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DEPARTMENT OF EDUCATION
BUNGENDORE NORTH CAMPUS HIGH SCHOOL

CIVIL ENGINEERING REPORT

2025-04-12

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CIVIL ENGINEERING REPORT
BUNGENDORE NORTH CAMPUS HIGH SCHOOL

DEPARTMENT OF EDUCATION

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Rev	Date	Details
01	11.03.2025	Draft for comment
02	12.04.2025	Planning comments

	Name	Date	Signature
Prepared by:	SCO	20.03.2025	SCO
Reviewed by:	MJD	20.03.2025	MJD
Approved by:	MJD	20.03.2025	MJD

WSP acknowledges that every project we work on takes place on First Peoples lands.
We recognise Aboriginal and Torres Strait Islander Peoples as the first scientists and engineers and pay our respects to Elders past and present.

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Executive summary

Enstruct, now WSP, have been engaged by Schools Infrastructure NSW (SINSW), on behalf of the NSW Department of Education, to provide civil engineering consultancy services and design development of the new Bungendore North Campus High School.

This Civil Engineering report has been prepared to support a Review of Environmental Factors (REF) report for the NSW Department of Education (DoE) for the construction and operation of the new Bungendore North Campus High School (the activity).

The report covers the following:

- Existing site conditions
- Stormwater management including onsite stormwater detention (OSD)
- Erosion and Sediment control

1 Introduction

This Civil Engineering Report has been prepared to support a Review of Environmental Factors (REF) for the NSW Department of Education (DoE) for the construction and operation of the new Bungendore North Campus High School (the activity).

The purpose of the REF is to assess the potential environmental impacts of the activity prescribed by *State Environmental Planning Policy (Transport and Infrastructure) 2021* (T&I SEPP) as "development permitted without consent" on land carried out by or on behalf of a public authority under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The activity is to be undertaken pursuant to Chapter 3, Part 3.4, Section 3.37A of the T&I SEPP.

This document has been prepared in accordance with the Guidelines for Division 5.1 assessments (the Guidelines) by the Department of Planning, Housing and Infrastructure (DPHI) as well as the Addendum Division 5.1 guidelines for schools and Addendum October 2024 (Consideration of environmental factors for health services facilities and schools).

The purpose of this report is to evaluate the environmental impacts of the proposed Civil engineering works and outline the mitigation measures proposed in response.

The NSW Department of Education (DoE) is the proponent and determining authority pursuant to Section 5.1 of the Environmental Planning and Assessment Act 1979 (EP&A Act).

1.1 Site Description

The project site, and land to which the REF applies (the site) includes Nos. 4-6, and 10 Majara Street, part Lot 1 DP 1276279 (previously Majara Street road reserve) and part Lot 1 DP 1276282 as identified in **Figure 1.**

As shown at **Figure 4**, the Bungendore North Campus High School will utilise the former Council administration building and car park located at 10 Majara Street. Demountable buildings are proposed to be placed north of the existing building. Public domain upgrades will feature in part Lot 1 DP 1276279 and part Lot 1 DP 1276282.

The site is located between Mick Sherd Oval (to the west) and the rail corridor (to the east). The site is located approx. 170m north of the Bungendore Train Station and Bungendore Primary School. The Bungendore Primary School, located on the corner of Gibraltar Street and Majara Street currently accommodates Bungendore High School on a temporary basis.

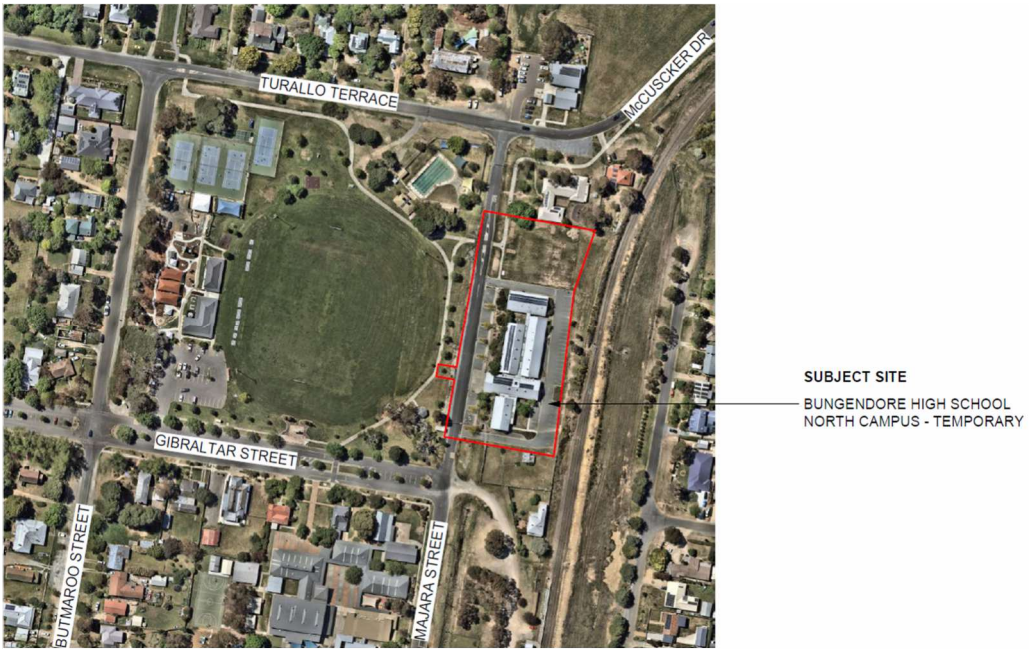

Figure 1: Aerial Photograph of the Site (Source: TKD, 2025)

1.2 Existing Stormwater

A survey by Project Surveyors (Ref: B04901-BUN-5, Revision R, dated 25.08.24) shows there is an existing 1300mm diameter stormwater main along Majara Street. An extract of the survey is included in Figure 2 below with the location of the stormwater main annotated including an associated stormwater manhole within the street reserve to the north east of the site.

