

	SCALE	1 : 200 @A1
	DATE	19.02.19
	DRAWN BY	AA
	CHECKED BY	TK
	PROJECT. No.	A1805

CLIENT NAME



PROJECT NAME:
Kingswood High School
Multipurpose Hall Facility

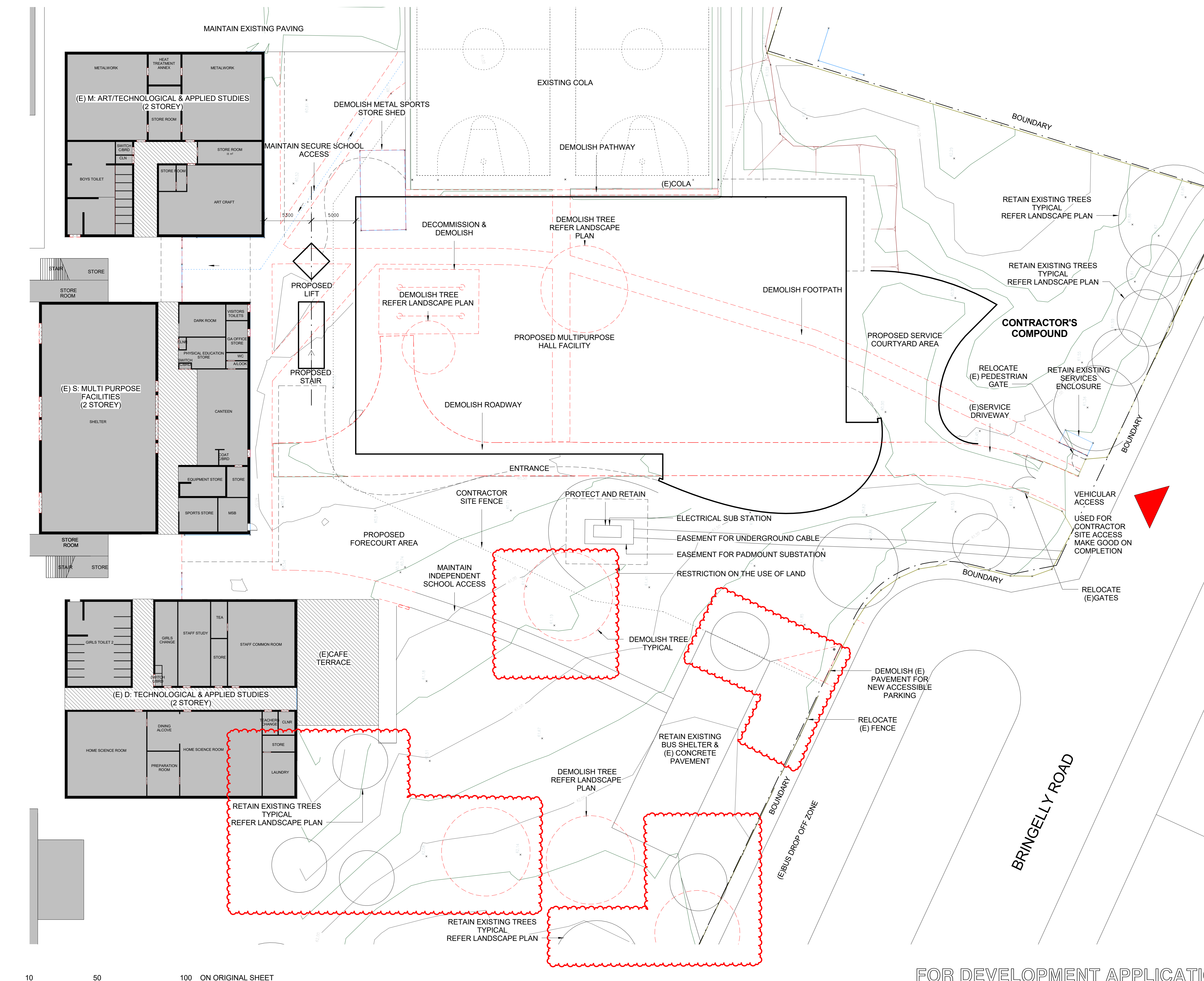
CONTRACT NUMBER: SINSW-18-1442

ADDRESS:
Kingswood High School
131 Bringelly Road
Kingswood NSW 2747

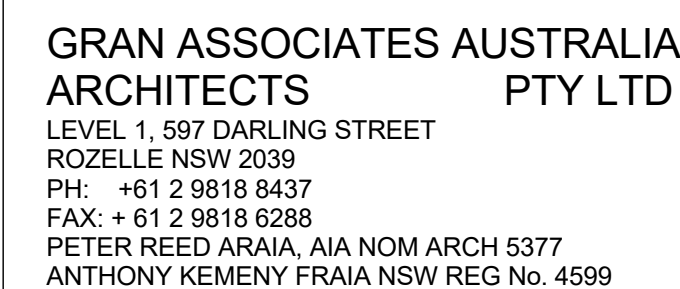
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CONTEXT GROUND FLOOR
DEMOLITION & EARTHWORKS PLAN

DRAWING No.
A-DA-02.1

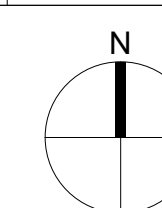
REVISION No.	0
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FOR DEVELOPMENT APPLICATION



Nº.	DESCRIPTION	DATE
A	FOR DEVELOPMENT APPLICATION	29.11.18
B	FOR DEVELOPMENT APPLICATION	30.01.19
C	FOR DEVELOPMENT APPLICATION	19.02.19



SCALE	1 : 200 @A1
DATE	19.02.19
DRAWN BY	AA
CHECKED BY	TK
PROJECT. NO.	A1805

CLIENT NAME



Education

 Kingswood
High School

PROJECT NAME:

PROJECT NAME:
Kingswood High School
Multipurpose Hall Facility

CONTRACT NUMBER: SINSW-18-1442

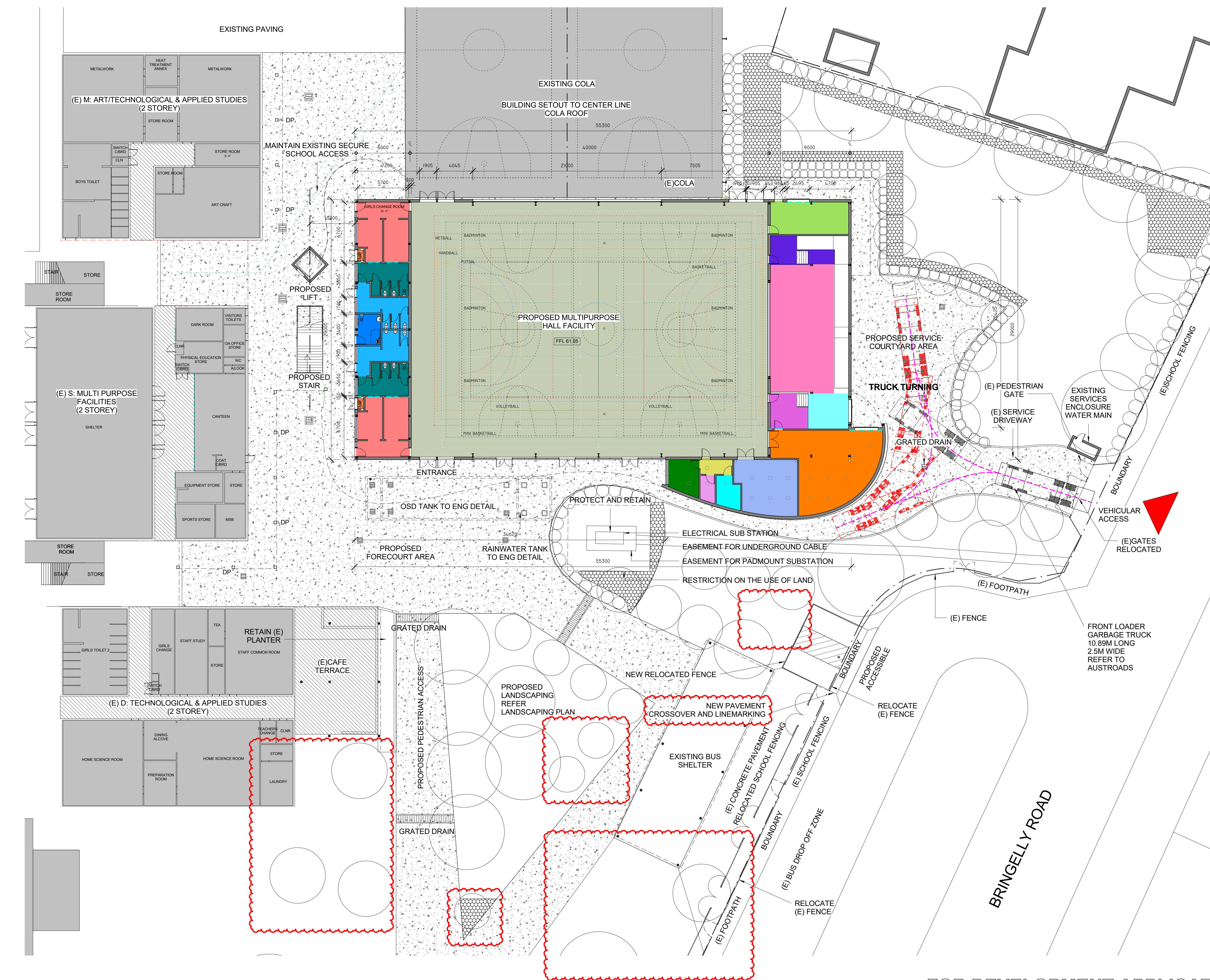
ADDRESS:
Kingswood High School
131 Bringelly Road
Kingswood NSW 2747

TITLE:
CONTEXT GROUND FLOOR PLAN

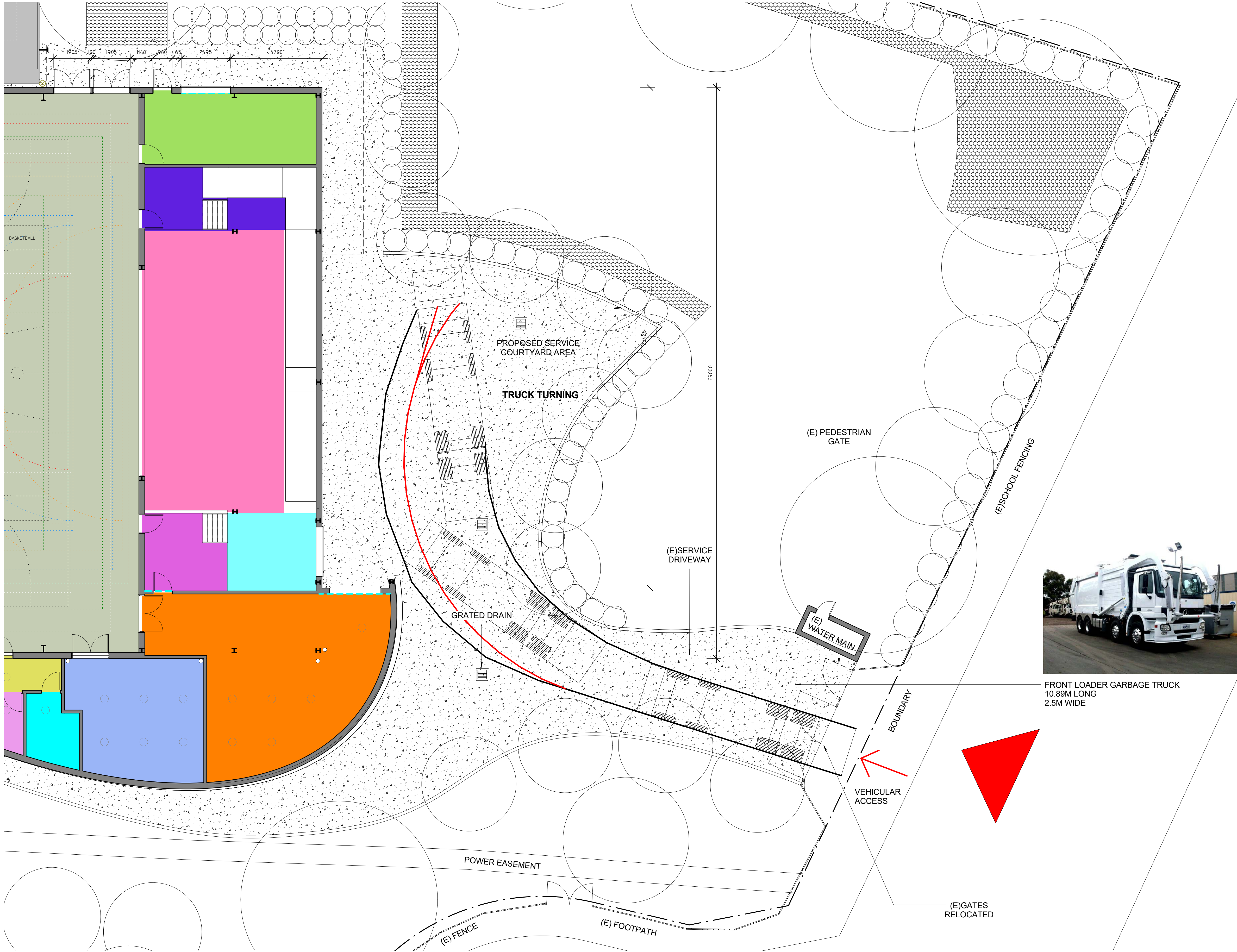
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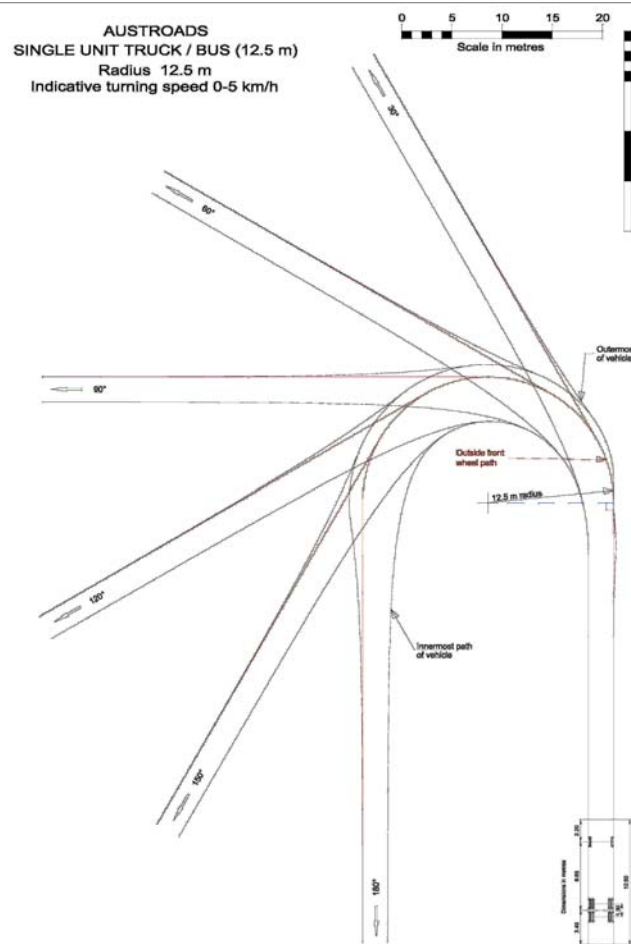
REVISION No.	
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FOR DEVELOPMENT APPLICATION



