of existing evacuation routes for the surrounding area in the event of a flood, and*

d. *incorporates appropriate measures to manage risk to life in the event of a flood, and*

e. *will not adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses.*

3. *(3) In deciding whether to grant development consent on land to which this clause applies, the consent authority must consider the following matters—*

   a. *the impact of the development on projected changes to flood behaviour as a result of climate change,*

   b. *the intended design and scale of buildings resulting from the development,*

   c. *whether the development incorporates measures to minimise the risk to life and ensure the safe evacuation of people in the event of a flood,*

   d. *the potential to modify, relocate or remove buildings resulting from development if the surrounding area is impacted by flooding or coastal erosion.*

4. *(4) A word or expression used in this clause has the same meaning as it has in the Considering Flooding in Land Use Planning Guideline unless it is otherwise defined in this clause.*

5. *(5) In this clause—*

   ***Considering Flooding in Land Use Planning Guideline** means the Considering Flooding in Land Use Planning Guideline published on the Department's website on 14 July 2021.*

   ***flood planning area** has the same meaning as it has in the Flood Risk Management Manual.*

   ***Flood Risk Management Manual** means the Flood Risk Management Manual, ISBN 978-1-923076-17-4, published by the NSW Government in June 2023.*

5.22 Special flood considerations

[Not adopted]

3.2 Blayney Development Control Plan 2018

The Blayney Development Control Plan 2018 includes a section on Environmental Hazards which addresses both stormwater and flooding.

3.2.1 Stormwater

The Blayney DCP outlined a number of objectives and prescriptive requirements with respect to stormwater. The prescriptive requirements are applied based on the land zoning outlined in the LEP. These cover stormwater conveyance, water quality and soil and water management.

For R1 (General Residential), the prescriptive requirements are applicable stormwater management and overland flow management on this site are outlined in Table 3-1.

Table 3-1 Blayney CDP 2018 Stormwater requirements

Clause	Requirement	Where addressed
1	If a Soil and Water Management Plan is required by Council's Development and Building Guide then it must demonstrate / address the matters set out below (where relevant).	To be addressed in the construction phase.
2	For all areas (both urban and rural) development must ensure stormwater management: a) Is in accordance with Council's Guidelines for Engineering Works (as amended);	Overland flows are discussed in Section 5.4 below. Water quality has been assessed separately.

Clause	Requirement	Where addressed
	b) Does not result in any concentration of flows to adjoining properties; c) Is designed to optimise the interception, retention and removal of water-borne pollutants and sediment prior to their discharge to receiving waters.	
3	For urban areas (Zone R1, RU5, B2, B5, B6, IN1 & IN2 and Zone R5 Large Lot Residential attached to towns/villages where lots < 1 ha in area) development must ensure stormwater management: a) Is designed to flow to Council's stormwater system, inter-allotment drainage easement, or other legal point of discharge; b) Where there is likely to be significant site coverage by buildings and hardstand areas, that the post-development run-off from the development site: i) will not exceed the run-off from the site during its pre-developed state; ii) Does not significantly alter pre-development stormwater patterns and flow regimes or cause unacceptable environmental damage in existing watercourses or receiving waters; c) For development of larger sites where the downstream hydraulic capacity of one or more components in a drainage system is inadequate for the design flow and/or where economically feasible, Council may require the design to incorporate some or all of the following: i) Onsite stormwater retention and/or detention devices; ii) Water quality treatment devices; and or iii) Water re-use, to manage stormwater on the site and improve water quality outcomes when discharging to the natural environment in accordance with recognised Water Sensitive Urban Design principles.	The land is zoned R1 (General Residential, and as such these provisions can be expected to apply. Overland flows are documented in Section 5.4 below.

3.2.2 Flooding

However, the controls relating to flooding are to be added at a later date. As such, the applicable controls will default back to the principals outline in the LEP, and the guidance provide in the NSW Flood Risk Management Manual (Department of Planning and Environment, 2023).

3.3 Guidelines for Engineering Works (WBC Strategic Alliance, 2009)

Details around the stormwater management requirements for the LGA are documented in the Guidelines for Engineering Works (WBC Strategic Alliance, 2009), and included specific requirements for both flooding and stormwater.

With respect to flooding, the general design requirement is to be based around the 1% Annual Exceedance Probability (AEP) flood event.

Stormwater drainage systems are to use the major/minor approach. In this approach, underground pipes and associated pits are to be used to drain nascence (frequent) flows, while overland flow paths are to be used to convey the rarer events in a safe and efficient manner. Major system drainage designs shall aim to control flood flows so that the severity of flooding downstream, and upstream afflux, is not increased.

Design flows for the stormwater and overland flow management system are outlined in Table 3-2. For this site, the 20% AEP event is most relevant to the stormwater design.

Table 3-2Design Annual Exceedance Probabilities (WBC Strategic Alliance, 2009)

Land Use	Annual Exceedance Probability (AEP)
Road Drainage - Minor (Piped) System	
Arterial Roads (Cross Drainage)	2%
Rural & Rural Residential (Cross Drainage)	20%
Urban Residential	20%
Sag Point (must have a defined 1% AEP overflow route)	20%
Commercial	20%
Floodway 'low-flow' system	100%
Interallotment Drainage	20%
Trunk Drainage	1%

3.4 NSW Flood Risk Management Manual (Department of Planning and Environment, 2023)

The policy as outlined in this document sets the direction for floodplain risk management in New South Wales. This manual and its associated toolkit support the implementation of the policy through the combined efforts of all levels of government.

As outlined in the guide, the primary objective of this policy is to reduce the impacts of flooding on communities and individual owners and occupiers of flood prone property, and reduce private and public losses resulting from floods. Achieving these outcomes includes:

- *using a merit-based approach in preparing and implementing flood risk management (FRM) plans to address riverine and local overland flooding*
- *reducing the impact of flooding and flood liability on existing developed areas identified in FRM plans through flood mitigation works and measures including ongoing emergency management (EM) measures, the raising of houses where appropriate and by development controls*
- *adopting a merit-based approach for all development decisions in the floodplain, taking into account social, economic and ecological factors, as well as flooding considerations*
- *limiting the potential for flood losses in all areas proposed for development or redevelopment by the application of ecologically sensitive planning and development controls.*

It is noted that this policy recognises that flood prone land is a valuable resource, and that that the development of flood prone land should be the subject of careful assessment which incorporates consideration of local circumstances. However, this manual does not outline the requirements for the development of flood prone land as these requirements are provided by the relevant planning legislation and policies (such as the LEP – refer Section 3.1).

3.5 Update on addressing flood risk in planning decisions (PS 24-001, NSW Government 2024)

This circular provides advice on a package of changes regarding how land use planning considers flooding and flood-related constraints. It is intended to provide specific direction on incorporating the flood planning policy as outlined in the NSW Flood Risk Management Manual (Department of Planning and Environment, 2023). This circular advises that councils and other authorities apply a risk-based approach to the assessment of flood-affected proposals. This risk-based approach should take into account the flood risk profile of each proposal which considers the flood characteristics for the location, including:

- *whether the proposal is in a high-risk catchment*
- *the location of the proposal in relation to flood behaviour and constraints including:*
  - *floodway, flood storage area or flood fringe area*
  - *the hazard vulnerability classification of the land*
  - *frequency of inundation*
- *whether the proposal provides for safe occupation and efficient and effective evacuation in flood events and how it is to be achieved*
- *in high-risk catchments, whether the proposal is likely to result in a significant increase to the risk to life in other parts of the catchment in a PMF flood event*
- *any known evacuation constraints such as the flood emergency response classification for the area and available warning times (including rate of rise and when the evacuation route is cut off by floodwater)*
- *whether the proposal is for a sensitive or hazardous land use, or other higher risk uses and what mitigation strategies (if any) are proposed to reduce any identified risks*
- *whether there may be adverse flooding impacts on surrounding properties*
- *potential impacts of cut and fill and other building works on flood behaviour*
- *ability of proposed development to withstand flood impacts.*

3.6 NSW Health Infrastructure Requirements

NSW Health Infrastructure, as part of a statutory body, have building requirements separate to those outlined for the LGA. These guidelines are developed to be consistent with the broader NSW Flood Prone Land Policy, including PS 24-001). These requirements indicate that for this proposal, immunity from the 1% AEP flood is required.

3.7 Planning Approval Conditions

The conditions of approval with respect to flooding that apply to this development are outlined in Condition 20 of the REF Decision Statement). The are:

- *It shall include assessment of any off-site impacts of development, including potential impacts on the neighbouring Lee Roshana Aged Care Facility.*

  (iii) structural capacity of proposed buildings to withstand floodwater loads and currents; and

  (iv) potential for environmental pollution from the development in association with flooding.
- *Identify any specific detailed design solutions and operational measures to mitigate flood risk where required, including:*
  - *minimum floor levels for essential plant, clinical facilities and utility connection points;*
  - *appropriate building construction standards including the use of flood compatible building components and the maintenance of structural integrity both during and after a PMF flood event;*
- *consideration of appropriate flood response actions for site attendees during flood events (including vulnerable persons) such as shelter-in-place or evacuation, consideration of potential impacts of site isolation including loss of power, consideration of any evacuation issues during the full range of anticipated flood events, and a decision matrix regarding site evacuation triggers, routes and destinations, as appropriate.*

4. Consultation

During the design development of the facility, Health Infrastructure NSW consulted with a number of external Agencies and stakeholders, including Blayney Shire Council and the SES.

4.1 Blayney Sire Council

Consultation was undertaken with Blayney Sire Council regarding a range of issues, including flooding and stormwater. Council noted that the stormwater management provisions were an improvement over the existing arrangements, and that their current flood study did not indicate the site as being flooded.

4.2 SES

Consultation was undertaken with the NSW State Emergency Service (SES), with a response letter provided on 25 March 2024. The letter outlined their position in response to the proposed development, including:

- Advocate for land use planning in which aged care facilities are situated above the Probable Maximum Flood (PMF) level and are not subject to isolation.
- Note a design condition has been proposed which involves construction of a flood levee/wall to prevent inundation of the site in the PMF. However, in the PMF event, the levee is subject to high hazard floodwaters and associated debris loads. If failure of the levee occurs, this may result in loss of life and/or widespread damage to property.
- Note the site is subject to vehicular isolation from the 20% AEP event.
- Recommend obtaining further information regarding the impact of the proposed design condition on adjacent flood risk in all flood events up to and including the PMF.

The submissions outlined above have been considered as part of this assessment.

5. Flood Modelling

Hydrological and hydraulic models for Blayney Town were developed as part of the Blayney Flood Study (Jacobs, 2015), and updated to current Australian Rainfall and Runoff (ARR) standards in 2022 by Storm Consulting as reported in the Blayney Flood Study Addendum (Storm Consulting, 2022).

Site specific flood modelling has been undertaken in order to determine post-development flood levels on site for a range of flood events and to determine any flood impact in adjacent property as a result of the proposed development. This flood modelling is more detailed and centred on this site so as to provide a complete overview of the flood risk at this site for events up to and including the PMF. It considers overland flows and local stormwater. However, the site is sufficiently elevated above the Belubula River flood plain so as not require consideration of mainstream flooding (other than as a tailwater contribution to the local flood model).

The existing hydrology model (XP-RAFTS) and hydraulic model (TUFLOW) have been refined for use in this assessment as discussed in the following sections.

5.1 Hydrological Modelling

Hydrological modelling was undertaken based on ARR (Australian Rainfall and Runoff) 2019 guidelines using the XP-RAFTS model developed for the Blayney Flood Study (Jacobs, 2015) and updated for the Blayney Flood Study Addendum (Storm Consulting, 2022).

The XP-RAFTS model was adopted for use as is, the major update being inclusion of the 1% AEP + Climate Change and PMP event.

It is noted that an inflow is applied to the XP-RAFTS model at GS 412104, located on the Belubula River upstream of Blayney. The external inflow was sourced from a calibrated and validated RORB model developed as part of the Portfolio Risk Assessment for 24 Dams (Jacobs, 2001). The RORB model was not supplied for use in this project and therefore could not be utilised in the updated calculation of the PMP flows.

5.1.1 PMP Calculation

Completed according to the Estimation of Probable Maximum Precipitation in Australia: Generalised Short-Duration Method (BoM, 2003) guidelines.

The PMP rainfall depth GSDM calculation focusses primarily on the project site and contributing catchments within Blayney Town. For the purpose of this assessment, it has been assumed that the relevant catchment is within ellipse A.

The input parameters utilised in the GSDM calculation are summarised below:

- Catchment Limit: 100km^2
- Duration Limit: 6 hours
- Terrain Category: Smooth (S)
- Elevation Adjustment Factor (EAF): 1
- Moisture Adjustment Factor (MAF): 0.70

The resultant PMP rainfall depths and design temporal distribution are presented in Table 5-1 and Table 5-2.

Table 5-1: PMP rainfall depth

Time (minutes)	PMP Depth Estimate (mm)
15	162.4
30	235.2
45	297.5
60	345.1
90	394.1
120	439.6
180	493.5
240	539.7
360	615.3

Table 5-2: Design Temporal Distribution of Short Duration PMP (GSDM Calculation Method, BoM 2003)

% of the time	% of PMP
0	0
5	4
10	10
15	18
20	25
25	32
30	39
35	46
40	52
45	59
50	64
55	70
60	75
65	80
70	85
75	89
80	92
85	95
90	97

% of the time	% of PMP
95	99
100	100

5.1.2 Climate Change

A climate change scenario was modelled by adopting a conservative rainfall increase factor of 20.2%, assuming a representative concentration pathway (RCP) 8.5 scenario and extrapolating to the year 2090 based on ARR 2019 datahub.

5.1.3 XP-RAFTS Outputs

The XP-RAFTS model was run for the following events:

- 20% AEP: 25min – 36 hour
- 5% AEP: 25min – 36 hour
- 1% AEP: 25min – 6 hour
- 1% AEP + Climate Change: 25min – 6 hour
- PMF: 15min – 6 hour

The critical duration (maximum) peak flows for each event are presented below in Table 5-3.

Table 5-3: XP-RAFTS Peak flows at the Mid-Western Highway, directly upstream of the project area

AEP (%)	Duration	Peak Flow (m3/s)
20	36 hour	2.2
5	1 hour	3.4
1	2 hour	7.7
1 + CC	2 hour	13.9
PMF	30 min	87.9

5.2 Hydraulic Modelling

Hydraulic modelling was undertaken based on ARR 2019 guidelines using the TUFLOW model developed for the Blayney Flood Study (Jacobs, 2015) and updated for the Blayney Flood Study Addendum (Storm Consulting, 2022). The TUFLOW model was reviewed and updated to ensure it was sufficiently detailed to assess the local flood risk at the project site and inform the flood immunity of the proposed design.

The key model updates include:

- Updated TUFLOW solver from Classic to HPC to reduce model simulation times.
- Incorporated revised LiDAR (2017). This LiDAR gives a greater cross-section to the drains and roadside swales, as well as provides better definition of the surfaces.
- Revised delineation of materials definition in the vicinity of the site
- Revised delineation of the building code layer within the vicinity of the site
- Minor updates to the representation of the drainage 1d-2d connections to better align with the major flowpaths and grid cell size.

The model a summary of the hydraulic model is presented in Table 5-4 with the model setup shown in Appendix A.

Table 5-4: TUFLOW Model Parameters

Parameter	Value
TUFLOW Release	2023-03-AE-iSP-w64
Solver	HPC
Hydrological Approach	XP-RAFTS hydrological flows applied as local (loc.ts1) and total (tot.ts1) hydrographs.
Boundary Conditions	Model extent = 12.2 km^2 Inflows applied to the model domain according to the following: Regional riverine routed hydrographs applied directly to the 1D river network as 1D_BC QT point type boundaries. Local catchment routed hydrographs applied to the 1D river network as 1D_BC QT region type boundaries. Local catchment routed hydrographs applied to the drainage pits within the urban areas of Blayney as 2D_SA Pit type boundaries. Local catchment routed hydrographs applied to the model surface as 2D_SA type boundaries. Belubula River and Abattoir Creek represented in the 1D domain with 1D-2D connection defined as 2d_HX lines. Downstream boundary was defined as a 1d_BC point with a Height Time HQ automated slope boundary.
Grid Size	3m
Terrain	1m LiDAR (2017)
Hydraulic Structures	Transverse culverts and trunk drainage pipes based on survey undertaken by Geolyse Pty Ltd for the 2015 Blayney Flood Study.

5.3 Design Inputs

The following design elements were included in the design conditions TUFLOW model:

- 3D design surface of the finished floor level and civil landscaping elements supplied by NBRS as of 24 August 2024 as shown in Figure 5-1.
- Drainage swale 0.5m deep with 1:1 slopes located along the western boundary of the site as shown in Figure 5-2.
- A civil grading plan developed by Taylor Consulting Engineers (Figure 5-3)

The design conditions model setup shown in Appendix A.



Figure 5-1: Design layout (NBRS, 24 August 2024)

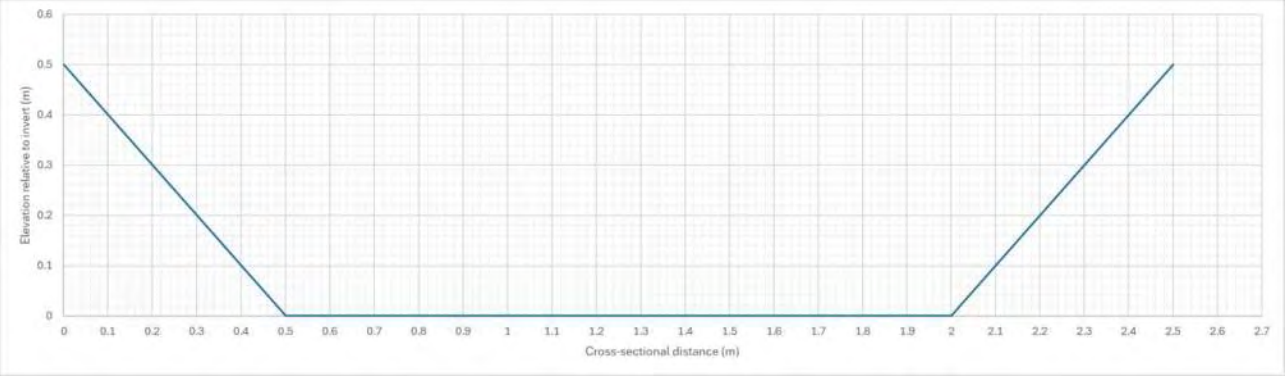


Figure 5-2: Assumed overland flow path dimensions.



Figure 5-3 Civil grading plan developed by Taylor Consulting Engineers (27 September 2024).

5.3.1 Floor Levels

Floor levels of the facility have been adopted based on the design. These are:

- Residential aged care (RAC) wing: 874.85 m AHD
- Health One wing: 874.40 m AHD.
- Generator Room: 874.10 m AHD

5.4 Hydraulic Modelling Results

Mapping for the peak flood depth, level, velocity and hazard is presented in Appendix B and Appendix D.

5.4.1 Existing Conditions

Existing conditions flood modelling results (presented in Appendix B) shows:

- The major transverse culvert beneath the Mid-Western Highway convey the upstream catchment flows north through the existing Oldham Place swale as shown in Figure 5-4.
- The Oldham Place swale is breached in the 5% AEP event with overland flows passing east through the project site.

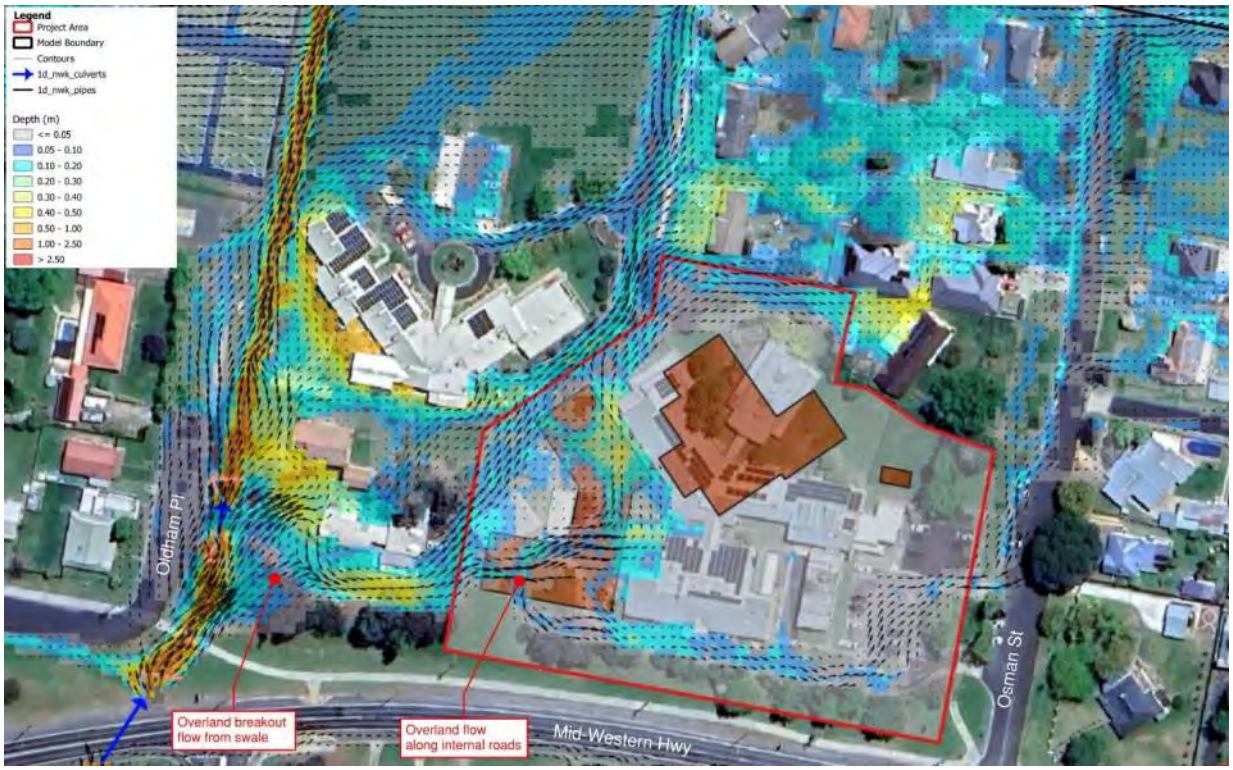


Figure 5-4: Existing conditions 1% AEP peak flood behaviour.

Flood hazard has been assessed in relation to flood depth and flood velocity. The generalised flood hazard curve outlined in ARR 2019 Book 5 Section 7.2.7 has been applied (ZAEM1). The output hazard values are 0 (zero) for no hazard and 1 to 6 for H1 to H6 respectively. Figure 5-5 outlines each of the Hazard Categories.

During the 1% AEP event the project site primarily shows a hazard category of up to H1 (generally safe for vehicles, people and buildings) with small patches of hazard category H3 (unsafe for vehicles, children and the elderly) observed at the Oldham Place entrance to the ambulance facility as shown in Figure 5-6.

During the PMF event the project site hazard categories of up to H5 (unsafe for vehicles and people. All building types vulnerable to structural damage) primarily contained within the internal roads of the site as shown in Figure 5-7.

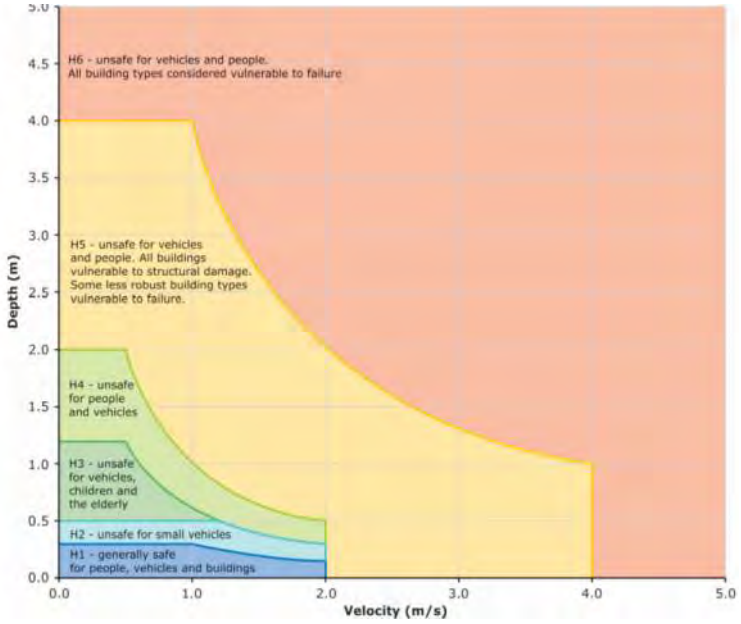


Figure 5-5: General flood hazard vulnerability curve.

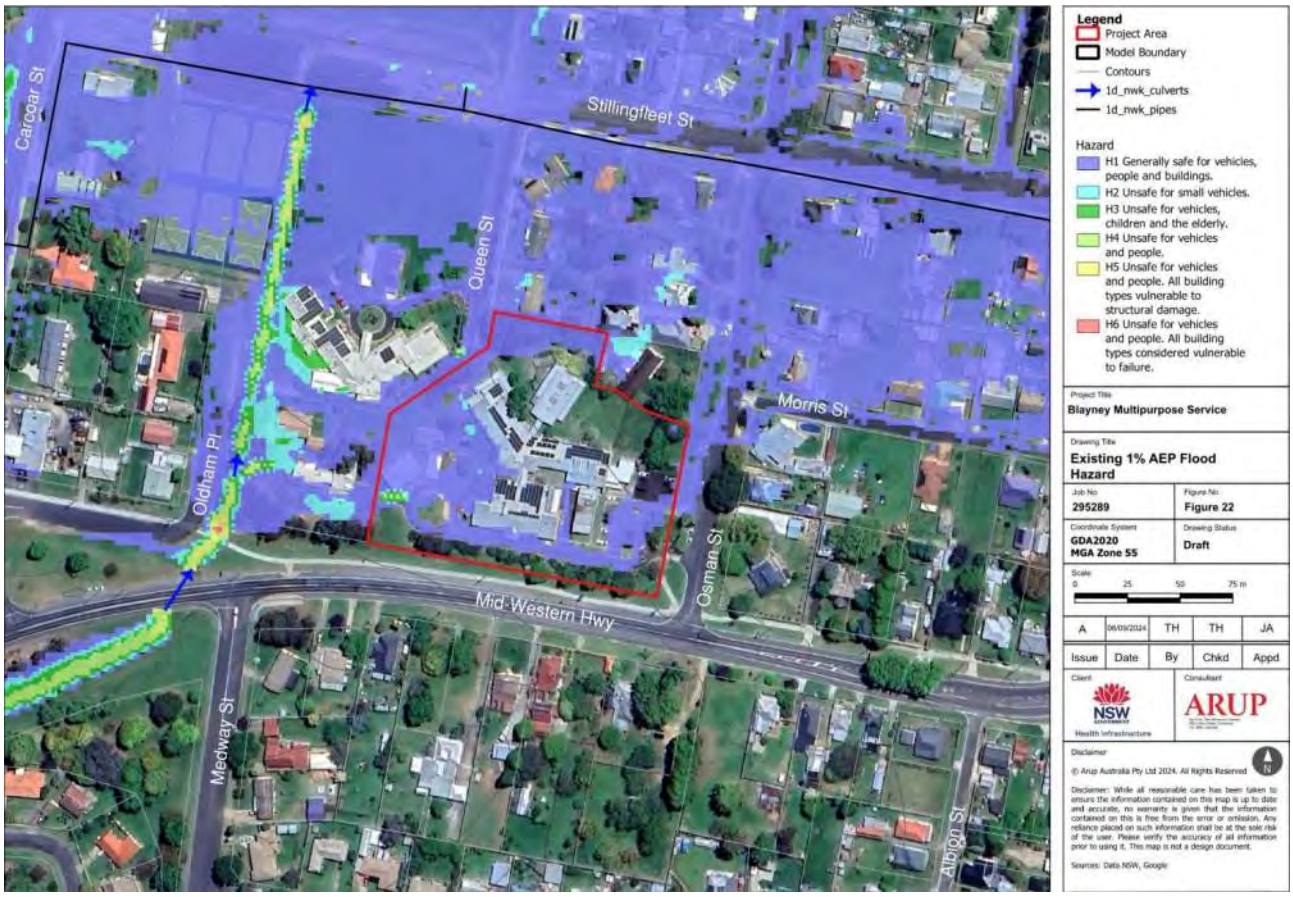


Figure 5-6: Existing conditions 1% AEP peak flood hazard.

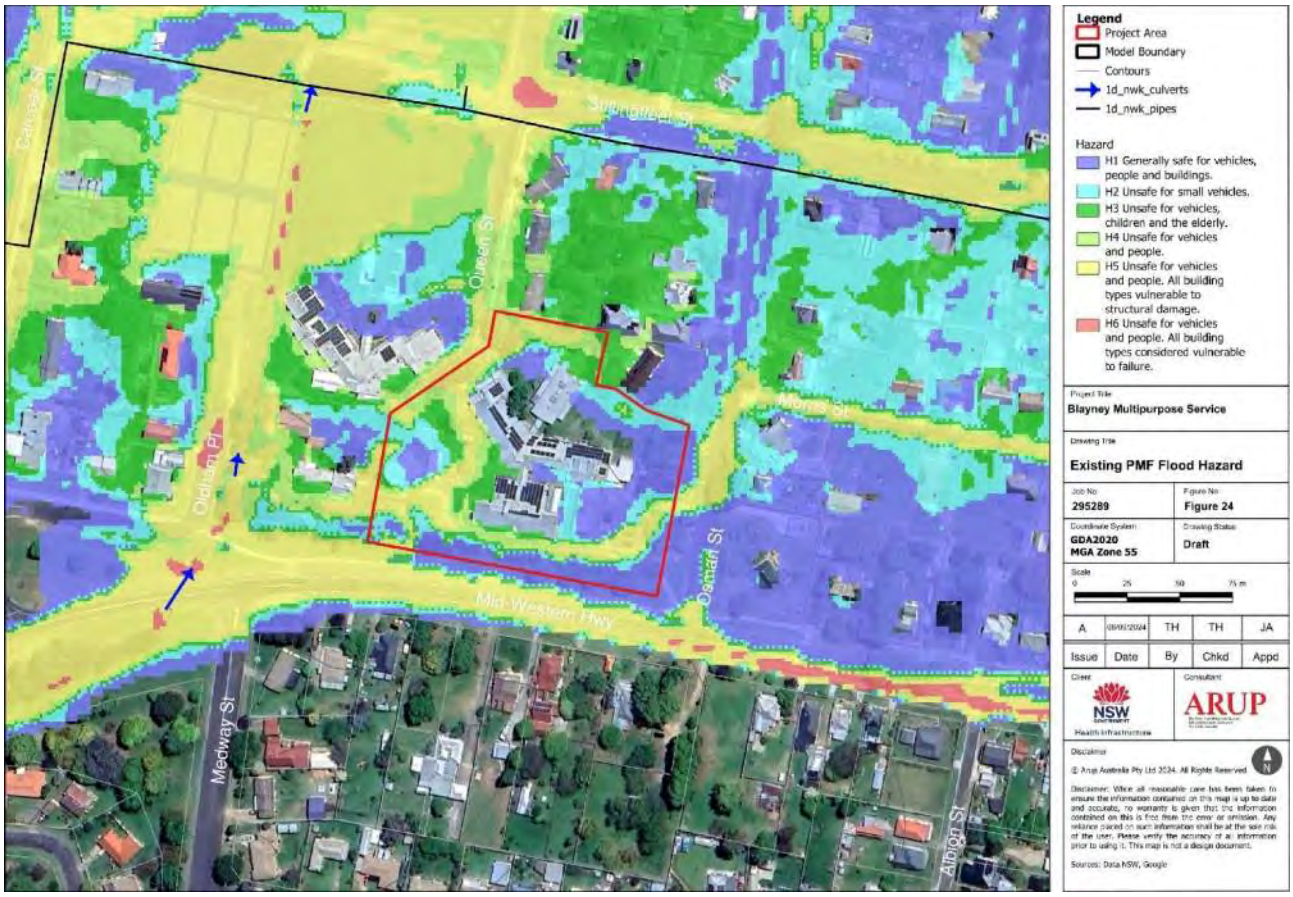


Figure 5-7: Existing conditions PMF peak flood hazard.

5.4.2 Validation against previous assessment

A validation against the previous assessment (Blayney Flood Study Addendum, Storm Consulting, 2022) was completed with results tabulated in Table 5-5 and shown in Figure 5-8 which demonstrates that the updates to the model produce comparable results to the previous assessment.

Table 5-5: Comparison in 1% AEP peak flood elevation to previous assessment

Location	1% AEP Peak Flood Level (m AHD)		Change in water level (m)
	Blayney Flood Study	Arup 2024	
A	879.52	879.53	0.01
B	877.20	877.28	0.09
C	874.60	874.66	0.06
D	876.15	876.21	0.06
E	874.74	874.71	-0.03



Figure 5-8: Comparison to previous assessment.

5.4.3 Post Development Conditions – Unmitigated

Testing was undertaken of the Blayney MPS facility with no flood mitigations, with the results outlined in Appendix C). These result indicate that:

- Impacts of up to 35mm are observed immediately north of the site.
- Hazard of up to H4 (unsafe for vehicles and people) is observed at the Oldham Place entrance to the ambulance facility in the 1% AEP event.
- During the PMF event the project site hazard categories of up to H5 (unsafe for vehicles and people. All building types vulnerable to structural damage) primarily contained within the internal roads of the site as shown in Figure 5-11.
- Hazard of up to H5 (unsafe for vehicles and people. All building types vulnerable to structural damage) is observed at the Oldham Place entrance to the ambulance facility and the Osman Street entry and exit to the MPS precinct.
- During the 1% AEP event, the MPS precinct maintains flood free access to the Mid-Western Highway via the Osman Street entry and exits.
- During the PMF event, the MPS facility is isolated with the Oldham Place entrance to the ambulance facility inundated by up to 350mm, whilst the Osmam Street entry and exit inundated by up to 130mm.
- The overland flows travelling from the Ambulance Station and along the western boundary of the site potentially result in flooding over flood or the Residential Aged Care wing of approximately 300 mm (1% AEP flood level of 875.15 m, AHD).

5.4.4 Post Development Conditions – Diversion Swale

To address the overflow flooding, a diversion swale is recommended to divert the overland flows travelling form the Ambulance station and to preserve flood immunity. Design conditions flood modelling results including this diversion swale (presented in Appendix D) shows:

- Overland flow originating from the Oldham Place swale to the west of the site and transversing through the ambulance facility, is effectively captured by the proposed swale and directed north as shown in Figure 5-9.
- The proposed MPS precinct buildings achieve flood immunity to the 1% AEP flood event through the use of a channel to divert overland flows around the building. This channel has a top width of 1.5 m, and a total depth of 0.5 m (refer Figure 5-2), however this may be optimised to fit the available space. The existing flowpath passing along the Mid-Western highway at southern boundary of the site is cut off by the proposed works, resulting in a reduction in surface water flooding within properties immediately to the north-east of the site as demonstrated in Figure 5-12.
- Impacts of up to 35mm are also observed immediately north of the site as shown in Figure 5-12.
- The following observations can be made about flood hazard:
    - Hazard is shown to largely remain as H1 (generally safe for vehicles, people and buildings) in the 1% AEP event with a small patch of hazard category H3 (unsafe for vehicles, children and the elderly) observed where flows enter the proposed swale.
    - Hazard of up to H4 (unsafe for vehicles and people) is observed at the Oldham Place entrance to the ambulance facility in the 1% AEP event.
    - During the PMF event the project site hazard categories of up to H5 (unsafe for vehicles and people. All building types vulnerable to structural damage) primarily contained within the internal roads of the site as shown in Figure 5-11.
    - Hazard of up to H5 (unsafe for vehicles and people. All building types vulnerable to structural damage) is observed at the Oldham Place entrance to the ambulance facility and the Osman Street entry and exit to the MPS precinct.
- The following observations can be made about access to the site:
    - During the 1% AEP event, the MPS precinct maintains flood free access to the Mid-Western Highway via the Osman Street entry and exits. The western entrance to the ambulance facility is cut where the driveway crosses the Oldham Place swale with depths of up to 100mm observed as shown in Figure 5-9.
    - During the PMF event, the MPS facility is isolated with the Oldham Place entrance to the ambulance facility inundated by up to 350mm, whilst the Osmam Street entry and exit inundated by up to 130mm.

These results indicate that there is no material change between the approved design and the mitigation measures proposed with respect to flood depth, level or hydraulic hazard. As such, the implementation of the diversion swale does not increase the impacts to the community or the Lee Roshana Aged Care Facility.

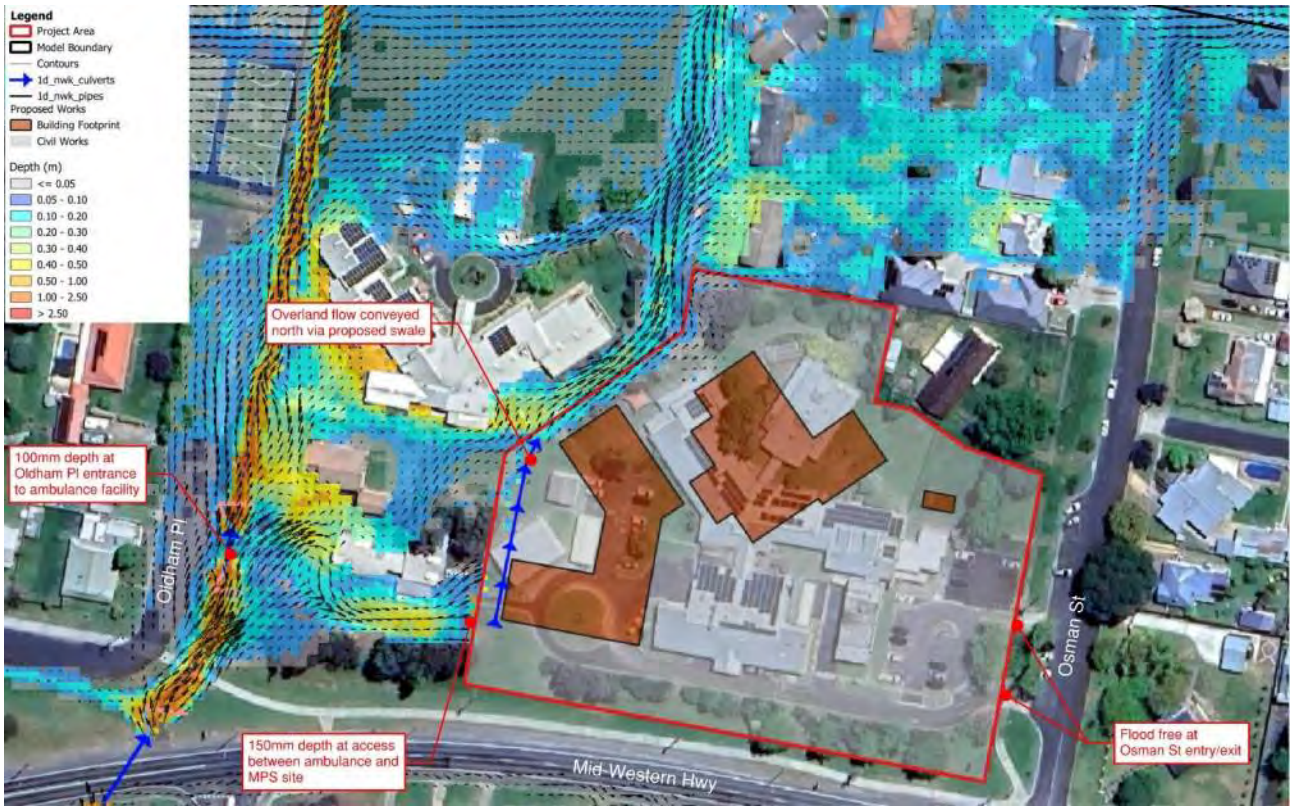


Figure 5-9: Design conditions 1% AEP peak flood depth.

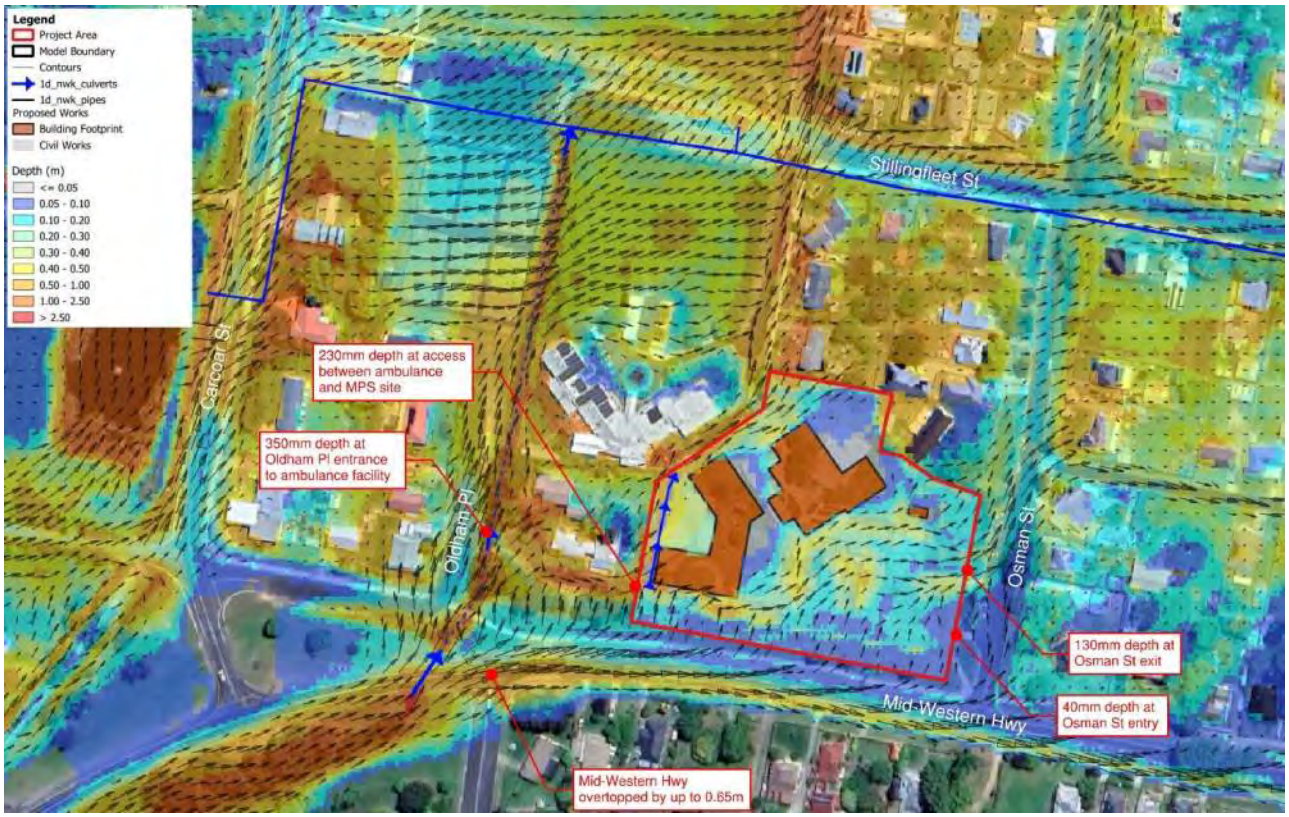


Figure 5-10: Design conditions PMF depth and velocity.

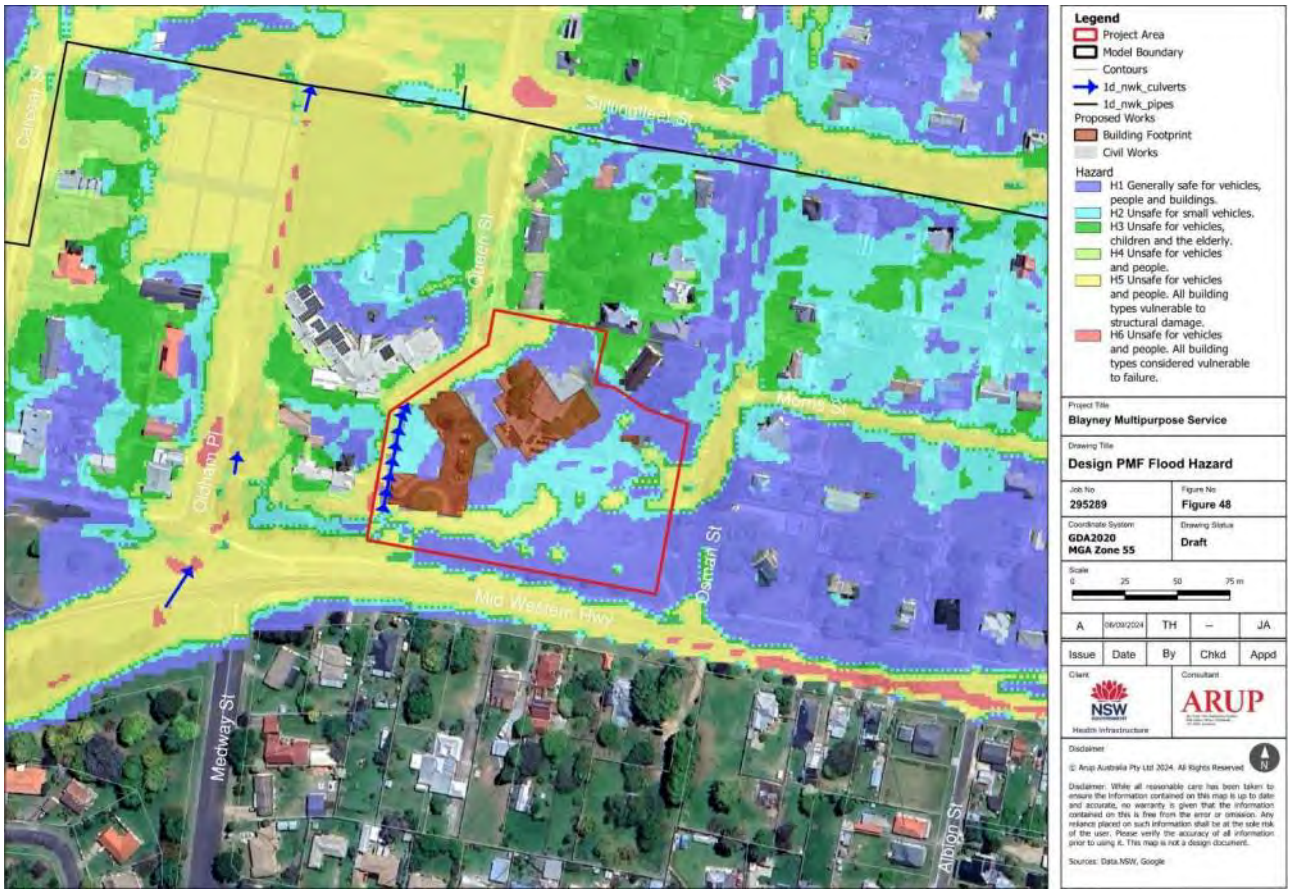


Figure 5-11: Design conditions PMF peak hydraulic hazard.

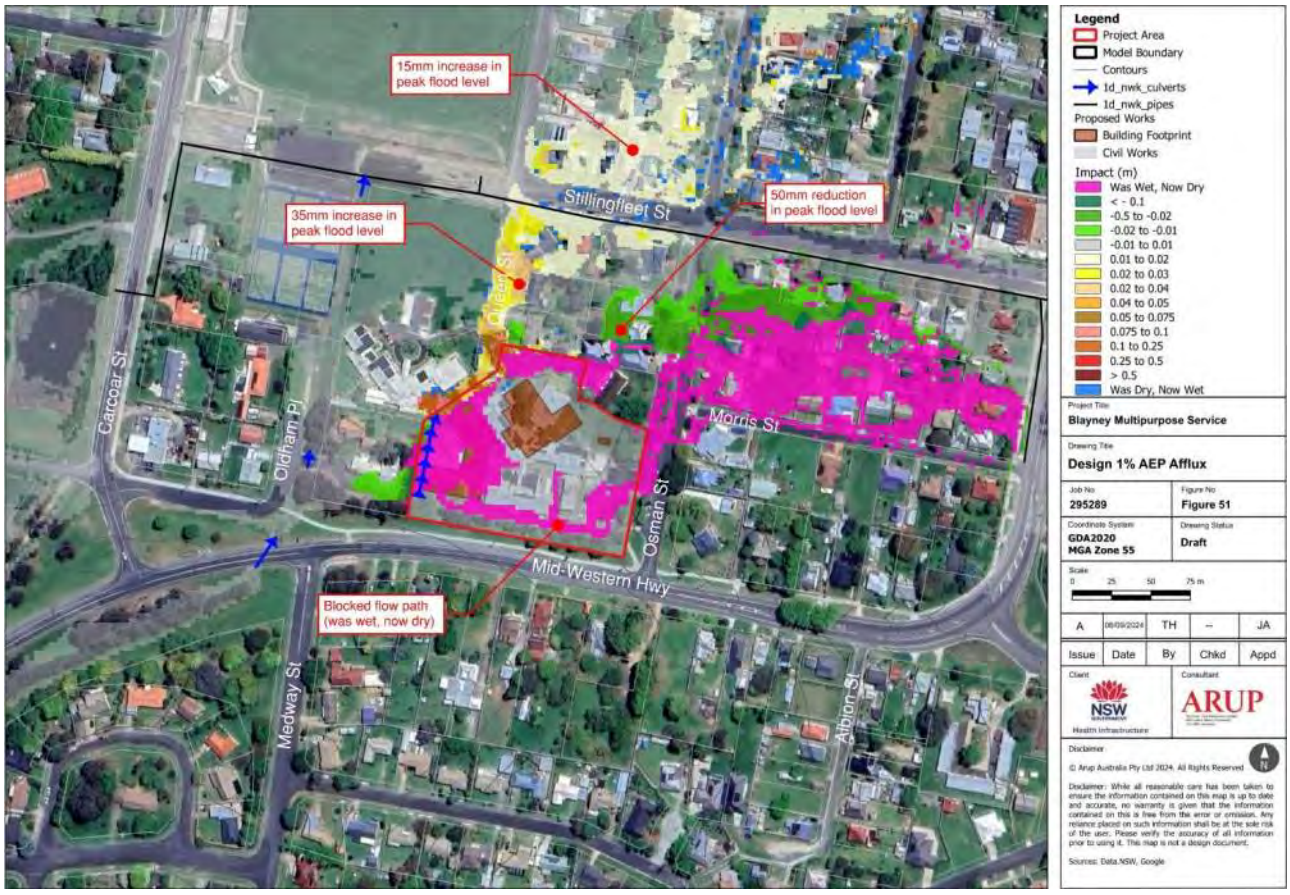


Figure 5-12: Design conditions 1% AEP peak flood impact.

5.5 Rate of Rise and Warning Times

The rate of rise of floodwaters at the key locations presented in Figure 5-13 are shown in Figure 5-14 to Figure 5-17 for the PMF event. It is noted that the key locations identified within the MPS Precinct (Locations 1 – 4) are only impacted in the PMF event.

The warning time for flows originating from upstream of the site is presented in Figure 5-18 and Figure 5-19. Notably, once overland flow levels have commenced rising, during an extreme event such as the PMF, the levels may rise rapidly and potentially exceed floor levels in affected areas within minutes.

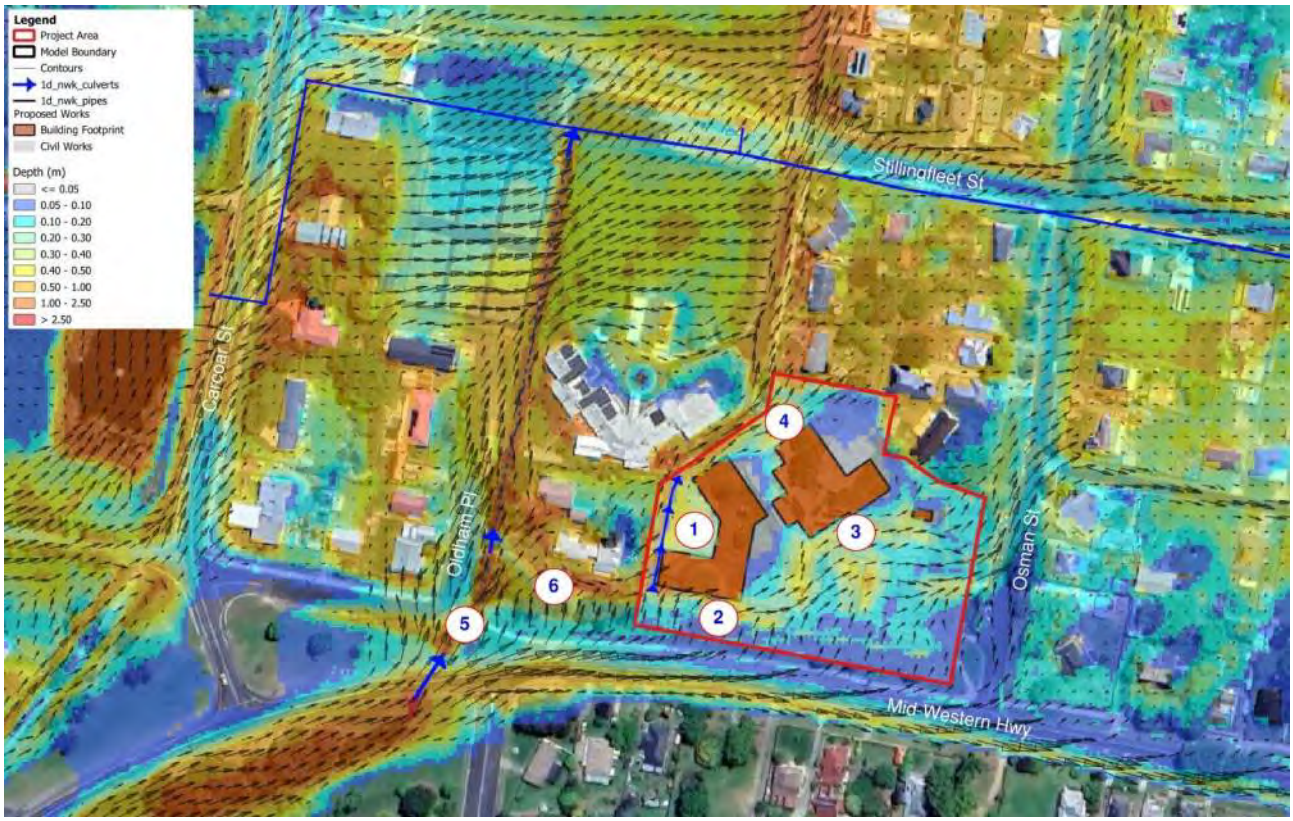


Figure 5-13: Reporting locations – Design conditions PMF peak flood depth.