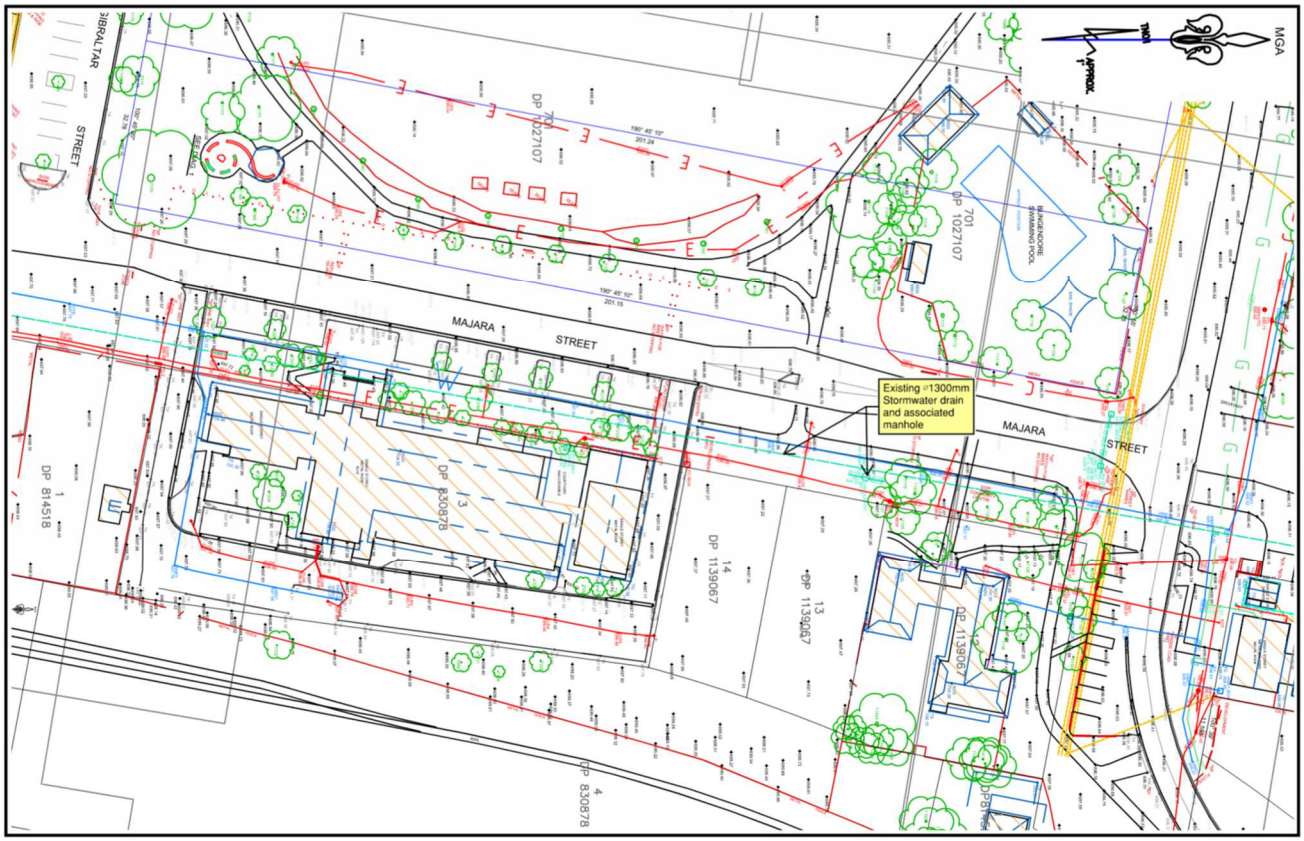

Figure 2: Survey (Source: Project Surveyors, 2024)

The existing building benefits from a connection to this stormwater main. A Hydraulic Services Plan by Northrop Consulting Engineers for the existing building shows the existing building downpipes leading to a 40m^3 (water holding capacity) centralised rainwater / stormwater detention tank before discharging to the main along Majara Street. No changes are proposed to the drainage of the existing building or to the existing private roads and parking surrounding it. An extract from the Hydraulic Services Plan for the existing building is shown in **Figure 3** below.