GRAN ASSOCIATES AUSTRALIA
ARCHITECTS PTY LTD
LEVEL 1, 597 DARLING STREET
ROZELLE NSW 2039
PH: +61 2 9818 8437
FAX: +61 2 9818 6288
PETER REED ARAIA, AIA NOM ARCH 5377
ANTHONY KEMENY FRAIA NSW REG No. 4599



AUSTROADS
TURNING CIRCLE DIAGRAM
FORWARD MOVEMENT

Nº.	DESCRIPTION	DATE
A	FOR DEVELOPMENT APPLICATION	30.01.19

SCALE	1 : 100 @A1
DATE	30.01.18
DRAWN BY	AA
CHECKED BY	TK
PROJECT. NO.	A1805

CLIENT NAME:



PROJECT NAME:
Kingswood High School
Multipurpose Hall Facility

CONTRACT NUMBER: SINSW-18-1442

ADDRESS:
Kingswood High School
131 Bringelly Road
Kingswood NSW 2747

TITLE:
CONTEXT GROUND FLOOR TRUCK
INGRESS SWEEP PATH

DRAWING No.
A-DA-02.3

REVISION No.
A



FRONT LOADER GARBAGE TRUCK
10.89M LONG
2.5M WIDE



PENRITH COUNCIL
TURNING CIRCLE DIAGRAM
FORWARD & REVERSE

Nº.	DESCRIPTION	DATE
A	FOR DEVELOPMENT APPLICATION	30.01.19

SCALE	1 : 100 @A1
DATE	30.01.18
DRAWN BY	AA
CHECKED BY	TK
PROJECT. NO.	A1805

CLIENT NAME:



PROJECT NAME:
Kingswood High School
Multipurpose Hall Facility

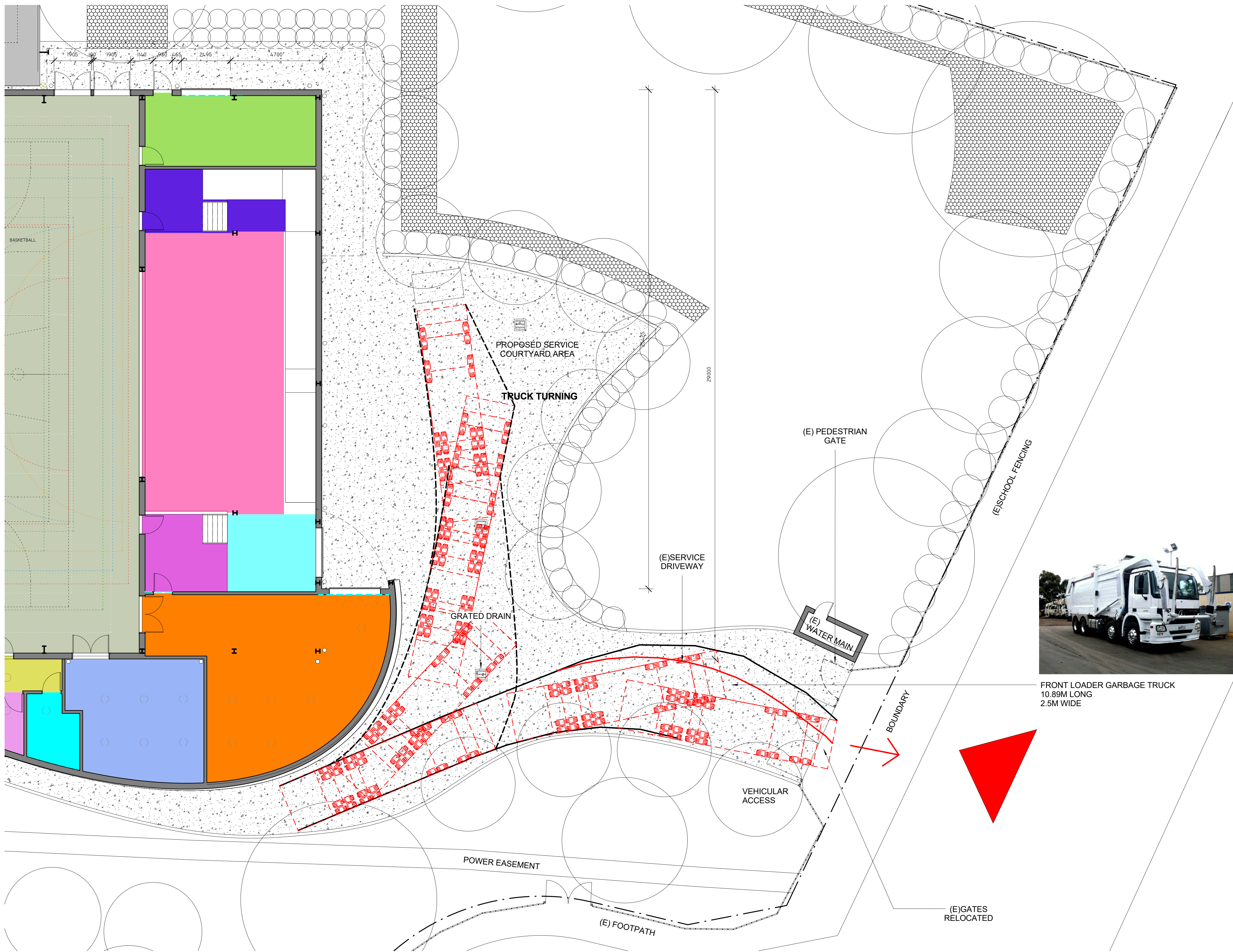
CONTRACT NUMBER: SINSW-18-1442

ADDRESS:
Kingswood High School
131 Bringelly Road
Kingswood NSW 2747

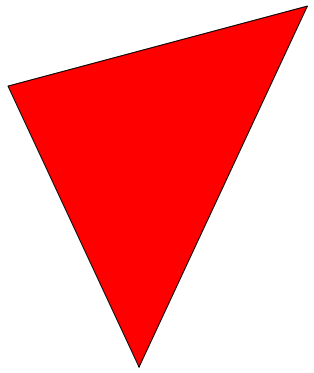
TITLE:
CONTEXT GROUND FLOOR PLAN
TRUCK EGRESS SWEEP PATH

DRAWING No.
A-DA-02.4

REVISION No.
A



FRONT LOADER GARBAGE TRUCK
10.89M LONG
2.5M WIDE





Nº.	DESCRIPTION	DATE
A	FOR DEVELOPMENT APPLICATION	29.II.18

	SCALE	1 : 200 @A1
	DATE	29.II.18
	DRAWN BY	AA
	CHECKED BY	TK
PROJECT. No.		A/805



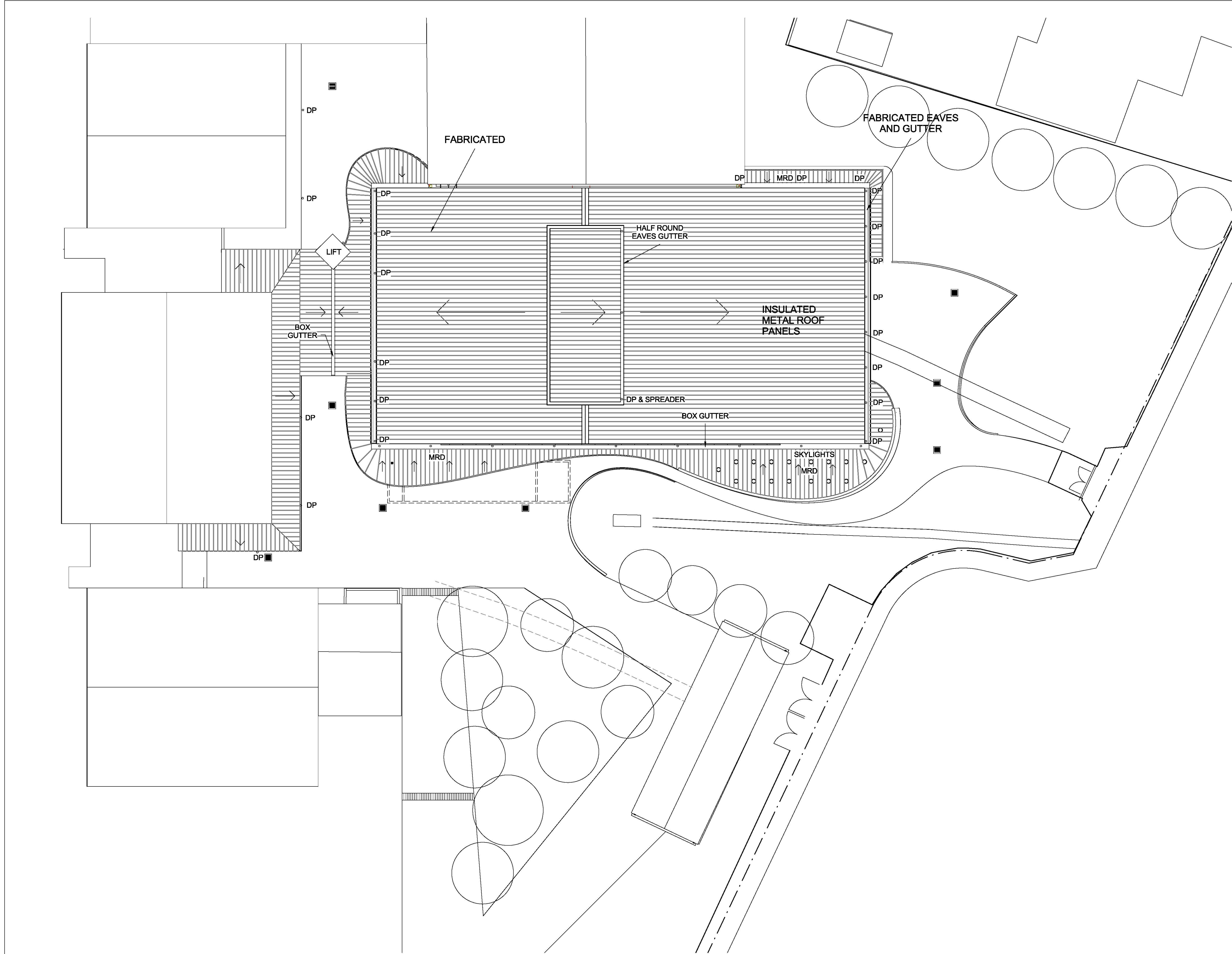
PROJECT NAME:
Kingswood High School
Multipurpose Hall Facility

