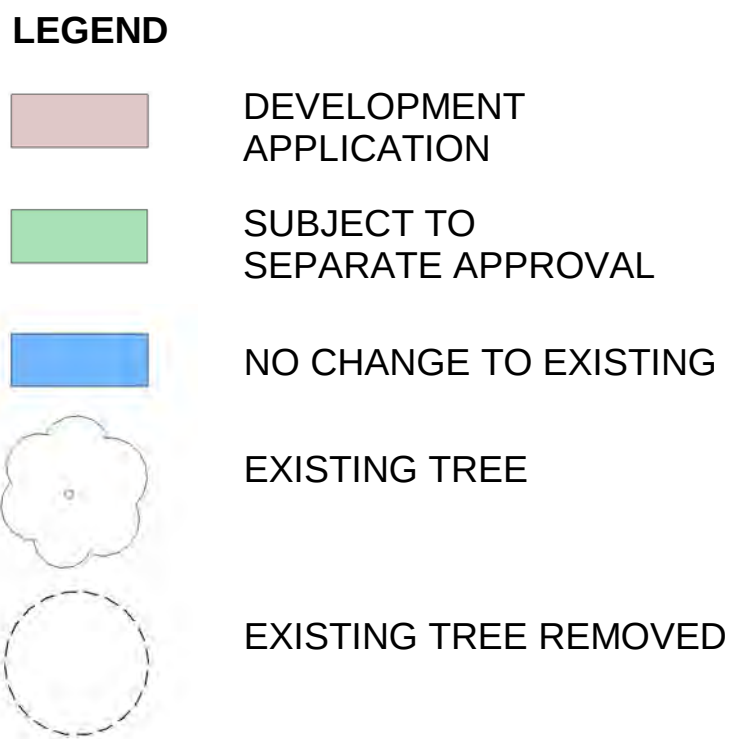
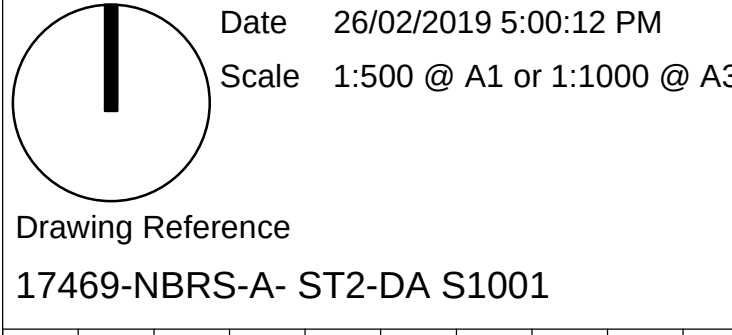




DEVELOPMENT APPLICATION


 Date 26/02/2019 5:00:12 PM
 Scale 1:500 @ A1 or 1:1000 @ A3
 Drawing Reference
 17469-NBRS-A- ST2-DA S1001