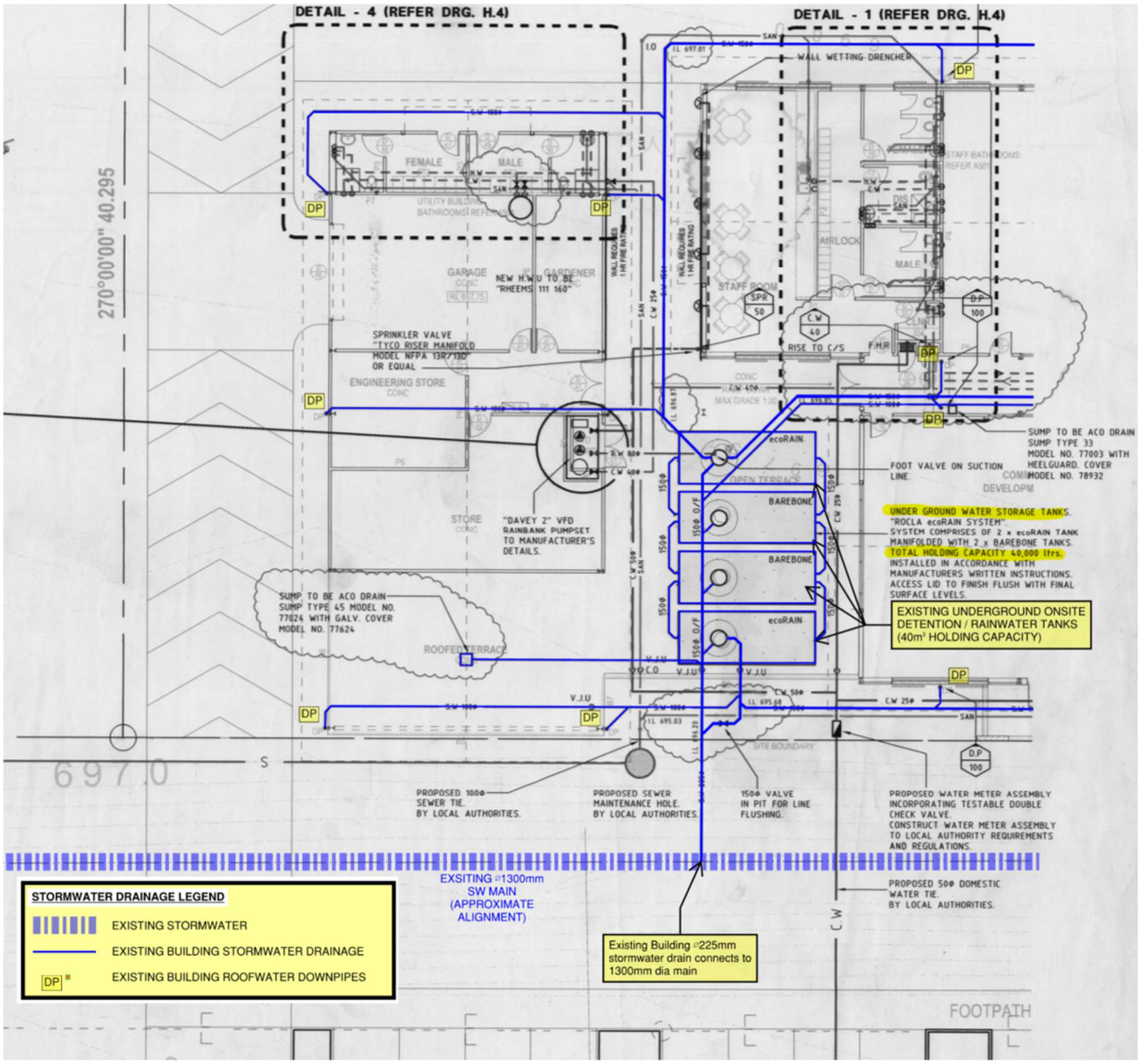

Figure 3: Existing Building Drainage (Source: Northrop Consulting Engineers drawing 'Ground Floor Plan North – Hydraulic Services', 2006)

1.3 Standards List

The civil design shall be in accordance with the latest revision of all relevant Australian Standards, relevant structural sections of the BCA and other statutory requirements. The design will be in accordance with the following relevant Australian Standards:

- Australian Rainfall & Runoff 2019
- Austroads: Guide to Pavement Technology
- AS1428.1 Design for Access & Mobility
- AS 3500.3-1990 National Plumbing and Drainage Code - Stormwater drainage.
- Queanbeyan-Palerang Local Environmental Plan 2022

- Queanbeyan-Palerang Regional Council Development Design Specification D5 – Stormwater Drainage Design (2019)
- Queanbeyan-Palerang Regional Council Public Domain Guidelines
- Palerang Development Control Plan (2015)
- Queanbeyan-Palerang Regional Council Development Design Specification D7 – Erosion Control and Stormwater Management (2018)
- Managing Urban Stormwater: Soils and Construction, “The Blue Book” – 4th edition 2004.

2 Proposed Activity

The proposed activity is for the construction and operation of the new Bungendore North Campus High School. The high school will accommodate the operational needs of the high school on a temporary basis (together with the existing high school located within the grounds of Bungendore Public School) as students enrolments continue to grow. These facilities will be utilised until such time the permanent high school at Birchfield Drive is established.

Specifically, the project involves the following:

- Use of the former Council administration building as part of the new Bungendore North Campus High School,
- New demountable classrooms,
- Landscaping, outdoor play areas, shade structure and basketball court,
- On site staff parking which utilises the existing car park and access from Majara Street, and
- Public domain upgrades to part Lot 1 DP 1276279 (previously Majara Street Road reserve) and part lot 1 DP 1276282 to enable kiss and drop from Majara Street and pedestrian connectivity to surrounding areas.

The North Campus facilities proposed will supplement the existing high school facilities located within the Bungendore Primary School site.

Refer to the Review of Environmental Factors (REF) for the detailed scope of works and operational details.

Figure 4 provides an extract of the proposed Overall Project Site Plan.

