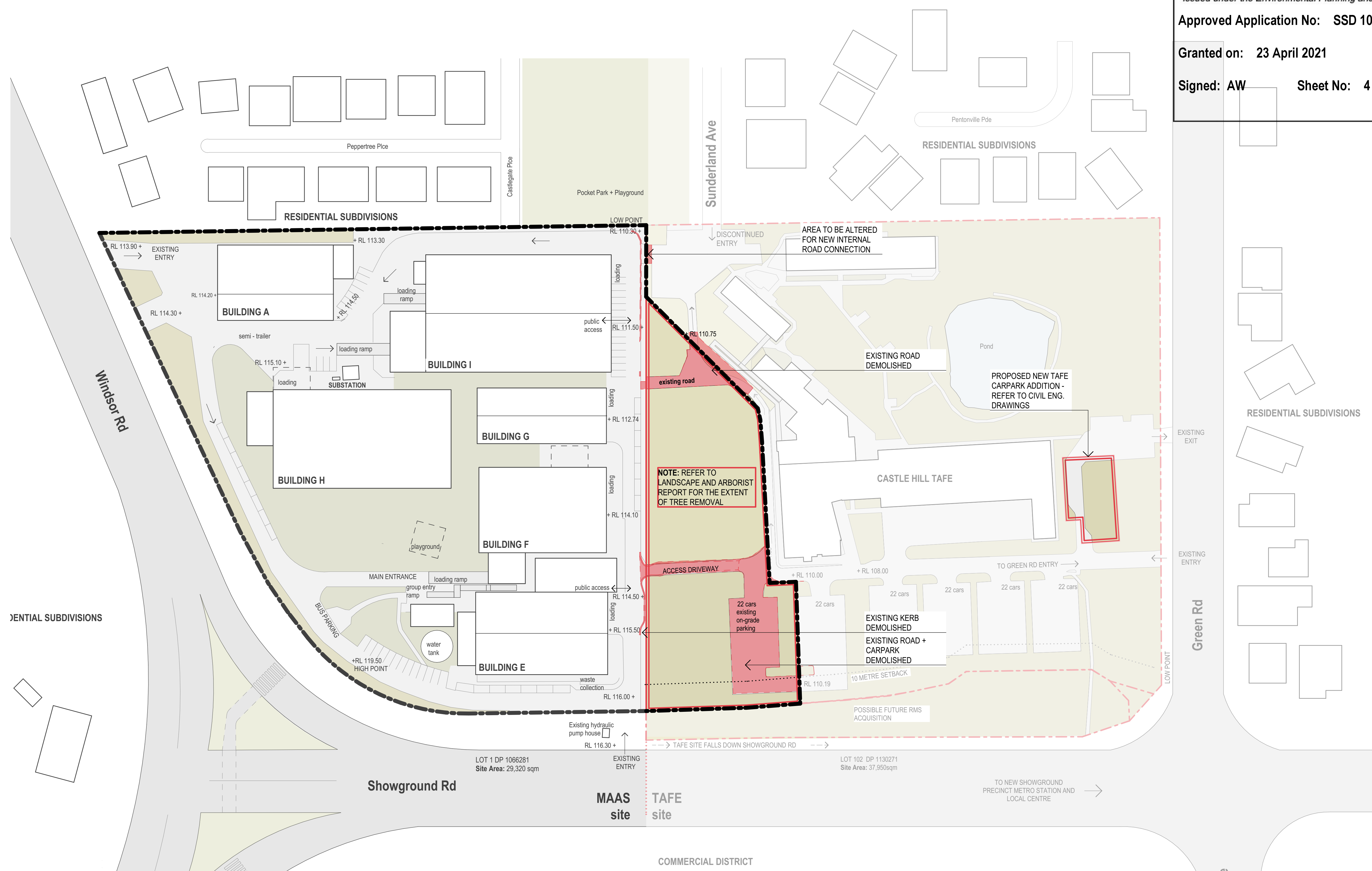




Signed: AW Sheet No: 1 of 28

[illegible]



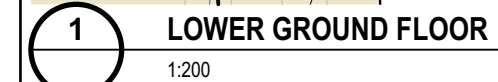
1 SITE DEMOLITION PLAN
1:750

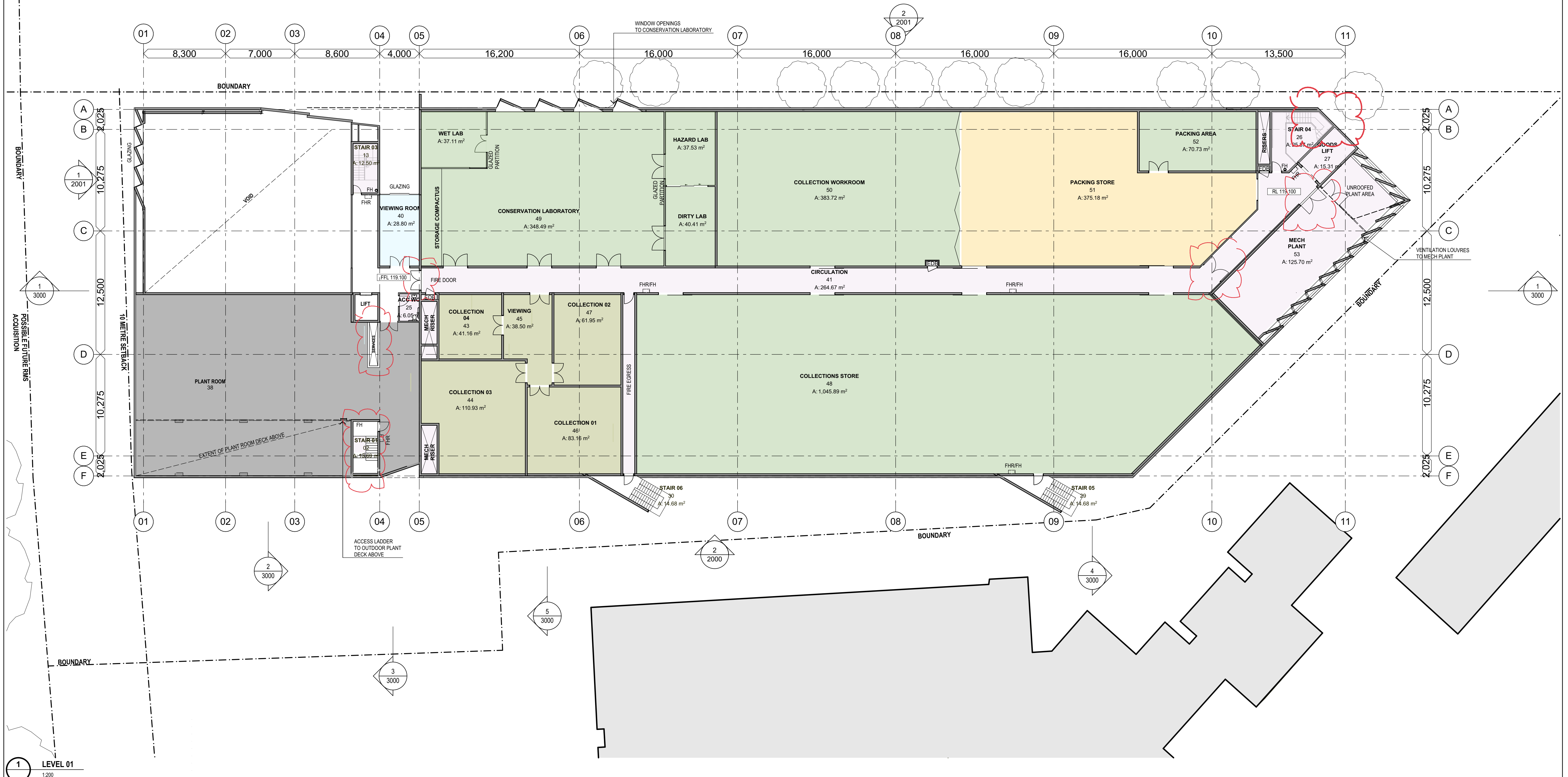
REV	DESCRIPTION	DATE	REV	DESCRIPTION	DATE	TITLE	TITLE	TITLE	TITLE	NORTH	PROJECT SPONSOR	DELIVERY AGENCY	PROJECT TITLE	lahznimmo architects Suite 404, Flourmill Studios 3 Gladstone St Newtown NSW 2042 Australia T 02 9550 5200 F 02 9550 5253 www.lahznimmo.com		TITLE				
01	SSDA ISSUE	07/06/2020				STRUCTURAL / CIVIL / SERVICES CONSULTANTS 				 DO NOT SCALE DRAWINGS. USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE. REFER ANY DISCREPANCIES TO THE ARCHITECT THIS DRAWING. THE INFORMATION ON IT AND THE DESIGN ARE COPYRIGHT OF LAHNIMMO ARCHITECTS PTY LTD.			BUILDING J Museums Discovery Centre, 172 Showground Road Castle Hill	REVIEW TENDER	DIRECTOR SIGNATURE _____	DATE _____	DRAWN BC / BG	PLOT DATE 19/01/2021	SCALE @A1 1:750	SCALE @
						TITLE	TITLE	TITLE	TITLE		CLIENT Museum of Applied Arts & Sciences		SCALE CHECK _____ 5 _____ 10	CONST		CHECKED AN	PROJECT NO. 18-14	DRAWING NO. A - D A - 1 2 0 0	REV.	

Approved Application No: SSD 10472

Granted on: 23 April 2021

Signed: AW Sheet No: 5 of 28

[illegible]



REV	DESCRIPTION	DATE	REV	DESCRIPTION	DATE	TITLE	TITLE	TITLE	TITLE	NORTH	PROJECT SPONSOR	DELIVERY AGENCY	PROJECT TITLE	lahznimmo architects Suite 40L, Flourmill Studios 3 Gladstone St Newtown NSW 2042 Australia T 02 9550 5300 F 02 9550 5233 www.lahznimmo.com				TITLE						
01	OPTION 3D - Preliminary Issue	07/01/18	12	Updated Floor Cost Package	16/06/2020		TITLE	TITLE	TITLE	 DO NOT SCALE DRAWINGS. USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE. REFER ANY DISCREPANCIES TO THE ARCHITECT. THIS DRAWING, THE INFORMATION CONTAINED THEREIN AND THE DESIGN ARE COPYRIGHT © LAHZNIMMO ARCHITECTS PTY LTD.	Create NSW Arts, Screen & Culture	Public Works Advisory	BUILDING J Museums Discovery Centre, 172 Showground Road Castle Hill	REVIEW	DIRECTOR SIGNATURE	DATE	DRAWN	PLOT DATE	SCALE @A1	SCALE @A3				
02	OPTION 3E - Preliminary Issue	23/01/18	13	Updated for SSDA Submission	10/07/2020		TITLE	TITLE	TITLE					TITLE	TENDER			CHECKED	PROJECT NO.	DRAWING NO.	REV. NO.			
03	OPTION 3F - Costing Issue	13/02/19	14	SSDA ISSUE	07/08/2020													BC / BG	19/01/2021	1:200	1:400			
04	OPTION 3F - Costing Issue Amended	15/02/19	15	UPDATED SSDA ISSUE	17/12/2020																			
05	OPTION 3F - Amended issue for consultant information	05/03/19																						
06	OPTION 3G	03/04/19																						
07	OPTION 05 - Issue For Information	28/01/20																						
08	OPTION 05 - Amended Level 1 Plan	25/02/20																						
09	OPTION 08	04/05/20																						
10	PRELIMINARY SSDA DRAWINGS ISSUE	15/05/2020																						
11	Approved Level 1 Plan L-1 Section 1 (Issue)	23/08/2021																						
											CLIENT	Museum of Applied Arts & Sciences		SCALE CHECK		5		10		CONST	AN	18-14	A - D - A - 14 0 2	15



Approved Application No: SSD 10472

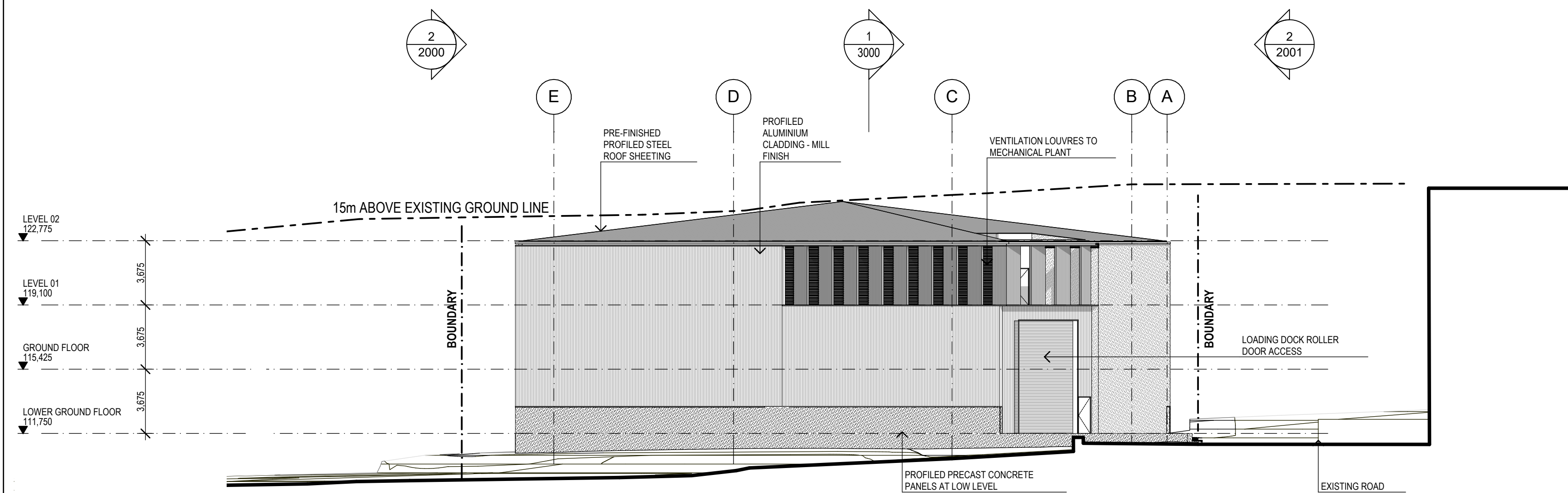
Signed: AW

Sheet No: 9 of 28



BUILDING I

[illegible]



1 NORTH ELEVATION
1:200



Planning,
Industry &
Environment

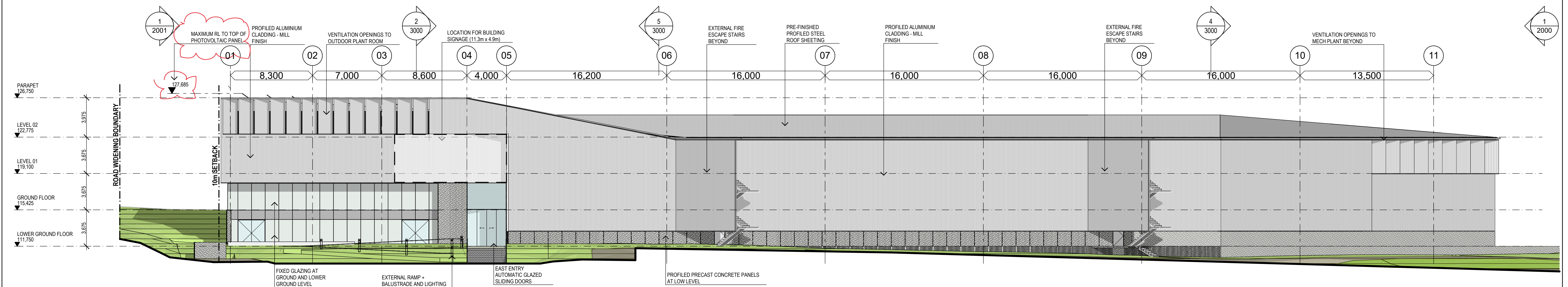
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Approved Application No: SSD 10472

Granted on: 23 April 2021

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Sheet No: 10 of 28



2 EAST ELEVATION
1:200

REV	DESCRIPTION	DATE	REV	DESCRIPTION	DATE
01	OPTION 3F - Coating Issue	13/02/19	12	UPDATED SSDA ISSUE	09/03/2021
02	OPTION 3F - Coating Issue Amended	15/02/19			
03	OPTION 3F - Amended issue for consultant information	05/03/19			
04	OPTION 3G	03/04/19			
05	OPTION 05 - Issue For Information	28/01/20			
06	OPTION 06	04/05/20			
07	PRELIMINARY SSDA DRAWING ISSUE	15/05/2020			
08	Updated for SSDA Submission	10/07/2020			
09	SSDA ISSUE	07/08/2020			
10	UPDATED SSDA ISSUE	17/12/2020			
11	UPDATED SSDA ISSUE	25/02/2021			