CONTRACT NUMBER: SINSW-18-1442

ADDRESS:
Kingswood High School
131 Bringelly Road
Kingswood NSW 2747

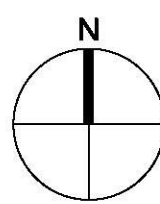
TITLE:
CONTEXT FIRST FLOOR PLAN

DRAWING No.	REVISION No.
A-DA-03	A



GRAN ASSOCIATES AUSTRALIA
ARCHITECTS PTY LTD
LEVEL 1, 597 DARLING STREET
ROZELLE NSW 2039
PH: +61 2 9818 8437
FAX: +61 2 9818 6288
PETER REED ARAIA, AIA NOM ARCH 5377
ANTHONY KEMENY FRAIA NSW REG No. 4599

Nº.	DESCRIPTION	DATE
A	FOR DEVELOPMENT APPLICATION	29.II.18



SCALE	1 : 200 @A1
DATE	29.II.18
DRAWN BY	AA
CHECKED BY	TK
PROJECT. No.	A/805

CLIENT NAME:



Education



Kingswood
High School

PROJECT NAME:
Kingswood High School
Multipurpose Hall Facility

CONTRACT NUMBER: SINSW-18-1442

ADDRESS:
Kingswood High School
131 Bringelly Road
Kingswood NSW 2747

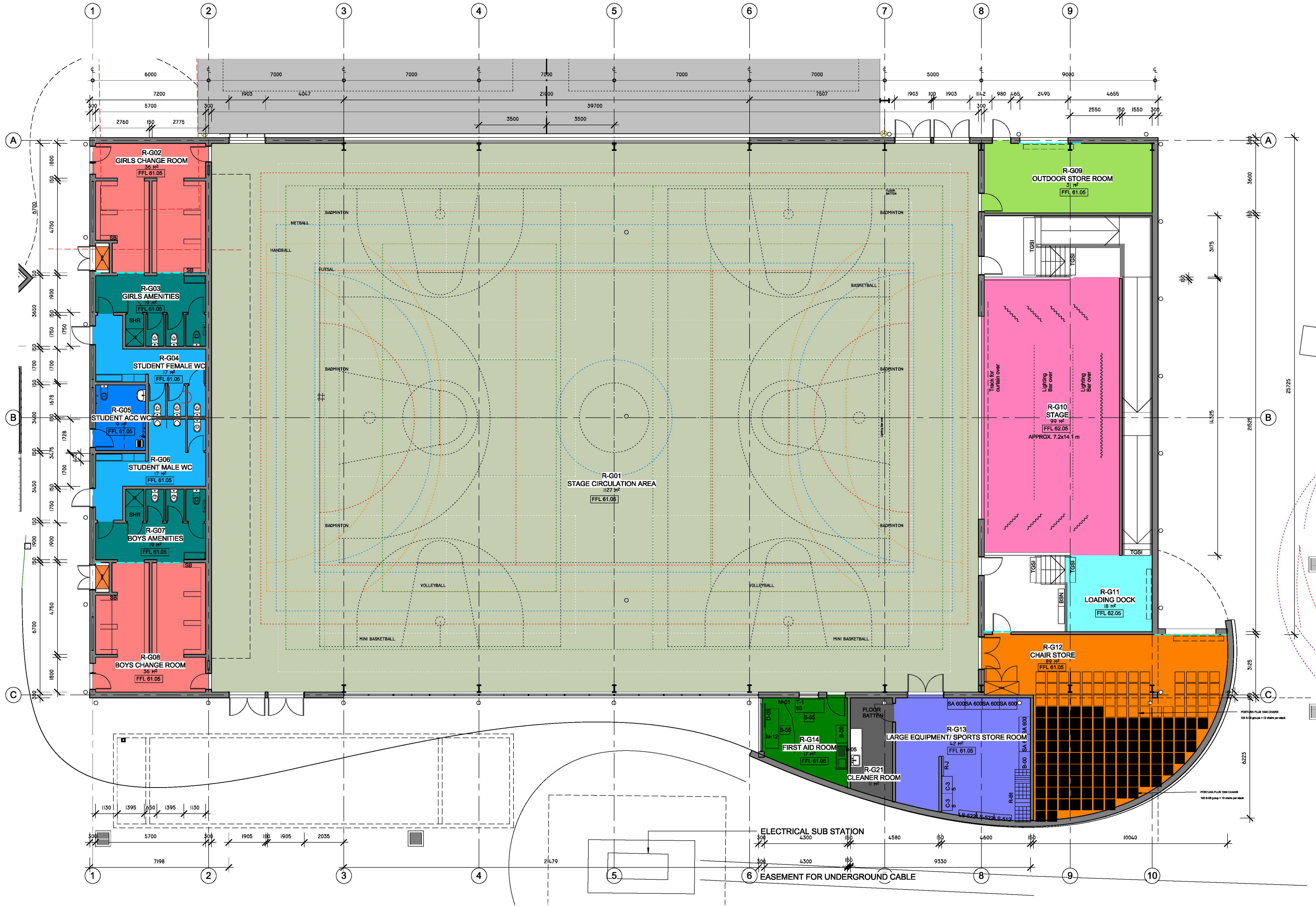
TITLE:
ROOF PLAN

DRAWING No.
A-DA-04

REVISION No.
A

10 50 100 ON ORIGINAL SHEET

FOR DEVELOPMENT APPLICATION



10 50 100 ON ORIGINAL SHEET

FOR DEVELOPMENT APPLICATION

Nº.	DESCRIPTION	DATE
A	FOR DEVELOPMENT APPLICATION	29.II.18

SCALE	1 : 100 @A1
DATE	29.II.18
DRAWN BY	AA
CHECKED BY	TK
PROJECT. NO.	A/805

CLIENT NAME:

 **Education**

 **Kingswood High School**

PROJECT NAME:
Kingswood High School Multipurpose Hall Facility

CONTRACT NUMBER: **SINSW-18-1442**

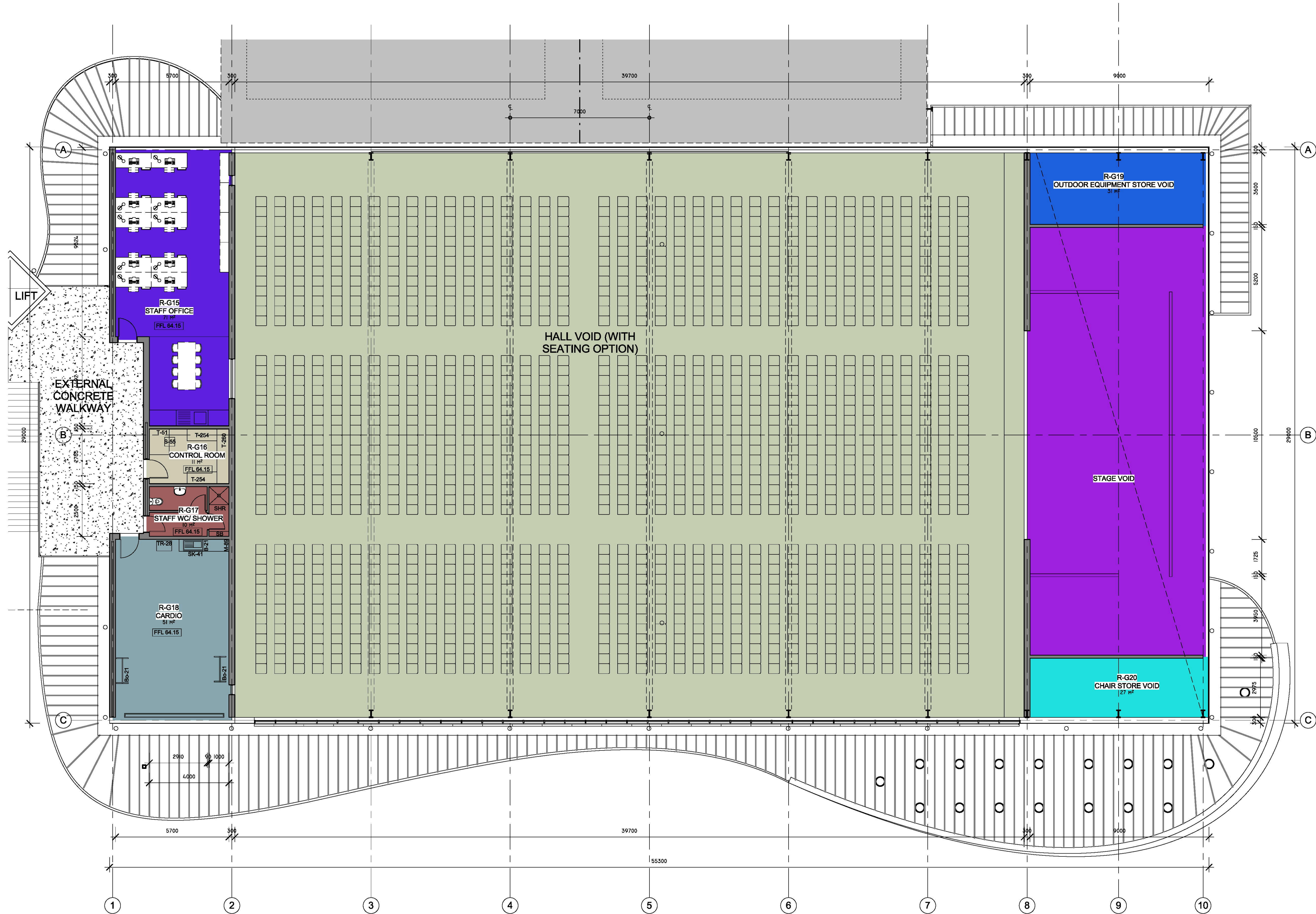
ADDRESS:
**Kingswood High School
131 Bringelly Road
Kingswood NSW 2747**

TITLE:
GROUND FLOOR BUILDING PLAN with Sports Line Markings

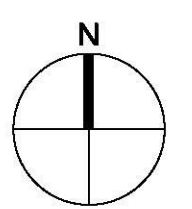
DRAWING No.	REVISION No.
A-DA-05	A



GRAN ASSOCIATES AUSTRALIA
ARCHITECTS PTY LTD
LEVEL 1, 597 DARLING STREET
ROZELLE NSW 2039
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PETER REED ARAIA, AIA NOM ARCH 5377
ANTHONY KEMENY FRAIA NSW REG No. 4599



Nº.	DESCRIPTION	DATE
A	FOR DEVELOPMENT APPLICATION	29.II.18



SCALE	1 : 100 @A1
DATE	29.II.18
DRAWN BY	AA
CHECKED BY	TK
PROJECT. No.	A/805

CLIENT NAME:



Education



Kingswood High School

PROJECT NAME:

Kingswood High School Multipurpose Hall Facility

CONTRACT NUMBER: SINSW-18-1442

ADDRESS:

Kingswood High School
131 Bringelly Road
Kingswood NSW 2747

TITLE:

FIRST FLOOR PLAN with Hall Seating

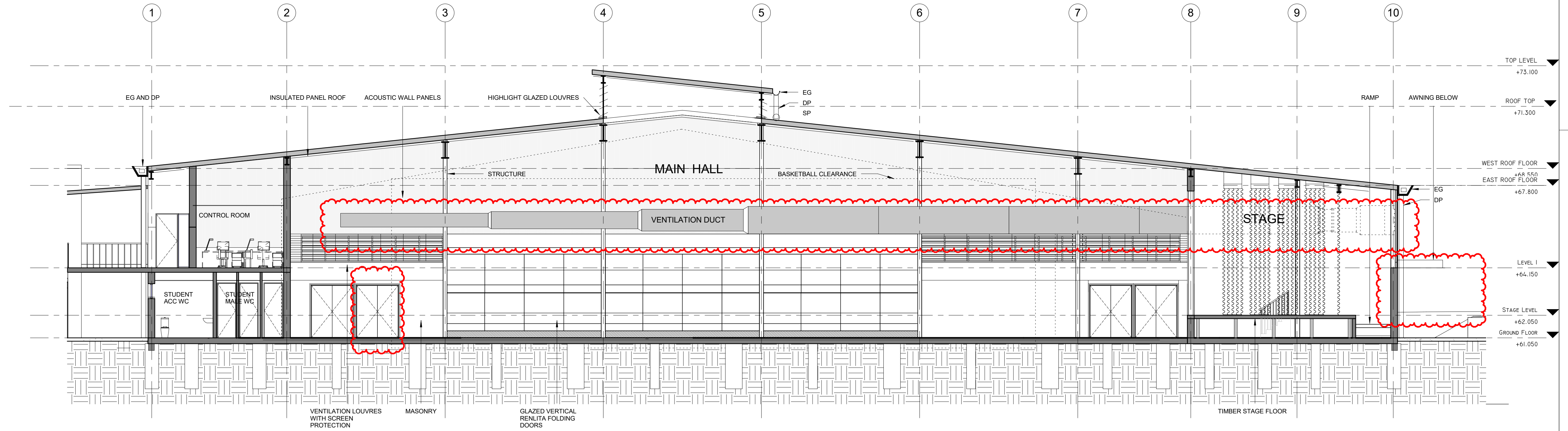
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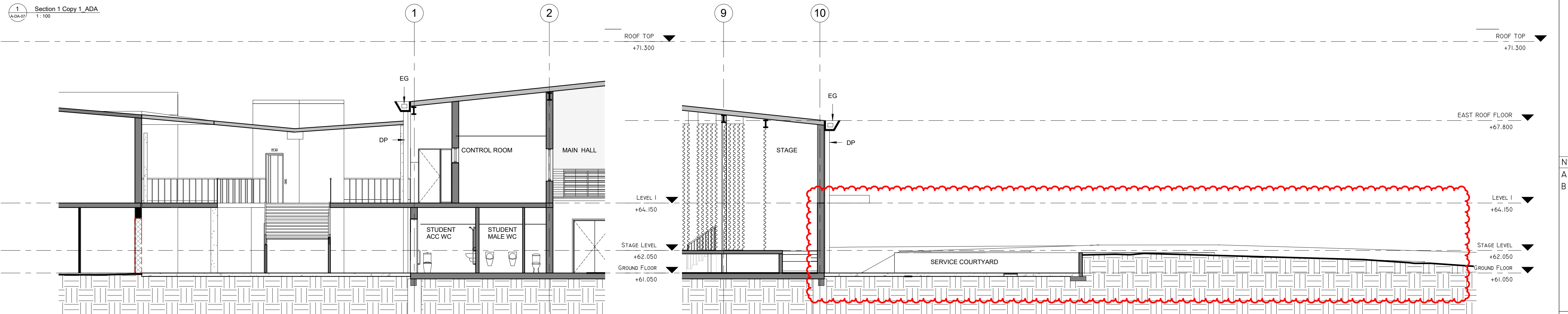
REVISION No.

A

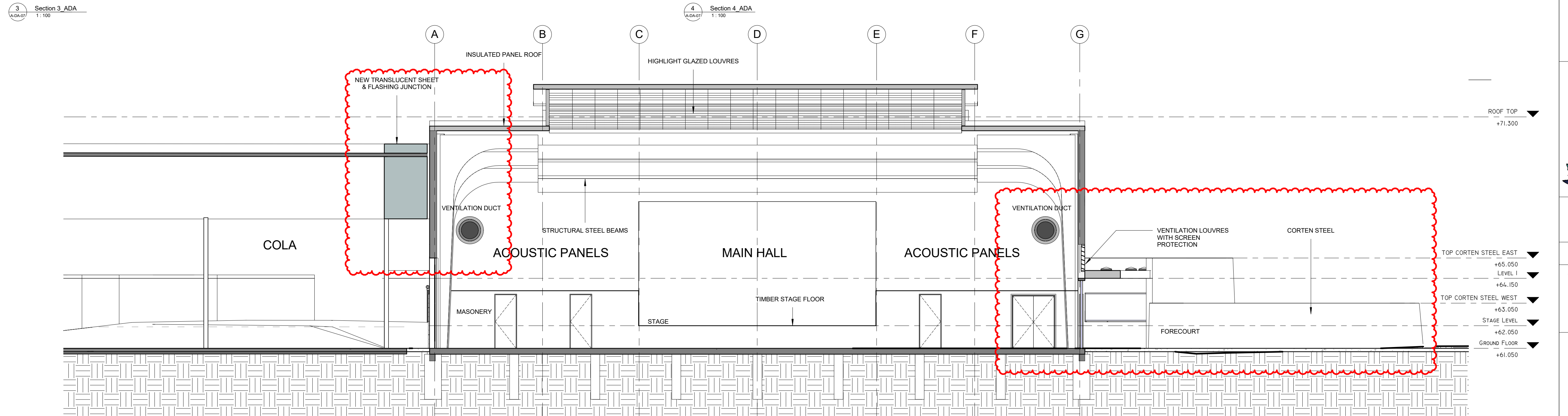
FOR DEVELOPMENT APPLICATION



1 Section 1 Copy 1 ADA
1:100



3 Section 3 ADA
1:100



4 Section 4 ADA
1:100

2 Section 2 Copy 1 ADA
1:100

10 50 100 ON ORIGINAL SHEET

FOR DEVELOPMENT APPLICATION

Nº.	DESCRIPTION	DATE
A	FOR DEVELOPMENT APPLICATION	29.11.18
B	FOR DEVELOPMENT APPLICATION	30.01.19

SCALE	1 : 100 @A1
DATE	30.01.18
DRAWN BY	AA
CHECKED BY	TK
PROJECT. No.	A1805

CLIENT NAME:



PROJECT NAME:
Kingswood High School
Multipurpose Hall Facility

CONTRACT NUMBER: SINSW-18-1442

ADDRESS:
Kingswood High School
131 Bringelly Road
Kingswood NSW 2747

TITLE:
SECTIONS

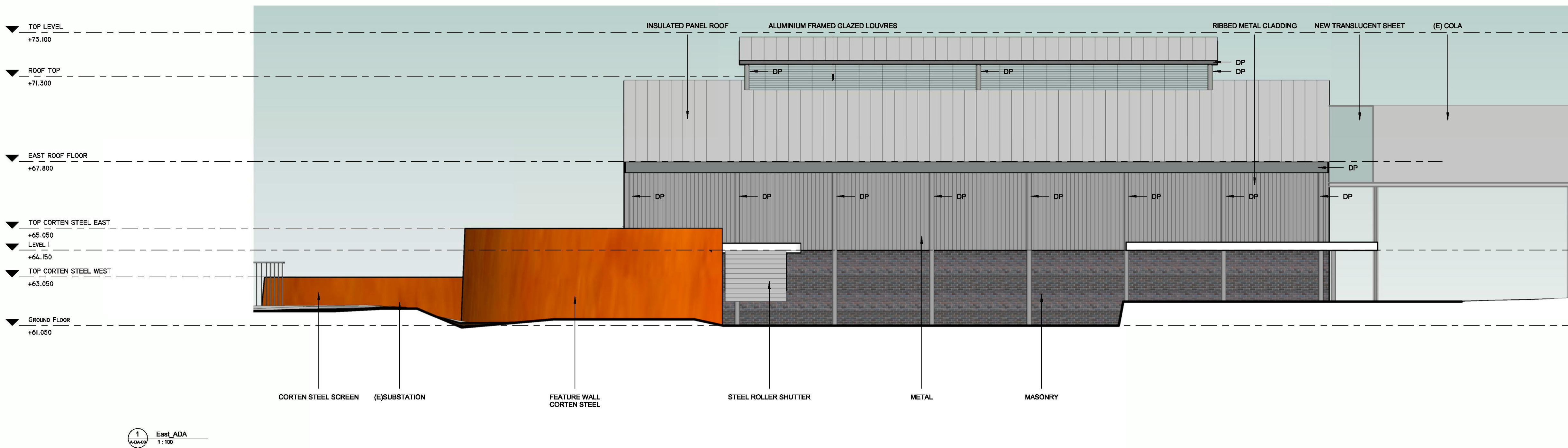
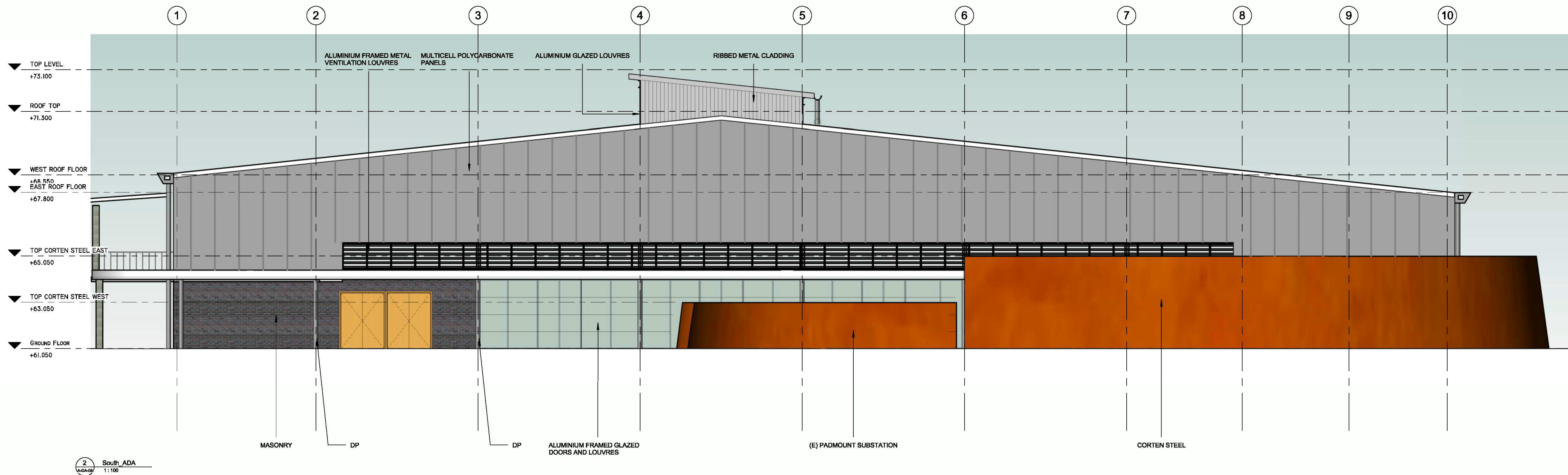
DRAWING No.
A-DA-07

REVISION No.
B



GRAN ASSOCIATES AUSTRALIA
ARCHITECTS PTY LTD

LEVEL 1, 597 DARLING STREET
ROZELLE NSW 2039
PH: +61 2 9818 8437
FAX: +61 2 9818 6288
PETER REED ARAIA, AIA NOM ARCH 5377
ANTHONY KEMENY FRAIA NSW REG No. 4599



Nº.	DESCRIPTION	DATE
A	FOR DEVELOPMENT APPLICATION	29.II.18

SCALE	1 : 100 @A1
DATE	29.II.18
DRAWN BY	LB
CHECKED BY	TK
PROJECT. NO.	A/805

CLIENT NAME:



PROJECT NAME:
Kingswood High School
Multipurpose Hall Facility

CONTRACT NUMBER: SINSW-18-1442

ADDRESS:
Kingswood High School
131 Bringelly Road
Kingswood NSW 2747

TITLE:
ELEVATIONS SHEET 1 (South & East)

