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M+G Consulting

New High School in Bungendore

Bungendore, NSW

Civil Schematic Design Report

Revision: D

Project #: 5555
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Issued For: SSD

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Report Amendment Register

Rev. No.	Issue/Amendment	Author/Initials		Reviewer/Initials		Date
01	Draft SD Issue (Meinhardt Bonacci)	Youmna Khalid	YK	George K	GK	24/03/21
A	SSD (Meinhardt Bonacci)	Youmna Khalid	YK	George K	GK	09/07/21
B	SSD (Meinhardt Bonacci)	George K.	GK	Amir B	AB	23/07/21
C	SSD (M+G Consulting)	Nicholas Nishijima	NN	Simon Matthews	SM	04/08/2021
D	SSD (M+G Consulting)	Nicholas Nishijima	NN	Simon Matthews	SM	09/09/2021

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1. PREAMBLE

1.1. Introduction

This Civil Design Report accompanies an Environmental Impact Statement (EIS) pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act) in support of an application for a State Significant Development (SSD No 14394209). The SSDA is for a new high school located at Bungendore.

This report addresses the Secretary's Environmental Assessment Requirements (SEARs), notably:

SEARs Requirement	Response
15. Stormwater Drainage Provide a preliminary stormwater management plan for the development that: - is prepared by a suitably qualified person in consultation with Council and any other relevant drainage authority. - details the proposed drainage design for the site including on-site detention facilities, water quality measures and the nominated discharge point. - demonstrates compliance with Council or other drainage authority requirements. - stormwater plans detailing the proposed methods of drainage without impacting on the downstream properties. Where drainage infrastructure works are required that would be handed over to Council, provide full hydraulic details and detailed plans and specifications of proposed works that have been prepared in consultation with Council and comply with Council's relevant standards. Relevant Policies and Guidelines: Guidelines for developments adjoining land managed by the Office of Environment and Heritage (OEH, 2013).	The proposed stormwater management plan aims to safely convey the existing flow regimes throughout the site and achieve the water quality pollutant reduction targets in accordance with the guidelines contained in the QPRC Drainage Design Guidelines and the QPRC DCP 2008. Stormwater quantity will be managed via a pit and piped system which will route stormwater run-off to an On-Site Detention Tank, which will temporarily store water to attenuate post-development flows to the pre-existing conditions. Stormwater quality outcomes are proposed to be achieved by incorporating water treatment devices into the OSD tank. These devices capture pollutants in the stormwater runoff from the post-development site and reduce the pollutant loading to the required targets specified by QPRC. Further details of the proposed can be found in section 4.1 & 4.2 and appendix B of this report.
17. Soil and Water Provide: -an assessment of potential impacts on surface and groundwater (quality and quantity), soil, related infrastructure and watercourse(s) where relevant. -water quality impacts, particularly the impact on relevant environmental values of the Lake George catchment during construction. -details of measures and procedures to minimise and manage the generation and off-site transmission of sediment, dust and fine particles. -an assessment of salinity and acid sulphate soil impacts, including a Salinity Management Plan and/or Acid Sulphate Soils Management Plan, where relevant. Relevant Policies and Guidelines: Managing Urban Stormwater - Soils and Construction Volume 1 (Landcom, 2004). Acid Sulphate Soil Manual, (NSW Acid Sulphate Soil Management Advisory Committee, 1998). Acid Sulphate Soils Assessment Guidelines (DoP, 2008). Guidelines for development adjoining land managed by the Office of Environment and Heritage (OEH, 2013).	The proposed soil and water management strategy ensures that control measures are put in place to manage runoff and ensure that there is no detrimental effect to the receiving environments downstream. This is further divided into the temporary condition (during the construction phase) and the permanent condition (handover). The temporary strategies generally refer to the control of the sediment and erosion, particularly during excavation works when sediments and suspended solids make their way into stormwater runoff. These measures attempt to minimize these the potential for these pollutants to be washed downstream into receiving waterways. The permanent strategies (also referenced above) refer to the design of water treatment devices used to achieve the pollutant reduction targets specified by QPRC. Further details of management strategies for both the temporary and permanent stages can be found in section 5 and appendix B of this report.

Table 1 - SEARs Requirements

1.2. Proposal

The proposed development is for the construction of a new high school in Bungendore. The proposal has been designed as a stream 3 high school to initially provide for approximately 450 students with core 4 facilities aimed to future proof demand forecasted to 2036.
The site is located adjacent to the existing Bungendore Public School to the south enabling the creation of an education style precinct that will enable a cohesive connection between the two schools as well as the wider Bungendore community.
The proposal will include the demolition of the Bungendore Swimming Pool (to be relocated to Queanbeyan-Palerang Regional Council's proposed new Bungendore Sports Hub) and the Bungendore Community Centre; repurposing of existing council buildings and the construction of new school buildings. New facilities for the high school will include 24 general learning spaces and three (3) support classrooms for science, technology and general learning spaces, a new gymnasium, library, canteen, outdoor learning and play areas including two new games courts.
A new agricultural plot is also proposed to the north of the main school site including a new agricultural building and scout storage shed, adjacent to the existing scout hall.
The proposal will also provide for shared administration and staff facilities between the high school and existing primary school and construction of a warm shell for community facilities including a community library, council shopfront and community health hub Additionally, miscellaneous off-site work, including upgrades to nearby road intersections and infrastructure, crossings, footpaths and the like will be provided to encourage active transport opportunities and respond to changing traffic conditions.

1.3. Site Description

The proposed development is located within the Bungendore Town Centre within the local government area of Queanbeyan-Palerang Regional Council. The proposal involves the use of land which includes Bungendore Park bounded by Gibraltar Street, Majara Street, Turallo Terrace and Butmaroo Street, the existing former Palerang Council site at 10 Majara Street, the Majara Street road reserve bounded by Turallo Terrace and Gibraltar Streets and Nos. 2, 4 and 6 Majara Street (Refer to Table 2 below).
The site is approximately 29,205m2 in area and consists of a relatively flat topography. It contains part of Bungendore Park, existing Council buildings and maintained public open space areas. The land is mostly cleared of vegetation with some mature trees intersperse throughout subject lots, refer to Figure 1-1.
The surrounding area generally includes low density residential developments to the north and west, an existing rail line to the east and Bungendore Public School and the Bungendore train station to the south and south west respectively.

Table 2 – New High School in Bungendore legal descriptions

Property Address	Lot Numbers	Property Address	Lot Numbers
6-14 Butmaroo Street	Part Lot 701 DP1027107	10 Majara Street	Lot 3 DP830878
2 Majara Street	Lot 12 DP1139067	Butmaroo Street	Part Lot 701 DP96240
4-6 Majara Street	Lot 13 DP1139067 Lot 14 DP1139067	Portion of Majara Street (between Turallo Terrace and Gibraltar Street)	N/A

The proposed development of the new High School consists of the construction of new buildings, carparks and associated site infrastructure. The Full Scope option is shown in figures 1 and 2 below:

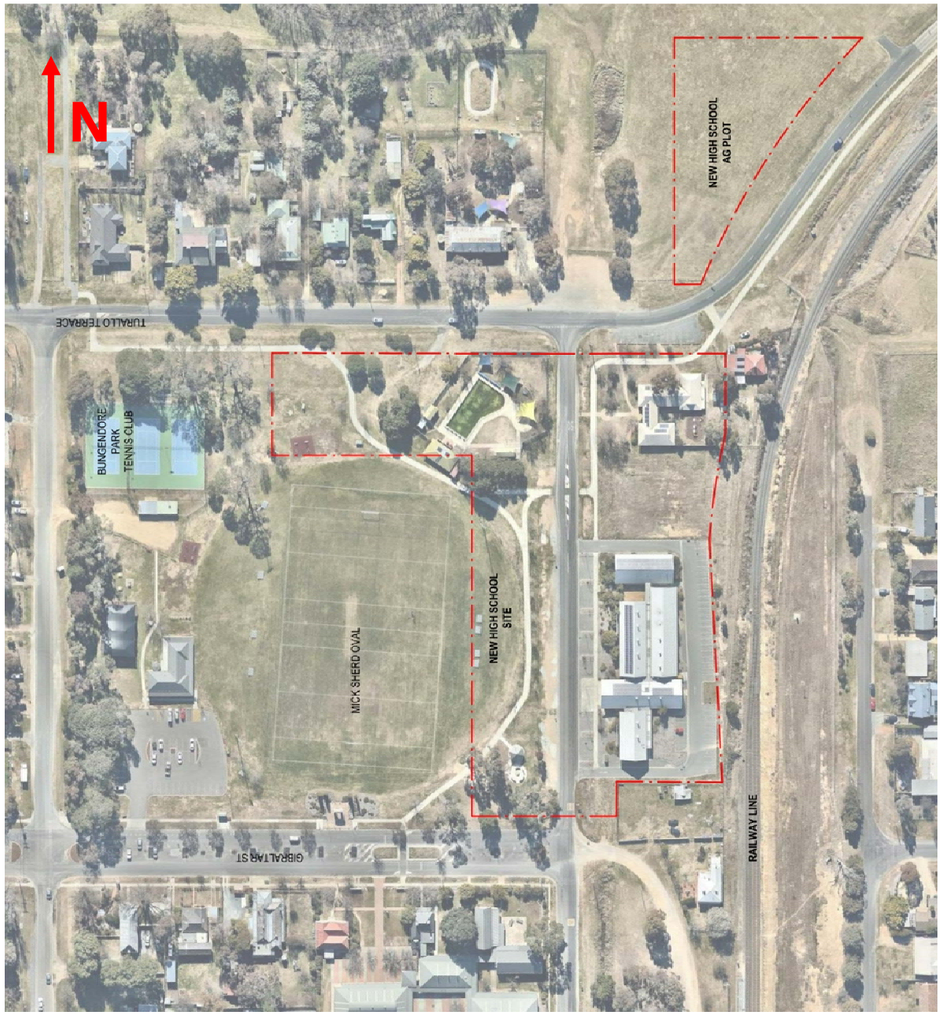


Fig. 1 Site aerial depicting the land subject to the proposed High School (Source: TKD Architects)

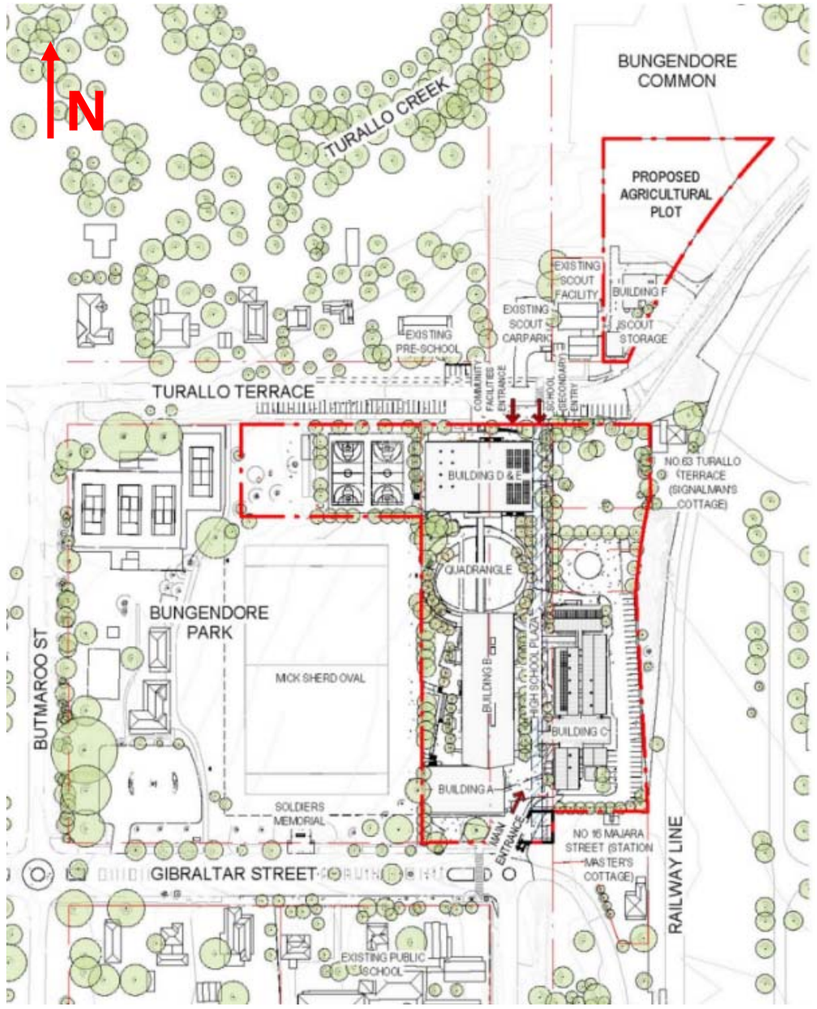


Fig. 2 Proposed Architectural Overall Site Plan (Source: TKD Architects)

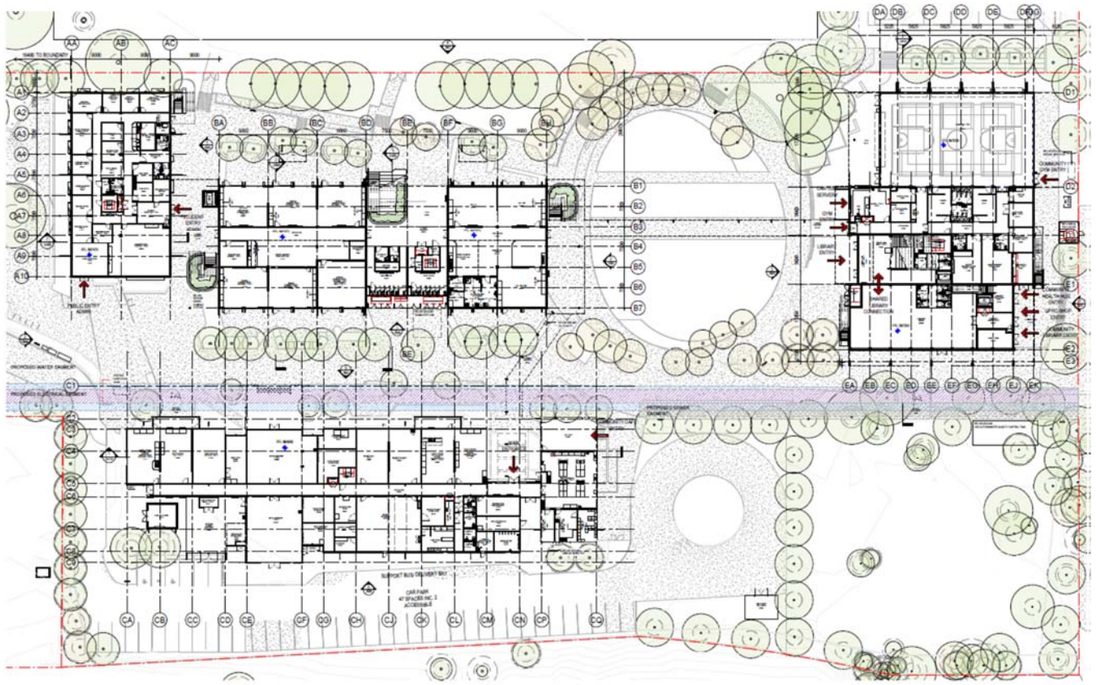


Fig. 3 Proposed Architectural Ground Floor Plan for BHS (Source: TKD Architects)

The proposed development is comprised of the following design packages:

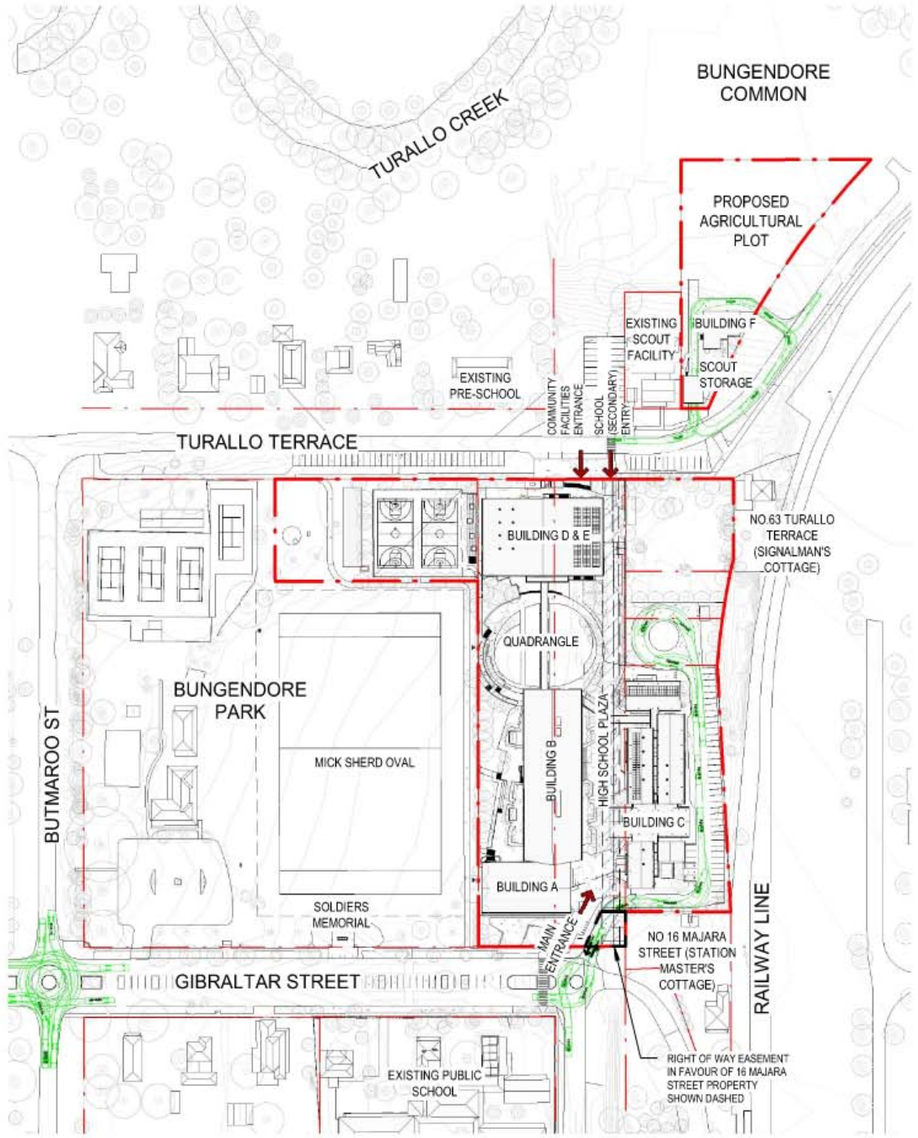
- Development of the new Bungendore High School Buildings A, B and D, and modification to existing buildings C and E.

1.4. Locality and Access to Site

The project site is in a relatively central location to the town area with railway line to the east, Bungendore station to the South east and Turallo Creek to the north of the site.
The proposed site of the new BHS is located on the eastern side of the Mick Sherd oval on Majara Street & incorporates the existing Council Chambers Building. The site is surrounding by a medium density residential suburb to the North, & West. To the East is the Council Chambers building which forms part of the study site as a joint community / education Facility.
There are three main existing site access roads to the site; Turallo Terrace to the North, Majara Street to the East & Gibraltar Street to the South. There is carparking available on all 3 streets around the site and, on site, adjacent to the Council Building.
The site is located within the Queanbeyan Palerang Regional Council (QPRC) Local Government Area (LGA). The school site is approximately 2.6 ha in area.

The largest vehicle by EcCell entering the site will be a refuse vehicle. The waste management plan for Bungendore High School by *SUEZ RECYCLING & RECOVERY PTY LTD* indicates a maximum Refuse Vehicle length of 10.4m. Referring to AS 2890.2:2018 Part2: Off-street commercial vehicle facilities, a 12.5m Heavy Rigid Vehicle (HRV) is adopted for checking site access for refuse vehicles.
The refuse vehicle will enter the site from the proposed roundabout at the intersection of Gibraltar Street and Majara street located to the south-west of the site. The refuse vehicle will use the internal access road to drive through the site to the north of Building C where a turning head is located adjacent to the bin storage area allowing for front or rear pickup of bins.
The 12.5m HRV is also adopted to confirm bus access to Gibraltar Street. The proposed roundabout at the intersection of Gibraltar Street and Butmaroo Street allows for all movements using the 12.5m HRV including U-turn capabilities. The proposed roundabout at the intersection of Majara Street and Gibraltar street allows for site entry and exit from Gibraltar Street and Majara Street for a 12.5m HR. A left turn from Majara Street onto Gibraltar Street for a 12.5m HRV is possible. However, a 12.5m HRV cannot make a U-turn at the roundabout From Majora Street.
On Turallo Terrace, where Building F is located, a passenger vehicle and boat trailer combination is shown entering the site from the West and East bound directions. The Vehicle and trailer enter the Boat Shed for loading/unloading and then exit the site onto Turallo Terrace in both directions.

For further details on vehicle traffic movements refer to drawings by TKD Architects (figure 4) shown on the following page.



NOT TO SCALE

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TKDArchitects
Tanner Kibble Denton

Traffic Sweep Paths
New High School in Bungendore 200096
23/07/21
NSW Nominated Architects: Robert Denton 5782 Alex Kibble 6015

Fig. 4 Traffic Sweep Paths (Source: TKD Architects)

1.5. Existing Services

A site survey has been conducted by Project Surveyors dated July 2021 that indicates existing utilities including stormwater, electrical, water, telecommunication and gas lines located within and around the site boundary. The existing services within the footprint of the proposed buildings will have to be relocated or decommissioned, as per the advice of services consultant.

Fig. 5 Existing Site Survey, BHS (Source: Project Surveyors)

1.6. Existing Stormwater Network

Based on the maps provided by Queanbeyan Palerang Regional Council (QPRC), figure 6 below is the information around existing stormwater network in the vicinity of the proposed new high school:

Fig. 6 Existing Stormwater Drainage Network (In vicinity of proposed new high school)

2. FLOODING

2.1. Existing Flooding Conditions

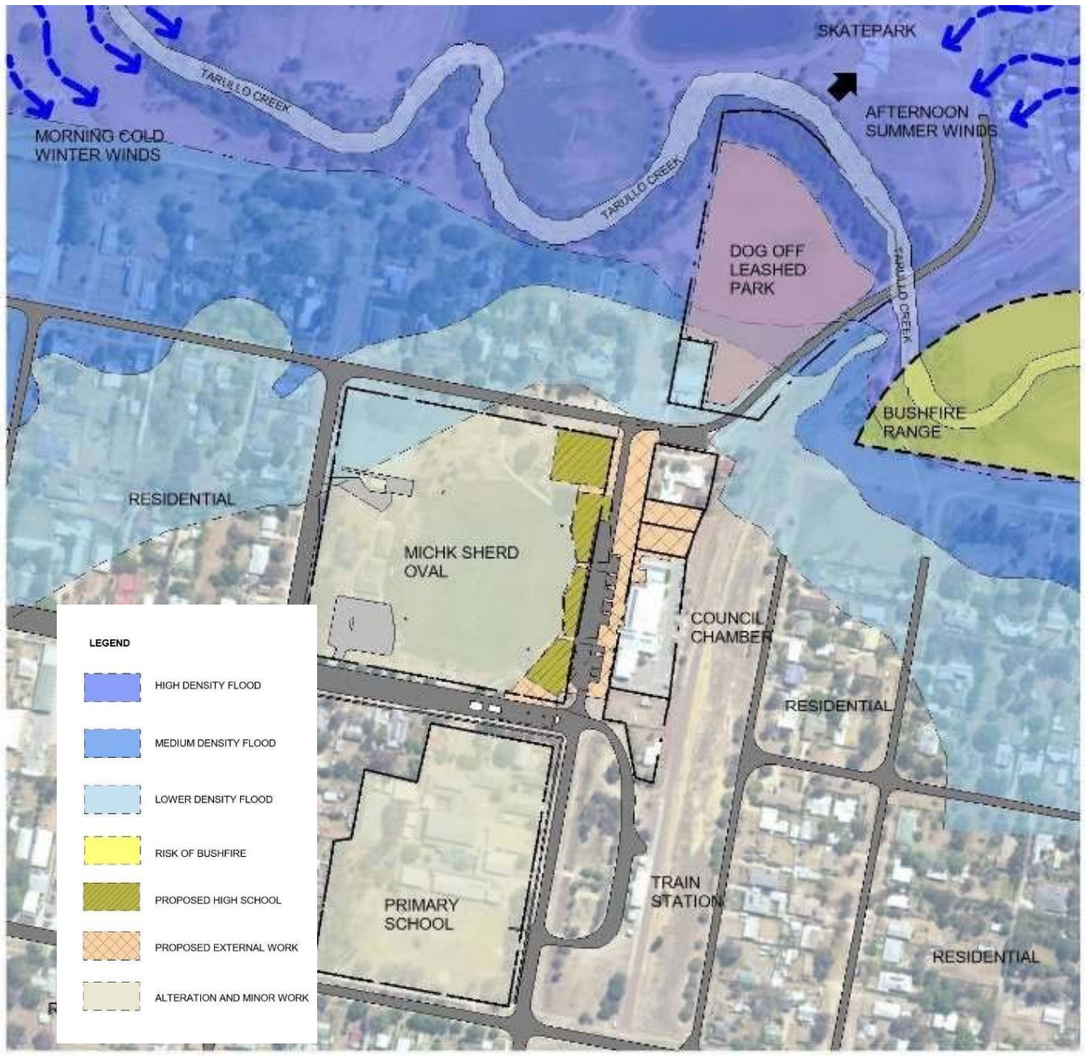

Fig. 7 Flood Extent for Mainstream Flooding (Source: Masterplanning Report)

Based on the information provided by Council flood map above, the High School Site is not affected by flooding. For detailed assessment reference shall be made to the flood report by Martens Consulting Engineers (Report Ref: P2008007JR01V02 Dated July 2021).

