# **MARQUIS STREET GUNNEDAH, NSW 2380** CIVIL ENGINEERING PACKAGE





GHR-CI-MW-0702 PAVEMENT PLAN - SHEET 02

GHR-CI-MW-1001 DETAILS - SHEET 01

GHR-CI-MW-1002 DETAILS - SHEET 02 GHR-CI-MW-1003 DETAILS - SHEET 03

GHR-CI-MW-1004 DETAILS - SHEET 04

GHR-CI-MW-1005 DETAILS - SHEET 05 GHR-CI-MW-1006 DETAILS - SHEET 06 GHR-CI-MW-1007 DETAILS - SHEET 07

CIVIL DRA	AWING SCHEDULE
DWG No.	DRAWING TITLE
GHR-CI-MW-0101	COVER SHEET, DRAWING SCHEDULE AND LOCALITY PLAN
GHR-CI-MW-0111	SPECIFICATION NOTES - SHEET 01
GHR-CI-MW-0112	SPECIFICATION NOTES - SHEET 02
GHR-CI-MW-0113	SPECIFICATION NOTES - SHEET 03
GHR-CI-MW-0121	GENERAL ARRANGEMENT PLAN
GHR-CI-MW-0201	SEDIMENT AND SOIL EROSION CONTROL PLAN
GHR-CI-MW-0211	SEDIMENT AND SOIL EROSION CONTROL DETAILS
GHR-CI-MW-0301	CUT AND FILL PLAN
GHR-CI-MW-0401	SITEWORKS AND STORMWATER MANAGEMENT PLAN - SHEET 01
GHR-CI-MW-0402	SITEWORKS AND STORMWATER MANAGEMENT PLAN - SHEET 02
GHR-CI-MW-0541	STORMWATER CATCHMENT PLAN
GHR-CI-MW-0601	RETAINING WALL PLAN
GHR-CI-MW-0621	RETAINING WALL ELEVATIONS - SHEET 01
GHR-CI-MW-0622	RETAINING WALL ELEVATIONS - SHEET 02
GHR-CI-MW-0623	RETAINING WALL ELEVATIONS - SHEET 03
GHR-CI-MW-0624	RETAINING WALL ELEVATIONS - SHEET 04
GHR-CI-MW-0701	PAVEMENT PLAN - SHEET 01

ISSUED FOR 70% DETAILED DESIGN ISSUED FOR 100% DETAILED DESIGN

G 40% CONTRACT DOCUMENTATION





**GUNNEDAH HOSPITAL REDEVELOPMENT** 

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DRAWING TITLE

**COVER SHEET, DRAWING SCHEDULE** AND LOCALITY PLAN

NOT FOR CONSTRUCTION

JOB NUMBER

DRAWING SHEET SIZE = A1

DRAWING NUMBER 220254



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# GENERAL NOTES:

SURVEY SUPPLIED BY: MONTEATH AND POWYS 1.1. REF. NUMBER: 22/0056

1.2. DRAWING TITLE: DETAIL SURVEY OVER SITE OF GUNNEDAH HOSPITAL & SURROUNDS MARQUIS STREET, GUNNEDAH

1.3. REVISION NUMBER: 3

1.3. GEOCENTRIC DATUM OF AUSTRALIA: GDA 2020

ALL UTILITY SERVICES INDICATED ON THE DRAWINGS
ORIGINATE FROM SUPPLIED DATA OR DIAL BEFORE YOU DIG SEARCHES, THEREFORE THEIR ACCURACY AND COMPLETENESS IS NOT GUARANTEED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE AND CONFIRM THE LOCATION AND LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE SUPERINTENDENT. CLEARANCES SHALL BE OBTAINED FROM THE RELEVANT SERVICE AUTHORITY.