TITLE	TITLE	TITLE	TITLE	TITLE
STRUCTURAL / CIVIL / SERVICES CONSULTANTS				
NORTHROP				
TITLE	TITLE	TITLE	TITLE	TITLE

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Create NSW
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Public Works
Advisory

Museum of Applied Arts & Sciences

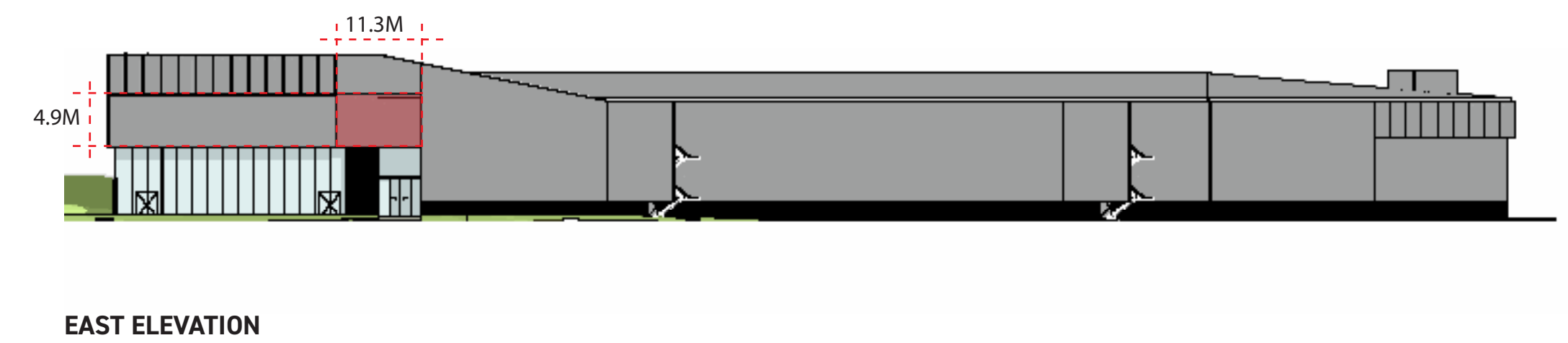
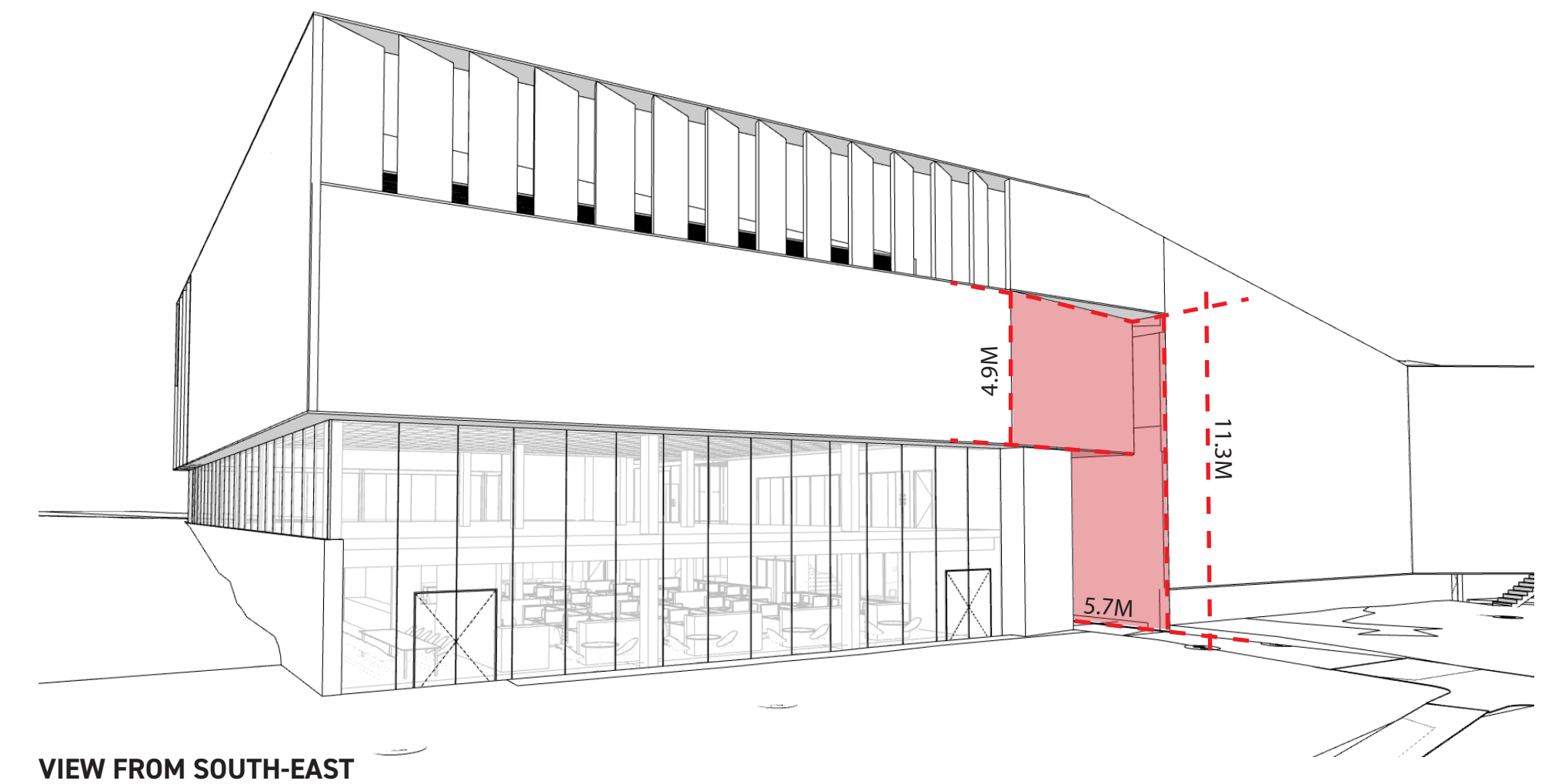
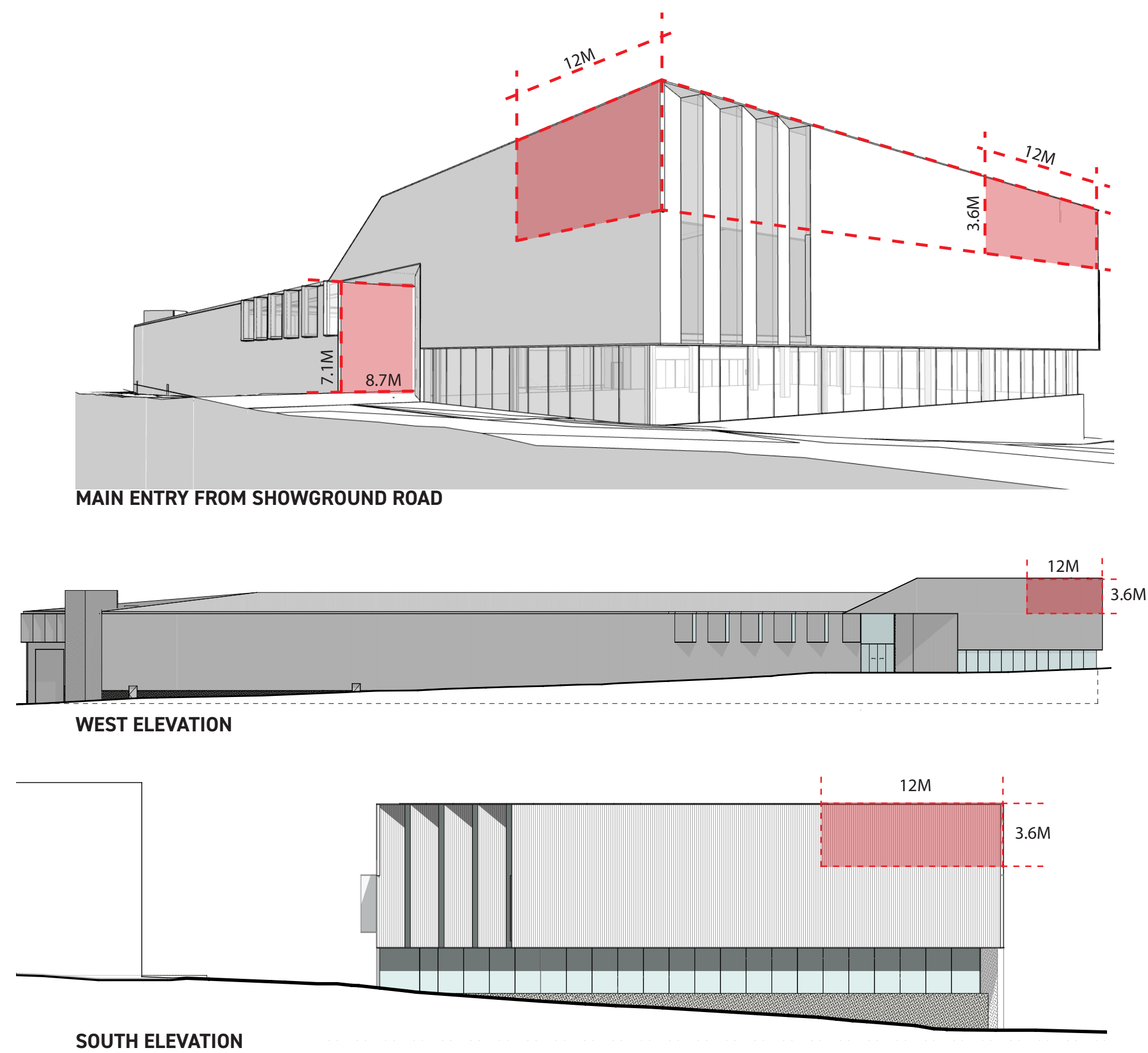
BUILDING J
Museums Discovery Centre,
172 Showground Road
Castle Hill

SCALE CHECK 5 10 CONST

lahznimmo architects
Suite 404, Flourmill Studios
3 Gladstone St
Newtown NSW 2042 Australia
T 02 9550 5200
F 02 9550 5233
www.lahznimmo.com

ELEVATIONS

REVIEW	DIRECTOR SIGNATURE	DATE	DRAWN	BC / BG	PLOT DATE	SCALE @A1	SCALE @A3
TENDER					9/03/2021	1:200	
CHECKED	AN				PROJECT NO.	DRAWING NO.	REV. NO.
					18-14	A - D A - 2 0 0 0	12



 **Planning,
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Environment**

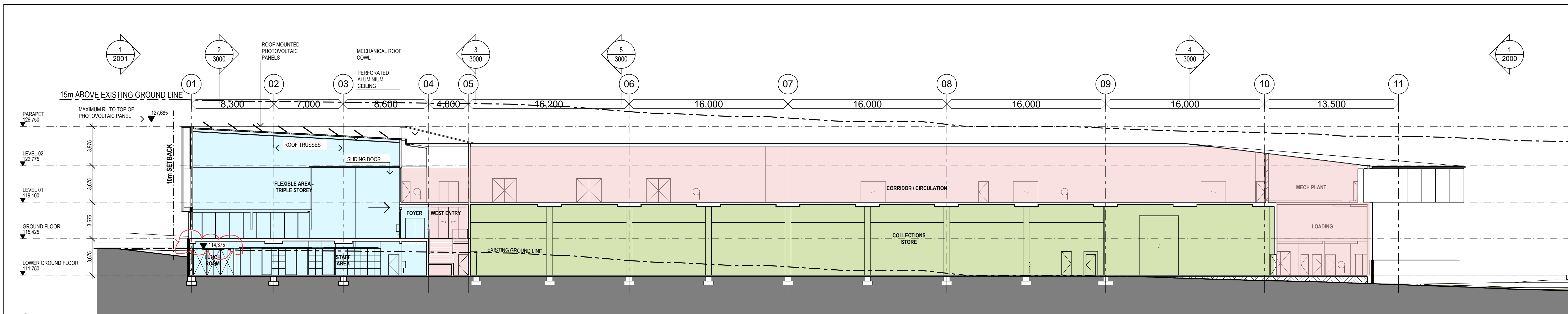
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Approved Application No: SSD 10472