3. EARTHWORKS

The earthwork quantities associated with the proposed development of the new Bungendore High School to station are provided in the figures below. Majority of the earthworks involve cut and will require proper disposal of excess cut material. Further details of earthworks can be found in Appendix B of this report.

Fig. 8 Earthworks Plan and Quantities for proposed building envelopes

4. STORMWATER MANAGEMENT

4.1 Stormwater Drainage Strategy

In accordance with QPRC, calculations to determine peak flows for non-urban catchment shall be carried out in accordance with the Book 9 of Australian Rainfall and Runoff, Commonwealth of Australia (Geoscience Australia), 2016 (AR&R) and the requirements of QPRC Drainage Design Specifications.

An on-site detention (OSD) system is required for any developments with additional impervious surface area to ensure there is no adverse impact from increased stormwater runoff on downstream properties as a result of new developments or redevelopments during all storm events up to and including the 100-year Annual Recurrence Interval (ARI) event. The OSD storages are to be designed to meet the Permissible Site Discharge as indicated in Table D5.5 of QPRC Drainage Design guidelines.

The existing site is approximately 50% impervious. The development increases impervious based on the proposed schematic design details. An underground Onsite Detention (OSD) tank will be required to limit the post-development flows to the pre- development conditions as outlined in Table D5.5 of QPRC Drainage Design guidelines.

The preliminary analysis undertaken using DRAINS computer software indicates a volume of approximately 100 m^3 of detention storage is required. Please refer figure 9 below for the preliminary DRAINS layout and estimated stormwater flows for the High School Site.

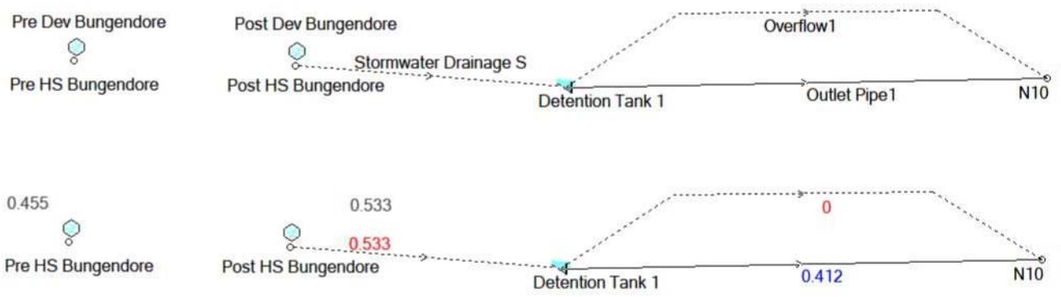

Fig. 9 High School Site Preliminary DRAINS Layout and the 1 in 20 yr. ARI flows

In accordance with Council's Development Design Specification D5 – Stormwater Drainage Design, new developments are to provide a stormwater major/minor system. The "major" system shall provide safe, well-defined overland flow paths for rare and extreme storm runoff events while the "minor" system shall be capable of carrying and controlling flows from frequent runoff events.

Additionally, as outlined in the Educational Facilities Standards & Guidelines (EFSG), the proposed development is required to install/upgrade the minor stormwater drainage system including pits, underground pipes and kerb and gutter to cater for storm events up to the 20-year Average Recurrence Interval (ARI).

A major system is also required for the proposed development in the form of overland flow paths. The major system should be designed to convey flows surcharged from the underground drainage system for storm events up to 100-year ARI. The overland flow is to be directed away from the buildings and carparks and towards the public road kerb and gutter provided.

No drainage is proposed to be discharged to existing rail corridor hence no adverse impact on rail infrastructure is expected.

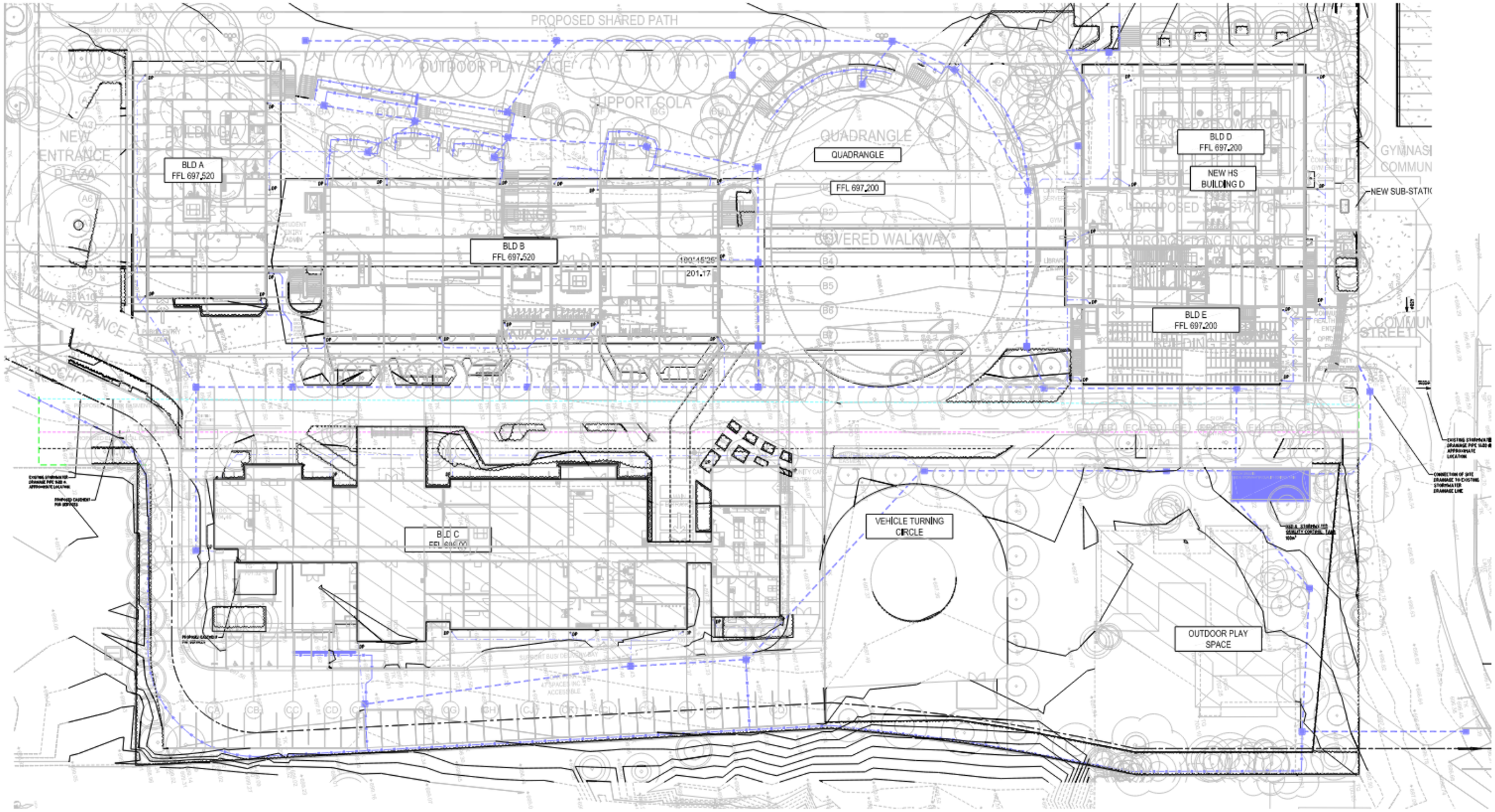

Fig. 10 High School Site Stormwater Drainage Plan - REFER APPENDIX B FOR FULL DRAWING(S)

4.2. Stormwater Quality Management Strategy

To protect the existing ecology, the development will be required to satisfy the water quality requirements over the full range of rainfall events to maintain the long-term protection of the pre-determined Environmental Values. The Council's Development Design Specification D7 - Erosion Control and Stormwater Management, outlines that any development except for single dwelling houses and dual occupancy housing must undertake a stormwater quality assessment to demonstrate that the development will achieve the post development pollutant load standards indicated below:

Pollutant	Objective
Suspended Solids SS	80% retention of average annual load
Sediment	100% retention of sediment greater than 0.125mm for flows up to the 3 month ARI peak flow
Oil & Grease	No visible oils for flows up to the 3 month ARI peak flow
Litter	100% retention of litter greater than 5 mm for flows up to the 3 month ARI peak flow
Total Phosphorus (TP)	65% retention of average annual load
Total Nitrogen (TN)	65% retention of average annual load

Table 3 - QRPC's Pollution Reduction Targets (DCP 2008)

Proprietary water quality treatment products including Litter Baskets and Filtration cartridges within the OSD tank are proposed for the site as water quality treatment devices. For the benefit of reducing the demand on water supply, a rainwater harvesting system is proposed onsite via the provision of a rainwater tank. Refer Infrastructure Management Plan produced by Services Engineer.

Alternative methods of water treatment adopting the use of more organic processes is also feasible for the proposed development. These include the use of bio-retention basins and swales which capture sediments and nutrients in the stormwater run-off and filter them through biologically active media layers, effectively reducing the pollutant loading in the stormwater run-off.

Further details of the above proposed treatment methods are further discussed later in this section of the report.

"MUSIC" software by eWater Pty Ltd will used to assess the performance of the treatment devices in achieving the pollution reduction targets outlined in the QPRC DCP 2008. A Music Template with a 6-minute time step will adopted in the design of the WSUD elements.

BIO-RETENTION BASINS/SWALES

The proposed stormwater management strategy can adopt bio-retention basins/swales that can be integrated into the drainage network to treat runoff from impervious surfaces. These systems will be aimed at reducing the pollutants present in these flows to the nominated targets outlined previously in the report.

Stormwater is routed to the bio-retention basins (or through swales), either directly or via an inlet pit and pipe. The water is then filtered through a vegetated and biologically active media layer and is collected in slotted subsoil drainage pipes below the garden beds.

The benefits of these bio-retention basins/swales include:

- Effective removal of fine and soluble pollutants;
- Effective removal of sediment and heavy metals;
- Effective removal of nutrients (Phosphorus & Nitrogen) and bacteria;
- Reduction in impervious areas for the proposed development site;
- Living plants provide an ecosystem for wildlife; and
- Basin volumes assist in the management of stormwater quantity control.

The vegetation incorporated into these basins for the treatment of stormwater are to be core functional bioretention plant species. A list of acceptable species can be found in table 19 of the document by Water by Design – Bioretention Technical Design Guidelines Version 1.1, October 2014. The selection of plant species is to be approved by the design engineer prior to construction.

STORMWATER FILTRATION CARTRIDGES

Stormwater filtration cartridges are an underground stormwater treatment devise comprised of one or more structures that house rechargeable, media-filled cartridges that trap particulates and absorb pollutants from stormwater run-off such as total suspended solids, hydrocarbons, nutrients, metals and other common pollutants. Filtered (treated) stormwater run-off is collected in underdrain pipes below the cartridges and are directed towards an outlet structure. In major storm events, an overflow-weir of high-flow bypass allows excessive run-off to bypass the system and prevent damage or overloading on the treatment devices.

LITTER BASKETS (PIT INSERTS)

Litter baskets capture pollutants at drainage entry points and consists of a capture basket and an overflow bypass flap(s). The basket is fitted below the invert of the gutter inside the drainage inlet pit, and importantly does not obstruct flow in the outlet pipe. Solid pollutants enter the litter basket with the stormwater from roadside or other run-off areas and the pollutants aquaplane across the flow plate into the capture basket. The filtered stormwater then passes into the drainage network with minimal head/hydraulic loss through the unit. These litter baskets can be retrofitted into pre-cast pits and positioned below inlet pipes (with sufficient depth above outlet pipes), so that stormwater pollutants that have already entered the system can be captured at a downstream pit.

RAINWATER TANKS

Rainwater tanks serve to benefit the stormwater drainage design through harvesting and re-use. The re-use of stored rainwater from roofed surfaces reduces the demand of potable water and provide assists in water conservation, whilst the storage provided within these tanks assists in the restoration of flow regimes towards the pre-development conditions. Rainwater tanks also assist in the removal of contaminants such as Suspended Solids, Phosphorous and Nitrogen.

Special consideration is also given to the water quality impacts on the Lake George catchment. The stormwater quality improvement elements that are to be incorporated into the stormwater drainage design for the site are to reach the pollutant reduction targets outlined in QRPC's DCP 2008 as a minimum requirement. In addition to reaching these targets, regular inspections and ongoing maintenance of these assets are required to monitor performance and to ensure that these elements are performing as intended. A management schedule for these elements can be developed in accordance with the *Maintenance Guidelines for Stormwater Treatment Measures Version 1, September 2020* by Stormwater NSW, to be reviewed during the detailed design stage of the project.

5. EROSION & SEDIMENT CONTROL (DURING CONSTRUCTION)

Prior to any earthworks commencing on site, soil and water management control measures will need to be put in place generally in accordance with *Managing Urban Stormwater – Soils and Construction*, 4th Edition (2004) by Landcom.
The contractor will be responsible to attain all necessary licenses, permits or approvals prior to the commencement of the works.
The contractor will be responsible for the implementation and maintenance of the Erosion and Sediment Control measure used during construction of the works.
The temporary measures contained in this report are to be implemented and maintained throughout the construction phase of the project, until such a time when permanent measures can be put in place.
Soil and water management requirements are not limited to the advice contained in this report and as such this document outlines the minimum requirements that are to be implemented by the contractor.
The final design and implementation of all maintenance works is the sole responsibility of the contractor.
Further assessment of the permanent stormwater management controls outlined in this report are required. This may require some revision to the measures, which is to be confirmed during the detailed design stage of the project.

The measures are to be installed as per the requirements contained in the documents referenced above and those outlined below:

- Clearly visible barrier, site fencing and hoarding shall be installed at the discretion of the superintendent to ensure site security, safety of the public, manage traffic control and prohibit any unnecessary site disturbance. Vehicular access to the site shall be limited to only what is essential for the construction activities and shall enter the site only through the stabilized access points.
- All disturbed areas are to be stabilised within 14 working days of the completion of earthworks. All disturbed areas are to be protected so that the land is permanently stabilised within six months.
- Proprietary silt fencing shall be installed by the contractor in accordance with the final approved erosion and sediment control plan and elsewhere at the discretion of the site superintendent to contain sedimentation to as near as possible to the original source.
- Sediment removed from any sediment trapping device shall be relocated where further pollution to downslope lands and waterways cannot occur.
- Stockpiles shall be located by the contractor in accordance with the final approved erosion and sedimentation control plan and elsewhere at the discretion of the project manager and/or superintendent. Where stockpiles are to be in place longer than 30 days they shall be stabilised.
- Water shall be prevented from entering the permanent drainage system unless it is sediment free. Drainage pits are to be protected in accordance with the final approved erosion and sedimentation control plan.
- Temporary sediment traps located at pits shall be retained throughout the early works stage and until the appropriate replacement measures for the subsequent stages are installed.

DURING WET WEATHER CONSTRUCTION

Soil and water management measures are to be incorporated into the construction works during wet weather construction works. These include, but are not limited, to:

- All plant and equipment are to be relocated away from edges of batters and edges of excavations.
- Construct temporary earth V-drains to direct surface water away from top of batters, edges of excavations batters and temporary shoring
- Inspect all batters and temporary shoring and undertake remedial works as required.
- Inspect all erosion and sediment control measures and repair as necessary.
- Check to ensure that sufficient supply of flocculant is on site for water treatment prior to discharge from site.
- Ensure all vehicle access tracks are in good condition. Undertake repairs and top with gravel/ballast as required.

LAKE GEORGE CATCHMENT (DURING CONSTRUCTION)

Special consideration is given towards the water quality impacts on the environmental values of the Lake George catchment during the construction phase of the proposed works. Unsatisfactory management of disturbed areas allow for pollutants such as sediments to escape into downstream environments, carrying nutrients and oxygen demanding materials that present an array of issues including a reduction in:

- Light penetration of water;
- Suitability of habitats for some aquatic flora and fauna;
- Suitability for recreation, irrigation etc, particularly if toxic algae is present; and
- Aesthetic appeal of the water.

In accordance with the guidelines presented in *Managing Urban Stormwater – Soils and Construction Volume 1* by Landcom (2004), some general recommendations are provided to minimise the water quality impacts on Lake George, situated North of the site. A summary of these recommendations is listed below:

- Design structures to minimise land disturbance.
- Pass any potential sediment-laden stormwater runoff through a trap or basin.
- Where possible, do not construct sediment basins on line on a watercourse.
- Design of any sediment retention basins to ensure that water is not diverted from its intended flow path.
- Where practical, place sediment control measures:
    - So that only waters polluted by on-site land disturbance activities enter them;
    - Off-line, so that trunk drainage carries only relatively clean water;
    - Away from normal construction operations; and
    - Upstream of any receiving waters.
- Ensure that the design of sediment control measures have adequate capacity to trap and store sediment and allow for adequate time for the settlement of desired particle sizes.
- Do not decommission temporary sediment control measures until the permanent works have been completed and fully stabilised for more than 90% of the contributing catchment.

For further details and proposed erosion and sediment control strategies, refer Fig. 10 and Appendix B of this report.

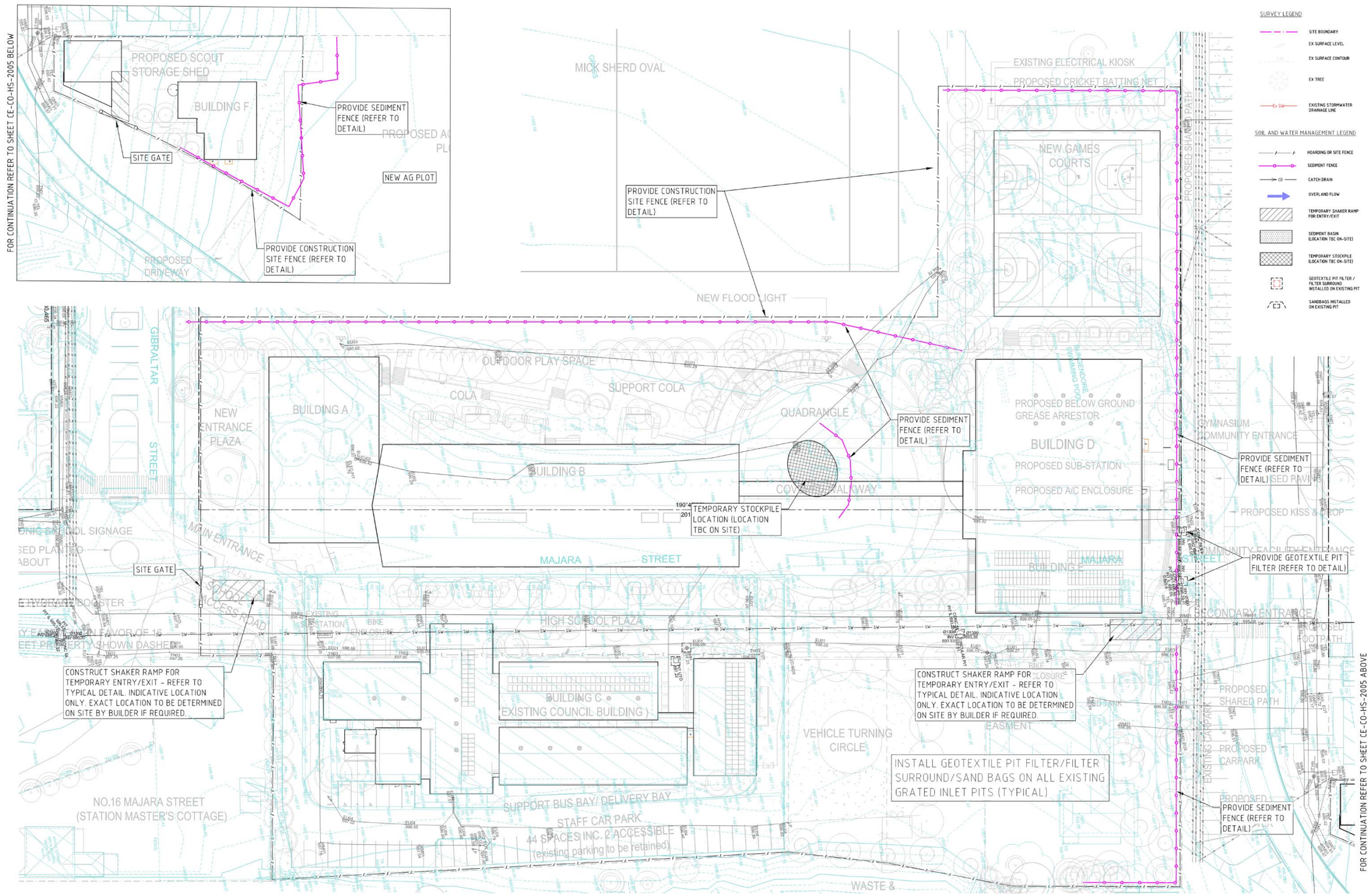

Fig. 11 Site Erosion & Sediment Control Plan – REFER APPENDIX B FOR FULL DRAWING(S)

Appendix A - Site Survey

NOTES :

* BOUNDARIES HAVE NOT BEEN DEFINED BY SURVEY AND ARE DIAGRAMMATIC ONLY
* LAND DIMENSIONS AND AREAS HAVE BEEN COMPILED FROM PLANS OBTAINED FROM LPMA
* BEARINGS RELATE TO MGA NORTH ORIGINATING FROM SCIMS MARKS
* LEVEL DATUM IS AHD ORIGINATING FROM PM40278 RL 696.187
* THE EXISTENCE OF UNDERGROUND SERVICES HAS BEEN ESTABLISHED IN AGREED SCOPE.
* EXISTENCE OF SERVICES MUST BE VERIFIED BY CONTACTING DIAL BEFORE YOU DIG (DBYD) 1100.COM.AU CRITICAL SERVICES MUST BE EXPOSED AND LOCATED.
* NEIGHBOURING HOUSES , WINDOWS AND ROOF POSITIONS ARE APPROXIMATELY ONLY.
* FLOOR LEVELS GENERALLY SURVEYED AT DOOR THRESHOLDS. INTERNAL ROOMS NOT SURVEYED.
* CONTOURS SHOWN ARE INDICATIVE OF LAND FORM. SPOT LEVELS SHOULD TAKE PRECEDENCE.
* REFER TO FACE OF PLAN FOR SUBJECT TITLE NOTATIONS.
* THIS TITLEBLOCK IS AN INTEGRAL PART OF THIS DRAWING AND SHOULD NOT BE REMOVED.

