ARCHADIA

PROJECTS

DEMOLITION MANAGEMENT PLAN

VERSION 2.0 - APRIL 2023

PROPOSED HEALTH SERVICES FACILITY

LOTS 1 + 2 /-/ DP877977

31-33 SMITH STREET CHARLESTOWN NSW 2290

PREPARED BY

ARCHADIA PROJECTS PTY LTD

ABN: 88 148 163 357

Report Details

Report:	**Title**	Preliminary Demolition Management Plan
	Status	Development Application
	Version	2.0
	Date	April 2023
Project:	**Proposed Facility**	Health Services Facility
	Location	31 – 33 Smith Street
		Charlestown NSW 2290
Prepared for:	**Client**	GPV Charlestown Pty Ltd (ATF)
		GPV Charlestown Trust
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Summary of Revisions

Version:	Date:	Author:	Status:
01	April 2023	IG	Draft for comment
02	April 2023	IG	DA Lodgement

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1.0 INTRODUCTION

This Demolition Management Plan (DMP) has been prepared to outline the intended strategies to be adopted during the demolition phase required prior to the construction of a proposed **Health Services Facility** at 31-33 Smith Street, Charlestown, New South Wales (the **Project**). This document supports a Regionally Significant Development Application (DA) submitted to Lake Macquarie City Council in accordance with the requirements of the *Environmental Planning and Assessment Act 1979*. This Preliminary Demolition Management Plan is a supporting document provided with the Statement of Environmental Effects (SEE) prepared by Wilson Planning and should be read in conjunction with the other related supporting documentation for the Project.

1.1 Background

The Developer of this project is GPV Charlestown Pty Ltd ATF GPV Charlestown Trust, a part of the GPV Property Group of companies. GPV Property Group is an experienced, locally based healthcare developer that has delivered many successful healthcare developments in the Newcastle, Lake Macquarie, Port Stephens and Blue Mountains regions over the last 12 years. Successfully completed projects include Crossroads Medical Precinct, Glendale ($13M); Warners Bay Medical Centre Stages 1 & 2 ($23M); Andrew Nash Centre, Wallsend ($8M); Newcastle Healthcare Stage 1 ($20M); Salamander Bay Medical Centre ($11M); Cooks Hill Medical Precinct ($48M); and Thornton Medical Centre ($16M).

The proposed development comprises a Health Services Facility, including a Medical Centre and Pharmacy. At the time of preparation of this document, the proposed development is more than 50% leased. Sonic Healthcare will be providing primary care including a general practice, pathology, radiology, pharmacy and skin cancer clinic on the ground floor. Ramsay Healthcare has leased the top floor of the proposed development and may provide more acute services such as a Private Hospital / Day Surgery use. The balance of the available tenancy space is being provided as consultation rooms for surgical / non-surgical healthcare disciplines and various other related allied health service providers. Strong interest has already been shown for these areas due to the central location, provision of parking and the opportunity to co-locate with the particular anchor tenants.

1.2 Scope & Objectives of this Report

This Demolition Management Plan has been prepared to outline the intended strategies to be adopted during the small demolition phase required prior to the construction of the project. The scope addressed by this report includes:

+ Staging of the Project
+ Working Hours
+ Worker & Site Safety
+ Site Security & Access
+ Materials Handling, Pedestrian & Traffic Management
+ Construction Waste Management
+ Construction Noise & Vibration Management
+ Air & Dust Management
+ Stormwater & Sediment Management

It should be noted that the strategies outlined herein are preliminary in nature and subject to confirmation by the builder once technical documentation and further consultation with the various stakeholder authorities is complete.

2.0 THE SITE

The proposed site is located in the central business district of Charlestown, which is the largest suburb of the City of Lake Macquarie in New South Wales.

2.1 Location & Extent

Charlestown is located on the north-eastern side of Lake Macquarie on the Pacific Highway (A43) approximately 10km south-west of the Newcastle central business district.

The site is broadly rectangular in shape and has an area of approximately 8,096sqm. It is identified as Lots 1 & 2, DP 877977, and is known as 31-33 Smith Street, Charlestown. The site has a diagonal fall from RL 111.0 AHD in the north-eastern corner down to RL105 AHD in the south-western corner adjoining the Pacific Highway / Frederick Street signalised intersection.

Figure 2.1: Locality Plan

2.2 Context

The site is located in the central commercial area of Charlestown with high visibility on an arterial road and good access to public transport. This location is approximately 150m from "Charlestown Square," the region's largest shopping centre situated just to the west of the proposed development.

The subject property is bounded by 3 street frontages: the Pacific Highway (A43) to the west; Frederick Street to the south; and Smith Street to the east. The northern boundary adjoins a fast food outlet to the northwest and a commercial office building with car park to the northeast.

2.3 History

Public records show that the subject site was originally owned by the Waratah Coal Company and donated to the community for use as a public school in 1877. Charlestown Public School was subsequently constructed and opened in October of 1879. Various alterations and new buildings were added during the early 1900's and additional land was procured to the east to provide additional playground area for the students.

New school buildings made from concrete were constructed on the eastern site and the original timber school buildings were demolished circa 1957. In 1974, new buildings were added to form an Infants Department for the school until the school was decommissioned in 1996.

In the late 1990's the former school facility was converted for use as NSW Department of Education & Training (TAFE) – Lake Macquarie District Office. Ownership appears to have been jointly held between State and Local Governments until transferred to Lake Macquarie City Council in 2003.

The former Infants School / TAFE buildings were demolished in late 2008 or early 2009 leaving one brick classroom on the site. A temporary car park was constructed on the site in late 2009 / early 2010 as ancillary works to support the construction of a major expansion to the shopping centre. The remaining brickwork classroom was demolished in 2014 and GPT removed its temporary car park in late 2017 / early 2018.

Lake Macquarie Council sold the site to Minmi Road Pty Ltd in 2018, which subsequently sold the property in 2021 to GPV Charlestown Pty Ltd, who is the current owner and developer of the Project.

3.0 THE PROPOSAL

The GPV Property Group is an experienced developer of private healthcare infrastructure in the Hunter Region and other areas of NSW. GPV Property is seeking approval to develop the subject site for the purposes of constructing a health services facility, car parking structure and associated civil works, services infrastructure, landscaping and signage works.

3.1 Proposed Parking Facilities

The proposed development includes a 3-storey, split-level, concrete framed car parking structure combined with on-grade concrete hardstand to provide vehicular parking spaces for staff, patients, visitors, deliveries, and ambulances. The vehicular parking is comprised of:

Parking:	245 car spaces including 6 accessible spaces
Drop off:	4 car spaces
Ambulance:	2 dedicated spaces
Delivery/Service:	3 dedicated spaces
Truck Loading:	1 Loading Dock (MRV capacity)
Motorbike:	12 spaces
Bicycle:	24 spaces

The proposed vehicular parking structure is to have two-way access-egress to Smith Street on the eastern boundary of the site via a kerb-crossing in a similar location to the existing crossing. Limited vehicular access will be provided from Frederick Street for service vehicles up to MRV size and for Patient drop-off only. The service vehicles wll be permitted to exit the site back on to Frederick Street due to manoeuvring and height constraints whereas all patient drop-off vehicles will be required to exit the site via the eastern, Smith Street exit. The top 2 levels of the car park are proposed as dedicated staff car parking. Two emergency egress stairs and a passenger lift service the car parking structure.

3.2 Proposed Health Services Facility

The proposed development also includes a 4-storey, concrete framed health services building with a rooftop plant area, passenger / bed lifts and a separate goods lift serviced by a dedicated loading dock. This structure will comprise a Base Building for the following uses that will be subject to separate fitout applications:

Level 1: Medical Centre with space for General Practice, Pathology, Imaging, Skin Clinic and Pharmacy.
Level 2: Specialist and Allied Healthcare Consulting Rooms.
Level 3: Specialist and Allied Healthcare Consulting Rooms.
Level 4: Private Hospital with 2 Operating Rooms and a 23 Bed Inpatient Unit.

