



## Report Document Control

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**Author:** Ben Clark

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A	17/08/2015	B Clark	E Avery
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## Distribution

Recipient	Revision	
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# A NEW HIGH SCHOOL FOR BALLINA 37- 49 SWIFT STREET BALLINA NSW 2478



## DRAWING SCHEDULE

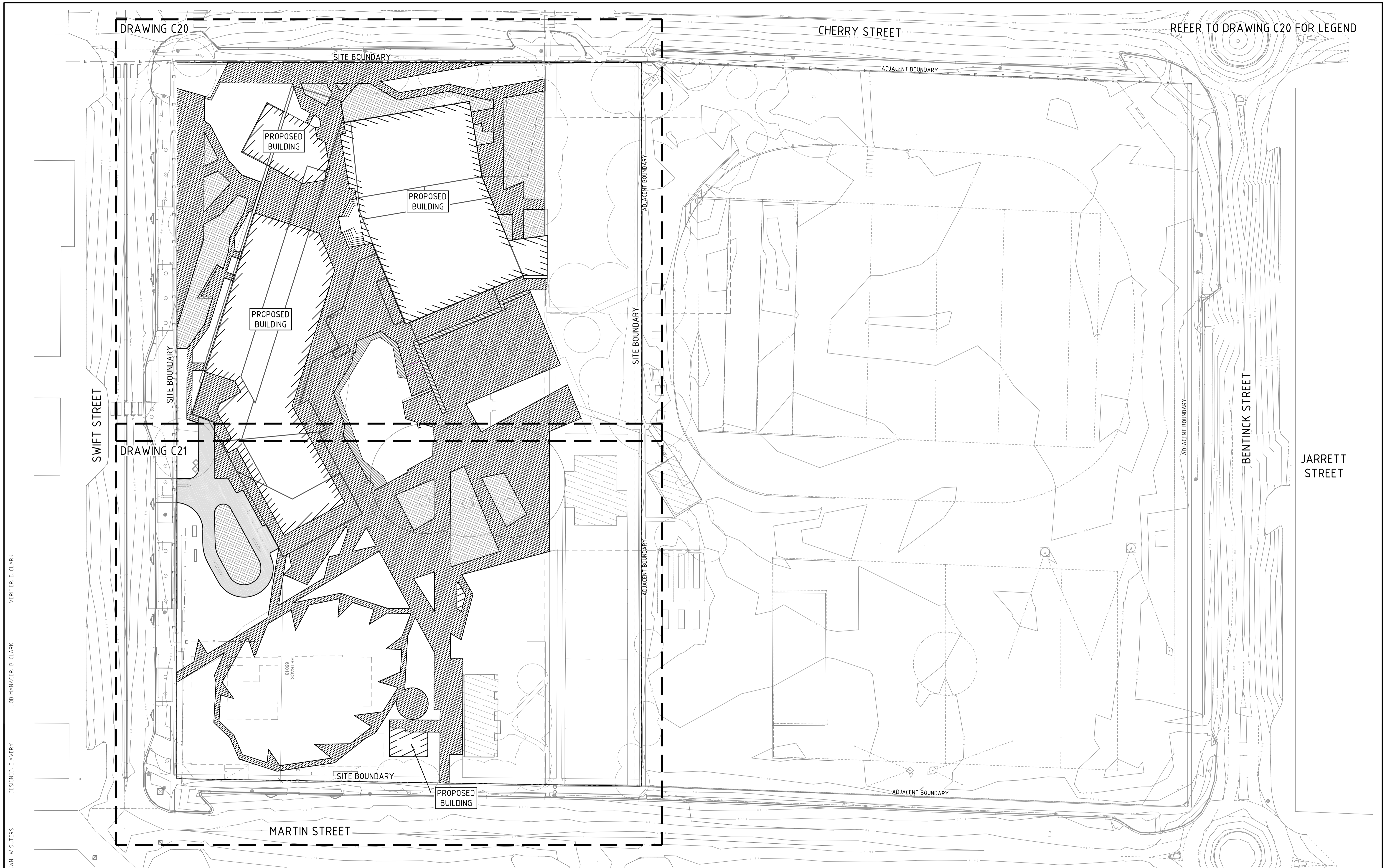
DRG No.	DRAWING TITLE
C01	COVERSHEET AND DRAWING SCHEDULE
C03	CONCEPT SITE LAYOUT PLAN
C10	CONCEPT EROSION AND SEDIMENT CONTROL PLAN - SHEET 1
C11	CONCEPT EROSION AND SEDIMENT CONTROL PLAN - SHEET 2
C12	CONCEPT EROSION AND SEDIMENT CONTROL DETAILS
C20	CONCEPT STORMWATER MANAGEMENT AND LEVELS PLAN - SHEET 1
C21	CONCEPT STORMWATER MANAGEMENT AND LEVELS PLAN - SHEET 2
C30	CIVIL DETAILS