LOCATING QUALITY LEVELS PURSUANT TO AS5488-2013

QL-A QUALITY LEVEL A. VISUALISATION / CONFIRMATION OF A SERVICE, POSITION AND DEPTH, BY NON DESTRUCTIVE DIGGING METHODS OR POINTS OF ENTRY TO PITS OR

QL-B QUALITY LEVEL B. LOCATING OF SERVICES USING RADIO DETECTION METHODS OR GROUND PENETRATION RADAR. ACCEPTABLE RANGE OF ACCURACY FOR QUALITY B IS 300mm FOR POSITION AND 500mm IN DEPTH.

QL-C QUALITY LEVEL C. SERVICES MARKED OUT USING ONLY SURFACE FEATURES THAT HAVE BEEN MEASURED IN THE FIELD. THIS INCLUDES HYDRANTS, GAS MARKERS, PITS LIDS ETC. NO INDICATION OF SERVICE LOCATION OR DEPTH CAN BE OBTAINED FROM QUALITY LEVEL C.

QL-D QUALITY LEVEL D. SERVICES MARKED UP USING DBYD PLANS ONLY. NO INDICATION OF SERVICE CONFIRMATION CAN BE GIVEN.

UNDERGROUND SERVICES ALONG HILL ROAD WERE DETECTED BY ASTREA PTY LTD ON 16.03.2021
SURVEY INFORMATION ABOUT SERVICES SHOULD BE READ TOGETHER WITH ASTREA REPORT: ASTREA-BUN-1.PDF, ASTREA-BUN-2.PDF,

* THE LOT 2 SEC 9 DP 758183 TITLE NOTES
1. RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2. LAND IS A RESERVE WITHIN THE MEANING OF PART 5 OF THE CROWN LANDS ACT 1989 AND THERE ARE RESTRICTIONS ON TRANSFER AND OTHER DEALINGS IN THE LAND UNDER THAT ACT, WHICH MAY REQUIRE CONSENT OF THE MINISTER

* THE LOT 4 SEC 9 DP 758183 TITLE NOTES
1. LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN
2. DEDICATED AS SITE FOR SCHOOL OF ARTS BY GOV. GAZ. 30.5.1890

* THE LOT 5 SEC 9 DP 758183 TITLE NOTES
1. LAND EXCLUDES MINERALS - SEE MEMORANDUM S700000A
2. RESERVE NO. R15432 FOR PUBLIC SCHOOL PURPOSES VIDE NOTIFIN. IN GOV. GAZ. DATED 2.4.1892 FOLIO 2745

* THE LOT 14 SEC 9 DP 758183 TITLE NOTES
1. LAND EXCLUDES MINERALS - SEE MEMORANDUM S700000A
2. RESERVE NO. R15432 FOR PUBLIC SCHOOL PURPOSES VIDE NOTIFIN. IN GOV. GAZ. DATED 26.9.1975 FOLIO 3957

* THE LOT 701 DP 1027107 TITLE NOTES
1. THE LAND IS A PRESERVE WITHIN THE MEANING OF PART 5 OF THE CROWN LANDS ACT 1989 AND THERE ARE RESTRICTIONS ON TRANSFER AND OTHER DEALINGS IN THE LAND UNDER THAT ACT, WHICH MAY REQUIRE CONSENT OF THE MINISTER
2. LIMITED TITLE. LIMITATION PURSUANT TO SECTION 28T(4) OF THE REAL PROPERTY ACT, 1900. THE BOUNDARIES OF THE LAND COMPRISED HEREIN HAVE NOT BEEN INVESTIGATED BY THE REGISTRAR GENERAL.
3. THE LAND IS DEDICATED FOR A PUBLIC PURPOSE.

LEGEND

ELP - ELECTRIC LIGHT POLE
HYD - HYDRANT
TW - TOP WALL
TK - TOP KERB
TG - TOP GUTTER
PP - POWER POLE
SMH - SEWER MANHOLE
SP - SIGN POST
CONC - CONCRETE
SL - SEALED LID

SV - STOP VALVE
TEL - TELSTRA PIT
VC - VEHICLE CROSSING
DP - DOWNPIPE
RDG - ROOF RIDGE
EOT - END OF TRACE
UTO - UNABLE TO OPEN
W - WATER PIT
GL - GRATED LID

C - COMMUNICATION
W - WATER LINE
G - GAS LINE
E - ELECTRICITY
SW - STORMWATER PIPE
OHP - OVERHEAD POWER

STRING NAME	SERVICE TYPE	QUALITY LEVEL	ASSET OWNER	COMMENT
WM01	Water Main line	D	Icon	Water main approx depth of .4 to 1.2
WY01	Water - house connection	D	Private	Water service school feed approx 0.4m deep
GM01	Gas main	D	Evoenergy	1x63mm pe main approx 0.7m deep
YG01	Gas line	D	Private	Gas service school feed approx 0.5m deep
MT01	Communication	A	Telstra	1xp50mm conduit approx 0.4m deep empty conduit
IRR01	Irrigation	B	Private	Irrigation line located approx 0.3m deep
EU01	Electricity	B	Evoenergy	Electric line approx depth of .5 to 1.0
EU02	Electricity	B	Private	Shelter lights Electric line approx depth of 3 to .8
EU03	Electricity	B	Private	Oval flood lights electric line approx depth of .6 to 1.0
EU04	Electricity	B	Private	Car park light poles approx depth of .4 to .8
EU05	Electricity	B	Private	Memorial Electric line Approx depth of .3 to .7
TN01	Communication	B	Telstra	Telstra mains cables approx depth of .3 to 1.1
TN02	Communication	B	Telstra	Telstra line approx depth of .3 to .7
TN03	Communication	B	Telstra	Telstra / optic fibre approx depth of .3 to .9
GM01	Gas main	D	Evoenergy	Gas main approx depth of .3 to .9
GM02	Gas main	D	Evoenergy	Gas main approx depth of .3 to 1.0
GM03	Gas main	D	Evoenergy	Gas main approx depth of .3 to 1.0

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D	TRAIN TRACKS ADDED	12.05.2021
C	UNDERGROUND SERVICES INFORMATION ADDED	21.04.2021
B	AMENDMENTS	01.04.2021
REV	AMENDMENTS	DATE

SHEET 1 0F 7 - DETAIL SURVEY

CLIENT : HINDMARSH

JOB REF. : B04901
DRAWING No. B04901-BUN-A
SURVEYOR: BC
CHECKED: NM
REGISTERED LAND SURVEYOR
DATE: 30/03/2021
DATUM: A.H.D.
ORIGIN: PM40278 RL 696.187
REFERENCE SYSTEM: GDA 2020

PLAN OF: BUNGENDORE HIGH SCHOOL
300 Lanyon Drive ACT

SHOWING: GENERAL DETAIL AND SITE LEVELS

PURPOSE: ARCHITECTURAL DESIGN
COUNCIL SUBMISSION

ABN 20 068 433 974
BELLA VISTA
PO Box 7419 BAULKHAM HILLS NSW 2153
SUITE 405, LEVEL 4 14 LEXINGTON DRIVE,
BELLA VISTA NSW 2153
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PROJECT SURVEYORS
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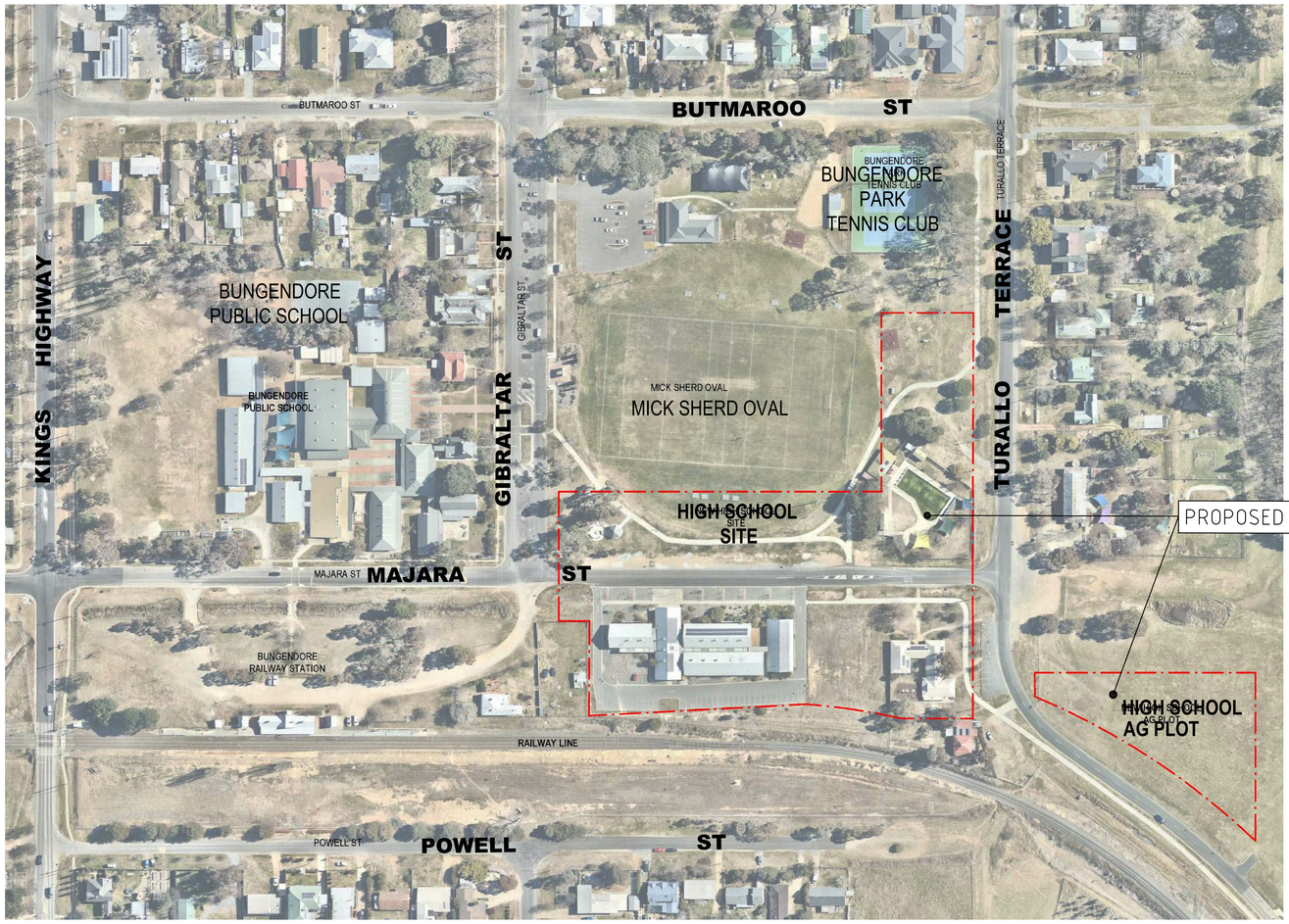
Appendix B - Civil Schematic Drawings

12785-02C - HIGH SCHOOL IN BUNGENDORE
MAJARA ST, BUNGENDORE, NSW 2621
CIVIL & STORMWATER

DRAWING No.	DESCRIPTION
200096-BHS-MB-CE-SD-HS-2001	DRAWING REGISTER AND LOCALITY PLAN
200096-BHS-MB-CE-SD-HS-2002	CONSTRUCTION NOTES
200096-BHS-MB-CE-SD-HS-2003	LEGEND SHEET
200096-BHS-MB-CE-SD-HS-2005	SEDIMENT & EROSION CONTROL PLAN
200096-BHS-MB-CE-SD-HS-2006	SEDIMENT & EROSION CONTROL PLAN - DETAILS
200096-BHS-MB-CE-SD-HS-2010	BULK EARTHWORKS DETAIL PLAN - SHEET 1
200096-BHS-MB-CE-SD-HS-2011	BULK EARTHWORKS DETAIL PLAN - SHEET 2
200096-BHS-MB-CE-SD-HS-2012	BULK EARTHWORKS LONGITUDINAL SECTIONS - SHEET 1
200096-BHS-MB-CE-SD-HS-2013	BULK EARTHWORKS LONGITUDINAL SECTIONS - SHEET 2
200096-BHS-MB-CE-SD-HS-2014	BULK EARTHWORKS LONGITUDINAL SECTIONS - SHEET 3
200096-BHS-MB-CE-SD-HS-2015	AG PLOT - BULK EARTHWORKS PLAN
200096-BHS-MB-CE-SD-HS-2016	AG PLOT - BULK EARTHWORKS LONGITUDINAL SECTIONS
200096-BHS-MB-CE-SD-HS-2030	GENERAL ARRANGEMENTS PLAN
200096-BHS-MB-CE-SD-HS-2031	STORMWATER DRAINAGE PLAN - SHEET 1
200096-BHS-MB-CE-SD-HS-2032	STORMWATER DRAINAGE PLAN - SHEET 2
200096-BHS-MB-CE-SD-HS-2034	STORMWATER DRAINAGE PLAN - SHEET 3
200096-BHS-MB-CE-SD-HS-2051	STORMWATER DRAINAGE DETAILS
200096-BHS-MB-CE-SD-HS-2060	SITEWORKS AND PAVEMENT PLAN - SHEET 1
200096-BHS-MB-CE-SD-HS-2061	SITEWORKS AND PAVEMENT PLAN - SHEET 2
200096-BHS-MB-CE-SD-HS-2062	SITEWORKS AND PAVEMENT PLAN - SHEET 3
200096-BHS-MB-CE-SD-HS-2071	SITEWORKS DETAILS - SHEET 1
200096-BHS-MB-CE-SD-HS-2091	PAVEMENT DETAILS



LOCALITY PLAN
SCALE N.T.S.

THIS DRAWING MAY BE PREPARED IN COLOUR AND MAY BE INCOMPLETE IF COPIED

Rev	Description	Date	By	App
E	SCHEMATIC DESIGN	12.05.21	HM	-
D	SCHEMATIC DESIGN	07.05.21	HM	-
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A	DRAFT SCHEMATIC DESIGN ISSUE	24.03.21	HM	-
G	DOCUMENT UPDATED FOR SCHEMATIC DESIGN	09.09.21	JDW	-
F	DOCUMENT UPDATED FOR SCHEMATIC DESIGN	06.08.21	JDW	-

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Project Name: HIGH SCHOOL IN BUNGENDORE
Drawing Title: DRAWING REGISTER AND LOCALITY PLAN

SCHEMATIC DESIGN

Designed	GK	Approved	North
Drawn	HM	Date	
Scale	-	Project Ref	Drawing No Rev
Date	MAR. 2021	20096	CE-SD-HS-2001 G
Sheet	A0		

GENERAL NOTES

G1 THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS OR SKETCHES AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCY SHALL BE REFERRED TO THE SUPERINTENDENT BEFORE PROCEEDING WITH WORK.

G2 MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE SPECIFICATION, CURRENT SAA CODES, BUILDING REGULATIONS AND THE REQUIREMENTS OF ANY OTHER RELEVANT STATUTORY AUTHORITIES.

G3 THESE DRAWINGS MUST NOT BE SCALED. ALL DIMENSIONS ARE IN METERS. ALL SET OUT DIMENSIONS AND LEVELS, INCLUDING THOSE SHOWN ON THESE DRAWINGS SHALL BE IN ACCORDANCE WITH THE ARCHITECT'S DRAWINGS AND VERIFIED ON SITE.

G4 ALL SETOUT AND DIMENSIONS OF THE STRUCTURE INCLUDING KERBS AND RETAINING WALLS, AND BULK EARTHWORKS MUST BE TAKEN FROM THE ARCHITECT'S DRAWINGS. SETOUT OF THE STORMWATER PITS BY OTHERS. CONTRACTOR TO CONFIRM SETOUT OF SERVICE TRENCHING INCLUDING SUBSOIL ON SITE.

G5 THE CONTRACTOR SHALL COMPLY WITH ALL REGULATIONS OF AUTHORITIES HAVING JURISDICTION VER THE WORKS. REFER TO GEOTECHNICAL REPORT BY DOUGLAS PARTNERS , DATED 4 MAY 2021

G6 ALL DIMENSIONS AND REDUCED LEVELS MUST BE VERIFIED ON SITE BEFORE THE COMMENCEMENT OF ANY WORK.

G7 THE APPROVAL OF A SUBSTITUTION SHALL BE SOUGHT FROM THE SUPERINTENDENT BUT IS NOT AN AUTHORISATION OF A COST VARIATION. THE SUPERINTENDENT MUST APPROVE ANY COST VARIATION INVOLVED BEFORE ANY WORK STARTS.

G8 ALL LEVELS SHOWN ARE TO THE AUSTRALIAN HEIGHT DATUM.

G9 SERVICE INFORMATION SHOWN IS APPROXIMATE ONLY. PRIOR TO COMMENCEMENT OF ANY WORKS, THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND SERVICES AND COMPLY WITH ALL REQUIREMENTS OF THOSE AUTHORITIES.

G10 EXISTING SURFACE CONTOURS, WHERE SHOWN, ARE INTERPOLATED AND MAY NOT BE ACCURATE.

G11 UNLESS NOTED OTHERWISE, ALL VEGETATION SHALL BE STRIPPED TO A MINIMUM DEPTH OF 150mm UNDER ALL PROPOSED PAVEMENT AND BUILDING AREAS.

G12 MAKE SMOOTH CONNECTION WITH ALL EXISTING WORKS.

SITEWORKS NOTES

S1 PRIOR TO THE PLACEMENT OF ANY PAVEMENTS, BUILDINGS OR DRAINS THE EXPOSED SUBGRADE SHALL BE COMPACTED TO A MINIMUM OF 98% STANDARD COMPACTION IN ACCORDANCE WITH TEST "E11" OF A.S. 1289 FOR THE TOP 300mm. ANY SOFT SPOTS SHALL BE REMOVED AND REPLACED WITH GRANULAR FILL TO THE ENGINEERS APPROVAL AND COMPACTED IN ACCORDANCE WITH THE COMPACTION REQUIREMENTS SET OUT BELOW. ON HIGHLY REACTIVE CLAY AREAS SITE EXCAVATED MATERIAL MAY BE USED WITH THE PRIOR AUTHORISATION OF THE ENGINEER.

S2 ALL FILL AND PAVEMENT MATERIALS SHALL BE COMPACTED IN ACCORDANCE WITH GEOTECHNICAL REPORT BY DOUGLAS PARTNERS , DATED 4 MAY 2021.
MOISTURE CONTENT TO BE MAINTAINED AT +/- 2% OMC. MINIMUM COMPACTION REQUIREMENTS ARE DETAILED BELOW FOR (ALL REQUIREMENTS ARE TO VERIFIED BY A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER):

- LANDSCAPED AREAS — 98% STD.
- FILL UNDER ANY FOOTINGS AND FLOOR SLABS FOR ANY STRUCTURE TO SUBGRADE LEVEL;
  - FINE CRUSHED ROCK — 98% STD.
  - SELECTED FILL WITHOUT CONSPICUOUS CLAY CONTENT — 98% STD.
- BUILDING BASECOURSE — 98% MOD
- FILL UNDER ROAD PAVEMENTS;
  - TO WITHIN 500mm OF FINISHED SUBGRADE LEVEL — 98% STD.
  - UP TO FINISHED SUBGRADE LEVEL — 98% STD.
- ROAD PAVEMENT MATERIALS;
  - SUB BASE — 98% MOD.
  - BASE COURSE — 98% MOD.

THE MAXIMUM COMPACTION IS TO BE NO GREAT THAN 4% ON TOP OF THE ABOVE MENTION VALUES.

S3 GRADE EVENLY BETWEEN FINISHED SURFACE SPOT LEVELS. FINISHED SURFACE CONTOURS ARE SHOWN FOR CLARITY. WHERE FINISHED SURFACE LEVELS ARE NOT SHOWN, THE SURFACE SHALL BE GRADED SMOOTHLY SO THAT IT WILL DRAIN AND MATCH ADJACENT SURFACES OR STRUCTURES.

S4 ALL DIMENSIONS GIVEN ARE TO FACE OF KERB, CENTER OF PIPE OR EXTERIOR FACE OF BUILDING UNLESS NOTED OTHERWISE.

S5 ANY STRUCTURES, PAVEMENTS OR SURFACES DAMAGED, DIRTIED OR MADE UNSERVICABLE DUE TO CONSTRUCTION WORK SHALL BE REINSTATED TO THE SATISFACTION OF THE ENGINEER.

S6 ANY FILL REQUIRED SHALL BE APPROVED BY THE ENGINEER / GEOTECHNICAL CONSULTANT

S7 CONTRACTOR IS TO ENSURE THAT ALL EXCAVATIONS ARE MAINTAINED IN A DRY CONDITION WITH NO WATER ALLOWED TO REMAIN IN THE EXCAVATIONS.

S8 ALL FINISHES AND COLOURS TO BE IN ACCORDANCE WITH ARCHITECTURAL SPECIFICATIONS.

S9 REFER TO STRUCTURAL DRAWINGS FOR CONCRETE, REINFORCEMENT AND RETAINING WALL DETAILS.

S10 GENERALLY FOR TRENCHING WORKS THE CONTRACTOR MUST:
A) COMPLY WITH THE GENERAL PROVISIONS OF PART 3.1 "MANAGING RISKS TO HEALTH AND SAFETY" OF NSW WORK AND HEALTH AND SAFETY REGULATION 2011

B) COMPLY PART 6.3 DIVISION 3 "EXCAVATION WORK" OF NSW WORK HEALTH AND SAFETY REGULATION NSW 2011

S11 PRIOR TO THE EXCAVATION OF ANY TRENCH DEEPER THAN 1.5 METRES THE CONTRACTOR MUST:
A) NOTIFY THE OCCUPATIONAL HEALTH AND SAFETY AUTHORITY ON THE APPROPRIATE FORM.

STORMWATER DRAINAGE NOTES

SW1 UNLESS NOTED OTHERWISE BY HYDRAULIC ENGINEERS DRAWINGS, ALL DOWNPIPES & GRATED INLETS SHALL BE CONNECTED TO PITS OR MAIN STORMWATER DRAINS WITH 150 DIA. UPVC PIPES LAID AT A MINIMUM GRADE OF 1 IN 100. FOR SYPHONIC ROOF DRAINAGE SYSTEMS ALL DOWNPIPES CONNECTION DRAIN SIZES TO BE CONNECTED INTO MAIN STORMWATER DRAINS SHALL BE IN ACCORDANCE WITH HYDRAULIC ENGINEERS DRAWINGS.

SW2 ALL MAIN STORMWATER DRAINS SHALL BE CONSTRUCTED USING MATERIALS AS SPECIFIED ON THE DRAWINGS IN ACCORDANCE WITH THE APPROPRIATE A.S. IF NOT SPECIFIED THEN CLASS 2 RRJ RCP SHALL BE USED FOR DIAMETERS > 225mm. SEWER CLASS SEH UPVC IN ACCORDANCE WITH AS1260 SHALL BE USED FOR ø225mm OR SMALLER.

SW3 ALL PIPEWORK TO BE INSTALLED IN ACCORDANCE WITH AS3725 FOR RCP AND AS2032 FOR PVC. ALL BEDDING TO BE TYPE H2 UNLESS NOTED OTHERWISE.

SW4 FOR ALL PITS > 1.2m DEEP, STEP IRONS SHALL BE INSTALLED.

SW5 PRECAST PITS MAY BE USED EXTERNAL TO THE BUILDING SUBJECT TO APPROVAL BY MEINHARDT-BONACCI GROUP.

SW6 ENLARGERS, CONNECTIONS AND JUNCTIONS TO BE PREFABRICATED FITTINGS WHERE PIPES ARE LESS THAN 300 DIA.

SW7 WHERE SUBSOIL DRAINS PASS UNDER FLOOR SLABS AND VEHICULAR PAVEMENTS, UNSLOTTED uPVC SEWER GRADE PIPE IS TO BE USED.