At the time of preparation of this document, the proposed development is more than 50% leased with all of the Level 1 primary healthcare, all of the Level 4 private hospital and part of Level 3 leased. The balance of the available tenancy space is being proposed as consultation rooms for surgical / non-surgical healthcare disciplines and various other related allied health service providers. Strong interest has already been shown for these areas due to the central location, provision of parking and the opportunity to co-locate with the particular anchor tenants.

3.3 Scope of Demolition Work

The proposed development includes the removal of existing trees and the demolition of existing brick and timber retaining walls, a concrete ramp, a small concrete paving slab and miscellaneous sewer and stormwater pipework and pits, before the construction of the new health services facility. Refer to the drawing DA-06 Existing Site Plan in Appendix A.

The works are expected to be split into two distinct contracts for the purposes of expediency: an early works contract to demolish, excavate and prepare the site ready for the commencement of construction; and a main contract for the two main building structures.

The outline scope of works for the project includes, but is not limited to:

a) Site establishment and security; temporary services connections; and installation of temporary shed accommodation and amenities.

b) Removal of existing trees and miscellaneous minor demolition of redundant items on site.

c) Bulk and detailed excavation and earthworks.

d) Installation of retaining walls and other civil works.

e) Installation of in-ground services such as water, sewer, electrical, stormwater and telecommunications.

f) Installation of foundations and reinforced concrete ground slabs.

g) Construction of reinforced concrete frame and suspended slabs.

h) Construction of reinforced concrete blockwork stair and lift shafts.

i) Construction of steel framed walls with insulated lightweight cladding.

j) Installation of aluminium framed windows, doors and louvre panels.

k) Installation of applied membrane and metal sheet roofing.

l) Installation of services, plant and equipment.

m) Construction of car parks, roads and paving.

n) Construction of external works and landscaping.

o) Installation of signage.

4.0 PRELIMINARY DEMOLITION MANAGEMENT PLANS

The Demolition Management Plan (DMP) outlines the methods and procedures that will be implemented to manage demolition activities in an orderly fashion such that the work does not lead to unsafe work conditions or the generation of unacceptable levels of environmental or community disturbance over the duration of the works.

The planning and implementation of the DMP will be completed in consultation with the relevant professional consultants, and the statutory authorities. Correct implementation of the DMP is vital for the successful outcome of the development.

This Preliminary Demolition Management Plan is a supporting document provided with the Environmental Impact Statement (EIS) prepared by Wilson Planning and should be read in conjunction with the other related supporting DA documentation for the Project. It should be noted that the strategies outlined herein are preliminary in nature and subject to confirmation by the builder once technical documentation and further consultation with the various stakeholder authorities is complete.

4.1 Staging of the Project

For the purposes of authority approvals the proposed development should be understood as comprising a single stage of development. From a contractual perspective, the proposed development is likely to be let as two contracts, one for early works (demolition, excavation and civil works); and a second contract for the building works; all to be built consecutively.

4.2 Working Hours

The consent conditions for the proposed development will outline the approved working hours for the project. Indicatively, the approved working hours are likely to be similar to the following:

Monday to Friday:	7:00am to 6:00pm; subject to DA Consent Conditions.
Saturday:	7:00am to 1:00pm if inaudible on residential premises; 8:00am to 1:00pm otherwise; subject to DA Consent Conditions.
Sunday + Public Holidays:	No work permitted. Work outside these hours requires written consent.

4.3 Worker & Site Safety

The proposed construction works will be carried out in accordance with the current requirements of the Work Health & Safety Act and its associated Regulations to protect the safety of all workers on the site. The Principal Contractor in control of the site will prepare a site and stage specific safety plan prior to commencing any work on site.

The Principal Contractor will implement the following safety strategies and measures during demolition subject to final confirmation prior to commencement of the works:

a) The Principal Contractor will prepare a site and stage specific safety plan based on risk analysis and safe work method statements (SWMS). All contract and subcontract staff will be required to adhere to the safety plan.

b) The Principal Contractor will require the subcontractors to carry out their own respective risk analyses and produce their own SWMS for approval. All subcontractors will carry out the work in accordance with the approved SWMS and regulatory requirements.

c) The Principal Contractor will organise and convene a rolling site/stage specific safety induction programme for staff and subcontractors. The safety induction programme will cover safety and amenity issues including working hours, site amenities, access and emergency evacuation procedures, first-aid facilities, as well as environmental risk issues including noise, dust stormwater and erosion management.

d) An 1800 high chain-mesh, temporary, security fence will be positioned around the perimeter of the site (where it is not already fenced).

e) The site fence will be clad with shade mesh to suppress dust, increase privacy and improve the aesthetic appearance of the site.

f) The requisite statutory safety signage with emergency contact information will be prominently displayed on the fence.

g) Temporary hoardings and safety barriers required for the demolition works will be designed by an approved subcontractor and submitted to local regulatory authorities for approval where required.

4.4 Site Security & Access

Site security and access management is required to safeguard the general public as well as to secure the demolition works, the tools and equipment both during, and after hours.

The following are some of the key measures that will be taken to manage site security and access:

a) An 1800 high chain-mesh, temporary, security fence will be positioned around the perimeter of the site (where it is not already fenced).

b) The site fence will be clad with shade mesh to suppress dust, increase privacy and improve the aesthetic appearance of the site.

c) The requisite statutory safety signage with emergency contact information will be prominently displayed on the fence.

d) A vehicular access gate will be provided to the site at the designated entry/exit location and these gates will be secured after-hours with a padlock.

e) The driveways of adjoining developments will not be blocked with vehicles. Occupants of adjoining buildings will be able to access to and from their properties at all times unless by prior arrangement with the affected neighbour.

f) Subcontractors will not be permitted to access neighbouring properties. In the unlikely event that access is required, the Principal Contractor will make prior arrangement and seek agreement with the affected neighbour(s).

g) The Principal Contractor will provide temporary safety and security lighting to illuminate circulation zones and risk prone work areas.

4.5 Materials Handling, Pedestrian & Traffic Management

The purpose of the Materials Handling, Pedestrian and Traffic Management Plan is to minimise the impacts of demolition work on the public domain, particularly with respect to safety issues and temporary interruptions to traffic flow and parking. The Principal Contractor must ensure that public safety is maintained at all times and, that wherever possible, any inconvenience for adjoining neighbours, pedestrians and road users is minimised.

The following are some of the key measures that will be taken to manage aspects of the materials handling, pedestrian and vehicular movements:

a) Vehicular Traffic Management will utilise a left-in, left-out policy at the main gate on the southern boundary to Frederick Street. Refer attached Drawings at Appendix A.

b) The Principal Contractor is to utilise traffic control personnel to assist with the movement of large demolition and haulage vehicles to and from the site, to ease the integration of traffic flow with Frederick Street and to ensure pedestrian safety.

c) Vehicle entry and egress for demolition vehicles executing work on-site (ie: cranes, delivery vehicles, etc) will be via Frederick Street only. Access via the Pacific Highway will not be permitted. Egress from the site will be in a forward direction only wherever possible.

d) Car parking for employees and sub-contractors working on the project will be provided on the site wherever possible. Entry will be around 6:30-7:00am and egress will be approximately 3:00-3:30pm.

e) Signage will be provided at the site entry/exit to alert pedestrians to the movement of demolition traffic and to provide guidance for safe pedestrian access around the site.

f) Stop signage will be provided to the site side of the boundary fencing at the Frederick Street exit to encourage vehicle drivers to ensure that they bring the vehicle to a complete stop at the boundary and check for oncoming traffic and passing pedestrians.

g) All loading and unloading activities will be executed within the site boundaries wherever possible to avoid causing congestion on the street environment. Consideration will be given to peak hour traffic and the school zone times for loading and deliveries. Wherever possible, non-critical loading and haulage will be scheduled outside of these hours to avoid traffic congestion.

h) The Principal contractor will provide temporary safety and security lighting to illuminate circulation zones and risk prone work areas.

4.6 Demolition Waste Management

The purpose of the Demolition Waste Management Plan is to ensure that resources are conserved, and waste is processed responsibly by minimising waste generation and maximising the recycling of materials.

The Principal Contractor will be advised that excess materials and wastage is to be avoided wherever possible. Where excess material is present, it should be re-used in the project. If it is unable to be re-used on the job then it should be sent for recycling. If no other alternative is possible, then the excess material will be responsibly disposed of at an approved waste disposal facility.

