

SSD Application

1. Dimensions are in millimetres unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.

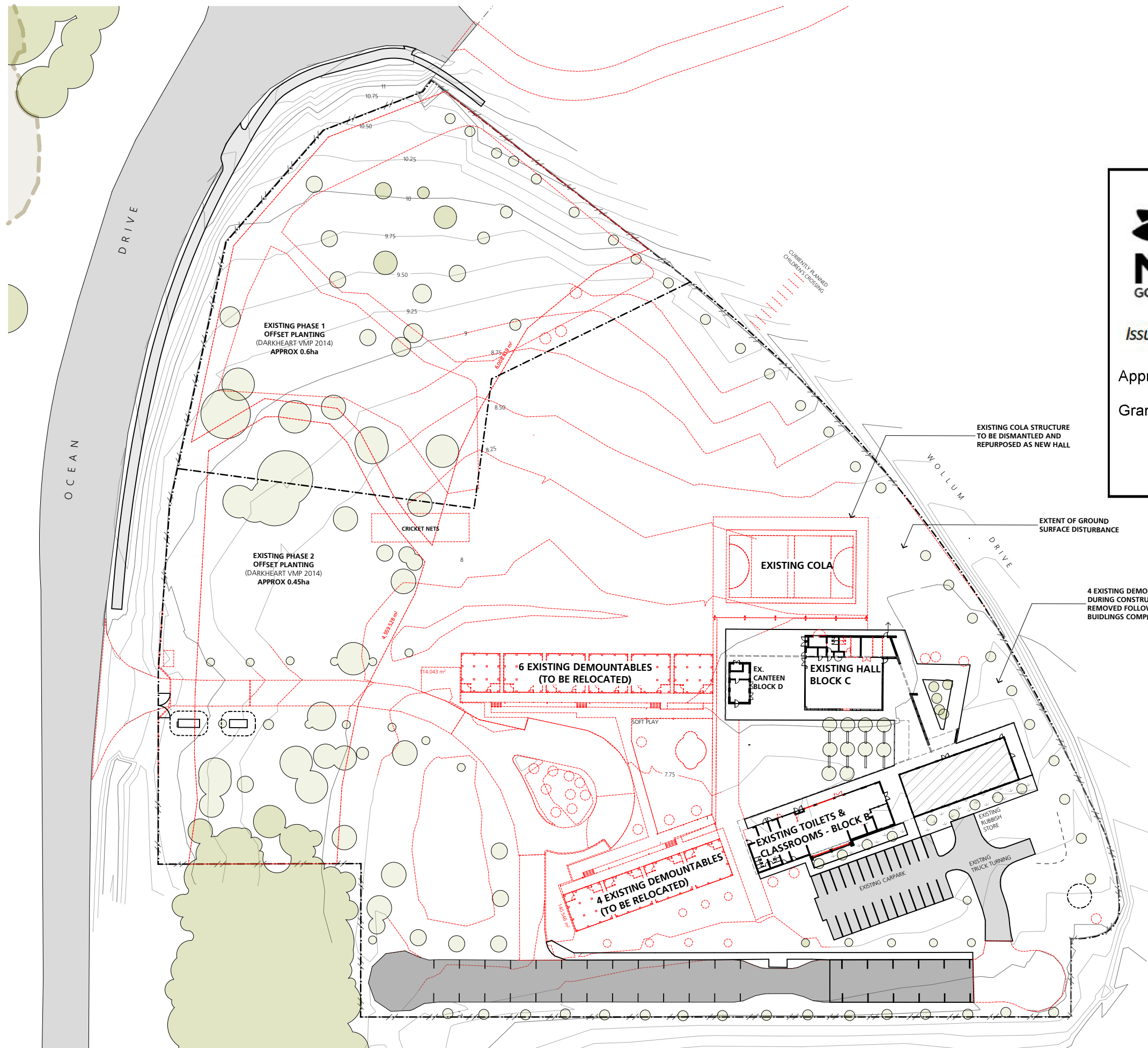


Planning,
Industry &
Environment

Issued under the Environmental Planning and Assessment Act 1979

Approved Application No: SSD 9491 Signed:

Granted on the: 30 January 2020 Sheet No: 1 of 23

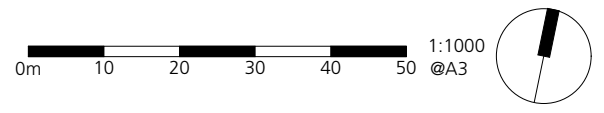


Drawing and design © SHAC Pty Ltd 2018. The signed control copy of this drawing is held by SHAC Pty Ltd. | Ref: BIM Server: BIMSERVER - BIM Server 21/9328 525; 10 Lake Cathie Master date: 17/01/2020 time: 10:41 AM



3928
DD2015
RevN 14.01.20

Proposed Site Plan
Lake Cathie Public School Upgrade
1240 Ocean Drive



SHAC
Nominated Architect Justin Hamilton (6160) | ABN 32 131 584 846

Drawing and design © SHAC Pty Ltd 2018. The signed control copy of this drawing is held by SHAC Pty Ltd. | Ref: BIM Server: BIMSERVER - BIM Server 21/9328.525.05 Lake Cathie Master date: 9/02/2019 time: 12:10 AM



Issued under the Environmental Planning and Assessment Act 1979

Approved Application No: SSD 9491 Signed:

Granted on the: 30 January 2020 Sheet No: 3 of 23

3928
DD2301
RevH 08.02.19

Block E - Learning Neighbourhood 1
Lake Cathie Public School Upgrade
1240 Ocean Drive

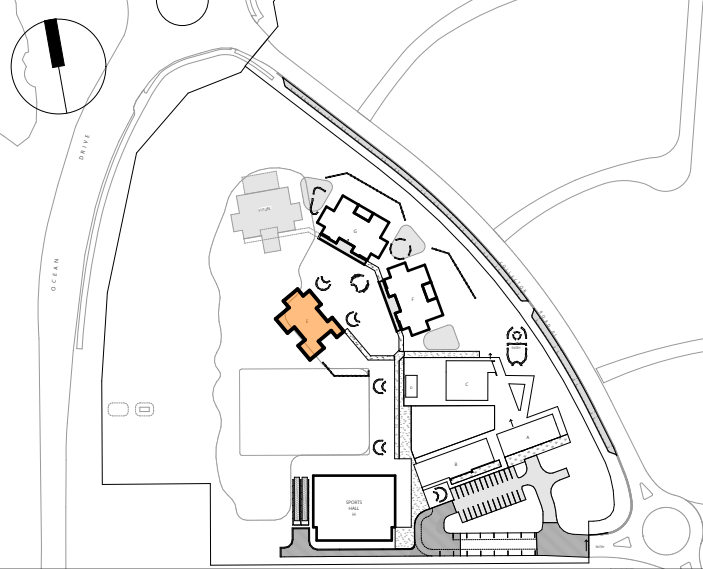


Education
Public Schools

SSD Application

1. Dimensions are in millimetres unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.

KEY PLAN



NEIGHBOURHOOD 01	CORE 14		CORE 21	
	EFSG	LCPS	EFSG	LCPS
HOMEBASE	180	193	240	258
HOME BASE STO. (m²) INCORPORATED IN JOINERY	18	8	24	12
LINEAR METRES STORE	-	32	-	48
PERSONAL EFFECTS STO.	19	6	12	6
PRACTICAL ACTIVITIES SINK EXTERNAL IN COLA	51	51	68	51
WITHDRAWAL	27	20	36	23
BUILDING COMMS	8	8	8	8
LEARNING COMMON	0	162	0	162
SUB TOTAL	303	337	388	520
% INCREASE ON EFSG	11%		34%	
COLA (Inc. PAA)	214m²			
COVERED WALKWAY	129m²			

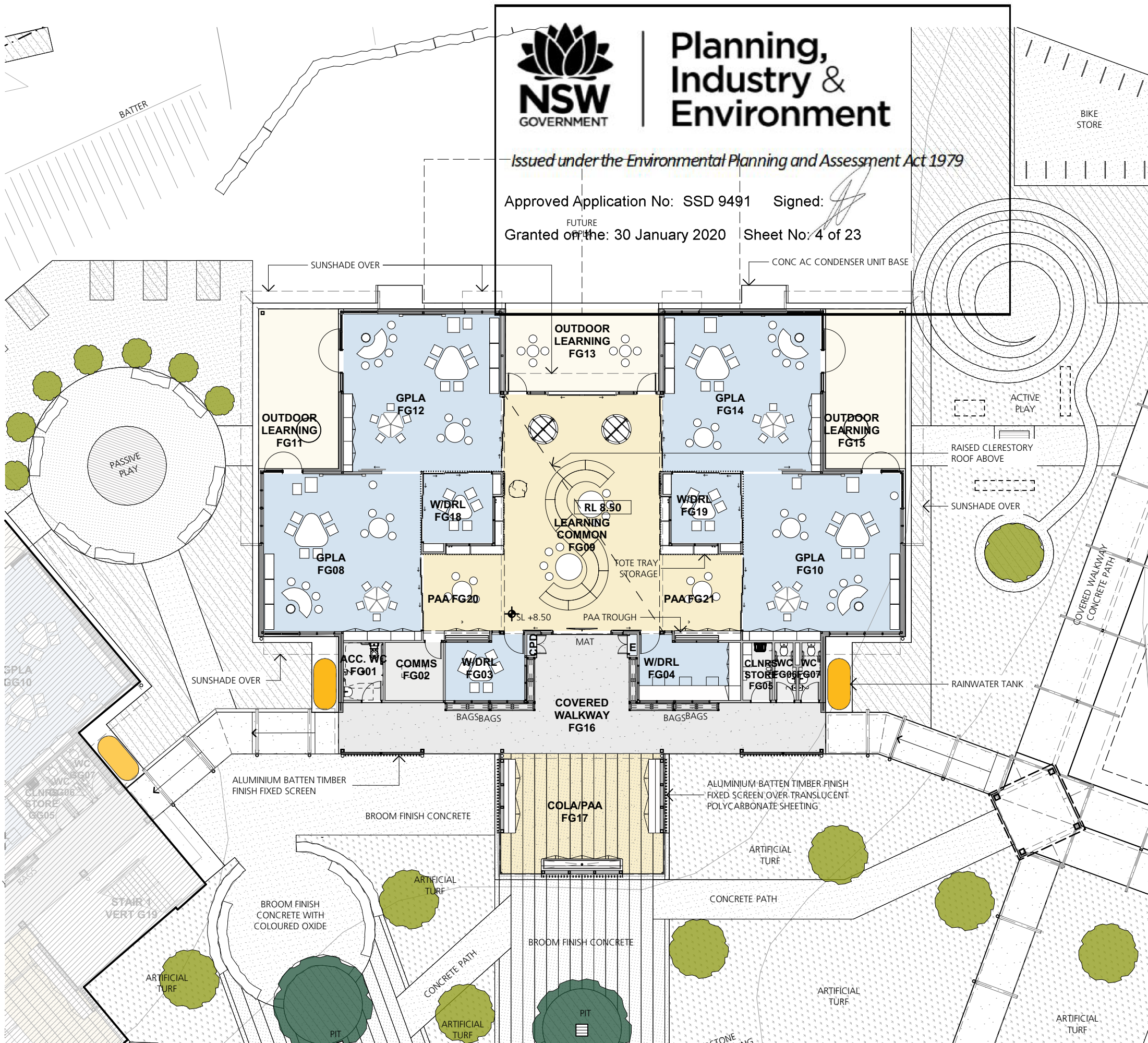
TOILETS (No.)		CORE 14		CORE 21	DIFF
		EXISTING	EFSG	EFSG	
MALE	10	13	26	18	8
FEMALE	10	14	26	19	7
ACCESS	3	1*	7	1*	*
TOTAL STUDENT TOILETS		34			

NOTE: ONLY LISTS TOILETS DEDICATED UNDER STUDENT SERVICES

SHAC

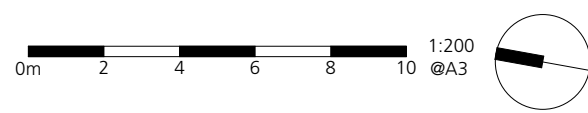
Nominated Architect Justin Hamilton (6160) | ABN 32 131 584 846

Drawing and design © SHAC Pty Ltd 2018. The signed control copy of this drawing is held by SHAC Pty Ltd. | Ref: BIM Server: BIMSERVER - BIM Server 21/3928 525 05 Lake Cathie Master date: 9/02/2019 time: 12:10 AM



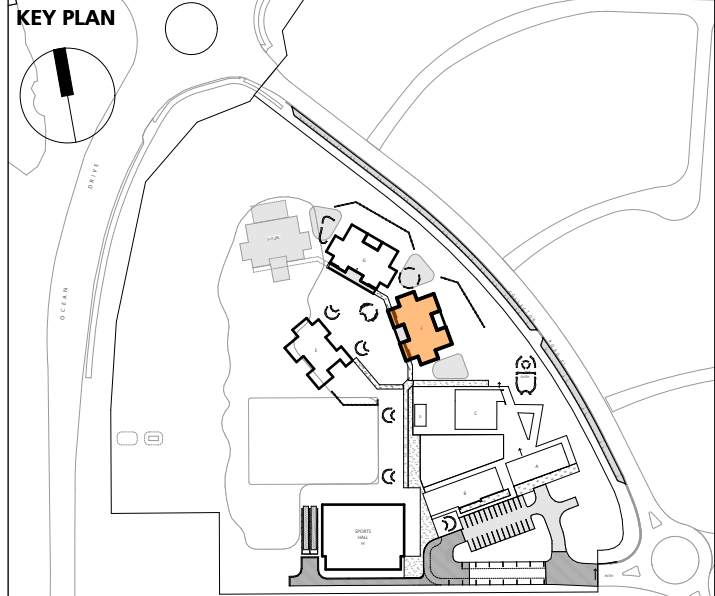
**3928
DD2310**
Rev1 08.02.19

Block F - Learning Neighbourhood 2
Lake Cathie Public School Upgrade
1240 Ocean Drive