DRAWN: W. SUTERS  
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A	ISSUED FOR APPROVAL	WC	BC	EA	31.10.16						
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PROJECT

**A NEW HIGH SCHOOL FOR BALLINA**  
**37- 49 SWIFT STREET**  
**BALLINA NSW 2478**

DRAWING TITLE

**CONCEPT SITE LAYOUT PLAN**

JOB NUMBER

**NL150200**

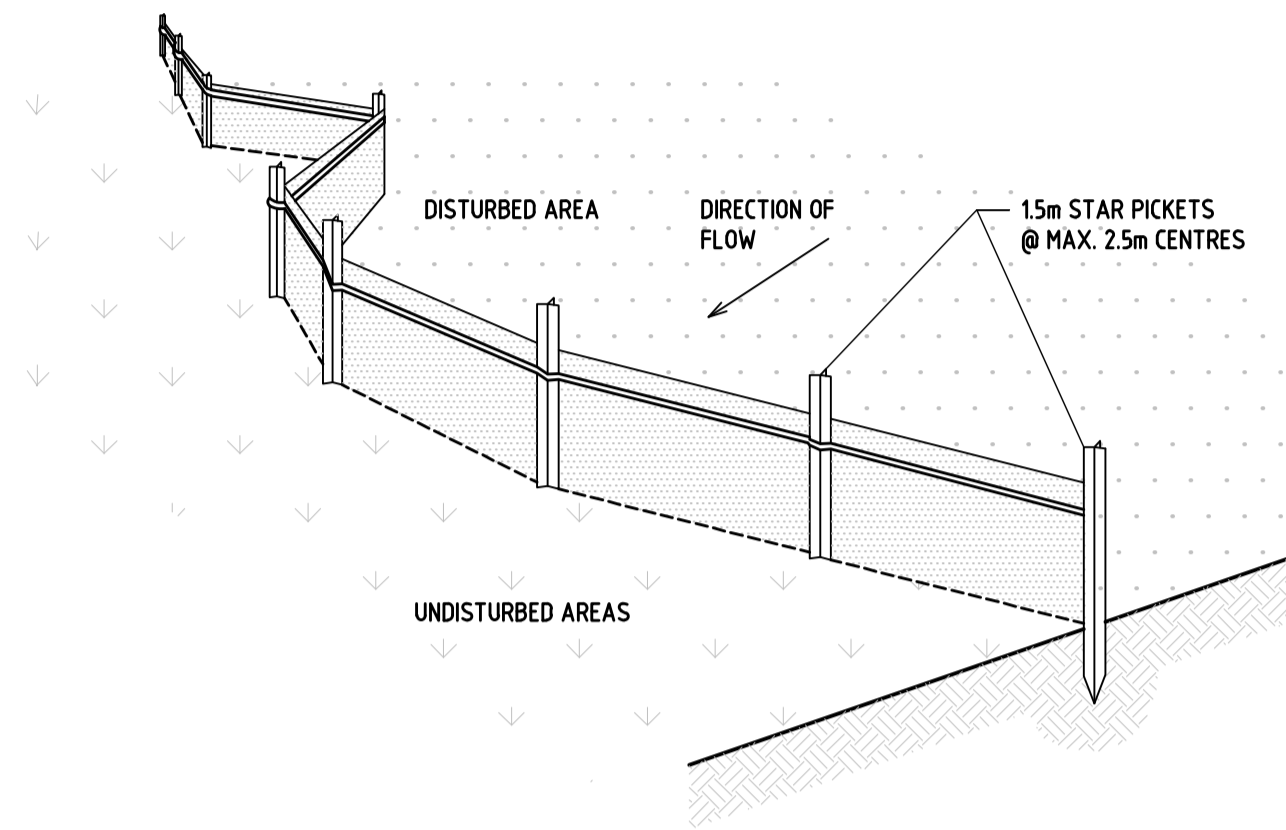
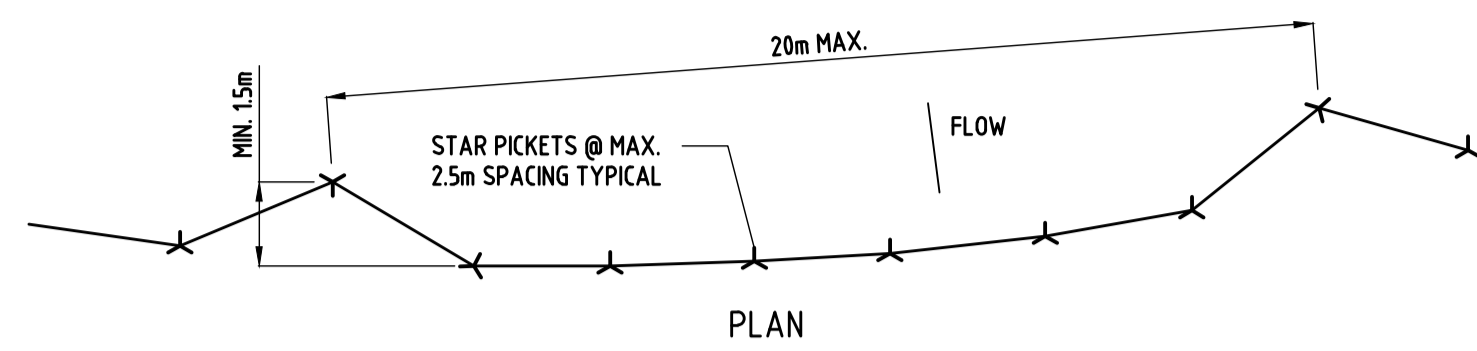
DRAWING NUMBER	REVISION
<b>C03</b>	<b>A</b>