The Principal Contractor may implement the following waste minimisation techniques, recycling and disposal measures during construction subject to confirmation prior to the commencement of construction:

a) The materials ordering and deliver process will be engineered to minimise materials packaging wherever practicable.

b) Material Safety Data Sheets (MSDS) are to be provided by the suppliers providing materials to site to ensure that safe handling and storage procedures are implemented.

c) The Principal Contractor staff and sub-contractors are to be made aware of the Demolition Waste Management Plan through site-specific inductions and on-site instruction from the Site Supervisor.

d) Sub-contract suppliers and trades to the Principal Contractor are required to comply with the Waste Management Plan as a condition of contract.

e) The Principal Contractor will provide suitable waste collection bins on-site and engage an accredited waste removal contractor that will undertake to comply with the Demolition Waste Management Plan. The bin sizes will include 4m^3, 9m^3 and 15m^3 according to needs and the location on-site may vary as the work progresses.

f) The Site Supervisor will monitor staff and sub-contractors to ensure compliance with the Demolition Waste Management Plan.

g) The Principal Contractor will monitor and respond to feedback from the waste removal contractor(s) in relation to compliance issues.

PRELIMINARY DEMOLITION WASTE MANAGEMENT

MATERIALS ON SITE		DESTINATION		
		RE-USE / RECYCLE		DISPOSE
Type:	**Vol%**	**On-Site**	**Off-Site**	**Contractor**
EARTHWORKS VENM ENM	TBC			Classify, validate, export
CONCRETE Paving Foundations	TBC		Recycle to crushing plant	Nil
TIMBER Retaining wall General	TBC	Utilise off-cuts on job Re-use on job	Wood-chip leftover Wood-chip leftover	Nil Nil
MASONRY Bricks	TBC		Send to crushing plant	Nil
METALS General	TBC	Re-use on job where possible	Recycle	Nil
LANDSCAPE Green Waste	TBC	Incorporate on site or export	Mulch	Nil
MISCELLANEOUS General Waste	TBC		Sort on-site (recycling)	Minimise

4.7 Demolition Noise & Vibration Management

Demolition Noise will be managed to ensure that demolition activities do not lead to the generation of unacceptably high levels of noise that may unreasonably disturb the adjoining neighbours.

Furthermore, the noise and vibration levels on site to which employees, contractors or visitors may be exposed, will be monitored to ensure that they remain at levels that will not affect human health.

The following measures will be implemented during demolition to mitigate noise output from demolition activities.

a) General demolition activity will be limited to the approved working hours, thereby, restricting any demolition noise to this period. Should work be required outside of the approved working hours for any reason (excluding emergency works, or to avoid environmental damage, or damage to the adjoining properties) then written application will be made to Council and the affected neighbours will be advised accordingly.

b) The maximum noise levels of all demolition plant and equipment are intended to comply with Australian Standards and EPA requirements.

c) The selection of demolition plant and equipment will be carried out using the potential for noise generation as an important selection criterion.

d) Noise generating plant and equipment will be located away from residential neighbours, schools, churches and the like wherever possible.

e) Noise attenuating devices will be used on powered vehicles/equipment and silenced compressors will be utilised as a matter of preference. Electrical machinery will be used in preference to mechanical where practicable.

f) Monitoring and assessment of risks to the exposure of workplace noise and vibration will be undertaken by the Safety Officer.

g) Noisy areas or equipment will be identified with warning signage to alert employees, contractors and visitors to the requirement to wear personal protective equipment.

h) Mandatory use of personal protective equipment by employees, contractors and visitors who undertake or are situated close to noisy work.

i) All plant and equipment will be regularly maintained and logbooks will be kept to ensure that there are no excess noise emissions.

j) All subcontractors will be responsible for managing noise and vibration in accordance with project specific Environmental Management Plans. The Principal Contractor will monitor and review the subcontractors' project specific Environmental Management Plans.

4.8 Air & Dust Management

Temporary dust control techniques will be employed during the demolition phase to ensure that there is no off-site environmental impact caused by airborne dust.

The following general principles will apply to the execution of the Air + Dust Management Plan:

a) Generally, approved dust control barriers will be installed at the boundaries in order to prevent wind-blown dust from leaving the site. Typically, this will include 1.8m high mesh fabric screening to the security fence and gates for the duration of the works.

b) Dust suppressing techniques will be employed, if necessary, such as using fine water mist sprayed from hose to water down excavations and the like.

c) Stockpiles of materials will be covered rather than leaving loose material exposed.

d) A stabilised vehicular access and turning area will be provided to minimise dust created by demolition vehicle wheels. Shaker grids will be employed at the vehicular exit points to minimise dirt tracking into the public domain as may be required.

e) All haulage vehicles bringing materials to the site or exporting materials off-site will have their loads covered.

f) The demolition works are to be regularly cleaned to maintain a relatively high level of cleanliness to minimise windblown dust and debris.

g) The Principal Contractor will encourage the use of appropriate equipment fitted with dust extractors, such as sanding machines, concrete grinders, etc, wherever possible.

h) A qualified site supervisor will be provided with the appropriate accreditation to manage the works.

i) All subcontractors will be responsible for managing air and dust in accordance with project specific Environmental Management Plans. The Principal Contractor will monitor and review the subcontractors' project specific Environmental Management Plans.

4.9 Stormwater & Sediment Management

Temporary stormwater detention, manipulation of potential erosion characteristics and sediment control techniques will be employed during the demolition phase to ensure that there are no adverse environmental impacts caused by stormwater running through and/or off the demolition site.

A professional Soil Erosion + Sediment Control Plan has been prepared by *Northrop Consulting Engineers* in accordance with Lake Macquarie City Council DCP 2014, and is attached to this document at Appendix B. These documents should be read in conjunction with this report. This plan will form the basis of the stormwater and sediment management techniques used on site for this project.

The following general principles will apply to the execution of the Stormwater + Sediment Management Plan:

a) Generally, approved sediment control barriers will be installed at the downstream boundaries in order to prevent run-off from the site. Some of these sediment control barriers may need to be staged and relocated to ensure optimum placement as work proceeds in order to maintain their effectiveness. Refer to the accompanying drawings at Appendix B.

b) Sediment control barriers will be installed along the western boundary adjacent to the Pacific Highway road reserve; the southern boundary adjacent to the Frederick Street road reserve; and part of the south-eastern boundary adjacent to the Smith Street road reserve. Refer to the accompanying drawings at Appendix B.

c) Providing dedicated sediment fencing, diversion drainage and protective sheet coverings to the temporary stockpile area(s) to protect against erosion. Refer Sediment + Stormwater Control Drawings by Northrop Consulting Engineers Appendix B.

d) Installation of sand bags with overflow points to protect the kerb inlet pits in the Pacific Highway and Smith Street. Refer Drawings.

e) Utilisation of a work methodology that will allow vehicular traffic to use the existing kerb crossings off Frederick Street to access and leave the site to minimise erosion and vehicle tracking.

f) Installation of a stabilised vehicle crossing at the entry/exit point from the site on the Frederick Street boundary. Refer Drawings Appendix B.

g) Installation of sediment filters and traps with overflow points to the stormwater sumps to protect the existing and proposed stormwater system.

h) Providing a qualified site supervisor with the appropriate accreditation to manage the works.

5.0 CONCLUSION

This Demolition Management Plan has been prepared to outline the intended strategies to be adopted during the small demolition phase required prior to the construction of a proposed Health Services Facility at 31-33 Smith Street, Charlestown, New South Wales in support of a Development Application (DA) submitted to Lake Macquarie City Council.

This DMP is a supporting document provided with the Statement of Environmental Effects (SEE) prepared by Wilson Planning and should be read in conjunction with the other related supporting documentation for the Project.