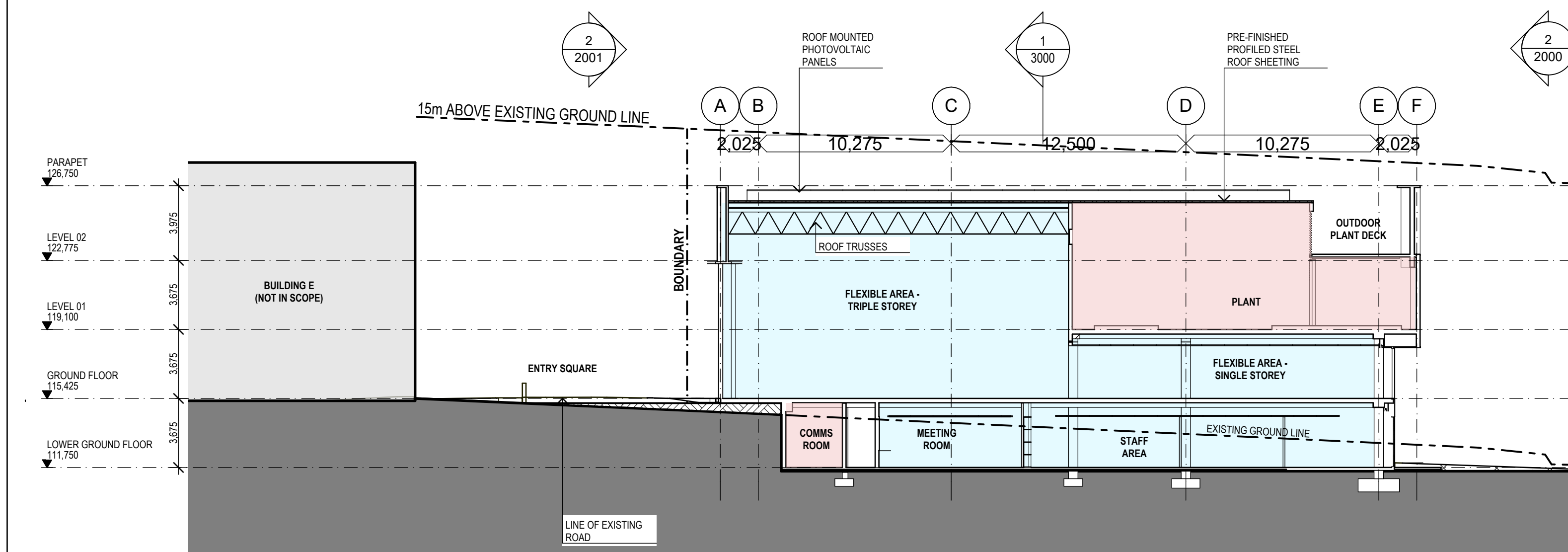
Granted on: 23 April 2021

Signed: AW **Sheet No: 12 of 28**

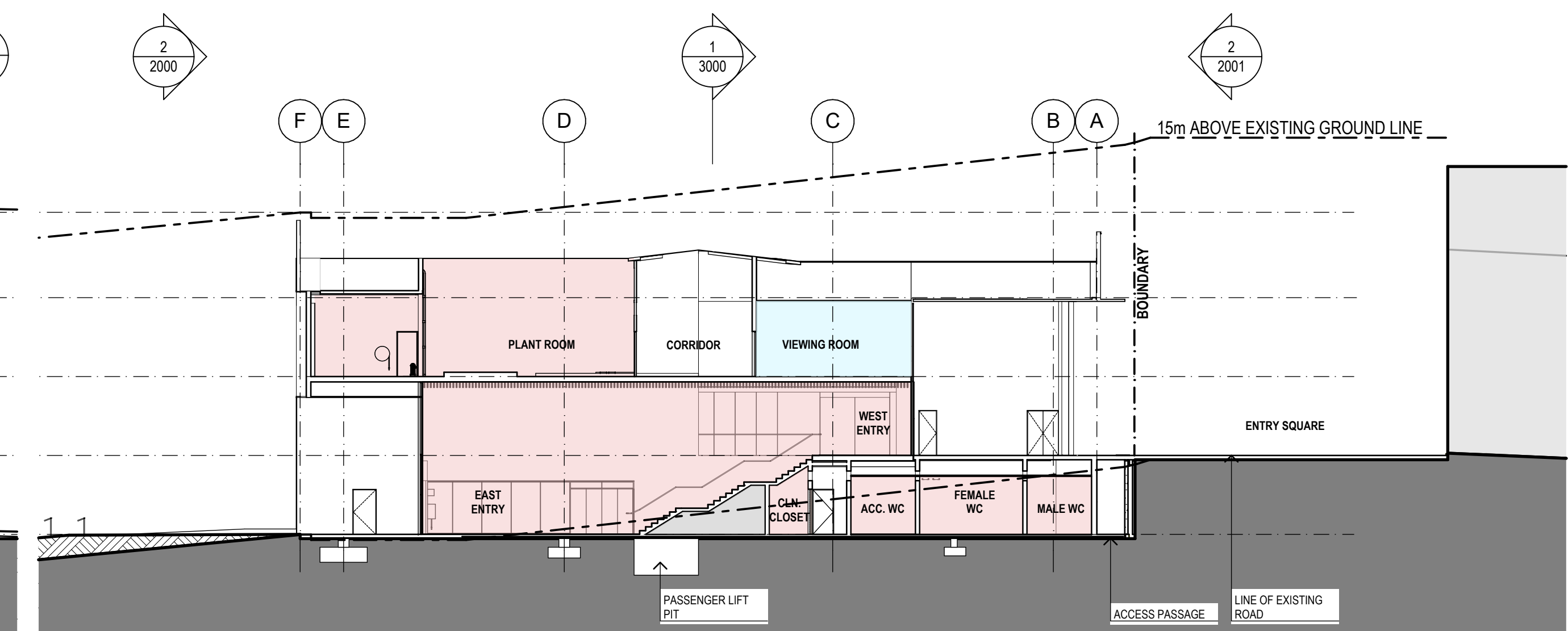
REV 01	DESCRIPTION UPDATED SSDA ISSUE	DATE 24/03/2021	REV	DESCRIPTION	DATE	TITLE STRUCTURAL / CIVIL / SERVICES CONSULTANTS 	TITLE	TITLE	TITLE	NORTH 	PROJECT SPONSOR  Create NSW Arts, Screen & Culture	DELIVERY AGENCY  Public Works Advisory	PROJECT TITLE BUILDING J Museums Discovery Centre, 172 Showground Road Castle Hill	lahznimmo architects Suite 404, Flourmill Studios 3 Gladstone St Newtown NSW 2042 Australia T 02 9550 5200 F 02 9550 5233 www.lahznimmo.com	TITLE SIGNAGE ZONES			
						TITLE	TITLE	TITLE	TITLE	DO NOT SCALE DRAWINGS. USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE. REFER ANY DISCREPANCIES TO THE ARCHITECT THIS DRAWING. THE INFORMATION ON IT AND THE DESIGN ARE COPYRIGHT OF LAHZNIMMO ARCHITECTS PTY LTD.	CLIENT Museum of Applied Arts & Sciences	REVIEW DIRECTOR SIGNATURE	DATE	DRAWN BC / BG	PLOT DATE 24/03/2021	SCALE @A1 1:1	SCALE @A3	
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													SCALE CHECK					



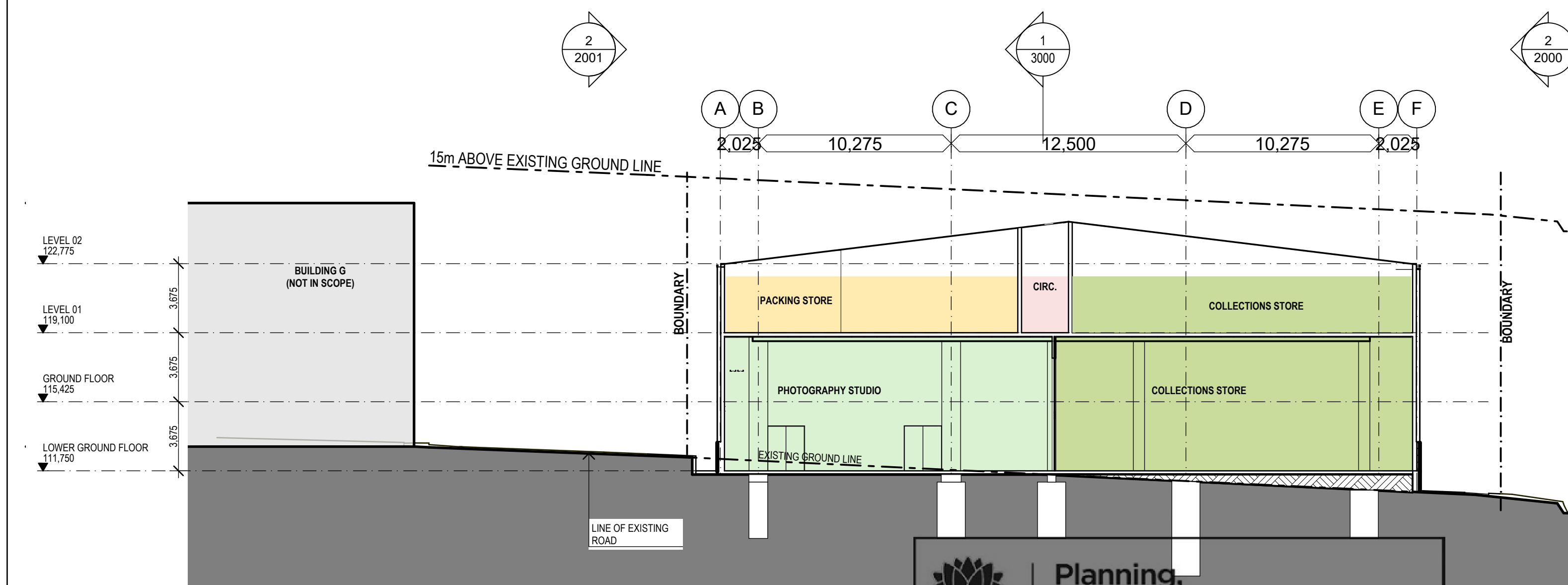
1 SECTION
1:200



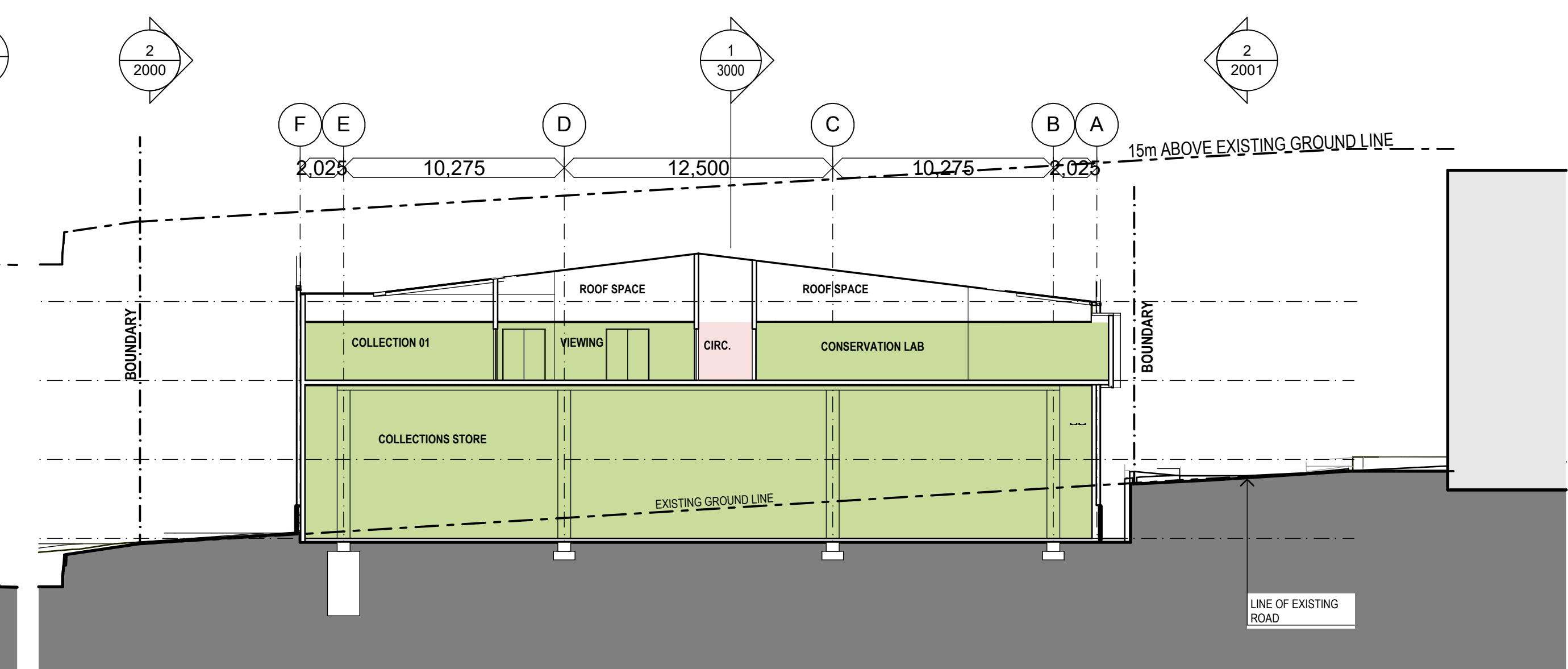
2 SECTION
1:200



3 SECTION
1:200



4 SECTION
1:200



5 SECTION
1:200

REV	DESCRIPTION	DATE	REV	DESCRIPTION	DATE	TITLE
01	OPTION 3E - Preliminary Issue	23/01/19	12	UPDATED SSDA ISSUE	17/12/2020	STRUCTURAL / CIVIL / SERVICES CONSULTANTS
02	OPTION 3F - Coating Issue	13/02/19	13	UPDATED SSDA ISSUE	25/02/2021	
03	OPTION 3F - Coating Issue Amended	15/02/19	14	UPDATED SSDA ISSUE	08/03/2021	
04	OPTION 3F - Amended issue for consultant information	05/03/19	15	UPDATED SSDA ISSUE	24/03/2021	
05	OPTION 3G	03/04/19				
06	OPTION 05 - Issue For Information	28/01/20				
07	OPTION 05	04/05/20				
08	PRELIMINARY SSDA DRAWING ISSUE	15/05/2020				
09	Amended Level 1 Plans + Section Drawings	12/06/2020				
10	Updated for SSDA Submission	10/07/2020				
11	SSDA ISSUE	07/08/2020				

NSW GOVERNMENT **Planning, Industry & Environment**

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Approved Application No: **SSD 10472**

Granted on: **23 April 2021**

Signed: **AW** Sheet No: **13 of 28**

PROJECT SPONSOR **NSW GOVERNMENT** **Create NSW** **Arts, Screen & Culture**

DELIVERY AGENCY **NSW GOVERNMENT** **Public Works Advisory**

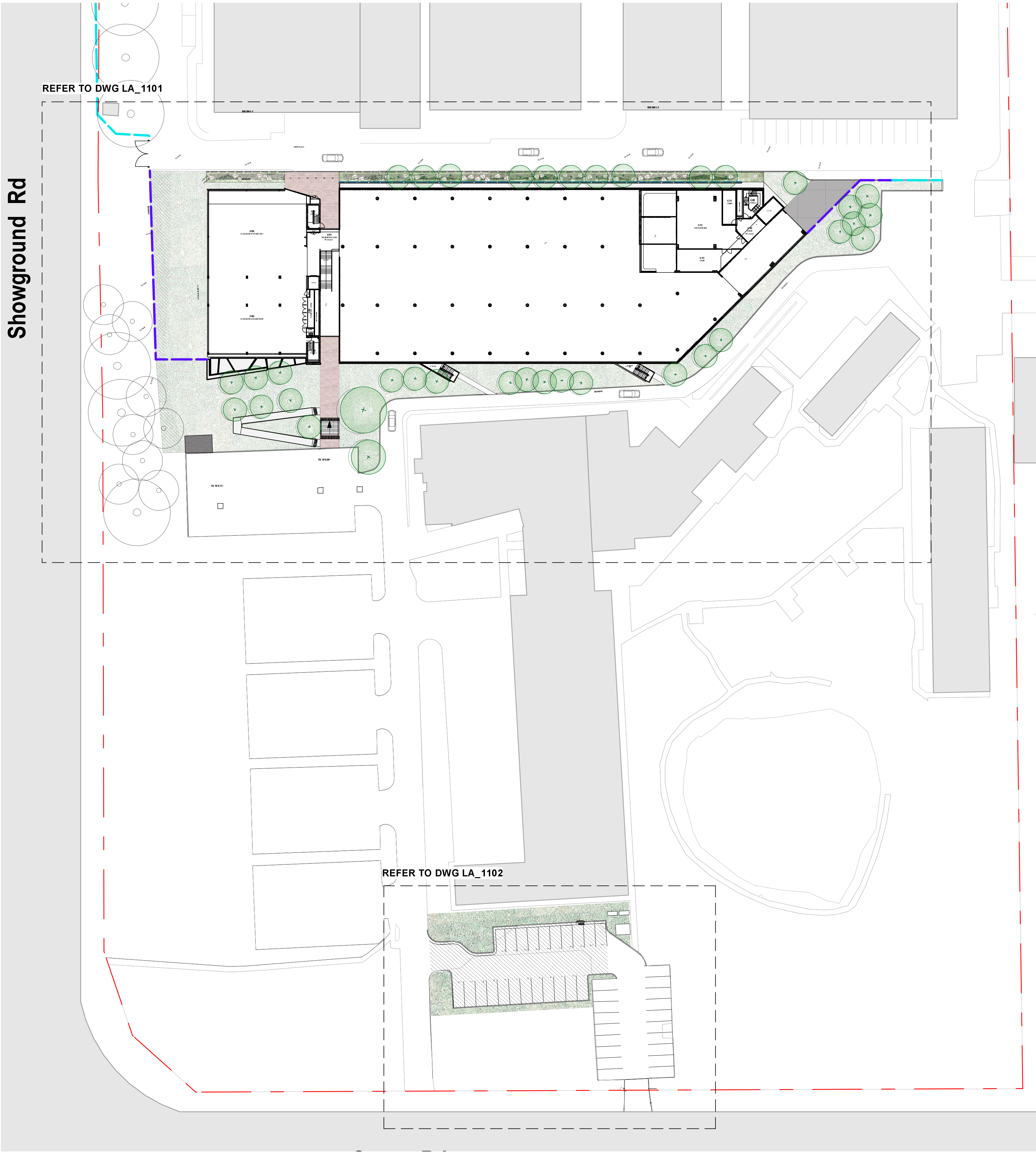
CLIENT **Museum of Applied Arts & Sciences**

PROJECT TITLE **BUILDING J** **Museums Discovery Centre,** **172 Showground Road** **Castle Hill**

lahznimmo architects Suite 404, Flourmill Studios 3 Gladstone St Newtown NSW 2042 Australia T 02 9550 5200 F 02 9550 5233 www.lahznimmo.com

TITLE **SECTIONS**

REVIEW	DIRECTOR SIGNATURE	DATE	DRAWN	BC / BG	PLOT DATE	SCALE @A1	SCALE @A3
TENDER			CHECKED	AN	18-14	DRAWING NO.	REV. NO.
						A - D A - 3 0 0 0	15



DRAWING LIST

Sheet No.	Sheet Name	Sheet Size	Rev. No.	Rev. Date
LA_1100	COVER SHEET & LEGEND	A1	C	02/02/21
LA_1101	LANDSCAPE PLAN	A1	D	02/02/21
LA_1102	LANDSCAPE PLAN - TAFE CAR PARK	A1	B	05/08/20
LA_1103	TREE REMOVAL PLAN	A1	B	05/08/20
LA_1104	TREE PROTECTION ZONE PLAN	A1	A	02/02/21
LA_3000	LANDSCAPE SECTION	A1	B	05/08/20

LEGEND

- BUILDING J SITE BOUNDARY
- TN XXX

TREE NUMBER
REFER TO ARBORIST REPORT
FOR FURTHER INFORMATION
- EXISTING TREE
RETAIN AND PROTECT
- EXISTING TREE - UNSURVEYED
RETAIN AND PROTECT
- EXISTING TREE
TO BE REMOVED
- TREE PROTECTION ZONE
RETAIN AND PROTECT

NOTES:
PROJECT ARBORIST TO REVIEW DESIGN AND CONFIRM
EXTENT OF TREE REMOVAL AND RETENTION.