NORTHROP TAKE NO RESPONSIBILITY FOR THE ACCURACY AND/OR USE OF THIS SURVEY AND ITS CONTENTS

REV	DESCRIPTION	ISS'D	VER'D	APP'D	DATE
D	ISSUED FOR 100% DETAILED DESIGN	MM		AC	20.10.23
Ε	ISSUED FOR 100% DETAILED DESIGN	MM		AC	27.10.23
F	40% CONTRACT DOCUMENTATION	MM		AC	02.02.24
G	40% CONTRACT DOCUMENTATION	AS		AC	05.03.24
Н	70% CONTRACT DOCUMENTATION	MM		AC	22.03.24
- 1	70% CONTRACT DOCUMENTATION	MM		AC	12.04.24

ARCHITECT





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**GENERAL ARRANGEMENT PLAN** 

NOT FOR CONSTRUCTION

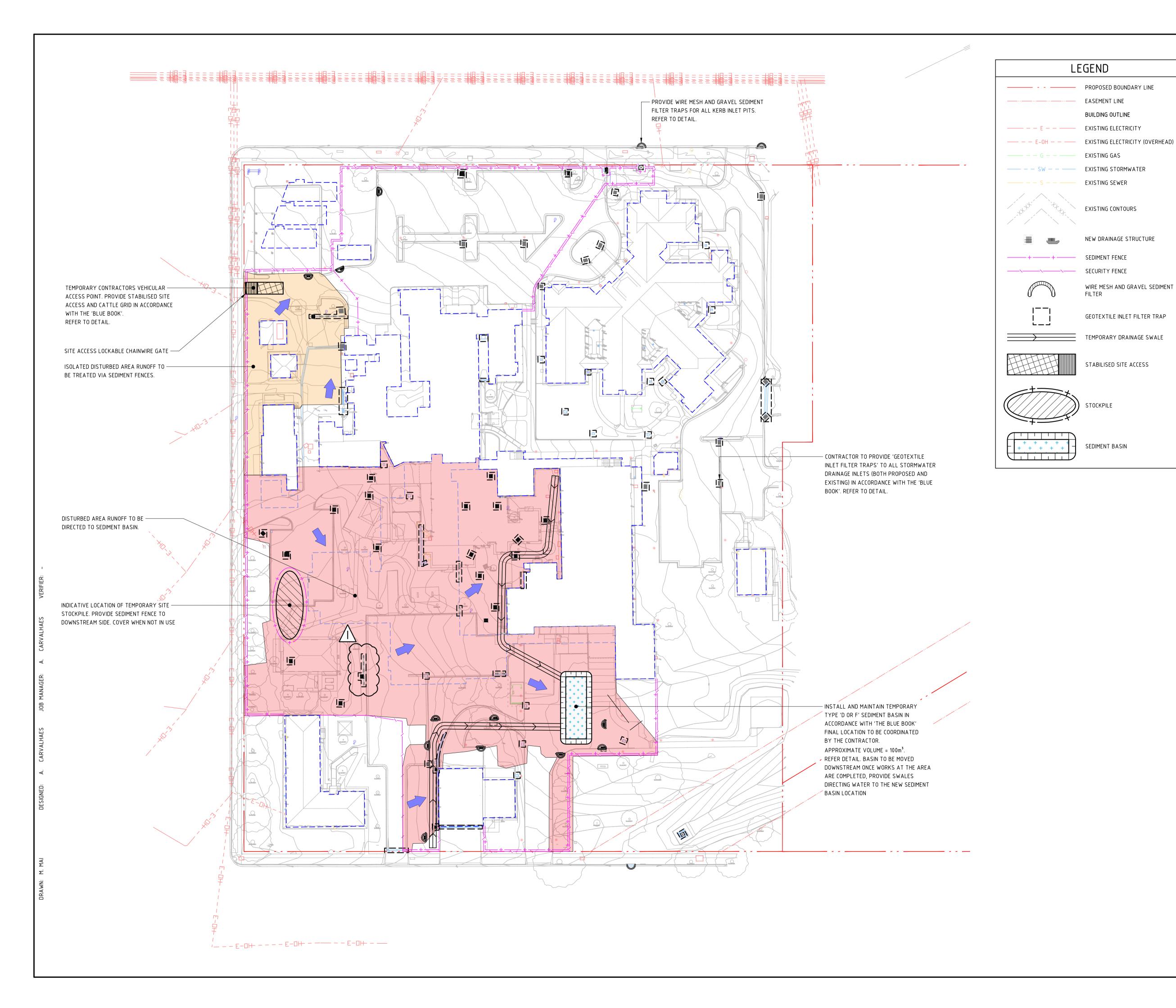
JOB NUMBER

DRAWING NUMBER

220254

GHR-CI-MW-0121

DRAWING SHEET SIZE = A1



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# GENERAL NOTES:

- REFER SPECIFICATIONS NOTES FOR SEDIMENT AND SOIL
- EROSION CONTROL GENERAL REQUIREMENTS. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH COUNCIL
- / RELEVANT AUTHORITY SPECIFICATIONS AND DETAILS. ALL SEDIMENT AND SOIL EROSION CONTROL MEASURES TO BE INSTALLED IN ACCORDANCE WITH THE 'BLUE BOOK'.
- CONTRACTOR TO ENSURE THESE MEASURES ARE IN PLACE AND MAINTAINED AT ALL TIMES DURING CONSTRUCTION WORKS. CONTRACTOR TO PROVIDE 'WIRE MESH AND GRAVEL SEDIMENT
- FILTER' TO ALL PAVED / ROAD AREAS (BOTH PROPOSED AND EXISTING) IN ACCORDANCE WITH THE 'BLUE BOOK'. CONTRACTOR TO PROVIDE 'GEOTEXTILE INLET FILTER TRAPS' TO ALL STORMWATER DRAINAGE INLETS (BOTH PROPOSED
- AND EXISTING) IN ACCORDANCE WITH THE 'BLUE BOOK' ALL PITS OPEN TO ATMOSPHERE TO BE PROTECTED IN ACCORDANCE WITH THE 'BLUE BOOK'

# SEDIMENT BASIN CALCULATIONS

PARAMETER	ADOPTED VALUE
TOTAL DISTURBED AREA (ha)	0.790
SOIL TEXTURE GROUP	D OR F
DESIGN RAINFALL DEPTH (DAYS)	5
DESIGN RAINFALL DEPTH (PERCENTILE)	80%
x-DAY, y-PERCENTILE RAINFALL EVENT	24.1
Cv	0.35
SETTLING ZONE VOLUME (m³)	66.637
SEDIMENT STORAGE VOLUME (m³)	33.318
TOTAL BASIN VOLUME (m³)	99.955

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Ξ	40% CONTRACT DOCUMENTATION	AS		AC	05.03.24
_	70% CONTRACT DOCUMENTATION	MM		AC	22.03.24
J	70% CONTRACT DOCUMENTATION	ММ		AC	12.04.24

### ARCHITECT





PROJECT

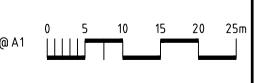
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DRAWING TITLE

SEDIMENT AND SOIL EROSION **CONTROL PLAN** 

FOR CONSTRUCTION

JOB NUMBER

220254

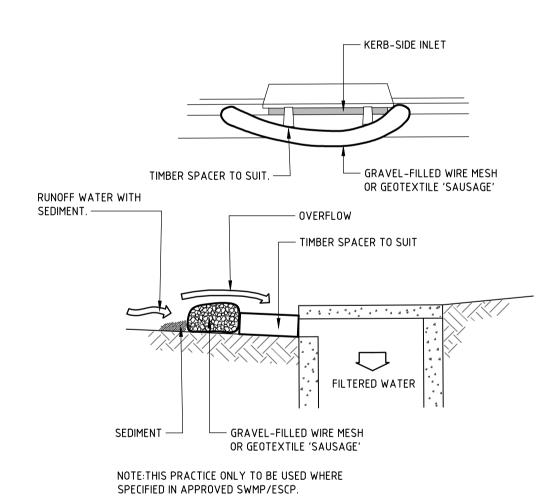
DRAWING NUMBER

GHR-CI-MW-0201 DRAWING SHEET SIZE = A1

## **CONSTRUCTION NOTES**

- 1. PLACE STOCKPILES MORE THAN 2m (PREFERABLY 5m) 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 2m IN HEIGHT.
- 4. WHERE THEY ARE TO BE IN PLACE FOR MORE THAN 10 DAYS, STABILISE FOLLOWING THE APPROVED ESCP OR SWMP TO REDUCE THE C-FACTOR TO LESS THAN 0.10.
- 5. CONSTRUCT EARTH BANKS (STANDARD DRAWING 5-5) ON THE UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES (STANDARD DRAWING 6-8) 1 TO 2m DOWNSLOPE.