5.1 Closing Comments

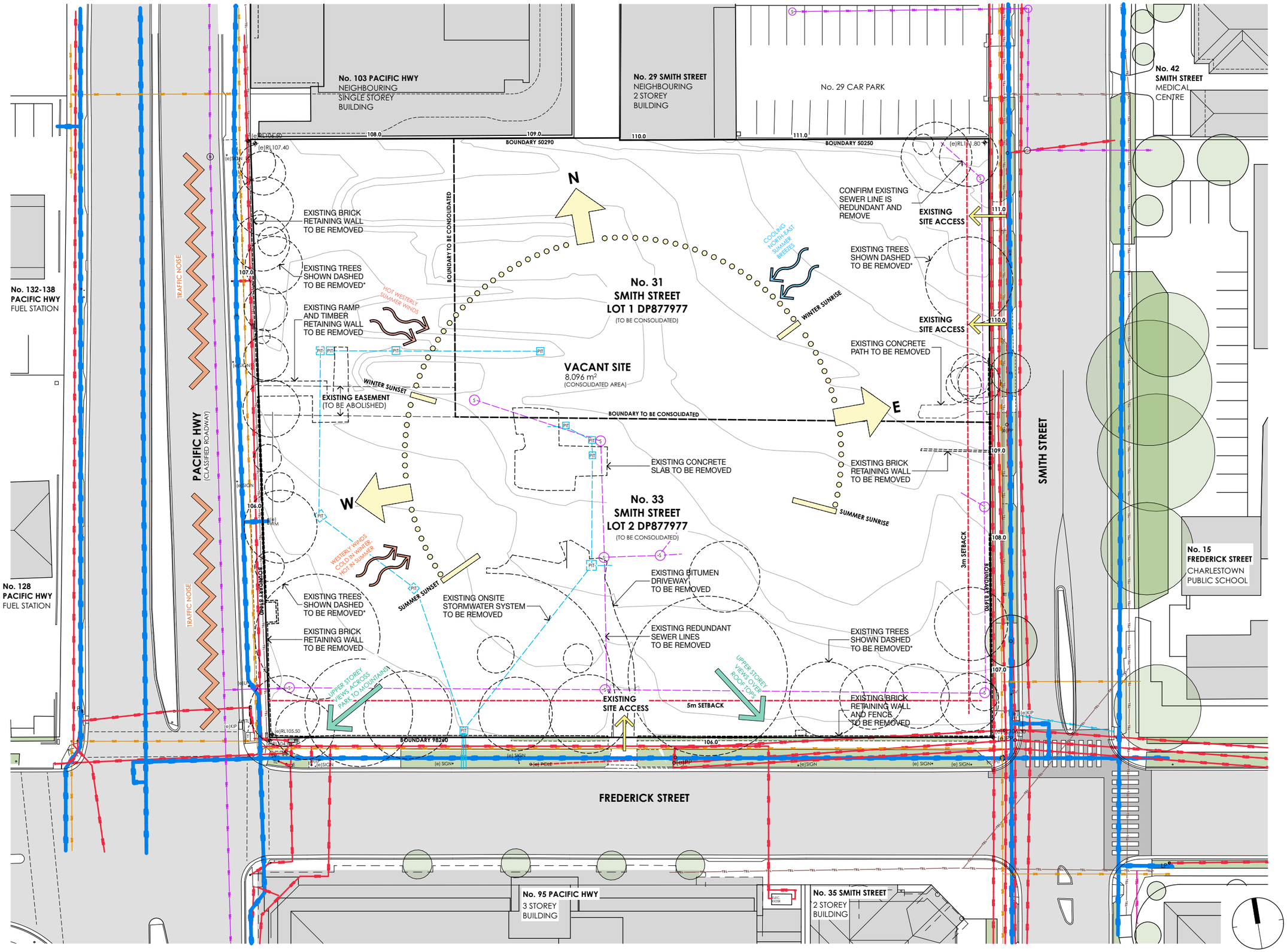
Outline strategies have been provided in this document to cover the following aspects of Demolition Management:

+ Staging of the Project
+ Working Hours
+ Worker & Site Safety
+ Site Security & Access
+ Materials Handling, Pedestrian & Traffic Management
+ Demolition Waste Management
+ Demolition Noise & Vibration Management
+ Air & Dust Management
+ Stormwater & Sediment Management

These strategies are preliminary in nature and are subject to confirmation by the Principal Contractor once technical documentation and further consultation with the various stakeholder authorities is complete.

6.0 APPENDIX A

EXISTING SITE PLAN – DEMOLITION REQUIREMENTS



LEGEND

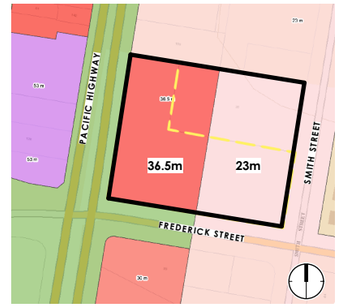
B	BOLLARD
E	ELECTRICAL PIT
(e)	EXISTING
FHR	FIRE HOSE REEL
HYD	HYDRANT
LP	LIGHT POLE
PP	POWER POLE
RWO	RAIN WATER OUTLET
S	SEWER PIT
SV	STOP VALVE
SW	STORMWATER
T	TELSTRA PIT
TL	TRAFFIC LIGHT

SERVICES LEGEND

- ELECTRICAL
- WATER
- STORMWATER
- SEWER
- GAS
- TELEPHONE/NBN

* Refer to Arborist report for existing trees to be removed.

LAND USE ZONING MAP
(Excerpt from LMCC LEP Maps 2014)
B3: Commercial Core
B4: Mixed Use



HEIGHT OF BUILDINGS MAP
(Excerpt from LMCC LEP Maps 2014)
Allowable height above natural ground level.

1:500
0 5 10 25m

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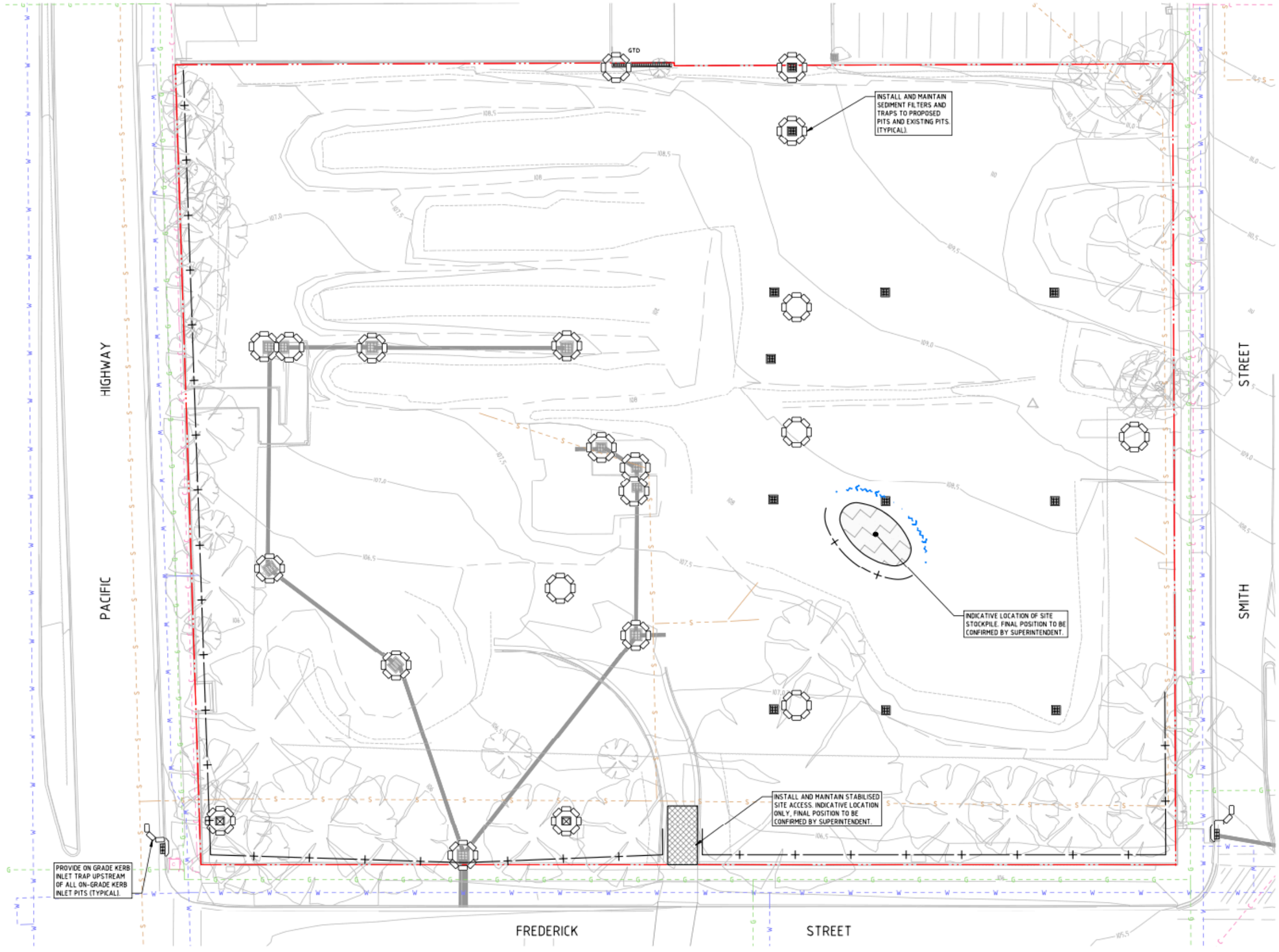
Existing Site Plan DA06