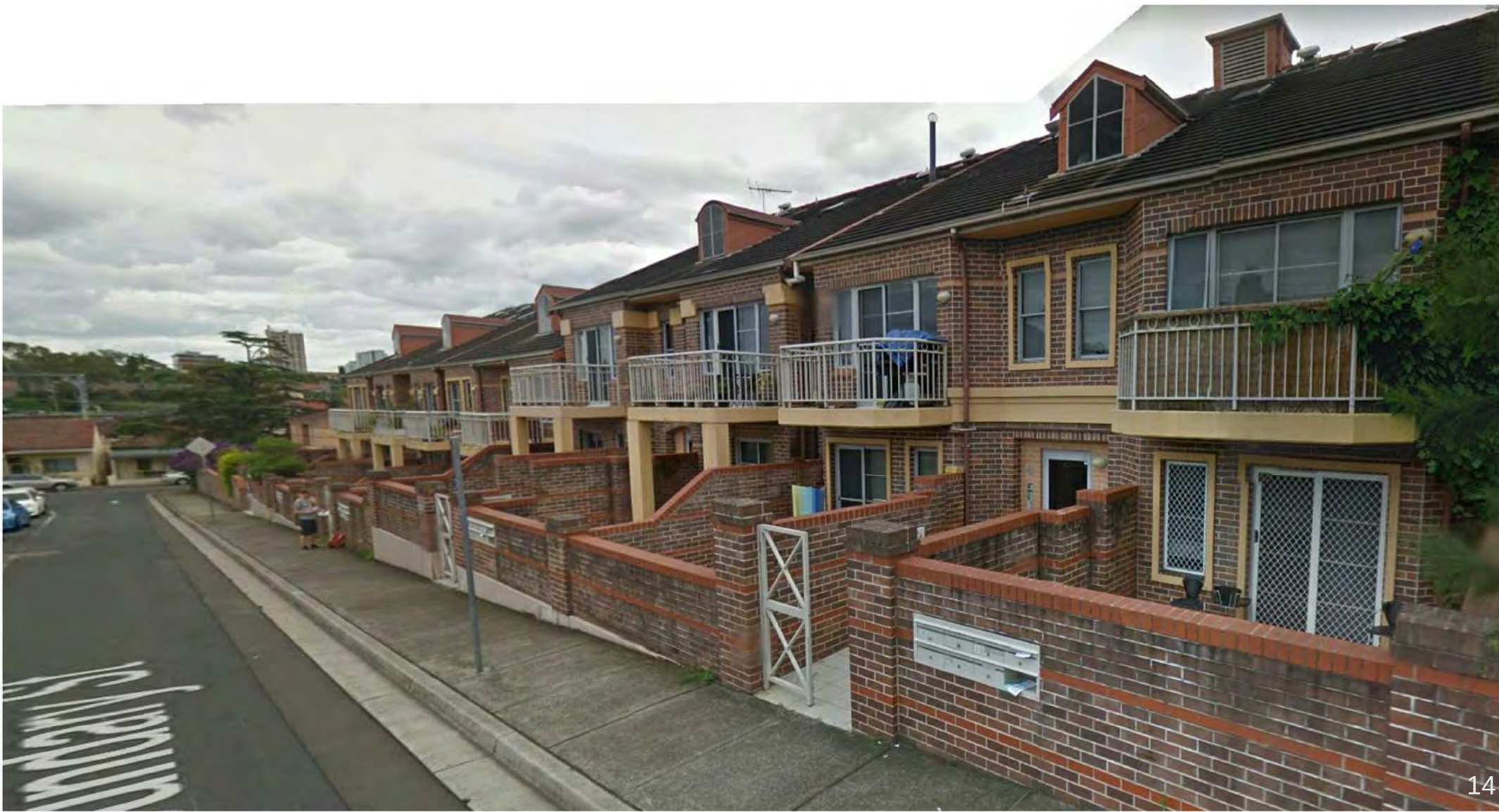
11



12



13



14



15



16



17

11. MULTISTOREY RESIDENTIAL BUILDINGS ON
BOUNDARY STREET OPPOSITE SITE

12. NO.6-10 BOUNDARY STREET, RESIDENTIAL
APARTMENTS OPPOSITE SITE

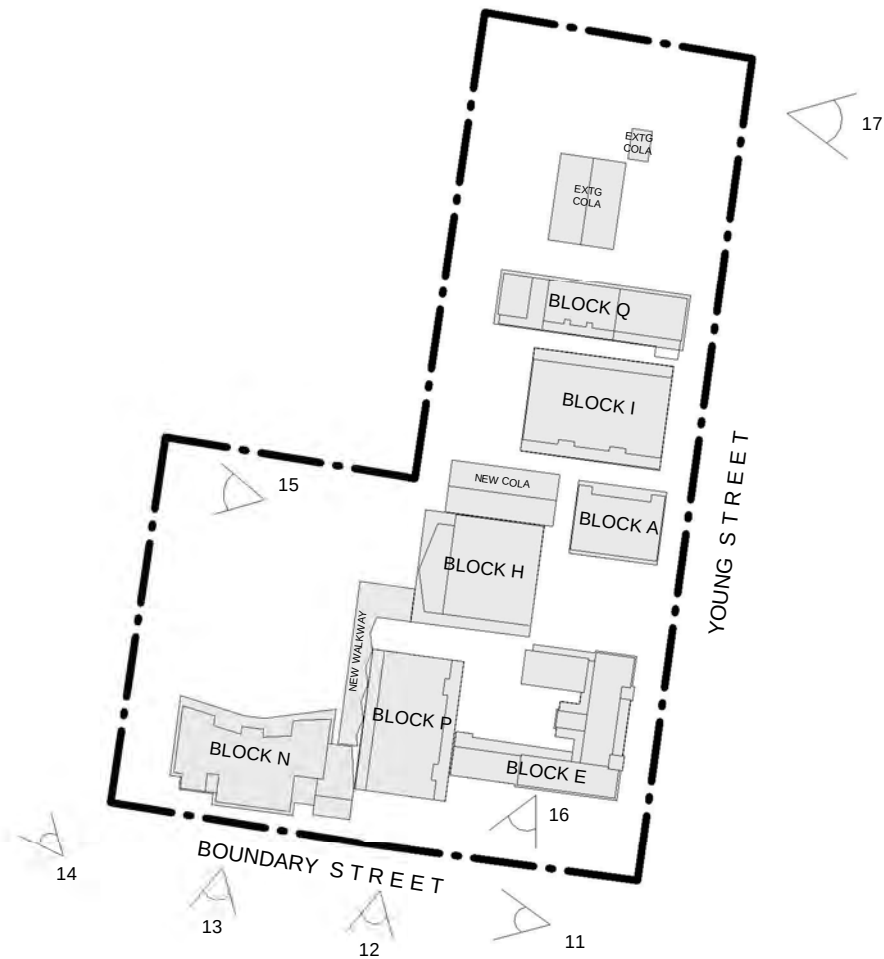
13. NEW 6-8 STOREY MULTISTOREY RESIDENTIAL
CURRENTLY UNDER CONSTRUCTION ON
BOUNDARY STREET OPPOSITE SITE