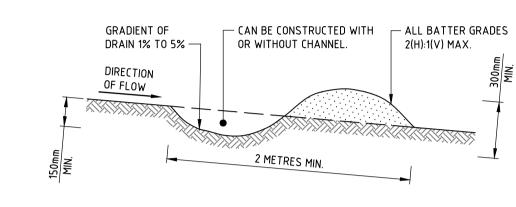
#### STOCKPILE



### CONSTRUCTION NOTES

- 1. INSTALL FILTERS TO KERB INLETS ONLY AT SAG POINTS. 2. 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.
- 3. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm HIGH x 400mm WIDE.
- 4. PLACE THE FILTER AT THE OPENING LEAVING AT LEAST A 100mm SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.
- 5. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE FILTER. 6. SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE
- PLACED SO THAT THEY FIRMLY ABUT EACH OTHER AND SEDIMENT-LADEN WATERS CANNOT PASS BETWEEN.

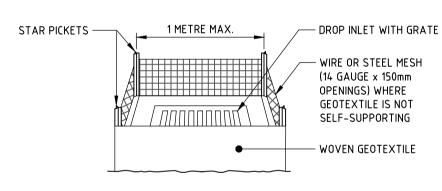
WIRE MESH AND GRAVEL SEDIMENT FILTER

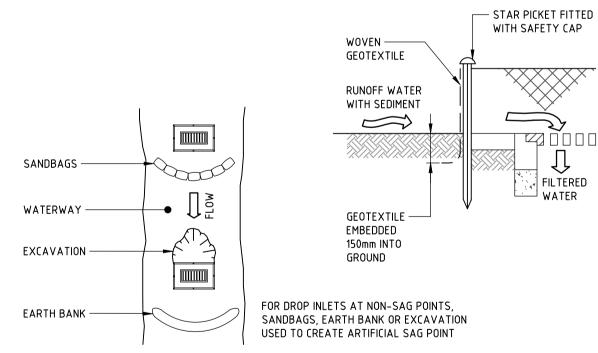


#### CONSTRUCTION NOTES

- 1. BUILD WITH GRADIENTS BETWEEN 1 AND 5 PERCENT.
- 2. AVOID REMOVING TREES AND SHRUBS IF POSSIBLE WORK AROUND THEM.
- 3. ENSURE THE STRUCTURES ARE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT COULD IMPEDE WATER
- 4. BUILD THE DRAINS WITH CIRCULAR, PARABOLIC OR TRAPEZOIDAL CROSS SECTIONS, NOT V SHAPED.
- 5. ENSURE THE BANKS ARE PROPERLY COMPACTED TO PREVENT FAILURE.
- 6. COMPLETE PERMANENT OR TEMPORARY STABILISATION WITHIN 10 DAYS OF CONSTRUCTION.

NOTE: ONLY TO BE USED AS TEMPORARY BANK WHERE MAXIMUM UPSLOPE LENGTH IS 80 METRES. DRAINAGE SWALE

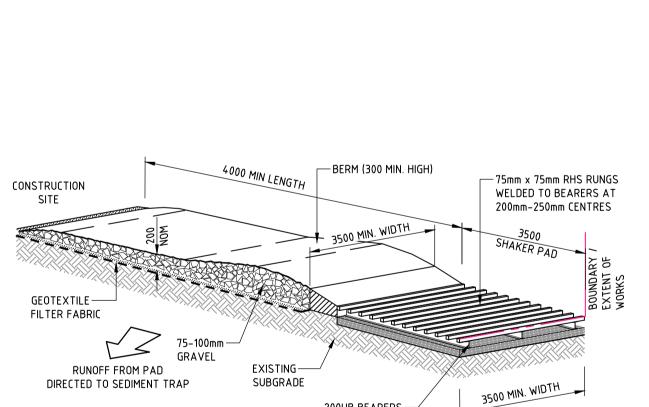




### CONSTRUCTION NOTES

- FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
- 2. FOLLOW STANDARD DRAWING 6-7 AND STANDARD DRAWING 6-8 FOR INSTALLATION PROCEDURES FOR THE STRAW BALES OR GEOFABRIC. REDUCE THE PICKET SPACING TO 1 METRE CENTRES.
- 3. IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN
- 4. DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.

GEOTEXTILE INLET FILTER TRAPS



200UB BEARERS -

ROADWAY

— EARTH

CREST OF SPILLWAY

- CUT-OFF TRENCH 600mm MIN.

DEPTH BACKFILLED WITH IMPERMEABLE CLAY COMPACTED.

EMBANKMENT

EMERGENCY

SPILLWAY -

\_\_LENGTH\_

LENGTH/WIDTH

RATIO 3:1 MIN.