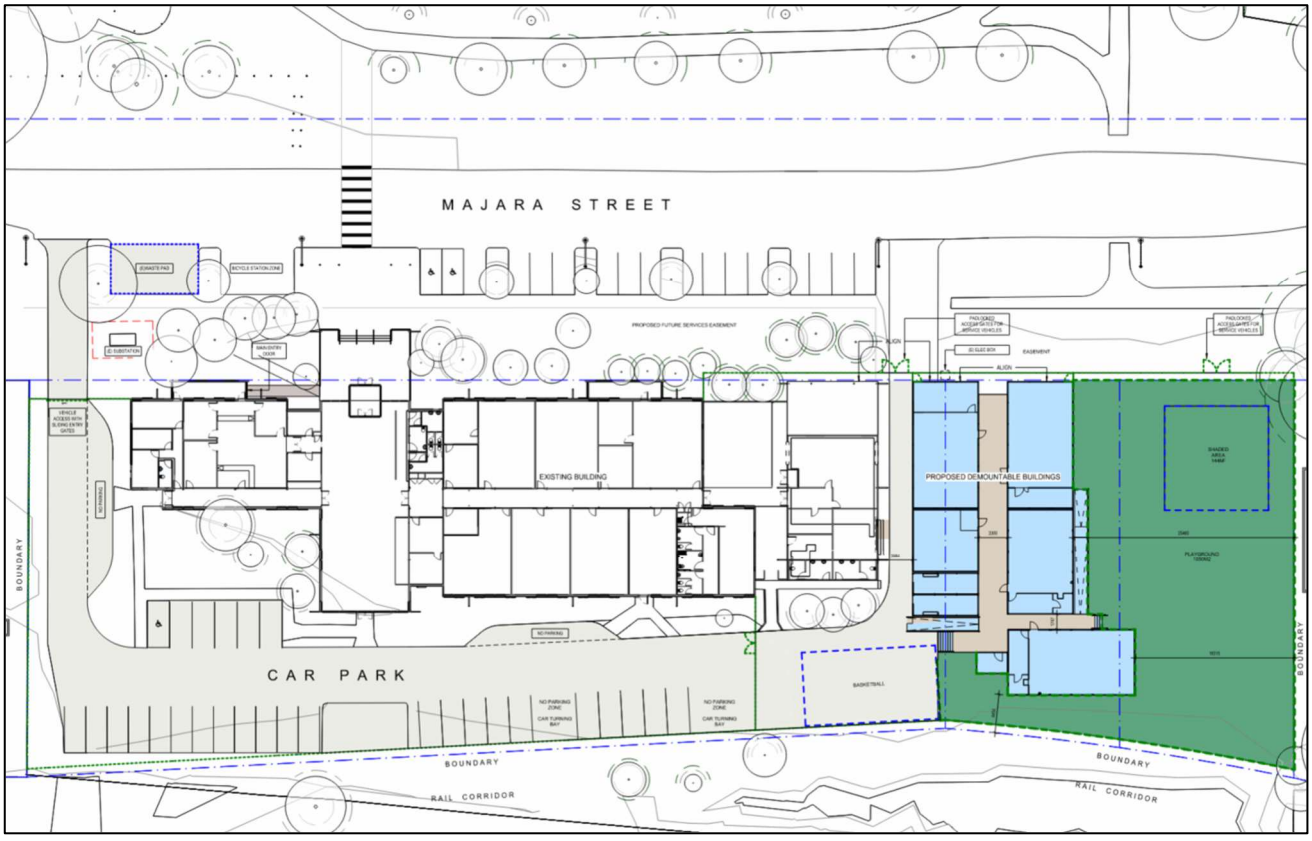

Figure 4: Overall Project Site Plan (Source: TKD, 2025)

3 Consultation

Queanbeyan-Palerang Regional Council were contacted for advice regarding their expectations for stormwater management on the site.

In summary, Council advised:

- given the temporary nature of the school, construction of permanent water quality and quantity devices does not represent value for money.
- The existing building already has underground detention tanks, and the carpark is 100% impervious area, so there will only be an increase in runoff from the grassed area (as a result of the new demountable buildings).
- Capture and reuse of this roofwater would be the preferred outcome to minimise demand on potable water supplies. Having said that, the project will need to ensure that discharge from the site does not represent a safety issue (which normal engineering due diligence and safety in design would cover anyway).
- In terms of stormwater connections, the existing building is already connected. Connection to the stormwater main for the new demountable building is preferred due to the absence of kerb and gutter along that frontage. This area is also very flat and has associated ponding issues.
- There is a spot that holds water after rainfall events in the private roadway to the north of the existing building.

The full correspondence with Council is included in **Appendix B**.

4 Stormwater Design

The stormwater design must be in accordance with Australian Standards, Queanbeyan-Palerang Regional Council Development Design Specification D5 – Stormwater Drainage Design (2019), and Australian Rainfall and Runoff (2019).

In general, drainage is to be designed to ensure that site facilities are available for students' use in all weather conditions up to a 100 Year ARI storm event. All new stormwater from the demountable buildings will be collected in roof gutters and downpipes and conveyed to the in-ground pipe system via two rainwater tanks. The drainage for the existing buildings and hardstand areas is not proposed to be modified and Queanbeyan-Palerang Regional Council are supportive of this approach.

Pipes and pits will need to be designed to satisfy the minimum provisions of AS 3500.3. They must be designed to convey, at least, the 5% Annual Exceedance Probability (AEP) flows as per Education Facilities and Standards Guidelines and Technical Standards (ESFG guidelines). Where pipe capacity is exceeded i.e., greater than 5% AEP, stormwater will be conveyed as overland flow. Overland flow paths are to be designed to convey at the minimum 1% AEP stormwater flows with a Velocity x Depth to be less than 0.4m2/s.

Class B, C and D pits are to be used in accordance with AS 3996.

4.1 Onsite Stormwater Detention

Generally, Queanbeyan-Palerang Regional Council requires onsite stormwater detention (OSD) for all individual dwellings, multi-unit developments, commercial and industrial developments.

Queanbeyan-Palerang Regional Council 'Development Design Specification D5 – Stormwater Drainage Design (2019)' stipulates that the OSD system must be designed and constructed to control stormwater runoff from development sites such that, for the 1% AEP and 20% AEP events, discharges do not exceed pre-development peak discharge rates.

Queanbeyan-Palerang Regional Council were contacted and have advised that rainwater capture and reuse are preferred and that the impacts of increased runoff from the new impervious areas associated with the temporary demountable buildings should be mitigated.

In response, and in consultation with the Hydraulic Engineer, two rainwater tanks are proposed in conjunction with an above ground OSD tank. The rainwater tanks will facilitate capture and reuse of rainwater and, together with the OSD tank, will limit discharge rates to no greater than pre-development levels. The above ground tank will limit disturbance to the site compared with a below ground tank and is considered appropriate given the temporary nature of the development.

The OSD has been sized based on the new / additional impervious area of approximately 638m^2 as shown in **Figure 4** below and Queanbeyan-Palerang Regional Council are supportive of this approach.

Roof water will be collected in downpipes and connected to two aboveground rainwater tanks (design by Hydraulic Engineer). The overflow from the rainwater tanks will discharge to a modular above ground stormwater detention tank, securely fixed to the ground beneath the demountable buildings. The outlet from the tank is initially 2 no. 90mm pipes to control outflows from the tank and this connects to a 150mm diameter below ground stormwater drain which in turn discharges to the 1300mm diameter main within the road reserve.

For further details refer to the Stormwater Management Plan in **Appendix A**.