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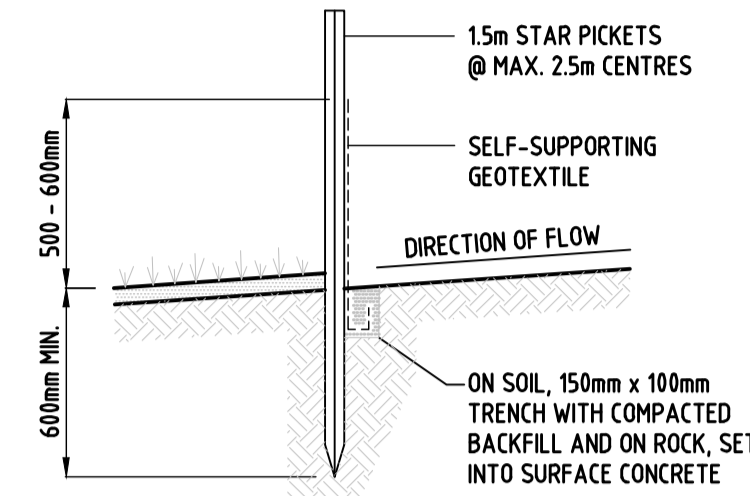
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**SEDIMENT FENCE**  
SCALE N.T.S.



**SECTION DETAIL**

**SEDIMENT BASIN SIZING CALCULATION**

THE SITE IS LOCATED WITHIN THE BURNS POINT SOIL LANDSCAPE AND PRIMARILY CONSISTS OF SILTY SAND (AS PER THE SITE SPECIFIC GEOTECHNICAL INVESTIGATION), WHICH HAS THE FOLLOWING PROPERTIES (IN ACCORDANCE WITH TABLE 2 OF THE "BLUE BOOK"):

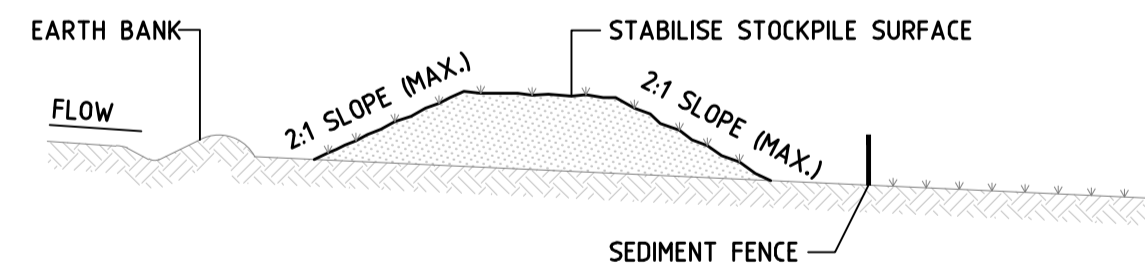
SITE PARAMETERS	
CONSTRAINT	VALUE
SEDIMENT TYPE	F (DISPERSIBLE SOILS)
SOIL HYDROLOGY GROUP	D
K = SOIL ERODIBILITY (K-FACTOR)	0.013
R = RAINFALL ERODIVITY (R-FACTOR)	4640
S = 2 YEAR, 6 HOUR STORM INTENSITY	14.5 mm/hr (BALLINA)
LS = SLOPE LENGTH/GRADIENT	0.18 (60m SLOPE @ 1% GRADE)
P = EROSION CONTROL PRACTICE (P-FACTOR)	1.3 (TYPICAL)
C = GROUND COVER (C-FACTOR)	1.0 (TYPICAL FOR STRIPPED SITE)
SOIL LOSS (RUSLE METHOD) (tonnes/ha/yr)	14
EROSION HAZARD (TABLE 4.2 BLUE BOOK)	VERY LOW