DRAWING No.
A-DA-08

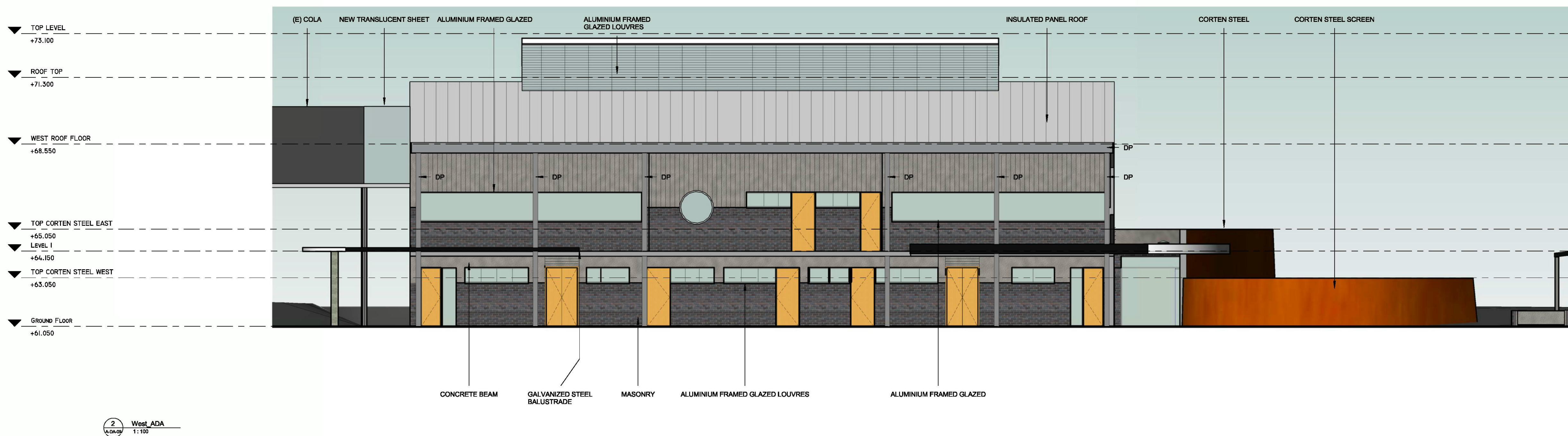
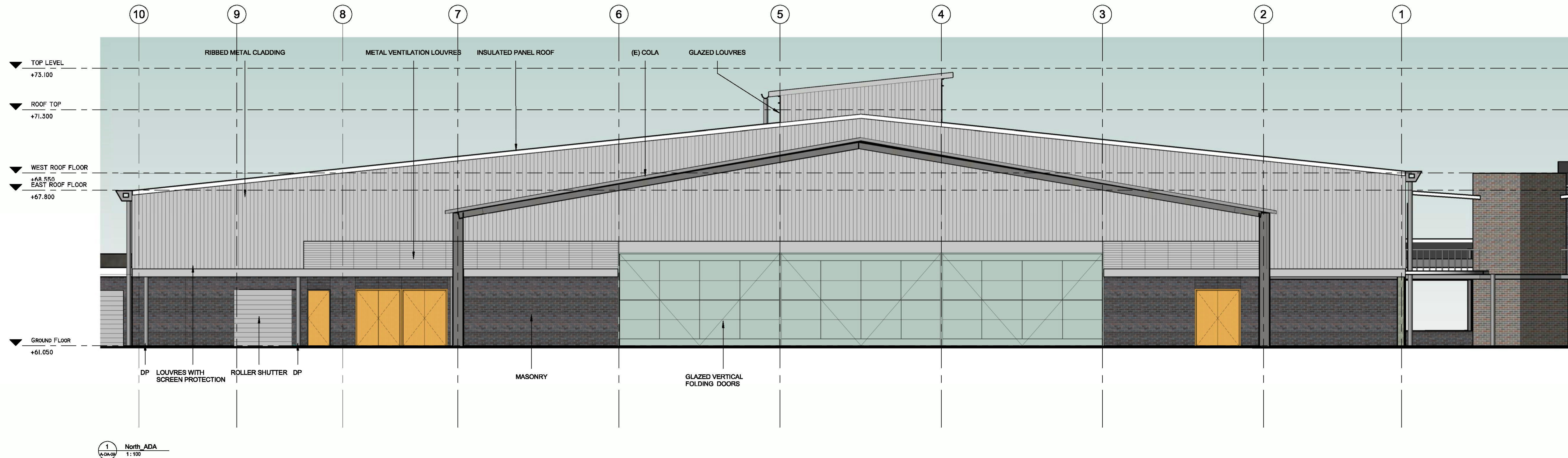
REVISION No.
A

FOR DEVELOPMENT APPLICATION



GRAN ASSOCIATES AUSTRALIA
ARCHITECTS PTY LTD

LEVEL 1, 597 DARLING STREET
ROZELLE NSW 2039
PH: +61 2 9818 8437
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PETER REED ARAIA, AIA NOM ARCH 5377
ANTHONY KEMENY FRAIA NSW REG No. 4599



10 50 100 ON ORIGINAL SHEET

FOR DEVELOPMENT APPLICATION

N°.	DESCRIPTION	DATE
A	FOR DEVELOPMENT APPLICATION	29.II.18

SCALE	1 : 100 @A1
DATE	29.II.18
DRAWN BY	LB
CHECKED BY	TK
PROJECT. No.	A/805

CLIENT NAME:



PROJECT NAME:
Kingswood High School
Multipurpose Hall Facility

CONTRACT NUMBER: SINSW-18-1442

ADDRESS:
Kingswood High School
131 Bringelly Road
Kingswood NSW 2747

TITLE:
ELEVATIONS SHEET 2 (North & West)

DRAWING No.
A-DA-09

REVISION No.
A



GRAN ASSOCIATES AUSTRALIA
ARCHITECTS PTY LTD

LEVEL 1, 39/ DAKLING STREET
ROZELLE NSW 2039
PH: +61 2 9818 8437
FAX: +61 2 9818 6288
PETER REED ARAIA, AIA NOM ARCH 5377
ANTHONY KEMENY FRAIA NSW REG No. 4599

SERVICES CONSULTANT



PH: 9635 5635

N°.	DESCRIPTION	DATE
A	DEVELOPMENT APPLICATION	29.II.18
B	ADDITIONAL WSUD ADDED	29.01.19

SCALE	1 : 200 @A1
DATE	29.II.18
DRAWN BY	NG
CHECKED BY	NG
PROJECT. No.	A1805

CLIENT NAME:



Education



Kingswood
High School

PROJECT NAME:

NEW MULTI-PURPOSE HALL
CONTRACT NO. SINSW-18-1442

ADDRESS:

Kingswood High School
131 Bringelly Road
Kingswood NSW 2747

TITLE:

CIVIL SERVICES
SITE PLAN

DRAWING No.

C-100

REVISION No.

B

SEE C-105 FOR
CONTINUATION

STW 525 STW 525
ALLOW TO EXTEND 525Ø PIPE. ALLOW
TO EXTEND NEW 525Ø PIPE 120M AND
CONNECT TO EXISTING 600Ø PIPE.
ALLOW TO CONNECT TO EXISTING PITS
ALONG THE PIPE ROUTE. REFER TO
EXISTING BUILDING SITE PLAN FOR
FURTHER DETAILS

900Sq PIT
WITH ENVIRO
POD BASKET
FILTER

900SQ PIT
WITH ENVIRO POD
BASKET FILTER

900SQ PIT
WITH ENVIRO POD
BASKET FILTER

900SQ PIT
WITH ENVIRO POD
BASKET FILTER

600SQ PIT
WITH ENVIRO POD
BASKET FILTER

600SQ PIT
WITH ENVIRO POD
BASKET FILTER

300 WIDE GRATED DRAIN
COMPLETE WITH HEEL
GUARD GRATE

300 WIDE GRATED DRAIN
COMPLETE WITH HEEL
GUARD GRATE

300 WIDE GRATED DRAIN
COMPLETE WITH HEEL
GUARD GRATE

DEVELOPMENT APPLICATION



GRAN ASSOCIATES AUSTRALIA
ARCHITECTS PTY LTD

LEVEL 1, 39/ DARLING STREET
ROZELLE NSW 2039
PH: +61 2 9818 8437
FAX: +61 2 9818 6288
PETER REED ARAIA, AIA NOM ARCH 5377
ANTHONY KEMENY FRAIA NSW REG No. 4599

SERVICES CONSULTANT



PH: 9635 5635

DESCRIPTION	DATE
A DEVELOPMENT APPLICATION	29.11.18
B ADDITIONAL WSUD ADDED	29.01.19
ADDITIONAL NOTE ADDED TO STORMFILTERS	20.03.19

SCALE	1 : 150 @A1
DATE	01.11.18
DRAWN BY	NG
CHECKED BY	NG
PROJECT. NO.	A1805

CLIENT NAME:



Education
Kingswood High School

PROJECT NAME:
NEW MULTI-PURPOSE HALL
CONTRACT NO. SINSW-18-1442

ADDRESS:
Kingswood High School
131 Bringelly Road
Kingswood NSW 2747

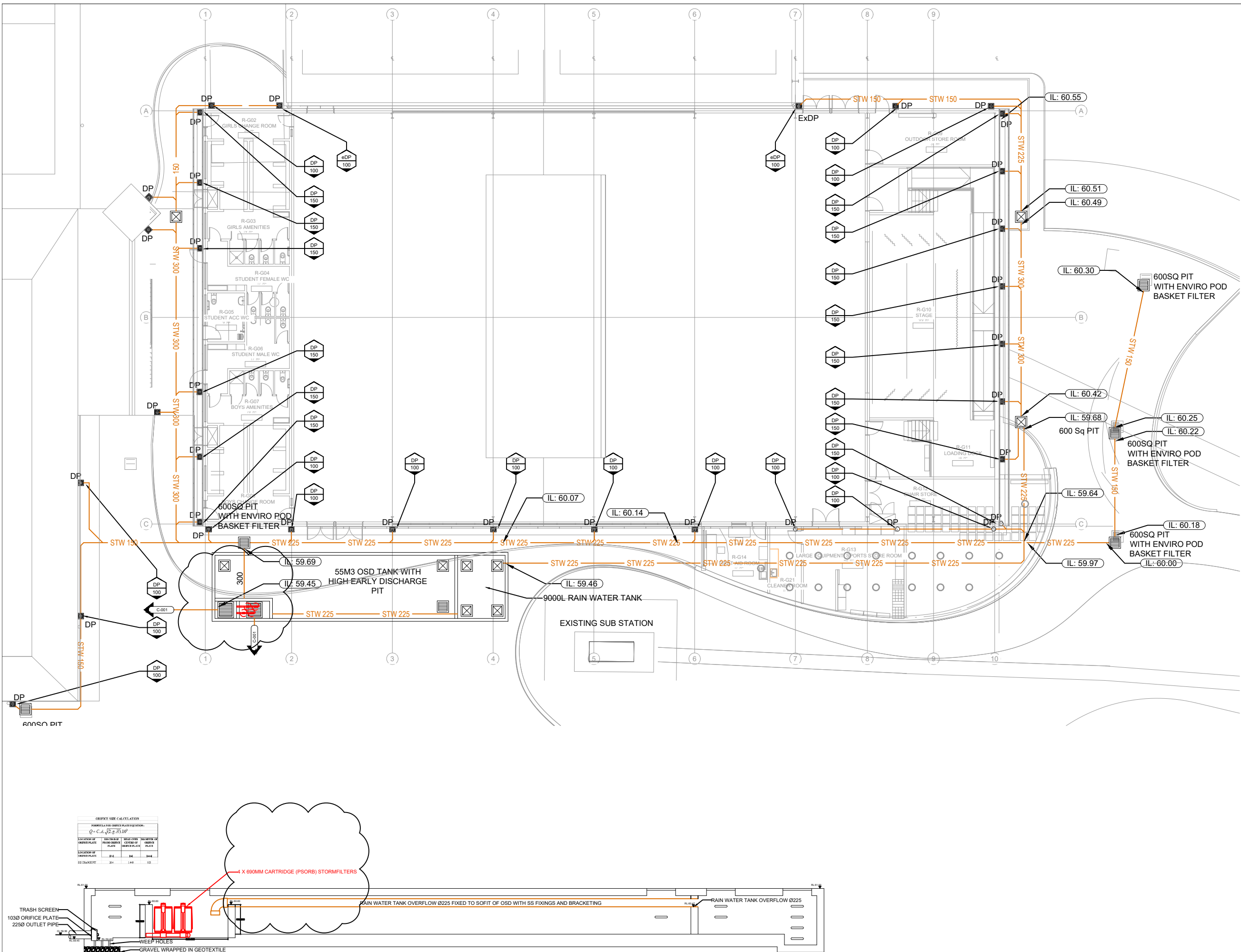
TITLE:
CIVIL SERVICES
STORMWATER MANAGEMENT
GROUND FLOOR

DRAWING NO.

C-101

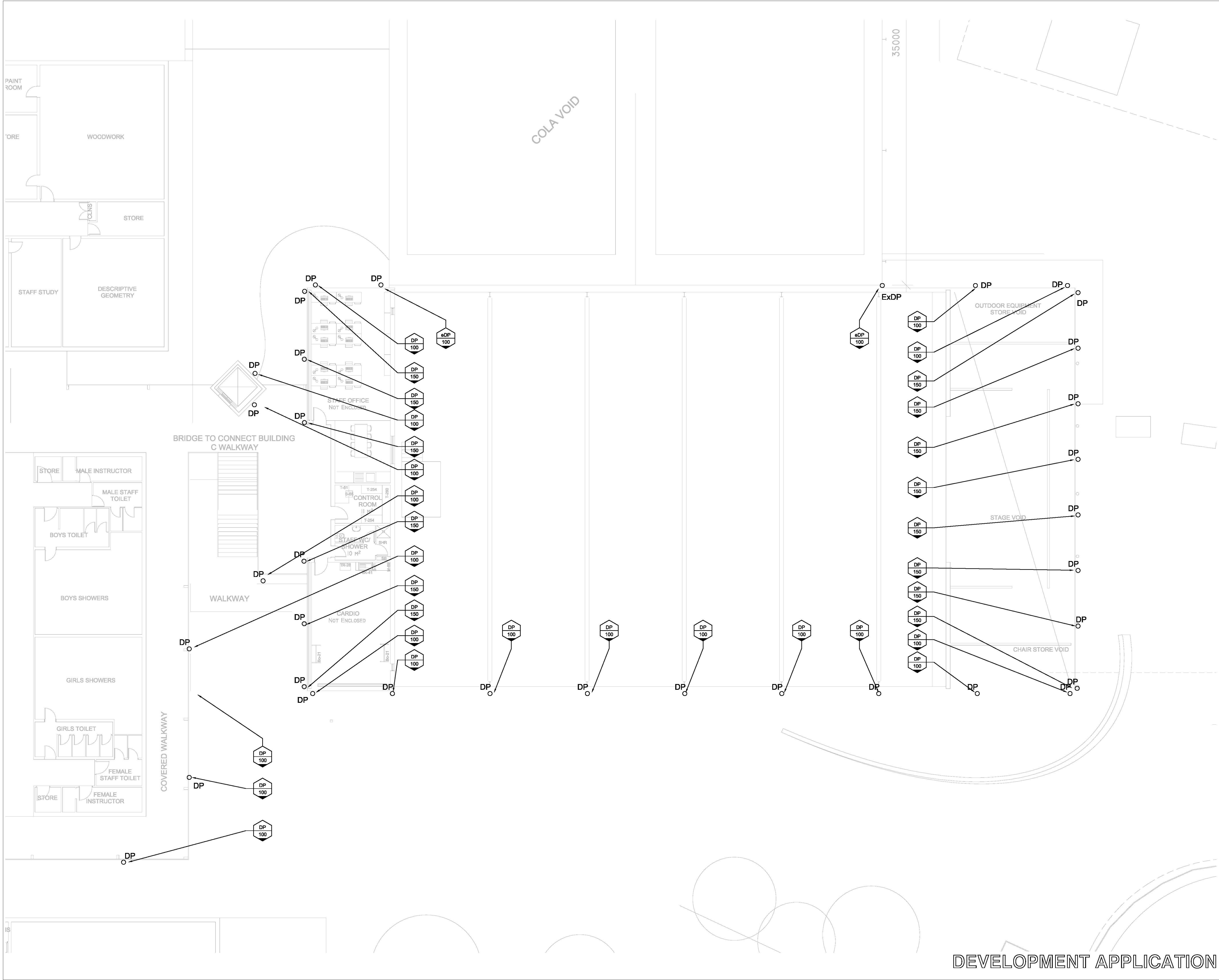
REVISION NO.

