6.8 Climate Change Impact

The impact of climate change on flooding in the study area was investigated within the SKM flood study "Parramatta River - Ryde Sub-Catchments Flood Study" by analysing three scenarios of storm event rainfall intensity increase (10%, 20% and 30%) coupled with two sea level rise scenarios (2050 and 2100 scenarios, corresponding with 0.4m and 0.9m sea level rise, respectively, on top of the 5% AEP ocean level at Fort Denison). Their analysis indicated that flood levels are not sensitive to sea level rise except at the outlets of the catchments and along the Parramatta River, with a number of low-lying riverside residential properties at risk from increased sea level alone, without river or overland flooding. The SKM report highlighted that where flow depths are typically shallow, results weren't sensitive to the increased rainfall intensity (less than 0.03m increase), while flood depths in flow paths and storage areas were more sensitive to the increase in rainfall intensity. Climate change sensitivity analysis has been completed and shows that peak flood levels increase by up to 450mm (RL 7.95m) for 30% increase in rainfall, refer to fig 6.8.1

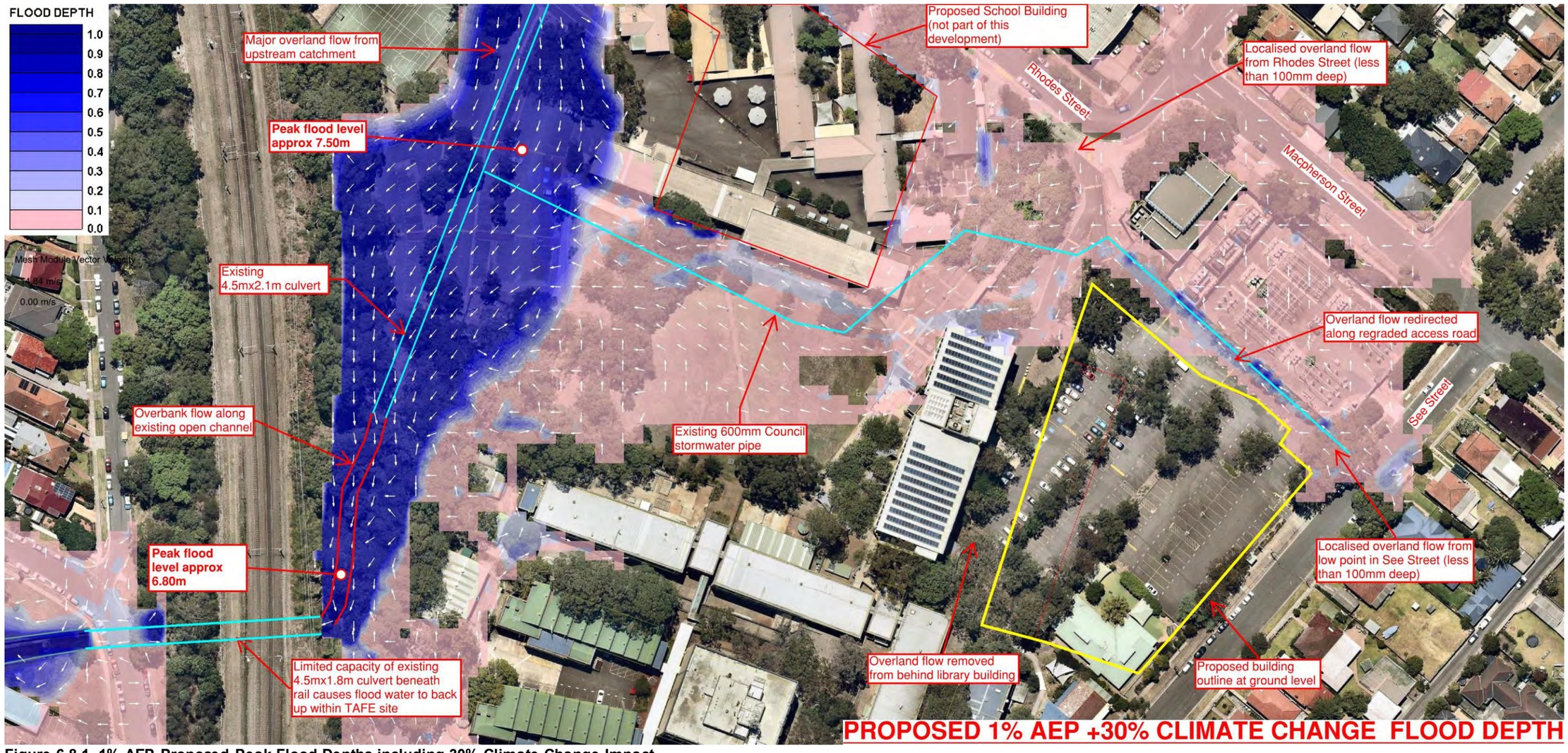

Figure 6.8.1 1% AEP Proposed Peak Flood Depths including 30% Climate Change Impact

7.0 Conclusion

This report provides a summary of the proposed flood impact management for the Meadowbank TAFE Campus.

Development does not adversely impact the existing flood regime in terms of diverting major overland flows. The implementation of the new Mulit-Trade Centre increases flood storage and flood evacuation education and sheltering. This submitted Flood Impact Statement demonstrates the development does not;

i. Reduce the pre-developed level of flood storage.

ii. Increase flood levels or velocities such to adversely impact adjoining dwellings.

Overland flow and flooding to be managed via several mitigation measures including flood evacuation education and procedure, flood detection and warning as well as training drills.

Prepared by

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Authorised By

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Eirian Crabbe
Associate Director

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8.0 Appendix A: Flood Diagrams

FLOOD DEPTH

1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0

Major overland flow from upstream catchment

Peak flood level approx 7.50m

Existing 4.5mx2.1m culvert

Overbank flow along existing open channel

Peak flood level approx 6.80m

Limited capacity of existing 4.5mx1.8m culvert beneath rail causes flood water to back up within TAFE site

Existing 600mm Council stormwater pipe

Proposed School Building (not part of this development)

Rhodes Street

Localised overland flow from Rhodes Street (less than 100mm deep)