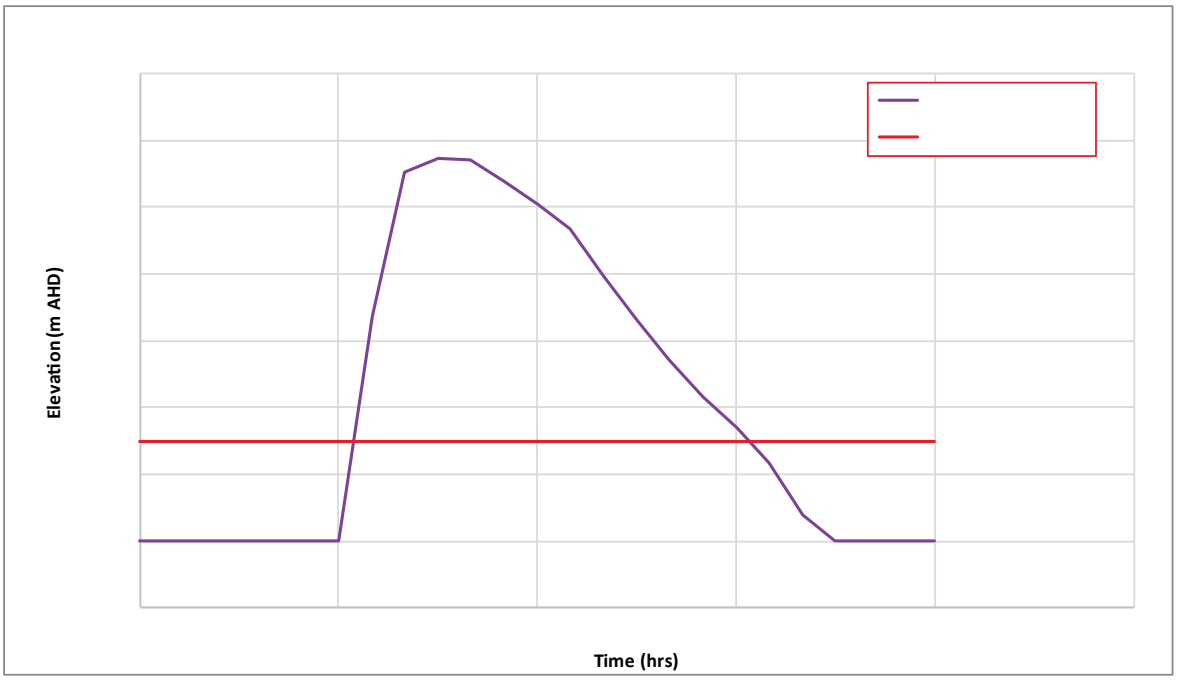


Figure 5-14: Rate of rise of PMF event within western courtyard.

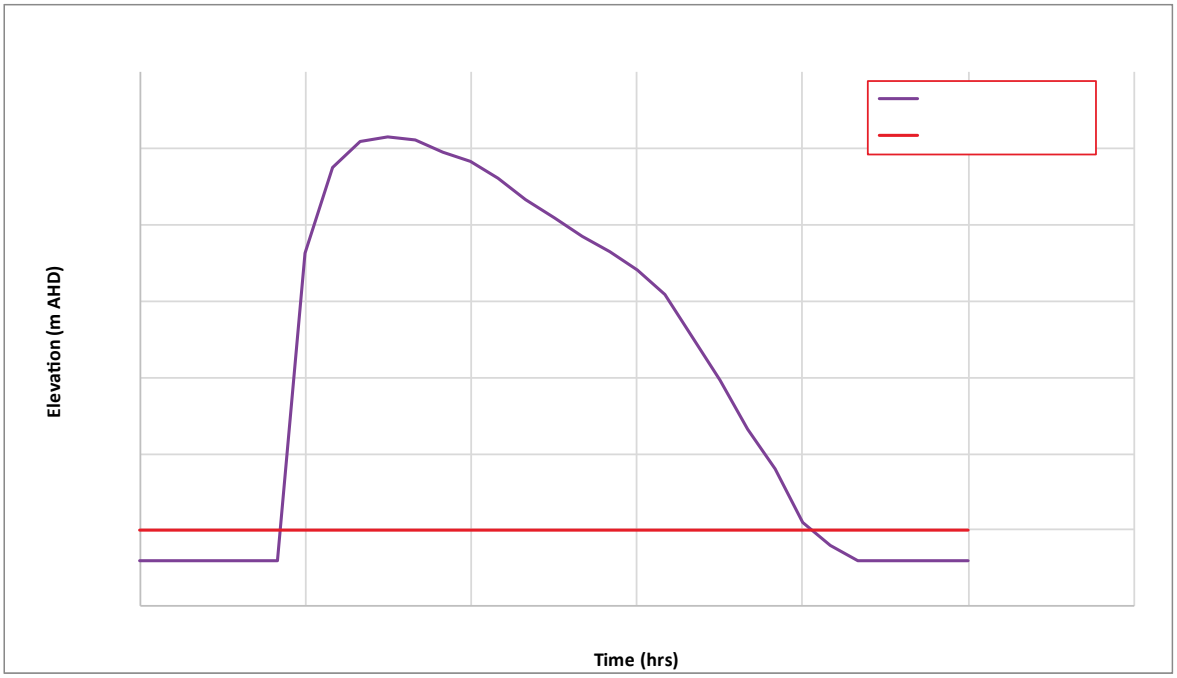


Figure 5-15: Rate of rise of PMF event at southern boundary of Residential Aged Care facility.

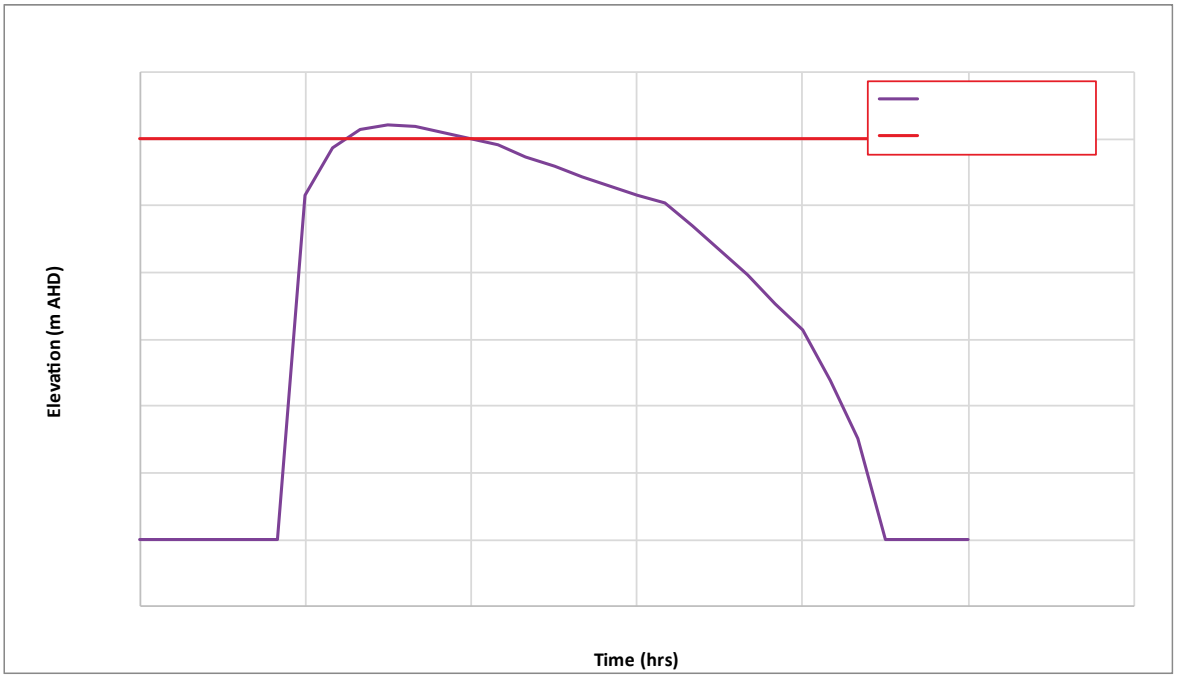


Figure 5-16: Rate of rise of PMF event at emergency drop-off zone.

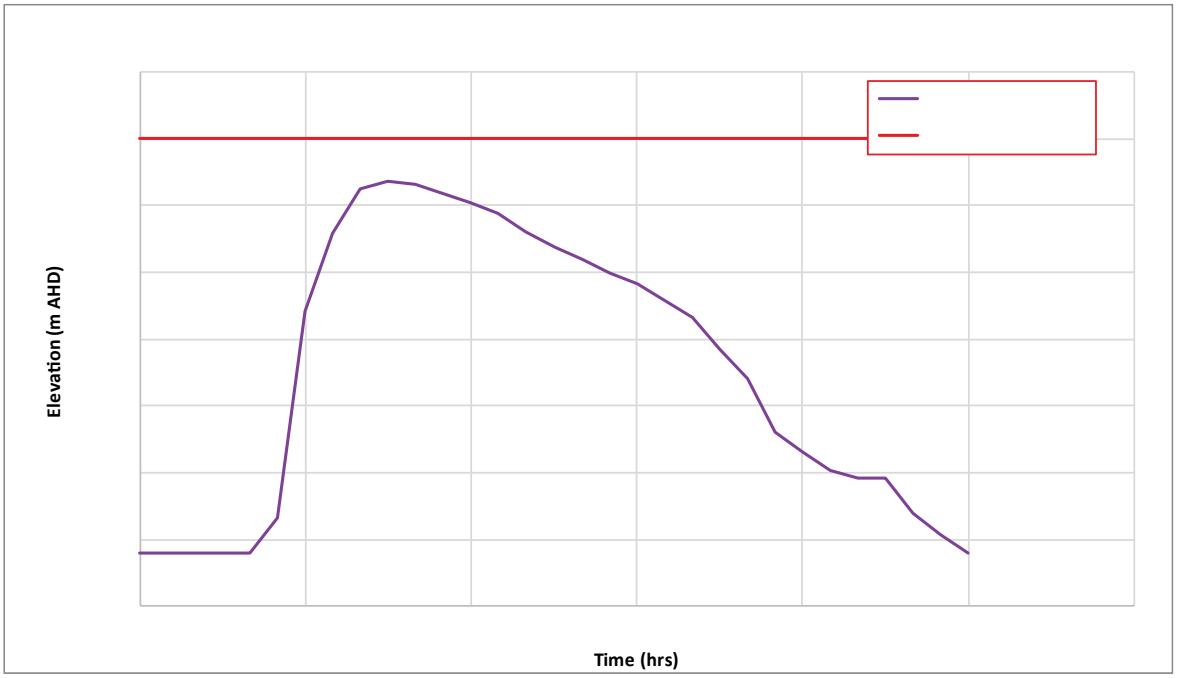


Figure 5-17: Rate of rise of PMF event at north-western boundary of Support and Mortuary unit.

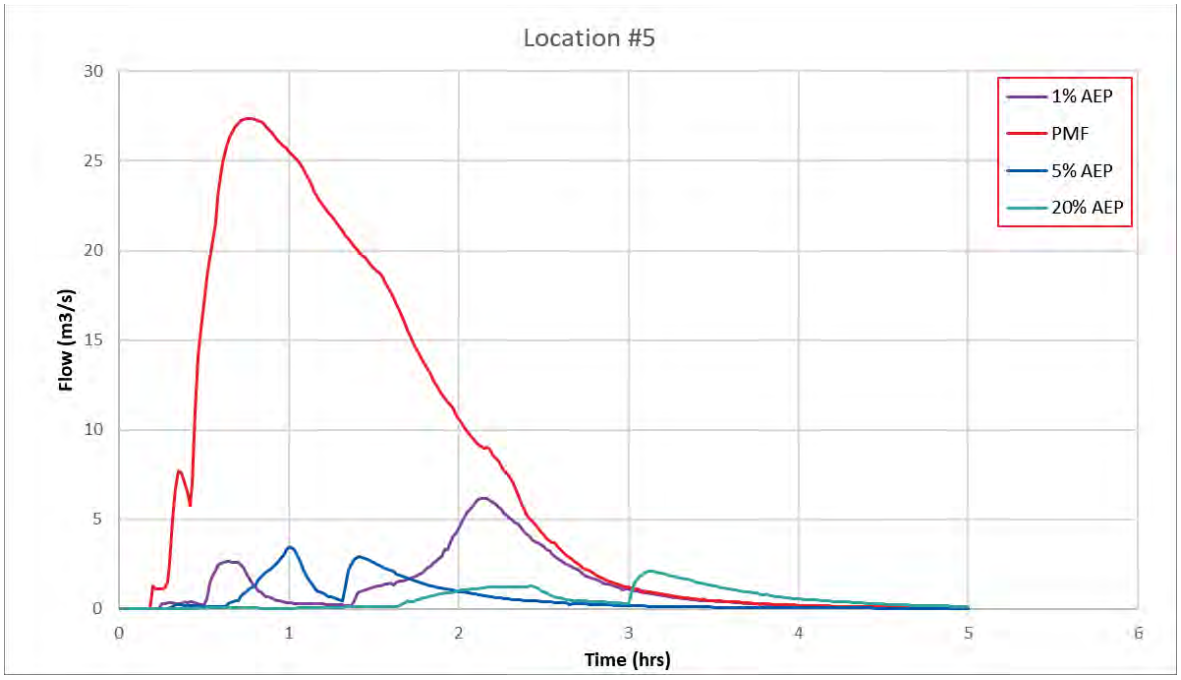


Figure 5-18 Flow hydrograph at Oldham Place

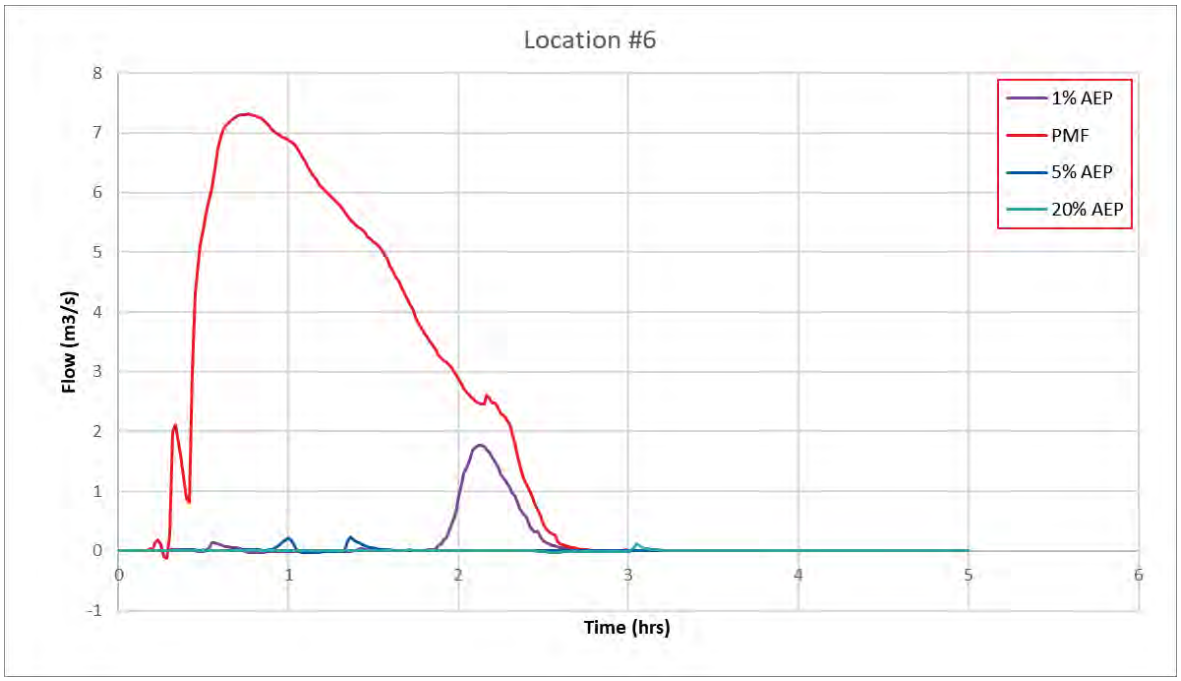


Figure 5-19 Flow hydrograph at the Ambulance Station

5.6 Blockage

This assessment has considered the blockage factors as applied in the exiting Council Flood study provided to undertake this study. This retained a zero blockage on the inlet to many of the major culverts. Hower, as this site is located downstream of many of the major culverts, this has the effect of maximising the flow rate through the town and across the site. As such, this represents a conservative envelope of blockage for this particular site.

A sensitivity assessment on the potential blockage has been completed for the major culvert transversing the Mid-Western Highway directly upstream of the site. A blockage factor of 50% has been tested as a sensitivity for the 1% AEP existing conditions scenario. Results from the blockage sensitivity scenario are presented in Figure 5-20. This demonstrates that in the case that the major transverse culvert immediately upstream of the site is blocked by debris, a large portion of flow is diverted to the east along the southern side of the Mid-Western Highway. At the site, surface water levels are reduced by up to 50mm.

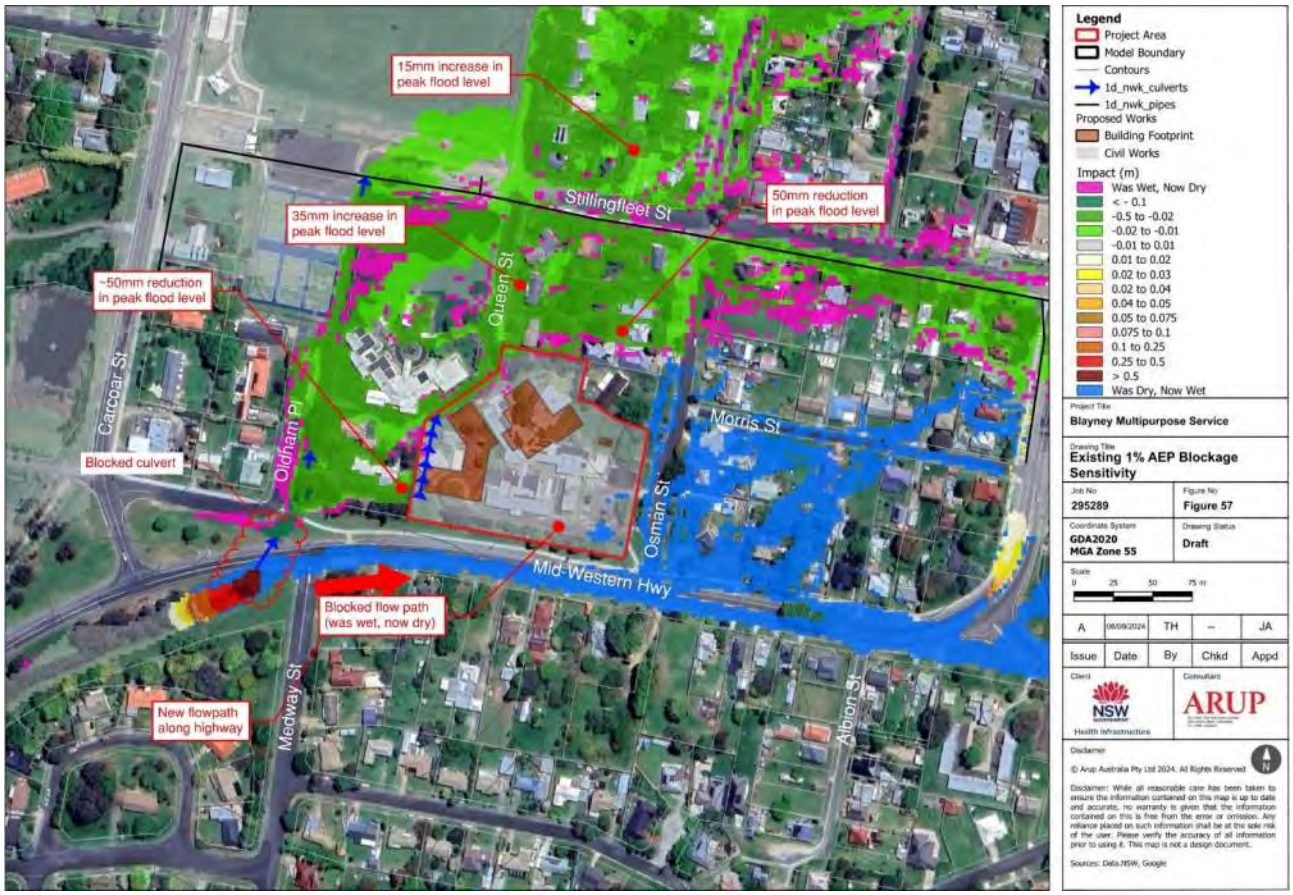


Figure 5-20: Blockage sensitivity 1% AEP peak flood impact.

5.7 Flooding Summary

The flooding results are consistent with the types of overland flow typical of urban areas such as the Blayney township. The flooding results indicate that the site is not affected by the Mainstream flooding associated with the Belubula River for all events up to and including the PMF.

Minor overland flows (up to the 20% AEP) event also do not affect the site, with mapping of the 20% AEP indicating that overland flow s in this event bypass the site along the existing drainage system. As such, aside from managing the direct rainfall that falls on the site, additional drainage network is not expected to be required.

The site is however affected by rarer overland flow events, such as the 1% AEP flood. To protect the building, the design includes a swale that is cut into the terrain along the southwestern side. This intercepts overland flows that may traverse the site. With the inclusion of an appropriate diversion swale, the immunity of the southwestern building can be maintained.

However, as the development intercepts the overland flows that would otherwise cross the site from west to east, flowing downhill towards the Belubula River, the level of the overland flows is increased in the southern portion of Queen Street. This may increase the inundation level at some of the dwellings by up to 35 mm. In this area, overland flow depths are shallow (less than 0.2 m) and the affected dwellings are elevated by approximately 300 mm (notwithstanding garage spaces and other typically non-habitable areas). As such the changes will not increase over floor flooding in the 1% AEP event. That is, areas that may already be subject to inundation in events up to and in including the 1% AEP will still be subject to inundation, while areas that are not subject to inundation are not expected to receive additional over. Note that this inundation is as a result of the MPS building and earthworks, and is not related to the proposed swale.

Flooding currently results in potentially hazardous in Queen Street, with a hydraulic hazard of H5 (Unsafe for vehicles and people. All building types vulnerable to structural damage). This maximum hazard is not affected by the proposal, with the hydraulic hazard category remaining unchanged for the PMF. However,

there is a minor escalation in the flood hazard for the 1% AEP event, with some localised areas escalating from H1 (Generally safe for vehicles, people and buildings) to H2 (Unsafe for small vehicles). This escalation doesn't exceed the hydraulic hazard threshold for the elderly or children.

Hydraulic hazard mapping is an indication of the potential flood risk only, and is based on hydraulic factors only. The actual flood hazard during an event may vary for a range of factors beyond those identified here. As such, the SES recommends avoiding evacuating through flood water. As such, the potential for evacuation risk is substantially unchanged as a result of the Blayney MPS.

5.7.1 Minimum Floor Levels

In order to meet the NSW Health Infrastructure requirements the finished floors to be above the 1% AEP flood. Due to the resolution of the model, the flood levels reported in the swale must be calculated using a backwater calculation based on the flow and connecting hydraulic conditions. These minimum are outlined in Table 6.

Table 6 Minimum floor levels

Location	Proposed floor Level	1% AEP flood level
Residential aged care (RAC) wing	874.85 m AHD	874.78 m AHD
Health One wing	874.40 m AHD	874.38 m AHD
Generator Room	874.10 m AHD	Not Affected

5.7.2 Pollution Risk

The current proposal reduces the potential for overflow flooding in all events up to the 1% AEP. This is an improvement as compared to the current health facilities. As such, the potential for pollution associated with inundation of the facilities is reduced.

5.7.3 Impact to structures

The detailed design of the building structures will need to consider the resilience to flooding and inundation. Guidance is provided regarding flood resilient infrastructure including:

- Information Handbook: Construction of Buildings in Flood Hazard Area (ACBC, 2012)
- ABCB Standard: Construction of buildings in flood hazard areas (ACBC, 2012)
- Flood Damage-Resistant Materials Requirements for Buildings Located in Special Flood Hazard Areas in accordance with the National Flood Insurance Program (FEMA 2008)
- Flood Resilient Building Guidance for Queensland Homes (Queensland Reconstruction Authority, 2019)

These guidelines require the use of flood resilient material and construction techniques below the 1% AEP flood level, and provide some specific guidance regarding suitable materials. They also provide guidance on ensuring that the construction is flood resilient.

6. Flood Emergency Response

The Blayney MPS has an existing emergency response plan: Blayney Health Service Emergency Management Plan & Standing Operating Procedures (Western NSW Local Health District, 2021). This plan outlines the response to a range of emergency management scenarios. A flood emergency would be managed under the plan for a *Code Orange*.

The hydraulic hazard mapping for the site indicates that in an extreme event such as the PMF, there may be high hazards (H3, H4 and H5) associated with the overland flows surrounding portions of the building (Figure 6-1). However, these only affect the southwestern wing (Residential Aged Care). Other facilities, including the inpatient unit, clinical support, shared services, emergency and reception are not directly impacted by significant hydraulic hazard, and the depth of any over floor inundation is shallow.

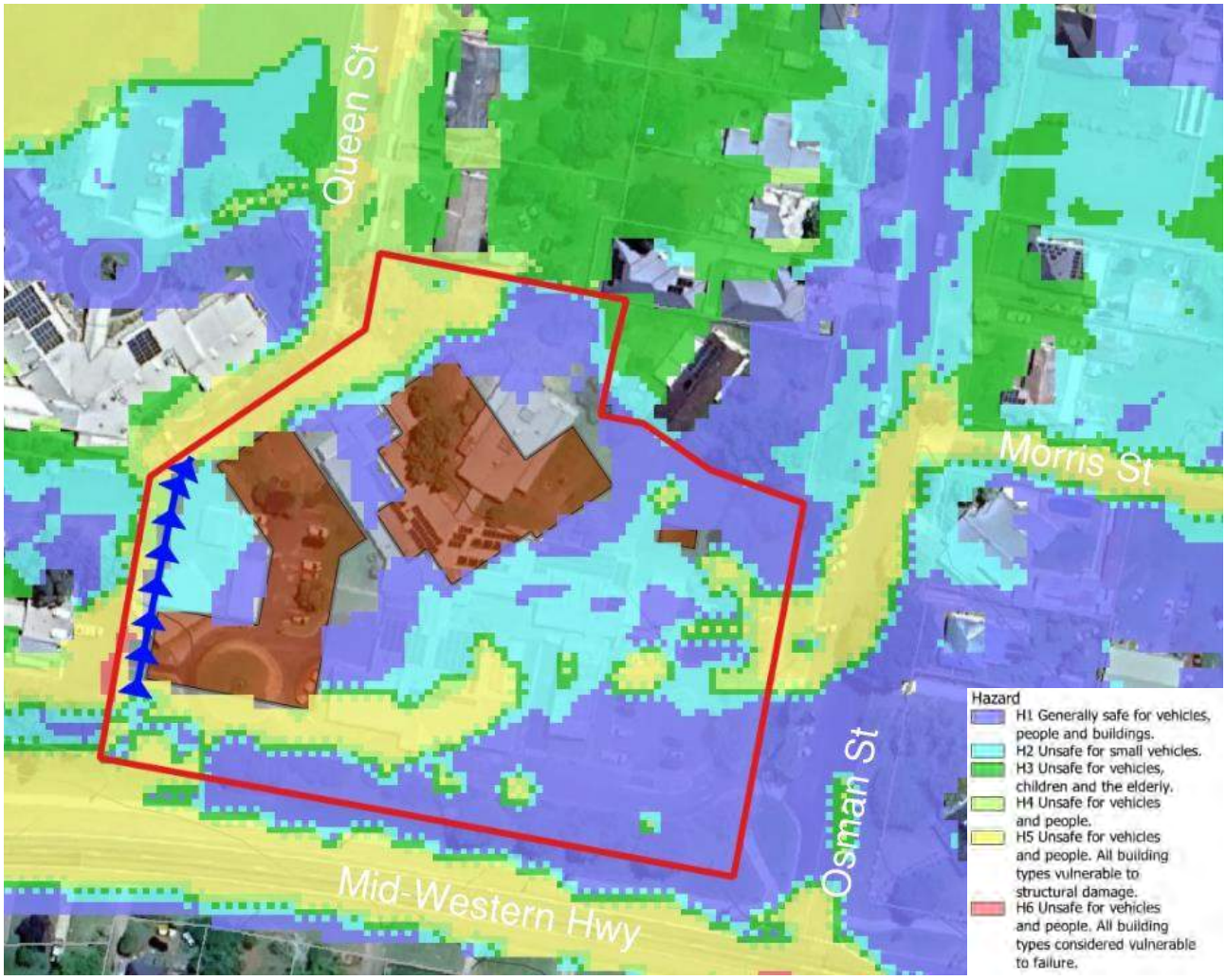


Figure 6-1 Provisional hydraulic hazard at the site.

6.1 Emergency response plan modifications

Noting that rapid rise in overland flow levels during an extreme event, as well as the high hazard in specific areas, it is adviasable that any evacuation be onsite, moving from flood affected areas to non-flood affected areas within the facility. If further evacuation (Stage 3) is required, it is advisable that this is done via Osman Street and only following an storm or flood event. Evacuation along Queen Street may be inadviasable due to the hydraulic hazard that may be associated with overland flows.

Modification of the Blayney Health Service Emergency Management Plan & Standing Operating Procedures to advise of separate procedures during a flood event is recommended.

6.2 Flood Monitoring

Resources are currently available to assist in monitoring flood risks and to ensure that any flood warnings are responded to promptly. Resources form the BoM and SES will provide advance notice of potentially hazardous conditions. However, reliance should not be placed on any single data source.

6.2.1 Bureau of Meteorology (BoM)

BoM have several services available to warn of flooding or hazardous storm conditions. These include:

- Severe Thunderstorm Warning Services to alert communities of more dangerous thunderstorms
- Severe Weather Warning Services provide notification when severe weather is occurring in an area or expected to move into an area. Severe Weather Warnings include notification of very heavy rain that may lead to flash flooding.
- Flood Watch – BoM issues a Flood Watch to provide early advice of a developing situation that may lead to flooding.
- Flood Warnings are provided by BoM to advice that flooding is occurring or expected to occur in an area based on defined criteria.

6.2.2 State Emergency Services (SES)

The SES operates several tools for monitoring and notifying flood risks. These include:

- SES website – Warnings available through the SES website
- NSW SES social media channels
- Hazard Watch – an online platform for accessing weather warnings.
- ABC radio reporting of weather warnings.

6.2.3 On-site monitoring

Flood conditions can vary dynamically, and it is expected that once hospital management have been alerted to potential conditions, some monitoring of the outside conditions will be required. It is advisable to monitor the carpark and surround areas for signs of inundation, for example, notable overland flows.

6.3 Flood Response

The appropriate flood response should be reflective of the flood risk. Most storm events, including incidents of riverine flooding, will represent an abnormal operating condition for the facility, however, are unlikely to significantly affect the facility in a way that presents a risk to those inside the facility:

6.3.1 Before a storm

During routine operation of the facility, some monitoring of the weather and potential for flood is required by facility managers. If storm or flood warning are received, this will require an adjustment to the operating procedure to reflect the potential for inundation and flood hazard in the surrounding area.

- Monitor the BoM, SES and Council for forecasts of potentially hazardous storm events.
- If notification is received, review admissions, staffing and inventory to reflect the potential hazard.
- Review emergency response systems to ensure that they are functional.
- Remind key staff of their roles and responsibilities.
- Provide a briefing to all staff making them aware of the potential hazard.

6.3.2 During a storm

During a storm event, a more active posture will be required to respond to changes in the situation. Actions include:

- Visually monitor condition surrounding the site (for example, in Queens Street, Osman Street and in the carpark).
- Monitor internal systems such as power, water, IT and medical gas.
- Provide appropriate information and assurance to staff and patients.
- If necessary, escalate the incident condition.
- Relocate within the facility if inundation is noted.

6.3.3 After a storm

Following a storm event, a number of actions will be required to ensure that the facility (in its entirety) is safe, and to restore functionality.

- Check power is safe.
- Check all levels and spaces for damage and report to management.
- Commence cleaning and recovery if necessary.

6.3.4 Recovery actions

If the facility has sustained damage during a storm or flood, the operations will need to be reviewed to ensure the on-going safety of all staff and patients. Once the order to stand down has been issued, this may include:

- Review patient load, and transfer patients to other facilities, discharge them or resume the functions at other sites within the precinct as appropriate.
- Transition functions to other facilities (e.g. Canowindra or Cowra).
- Undertake electrical inspections.
- Damage review (check all rooms and spaces).
- Cleaning.
- Repair or replacement of damaged equipment.

6.4 Communications

During an incident, communications are to be managed by the hospital management, or other delegates in accordance with the disaster response plan. This plan will also include documentation on the distribution of information to other key staff, nurses and doctors, and to patients. Where applicable and feasible, administration staff may be required to control admissions and discharges around the hazard conditions.

During all flooding and storm events, staff and patients are to be reminded about the SES advice to not drive through floodwater.

6.4.1 Communications equipment

To co-ordinate with other agencies, communications equipment compatible with the SES and other response agencies will be required. Consultation with the local SES unit to confirm the communications requirements is advised.

6.5 Flood Plan Documentation

It will be necessary to develop, document and train the appropriate personnel in the appropriate flood response actions, including:

- How flood warnings are monitored/received.
- How flood warnings are to be communicated to the occupiers of the building/site.
- Who is responsible for activating the flood response. Ensuring that contact numbers are available for individual(s) responsible for the managing the flood response.
- Headcount for occupiers/evacuees.
- Identifying post-flood responses including assisting individuals in their exit from site is a safe manner with consideration of potential new hazards arising from flooding.

These actions are to be undertaken as part of the next Emergency plan update.

7. Conclusions and Recommendations

The town of Blayney is affected by both riverine flooding (associated with the Belubula River), local catchment flooding (associated with the gulleys and stormwater channels though the town), and overland flows that traverse the urban area. These event may produce some significant hydraulic hazards within the urban areas. However, these hydraulic hazards are consistent with the extreme rainfall events associated with the PMF, and similar hazards in these events are common throughout NSW. As such, flooding and extreme rainfall, as well as associated hazards such and high winds and storms, represent a significant flood hazard that should be considered in the planning of any development.

However, the exiting Council mapping indicates that this site is not affected by mainstream flooding associated with the Belubula River, nor is it affected directly by local catchment flooding (Section 2.2). As such, the flooding issues that do affect the site are overland flows, including overland flows that have escaped the drainage system at Oldham Place and passes through the Ambulance station west of the Blayney MPS site.

Modelling undertaken for this project has indicated that minor and nuisance overland flows (20% AEP do not affect the site. These overland flows only affect the site in rare events such as the 1% AEP event. With an appropriate drainage swale along the batter slow on the western boundary, the required immunity from overland flows can be maintained for the Residential Aged Care building (Finished floor level of 874.85m AHD) and the Emergency Department building (finished floor level of 874.40 m AHD). As such, the flood immunity requirements of NSW Health are achieved. This swale would connect with the flow in Queen Street, in keeping with the major / minor principle outlined in the Guidelines for Engineering Works (WBC Strategic Alliance, 2009).

Due to the shallow flows some high flood hazard (categories H3, H4 and H5) is noted in areas around the hospital. However, this will only affect the southwestern corner of the facility. The residual flooding risk can be managed with on-site relocation inside the facility if required.

It is noted that as the development does intercept existing overland flows and direct them towards Queen Street. This may result in some afflux may be noted at properties in this area. However, the depths of flooding are shallow, even in rare events such as the 1% AEP storm. Many properties already affected in this event to some degree. Due to the shallow overland flows, it is unlikely that this results in additional over floor flooding to neighbouring properties. This change is also not materially different to the current approved design. Opportunities to minimise this would require significant drainage work through the Blayney township.

With the above measures, the flood risk to those inside the facility, and the surrounding community, can be minimised. However, many of the risks are associated with shallow overland flows, and affect the town more broadly, and so are not specific to the site.

7.1 Recommendations

To enable the flood risk to both the community, staff and patients of the Blayney MPS, the following flood management measures are recommended:

- An appropriately sized drainage swale be installed along the western boundary (at the base of the batter slope) to carry intercepted overland flows an maintain the required flood immunity for the facility.
- The *Blayney Health Service Emergency Management Plan & Standing Operating Procedures* be updated to address flooding directly. In the event that the facility becomes inundated, those in the affected sections of the hospital are to be directed to other parts of the facility as a safer place.
    - The plan should indicate that in the event of a flood, evacuation via Queen Street is not advised.
    - If further evacuation off site (Stage 3 Evacuation) is required, this should be organised via the Osman Street access, and only when safe to do so.

- Off-site evacuation should consider both local conditions (in the streets surrounding the MPS and directly observable from the facility), as well as the regional flood conditions. The plan should direct that this may require co-ordination with the local SES commander to understand regional flood conditions.
- A stockpile of flood management materials should be maintained on site. This includes sandbags, mops, communications devices for communicating with the SES and other agencies and other cleaning equipment to control local inundation on site.
- SES material regarding flood safety, including advisories to not drive through floodwater should be obtained, and displayed within the facility when commissioned (for example, on an appropriate notice board).
- Maintain facilities to transfer patents to other facilities following a flood or storm event.
    - Any changes to the vehicles maintained on-site should be in response to an operational risk review and update of the *Blayney Health Service Emergency Management Plan & Standing Operating Procedures.*
- The building should consider management of overland flows and drainage along all building perimeters where there is catchment area that could runoff towards the building, even if this is not identified as flooding.

References

Bureau of Meteorology, 2003, The Estimation of Probable Maximum Precipitation in Australia: Generalised Short-Duration Method.

Jacobs, 2015, Blayney Flood Study, Blayney Shire Council. Prepared for Blayney Shire Council

Storm Consulting, 2022, Addendum-to-Blayney-flood-study Prepared for Blayney Shire Council

Western NSW Local Health District, 2021, Blayney Health Service Emergency Management Plan & Standing Operating Procedures

Appendix A

Flood Model Configuration



Legend

- Project Area
- Model Boundary
- Contours
- 2d_code_bldgs
- 2d_zsh_gully
- 2d_zsh_ridge
- 1d_nwk_culverts
- 1d_nwk_pipes

2d_bc_culverts

- CN
- SX

Project Title
Blayney Multipurpose Service

Drawing Title
TUFLOW Model Setup - Existing

Job No	Figure No
295289	**Figure 1**
Coordinate System **GDA2020 MGA Zone 55**	Drawing Status **Draft**

Scale
0 50 100 150 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	TH	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 2d_sa_pits
- 2d_code_bldgs
- 2d_sa
- 1d_bc
- 2d_bc_B_HX_R

2d_bc_culverts
- CN
- SX

2d_bc_B_HX_L
- CN
- HX

1d_nwk_channels
- W
- S
- B

Project Title
Blayney Multipurpose Service

Drawing Title
TUFLOW Model Boundary Conditions - Existing

Job No	Figure No
295289	**Figure 2**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale
0 50 100 150 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	TH	JA

Client
NSW GOVERNMENT
Health Infrastructure

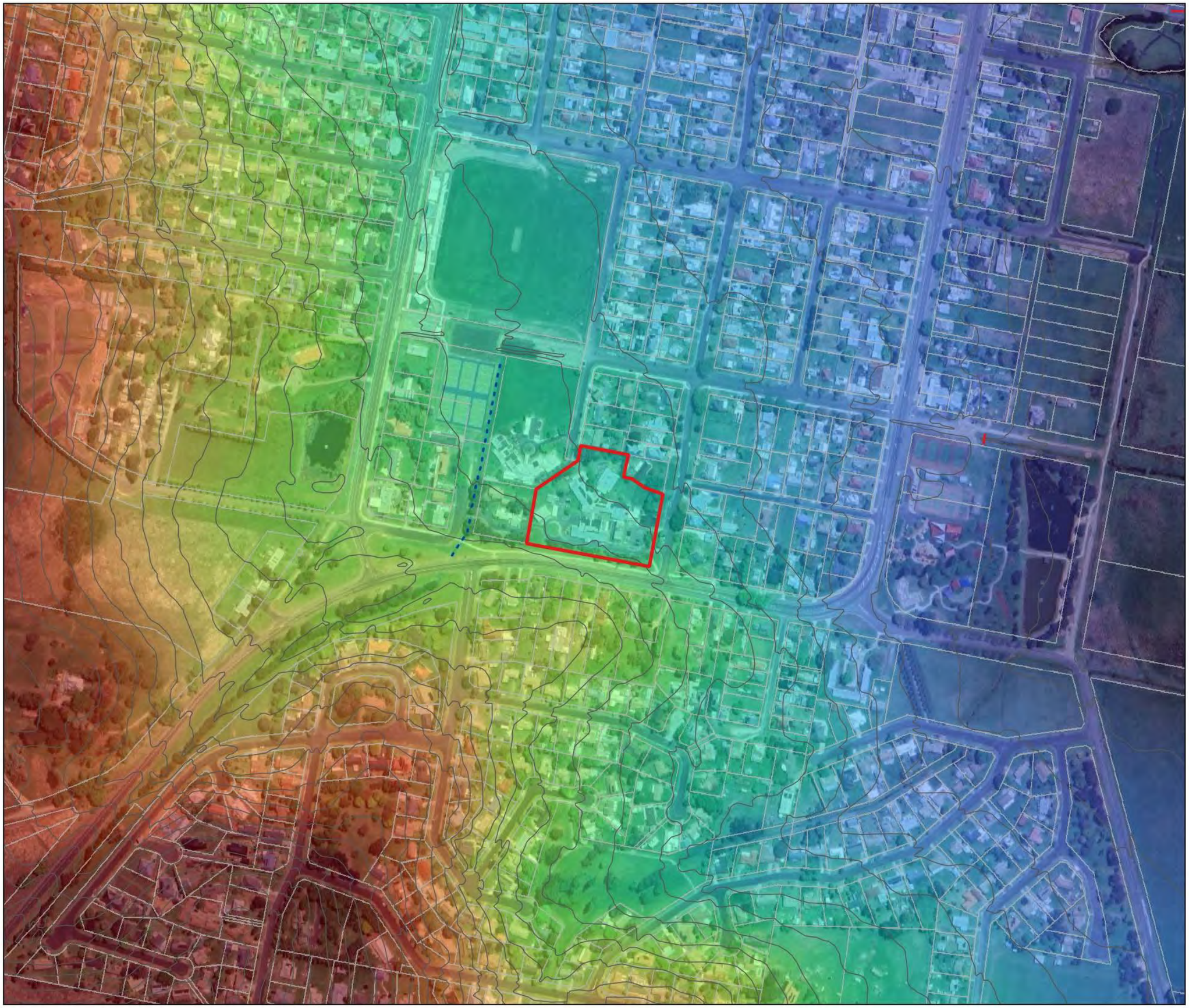
Consultant
ARUP
Sky Park, One Melbourne Quarter, 699 Collins Street, Docklands, VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google



Legend

- Project Area
- Model Boundary
- Contours
- 2d_zsh_gully
- 2d_zsh_ridge

LiDAR (m AHD)

900

860

Project Title

Blayney Multipurpose Service

Drawing Title

TUFLOW Model Topography - Existing

Job No	Figure No
295289	**Figure 3**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale

0 50 100 150 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	TH	JA

Client

NSW GOVERNMENT
Health Infrastructure

Consultant

ARUP
Sky Park, One Melbourne Quarter, 699 Collins Street, Docklands, VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 2d_code_bldgs

2d_Materials

- Roads (n = 0.015)
- Urban Area (n = 0.200)
- Waterways (n = 0.05)
- Wetlands (n = 0.120)
- Dense Vegetation (n = 0.120)

Project Title
Blayney Multipurpose Service

Drawing Title
TUFLOW Model Roughness - Existing

Job No	Figure No
295289	**Figure 4**
Coordinate System **GDA2020 MGA Zone 55**	Drawing Status **Draft**

Scale
0 50 100 150 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	TH	JA

Client
NSW GOVERNMENT
Health Infrastructure

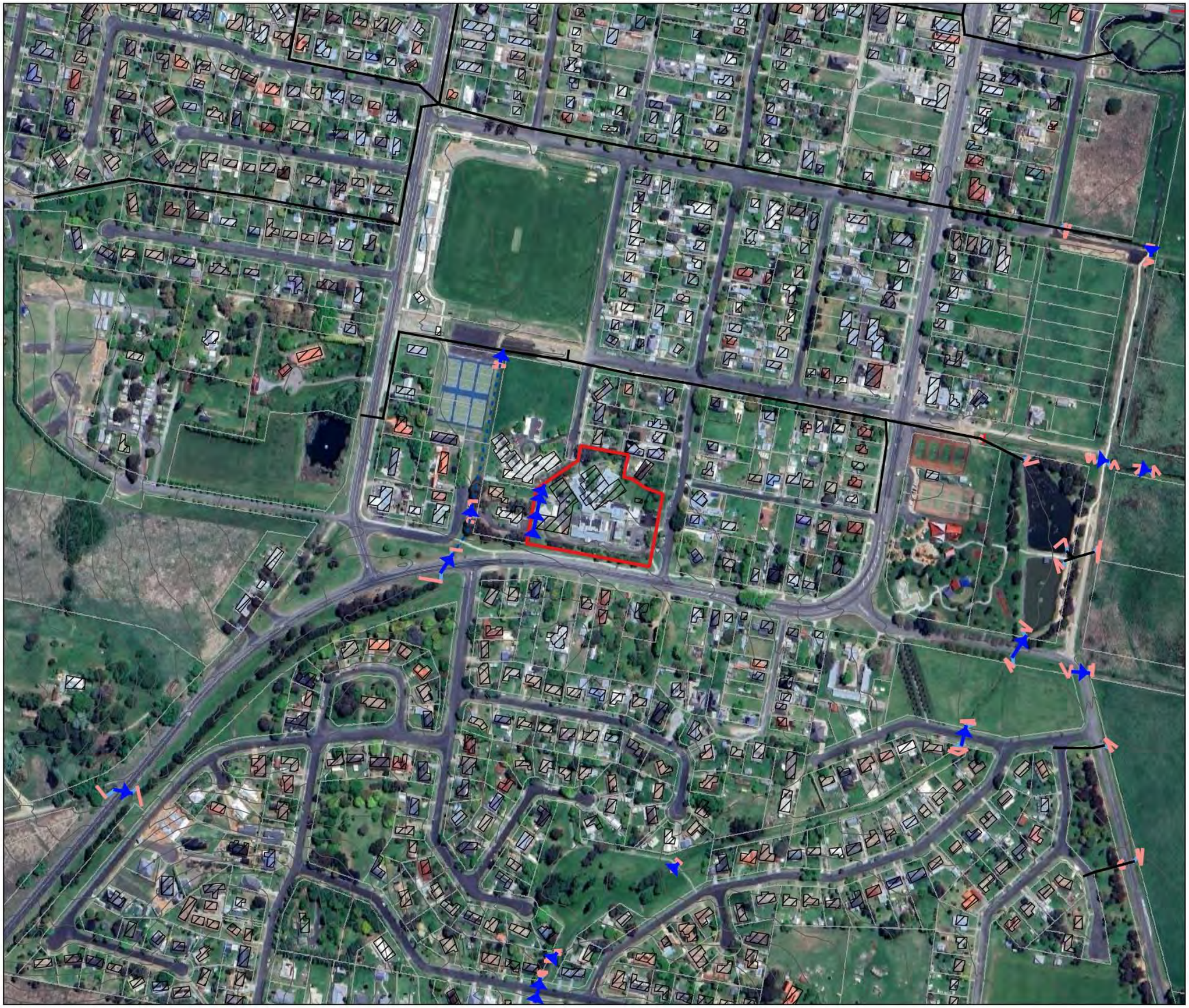
Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google



Legend

- Project Area
- Model Boundary
- Contours
- 2d_zsh_gully
- 2d_zsh_ridge
- 1d_nwk_culverts
- 1d_nwk_pipes
- Proposed Swale

2d_bc_culverts

- CN
- SX

- 2d_code_bldgs

Project Title
Blayney Multipurpose Service

Drawing Title
TUFLOW Model Setup - Design

Job No	Figure No
295289	**Figure 5**
Coordinate System **GDA2020 MGA Zone 55**	Drawing Status **Draft**

Scale
0 50 100 150 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	TH	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google



Legend

- Project Area
- Model Boundary
- Contours
- 2d_sa_pits
- 2d_sa
- 1d_bc
- 2d_bc_B_HX_R

2d_bc_culverts
- CN
- SX

2d_bc_B_HX_L
- CN
- HX

1d_nwk_channels
- W
- S
- B

- 2d_code_bldgs

Project Title
Blayney Multipurpose Service

Drawing Title
TUFLOW Model Boundary Conditions - Design

Job No	Figure No
295289	**Figure 6**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale
0 50 100 150 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	TH	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter, 699 Collins Street, Docklands, VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 2d_zsh_gully
- 2d_zsh_ridge

Proposed Works

- Building Footprint
- Civil Works

LiDAR (m AHD)

900

860

Project Title

Blayney Multipurpose Service

Drawing Title

TUFLOW Model Topography - Design

Job No	Figure No
295289	**Figure 7**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale

0 50 100 150 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	TH	JA

Client

NSW GOVERNMENT
Health Infrastructure

Consultant

ARUP
Sky Park, One Melbourne Quarter, 699 Collins Street, Docklands, VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

N

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google



Legend

- Project Area
- Model Boundary
- Contours
- 2d_code_bldgs

2d_materials

- Roads (n = 0.015)
- Urban Area (n = 0.200)
- Waterways (n = 0.05)
- Wetlands (n = 0.120)
- Dense Vegetation (n = 0.120)

Project Title
Blayney Multipurpose Service

Drawing Title
TUFLOW Model Roughness - Design

Job No	Figure No
295289	**Figure 8**
Coordinate System **GDA2020 MGA Zone 55**	Drawing Status **Draft**

Scale
0 50 100 150 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	TH	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

Appendix B

Existing Conditions Results



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Depth (m)

- <= 0.05
- 0.05 - 0.10
- 0.10 - 0.20
- 0.20 - 0.30
- 0.30 - 0.40
- 0.40 - 0.50
- 0.50 - 1.00
- 1.00 - 2.50
- > 2.50
- Water Level Contour (m AHD)

Project Title

Blayney Multipurpose Service

Drawing Title

Existing 20% AEP Depth

Job No	Figure No
295289	**Figure 9**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale: 0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	TH	JA

Client: NSW GOVERNMENT Health Infrastructure

Consultant: ARUP

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Depth (m)

- <= 0.05
- 0.05 - 0.10
- 0.10 - 0.20
- 0.20 - 0.30
- 0.30 - 0.40
- 0.40 - 0.50
- 0.50 - 1.00
- 1.00 - 2.50
- > 2.50
- Water Level Contour (m AHD)

Project Title
Blayney Multipurpose Service

Drawing Title
Existing 5% AEP Depth

Job No	Figure No
295289	**Figure 10**
Coordinate System **GDA2020 MGA Zone 55**	Drawing Status **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	TH	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