C



OSD SECTION

DEVELOPMENT APPLICATION





GRAN ASSOCIATES AUSTRALIA ARCHITECTS PTY LTD
LEVEL 1, 39/ DARLING STREET
ROZELLE NSW 2039
PH: +61 2 9818 8437
FAX: +61 2 9818 6288
PETER REED ARAIA, AIA NOM ARCH 5377
ANTHONY KEMENY FRAIA NSW REG No. 4599

SERVICES CONSULTANT



PH: 9635 5635

Nº.	DESCRIPTION	DATE
A	DEVELOPMENT APPLICATION	29.II.18

SCALE	I : 100 @A1
DATE	01.II.18
DRAWN BY	NG
CHECKED BY	NG
PROJECT. NO.	A1805

CLIENT NAME:



Education



Kingswood High School

PROJECT NAME:

NEW MULTI-PURPOSE HALL
CONTRACT NO. SINSW-18-1442

ADDRESS:

Kingswood High School
131 Bringelly Road
Kingswood NSW 2747

TITLE:

CIVIL SERVICES
STORMWATER MANAGEMENT
LEVEL 01

DRAWING No.	REVISION No.
C-102	A

DEVELOPMENT APPLICATION



GRAN ASSOCIATES AUSTRALIA
ARCHITECTS PTY LTD

LEVEL 1, 39/ DARLING STREET
ROZELLE NSW 2039
PH: +61 2 9818 8437
FAX: +61 2 9818 6288
PETER REED ARAIA, AIA NOM ARCH 5377
ANTHONY KEMENY FRAIA NSW REG No. 4599

SERVICES CONSULTANT



PH: 9635 5635

Nº.	DESCRIPTION	DATE
A	DEVELOPMENT APPLICATION	29.11.18

SCALE	1 : 100 @A1
DATE	01.11.18
DRAWN BY	NG
CHECKED BY	NG
PROJECT. NO.	A/805

CLIENT NAME:



Education



Kingswood
High School

PROJECT NAME:

NEW MULTI-PURPOSE HALL
CONTRACT NO. SINSW-18-1442

ADDRESS:

Kingswood High School
131 Bringelly Road
Kingswood NSW 2747

TITLE:

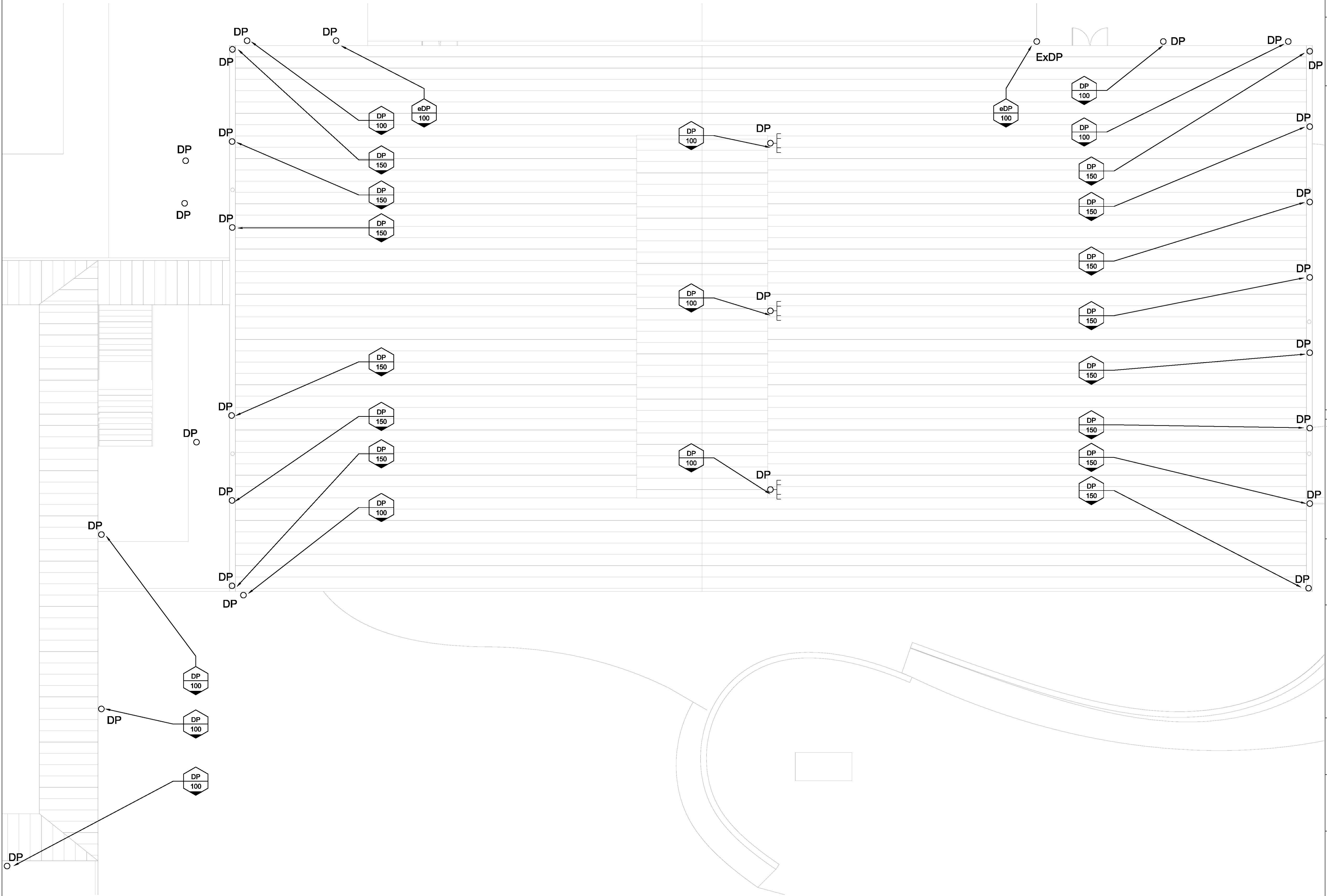
CIVIL SERVICES
STORMWATER MANAGEMENT
ROOF LEVEL

DRAWING NO.

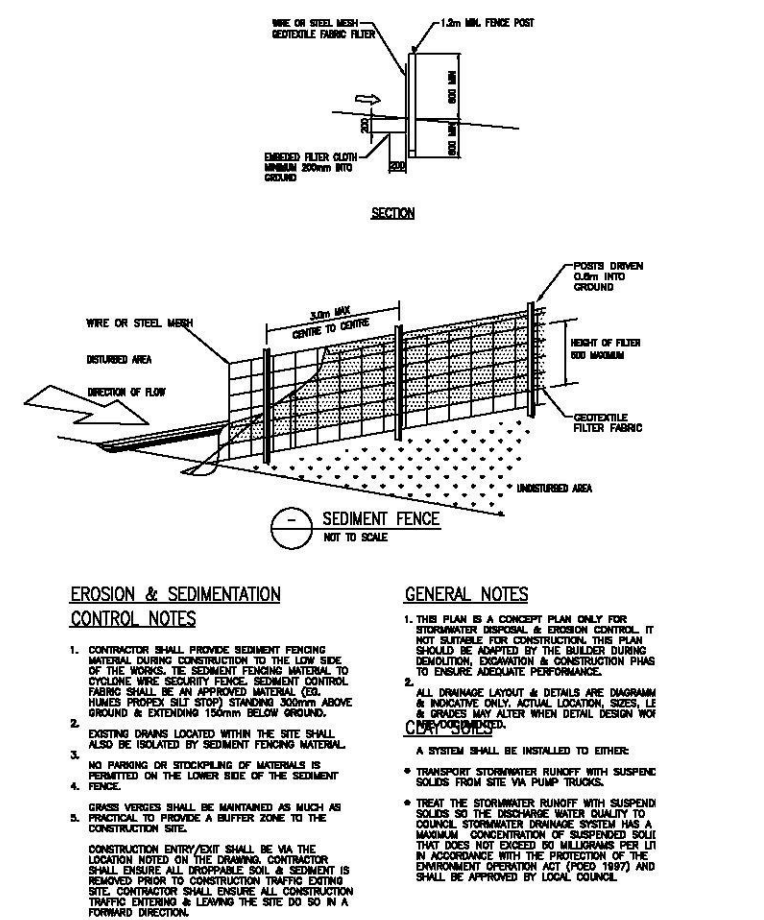
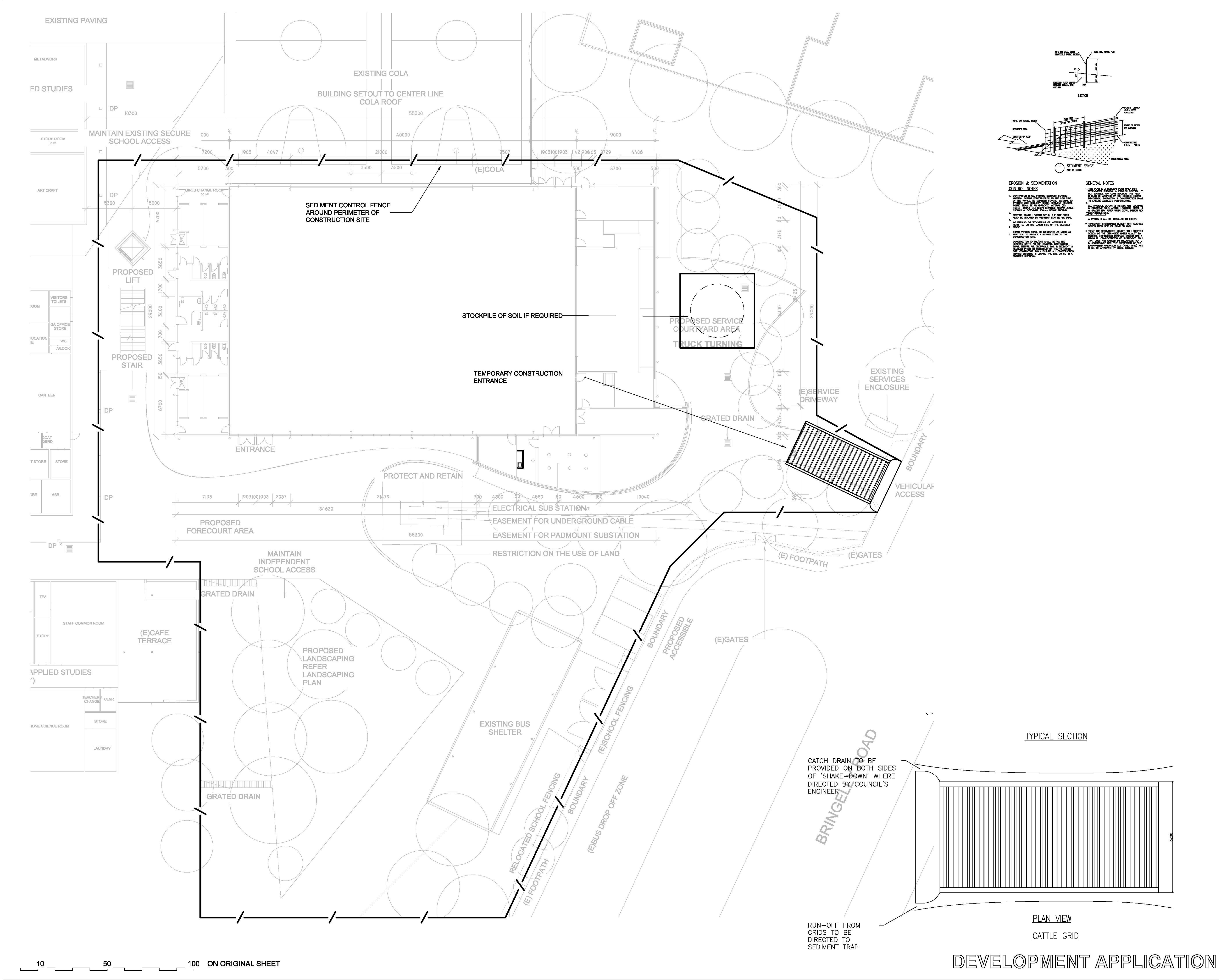
C-103

REVISION NO.