A106.Proposed Health Services Facility
31-33 Smith Street CHARLESTOWN
Nov 2022.Ver 2.7

7.0 APPENDIX B

STORMWATER + SEDIMENT CONTROL DETAILS



LEGEND

- SITE BOUNDARY LINE
- SEDIMENT FENCE
- SANDBAG SEDIMENT FILTER
- DIVERSION DRAIN (CLEAN)
- STABILISED SITE ACCESS
- STOCKPILES
- XX.XX EXISTING CONTOURS
- G EXISTING GAS
- C EXISTING TELECOMMUNICATIONS
- W EXISTING WATER
- S EXISTING SEWER

SEDIMENT BASIN SIZING CALCULATION:

THE SITE IS LOCATED WITHIN THE GATESHEAD SOIL LANDSCAPE AND PRIMARILY CONSISTS OF SANDY CLAY (AS PER NSW eSPADE CLASSIFICATION), WHICH HAS THE FOLLOWING PROPERTIES (IN ACCORDANCE WITH TABLE C7 OF THE "BLUE BOOK"):

SITE PARAMETERS	
CONSTRAINT	VALUE
SEDIMENT TYPE	F (DISPERSIBLE SOILS)
SOIL HYDROLOGY GROUP	C
K = SOIL ERODIBILITY (K-FACTOR)	0.020
R = RAINFALL EROSIVITY (R-FACTOR)	2120
5 = 2 YEAR, 6 HOUR STORM INTENSITY	9.76mm/hr
LS = SLOPE LENGTH/GRADIENT	1.19 (10m SLOPE @ 6% GRADE)
P = EROSION CONTROL PRACTICE (P-FACTOR)	1.3 (TYPICAL)
C = GROUND COVER (C-FACTOR)	1.0 (TYPICAL FOR STRIPPED SITE)
SOIL LOSS (RUSLE METHOD) (tonnes/ha/yr)	66.0
SOIL LOSS (RUSLE METHOD) (m^3/ha/yr)	50
EROSION HAZARD (TABLE 4.2 BLUE BOOK)	VERY LOW

THE AVERAGE ANNUAL SOIL LOSS FROM THE TOTAL AREA OF LAND DISTURBANCE IS LESS THAN 150 m^3 PER HECTRE PER YEAR, THE BUILDING OF A SEDIMENT BASIN IS UNNECESSARY IN ACCORDANCE WITH SECTION 6.3.2 OF THE "BLUE BOOK".

DESIGNED: R. WRIGHT
DRAWN: B. DUGGAN
JOB MANAGER: C. SMITH
VERIFIER:

NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
1	ISSUED FOR INFORMATION	RW		CP	14.07.22

CLIENT

DRAWING NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED

ARCHITECT
ARCHADIA

ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE COMMENCING WORK
NORTHROP ACCEPTS NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR SCALE OF DRAWINGS TRANSFERRED ELECTRONICALLY.
THIS DRAWING MAY HAVE BEEN PREPARED USING COLOUR, AND MAY BE INCOMPLETE IF COPIED TO BLACK & WHITE.

SCALE 1:200@A1 (0 2 4 6 8 10m)

NORTHROP
Newcastle
Level 1, 215 Pacific Hwy, Charlestown NSW 2290
Ph (02) 4943 1777 Email newcastle@northrop.com.au
ABN 81 094 433 100

PROJECT
PROPOSED CHARLESTOWN PRIVATE HOSPITAL
31-33 SMITH STREET, CHARLESTOWN

DRAWING TITLE
CIVIL ENGINEERING PACKAGE

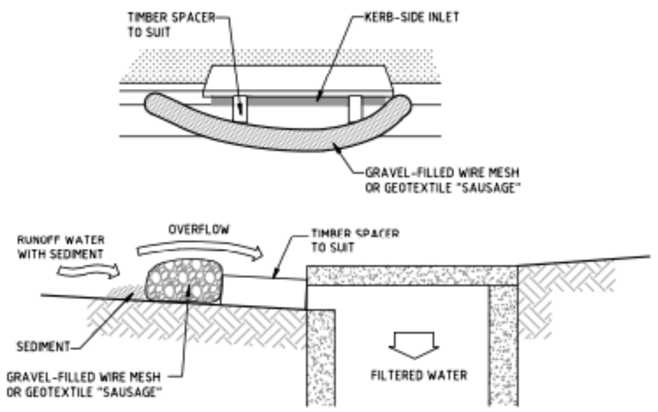
EROSION AND SEDIMENT CONTROL PLAN

JOB NUMBER NL211248

DRAWING NUMBER DA-C02.01

REVISION 1

DRAWING SHEET SIZE = A1

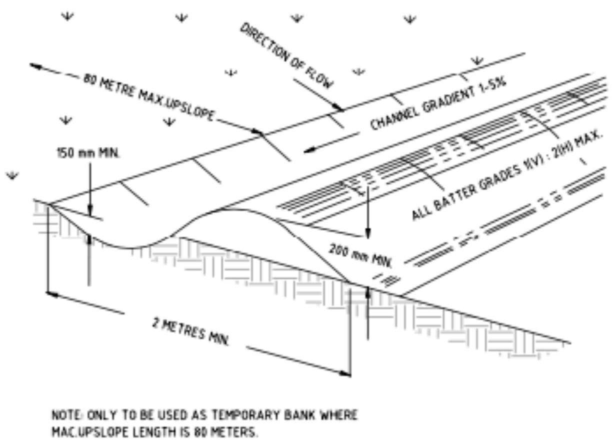


MESH AND GRAVEL INLET FILTER CONSTRUCTION NOTES:

1. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT AND FILL IT WITH 25mm TO 50mm GRAVEL.
2. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm HIGH x 400mm WIDE.
3. PLACE THE FILTER AT THE OPENING LEAVING AT LEAST A 100mm SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.
4. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE FILTER.
5. SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE PLACED SO THAT THEY CAN FIRMLY ABUT EACH OTHER AND SEDIMENT / LADEN WATERS CANNOT PASS BETWEEN.

MESH AND GRAVEL INLET FILTER

SCALE N.T.S.



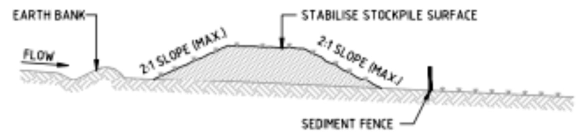
NOTE: ONLY TO BE USED AS TEMPORARY BANK WHERE MAC.UPSLOPE LENGTH IS 80 METERS.