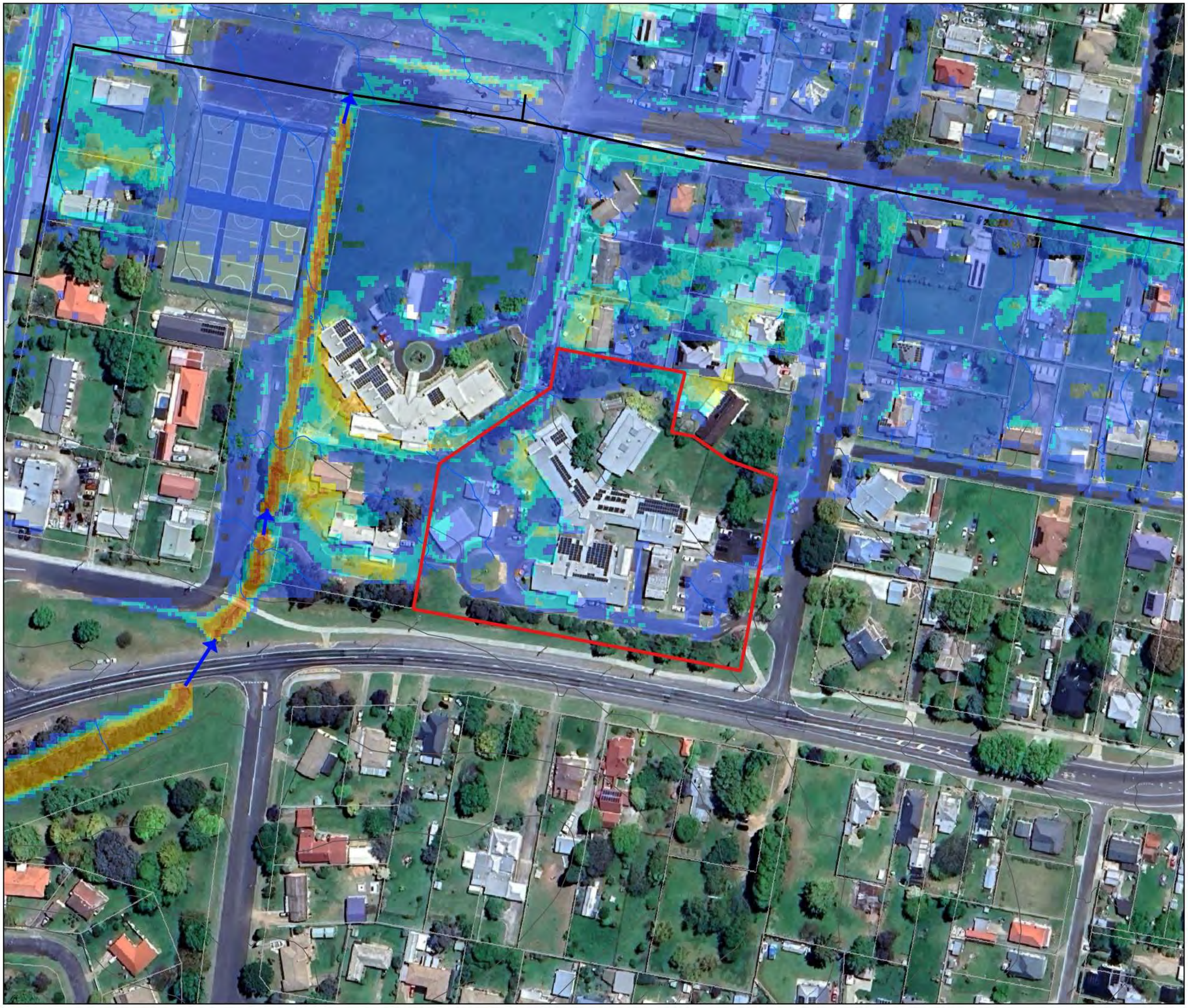
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Depth (m)

- <= 0.05
- 0.05 - 0.10
- 0.10 - 0.20
- 0.20 - 0.30
- 0.30 - 0.40
- 0.40 - 0.50
- 0.50 - 1.00
- 1.00 - 2.50
- > 2.50
- Water Level Contour (m AHD)

Project Title

Blayney Multipurpose Service

Drawing Title

Existing 1% AEP Depth

Job No	Figure No
295289	**Figure 11**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale: 0 — 25 — 50 — 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	TH	JA

Client: NSW GOVERNMENT Health Infrastructure

Consultant: ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

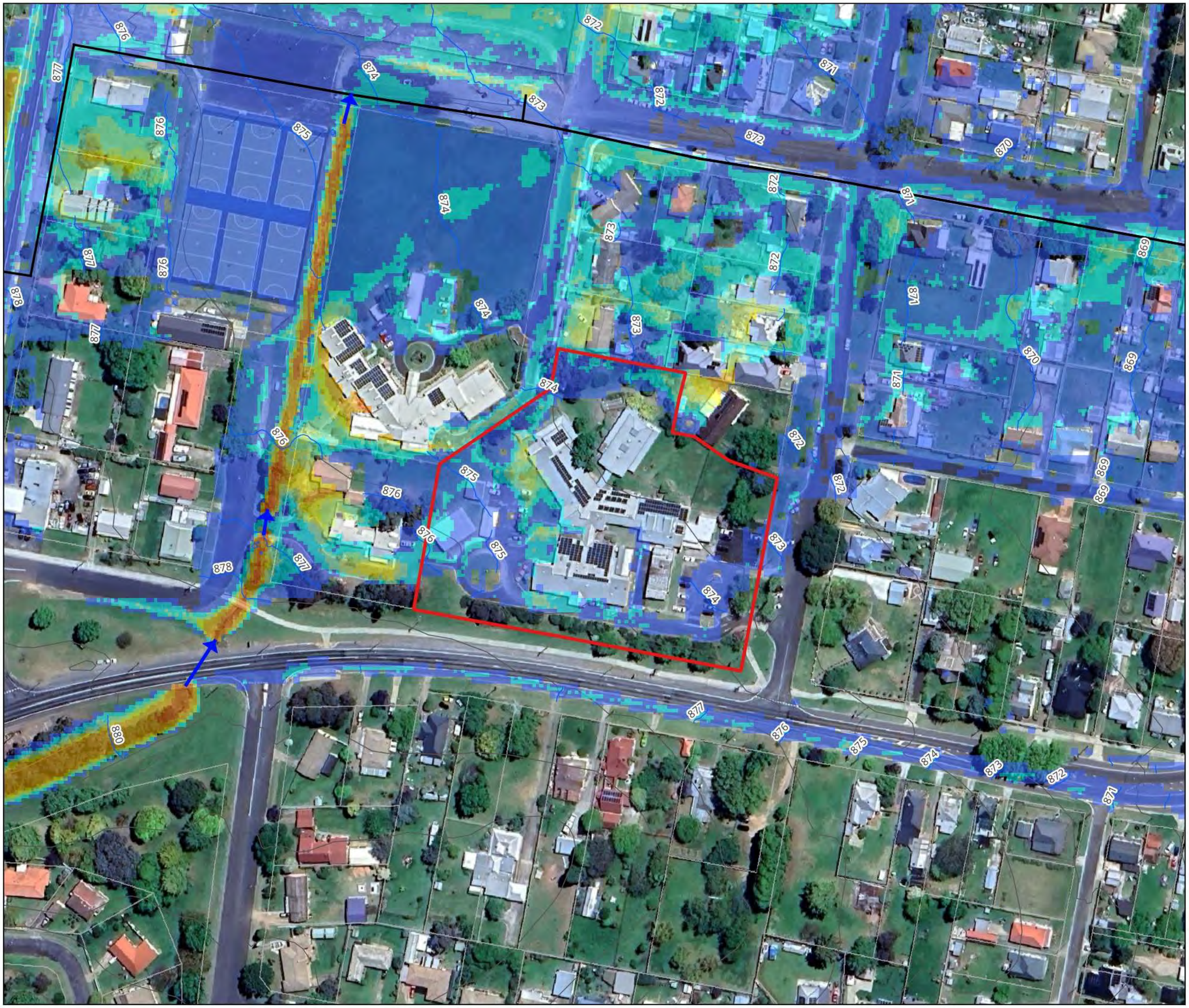
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Depth (m)

- <= 0.05
- 0.05 - 0.10
- 0.10 - 0.20
- 0.20 - 0.30
- 0.30 - 0.40
- 0.40 - 0.50
- 0.50 - 1.00
- 1.00 - 2.50
- > 2.50
- Water Level Contour (m AHD)

Project Title

Blayney Multipurpose Service

Drawing Title

Existing 1% AEP + CC Depth

Job No	Figure No
295289	**Figure 12**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale: 0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	TH	JA

Client: NSW GOVERNMENT Health Infrastructure

Consultant: ARUP

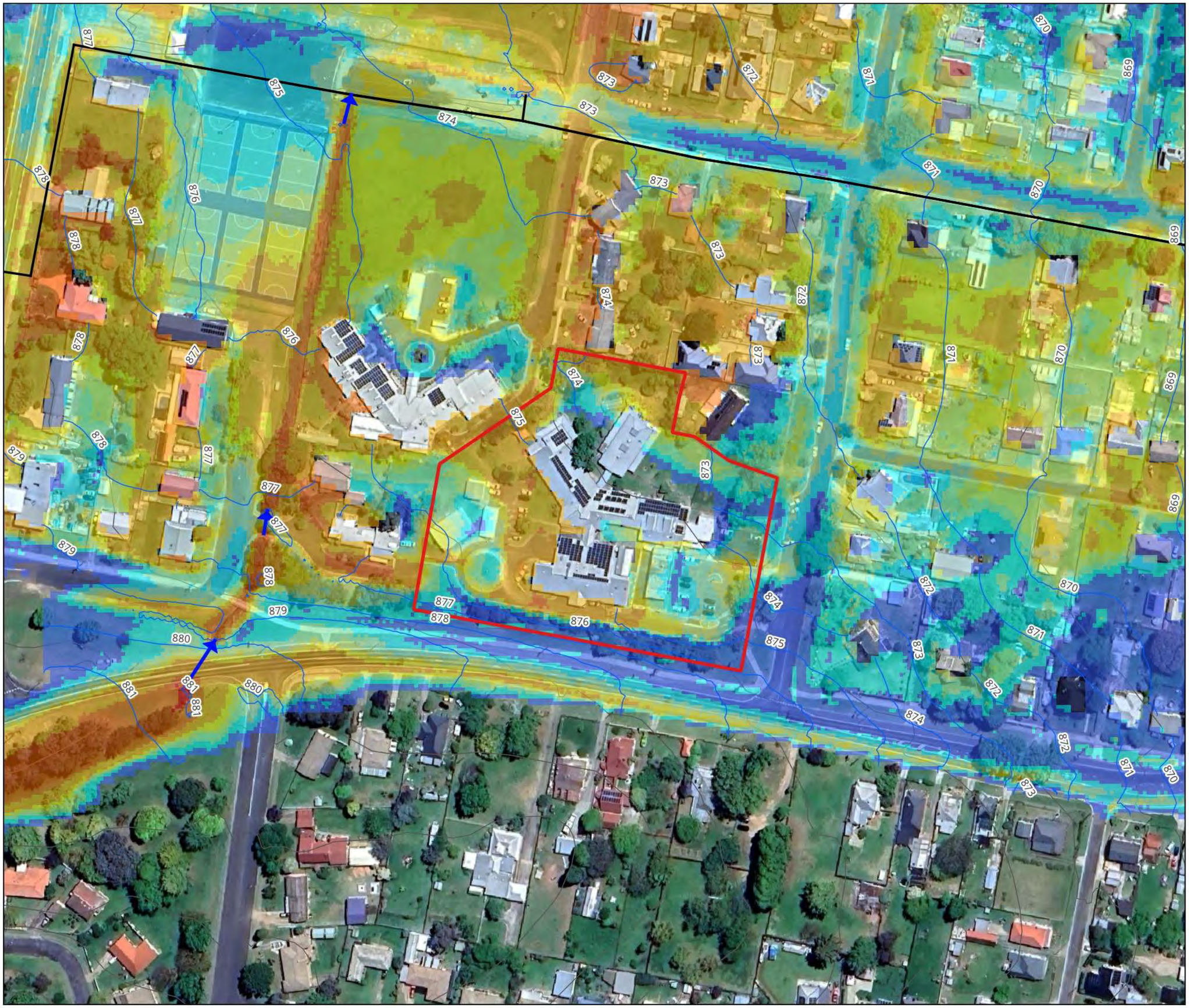
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Project Title

Blayney Multipurpose Service

Drawing Title

Existing PMF Depth

Job No	Figure No
295289	**Figure 13**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale

0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	TH	JA

Client

NSW GOVERNMENT
Health Infrastructure

Consultant

ARUP
Sky Park, One Melbourne Quarter, 699 Collins Street, Docklands, VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Level (m AHD)

- 890
- 860

Water Level Contour (m AHD)

Project Title

Blayney Multipurpose Service

Drawing Title

Existing 20% AEP Water Level

Job No	Figure No
295289	**Figure 14**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale

0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	TH	JA

Client: NSW GOVERNMENT Health Infrastructure

Consultant: ARUP

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Level (m AHD)

- 890
- 860
- Water Level Contour (m AHD)

Project Title

Blayney Multipurpose Service

Drawing Title

Existing 5% AEP Water Level

Job No	Figure No
295289	**Figure 15**
Coordinate System **GDA2020** **MGA Zone 55**	Drawing Status **Draft**

Scale

0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	TH	JA

Client

NSW GOVERNMENT
Health Infrastructure

Consultant

ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Level (m AHD)

- 890
- 860
- Water Level Contour (m AHD)

Project Title

Blayney Multipurpose Service

Drawing Title

Existing 1% AEP Water Level

Job No	Figure No
295289	**Figure 16**
Coordinate System **GDA2020** **MGA Zone 55**	Drawing Status **Draft**

Scale

0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	TH	JA

Client

NSW GOVERNMENT
Health Infrastructure

Consultant

ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

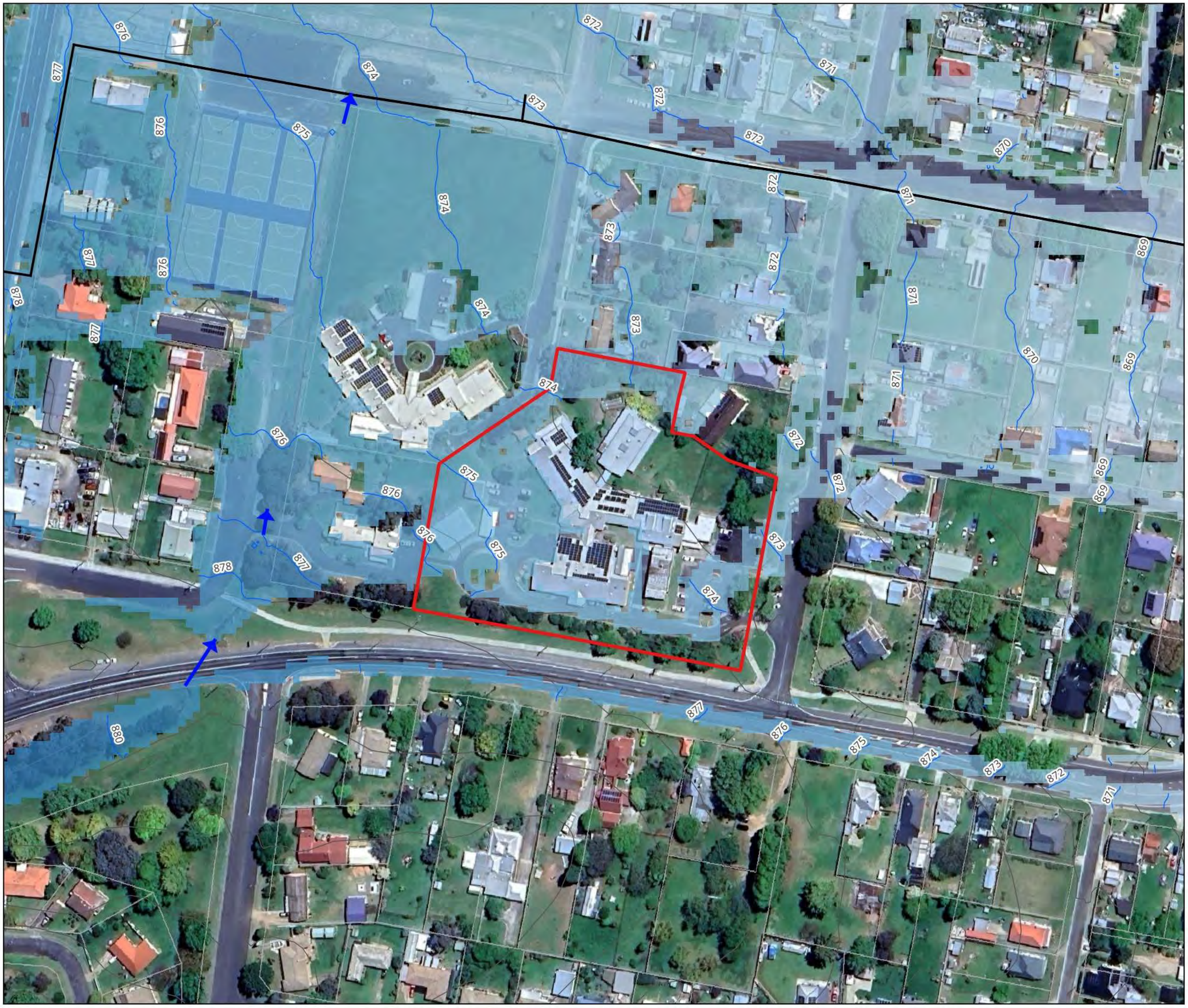
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Level (m AHD)

- 890
- 860
- Water Level Contour (m AHD)

Project Title

Blayney Multipurpose Service

Drawing Title

Existing 1% AEP + CC Water Level

Job No	Figure No
295289	**Figure 17**
Coordinate System **GDA2020 MGA Zone 55**	Drawing Status **Draft**

Scale

0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	TH	JA

Client

NSW GOVERNMENT
Health Infrastructure

Consultant

ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

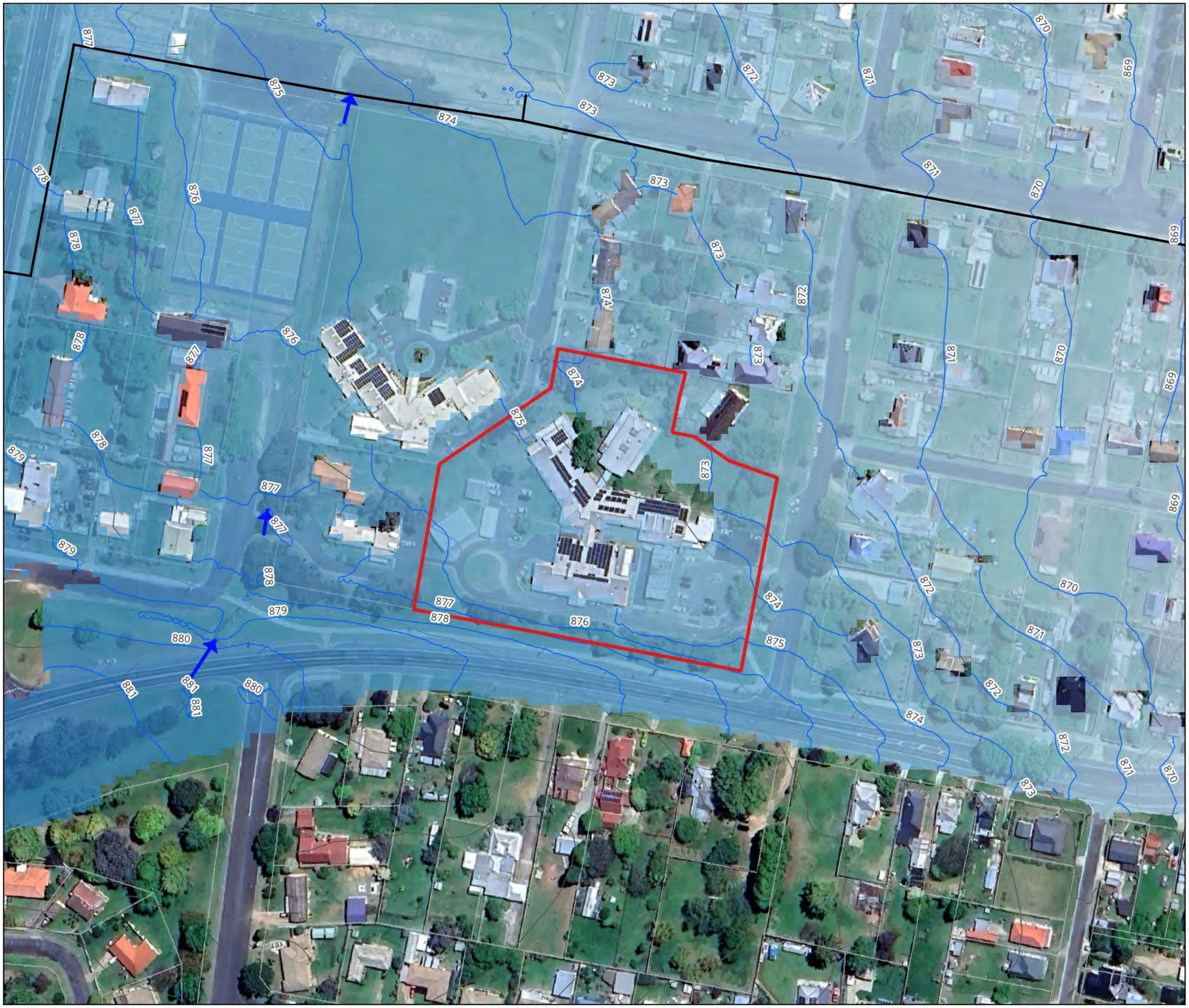
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Level (m AHD)

- 890
- 860
- Water Level Contour (m AHD)

Project Title

Blayney Multipurpose Service

Drawing Title

Existing PMF Water Level

Job No	Figure No
295289	**Figure 18**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale

0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	TH	JA

Client

NSW GOVERNMENT
Health Infrastructure

Consultant

ARUP
Sky Park, One Melbourne Quarter, 699 Collins Street, Docklands, VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Velocity (m/s)

- <= 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- > 2.0

Project Title

Blayney Multipurpose Service

Drawing Title

Existing 20% AEP Velocity

Job No	Figure No
295289	**Figure 19**
Coordinate System **GDA2020** **MGA Zone 55**	Drawing Status **Draft**

Scale

0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	TH	JA

Client

NSW GOVERNMENT
Health Infrastructure

Consultant

ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Velocity (m/s)

- <= 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- > 2.0

Project Title
Blayney Multipurpose Service

Drawing Title
Existing 5% AEP Velocity

Job No	Figure No
295289	**Figure 20**
Coordinate System **GDA2020** **MGA Zone 55**	Drawing Status **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	TH	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

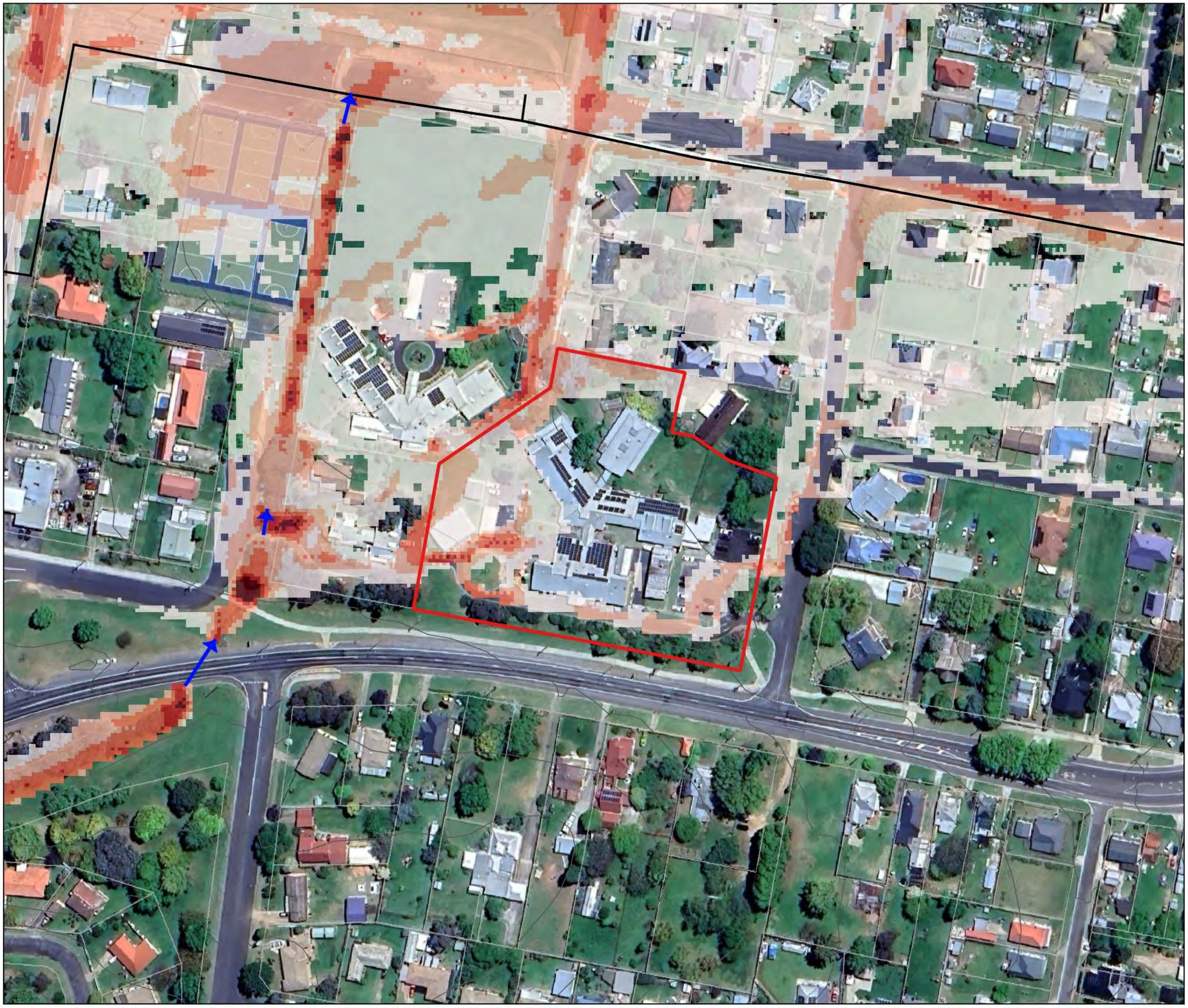
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Velocity (m/s)

- <= 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- > 2.0

Project Title
Blayney Multipurpose Service

Drawing Title
Existing 1% AEP Velocity

Job No	Figure No
295289	**Figure 21**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	TH	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

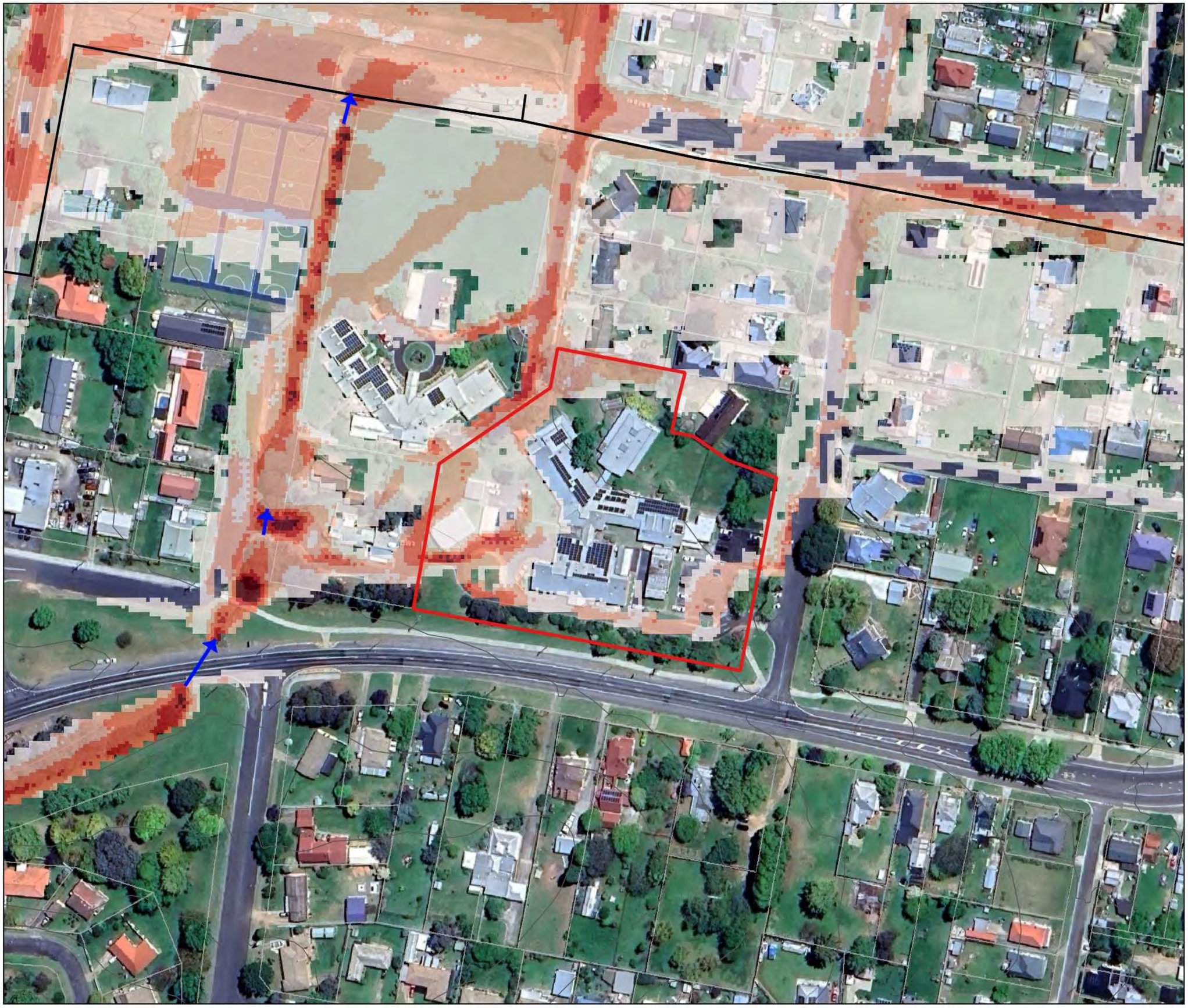
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Velocity (m/s)

- <= 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- > 2.0

Project Title
Blayney Multipurpose Service

Drawing Title
Existing 1% AEP + CC Velocity

Job No	Figure No
295289	**Figure 22**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	TH	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

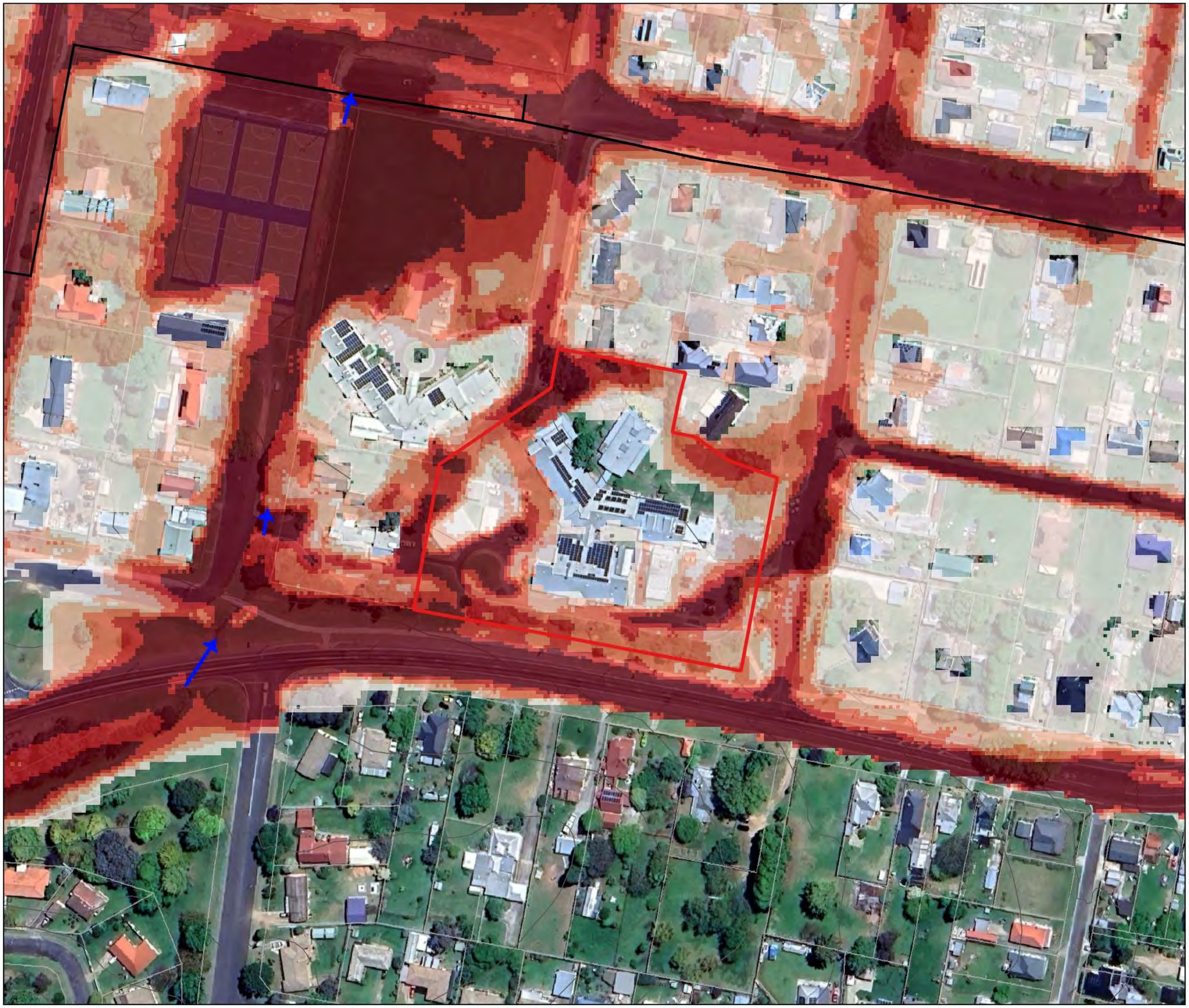
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Velocity (m/s)

- <= 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- > 2.0

Project Title

Blayney Multipurpose Service

Drawing Title

Existing PMF Velocity

Job No	Figure No
295289	**Figure 23**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale

0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	TH	JA

Client: NSW GOVERNMENT Health Infrastructure

Consultant: ARUP

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Hazard

- H1 Generally safe for vehicles, people and buildings.
- H2 Unsafe for small vehicles.
- H3 Unsafe for vehicles, children and the elderly.
- H4 Unsafe for vehicles and people.
- H5 Unsafe for vehicles and people. All building types vulnerable to structural damage.
- H6 Unsafe for vehicles and people. All building types considered vulnerable to failure.

Project Title

Blayney Multipurpose Service

Drawing Title

Existing 20% AEP Flood Hazard

Job No	Figure No
295289	**Figure 24**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale

0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	TH	JA

Client

NSW GOVERNMENT
Health Infrastructure

Consultant

ARUP
Sky Park, One Melbourne Quarter, 699 Collins Street, Docklands, VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Hazard

- H1 Generally safe for vehicles, people and buildings.
- H2 Unsafe for small vehicles.
- H3 Unsafe for vehicles, children and the elderly.
- H4 Unsafe for vehicles and people.
- H5 Unsafe for vehicles and people. All building types vulnerable to structural damage.
- H6 Unsafe for vehicles and people. All building types considered vulnerable to failure.

Project Title

Blayney Multipurpose Service

Drawing Title

Existing 5% AEP Flood Hazard

Job No	Figure No
295289	**Figure 25**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale: 0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	TH	JA

Client: NSW GOVERNMENT Health Infrastructure

Consultant: ARUP

Sky Park, One Melbourne Quarter, 699 Collins Street, Docklands, VIC 3008, Australia

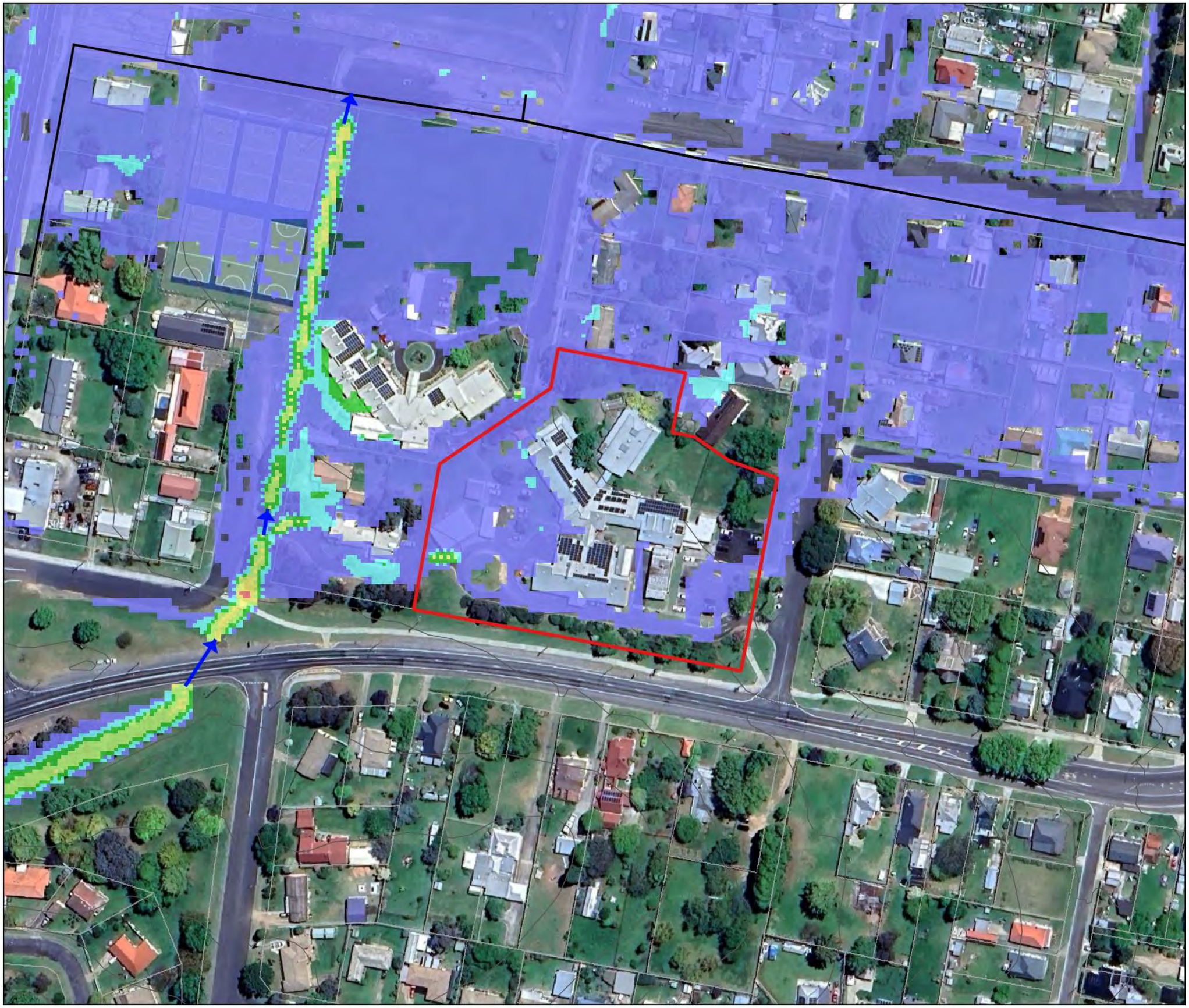
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Hazard

- H1 Generally safe for vehicles, people and buildings.
- H2 Unsafe for small vehicles.
- H3 Unsafe for vehicles, children and the elderly.
- H4 Unsafe for vehicles and people.
- H5 Unsafe for vehicles and people. All building types vulnerable to structural damage.
- H6 Unsafe for vehicles and people. All building types considered vulnerable to failure.

Project Title

Blayney Multipurpose Service

Drawing Title

Existing 1% AEP Flood Hazard

Job No	Figure No
295289	**Figure 26**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale: 0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	TH	JA

Client: NSW GOVERNMENT Health Infrastructure

Consultant: ARUP

Sky Park, One Melbourne Quarter, 699 Collins Street, Docklands, VIC 3008, Australia

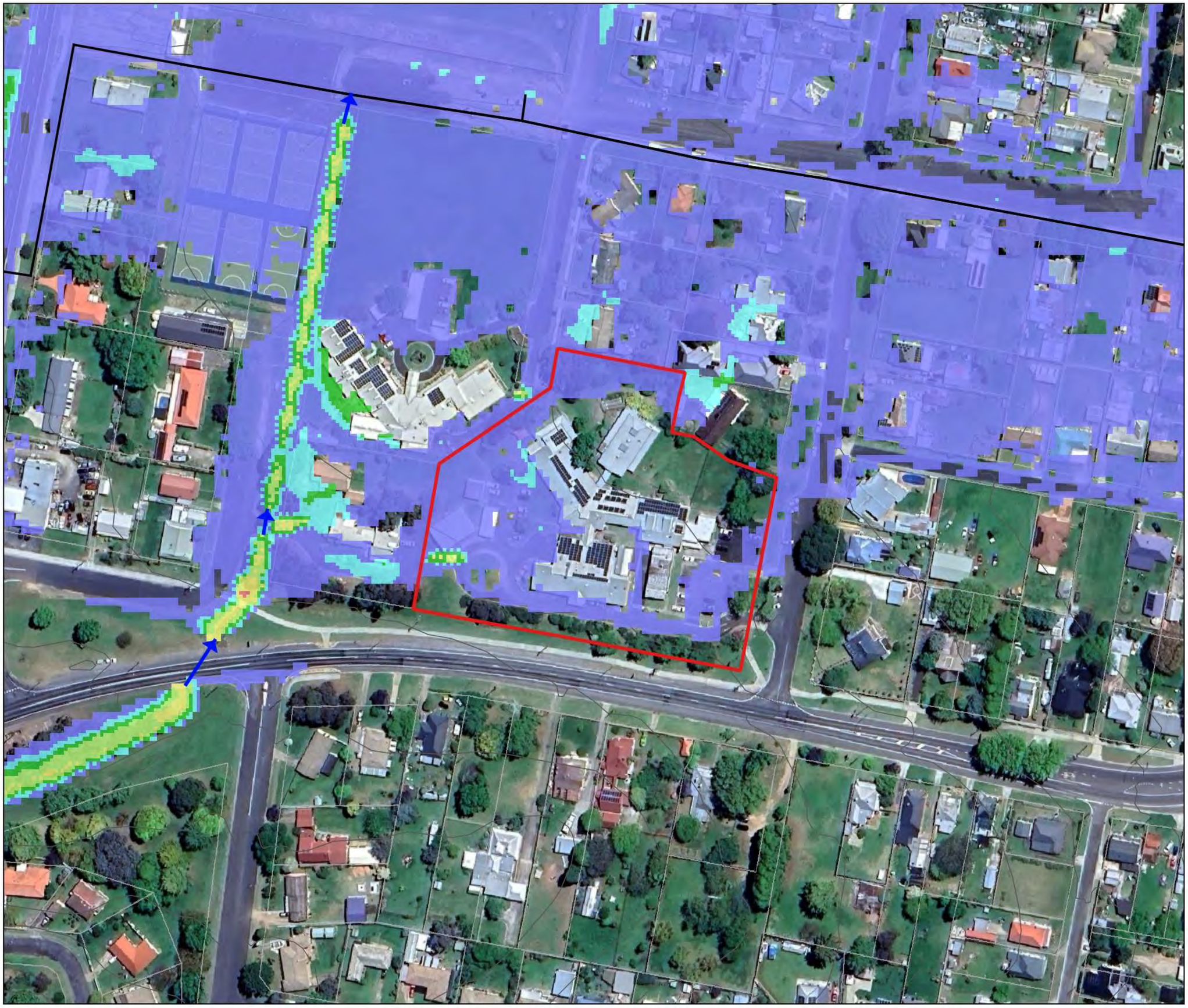
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Hazard

- H1 Generally safe for vehicles, people and buildings.
- H2 Unsafe for small vehicles.
- H3 Unsafe for vehicles, children and the elderly.
- H4 Unsafe for vehicles and people.
- H5 Unsafe for vehicles and people. All building types vulnerable to structural damage.
- H6 Unsafe for vehicles and people. All building types considered vulnerable to failure.

Project Title

Blayney Multipurpose Service

Drawing Title

Existing 1% AEP + CC Flood Hazard

Job No	Figure No
295289	**Figure 27**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale: 0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	TH	JA

Client: NSW GOVERNMENT Health Infrastructure

Consultant: ARUP

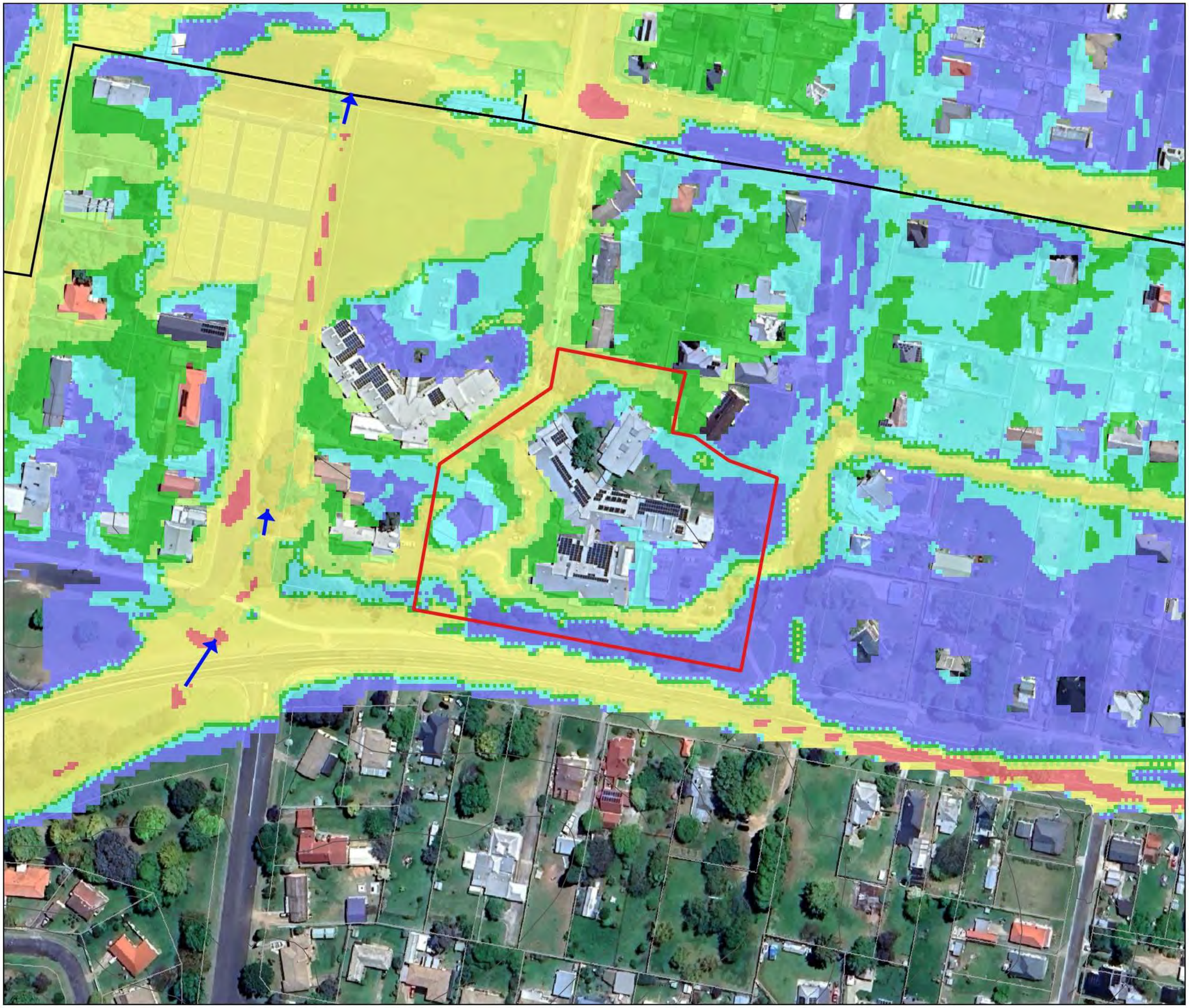
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Hazard

- H1 Generally safe for vehicles, people and buildings.
- H2 Unsafe for small vehicles.
- H3 Unsafe for vehicles, children and the elderly.
- H4 Unsafe for vehicles and people.
- H5 Unsafe for vehicles and people. All building types vulnerable to structural damage.
- H6 Unsafe for vehicles and people. All building types considered vulnerable to failure.