A



DEVELOPMENT APPLICATION

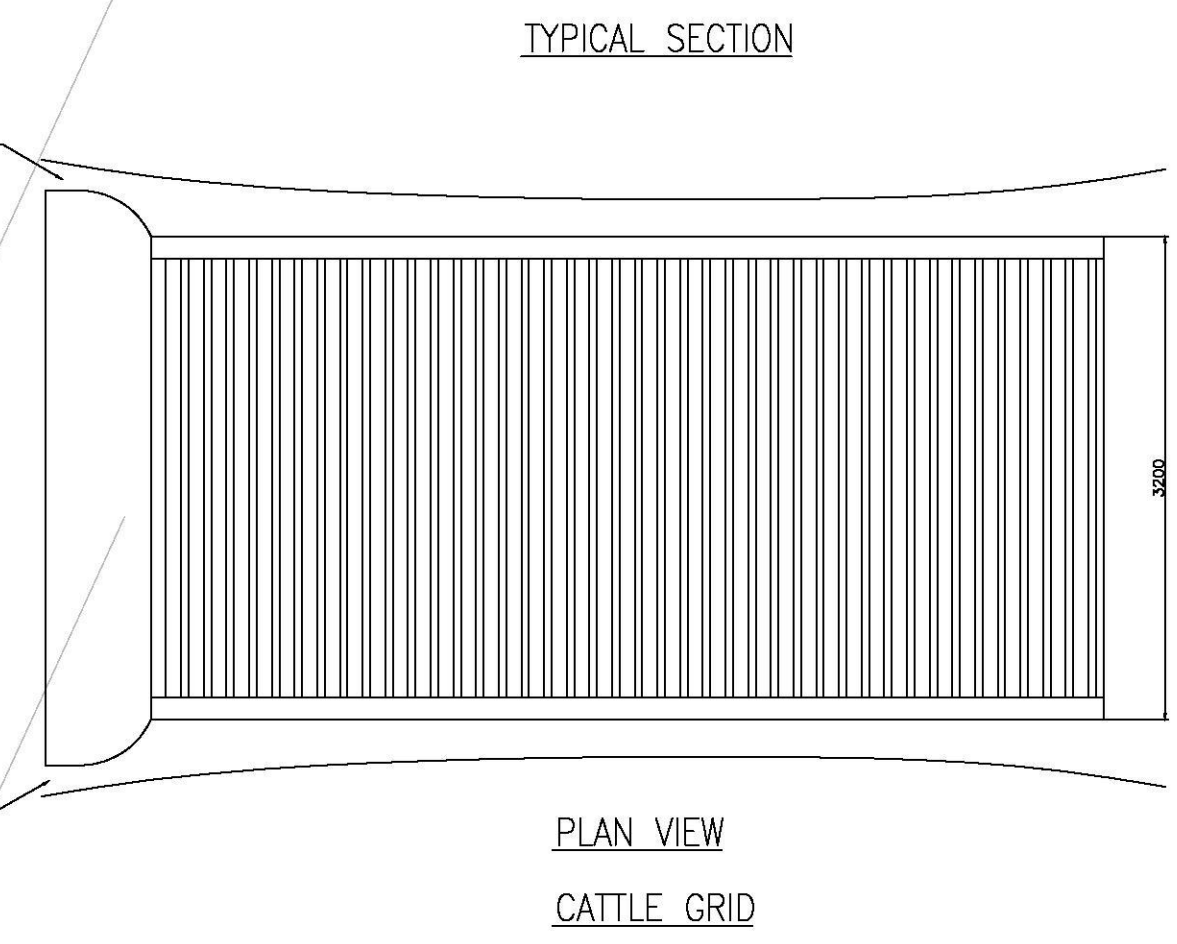


EROSION & SEDIMENTATION CONTROL NOTES

1. CONSTRUCTION SHALL MAINTAIN SEDIMENT FENCE AROUND PERIMETER OF CONSTRUCTION SITE AT ALL TIMES.
2. ALL EXISTING VEGETATION SHALL BE PROTECTED AND NOT REMOVED UNLESS NECESSARY FOR CONSTRUCTION.
3. ALL EXISTING VEGETATION SHALL BE PROTECTED AND NOT REMOVED UNLESS NECESSARY FOR CONSTRUCTION.
4. ALL EXISTING VEGETATION SHALL BE PROTECTED AND NOT REMOVED UNLESS NECESSARY FOR CONSTRUCTION.

GENERAL NOTES

1. THIS PLAN IS A CONCEPT PLAN ONLY FOR INFORMATION PURPOSES. ANY CHANGES TO THE PLAN SHALL BE APPROVED BY THE LOCAL COUNCIL.
2. ALL EXISTING VEGETATION SHALL BE PROTECTED AND NOT REMOVED UNLESS NECESSARY FOR CONSTRUCTION.
3. ALL EXISTING VEGETATION SHALL BE PROTECTED AND NOT REMOVED UNLESS NECESSARY FOR CONSTRUCTION.
4. ALL EXISTING VEGETATION SHALL BE PROTECTED AND NOT REMOVED UNLESS NECESSARY FOR CONSTRUCTION.



DEVELOPMENT APPLICATION

gran
GRAN ASSOCIATES AUSTRALIA
ARCHITECTS PTY LTD
LEVEL 1, 39/ DARLING STREET
ROZELLE NSW 2039
PH: +61 2 9818 8437
FAX: +61 2 9818 6288
PETER REED ARAIA, AIA NOM ARCH 5377
ANTHONY KEMENY FRAIA NSW REG No. 4599

SERVICES CONSULTANT
ENGINEERING SERVICES
PH: 9635 5635

Nº.	DESCRIPTION	DATE
A	DEVELOPMENT APPLICATION	29.11.18

SCALE	1 : 200 @A1
DATE	29.11.18
DRAWN BY	NG
CHECKED BY	NG
PROJECT. NO.	A1805

CLIENT NAME:

NSW Education
Kingswood High School

PROJECT NAME:
NEW MULTI-PURPOSE HALL
CONTRACT NO. SINSW-18-1442

ADDRESS:
Kingswood High School
131 Bringelly Road
Kingswood NSW 2747

TITLE:
CIVIL SERVICES
SEDIMENT AND EROSION
CONTROL PLAN

DRAWING NO.	REVISION NO.
C-104	A

MUSIC-link Report

Project Details		Company Details	
Project:	131 Bringelly Rd, Kingswood	Company:	Engineering Services PTY LTD
Report Export Date:	19/01/2019	Contact:	Nathan Greaves
Catchment Name:	12006 - 131 Bringelly Rd	Address:	NA
Catchment Area:	0.474ha	Phone:	+61 422 294 047
Impervious Area:	89.87%	Email:	Nathan.Greaves@engserv.com.au
Rainfall Station:	67113 PENRITH		
Modelling Time-step:	6 Minutes		
Modelling Period:	1/01/1999 - 31/12/2008 11:54:00 PM		
Mean Annual Rainfall:	691mm		
Evapotranspiration:	1158mm		
MUSIC Version:	6.3.0		
MUSIC-link data Version:	6.31		
Study Area:	Penrith		
Scenario:	Penrith Development		

* takes into account area from all source nodes that link to the chosen reporting node, excluding Input Data Nodes

Treatment Train Effectiveness		Treatment Nodes		Source Nodes	
Node: 85/60/45	Reduction	Node Type	Number	Node Type	Number
Flow	5.29%	Sedimentation Basin Node	1	Urban Source Node	5
TSS	86.4%	Rain Water Tank Node	1		
TP	64.5%	GPT Node	1		
TN	45%	Generic Node	1		
GP	100%				

Comments

- Roof node base flow values are as per the MUSIC modelling guidelines which indicate base flow has no effect for impervious areas and therefore no value is needed.

- The 'SF Chamber' detention node (sedimentation basin) has been modified to represent a tank to hold volume for use with the Stormwater360 filter. k values has been set to 1 to prevent the tank from "treating" the flow as it would within a grassed above ground OSD

NOTE: A successful self-validation check of your model does not constitute an approved model by Penrith City Council
MUSIC-link now in MUSIC by eWater - leading software for modelling stormwater solutions

1 of 3

Passing Parameters					
Node Type	Node Name	Parameter	Min	Max	Actual
GPT	7 x Enviropod or Equivalent	Hi-flow bypass rate (cum/sec)	None	99	0.14
Receiving	85/60/45	% Load Reduction	None	None	5.29
Receiving	85/60/45	GP % Load Reduction	90	None	100
Receiving	85/60/45	TN % Load Reduction	45	None	45
Receiving	85/60/45	TP % Load Reduction	60	None	64.5
Receiving	85/60/45	TSS % Load Reduction	85	None	86.4
Sedimentation	SF Chamber 5m	High Flow Bypass Out (ML/yr)	None	None	0
Urban	Hardstand - 1652m (100% Imp.)	Area Impervious (ha)	None	None	0.165
Urban	Hardstand - 1652m (100% Imp.)	Area Pervious (ha)	None	None	0
Urban	Hardstand - 1652m (100% Imp.)	Total Area (ha)	None	None	0.165
Urban	Landscape - 483m (100% Perv.)	Area Impervious (ha)	None	None	0
Urban	Landscape - 483m (100% Perv.)	Area Pervious (ha)	None	None	0.048
Urban	Landscape - 483m (100% Perv.)	Total Area (ha)	None	None	0.048
Urban	Paved - 347m (100% Imp.)	Area Impervious (ha)	None	None	0.035
Urban	Paved - 347m (100% Imp.)	Area Pervious (ha)	None	None	0
Urban	Paved - 347m (100% Imp.)	Total Area (ha)	None	None	0.035
Urban	Roof - 1095m (100% Imp.)	Area Impervious (ha)	None	None	0.11
Urban	Roof - 1095m (100% Imp.)	Area Pervious (ha)	None	None	0
Urban	Roof - 1095m (100% Imp.)	Total Area (ha)	None	None	0.11
Urban	Roof to RWT - 1162m (100% Imp.)	Area Impervious (ha)	None	None	0.116
Urban	Roof to RWT - 1162m (100% Imp.)	Area Pervious (ha)	None	None	0
Urban	Roof to RWT - 1162m (100% Imp.)	Total Area (ha)	None	None	0.116

Only certain parameters are reported when they pass validation

NOTE: A successful self-validation check of your model does not constitute an approved model by Penrith City Council
MUSIC-link now in MUSIC by eWater - leading software for modelling stormwater solutions

2 of 3

Failing Parameters					
Node Type	Node Name	Parameter	Min	Max	Actual
Rain	1 x 9kL	% Reuse Demand Met	80	None	70.8207
Sedimentation	SF Chamber 5m	Notional Detention Time (hrs)	8	12	0.232
Sedimentation	SF Chamber 5m	Total Nitrogen - k (m/yr)	500	500	1
Sedimentation	SF Chamber 5m	Total Phosphorus - k (m/yr)	6000	6000	1
Sedimentation	SF Chamber 5m	Total Suspended Solids - k (m/yr)	8000	8000	1
Urban	Roof - 1095m (100% Imp.)	Baseflow Total Nitrogen Mean (log mg/L)	0.11	0.11	0
Urban	Roof - 1095m (100% Imp.)	Baseflow Total Nitrogen Standard Deviation (log mg/L)	0.12	0.12	0
Urban	Roof - 1095m (100% Imp.)	Baseflow Total Phosphorus Mean (log mg/L)	-0.85	-0.85	0
Urban	Roof - 1095m (100% Imp.)	Baseflow Total Phosphorus Standard Deviation (log mg/L)	0.19	0.19	0
Urban	Roof - 1095m (100% Imp.)	Baseflow Total Suspended Solids Mean (log mg/L)	1.2	1.2	0
Urban	Roof - 1095m (100% Imp.)	Baseflow Total Suspended Solids Standard Deviation (log mg/L)	0.17	0.17	0
Urban	Roof to RWT - 1162m (100% Imp.)	Baseflow Total Nitrogen Mean (log mg/L)	0.11	0.11	0
Urban	Roof to RWT - 1162m (100% Imp.)	Baseflow Total Nitrogen Standard Deviation (log mg/L)	0.12	0.12	0
Urban	Roof to RWT - 1162m (100% Imp.)	Baseflow Total Phosphorus Mean (log mg/L)	-0.85	-0.85	0
Urban	Roof to RWT - 1162m (100% Imp.)	Baseflow Total Phosphorus Standard Deviation (log mg/L)	0.19	0.19	0
Urban	Roof to RWT - 1162m (100% Imp.)	Baseflow Total Suspended Solids Mean (log mg/L)	1.2	1.2	0
Urban	Roof to RWT - 1162m (100% Imp.)	Baseflow Total Suspended Solids Standard Deviation (log mg/L)	0.17	0.17	0