REFER TO THE ARBORIST REPORT BY MACKAY TREE
MANAGEMENT

SOFTWORKS

- PROPOSED TREE
SPECIES TO BE CONFIRMED - REFER TO PLANTING PALETTE
- PROPOSED MASS PLANTING
SITE WIDE
- EXISTING UNDERSTOREY PLANTING
TO BE PROTECTED & INTEGRATED WITH NEW PLANTING
FOLLOWING TREE REMOVAL / CONSTRUCTION
- PROPOSED WSUD
WESTERN EDGE OF BUILDING J

FIXTURES & FURNITURE (continued)

- EXISTING FENCE
- PROPOSED FENCE
TO MATCH EXISTING ENGINEER'S SPECIFICATION

- GATE

LIGHTING

- LIGHTING BOLLARD
- TREE UPLIGHTERS
- POLE MOUNTED LIGHT

HARDWORKS

- CONCRETE FEATURE PATH
PEDESTRIAN LINK THROUGH BUILDING J
FUTURE INTERPRETIVE ART TBC
- HARDWOOD DECKING
STAFF BREAK OUT SPACE
- BRUSHED CONCRETE SURFACE - DARK
LOADING DOCK / SUBSTATION
- BRUSHED CONCRETE SURFACE - LIGHT
ACCESS PATH

FIXTURES & FURNITURE

- STAINLESS STEEL TACTILE INDICATORS
WESTERN ACCESS ROAD / STEPS
- PRECAST CONCRETE STEP UNIT
300mm TREAD x 150mm RISE | CONTRASTING NOSING STRIP
- STAINLESS STEEL HANDRAIL
TO FUTURE DETAIL
- CONCRETE SEATING EDGE
TO STAFF BREAK OUT SPACE
- BALUSTRADE
ALONG WESTERN EDGE OF ACCESS PATH |
TO ARCHITECT'S DETAIL

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NOTES / KEY PLAN

DATE	REV	AMENDMENTS
8/5/20	A	SSDA ISSUE
14/01/21	B	SSDA ISSUE
2/2/21	C	SSDA ISSUE

ARCHITECTS
lahznimmo
architects

ASPECT Studios

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Level 1, 78-80 George Street
Redfern NSW 2016
Australia
T 02 9699 7182
www.aspect-studios.com
sydney@aspect-studios.com
ABN 11 120 219 561

PROJECT
MUSEUM DISCOVERY CENTRE |
BUILDING J SSDA



STATUS
NORTH
SCALE A1 | SCALE A3
1:250 | 1:500
0 5 10 20M
Do not scale - use dimensions & callouts on drawings & schedules.
Refer discrepancies to Landscape Architect for clarification.

FOR DEVELOPMENT APPLICATION
NOT FOR CONSTRUCTION

DRAWING
COVER SHEET & LEGEND

DRAWING NO. **LA_1000** REVISION **C**



Planning,
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Approved Application No: SSD 10472

Granted on: 23 April 2021

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BUILDING E

BUILDING F

BUILDING G

BUILDING I

PROPOSED
BUILDING J

TAFE

NOTE: New fence to connect into existing

NOTE: New fence to connect into existing

NOTE: area shown for substation includes
800mm easement surrounding the substation as
required by Endeavour Energy. Planting beyond
the area shown for the substation will allow for
screening of the structure

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NOTES / KEY PLAN

DATE	REV	AMENDMENTS
7/30/20	A	DRAFT SSDA ISSUE
8/7/20	B	SSDA ISSUE
14/01/21	C	SSDA ISSUE
2/2/21	D	SSDA ISSUE

ARCHITECTS
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sydney@aspect-studios.com
ABN 11 20 219 561

PROJECT
MUSEUM DISCOVERY CENTRE |
BUILDING J SSDA

CLIENT
NSW Create NSW
Arts, Screen & Culture

S19107
NORTH
SCALE A1 | SCALE A3
1:250 | 1:500
DRAWN: JT
CHECKED: SB | LP
20M
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STATUS
FOR DEVELOPMENT APPLICATION
NOT FOR CONSTRUCTION

DRAWING
LANDSCAPE PLAN

DRAWING NO.
LA_1101

REVISION
D

X00000105_PRODUCTION01_Phase01_CAD/Package Files1



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Granted on: 23 April 2021

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EXISTING TREES
RETAINED AND
PROTECTED DURING
CONSTRUCTION

PROPOSED
UNDERSTOREY
PLANTING TO
CONSTRUCTED AREAS

EXISTING TREES
RETAINED AND
PROTECTED DURING
CONSTRUCTION

NEW KERB ALIGNMENT AND
PARKING AREA - REFER TO
ENGINEER'S DRAWINGS

ASPHALT RESURFACING -
REFER TO ENGINEER'S
DRAWINGS

EXISTING PARKING
LAYOUT
MAXIMISED- REFER
TO CIVIL
DRAWINGS

EXISTING DRIVEWAY
ENTRANCE FROM
GREEN ROAD
MAINTAINED

GREEN ROAD

REFER TO ARBORIST
REPORT FOR INFORMATION
ON PLANTATION TO BE
REMOVED.

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NOTES / KEY PLAN

DATE	REV	AMENDMENTS
7/30/20	A	DRAFT SSDA ISSUE
8/7/20	B	SSDA ISSUE

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architects

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sydney@aspect-studios.com
ABN 11 120 219 561

PROJECT
MUSEUM DISCOVERY CENTRE |
BUILDING J SSDA

CLIENT

NSW Government
Create NSW
Arts, Screen & Culture

S19107

NORTH
SCALE A1 | SCALE A3
1:150 1:300
0 5 10 20M
Do not scale - use dimensions & callouts on drawings & schedules.
Refer discrepancies to Landscape Architect for clarification.

STATUS

FOR DEVELOPMENT APPLICATION
NOT FOR CONSTRUCTION

DRAWING
LANDSCAPE PLAN
TAFE CAR PARK

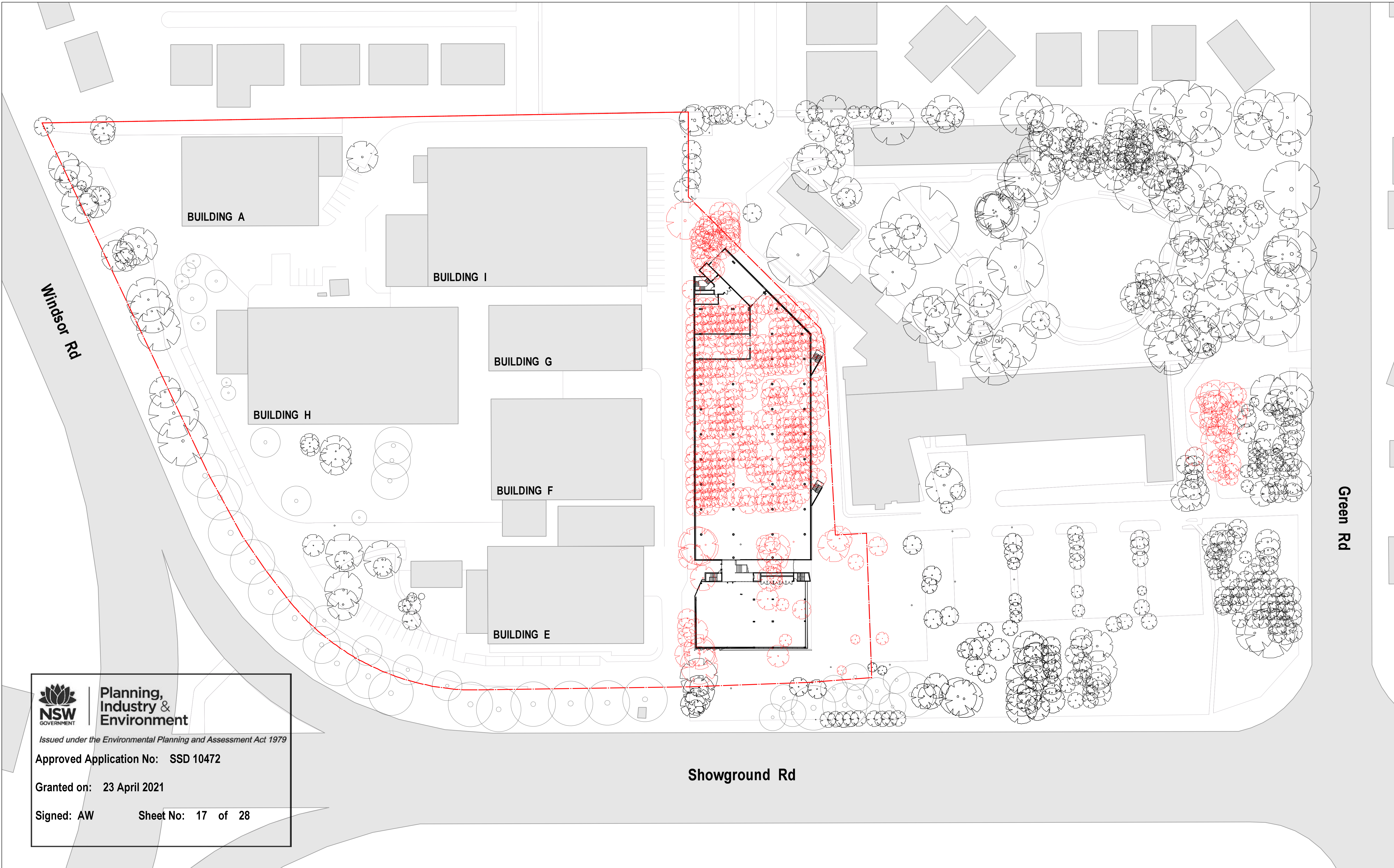
DRAWING NO.

LA_1102

REVISION

B

X00000005_PRODUCTION\01_Phase\01_CAD\Package Files\





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Approved Application No: SSD 10472
Granted on: 23 April 2021
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NOTES / KEY PLAN	
DATE	REV AMENDMENTS
7/30/20	A DRAFT SSDA ISSUE
8/7/20	B SITE BOUNDARY UPDATE

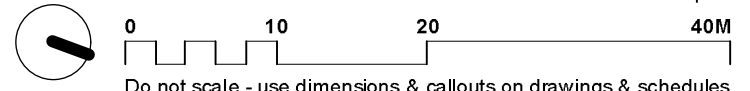
ARCHITECTS
lahznimmo
architects

ASPECT Studios
ASPECT Studios Pty Ltd
Level 1, 78-80 George Street
Redfern NSW 2016
Australia
T 02 9699 7182
www.aspect-studios.com
sydney@aspect-studios.com
ABN 11 120 219 561

PROJECT
MUSEUM DISCOVERY CENTRE |
BUILDING J SSDA

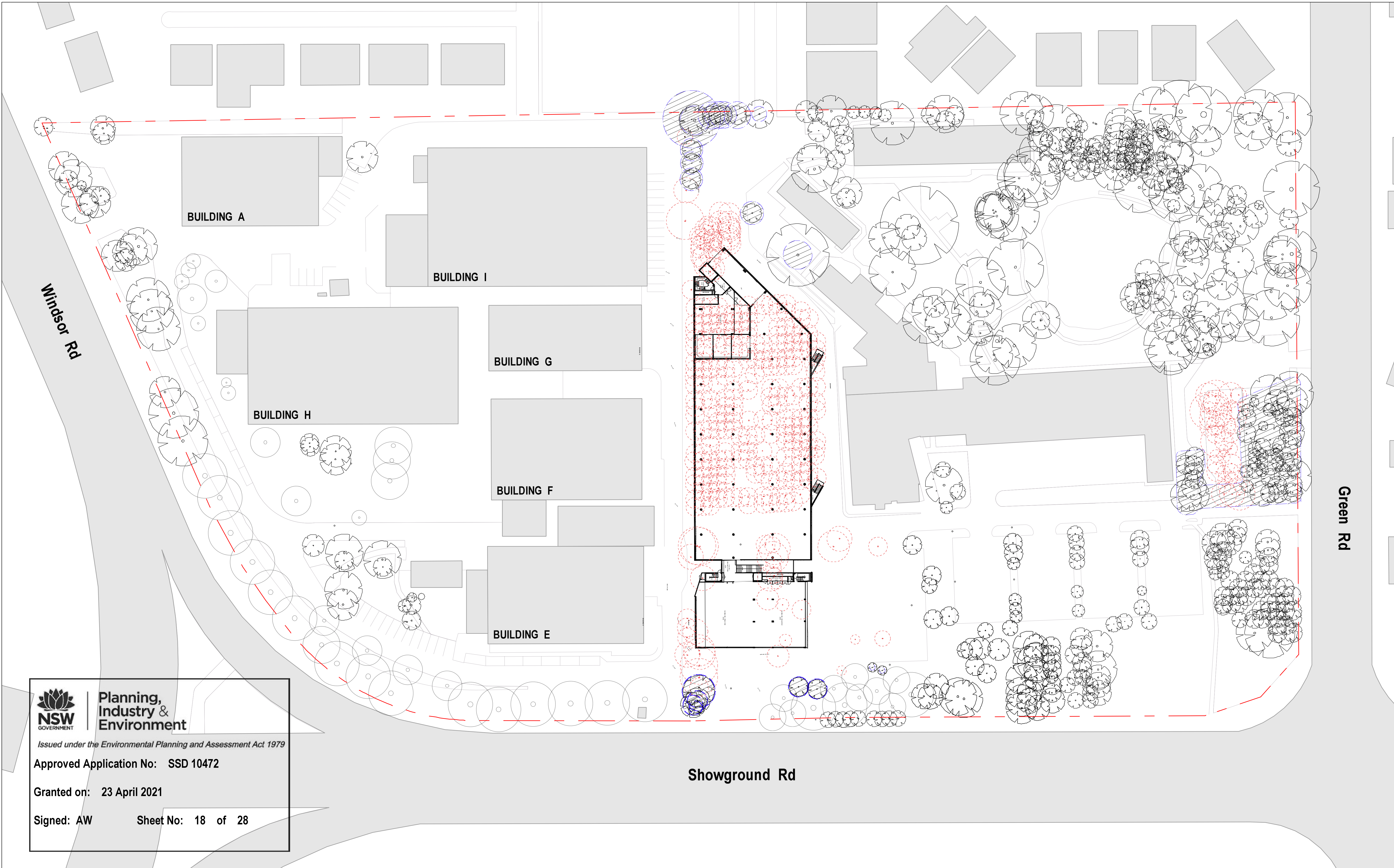
CLIENT
 **Create NSW**
Arts, Screen & Culture

STATUS
FOR DEVELOPMENT APPLICATION
NOT FOR CONSTRUCTION

SCALE A1 | SCALE A3
1:500 1:1000

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DRAWING NO.
LA_1103

REVISION
B



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NOTES / KEY PLAN

DATE	REV	AMENDMENTS
2/2/21	A	SSDA ISSUE

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Redfern NSW 2016
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www.aspect-studios.com
sydney@aspect-studios.com
ABN 11 120 219 561