Project Title

Blayney Multipurpose Service

Drawing Title

Existing PMF Flood Hazard

Job No	Figure No
295289	**Figure 28**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale: 0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	TH	JA

Client: NSW GOVERNMENT Health Infrastructure

Consultant: ARUP

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N

Appendix C

Proposed Conditions Results without mitigation



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Depth (m)

- <= 0.05
- 0.05 - 0.10
- 0.10 - 0.20
- 0.20 - 0.30
- 0.30 - 0.40
- 0.40 - 0.50
- 0.50 - 1.00
- 1.00 - 2.50
- > 2.50
- Water Level Contour (m AHD)

Project Title
Blayney Multipurpose Service

Drawing Title
Unmitigated Design 20% AEP Depth

Job No	Figure No
295289	**Figure 29**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Depth (m)

- <= 0.05
- 0.05 - 0.10
- 0.10 - 0.20
- 0.20 - 0.30
- 0.30 - 0.40
- 0.40 - 0.50
- 0.50 - 1.00
- 1.00 - 2.50
- > 2.50
- Water Level Contour (m AHD)

Project Title
Blayney Multipurpose Service

Drawing Title
Unmitigated Design 5% AEP Depth

Job No	Figure No
295289	**Figure 30**
Coordinate System **GDA2020 MGA Zone 55**	Drawing Status **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

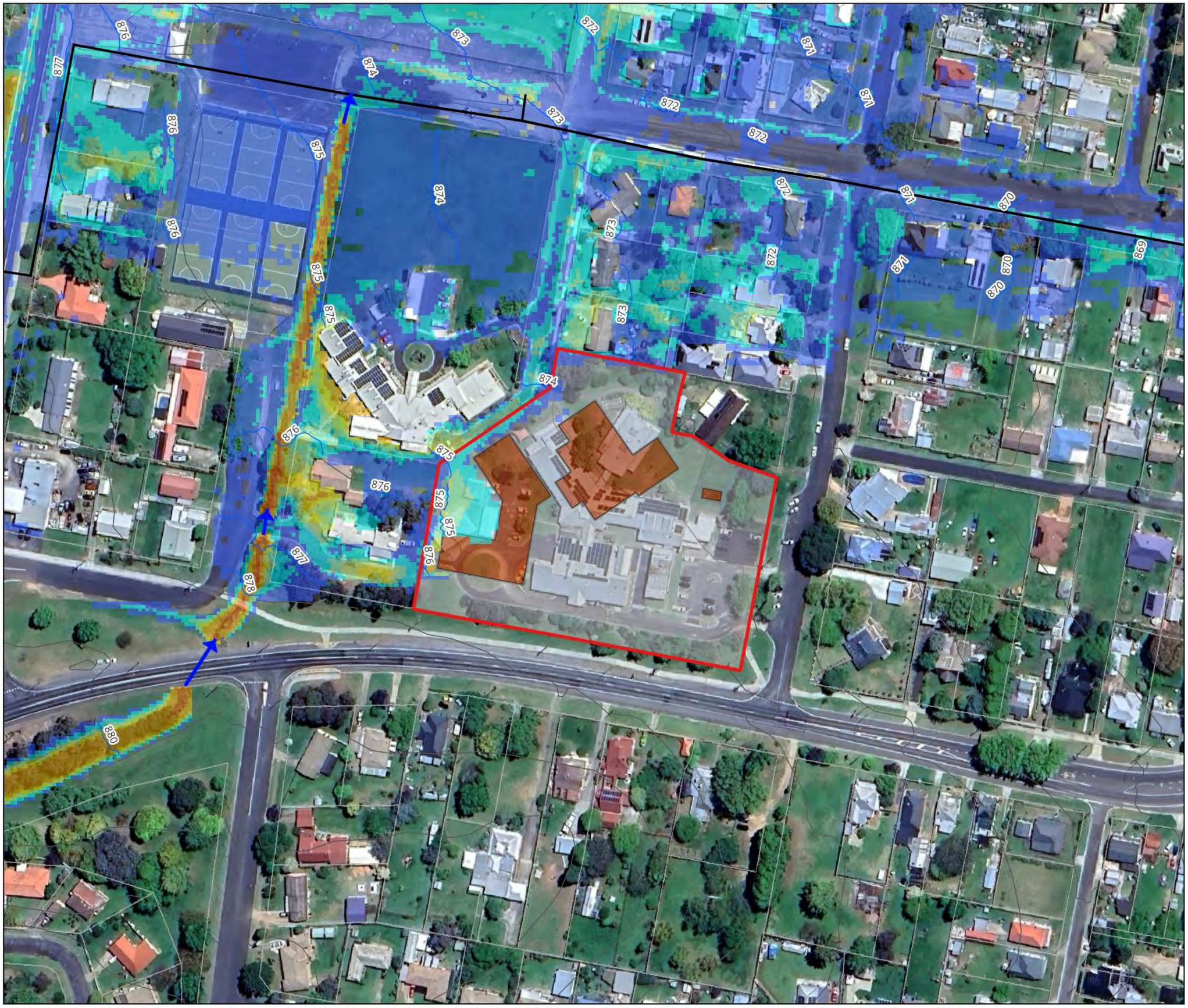
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Depth (m)

- <= 0.05
- 0.05 - 0.10
- 0.10 - 0.20
- 0.20 - 0.30
- 0.30 - 0.40
- 0.40 - 0.50
- 0.50 - 1.00
- 1.00 - 2.50
- > 2.50
- Water Level Contour (m AHD)

Project Title
Blayney Multipurpose Service

Drawing Title
Unmitigated Design 1% AEP Depth

Job No	Figure No
295289	**Figure 31**
Coordinate System **GDA2020 MGA Zone 55**	Drawing Status **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

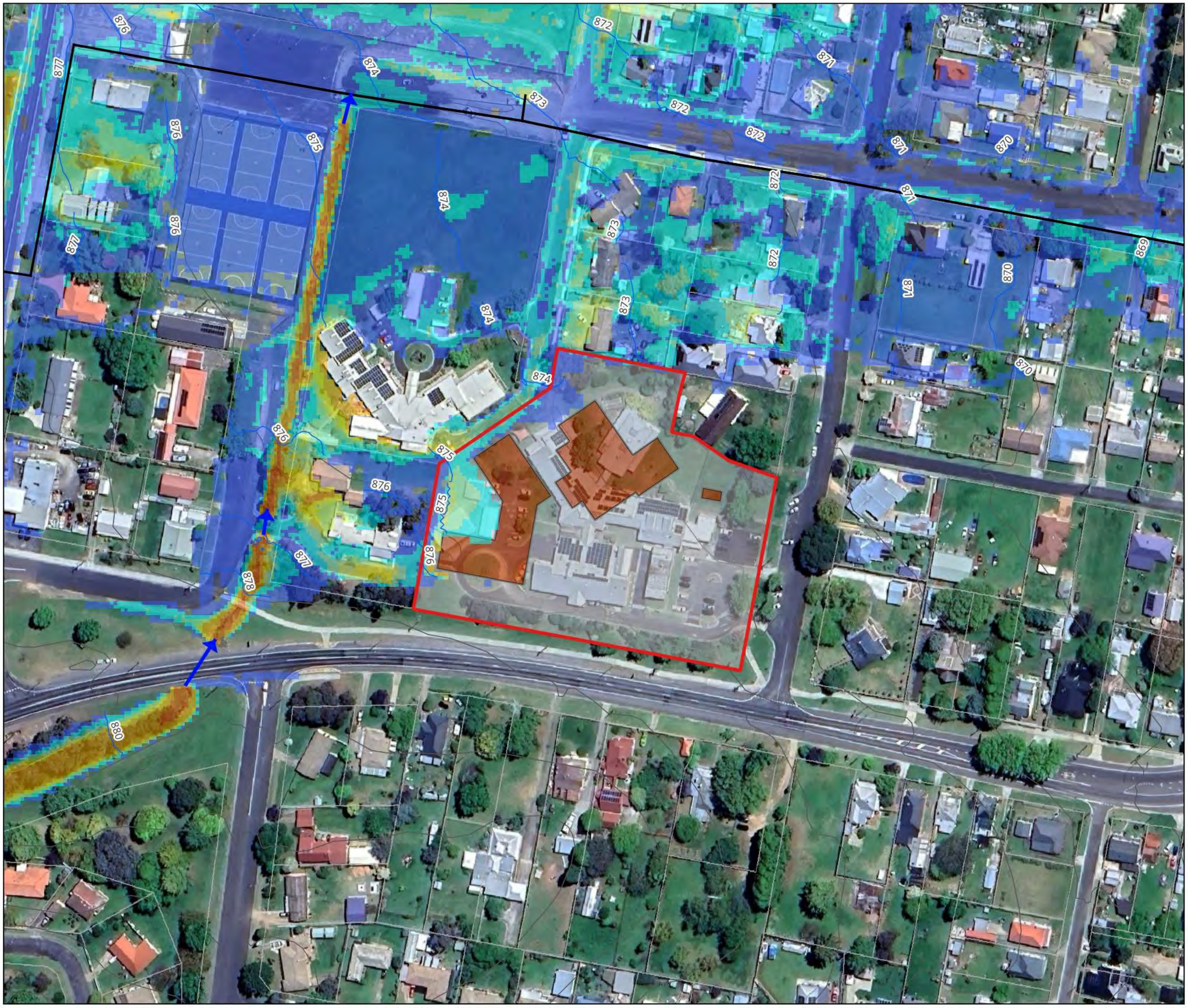
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Depth (m)

- <= 0.05
- 0.05 - 0.10
- 0.10 - 0.20
- 0.20 - 0.30
- 0.30 - 0.40
- 0.40 - 0.50
- 0.50 - 1.00
- 1.00 - 2.50
- > 2.50
- Water Level Contour (m AHD)

Project Title
Blayney Multipurpose Service

Drawing Title
Unmitigated Design 1% AEP + CC Depth

Job No	Figure No
295289	**Figure 32**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

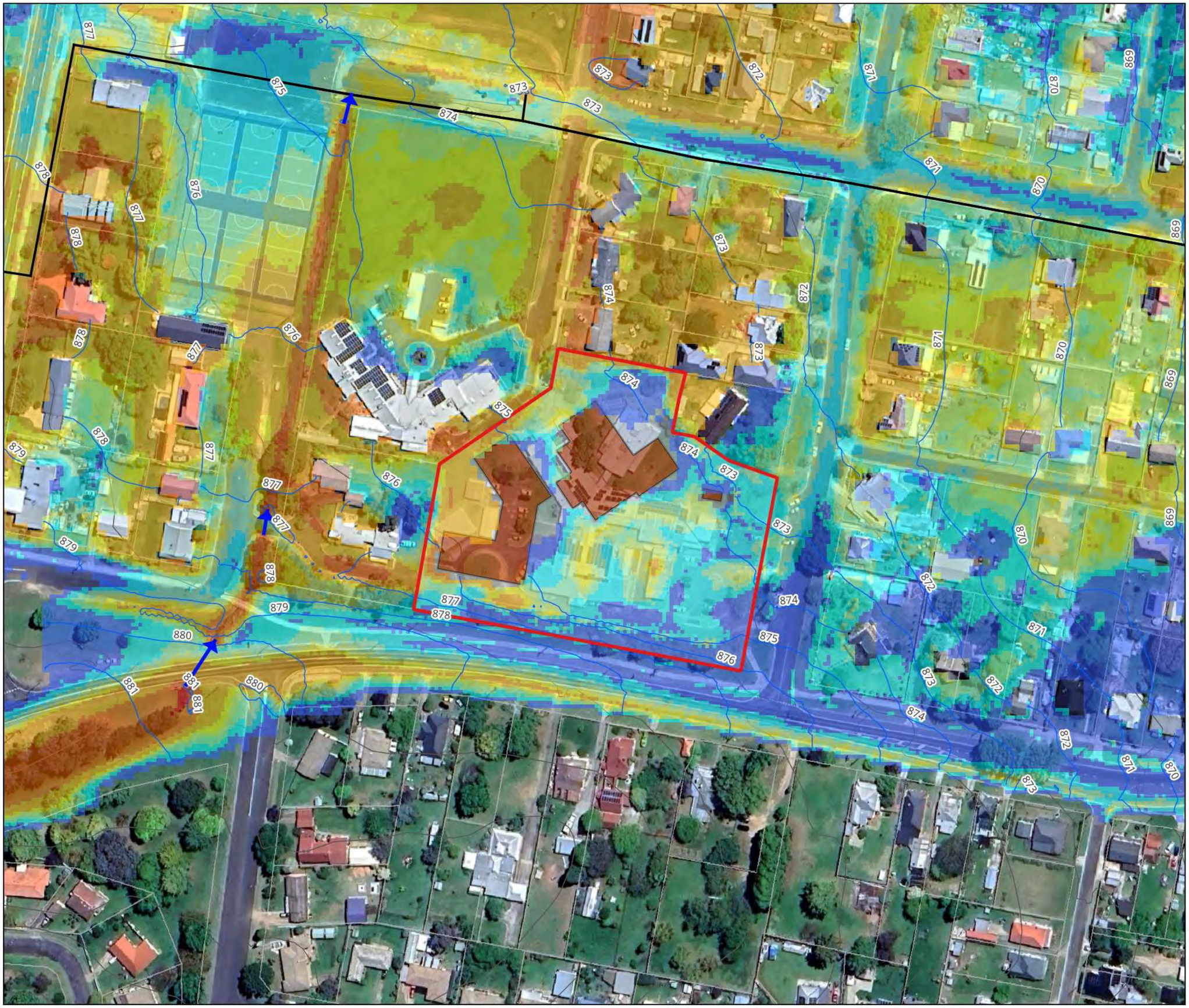
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Depth (m)

- <= 0.05
- 0.05 - 0.10
- 0.10 - 0.20
- 0.20 - 0.30
- 0.30 - 0.40
- 0.40 - 0.50
- 0.50 - 1.00
- 1.00 - 2.50
- > 2.50
- Water Level Contour (m AHD)

Project Title
Blayney Multipurpose Service

Drawing Title
Unmitigated Design PMF Depth

Job No	Figure No
295289	**Figure 33**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Level (m AHD)

- 890
- 860
- Water Level Contour (m AHD)

Project Title
Blayney Multipurpose Service

Drawing Title
Unmitigated Design 20% AEP Water Level

Job No	Figure No
295289	**Figure 34**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Level (m AHD)

- 890
- 860
- Water Level Contour (m AHD)

Project Title
Blayney Multipurpose Service

Drawing Title
Unmitigated Design 5% AEP Water Level

Job No	Figure No
295289	**Figure 35**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale: 0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client: NSW GOVERNMENT Health Infrastructure

Consultant: ARUP
Sky Park, One Melbourne Quarter, 699 Collins Street, Docklands, VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Level (m AHD)

- 890
- 860
- Water Level Contour (m AHD)

Project Title
Blayney Multipurpose Service

Drawing Title
Unmitigated Design 1% AEP Water Level

Job No	Figure No
295289	**Figure 36**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale: 0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client: NSW GOVERNMENT Health Infrastructure

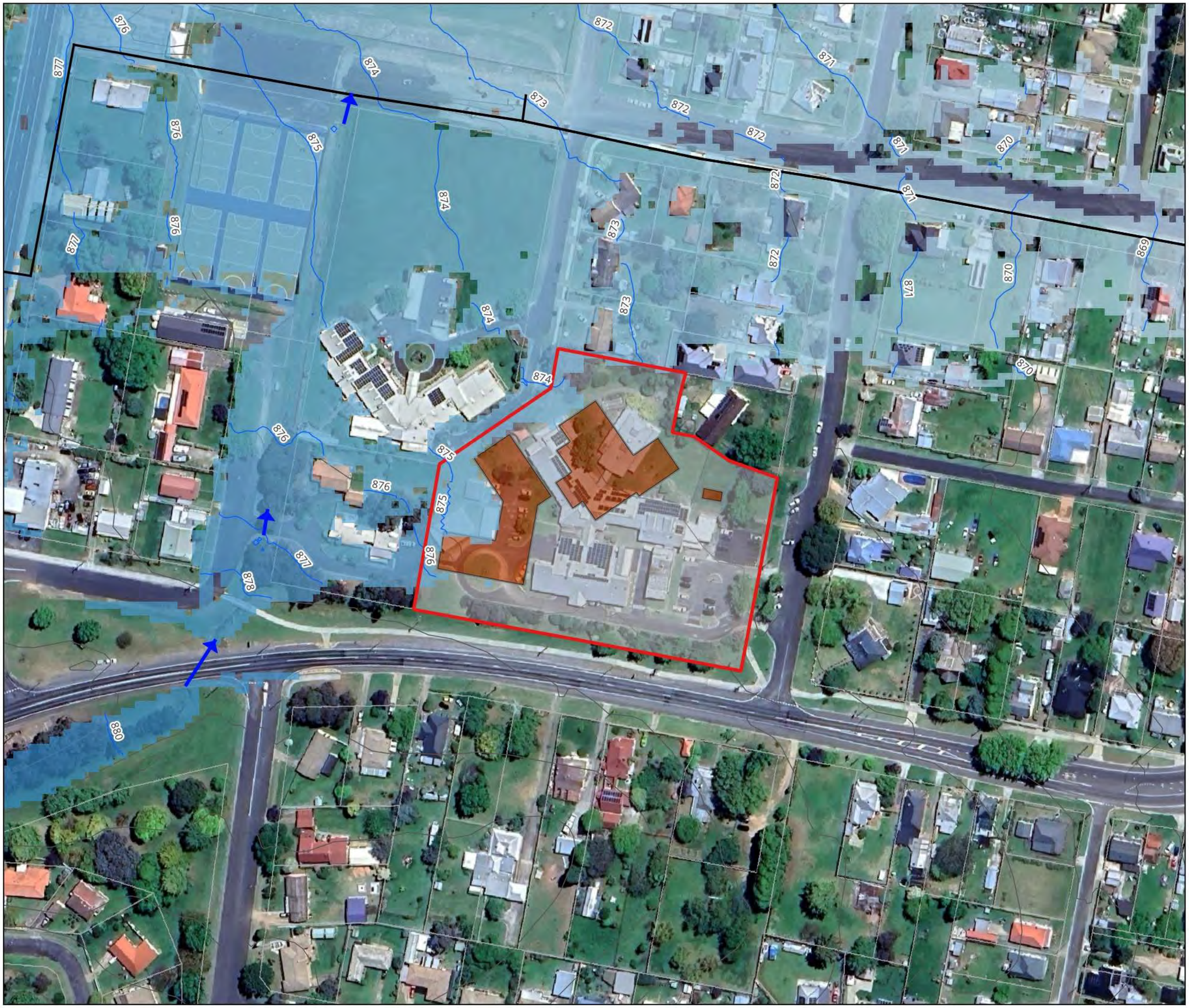
Consultant: ARUP
Sky Park, One Melbourne Quarter, 699 Collins Street, Docklands, VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Level (m AHD)

- 890
- 860
- Water Level Contour (m AHD)

Project Title
Blayney Multipurpose Service

Drawing Title
Unmitigated Design 1% AEP + CC Water Level

Job No	Figure No
295289	**Figure 37**

Coordinate System	Drawing Status
GDA2020 MGA Zone 55	**Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT Health Infrastructure

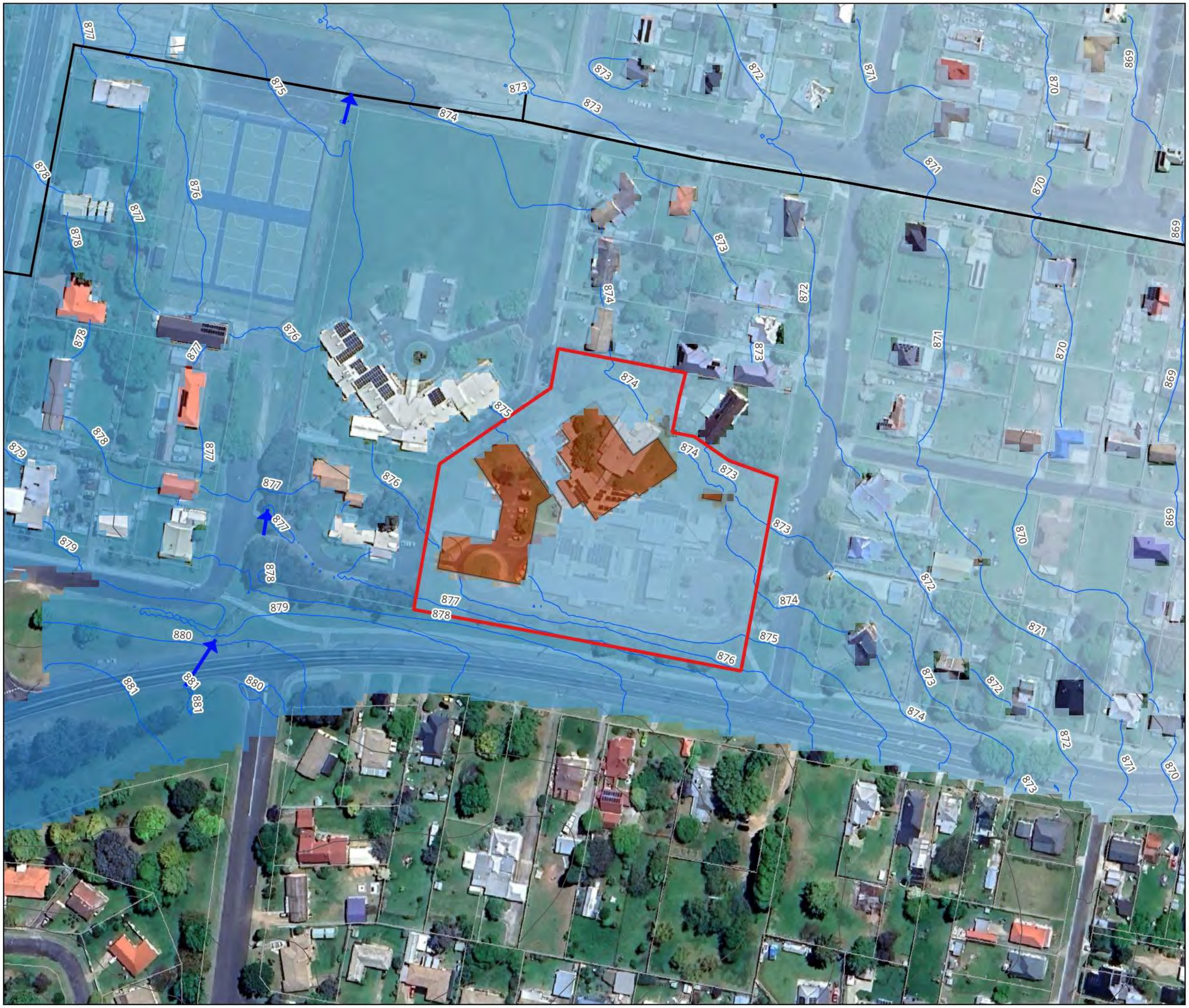
Consultant
ARUP
Sky Park, One Melbourne Quarter, 699 Collins Street, Docklands, VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Level (m AHD)

- 890
- 860
- Water Level Contour (m AHD)

Project Title
Blayney Multipurpose Service

Drawing Title
Unmitigated Design PMF Water Level

Job No	Figure No
295289	**Figure 38**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Velocity (m/s)

- <= 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- > 2.0

Project Title
Blayney Multipurpose Service

Drawing Title
Unmitigated Design 20% AEP Velocity

Job No	Figure No
295289	**Figure 39**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Velocity (m/s)

- <= 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- > 2.0

Project Title
Blayney Multipurpose Service

Drawing Title
Unmitigated Design 5% AEP Velocity

Job No	Figure No
295289	**Figure 40**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter, 699 Collins Street, Docklands, VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Velocity (m/s)

- <= 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- > 2.0

Project Title
Blayney Multipurpose Service

Drawing Title
Unmitigated Design 1% AEP Velocity

Job No	Figure No
295289	**Figure 41**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Velocity (m/s)

- <= 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- > 2.0

Project Title
Blayney Multipurpose Service

Drawing Title
Unmitigated Design 1% AEP + CC Velocity

Job No	Figure No
295289	**Figure 42**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

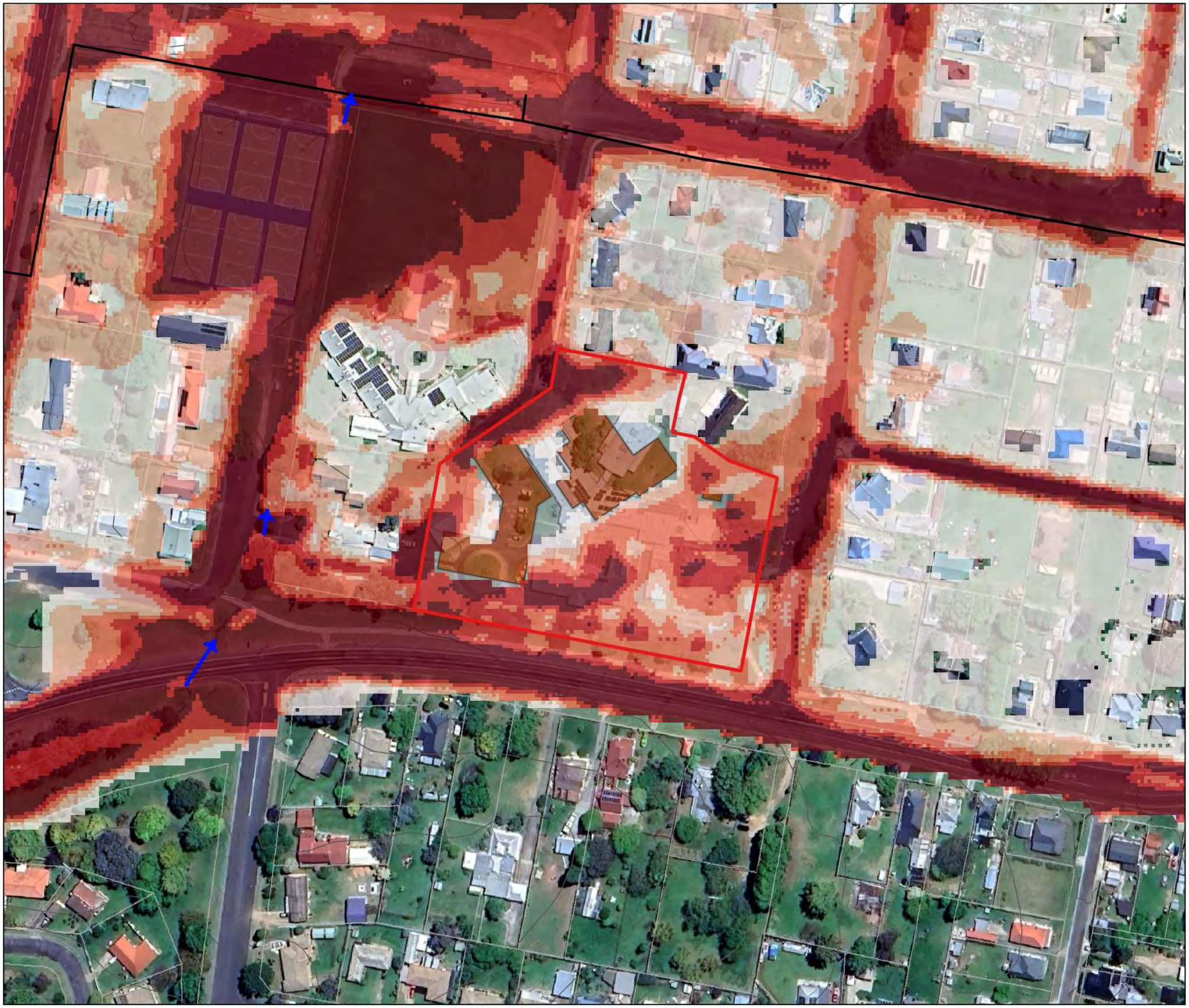
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Velocity (m/s)

- <= 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- > 2.0

Project Title
Blayney Multipurpose Service

Drawing Title
Unmitigated Design PMF Velocity

Job No	Figure No
295289	**Figure 43**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

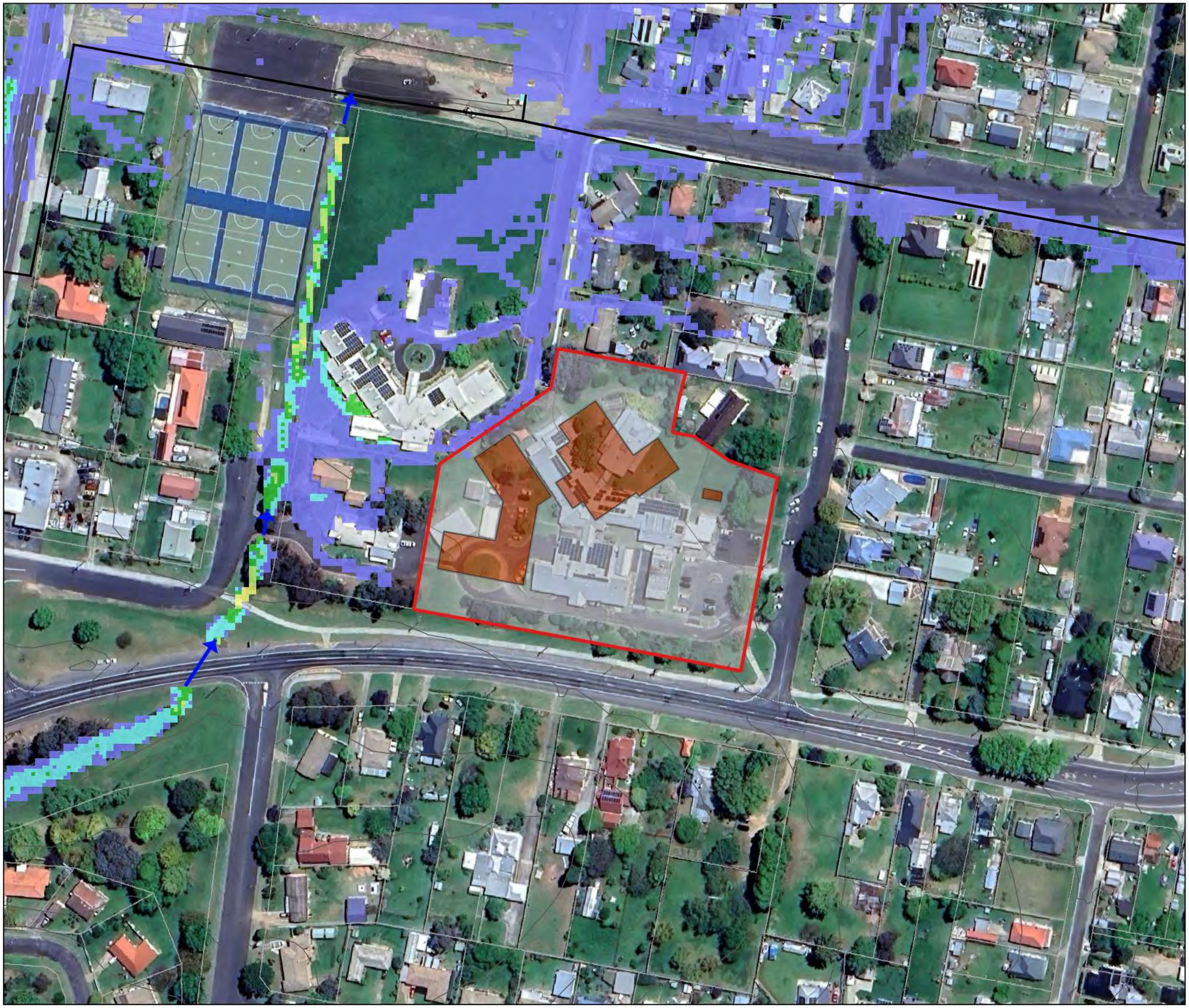
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

N

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Hazard

- H1 Generally safe for vehicles, people and buildings.
- H2 Unsafe for small vehicles.
- H3 Unsafe for vehicles, children and the elderly.
- H4 Unsafe for vehicles and people.
- H5 Unsafe for vehicles and people. All building types vulnerable to structural damage.
- H6 Unsafe for vehicles and people. All building types considered vulnerable to failure.

Project Title
Blayney Multipurpose Service

Drawing Title
Unmitigated Design 20% AEP Flood Hazard

Job No	Figure No
295289	**Figure 44**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter, 699 Collins Street, Docklands, VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Hazard

- H1 Generally safe for vehicles, people and buildings.
- H2 Unsafe for small vehicles.
- H3 Unsafe for vehicles, children and the elderly.
- H4 Unsafe for vehicles and people.
- H5 Unsafe for vehicles and people. All building types vulnerable to structural damage.
- H6 Unsafe for vehicles and people. All building types considered vulnerable to failure.

Project Title
Blayney Multipurpose Service

Drawing Title
Unmitigated Design 5% AEP Flood Hazard

Job No	Figure No
295289	**Figure 45**
Coordinate System **GDA2020 MGA Zone 55**	Drawing Status **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

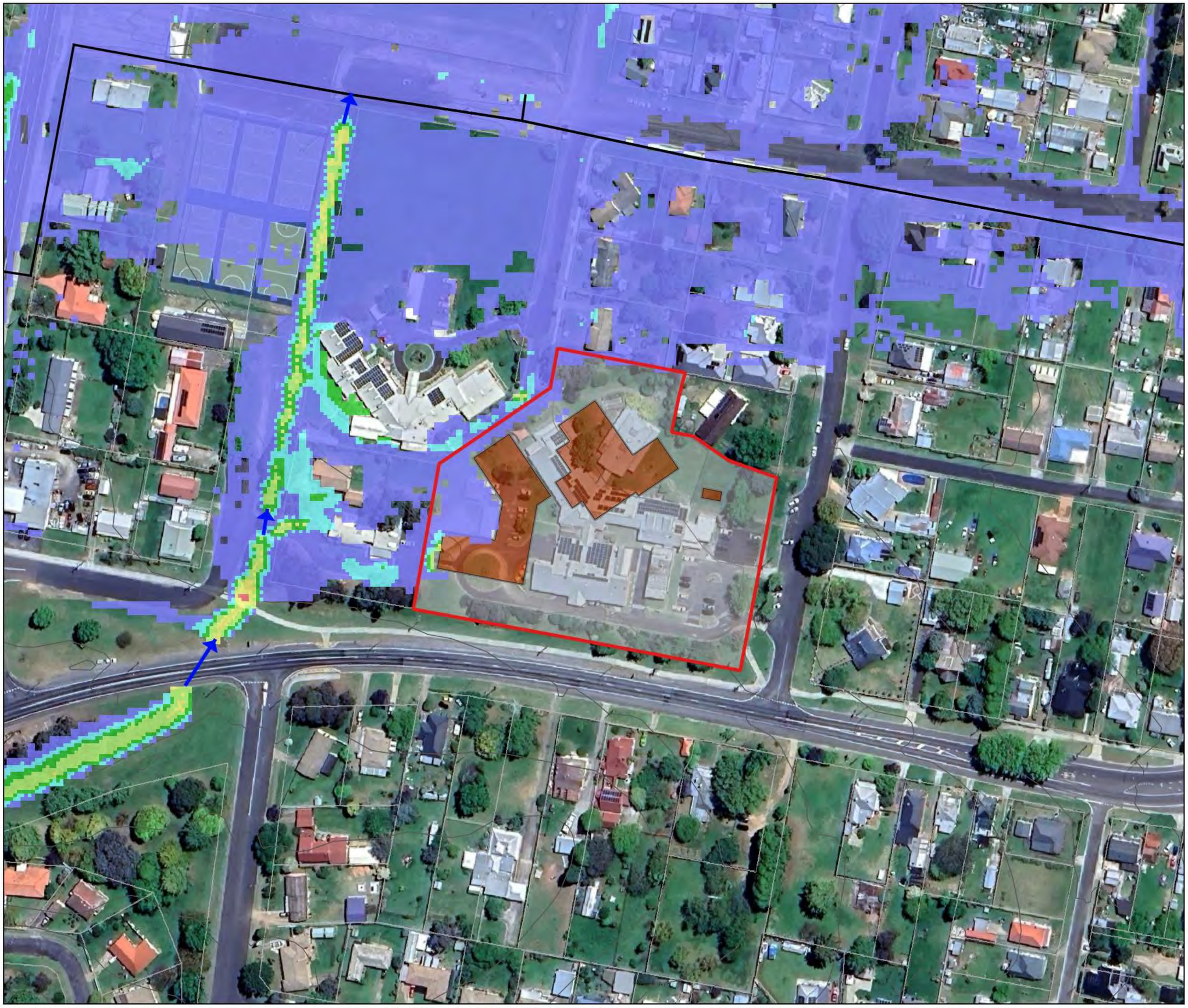
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Hazard

- H1 Generally safe for vehicles, people and buildings.
- H2 Unsafe for small vehicles.
- H3 Unsafe for vehicles, children and the elderly.
- H4 Unsafe for vehicles and people.
- H5 Unsafe for vehicles and people. All building types vulnerable to structural damage.
- H6 Unsafe for vehicles and people. All building types considered vulnerable to failure.

Project Title
Blayney Multipurpose Service

Drawing Title
Unmitigated Design 1% AEP Flood Hazard

Job No	Figure No
295289	**Figure 46**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

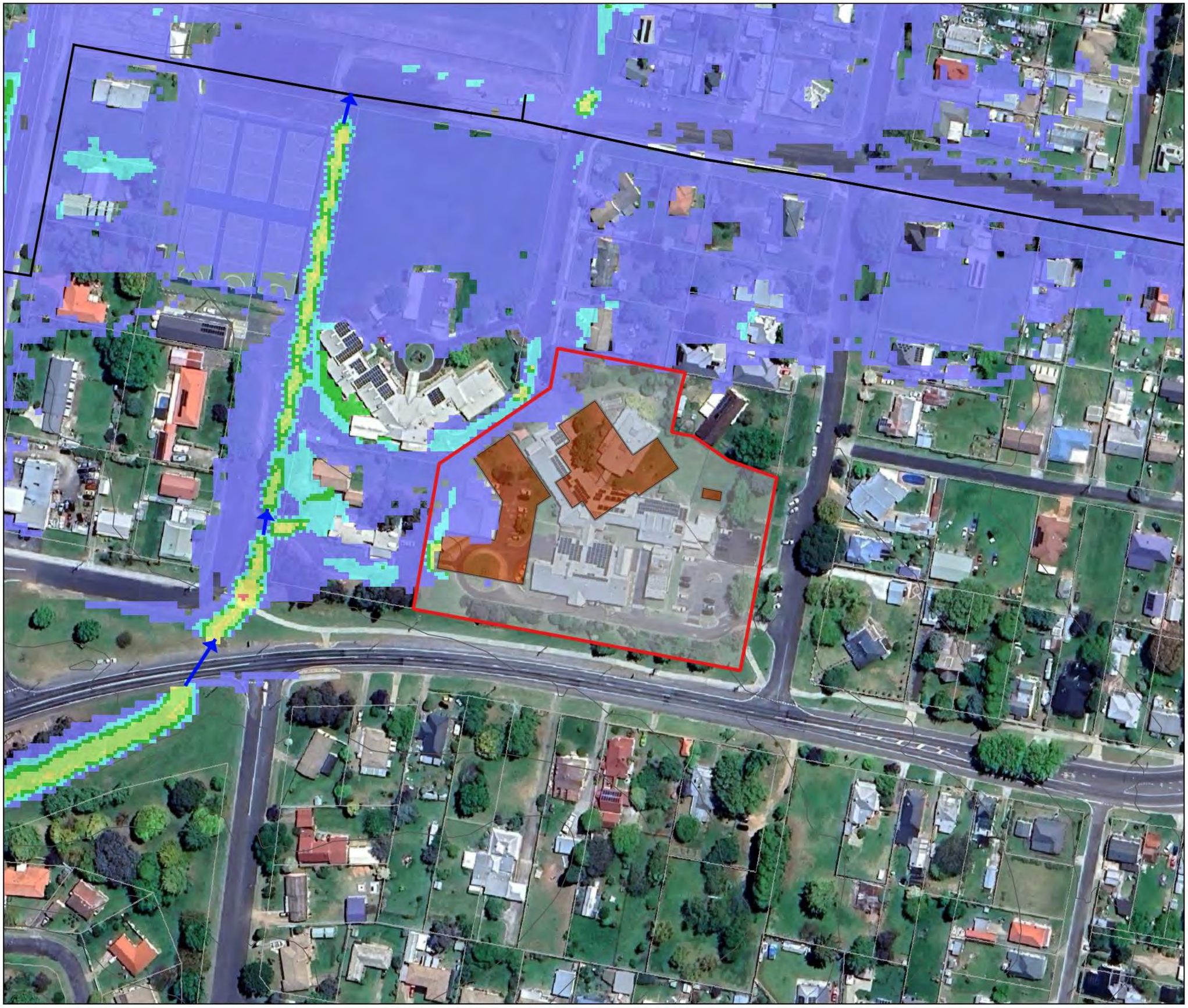
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Hazard

- H1 Generally safe for vehicles, people and buildings.
- H2 Unsafe for small vehicles.
- H3 Unsafe for vehicles, children and the elderly.
- H4 Unsafe for vehicles and people.
- H5 Unsafe for vehicles and people. All building types vulnerable to structural damage.
- H6 Unsafe for vehicles and people. All building types considered vulnerable to failure.

Project Title
Blayney Multipurpose Service

Drawing Title
Unmitigated Design 1% AEP + CC Flood Hazard

Job No	Figure No
295289	**Figure 47**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

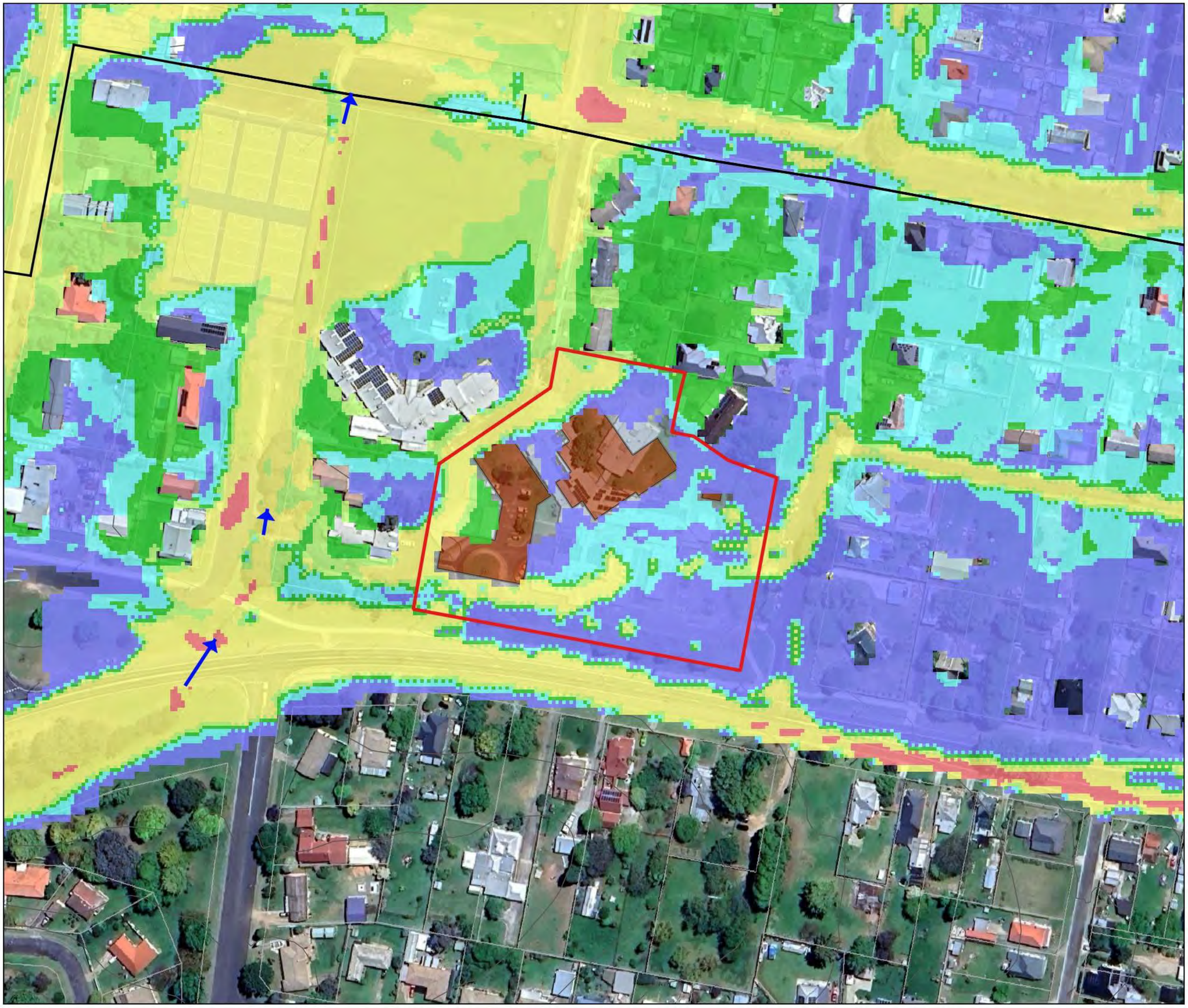
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Hazard

- H1 Generally safe for vehicles, people and buildings.
- H2 Unsafe for small vehicles.
- H3 Unsafe for vehicles, children and the elderly.
- H4 Unsafe for vehicles and people.
- H5 Unsafe for vehicles and people. All building types vulnerable to structural damage.
- H6 Unsafe for vehicles and people. All building types considered vulnerable to failure.

Project Title
Blayney Multipurpose Service

Drawing Title
Unmitigated Design PMF Flood Hazard

Job No	Figure No
295289	**Figure 48**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Impact (m)

- Was Wet, Now Dry
- < - 0.1
- -0.5 to -0.02
- -0.02 to -0.01
- -0.01 to 0.01
- 0.01 to 0.02
- 0.02 to 0.03
- 0.02 to 0.04
- 0.04 to 0.05
- 0.05 to 0.075
- 0.075 to 0.1
- 0.1 to 0.25
- 0.25 to 0.5
- > 0.5
- Was Dry, Now Wet

Project Title

Blayney Multipurpose Service

Drawing Title

Unmitigated Design 20% AEP Afflux

Job No	Figure No
295289	**Figure 49**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale

0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client: NSW GOVERNMENT Health Infrastructure

Consultant: ARUP

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Impact (m)

- Was Wet, Now Dry
- < - 0.1
- -0.5 to -0.02
- -0.02 to -0.01
- -0.01 to 0.01
- 0.01 to 0.02
- 0.02 to 0.03
- 0.02 to 0.04
- 0.04 to 0.05
- 0.05 to 0.075
- 0.075 to 0.1
- 0.1 to 0.25
- 0.25 to 0.5
- > 0.5
- Was Dry, Now Wet

Project Title

Blayney Multipurpose Service

Drawing Title

Unmitigated Design 5% AEP Afflux

Job No	Figure No
295289	**Figure 50**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale

0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client: NSW GOVERNMENT Health Infrastructure

Consultant: ARUP

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Impact (m)

- Was Wet, Now Dry
- < - 0.1
- -0.5 to -0.02
- -0.02 to -0.01
- -0.01 to 0.01
- 0.01 to 0.02
- 0.02 to 0.03
- 0.02 to 0.04
- 0.04 to 0.05
- 0.05 to 0.075
- 0.075 to 0.1
- 0.1 to 0.25
- 0.25 to 0.5
- > 0.5
- Was Dry, Now Wet

Project Title

Blayney Multipurpose Service

Drawing Title

Unmitigated Design 1% AEP Afflux

Job No	Figure No
295289	**Figure 51**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale

0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client: NSW GOVERNMENT Health Infrastructure

Consultant: ARUP

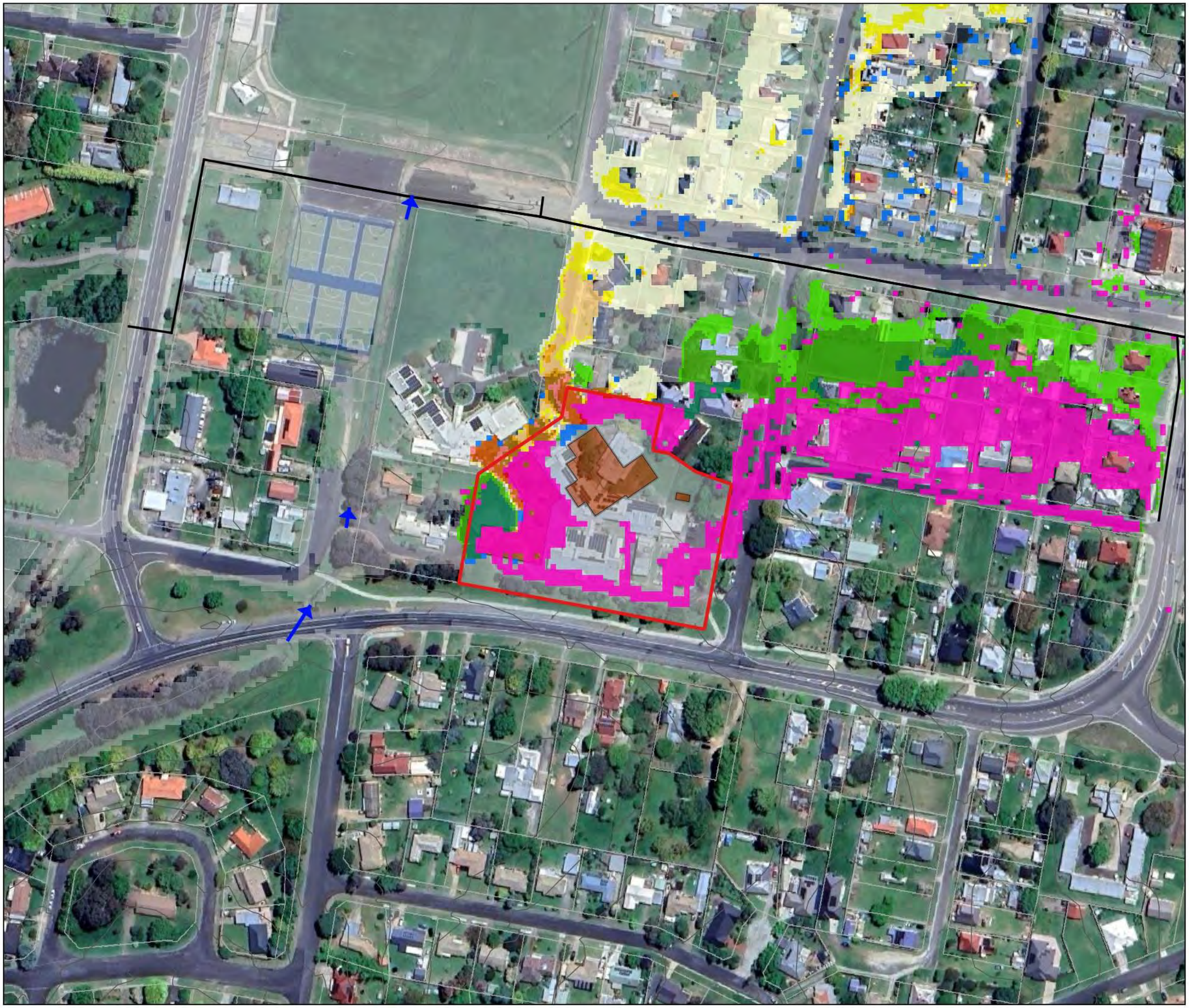
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Impact (m)

- Was Wet, Now Dry
- < - 0.1
- -0.5 to -0.02
- -0.02 to -0.01
- -0.01 to 0.01
- 0.01 to 0.02
- 0.02 to 0.03
- 0.02 to 0.04
- 0.04 to 0.05
- 0.05 to 0.075
- 0.075 to 0.1
- 0.1 to 0.25
- 0.25 to 0.5
- > 0.5
- Was Dry, Now Wet

Project Title

Blayney Multipurpose Service

Drawing Title

Unmitigated Design 1% AEP + CC Afflux

Job No	Figure No
295289	**Figure 52**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale

0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client

NSW GOVERNMENT Health Infrastructure

Consultant

ARUP

Sky Park, One Melbourne Quarter, 699 Collins Street, Docklands, VIC 3008, Australia

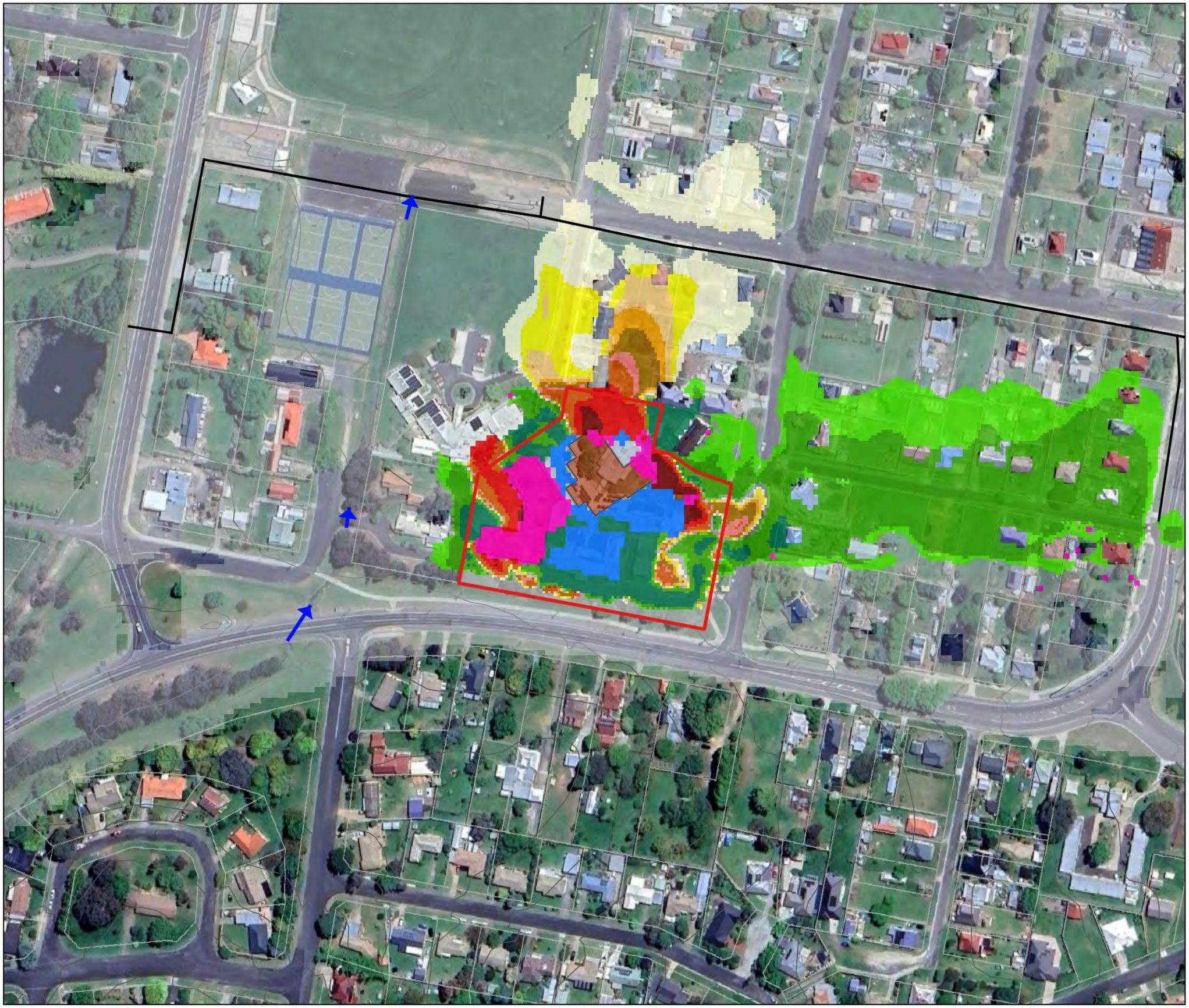
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Impact (m)

- Was Wet, Now Dry
- < - 0.1
- -0.5 to -0.02
- -0.02 to -0.01
- -0.01 to 0.01
- 0.01 to 0.02
- 0.02 to 0.03
- 0.02 to 0.04
- 0.04 to 0.05
- 0.05 to 0.075
- 0.075 to 0.1
- 0.1 to 0.25
- 0.25 to 0.5
- > 0.5
- Was Dry, Now Wet

Project Title

Blayney Multipurpose Service

Drawing Title

Unmitigated Design PMF Afflux

Job No	Figure No
295289	**Figure 53**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale

0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client

NSW GOVERNMENT Health Infrastructure

Consultant

ARUP

Sky Park, One Melbourne Quarter, 699 Collins Street, Docklands, VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N

Appendix D

Proposed Conditions Results with mitigation



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Depth (m)

- <= 0.05
- 0.05 - 0.10
- 0.10 - 0.20
- 0.20 - 0.30
- 0.30 - 0.40
- 0.40 - 0.50
- 0.50 - 1.00
- 1.00 - 2.50
- > 2.50
- Water Level Contour (m AHD)

Project Title

Blayney Multipurpose Service

Drawing Title

Design 20% AEP Depth

Job No	Figure No
295289	**Figure 54**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale: 0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client: NSW GOVERNMENT Health Infrastructure

Consultant: ARUP

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Depth (m)

- <= 0.05
- 0.05 - 0.10
- 0.10 - 0.20
- 0.20 - 0.30
- 0.30 - 0.40
- 0.40 - 0.50
- 0.50 - 1.00
- 1.00 - 2.50
- > 2.50
- Water Level Contour (m AHD)

Project Title
Blayney Multipurpose Service

Drawing Title
Design 5% AEP Depth

Job No	Figure No
295289	**Figure 55**
Coordinate System **GDA2020** **MGA Zone 55**	Drawing Status **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