SSD Application

1. Dimensions are in millimetres unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.



NEIGHBOURHOOD 02	CORE 14		CORE 21	
	EFSG	LCPS	EFSG	LCPS
HOMEBASE	240	256	360	384
HOME BASE STO. (m²) INCORPORATED IN JOINERY	24	9	24	13
LINEAR METRES STORE	-	26	-	39
PERSONAL EFFECTS STO. LINEAR METRES STORE	12	16	12	16
PRACTICAL ACTIVITIES SINK EXTERNAL IN COLA	68	80	102	80
WITHDRAWAL	36	52	54	52
BUILDING COMMS	8	9	8	9
LEARNING COMMON	-	95	-	126
SUB TOTAL	388	516	560	679
% INCREASE ON EFSG	33%		21%	
COLA Inc. PAA	149m²			
COVERED WALKWAY	99m²			

TOILETS (No.)		CORE 14		CORE 21	DIFF
		EFSG	LCPS	EFSG	
MALE	10	13	26	18	8
FEMALE	10	14	26	19	7
ACCESS	3	1*	7	1*	*
TOTAL STUDENT TOILETS		34			

NOTE: ONLY LISTS TOILETS DEDICATED UNDER STUDENT SERVICES



Issued under the Environmental Planning and Assessment Act 1979

Approved Application No: SSD 9491 Signed:

Granted on the: 30 January 2020 Sheet No: 5 of 23

EMERGENCY
CONC FIRE
STAIR

RETAINING WALL

FUTURE
GPLA

CONC AC CONDENSER UNIT BASE

SUNSHADE OVE

OUTDOOR
LEARNING
VERANDAH
GG13

OUTDOOR
LEARNING
VERANDAH
GG11

GPLA
GG12

GPLA
GG14

OUTDOOR
LEARNING
VERANDAH
GG15

VOID OVER

GPLA
GG08

W/DRL
GG18

LEARNING
COMMON
GG09

W/DRL
GG19

GPLA
GG10

TOTE TRAY
STORAGE

PAA TROUGH

RL 8.80

MAT

ACC. WC
GG01

COMMS
GG02

W/DRL
GG03

BAGS/BAGS

CORRIDOR
G16

W/DRL
GG04

CLNRS
STORE
GG05

WCL WC
GG06

WCL WC
GG07

RAINWATER TANK

GPLA
FG08

SUNSHADE OVER

CONCRETE PATH

LIFT G18

STAIR 1
VERT G19

PRIMARY VERTICAL
CIRCULATION
PATHWAY

ALUMINIUM BATTEN TIMBER FINISH
FIXED SCREEN OVER TRANSLUCENT
POLYCARBONATE SHEETING

COLA/PAA
GG17

ARTIFICIAL
TURF

BROOM FINISH
CONCRETE WITH
COLOURED OXIDE

BROOM FINISH CONCRETE

CONCRETE PATH

ARTIFICIAL
TURF

ARTIFICIAL
TURF

BROOM FINISH CONCRETE

PIT

PIT

SANDSTONE
BLOCK SEA

8.50

CONCRETE PATH

CONCRETE PATH

ARTIFICIAL
TURF

ARTIFICIAL
TURF



SSD Application

1. Dimensions are in millimetres unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.

KEY PLAN



NEIGHBOURHOOD 03 GROUND FLOOR	CORE 14		CORE 21	
	EFSG	LCPS	EFSG	LCPS
HOMEBASE	240	262	360	372
HOME BASE STO. (m²) INCORPORATED IN JOINERY	24	8	24	12
LINEAR METRES STORE	-	40	-	60
PERSONAL EFFECTS STO.	12	6	12	6
PRACTICAL ACTIVITIES SINK EXTERNAL IN COLA	68	62	102	62
WITHDRAWAL	36	23	36	23
BUILDING COMMS	8	8	8	8
LEARNING COMMON	-	160	-	194
SUB TOTAL	388	529	542	677
% INCREASE ON EFSG	36%		25%	
COLA Inc. PAA	159m²			
COVERED WALKWAY	72m²			

TOILETS (No.)		CORE 14		CORE 21	DIFF
		EXISTING	EFSG	LCPS	
MALE	10	13	26	18	8
FEMALE	10	14	26	19	7
ACCESS	3	1*	7	1*	*
TOTAL STUDENT TOILETS		34			

NOTE: ONLY LISTS TOILETS DEDICATED UNDER STUDENT SERVICES



Issued under the Environmental Planning and Assessment Act 1979

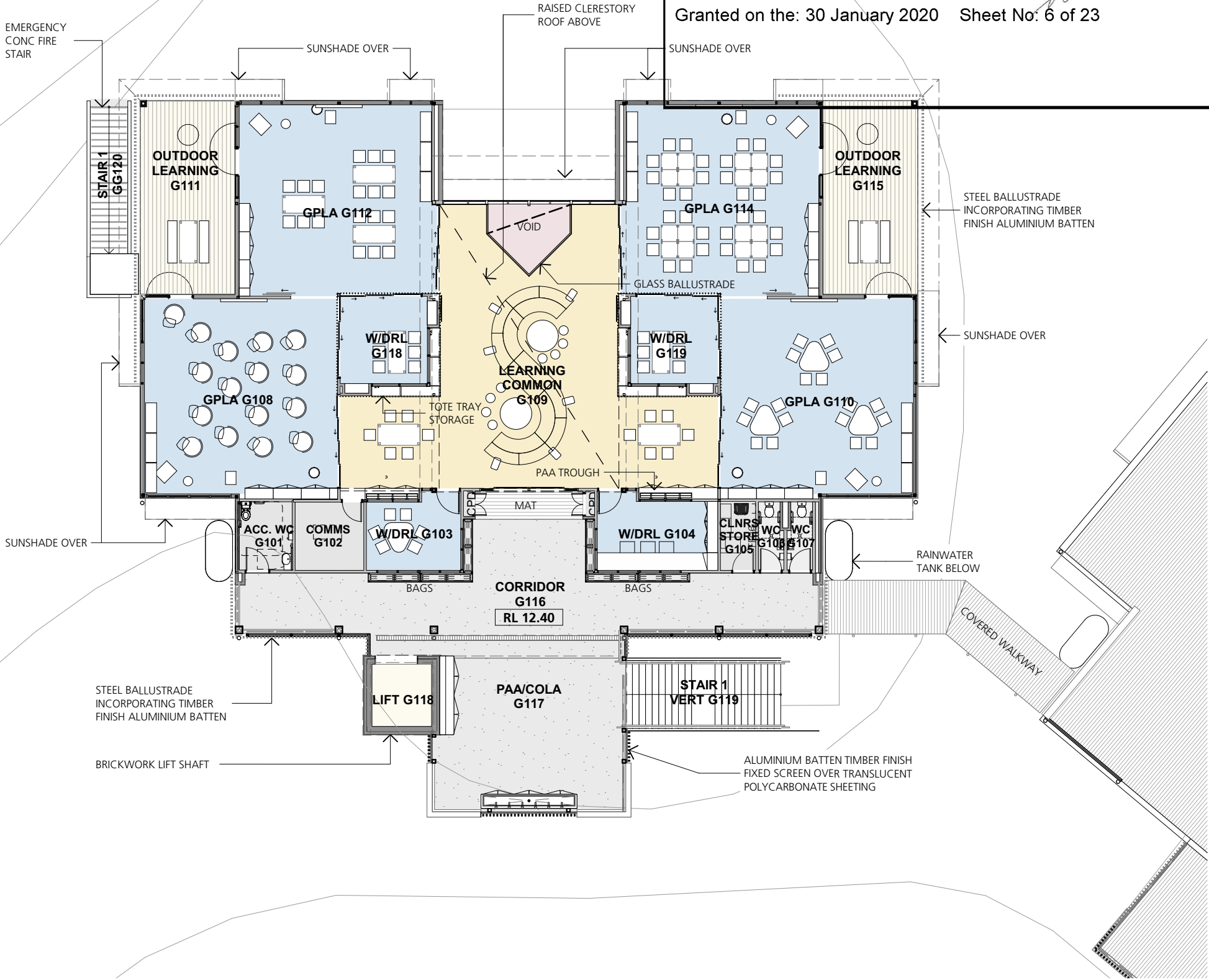
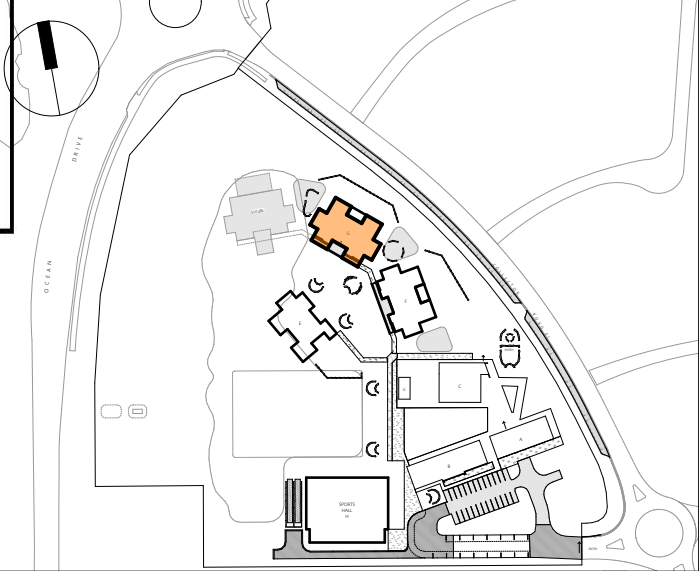
Approved Application No: SSD 9491 Signed: 
Granted on the: 30 January 2020 Sheet No: 6 of 23