SW8 GRATES AND COVERS SHALL CONFORM WITH AS 3996 AND AS 1428.1 FOR ACCESS REQUIREMENTS.

SW9 CARE IS TO BE TAKEN WITH LEVELS OF STORMWATER LINES. GRADES ARE NOT TO BE REDUCED WITHOUT APPROVAL.

SW10 AT ALL TIMES DURING CONSTRUCTION OF STORMWATER PITS, ADEQUATE SAFETY PROCEDURES SHALL BE TAKEN TO ENSURE AGAINST THE POSSIBILITY OF PERSONNEL FALLING DOWN PITS.

SW11 ALL EXISTING STORMWATER DRAINAGE LINES AND PITS THAT ARE TO REMAIN ARE TO BE INSPECTED AND CLEANED. DURING THIS PROCESS ANY PART OF THE STORMWATER DRAINAGE SYSTEM THAT WARRANTS REPAIR SHALL BE REPORTED TO THE SUPERINTENDENT/ENGINEER FOR FURTHER DIRECTIONS.

KERBING NOTES

K1 ALL CONCRETE TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 32 MPa U.N.O.

K2 ALL KERBS, GUTTERS, DISH DRAINS AND CROSSINGS TO BE CONSTRUCTED ON 75mm GRANULAR BASECOURSE COMPACTED TO A MINIMUM 98% MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS1289 5.2.1.

K3 EXPANSION JOINTS (E.J) 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 MAX 12m CENTRES EXCEPT FOR INTEGRAL KERBS WHERE THE EXPANSION JOINTS ARE TO MATCH THE JOINT LOCATIONS IN THE SLAB.

K4 WEAKENED PLANE JOINTS TO BE MIN 3mm WIDE AND LOCATED AT 3m CENTRES EXCEPT FOR INTEGRAL KERBS WHERE THE WEAKENED PLANE JOINTS ARE TO MATCH THE JOINT LOCATIONS IN THE SLAB.

K5 BROOMED FINISH TO ALL RAMPED AND VEHICULAR CROSSINGS. ALL OTHER KERBING OR DISH DRAINS TO BE STEEL FLOAT FINISHED.

K6 IN THE REPLACEMENT OF KERBS:-
- EXISTING ROAD PAVEMENT IS TO BE SAWCUT 900mm U.N.O. FROM THE LIP OF GUTTER. UPON COMPLETION OF THE NEW KERB AND GUTTER, NEW BASECOURSE AND SURFACE TO BE LAID 600mm WIDE U.N.O.
- EXISTING KERBS ARE TO BE COMPLETELY REMOVED WHERE NEW KERBS ARE SHOWN.

SEDIMENT AND EROSION CONTROL NOTES

1. IT HAS BEEN ASSUMED THAT HOARDINGS/SILT FENCING WILL BE PROVIDED TO THE STAGE BOUNDARY SUFFICIENT TO PREVENT SEDIMENT RUNOFF FROM LEAVING SITE (EXCEPT IN THE CASE OF ENTRY/EXIT LOCATIONS WHERE TEMPORARY CONSTRUCTION ENTRY/EXIT SEDIMENT TRAP ARE PROVIDED). IF THIS IS NOT THE CASE, PROVIDE SEDIMENT FENCE TO STANDARD DETAIL BELOW AS REQUIRED TO PREVENT SEDIMENT FROM LEAVING SITE, DIRECT RUNOFF TO SEDIMENT BASIN.
2. ALL SEDIMENT CONTROL MEASURES TO BE INSTALLED IN ACCORDANCE WITH LANDCOM MANAGING URBAN STORMWATER "BLUE BOOK".

SEDIMENT CONTROL CONDITIONS

1. SEDIMENT FENCES WILL BE INSTALLED AS SHOWN AND ELSEWHERE AT THE DISCRETION OF THE SITE MANAGER TO CONTAIN COARSER SEDIMENT FRACTIONS INCLUDING AGGREGATED FINES) AS NEAR AS POSSIBLE TO THEIR SOURCE.
2. SEDIMENT REMOVED FROM ANY TRAPPING DEVICE WILL BE RELOCATED WHERE FURTHER POLLUTION TO DOWNSLOPE LANDS & WATERWAYS CANNOT OCCUR.
3. STOCKPILES WILL BE PLACED WHERE SHOWN ON DRAWING OR ELSEWHERE AT THE DISCRETION OF THE SITE MANAGER AND NOT WITHIN 5m OF HAZARD AREAS INCLUDING LIKELY AREAS OF HIGH VELOCITY FLOWS SUCH AS WATERWAYS, PAVED AREAS & DRIVEWAYS.
4. WATER WILL BE PREVENTED FROM DIRECTLY ENTERING THE PERMANENT DRAINAGE SYSTEM WITH INLET FILTERS (SEE DETAILS) UNLESS IT IS SEDIMENT FREE.
5. TEMPORARY SEDIMENT TRAPS WILL BE RETAINED UNTIL AFTER THE LANDS THEY ARE PROTECTING ARE COMPLETELY REHABILITATED.
6. CONTRACTOR TO DESIGN/SIZE/CONSTRUCT TEMPORARY SEDIMENT BASIN, WATER SHOULD BE ALLOWED TO SETTLE BEFORE DISCHARGE. CONTRACTOR MUST VERIFY THAT WATER QUALITY MEETS AUTHORITIES REQUIREMENTS PRIOR TO DISCHARGE. ACCUMULATED SEDIMENT SHOULD THEN BE REMOVED & DISPOSED OF IN ACCORDANCE WITH ENVIRONMENTAL MANAGEMENT PROCEDURES.

SITE INSPECTION & MAINTENANCE CONDITIONS

THE SITE MANAGER WILL INSPECT THE SITE AT LEAST WEEKLY AND WILL:

1. ENSURE THAT DRAINS OPERATE PROPERLY & TO EFFECT ANY NECESSARY REPAIRS
2. REMOVE SPILLED SAND OR OTHER MATERIALS FROM HAZARD AREAS, INCLUDING LANDS CLOSER THAN 5m FROM AREAS OF LIKELY CONCENTRATED OR HIGH VELOCITY FLOWS ESPECIALLY WATERWAYS & PAVED AREAS.
3. REMOVE TRAPPED SEDIMENT WHENEVER LESS THAN DESIGN CAPACITY REMAINS WITHIN THE STRUCTURE
4. ENSURE REHABILITATED LANDS HAVE EFFECTIVELY REDUCED THE EROSION HAZARD AND TO INITIATE UPGRADING OR REPAIR AS APPROPRIATE.
5. CONSTRUCT ADDITIONAL EROSION AND/OR SEDIMENT CONTROL WORKS AS MIGHT BECOME NECESSARY TO ENSURE THE DESIRED PROTECTION IS GIVEN TO DOWNSLOPE LANDS AND WATERWAYS.
6. MAINTAIN EROSION & SEDIMENT CONTROL MEASURES IN A FULLY FUNCTIONING CONDITION UNTIL ALL EARTHWORK ACTIVITIES ARE COMPLETED AND THE SITE IS REHABILITATED.
7. REMOVE TEMPORARY SOIL CONSERVATION STRUCTURES AS THE LAST ACTIVITY IN THE REHABILITATION PROGRAM.

AS PART OF THE STATUTORY 'DILIGENCE OF CARE' RESPONSIBILITIES, THE SITE MANAGER WILL KEEP A LOGBOOK MAKING ENTRIES AT LEAST WEEKLY, IMMEDIATELY BEFORE FORECAST RAIN AND AFTER RAINFALL.
ENTRIES WILL INCLUDE:

1. THE VOLUME & INTENSITY OF ANY RAINFALL EVENTS
2. THE CONDITION OF ANY SOIL & WATER MANAGEMENT WORKS
3. THE CONDITION OF VEGETATION & ANY NEED TO IRRIGATE
4. THE NEED FOR DUST PREVENTION STRATEGIES
5. ANY REMEDIAL WORKS TO BE UNDERTAKEN

THE BOOK WILL BE KEPT ONSITE & MADE AVAILABLE TO ANY AUTHORISED PERSON ON REQUEST. IT WILL BE GIVEN TO THE PROJECT MANAGER AT THE CONCLUSION OF WORKS.

JOINTING NOTES

PEDESTRIAN FOOTPATH JOINTS

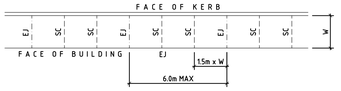
J1 EXPANSION JOINTS (E.J) ARE TO BE LOCATED WHERE POSSIBLE AT TANGENT POINTS OF CURVES AND ELSEWHERE AT 6m CENTRES.

J2 SAWCUT JOINTS (SC) ARE TO BE LOCATED AT A MAX 1.5m x WIDTH OF PAVEMENT. THE TIMING OF THE SAWCUT 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.

J3 WHERE POSSIBLE JOINTS SHOULD BE LOCATED TO MATCH KERBING AND / OR ADJACENT PAVEMENT JOINTS.

J4 PROVIDE 10mm WIDE FULL DEPTH EXPANSION JOINTS (E.J) BETWEEN BUILDINGS AND ALL CONCRETE OR UNIT PAVERS

J5 ALL PEDESTRIAN FOOTPATH JOINTINGS AS FOLLOWS (U.N.O.).



VEHICULAR PAVEMENT JOINTS

J6 ALL VEHICULAR PAVEMENTS TO BE JOINTED AS SHOWN ON DRAWINGS.

J7 LONGITUDINAL WARPING JOINTS (L.W.J) SHOULD GENERALLY BE LOCATED AT A MAXIMUM OF 3m TO 4.5m MAX CENTERS. ALL L.W.J's SHOULD BE TIED UP TO A MAXIMUM TOTAL WIDTH OF 30m.

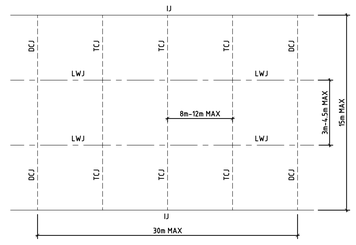
J8 TRANSVERSE CONTRACTION JOINTS (T.C.J) SHOULD GENERALLY BE LOCATED AT A MAXIMUM OF 8m TO 12m MAX CENTERS. TC.J's CAN BE SPACED AT SUITABLE INTERVALS UP TO A RECOMMENDED MAXIMUM LENGTH OF 15m.

J9 TRANSVERSE DOWELLED CONSTRUCTION JOINTS (DC.J) TO BE PROVIDED FOR PLANNED INTERRUPTIONS SUCH AS AT THE END OF EACH DAY'S OPERATIONS (POUR BREAK), AT BLOCK OUTS FOR BRIDGES AND INTERSECTIONS OR FOR UNEXPECTED DELAYS WHEN THE SUSPENSION OF OPERATIONS IS LIKELY TO CREATE A JOINT.

J10 ISOLATION JOINTS WITH SUB-GRADE BEAM (I.J) TO BE PROVIDED AT INTERSECTIONS OR AT THE JUNCTION OF A POUR BREAK.

J11 ALL VEHICULAR PAVEMENTS TO BE JOINTED IN ACCORDANCE WITH AUSTROADS AGPT02-12 GUIDE TO PAVEMENT TECHNOLOGY PART 2 STRUCTURAL PAVEMENT DESIGN AND SUPPLEMENT AP-T36-06 PAVEMENT DESIGN FOR LIGHT TRAFFIC

J12 VEHICULAR PAVEMENT JOINTING AS FOLLOWS (U.N.O.)



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Project Name: HIGH SCHOOL IN BUNGENDORE
Drawing Title: CONSTRUCTION NOTES

SCHEMATIC DESIGN

Designed	GK	Approved	
Drawn	HM	Date	
Scale	-	North	
Date	MAR. 2021	Project Ref	Drawing No / Rev
Sheet	A0	20096	CE-SD-HS-2002 G

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SURVEY LEGEND

- SITE BOUNDARY
- EX SURFACE LEVEL
- EX SURFACE CONTOUR
- EX TREE
- EXISTING STORMWATER DRAINAGE LINE
- EXISTING SEWER LINE
- EXISTING WATER MAIN
- EXISTING GAS LINE
- EXISTING TELECOMMUNICATIONS LINE
- EXISTING ELECTRICAL LINE
- EXISTING UNKNOWN SERVICE
- EXISTING SERVICE TO BE MADE REDUNDANT

BULK EARTHWORKS LEGEND

NOTE
1. VOLUMES ARE APPROXIMATE ONLY, WHICH ARE IN PLACE AND DO NOT INCORPORATE BULKING FACTORS, OVER EXCAVATION AND OSD.
2. GROUND WATER SEEPAGE MAY OCCUR IN EXCAVATED AREAS. DE-WATERING MAY BE REQUIRED IN THIS INSTANCE.

- EX ROCK CONTOUR
- FINISHED BULK EXCAVATION LEVEL
- BATTER

SOIL AND WATER MANAGEMENT LEGEND

- SEDIMENT FENCE
- CATCH DRAIN
- TEMPORARY SHAKER RAMP FOR ENTRY/EXIT
- SEDIMENT BASIN (LOCATION TBC ON-SITE)
- TEMPORARY STOCKPILE (LOCATION TBC ON-SITE)
- GEOTEXTILE PIT FILTER / FILTER SURROUND INSTALLED ON EXISTING PIT
- SANDBAGS INSTALLED ON EXISTING PIT
- OVERLAND FLOW

SITEWORKS LEGEND

- LIMIT OF WORKS
- EX RL 7.25 — EXISTING FINISHED SURFACE LEVEL
- F 10.00 — FINISHED SURFACE SPOT LEVEL
- B 10.00 — BULK EARTHWORKS SPOT LEVEL
- TOK 10.00 — TOP OF KERB SPOT LEVEL
- TOW 10.00 — TOP OF WALL SPOT LEVEL
- BOW 10.00 — BOTTOM OF WALL SPOT LEVEL
- XX% FALL — DIRECTION AND GRADE OF FALL
- 5.00 — FINISHED MINOR SURFACE CONTOUR
- 5.00 — FINISHED MINOR SURFACE CONTOUR
- KO — KERB ONLY
- KG — KERB AND GUTTER
- VC — VEHICULAR CROSSING
- DD — DISH DRAIN
- FK — FLUSH KERB
- IK — INTEGRAL KERB
- IKG — INTEGRAL KERB AND GUTTER
- MK — MOUNTABLE KERB
- MKG — MOUNTABLE KERB AND GUTTER
- ET — EDGE THICKENING
- W-BEAM (INSTALLED IN ACCORDANCE WITH RMS STANDARD DRAWINGS AND REQUIREMENTS)
- RW — RETAINING WALL
- BATTER
- B — BOLLARD IN ACCORDANCE WITH ARCHITECTURAL SPECIFICATIONS
- SP — PROPOSED SIGN POST
- EX SP — EX SIGN POST
- TP — TRAFFIC SIGNAL POST
- LP — PROPOSED STREET LIGHTING
- EX LP — EX STREET LIGHTING
- R = 1.0m — ARC RADIUS
- A = 1.0m — ARC LENGTH

DRAINAGE LEGEND

- SURFACE INLET PIT
- JUNCTION PIT
- KERB INLET PIT
- IL 0.00 PIPE ø IL 0.00 — STORMWATER DRAINAGE LINE
- GD — GRATED DRAIN
- DP — DOWNPIPE AND CONNECTION LINE (REFER TO HYDRAULIC DRAWINGS FOR DETAILS)
- FOR SO — FLUSHOUT RISER (max 30m CTRS) WITH SUBSOIL DRAINAGE (100ø uPVC SLOTTED PIPE UN-SOCKED)
- IO — INSPECTION OPENING
- SWALE DRAIN
- EX SW — EXISTING STORMWATER TO REMAIN
- EX SW — EXISTING STORMWATER TO BE MADE REDUNDANT
- EX SW — EXISTING STORMWATER TO REMAIN
- OVERLAND FLOW
- EMERGENCY FLOW

PAVEMENT LEGEND

NOTES
1. ASPHALTIC CONCRETE SHALL CONFORM TO AS2150 AND THE SPECIFICATIONS
2. PAVEMENT BASED ON GEOTECHNICAL REPORT BY JKGEOTECHNICS REF:30999L2rpt DATE 15 NOVEMBER 2019

- PAVEMENT TYPE 1 HEAVY DUTY ASPHALT PAVEMENT
- PAVEMENT TYPE 2 MEDIUM DUTY ASPHALT PAVEMENT
- PAVEMENT TYPE 4 HEAVY DUTY CONCRETE PAVEMENT
- PAVEMENT TYPE 7 CONCRETE FOOTPATH PAVEMENT
- PAVEMENT TYPE 8 LIGHT DUTY UNIT PAVERS
- PAVEMENT TYPE 12 'TERRAM BODPAV 85' GRASS REINFORCED PAVEMENT SUPPLIED BY 'POLYFABRICS' OR APPROVED EQUIVALENT.

- SJ — SAWCUT JOINT
- EJ — EXPANSION JOINT
- DEJ — DOWELLED EXPANSION JOINT
- KJ — KEYED CONSTRUCTION JOINT
- TCJ — TRANSVERSE CONTRACTION JOINT
- LWJ — LONGITUDINAL WARPING JOINT
- IJ — ISOLATION JOINT

LANDSCAPE LEGEND

- EX TREE
- EX TREE TO BE REMOVED
- PROPOSED NEW TREE

LINEMARKING LEGEND

NOTE
LINEMARKING TO BE IN ACCORDANCE WITH AS1742.2 AND THE RELEVANT LOCAL OR STATE AUTHORITY GUIDELINES.

- 0.1m wide / 0.1m space / 0.1m wide — BB — DIVIDING BARRIER LINES (TWO WAY)
- 0.1m wide — L1 — 9m gap — 3m line — 9m gap — LANE LINE
- 0.1m wide — L3 — LANE LINE
- 0.15m wide — E1 — EDGE LINE
- 0.15m wide — E5 — EDGE LINE (PAINTED MEDIAN)
- 0.15m wide — 3m gap — C1 — 1m line — 3m gap — CONTINUITY LINE
- 0.1m wide — 0.6m gap — T1 — 0.6m line — 0.6m gap — TURN LINE
- 0.3m wide — TF — STOP LINE
- 0.3m wide — 0.6m line — TB — 0.6m gap — 0.6m line — GIVE WAY LINE (USED WITH SIGNS)
- 0.15m wide — 0.6m line — TB1 — 0.6m gap — 0.6m line — GIVE WAY LINE (USED ON RIGHT SIDE OF ROAD)
- 0.15m wide — 0.3m gap — PCW — 1m line — 0.3m gap — PEDESTRIAN CROSS WALK LINES

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E	SCHEMATIC DESIGN	17.05.21	HM	-
D	SCHEMATIC DESIGN	07.05.21	HM	-
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Project Name: HIGH SCHOOL IN BUNGENDORE
Drawing Title: LEGEND SHEET

SCHEMATIC DESIGN

Designed	GK	Approved	
Drawn	HM	Date	
Scale	-	North	
Date	MAR. 2021	Project Ref	Drawing No / Rev
Sheet	A0	20096	CE-SD-HS-2003 F

FOR CONTINUATION REFER TO SHEET CE-CO-HS-2005 BELOW

PROPOSED SCOUT STORAGE SHED

BUILDING F

SITE GATE

PROVIDE SEDIMENT FENCE (REFER TO DETAIL)

NEW AG PLOT

PROVIDE CONSTRUCTION SITE FENCE (REFER TO DETAIL)

PROPOSED DRIVEWAY

MICK SHERD OVAL

PROVIDE CONSTRUCTION SITE FENCE (REFER TO DETAIL)

EXISTING ELECTRICAL KIOSK

PROPOSED CRICKET BATTING NET

NEW GAMES COURTS

PROPOSED SHARED PATH

NEW FLOOD LIGHT

GIBRALTAR STREET

NEW ENTRANCE PLAZA

BUILDING A

OUTDOOR PLAY SPACE

COLA

SUPPORT COLA

QUADRANGLE

BUILDING B

COVERED WALKWAY

PROVIDE SEDIMENT FENCE (REFER TO DETAIL)

TEMPORARY STOCKPILE LOCATION (LOCATION TBC ON SITE)

PROPOSED BELOW GROUND GREASE ARRESTOR

BUILDING D

PROPOSED SUB-STATION

PROPOSED A/C ENCLOSURE

BUNGENDORE SWIMMING POOL

GYMNASIUM COMMUNITY ENTRANCE

PROVIDE SEDIMENT FENCE (REFER TO DETAIL)

PROPOSED KISS & DROP

MAIN ENTRANCE

SCHOOL ACCESS ROAD

SITE GATE

MAJARA STREET

BUILDING E

COMMUNITY FACILITY ENTRANCE

PROVIDE GEOTEXTILE PIT FILTER (REFER TO DETAIL)

SECONDARY ENTRANCE

PROPOSED FOOTPATH

CONSTRUCT SHAKER RAMP FOR TEMPORARY ENTRY/EXIT - REFER TO TYPICAL DETAIL. INDICATIVE LOCATION ONLY. EXACT LOCATION TO BE DETERMINED ON SITE BY BUILDER IF REQUIRED.

HIGH SCHOOL PLAZA

BUILDING C (EXISTING COUNCIL BUILDING)

CONSTRUCT SHAKER RAMP FOR TEMPORARY ENTRY/EXIT - REFER TO TYPICAL DETAIL. INDICATIVE LOCATION ONLY. EXACT LOCATION TO BE DETERMINED ON SITE BY BUILDER IF REQUIRED.

EASEMENT

PROPOSED SHARED PATH

EXISTING CARPARK

PROPOSED CARPARK

VEHICLE TURNING CIRCLE

INSTALL GEOTEXTILE PIT FILTER/FILTER SURROUND/SAND BAGS ON ALL EXISTING GRATED INLET PITS (TYPICAL)

NO.16 MAJARA STREET (STATION MASTER'S COTTAGE)

SUPPORT BUS BAY/ DELIVERY BAY

STAFF CAR PARK 44 SPACES INC. 2 ACCESSIBLE (existing parking to be retained)

FOR CONTINUATION REFER TO SHEET CE-CO-HS-2005 ABOVE

SURVEY LEGEND

- SITE BOUNDARY
- EX SURFACE LEVEL
- EX SURFACE CONTOUR
- EX TREE
- Ex SW — EXISTING STORMWATER DRAINAGE LINE

SOIL AND WATER MANAGEMENT LEGEND

- HOARDING OR SITE FENCE
- SEDIMENT FENCE
- CD — CATCH DRAIN
- OVERLAND FLOW
- TEMPORARY SHAKER RAMP FOR ENTRY/EXIT
- SEDIMENT BASIN (LOCATION TBC ON-SITE)
- TEMPORARY STOCKPILE (LOCATION TBC ON-SITE)
- GEOTEXTILE PIT FILTER / FILTER SURROUND INSTALLED ON EXISTING PIT
- SANDBAGS INSTALLED ON EXISTING PIT

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Project Name: HIGH SCHOOL IN BUNGENDORE

Drawing Title: SEDIMENT & EROSION CONTRO PLAN

SCHEMATIC DESIGN

Designed	GK	Approved	
Drawn	JF	Date	
Scale	1:500		North
Date	MAR. 2021	Project Ref	
Sheet	A0	Drawing No	Rev

20096 CE-SD-HS-2005 G

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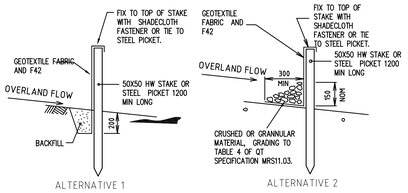
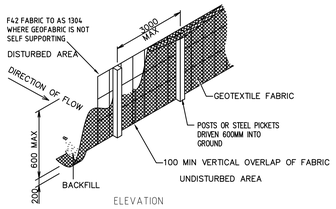
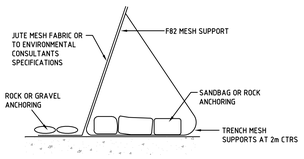




SEDIMENT FENCE

NOT TO SCALE

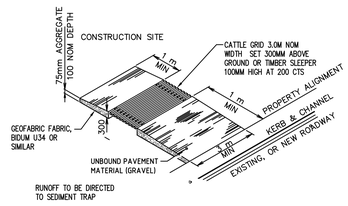


ALTERNATIVE SEDIMENT FENCE

NOT TO SCALE

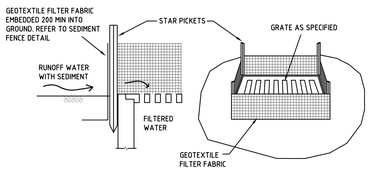
ALTERNATIVE SEDIMENT FENCE NOTES

1. INSTALL THIS TYPE OF SEDIMENT FENCE WHEN USE OF SUPPORT POSTS IS NOT DESIRABLE OR NOT POSSIBLE. SUCH CONDITIONS MIGHT APPLY, FOR EXAMPLE, WHERE APPROVAL IS GRANTED FROM THE APPROPRIATE AUTHORITIES TO PLACE THESE FENCES IN HIGHLY SENSITIVE ESTUARINE AREAS.
2. USE BENT TRENCH MESH TO SUPPORT THE F82 WELDED MESH FACING AS SHOWN ON THE DRAWING ABOVE. ATTACH THE JUTE MESH TO THE WELDED MESH FACING USING UV-RESISTANT CABLE TIES.
3. STABILISE THE WHOLE STRUCTURE WITH SANDBAG OR ROCK ANCHORING OVER THE TRENCH MESH AND THE LEADING EDGE OF THE JUTE MESH. THE ANCHORING SHOULD BE SUFFICIENTLY LARGE TO ENSURE STABILITY OF THE STRUCTURE IN THE DESIGN STORM EVENT, USUALLY THE 10 YEAR EVENT.