PROJECT
MUSEUM DISCOVERY CENTRE |
BUILDING J SSDA

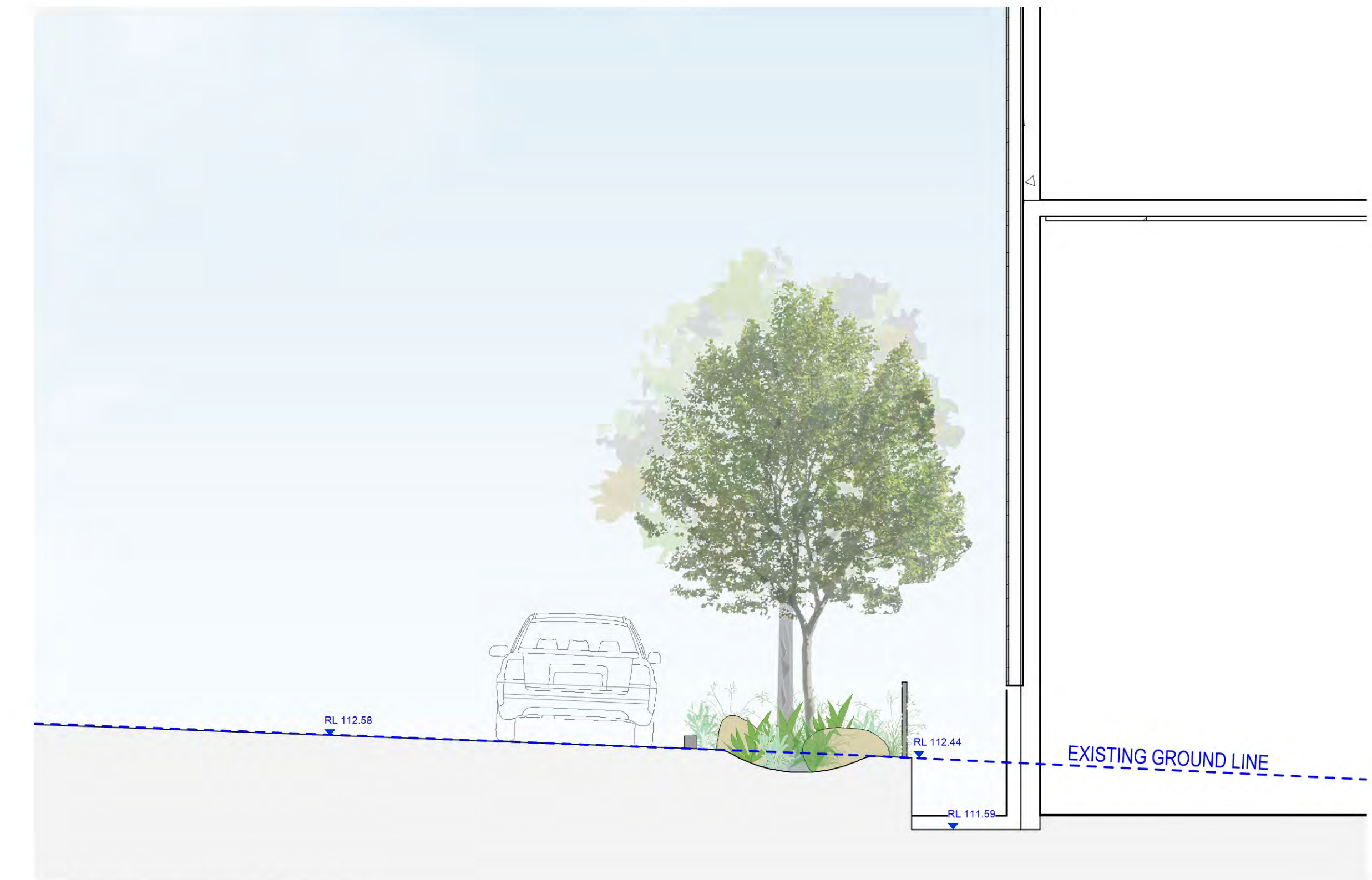
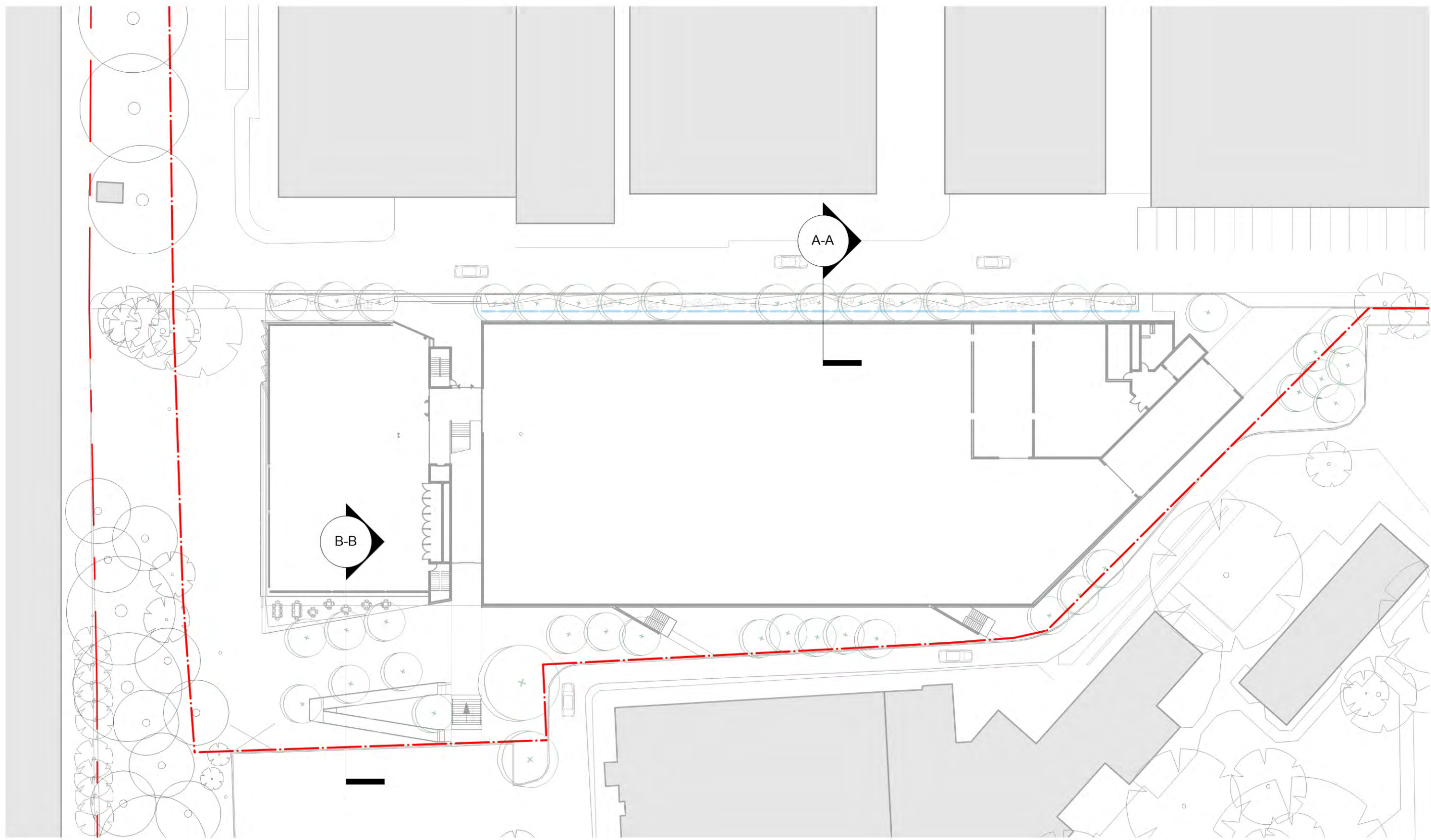


S19107
NORTH
SCALE A1 | SCALE A3
1:500 1:1000
0 10 20 40M
Do not scale - use dimensions & callouts on drawings & schedules.
Refer discrepancies to Landscape Architect for clarification.

STATUS
FOR DEVELOPMENT APPLICATION
NOT FOR CONSTRUCTION

DRAWING
TREE PROTECTION ZONE PLAN

DRAWING NO.
LA_1104
REVISION
A



A-A MDC ACCESS ROAD | WSUD
1:50 @ A1



Planning,
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Environment

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Approved Application No: SSD 10472

Granted on: 23 April 2021

Signed: AW

Sheet No: 19 of 28



B-B STAFF BREAKOUT SPACE | RAMP
1:50 @ A1

WARNING
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NOTES / KEY PLAN

DATE	REV	AMENDMENTS
7/31/20	A	DRAFT SSDA ISSUE
8/7/20	B	SSDA ISSUE

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architects

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ABN 11 120 219 561

PROJECT
MUSEUM DISCOVERY CENTRE |
BUILDING J SSDA

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S19107



SCALE A1 | SCALE A3
1:50 1:100

DRAWN
JT | SB

CHECKED
SB | JK

DRAWING
LANDSCAPE SECTIONS

STATUS
Do not scale - use dimensions & callouts on drawings & schedules.
Refer discrepancies to Landscape Architect for clarification.

FOR DEVELOPMENT APPLICATION
NOT FOR CONSTRUCTION

DRAWING NO.
LA_3000

REVISION
B

POWERHOUSE MUSEUM DISCOVERY CENTRE

172 SHOWGROUND RD, CASTLE HILL NSW 2154
CIVIL ENGINEERING WORKS PACKAGE



SOURCE : NEARMAP.COM.AU (©2018)

DRAWING SCHEDULE	
DRG No.	DRAWING TITLE
DA1.01	COVERSHEET, DRAWING SCHEDULE AND LOCALITY PLAN
DA1.11	GENERAL ARRANGEMENT PLAN
DA2.01	CONCEPT SEDIMENT AND EROSION CONTROL PLAN
DA2.11	SEDIMENT AND EROSION CONTROL DETAILS
DA2.21	BULK EARTHWORKS PLAN
DA3.01	SITEWORKS AND STORMWATER MANAGEMENT PLAN
DA3.02	SITEWORKS AND STORMWATER MANGEMENT PLAN - SHEET 2
DA3.11	CARPARK TURNING PATHS
DA4.01	OSD DETAILS - SHEET 1
DA4.02	OSD DETAILS - SHEET 2



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Approved Application No: SSD 10472

Granted on: 23 April 2021

Signed: AW Sheet No: 20 of 28

DRAWN: JPHILLIPS
DESIGNED: EFLACK
JOB MANAGER: EFLACK
VERIFIER: -

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1	ISSUED FOR SSDA COORDINATION	E.F.		E.F.	26.06.20
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PROJECT

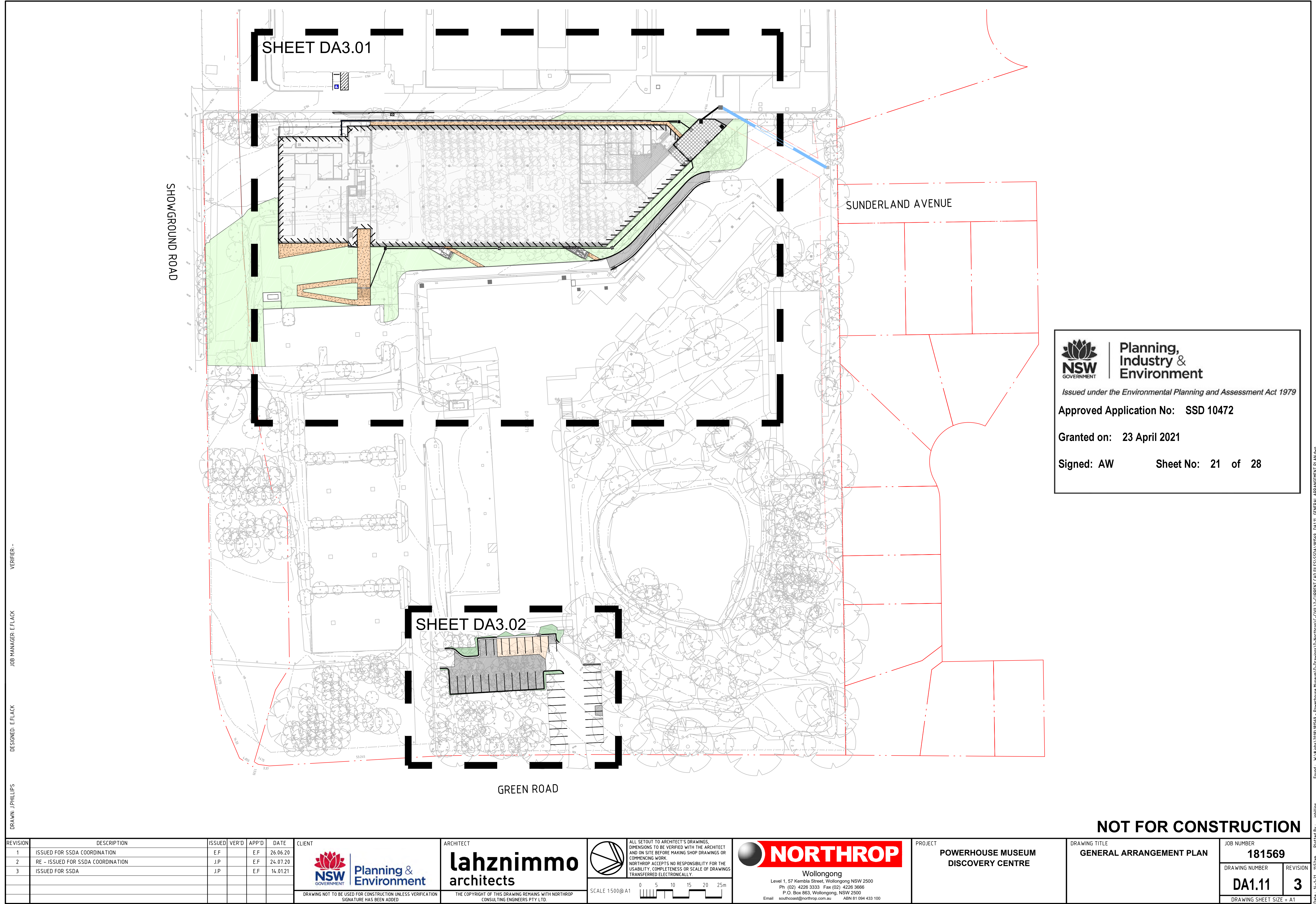
**POWERHOUSE MUSEUM
DISCOVERY CENTRE**

DRAWING TITLE

**COVERSHEET, DRAWING SCHEDULE
AND LOCALITY PLAN**

JOB NUMBER 181569	
DRAWING NUMBER DA1.01	REVISION 3
DRAWING SHEET SIZE = A1	

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DESIGNED: E.FLACK
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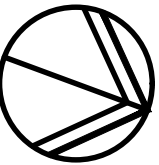
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PROJECT

POWERHOUSE MUSEUM
DISCOVERY CENTRE

DRAWING TITLE

GENERAL ARRANGEMENT PLAN

JOB NUMBER

181569

DRAWING NUMBER

DA1.11

REVISION

3

DRAWING SHEET SIZE = A1



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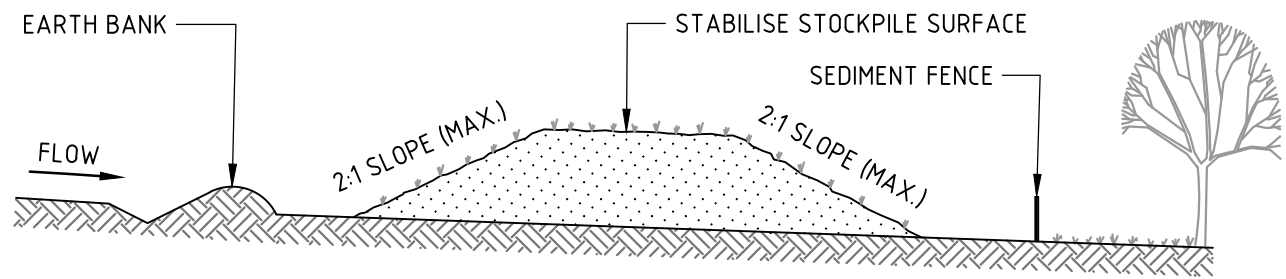
Approved Application No: SSD 10472