SEDIMENT BASIN SIZING		
CONSTRAINT	VALUE	UNITS
CV = VOLUMETRIC RUNOFF COEFFICIENT	0.56	
R = 5 DAY, 80 <sup>th</sup> PERCENTILE RAINFALL	35.300	mm
A = CATCHMENT AREA	2.230	ha
SETTLING ZONE VOLUME (10xCVxRxX)	504	m <sup>3</sup>
SOIL LOSS (CALC ABOVE)	11	m <sup>3</sup> /ha/yr
A2 = DISTURBED CATCHMENT AREA	2.230	ha
SEDIMENT STORAGE VOLUME (0.17xSOIL LOSSxA2)	4	m <sup>3</sup>
TOTAL BASIN VOLUME REQUIRED	508	m <sup>3</sup>

GIVEN THE VERY LOW EROSION HAZARD CLASSIFICATION DETERMINED FOR THIS SITE A SEDIMENT BASIN IS NOT REQUIRED UNDER THE "BLUE BOOK" GUIDELINES. AS SUCH ALTERNATIVE SITE APPROPRIATE MEASURES HAVE BEEN PROPOSED TO MANAGE THE SEDIMENT LADEN RUN-OFF PRIOR TO DISCHARGE FROM SITE.

**SEDIMENT FENCE CONSTRUCTION NOTES:**

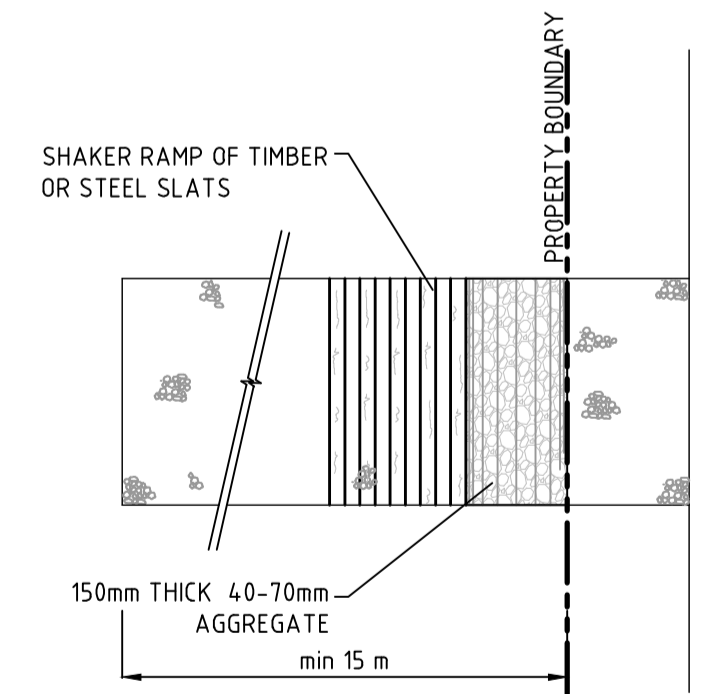
- CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.
- CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
- 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.
- 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.
- JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
- BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.