Macpherson Street

See Street

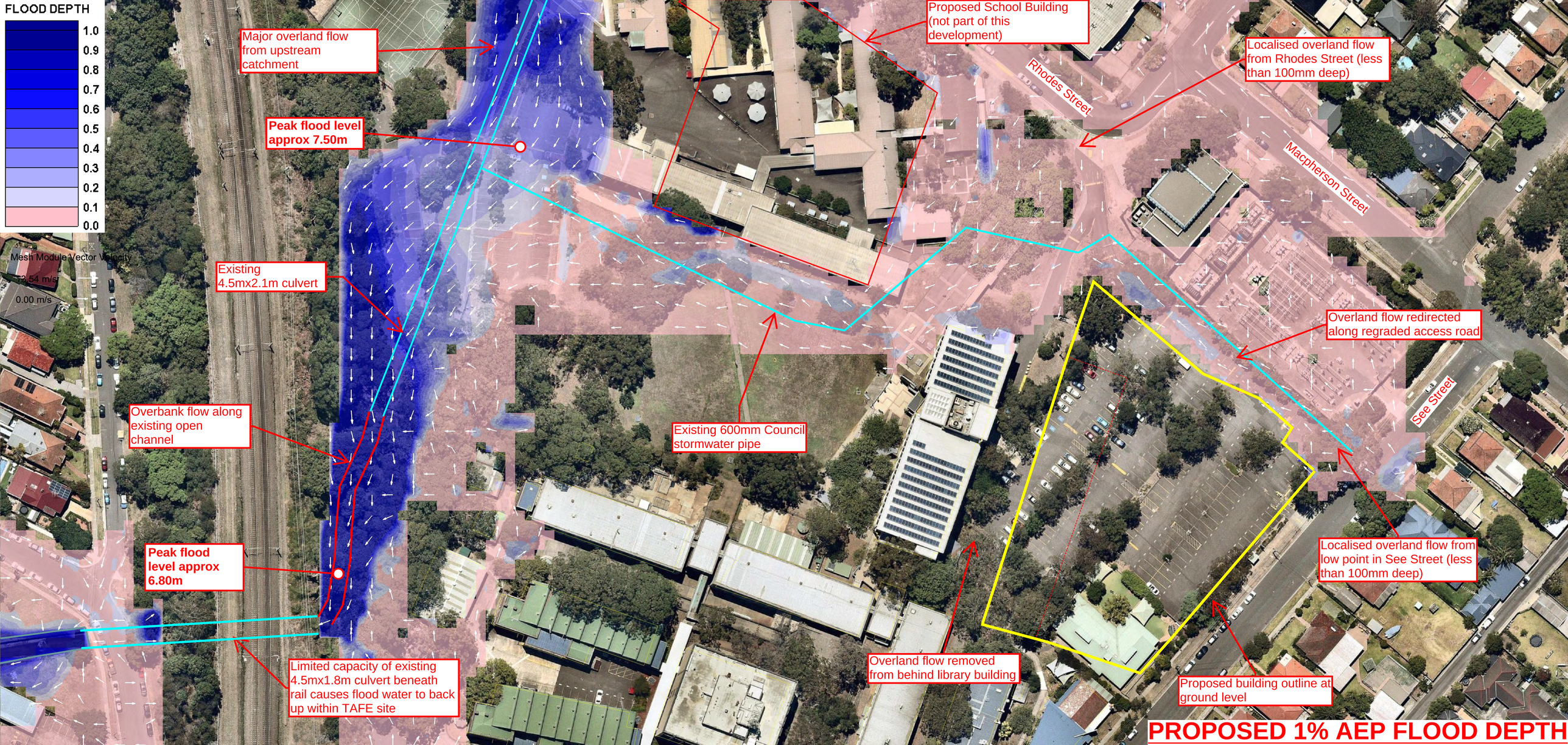
Minor overland flow through existing car park

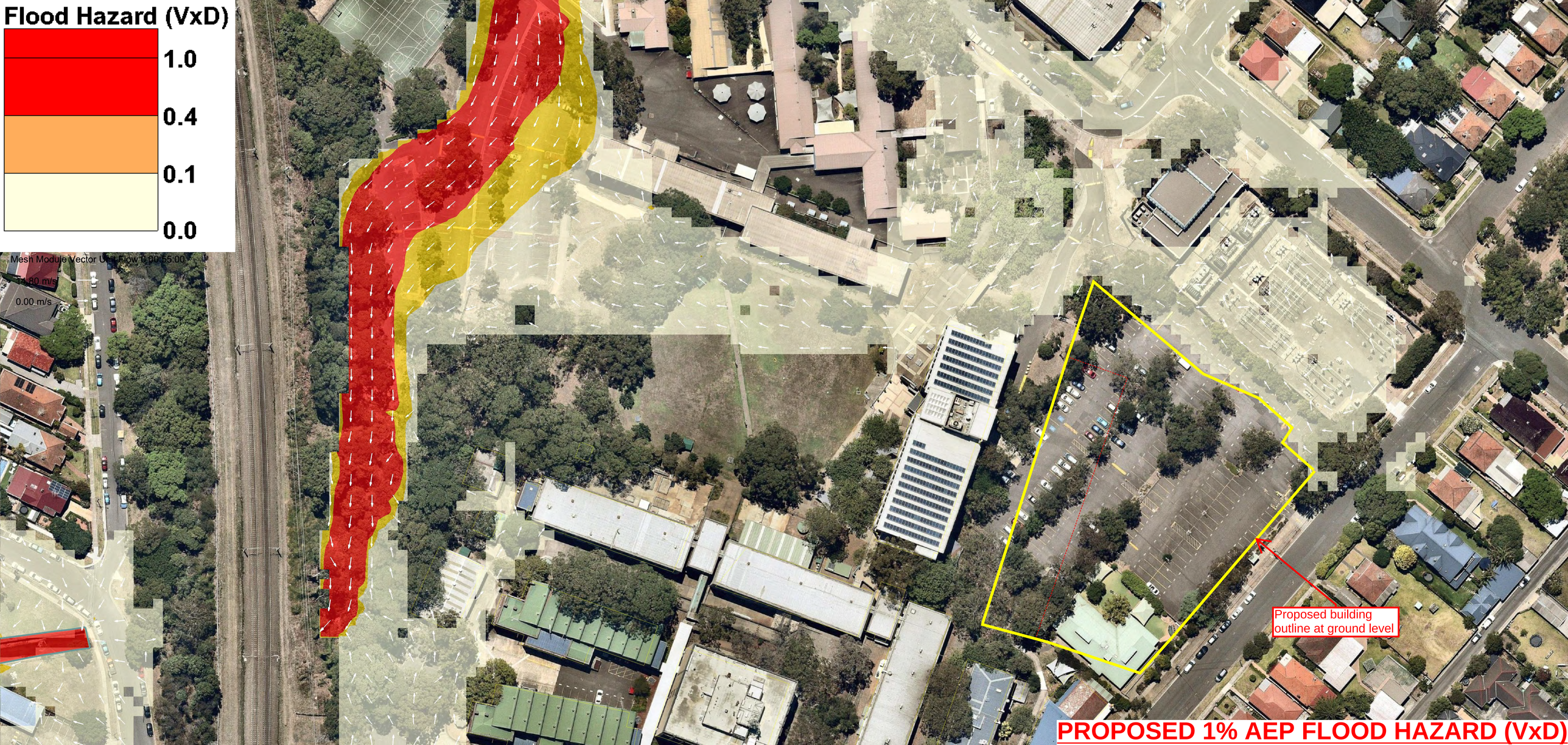
Overland flow from car park trapped behind library building (up to 500mm deep)