SSD Application

1. Dimensions are in millimetres unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.

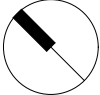
KEY PLAN



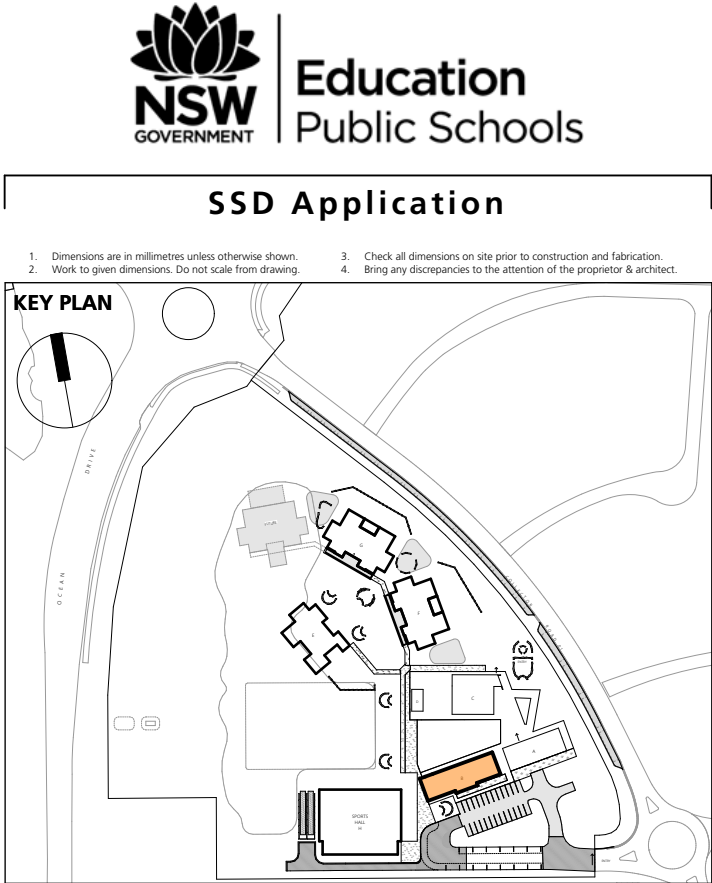
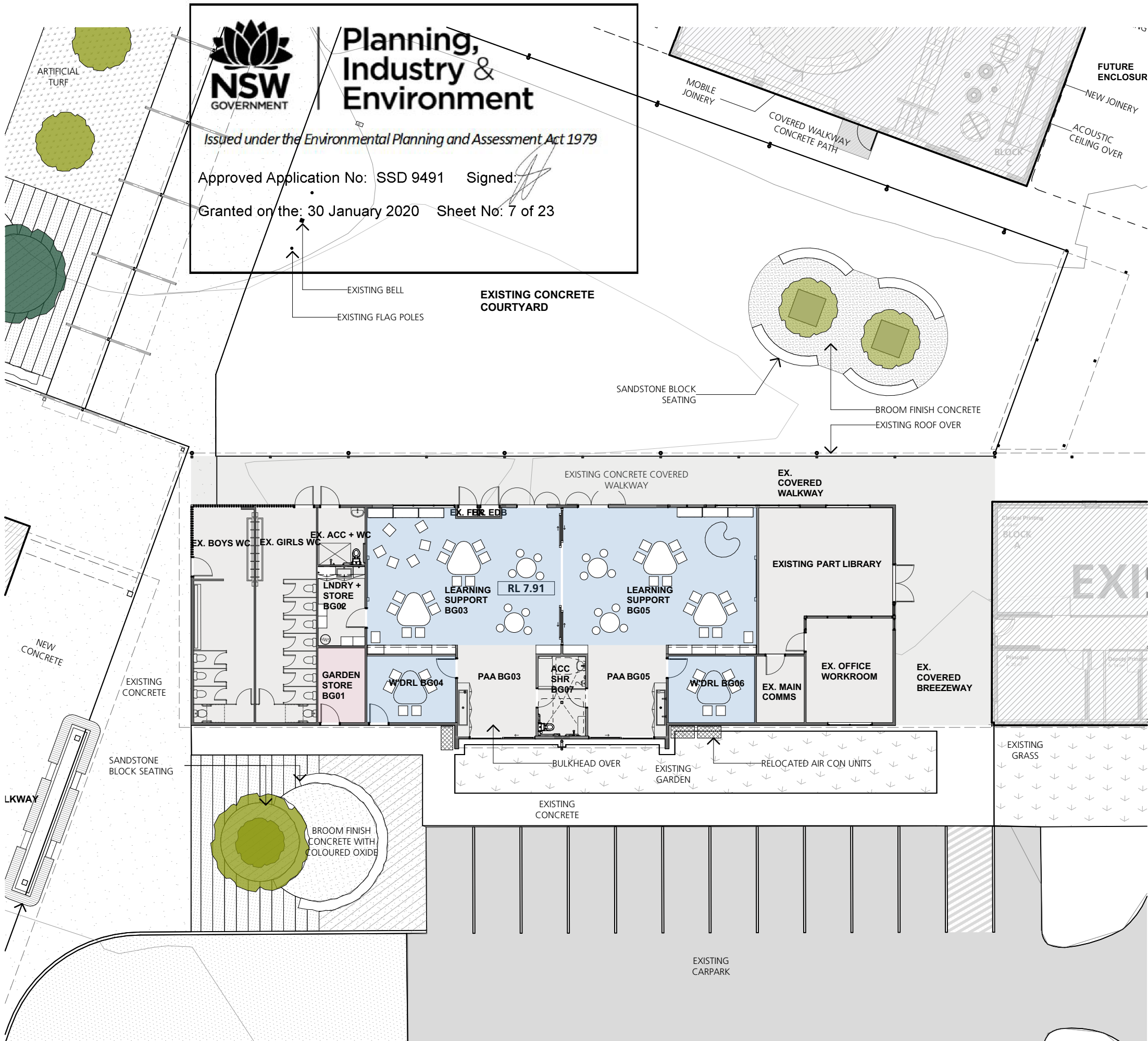
NEIGHBOURHOOD 03 FIRST FLOOR	CORE 14		CORE 21	
	EFSG	LCPS	EFSG	LCPS
HOMEBASE	240	262	360	372
HOME BASE STO. (m²) INCORPORATED IN JOINERY	24	8	24	12
LINEAR METRES STORE	-	40	-	60
PERSONAL EFFECTS STO.	12	6	12	6
PRACTICAL ACTIVITIES SINK EXTERNAL IN COLA	68	61	102	61
WITHDRAWAL	36	23	36	23
BUILDING COMMS	8	8	8	8
LEARNING COMMON	0	129	0	194
SUB TOTAL	388	497	542	676
% INCREASE ON EFSG	8%		25%	
COLA Inc. PAA	159m²			
COVERED WALKWAY	66m²			

TOILETS (No.)		CORE 14		CORE 21	DIFF
		EXISTING	EFSG	LCPS	
MALE	10	13	26	18	8
FEMALE	10	14	26	19	7
ACCESS	3	1*	7	1*	*
TOTAL STUDENT TOILETS		34			

NOTE: ONLY LISTS TOILETS DEDICATED UNDER STUDENT SERVICES



Drawing and design © SHAC Pty Ltd 2018. The signed control copy of this drawing is held by SHAC Pty Ltd. | Ref: BIM Server: BIMSERVER - BIM Server 21/3/2018 5:25:05 Lake Cathie Master date: 9/02/2019 Time: 12:11 AM



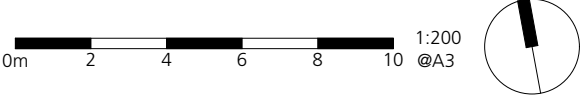
LEARNING SUPPORT	CORE 14		CORE 21	
	EFSG	LCPS	EFSG	LCPS
HOME BASE	120	136	120	136
HOME BASE STO. (m ²) INCORPORATED IN JOINERY	12	5	12	5
LINEAR METRES STORE	-	20	-	20
WITHDRAWAL	18	18	18	18
PERSONAL EFFECTS STO.	6	-	6	-
PRACTICAL ACTIVITIES	34	36	34	36
ACC / WC	10	10	10	10
LAUNDRY	8	10	8	10
SUB TOTAL	208	215	208	215
DEVIATION FROM EFSG	3%		3%	

TOILETS (No.)		CORE 14		CORE 21	DIFF
		EXISTING	EFSG	EFSG	
MALE	10	13	26	18	8
FEMALE	10	14	26	19	7
ACCESS	3	1*	7	1*	*
TOTAL STUDENT TOILETS		34			

NOTE: ONLY LISTS TOILETS DEDICATED UNDER STUDENT SERVICES

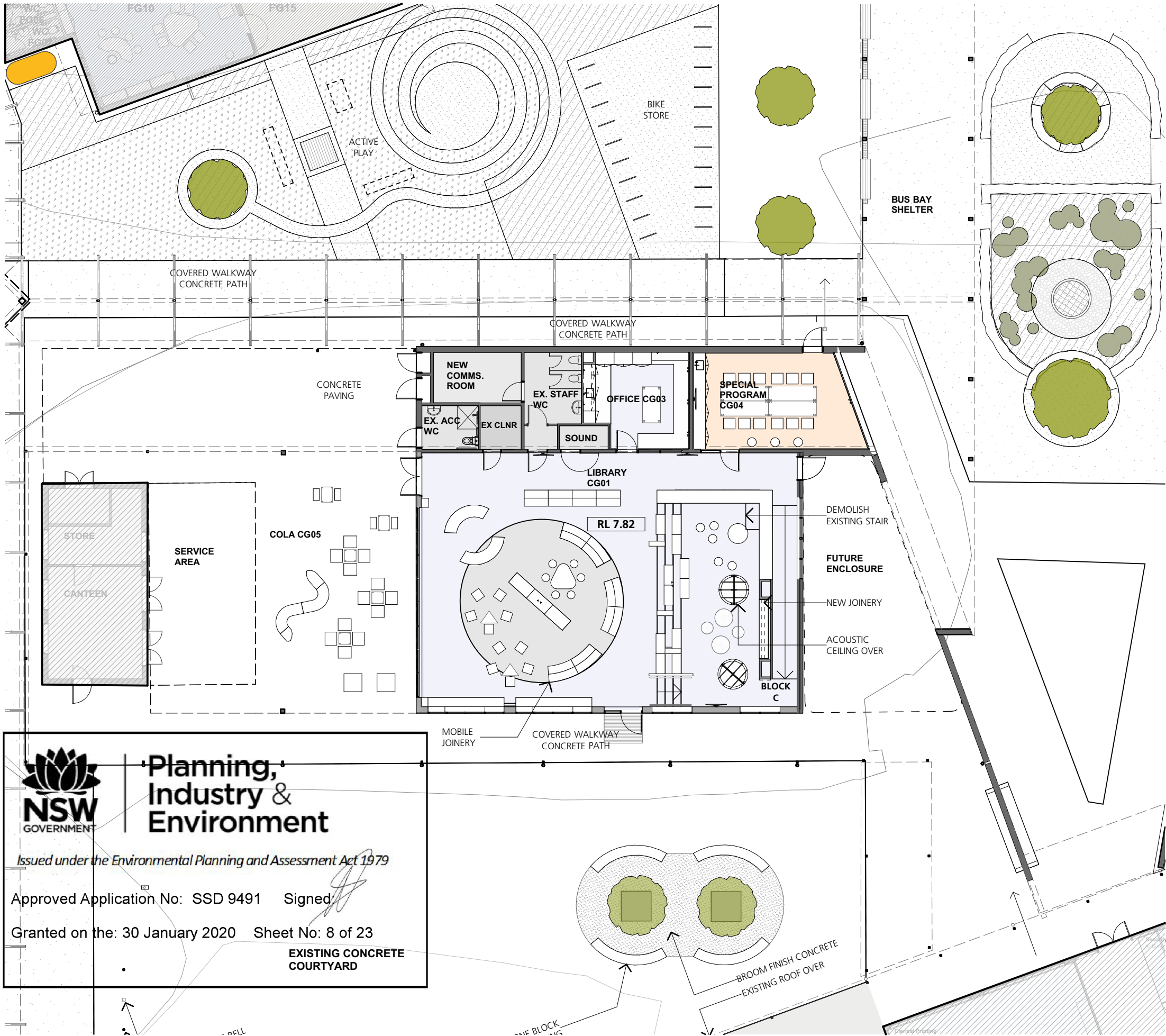
3928
DD2340
RevG 08.02.19

Block B - Spec. Education
Lake Cathie Public School Upgrade
1240 Ocean Drive



SHAC
Nominated Architect Justin Hamilton (6160) | ABN 32 131 584 846

Drawing and design © SHAC Pty Ltd 2018. The signed control copy of this drawing is held by SHAC Pty Ltd. | Ref: BIM Server: BIMSERVER - BIM Server 21/9328.525.05 Lake Cathie Master date: 9/02/2019 time: 12:11 AM



Education
Public Schools

SSD Application

1. Dimensions are in millimetres unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.

KEY PLAN



LEARNING HUB (LIBRARY)	CORE 14		CORE 21	
	EFSG	LCPS	EFSG	LCPS
MAIN AREA	163	218	230	218
OFFICE / WORKROOM	24	25	27	25
KLA RESOURCE	15	-	20	-
STAFF WC	5	10	5	10
SPECIAL PROG.	32	39	32	39
SPEC. PROG STORE INCORPORATED IN JOINERY	6	3	6	3
LINEAR METRES STORE	-	6	-	6
BUILDING COMMS	8	11	8	11
SUBTOTAL	245	312	320	312
DEVIATION FROM EFSG	+21.5%		-2.5%	

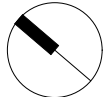
TOILETS (No.)		CORE 14		CORE 21	DIFF
		EXISTING	EFSG	EFSG	
MALE	10	13	26	18	8
FEMALE	10	14	26	19	7
ACCESS	3	1*	7	1*	*
TOTAL STUDENT TOILETS		34			

NOTE: ONLY LISTS TOILETS DEDICATED UNDER STUDENT SERVICES

3928
DD2350
RevH 08.02.19

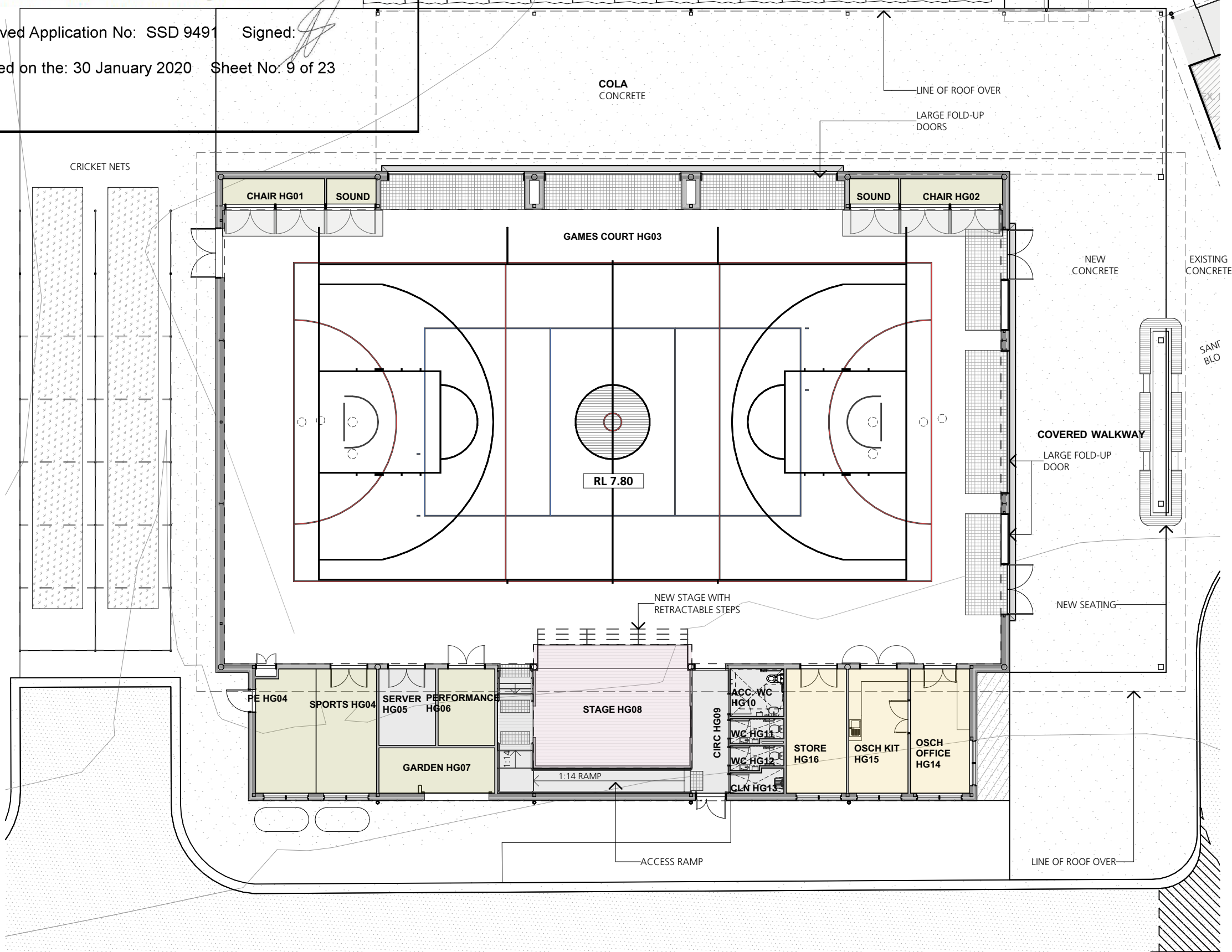
Blocks C & D - Library and Canteen
Lake Cathie Public School Upgrade
1240 Ocean Drive