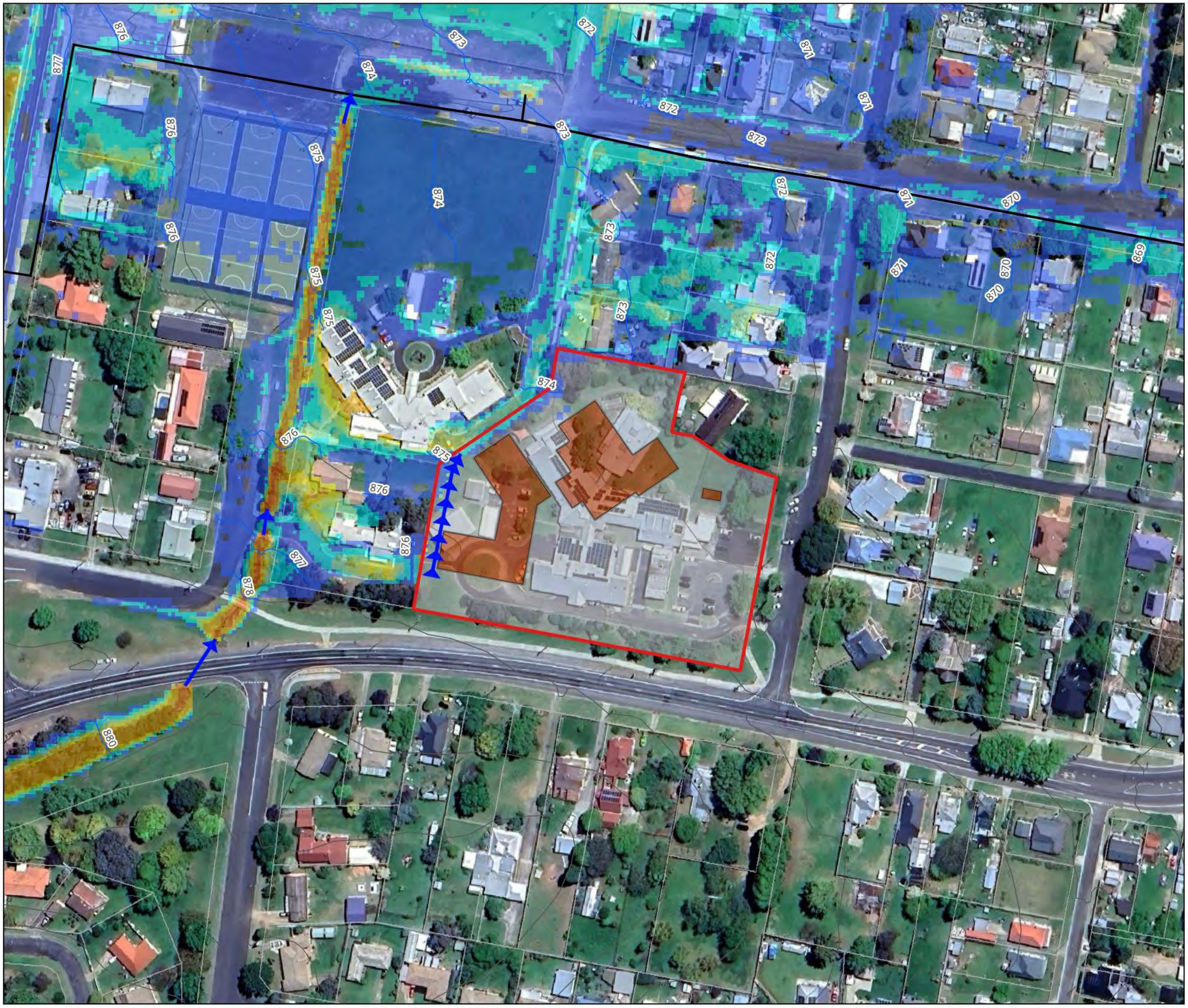
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Depth (m)

- <= 0.05
- 0.05 - 0.10
- 0.10 - 0.20
- 0.20 - 0.30
- 0.30 - 0.40
- 0.40 - 0.50
- 0.50 - 1.00
- 1.00 - 2.50
- > 2.50
- Water Level Contour (m AHD)

Project Title
Blayney Multipurpose Service

Drawing Title
Design 1% AEP Depth

Job No	Figure No
295289	**Figure 56**
Coordinate System **GDA2020** **MGA Zone 55**	Drawing Status **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

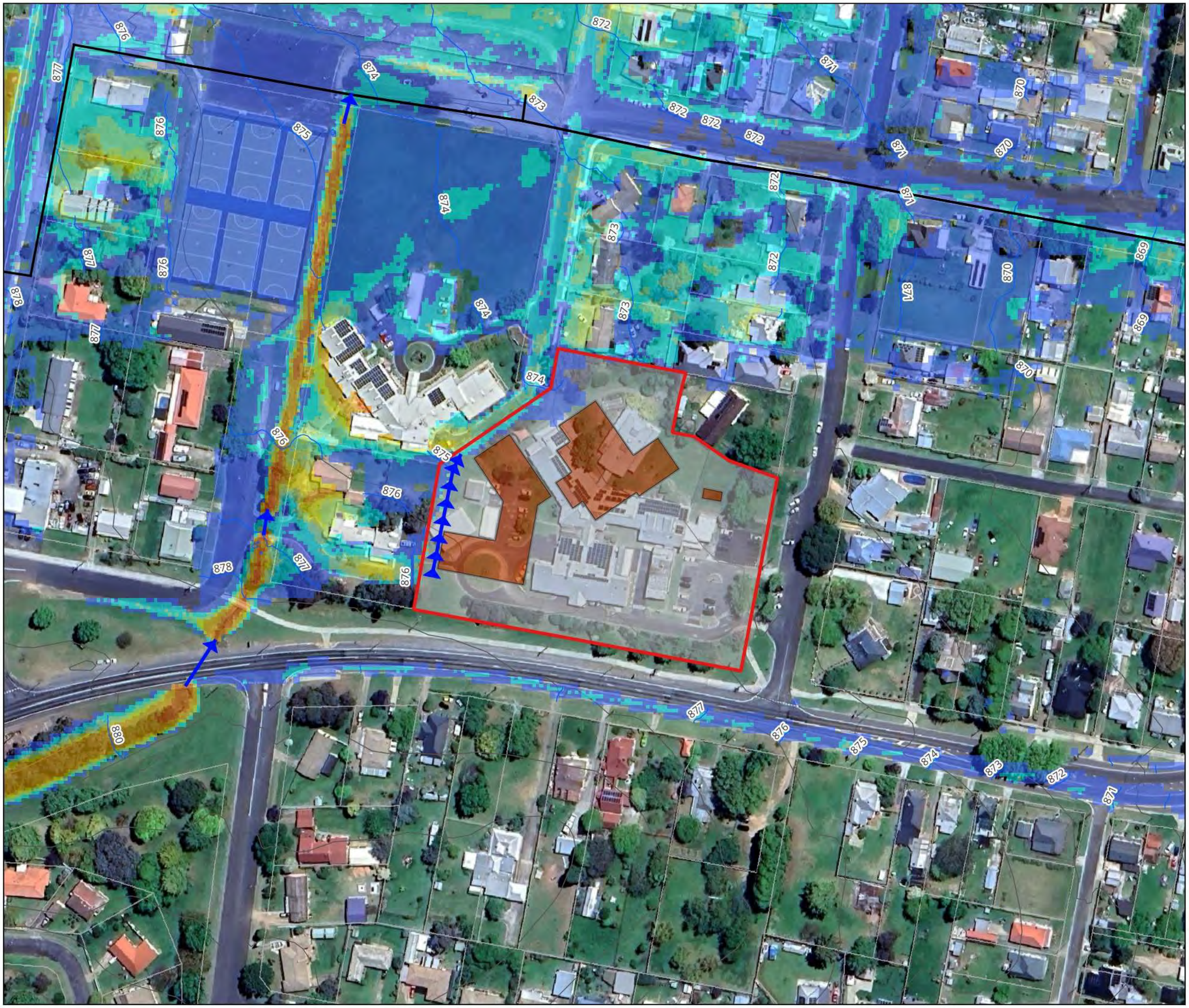
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Depth (m)

- <= 0.05
- 0.05 - 0.10
- 0.10 - 0.20
- 0.20 - 0.30
- 0.30 - 0.40
- 0.40 - 0.50
- 0.50 - 1.00
- 1.00 - 2.50
- > 2.50
- Water Level Contour (m AHD)

Project Title
Blayney Multipurpose Service

Drawing Title
Design 1% AEP + CC Depth

Job No	Figure No
295289	**Figure 57**
Coordinate System **GDA2020** **MGA Zone 55**	Drawing Status **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

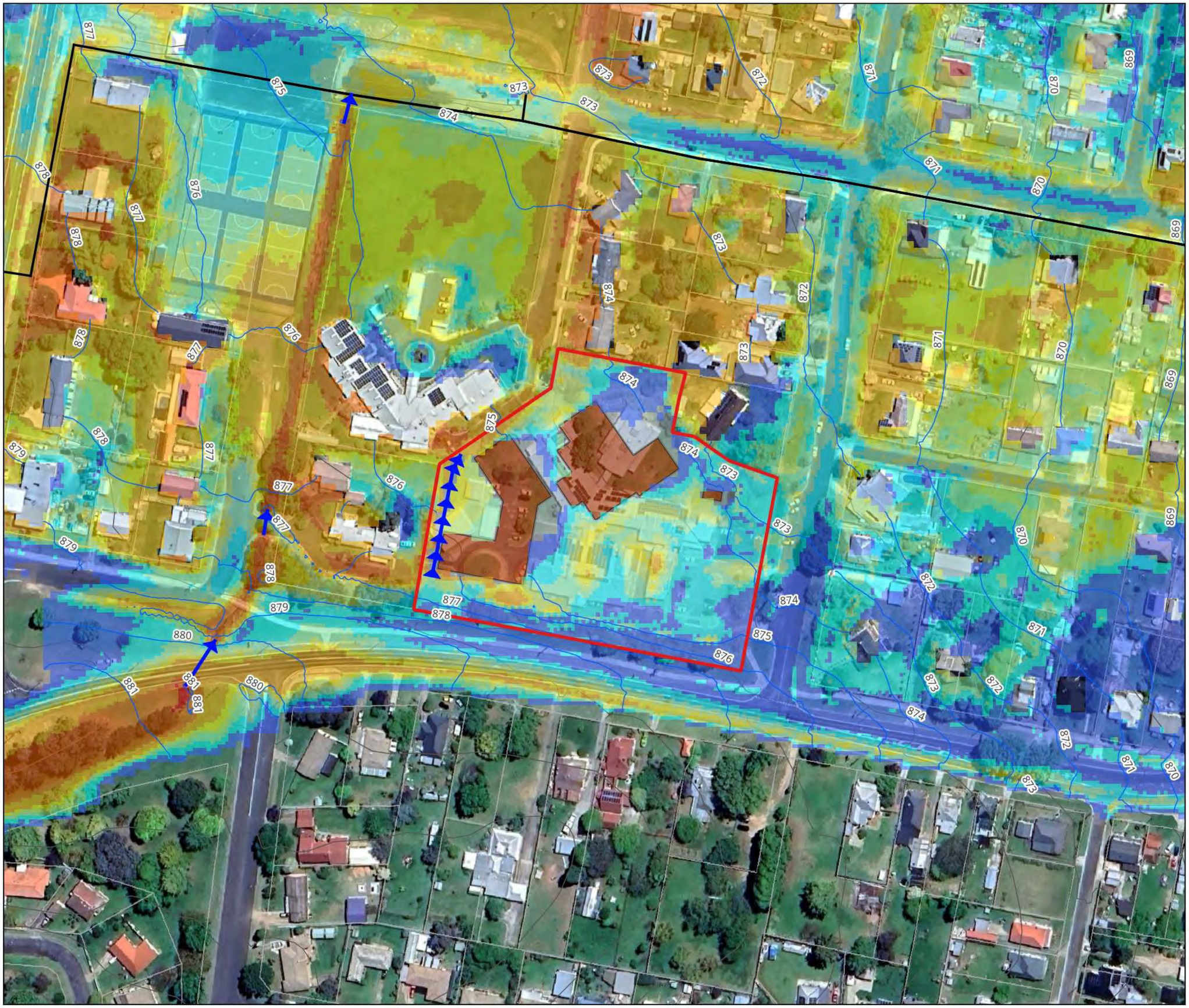
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Depth (m)

- <= 0.05
- 0.05 - 0.10
- 0.10 - 0.20
- 0.20 - 0.30
- 0.30 - 0.40
- 0.40 - 0.50
- 0.50 - 1.00
- 1.00 - 2.50
- > 2.50
- Water Level Contour (m AHD)

Project Title
Blayney Multipurpose Service

Drawing Title
Design PMF Depth

Job No	Figure No
295289	**Figure 58**
Coordinate System **GDA2020** **MGA Zone 55**	Drawing Status **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Level (m AHD)

890
860

Project Title
Blayney Multipurpose Service

Drawing Title
Design 20% AEP Water Level

Job No	Figure No
295289	**Figure 59**

Coordinate System	Drawing Status
GDA2020 MGA Zone 55	**Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter, 699 Collins Street, Docklands, VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Level (m AHD)

890
860

Project Title
Blayney Multipurpose Service

Drawing Title
Design 5% AEP Water Level

Job No	Figure No
295289	**Figure 60**
Coordinate System **GDA2020** **MGA Zone 55**	Drawing Status **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Level (m AHD)

890
860

Project Title
Blayney Multipurpose Service

Drawing Title
Design 1% AEP Water Level

Job No	Figure No
295289	**Figure 61**
Coordinate System **GDA2020** **MGA Zone 55**	Drawing Status **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Level (m AHD)

890
860

Project Title
Blayney Multipurpose Service

Drawing Title
Design 1% AEP + CC Water Level

Job No	Figure No
295289	**Figure 62**
Coordinate System **GDA2020 MGA Zone 55**	Drawing Status **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

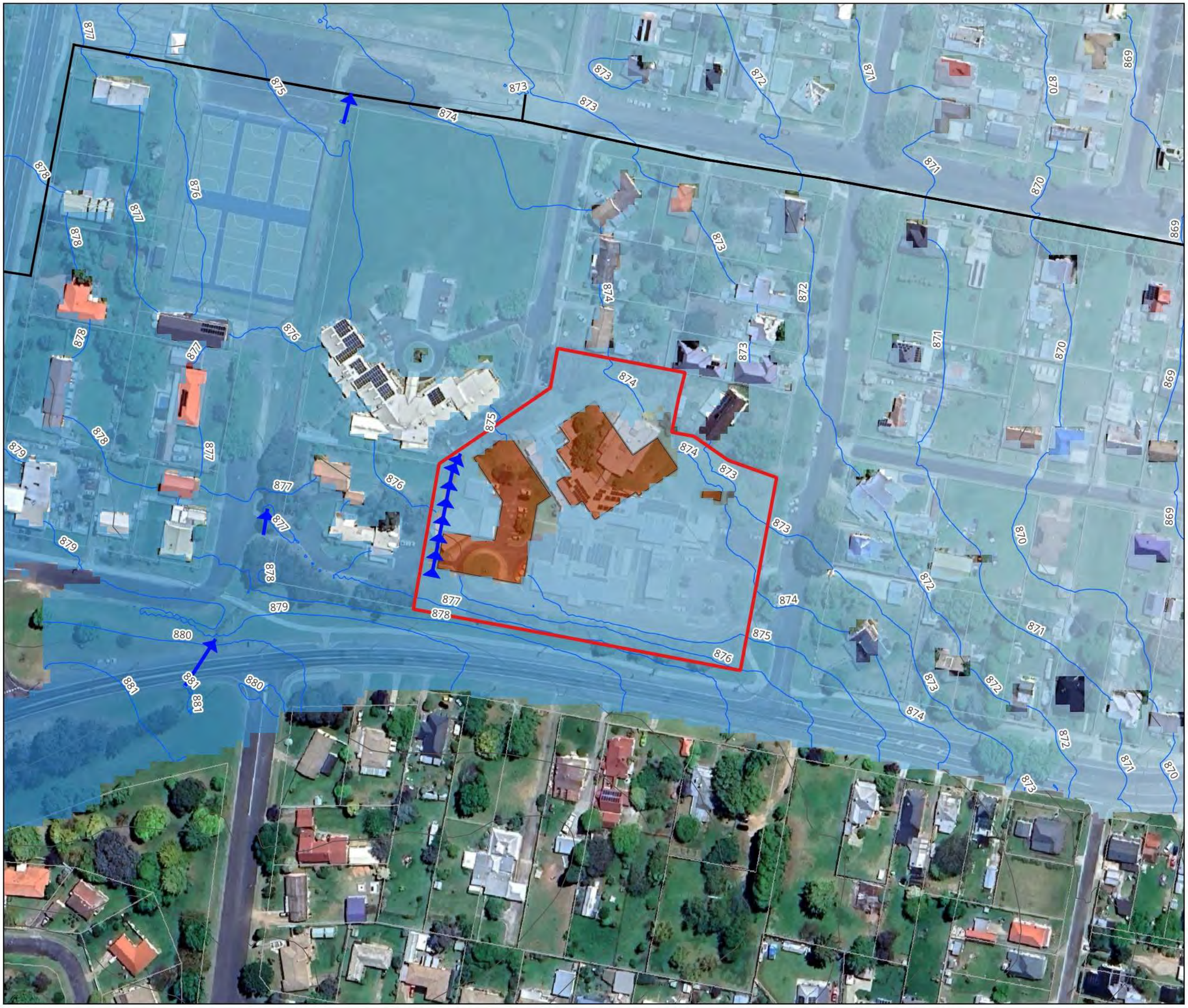
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Level (m AHD)

890
860

Project Title
Blayney Multipurpose Service

Drawing Title
Design PMF Water Level

Job No	Figure No
295289	**Figure 63**
Coordinate System **GDA2020** **MGA Zone 55**	Drawing Status **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Velocity (m/s)

- <= 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- > 2.0

Project Title
Blayney Multipurpose Service

Drawing Title
Design 20% AEP Velocity

Job No	Figure No
295289	**Figure 64**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Velocity (m/s)

- <= 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- > 2.0

Project Title
Blayney Multipurpose Service

Drawing Title
Design 5% AEP Velocity

Job No	Figure No
295289	**Figure 65**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

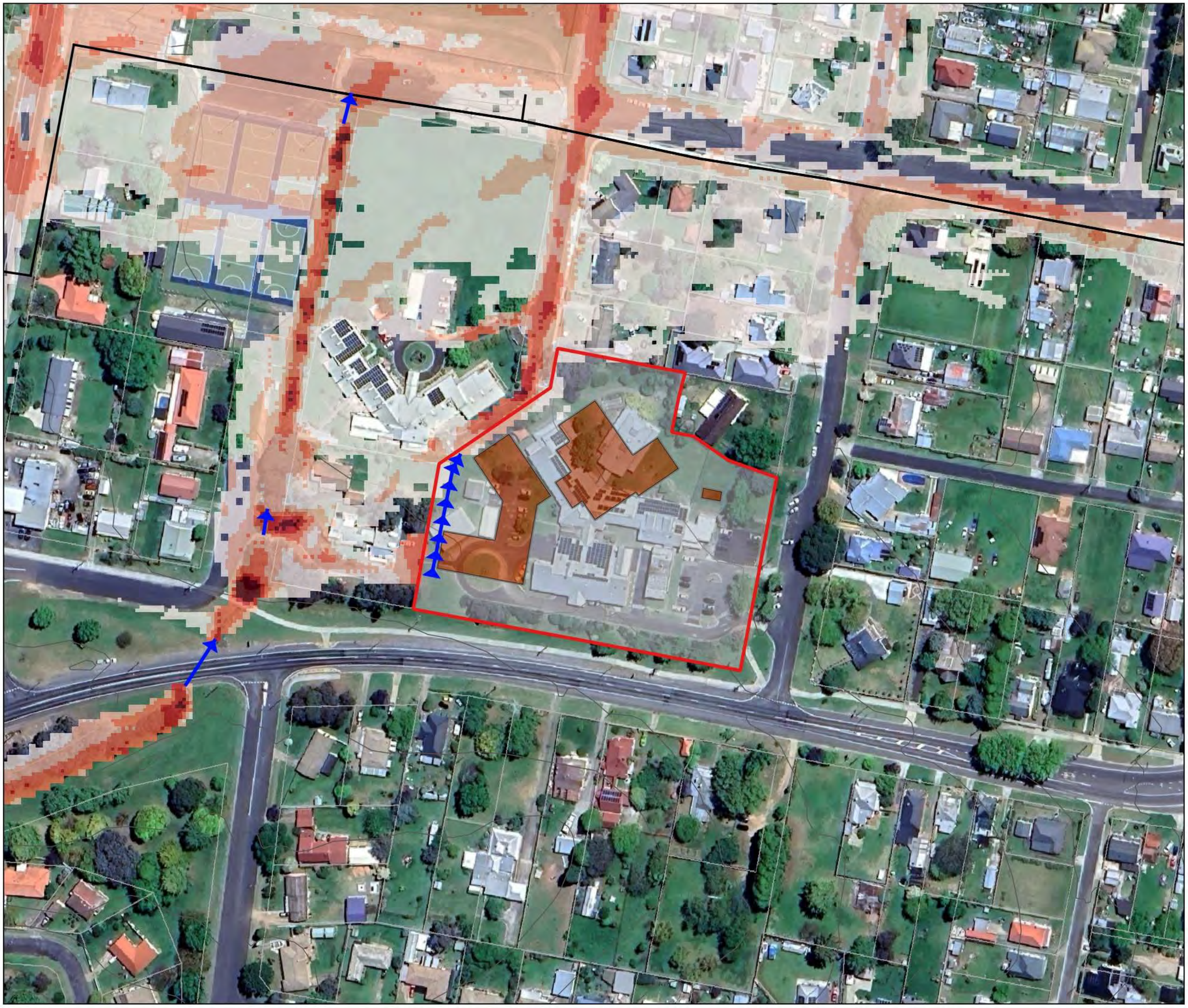
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Velocity (m/s)

- <= 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- > 2.0

Project Title
Blayney Multipurpose Service

Drawing Title
Design 1% AEP Velocity

Job No	Figure No
295289	**Figure 66**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Velocity (m/s)

- <= 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- > 2.0

Project Title
Blayney Multipurpose Service

Drawing Title
Design 1% AEP + CC Velocity

Job No	Figure No
295289	**Figure 67**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

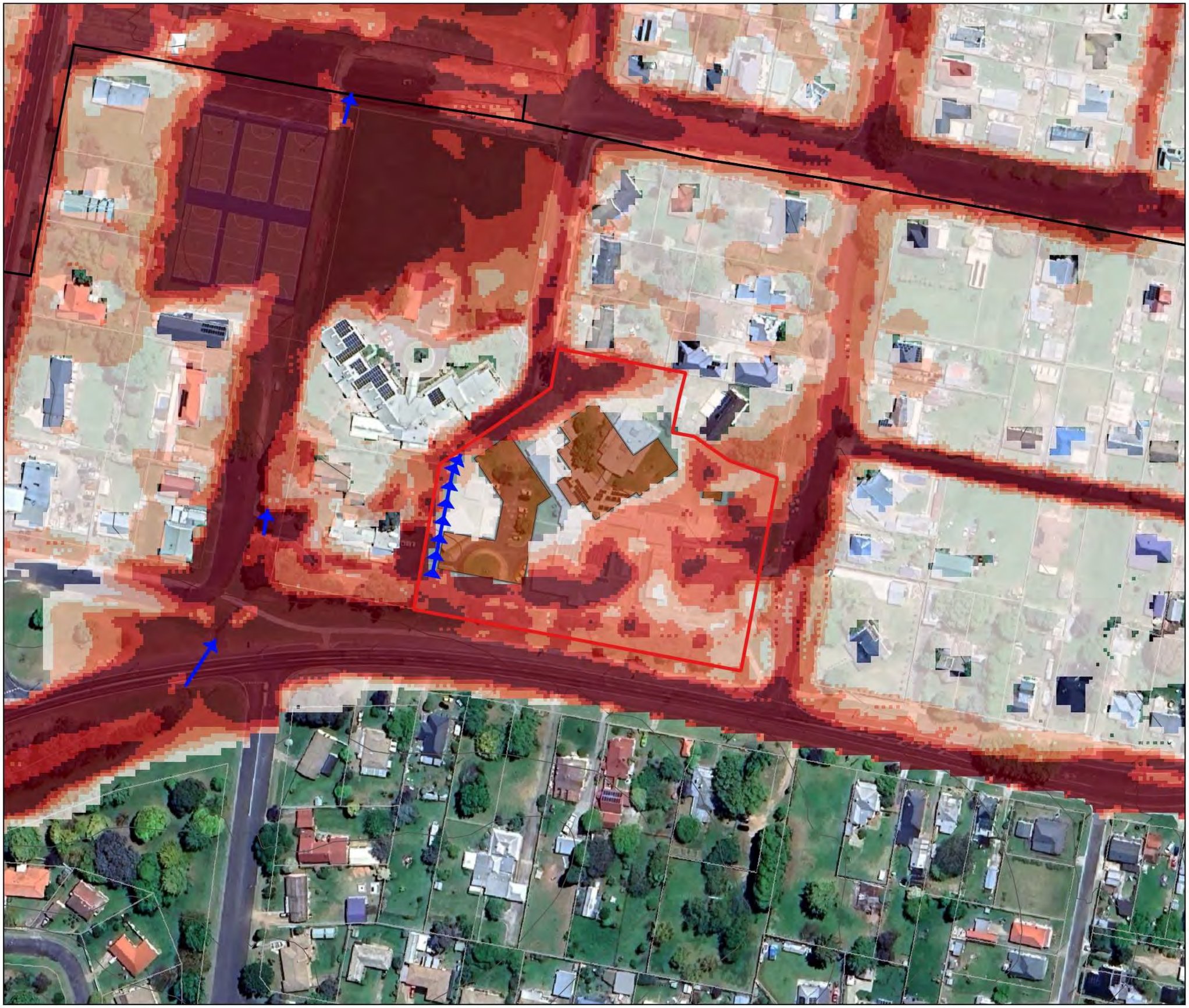
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Velocity (m/s)

- <= 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- > 2.0

Project Title
Blayney Multipurpose Service

Drawing Title
Design PMF Velocity

Job No	Figure No
295289	**Figure 68**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

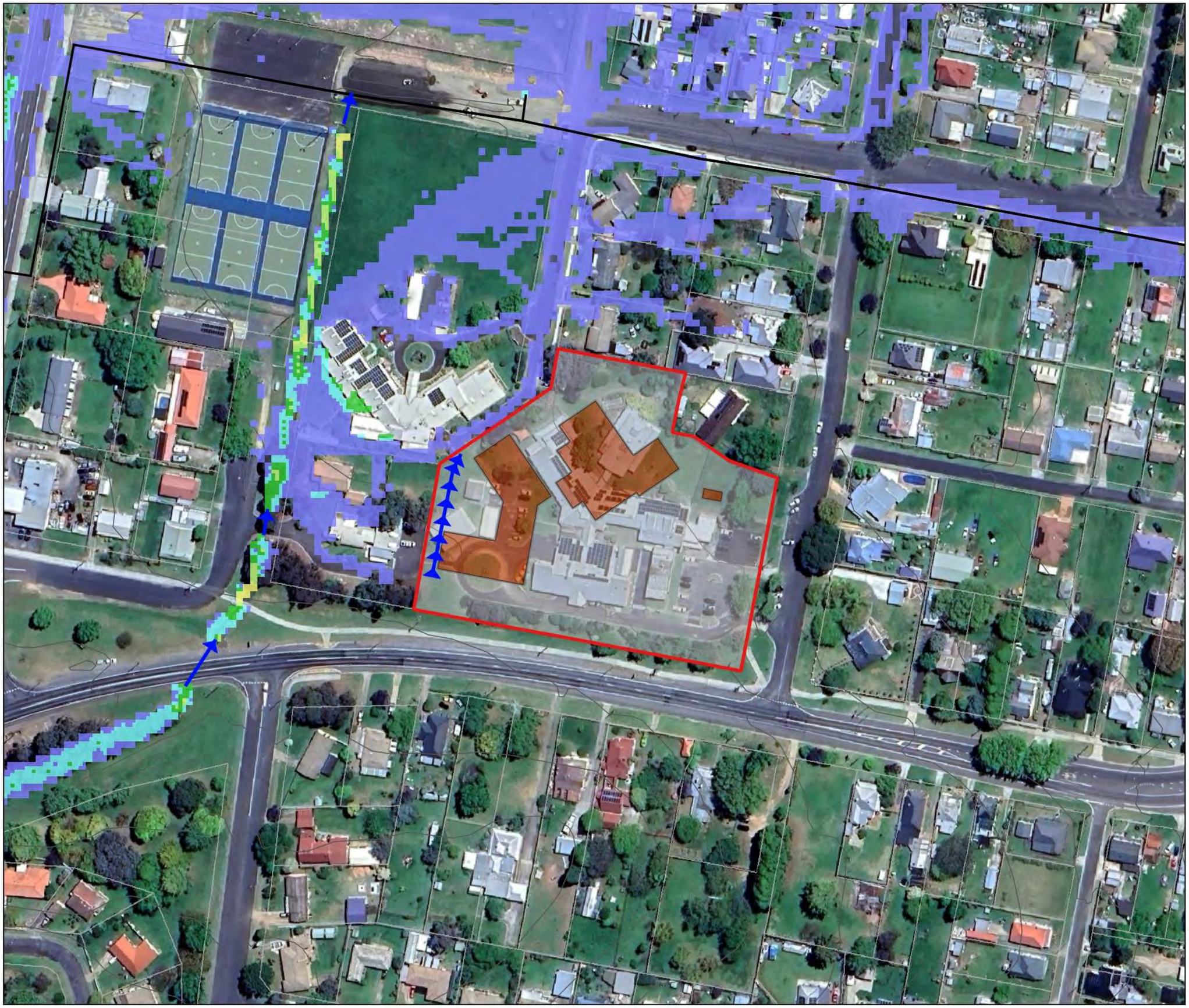
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Hazard

- H1 Generally safe for vehicles, people and buildings.
- H2 Unsafe for small vehicles.
- H3 Unsafe for vehicles, children and the elderly.
- H4 Unsafe for vehicles and people.
- H5 Unsafe for vehicles and people. All building types vulnerable to structural damage.
- H6 Unsafe for vehicles and people. All building types considered vulnerable to failure.

Project Title

Blayney Multipurpose Service

Drawing Title

Design 20% AEP Flood Hazard

Job No	Figure No
295289	**Figure 69**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale: 0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client: NSW GOVERNMENT Health Infrastructure

Consultant: ARUP

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Hazard

- H1 Generally safe for vehicles, people and buildings.
- H2 Unsafe for small vehicles.
- H3 Unsafe for vehicles, children and the elderly.
- H4 Unsafe for vehicles and people.
- H5 Unsafe for vehicles and people. All building types vulnerable to structural damage.
- H6 Unsafe for vehicles and people. All building types considered vulnerable to failure.

Project Title
Blayney Multipurpose Service

Drawing Title
Design 5% AEP Flood Hazard

Job No	Figure No
295289	**Figure 70**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

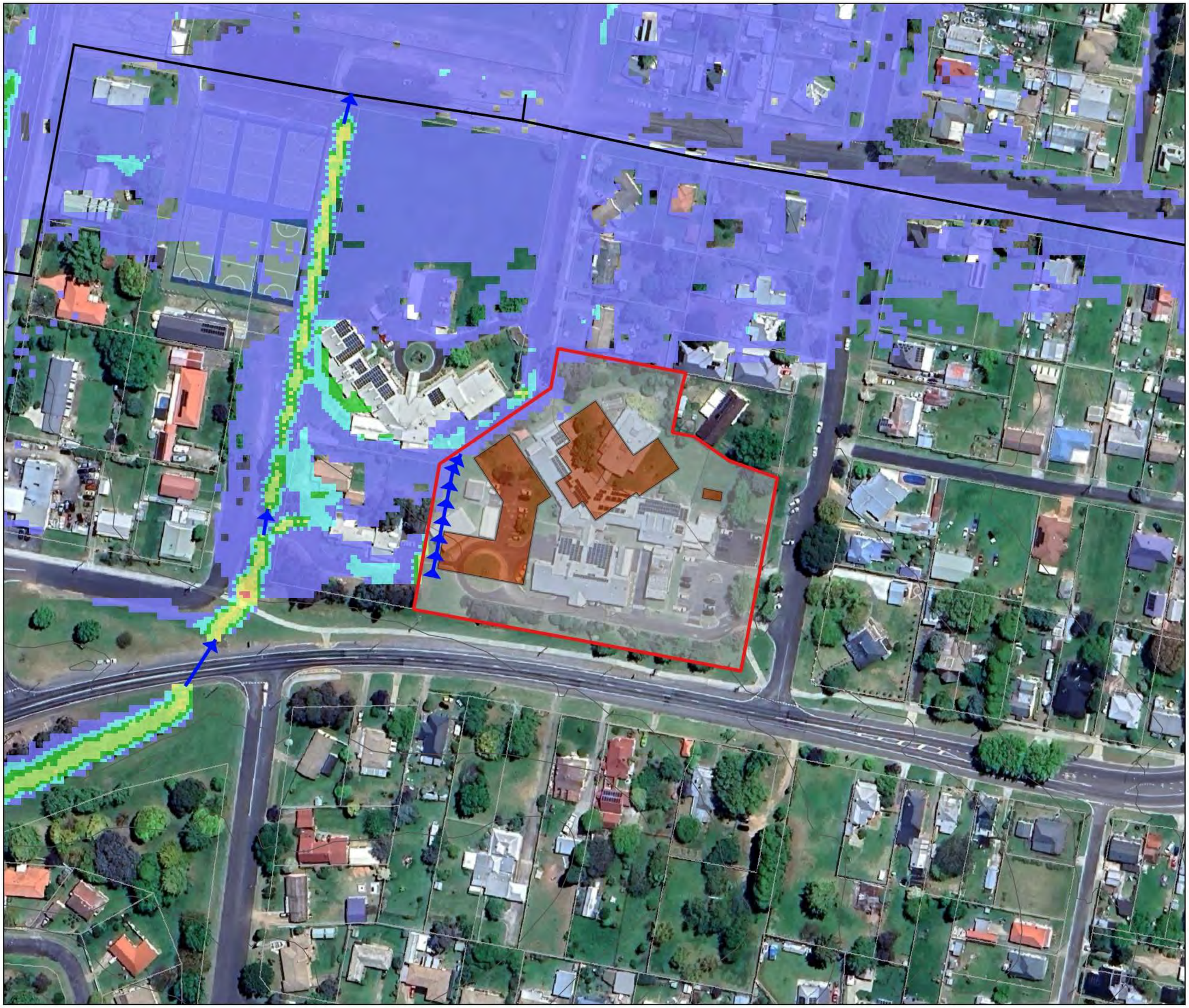
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Hazard

- H1 Generally safe for vehicles, people and buildings.
- H2 Unsafe for small vehicles.
- H3 Unsafe for vehicles, children and the elderly.
- H4 Unsafe for vehicles and people.
- H5 Unsafe for vehicles and people. All building types vulnerable to structural damage.
- H6 Unsafe for vehicles and people. All building types considered vulnerable to failure.

Project Title
Blayney Multipurpose Service

Drawing Title
Design 1% AEP Flood Hazard

Job No	Figure No
295289	**Figure 71**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

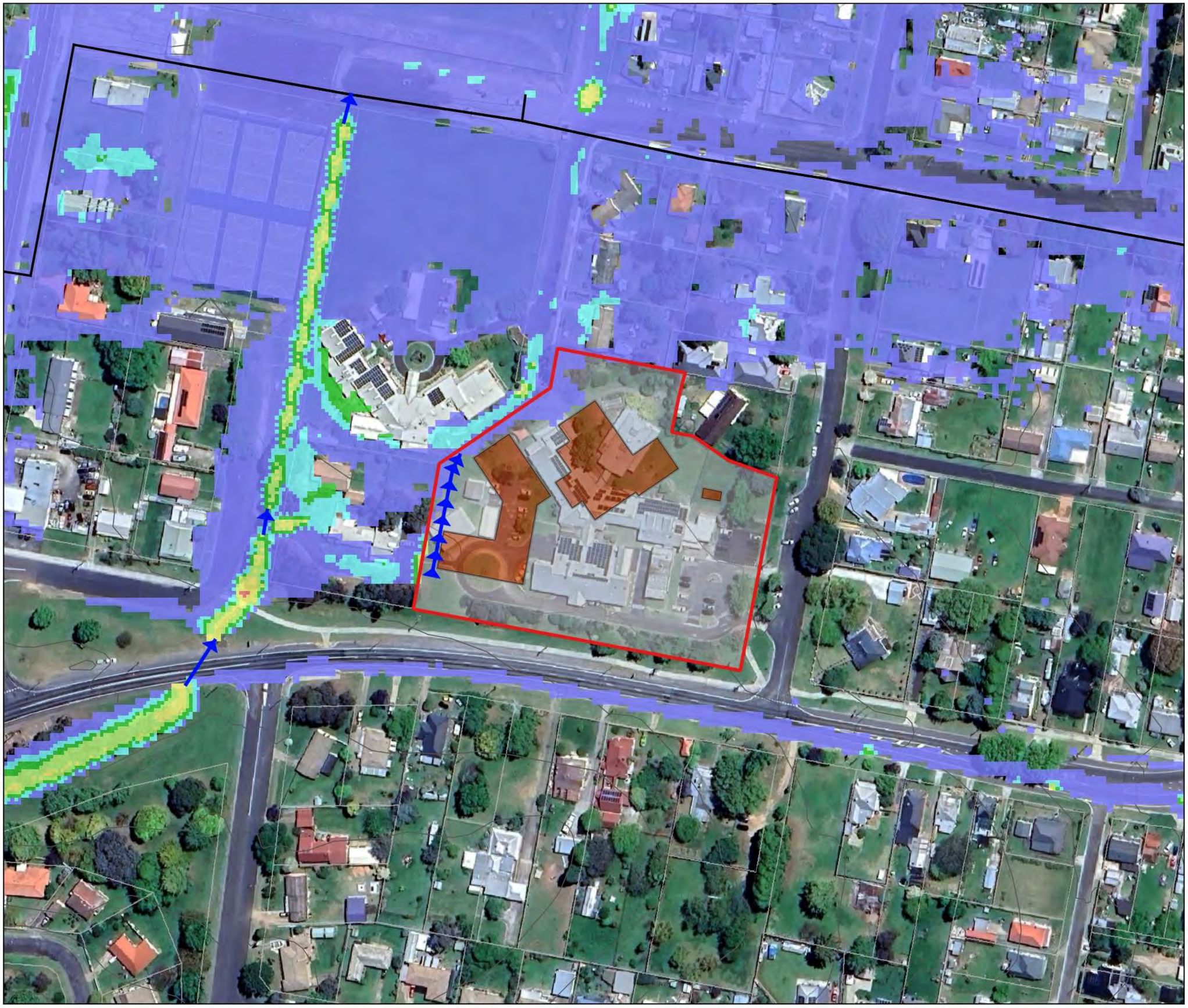
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Hazard

- H1 Generally safe for vehicles, people and buildings.
- H2 Unsafe for small vehicles.
- H3 Unsafe for vehicles, children and the elderly.
- H4 Unsafe for vehicles and people.
- H5 Unsafe for vehicles and people. All building types vulnerable to structural damage.
- H6 Unsafe for vehicles and people. All building types considered vulnerable to failure.

Project Title
Blayney Multipurpose Service

Drawing Title
Design 1% AEP + CC Flood Hazard

Job No	Figure No
295289	**Figure 72**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

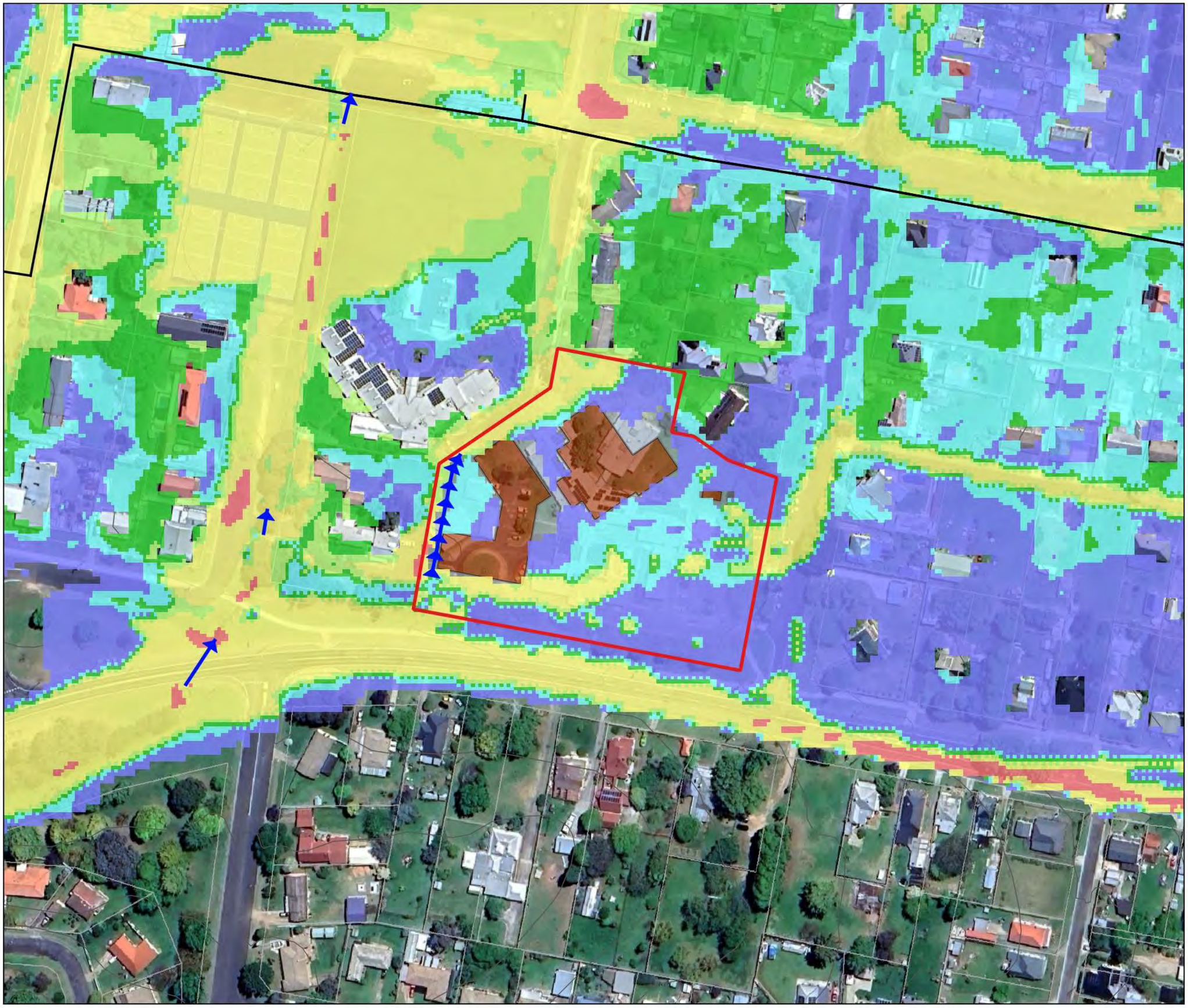
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Hazard

- H1 Generally safe for vehicles, people and buildings.
- H2 Unsafe for small vehicles.
- H3 Unsafe for vehicles, children and the elderly.
- H4 Unsafe for vehicles and people.
- H5 Unsafe for vehicles and people. All building types vulnerable to structural damage.
- H6 Unsafe for vehicles and people. All building types considered vulnerable to failure.

Project Title

Blayney Multipurpose Service

Drawing Title

Design PMF Flood Hazard

Job No	Figure No
295289	**Figure 73**
Coordinate System **GDA2020 MGA Zone 55**	Drawing Status **Draft**

Scale

0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client

NSW GOVERNMENT Health Infrastructure

Consultant

ARUP

Sky Park, One Melbourne Quarter, 699 Collins Street, Docklands, VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Impact (m)

- Was Wet, Now Dry
- < - 0.1
- -0.5 to -0.02
- -0.02 to -0.01
- -0.01 to 0.01
- 0.01 to 0.02
- 0.02 to 0.03
- 0.02 to 0.04
- 0.04 to 0.05
- 0.05 to 0.075
- 0.075 to 0.1
- 0.1 to 0.25
- 0.25 to 0.5
- > 0.5
- Was Dry, Now Wet

Project Title

Blayney Multipurpose Service

Drawing Title

Design 20% AEP Afflux

Job No	Figure No
295289	**Figure 74**
Coordinate System **GDA2020** **MGA Zone 55**	Drawing Status **Draft**

Scale

0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client

NSW GOVERNMENT
Health Infrastructure

Consultant

ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Impact (m)

- Was Wet, Now Dry
- < - 0.1
- -0.5 to -0.02
- -0.02 to -0.01
- -0.01 to 0.01
- 0.01 to 0.02
- 0.02 to 0.03
- 0.02 to 0.04
- 0.04 to 0.05
- 0.05 to 0.075
- 0.075 to 0.1
- 0.1 to 0.25
- 0.25 to 0.5
- > 0.5
- Was Dry, Now Wet

Project Title

Blayney Multipurpose Service

Drawing Title

Design 5% AEP Afflux

Job No	Figure No
295289	**Figure 75**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale

0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client: NSW GOVERNMENT Health Infrastructure

Consultant: ARUP

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Impact (m)

- Was Wet, Now Dry
- < - 0.1
- -0.5 to -0.02
- -0.02 to -0.01
- -0.01 to 0.01
- 0.01 to 0.02
- 0.02 to 0.03
- 0.02 to 0.04
- 0.04 to 0.05
- 0.05 to 0.075
- 0.075 to 0.1
- 0.1 to 0.25
- 0.25 to 0.5
- > 0.5
- Was Dry, Now Wet

Project Title

Blayney Multipurpose Service

Drawing Title

Design 1% AEP Afflux

Job No	Figure No
295289	**Figure 76**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale

0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client: NSW GOVERNMENT Health Infrastructure

Consultant: ARUP

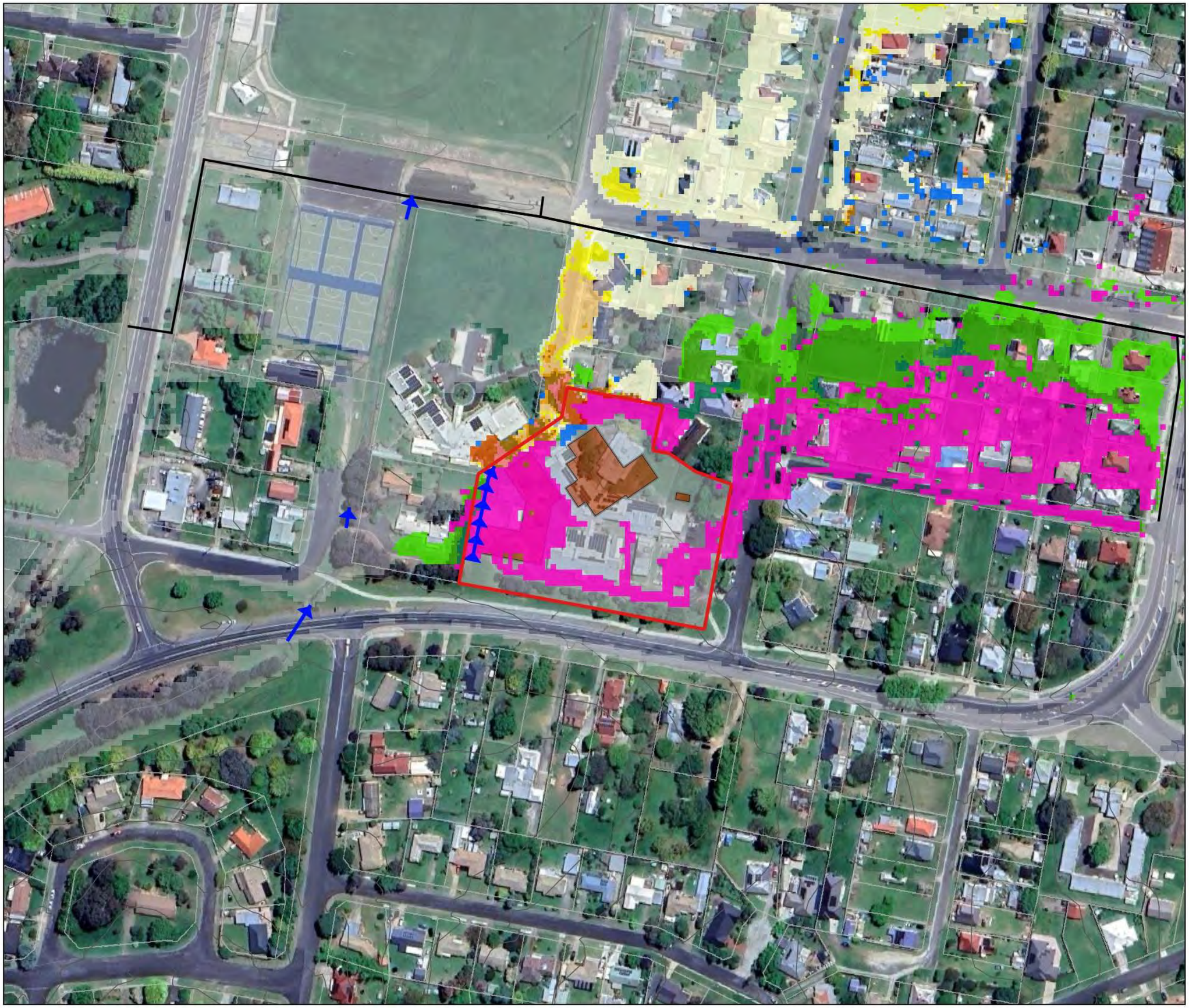
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Impact (m)

- Was Wet, Now Dry
- < - 0.1
- -0.5 to -0.02
- -0.02 to -0.01
- -0.01 to 0.01
- 0.01 to 0.02
- 0.02 to 0.03
- 0.02 to 0.04
- 0.04 to 0.05
- 0.05 to 0.075
- 0.075 to 0.1
- 0.1 to 0.25
- 0.25 to 0.5
- > 0.5
- Was Dry, Now Wet

Project Title

Blayney Multipurpose Service

Drawing Title

Design 1% AEP + CC Afflux

Job No	Figure No
295289	**Figure 77**
Coordinate System **GDA2020** **MGA Zone 55**	Drawing Status **Draft**

Scale

0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client

NSW GOVERNMENT
Health Infrastructure

Consultant

ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

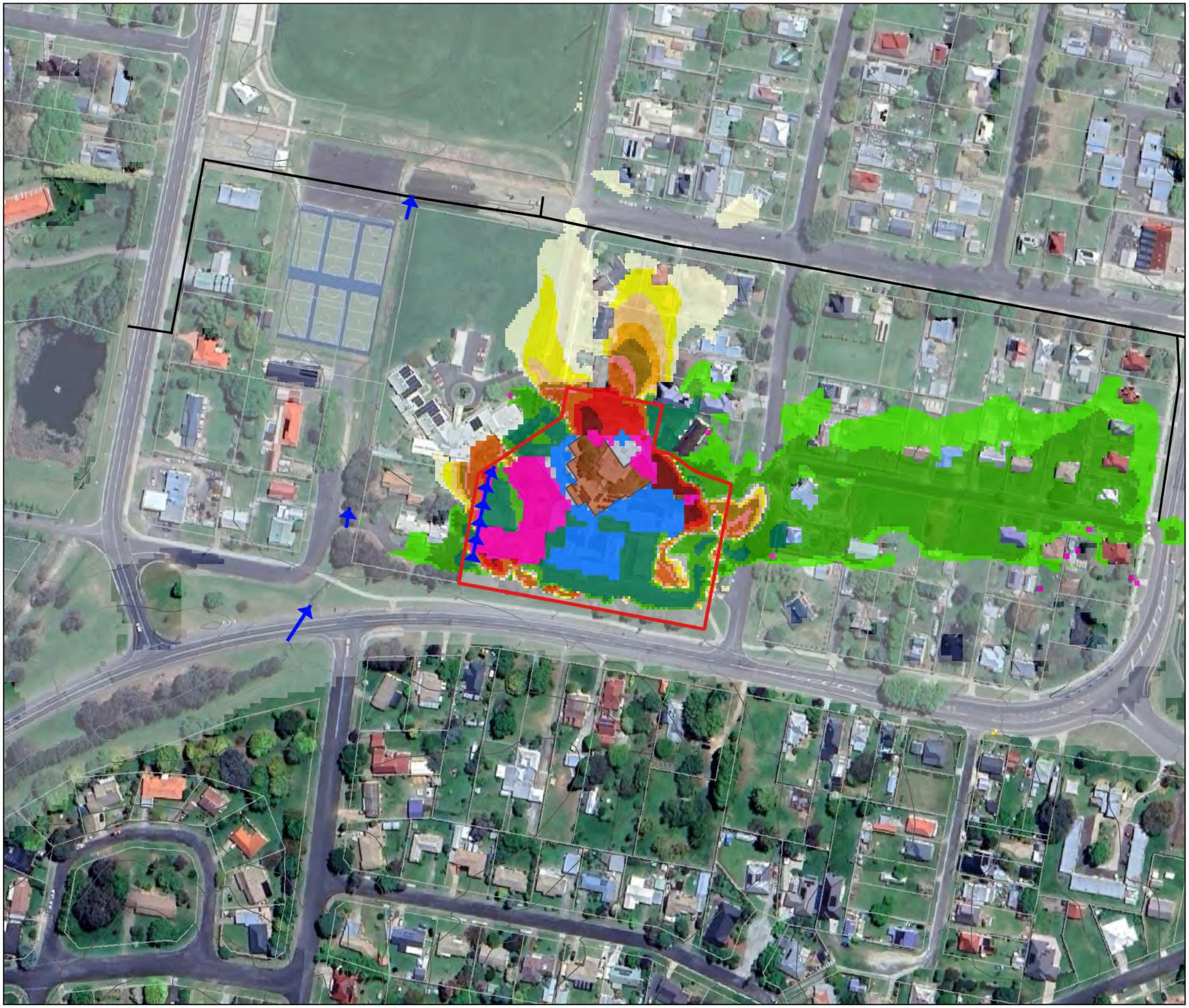
N

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Impact (m)