ORIGINAL GROUND

LEVEL. –

SEDIMENT SETTLING ZONE -

SEDIMENT STORAGE ZONE -

CONSTRUCTION NOTES

TO THE EXISTING SUBSTRATE.

CONSTRUCT THE EMERGENCY SPILLWAY.

STORAGE ZONE

WATER DEPTH 1500mm MIN. ——

SECTION

EXTENDING TO A POINT ON THE GULLY WALL LEVEL WITH THE RISER CREST.

SWMP TO 95 PER CENT STANDARD PROCTOR DENSITY.

8. REHABILITATE THE STRUCTURE FOLLOWING THE SWMP.

REMOVE ALL VEGETATION AND TOPSOIL FROM UNDER THE DAM WALL AND FROM WITHIN THE STORAGE AREA.

2. CONSTRUCT A CUT-OFF TRENCH 500mm DEEP AND 1200mm WIDE ALONG THE CENTRELINE OF THE EMBANKMENT

3. MAINTAIN THE TRENCH FREE OF WATER AND RECOMPACT THE MATERIALS WITH EQUIPMENT AS SPECIFIED IN THE

4. SELECT FILL FOLLOWING THE SWMP THAT IS FREE OF ROOTS, WOOD, ROCK, LARGE STONE OR FOREIGN MATERIAL.

6. SPREAD THE FILL IN 100mm TO 150mm LAYERS AND COMPACT IT AT OPTIMUM MOISTURE CONTENT FOLLOWING THE

(APPLIES TO 'TYPE D' AND 'TYPE F' SOILS ONLY) SEDIMENT BASIN

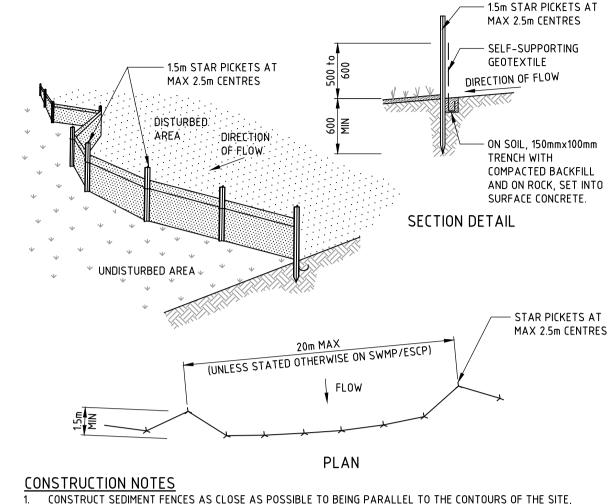
5. PREPARE THE SITE UNDER THE EMBANKMENT BY RIPPING TO AT LEAST 100mm TO HELP BOND COMPACTED FILL

# CONSTRUCTION NOTES

- 1. THE TEMPORARY ACCESS SHALL BE MAINTAINED IN A CONDITION THAT PREVENTS TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY, • THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL GRAVEL AS CONDITIONS DEMAND AND REPAIR
- AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT, 2. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS OF WAY MUST BE REMOVED
- 3. INSTALL BARRIER ON EITHER SIDE OF SHAKER PAD. TO ENSURE VEHICLES ARE GUIDED ON TO THE PAD.
- 4. INVERT OF SHAKER PAD TO BE DRAINED VIA AGRICULTURAL PIPE WRAPPED IN GEOTEXTILE FABRIC.

STABILISED SITE ACCESS

ALL SETOUT TO ARCHITECT'S DRAWINGS. DIMENSIONS TO BE VERIFIED WITH ARCHITECT AND BUILDER BEFORE COMMENCING SHOP DRAWINGS OR SITE WORK. NORTHROP ACCEPTS NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR SCALE OF DRAWINGS TRANSFERRED ELECTRONICALLY. THE COPYRIGHT OF THIS DRAWING REMAINS WITH NORTHROP CONSULTING ENGINEERS PTY LTD



- 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
- 3. DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND AT 2.5 METRE 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.

SEDIMENT FENCE

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NOT TO SCALE

DRAWING TITLE

SEDIMENT AND SOIL **EROSION CONTROL DETAILS** 

FOR CONSTRUCTION

JOB NUMBER 220254 DRAWING NUMBER

DRAWING SHEET SIZE = A1