Only certain parameters are reported when they pass validation

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MUSIC-link now in MUSIC by eWater - leading software for modelling stormwater solutions

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SERVICES CONSULTANT



PH: 9635 5635

Nº.	DESCRIPTION	DATE
A	ADDITIONAL WSUD ADDED	29.01.19

SCALE 1 : 150 @A1

DATE 01.11.18

DRAWN BY NG

CHECKED BY NG

PROJECT. No. A1805

CLIENT NAME:

Education
Kingswood
High School

PROJECT NAME:

NEW MULTI-PURPOSE HALL
CONTRACT NO. SINSW-18-1442

ADDRESS:

Kingswood High School
131 Bringelly Road
Kingswood NSW 2747

TITLE:

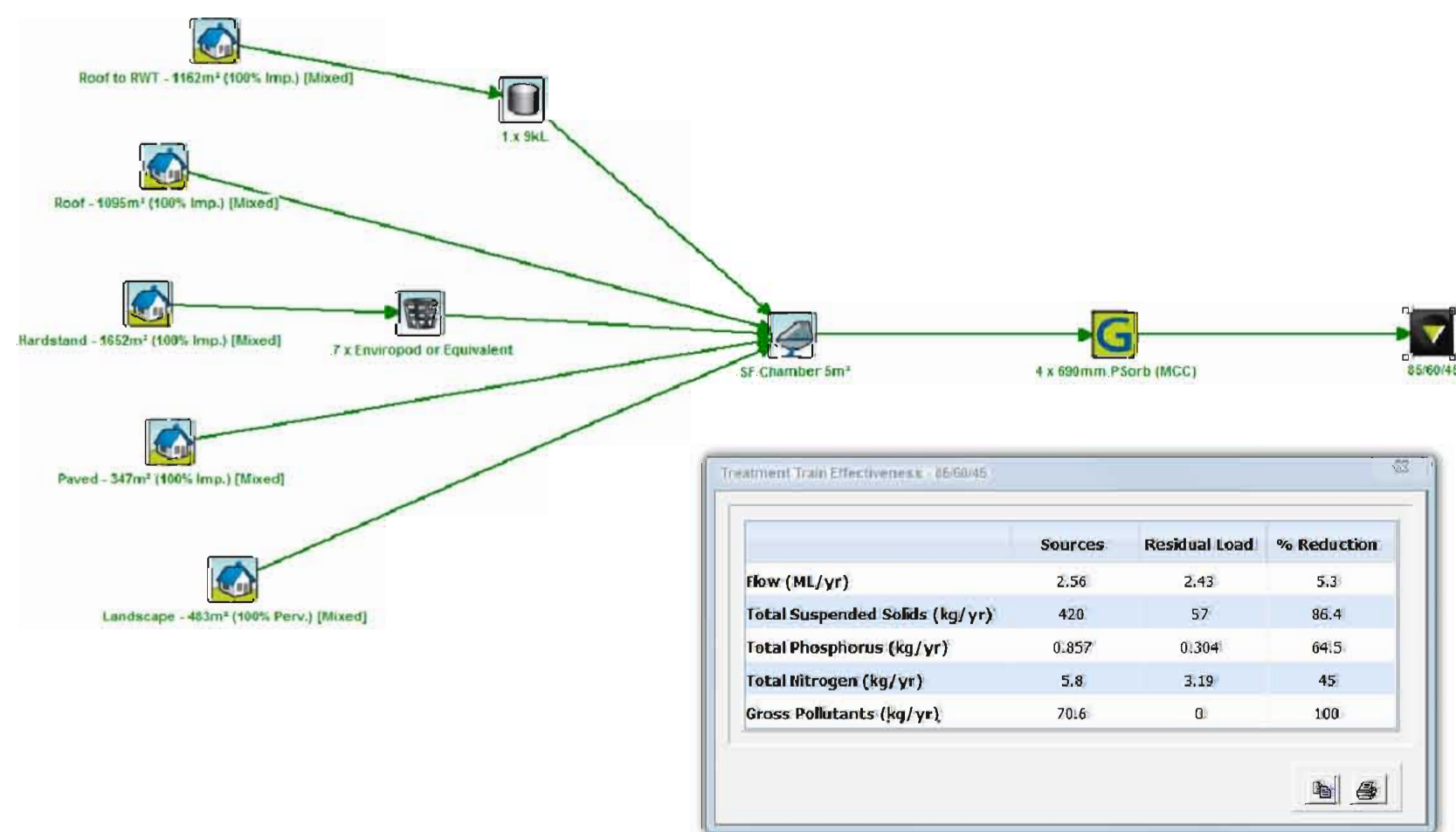
CIVIL SERVICES
STORMWATER MANAGEMENT
DETAIL SHEET 1

DRAWING No.

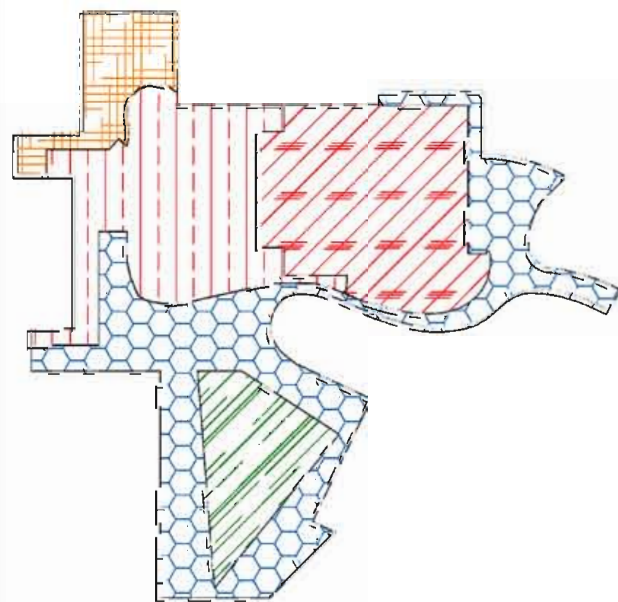
C-106

REVISION No.

A

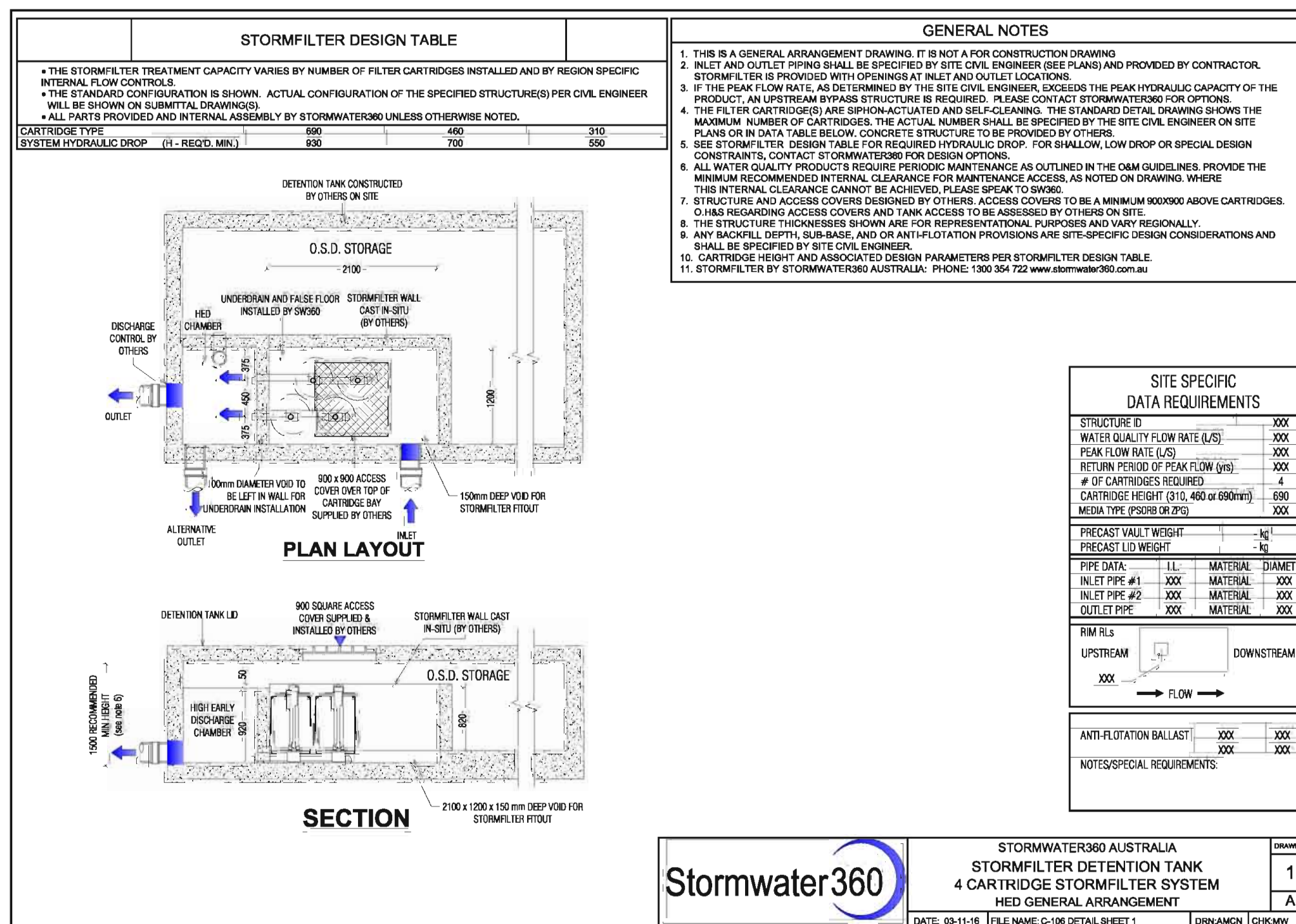
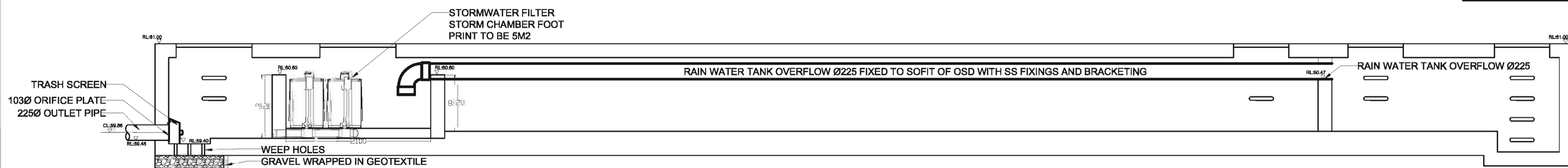
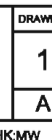


MUSIC Model Site Area Breakup



12006 - 131 Bringelly Rd, Kingswood (Prelim - Site Area Breakup)

OSD SECTION

STORMWATER360 AUSTRALIA
STORMFILTER DETENTION TANK
4 CARTRIDGE STORMFILTER SYSTEM
HEID GENERAL ARRANGEMENT

55.28 EXISTING LEVELS

●● TREE PROTECTION FENCING

TPZ

SRZ

A. DA ISSUE	28.11.18
B. REVISED DA ISSUE	23.01.19
C. REVISED DA ISSUE	08.02.19
D. REVISED DA ISSUE	18.02.19

Verify all dimensions on site before commencing construction or ordering materials. Verify the dimensions of all manufactured products before installation. Use figured dimensions in preference to scaled dimensions. Report any discrepancies to the Landscape Architect for a decision before work commences.

This plan is to be read in conjunction with all documentation prepared by **Gran Associates.**

CONTRACT NO. SINSW-18-1442



office. 16/303 pacific highway
lindfield nsw 2070
postal. 25 bent street
lindfield nsw 2070
ph 9416 4290 fax 9416 4735
A.C.N 097 328 580
email ijla@netspace.net.au

project
Kingswood High School
Bringelly Road, Kingswood

drawing
DA Landscape Plan

client
NSW Government - Education

date	scale
February 2019	1:200 @ A1
job.dwg no.	1:400 @ A3
175.19(18)/512'D'	no. in set
designed by	ONE/ONE
JJ	drawn by
	AM