- Was Wet, Now Dry
- < - 0.1
- -0.5 to -0.02
- -0.02 to -0.01
- -0.01 to 0.01
- 0.01 to 0.02
- 0.02 to 0.03
- 0.02 to 0.04
- 0.04 to 0.05
- 0.05 to 0.075
- 0.075 to 0.1
- 0.1 to 0.25
- 0.25 to 0.5
- > 0.5
- Was Dry, Now Wet

Project Title

Blayney Multipurpose Service

Drawing Title

Design PMF Afflux

Job No	Figure No
295289	**Figure 78**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale

0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client

NSW GOVERNMENT
Health Infrastructure

Consultant

ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

Disclaimer

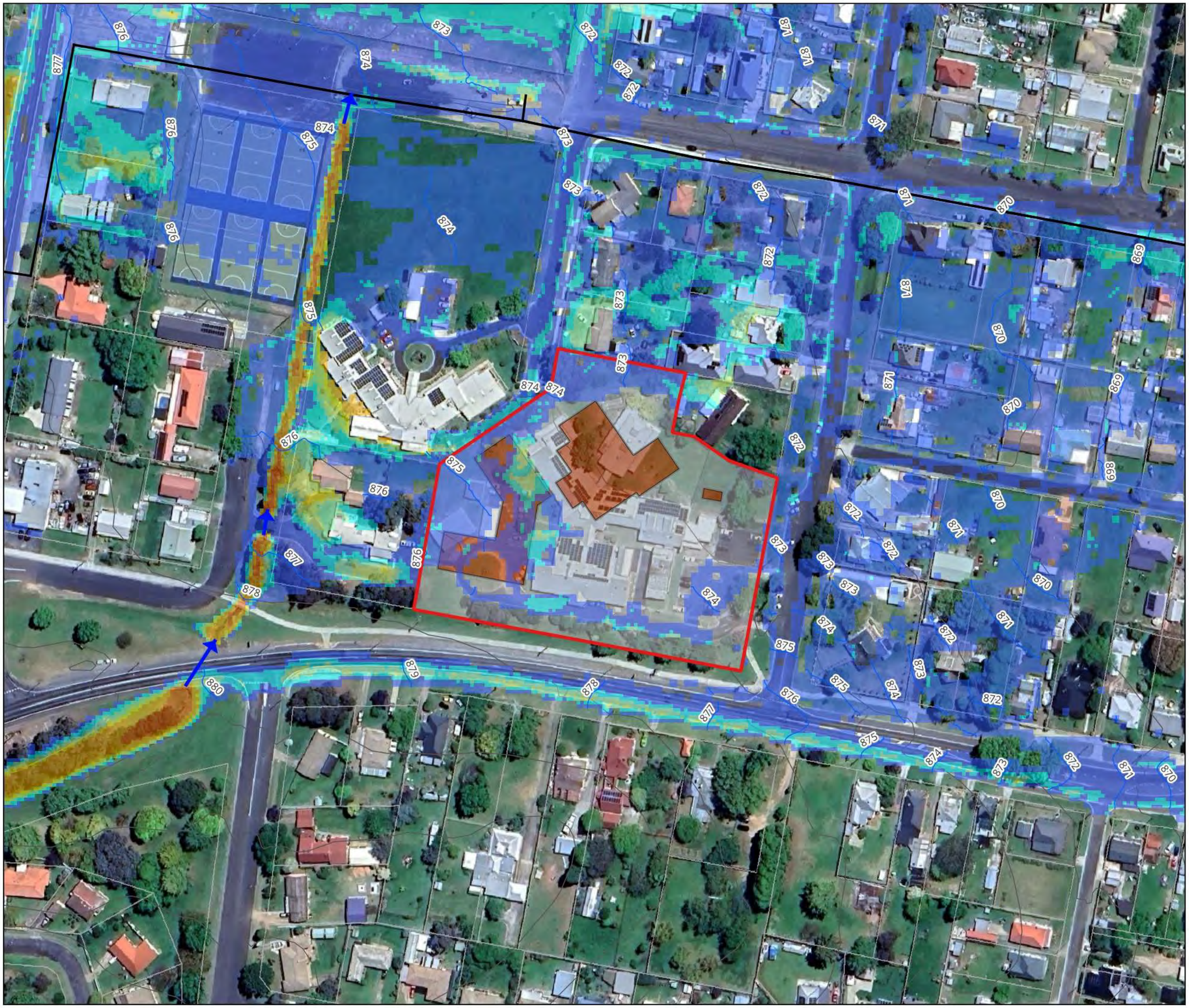
© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

Appendix E

TUFLOW Sensitivity Testing Results



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Depth (m)

- <= 0.05
- 0.05 - 0.10
- 0.10 - 0.20
- 0.20 - 0.30
- 0.30 - 0.40
- 0.40 - 0.50
- 0.50 - 1.00
- 1.00 - 2.50
- > 2.50
- Water Level Contour (m AHD)

Project Title
Blayney Multipurpose Service

Drawing Title
Existing 1% AEP Depth Blockage Sensitivity

Job No	Figure No
295289	**Figure 79**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale: 0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client: NSW GOVERNMENT Health Infrastructure

Consultant: ARUP
Sky Park, One Melbourne Quarter, 699 Collins Street, Docklands, VIC 3008, Australia

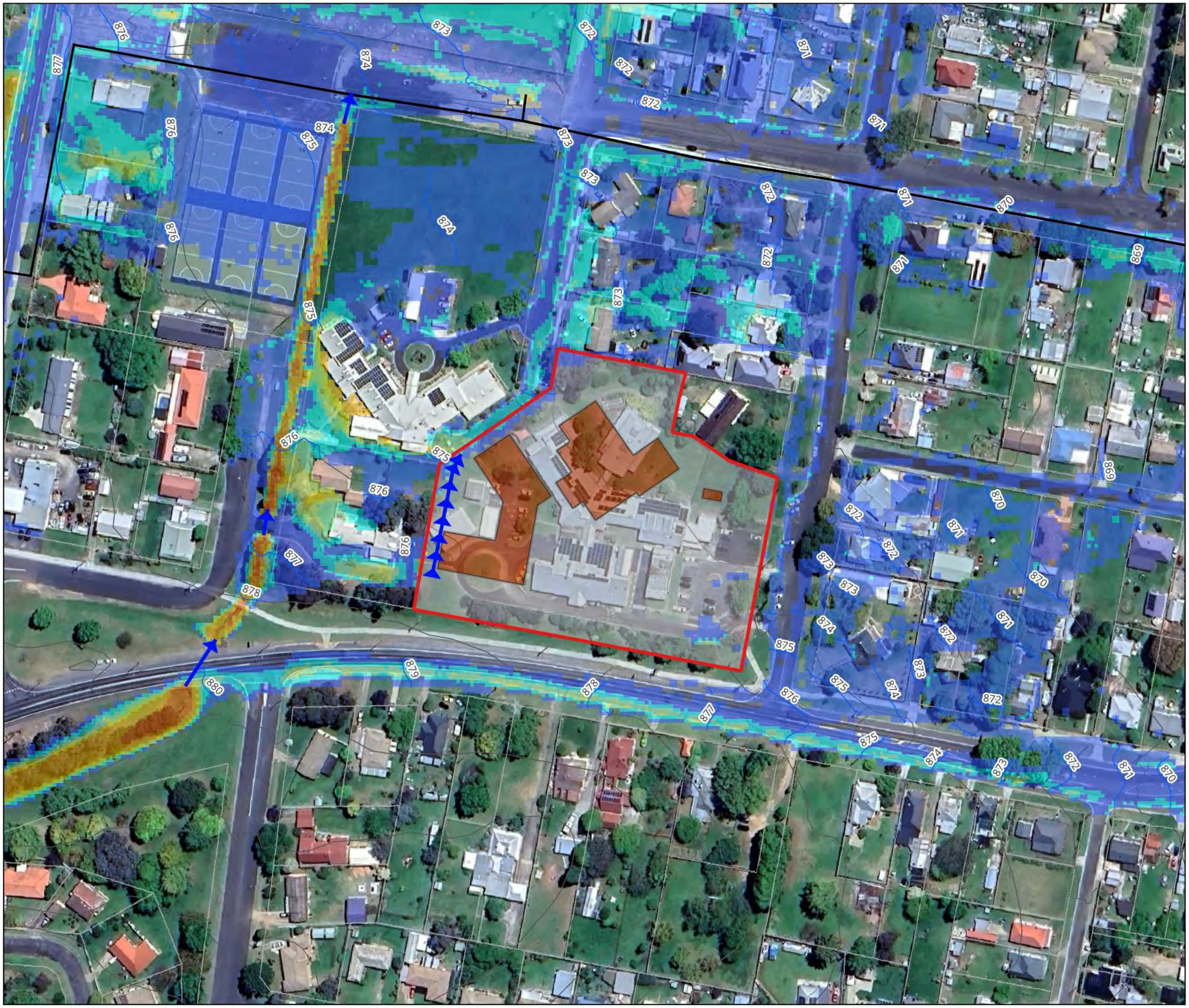
Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Depth (m)

- <= 0.05
- 0.05 - 0.10
- 0.10 - 0.20
- 0.20 - 0.30
- 0.30 - 0.40
- 0.40 - 0.50
- 0.50 - 1.00
- 1.00 - 2.50
- > 2.50
- Water Level Contour (m AHD)

Project Title
Blayney Multipurpose Service

Drawing Title
Design 1% AEP Depth Blockage Sensitivity

Job No	Figure No
295289	**Figure 80**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Impact (m)

- Was Wet, Now Dry
- < - 0.1
- -0.5 to -0.02
- -0.02 to -0.01
- -0.01 to 0.01
- 0.01 to 0.02
- 0.02 to 0.03
- 0.02 to 0.04
- 0.04 to 0.05
- 0.05 to 0.075
- 0.075 to 0.1
- 0.1 to 0.25
- 0.25 to 0.5
- > 0.5
- Was Dry, Now Wet

Project Title

Blayney Multipurpose Service

Drawing Title

Existing 1% AEP Blockage Sensitivity

Job No	Figure No
295289	**Figure 81**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale: 0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client: NSW GOVERNMENT Health Infrastructure

Consultant: ARUP

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google



Legend

- Project Area
- Model Boundary
- Contours
- 1d_nwk_culverts
- 1d_nwk_pipes

Proposed Works

- Building Footprint
- Civil Works

Impact (m)

- Was Wet, Now Dry
- < - 0.1
- -0.5 to -0.02
- -0.02 to -0.01
- -0.01 to 0.01
- 0.01 to 0.02
- 0.02 to 0.03
- 0.02 to 0.04
- 0.04 to 0.05
- 0.05 to 0.075
- 0.075 to 0.1
- 0.1 to 0.25
- 0.25 to 0.5
- > 0.5
- Was Dry, Now Wet

Project Title
Blayney Multipurpose Service

Drawing Title
Existing 1% AEP Blockage Sensitivity

Job No	Figure No
295289	**Figure 82**
Coordinate System: **GDA2020 MGA Zone 55**	Drawing Status: **Draft**

Scale
0 25 50 75 m

Issue	Date	By	Chkd	Appd
A	26/09/2024	TH	--	JA

Client
NSW GOVERNMENT
Health Infrastructure

Consultant
ARUP
Sky Park, One Melbourne Quarter,
699 Collins Street, Docklands,
VIC 3008, Australia

Disclaimer

© Arup Australia Pty Ltd 2024. All Rights Reserved

Disclaimer: While all reasonable care has been taken to ensure the information contained on this map is up to date and accurate, no warranty is given that the information contained on this is free from the error or omission. Any reliance placed on such information shall be at the sole risk of the user. Please verify the accuracy of all information prior to using it. This map is not a design document.

Sources: Data.NSW, Google

N

Appendix 3: Civil Design Report

Blayney MPS

Civil Design Report

130607-JAC-CV-RPT-1003 | 3

10 August 2023

NSW Health Infrastructure



Civil Design Report

Project No.	IA228800
Document Title	Civil Design Report
Document Number	130607-JAC-CV-RPT-1003
Revision	3
Date	10 August 2023
Client Name	NSW Health Infrastructure
Project Manager	Mihaela Serban
Author	Dana Silang

Document history and status

Revision	Date	Description	Author	Checked	Reviewed	Approved
Draft	31/05/23	Design Development – Civil Works Report	D. Silang	K. Lau	M. Serban	M. Serban
1	06/07/23	75% Design Development – Civil Report	D. Silang	K. Lau	M. Serban	M. Serban
2	09/08/23	For Tender – Civil Report	D. Silang	K. Lau	M. Serban	M. Serban
3	10/08/23	For Tender – Civil Report Reissue	D. Silang	K. Lau	M. Serban	M. Serban

Jacobs Group (Australia) Pty Ltd

Level 7, 177 Pacific Highway
North Sydney, NSW 2060
PO Box 632
North Sydney, NSW 2059
Australia

T +61 2 9928 2100
F +61 2 9928 2444
www.jacobs.com

Copyright Jacobs Group (Australia) Pty Ltd © 2023.

All rights reserved. The concepts and information contained in this document are the property of the Jacobs group of companies. Use or copying of this document in whole or in part without the written permission of Jacobs constitutes an infringement of copyright. Jacobs, the Jacobs logo, and all other Jacobs trademarks are the property of Jacobs.

NOTICE: This document has been prepared exclusively for the use and benefit of Jacobs' client. Jacobs accepts no liability or responsibility for any use or reliance upon this document by any third party.

Executive Summary

The Blayney MPS is a small rural health facility located in the Southern Sector of Western New South Wales (NSW). It is located on the corner of Osman Street and Martha Street.

The Blayney MPS redevelopment will aim to provide:

- Residential aged care accommodation providing care to aged care residents with high care needs including clients with dementia who have been assessed as suitable for an MPS. Blayney MPS also provides respite care for low and high care residents.
- Inpatient services that will provide low level acute care to patients including palliative care in line with the agreed role delineation.
- Emergency services including stabilisation and management in preparation for admission or transfer of care in line with level 1 role delineation.
- Imaging services including general x-ray with a visiting Radiographer onsite from the Cowra Health Service – two days a week.
- Western NSW LHD community health, outpatient/ambulatory services and Hospital in the Home (HiTH)

The purpose of this report is to document the civil components for the Blayney MPS redevelopment. These consist of access roads, pavement, drainage, and earthworks.

Contents

Executive Summary ..... **i**
Acronyms and abbreviations **1**
1. Existing Conditions **2**
1.1 Location 2
1.2 Geotechnical 2
1.2.1 Geology 2
1.2.2 Soil Contamination 2
1.2.3 Groundwater 3
1.3 Stormwater 3
1.3.1 Flooding 4
2. Proposed Development **5**
2.1 Civil Works 5
2.1.1 Civil Design Criteria 5
2.1.2 Earthworks 6
2.1.3 Stormwater 6
2.1.4 Groundwater 6
2.1.5 Flooding (PMF) 7
2.1.6 Access Roads 7
2.1.7 Pavement Design 9
2.2 Structural Works 9

Appendices

Appendix A. Civil Drawings **11**
Appendix B. Earthworks **12**
Appendix C. Stormwater Drainage Memo **13**
Appendix D. Pavement Design Memo and Calculations **14**
Appendix E. Vehicle Access Strategy Annotation **15**
Appendix F. PMF Mitigation Measures **16**

Tables

Table 1: Approved Design Vehicle Types 5
Table 2: Proposed Building Levels 6
Table 3: Geometric Design Criteria - Access Roads 7
Table 4: Geometric Design Criteria - Shared Path 8
Table 5: Cut/Fill Summary (Based on Existing Levels) 8
Table 6: Design Traffic Loading 9

Figures

Figure 1: Existing Hospital Plan (Source: NBRS) 2
Figure 2: Existing Sub-Catchments and Discharge Points 3

Acronyms and abbreviations

[ACRONYM]	[Full Name]
St	Street
PMF	Probable Maximum Flood
LDF	Lane Distribution Factor
DF	Direction Factor
RAC	Residential Aged Care
MPS	Multi-Purpose Service
FPL	Floor Planning Level
FFL	Finish Floor Level
AEP	Annual Exceedance Probability Existing Conditions

1. Existing Conditions

1.1 Location

The existing hospital site is located on the corner of Martha Street and Osman Street. To the south of the hospital is Martha Street which continues as Mid Western Highway (A41). To the West of the hospital is Lee Hostel with access to Queen Street and residential buildings on the East and North of the site.

The main hospital entrance is on Osman Street with an existing carpark available on site. There is also on-street parking on Osman St adjacent to the hospital. The site generally slopes from West to East.



Figure 1: Existing Hospital Plan (Source: NBRS)

1.2 Geotechnical

1.2.1 Geology

According to the Desktop Preliminary (Stage 1) Site Investigation report (Ref: E35521PTrpt) by JK Environments, the Blayney MPS site is found to be underlain by Wombiana Formation Shale, typically consisting of buff to light coloured shale, siltstone, limestones, and fine-grained sandstones and marble. The Blayney volcanics are located approximately 305m to the south-west, which provide potential for asbestos to naturally occur. Further to the investigation, the site has been reported to be located within the Vittoria-Blayney soil landscape which are considered to have moderate erodibility with some higher local occurrences and low salinity.

1.2.2 Soil Contamination

Based on reviews and inspections made by JK Environments in their Desktop Preliminary (Stage 1) Site Investigation report (Ref: E35521PTrpt), JK Environments is of the opinion that there is potential for site contamination. There were potential contamination sources found such as fill material from unknown origin, onsite fuel storage, use of pesticides, hazardous building materials, naturally occurring asbestos, and off-site land uses. JK Environments state that the historical land uses and potential sources of contamination would

not prohibit the proposed development. However, further investigation of the contamination conditions is required based on the potential contamination sources identified and potential for contamination in future.

1.2.3 Groundwater

Based on the geotechnical investigation report, groundwater was found 0.85m below ground level at BH15 at the south-western corner of the development area, with groundwater seepage encountered during or on completion of various boreholes, ranging from depths between 0.85m to 1.4m.

1.3 Stormwater

The subject site of Blayney Hospital has three main sub-catchments discharging to three existing discharge points. Two of the discharge points are in Osman St and one discharge point to Queens St existing drainage system (shown in Figure 2 below).



Figure 2: Existing Sub-Catchments and Discharge Points

Stormwater runoff from the subject site discharging into Osman Street and Queen Street existing drainage systems is conveyed via the existing drainage pit and pipe systems to Stillingfleet Street existing drainage systems. This then discharges into a wetland located at the intersection of Stillingfleet Street and Lower Farm Street for detention and treatment before ultimately discharging to Belubula River.

1.3.1 Flooding

The following studies have been used for flood assessment:

- Blayney Flood Study -Flood Study Report prepared for Blayney Shire Council dated 15th June 2015 by Jacobs.
- Floodplain Risk Management Study and Floodplain Risk Management Plan for Blayney Final, prepared for Blayney Shire Council dated December 2016 by Jacobs
- Addendum to Blayney Flood Study- Update to Austalian Rainfall and Runoff 2019 Guidelines for Blayney Shire Council dated 10th February 2022 by Storm.

The PMF is defined in the Council flood study as the largest flood that could conceivably occur at a particular location, usually estimated from probable maximum precipitation coupled with the worst flood producing catchment conditions. Generally, it is not physically or economically possible to provide complete protection for the site against such an event.

The hospital side is currently under the PMF level with surrounding roads and adjacent buildings also within the flood zone. The overall building level of the hospital will need to be raised over 1m to meet the PMF requirements, with the surrounding areas also raised to meet the building level, which will require extensive earthworks. All access roads to the hospital will be blocked during the PMF event. Social and economic value will need to be considered should building levels be raised to PMF.

Typically, residential development would generally be based around the 1% AEP flood event plus an appropriate freeboard (typically 0.5m). The council is responsible for the determination of appropriate planning and development controls, including FPLs, to manage future flood risk to an acceptable level based on social, economic, and ecological, as well as flooding considerations. These controls should be cognisant of the relevant regional planning and any associated controls. The council is also responsible for responsible for risks of flooding and providing acceptable levels of safety within the community in accordance with the Emergency Servicing Act 1939.

Finished Surface Level (FSLs) for the building has been adopted from Blayney Flood Study, however council consultation and acceptable levels will need to be confirmed including emergency access during extreme flood events, and safe and orderly egress from development.

2. Proposed Development

2.1 Civil Works

2.1.1 Civil Design Criteria

2.1.1.1 Traffic Requirements

The main site access light vehicles for patients and visitors will continue to remain on Osman St with separated entry and exits. The existing main entrance driveway will be converted to entry access only, with the other Osman St access widened as an exit. The Osman St access to site will only cater for cars and ambulances.

Larger vehicles that require access to the hospital site such as servicing, waste and the fire brigade will utilise the Queen Street access. This will be a two-way access for entry and exit of the larger vehicles only as it provides the most direct and convenient access to the site area where the loading dock, ambulance bay and booster assembly will be located. The single-lane driveway to the ambulance station on the western side of the hospital will be retained.

For vehicle access strategy annotation containing traffic flows and vehicle type access provided by SCT Consulting, refer to Appendix E.

2.1.1.2 Vehicle Types

The vehicles that have been assessed to access the hospital site include the following:

Vehicle Type	Size (Length)	Access Points/Locations
Ambulance (non-bariatric)	6.5m	Oldham Place (west of hospital) entrance, Osman St entrance, Queen St exits only,
SRV	6.4m	Entire site accessible
HRV	12.5m	Queen St entry/exit only
MRV	8.8m	Queen St entry/exit., Osman St exit only
B99 Vehicle (Light Vehicle)	5.2m	Existing and new carparks, reception, Osman St entry and exit

Table 1: Approved Design Vehicle Types

2.1.1.3 Turning Paths

A turning path assessment has been undertaken and determined that the layout for each intersection and access road is adequate for their corresponding design vehicle. The main area where critical care with turning paths is evident is at the Queen St entrance/exit. Due to the two-way access at Queen St and the traffic being an SRV vehicle size at minimum, it will require at least a 3-point turn to change to the opposite direction.

The civil drawings in Appendix A highlight the turning radius path for each design vehicle.

2.1.2 Earthworks

The bulk cut and fill quantities based on the design surface over the natural surface only is found in Section 2.1.6.3 of this report. The natural surface does not consider pavement boxing or foundation excavations. There is a significant amount of net fill required due to matching the surrounding landscaping to the building levels.

The proposed levels are as below:

Project Area	1% AEP (plus freeboard)	PMF
Residential Aged Care (RAC)	874.65 AHD	875.65 AHD
Health One building	874.20 AHD	875.25 AHD

Table 2: Proposed Building Levels

The finished surfaced level is currently designed for the 1% AEP plus 500mm freeboard. Noting that the 1% AEP is based on the existing council flood maps, further discussion with council and flood modelling may be required for approval of the finished floor levels.

The RAC building requires approximately 1.3m cut in the south-west corner of the site and the Health One building requires approximately 1.2m fill on the north-east corner of the building adjacent the boundary.

Further information about the proposed earthworks can be found in the Earth Works Preliminary Analysis in Appendix B, which includes earthwork heatmaps which was used to further development the design.

2.1.3 Stormwater

2.1.3.1 Stormwater Drainage

The stormwater drainage strategy for the proposed development will utilise the existing Council stormwater drainage systems to carry runoff from the site to the existing wetlands for detention and water quality treatment at Stillingfleet St and Lower Farm St. The proposed drainage strategy is to install raingardens in the proposed carpark area of the hospital site to treat runoff (from carpark only) and provide two 10,000L rainwater tanks for stormwater harvesting and irrigation reuse of landscape areas. The provision of rainwater tanks and raingarden/biorention trench for the new carpark endeavours to enhance the use of water sensitive urban design elements and reduce pollutant loads carried by the stormwater runoff from the hospital site to the existing wetlands.

The stormwater drainage strategy drawing and memo for information is in Appendix A and Appendix C, respectively.

2.1.3.2 Erosion and Sediment Control

The proposed erosion and sediment control plan will be conducted in three stages throughout the construction of the new hospital site. The control measures that will be put in place such as barrier fence, sediment fence, catch drains, gravel filters, and an area for the stockpile will help mitigate and prevent soil erosion during construction and other sediments from the construction site washing into gutters, drains, and waterways.

The new RAC building will be required to remain accessible across all the stages of construction to allow for patients, staff, and visitors to enter and exit.

For the detailed construction staging and erosion and sediment control plans, refer to Appendix A.

2.1.4 Groundwater

The geotechnical investigation report recommends the installation of subsoil drains at a minimum of 0.3m below the subgrade levels to help manage the moisture seepage on the clay subgrade in the long term.

2.1.5 Flooding (PMF)

Jacobs has investigated the current PMF levels on Blayney Hospital based on the Blayney Shire Council Flood Study Report dated on the 15th of June 2015. The PMF depths range from 0.5m to 1m, using the latest survey level of RL 874.4 near RAC and RL 874.2 near Health One.

The PMF level is estimated to be at approximately RL 875.65 (RAC) and RL 875.25 (Health One) based on the flood depths indicated in the Jacobs Flood Study (2015).

Further PMF flood analysis is currently being carried out by GHD and findings from the assessment will be advised to Health Infrastructure.

2.1.5.1 Flood Mitigation Measures

The PMF flood analysis is currently being carried out by GHD and findings from the assessment will be advised to Health Infrastructure.

A flood levee/wall is being proposed around the southern and western boundary to protect the hospital asset during PMF events including flood gates at the access points from the Ambulance link and Queens Street. Refer to Appendix F.

2.1.6 Access Roads

2.1.6.1 Land Configuration and Intersections

The Blayney MPS civil work consists of four one-way single lanes from Osman Street and Oldham Place entry access roads to the hospital. Exits include existing exit to Osman Street, and one two-way lanes from proposed/existing carpark to Queen St entry/exit. The following junctions along the hospital and carparks allow the right/left turn movement in the project site:

- Entry from Osman place – Left turn only toward the hospital reception.
- Entry from Osman Street – Right turn only toward the hospital reception and right turn movement to the proposed carpark.
- Exit from the hospital reception – Left/Right turn toward the loading zone/exit to Osman Street/Carparks.

The approved route for design vehicles refers to Table 1 in section 2.1.1.2.

2.1.6.2 Design Standards and Guidelines

The proposed road geometry has been designed in accordance with the following standards and guidelines:

- WBC Strategic Alliance – Guidelines for Engineering Works, 2009, Version 4
- Austroads Guide to Road Design - Part 3: Geometric Design
- AS 2890.1:2004 – Parking Facilities – Off-Street Parking
- R0300 – NSW RMS Kerb and Channel Series

Table 3: Geometric Design Criteria - Access Roads

Design Parameter	David Warren Road Value	Notes
Posted speed limit	30Km/h	
Design speed	40Km/h	

Design Parameter	David Warren Road Value	Notes
Minimum general traffic lane width	3.0m	Derived from WBC Strategic Alliance – Guidelines for Engineering Works, 2009, Version 4
Parking bay width	2.0m	Derived from WBC Strategic Alliance – Guidelines for Engineering Works, 2009, Version 4
Reaction time	1.5s	AustRoads Guide to Road Design – Part 3
Minimum K value crest	2.6	AustRoads Guide to Road Design – Part 3
Minimum K value sag	3.0	
Minimum Sight Distance	73m	Access Road assumption.
Minimum grade	0.5%	Derived from Drainage Design.
Maximum grade	2.5%	
Crossfall	-3% desirable	Typical values.
Cut and Fill batter slope	4H to 1 V on Fill 2H to 1V on Cut	Derived from Drainage Design.
Design Vehicle	6.5m Ambulance 6.4m SRV 12.5m HRV 8.8m MRV 5.2m B99	Assessed in the turning paths. Based on usage determined by Local Health District (LHD).
Verge widths	Match to existing	If there is no existing verge, refer to MIS06

Table 4: Geometric Design Criteria - Shared Path

Design Parameter	Value	Notes
Design speed	30km/h	
Minimum shared path width	2.5m	Design width measured.
Longitudinal Grade	Max 4.0%	Assumed.
Maximum Crossfall	Max 3.0%	Assumed.

2.1.6.3 Models and Quantities

Below is the current Cut and Fill quantities based on the latest road design:

Table 5: Cut/Fill Summary (Based on Existing Levels)

Cut/Fill Summary (Based on Existing Levels)					
Location	2D Area (m^2)	Cut Volume (m^3)	Fill Volume (m^3)	Net Volume (m^3)	Cut/Fill
Footpath	403.456	90.92	16.04	-74.88	Cut
Access Road	2741.579	238.85	797	558.15	Fill
Parking Lot	560.177	182.14	0.01	-182.13	Cut
Building	2838.703	670.67	309.05	-361.62	Cut

Cut/Fill Summary (Based on Existing Levels)					
Landscaping	4455.039	902.82	801.17	-101.65	Cut
Project Site (TOTAL)	10998.954	2085.4	1923.27	-162.13	Cut

Note that cut/fill levels are for bulk earthworks only, allow for additional cut/fill volumes such as footings, pavement, tree removals and where residual soil is not encountered.

2.1.7 Pavement Design

The pavement design of the access road and new car park recommendations for Blayney Hospital follows the assumption that the traffic volume is 200 vehicles per day with 20% of heavy vehicles for access road and 5% for car parks. This is based on the advice provided by SCT Consulting from the review of Clinical Service Plan, the Workforce Plan, and an estimate of staff, visitors, and patients utilising the hospital grounds.

A granular pavement design with asphalt wearing course to match the existing pavement type of the access roads is considered for this project site due to the low traffic volume. However, for the loading dock area, a full depth asphalt pavement has been considered to carter for the turning movements of heavy vehicles that will be predominantly accessing the area.

It is to be noted that a consistent pavement thickness has been adopted for the access road and car park for ease of construction, due to their minimal difference in thickness. A 10mm tolerance has also been incorporated into the subbase layer in the granular pavement and the critical asphalt layer in the full depth asphalt pavement design.

2.1.7.1 Pavement Loadings

The adoption of an assumed 40-year design life coupled with the LDF of 1 and a DF of 1 for a one-way carpark and 0.5 for a two-way access road, the design traffic loading in Table 6 below is determined:

Table 6: Design Traffic Loading

Description	AADT	HV (%)	Design Years	N_{DT} (HVAG)	DESA
Access Roads	200	20	40	735000	3.23×10^5
Car Park	200	5	40	368000	1.62×10^5
Loading Dock	200	20	40	2205000	9.70×10^5

For further pavement design information, data, and calculations refer to Appendix D.

2.2 Structural Works

The structural foundation system is based on advice from JK Geotechnics Geotechnical Investigation Report that recommends footings should be founded on still residual clays, at a minimum depth of 1m below the current ground levels of the site. With the requirement to raise the hospital building above PMF, there are two proposed options for structural below:

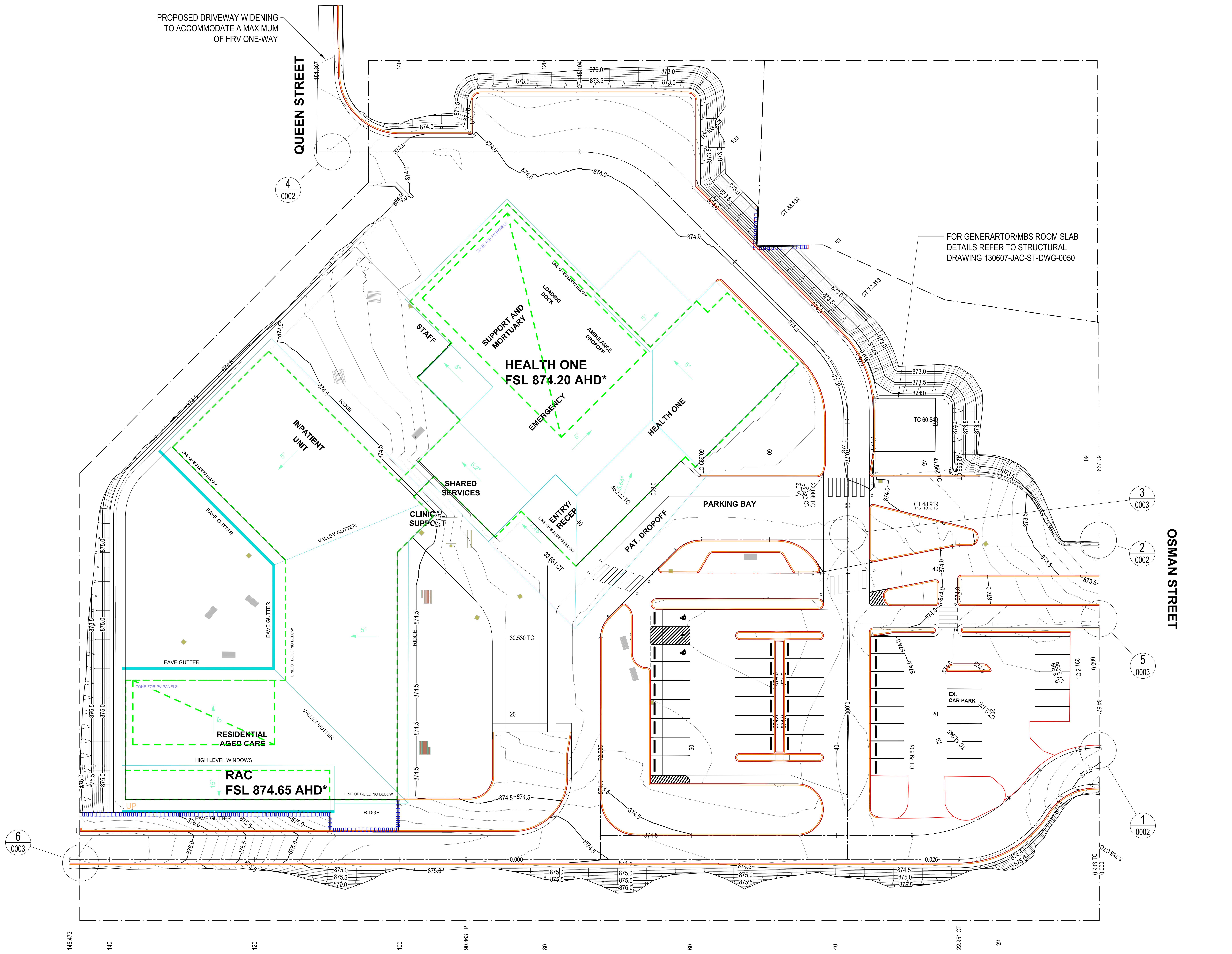
1. Raise building on engineered fill – this will not significantly impact the existing structural solution with the impact on costing relating to additional engineered fill and the external wall can extend down to the existing ground level to retain full under building (e.g., no batter required adjacent to existing buildings during construction staging). The additional fill may have adverse impact on future flood studies.

2. Raise building on piers – requires a significant change to ground floor structure and foundations including the costing of new structural elements. It is anticipated that fill will be required up to the edge of the building with retaining walls under building footprint. There are also possibilities of the ground

floor slab needing to be fire rated and maintenance issues from confined space void created under building.

For further details refer to Structures Design Development Report 130607-JAC-ST-RPT-1004.

Appendix A. Civil Drawings



LEGEND

- CIVIL WORKS
- BOUNDARY
- ARCHITECTURAL LAYOUT
- CONTOUR LINES 0.5m INTERVALS
- CONTOUR LINES 0.1m INTERVALS
- RETAINING WALL

NOTE:
*** FSL SUBJECTED TO APPROVAL**

BCA Consultant
Blackett Maguire + Goldmsith Pty Ltd
Aaron Redfern
Suite 2, 56 Hudson Street, Hamilton, NSW, 2303
+61 2 9211 7777
aaron@bmplusg.com.au

Cost Management
Genus Advisory
Nam Nguyen
Level 6, 201 Kent Street, Sydney, NSW, 2000
<PHONE>
namnguyen@genusadvisory.com.au

ARCHITECT
NBRS ARCHITECTURE
Anselmo Matsui
4 Glen Street, Milsons Point, NSW, 2061
+61 2 9095 5640
anselmo.matsui@nbrs.com.au

Issue

No.	Date	Description	Chkd
0	18.01.23	50% SCHEMATIC DESIGN ISSUE	K.L
1	17.02.23	100% SCHEMATIC DESIGN ISSUE	K.L
2	22.02.23	100% SCHEMATIC DESIGN ISSUE	K.L
3	10.05.23	DRAFT 50% DESIGN DEVELOPMENT	K.L
4	06.07.23	75% DESIGN DEVELOPMENT	K.L
5	09.08.23	FOR TENDER	K.L

Building Services, Structural & Civil Consultants

Jacobs

Level 7, 177 Pacific Highway
P.O. Box 632
North Sydney, NSW 2060
AUSTRALIA

Tel: +61 2 9928 2100
Fax: +61 2 9928 2500
Web: www.jacobs.com

Project
Blayney HS

at
3 OSman St, Blayney NSW 2799

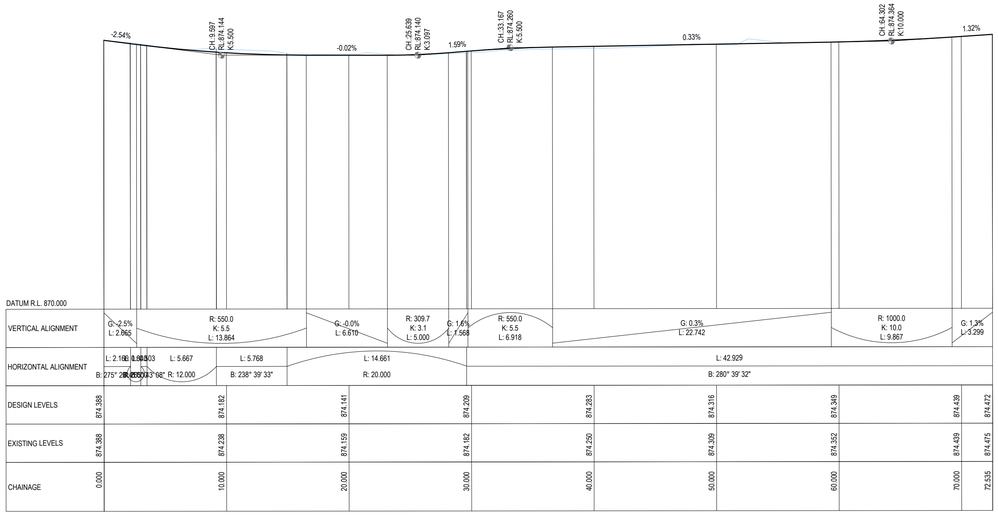
for
Health Infastructure

Drawing Title
CIVIL WORKS GENERAL ARRANGEMENT PLAN

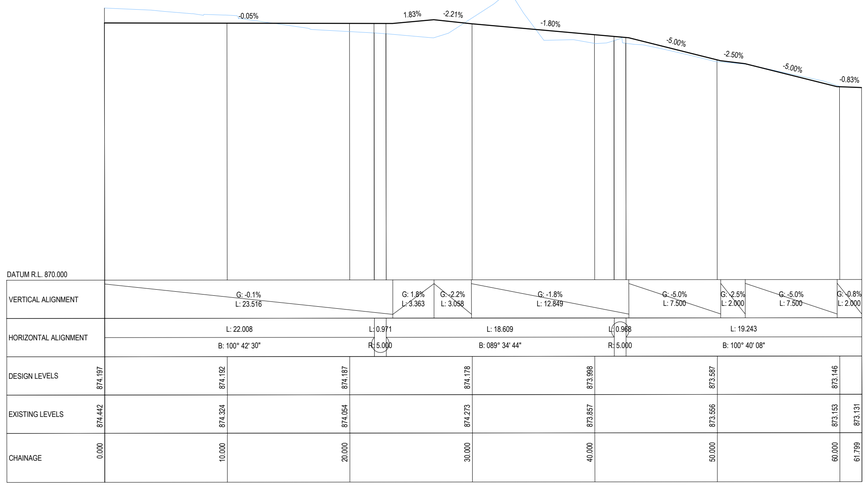
Scale 1 : 250@ A1

Drawing Reference: 130607-JAC-CV-DWG-0001
Revision: 5

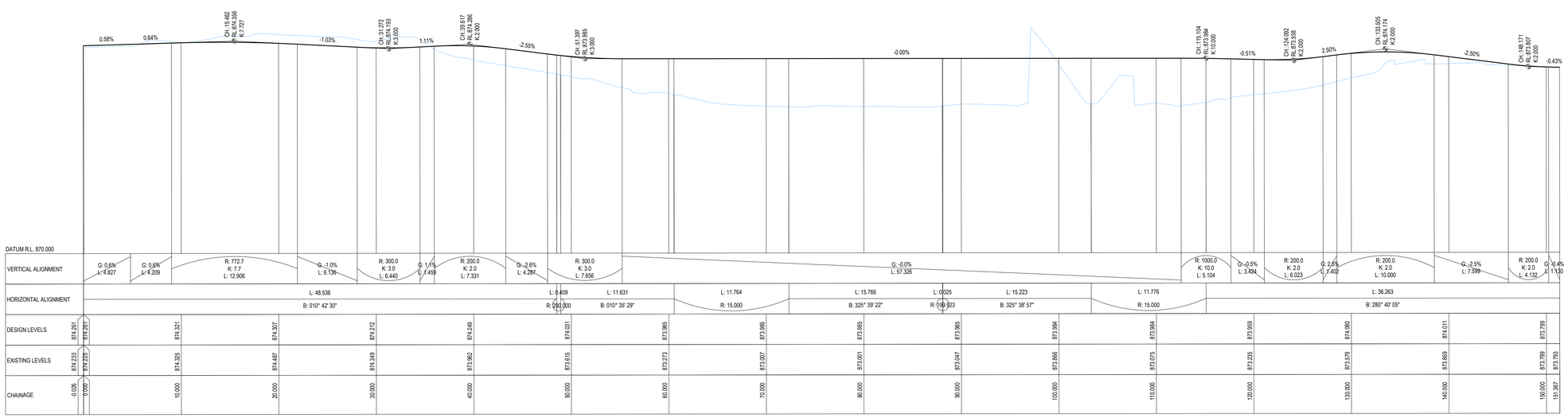
0 10 20 30 40 50 60 70 80 90 100



1 / 0001 LONGITUDINAL SECTION - MC10
SCALE: H 1:250 V 1:50



2 / 0001 LONGITUDINAL SECTION - MC20
SCALE: H 1:250 V 1:50



4 / 0001 LONGITUDINAL SECTION - MC40
SCALE: H 1:250 V 1:50

BCA Consultant
Blackett Maguire + Goldsmith Pty Ltd
Aaron Redfern
Suite 2, 56 Hudson Street, Hamilton, NSW, 2303
+61 2 9211 7777
aaron@bmplusg.com.au

Cost Management
Genus Advisory
Nam Nguyen
Level 6, 201 Kent Street, Sydney, NSW, 2000
<PHONE>
namnguyen@genusadvisory.com.au

ARCHITECT
NBRS ARCHITECTURE
Anselmo Matsui
4 Glen Street, Milsons Point, NSW, 2061
+61 2 9095 5640
anselmo.matsui@nbrs.com.au

Issue

No.	Date	Description	Chkd
0	10.05.23	DRAFT 50% DESIGN DEVELOPMENT	K.L
1	06.07.23	75% DESIGN DEVELOPMENT	K.L
2	09.08.23	FOR TENDER	K.L

Building Services, Structural & Civil Consultants

Jacobs

Level 7, 177 Pacific Highway
P.O. Box 632
North Sydney, NSW 2060
AUSTRALIA

Tel: +61 2 9928 2100
Fax: +61 2 9928 2500
Web: www.jacobs.com

Project
Blayney HS

at
3 OSman St, Blayney NSW 2799

for
Health Infastructure

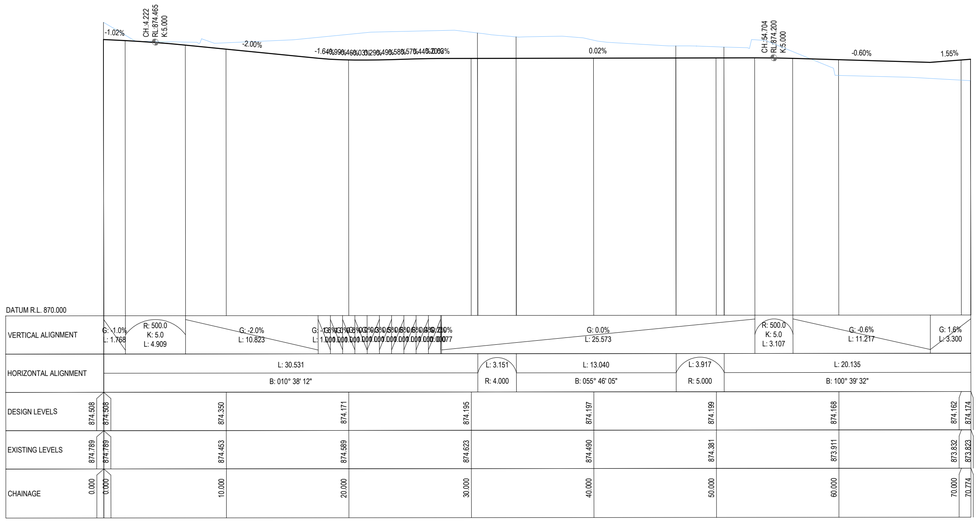
Drawing Title
CIVIL WORKS
TYPICAL SECTIONS
SHEET 1

Scale 1 : 250@ A1

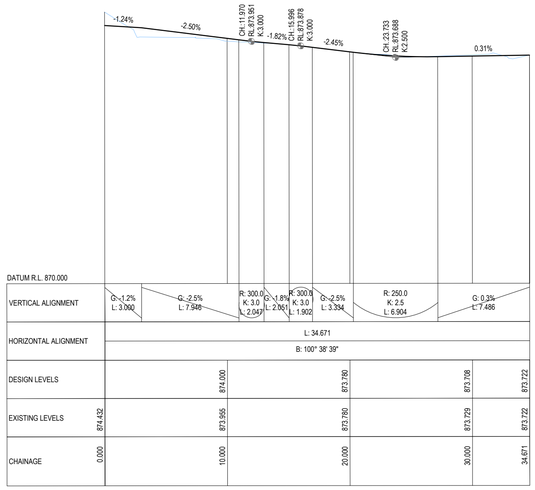
Drawing Reference
130607-JAC-CV-DWG-0002

Revision
2

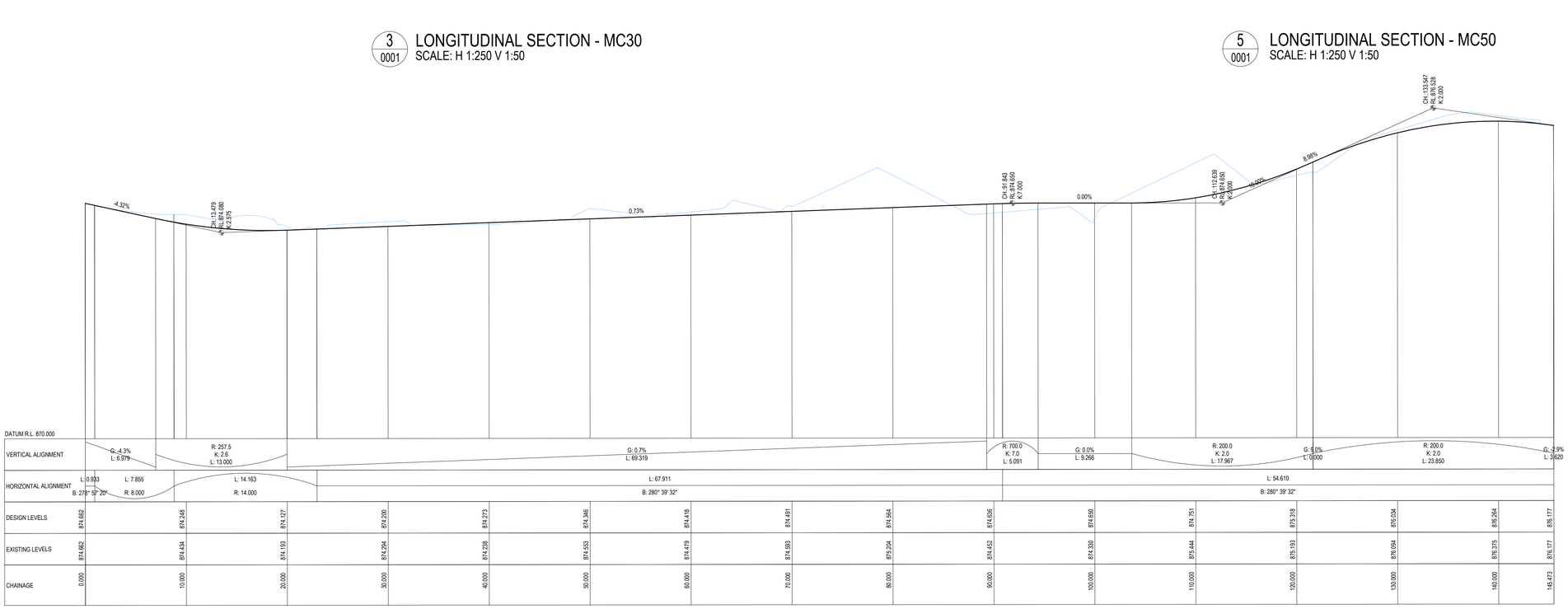
0 10 20 30 40 50 60 70 80 90 100



3 0001 LONGITUDINAL SECTION - MC30
SCALE: H 1:250 V 1:50



5 0001 LONGITUDINAL SECTION - MC50
SCALE: H 1:250 V 1:50



6 0001 LONGITUDINAL SECTION - MC60
SCALE: H 1:250 V 1:50

BCA Consultant
Blackett Maguire + Goldsmith Pty Ltd
Aaron Redfern
Suite 2, 56 Hudson Street, Hamilton, NSW, 2303
+61 2 9211 7777
aaron@bmplusg.com.au

Cost Management
Genus Advisory
Nam Nguyen
Level 6, 201 Kent Street, Sydney, NSW, 2000
<PHONE>
namnguyen@genusadvisory.com.au

ARCHITECT
NBRS ARCHITECTURE
Anselmo Matsui
4 Glen Street, Milsons Point, NSW, 2061
+61 2 9095 5640
anselmo.matsui@nbrs.com.au

Issue

No.	Date	Description	Chkd
0	10.05.23	DRAFT 50% DESIGN DEVELOPMENT	K.L
1	06.07.23	75% DESIGN DEVELOPMENT	K.L
2	09.08.23	FOR TENDER	K.L

Building Services, Structural & Civil Consultants

Jacobs

Level 7, 177 Pacific Highway
P.O. Box 632
North Sydney, NSW 2060
AUSTRALIA

Tel: +61 2 9928 2100
Fax: +61 2 9928 2500
Web: www.jacobs.com

Project
Blayney HS

at
3 OSman St, Blayney NSW 2799

for
Health Infastructure

Drawing Title
CIVIL WORKS
TYPICAL SECTIONS
SHEET 2

Scale 1 : 250@ A1

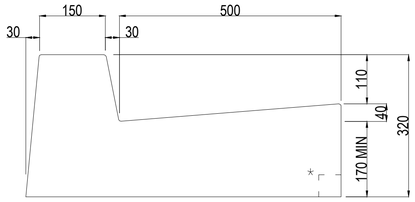
Drawing Reference
130607-JAC-CV-DWG-0003

Revision
2

0 10 20 30 40 50 60 70 80 90 100

DRAWING NOTE:

1. ALL KERBS ALONG ACCESS ROAD ARE DESIGNED AS A TYPICAL SA KERB.
2. PROPOSED CARPARK TO BE IN ACCORDANCE WITH AS1428.1 AND AS2890.1



* RECESS AT BASE OF KERB MAYBE REQUIRED FOR SUBBASE LAYER.