CATCH DRAIN CONSTRUCTION NOTES:

1. CONSTRUCT ALONG GRADIENT AS SPECIFIED.
2. MAXIMUM SPACING BETWEEN BANKS SHALL BE 80 METRES.
3. DRAINS TO BE OF PARABOLIC OR TRAPEZOIDAL CROSS SECTION NOT V-SHAPED.
4. EARTH BANKS TO BE ADEQUATELY COMPACTED IN ORDER TO PREVENT FAILURE.
5. CONSTRUCTION IS OF A TEMPORARY NATURE AND SHALL BE COMPACTED AT THE END A DAYS WORK OR IMMEDIATELY PRIOR RAIN.
6. ALL OUTLETS FROM DISTURBED LANDS ARE TO FEED INTO SEDIMENT BASIN OR SIMILAR.
7. DISCHARGE RUNOFF COLLECTED FROM UNDISTURBED LANDS ONTO EITHER A STABILISED OR AN UNDISTURBED DISPOSAL AISLE WITHIN THE SAME SUBCATCHMENT AREA FROM WHICH THE WATER ORIGINATED.
8. COMPACT WITH A SUITABLE IMPLEMENT IN SITUATIONS WHERE THEY ARE REQUIRED TO FUNCTION FOR MORE THAN FIVE DAYS.
9. EARTH BANKS TO BE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT WILL IMPEDE NORMAL FLOW.

CATCH DRAINS SD 5-8

SCALE N.T.S.

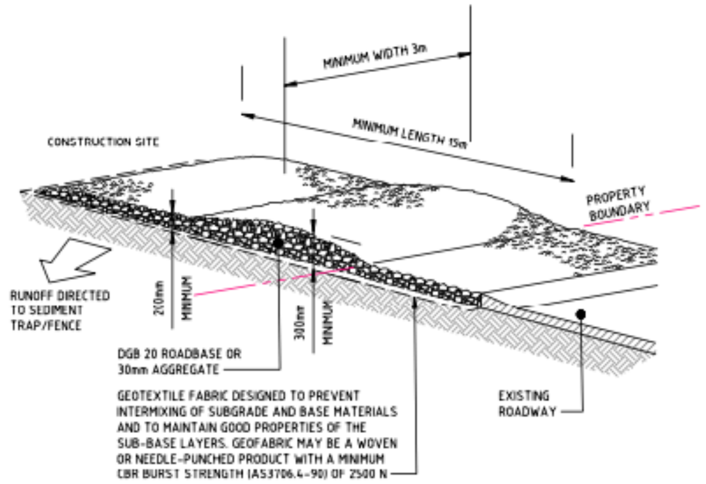


STOCKPILE CONSTRUCTION NOTES:

1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT. WHERE THEY ARE TO BE PLACED FOR MORE THAN 10 DAYS, STABILISE FOLLOWING THE APPROVED E.S.C.P. OR S.W.M.P. TO REDUCE THE C-FACTOR TO LESS THAN 0.10.
4. CONSTRUCT EARTH BANKS ON THE UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES 1 TO 2 METRES DOWNSLOPE.

STOCKPILES

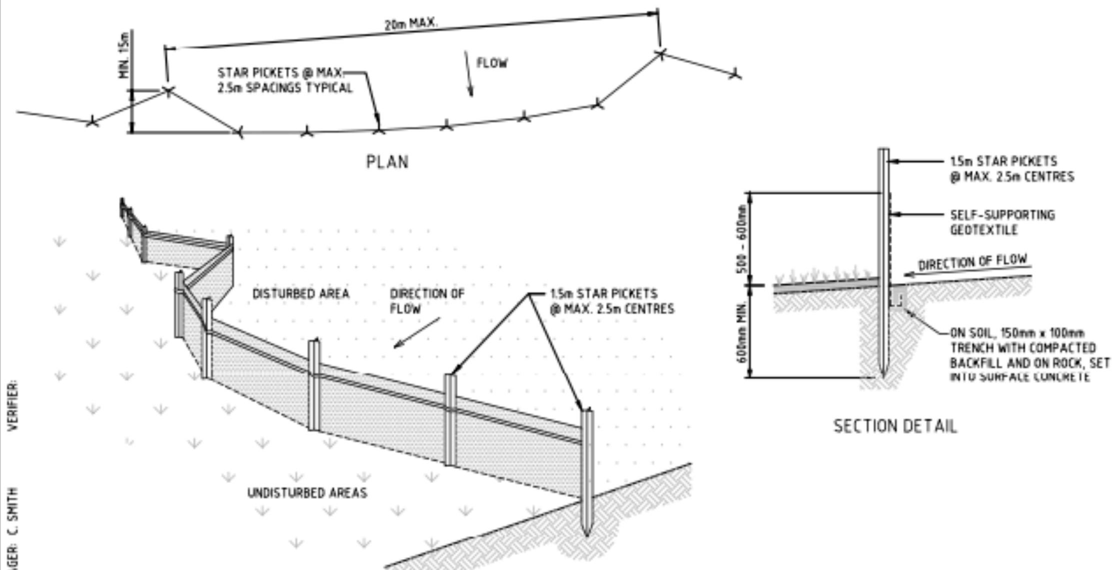
SCALE N.T.S.



CONSTRUCTION NOTES

1. STRIP THE TOPSOIL, LEVEL THE SITE AND COMPACT THE SUBGRADE.
2. COVER THE AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
3. CONSTRUCT A 200mm THICK PAD OVER THE GEOTEXTILE USING ROAD BASE OR 30mm AGGREGATE.
4. ENSURE THE STRUCTURE IS AT LEAST 15 METRES LONG OR TO BUILDING ALIGNMENT AND AT LEAST 3 METRES WIDE.
5. WHERE A SEDIMENT FENCE JOINS ONTO THE STABILISED ACCESS, CONSTRUCT A HUMP IN THE STABILISED ACCESS TO DIVERT WATER TO THE SEDIMENT FENCE.

STABILISED SITE ACCESS (SD 6-14)

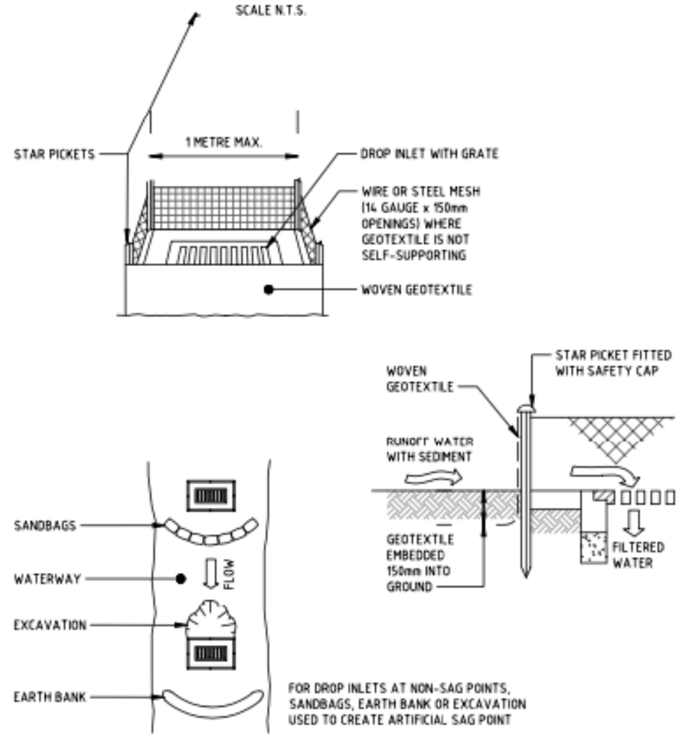


SEDIMENT FENCE

SCALE N.T.S.

SEDIMENT FENCE CONSTRUCTION NOTES:

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



CONSTRUCTION NOTES

1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
2. PICKET SPACING TO BE 1 METRE CENTRES.
3. IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWING.
4. DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.

DRAWN: B. DUGGAN DESIGNED: R. WRIGHT JOB MANAGER: C. SMITH VERIFIER:

NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
1	ISSUED FOR INFORMATION	RW		CP	14.07.22

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PROJECT

PROPOSED CHARLESTOWN PRIVATE HOSPITAL
31-33 SMITH STREET, CHARLESTOWN

DRAWING TITLE

CIVIL ENGINEERING PACKAGE

EROSION AND SEDIMENT CONTROL DETAILS

JOB NUMBER NL211248

DRAWING NUMBER DA-C02.11

REVISION 1

DRAWING SHEET SIZE = A1

EROSION AND SEDIMENT CONTROL NOTES

THE FOLLOWING NOTES MAY NOT BE RELEVANT TO EACH DEVELOPMENT.