0m 2 4 6 8 10 1:200
@A3

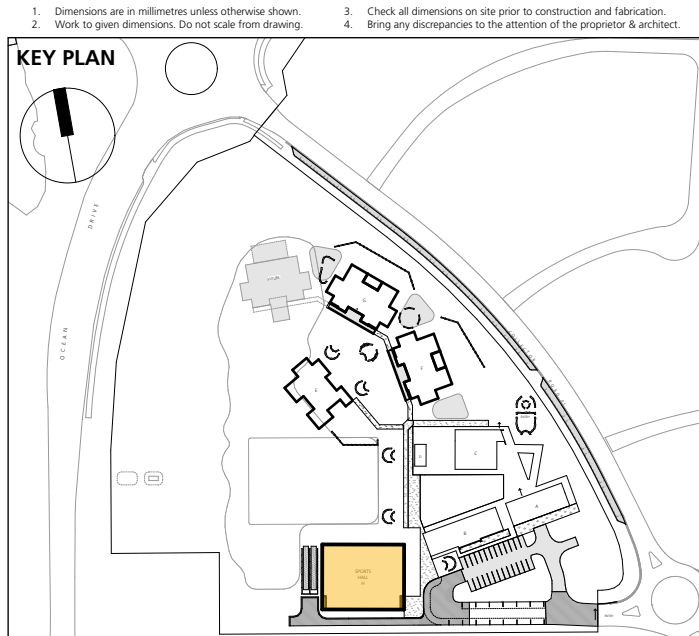


SHAC

Nominated Architect Justin Hamilton (6160) | ABN 32 131 584 846



SSD Application



HALL (m ²)	CORE 14		CORE 21	
	EFSG	LCPS	EFSG	LCPS
COMMUNAL SPACE	190	840	250	798
COLA	-	295	-	61
CHAIR STORE	9	12	11	12
PE STORE	13	16	17	16
SPORTS STORE	13	17	17	17
PERFORMANCE STORE	9	10	11	10
SOUND BOARD	2	6	2	6
OSHC OFFICE	13	17	13	17
OSHC STORE	20	17	30	17
OSHC KITCHENETTE	14	17	20	17
SUBTOTAL	281	952	371	952
DEVIATION FROM ESFG	+239%		+157%	
AMENITIES (No.)	3	3	3	3
GARDEN STORE	13	12	13	12

TOILETS (No.)		CORE 14		CORE 21	
		EFSG	LCPS	EFSG	DIFF
MALE	EXISTING	10	13	18	8
FEMALE	EXISTING	10	14	19	7
ACCESS	EXISTING	3	1*	1*	*
TOTAL STUDENT TOILETS		34			

NOTE: ONLY LISTS TOILETS DEDICATED UNDER STUDENT SERVICES

SSD Application

1. Dimensions are in millimetres unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.



Planning, Industry & Environment

Issued under the Environmental Planning and Assessment Act 1979

Approved Application No: SSD 9491 Signed:

Granted on the: 30 January 2020 Sheet No: 10 of 23



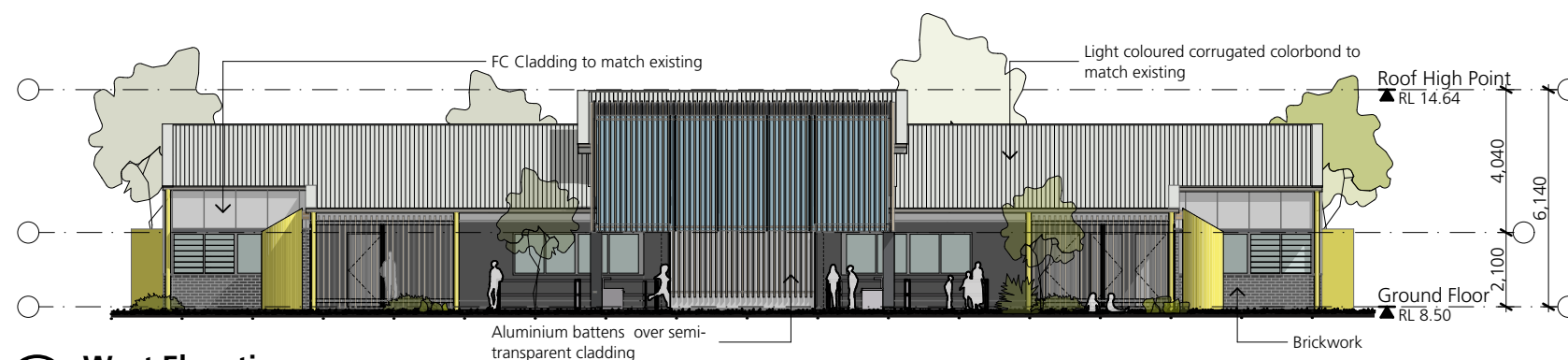
SSD Application

1. Dimensions are in millimetres unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.

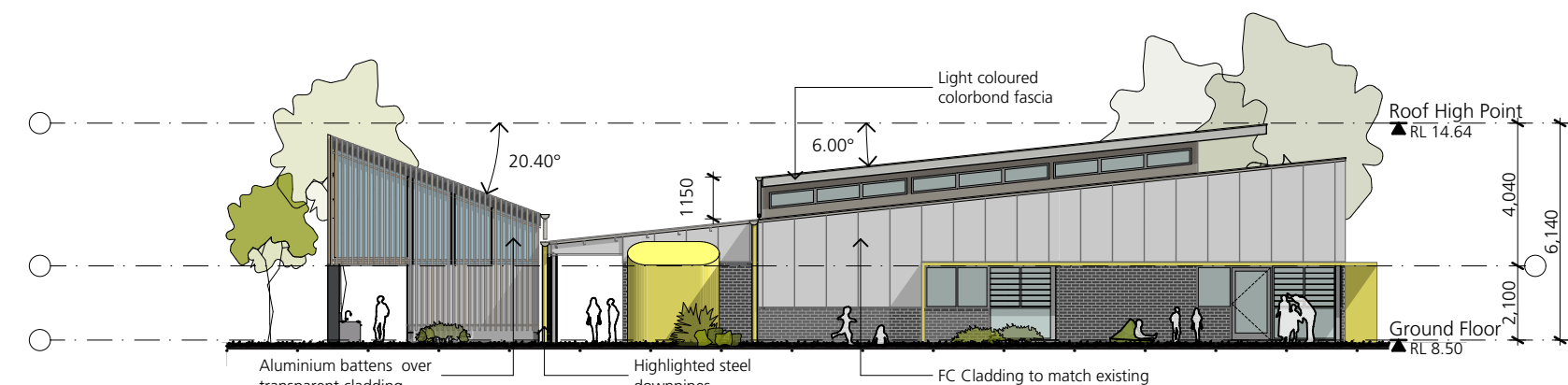
Issued under the Environmental Planning and Assessment Act 1979

Approved Application No: SSD 9491 Signed:

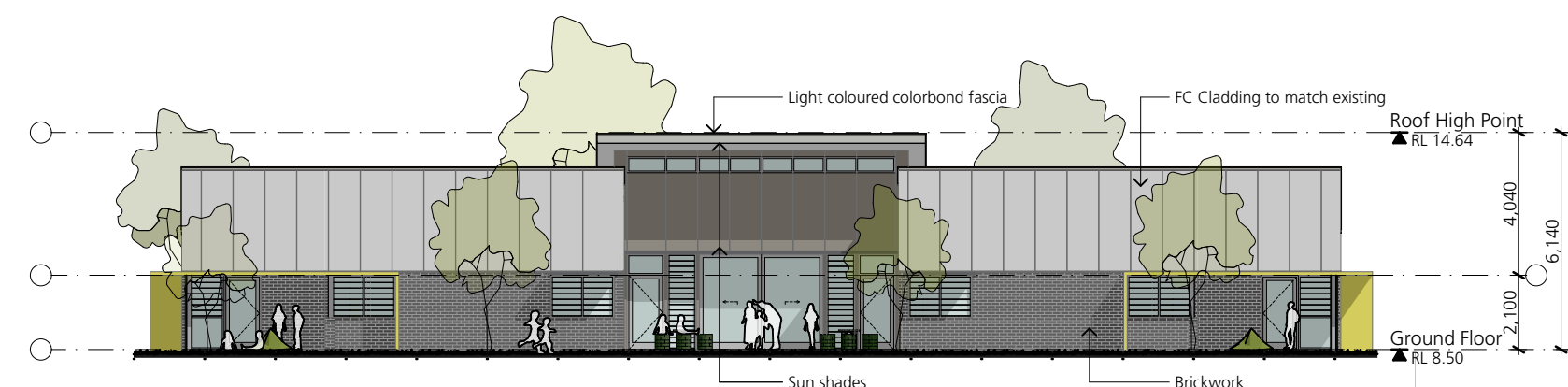
Granted on the: 30 January 2020 Sheet No: 11 of 23



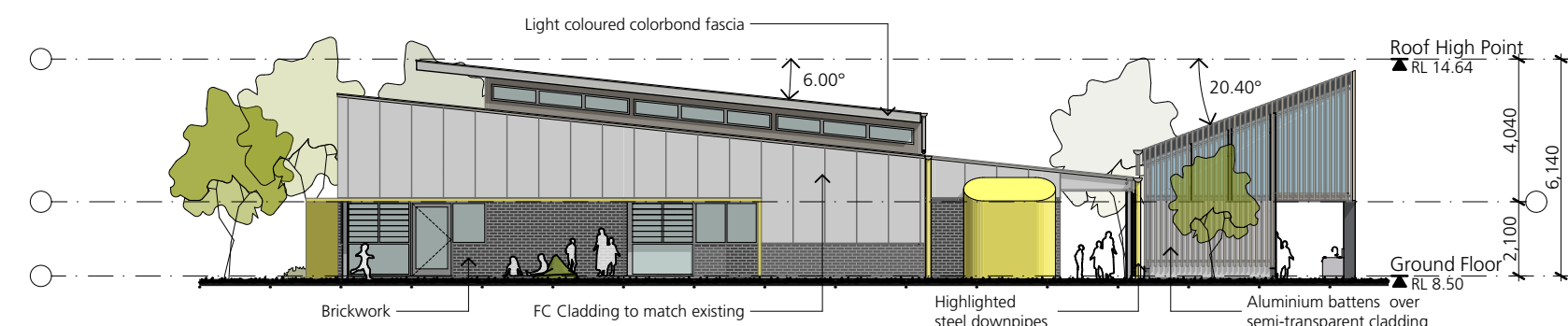
West Elevation



South Elevation



East Elevation



North Elevation



Planning, Industry & Environment

Issued under the Environmental Planning and Assessment Act 1979

Approved Application No: SSD 9491 Signed:

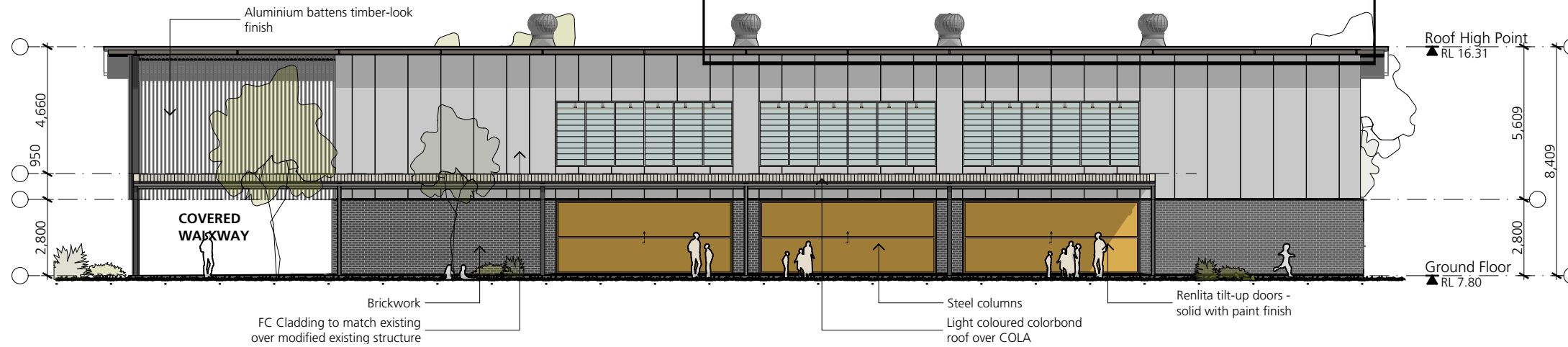
Granted on the: 30 January 2020 Sheet No: 12 of 23