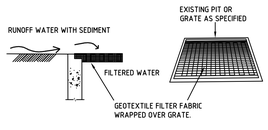
TEMPORARY CONSTRUCTION VEHICLE ENTRY/EXIT SEDIMENT TRAP

NOT TO SCALE



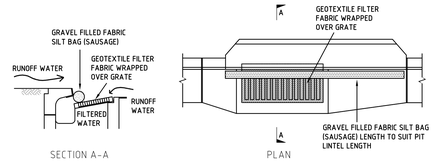
GEOTEXTILE PIT FILTER 1

NOT TO SCALE



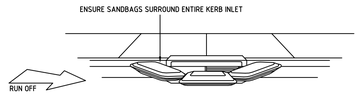
GEOTEXTILE PIT FILTER 2

NOT TO SCALE



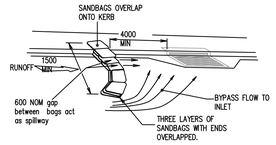
KERB INLET SEDIMENT TRAP

NOT TO SCALE



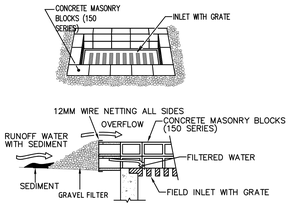
SANDBAG KERB INLET SEDIMENT TRAP

NOT TO SCALE



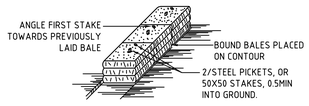
ON GRADE KERB INLET SEDIMENT TRAP

NOT TO SCALE



FIELD INLET SEDIMENT TRAP

NOT TO SCALE

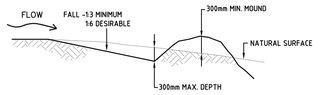


ANCHORING DETAIL

BEDDING DETAIL

STRAW BALE BANK SEDIMENT CONTROL

NOT TO SCALE



CATCH DRAIN

NOT TO SCALE

SOIL AND WATER MANAGEMENT NOTES

1. IT HAS BEEN ASSUMED THAT HOARDINGS/SILT FENCING WILL BE PROVIDED TO THE STAGE BOUNDARY SUFFICIENT TO PREVENT SEDIMENT RUNOFF FROM LEAVING SITE (EXCEPT IN THE CASE OF ENTRY/EXIT LOCATIONS WHERE TEMPORARY CONSTRUCTION ENTRY/EXIT SEDIMENT TRAP ARE PROVIDED). IF THIS IS NOT THE CASE, PROVIDE SEDIMENT FENCE TO STANDARD DETAIL BELOW AS REQUIRED TO PREVENT SEDIMENT FROM LEAVING SITE, DIRECT RUNOFF TO SEDIMENT BASIN.
2. ALL SEDIMENT CONTROL MEASURES TO BE INSTALLED IN ACCORDANCE WITH LANDCOM MANAGING URBAN STORMWATER "BLUE BOOK".

SEDIMENT CONTROL CONDITIONS

1. SEDIMENT FENCES WILL BE INSTALLED AS SHOWN AND ELSEWHERE AT THE DISCRETION OF THE SITE MANAGER TO CONTAIN COARSER SEDIMENT FRACTIONS INCLUDING AGGREGATED FINES) AS NEAR AS POSSIBLE TO THEIR SOURCE.
2. SEDIMENT REMOVED FROM ANY TRAPPING DEVICE WILL BE RELOCATED WHERE FURTHER POLLUTION TO DOWNSLOPE LANDS & WATERWAYS CANNOT OCCUR.
3. STOCKPILES WILL BE PLACED WHERE SHOWN ON DRAWING OR ELSEWHERE AT THE DISCRETION OF THE SITE MANAGER AND NOT WITHIN 5m OF HAZARD AREAS INCLUDING LIKELY AREAS OF HIGH VELOCITY FLOWS SUCH AS WATERWAYS, PAVED AREAS & DRIVEWAYS.
4. WATER WILL BE PREVENTED FROM DIRECTLY ENTERING THE PERMANENT DRAINAGE SYSTEM WITH INLET FILTERS (SEE DETAILS) UNLESS IT IS SEDIMENT FREE.
5. TEMPORARY SEDIMENT TRAPS WILL BE RETAINED UNTIL AFTER THE LANDS THEY ARE PROTECTING ARE COMPLETELY REHABILITATED.

SITE INSPECTION & MAINTENANCE CONDITIONS

THE SITE MANAGER WILL INSPECT THE SITE AT LEAST WEEKLY AND WILL:

1. ENSURE THAT DRAINS OPERATE PROPERLY & TO EFFECT ANY NECESSARY REPAIRS
2. REMOVE SPILLED SAND OR OTHER MATERIALS FROM HAZARD AREAS, INCLUDING LANDS CLOSER THAN 5m FROM AREAS OF LIKELY CONCENTRATED OR HIGH VELOCITY FLOWS ESPECIALLY WATERWAYS & PAVED AREAS.
3. REMOVE TRAPPED SEDIMENT WHENEVER LESS THAN DESIGN CAPACITY REMAINS WITHIN THE STRUCTURE
4. ENSURE REHABILITATED LANDS HAVE EFFECTIVELY REDUCED THE EROSION HAZARD AND TO INITIATE UPGRADING OR REPAIR AS APPROPRIATE.
5. CONSTRUCT ADDITIONAL EROSION AND/OR SEDIMENT CONTROL WORKS AS MIGHT BECOME NECESSARY TO ENSURE THE DESIRED PROTECTION IS GIVEN TO DOWNSLOPE LANDS AND WATERWAYS.
6. MAINTAIN EROSION & SEDIMENT CONTROL MEASURES IN A FULLY FUNCTIONING CONDITION UNTIL ALL EARTHWORK ACTIVITIES ARE COMPLETED AND THE SITE IS REHABILITATED.
7. REMOVE TEMPORARY SOIL CONSERVATION STRUCTURES AS THE LAST ACTIVITY IN THE REHABILITATION PROGRAM.

AS PART OF THE STATUTORY 'DILIGENCE OF CARE' RESPONSIBILITIES, THE SITE MANAGER WILL KEEP A LOGBOOK MAKING ENTRIES AT LEAST WEEKLY, IMMEDIATELY BEFORE FORECAST RAIN AND AFTER RAINFALL.
ENTRIES WILL INCLUDE:

1. THE VOLUME & INTENSITY OF ANY RAINFALL EVENTS
2. THE CONDITION OF ANY SOIL & WATER MANAGEMENT WORKS
3. THE CONDITION OF VEGETATION & ANY NEED TO IRRIGATE
4. THE NEED FOR DUST PREVENTION STRATEGIES
5. ANY REMEDIAL WORKS TO BE UNDERTAKEN

THE BOOK WILL BE KEPT ONSITE & MADE AVAILABLE TO ANY AUTHORISED PERSON ON REQUEST. IT WILL BE GIVEN TO THE PROJECT MANAGER AT THE CONCLUSION OF WORKS.

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E	SCHEMATIC DESIGN	12.05.21	HM	-
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Project Name: HIGH SCHOOL IN BUNGENDORE
Drawing Title: SEDIMENT & EROSION CONTROL PLAN - DETAILS

SCHEMATIC DESIGN

Designed	GK	Approved	North
Drawn	HM	Date	
Scale	-		
Date	MAR. 2021	Project Ref	Drawing No Rev
Sheet	A0	20096	CE-SD-HS-2006 F

BULK EARTHWORKS QUANTITIES (IN-PLACE)

TOTAL CUT VOLUME = 3,190m³
TOTAL FILL VOLUME = 3,460m³

IMPORTED FILL VOLUME = 270m³

BULK EARTHWORKS DEPTH RANGE					
Lower_value		Upper_value		Colour	
-10.5	to	-10	2		
-10	to	-9.5	2		
-9.5	to	-9	2		
-9	to	-8.5	2		
-8.5	to	-8	2		
-8	to	-7.5	2		
-7.5	to	-7	2		
-7	to	-6.5	2		
-6.5	to	-6	2		
-6	to	-5.5	2		
-5.5	to	-5.0	2		
-5.0	to	-4.5	2		
-4.5	to	-4.0	2		
-4.0	to	-3.5	2		
-3.5	to	-3.0	2		
-3.0	to	-2.5	2		
-2.5	to	-2.0	2		
-2.0	to	-1.5	2		
-1.5	to	-1.0	2		
-1.0	to	-0.5	2		
-0.5	to	0	2		
0	to	0.5	2		
0.5	to	1.0	2		
1.0	to	1.5	2		
1.5	to	2.0	2		
2.0	to	2.5	2		
2.5	to	3.0	2		
3.0	to	3.5	2		
3.5	to	4.0	2		
4.0	to	4.5	2		
4.5	to	5.0	2		
5.0	to	5.5	2		
5.5	to	6	2		
6	to	6.5	2		
6.5	to	7	2		
7.5	to	8	2		

250mm ALLOWANCE ASSUMED BELOW FINISHED GROUND LEVELS FOR PAVEMENT BUILDUP (TO BE CONFIRM)

FILL REQUIRED WHERE EXISTING LEVELS ARE LOWER THAN 1m BELOW UNDERSIDE OF FLOOR.

LEVEL AGAINST BUILDING BETWEEN 150mm - 300mm BELOW FFL TO BE GRADE PLANTING TO BOUNDARY MAX 1:5

EXTENTS OF NO FILL BELOW MODULAR CONSTRUCTION. EXISTING SURFACE LEVELS TO BE MAINTAINED

300mm ALLOWANCE ASSUMED BELOW FINISHED GROUND LEVELS FOR PAVEMENT/LANDSCAPE BUILDUP (LANDSCAPE ARCHITECT TO CONFIRM)

OUTDOOR LEARNING AREA BEL 697.22

FILL REQUIRED WHERE EXISTING LEVELS ARE LOWER THAN 1m BELOW UNDERSIDE OF FLOOR.

300mm ALLOWANCE ASSUMED BELOW FINISHED GROUND LEVELS FOR PAVEMENT/LANDSCAPE BUILDUP (LANDSCAPE ARCHITECT TO CONFIRM)

QUADRANGLE BEL 696.90

300mm ALLOWANCE BELOW FINISH FLOOR LEVEL FOR SLAB ON GROUND CONSTRUCTION (STRUCTURAL TO CONFIRM)

BUILDING D FFL 697.20 BEL 696.90

EXTENTS OF NO FILL BELOW MODULAR CONSTRUCTION. EXISTING SURFACE LEVELS TO BE MAINTAINED

750mm ALLOWANCE BELOW FINISH FLOOR LEVEL FOR MODULAR CONSTRUCTION (300mm FLOOR ZONE AND 450mm CLEAR ACCESS SPACE)

COMMUNITY BUILDING E FFL 697.20 BEL 696.45

BUILDING A FFL 697.52 BEL 696.77

BUILDING B FFL 697.52 BEL 696.77

EXTENTS OF NO FILL BELOW MODULAR CONSTRUCTION. EXISTING SURFACE LEVELS TO BE MAINTAINED

750mm ALLOWANCE BELOW FINISH FLOOR LEVEL FOR MODULAR CONSTRUCTION (300mm FLOOR ZONE AND 450mm CLEAR ACCESS SPACE)

750mm ALLOWANCE BELOW FINISH FLOOR LEVEL FOR MODULAR CONSTRUCTION (300mm FLOOR ZONE AND 450mm CLEAR ACCESS SPACE)

FOR CONTINUATION REFER TO SHEET CE-SD-HS-2011

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Rev	Description	Date	By	App
E	SCHEMATIC DESIGN	07.05.21	HM	-
D	SCHEMATIC DESIGN	30.04.21	HM	-
C	SCHEMATIC DESIGN	16.04.21	HM	-
B	SCHEMATIC DESIGN	09.04.21	JF	-
A	DRAFT SCHEMATIC DESIGN ISSUE	24.03.21	HM	-

Rev	Description	Date	By	App
H	DOCUMENT UPDATED FOR SCHEMATIC DESIGN	09.09.21	JDW	-
G	DOCUMENT UPDATED FOR SCHEMATIC DESIGN	04.08.21	JDW	-
F	SCHEMATIC DESIGN	12.05.21	HM	-

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Project Name: HIGH SCHOOL IN BUNGENDORE

Drawing Title: BULK EARTHWORKS PLAN SHEET 1

SCHEMATIC DESIGN

Designed	GK	Approved	
Drawn	JF	Date	North
Scale	1:200		
Date	MAR 2021	Project Ref	Drawing No Rev
Sheet	A0	20096	CE-SD-HS-2010 H

FOR CONTINUATION REFER TO SHEET CE-SD-HS-2010

BULK EARTHWORKS QUANTITIES (IN-PLACE)

TOTAL CUT VOLUME = 3,190m³
TOTAL FILL VOLUME = 3,460m³

IMPORTED FILL VOLUME = 270m³

BULK EARTHWORKS DEPTH RANGE				
Lower_value		Upper_value		Colour
-10.5	to	-10	2	
-10	to	-9.5	2	
-9.5	to	-9	2	
-9	to	-8.5	2	
-8.5	to	-8	2	
-8	to	-7.5	2	
-7.5	to	-7	2	
-7	to	-6.5	2	
-6.5	to	-6	2	
-6	to	-5.5	2	
-5.5	to	-5.0	2	
-5.0	to	-4.5	2	
-4.5	to	-4.0	2	
-4.0	to	-3.5	2	
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-1.5	to	-1.0	2	
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0.5	to	1.0	2	
1.0	to	1.5	2	
1.5	to	2.0	2	
2.0	to	2.5	2	
2.5	to	3.0	2	
3.0	to	3.5	2	
3.5	to	4.0	2	
4.0	to	4.5	2	
4.5	to	5.0	2	
5.0	to	5.5	2	
5.5	to	6	2	
6	to	6.5	2	
6.5	to	7	2	
7.5	to	8	2	

FILL REQUIRED WHERE EXISTING LEVELS ARE LOWER THAN 1m BELOW UNDERSIDE OF FLOOR.

LEVEL AGAINST BUILDING BETWEEN 150mm ~ 300mm BELOW FFL TO BE GRADE PLANTING TO BOUNDARY MAX 1:5

EXTENTS OF NO FILL BELOW MODULAR CONSTRUCTION. EXISTING SURFACE LEVELS TO BE MAINTAINED

300mm ALLOWANCE ASSUMED BELOW FINISHED GROUND LEVELS FOR PAVEMENT/LANDSCAPE BUILDUP (LANDSCAPE ARCHITECT TO CONFIRM)

FILL REQUIRED WHERE EXISTING LEVELS ARE LOWER THAN 1m BELOW UNDERSIDE OF FLOOR.

OUTDOOR LEARNING AREA BEL 697.22

BUILDING A FFL 697.52 BEL 696.77

BUILDING B FFL 697.52 BEL 696.77

750mm ALLOWANCE BELOW FINISH FLOOR LEVEL FOR MODULAR CONSTRUCTION (300mm FLOOR ZONE AND 450mm CLEAR ACCESS SPACE)

EXTENTS OF NO FILL BELOW MODULAR CONSTRUCTION. EXISTING SURFACE LEVELS TO BE MAINTAINED

300mm ALLOWANCE ASSUMED BELOW FINISHED GROUND LEVELS FOR PAVEMENT/LANDSCAPE BUILDUP (LANDSCAPE ARCHITECT TO CONFIRM)

QUADRANGLE BEL 696.90

300mm ALLOWANCE BELOW FINISH FLOOR LEVEL FOR SLAB ON GROUND CONSTRUCTION (STRUCTURAL TO CONFIRM)

BUILDING D FFL 697.20 BEL 696.90

EXTENTS OF NO FILL BELOW MODULAR CONSTRUCTION. EXISTING SURFACE LEVELS TO BE MAINTAINED

750mm ALLOWANCE BELOW FINISH FLOOR LEVEL FOR MODULAR CONSTRUCTION (300mm FLOOR ZONE AND 450mm CLEAR ACCESS SPACE)

COMMUNITY BUILDING E FFL 697.20 BEL 696.45

750mm ALLOWANCE BELOW FINISH FLOOR LEVEL FOR MODULAR CONSTRUCTION (300mm FLOOR ZONE AND 450mm CLEAR ACCESS SPACE)

340mm ALLOWANCE ASSUMED BELOW FINISHED ROAD LEVELS FOR PAVEMENT BUILDUP (TO BE CONFIRM)

NEW FLOOD LIGHT

OUTDOOR PLAY SPACE

COLA

SUPPORT COLA

QUADRANGLE

COVERED WALKWAY

BUNGENDORE SWIMMING POOL

GREASE ARRESTOR

BUILDING D

NEW ENTRANCE PLAZA

BUILDING A

MAGARA STREET

MAIN ENTRANCE

SCHOOL ACCESS ROAD

EXISTING SUBSTATION

BIKE ENCLOSURE

HIGH SCHOOL PLAZA

BUILDING C (EXISTING COUNCIL BUILDING)

SUPPORT BUS BAY/ DELIVERY BAY

STAFF CAR PARK 44 SPACES INC. 2 ACCESSIBLE (existing parking to be retained)

VEHICLE TURNING CIRCLE

PROPOSED SEWER EASMENT

OSD TANK

BIKE ENCLOSURE

OUTDOOR PLAY SPACE

PROPOSED SHARED PATH

EXISTING CARPARK

PROPOSED CARPARK

PROPOSED DRIVEWAY CROSSOVER

PROPOSED FIRE PUMP ROOM ENCLOSURE

WASTE & RECYCLING ENCLOSURE

NO. 63 TURALLO TERRACE (SIGNALMAN'S COTTAGE)

RAIL

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E	SCHEMATIC DESIGN	07.05.21	HM	-
D	SCHEMATIC DESIGN	30.04.21	HM	-
C	SCHEMATIC DESIGN	16.04.21	HM	-
B	SCHEMATIC DESIGN	09.04.21	JF	-
A	DRAFT SCHEMATIC DESIGN ISSUE	24.03.21	HM	-

Rev	Description	Date	By	App
G	DOCUMENT UPDATED FOR SCHEMATIC DESIGN	04.08.21	JDW	-
F	SCHEMATIC DESIGN	12.05.21	HM	-

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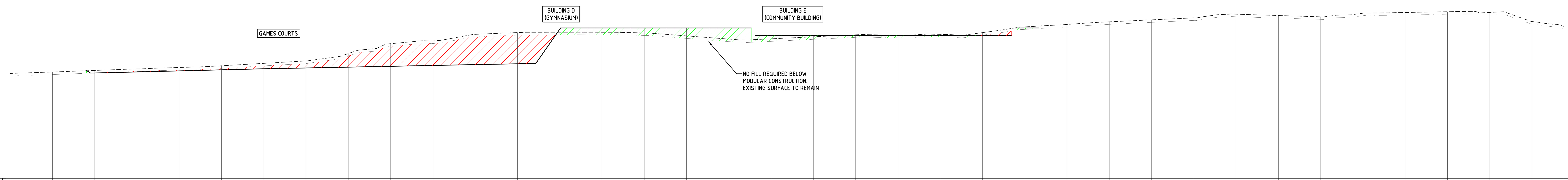
Project Name: HIGH SCHOOL IN BUNGENDORE

Drawing Title: BULK EARTHWORKS PLAN SHEET 2

SCHEMATIC DESIGN

Designed	GK	Approved	Date
Drawn	JF		North
Scale	1:200	Project Ref	Drawing No Rev
Date	MAR 2021	20096	CE-SD-HS-2011 G
Sheet	A0		



DESIGN GRADELINE

HORIZONTAL GEOMETRY

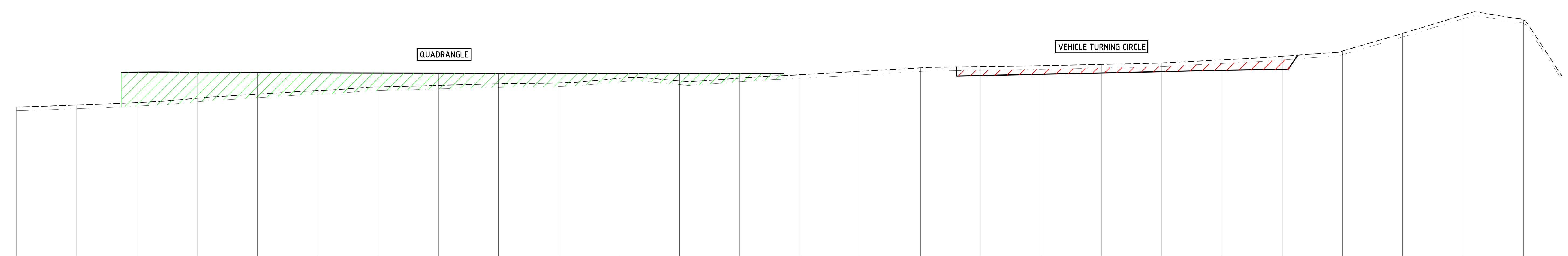
DATUM 688.0

SC01

CHAINAGES	EXISTING SURFACE	150mm STRIPPED SURFACE	BULK EARTHWORKS SURFACE
0.000	694.205	694.055	
5.000	694.290	694.140	
10.000	694.384	694.234	694.231
15.000	694.477	694.327	694.294
20.000	694.558	694.408	694.356
25.000	694.660	694.510	694.418
30.000	694.803	694.653	694.480
35.000	694.947	694.797	694.530
40.000	695.385	695.235	694.579
45.000	695.970	695.820	694.628
50.000	696.129	695.979	694.677
55.000	696.522	696.372	694.727
60.000	696.626	696.476	694.776
65.000	696.646	696.496	696.827
70.000	696.644	696.494	696.900
75.000	696.605	696.455	696.900
80.000	696.430	696.280	696.900
85.000	696.241	696.091	696.900
90.000	696.256	696.106	696.450
95.000	696.376	696.226	696.450
100.000	696.495	696.345	696.450
105.000	696.467	696.317	696.450
110.000	696.520	696.370	696.450
115.000	696.624	696.474	696.450
120.000	696.965	696.815	696.900
125.000	697.109	696.959	
130.000	697.264	697.114	
135.000	697.381	697.231	696.629
140.000	697.498	697.348	696.664
145.000	697.716	697.566	696.700
150.000	697.638	697.488	696.735
155.000	697.560	697.410	696.771
160.000	697.775	697.625	696.806
165.000	697.817	697.667	696.841
170.000	697.863	697.713	696.878
175.000	697.821	697.671	697.043
180.000	697.281	697.131	
183.757	696.995	696.845	