General

1. ESCP refers to Erosion and Sediment Control Plan or a Soil and Water Management Plan (SWMP).
2. ESC refers to erosion and sediment control.
3. Sediment, includes, but is not limited to, clay, silt, sand, gravel, soil, mud, cement, and ceramic waste.
4. Any reference to the Blue Book refers to Managing Urban Stormwater – Soils and Construction. Landcom, 2004.
5. Any reference to the IECA White Books (2008) refers to IECA 2008. Best Practice Erosion and Sediment Control. Books 1-6. International Erosion Control Association (Australasia). Picton NSW.
6. Any material deposited in any conservation area from works associated with the development shall be removed immediately by measures involving minimal ground and/or vegetation disturbance and no machinery, or following directions by Council and/or within a timeframe advised by Council.

The ESCP

7. The ESCP and its associated ESC measures shall be constantly monitored, reviewed, and modified as required to correct deficiencies. Council has the right to direct changes if, in its opinion, the measures that are proposed or have been installed are inadequate to prevent pollution.
8. Prior to any activities onsite, the responsible person(s) is to be nominated. The responsible person(s) shall be responsible for the ESC measures onsite. The name, address and 24 hour contact details of the person(s) shall be provided to Council in writing. Council shall be advised within 48 hours of any changes to the responsible person(s), or their contact details, in writing.
9. At least 14 days before the natural surface is disturbed in any new stage, the contractor shall submit to the Certifier, a plan showing ESC measures for that Stage. The degree of design detail shall be based on the disturbed area.
10. At any time, the ESC measures onsite shall be appropriate for the area of disturbance and its characteristics including soils (in accordance with those required for the site as per DCP).
11. The implementation of the ESCP shall be supervised by personnel with appropriate qualifications and/or experience in ESC on construction sites.
12. The approved ESCP shall be available on-site for inspection by Council officers while work activities are occurring.
13. The approved ESCP shall be up to date and show a timeline of installation, maintenance and removal of ESC measures.
14. All ESC measures shall be appropriate for the Sediment Type(s) of the soils onsite, in accordance with the Blue Book, IECA White Books or other current recognised industry standard for ESC for Australian conditions.
15. Adequate site data, including soil data from a NATA approved Laboratory, shall be obtained to allow the preparation of an appropriate ESCP, and allow the selection, design and specification of required ESC measures.
16. All works shall be carried out in accordance with the approved ESCP (as amended from time to time) unless circumstances arise where:
    a) compliance with the ESCP would increase the potential for environmental harm; or
    b) circumstances change during construction and those circumstances could not have been foreseen; or
    c) Council determines that unacceptable off-site sedimentation is occurring as a result of a land-disturbing activity. In either case, the person(s) responsible may be required to take additional, or alternative protective action, and/or undertake reasonable restoration works within the timeframe specified by the Council.
17. Additional ESC measures shall be implemented, and a revised ESCP submitted for approval to the certifier (within five business days of any such amendments) in the event that:
    a) there is a high probability that serious or material environmental harm may occur as a result of sediment leaving the site; or
    b) the implemented works fail to achieve Council's water quality objectives specified in these conditions; or
    c) site conditions significantly change; or
    d) site inspections indicate that the implemented works are failing to achieve the 'objective' of the ESCP.
18. A copy of any amended ESCP shall be forwarded to an appropriate Council Officer, within five business days of any such amendments.

Site establishment including clearing and mulching

19. No land clearing shall be undertaken unless preceded by the installation of adequate drainage and sediment control measures, unless such clearing is required for the purpose of installing such measures, in which case, only the minimum clearing required to install such measures shall occur.
20. Bulk tree clearing and grubbing of the site shall be immediately followed by specified temporary erosion control measures (e.g. temporary grassing or mulching) prior to commencement of each stage of construction works.
21. Trees and vegetation cleared from the site shall be mulched onsite within 7 days of clearing.
22. Appropriate measures shall be undertaken to control any dust originating due to the mulching of vegetation onsite.
23. All office facilities and operational activities shall be located such that any effluent, including wash-down water, can be totally contained and treated within the site.
24. All reasonable and practicable measures shall be taken to ensure stormwater runoff from access roads and stabilised entry/exit systems, drains to an appropriate sediment control device.
25. Site exit points shall be appropriately managed to minimise the risk of sediment being tracked onto sealed, public roadways.
26. Stormwater runoff from access roads and stabilised entry/exit points shall drain to an appropriate sediment control device.
27. The Applicant shall ensure an adequate supply of ESC, and appropriate pollution clean-up materials are available on-site at all times.
28. All temporary earth banks, flow diversion systems, and sediment basin embankments shall be machine-compacted, seeded and mulched within ten (10) days of formation for the purpose of establishing a vegetative cover, or lined appropriately.
29. Sediment deposited off site as a result of on-site activities shall be collected and the area cleaned/rehabilitated as soon as reasonable and practicable.
30. Concrete waste and chemical products, including petroleum and oil-based products, shall be prevented from entering any internal or external water body, or any external drainage system, excluding those on-site water bodies specifically designed to contain and/or treat such material. Appropriate measures shall be installed to trap these materials onsite.
31. Brick, tile or masonry cutting shall be carried out on a pervious surface (e.g. grass or open soil) and in such a manner that any resulting sediment-laden runoff is prevented from discharging into a gutter, drain or water. Appropriate measures shall be installed to trap these materials onsite.
32. Newly sealed hard-stand areas (e.g. roads, driveways and car parks) shall be swept thoroughly as soon as practicable after sealing/surfacing to minimise the risk of components of the surfacing compound entering stormwater drains.
33. Stockpiles of erodible material shall be provided with an appropriate protective cover (synthetic or organic) if the materials are likely to be stockpiled for more than 10 days.
34. Stockpiles, temporary or permanent, shall not be located in areas identified as no-go zones (including, but not limited to, restricted access areas, buffer zones, or areas of non-disturbance) on the ESCP.
35. No more than 150m of a stormwater, sewer line or other service trench shall to be open at any one time.
36. Site spoil shall be lawfully disposed of in a manner that does not result in ongoing soil erosion or environmental harm.
37. Wherever reasonable and practicable, stormwater runoff entering the site from external areas, and non-sediment laden (clean) stormwater runoff entering a work area or area of soil disturbance, shall be diverted around or through that area in a manner that minimises soil erosion and the contamination of that water for all discharges up to the specified design storm discharge.

EROSION AND SEDIMENT CONTROL NOTES (cont)

Site Management including Dust

38. Priority shall be given to the prevention, or at least the minimisation, of soil erosion, rather than the trapping of displaced sediment. Such a clause shall not reduce the responsibility to apply and maintain, at all times, all necessary ESC measures.
39. Measures used to control wind erosion shall be appropriate for the location and prevent soil erosion at all times, including working hours, out of hours, weekends, public holidays, and during any other shutdown periods.
40. The application of liquid or chemical-based dust suppression measures shall ensure that sediment-laden runoff resulting from such measures does not create a traffic or environmental hazard.
41. All cut and fill earth batters less than 3m in elevation shall be topsoiled, and grass seeded/hydromulched within 10 days of completion of grading in consultation with Council.
42. Once cut/fill operations have been finalised in a section, all disturbed areas that are not being worked on shall be stabilised in accordance with time lines in the Blue Book.
43. All reasonable and practicable measures shall be taken to prevent, or at least minimise, the release of sediment from the site.
44. Suitable all-weather maintenance access shall be provided to all sediment control devices.
45. Sediment control devices, other than sediment basins, shall be de-silted and made fully operational as soon as reasonable and practicable after a sediment-producing event, whether natural or artificial, if the device's sediment retention capacity falls below 75% of its design retention capacity.
46. All erosion and sediment control measures, including drainage control measures, shall be maintained in proper working order at all times during their operational lives.
47. Washing/flushing of sealed roadways shall only occur where sweeping has failed to remove sufficient sediment and there is a compelling need to remove the remaining sediment (e.g. for safety reasons). In such circumstances, all reasonable and practicable sediment control measures shall be used to prevent, or at least minimise, the release of sediment into receiving waters. Only those measures that will not cause safety and property flooding issues shall be employed. Sediment removed from roadways shall be disposed of in a lawful manner that does not cause ongoing soil erosion or environmental harm.
48. Sediment removed from sediment traps and places of sediment deposition shall be disposed of in a lawful manner that does not cause ongoing soil erosion or environmental harm.