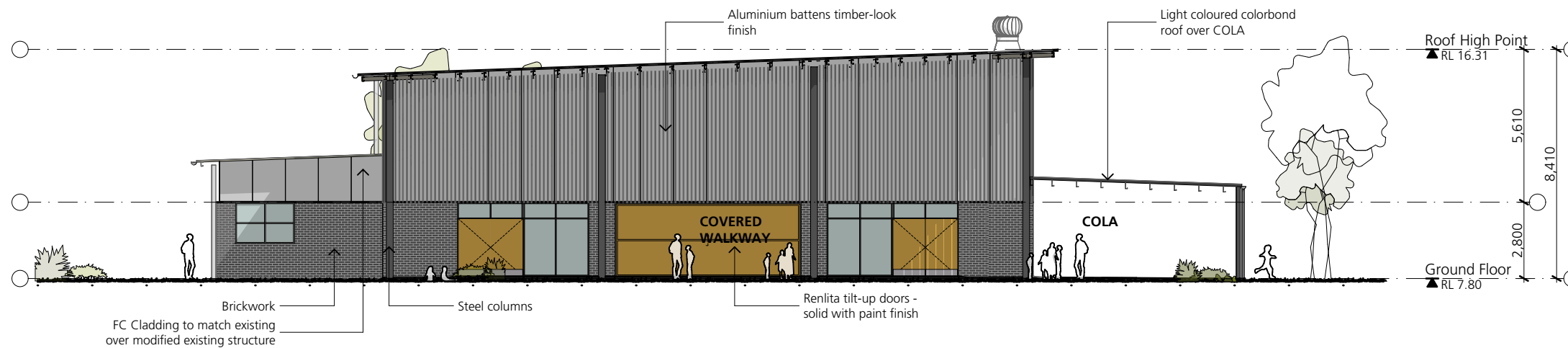
Education
Public Schools

SSD Application

1. Dimensions are in millimetres unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.



North Elevation - Sports Hall



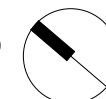
East Elevation - Sports Hall

3928
DD3005
RevC 08.02.19

Elevations Block H - Sports Hall - Sheet 1

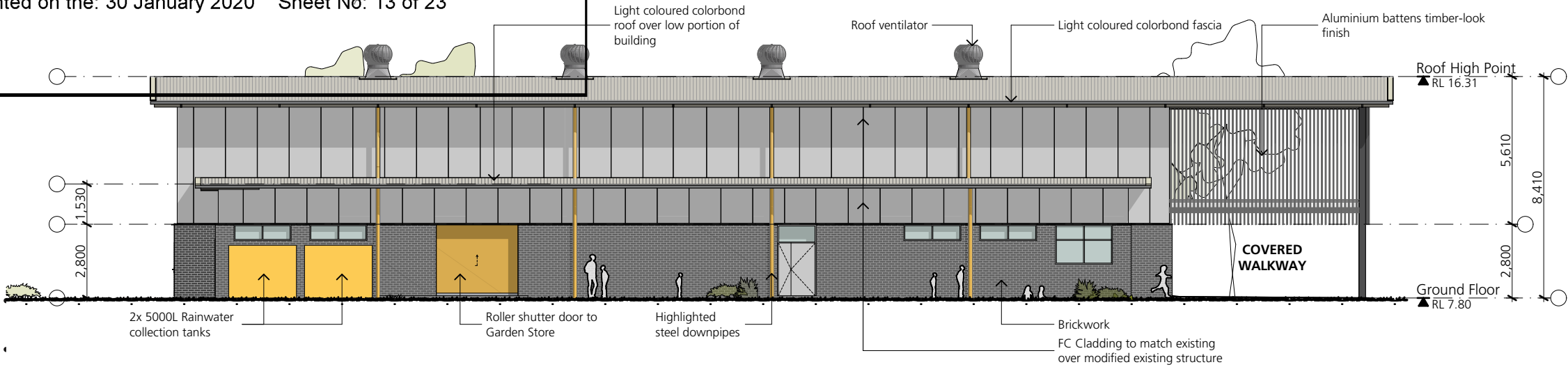
Lake Cathie Public School Upgrade
1240 Ocean Drive

0m 2 4 6 8 10 1:200
@A3

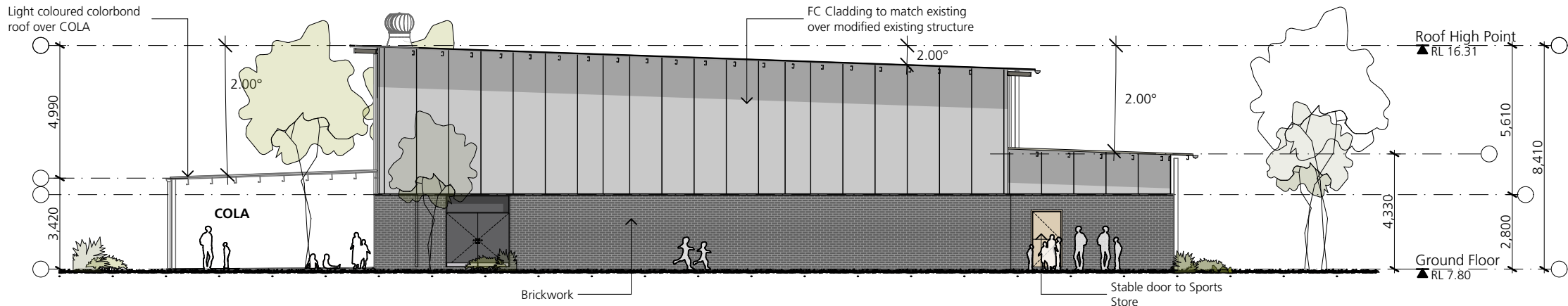


SHAC

Nominated Architect Justin Hamilton (6160) | ABN 32 131 584 846



South Elevation - Sports Hall



West Elevation - Sports Hall

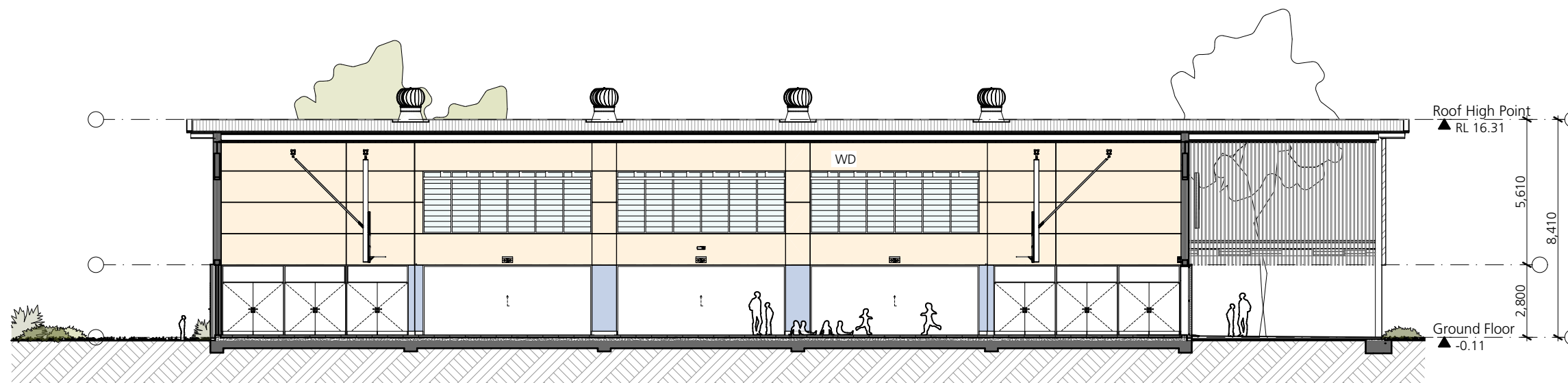
SSD Application

1. Dimensions are in millimetres unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.

Drawing and design © SHAC Pty Ltd 2018. The signed control copy of this drawing is held by SHAC Pty Ltd. | Ref: BIM Server: BIMSERVER - BIM Server 21/9/2018 5:25:05 Lake Cathie Master date: 9/02/2019 time: 12:11 AM

SSD Application

1. Dimensions are in millimetres unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.

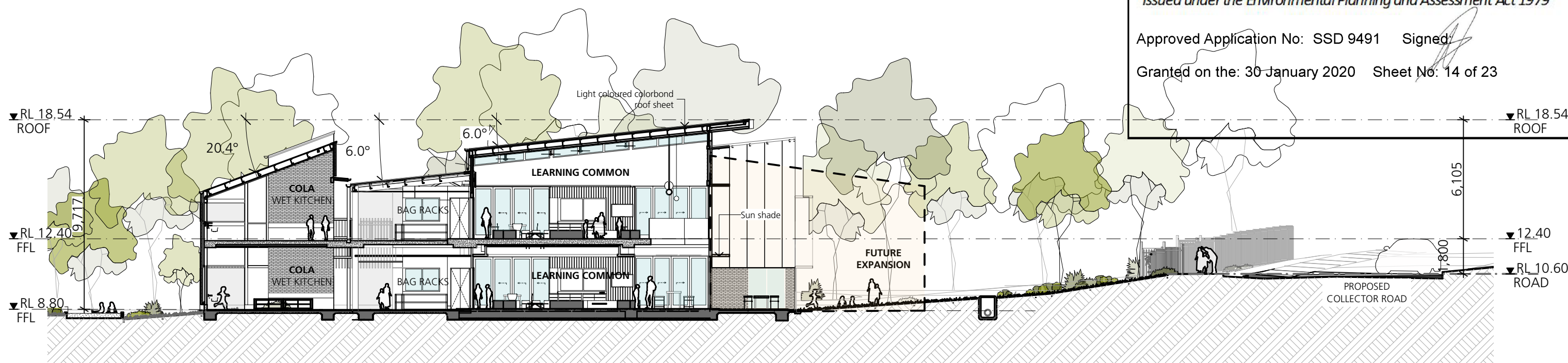


Sports Hall Section

Issued under the Environmental Planning and Assessment Act 1979

Approved Application No: SSD 9491 Signed:

Granted on the: 30 January 2020 Sheet No: 14 of 23



Streetscape Section



Legend

NEW TREES

EXISTING TREES

NEW TURF

MASS PLANTING

SYNTHETIC TURF

BIO SWALE

Planning,
Industry &
Environment

Issued under the Environmental Planning and Assessment Act 1979

Approved Application No: SSD 9491 Signed:

Granted on the: 30 January 2020 Sheet No: 15 of 23

01

MASTER PLAN

landscape layout

scale 1:500



LEGEND

- P1** PAVEMENT TYPE 1
COLORED CONCRETE
- P2** PAVEMENT TYPE 2
SHOTBLASTED CONCRETE
- P3** PAVEMENT TYPE 3
SHOTBLASTED CONCRETE
DARKER TONE
- P4** PAVEMENT TYPE 4:
OUTDOOR CLASS PAVING:
SANDSTONE
- T** NEW TURF
- T1** SYNTHETIC TURF
REFER SPECIFICATION
- S1** SEATING 1:
LINEAR SANDSTONE BLOCK
- S2** SEATING 2:
CONCRETE SEATING TIMBER
TOP
- S3** SEATING 3:
SANDSTONE BLOCK IN CIRCLE
- ST** SANDSTONE BLOCK STEP
- MP** MASS PLANTING
- VG** VEGETABLE GARDEN
PLANTER
- M** GARDEN MULCH
- MT** PLAYGROUND MULCH
- SP** PLAYGROUND SAND:
REFER SPECIFICATION
- RP** PEBBLES AS SWALE:
FLOWING WATER
TIMBER EDGE
- TE**

PLAY ELEMENT LEGEND

- WB** PLAY ELEMENT:
WORK BENCH
- PT** PLAY ELEMENT:
PLATFORM
- MK** PLAY ELEMENT:
MUD KITCHEN
- PF** PLAY ELEMENT:
PLAY FRAME



Issued under the Environmental Planning and Assessment Act 1979

Approved Application No: SSD 9491 Signed: [Signature]

Granted on the: 30 January 2020 Sheet No: 16 of 23

02 HARDWORKS PLAN part 1

Scale 1:100

NOTES
1. Dimensions are in millimetres unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.