**STOCKPILE CONSTRUCTION NOTES:**

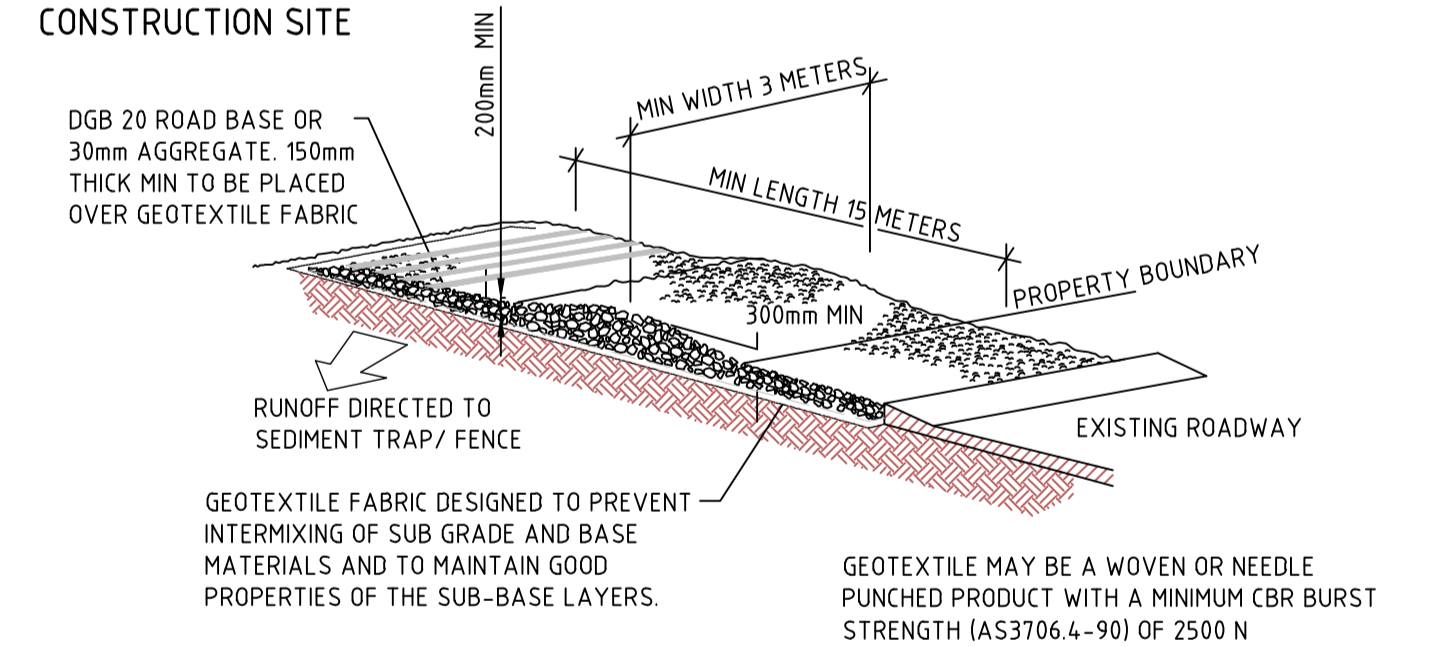
- PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
- CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
- WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT. WHERE THEY ARE TO BE PLACED 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.
- 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.



**STABILISED SITE ACCESS WITH SHAKER RAMP**  
N.T.S.

**CONSTRUCTION SITE**



**STABILISED SITE ACCESS WITH SHAKER RAMP**  
N.T.S.

**STABILISED SITE ACCESS WITH SHAKER RAMP CONSTRUCTION NOTES:**

- THIS DEVICE IS TO BE LOCATED AT ALL EXITS FROM CONSTRUCTION SITE.
- THIS DEVICE IS TO BE REGULARLY CLEANED OF DEPOSITED MATERIAL SO AS TO MAINTAIN A 50mm DEEP SPACE BETWEEN PLANKS.
- ANY UNSEALED ROAD BETWEEN THIS DEVICE AND NEAREST ROADWAY IS TO BE TOPPED WITH 100mm THICK 4.0-70mm SIZE AGGREGATE.
- ALTERNATIVELY, PRECAST CONCRETE CATTLE GRIDS MAY BE USED. 1, 2 & 3 ABOVE ALSO APPLY.

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DESIGNED: E AVERY  
JOB MANAGER: B CLARK  
VERIFIER: B CLARK

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CLIENT  
**NSW Education Public Schools**