Sediment Basins – installation, maintenance and removal including sediment traps

49. As-Constructed plans shall be prepared for all constructed Sediment Basins and associated emergency spillways. Such plans shall verify the basin's dimensions, levels and volumes comply with the approved design drawings. These plans may be requested by the Certifier or Council.
50. Sediment basins shall be constructed and fully operational prior to any other soil disturbance in their catchment.
51. Install an internal gated valve, or similar, in any outlet pipe once pipes installed, or install a sacrificial pipe from basin through wall to external outlet point. The valve shall be connected to a riser made from slotted pipe in the basin. The valve may be opened once captured water meets water quality requirements. The final setup for temporary internal outlet structures to be confirmed prior to construction with Council. This setup will enable discharge of treated water from site without need for pumping.
52. A sediment storage level marker post shall be with a cross member set just below the top of the sediment storage zone (as specified on the approved ESCP). At least a 75mm wide post shall be firmly set into the basin floor.
53. The Site Manager shall obtain the relevant approvals from the relevant organisations to discharge treated water from any existing basins. Organisations may include, but not be limited to, Hunter Water, and Council.
54. Where more than one stage is to be developed at one time, or before the preceding stage is complete, the sediment basin(s) for these stages shall have sufficient capacity to cater for all area directed to the basin(s).
55. Prior to any forecast weather event likely to result in runoff, any basins/traps shall be dewatered to provide sufficient capacity to capture sediment laden water from the site.
56. Sufficient quantities of chemicals/agents to treat captured water shall be placed such that water entering the basin mixes with the chemical/agents and is carried into the basin to speed up clarification.
57. Any basin shall be dewatered within the X-day rainfall depth used to calculate the capacity of the basin, after a rainfall event.
58. Sufficient quantities of chemicals/agents to treat turbid water shall be securely stored on-site to provide for at least three complete treatments of all basins requiring chemically treatment onsite.
59. Prior to the controlled discharge (e.g. de-watering activities) from site including excavations and/or sediment basins, the following water quality objectives shall be achieved:
    a) Total Suspended Solids (TSS) to a maximum 50 milligrams/L;
    b) water pH between 6.5 and 8.5, unless otherwise required by the Council;
    c) Turbidity (measured in NTUs) to a maximum of 60 NTU); and
    d) EC levels no greater than background levels.
60. The Development Approval may require testing of additional water quality elements prior to discharge. E.g. metals, organic substances, chemicals or bacteriological indicators.
61. A sample of the released treated water shall be kept onsite in a clear container with the sample date recorded on it.
62. Water quality samples shall be taken at a depth no less than 200mm below the water surface of the basin.
63. No Aluminium based products may be used treat captured water onsite without the prior written permission from an appropriate Council Officer. The applicant shall have a demonstrated ability to use such products correctly and without environmental harm prior to any approval.
64. The chemical/agent used in Type D and Type F basins to treat captured water captured in the basin shall be applied in concentrations sufficient to achieve Council's water quality objectives within the X-day rainfall depth used to calculate the capacity of the basin, after a rainfall event.
65. All Manufacturers' Instructions shall be followed for any chemicals/agents used onsite, except where approved by the Responsible Person or an appropriate Council Officer.
66. The Applicant shall ensure that on each occasion a Type F or Type D basin was not de-watered prior to being surcharged by a following rainfall event, a report is presented to an appropriate Council officer within 5 days identifying the circumstances and proposed amendments, if any, to the basin's operating procedures.
67. Settled sediment shall be removed as soon as reasonable and practicable from any sediment basin if:
    a) it is anticipated that the next storm event is likely to cause sediment to settle above the basin's sediment storage zone; or
    b) the elevation of settled sediment is above the top of the basin's sediment storage zone; or
    c) the elevation of settled sediment is above the basins sediment marker line.
68. Scour protection measures placed on sediment basin emergency spillways shall appropriately protect the spillway chute and its side batters from scour, and shall extend a minimum of 3m beyond the downstream toe of the basin's embankment.
69. Suitable all-weather maintenance access shall be provided to all sediment control devices.
70. Materials, whether liquid or solid, removed from any ESC measure or excavation during maintenance or decommissioning, shall be disposed of in a manner that does not cause ongoing soil erosion, water pollution or environmental harm.
71. All sediment basins shall remain fully operational at all times until the basin's design catchment achieves 70% ground cover or surface stabilisation acceptable to Council.
72. The ESC measures installed during the decommissioning and rehabilitation of a sediment basin shall comply with same standards specified for the normal construction works.
73. A sediment basin shall not be decommissioned until all up-slope site stabilisation measures have been implemented and are appropriately working to control soil erosion and sediment runoff..
74. Immediately prior to the construction of the permanent stormwater treatment device, appropriate flow bypass conditions shall be established to prevent sediment-laden water entering the device.

EROSION AND SEDIMENT CONTROL NOTES (cont)

Revegetation/Stabilisation

75. Temporary Stabilisation may be attained using vegetation, non rewettable soil polymers, or pneumatically applied erosion controls.
76. All cut and fill earth batters less than 3m in elevation shall be topsoiled, and grass seeded/hydromulched within 10 days of completion of grading in consultation with Council.
77. Once cut/fill operations have been finalised in a section, all disturbed areas that are not being worked on shall be stabilised in accordance with time lines in the Blue Book.
78. The LMCC Seed mix shall be used unless stated on the ESCP/SWMP.
79. The pH level of topsoil shall be appropriate to enable establishment and growth of specified vegetation prior to initiating the establishment of vegetation.
80. Non rewettable binder shall be used in all hydromulch/hydroseed/polymer mixes on slopes or works adjacent to a water course.
81. Soil ameliorants shall be added to the soil in accordance with an approved Landscape Plan, Vegetation Management Plan, and/or soil analysis.
82. Surface soil density, compaction and surface roughness shall be adjusted prior to seeding/planting in accordance with an approved Landscape Plan, Vegetation Management Plan, and/or soil analysis.
83. Procedures for initiating a site shutdown, whether programmed or un-programmed, shall incorporate revegetation of all soil disturbances unless otherwise approved by Council. The stabilisation works shall not rely upon the longevity of non-vegetated erosion control blankets, or temporary soil binders.

Site Monitoring and Maintenance

84. The Applicant shall ensure that appropriate procedures and suitably qualified personnel are engaged to plan and conduct site inspections and water quality monitoring throughout the construction and maintenance phase.
85. All ESC measures shall be inspected and any maintenance undertaken immediately:
    a) at least daily (when work is occurring on-site); and
    b) at least weekly (when work is not occurring on-site); and
    c) within 24hrs of expected rainfall; and
    d) within 18hrs of a rainfall event that causes runoff on the site.
86. Written records shall be kept onsite of ESC monitoring and maintenance activities conducted during the construction and maintenance periods, and be available to Council officers on request.
87. All environmentally relevant incidents shall be recorded in a field log that shall remain accessible to all relevant regulatory authorities.
88. All water quality data, including dates of rainfall, dates of testing, testing results and dates of water release, shall be kept in an on-site register. The register is to be maintained up to date for the duration of the approved works and be available on-site for inspection by [insert name of regulatory authority] on request.
89. At nominated instream water monitoring sites, a minimum of 3 water samples shall be taken and analysed, and the average result used to determine quality.

Instream Works

90. All instream works (including in or adjacent to watercourses natural or manmade, flowing or not) shall be carried out in accordance with the IECA White Books.

DRAWN: B. DUGGAN DESIGNED: R. WRIGHT JOB MANAGER: C. SMITH VERIFIER:

NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
1	ISSUED FOR INFORMATION	RW		CP	14.07.22

CLIENT

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ARCHITECT

ARCHADIA

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PROJECT
PROPOSED CHARLESTOWN PRIVATE HOSPITAL
31-33 SMITH STREET, CHARLESTOWN

DRAWING TITLE
CIVIL ENGINEERING PACKAGE
EROSION AND SEDIMENT CONTROL DETAILS

JOB NUMBER **NL211248**
DRAWING NUMBER **DA-C02.12**
REVISION **1**
DRAWING SHEET SIZE = A1

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