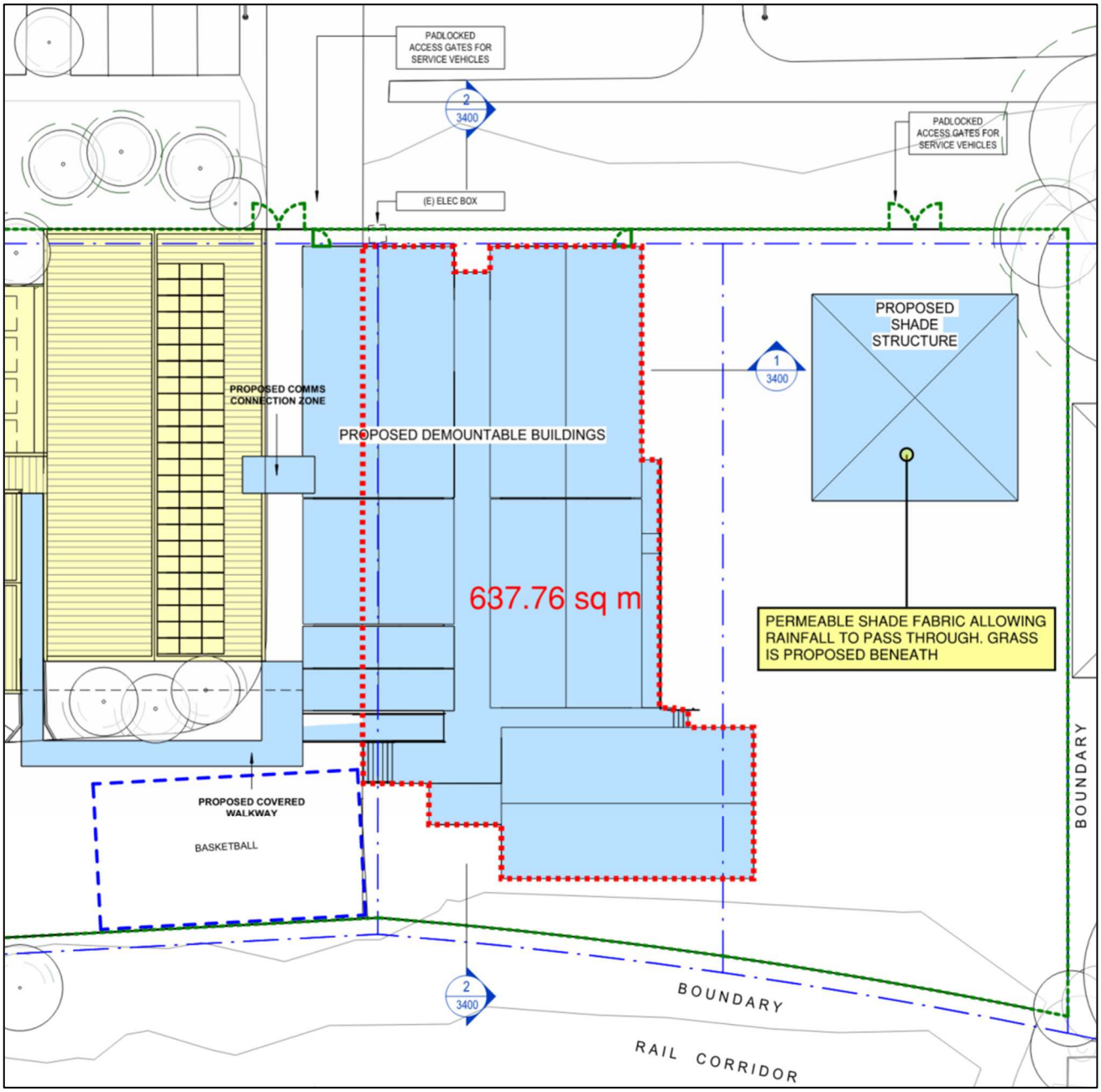

Figure 5: Catchment Plan

4.2 OSD Modelling

A DRAINS model has been used to determine the OSD volume required to mitigate an increase in runoff from the new (additional) impervious catchment area associated with the new demountable buildings.

Figure 6 and **Figure 7** below show a comparison between pre and post development flow rates for the 1% AEP and 20% AEP storms respectively. This shows that with the OSD, post development flows are no greater than predevelopment flows for both storm events.

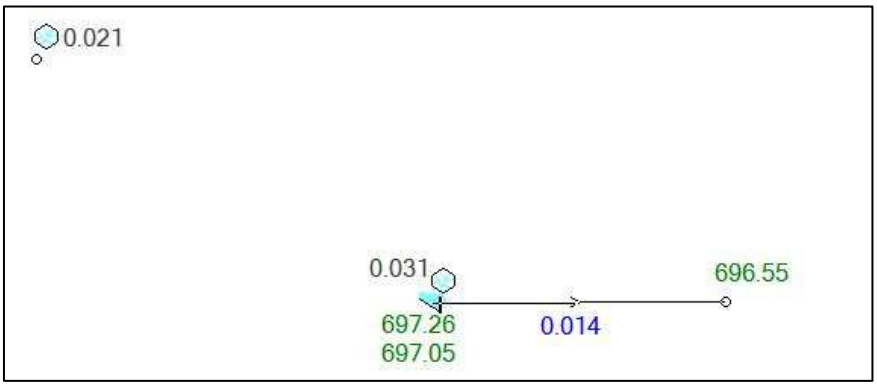

Figure 6: Pre vs Post Development Flow for the 1% AEP storm

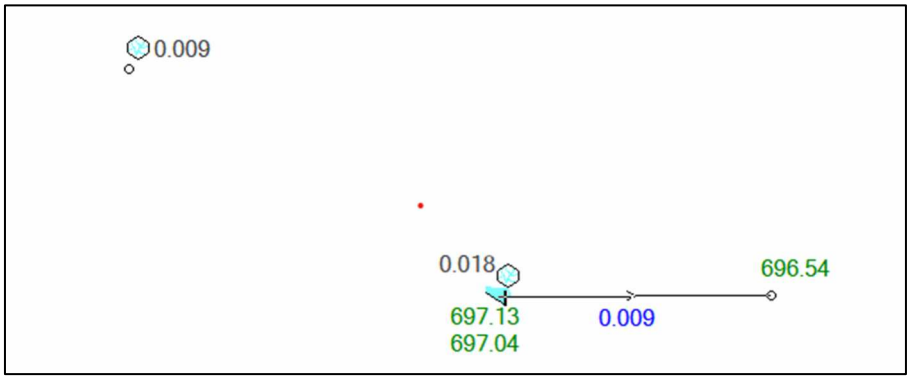

Figure 7: Pre vs Post Development Flow for the 20% AEP storm

Based on the modelling, 10.5m^3 of OSD is required for the new demountable buildings.

As per clause 15.7 of Queanbeyan-Palerang Regional Council's 'D5 Stormwater Drainage Design Specification', 50% of the rainwater tank volume may contribute to the overall OSD storage capacity. Two 5m^3 rainwater tanks are proposed by the Hydraulic Engineer (total 10m^3), therefore 5m^3 of this can contribute to the required OSD volume, resulting in a **required OSD tank volume of 5.5m^3**.

This may comprise of 18 no. 320L Aquacomb pods or an equivalent modular water storage system. The depth of the Aquacomb pod units is 300mm, therefore there will be ample space underneath the raised demountable buildings to accommodate the units. Refer to the Stormwater Management Plan in **Appendix A** for further details.