1 in 200 HORIZONTAL
1 in 100 VERTICAL

SC01 LONGITUDINAL SECTION



DESIGN GRADELINE

HORIZONTAL GEOMETRY

DATUM 689.4

SC02

CHAINAGES	EXISTING SURFACE	150mm STRIPPED SURFACE	BULK EARTHWORKS SURFACE
0.000	695.606	695.456	
5.000	695.686	695.536	
10.000	695.792	695.642	697.044
15.000	695.969	695.819	697.042
20.000	696.136	695.986	697.031
25.000	696.285	696.135	697.022
30.000	696.436	696.286	697.016
35.000	696.504	696.354	697.007
40.000	696.568	696.418	697.004
45.000	696.607	696.457	697.001
50.000	696.791	696.641	696.998
55.000	696.685	696.535	696.995
60.000	696.799	696.649	696.991
65.000	696.942	696.792	
70.000	697.084	696.934	
75.000	697.228	697.078	696.859
80.000	697.278	697.128	696.911
85.000	697.319	697.169	696.963
90.000	697.369	697.219	697.015
95.000	697.430	697.280	697.069
100.000	697.562	697.412	697.124
105.000	697.706	697.556	697.157
110.000	697.924	697.774	697.290
115.000	698.658	698.508	
120.000	699.414	699.264	
125.000	699.214	699.064	
130.000			
131.655			

1 in 200 HORIZONTAL
1 in 100 VERTICAL

SC02 LONGITUDINAL SECTION

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Rev	Description	Date	By	App
G	DOCUMENT UPDATED FOR SCHEMATIC DESIGN	04.08.21	JDW	-
F	SCHEMATIC DESIGN	12.05.21	HM	-
E	SCHEMATIC DESIGN	07.05.21	HM	-
D	SCHEMATIC DESIGN	30.04.21	HM	-
C	SCHEMATIC DESIGN	16.04.21	HM	-
B	SCHEMATIC DESIGN	09.04.20	JF	-
A	DRAFT SCHEMATIC DESIGN ISSUE	24.03.21	HM	-

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Project Name: HIGH SCHOOL IN BUNGENDORE

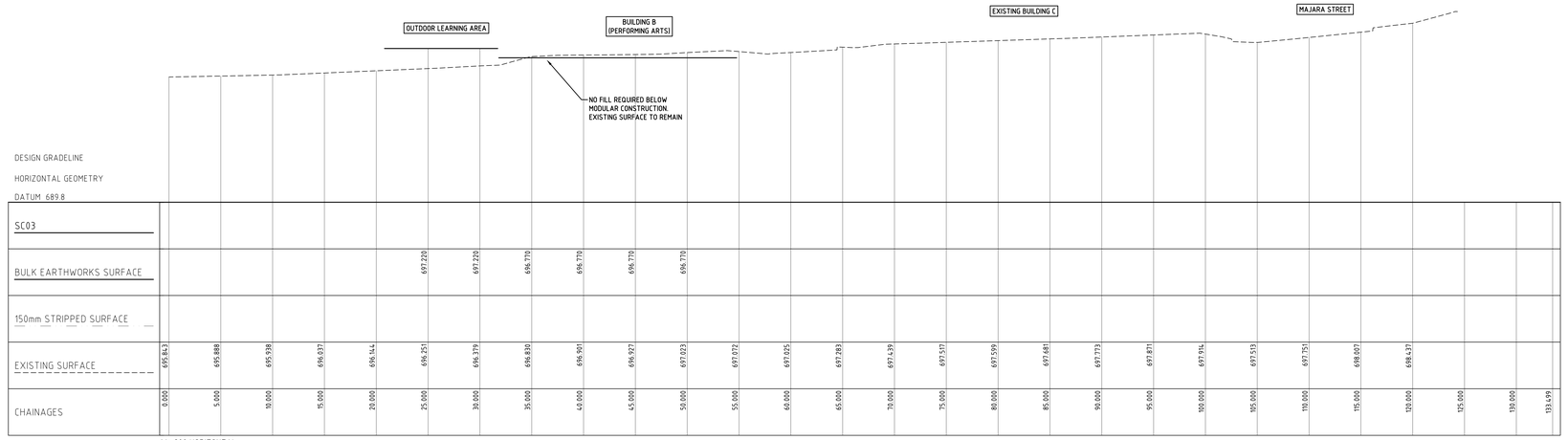
Drawing Title: BULK EARTHWORKS LONGITUDINAL SECTIONS SHEET 1

SCHEMATIC DESIGN

Designed GK
Drawn JF
Scale -
Date MAR. 2021
Sheet A0

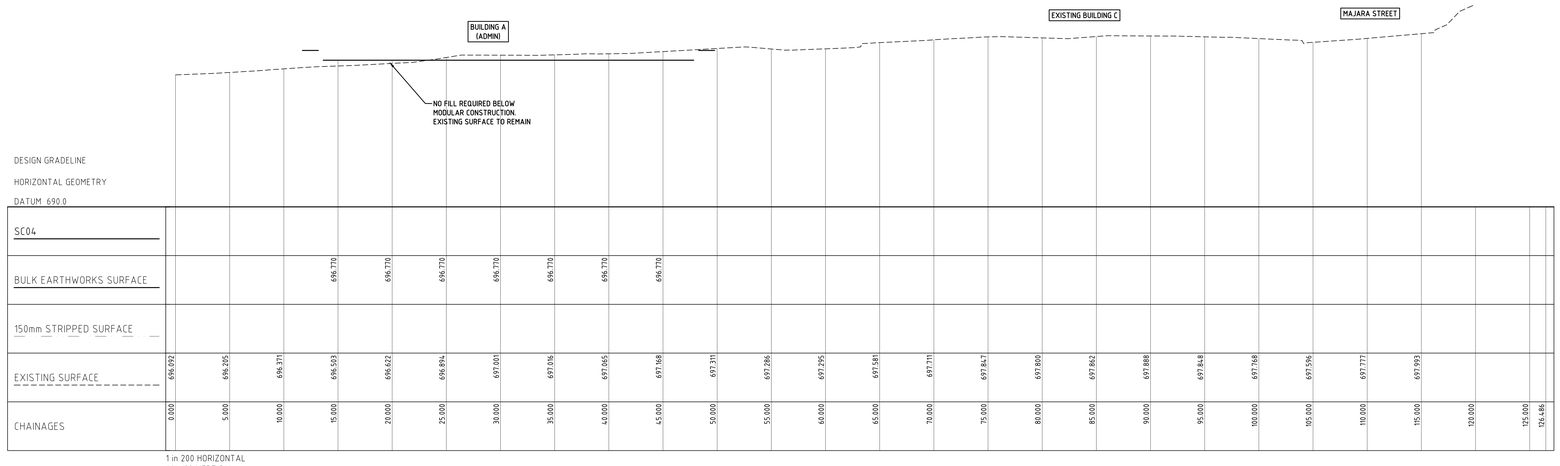
Approved | Date | North

Project Ref: 20096 | Drawing No: CE-SD-HS-2012 | Rev: G



1 in 200 HORIZONTAL
1 in 100 VERTICAL

SC03 LONGITUDINAL SECTION



1 in 200 HORIZONTAL
1 in 100 VERTICAL

SC04 LONGITUDINAL SECTION

Rev	Description	Date	By	App
E	SCHEMATIC DESIGN	07.05.21	HM	-
D	SCHEMATIC DESIGN	30.04.21	HM	-
C	SCHEMATIC DESIGN	16.04.21	HM	-
B	SCHEMATIC DESIGN	09.04.21	JF	-
A	DRAFT SCHEMATIC DESIGN ISSUE	24.03.21	HM	-

Rev	Description	Date	By	App
G	DOCUMENT UPDATED FOR SCHEMATIC DESIGN	04.08.21	JDW	-
F	SCHEMATIC DESIGN	12.05.21	HM	-

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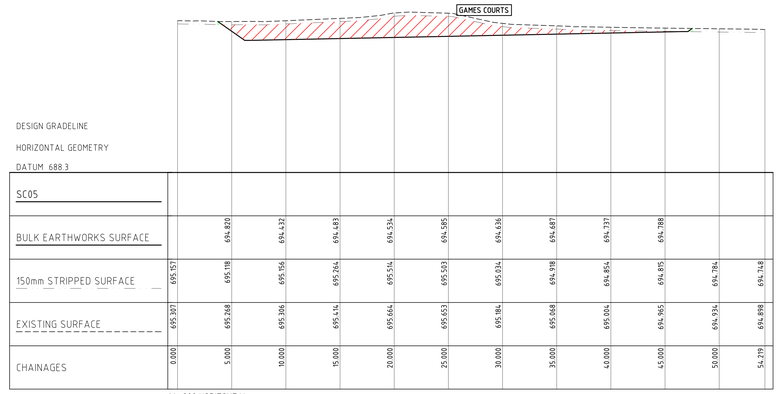
Project Name: HIGH SCHOOL IN BUNGENDORE

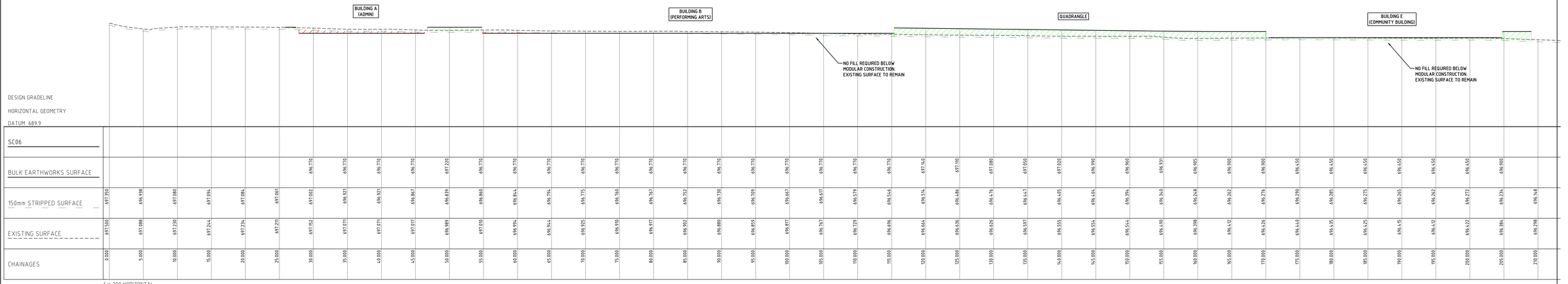
Drawing Title: BULK EARTHWORKS LONGITUDINAL SECTIONS SHEET 2

SCHEMATIC DESIGN

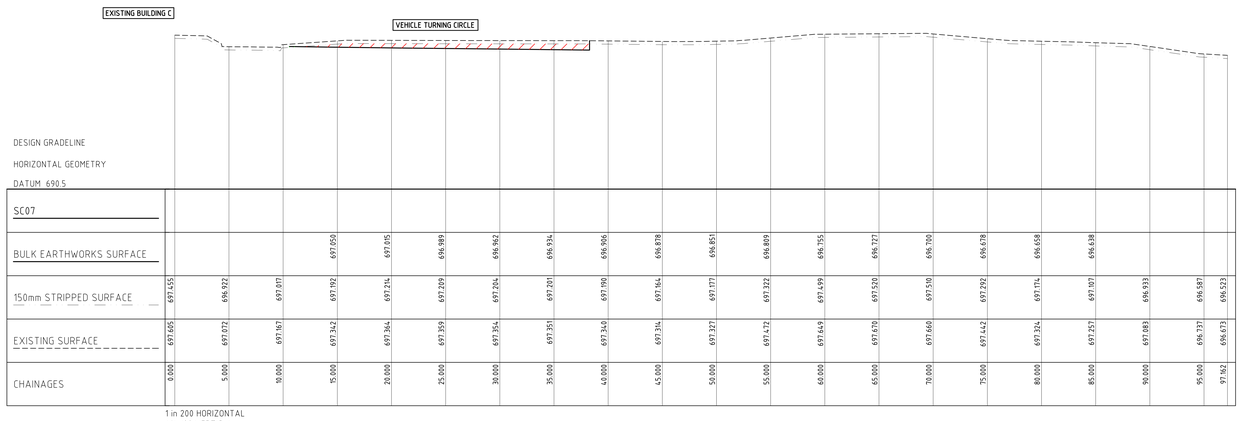
Designed	GK	Approved	
Drawn	JF	Date	
Scale	-	North	
Date	MAR. 2021	Project Ref	Drawing No Rev
Sheet	A0	20096	CE-SD-HS-2013 G



SC05 LONGITUDINAL SECTION



SC06 LONGITUDINAL SECTION



SC07 LONGITUDINAL SECTION

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Rev	Description	Date	By	App
E	SCHEMATIC DESIGN	07.05.21	HM	-
D	SCHEMATIC DESIGN	30.04.21	HM	-
C	SCHEMATIC DESIGN	16.04.21	HM	-
B	SCHEMATIC DESIGN	09.04.20	JF	-
A	DRAFT SCHEMATIC DESIGN ISSUE	24.03.21	HM	-
G	DOCUMENT UPDATED FOR SCHEMATIC DESIGN	04.08.21	JDW	-
F	SCHEMATIC DESIGN	12.05.21	HM	-

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Project Name	HIGH SCHOOL IN BUNGENDORE
Drawing Title	BULK EARTHWORKS LONGITUDINAL SECTIONS SHEET 3

SCHEMATIC DESIGN

Designed	GK	Approved	North
Drawn	JF	Date	
Scale	-	Project Ref	Drawing No Rev
Date	MAR. 2021		
Sheet	A0	20096	CE-SD-HS-2014 G

FOR CONTINUATION REFER TO SHEET CE-SD-HS-2011

750mm ALLOWANCE BELOW FINISH FLOOR LEVEL FOR MODULAR CONSTRUCTION (300mm FLOOR ZONE AND 450mm CLEAR ACCESS SPACE)

COMMUNITY BUILDING E FFL 697.20 BEL 696.45

340mm ALLOWANCE ASSUMED BELOW FINISHED ROAD LEVELS FOR PAVEMENT BUILDUP (TO BE CONFIRM)

PROPOSED KISS & DROP

COMMUNITY FACILITY ENTRANCE

STREET

SECONDARY ENTRANCE

PROPOSED FOOTPATH

EXISTING SCOUT CARPARK

PROPOSED SHARED PATH

EXISTING CARPARK

PROPOSED CARPARK

PROPOSED DRIVEWAY CROSSOVER

EXISTING SCOUT FACILITY

PROPOSED SCOUT STORAGE SHED

BUILDING F

BEL 694.70

PROVIDE 1:4 BATTER SLOPE TO EXISTING SURFACE LEVELS (TYPICAL)

PROPOSED AGRICULTRUAL PLOT

PROPOSED DRIVEWAY CROSSOVER

BIKE ENCLOSURE

PROPOSED SEWER EASEMENT

OSD TANK

OUTDOOR PLAY SPACE

NO. 63 TURALLO TERRACE (SIGNALMAN'S COTTAGE)

RAIL

SC10 CH 0.000 / CH 48.378

SC11 CH 0.000 / CH 48.378

SC12 CH 0.000 / CH 27.995

SC13 CH 37.618

BULK EARTHWORKS DEPTH RANGE				
Lower_value		Upper_value		Colour
-10.5	to	-10	2	
-10	to	-9.5	2	
-9.5	to	-9	2	
-9	to	-8.5	2	
-8.5	to	-8	2	
-8	to	-7.5	2	
-7.5	to	-7	2	
-7	to	-6.5	2	
-6.5	to	-6	2	
-6	to	-5.5	2	
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-3.5	to	-3.0	2	
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-1.5	to	-1.0	2	
-1.0	to	-0.5	2	
-0.5	to	0	2	
0	to	0.5	2	
0.5	to	1.0	2	
1.0	to	1.5	2	
1.5	to	2.0	2	
2.0	to	2.5	2	
2.5	to	3.0	2	
3.0	to	3.5	2	
3.5	to	4.0	2	
4.0	to	4.5	2	
4.5	to	5.0	2	
5.0	to	5.5	2	
5.5	to	6	2	
6	to	6.5	2	
6.5	to	7	2	
7.5	to	8	2	

AGPLOT BULK EARTHWORKS QUANTITIES (IN-PLACE)

TOTAL CUT VOLUME = 15m³
TOTAL FILL VOLUME = 620m³

IMPORTED FILL VOLUME = 605m³

Rev	Description	Date	By	App
B	DOCUMENT UPDATED FOR SCHEMATIC DESIGN	04.08.21	JDW	-
A	SCHEMATIC DESIGN	11.05.21	HM	-

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Project Name: HIGH SCHOOL IN BUNGENDORE
Drawing Title: AG PLOT BULK EARTHWORKS PLAN

SCHEMATIC DESIGN

Designed	GK	Approved	
Drawn	JF	Date	
Scale	1:200		North
Date	MAR. 2021	Project Ref	
Sheet	A0	Drawing No	Rev

20096 CE-SD-HS-2015 B

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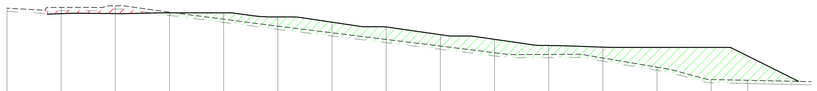


DESIGN GRADELINE

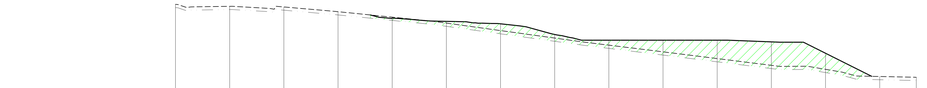
HORIZONTAL GEOMETRY

DATUM 686.9

SC10														
BULK EARTHWORKS SURFACE		696.962	696.964	696.200	696.200	696.611	695.788	695.550	695.192	694.977	694.694	694.696		
150mm STRIPPED SURFACE	696.268	696.299	696.374	696.089	695.757	695.424	695.128	694.822	694.516	694.210	694.131	693.967	693.542	692.972	692.936
EXISTING SURFACE	696.418	696.449	696.524	696.239	695.907	695.584	695.278	694.972	694.666	694.360	694.281	694.117	693.692	693.122	693.086
CHAINAGES	0.000	5.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	55.000	60.000	65.000	68.378

1 in 200 HORIZONTAL
1 in 100 VERTICAL

SC10 LONGITUDINAL SECTION



DESIGN GRADELINE

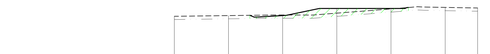
HORIZONTAL GEOMETRY

DATUM 686.8

SC11														
BULK EARTHWORKS SURFACE					695.720	695.568	695.455	694.963	694.700	694.700	694.700	694.620	693.671		
150mm STRIPPED SURFACE	696.264	696.111	696.083	695.865	695.612	695.338	694.992	694.647	694.319	694.172	693.700	693.388	693.204	692.813	692.837
EXISTING SURFACE	696.354	696.261	696.233	696.015	695.762	695.488	695.142	694.797	694.469	694.182	693.859	693.538	693.354	693.023	692.987
CHAINAGES	0.000	5.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	55.000	60.000	65.000	68.378

1 in 200 HORIZONTAL
1 in 100 VERTICAL

SC11 LONGITUDINAL SECTION



DESIGN GRADELINE

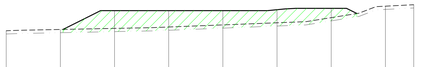
HORIZONTAL GEOMETRY

DATUM 689.6

SC12								
BULK EARTHWORKS SURFACE			695.873	696.200	696.200			
150mm STRIPPED SURFACE	695.691	695.722	695.750	695.835	696.031	696.099	696.074	
EXISTING SURFACE	695.841	695.872	695.900	695.985	696.181	696.249	696.224	
CHAINAGES	0.000	5.000	10.000	15.000	20.000	25.000	27.995	

1 in 200 HORIZONTAL
1 in 100 VERTICAL

SC12 LONGITUDINAL SECTION



DESIGN GRADELINE

HORIZONTAL GEOMETRY

DATUM 687.6

SC13									
BULK EARTHWORKS SURFACE			694.700	694.700	694.700	694.744	694.807		
150mm STRIPPED SURFACE	693.624	693.581	693.731	693.795	693.893	693.990	694.227	694.756	694.824
EXISTING SURFACE	693.774	693.731	693.881	693.945	694.043	694.140	694.377	694.906	694.974
CHAINAGES	0.000	5.000	10.000	15.000	20.000	25.000	30.000	35.000	37.618

1 in 200 HORIZONTAL
1 in 100 VERTICAL

SC13 LONGITUDINAL SECTION

Rev	Description	Date	By	App
B	DOCUMENT UPDATED FOR SCHEMATIC DESIGN	04.08.21	JDW	-
A	SCHEMATIC DESIGN	11.05.21	HM	-

Rev	Description	Date	By	App

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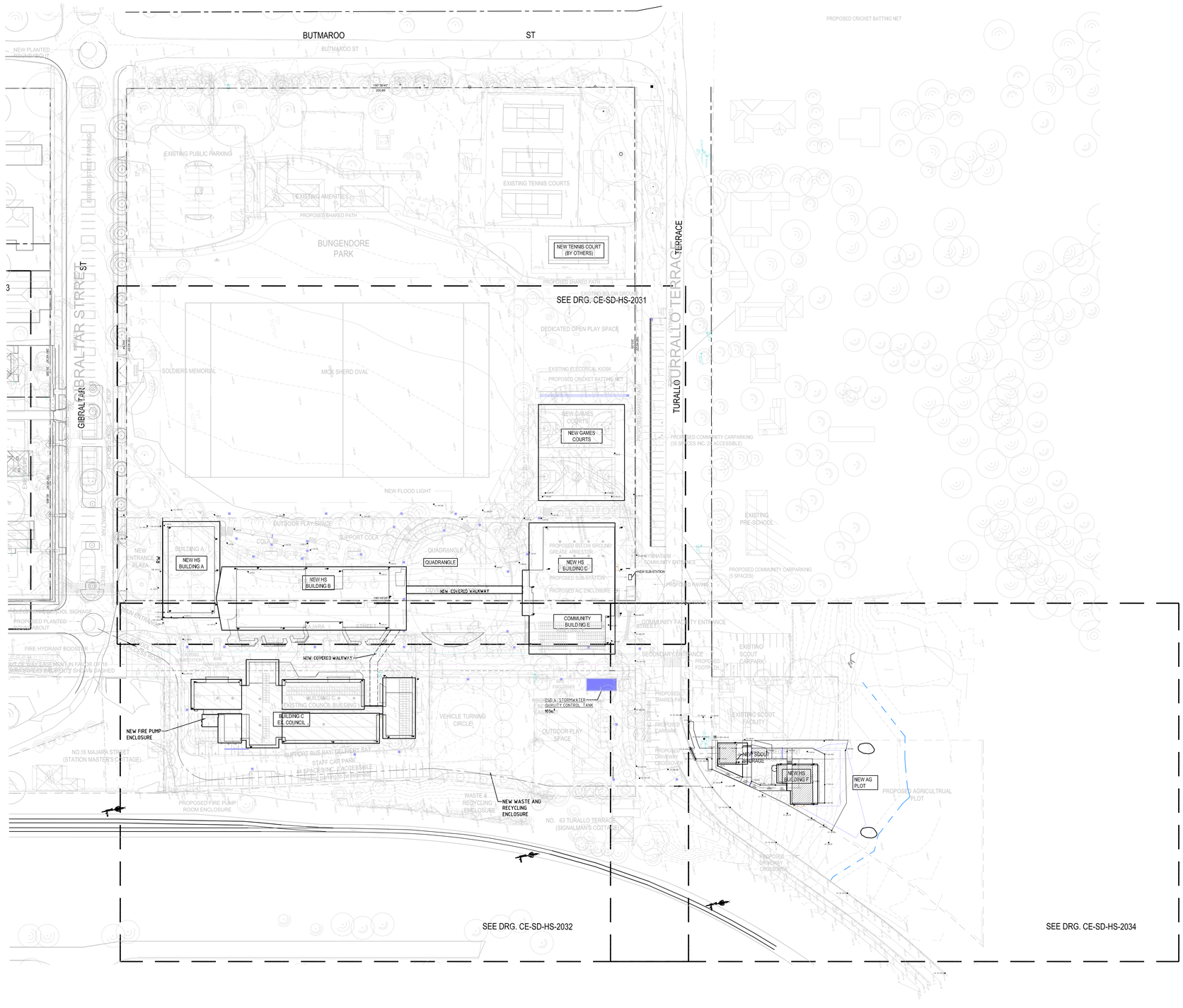
Project Name: HIGH SCHOOL IN BUNGENDORE