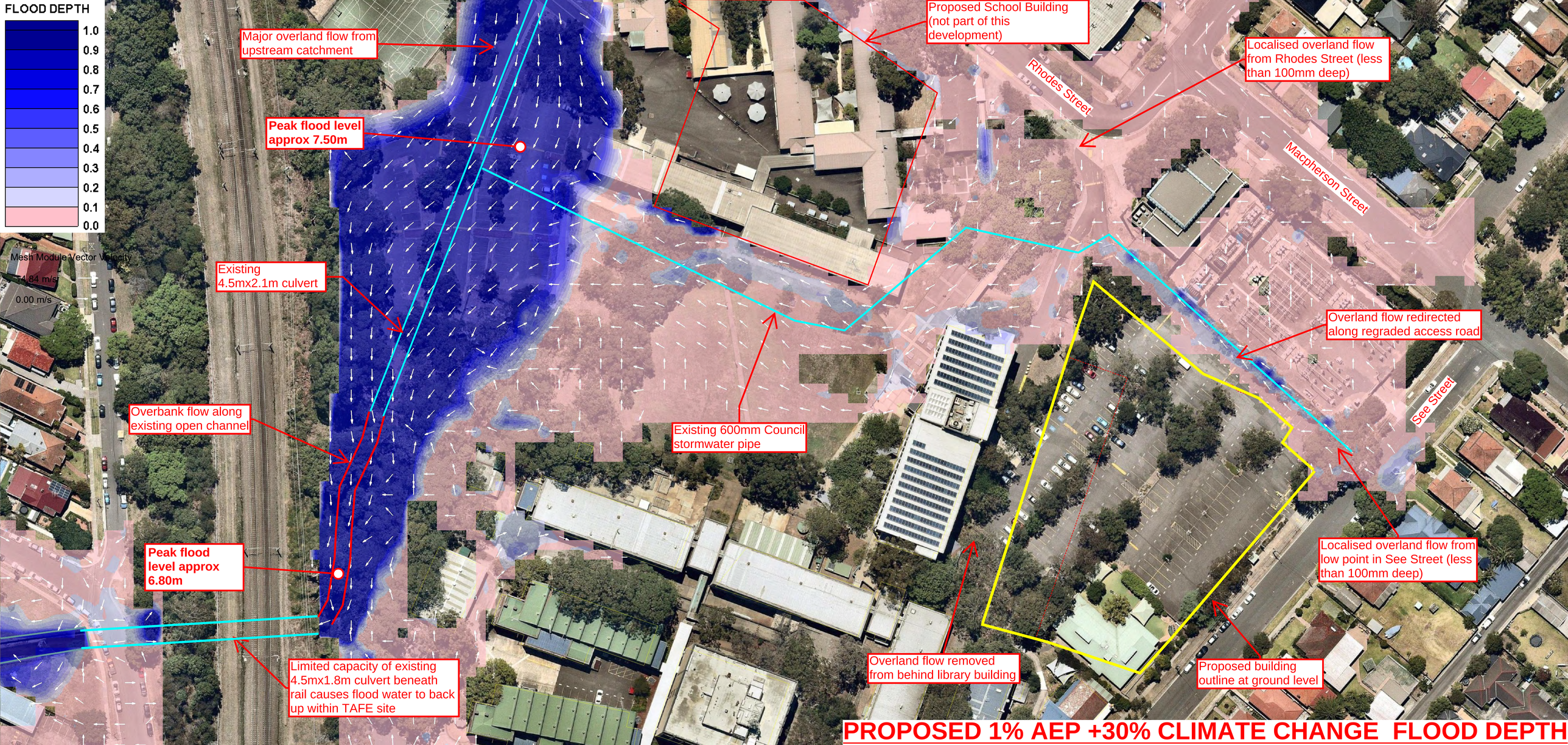
Proposed building outline at ground level

Localised overland flow from low point in See Street (less than 100mm deep)

EXISTING 1% AEP FLOOD DEPTH


FLOOD DEPTH
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
Mesh Module Vector Velocity
13.54 m/s
0.00 m/s
Major overland flow from upstream catchment
Peak flood level approx 7.50m
Existing 4.5mx2.1m culvert
Overbank flow along existing open channel
Peak flood level approx 6.80m
Limited capacity of existing 4.5mx1.8m culvert beneath rail causes flood water to back up within TAFE site
Existing 600mm Council stormwater pipe
Proposed School Building (not part of this development)
Rhodes Street
Localised overland flow from Rhodes Street (less than 100mm deep)
Macpherson Street
Overland flow redirected along regraded access road
See Street
Localised overland flow from low point in See Street (less than 100mm deep)
Overland flow removed from behind library building
Proposed building outline at ground level
PROPOSED 1% AEP FLOOD DEPTH


Flood Hazard (VxD)
1.0
0.4
0.1
0.0
Mesh Module Vector Unit Flow 0:00:55:00
1.80 m/s
0.00 m/s
Proposed building outline at ground level
PROPOSED 1% AEP FLOOD HAZARD (VxD)


FLOOD DEPTH
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
Mesh Module Vector Velocity
4.84 m/s
0.00 m/s
Major overland flow from upstream catchment
Peak flood level approx 7.50m
Existing 4.5mx2.1m culvert
Overbank flow along existing open channel
Peak flood level approx 6.80m
Limited capacity of existing 4.5mx1.8m culvert beneath rail causes flood water to back up within TAFE site
Proposed School Building (not part of this development)
Rhodes Street
Localised overland flow from Rhodes Street (less than 100mm deep)
Macpherson Street
Overland flow redirected along regraded access road
See Street
Existing 600mm Council stormwater pipe
Overland flow removed from behind library building
Proposed building outline at ground level
Localised overland flow from low point in See Street (less than 100mm deep)
PROPOSED 1% AEP +30% CLIMATE CHANGE FLOOD DEPTH

FLOOD DEPTH

<4.0
3.6
3.2
2.8
2.4
2.0
1.6
1.2
0.8
0.4
0.0

Major overland flow from upstream catchment

Peak flood level approx 16.25m

Existing 4.5mx2.1m culvert

Existing 600mm Council stormwater pipe

Overbank flow along existing open channel

Peak flood level approx 16.25m

Limited capacity of existing 4.5mx1.8m culvert beneath rail causes flood water to back up within TAFE site

Peak flood level approx 16.25m

Proposed School Building (not part of this development)

Rhodes Street

Localised overland flow from Rhodes Street (less than 100mm deep)

Peak flood level approx 16.25m

Macpherson Street

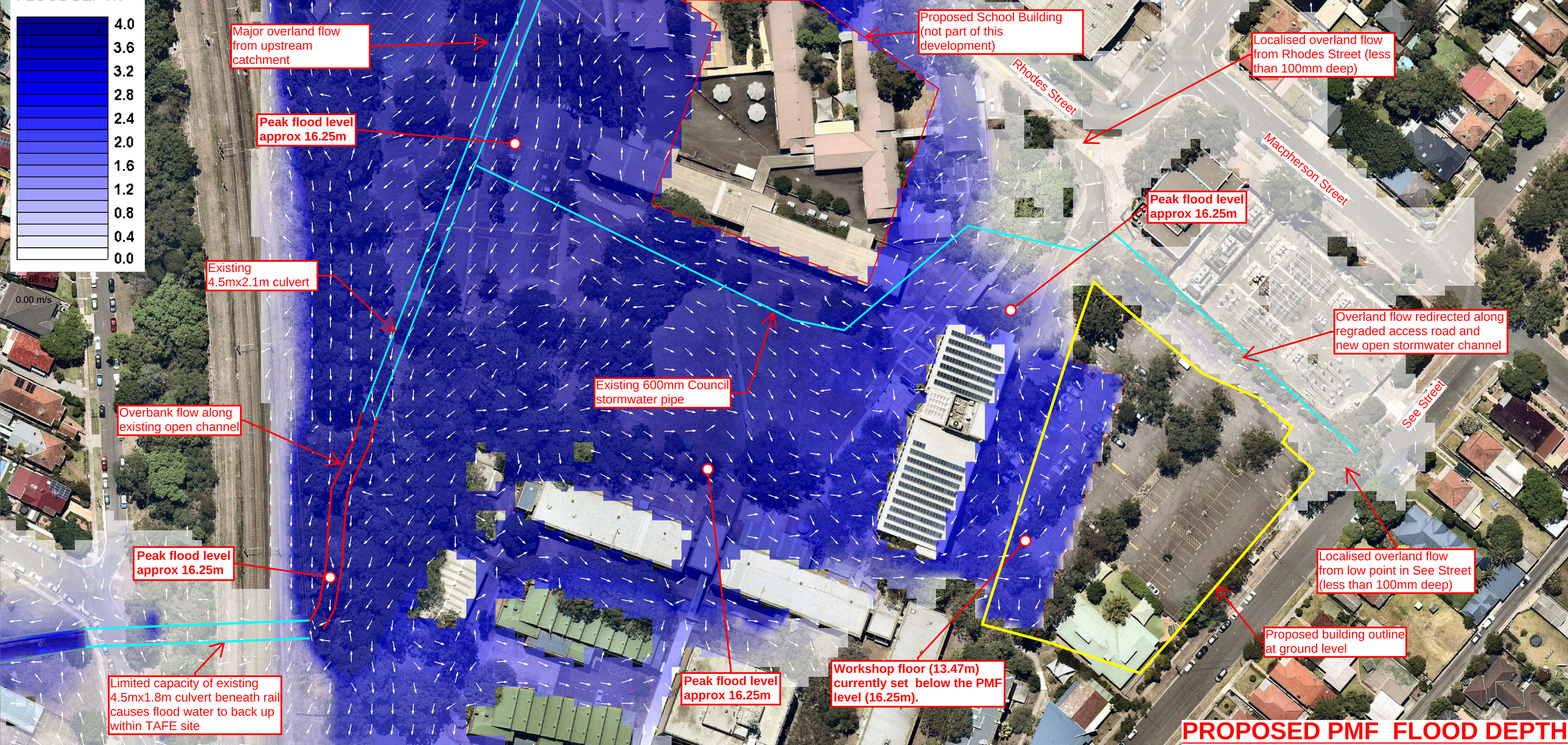
See Street

Minor overland flow through existing car park

Localised overland flow from low point in See Street (less than 100mm deep)