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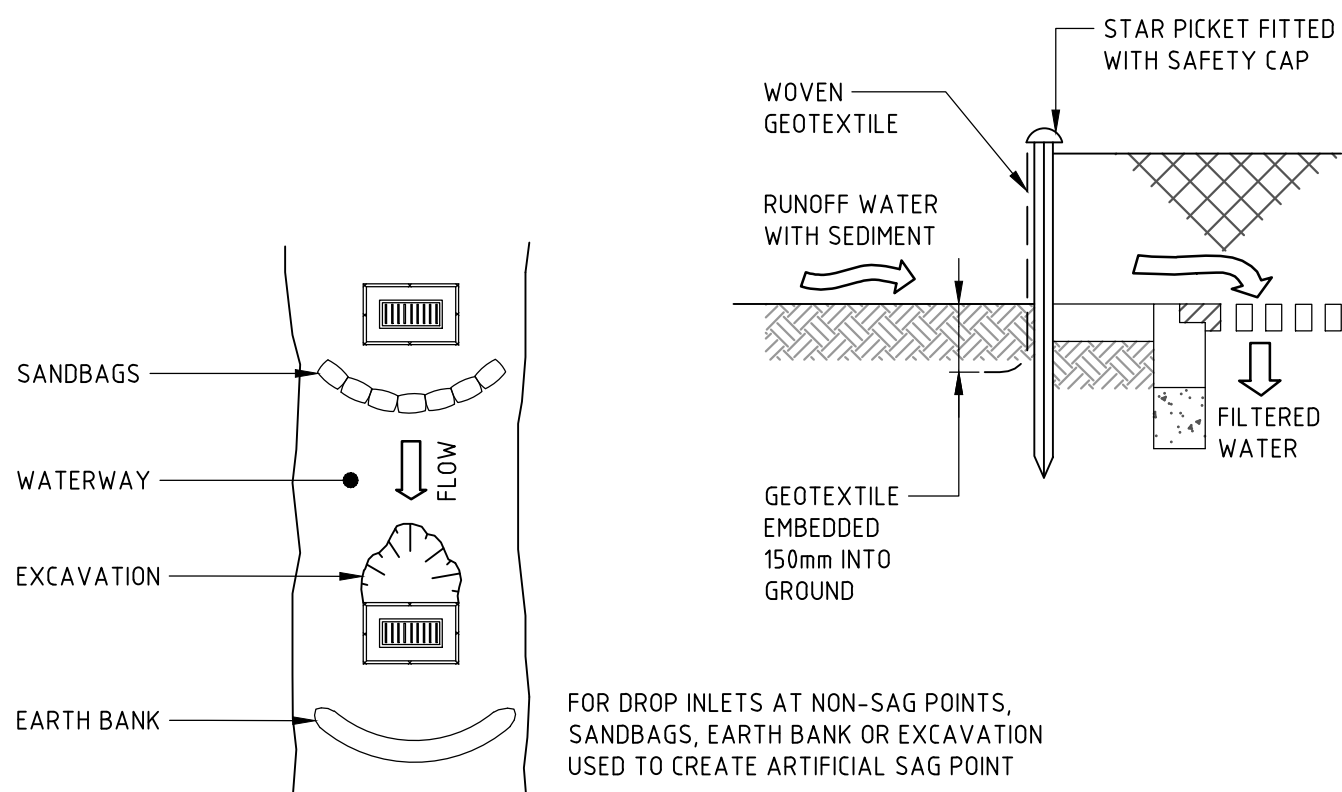
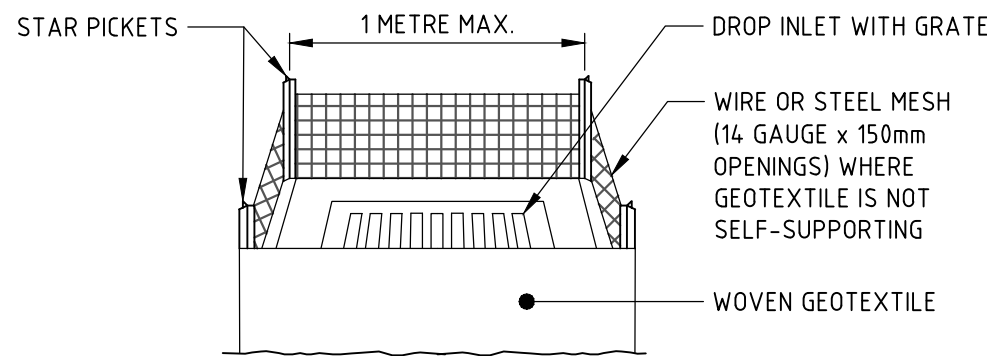
VERIFIER -
JOB MANAGER: EFLACK
DESIGNED: EFLACK
DRAWN: JPHILLIPS



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.

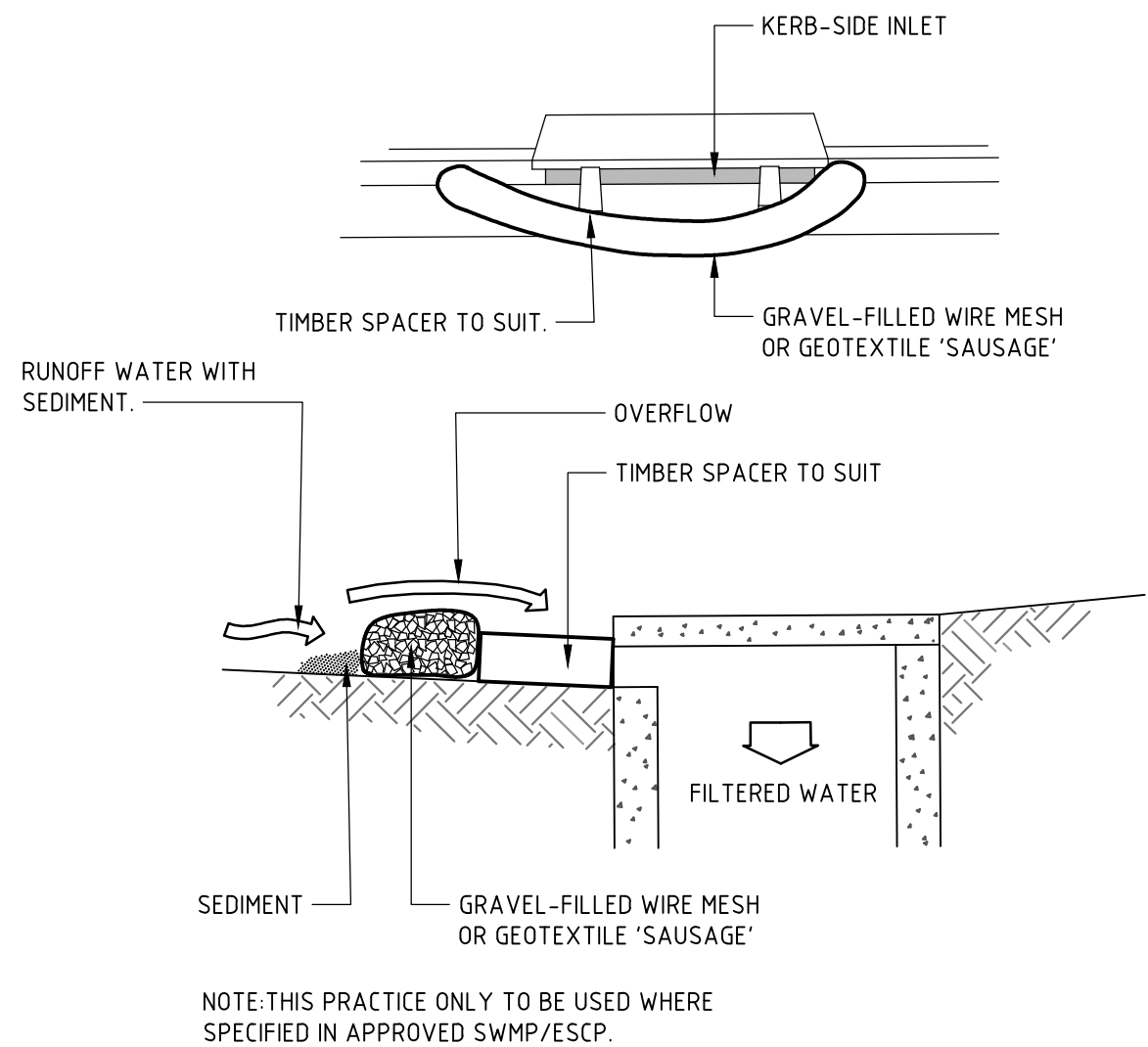
STOCKPILES (SD 4-1)



CONSTRUCTION NOTES

1. 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 GEOTEXTILE. 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 THE DRAWING.
4. DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.

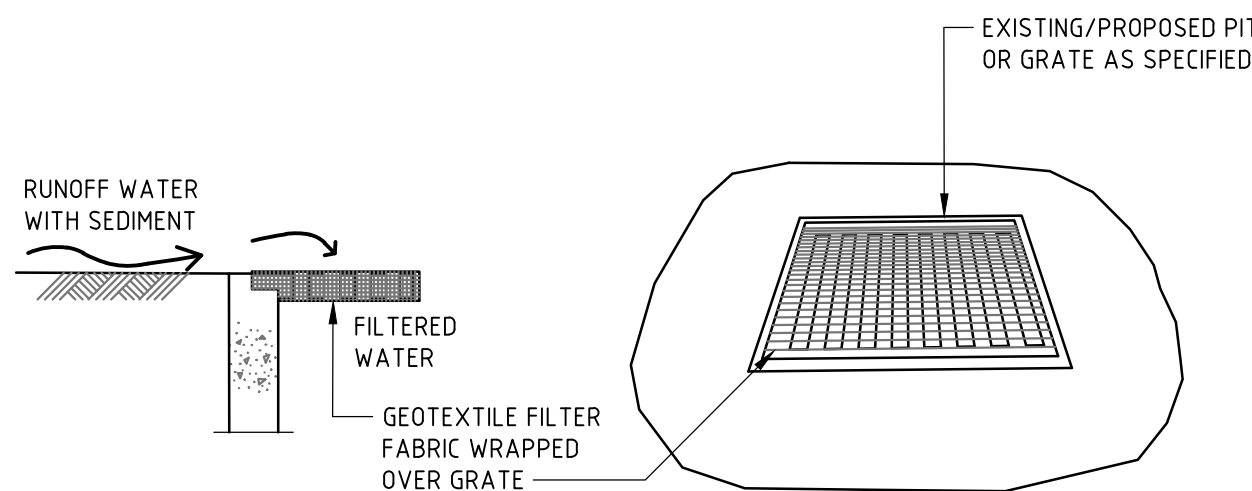
GEOTEXTILE INLET FILTER (SD 6-12)



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.

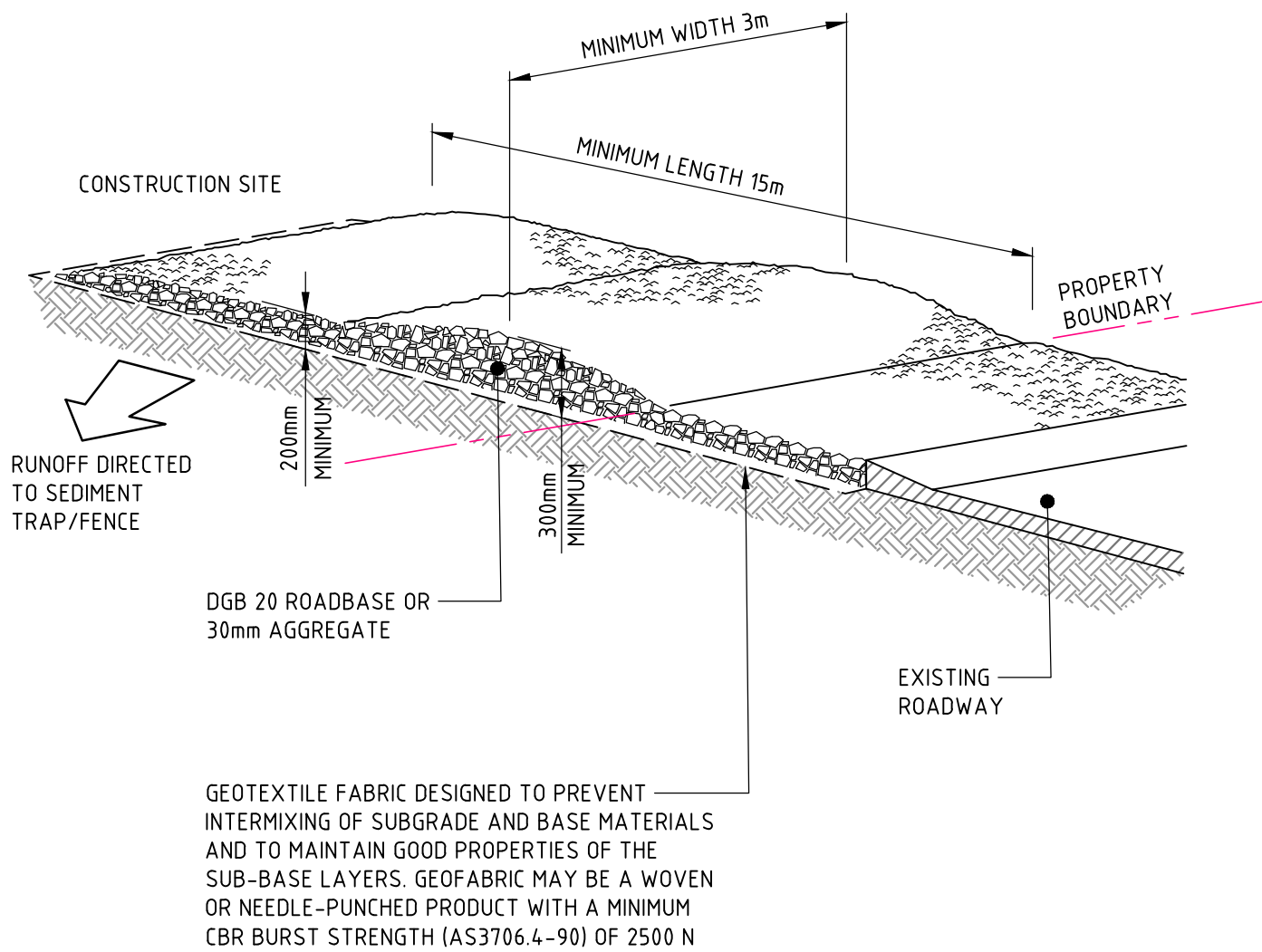
MESH AND GRAVEL INLET FILTER (SD 6-11)



CONSTRUCTION NOTES

1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE FILTER MATERIAL.
2. GEOTEXTILE PIT FILTERS TO BE USED ON PIT LOCATED ON ROAD LANEWAY SURFACE.

GEOTEXTILE FILTER WRAP



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)

SWMP Commentary, Detailed Calculations

4. Volume of Sediment Basins, Type D and Type F Soils

Basin volume = settling zone volume + sediment storage zone volume

Settling Zone Volume

The settling zone volume for Type F and Type D soils is calculated to provide capacity to contain all runoff expected from up to the y-percentile rainfall event. The volume of the basin's settling zone (V) can be determined as a function of the basin's surface area and depth to allow for particles to settle and can be determined by the following equation:

$$V = 10 \times C_v \times A \times R_{x\text{-day}, y\%ile} \text{ (m}^3\text{)}$$

where:

10 = a unit conversion factor

C_v = the volumetric runoff coefficient defined as that portion of rainfall that runs off as stormwater over the x-day period

$R_{x\text{-day}, y\%ile}$ = is the x-day total rainfall depth (mm) that is not exceeded in y percent of rainfall events. (See Sections 6.3.4(d), (e), (f), (g) and (h)).

A = total catchment area (ha)

Sediment Storage Zone Volume

In the detailed calculation on Soil Loss Classes 1 to 4 lands, the sediment storage zone can be taken as 50 percent of the settling zone capacity. Alternately designers can design the zone to store the 2-month soil loss as calculated by the RUSLE (Section 6.3.4(i)(ii)). However, on Soil Loss Classes 5, 6 and 7 lands, the zone must contain the 2-month soil loss as calculated by the RUSLE (Section 6.3.4(i)(iii)).