PROPOSED DRIVEWAY WIDENING TO ACCOMMODATE A MAXIMUM OF HRV ONE-WAY

RESTRICTED VEHICLES ONLY

GIVE WAY

PAVEMENT TYPE 3 - FULL DEPTH ASPHALT PAVEMENT CONFIGURATION FOR LOADING DOCK AREA

QUEEN STREET

KERB TYPE SA SEE NOTE 1

KERB TYPE SA SEE NOTE 1

FOR GENERARTOR/MBS ROOM SLAB DETAILS REFER TO STRUCTURAL DRAWING 130607-JAC-ST-DWG-0050

LOADING DOCK

SUPPORT AND MORTUARY

AMBULANCE DROPOFF

EMERGENCY

STAFF

KERB TYPE SM

HEALTH ONE

INPATIENT UNIT

SHARED SERVICES

CLINICAL SUPPORT

ENTRY/ RECEP

PAT. DROPOFF

PARKING BAY

TYPE 1 - FOOTPATH

TYPE 1 - FOOTPATH

TYPE 1 - FOOTPATH

STOP

GIVE WAY

GIVE WAY

GIVE WAY

GIVE WAY

GIVE WAY

ONLY

ONLY

EXIT

ENTRY

EX. CAR PARK

OSMAN STREET

RESIDENTIAL AGED CARE

UP

PAVEMENT TYPE 2 - GRANULAR PAVEMENT CONFIGURATION FOR ACCESS ROAD AND CAR PARK

PAVEMENT TYPE 2 - GRANULAR PAVEMENT CONFIGURATION FOR ACCESS ROAD AND CAR PARK

MILL AND RESHEET EXISTING CARPARK AND PROVIDE NEW LINE MARKINGS

MILL AND RESHEET

ONLY

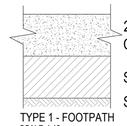
ENTRY ONLY

NO ENTRY

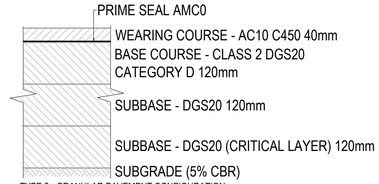
NO ENTRY

LEGEND

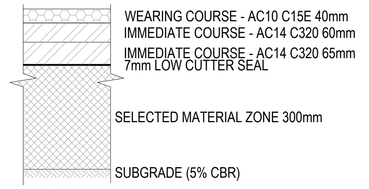
- CIVIL WORKS
- BOUNDARY
- ARCHITECTURAL LAYOUT
- PAVEMENT MARKING



TYPE 1 - FOOTPATH
SCALE 1:10



TYPE 2 - GRANULAR PAVEMENT CONFIGURATION FOR ACCESS ROAD AND CAR PARK
SCALE 1:10



TYPE 3 - FULL DEPTH ASPHALT PAVEMENT CONFIGURATION FOR LOADING DOCK AREA
SCALE 1:10

BCA Consultant
Blackett Maguire + Goldsmith Pty Ltd
Aaron Redfern
Suite 2, 56 Hudson Street, Hamilton, NSW, 2303
+61 2 9211 7777
aaron@bmplusg.com.au

Cost Management
Genus Advisory
Nam Nguyen
Level 6, 201 Kent Street, Sydney, NSW, 2000
<PHONE>
namnguyen@genusadvisory.com.au

ARCHITECT
NBRS ARCHITECTURE
Anselmo Matsui
4 Glen Street, Milsons Point, NSW, 2061
+61 2 9095 5640
anselmo.matsui@nbrs.com.au

Issue

No.	Date	Description	Chkd
0	10.05.23	DRAFT 50% DESIGN DEVELOPMENT	K.L
1	06.07.23	75% DESIGN DEVELOPMENT	K.L
2	09.08.23	FOR TENDER	K.L

Building Services, Structural & Civil Consultants

Jacobs

Level 7, 177 Pacific Highway
P.O. Box 632
North Sydney, NSW 2060
AUSTRALIA

Tel: +61 2 9928 2100
Fax: +61 2 9928 2500
Web: www.jacobs.com

Project
Blayney HS

at
3 OSman St, Blayney NSW 2799

for
Health Infastructure

Drawing Title
CIVIL WORKS
PAVEMENT LAYOUT
PLAN

Scale 1 : 250@ A1

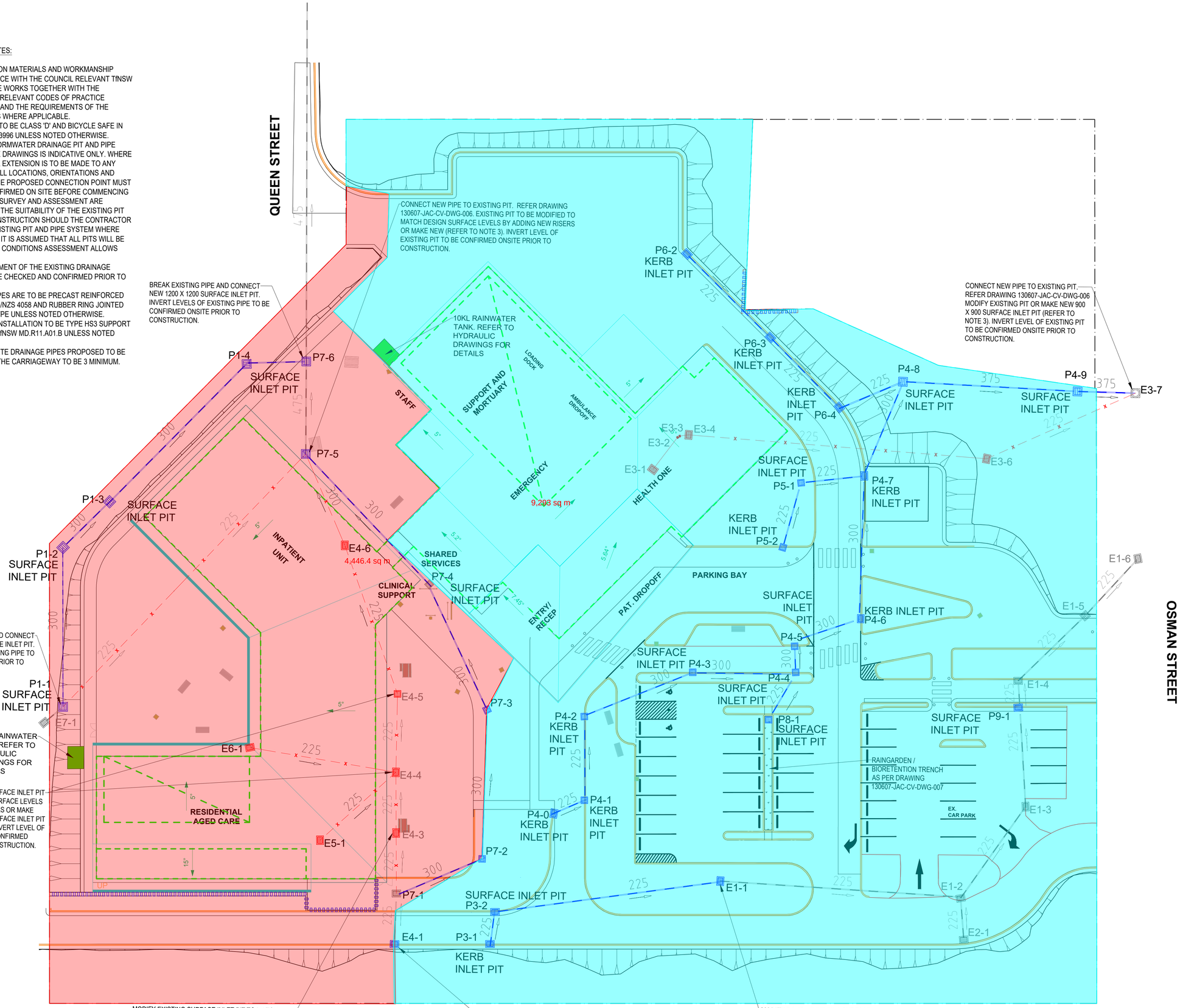
Drawing Reference
130607-JAC-CV-DWG-0004

Revision
2

0 10 20 30 40 50 60 70 80 90 100

GENERAL DRAINAGE NOTES:

1. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE COUNCIL RELEVANT TfNSW SPECIFICATION FOR THE WORKS TOGETHER WITH THE REQUIREMENTS OF ALL RELEVANT CODES OF PRACTICE REFERRED TO THEREIN AND THE REQUIREMENTS OF THE STATUTORY AUTHORITIES WHERE APPLICABLE.
2. ALL GRATES ARE TO BE CLASS 'D' AND BICYCLE SAFE IN ACCORDANCE WITH AS 3996 UNLESS NOTED OTHERWISE.
3. THE EXISTING STORMWATER DRAINAGE PIT AND PIPE LAYOUT SHOWN ON THE DRAWINGS IS INDICATIVE ONLY. WHERE A NEW CONNECTION OR EXTENSION IS TO BE MADE TO ANY EXISTING PIT OR PIPE, ALL LOCATIONS, ORIENTATIONS AND REDUCED LEVELS AT THE PROPOSED CONNECTION POINT MUST BE SURVEYED AND CONFIRMED ON SITE BEFORE COMMENCING ANY WORK. CONDITION SURVEY AND ASSESSMENT ARE REQUIRED TO CONFIRM THE SUITABILITY OF THE EXISTING PIT AND PIPE PRIOR TO CONSTRUCTION SHOULD THE CONTRACTOR WISH TO REUSE THE EXISTING PIT AND PIPE SYSTEM WHERE APPLICABLE. HOWEVER IT IS ASSUMED THAT ALL PITS WILL BE MADE NEW UNLESS THE CONDITIONS ASSESSMENT ALLOWS OTHERWISE.
4. LOADING ASSESSMENT OF THE EXISTING DRAINAGE INFRASTRUCTURE TO BE CHECKED AND CONFIRMED PRIOR TO CONSTRUCTION.
5. ALL DRAINAGE PIPES ARE TO BE PRECAST REINFORCED CONCRETE PIPES TO AS/NZS 4058 AND RUBBER RING JOINTED SPIGOT AND SOCKET TYPE UNLESS NOTED OTHERWISE.
6. CONCRETE PIPE INSTALLATION TO BE TYPE HS3 SUPPORT IN ACCORDANCE WITH TfNSW MD.R11.A01.B UNLESS NOTED OTHERWISE.
7. ALL NEW CONCRETE DRAINAGE PIPES PROPOSED TO BE TRANSVERSE ACROSS THE CARRIAGEWAY TO BE 3 MINIMUM.



LEGEND

- EXISTING PIT TO BE RETAINED
- EXISTING PIPE TO BE RETAINED
- PIPE FLOW DIRECTION
- 375 PIPE DIAMETER
- PROPOSED KERB INLET PIT
- PROPOSED SURFACE INLET PIT
- PROPOSED PIPE
- EXISTING PITS TO BE REMOVED
- EXISTING PIPE TO BE REMOVED
- PROPOSED RAINGARDEN/ BIORETENTION TRENCH
- GRASSED SWALE
- RAINWATER TANK
- RETAINING WALL

BCA Consultant
Blackett Maguire + Goldsmith Pty Ltd
Aaron Redfern
Suite 2, 56 Hudson Street, Hamilton, NSW, 2303
+61 2 9211 7777
aaron@bmplusg.com.au

Cost Management
Genus Advisory
Nam Nguyen
Level 6, 201 Kent Street, Sydney, NSW, 2000
<PHONE>
namnguyen@genusadvisory.com.au

ARCHITECT
NBRS ARCHITECTURE
Anselmo Matsui
4 Glen Street, Milsons Point, NSW, 2061
+61 2 9095 5640
anselmo.matsui@nbrs.com.au

Issue

No.	Date	Description	Chkd
0	10.05.23	DRAFT 50% DESIGN DEVELOPMENT	K.L
1	06.07.23	75% DESIGN DEVELOPMENT	K.L
2	09.08.23	FOR TENDER	K.L

Building Services, Structural & Civil Consultants

Jacobs

Level 7, 177 Pacific Highway
P.O. Box 632
North Sydney, NSW 2060
AUSTRALIA

Tel: +61 2 9928 2100
Fax: +61 2 9928 2500
Web: www.jacobs.com

Project
Blayney HS

at
3 OSman St, Blayney NSW 2799

for
Health Infastructure

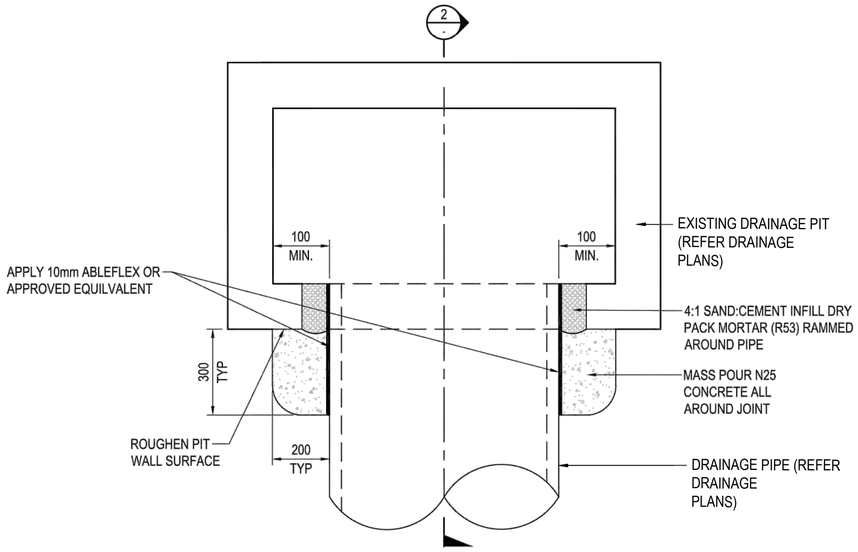
Drawing Title
CIVIL WORKS
DRAINAGE LAYOUT PLAN

Scale 1 : 250@ A1

Drawing Reference 130607-JAC-CV-DWG-0005

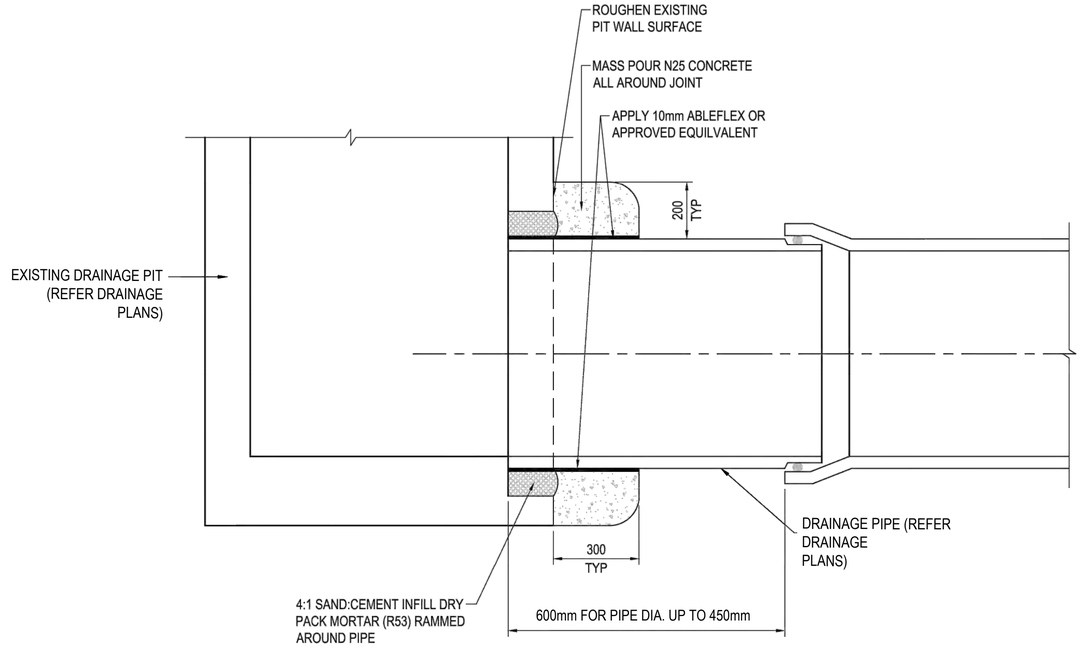
Revision 2

0 10 20 30 40 50 60 70 80 90 100



PLAN - NEW PIPE CONNECTION TO EXISTING PIT

SCALE 1: 10



SECTION 2 -

SCALE 1: 10

NOTES:

1. FOR GENERAL NOTES ON DRAWING NUMBER 130607-JAC-CV-DWG-0005

NOTES FOR PIT SCHEDULE

1. XY SETOUT TO PIT CENTRE
2. SETOUT LEVEL TO PIT COVER LEVEL
3. PIPES UNDER ACCESS ROADS TO BE MINIMUM CLASS 4 RCP OR QUIVALENT APPROVED.
4. PIPES NOT UNDER ROADS TO BE A MINIMUM CLASS 2 RCP OR EQUIVALENT APPROVED.

PIT SCHEDULE

Pit			SETOUT		INTERNAL		INLET		OUTLET		PIT		
Name	TYPE	STANDARD REFERENCE DRAWING	EASTING	NORTHING	WD	LEN	DIA	INV LEV	DIA	INV LEV	SETOUT RL	DEPTH	REMARKS
E4-1	KERB INLET PIT	WBC009	708958.264	6286787.926	0.87	0.67			225	873.686	874.7	1.014	REFER NOTE ON DRAWING 130607-JAC-CV-DWG-0005
P1-1	SURFACE INLET PIT	WBC011	708920.231	6286826.717	0.9	0.9			300	873.284	875.433	2.148	
P1-2	SURFACE INLET PIT	WBC011	708924.189	6286847.712	0.9	0.9	300	873.178	300	873.158	874.998	1.84	
P1-3	SURFACE INLET PIT	WBC011	708931.453	6286852.582	0.9	0.9	300	873.114	300	873.094	874.772	1.678	
P1-4	SURFACE INLET PIT	WBC011	708952.952	6286867.332	0.9	0.9	300	872.959	300	872.939	874.372	1.433	
P7-6	SURFACE INLET PIT	WBC011	708960.862	6286866.149	0.9	0.9	300	872.899			874.307	1.47	REFER NOTE ON DRAWING 130607-JAC-CV-DWG-0005
P3-1	KERB INLET PIT	WBC009	708970.625	6286784.872	0.6	0.9			225	873.972	874.686	0.714	
P3-2	KERB INLET PIT	WBC009	708972.091	6286788.976	0.6	0.9	225	873.954	225	873.934	874.7	0.766	
E1-1	SURFACE INLET PIT	WBC011	709002.556	6286787.447	0.87	0.67	225	873.81			874.241	0.451	REFER NOTE ON DRAWING 130607-JAC-CV-DWG-0005
P4-0	KERB INLET PIT	WBC009	708982.294	6286800.486	0.9	0.6			225	873.222	874.995	1.772	
P4-1	KERB INLET PIT	WBC009	708986.636	6286801.481	0.6	0.6	225	873.199	225	873.179	874.2	1.02	
P4-2	KERB INLET PIT	WBC009	708988.707	6286812.505	0.6	0.6	225	873.123	300	873.103	875.06	1.957	
P4-3	KERB INLET PIT	WBC009	709004.101	6286815.647	0.6	0.6	300	873.023	300	873.003	874.2	1.197	
P4-4	KERB INLET PIT	WBC009	709017.671	6286813.08	0.6	0.6	300	872.933	300	872.485	874.2	1.715	
P4-5	KERB INLET PIT	WBC009	709018.18	6286816.546	0.6	0.6	300	872.467	300	872.447	874.2	1.753	
P4-6	KERB INLET PIT	WBC009	709027.571	6286818.537	0.6	0.9	300	872.397	300	872.377	874.605	2.228	
P4-7	KERB INLET PIT	WBC009	709031.577	6286837.268	0.6	0.9	300	872.277	300	872.257	874.431	2.174	
P4-8	SURFACE INLET PIT	WBC011	709039.019	6286848.711	0.9	0.9	300	871.89	375	871.89	872.691	0.801	
P4-9	SURFACE INLET PIT	WBC011	709061.784	6286843.099	0.9	0.9	375	871.77	375	871.77	872.347	0.577	
P5-2	KERB INLET PIT	WBC009	709019.085	6286829.864	0.6	0.6			225	873.311	874.783	1.472	
P5-1	SURFACE INLET PIT	WBC011	709023.077	6286837.913	0.9	0.9	225	873.221	225	873.201	874.192	0.99	
P6-2	KERB INLET PIT	WBC009	709013.718	6286870.892	0.6	0.9			225	873	875.194	2.194	
P6-3	KERB INLET PIT	WBC009	709022.641	6286857.834	0.6	0.9	225	872.92	225	872.9	874.718	1.818	
P6-4	KERB INLET PIT	WBC009	709029.986	6286846.906	0.6	0.9	225	872.77	225	872.77	874.389	1.619	REFER NOTE ON DRAWING 130607-JAC-CV-DWG-0005
P7-6	SURFACE INLET PIT	WBC011	708960.862	6286866.149	0.9	0.9	475	872.838	475	872.838	874.307	1.47	
P7-1	SURFACE INLET PIT	WBC011	708959.549	6286793.854	0.9	0.9	225	873.655	300	873.545	874.738	1.193	
P7-2	SURFACE INLET PIT	WBC011	708971.708	6286796.291	0.6	0.6	300	873.48	300	873.48	874.379	0.899	
P7-3	SURFACE INLET PIT	WBC011	708976.05	6286815.814	0.6	0.6	300	873.37	300	873.37	874.198	0.828	
P7-4	SURFACE INLET PIT	WBC011	708971.539	6286833.759	0.6	0.6	300	873.27	300	873.27	874.336	1.066	
P7-5	SURFACE INLET PIT	WBC011	708958.508	6286854.022	0.9	0.9	300	873.145	475	873	874.467	1.467	
P8-1	PRECAST GRATED INLET 900X900	WBC012	709012.94	6286807.523	0.9	0.9			225	872.578	873.8	1.222	
E1-1	SURFACE INLET PIT	WBC011	709002.556	6286787.447	0.87	0.67			225	873.79	874.241	0.451	REFER NOTE ON DRAWING 130607-JAC-CV-DWG-0005
9-1	KERB INLET PIT	WBC009	709046.354	6286802.684	0.9	0.6	225	873.062	225	873.062	873.7	0.638	
P1-1	SURFACE INLET PIT	WBC011	708920.231	6286826.717	0.9	0.9	225	873.304			875.433	2.148	

BCA Consultant
Blackett Maguire + Goldsmith Pty Ltd
Aaron Redfern
Suite 2, 56 Hudson Street, Hamilton, NSW, 2303
+61 2 9211 7777
aaron@bmplusg.com.au

Cost Management
Genus Advisory
Nam Nguyen
Level 6, 201 Kent Street, Sydney, NSW, 2000
<PHONE>
namnguyen@genusadvisory.com.au

ARCHITECT
NBRS ARCHITECTURE
Anselmo Matsui
4 Glen Street, Milsons Point, NSW, 2061
+61 2 9095 5640
anselmo.matsui@nbrs.com.au

Issue

No.	Date	Description	Chkd
0	10.05.23	DRAFT 50% DESIGN DEVELOPMENT	K.L
1	06.07.23	75% DESIGN DEVELOPMENT	K.L
2	09.08.23	FOR TENDER	K.L

Building Services, Structural & Civil Consultants

Jacobs

Level 7, 177 Pacific Highway
P.O. Box 632
North Sydney, NSW 2060
AUSTRALIA

Tel: +61 2 9928 2100
Fax: +61 2 9928 2500
Web: www.jacobs.com

Project

Blayney HS

at

3 OSman St, Blayney NSW 2799

for

Health Infastructure

Drawing Title

CIVIL WORKS
STORMWATER AND DRAINAGE
TYPICAL DETAILS

Scale 1 : 250@ A1

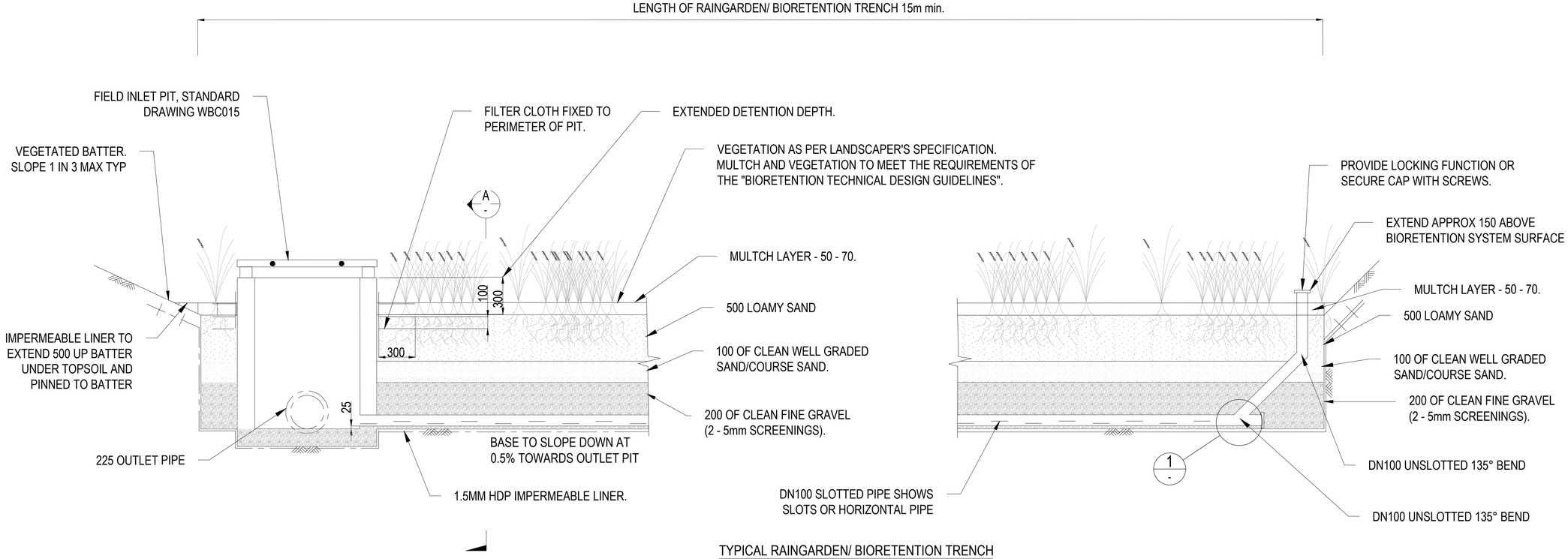
Drawing Reference

130607-JAC-CV-DWG-0006

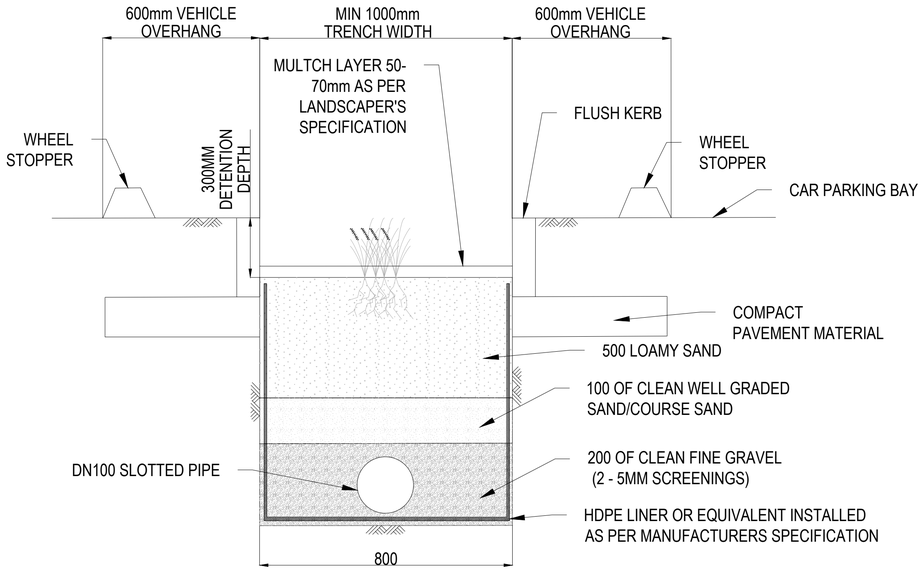
Revision

2

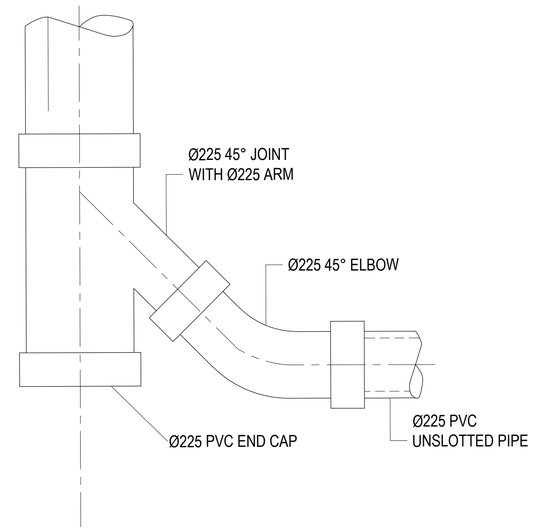
0 10 20 30 40 50 60 70 80 90 100



TYPICAL RAINGARDEN/ BIORETENTION TRENCH



SECTION A
SCALE 1:50



DETAIL 1
SCALE 1:5 CV-DWG-0007

GENERAL NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. LINER IS NOT REQUIRED WHERE GEOTECHNICAL INSPECTION HAS DETERMINED IN-SITU MATERIAL PROVIDES SUFFICIENT IMPERMEABILITY.

WELLINGTON BLAYNEY CABONNE COUNCIL STRATEGIC ALLIANCE REFERENCE DRAWINGS

WBC009	STORMWATER - KERB INLET PIT CONFIGURATION
WBC010	STORMWATER - PIPE BEDDING
WBC011	STORMWATER - FOOTPATH SURFACE INLET PITS
WBC012	STORMWATER - SURFACE/SURCHARGE PITS
WBC015	STORMWATER - FIELD INLET AND INTERALLOTMENT PITS
WBC017	STORMWATER - SUBSOIL DRAINAGE LINES
WBC018	STORMWATER - SUBSOIL FLUSHOUT AND OUTLET STRUCTURES

LEGEND

- MULTCH LAYER 50 - 70
- 500 LOAMY SAND
- 100 OF CLEAN WELL GRADED SAND/COURSE SAND
- 200 OF CLEAN FINE GRAVEL (2-5mm SCREENINGS)

BCA Consultant
Blackett Maguire + Goldsmith Pty Ltd
Aaron Redfern
Suite 2, 56 Hudson Street, Hamilton, NSW, 2303
+61 2 9211 7777
aaron@bmplusg.com.au

Cost Management
Genus Advisory
Nam Nguyen
Level 9, 201 Kent Street, Sydney, NSW, 2000
<PHONE>
namnguyen@genusadvisory.com.au

ARCHITECT
NBRS ARCHITECTURE
Anselmo Matsui
4 Glen Street, Milsons Point, NSW, 2061
+61 2 9095 5640
anselmo.matsui@nbrs.com.au

Issue

No.	Date	Description	Chkd
0	10.05.23	DRAFT 50% DESIGN DEVELOPMENT	K.L
1	06.07.23	75% DESIGN DEVELOPMENT	K.L
2	09.08.23	FOR TENDER	K.L

Building Services, Structural & Civil Consultants

Jacobs

Level 7, 177 Pacific Highway
P.O. Box 632
North Sydney, NSW 2060
AUSTRALIA

Tel: +61 2 9928 2100
Fax: +61 2 9928 2500
Web: www.jacobs.com

Project
Blayney HS

at
3 OSman St, Blayney NSW 2799

for
Health Infastructure

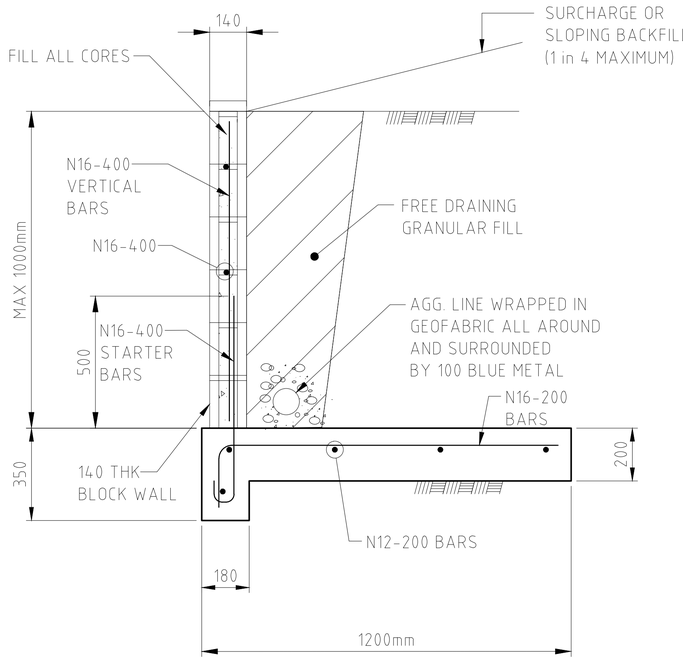
Drawing Title
CIVIL WORKS
DRAINAGE DETAILS

Scale 1 : 250@ A1

Drawing Reference
130607-JAC-CV-DWG-0007

Revision
2

0 10 20 30 40 50 60 70 80 90 100



TYPICAL RETAINING WALL DETAIL

NOTES

1. FOR GENERAL STRUCTURES, RETAINING WALL CONCRETE AND REINFORCEMENT REFER TO STRUCTURAL SERVICES GENERAL NOTES ON DRAWING NUMBER 130607-JAC-ST-DWG-0001

BCA Consultant
Blackett Maguire + Goldmsith Pty Ltd
Aaron Redfern
Suite 2, 56 Hudson Street, Hamilton, NSW, 2303
+61 2 9211 7777
aaron@bmplusg.com.au

Cost Management
Genus Advisory
Nam Nguyen
Level 6, 201 Kent Street, Sydney, NSW, 2000
<PHONE>
namnguyen@genusadvisory.com.au

ARCHITECT
NBRS ARCHITECTURE
Anselmo Matsui
4 Glen Street, Milsons Point, NSW, 2061
+61 2 9095 5640
anselmo.matsui@nbrs.com.au

Issue

No.	Date	Description	Chkd
0	06.07.23	75% DESIGN DEVELOPMENT	K.L
1	09.08.23	FOR TENDER	K.L

Building Services, Structural & Civil Consultants

Jacobs

Level 7, 177 Pacific Highway
P.O. Box 632
North Sydney, NSW 2060
AUSTRALIA

Tel: +61 2 9928 2100
Fax: +61 2 9928 2500
Web: www.jacobs.com

Project
Blayney HS

at
3 OSman St, Blayney NSW 2799

for
Health Infastructure

Drawing Title
CIVIL WORKS
RETAINING WALL TYPICAL DETAILS

Scale 1 : 250@ A1

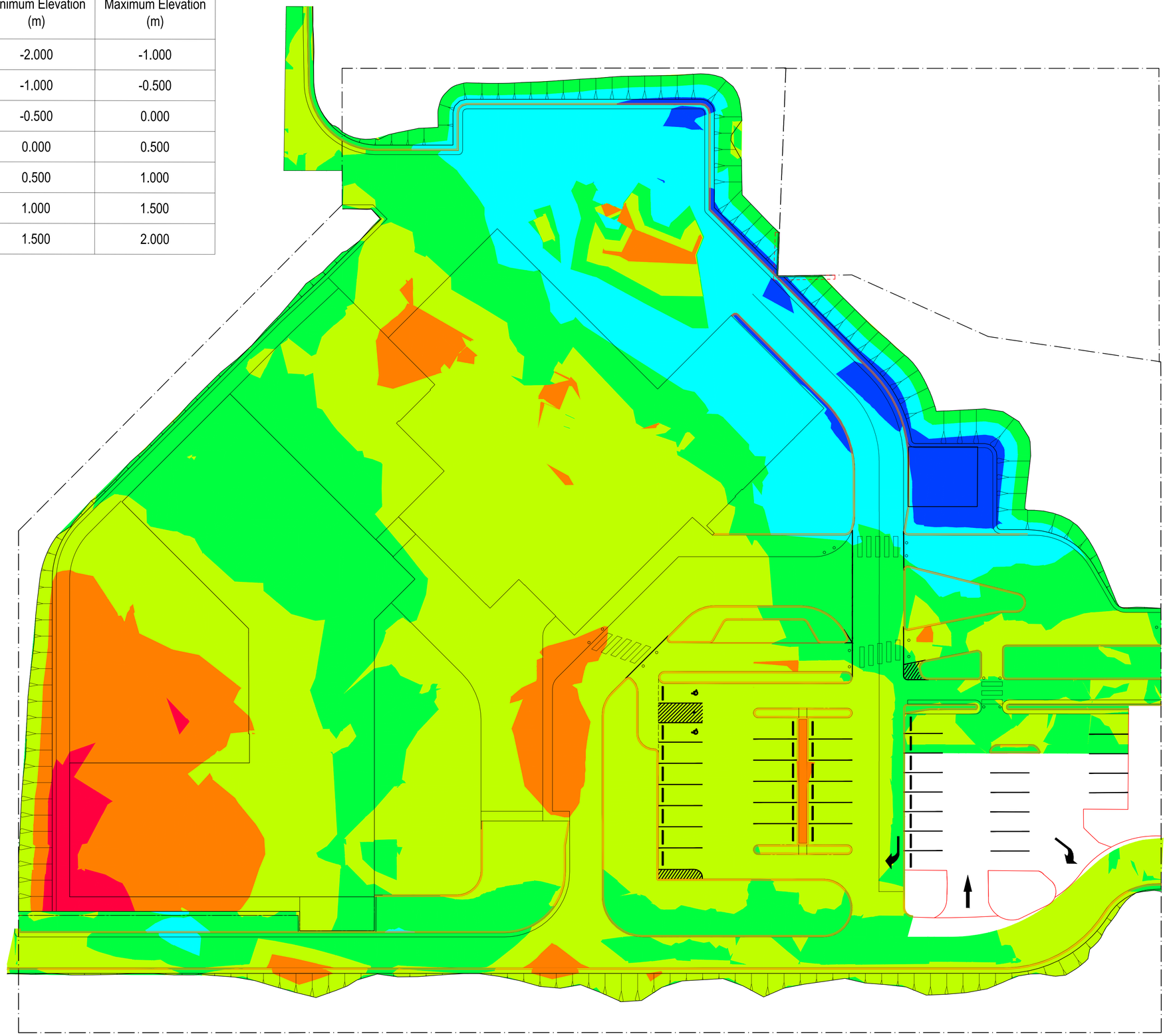
Drawing Reference
130607-JAC-CV-DWG-0008

Revision
1

0 10 20 30 40 50 60 70 80 90 100

Surface Analysis: Elevation Ranges

Number	Color	Minimum Elevation (m)	Maximum Elevation (m)
1		-2.000	-1.000
2		-1.000	-0.500
3		-0.500	0.000
4		0.000	0.500
5		0.500	1.000
6		1.000	1.500
7		1.500	2.000



NOTES

1. ALLOW FOR ADDITIONAL CUT AND FILL REQUIREMENTS, E.G. IN AREAS OF EXISTING FOOTINGS, WHERE TREES ARE REMOVED AND WHERE RESIDUAL SOIL IS NOT ENCOUNTERED, AS NOTED ON STRUCTURAL DRAWINGS 13067-ST-DWG-0060, 0061 & 0070.

BCA Consultant
Blackett Maguire + Goldsmith Pty Ltd
Aaron Redfern
Suite 2, 56 Hudson Street, Hamilton, NSW, 2303
+61 2 9211 7777
aaron@bmplusg.com.au

Cost Management
Genus Advisory
Nam Nguyen
Level 6, 201 Kent Street, Sydney, NSW, 2000
<PHONE>
namnguyen@genusadvisory.com.au

ARCHITECT
NBRS ARCHITECTURE
Anselmo Matsui
4 Glen Street, Milsons Point, NSW, 2061
+61 2 9095 5640
anselmo.matsui@nbrs.com.au

Issue

No.	Date	Description	Chkd
0	06.07.23	75% DESIGN DEVELOPMENT	K.L
1	09.08.23	FOR TENDER	K.L

Building Services, Structural & Civil Consultants

Jacobs

Level 7, 177 Pacific Highway
P.O. Box 632
North Sydney, NSW 2060
AUSTRALIA

Tel: +61 2 9928 2100
Fax: +61 2 9928 2500
Web: www.jacobs.com

Project
Blayney HS

at
3 OSman St, Blayney NSW 2799

for
Health Infastructure

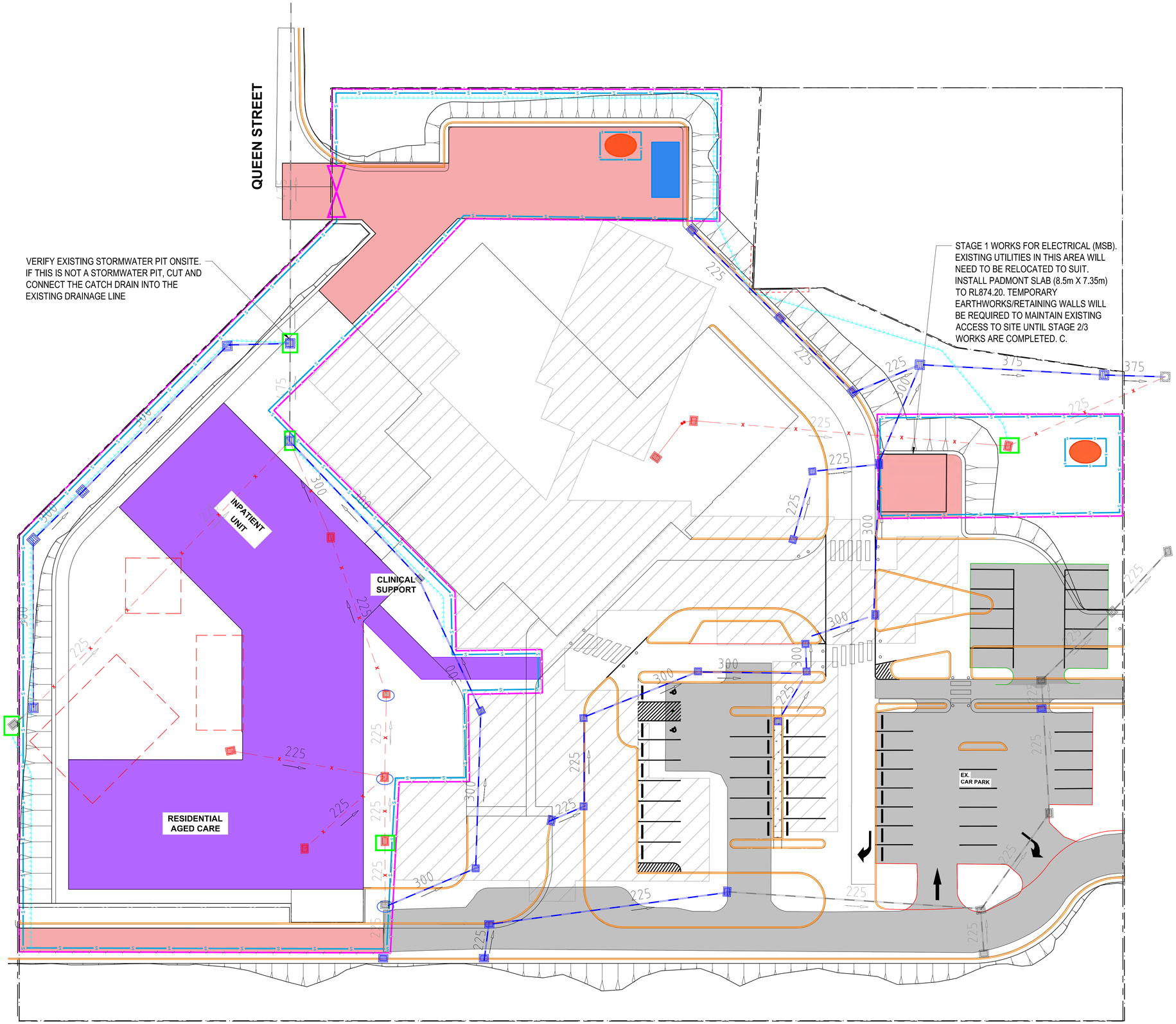
Drawing Title
CIVIL WORKS
CUT AND FILL PLAN

Scale 1 : 250@ A1

Drawing Reference
130607-JAC-CV-DWG-0009

Revision
1

0 10 20 30 40 50 60 70 80 90 100



LEGEND

REFERENCE ONLY

- PROPOSED BOUNDARY

CONSTRUCTION STAGING

- EXISTING ROAD AND CARPARK
- ROAD AND CARPARK IN CONSTRUCTION
- ROAD AND CARPARK CONSTRUCTED
- EXISTING BUILDING
- EXISTING BUILDING DEMOLISHED
- NEW BUILDING IN CONSTRUCTION
- NEW BUILDING CONSTRUCTED

EROSION AND SEDIMENT CONTROL

- BARRIER FENCE
- SEDIMENT FENCE
- CATCH DRAIN
- GRAVEL FILTER / GEOTEXTILE SAUSAGE
- GEOTEXTILE INLET FILTER
- GATE
- SITE COMPUND
- STOCK PILE AREA

NOTES

1. EROSION AND SEDIMENT CONTROLS ARE INDICATIVE ONLY.
2. FURTHER TEMPORARY STAGING MAY BE REQUIRED AS CONSTRUCTION PROGRESSES.
3. EROSION SEDIMENT CONTROL MEASURES TO BE IN ACCORDANCE WITH BLAYNEY SHIRE COUNCIL DCP PART G.

BCA Consultant
Blackett Maguire + Goldsmith Pty Ltd
Aaron Redfern
Suite 2, 56 Hudson Street, Hamilton, NSW, 2303
+61 2 9211 7777
aaron@bmplusg.com.au

Cost Management
Genus Advisory
Nam Nguyen
Level 6, 201 Kent Street, Sydney, NSW, 2000
<PHONE>
namnguyen@genusadvisory.com.au

ARCHITECT
NBRS ARCHITECTURE
Anselmo Matsui
4 Glen Street, Milsons Point, NSW, 2061
+61 2 9095 5640
anselmo.matsui@nbrs.com.au

Issue

No.	Date	Description	Chkd
0	17.02.23	100% SCHEMATIC DESIGN ISSUE	K.L
1	22.02.23	100% SCHEMATIC DESIGN ISSUE	K.L
2	06.07.23	75% DESIGN DEVELOPEMENT	K.L
3	09.08.23	FOR TENDER	K.L

Building Services, Structural & Civil Consultants

Jacobs

Level 7, 177 Pacific Highway
P.O. Box 632
North Sydney, NSW 2060
AUSTRALIA

Tel: +61 2 9928 2100
Fax: +61 2 9928 2500
Web: www.jacobs.com

Project

Blayney HS

at

3 Osman St, Blayney NSW 2799

for

Health Infastructure

Drawing Title

CIVIL WORKS
CONSTRUCTION STAGING &
EROSION AND SEDIMENT CONTROL
STAGE 1

Scale 1 : 250@ A1

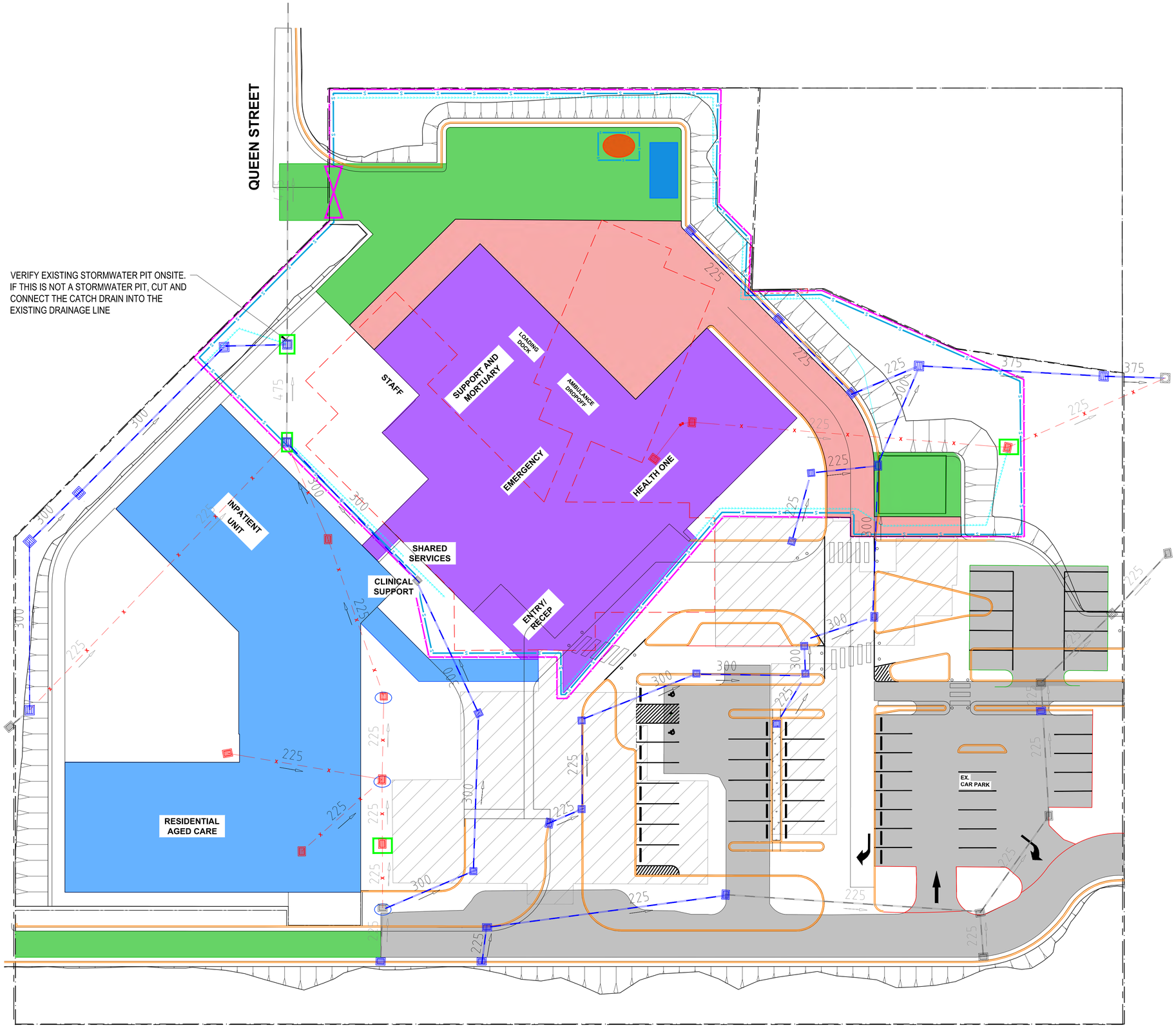
Drawing Reference

130607-JAC-CV-DWG-0121

Revision

3

0 10 20 30 40 50 60 70 80 90 100



LEGEND

REFERENCE ONLY

- PROPOSED BOUNDARY

CONSTRUCTION STAGING

- EXISTING ROAD AND CARPARK
- ROAD AND CARPARK IN CONSTRUCTION
- ROAD AND CARPARK CONSTRUCTED
- EXISTING BUILDING
- EXISTING BUILDING DEMOLISHED
- NEW BUILDING IN CONSTRUCTION
- NEW BUILDING CONSTRUCTED

EROSION AND SEDIMENT CONTROL

- BARRIER FENCE
- SEDIMENT FENCE
- CATCH DRAIN
- GRAVEL FILTER / GEOTEXTILE SAUSAGE
- GEOTEXTILE INLET FILTER
- GATE
- SITE COMPUND
- STOCK PILE AREA

NOTES

1. EROSION AND SEDIMENT CONTROLS ARE INDICATIVE ONLY.
2. FURTHER TEMPORARY STAGING MAY BE REQUIRED AS CONSTRUCTION PROGRESSES.
3. EROSION SEDIMENT CONTROL MEASURES TO BE IN ACCORDANCE WITH BLAYNEY SHIRE COUNCIL DCP PART G.