ARCHITECT  
**EJE architecture**

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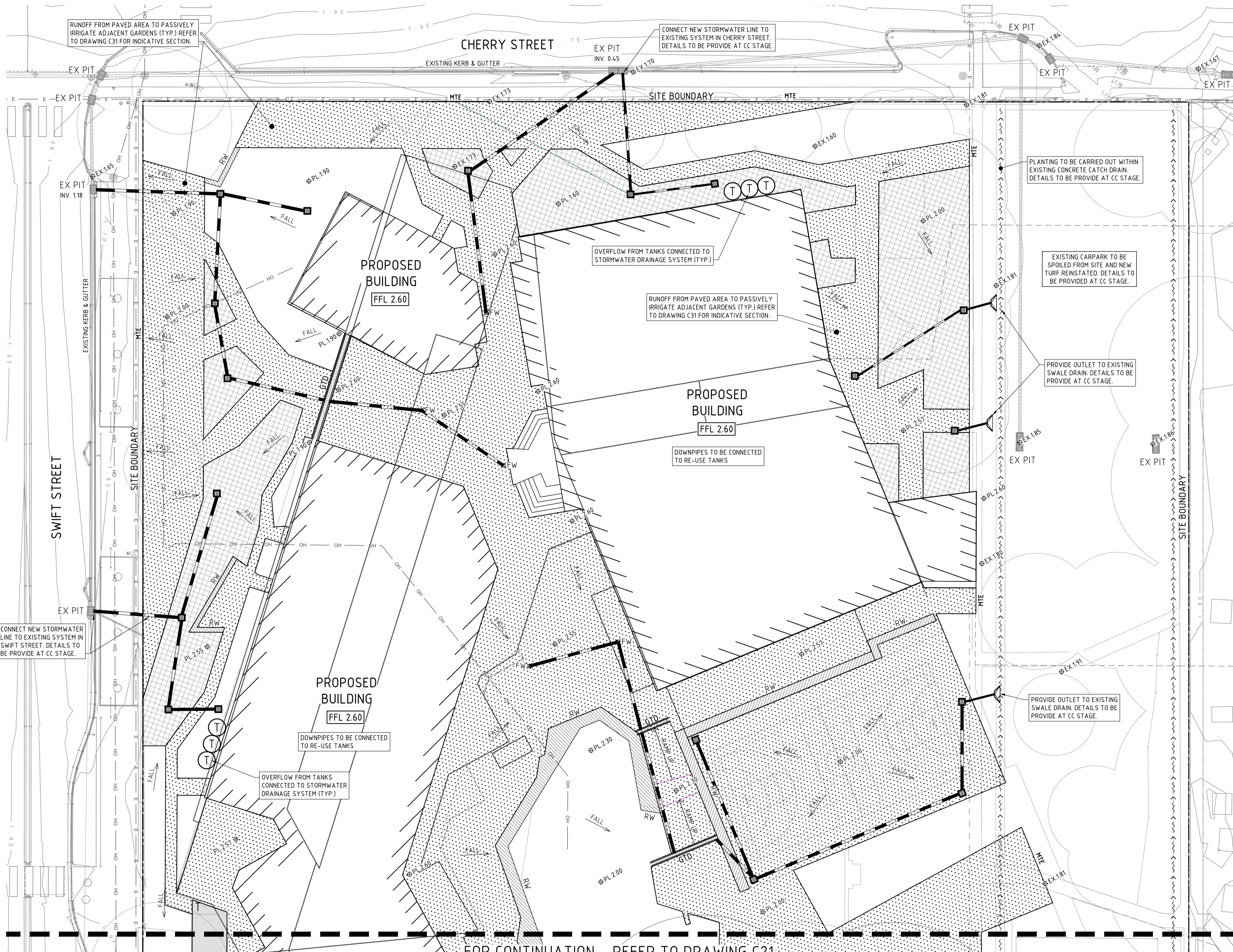
PROJECT  
**A NEW HIGH SCHOOL FOR BALLINA**  
37- 49 SWIFT STREET  
BALLINA NSW 2478

DRAWING TITLE  
**EROSION AND SEDIMENT CONTROL DETAILS**

JOB NUMBER  
**NL150200**

DRAWING NUMBER <b>C12</b>	REVISION <b>A</b>
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DRAWING SHEET SIZE ± A1



- LEGEND**
- DENOTES SITE FENCE.
  - DENOTES PROPOSED STORMWATER PIT. DETAILS & PIT SCHEDULE TO BE PROVIDED AT CC STAGE.
  - DENOTES PROPOSED STORMWATER DRAINAGE PIPE.
  - EX PIT --- DENOTES EXISTING STORMWATER PIT.
  - DENOTES EXISTING STORMWATER DRAINAGE PIPE.
  - FFL 2.60 DENOTES PROPOSED FINISHED FLOOR LEVEL.
  - PL 2.57 DENOTES PROPOSED FINISHED SURFACE LEVEL.
  - EX 1.85 DENOTES EXISTING FINISHED SURFACE LEVEL.
  - MTE DENOTES MATCH TO EXISTING LEVELS.
  - FALL DENOTES PROPOSED DIRECTION OF FALL IN FINISHED SURFACE.
  - GTD DENOTES PROPOSED PROPRIETARY OR CAST INSITU GRATED TRENCH DRAIN. DETAILS TO BE PROVIDED AT CC STAGE.
  - RW DENOTES PROPOSED RETAINING WALL. DETAILS TO BE PROVIDED AT CC STAGE.
  - DENOTES EXISTING CONCRETE CATCH DRAIN. DETAILS TO BE PROVIDED AT CC STAGE.
  - (T) DENOTES ABOVE GROUND REUSE TANK. DETAILS & SIZES WILL BE PROVIDED AT CC.
  - [Dotted Pattern] DENOTES EXTENT OF PROPOSED IMPERVIOUS PAVEMENT. REFER TO LANDSCAPE ARCHITECTS PLANS FOR FINISH AND TYPE.
  - [Hatched Pattern] DENOTES EXTENT OF PROPOSED IMPERVIOUS DRIVEWAY/LOADING ZONE PAVEMENT. DETAILS TO BE PROVIDED AT CC STAGE.
  - [Cross-hatched Pattern] DENOTES EXTENT OF PROPOSED PASSIVE IRRIGATION AREA. DETAILS TO BE PROVIDED AT CC STAGE.