Proposed building outline at ground level

EXISTING PMF FLOOD DEPTH


4.0
3.6
3.2
2.8
2.4
2.0
1.6
1.2
0.8
0.4
0.0
75.68 m/s
0.00 m/s
Major overland flow from upstream catchment
Peak flood level approx 16.25m
Existing 4.5mx2.1m culvert
Overbank flow along existing open channel
Peak flood level approx 16.25m
Limited capacity of existing 4.5mx1.8m culvert beneath rail causes flood water to back up within TAFE site
Existing 600mm Council stormwater pipe
Peak flood level approx 16.25m
Proposed School Building (not part of this development)
Rhodes Street
Localised overland flow from Rhodes Street (less than 100mm deep)
Macpherson Street
Peak flood level approx 16.25m
Overland flow redirected along regraded access road and new open stormwater channel
See Street
Localised overland flow from low point in See Street (less than 100mm deep)
Proposed building outline at ground level
Workshop floor (13.47m) currently set below the PMF level (16.25m).
PROPOSED PMF FLOOD DEPTH

9.0 Appendix B: Proposed Development Plan

THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT NOTES ON DRAWING S0001

CIVILWORK - MEADOWBANK TAFE PHASE 2.1

Combined Multi-Trades and Digital Technology Hub

GENERAL NOTES

1. Contractor must verify all dimensions and existing levels on site prior to commencement of works. Any discrepancies to be reported to the Engineer .
2. Strip all topsoil from the construction area. All stripped topsoil shall be disposed of off-site unless directed otherwise.
3. Make smooth connection with all existing works.
4. Compact subgrade under buildings and pavements to minimum 98% standard maximum dry density in accordance with AS 1289 5.1.1. Compaction under buildings to extend 2m minimum beyond building footprint.
5. All work on public property, property which is to become public property, or any work which is to come under the control of the Statutory Authority, the Contractor is to ensure that the drawings used for construction have been approved by all relevant authorities prior to commencement site.
6. All work on public property, property which is to become public property, or any work which is to come under the control of the Statutory Authority is to be carried out in accordance with the requirements of the relevant Authority. The Contractor shall obtain these requirements from the Authority. Where the requirements of the Authority are different to the drawings and specifications, the requirements of the Authority shall be applicable.
7. For all temporary batters refer to geotechnical recommendations.

REFERENCE DRAWINGS

1. These drawings have been based from, and to be read in conjunction with the following Consultants drawings. Any conflict to the drawings must be notified immediately to the Engineer.

Consultant	Dwg Title	Dwg No	Rev	Date
THOMSON ADSETT	FLOOR PLANS	REVIT MODEL		01.05.19
	SURVEY	35179 DETAIL MGA WITH PATH		

SITEWORKS NOTES

1. All basecourse material to comply with RMS specification No 3051 and compacted to minimum 98% modified standard dry density in accordance with AS 1289 5.2.1.
2. All trench backfill material shall be compacted to the same density as the adjacent material.
3. All service trenches under vehicular pavements shall be backfilled with an approved select material and compacted to a minimum 98% standard maximum dry density in accordance with AS 1289 5.1.1

CONCRETE FINISHING NOTES

1. All exposed concrete pavements are to be broomed finished.
2. All edges of the concrete pavement including keyed and dowelled joints are to be finished with an edging tool.
3. Concrete pavements with grades greater than 10 % shall be heavily broomed finished.
4. Carborundum to be added to all stair treads and ramped crossings U.N.O.

SURVEY AND SERVICES INFORMATION

SURVEY

Origin of levels :
Datum of levels : A.H.D. AUSTRALIAN HEIGHT DATUM
Coordinate system : MGA
Survey prepared by :
Setout Points : CONTACT THE SURVEYOR

Taylor Thomson Whitting does not guarantee that the survey information shown on these drawings is accurate and will accept no liability for any inaccuracies in the survey information provided to us from any cause whatsoever.

UNDERGROUND SERVICES - WARNING

The locations of underground services shown on Taylor Thomson Whittings drawings have been plotted from diagrams provided by service authorities. This information has been prepared solely for the authorities own use and may not necessarily be updated or accurate.

The position of services as recorded by the authority at the time of installation may not reflect changes in the physical environment subsequent to installation.

Taylor Thomson Whitting does not guarantee that the services information shown on these drawings shows more than the presence or absence of services, and will accept no liability for inaccuracies in the services information shown from any cause whatsoever.

The Contractor must confirm the exact location and extent of services prior to construction and notify any conflict with the drawings immediately to the Engineer/Superintendent.

The contractor is to get approval from the relevant state survey department, to remove/adjust any survey mark. This includes but is not limited to; State Survey Marks (SSM), Permanent Marks (PM), cadastral reference marks or any other survey mark which is to be removed or adjusted in any way.
Taylor Thomson Whitting plans do not indicate the presence of any survey mark. The contractor is to undertake their own search.

BOUNDARY AND EASEMENT NOTE

The property boundary and easement locations shown on Taylor Thomson Whitting drawing's have been based from information received from : No boundary information received.
Refer architect for boundary information and locations

Taylor Thomson Whitting makes no guarantees that the boundary or easement information shown is correct.
Taylor Thomson Whitting will accept no liabilities for boundary inaccuracies. The contractor/builder is advised to check/confirm all boundaries in relation to all proposed work prior to the commencement of construction. Boundary inaccuracies found are to be reported to the superintendent prior to construction starting.

EXISTING SERVICES LEGEND

- S — Existing sewer
- W — Existing water
- EU — Existing underground electrical
- EA — Existing aerial electrical
- T — Existing communications
- G — Existing gas
- SW — Existing stormwater

DBYD SERVICES NOTE

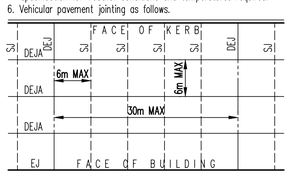
"Public Service Utility information shown on plan has been complied from information received from Dial Before You Dig inquiry, reference Number 15084520, which was obtained on 10/10/18.
Unless specifically shown otherwise, this location and depth of services shown on this plan have not been verified.

The location of services shown on this drawing have been plotted as accurately as possible from diagrams provided by service authorities and should be confirmed by site inspection."

JOINTING NOTES

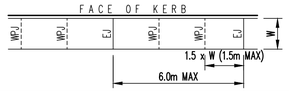
Vehicular Pavement Jointing

1. All vehicular pavements to be jointed as shown on drawings.
2. Keyed construction joints should generally be located at a maximum of 6m centres.
3. Sawn joints should generally be located at a maximum of 6m centres or 1.5 x the spacing of keyed joints, where key joint spacing is less than 4m, with dowelled expansion joints at maximum of 30m centres.
4. Provide 10mm wide full depth expansion joints between buildings and all concrete or unit pavers.
5. The timing of the saw cut is to be confirmed by the contractor on site. Site conditions will determine how many hours after the concrete pour before the saw cuts are commenced. Refer to the specification for weather conditions and temperatures required.
6. Vehicular pavement jointing as follows.



Pedestrian Footpath Jointing

1. Expansion joints are to be located where possible at tangent points of curves and elsewhere at max 6.0m centres.
2. Weakened plane 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 jointings as follows (uno).