Place an "X" in the box below to show the sediment storage zone design parameters used here:

x	50% of settling zone capacity,
	2 months soil loss calculated by RUSLE

Total Basin Volume

Site	C_v	$R_{x\text{-day}, y\%ile}$	Total catchment area (ha)	Settling zone volume (m ³)	Sediment storage volume (m ³)	Total basin volume (m ³)
Bdg J	0.64	32.2	0.47	96.8576	48	145.2864

Note that designers should achieve a minimum 3:1 length:width ratio in Type D or F basins

Sediment_Basin_Design_Detailed_V6

1



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CLIENT	ARCHITECT
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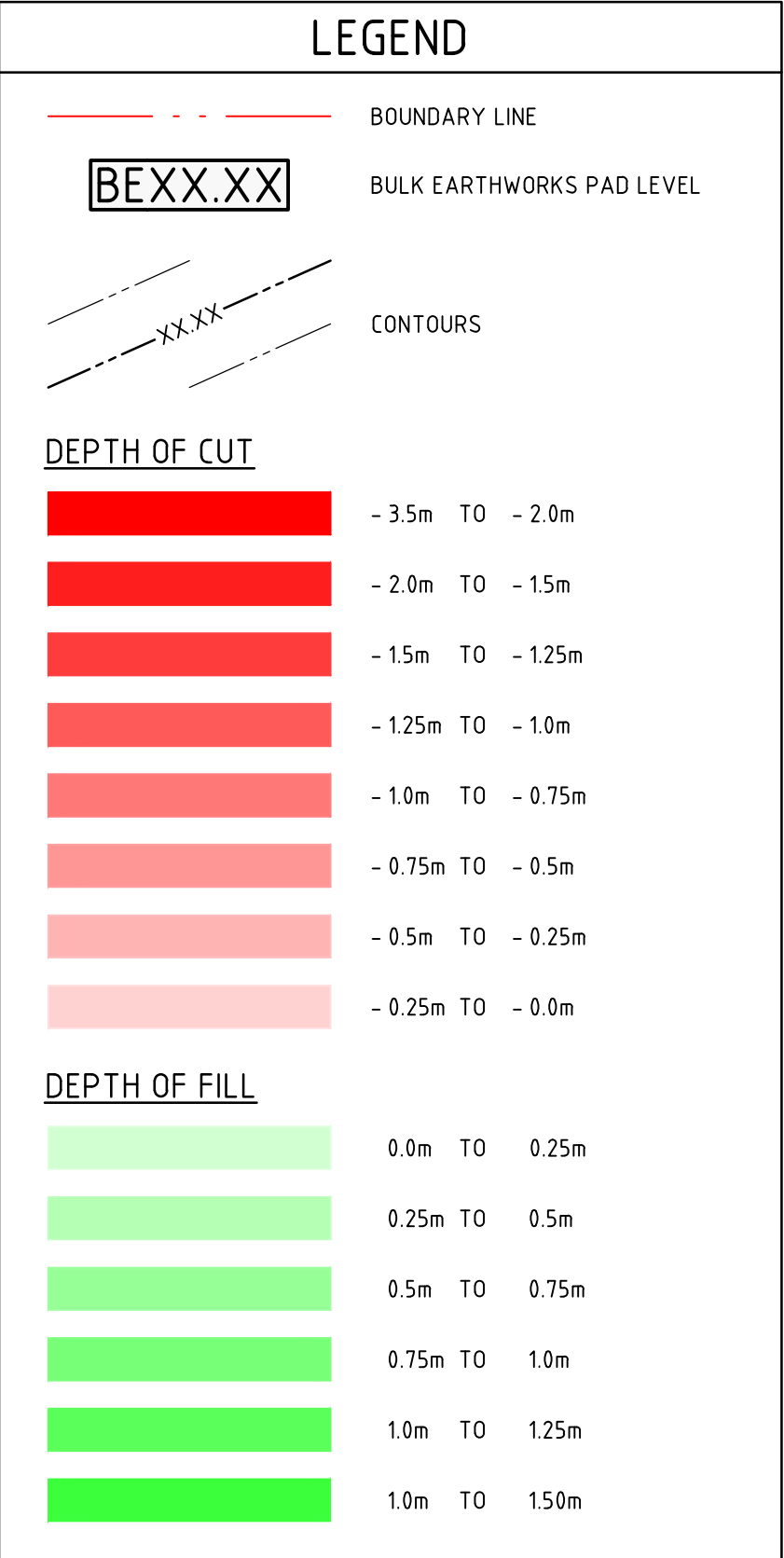
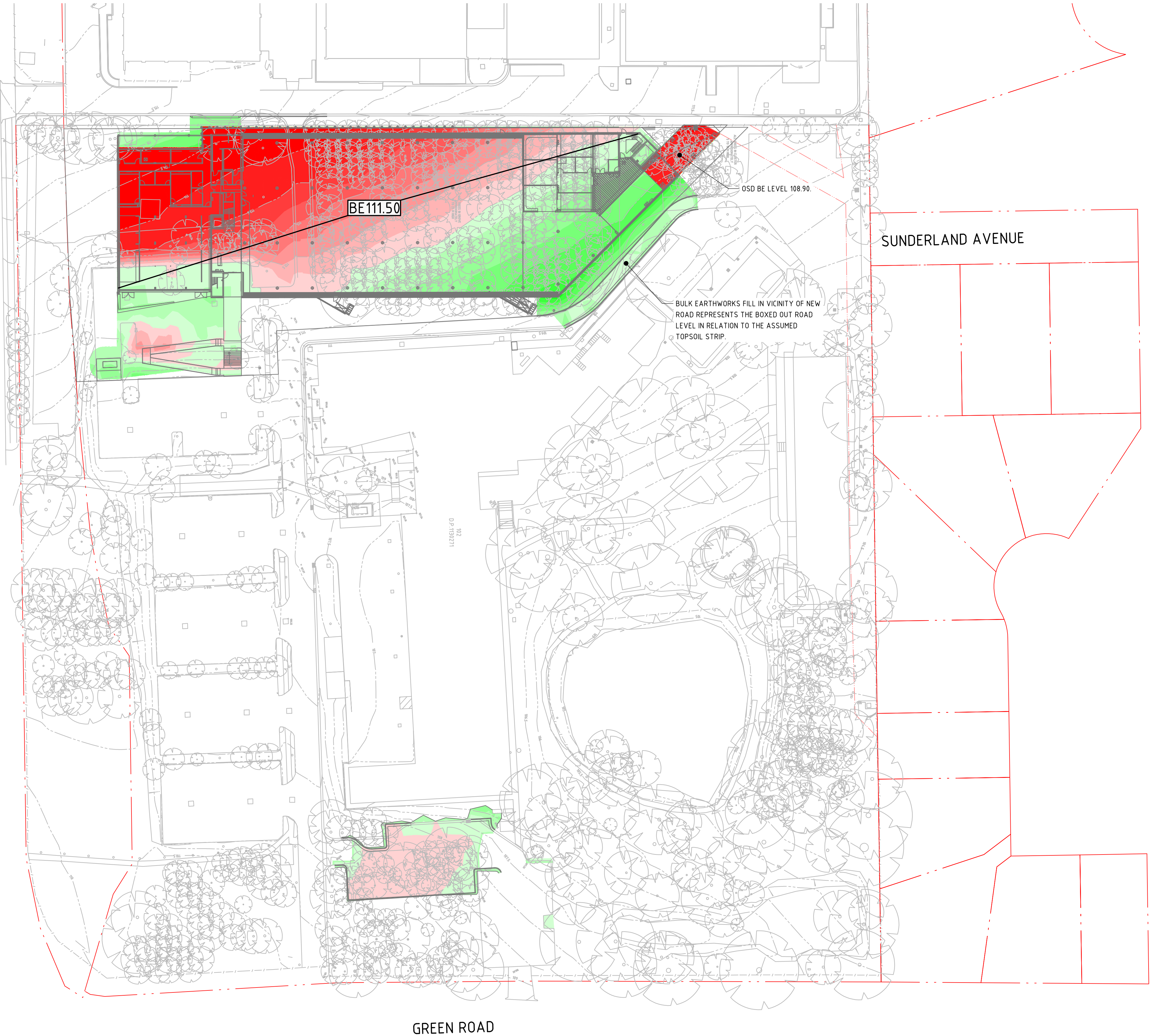
PROJECT	DRAWING TITLE
POWERHOUSE MUSEUM DISCOVERY CENTRE	SEDIMENT AND EROSION CONTROL DETAILS

JOB NUMBER	DRAWING NUMBER	REVISION
181569	DA2.11	3
DRAWING SHEET SIZE = A1		

DATE	14-1-21
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FOR BY	jphillips
FOUND	W:\p\ss\1081\81569 - Powerhouse Museum\Drawings\U-Northrop\U-Northrop\CAD FILES\SSA\81569_DA2.11_SEDIMENT AND EROSION CONTROL DETAILS.dwg

SHOWGROUND ROAD



- GENERAL NOTES:**
- REFER SPECIFICATIONS NOTES FOR EARTHWORKS GENERAL REQUIREMENTS.
 - ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH COUNCIL / RELEVANT AUTHORITY SPECIFICATIONS AND DETAILS.
 - CAD FILES / DTM FILES TO BE SUPPLIED IN AUTOCAD FORMAT FOR SETOUT PURPOSES (UPON REQUEST).
 - NO ALLOWANCE HAS BEEN MADE FOR BULKING FACTORS. NOTE ALL VOLUMES DEPICTED ARE SOLID VOLUMES ONLY AND MAY NOT REFLECT DETAILED EARTHWORKS.
 - NO ALLOWANCE HAS BEEN MADE FOR DETAILED EARTHWORKS, ie SERVICE TRENCHING, DETAILED EXCAVATION, FOOTINGS, RETAINING WALLS, TEMPORARY BATTERS AND THE LIKE. CONTRACTOR IS TO ALLOW FOR REMOVAL OF ALL EXCESS MATERIAL GENERATED BY THE WORKS.
 - REFER TO STRUCTURAL ENGINEERS DRAWINGS FOR SHORING WALL DETAILS.
 - THE CONTRACTOR SHALL USE FINAL SURFACE LEVELS AND TYPICAL PAVEMENT DETAILS FOR ACTUAL EARTHWORKS LEVELS.
 - BULK EARTHWORKS ARE BASED ON THE FOLLOWING DEPTHS FROM FINISHED SURFACE LEVELS:
 - ASPHALT PAVEMENT 330mm
 - BUILDING SLAB 150mm (REFER STRUCTURAL DWGS)
 - FOOTPATH PAVEMENT 200mm
 - LANDSCAPE AREA NO ALLOWANCE HAS BEEN MADE FOR EARTHWORKS IN LANDSCAPED AREAS
 - APPROXIMATE BULK EARTHWORK VALUES AS FOLLOWS;
 - CUT -3610 cu.m
 - FILL 1192 cu.m
 - BALANCE -2418 cu.m CUT
 - NOTE: SITE STRIPPING VOLUMES ARE SEPARATE TO ABOVE CALCULATIONS.
 - SITE STRIPPING VOLUME DEPTH -2739 cu.m CUT
 - STRIP EXISTING TOPSOIL AND FILL IN CONSULTATION WITH THE GEOTECHNICAL ENGINEER/REPORT. FOR THE PURPOSES OF EARTHWORKS CALCULATIONS A TOPSOIL STRIPPING DEPTH OF 600mm HAS BEEN ASSUMED.



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DESIGNED: E.FLACK
JOB MANAGER: E.FLACK
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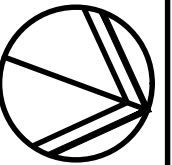
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architects**

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0 5 10 15 20 25m

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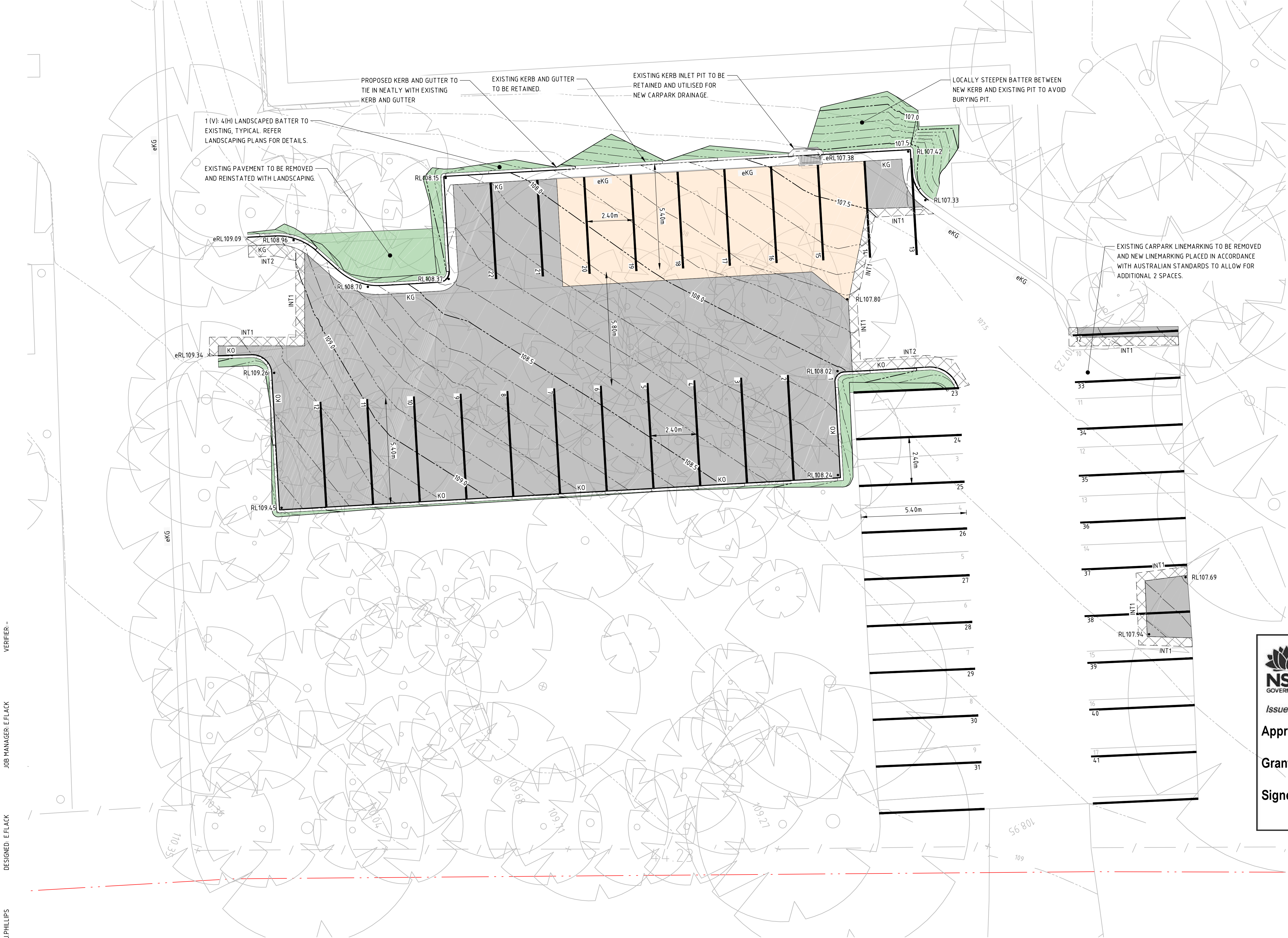
PROJECT