PROJECT NAME AND ADDRESS
Lake Cathie Public School Upgrade
1240 Ocean Drive

SCALE
0m 1 2 3 4 5 1:100@A1
DISCIPLINE
Landscape

STATUS
Schematic Design
Not for Construction
DRAWING TITLE
Hardworks plan:part 1

NSW Education
School Infrastructure

DRAWN MA
APPROVED SR

PROJECT NO. 12199.5
DRAWING NO. L02
REV. C

terras
landscape architects
412 KING STREET NEWCASTLE NSW AUSTRALIA 2300
TEL: 49 244 926 FAX: 49 263 069

CONSULTANTS

SHAC ARCHITECTURAL SHAC Architects T 02 4961 5888	STRUCTURAL + CIVIL MPC Consulting Engineers T 02 4927 5566	ELECTRICAL Electrical Projects Australia T 02 4967 5999	HYDRAULIC McCallum PFCA T 02 4946 2633	MECHANICAL EV Consulting Engineers T 02 4929 2461	QUANTITY SURVEYOR Altus Group T 02 9283 7311	PCA CONSULTANT NewCert T 02 4986 1127	PROJECT MANAGER Crown Project Services Pty Ltd T 02 9292 4420
---	---	--	---	--	---	--	--

AMENDMENTS



LEGEND

- P1 PAVEMENT TYPE 1
COLORED CONCRETE
- P2 PAVEMENT TYPE 2
SHOTBLASTED CONCRETE
- P3 PAVEMENT TYPE 3
SHOTBLASTED CONCRETE
DARKER TONE
- P4 PAVEMENT TYPE 4:
OUTDOOR CLASS PAVING:
SANDSTONE
- T NEW TURF
- T1 SYNTHETIC TURF
REFER SPECIFICATION
- S1 SEATING 1:
LINEAR SANDSTONE BLOCK
- S2 SEATING 2:
CONCRETE SEATING TIMBER
TOP
- S3 SEATING 3:
SANDSTONE BLOCK IN CIRCLE
- ST SANDSTONE BLOCK STEP
- MP MASS PLANTING
- VG VEGETABLE GARDEN
PLANTER
- M1 GARDEN MULCH
- MT PLAYGROUND MULCH
- SP PLAYGROUND SAND:
REFER SPECIFICATION
- RP PEBBLES AS SWALE:
FLOWING WATER
TIMBER EDGE

PLAY ELEMENT LEGEND

- WB PLAY ELEMENT:
WORK BENCH
- PT PLAY ELEMENT:
PLATFORM
- MK PLAY ELEMENT:
MUD KITCHEN
- PF PLAY ELEMENT:
PLAY FRAME



Issued under the Environmental Planning and Assessment Act 1979

Approved Application No: SSD 9491 Signed: [Signature]

Granted on the: 30 January 2020 Sheet No: 17 of 23

03 HARDWORKS PLAN: SET OUT
part 1 Scale 1:100

NOTES
1. Dimensions are in millimetres unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.

PROJECT NAME AND ADDRESS
Lake Cathie Public School Upgrade
1240 Ocean Drive

SCALE
0m 1 2 3 4 5 1:100@A1
DISCIPLINE
Landscape

STATUS
Schematic Design
Not for Construction
DRAWING TITLE
Hardworks setout plan:part 1

NSW Education
School Infrastructure

DRAWN MA
APPROVED SR

PROJECT NO. 12199.5
DRAWING NO. L03
REV. C



CONSULTANTS

SHAC ARCHITECTURAL SHAC Architects T 02 4961 9888	STRUCTURAL + CIVIL MPC Consulting Engineers T 02 4927 5566	ELECTRICAL Electrical Projects Australia T 02 4967 9999	HYDRAULIC McCallum PFCA T 02 4946 2633	MECHANICAL EV Consulting Engineers T 02 4929 2461	QUANTITY SURVEYOR Altus Group T 02 9283 7311	PCA CONSULTANT NewCert T 02 4986 1127	PROJECT MANAGER Crown Project Services Pty Ltd T 02 9292 4420
--	--	---	--	---	--	---	---

AMENDMENTS



Planning,
Industry &
Environment

Issued under the Environmental Planning and Assessment Act 1979

Approved Application No: SSD 9491 Signed: [Signature]

Granted on the: 30 January 2020 Sheet No: 18 of 23



LEGEND

- P1** PAVEMENT TYPE 1
COLORED CONCRETE
- P2** PAVEMENT TYPE 2
SHOTBLASTED CONCRETE
- P3** PAVEMENT TYPE 3
SHOTBLASTED CONCRETE
DARKER TONE
- P4** PAVEMENT TYPE 4:
OUTDOOR CLASS PAVING:
SANDSTONE
- T** NEW TURF
- T1** SYNTHETIC TURF
REFER SPECIFICATION
- S1** SEATING 1:
LINEAR SANDSTONE BLOCK
- S2** SEATING 2:
CONCRETE SEATING TIMBER
TOP
- S3** SEATING 3:
SANDSTONE BLOCK IN CIRCLE
- ST** SANDSTONE BLOCK STEP
- MP** MASS PLANTING
- VG** VEGETABLE GARDEN
PLANTER
- M** GARDEN MULCH
- MT** PLAYGROUND MULCH
- SP** PLAYGROUND SAND:
REFER SPECIFICATION
- RP** PEBBLES AS SWALE:
FLOWING WATER
TIMBER EDGE
- TE**

PLAY ELEMENT LEGEND

- WB** PLAY ELEMENT:
WORK BENCH
- PT** PLAY ELEMENT:
PLATFORM
- MK** PLAY ELEMENT:
MUD KITCHEN
- PF** PLAY ELEMENT:
PLAY FRAME
- SF** PLAY ELEMENT:
SHOP FRONT
- ST** PLAY ELEMENT:
SEATING

04 HARDWORKS PLAN
part 2

Scale 1:100

CONSULTANTS

SHAC
ARCHITECTURAL
SHAC Architects
T 02 4961 9888

STRUCTURAL + CIVIL
MPC Consulting Engineers
T 02 4927 5566

ELECTRICAL
Electrical Projects Australia
T 02 4967 9999

HYDRAULIC
McCallum PFCA
T 02 4946 2633

MECHANICAL
EV Consulting Engineers
T 02 4929 2461

QUANTITY SURVEYOR
Altus Group
T 02 9283 7311

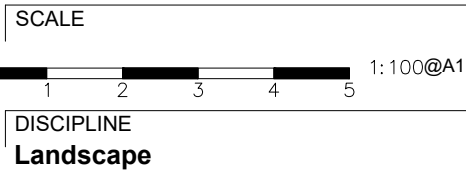
PCA CONSULTANT
NewCert
T 02 4986 1127

PROJECT MANAGER
Crown Project Services Pty Ltd
T 02 9292 4420

AMENDMENTS

NOTES
1. Dimensions are in millimetres unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.

PROJECT NAME AND ADDRESS
Lake Cathie Public School Upgrade
1240 Ocean Drive



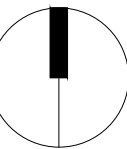
STATUS
Schematic Design
Not for Construction
DRAWING TITLE
Hardworks plan:part 2

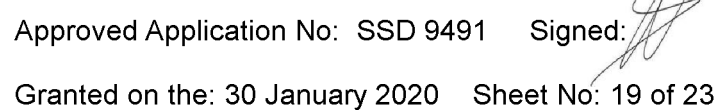


Education
School Infrastructure

DRAWN
MA
APPROVED
SR

PROJECT NO.
12199.5 L04
DRAWING NO.
C
REV.





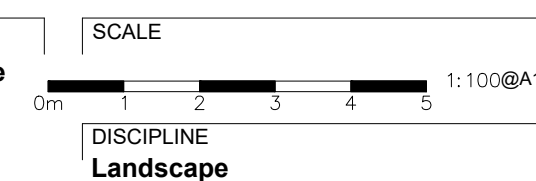
	PAVEMENT TYPE 1 COLORED CONCRETE
	PAVEMENT TYPE 2 SHOTBLASTED CONCRETE
	PAVEMENT TYPE 3 SHOTBLASTED CONCRETE DARKER TONE
	PAVEMENT TYPE 4: OUTDOOR CLASS PAVING: SANDSTONE
	NEW TURF
	SYNTHETIC TURF REFER SPECIFICATION
	SEATING 1: LINEAR SANDSTONE BLOCK
	SEATING 2: CONCRETE SEATING TIMBER TOP
	SEATING 3: SANDSTONE BLOCK IN CIRCLE
	SANDSTONE BLOCK STEP
	MASS PLANTING
	VEGETABLE GARDEN PLANTER
	GARDEN MULCH
	PLAYGROUND MULCH
	PLAYGROUND SAND: REFER SPECIFICATION
	PEBBLES AS SWALE: FLOWING WATER
	TIMBER EDGE

WB	PLAY ELEMENT: WORK BENCH
PT	PLAY ELEMENT: PLATFORM
MK	PLAY ELEMENT: MUD KITCHEN
PF	PLAY ELEMENT: PLAY FRAME
SF	PLAY ELEMENT: SHOP FRONT
ST	PLAY ELEMENT: SEATING

NOTES

1. Dimensions are in millimetres unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.

PROJECT NAME AND ADDRESS
Lake Cathie Public School Upgrade
1240 Ocean Drive



STATUS
Schematic Design
Not for Construction

DRAWING TITLE
Hardworks setout plan:part 2

PROJECT NO.	DRAWING NO.	REV.
12199.5	L05	C



terras
landscape architects

412 KING STREET NEWCASTLE NSW AUSTRALIA 2300
TERRAS.COM.AU PH: 49 294 926 FAX: 49 243 046



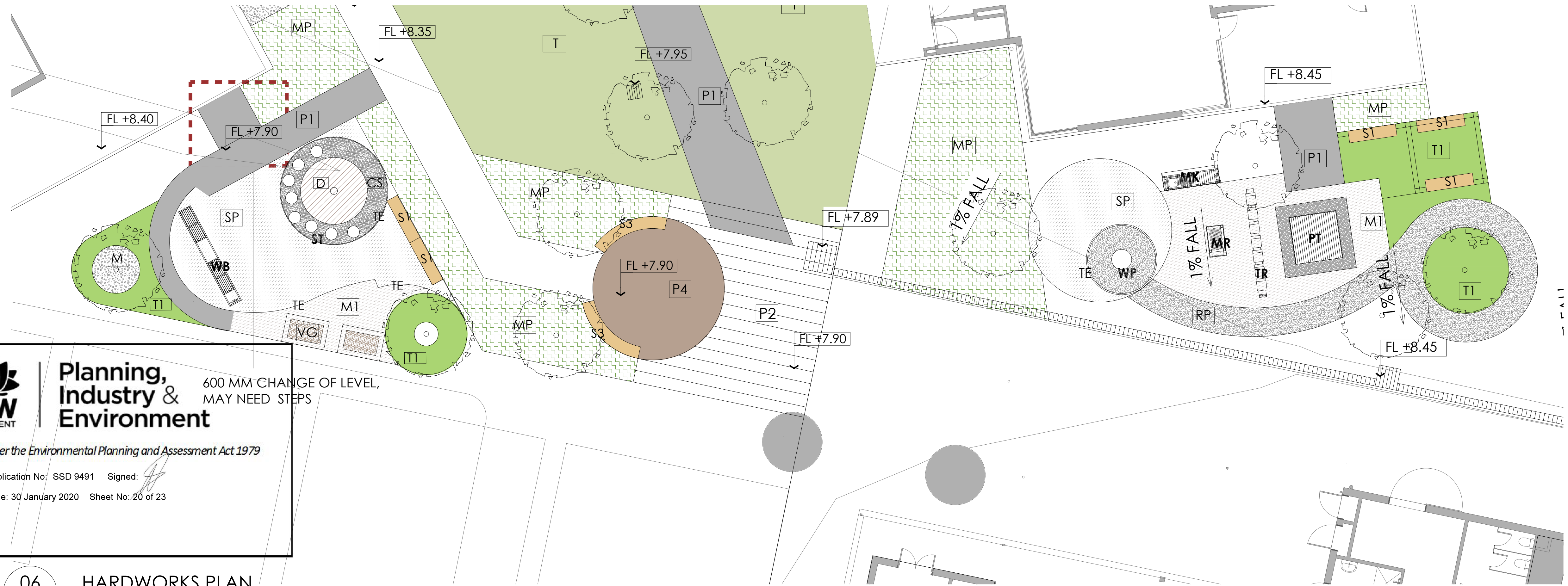
Planning,
Industry &
Environment

600 MM CHANGE OF LEVEL,
MAY NEED STEPS

Issued under the Environmental Planning and Assessment Act 1979

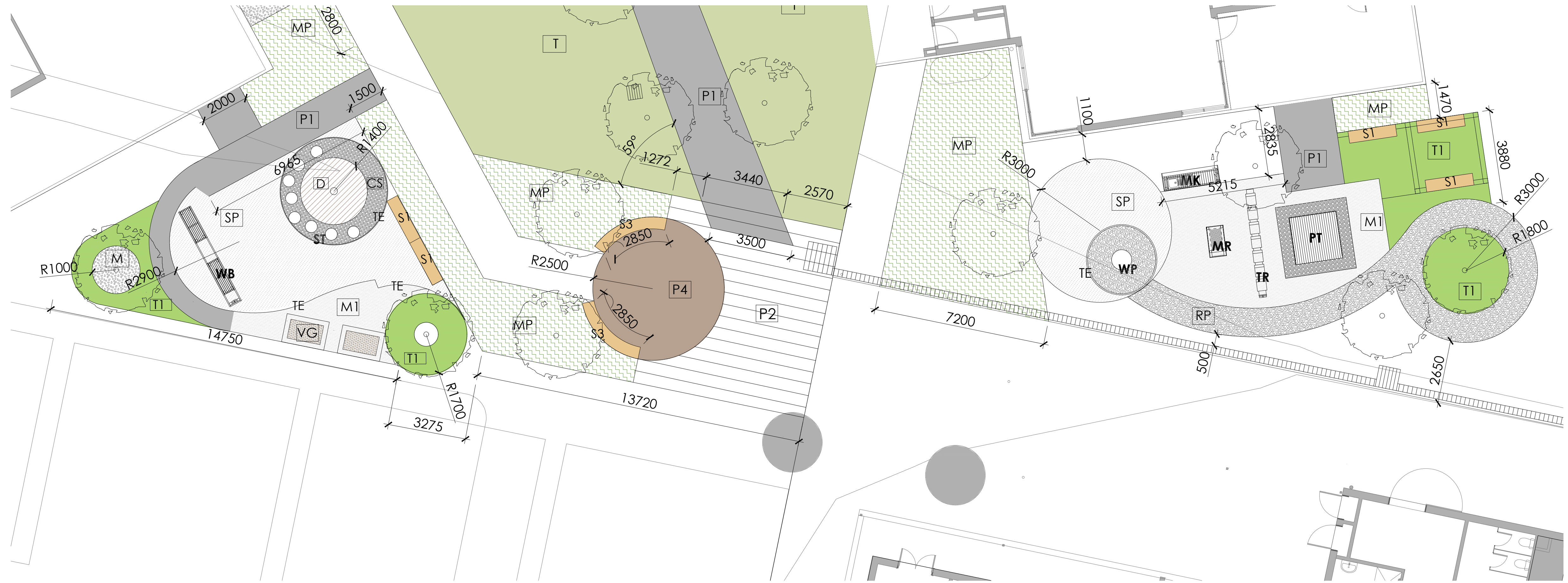
Approved Application No: SSD 9491 Signed: 