4.3 Stormwater Quality

Part D7.21 of Queanbeyan-Palerang Regional Council's 'Development Design Specification D7 – Erosion Control and Stormwater Management (2018) sets out the requirements for treating stormwater prior to discharge into Council's system. The guidelines require all developments to achieve a minimum percentage reduction in average annual pollutant loads.

However, due to the temporary nature of the development and considering the new impermeable area is roof only, Council advised that construction of permanent water quality devices does not represent value for money. Therefore, water quality improvement devices have not been incorporated except for:

- Leaf/debris screens on the gutters
- The rainwater and OSD tanks will capture some sediment and when water is utilised, some pollutants will be removed along with the water. The tanks are also effective at removing total nitrogen (TN).

5 Erosion and Sediment Control

During construction and while the site is disturbed, erosion prevention and sediment control measures will be required.

The demountable buildings will have discrete foundations and there will be some disturbance of the site due to construction equipment and in association with drainage and utilities trenching. No earthworks are proposed as the existing site levels are being retained.

Erosion prevention generally involves managing stormwater by diverting overland flow around construction areas as well as collecting stormwater within the construction zones and directing runoff to sediment control devices. Devices to be incorporated include silt removal fences, sandbags and geotextile filters.

Erosion prevention and sediment removal strategies need to be inspected regularly during construction works, cleaned, and maintained after storm events, and modified to suit construction work progress, decanting and demolition.

Erosion and sediment controls are to be designed, constructed, and installed in accordance with Managing Urban Stormwater: Soils and construction - Volume 1 and maintained until the site is fully stabilised to prevent pollution of the receiving environment.

6 Proposed Mitigation Measures

The table below provides a summary of the proposed mitigation measures. These are described in further detail in the proceeding sections of the report.

Mitigation Number / Name	Aspect / Section	Mitigation Measure	Reason for Mitigation Measure
Erosion and Sediment Control	During Design and Construction	Provision of erosion and sediment control devices, such as sedimentation fences and geotextile filters around existing pits during construction work and until the site is stabilised. Regular inspection of erosion prevention and sediment removal strategies during construction works. Clean and maintain sediment control devices after storm events. Modify sediment control devices to suit construction work progress and until the site is stabilised.	To avoid polluting the water and/or blocking the stormwater network, erosion and sediment control measures have been detailed. To prevent sediment laden stormwater from leaving the Site. Stormwater will pass through sediment/siltation fences, but the fence will trap the sediment. To remove ground materials from construction vehicle wheels prior to the vehicle leaving the Site, to prevent the depositing of material onto the public roadway. To prevent sediment discharged from the Site from entering the stormwater inlet structure and contaminating the water course.
Stormwater Quantity Control	During Design, Construction and Operation	An OSD tank will be installed to mitigate the increase in runoff from the new demountable buildings and shall be designed and constructed in accordance with Queanbeyan-Palerang Regional Council 'Development Design Specification D5 – Stormwater Drainage Design (2019)' and the consultation under taken with them (Refer to Section 3 of this report).	To ensure the development is not worsening flow conditions in downstream receiving stormwater networks and waterways.
Stormwater Quality Control	During Design, Construction and Operation	Provision of leaf/debris screens on gutters along with the rainwater tanks and the OSD tank are to be installed.	To ensure that stormwater discharge is of adequate quality to protect downstream receiving stormwater networks and waterways, in accordance with Council's requirements.
Stormwater Design	During Design and Construction	Pipes and pits will need to be designed to satisfy the minimum provisions of AS 3500.3. They must be designed to convey, at least, the 5% Annual Exceedance Probability (AEP) flows as per Education Facilities and Standards Guidelines and Technical Standards (ESFG guidelines). Where pipe capacity	To ensure that site facilities are available for students' use in all weather conditions up to a 100 Year ARI storm event.

Mitigation Number / Name	Aspect / Section	Mitigation Measure	Reason for Mitigation Measure
		is exceeded i.e., greater than 5% AEP, stormwater will be conveyed as overland flow. Overland flow paths are to be designed to convey at the minimum 1% AEP stormwater flows with a Velocity x Depth to be less than 0.4m2/s. Class B, C and D pits are to be used in accordance with AS 3996.	
Stormwater ponding - there is a spot that holds water after rainfall events in the private roadway to the north of the existing building.	Operation	The area where ponding has been identified has a spoon drain with insufficient slope to be free draining. The existing ponding issue is considered a nuisance, not a hazard and the ponding depth is expected to be very shallow. Therefore, it is recommended that the ponding issue is monitored and addressed if necessary.	To ensure pedestrian safety.

7 Evaluation of Environmental Impacts

The site works could result in sediment and nutrient laden runoff leaving the site. This could pollute downstream watercourses and/or result in blockages to the public stormwater network. Erosion and sediment control measures have been included as a mitigation measure to address the potential impacts.

The increase in impervious area associated with the new temporary demountable buildings would result in an increase in stormwater runoff compared with the existing pre-developed Site, if not mitigated. An increase in runoff from the Site may cause damage to the surrounding environment, overload Council's existing stormwater network and/or cause damage to people and/or property. On site detention is proposed to manage stormwater such that pre-development peak discharge rates are not exceeded in the 1% AEP and 20% AEP storm events.

As a result of the increase in impervious area associated with the new temporary demountable buildings, the development may result in a degradation of stormwater quality leaving the site. Leaf/debris screens on gutters along with rainwater tanks and an OSD tank will improve water quality and are appropriate given the nature and scale of the development.

8 Conclusions

The civil works associated with the design and construction of the new Bungendore North Campus High School will be carried out in accordance with normal engineering practice and will meet the requirements of relevant standard.

Erosion and sediment control measures are to be in place during construction to prevent contamination of the downstream stormwater system and tracking of grit and sediment onto the roadway.

An onsite detention (OSD) system will be provided to meet acceptable stormwater runoff discharge rates from the site.

The extent and nature of potential environmental impacts associated with the Civil works are considered low and will not have significant impact on the locality, community and/or the environment.

Potential impacts can be appropriately mitigated or managed to ensure that there is minimal impact on the locality, community and/or the environment.