**POWERHOUSE MUSEUM
DISCOVERY CENTRE**

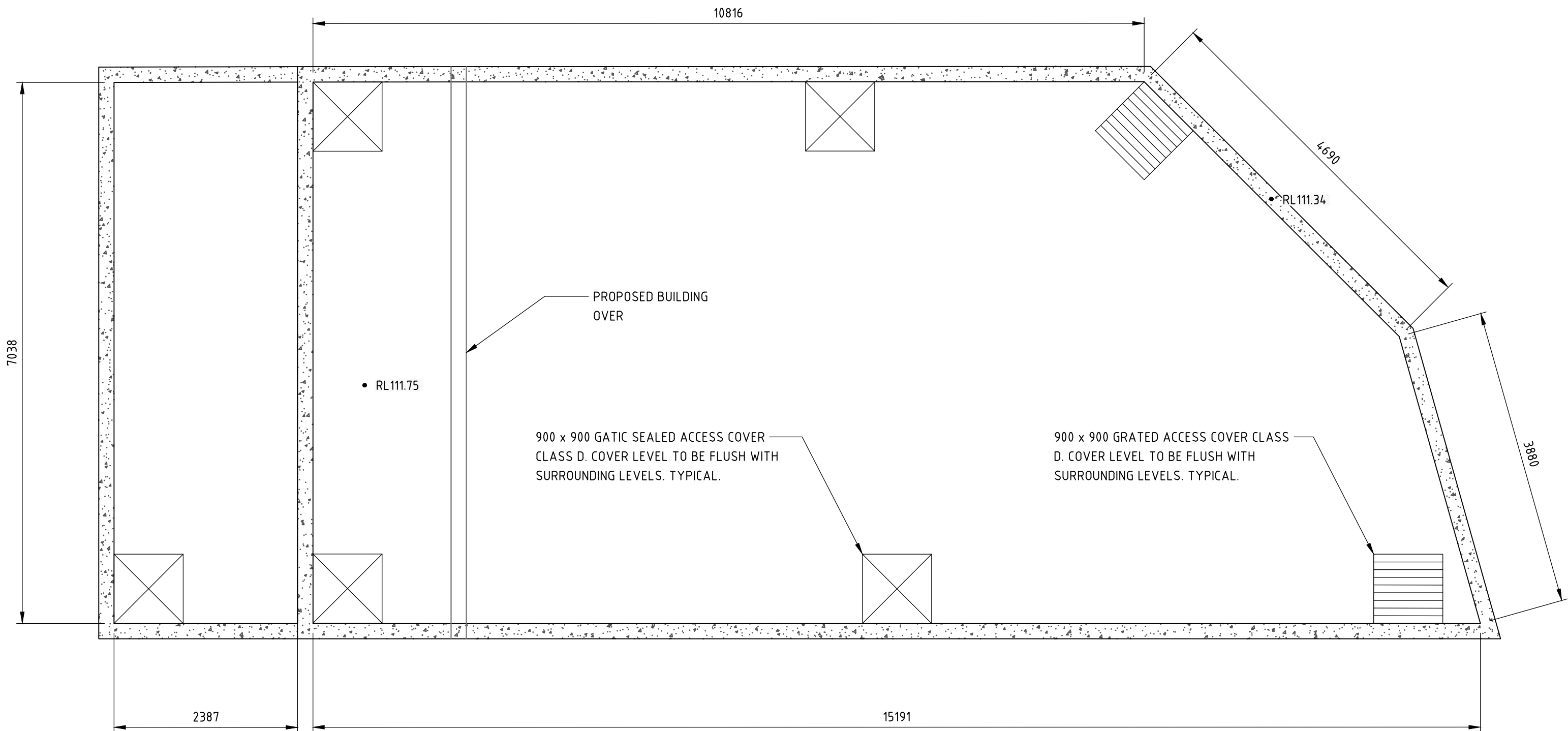
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BULK EARTHWORKS PLAN		181569	
DRAWING NUMBER	REVISION		
DA2.21	5		
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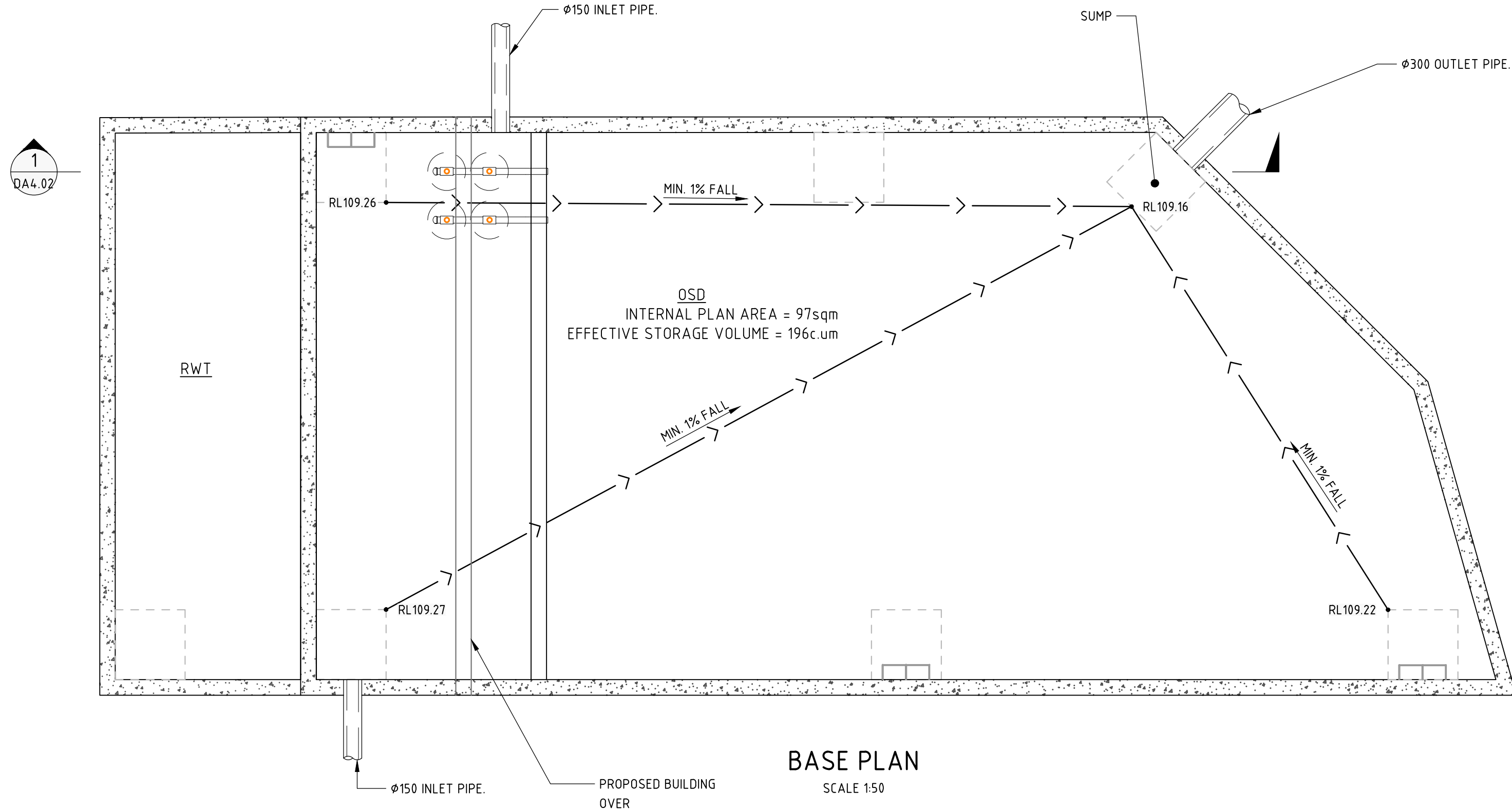
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ROOF PLAN
SCALE 1:50



BASE PLAN
SCALE 1:50



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Approved Application No: SSD 10472

Granted on: 23 April 2021

Signed: AW Sheet No: 26 of 28

DESIGN SUMMARY

CATCHMENT CALCULATIONS:

	PRE-DEVELOPMENT	POST-DEVELOPMENT
TOTAL AREA	4781m ²	4781m ²
IMPERVIOUS AREA	1080m ² (23%)	4781m ² (100%)
PERVIOUS AREA	3701m ² (77%)	0m ² (0%)

ON-SITE DETENTION:

DESIGN BASIS:

- COUNCIL GUIDELINES BASED ON UPPER PARRAMATTA RIVER CATCHMENT TRUST OSD HANDBOOK

AVERAGE SITE SLOPE = 5%

HAWKESBURY CATCHMENT STORAGE RATE = 396m³/ha

THEREFORE SITE STORAGE REQUIREMENT = 190m³

ON-SITE DETENTION STORAGE PROVIDED = 196m³

HAWKESBURY CATCHMENT DISCHARGE RATE = 92L/s/ha

THEREFORE PERMITTED SITE DISCHARGE = 44L/s

ON-SITE DETENTION SUMMARY:

- BELOW GROUND BLOCK WORK TANK

ORIFICE DIAMETER ORIGINALLY CALCULATED USING THE UPRCT METHOD, THEN ASSESSED AND ADJUSTED USING DRAINS MODELLING SOFTWARE TO ACCOUNT FOR THE DOWNSTREAM TAIL WATER LEVEL (109.80), ENSURING COMPLIANCE WITH THE PSD.

TOP WATER LEVEL = 111.15

ORIFICE CENTRELINE = 109.31

ORIFICE DIAMETER = 125mm

SITE DISCHARGE CALCULATIONS:

	10 YEAR ARI	100 YEAR ARI
WITHOUT OSD	180 L/s	277 L/s
WITH OSD	30 L/s	40 L/s

WATER QUALITY:

MUSIC MODEL SUMMARY:

SOURCE NODE	CATCHMENT	AREA
URBAN	ROOF AREA 1	4380m ²
URBAN	PAVED AREA 1	87m ²
URBAN	PAVED AREA 2	314m ²
		TOTAL 4781m ²

TREATMENT NODES:

- RAINWATER RE-USE TANK
- ON-SITE DETENTION TANK
- OCEAN PROTECT 'STORMFILTER 690mm PSorb' x4
- OCEAN PROTECT 'OCEAN GUARD' x2

TREATMENT STANDARDS:

POLLUTANT	REDUCTION STANDARDS	REDUCTION ACHIEVED
GROSS POLLUTANTS	90%	100%
TOTAL SUSPENDED SOLIDS	80%	80.8%
TOTAL PHOSPHORUS	60%	67.3%
TOTAL NITROGEN	45%	51.3%

MUSIC MODEL PARAMETERS IN ACCORDANCE WITH THE NSW MUSIC MODELLING GUIDELINES REF: R.B17048.001.05 DATED AUGUST 2015.

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PROJECT

**POWERHOUSE MUSEUM
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DRAWING TITLE

OSD DETAILS - SHEET 1

JOB NUMBER

181569

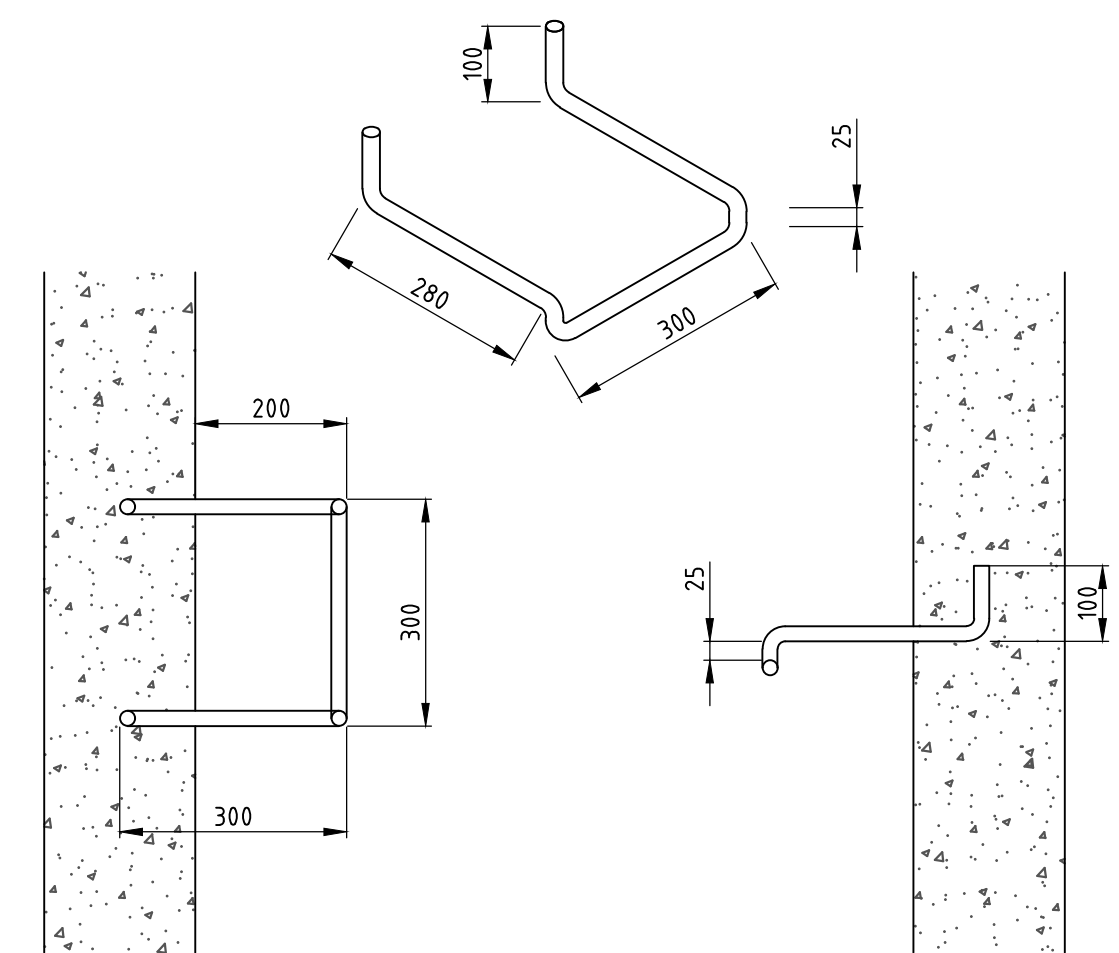
DRAWING NUMBER

DA4.01

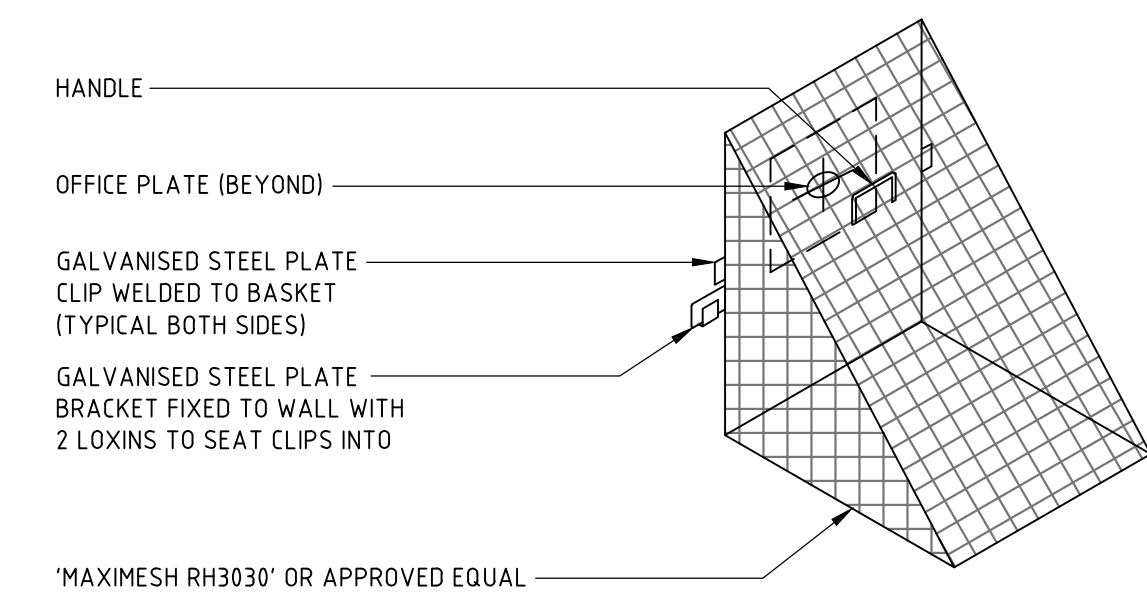
REVISION

3

DRAWING SHEET SIZE = A1



STEP IRON OF 20mm GALVANISED STEEL MADE TO SHAPE AND DIMENSIONS AS SHOWN, PLACED AT 300 CENTRES AND STAGGERED HORIZONTALLY FOR ALL PITS DEEPER THAN 1.0m. THE USE OF PROPRIETARY STEP IRONS ARE ACCEPTABLE PROVIDED THE PRODUCT IS IN ACCORDANCE WITH AUSTRALIAN STANDARDS



Technical drawing of a 3mm thick stainless steel plate with a central orifice. The drawing includes the following labels and dimensions:

- $\phi 10 \times 100$ DYNABOLTS (4 OFF) OR APPROVED EQUAL
- ORIFICE PLATE OPENING DIAMETER
- OUTLET PIPE (BEYOND)
- 3mm THICK STAINLESS STEEL PLATE
- OUTLET

- ORIFICE PLATE - ϕ 125mm

 **Planning,
Industry &
Environment**

Issued under the Environmental Planning and Assessment Act 1979

Approved Application No: SSD 10472

Granted on: 23 April 2021

Signed: AW Sheet No: 27 of 28

REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE	CLIENT	ARCHITECT		ALL SETOUT TO ARCHITECT'S DRAWINGS, DIMENSIONS TO BE VERIFIED WITH THE ARCHITECT AND ON SITE BEFORE MAKING SHOP DRAWINGS OR COMMENCING WORK. NORTHROP ACCEPTS NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR SCALE OF DRAWINGS TRANSFERRED ELECTRONICALLY.	PROJECT	DRAWING TITLE	JOB NUMBER
1	ISSUED FOR SSDA COORDINATION	E.F		E.F	26.06.20	 Planning & Environment		 Wollongong Level 1, 57 Kembla Street, Wollongong NSW 2500 Ph (02) 4226 3333 Fax (02) 4226 3666 P.O. Box 863, Wollongong, NSW 2500 Email southcoast@northrop.com.au ABN 81 094 433 100	POWERHOUSE MUSEUM DISCOVERY CENTRE	OSD DETAILS - SHEET 2	181569	
2	RE - ISSUED FOR SSDA COORDINATION	J.P		E.F	24.07.20							
3	ISSUED FOR SSDA	J.P		E.F	14.01.21							
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