FOR CONTINUATION - REFER TO DRAWING C21

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NSW Education Public Schools

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PROJECT: A NEW HIGH SCHOOL FOR BALLINA FOR BALLINA 37- 49 SWIFT STREET BALLINA NSW 2478

DRAWING TITLE: CONCEPT STORMWATER MANAGEMENT AND LEVELS PLAN - SHEET 1

JOB NUMBER: NL150200

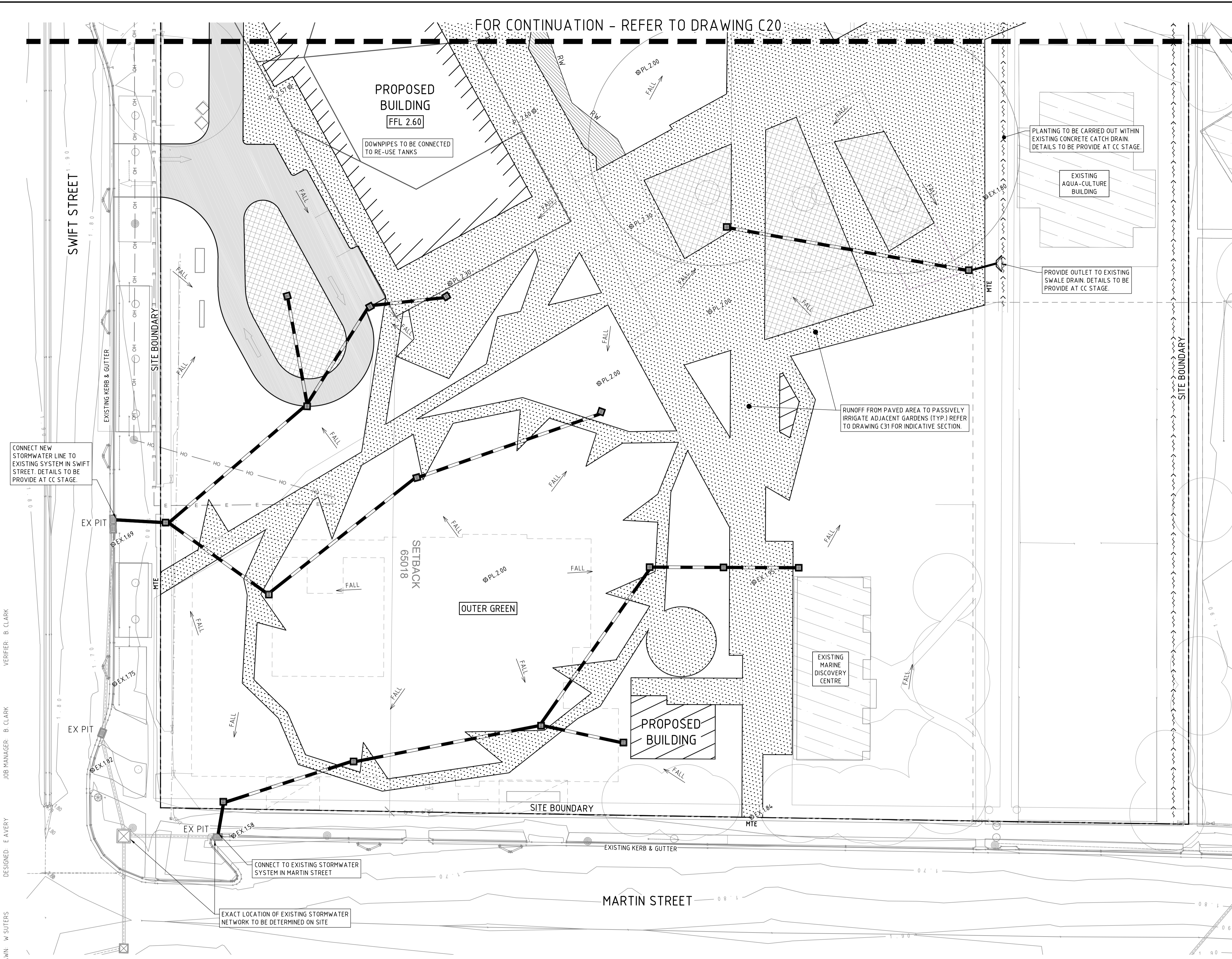
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REFER TO DRAWING C20 FOR LEGEND