Granted on the: 30 January 2020 Sheet No: 20 of 23



06

HARDWORKS PLAN
part 3
Scale 1:100



07

HARDWORKS SETOUT PLAN
part 3
Scale 1:100

LEGEND

- P1

PAVEMENT TYPE 1
COLORED CONCRETE
- P2

PAVEMENT TYPE 2
SHOTBLASTED CONCRETE
- P3

PAVEMENT TYPE 3
SHOTBLASTED CONCRETE
DARKER TONE
- P4

PAVEMENT TYPE 4:
OUTDOOR CLASS PAVING:
SANDSTONE
- T

NEW TURF
- T1

SYNTHETIC TURF
REFER SPECIFICATION
- S1

SEATING 1:
LINEAR SANDSTONE BLOCK
- S2

SEATING 2:
CONCRETE SEATING TIMBER
TOP
- S3

SEATING 3:
SANDSTONE BLOCK IN CIRCLE
- ST

SANDSTONE BLOCK STEP
- MP

MASS PLANTING
- VG

VEGETABLE GARDEN
PLANTER
- M

GARDEN MULCH
- M1

PLAYGROUND MULCH
- SP

PLAYGROUND SAND:
REFER SPECIFICATION
- RP

PEBBLES AS SWALE:
FLOWING WATER
TIMBER EDGE
- TE

PLAY ELEMENT LEGEND

- WB

PLAY ELEMENT:
WORK BENCH
- PT

PLAY ELEMENT:
PLATFORM
- MK

PLAY ELEMENT:
MUD KITCHEN
- PF

PLAY ELEMENT:
PLAY FRAME
- SF

PLAY ELEMENT:
SHOP FRONT
- ST

PLAY ELEMENT:
SEATING
- TR

PLAY ELEMENT:
TRANSPORT
- MR

PLAY ELEMENT:
MARBLE RACE
- WP

PLAY ELEMENT:
WATER PUMP



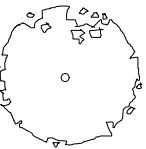


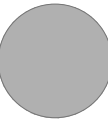
**Planning,
Industry &
Environment**

Issued under the Environmental Planning and Assessment Act 1979

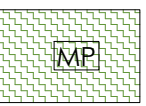
Approved Application No: SSD 9491 Signed: 

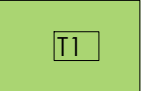
Granted on the: 30 January 2020 Sheet No: 21 of 23

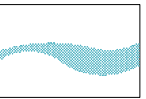
- Legend
- 

NEW TREES
- 

EXISTING TREES
- 

NEW TURF
- 

MASS PLANTING
- 

SYNTHETIC TURF
- 

BIO SWALE

PLANT SCHEDULE -							
All trees supplied are to comply with NATSPEC's 'Specifying Trees a guide to accessment of tree							
ABV	BOTANICAL NAME	COMMON NAME	MATURE HIGHT	TURE SPRE	POT SIZE	SPACING	QUANTITY
TREES							
LAG	<i>Lagerstroemia indica</i> 'Tonto'	Crepe myrtle	3 m	3 m	100 L	as shown	7
PC	<i>Pistacia chinensis</i>	Chinese Pistachio	8m	6 m	200 L	as shown	3
MG	<i>Magnolia grandiflora</i> 'Little Gem'	dwarf magnolia	3-5 m	2-3.5 m	100 L	as shown	8
PR	<i>Prunus campanulata</i>	Taiwan Cherry	5 m	5 m	100 L	as shown	3
TIB	<i>Tibouchina</i> 'Alstonville'	Tibouchina	5m	4 m	100 L	as shown	3
SHRUBS - MP							
PHI x	<i>Philodendron xanadu</i>	xanadu	0.7 m	0.7m	5 L	as shown	0
GAR aug	<i>Gardenia augusta</i> 'Florida'	White Gardenia	1 m	0.9 m	5 L	0.8 m	0
NAN	<i>Nandina domestica</i> 'Gulf Stream'	Nandina	0.5 m	0.5 m	5 L	0.5 m	0
AZA	<i>Azalea indica</i> 'White Bouquet'	Azalea	1 m	1m	200mm	0.75m	0
AC	<i>Acmena</i> 'Allyn Magic'	Dwarf Lillypilly	0.9-1m	0.7-0.8	5 L	0.5 m	0
Ro	<i>Rosmarinus officinalis</i>	Rosemary	0.6-1.2 m	0.6-1.2	5 L	0.6 m	0
Di	<i>Diets grandiflora</i>	wild iris	06.-1.2	0.6-0.9	150 mm	0.9 m	0
CA	<i>Callistemon</i> 'Green John'	Dwarf Bottlebrush					
GRASSES & GROUNDCOVERS -MP @ 325 SQ M							
LIR	<i>Liriope muscari</i> 'variegata'	Variegated Turf	0.5 m	0.5 m	150 mm	0.5 m	0
GRE L	<i>Grevillea lanigera</i> mt tambaritha	Grevillea	0.3-0.5	0.6-1.5	150 mm	0.5 m	0
TRA	<i>Trachelospermum jasminoides</i>	Star Jasmine	0.4	1.5m	200mm	0.75 m	0
LOM Kat	<i>Lomandra longifolia</i> 'Katrinus'	Mat Rush	0.8-1.0m	1-1.2 m	200mm	2 /m2	0
TRA	<i>Trachelospermum SHOOTING</i>	star jasmine	0.4	1.5m	200mm	0.75 m	0
ZEP ca	<i>Zephryanthes candida</i>	White Wind	0.3 m	2	2.5L	15/m2	8
TURF							
T	<i>Cynodon dactylon</i> 'Santa Ana'	Santa Ana					390 SQ
TG	<i>Stenotaphrum secundatum</i>	buffalo grass					365 SQ
T1	Synthetic turf						126 SQ

- NOTES
1. Dimensions are in millimetres unless otherwise shown.

2. Work to given dimensions. Do not scale from drawing.

3. Check all dimensions on site prior to construction and fabrication.

4. Bring any discrepancies to the attention of the proprietor & architect.

PROJECT NAME AND ADDRESS

Lake Cathie Public School Upgrade

1240 Ocean Drive

SCALE

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

DISCIPLINE

Landscape

STATUS

Schematic Design

Not for Construction

DRAWING TITLE

Softworks plan



Education

School Infrastructure

DRAWN

MA

APPROVED

SR

PROJECT NO.

12199.5

DRAWING NO.

L07

REV.