9 Limitations

This Report is provided by WSP Australia Pty Limited (WSP) for Department of Education (Client) in response to specific instructions from the Client.

PERMITTED PURPOSE

This Report is provided by WSP for the purpose described in the Agreement and no responsibility is accepted by WSP for the use of the Report in whole or in part, for any other purpose (*Permitted Purpose*).

QUALIFICATIONS AND ASSUMPTIONS

The services undertaken by WSP in preparing this Report were limited to those specifically detailed in the Report and are subject to the scope, qualifications, assumptions and limitations set out in the Report or otherwise communicated to the Client.

Except as otherwise stated in the Report and to the extent that statements, opinions, facts, conclusion and / or recommendations in the Report (*Conclusions*) are based in whole or in part on information provided by the Client and other parties identified in the report (*Information)*, those Conclusions are based on assumptions by WSP of the reliability, adequacy, accuracy and completeness of the Information and have not been verified. WSP accepts no responsibility for the Information.

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Appendix A

Stormwater Management Plan

DATE 12.04.2025	DRAWN SCO
SCALE 1:200	CHECKED MJD
SHEET SIZE A1	APPROVED MJD

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PROJECT
BUNGENDORE TEMPORARY HIGHSCHOOL

CLIENT
NSW DEPARTMENT
OF EDUCATION

TITLE
STORMWATER MANAGEMENT PLAN

PROJECT NO.	DRAWING NO.	REVISION
218485	SK-001	03

STORMWATER DRAINAGE LEGEND

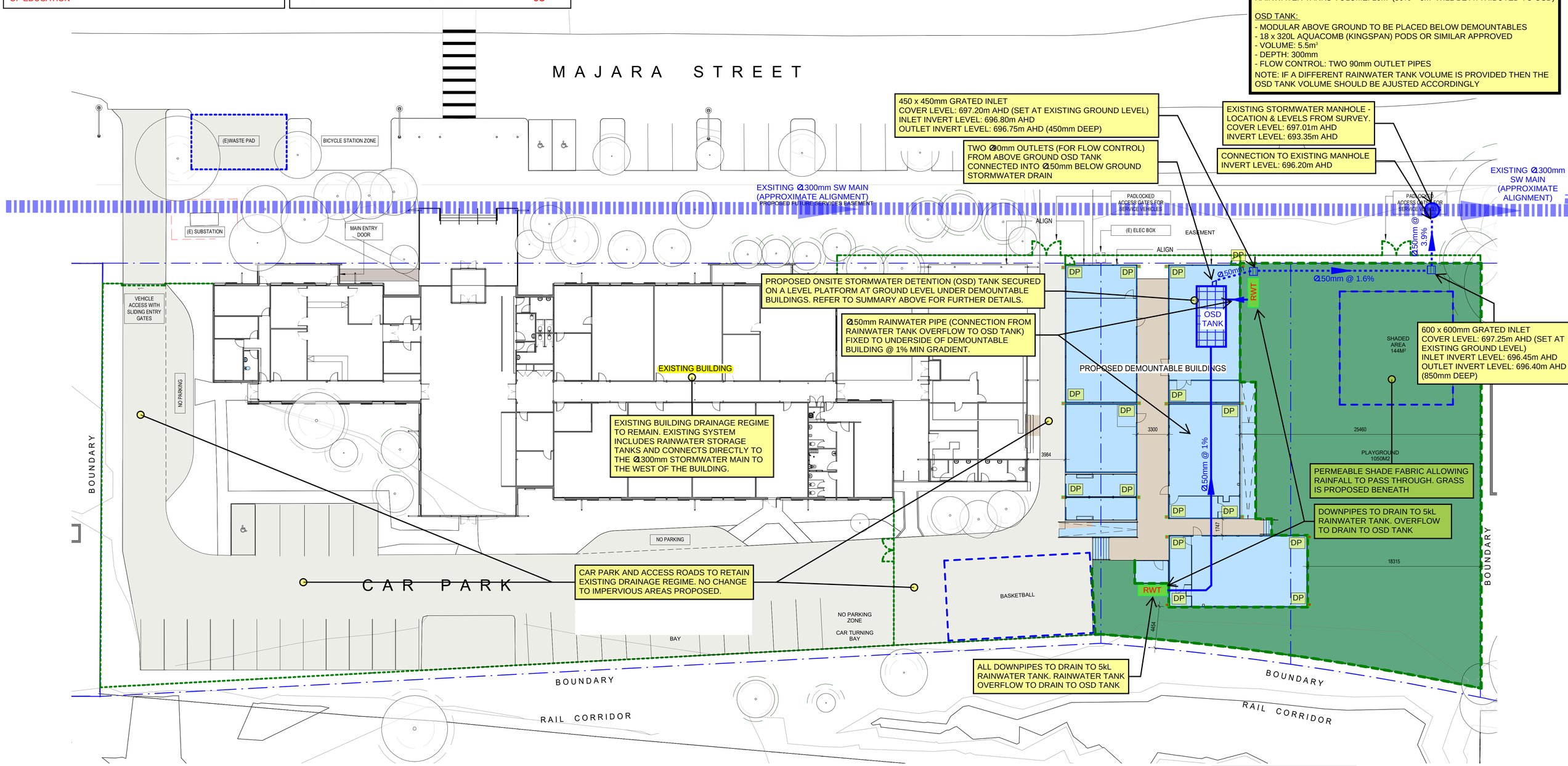
- EXISTING ∅300mm STORMWATER MAIN
- PROPOSED BELOW GROUND STORMWATER PIPE
- PROPOSED ABOVE GROUND RAINWATER PIPE
- RWT — RAINWATER TANK BY HYDRAULIC ENGINEER
- DP — ROOFWATER DOWNPIPES (TO BE CONNECTED INTO ONE OF THE TWO RAINWATER TANKS)

PROPOSED STORMWATER ONSITE DETENTION (OSD) SUMMARY:

TOTAL DETENTION VOLUME REQUIRED: 10.5m³
RAINWATER TANKS VOLUME: 10m³ (50% = 5m³ WILL BE ATTRIBUTED TO OSD)