BCA Consultant
Blackett Maguire + Goldsmith Pty Ltd
Aaron Redfern
Suite 2, 56 Hudson Street, Hamilton, NSW, 2303
+61 2 9211 7777
aaron@bmplusg.com.au

Cost Management
Genus Advisory
Nam Nguyen
Level 9, 201 Kent Street, Sydney, NSW, 2000
<PHONE>
namnguyen@genusadvisory.com.au

ARCHITECT
NBRS ARCHITECTURE
Anselmo Matsui
4 Glen Street, Milsons Point, NSW, 2061
+61 2 9095 5640
anselmo.matsui@nbrs.com.au

Issue

No.	Date	Description	Chkd
0	17.02.23	100% SCHEMATIC DESIGN ISSUE	K.L
1	22.02.23	100% SCHEMATIC DESIGN ISSUE	K.L
2	06.07.23	75% DESIGN DEVELOPEMENT	K.L
3	09.08.23	FOR TENDER	K.L

Building Services, Structural & Civil Consultants

Jacobs

Level 7, 177 Pacific Highway
P.O. Box 632
North Sydney, NSW 2060
AUSTRALIA

Tel: +61 2 9928 2100
Fax: +61 9928 2500
Web: www.jacobs.com

Project

Blayney HS

at

3 OSman St, Blayney NSW 2799

for

Health Infastructure

Drawing Title

CIVIL WORKS
CONSTRUCTION STAGING &
EROSION AND SEDIMENT CONTROL
STAGE 2

Scale 1 : 250@ A1

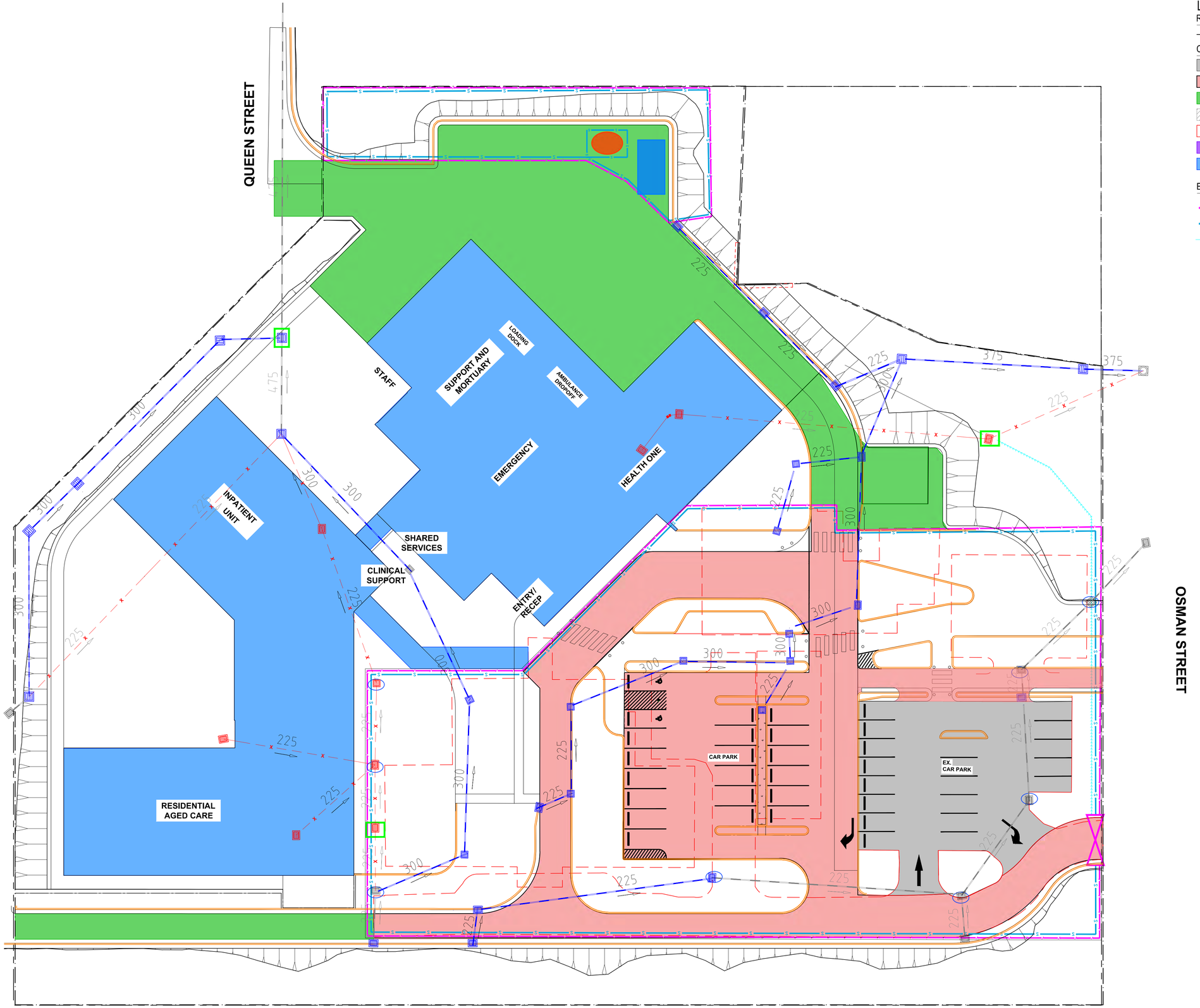
Drawing Reference

130607-JAC-CV-DWG-0122

Revision

3

0 10 20 30 40 50 60 70 80 90 100



LEGEND

REFERENCE ONLY

- PROPOSED BOUNDARY

CONSTRUCTION STAGING

- EXISTING ROAD AND CARPARK
- ROAD AND CARPARK IN CONSTRUCTION
- ROAD AND CARPARK CONSTRUCTED
- EXISTING BUILDING
- EXISTING BUILDING DEMOLISHED
- NEW BUILDING IN CONSTRUCTION
- NEW BUILDING CONSTRUCTED

EROSION AND SEDIMENT CONTROL

- BARRIER FENCE
- SEDIMENT FENCE
- CATCH DRAIN
- GRAVEL FILTER / GEOTEXTILE SAUSAGE
- GEOTEXTILE INLET FILTER
- GATE
- SITE COMPUND
- STOCK PILE AREA

NOTES

1. EROSION AND SEDIMENT CONTROLS ARE INDICATIVE ONLY.
2. FURTHER TEMPORARY STAGING MAY BE REQUIRED AS CONSTRUCTION PROGRESSES.
3. ACCESS TO HEALTH ONE BUILDING AND RESIDENTIAL AGED CARE BUILDING WILL NEED TO BE CONSIDERED FROM THE EXISTING CARPARK.
4. EROSION SEDIMENT CONTROL MEASURES TO BE IN ACCORDANCE WITH BLAYNEY SHIRE COUNCIL DCP PART G.

BCA Consultant
Blackett Maguire + Goldsmith Pty Ltd
Aaron Redfern
Suite 2, 56 Hudson Street, Hamilton, NSW, 2303
+61 2 9211 7777
aaron@bmplusg.com.au

Cost Management
Genus Advisory
Nam Nguyen
Level 6, 201 Kent Street, Sydney, NSW, 2000
<PHONE>
namnguyen@genusadvisory.com.au

ARCHITECT
NBRS ARCHITECTURE
Anselmo Matsui
4 Glen Street, Milsons Point, NSW, 2061
+61 2 9095 5640
anselmo.matsui@nbrs.com.au

Issue

No.	Date	Description	Chkd
0	17.02.23	100% SCHEMATIC DESIGN ISSUE	K.L
1	22.02.23	100% SCHEMATIC DESIGN ISSUE	K.L
2	06.07.23	75% DESIGN DEVELOPEMENT	K.L
3	09.08.23	FOR TENDER	K.L

Building Services, Structural & Civil Consultants

Jacobs

Level 7, 177 Pacific Highway
P.O. Box 632
North Sydney, NSW 2060
AUSTRALIA

Tel: +61 2 9928 2100
Fax: +61 2 9928 2500
Web: www.jacobs.com

Project
Blayney HS

at
3 OSman St, Blayney NSW 2799

for
Health Infastructure

Drawing Title
CIVIL WORKS
CONSTRUCTION STAGING &
EROSION AND SEDIMENT CONTROL
STAGE 3

Scale 1 : 250@ A1

Drawing Reference
130607-JAC-CV-DWG-0123

Revision
3

0 10 20 30 40 50 60 70 80 90 100

Appendix B. Earthworks

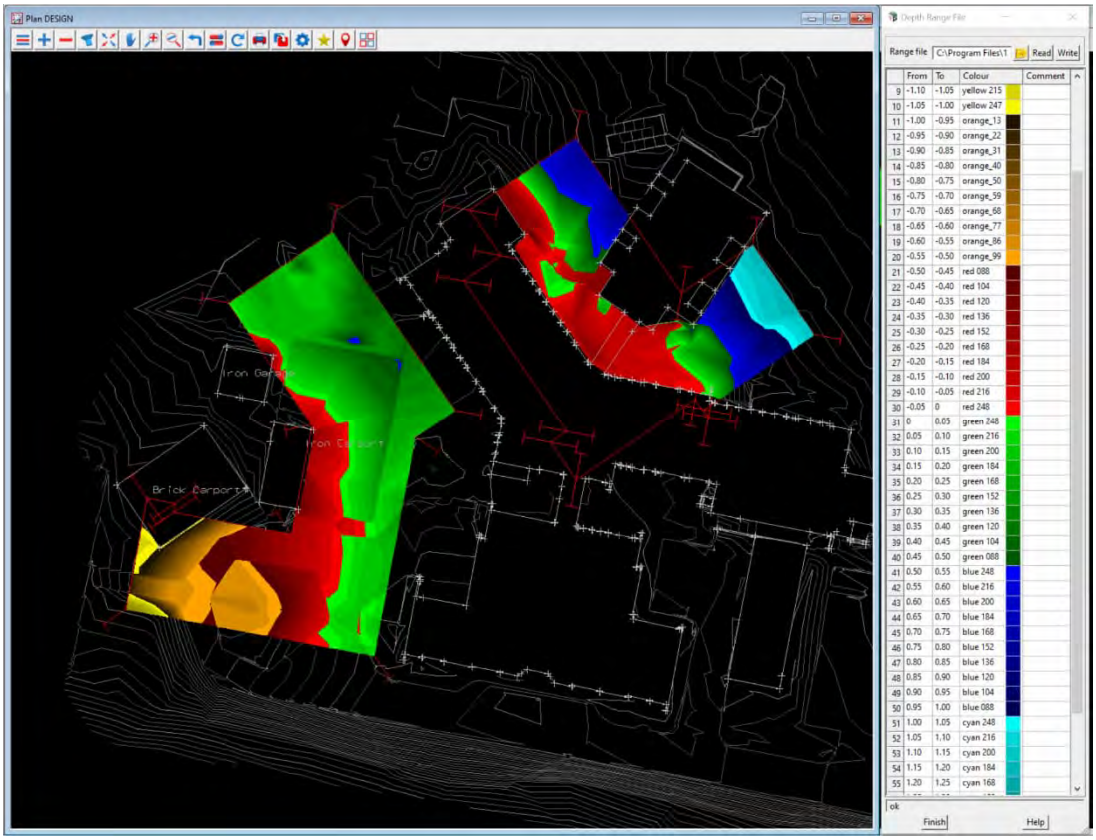
Earthworks Preliminary Analysis

Date: 17 February 2023
Project name: Blayney Hospital
Project no: IA228800
Prepared by: Martin Yates

Jacobs Australia Pty Limited
Level 7, 177 Pacific Highway
North Sydney, NSW 2060
PO Box 632
North Sydney, NSW 2059
Australia
T +61 2 9928 2100
F +61 2 9928 2444
[Website]

Please see below high level summary of key items for Blayney. This is a preliminary preliminary analysis only with the design still at a 2d strategic level.

- Proposed levels Residential Aged Care building FSL = 874.65 and Health One building FSL = 874.20. Footing depth is unknown at this stage.
- The proposed levels provide 0.45m height difference between buildings and approximately balance maximum cut and fill across the site, volume balance has not been reviewed at this stage.
- The image below highlights depth range for the proposed buildings compared to the existing surface levels. The Residential Aged Care building requires approximately 1.3m cut in the south-west corner of the site and the Health One buildings requires approximately 1.2m fill on the north-east corner of the building adjacent the boundary.



Key items for consideration

- South-west corner of site adjacent the Residential Aged Care building. The close proximity of the access road and building requires a retaining structure at this location to address the proposed 1.3m fill. The access road is constrained by the existing levels at the interface with the road off Oldham Place. Consideration is required for the proximity of a retaining structure to the edge of the proposed access road and for a potential circulating path around the building. There is approximately 2.3m between the proposed building roof line and the edge of the access road.

- Level access for ambulance bay/loading dock. It has been assumed that the pavement levels for the ambulance bay/loading dock will match the building FSL at the interface with the Health One building and grade away from the building at a maximum of 2.5%. This detail is to be further developed at the detailed design stage.

- Pinch point North-east of Health One building. The proposed location of the Health One building constrains the available space for a circulating roadway connecting the ambulance bay/loading dock and the main car park. At the corner of the site boundary there is approximately 7.5m offset (0.75m circulating path adjacent the building, 6.0m road, 0.75m residual to boundary) with a 1.3m difference in height. The surface level of the proposed new road is constrained by the ambulance bay/loading dock levels, with the height difference to the existing surface to be addressed by a retaining structure adjacent the boundary located in the 0.75m to the proposed new road. Assuming a 2.5% grade from the ambulance bay/loading dock interface, the proposed new road could be located approximately 0.3m below the building FSL with a residual of approximately 1.0m to be addressed via the retaining structure.



Appendix C. Stormwater Drainage Memo

Stormwater Assessment (Final)

Date: 9 August 2023
Project name: Blayney MPS
Project no: IA228800
Attention: Nick Crossingham
Company: APP
Prepared by: Rapula Regoeng

Jacobs Group (Australia) Pty Ltd
Level 7, 177 Pacific Highway
North Sydney, NSW 2060
PO Box 632
North Sydney, NSW 2059
Australia
T +61 2 9928 2100
F +61 2 9928 2444
www.jacobs.com

New stormwater drainage systems and modification of existing drainage systems where required has been carried out to comply with the Wellington, Blayney and Cabonne Council (WBC) Strategic Alliance Guidelines for Engineering Works, Australian Standards and Austroads guidelines adopting design parameters tabled below.

Table 1: Summary of drainage design criterion

Criterion	Requirement	Source
Minor Drainage System	20% AEP	Section 3.3.1 of WBC Strategic Alliance Guidelines for Engineering Works
Major Drainage System	1% AEP	Section 3.3 of WBC Strategic Alliance Guidelines for Engineering Works
Flow width	2.5m for the minor drainage system 1m at intersections	Section 3.4.1.2 of WBC Strategic Alliance Guidelines for Engineering Works
Minimum pipe size	225mm for the minor drainage system 100mm for water quality elements	Section 3.8.4.3 of WBC Strategic Alliance Guidelines for Engineering Works
Pipe Class	SN1000 for UPVC Class 3 for RCP or FRC under carriageways/carpark	Manufacturer's specification
Minimum pipe cover	300mm absolute minimum cover 600mm under the kerb line	Sections 3.4.2.5 & 3.4.2.6 of WBC Strategic Alliance Guidelines for Engineering Works
Minimum pipe grade	1% where possible	Sections 3.4.2.4 of WBC Strategic Alliance Guidelines for Engineering Works AS3725
Minimum pipe velocity	0.6m/s for 1EY	AGRD Part 5A
Maximum pipe velocity	6m/s (absolute = 8m/s)	AGRD Part 5A
Pipe Installation Support	H2 trench installation within footpaths and HS2 trench installation under carriageway	Sections 3.4.2.1 of WBC Strategic Alliance Guidelines for Engineering Works AS3725
Freeboard	150mm for minor drainage systems 500mm for major drainage systems	Sections 3.3.1 and 3.4.1.2 of WBC Strategic Alliance Guidelines for Engineering Works
Maximum pit spacing	85m	Section 3.4.1.2 of WBC Strategic Alliance Guidelines for Engineering Works
Pit bypass flow	15% of the gutter flow	Section 3.4.1.2 of WBC Strategic Alliance Guidelines for Engineering Works

Velocity x depth factor	0.4m2/s	Section 3.4.1.2 of WBC Strategic Alliance Guidelines for Engineering Works
Channel lining	Concrete lined n = 0.013 Gabions n = 0.03 Grassed channel n = 0.035 Clear earth n = 0.02	Section 3.5.2 of WBC Strategic Alliance Guidelines for Engineering Works
Blockage factor	20% for on-grade 50% for sag pits	Section 3.4.1.3 of WBC Strategic Alliance Guidelines for Engineering Works
Drainage structures	All drainage elements including but not limited to kerb inlet pits and surface inlet pits	Council standard drawings and RTA standard drawings

In addition to broad stormwater objectives in Section 3.1 of WBC Strategic Alliance Guidelines for Engineering Works, the stormwater drainage design includes the following:

- Maintain existing stormwater flow direction and discharge points in Queens Street and Osman Street
- Include measures for the management of external overland flows along the Western boundary in order to minimise impact on the proposed buildings
- Maintain and utilise existing drainage systems at the existing the connection
- Retain and utilise existing drainage system where physically possible
- Provide water quality measures for the new carpark in order to maintain existing water quality and
- Provide two new rainwater tanks to enhance the mandate of stormwater harvesting and reuse for irrigation purposes.

The subject site has three main sub-catchments discharging to three existing discharge points, two discharge points in Osman Street and one discharge point in Queens Street existing drainage systems as shown in Figure 1 below. In the proposed condition, the stormwater design will maintain and utilise the existing discharge points, with minor reconfiguration of internal sub-catchments.



Figure 1: Existing Sub-catchments and Discharge Points

Stormwater runoff from the subject site discharging into Osman Street and Queens Street existing drainage systems is conveyed via the existing drainage pit and pipe systems to Stillingfleet Street existing drainage systems before discharging into a wetland located at the intersection of Stillingfleet Street and Lower Farm St, Figure 2 below, for detention and treatment before ultimately discharging to Belubula River.



Figure 2: Existing Council drainage systems

The stormwater strategy for the proposed development seeks to utilise the existing Council stormwater drainage systems to convey runoff from the site to the existing wetlands at the corner of Stillingfleet Street and Lower Farm Street for detention and water quality treatment. The development proposed to install raingardens in the new carpark to treat runoff from the carpark only and provide two 10 000L rainwater tanks for stormwater harvesting and reuse in irrigation of landscaped areas. It is expected that the provision of rainwater tanks and raingarden in the proposed carpark will enhance the use of water sensitive urban design elements and reduce pollutant loads carried by the stormwater runoff from the subject site to the existing wetlands where further treatment and detention will occur.

The peak stormwater runoff discharges from the subject site in the existing condition and in the post development condition are as tabled below.

Table 2: Peak stormwater discharges occurring in the existing condition

Outlet Points	Existing Contributing Catchment				
	Area	Total Impervious Area		$Q_{20\ \%\ AEP\ peak\ flows}$	$Q_{1\ \%\ AEP\ peak\ flows}$
	Ha	Ha	%	L/s	L/s
Queen Street Sub-catchment	0.79	0.47	60	98.0	216.0
Osman Street Sub-catchment, Existing Pit 4-1	0.33	0.18	55	37.0	85.0
Osman Street Sub-catchment, Existing Pit 6-1	0.55	0.28	50	58.0	139.0
Total	1.67				

Table 3: Peak stormwater discharges occurring in the post development

Outlet Points	Post Development Contributing Catchment				
	Area	Total Impervious Area		$Q_{20\ \%\ AEP\ peak\ flows}$	$Q_{1\ \%\ AEP\ peak\ flows}$
	Ha	Ha	%	L/s	L/s
Queen Street Sub-catchment	0.76	0.50	65	101.0	216.0

Osman Street Sub-catchment, Existing Pit 4-1	0.38	0.19	50	41.0	96.0
Osman Street Sub-catchment, Existing Pit 6-1	0.52	0.34	65	68.0	144.0
Total	1.67				

As shown in Tables 2 and 3 above, peak flows discharging to each of the three existing connection points in the post development condition is about the same as the peak flows in the existing condition and it is expected that no onsite detention or upgrade of the existing external stormwater drainage systems will be required as a result of the proposed hospital redevelopment. Peak flows are maintained by reconfiguring the inter-allotment sub-catchments such that the total impervious areas contributing to each of the discharge points in the post development is about the same as the total impervious area to each discharge points in the existing condition.

A review of Blayney flood studies, viz. Addendum to Blayney Flood Study – Update to Australian Rainfall and Runoff 2019 Guidelines prepared for Blayney Shire Council dated 10th February 2022 by Storm Consulting and Blayney Flood Study -Flood Study Report prepared for Blayney Shire Council dated 15th June 2015 by Jacobs indicates that Blayney Hospital is located withing the overland flow path of runoff cascading from the catchment west of the Hospital.

The 2015 Blayney flood study indicated the development site inundated in a 20%AEP event and above due to the overland flows from the catchment west of the hospital as shown in refer Figures 3 and 4 below.

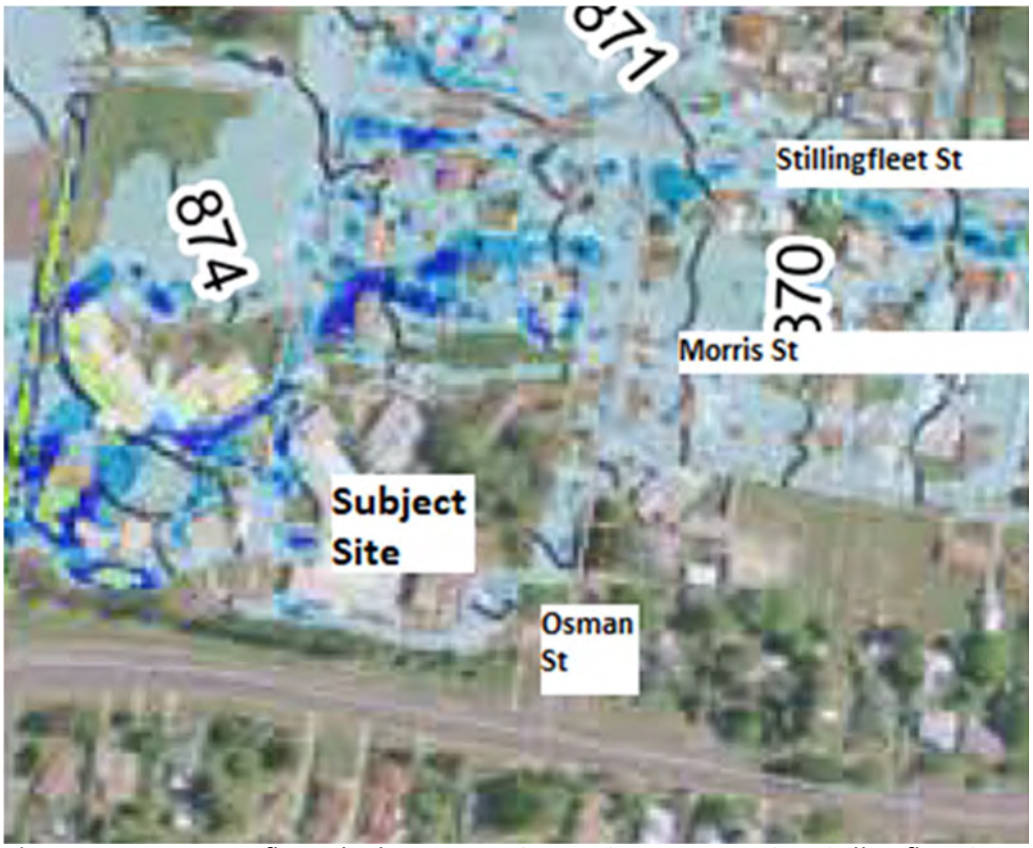


Figure 3: Existing gap flows discharging via Osman Street, Morris St & Stillingfleet St in a 20% AEP event Reference: Appendix D of Blayney Flood Study -Flood Study Report prepared for Blayney Shire Council dated 15th June 2015 by Jacobs.

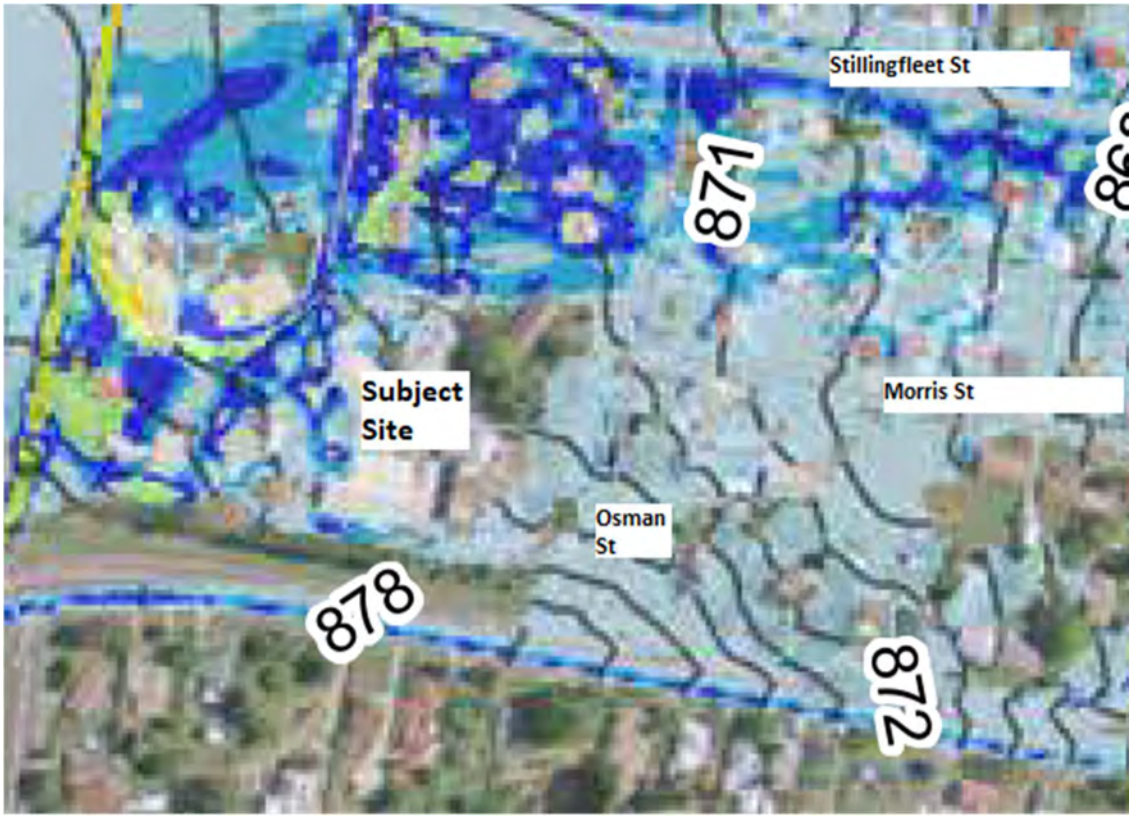


Figure 4: Existing gap flows discharging via Osman Street, Morris St & Stillingfleet St in a 100% AEP event
Reference: Appendix D of Blayney Flood Study -Flood Study Report prepared for Blayney Shire Council dated 15th June 2015 by Jacobs

In order to mitigate the impacts of overland flows from the catchment west of the development site, flood walls and flood gates are proposed to be incorporated into the flood mitigation measures for the site. The flood mitigation measures are details on the development site flood report currently being prepared by GHD as a stand along report.

Water quality measures proposed for the hospital redevelopment includes raingardens for the new carpark, grassed swale for the access roads and two 10 000 L rainwater tanks for harvesting roof water and reuse in irrigation of landscaped area. The water quality measures have been proposed to comply with the water quality objective of maintaining existing water quality of receiving waters in Section 3.1 WBC Strategic Alliance Guidelines for Engineering Works. Review of the water quality outputs from the development site using MUSIC software indicates that the proposed water quality measures are sufficient to treat runoff from the site to better quality than in the existing condition as shown below and therefore complies with the water quality objective of WBC Strategic Alliance Guidelines for Engineering Works.

Table 4: Summary of Treatment Train Efficiencies in the Existing and Post Development Conditions

	Source		Residual Load		% Reduction	
	Pre dev.	Post Dev.	Pre dev.	Post Dev.	Pre dev.	Post Dev.
Flow (ML/yr)	15.8	15.7	15.8	15.6	0	0.637
Total Suspended Solids (kg/yr)	2.84E+03	2.20E+03	2.84E+03	1.93E+03	0	12.3
Total Phosphorus (kg/yr)	6.26	4.97	6.26	4.57	0	8.05
Total Nitrogen (kg/yr)	44	40.2	44	38.5	0	4.23
Gross Pollutants (kg/yr)	404	382	404	255	0	33.2

Appendix D. Pavement Design Memo and Calculations

Blayney Hospital Redevelopment Road and Car Park Pavement Design

Date:	22 March 2023
Project name:	Blayney Hospital Redevelopment
Project no:	IA228800
Prepared by:	Kai Zheng
Reviewed by:	Brendan Bennett
Revision no:	B
Copies to:	Kathy Lau and Dana Silang

Jacobs Group Australia Pty Ltd
Level 3, 121 King William Street
Adelaide, SA 5000
Australia
T +61 8 8113 5400
F +61 8 8113 5440
www.jacobs.com

1. Introduction

This technical memorandum has been prepared for the pavement design of the access road and new car park for the Blayney Hospital Redevelopment in regional New South Wales. Figure 1 below shows the access roads and the proposed new car park for the hospital redevelopment:

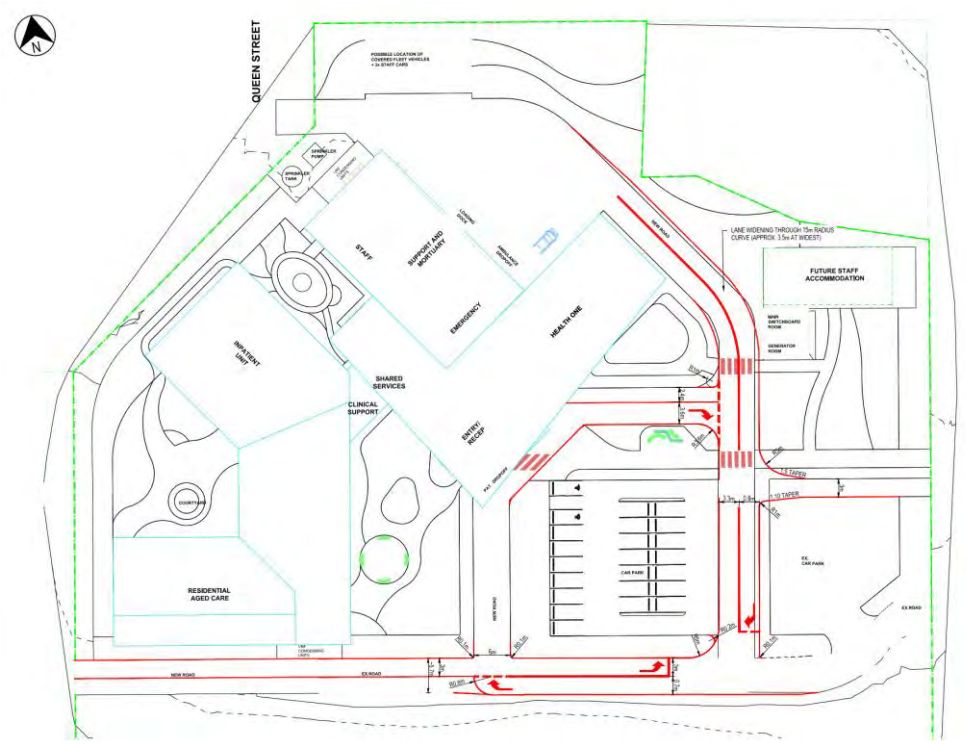


Figure 1: Access Roads for the Blayney Hospital Redevelopment

This document presents the results of the pavement recommendation for the access roads and new car park.

2. Standards, References and Guidelines

The following standards, references and guidelines are applicable for this project:

- Austroads Guide to Pavement Technology Part 2 (AGPT02): Pavement Structural Design – November 2019
- Roads and Maritime Supplement to Austroads Guide to Pavement Technology Part 2: Pavement Structural Design

3. Assumptions

The following assumptions have been made for the pavement design purpose:

- Traffic volume is assumed to be 200 vehicles per day with 20% of heavy vehicles for access road and 5% for car park based on the advice provided by SCT Consulting from review of Clinical Service Plan, the Workforce Plan and an estimate of staff, visitors, and patients

4. Design Traffic Loading

Due to the low traffic volume anticipated for the hospital, the traffic load distribution for a Local Access Road with Buses from Austroads Table O 4 is considered suitable for this case, with the following factors to be used in determining the design traffic loading:

N_{HVAG} = 2.06 ESA/HVAG = 0.44 ESA/HV = 0.91

With the adoption of a 40 years design life (assumed), Lane Distribution Factor (LDF) of 1 and a Direction Factor (DF) of 1 for an one-way car park and 0.5 for a two way access road, the design traffic loading in Table 1 below is determined:

Table 1 – Design Traffic Loading

Description	AADT	HV (%)	Design Years	N_{DT} (HVAG)	DESA
Blayney Hospital Redevelopment – Access Road	200	20%	40	735000	3.23×10^5
Blayney Hospital Redevelopment – Car Park	200	5%	40	368000	1.62×10^5
Blayney Hospital Redevelopment – Loading Dock	200	20%	40	2205000	9.70×10^5

Noting that it is assumed the design life of the new pavement is 40 years.

Due to the constant turning movement of heavy vehicle at the proposed loading dock, a multiplier of 3 has been applied in estimating design traffic for the loading dock based on AGPT02.

5. Asphalt Modulus

The asphalt modulus is used for the design of the full depth asphalt pavement for the loading dock area where frequent turning movement of heavy vehicles are anticipated. The following asphalt modulus is adopted for the full depth asphalt pavement:

Asphalt Mix Type	Binder	Design Speed for Asphalt Characterisation (km/hr)	WMAPT (Degree) based on AGPT Part 2 Appendix B	Adjusted Mix Modulus (MPa)
AC10	A15E	10	19	2,800
AC14	C450	10	19	4,000

Refer to Appendix B for asphalt modulus calculation.

6. Subgrade

Design subgrade CBR of 5 was determined in accordance with the Geotechnical Investigation Report by JK Geotechnics under Section 4.6. The four-day soaked CBR test report in Table B of the Geotechnical Investigation Report also indicated that the subgrade has a swell percentage of 1%. Based on Roads and Maritime Supplement to Austroads Guide to Pavement Technology Part 2: Pavement Structural Design at this location, a 10-day soaked CBR test is required due to the annual rainfall greater than 800mm as per Section 5.6.2. However, at this stage, it is assumed that no expansive soil is present (swell <2.5%) and no working

platform / capping layer is required, but it is recommended that a 10-day soaked CBR test is to be undertaken to confirm the assumption prior to work commencement.

7. Groundwater Level

Based on the geotechnical investigation report, ground water was found 0.85m below ground level at BH15 at the south-western corner of the development, with groundwater seepage encountered during or on completion of various boreholes, ranging from depths between 0.85m to 1.4m. The geotechnical investigation report recommended to install subsoil drain at least 0.3m below the subgrade levels to help manage the moisture seepage on the clay subgrade in the long term.

8. Pavement Design

A granular pavement design with asphalt wearing course to match existing pavement type is considered for this project due to the low traffic volume. However, for the loading dock area, , a full depth asphalt pavement has been considered to cater for the turning movement of heavy vehicle in the area.

The pavement configurations have been designed in accordance with the Austroads Guide to Pavement Technology – Part 2 – Pavement Structural Design (Figure 12.2).

The following pavement configuration in Table 2 and 3 below are recommended, with calculations for both access road and car park contained in Appendix A and the CIRCLY output in Appendix C.

It should be noted that a consistent pavement thickness has been adopted for the access road and car park, due to their minimal difference in thickness for ease of construction. A 10mm tolerance has also been incorporated into the subbase layer in the granular pavement and the critical asphalt layer in the full depth asphalt pavement.

Table 2 – Granular Pavement Configuration for Access Road and Car Park

Carriageway Pavement Layer	Thickness (mm)
Wearing Course – AC10 C450	40
7mm Low Cutter Seal with Primer (C240 Binder)	-
Base Course – Class 2 DGB20 Category D	120
Subbase – DGS20	120
Subbase – DGS20 (Critical Layer)	120
Subgrade CBR	5%
Total Thickness	400

Table 3 – Full Depth Asphalt Pavement Configuration for Loading Dock Area

Carriageway Pavement Layer	Thickness (mm)
Wearing Course – AC10 A15E	40
Intermediate Course – AC14 C320	55
Intermediate Course – AC14 C320 (Critical Layer)	60
7mm Low Cutter Seal with Primer (C240 Binder)	-
Selected Material Zone	300
Subgrade CBR	5%
Total Thickness	455

Appendix A – Granular Pavement Design Calculation

Design Traffic Calculation

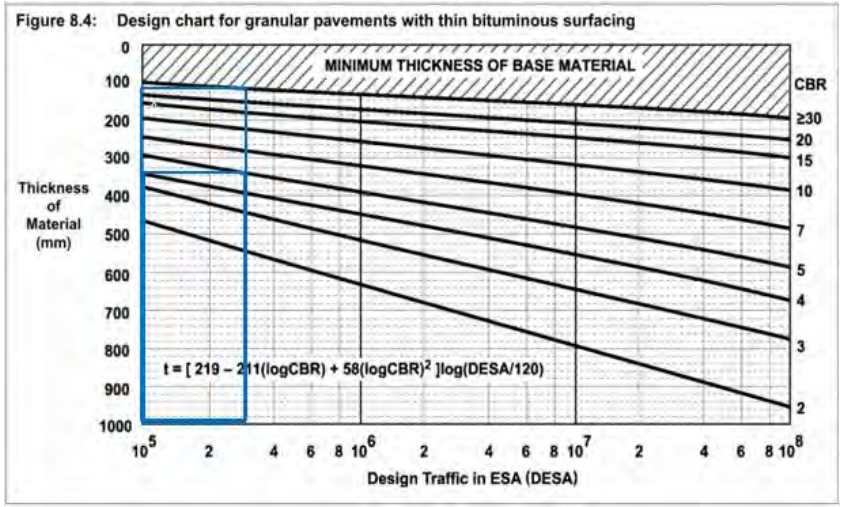
ID	Description	AADT (estimated)	HV average (%)	Number of HV, AADTHV at Hospital Opening	DF	N_{HVAG}	LDF	R (%)	P (Years)	CGF	N_{DT} (HVAG)	N_i (HV)	N_{HV} (HV)	N_{DT} (HVAG)	ESA / HVAG	DESA
1	Blayney Hospital Redevelopment - Access Road	200	20.0%	40	0.5	2.06	1.0	1.00	40	48.89	7.35E+05	2.00E+01	3.57E+05	7.35E+05	0.44	3.23E+05
2	Blayney Hospital Redevelopment - Loading Dock	200	20.0%	40	0.5	2.06	1.0	1.00	40	48.89	2.21E+06	2.00E+01	3.57E+05	2.21E+06	0.44	9.70E+05
3	Blayney Hospital Redevelopment - Car Park	200	5.0%	10	1.0	2.06	1.0	1.00	40	48.89	3.68E+05	1.00E+01	1.78E+05	3.68E+05	0.44	1.62E+05

Note:
1. AADT provided is for in and out traffic movements
2. Car park is one way only
3. A multiplier of 3 has been applied in estimating design traffic for high stress area for turning movements within the loading dock.

PAVEMENT CONFIGURATION - ACCESS ROAD

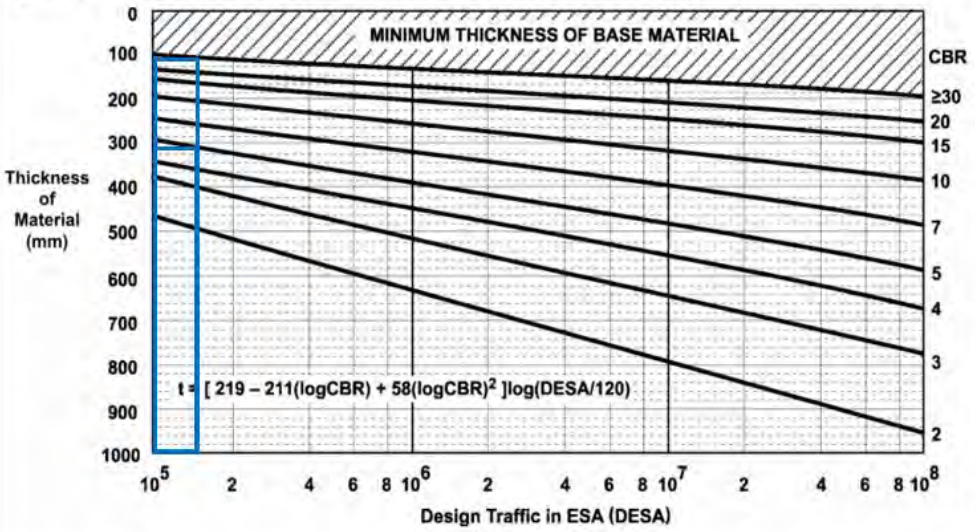
LAYER	MIN. THICKNESS	DESIGN REQUIREMENT*	MATERIAL	BINDER RATE / COMPACTION	DESCRIPTION
Wearing Course	-	40	AC10 C450	-	40mm AC10 C450
Base (thickness, material, compaction)	120	120	Class 2 DGB20 Category D	102% compaction	120 mm thickness Class 2 DGB20 Category D material compacted to 102% compaction
Sub-base (thickness, material, compaction)	230	240	DGS20	100% compaction	240 mm thickness DGS20 material compacted to 100% compaction
TOTAL THICKNESS	350	400 mm			

Figure 8.4: Design chart for granular pavements with thin bituminous surfacing



PAVEMENT CONFIGURATION - CAR PARK					
LAYER	MIN. THICKNESS	DESIGN REQUIREMENT*	MATERIAL	BINDER RATE / COMPACTION	DESCRIPTION
Wearing Course	-	40	AC10 C450	-	40mm AC10 C450
Base (thickness, material, compaction)	110	110	Class 2 DGB20 Category D	102% compaction	110 mm thickness Class 2 DGB20 Category D material compacted to 102% compaction
Sub-base (thickness, material, compaction)	210	220	DGS20	100% compaction	220 mm thickness DGS20 material compacted to 100% compaction
TOTAL THICKNESS	320	370 mm			

Figure 8.4: Design chart for granular pavements with thin bituminous surfacing



Appendix B – Asphalt Modulus Calculation

DESIGN ASPHALT MODULUS

Project details:	Blayney Hospital Full Depth Asphalt for Loading Dock
Date:	31 March 2023
Designer:	Kai ZHeng
AC Modulus version:	6B (01 March 2018)
Design references:	Roads and Maritime Supplement to Austroads Part 2 Roads and Maritime asphalt and material specifications Austroads Part 2: Pavement Structural Design (AGPT02-17)

Inputs

Mix type:	AC10
Binder grade:	A15E
Modulus adjustment factor:	0.75
Total binder content (by mass):	5.7%
Binder absorption:	0.3%
Binder density:	1.043 tonnes/m3
Insitu air voids:	6.0%
Combined bulk density of mineral aggregate:	2.65 tonnes/m3
Bitumen penetration at 25° C (0.1 mm):	31 (after RTFO)
Bitumen viscosity at 60° C:	970 Pa.s (after RTFO)
Loading speed:	10 km/h
WMAPT:	19.0° C

Results

Time of loading:	0.10 seconds
Bitumen T800 pen:	58.1° C
Bitumen Penetration Index:	-0.4
Binder stiffness:	32.0 MPa
Binder volume:	11.9%
Aggregate volume:	82.1%
Nominal mix modulus:	2,816 MPa
Adjusted mix modulus:	2,800 MPa
CIRCLY (k) value:	0.004475

DESIGN ASPHALT MODULUS

Project details:	Blayney Hospital Full Depth Asphalt for Loading Dock
Date:	31 March 2023
Designer:	Kai ZHeng
AC Modulus version:	6B (01 March 2018)
Design references:	Roads and Maritime Supplement to Austroads Part 2 Roads and Maritime asphalt and material specifications Austroads Part 2: Pavement Structural Design (AGPT02-17)

Inputs

Mix type:	AC14
Binder grade:	C450
Modulus adjustment factor:	1
Total binder content (by mass):	5.2%
Binder absorption:	0.3%
Binder density:	1.043 tonnes/m3
Insitu air voids:	6.0%
Combined bulk density of mineral aggregate:	2.65 tonnes/m3
Bitumen penetration at 25° C (0.1 mm):	31 (after RTFO)
Bitumen viscosity at 60° C:	970 Pa.s (after RTFO)
Loading speed:	10 km/h
WMAPT:	19.0° C

Results

Time of loading:	0.10 seconds
Bitumen T800 pen:	58.1° C
Bitumen Penetration Index:	-0.4
Binder stiffness:	32.0 MPa
Binder volume:	10.9%
Aggregate volume:	83.1%
Nominal mix modulus:	4,228 MPa
Adjusted mix modulus:	4,000 MPa
CIRCLY (k) value:	0.003637

Appendix C – CIRCLY Output for Full Depth Asphalt

CIRCLY - Version 7.0 (1 February 2022)

Job Title: Blayney Hospital Loading Dock Pavement Design (High Stress)

Design Method: Austroads 2017

NDT (cumulative heavy vehicle axle groups over design period): 2.21E+06

Traffic Load Distribution:

ID: LTR - O4
Name: Lightly-Trafficked Roads - O4 - local access with buses
ESA/HVAG: 0.443

Details of Load Groups:

Load No.	Load ID	Load Category	Load Type	Radius	Pressure/ Ref. stress	Exponent
1	ESA750-Full	ESA750-Full	Vertical Force	92.1	0.75	0.00
2	SAST53	SAST53	Vertical Force	102.4	0.80	0.00

Load Locations:

Location No.	Load ID	Gear No.	X	Y	Scaling Factor	Theta
1	ESA750-Full	1	-165.0	0.0	1.00E+00	0.00
2	ESA750-Full	1	165.0	0.0	1.00E+00	0.00
3	ESA750-Full	1	1635.0	0.0	1.00E+00	0.00
4	ESA750-Full	1	1965.0	0.0	1.00E+00	0.00
1	SAST53	1	0.0	0.0	1.00E+00	0.00
2	SAST53	1	2130.0	0.0	1.00E+00	0.00

Details of Layered System:

ID: Ash Foam Title: Asphalt over foamed bitumen surface

Layer No.	Lower i/face	Material ID	Isotropy	Modulus (or Ev)	P.Ratio (or vvh)	F	Eh	vh
1	rough	AC10 A15E	Iso.	2.80E+03	0.40			
2	rough	AC14 C450	Iso.	4.00E+03	0.40			
3	rough	SMZ CBR=15	Aniso.	7.00E+01	0.00	7.00E+01	3.50E+01	0.00
4	rough	Sub_CBR5	Aniso.	5.00E+01	0.45	3.45E+01	2.50E+01	0.45

Performance Relationships:

Layer No.	Location	Material ID	Component	Perform. Constant	Perform. Exponent	Shift Factor
1	bottom	AC10 A15E	ETH	0.004475	5.000	6.0
2	bottom	AC14 C450	ETH	0.003637	5.000	6.0
3	top	SMZ CBR=15	EZZ	0.009150	7.000	
4	top	Sub_CBR5	EZZ	0.009150	7.000	

Reliability Factors:
Project Reliability: Austroads 95%

Layer No.	Reliability Factor	Material Type
1	6.00	Asphalt
2	6.00	Asphalt
3	1.00	Subgrade (Selected Material) (Austroads 2017)
4	1.00	Subgrade (Austroads 2017)

Details of Layers to be sublayered:
Layer no. 3: Austroads (2004) sublayering

Strains:

Layer No.	Thickness	Material ID	Axle	Unitless Strain
1	40.00	AC10 A15E		
			SADT(80):	4.380E-05 (Compressive)
			SAST(53):	6.284E-05 (Compressive)
2	105.00	AC14 C450		
			SADT(80):	2.439E-04
			SAST(53):	2.240E-04
3	300.00	SMZ CBR=15		
			SADT(80):	8.423E-04
4	0.00	Sub_CBR5		
			SADT(80):	5.274E-04

Results:

Layer No.	Thickness	Material ID	Axle Group	CDF
1	40.00	AC10 A15E		Compressive
2	105.00	AC14 C450	Total:	9.707E-01
			SAST:	4.742E-01
			SADT:	4.880E-01
			TAST:	0.000E+00
			TADT:	8.619E-03
			TRDT:	0.000E+00
			QADT:	0.000E+00

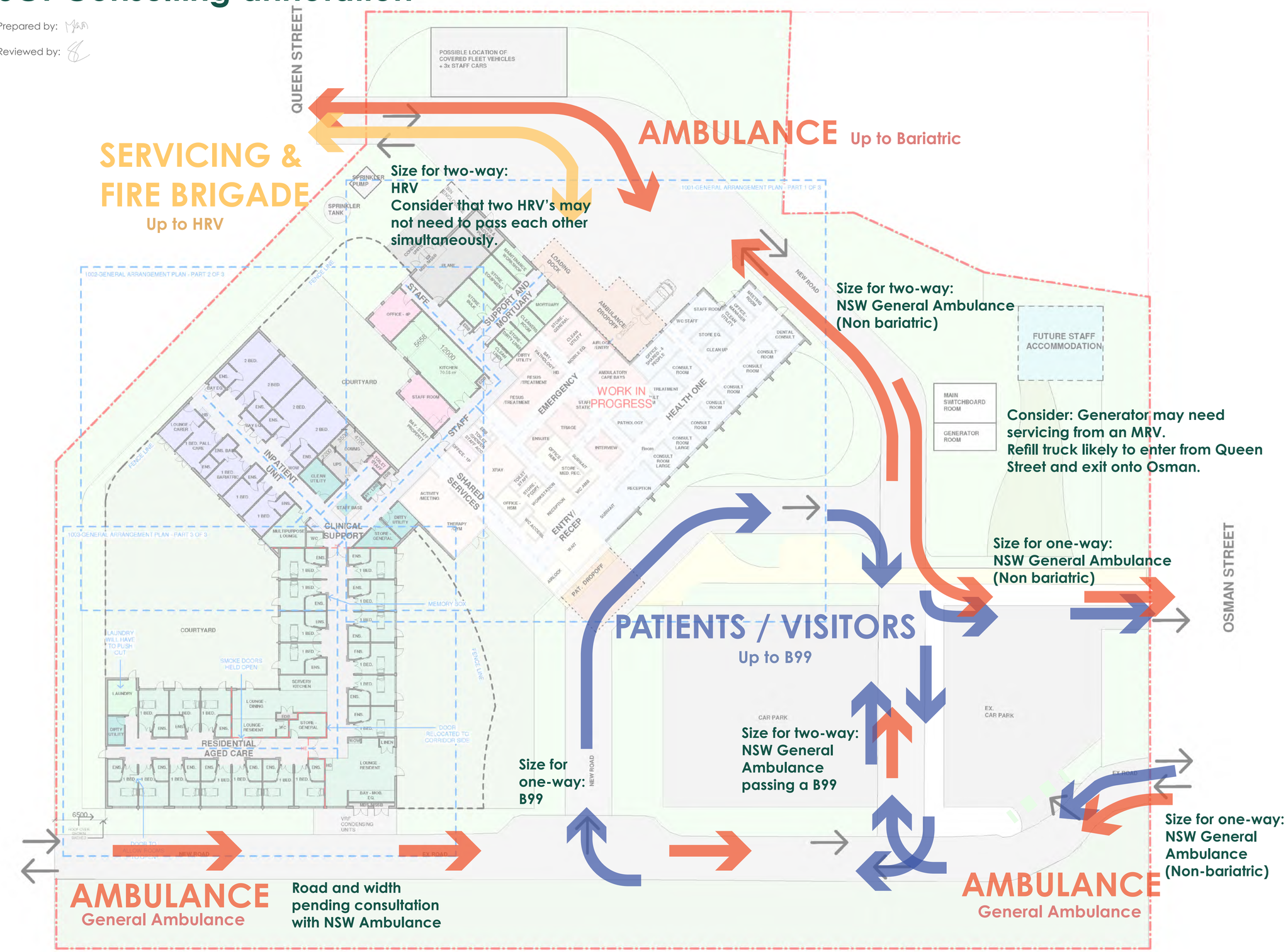
3	300.00	SMZ CBR=15	Total:	5.488E-02
4	0.00	Sub_CBR5	Total:	2.069E-03

Appendix E. Vehicle Access Strategy Annotation

Vehicle access strategy 2022-12-21
SCT Consulting annotation

Prepared by:

Reviewed by:



NBRSARCHITECTURE.

- CLINICAL SUPPORT
- CORRIDOR
- EMERGENCY SERVICES
- ENTRY /RECEP /ADMIN
- HEALTHONE
- IPU
- NON CLINICAL SUPPORT
- PLANT
- RAC
- SHARED SERVICES
- STAFF AMENITIES

WORK IN PROGRESS

BCA Consultant
Blackett Maguire + Goldsmith Pty Ltd
Aaron Redfern
Suite 2, 56 Hudson Street, Hamilton, NSW, 2303
+61 2 9211 7777
aaron@cmplusg.com.au

Cost Management
Genus Advisory
Nam Nguyen
Level 6, 201 Kent Street, Sydney, NSW, 2000
<PHONE>
namnguyen@genusadvisory.com.au

ENGINEER - CIVIL/FIRE/STRU/ELEC/SECU/HYDRA/MECH
Jacobs Group (Australia) Pty Ltd
Mihaela Serban
Level 7, 177 Pacific Highway, North Sydney, NSW, 2060
+ 61 2 9020 1095
mihaela.Serban@jacobs.com

Issue

No.	Date	Description	Chkd

Architect
NBRSARCHITECTURE.
Sydney
61 2 9922 2344 nbrsarchitecture.com

Any form of replication of this drawing in full or in part without the written permission of NBRS+PARTNERS Pty Ltd constitutes an infringement of the copyright.

Nominated Architect:
Andrew Duffin NSW 5502
NBRS & Partners Pty Ltd VIC 51197

© 2022

ABN 16 002 247 565

Project
Blayney HS

at
3 Osman St, Blayney NSW 2799

for
Health Infrastructure

Drawing Title
OVERALL FLOOR PLAN

Scale 1:250 @ A1

Drawing Reference
130607-NBRS-AR- DWG-1000

Revision

0 2.5m 5m 7.5m 10m 12.5m 15m 17.5m 20m 1:250

Appendix F. PMF Mitigation Measures

LEGEND

- CIVIL WORKS
- BOUNDARY
- ARCHITECTURAL LAYOUT
- CONTOUR LINES 0.5m INTERVALS
- CONTOUR LINES 0.1m INTERVALS
- RETAINING WALL

NOTE:
*** FSL SUBJECTED TO APPROVAL**

PROPOSED DRIVEWAY WIDENING TO ACCOMMODATE A MAXIMUM OF HRV ONE-WAY

FLOOD GATE TO BE CONFIRMED BY GHD

FLOOD LEVEE WALLTO BE CONFIRMED BY GHD

QUEEN STREET

EP 149.192

MC40

4 0002

HEALTH ONE
FSL 874.20 AHD*

LOADING DOCK

SUPPORT AND MORTUARY

AMBULANCE DROPOFF

STAFF

EMERGENCY

HEALTH ONE

INPATIENT UNIT

SHARED SERVICES

CLINICAL SUPPORT

ENTRY/ RECEP

PAT. DROPOFF

PARKING BAY

RAC
FSL 874.65 AHD*

RESIDENTIAL AGED CARE

HIGH LEVEL WINDOWS

EAVE GUTTER

VALLEY GUTTER

RIDGE

LINE OF BUILDING BELOW

ZONE FOR PV PANELS

EX. CAR PARK

TP 103.328

TP 115.104

TP 72.313

TP 60.549

TP 50.854

TP 46.545

TP 34.414

TP 28.900

TP 23.652

TP 48.919

TP 0.000

TP 0.929

RP 0.000

OSMAN STREET

EP 37.101

FLOOD LEVEE WALL TO BE CONFIRMED BY GHD

6 0003

3 0003

2 0002

5 0003

1 0002