Drawing Title: AG PLOT
BULK EARTHWORKS
LONGITUDINAL SECTIONS

SCHEMATIC DESIGN

Designed	GK	Approved	North
Drawn	JF	Date	
Scale	AS SHOWN		
Date	MAR. 2021	Project Ref	Drawing No Rev
Sheet	A0	20096	CE-SD-HS-2016 B



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Rev	Description	Date	By	App
E	SCHEMATIC DESIGN	12.05.21	HM	-
D	SCHEMATIC DESIGN	07.05.21	HM	-
C	SCHEMATIC DESIGN	30.04.21	HM	-
B	SCHEMATIC DESIGN	16.04.21	HM	-
A	DRAFT SCHEMATIC DESIGN ISSUE	24.03.21	HM	-

Rev	Description	Date	By	App
G	DOCUMENT UPDATED FOR SCHEMATIC DESIGN	09.09.21	JDW	-
F	DOCUMENT UPDATED FOR SCHEMATIC DESIGN	06.08.21	JDW	-

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Project Name: HIGH SCHOOL IN BUNGENDORE

Drawing Title: GENERAL ARRANGEMENT PLAN

SCHEMATIC DESIGN

Designed	GK	Approved	
Drawn	JF	Date	
Scale	-		North
Date	MAR. 2021	Project Ref	
Sheet	A0	Drawing No	Rev

20096 CE-SD-HS-2030 G

SOLDIERS MEMORIAL

MICK SHERD OVAL

MICK SHERD OVAL

EXISTING BELOW GROUND IRRIGATION TANK

DEDICATED OPEN PLAY SPACE

EXISTING ELECTRICAL KIOSK

PROPOSED CRICKET BATTING NET

GRASSED OPEN DRAIN

NEW GAMES COURTS

NEW GAMES COURTS

FFL 694.800

PROPOSED SHARED PATH

TURALLO TERRACE

NEW PIT IN C
OF NEW CARP

NEW KERB & C

NEW FLOOD LIGHT

OUTDOOR PLAY SPACE

SUPPORT COLA

QUADRANGLE

QUADRANGLE

FFL 697.200

BUILDING A

NEW ENTRANCE PLAZA

BLD A
FFL 697.520

BUILDING B

BLD B
FFL 697.520

COVERED WALKWAY

PROPOSED BELOW GROUND GREASE

BLD D
FFL 697.200

NEW HS BUILDING D

BUILDING E

BLD E
FFL 697.200

PROPOSED SUB-STATION

PROPOSED A/C ENCLOSURE

NEW SUB-STATION

BUNGENDORE SWIMMING POOL

GYMNASIUM
COMMUNITY ENTRA

PROPOSE

PROPOSE

COMMUNITY FACII

MAIN ENTRANCE

MAJARA STREET

MAJARA STREET

FOR CONTINUATION REFER TO SHEET CE-CO-HS-2032

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E	SCHEMATIC DESIGN	12.05.21	HM	-
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C	SCHEMATIC DESIGN	30.04.21	HM	-
B	SCHEMATIC DESIGN	16.04.21	HM	-
A	DRAFT SCHEMATIC DESIGN ISSUE	24.03.21	HM	-
G	DOCUMENT UPDATED FOR SCHEMATIC DESIGN	09.09.21	JDW	-
F	DOCUMENT UPDATED FOR SCHEMATIC DESIGN	06.08.21	JDW	-

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Project Name: HIGH SCHOOL IN BUNGENDORE

Drawing Title: STORMWATER DRAINAGE PLAN SHEET 1

SCHEMATIC DESIGN

Designed	GK	Approved	
Drawn	JF	Date	
Scale	1:200		North
Date	MAR. 2021	Project Ref	Drawing No Rev
Sheet	A0	20096	CE-SD-HS-2031 G

FOR CONTINUATION REFER TO SHEET CE-CO-HS-2031

ALL EXISTING PROPERTY SERVICES' LOCATIONS AND DEPTHS ARE APPROXIMATE AND MUST BE VERIFIED ON SITE.
THE CONTRACTOR SHOULD SUPPLY PRECISE LOCATIONS AND DEPTHS TO THE ENGINEER FOR REVIEW PRIOR TO ANY WORKS THAT MAY AFFECT THESE SERVICES.

WARNING
NO DRAINAGE WORKS SHALL COMMENCE UNTIL THE CONTRACTOR CONFIRMS THE I.L. OF ALL EXISTING DRAINS, AND CONFIRMS IN WRITING WITH THE ENGINEERING SUPERVISOR.

WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES SHOWN ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE.

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Rev	Description	Date	By	App
E	SCHEMATIC DESIGN	12.05.21	HM	-
D	SCHEMATIC DESIGN	07.05.21	HM	-
C	SCHEMATIC DESIGN	30.04.21	HM	-
B	SCHEMATIC DESIGN	16.04.21	HM	-
A	DRAFT SCHEMATIC DESIGN ISSUE	24.03.21	HM	-

Rev	Description	Date	By	App
G	DOCUMENT UPDATED FOR SCHEMATIC DESIGN	04.08.21	JDW	-
F	SCHEMATIC DESIGN	11.06.21	HM	-

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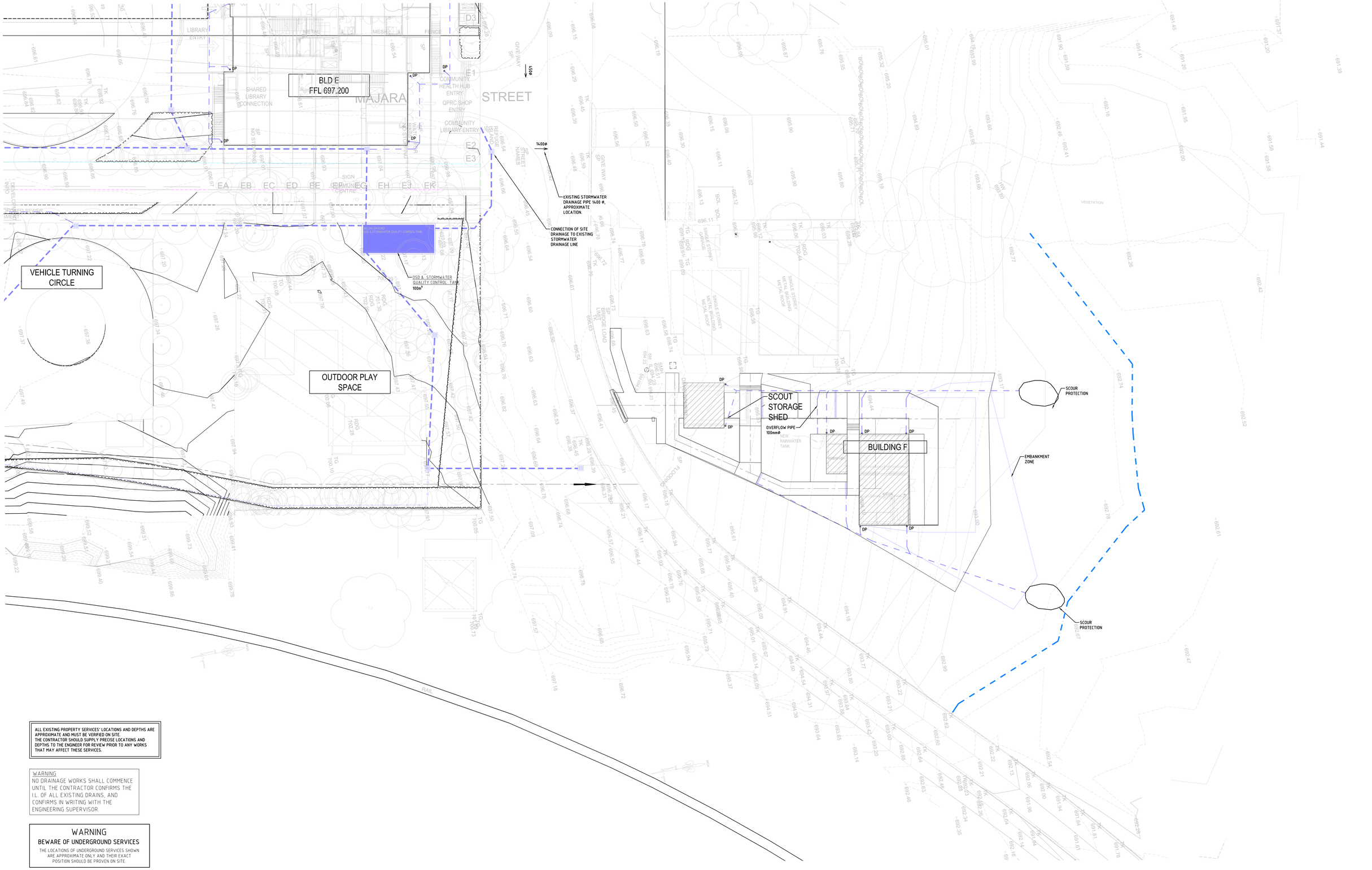
Project Name: HIGH SCHOOL IN BUNGENDORE

Drawing Title: STORMWATER DRAINAGE PLAN SHEET 2

SCHEMATIC DESIGN

Designed	GK	Approved	
Drawn	JF	Date	
Scale	1:200	North	
Date	MAR. 2021	Project Ref	
Sheet	A0	Drawing No	20096 CE-CO-HS-2032 G
		Rev	

FOR CONTINUATION REFER TO SHEET CE-CO-HS-2032



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THE CONTRACTOR SHOULD SUPPLY PRECISE LOCATIONS AND DEPTHS TO THE ENGINEER FOR REVIEW PRIOR TO ANY WORKS THAT MAY AFFECT THESE SERVICES.

WARNING
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WARNING
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Rev	Description	Date	By	App
E	DOCUMENT UPDATED FOR SCHEMATIC DESIGN	06.08.21	JDW	-
D	SCHEMATIC DESIGN	13.05.21	HM	-
C	SCHEMATIC DESIGN	07.05.21	HM	-
B	SCHEMATIC DESIGN	01.05.21	HM	-
A	SCHEMATIC DESIGN	30.04.21	HM	-

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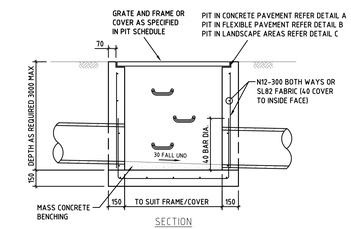
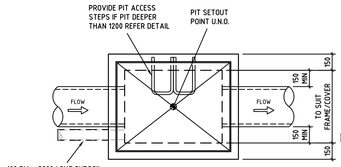
Project Name: HIGH SCHOOL IN BUNGENDORE
Drawing Title: STORMWATER DRAINAGE PLAN SHEET 3

SCHEMATIC DESIGN

Designed	GK	Approved	
Drawn	JF	Date	
Scale	1:200		North
Date	MAR. 2021	Project Ref	Drawing No Rev
Sheet	A0	20096	CE-CO-HS-2034 E



SECTION



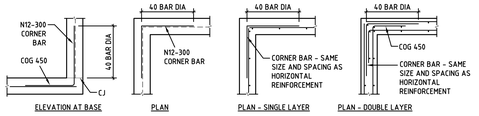
PLAN

SURFACE INLET/JUNCTION PIT DETAIL

SCALE 1:20

STORMWATER PIT NOTES

1. CONCRETE TO HAVE A MIN. COMPRESSIVE STRENGTH (F'c) OF 25 MPa AT 28 DAYS.
2. REINFORCEMENT NOT REQUIRED IF DEPTH OF PIT IS LESS THAN 1000mm. PITS GREATER THAN 3000mm DEEP TO HAVE WALL AND BASE 200mm THICK REINFORCED WITH N12-250 EACH WAY EACH FACE WITH CONCRETE STRENGTH F'c = 40 MPa.
3. PROVIDE STEP IRONS AT MAX 350mm CTRS IF DEPTH OF PIT EXCEEDS 1200mm.
4. IF REINFORCING FABRIC IS TO BE USED REFER TO WALL AND CORNER DETAILS
5. PRECAST PITS ARE TO GENERALLY COMPLY WITH THESE DETAILS.
6. PRECAST PIT MAY BE USED SUBJECT TO ENGINEERS APPROVAL.
7. ALL PITS TO BE LOCKABLE.
8. FINAL INTERNAL PIT DIMENSIONS ARE TO COMPLY WITH AS 3500.

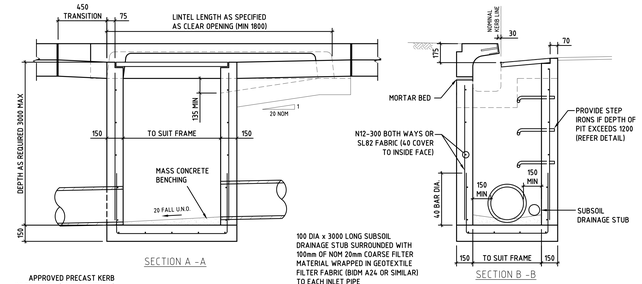


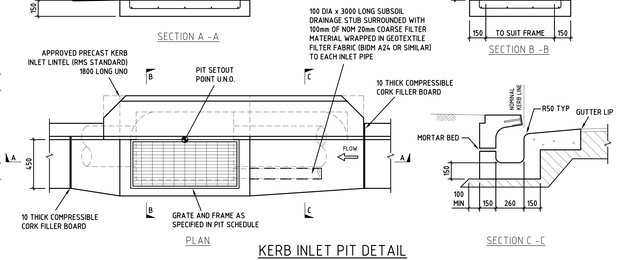
FABRIC REINFORCEMENT

PIT CORNER DETAILS

SCALE 1:20

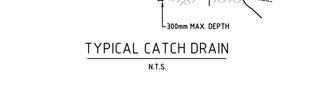
NOTE: DESIGNER TO VERIFY EXTENT OF DETAILING





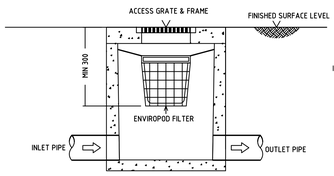
KERB INLET PIT DETAIL

SCALE 1:20

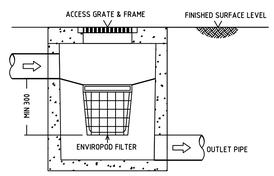


TYPICAL CATCH DRAIN

N.T.S.

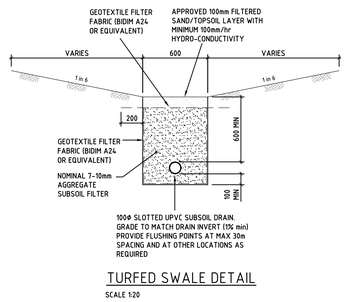


STANDARD ENVIROPOD CONFIGURATION SECTION



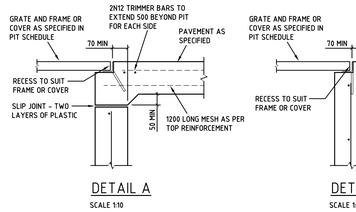
DROP PIPE ENVIROPOD CONFIGURATION SECTION

TYPICAL ENVIROPOD PIT DETAILS



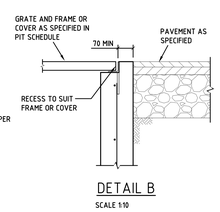
TURFED SWALE DETAIL

SCALE 1:20



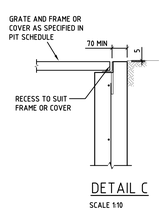
DETAIL A

SCALE 1:10



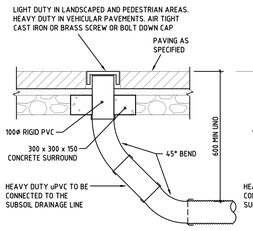
DETAIL B

SCALE 1:10



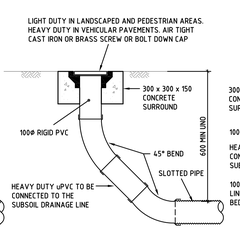
DETAIL C

SCALE 1:10



FLUSHOUT RISER (FOR) IN PAVING BRICKS

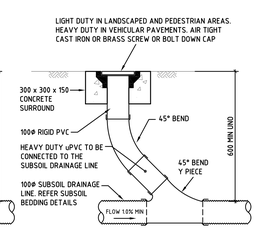
SCALE 1:10



FLUSHOUT RISER (FOR)

SCALE 1:10

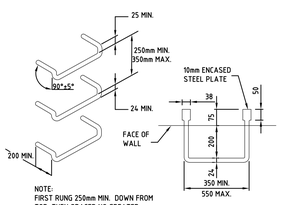
NOTE: SLOTTED RIGID PVC PIPE AND FITTINGS WITHIN DRAINAGE LAYER ONLY



INTERMEDIATE RISER

SCALE 1:10

NOTE: SLOTTED RIGID PVC PIPE AND FITTINGS MAY BE USED

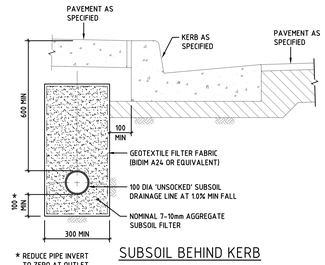


NOTE:
FIRST RUNG 250mm MIN. DOWN FROM TOP, THEN SPACED NO GREATER THAN 350mm MAX.
VERTICAL RISE DOES NOT EXCEED 6m IN ACCORDANCE WITH AS1657.

MATERIAL - 24mm DIA MILD STEEL HEAVY GALVANIZED

STEP IRONS FOR DRAINAGE PITS

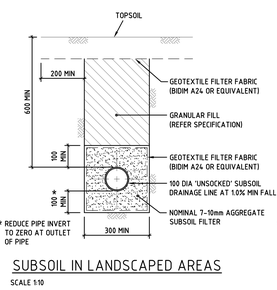
N.T.S.



* REDUCE PIPE INVERT TO ZERO AT OUTLET OF PIPE

SUBSOIL BEHIND KERB

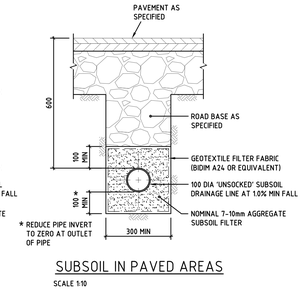
SCALE 1:10



* REDUCE PIPE INVERT TO ZERO AT OUTLET OF PIPE

SUBSOIL IN LANDSCAPED AREAS

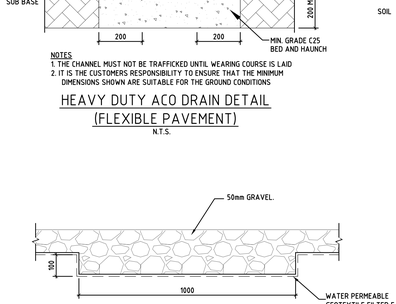
SCALE 1:10



* REDUCE PIPE INVERT TO ZERO AT OUTLET OF PIPE

SUBSOIL IN PAVED AREAS

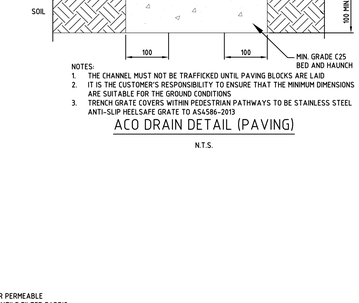
SCALE 1:10



NOTES
1. THE CHANNEL MUST NOT BE TRAFFICKED UNTIL WEARING COURSE IS LAID
2. IT IS THE CUSTOMERS RESPONSIBILITY TO ENSURE THAT THE MINIMUM DIMENSIONS SHOWN ARE SUITABLE FOR THE GROUND CONDITIONS

HEAVY DUTY ACO DRAIN DETAIL (FLEXIBLE PAVEMENT)

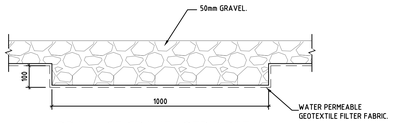
N.T.S.



NOTES:
1. THE CHANNEL MUST NOT BE TRAFFICKED UNTIL PAVING BLOCKS ARE LAID
2. IT IS THE CUSTOMER'S RESPONSIBILITY TO ENSURE THAT THE MINIMUM DIMENSIONS ARE SUITABLE FOR THE GROUND CONDITIONS
3. TRENCH GRATE COVERS WITHIN PEDESTRIAN PATHWAYS TO BE STAINLESS STEEL ANTI-SLIP HEELSAFE GRATE TO AS4586-2013

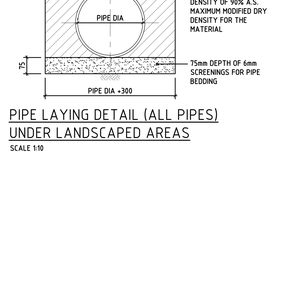
ACO DRAIN DETAIL (PAVING)

N.T.S.



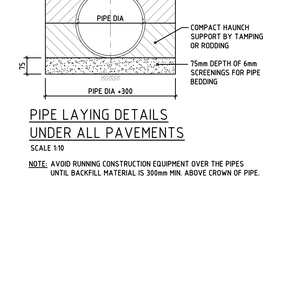
DRAINAGE GRAVEL STRIP DETAIL

SCALE 1:10



PIPE LAYING DETAIL (ALL PIPES) UNDER LANDSCAPED AREAS

SCALE 1:10



PIPE LAYING DETAILS UNDER ALL PAVEMENTS

SCALE 1:10

NOTE: AVOID RUNNING CONSTRUCTION EQUIPMENT OVER THE PIPES UNTIL BACKFILL MATERIAL IS 300mm MIN. ABOVE CROWN OF PIPE.