C



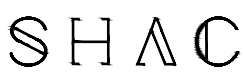
terras

landscape architects

412 KING STREET NEWCASTLE NSW AUSTRALIA 2300

TERRAS.COM.AU PH: 49 294 926 FAX: 49 263 049

CONSULTANTS



ARCHITECTURAL

SHAC Architects

T 02 4961 9888



STRUCTURAL + CIVIL

MPC Consulting Engineers

T 02 4927 5566



ELECTRICAL

Electrical Projects Australia

T 02 4967 9999



HYDRAULIC

McCallum PFCA

T 02 4946 2633



MECHANICAL

EV Consulting Engineers

T 02 4929 2461



QUANTITY SURVEYOR

Altus Group

T 02 9283 7311



PCA CONSULTANT

NewCert

T 02 4986 1127

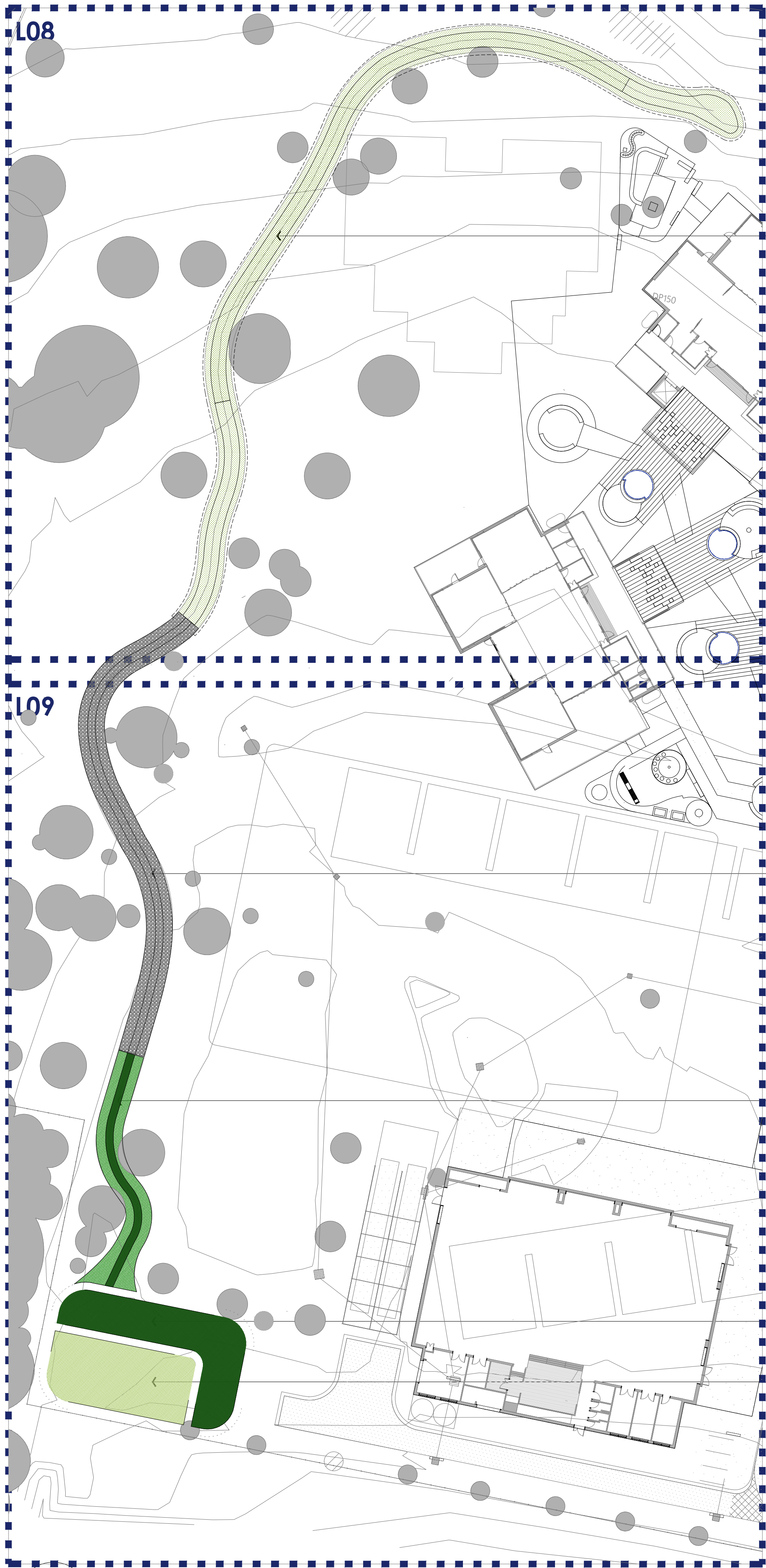


PROJECT MANAGER

Crown Project Services Pty Ltd

T 02 9292 4420

AMENDMENTS



12 L09 GRASS SWALE

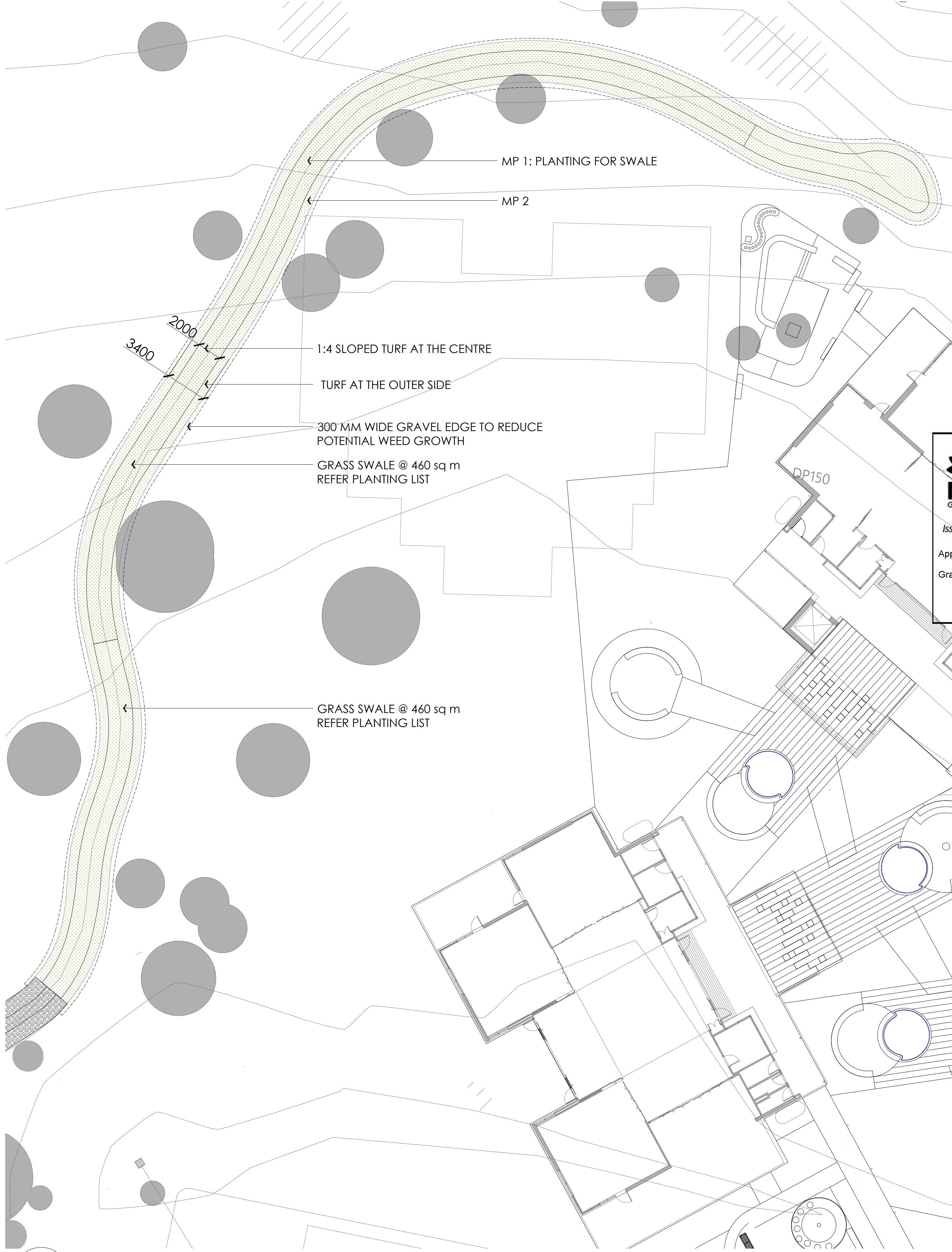
13 L09 ROCK LINED SWALE WITH PLANTING

14 L09 PLANTED SWALE

BIO BASIN 1

BIO BASIN 2

09 BIO SWALE landscape layout Scale 1:400



MP 1: PLANTING FOR SWALE

MP 2

1:4 SLOPED TURF AT THE CENTRE

TURF AT THE OUTER SIDE

300 MM WIDE GRAVEL EDGE TO REDUCE POTENTIAL WEED GROWTH

GRASS SWALE @ 460 sq m REFER PLANTING LIST

GRASS SWALE @ 460 sq m REFER PLANTING LIST

10 BIO SWALE: PART 1 landscape layout Scale 1:200

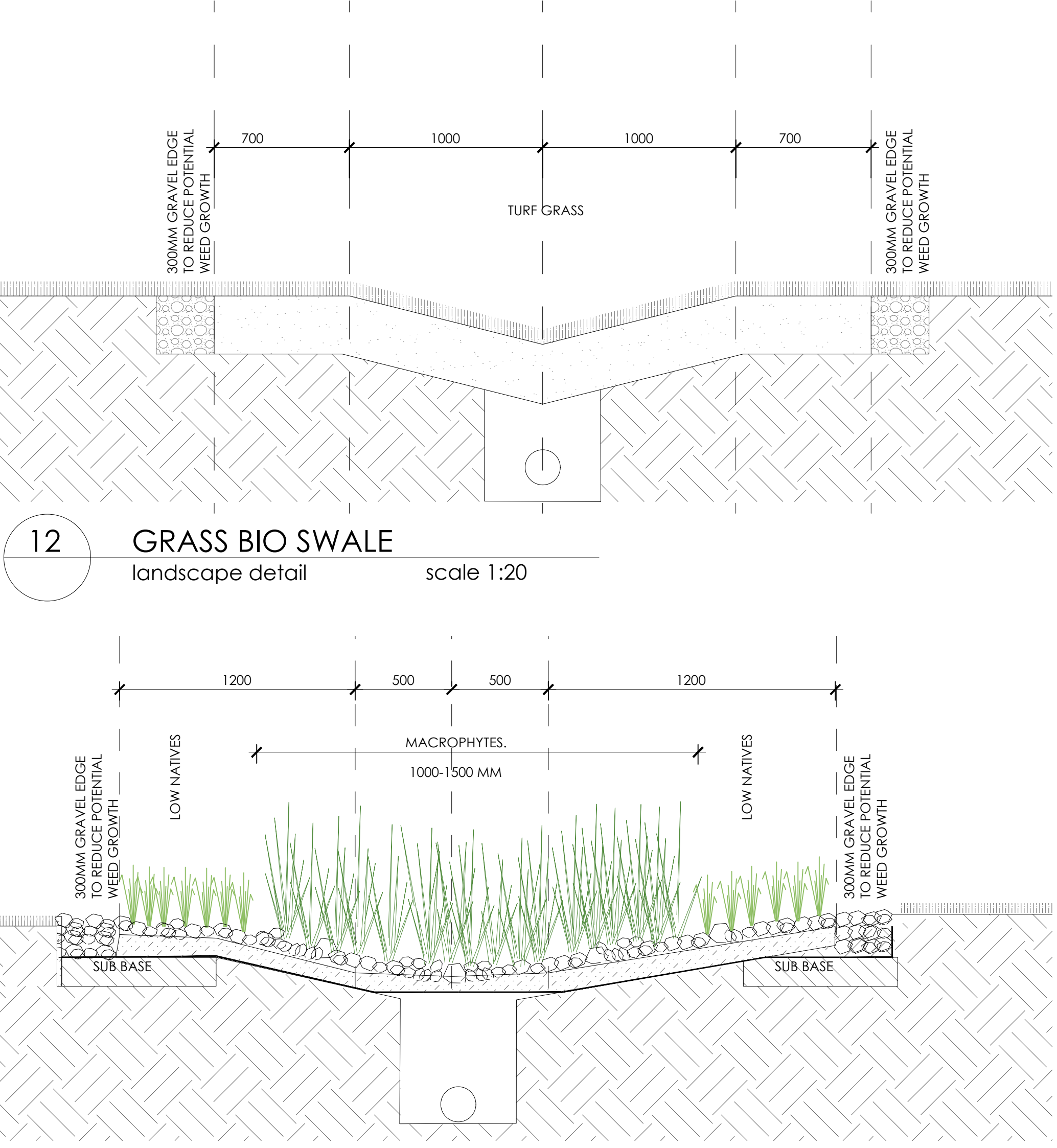


**Planning,
Industry &
Environment**

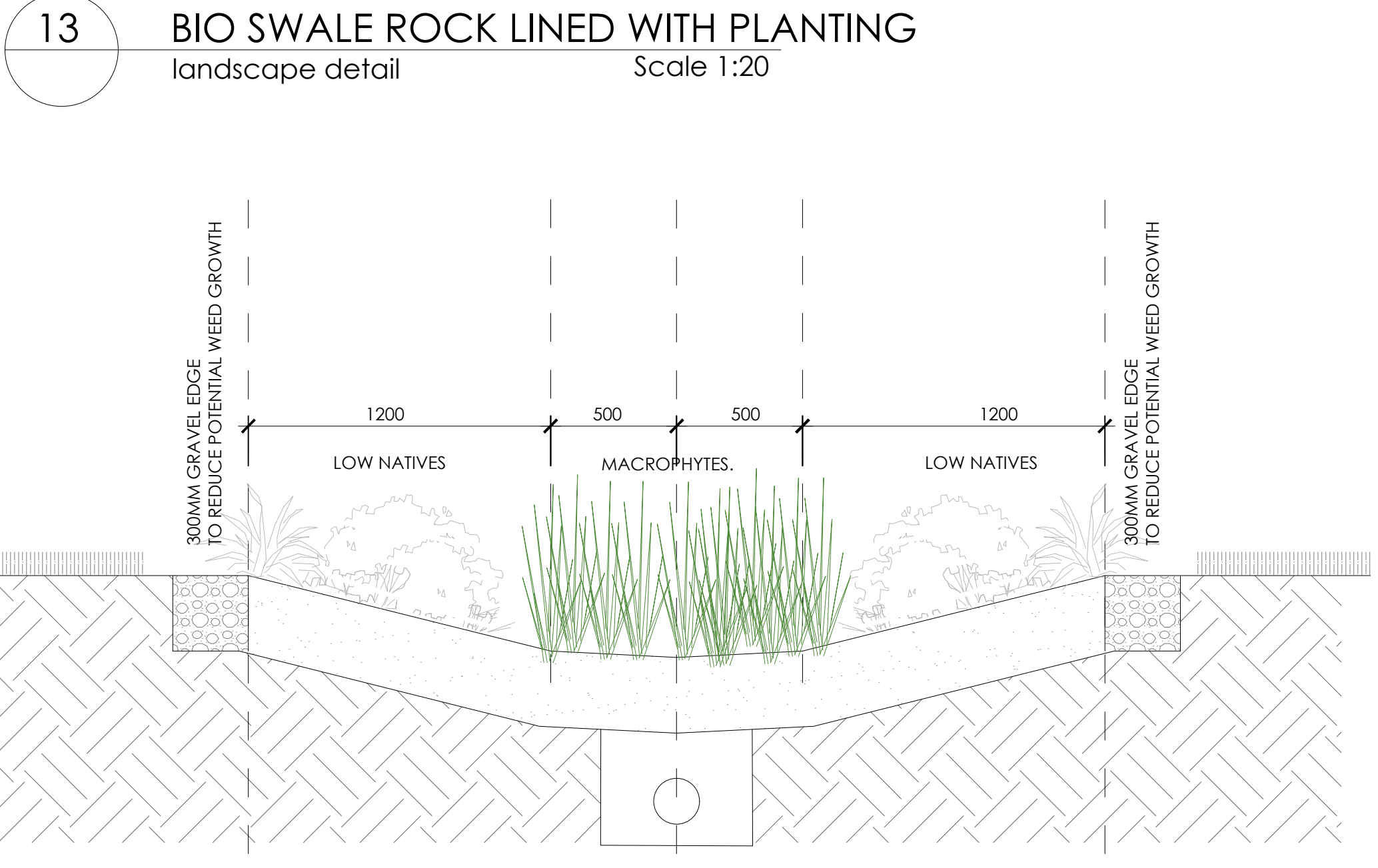
Issued under the Environmental Planning and Assessment Act 1979

Approved Application No: SSD 9491 Signed: 

Granted on the: 30 January 2020 Sheet No: 22 of 23



11 BIO SWALE landscape layout Scale 1:200



12 GRASS BIO SWALE landscape detail scale 1:20

13 BIO SWALE ROCK LINED WITH PLANTING landscape detail Scale 1:20

14 BIO SWALE ROCK LINED WITH PLANTING landscape detail Scale 1:20

PLANT SCHEDULE - BIOSWALE

MP1- MACROPHYTES			120 sq m
	Baumea rubiginosa		
	Bolboschoenus fluv iatilis		
	Isolepis nodosa		
MP2- WATER TOLERANT PLANT SPECIES			100 sqm
	Lomandra longifolia		
	viola betonicifolia		
MP3- MACROPHYTES AND WATER TOLERANT GRASSES			33 sq m
	Gahnia clarkei		
	Juncus polyanthemus		
	Schoenoplectus mucronatus		
MP4- WATER TOLERANT LOCAL NATIVES			87 sq m
	Imperata cylindrica v ar. major		
	Lomandra longifolia 'Katrinus'		
	viola betonicifolia		
	Ranunculus inundatus		
BIO BASIN PLANTS			
	Carex appressa		
	Juncus usitatus		
	Schoenoplectus mucronatus		
	Bolboschoenus fluv iatilis		
	Gahnia sieberiana		
	Hydrocharis dubia		
TURF			460 sqm
	Cynodon dactylon		
	Paspalum distichum		



Planning,
Industry &
Environment

Issued under the Environmental Planning and Assessment Act 1979

Approved Application No: SSD 9491 Signed: 

Granted on the: 30 January 2020 Sheet No: 23 of 23