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PROJECT

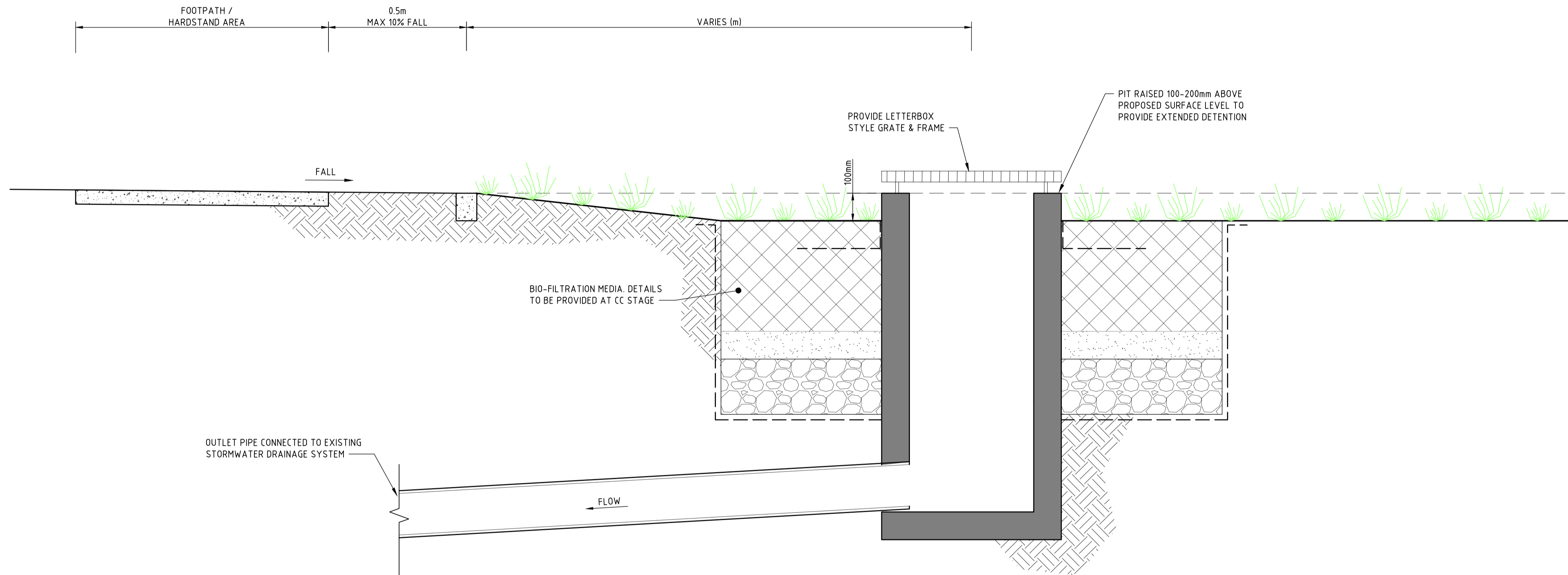
**A NEW HIGH SCHOOL FOR BALLINA**  
 37-49 SWIFT STREET  
 BALLINA NSW 2478

DRAWING TITLE

**CONCEPT STORMWATER MANAGEMENT AND LEVELS**  
 PLAN - SHEET 2

JOB NUMBER	
<b>NL150200</b>	
DRAWING NUMBER	REVISION
<b>C21</b>	<b>A</b>
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TYPICAL PASSIVE IRRIGATION DETAIL  
FOOTPATH TO GARDEN EDGE  
SCALE 1:10

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DRAWING TITLE

**CIVIL DETAILS**

JOB NUMBER

**NL150200**

DRAWING NUMBER	REVISION
<b>C30</b>	<b>A</b>

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