KERBING NOTES

Includes all kerbs, gutters, dish drains, crossings and edges.

1. All kerbs, gutters, dish drains and crossings to be constructed on minimum 75mm granular basecourse compacted to minimum 98% modified maximum dry density in accordance with AS 1289 5.2.1.
2. Expansion joints (EJ) to be formed from 10mm compressible cork filler board for the full depth of the section and cut to profile. Expansion joints to be located at drainage pits, on tangent points of curves and elsewhere at 12m centres except for integral kerbs where the expansion joints are to match the joint locations in slabs.
3. Weakened plane joints to be min 3mm wide and located at 3m centres except for integral kerbs where weakened plane joints are to match the joint locations in slabs.
4. Broomed finished to all ramped and vehicular crossings, all other kerbing or dish drains to be steel float finished.
5. In the replacement of kerbs –
   Existing road pavement is to be sawcut 900mm from lip of gutter. Upon completion of new kerbs, new basecourse and surface is to be laid 900mm wide to match existing materials and thicknesses.
   Existing allotment drainage pipes are to be built into the new kerb with a 100mm dia hole.
   Existing kerbs are to be completely removed where new kerbs are shown.

SAFETY IN DESIGN

Contractor to refer to Appendix B of the Civil Specification for the Civil Risk and Solutions Register.

EXISTING SERVICES

Contractor to be aware existing services are located within the site. Location of all services to be verified by the Contractor prior to commencing works. Contractor to confirm with relevant authority regarding measures to be taken to ensure services are protected or procedures are in place to demolish and/or relocate.

EXISTING STRUCTURES

Contractor to be aware existing structures may exist within the site. To prevent damage to existing structure(s) and/or personnel, site works to be carried out as far as practicably possible from existing structure(s).

EXISTING TREES

Contractor to be aware existing trees exist within the site which need to be protected. To prevent damage to trees and/or personnel, site works to be carried out as far as practicably possible from existing trees. Advice needs to be sought from Arborist and/or Landscape Architect on measures required to protect trees.

GROUNDWATER

Contractor to be aware ground water levels are close to existing surface level. Temporary de-watering may be required during construction works.

EXCAVATIONS

Deep excavations due to stormwater drainage works is required. Contractor to ensure safe working procedures are in place for works. All excavations to be fenced off and batters adequately supported to approval of Geotechnical Engineer.

GROUND CONDITIONS

Contractor to be aware of the site geotechnical conditions. Refer to geotechnical report by (JK GEOTECHNICS) for details.

HAZARDOUS MATERIALS

Existing asbestos products & contaminated material may be present on site. Contractor to ensure all hazardous materials are identified prior to commencing works. Safe working practices as per relevant authority to be adopted and appropriate PPE to be used when handling all hazardous materials. Refer to geotechnical/environmental report by (insert report details) for details.

CONFINED SPACES

Contractor to be aware of potential hazards due to working in confined spaces such as stormwater pits, trenches and/or tanks. Contractor to provide safe working methods and use appropriate PPE when entering confined spaces.

MANUAL HANDLING

Contractor to be aware manual handling may be required during construction. Contractor to take appropriate measures to ensure manual handling procedures and assessments are in place prior to commencing works.

WATER POLLUTION

Contractor to ensure appropriate measures are taken to prevent pollutants from construction works contaminating the surrounding environment.

SITE ACCESS/EGRESS

Contractor to be aware site works occur in close proximity to footpaths and roadways. Contractor to erect appropriate barriers and signage to protect site personnel and public.

VEHICLE MOVEMENT

Contractor to supply and comply with traffic management plan and provide adequate site traffic control including a certified traffic marshall to supervise vehicle movements where necessary.

SITEWORKS LEGEND

- ● F22.20 — Finished surface level
- F22.00 — Finished contour
- K&G — Kerb and gutter
- KO — Kerb only
- FK — Flush kerb
- DD — Dish drain
- TE — Thickened Edge
- IK+TE — Intergrated kerb + Thickened Edge
- Taper kerb to zero height over 500 mm
- Wheelstop
- CRW# — Civil retaining wall
- SRW — Wall detailed by structural engineer
- SHW — Shotcrete Wall detailed by Geotechnical engineer
- DEJ — Dowelled expansion joint
- SJ — Sawn joint
- KJ — Keyed construction joint
- WPJ — Weakened plane joint
- EJ — Expansion joint
- Guard Rail

DRAWING SCHEDULE

Drawing No.	Drawing Title
SKC100	NOTES AND LEGEND SHEET
SKC102	EROSION & SEDIMENT CONTROL PLAN
SKC110	SITEWORKS AND STORMWATER PLAN
SKC120	TYPICAL DETAILS SHEET 1

FileName: SKC100.dwg - USER: anthonyl - Plot File Created: Oct 03, 2019 - 11:34pm

A1 0 1 2 3 4 5 6 7 8 9 10

Rev	Description	Eng	Draft	Date
P2	ISSUED FOR SSDA	AL	SP	03.10.19
P1	PRELIMINARY	AL	PM	09.08.19

Client: NSW GOVERNMENT TAFE NSW

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Project: TAFE MEADOWBANK
MULTI-TRADES AND DIGITAL TECHNOLOGY HUB

Sheet Subject: NOTES AND LEGEND SHEET

PRELIMINARY

Scale : A1	Drawn	Authorised
NTS	PM	

Job No	Drawing No	Revision
191346	SKC100	P2

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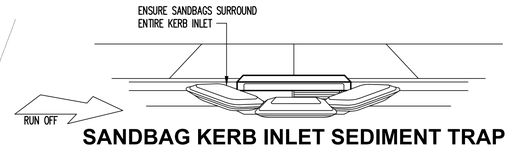
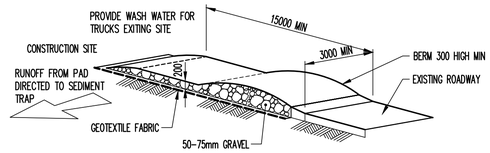
THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT NOTES ON DRAWING S0001



SANDBAG KERB INLET SEDIMENT TRAP
NTS



TEMPORARY CONSTRUCTION EXIT
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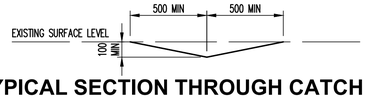
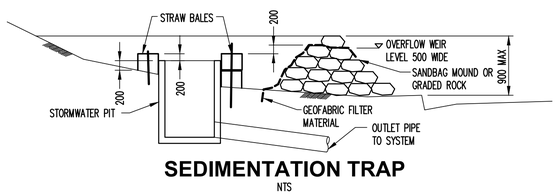


TYPICAL SECTION THROUGH CATCH DRAIN
SCALE 1: 20

SILTATION FENCE DETAIL
SCALE 1: 20



SEDIMENTATION TRAP
NTS

EROSION AND SEDIMENT CONTROL NOTES

1. All work shall be generally carried out in accordance with
   (A) Local authority requirements,
   (B) EPA – Pollution control manual for urban stormwater,
   (C) LANDCOM NSW – Managing Urban Stormwater: Soils and Construction ("Blue Book").
2. Erosion and sediment control drawings and notes are provided for the whole of the works. Should the Contractor stage these works then the design may be required to be modified. Variation to these details may require approval by the relevant authorities.
   The erosion and sediment control plan shall be implemented and adapted to meet the varying situations as work on site progresses.
3. Maintain all erosion and sediment control devices to the satisfaction of the superintendent and the local authority.
4. When stormwater pits are constructed prevent site runoff entering the pits unless silt fences are erected around pits.
5. Minimise the area of site being disturbed at any one time.
6. Protect all stockpiles of materials from scour and erosion. Do not stockpile loose material in roadways, near drainage pits or in watercourses.
7. All soil and water control measures are to be put back in place at the end of each working day, and modified to best suit site conditions.
8. Control water from upstream of the site such that it does not enter the disturbed site.
9. All construction vehicles shall enter and exit the site via the temporary construction entry/exit.
10. All vehicles leaving the site shall be cleaned and inspected before leaving.
11. Maintain all stormwater pipes and pits clear of debris and sediment. Inspect stormwater system and clean out after each storm event.
12. Clean out all erosion and sediment control devices after each storm event.