OSD TANK:
- MODULAR ABOVE GROUND TO BE PLACED BELOW DEMOUNTABLES
- 18 x 320L AQUACOMB (KINGSPAN) PODS OR SIMILAR APPROVED
- VOLUME: 5.5m³
- DEPTH: 300mm
- FLOW CONTROL: TWO 90mm OUTLET PIPES

NOTE: IF A DIFFERENT RAINWATER TANK VOLUME IS PROVIDED THEN THE OSD TANK VOLUME SHOULD BE AJUSTED ACCORDINGLY



LEGEND
- EXISTING DEVELOPMENT
- PROPOSED DEMOUNTABLES
- BLACK CORROMESH FENCING 2100 HIGH

DRAFT

0M 4 8 12 16 20

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NSW Nominated Architects: Robert Denton Reg. No. 5782, Alex Kibble Reg. No. 6015
Do not scale drawings. Verify all dimensions on site. Notify architect of all discrepancies

Rev	Date	Description	Chkd	Auth
P1	17.03.25	FOR REVIEW AND COMMENTS	PD	RD
P2	25.03.25	FOR REVIEW AND COMMENTS	PD	RD
P3	26.03.25	FOR REVIEW AND COMMENTS	PD	RD
P4	04.04.25	FOR REVIEW AND COMMENTS	PD	RD

Project
BUNGENDORE HIGH SCHOOL - NORTH CAMPUS (TEMPORARY)
MAJARA STREET,
BUNGENDORE NSW 2621

Drawing Title
OVERALL PROJECT SITE PLAN

Proj. Dir	Proj. Arch	Drawn	Sheet
RD	PD	AC	A1

Job No.	Date	Scale
240071	04.04.25	1 : 200

Drawing No.
AR REF 2100

Revision
P4

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TKDArchitects
Tanner Kibble Denton

Appendix B

Consultation

From: O'Sullivan, Sine
Sent: Friday, 14 March 2025 8:40 AM
To: Development Engineering; Brendan Belcher
Cc: Duffy, Michael
Subject: RE: Bungendore Temporary High School

Good morning,

Thank you for the confirmation. We will incorporate Brendan's comments.

Kind Regards,

Sine O'Sullivan
Civil Design Engineer

WSP
Level 27, 680 George Street
Sydney, 2000
Australia

wsp.com

From: Development Engineering <Development.Engineering@qprc.nsw.gov.au>
Sent: Thursday, 13 March 2025 2:39 PM
To: O'Sullivan, Sine <Sine.OSullivan@wsp.com>; Brendan Belcher <brendan.belcher@qprc.nsw.gov.au>
Cc: Duffy, Michael <Michael.Duffy@wsp.com>
Subject: RE: Bungendore Temporary High School

Hi,

Thanks for the email. There are no further comments regarding the Stormwater Management.

Please reach out to us if you have any further questions.

Kind Regards,
Hamad Abro

Development Engineering

Queanbeyan-Palerang Regional Council
Tel:
Web: www.qprc.nsw.gov.au
Mail: PO Box 90 Queanbeyan NSW 2620

From: O'Sullivan, Sine <Sine.OSullivan@wsp.com>
Sent: Thursday, 13 March 2025 10:15 AM
To: Development Engineering <Development.Engineering@qprc.nsw.gov.au>; Brendan Belcher <brendan.belcher@qprc.nsw.gov.au>
Cc: Duffy, Michael <Michael.Duffy@wsp.com>
Subject: RE: Bungendore Temporary High School

Hi @Development Engineering,

Further to Brendans helpful advice below, we wanted to reach out again to check if we would require anything further in terms of consultation or whether your team has any additional comments?

Kind Regards,

Sine O'Sullivan
Civil Design Engineer

WSP
Level 27, 680 George Street
Sydney, 2000
Australia

wsp.com

WSP acknowledges that every project we work on takes place on First Peoples lands. We recognise Aboriginal and Torres Strait Islander Peoples as the first scientists and engineers and pay our respects to Elders past and present.

From: O'Sullivan, Sine
Sent: Wednesday, 5 March 2025 12:32 PM
To: Brendan Belcher <brendan.belcher@qprc.nsw.gov.au>; Development Engineering <Development.Engineering@qprc.nsw.gov.au>
Cc: Duffy, Michael <Michael.Duffy@wsp.com>
Subject: RE: Bungendore Temporary High School [Filed 05 Mar 2025 12:32]

Hi Brendan,

Thank you for your email and time on the phone earlier. It was great to get clarification and your opinion on the stormwater engineering components of this temporary development.

In regard to the discussion below does Council's Development Engineering Team (@Development Engineering) have any further comments they would like to add? We would like to understand if they require any further consultation in addition to any comments they may have.

Kind Regards,

Sine O'Sullivan
Civil Design Engineer

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Australia

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From: Brendan Belcher <brendan.belcher@qprc.nsw.gov.au>
Sent: Wednesday, 5 March 2025 11:45 AM
To: O'Sullivan, Sine <Sine.OSullivan@wsp.com>
Cc: Development Engineering <Development.Engineering@qprc.nsw.gov.au>
Subject: Bungendore Temporary High School

Hi Sinead,

Following up on our conversation, I agree that given the temporary nature of the school, that construction of permanent water quality and quantity devices does not represent value for money. The existing building already has underground detention tanks, and the carpark already represents 100% impervious area, so you will only be increasing runoff from the grassed area. Capture and reuse of this roofwater would be the preferred outcome to minimise demand on potable water supplies. Having said that, the project will need to ensure that discharge from the site does not represent a safety issue (which normal engineering due diligence and safety in design would cover anyway).

In terms of stormwater connections, the existing building is already connected. Connection to the stormwater main for the new buildings is preferred due to the absence of kerb and gutter along that frontage. This area is also very flat and we do have ponding issues in that street.

Regarding flatness, as mentioned, the green spot on the image below represents a spot that holds water after rainfall events. We never worried about it in the past, but we didn't have kids wandering around so you may need to have a think about resolving this.

Majara St
Majara St
Majara St
10

I'm not sure if the project has already made contact with Council with respect to consultation as required under Part 3.2 of the State Environmental Planning Policy (Transport and Infrastructure) 2021, but generally these are managed through our development area. Our Development Engineering team are best contacted through email CC'd to this email.

Thanks,

Brendan Belcher
Coordinator, Utilities Technical

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