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Rev	Description	Date	By	App
E	SCHEMATIC DESIGN	17.05.21	HM	-
D	SCHEMATIC DESIGN	07.05.21	HM	-
C	SCHEMATIC DESIGN	30.04.21	HM	-
B	SCHEMATIC DESIGN	16.04.21	HM	-
A	DRAFT SCHEMATIC DESIGN ISSUE	24.03.21	HM	-
F	DOCUMENT UPDATED FOR SCHEMATIC DESIGN	04.08.21	JDW	-

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www.meinhardt-bonacci.com
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Project Name	HIGH SCHOOL IN BUNGENDORE
Drawing Title	STORMWATER DRAINAGE DETAILS

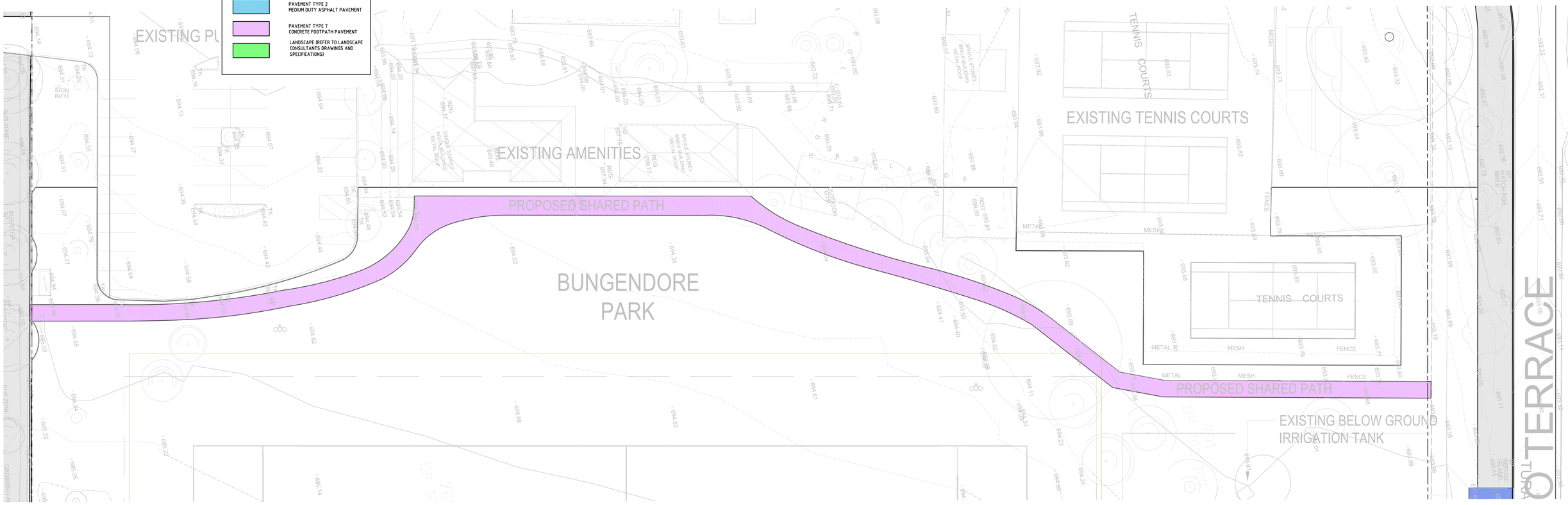
SCHEMATIC DESIGN

Designed	GK	Approved	
Drawn	HM	Date	
Scale	-		North
Date	MAR 2021	Project Ref	Drawing No Rev
Sheet	A0	20096	CE-SD-HS-2051 F

PAVEMENT LEGEND

NOTES
1. ASPHALTIC CONCRETE SHALL CONFORM TO AS2150 AND THE SPECIFICATIONS

- PAVEMENT TYPE 1 — HEAVY DUTY ASPHALT PAVEMENT
- PAVEMENT TYPE 2 — MEDIUM DUTY ASPHALT PAVEMENT
- PAVEMENT TYPE 7 — CONCRETE FOOTPATH PAVEMENT
- LANDSCAPE (REFER TO LANDSCAPE CONSULTANTS DRAWINGS AND SPECIFICATIONS)



FOR CONTINUATION REFER TO SHEET CE-CO-HS-2061

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Rev	Description	Date	By	App
A	DOCUMENT UPDATED FOR SCHEMATIC DESIGN	M	JDW	-

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Project Name: HIGH SCHOOL IN BUNGENDORE
Drawing Title: SITEWORKS AND PAVEMENT PLAN SHEET 1

SCHEMATIC DESIGN

Designed	GK	Approved	North
Drawn	JF	Date	
Scale	1:200		
Date	MAR. 2021	Project Ref	Drawing No Rev
Sheet	A0	20096	CE-SD-HS-2060 A

FOR CONTINUATION REFER TO SHEET CE-CO-HS-2060

PAVEMENT LEGEND

NOTES
1. ASPHALTIC CONCRETE SHALL CONFORM TO AS2150 AND THE SPECIFICATIONS

- PAVEMENT TYPE 1 HEAVY DUTY ASPHALT PAVEMENT
- PAVEMENT TYPE 2 MEDIUM DUTY ASPHALT PAVEMENT
- PAVEMENT TYPE 7 CONCRETE FOOTPATH PAVEMENT
- LANDSCAPE (REFER TO LANDSCAPE CONSULTANTS DRAWINGS AND SPECIFICATIONS)

SOLDIERS MEMORIAL
MICK SHERD OVAL
EXISTING BELOW GROUND IRRIGATION TANK
DEDICATED OPEN PLAY SPACE
EXISTING ELECTRICAL KIOSK
PROPOSED CRICKET BATTING NET
NEW GAMES COURTS
PROPOSED SHARED PATH
NEW FLOOD LIGHT
OUTDOOR PLAYSPACE
SUPPORT LOLA
QUADRANGLE
COVERED WALKWAY
BUILDING A
BUILDING B
NEW ENTRANCE PLAZA
NEW HS BUILDING A
NEW HS BUILDING B
BLD A FFL 697.520
BLD B FFL 697.520
PROPOSED BELOW GROUND GREASE ARRESTOR
BLD D FFL 697.200
NEW HS BUILDING D
PROPOSED SUB-STATION
PROPOSED A/C ENCLOSURE
BLD E FFL 697.200
COMMUNITY BUILDING E
NEW SUB-STATION
GYMNASIUM
COMMUNITY ENTRANCE
COMMUNITY FACILITY
PROPOSED
MAJARA STREET
MAIN ENTRANCE
SCHOOL
100°45'25" 202.54
190°45'25" 201.17
100°40'25" 203.05

FOR CONTINUATION REFER TO SHEET CE-CO-HS-2062

Rev	Description	Date	By	App
E	SCHEMATIC DESIGN	12.05.21	HM	-
D	SCHEMATIC DESIGN	07.05.21	HM	-
C	SCHEMATIC DESIGN	30.04.21	HM	-
B	SCHEMATIC DESIGN	16.04.21	HM	-
A	DRAFT SCHEMATIC DESIGN ISSUE	24.03.21	HM	-
G	DOCUMENT UPDATED FOR SCHEMATIC DESIGN	09.09.21	JDW	-
F	DOCUMENT UPDATED FOR SCHEMATIC DESIGN	06.08.21	JDW	-

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www.meinhardt-bonacci.com

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Project Name: HIGH SCHOOL IN BUNGENDORE
Drawing Title: SITEWORKS AND PAVEMENT PLAN SHEET 2

SCHEMATIC DESIGN

Designed	GK	Approved	
Drawn	JF	Date	
Scale	1:200	North	
Date	MAR. 2021	Project Ref	
Sheet	A0	Drawing No	20096 CE-SD-HS-2061
		Rev	G

FOR CONTINUATION REFER TO SHEET CE-CO-HS-2031

BLD B
FFL 697.520

NEW HS
BUILDING B

190°45'25"
201.17

COVERED WALKWAY

PROPOSED A/C ENCLOSURE

BLD E
FFL 697.200

COMMUNITY
BUILDING E

MAJARA STREET

SCHOOL ACCESS ROAD

MAIN ENTRANCE

EXISTING BUS STATION

BIKE ENCLOSURE

HIGH SCHOOL PLAZA

BUILDING C
(EXISTING COUNCIL BUILDING)

BLD C
FFL 698.00

BUILDING C
EX. COUNCIL

VEHICLE TURNING CIRCLE

PROPOSED SEWER EASEMENT

OUTDOOR PLAY SPACE

SUPPORT BUS BAY/ DELIVERY BAY

STAFF CAR PARK
44 SPACES INC. 2 ACCESSIBLE
(existing parking to be retained)

PROPOSED FIRE PUMP

WASTE & RECYCLING ENCLOSURE

NO. 63 TURALLO TERRACE
(SIGNALMAN'S COTTAGE)

COMMUNITY FA

SECONDARY EN

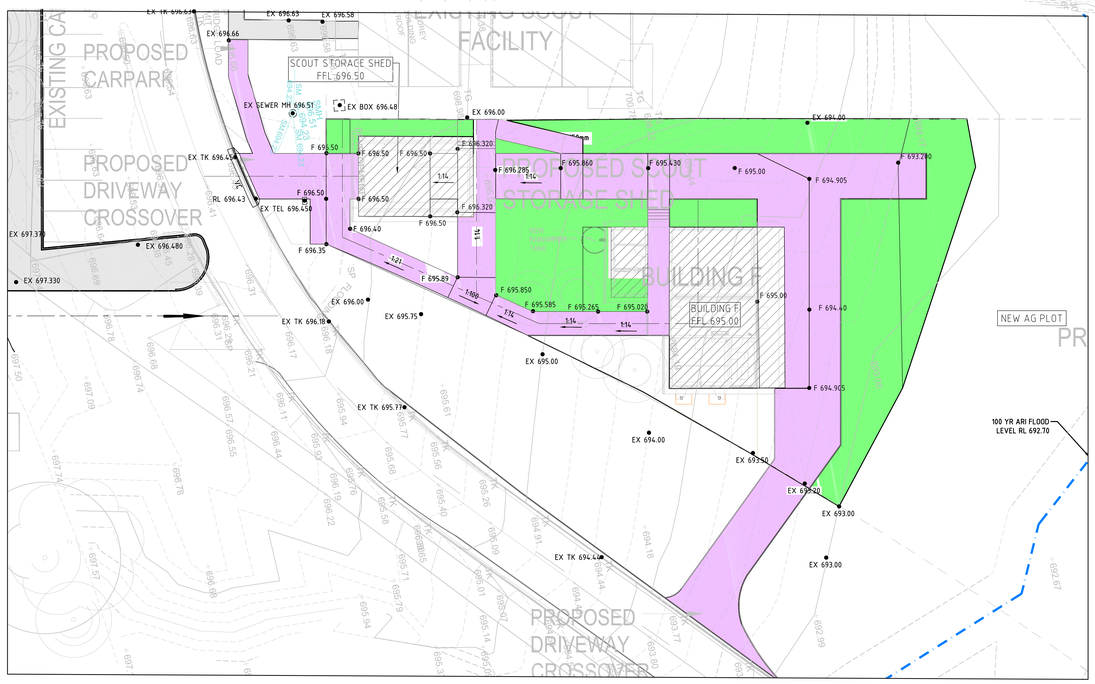
PROPOSED SHARED PA

EXISTING CARPARK

PROPOSED CARPARK

PROPOSED DRIVEWAY CROSSOVER

FOR CONTINUATION REFER TO SHEET CE-SD-HS-2062 BELOW



FOR CONTINUATION REFER TO SHEET CE-SD-HS-2062 ABOVE

PAVEMENT LEGEND

NOTES
1. ASPHALTIC CONCRETE SHALL CONFORM TO AS2150 AND THE SPECIFICATIONS

- PAVEMENT TYPE 1 — HEAVY DUTY ASPHALT PAVEMENT
- PAVEMENT TYPE 2 — MEDIUM DUTY ASPHALT PAVEMENT
- PAVEMENT TYPE 7 — CONCRETE FOOTPATH PAVEMENT
- LANDSCAPE (REFER TO LANDSCAPE CONSULTANT'S DRAWINGS AND SPECIFICATIONS)

ALL EXISTING PROPERTY SERVICES' LOCATIONS AND DEPTHS ARE APPROXIMATE AND MUST BE VERIFIED ON SITE.
THE CONTRACTOR SHOULD SUPPLY PRECISE LOCATIONS AND DEPTHS TO THE ENGINEER FOR REVIEW PRIOR TO ANY WORKS THAT MAY AFFECT THESE SERVICES.

WARNING
NO DRAINAGE WORKS SHALL COMMENCE UNTIL THE CONTRACTOR CONFIRMS THE I.L. OF ALL EXISTING DRAINS, AND CONFIRMS IN WRITING WITH THE ENGINEERING SUPERVISOR.

WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES SHOWN ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE.

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Rev	Description	Date	By	App
E	SCHEMATIC DESIGN	12.05.21	HM	-
D	SCHEMATIC DESIGN	07.05.21	HM	-
C	SCHEMATIC DESIGN	30.04.21	HM	-
B	SCHEMATIC DESIGN	16.04.21	HM	-
A	DRAFT SCHEMATIC DESIGN ISSUE	24.03.21	HM	-

Rev	Description	Date	By	App
H	DOCUMENT UPDATED FOR SCHEMATIC DESIGN	09.09.21	JDW	-
G	DOCUMENT UPDATED FOR SCHEMATIC DESIGN	06.08.21	JDW	-
F	SCHEMATIC DESIGN	11.06.21	HM	-

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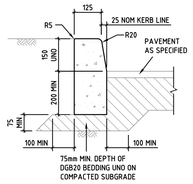
Project Name: HIGH SCHOOL IN BUNGENDORE
Drawing Title: SITE WORKS & PAVEMENT PLAN SHEET 3

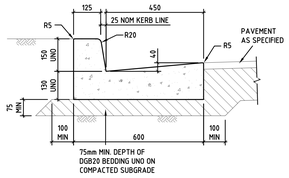
SCHEMATIC DESIGN

Designed	GK	Approved	Date
Drawn	JF		
Scale	1:200		North
Date	MAR. 2021	Project Ref	Drawing No Rev
Sheet	A0	20096	CE-SD-HS-2062 H



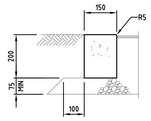
KERB ONLY (KO)

SCALE 1:10



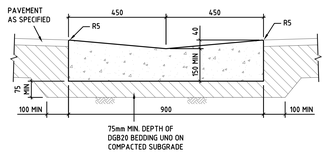
KERB AND GUTTER (K&G)

SCALE 1:10



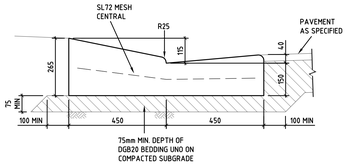
FLUSH KERB (FK)

SCALE 1:10



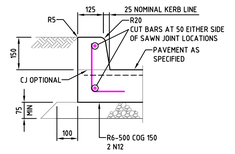
DISH DRAIN (DD1)

SCALE 1:10



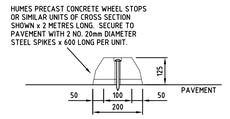
VEHICULAR CROSSING (VC)

SCALE 1:10



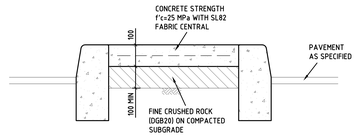
INTERGRAL KERB (IK)

SCALE 1:10



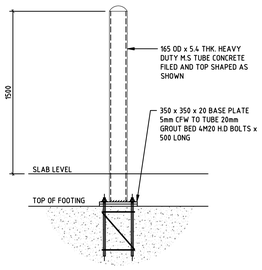
PRECAST WHEEL STOP

N.T.S.

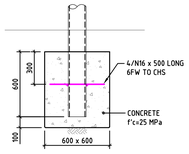


CONCRETE ISLAND INFILL

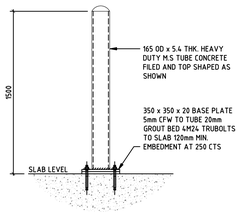
SCALE 1:10



BOLLARD DETAIL TYPE 1 (FOOTING)



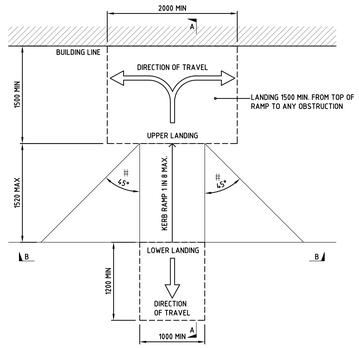
BOLLARD FOOTING DETAIL



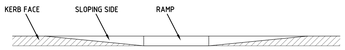
BOLLARD DETAIL TYPE 2 (SLAB)

TYPICAL BOLLARD DETAILS

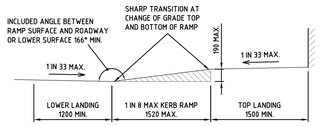
SCALE 1:20



PLAN VIEW



SECTION B - B



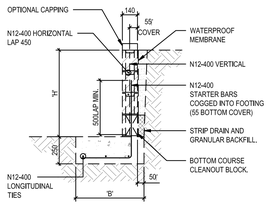
SECTION A - A

PRAM RAMP DETAIL

NTS

NOTES

1. THE RAMP AND SLOPING SIDES SHOULD BE SLIP RESISITANT AND OF A COLOUR THAT CONTRASTS WITH THE ADJOINING SURFACES.
2. A TACTILE INDICATOR, AS SPECIFIED IN AS1428.4 SHOULD BE INTEGRATED AND EXTENDED FOR 200mm AWAY FROM THE RAMP AT THE SHARP TRANSITION AT THE TOP AND BOTTOM OF THE RAMP. THIS COULD TAKE THE FORM OF ROUGH BROOMING OR SIMILAR TEXTURE WHICH WILL AID ORIENTATION FOR PEOPLE WITH A VISUAL IMPAIRMENT.
3. # WHERE CONSTRAINTS DICTATE THE ANGLE MAY BE REDUCED TO 30° IN ACCORDANCE WITH RMS STANDARD DRAWING No. R0300-11.
4. MINIMUM 125mm THICKNESS OF CONCRETE REINFORCED WITH SL82 MESH BOTTOM, 40mm COVER



RETAINING WALL - 1.0m HIGH MAX. (TYPE 2)

SCALE 1:20

- WALLS TO BE CONSTRUCTED USING 140 'H' BLOCKS
- ALL BLOCKWORK TO BE CONCRETE CORE FILLED AS PER BLOCKWORK RETAINING WALL NOTES

BASE DIMENSIONS	
'H' (HEIGHT mm)	'B' (BASE mm)
600	600
800	700
1000	900

Rev	Description	Date	By	App
E	SCHEMATIC DESIGN	12.05.21	HM	-
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F	DOCUMENT UPDATED FOR SCHEMATIC DESIGN	04.08.21	JDW	-

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NSW GOVERNMENT Education School Infrastructure

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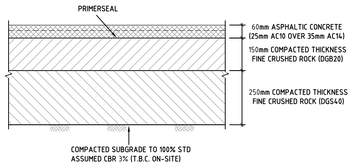
Project Name: HIGH SCHOOL IN BUNGENDORE
Drawing Title: SITEWORKS DETAILS

SCHEMATIC DESIGN

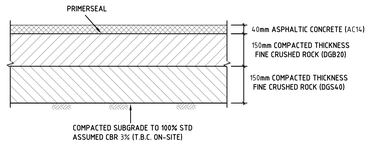
Designed	GK	Approved	North
Drawn	HM	Date	
Scale	AS SHOWN		
Date	MAR. 2021	Project Ref	Drawing No / Rev
Sheet	A0	20096	CE-SD-HS-2071 F



PAVEMENT TYPE P1
HEAVY DUTY ASPHALT PAVEMENT

SCALE 1:10

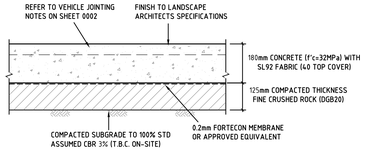
DENOTED ON PLAN



PAVEMENT TYPE P2
MEDIUM DUTY ASPHALT PAVEMENT

SCALE 1:10

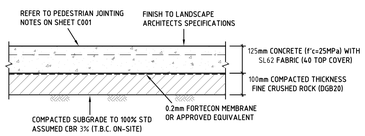
DENOTED ON PLAN



PAVEMENT TYPE P4
HEAVY DUTY CONCRETE PAVEMENT

SCALE 1:10

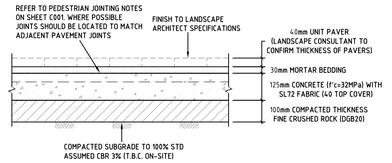
DENOTED ON PLAN



PAVEMENT TYPE P7
CONCRETE FOOTPATH PAVEMENT

SCALE 1:10

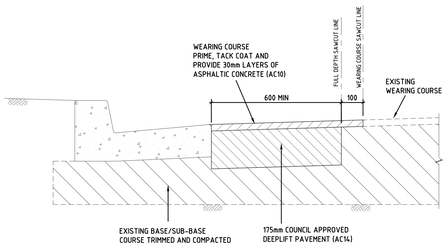
DENOTED ON PLAN



PAVEMENT TYPE P8
LIGHT DUTY UNIT PAVERS

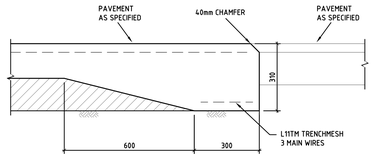
SCALE 1:10

DENOTED ON PLAN



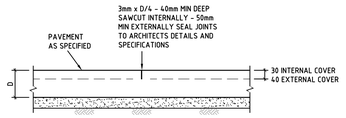
PAVEMENT - DEEPLIFT

SCALE 1:10



EDGE THICKENING (ET)

SCALE 1:10

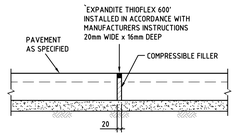


SAWCUT JOINT (SJ)

SCALE 1:10

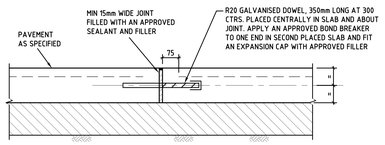
NOTES

1. SLAB MUST BE SAWCUT AS SOON AS PRACTICABLE AFTER FINISHING OF THE SLAB WITHOUT CAUSING DAMAGE TO THE SAWCUT EDGES - USUALLY 12-24 HOURS.
2. SLABS MUST NOT BE POURED IF TEMPERATURE EXCEEDS 32°
3. HOT WEATHER PLACING (25° AND OVER) MAY REQUIRE SLABS TO BE SAWCUT AS SOON AS 5-6 HOURS AFTER POURING.
4. ANY SLAB BAY IN WHICH SHRINKAGE CRACKS OCCUR DUE TO LATE SAWCUTTING MUST BE REMOVED AND REPLACED BY THE BUILDER/CONTRACTOR.



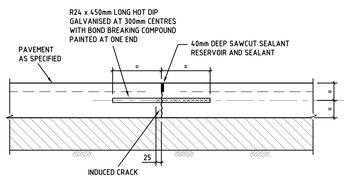
EXPANSION JOINT (EJ)

SCALE 1:10



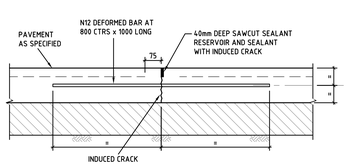
DOWELLED EXPANSION JOINT (DEJ)

SCALE 1:10



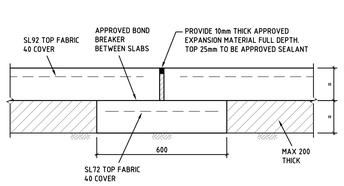
TRANSVERSE CONTRACTION JOINT (TCJ)

SCALE 1:10



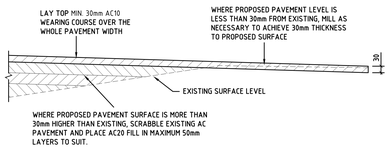
LONGITUDINAL WARPING JOINT (LWJ)

SCALE 1:10



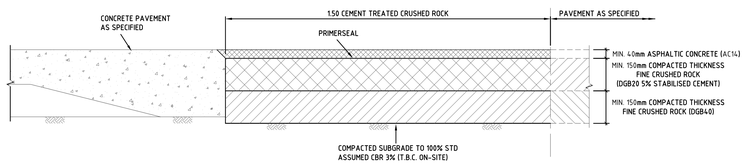
ISOLATION JOINT (IJ) WITH SUBGRADE BEAM

SCALE 1:20



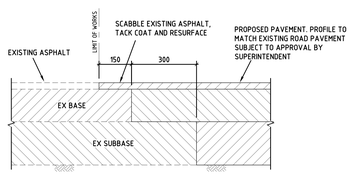
MILL RE-SHEET/SCRABBLE AND FILL DETAIL

SCALE 1:10



CONCRETE CONNECTION TO ASPHALT PAVEMENT

SCALE 1:10



ASPHALT CONNECTION TO EXISTING PAVEMENT

SCALE 1:10

Rev	Description	Date	By	App
E	SCHEMATIC DESIGN	12.05.21	HM	-
D	SCHEMATIC DESIGN	07.05.21	HM	-
C	SCHEMATIC DESIGN	30.04.21	HM	-
B	SCHEMATIC DESIGN	16.04.21	HM	-
A	DRAFT SCHEMATIC DESIGN ISSUE	24.03.21	HM	-
F	DOCUMENT UPDATED FOR SCHEMATIC DESIGN	04.08.21	JDW	-

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Drawing Title: SITEWORKS DETAILS

SCHEMATIC DESIGN

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Drawn	HM	Date	
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Date	MAR. 2021		
Sheet	A0	Project Ref	Drawing No Rev

20096 CE-SD-HS-2091 F