Sequence Of Works

1. Prior to commencement of excavation the following soil management devices must be installed.
1.1. Construct silt fences below the site and across all potential runoff sites.
1.2. Construct temporary construction entry/exit and divert runoff to suitable control systems.
1.3. Construct measures to divert upstream flows into existing stormwater system.
1.4. Construct sedimentation traps/basin including outlet control and overflow.
1.5. Construct turf lined swales.
1.6. Provide sandbag sediment traps upstream of existing pits.
2. Construct geotextile filter pit surround around all proposed pits as they are constructed.
3. On completion of pavement provide sand bag kerb inlet sediment traps around pits.
4. Provide and maintain a strip of turf on both sides of all roads after the construction of kerbs.

WATER QUALITY TESTING REQUIREMENTS

Prior to discharge of site stormwater, groundwater and seepage water into council's stormwater system, contractors must undertake water quality tests in conjunction with a suitably qualified environment consultant outlining the following:

- Compliance with the criteria of the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000)
- If required subject to the environmental consultants advice, provide remedial measures to improve the quality of water that is to be discharged into Councils storm water drainage system.This should include comments from a suitably qualified environmental consultant confirming the suitability of these remedial measures to manage the water discharged from the site into Councils storm water drainage system. Outlining the proposed, ongoing monitoring, contingency plans and validation program that will be in place to continually monitor the quality of water discharged from this site. This should outline the frequency of water quality testing that will be undertaken by a suitably qualified environmental consultant.

PRELIMINARY

Rev	Description	Eng	Draft	Date
P2	ISSUED FOR SSDA	AL	SP	03.10.19
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Project: TAFE MEADOWBANK
MULTI-TRADES AND DIGITAL TECHNOLOGY HUB

Sheet Subject: EROSION AND SEDIMENT CONTROL PLAN

Scale : A1 1:300 | Drawn PM | Authorised

Job No 191346 | Drawing No SKC102 | Revision P2

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PRELIMINARY

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Client: NSW GOVERNMENT TAFE NSW

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Project: TAFE MEADOWBANK
MULTI-TRADES AND DIGITAL TECHNOLOGY HUB

Sheet Subject: SITEWORKS AND STORMWATER PLAN

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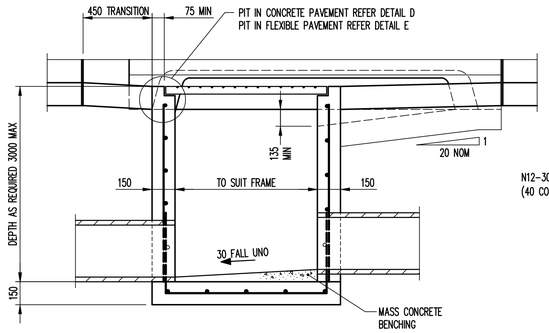
1:300	PM	

Job No	Drawing No	Revision
191346	SKC110	P2

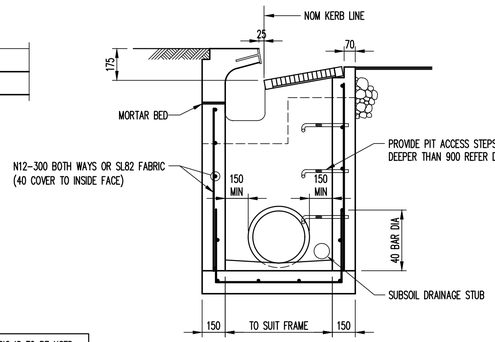
Plot File Created: Oct 03, 2019 - 10:05pm

THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT NOTES ON DRAWING S0001

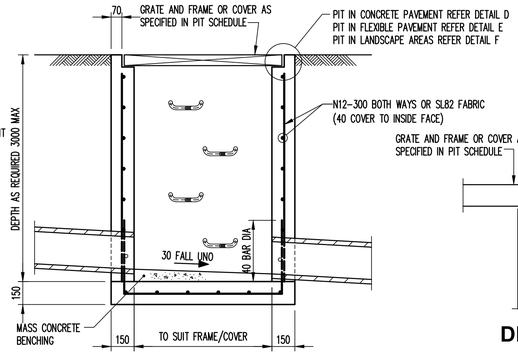


SECTION A
SCALE 1:20

NOTE:IF REINFORCING FABRIC IS TO BE USED REFER TO WALL AND CORNER DETAILS

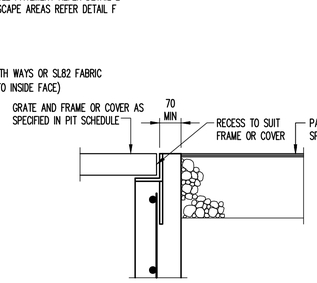


SECTION B
SCALE 1:20

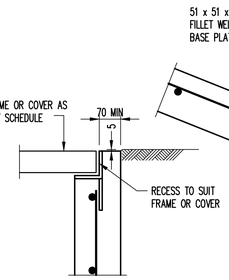


SECTION D
SCALE 1:20

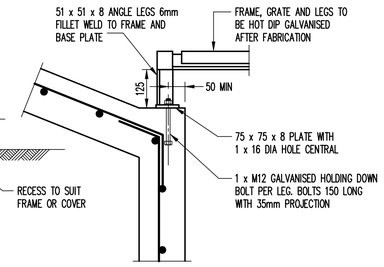
NOTE:IF REINFORCING FABRIC IS TO BE USED REFER TO WALL AND CORNER DETAILS



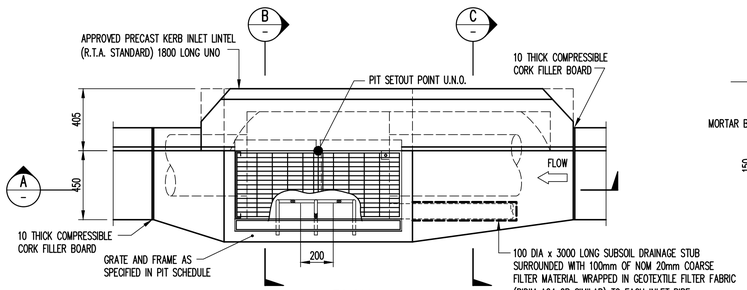
DETAIL E
SCALE 1: 10



DETAIL F
SCALE 1: 10

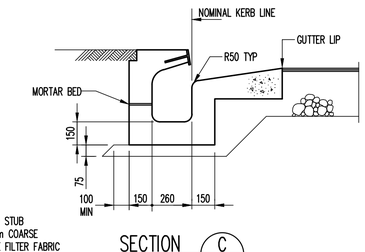


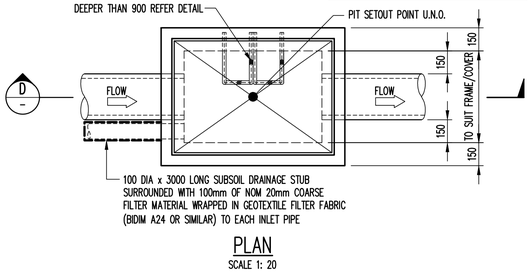
DETAIL G
SCALE 1: 10



PLAN
SCALE 1: 20

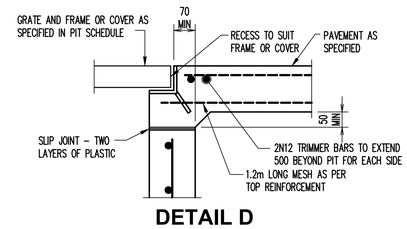
PIT TYPE A



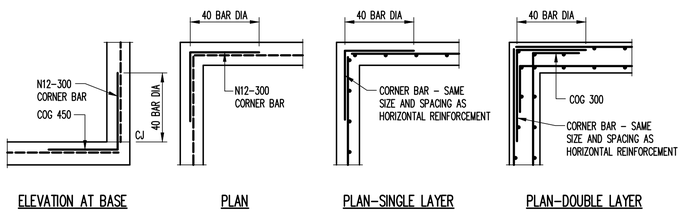


PLAN
SCALE 1: 20

PIT TYPE B



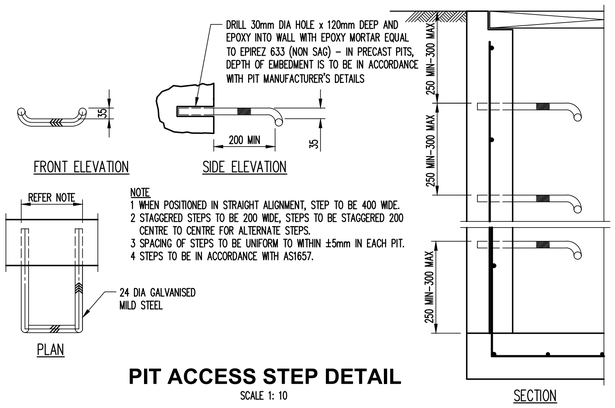
DETAIL D
SCALE 1: 10



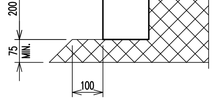
ELEVATION AT BASE | PLAN | PLAN–SINGLE LAYER | PLAN–DOUBLE LAYER

FABRIC | REINFORCEMENT

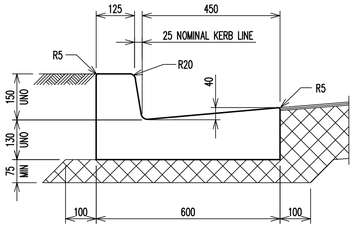
PIT CORNER DETAILS
SCALE 1: 20



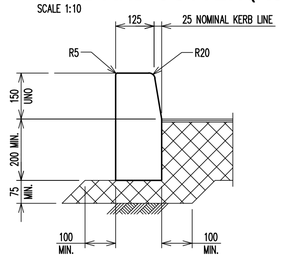
PIT ACCESS STEP DETAIL
SCALE 1: 10



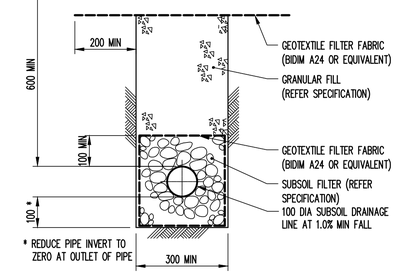
FLUSH KERB (FK)
SCALE 1:10



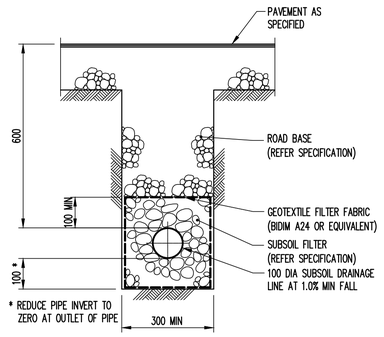
KERB AND GUTTER (K&G)
SCALE 1:10



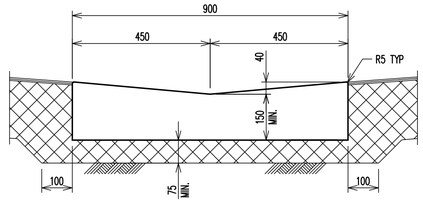
KERB ONLY (KO)
SCALE 1:10



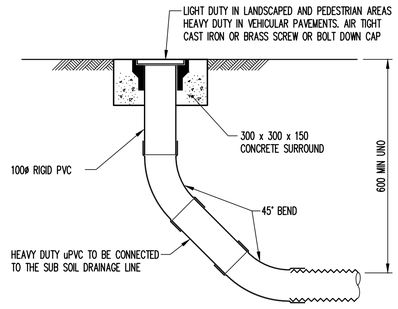
SUBSOIL IN LANDSCAPED AREAS
SCALE 1: 10



SUBSOIL IN PAVED AREAS
SCALE 1: 10



DISH DRAIN (DD)
SCALE 1:10



FLUSHING POINT (FP)
SCALE 1: 10
NOTE: SLOTTED RIGID PVC PIPE AND FITTINGS MAY BE USED

A1 0 1 2 3 4 5 6 7 8 9 10

Rev	Description	Eng	Draft	Date
P2	ISSUED FOR SSDA	AL	SP	03.10.19
P1	PRELIMINARY	DU	PM	09.08.19

Client: NSW GOVERNMENT TAFE NSW

Architect
GRAY PUKSAND
1/156 Clarence Street, Sydney NSW 2000
Ph. (02) 92479422

Structural Engineer
TTW Taylor Thomson Whitting
612 9439 7288 | 48 Chandos Street St Leonards NSW 2065

Project: TAFE MEADOWBANK

MULTI-TRADES AND DIGITAL TECHNOLOGY HUB

Sheet Subject: TYPICAL DETAIL SHEET 1

PRELIMINARY

Scale : A1	Drawn	Authorised
AS SHOWN	PM	

Job No	Drawing No	Revision
191346	SKC120	P2

Plot File Created: Oct 03, 2019 - 11:36pm

Appendix B – Consultation Record

Education
School Infrastructure

Post Approval Consultation Record

Identified Party to Consult:	State Emergency Service
Consultation type:	Email Correspondence
When is consultation required?	Prior to commencement of Construction
Why	B20. The Flood Emergency Response Sub-Plan (FERSP) must address, but not limited to, the following: (a) be prepared by a suitably qualified and experienced person(s) in consultation with the State Emergency Service;
When was consultation scheduled/held	Initial email sent to Tony Harb (SES Deputy Unit Commander) 22/10/20 Follow up email to Tony Harb (SES Deputy Unit Commander) 28/10/20 Further email sent to SES Community Planning 09/11/20
When was consultation held	Initial email sent to Tony Harb (SES Deputy Unit Commander) 22/10/20 Follow up email to Tony Harb (SES Deputy Unit Commander) 28/10/20 Further email sent to SES Community Planning 09/11/20 No comments provided to date
Identify persons and positions who were involved	Tony Harb (Deputy Unit Commander)– Then forwarded to Deputy Zone Commander – No response.
Provide the details of the consultation	FERSP continually sent for review – no response provided.
What specific matters were discussed?	Nil
What matters were resolved?	Nil
What matters are unresolved?	Not Applicable
Any remaining points of disagreement?	Not Applicable

How will SINSW address matters not resolved?	Not Applicable

James Gilligan

From: Tony Harb <TonyH@inconsult.com.au>
Sent: Wednesday, 28 October 2020 11:59 AM
To: James Gilligan
Cc: Hang Nghiem; Adam Rowston; Nicole Sutherland
Subject: RE: [SSD 10349 - B20] SES Consultation - Flood Emergency Response Plan

Hi James

Please email all future requests to NSW SES Community Planning team at nswses.communityplanning@ses.nsw.gov.au. I'm advised that this is where all correspondence is collated around flooding and then issued to the relevant area/unit.

Regards,

Tony

SES
Tony Harb
Deputy Unit Commander
NSW State Emergency Service – Bankstown Unit
M 0416 207 186 E tony.harb@member.ses.nsw.gov.au

2 Johnston Road, Bass Hill NSW 2197
FOR EMERGENCY HELP IN FLOODS AND STORMS CALL THE NSW SES ON 132 500
www.ses.nsw.gov.au

From: James Gilligan <JGilligan@northrop.com.au>
Sent: Wednesday, 28 October 2020 11:21 AM
To: Tony Harb <TonyH@inconsult.com.au>
Cc: Hang Nghiem <HNghiem@hansenyuncken.com.au>; Adam Rowston <ARowston@hansenyuncken.com.au>; Nicole Sutherland <NSutherland@northrop.com.au>
Subject: RE: [SSD 10349 - B20] SES Consultation - Flood Emergency Response Plan

Hi Tony,

Thank you for circulating our correspondence regarding the Flood Emergency Response Plan.

Have you received a response from the Deputy Zone Commander by any chance.

Happy to liaise with the appropriate personnel in SES as required to address any comments.

Kind regards,

James Gilligan
Associate | Senior Civil Manager

Northrop Consulting Engineers Pty Ltd
T 02 9241 4188 **M** 0417 664 577
D 02 9156 3147
Level 2, 3 Horwood Place Parramatta NSW 2150

www.northrop.com.au

NORTHROP Follow us on LinkedIn

From: Tony Harb <TonyH@inconsult.com.au>
Sent: Friday, 23 October 2020 7:01 AM
To: James Gilligan <JGilligan@northrop.com.au>
Cc: Hang Nghiem <HNghiem@hansenyuncken.com.au>; Adam Rowston <ARowston@hansenyuncken.com.au>; Nicole Sutherland <NSutherland@northrop.com.au>
Subject: RE: [SSD 10349 - B20] SES Consultation - Flood Emergency Response Plan

Hi James

I have forwarded you email to our Deputy Zone Commander as I only look after the Bankstown area. Please standby.

Regards,

Tony

SES

Tony Harb
Deputy Unit Commander
NSW State Emergency Service – Bankstown Unit
M 0416 207 186 E tony.harb@member.ses.nsw.gov.au

2 Johnston Road, Bass Hill NSW 2197
FOR EMERGENCY HELP IN FLOODS AND STORMS CALL THE NSW SES ON 132 500
www.ses.nsw.gov.au

From: James Gilligan <JGilligan@northrop.com.au>
Sent: Thursday, 22 October 2020 10:05 PM
To: Tony Harb <tony.harb@member.ses.nsw.gov.au>
Cc: Hang Nghiem <HNghiem@hansenyuncken.com.au>; Adam Rowston <ARowston@hansenyuncken.com.au>; Nicole Sutherland <NSutherland@northrop.com.au>
Subject: [SSD 10349 - B20] SES Consultation - Flood Emergency Response Plan

Hi Tony,

We have recently received development consent conditions for construction of new facilities at Meadowbank TAFE (SSD 10349).

As part of the consent, condition B20 requires the preparation of Flood Emergency Response Plan for the Construction Phase of the project - in consultation with SES.

Can you please advise where the Flood Emergency Response Plan can be directed within the SES to initiate consultation required for the project.

I have provided a link below to download a copy the plan for your information.

https://sydneynorthrop-my.sharepoint.com/:f:/g/personal/civil_sydneynorthrop_onmicrosoft_com/EjCqTJkDEBdLibb5E8_LmKUBH1RqrwJnkYOKL_jBzI1g2g?e=FYbgZv

Your assistance with this matter would be greatly appreciated.

Kind regards,

James Gilligan
Associate | Senior Civil Manager

Northrop Consulting Engineers Pty Ltd
T 02 9241 4188 **M** 0417 664 577
D 02 9156 3147
Level 2, 3 Horwood Place Parramatta NSW 2150
www.northrop.com.au

James Gilligan

From: James Gilligan
Sent: Monday, 9 November 2020 9:48 AM
To: nswses.communityplanning@ses.nsw.gov.au
Cc: Hang Nghiem; Adam Rowston; Nicole Sutherland
Subject: [SSD 10349 - B20] SES Consultation - Flood Emergency Response Plan

Hi,

We have recently received development consent conditions for construction of new facilities at Meadowbank TAFE (SSD 10349).

As part of the consent, condition B20 requires the preparation of Flood Emergency Response Plan for the Construction Phase of the project - in consultation with SES.

I have provided a link below to download a copy the plan for your information.

https://sydneynorthrop-my.sharepoint.com/:f:/g/personal/civil_sydneynorthrop_onmicrosoft_com/EjCqTJkDEBdLibb5E8_LmKUBH1RqrwJnkYOKL_jBzI1g2g?e=FYbgZv

Your assistance with this matter would be greatly appreciated.

Kind regards,

James Gilligan
Associate | Senior Civil Manager

Northrop Consulting Engineers Pty Ltd
T 02 9241 4188 **M** 0417 664 577
D 02 9156 3147
Level 2, 3 Horwood Place Parramatta NSW 2150
www.northrop.com.au

Appendix C - CV

James Gilligan

Associate | Senior Civil Engineer

BE (Civil) MIEAust CPEng NER

James is a Senior Civil Engineer with over twelve years' experience managing and delivering buildings and complex civil infrastructure projects requiring design from the concept phase through to construction and post construction stages.

James also has particular experience in project management and contract administration. James' technical background includes civil design of utilities, earthworks, stormwater and roads for subdivision and buildings projects across all types of development including Education, Residential, Commercial & Industrial.

Project Experience

Urban Redevelopment

- Frasers Central Park, Broadway
- Tailors Walk, Pemberton Street, Botany
- 150 Epping Road, Lane Cove
- Glebe Affordable Housing Project, Glebe
- Altrove Stage 7 & 9, Schofields
- Airds Subdivision Works, Airds
- Pemulwuy Southern Lands, Pemulwuy
- Stellar Apartments, Ryde
- 10 Hall Street, Bondi
- McEvoy Street, Waterloo

Public Domain and Open Spaces

- Endeavour Energy Southern Carpark, Huntingwood
- Windsor Station Bus Interchange, Windsor
- Waterfall Station Easy Access Upgrade
- New Acton South Carpark, Canberra
- Elara Neighbourhood Centre, Elara
- Hurstville Bus Interchange, Hurstville
- Twin Creeks Golf Club, Luddenham
- Croom Regional Sporting Complex, Croom

Infrastructure / Utilities Coordination

- Southern Sydney Freight Line
- North West Rail Link
- Sydney International Airport – Stage 2B

Aged Care & Retirement Living

- St Mary's Aged Care Facility, St Mary's
- The Abbey Aged Care Facility, Mittagong
- Anglican Retirement Village, Glenhaven
- Oran Park Aged Care Facility, Oran Park
- Zhiva Living, Dural

Commercial / Industrial

- Ingram Micro Warehouse
- Goodyear Warehouse
- 1-5 Interchange Drive, Eastern Creek
- 2-4 Interchange Drive Eastern Creek
- 9-11 Interchange Drive, Eastern Creek
- 17-19 Interchange Drive, Eastern Creek
- 21-23 Interchange Drive, Eastern Creek
- Bunnings Distribution Centre, Eastern Creek
- Basalt Road, Greystanes
- Blum Australia Warehouse, Hoxton Park
- Masters Home Improvement, Penrith
- Masters Home Improvement Wagga Wagga
- AMP Shopping Centre, Glenmore Park
- Kingsford Smith Distribution Centre, Mascot
- Danks Hardware Distribution Centre

Health

- Manly AYAH
- Westmead Hospital
- Cumberland Hospital
- Bungarribee House Relocation, Blacktown

Education

- Passfield Park School
- Jordon Spring Public School
- Alex Avenue Public School
- Western Sydney University, Westmead
- Barker College Junior School and Early Learning Centre
- Westmead Catholic College
- Catherine Field Public School
- Wagga Wagga Public School
- East Leppington Public School
- Meadowbank TaFE