14. TOWNHOUSES ALONG BOUNDARY STREET
ADJACENT SITE

15. MULTISTOREY RESIDENTIAL APARTMENTS
FROM PLAYGROUND

16.VIEW FROM HERITAGE BUILDING COURTYARD,
6-8 STOREY NEW RESIDENTIAL BUILDING IN THE
DISTANCE

17. SINGLE STOREY DWELLINGS NORTH OF SITE ON
YOUNG ST



Issue			
No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK

DEVELOPMENT APPLICATION

Drawing Title
Site photos - Neighboring Context

Project
CROYDON PUBLIC SCHOOL

at
39 YOUNG STREET, CROYDON
for
NSW DEPARTMENT OF EDUCATION

Architect
NBRARCHITECTURE.

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Date 26/02/2019 5:00:37 PM
Scale 1 : 2000 @ A1

Drawing Reference
17469-NBR-A- ST2-DA S1001D

0 1 2 3 4 5 6 7 8 9 10



WINTER STRONG COOL SOUTH WEST

TRAIN STATION

PEDESTRIAN ACCESS

TRAFFIC ACCESS

BUS STOP

PARKING

INNER WEST TRAIN LINE

SITE FALL

ESTABLISHED TREES

EXIST. BUILDINGS ON SITE

SITE BOUNDARY LINE

LIMITED PARKING IN SURROUNDING STREETS MOST PARKING IS ALSO TIME LIMITED

Issue No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK

DEVELOPMENT APPLICATION

Drawing Title
Site Analysis

Project
CROYDON PUBLIC SCHOOL
at
39 YOUNG STREET, CROYDON
for
NSW DEPARTMENT OF EDUCATION

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Date 26/02/2019 5:00:28 PM
Scale 1:1000 @ A1 or 1:2000 @ A3
Drawing Reference
17469-NBRS-A- ST2-DA S1001B
0 10m 20m 30m 40m 50m 60m 70m 80m 90m 100m 110m 120m 130m 140m 150m 160m 170m 180m 190m 200m 1:1000



1. SOUT WEST PLAYGROUND & DEMOUNTABLE CLASSROOMS
2. NORTH COLA & BUILDING D (AMENITIES) WITH BUILDING Q IN BACKGROUND
3. COVERED RAMPED WALKWAY
4. COLA (WESTSIDE OF HALL)
5. NORTHERN VERANDAH OF BUILDING I
6. COLA & NORTHERN FACADE OF HALL
7. HERITAGE BUILDING E
8. HERITAGE BUILDING STONWORK OVER ENTRY
9. OUTDOOR SEATING LOOKING WEST
10. HERITAGE BUILDING E TOWER OVER MAIN ENTRY

Issue No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK

DEVELOPMENT APPLICATION

Drawing Title
Site photos

Project
CROYDON PUBLIC SCHOOL
at
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Date 26/02/2019 5:00:33 PM
Scale NTS

Drawing Reference
17469-NBR-A- ST2-DA S1001C

0 1 2 3 4 5 6 7 8 9 10

LEGEND

EXISTING BUILDING SHADOW

NEW BUILDING SHADOW



1 SHADOW STUDY 9am - 21st JUNE
1 : 750

2 SHADOW STUDY 12 NOON - 21st JUNE
1 : 750

3 SHADOW STUDY 3pm - 21st JUNE
1 : 750

Issue No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK

DEVELOPMENT
APPLICATION

Drawing Title
Shadow Diagrams

Project
CROYDON PUBLIC SCHOOL

at
39 YOUNG STREET, CROYDON

for
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Date 26/02/2019 5:03:04 PM
Scale 1:750 @ A1 or 1:1500 @ A3

Drawing Reference
17469-NBRS-A- ST2-DA S1008

0 7.5m 15m 22.5m 30m 37.5m 45m 52.5m 60m 1:750

LEGEND

- OUTDOOR SPACE
- BUILDING
- EXISTING TREE

TOTAL OUTDOOR
SPACE
10130m²



Issue			
No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK

DEVELOPMENT
APPLICATION

Drawing Title
Outdoor Space

Project
CROYDON PUBLIC SCHOOL

at
39 YOUNG STREET, CROYDON

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Date 26/02/2019 5:03:16 PM
Scale 1:500 @ A1 or 1:1000 @ A3

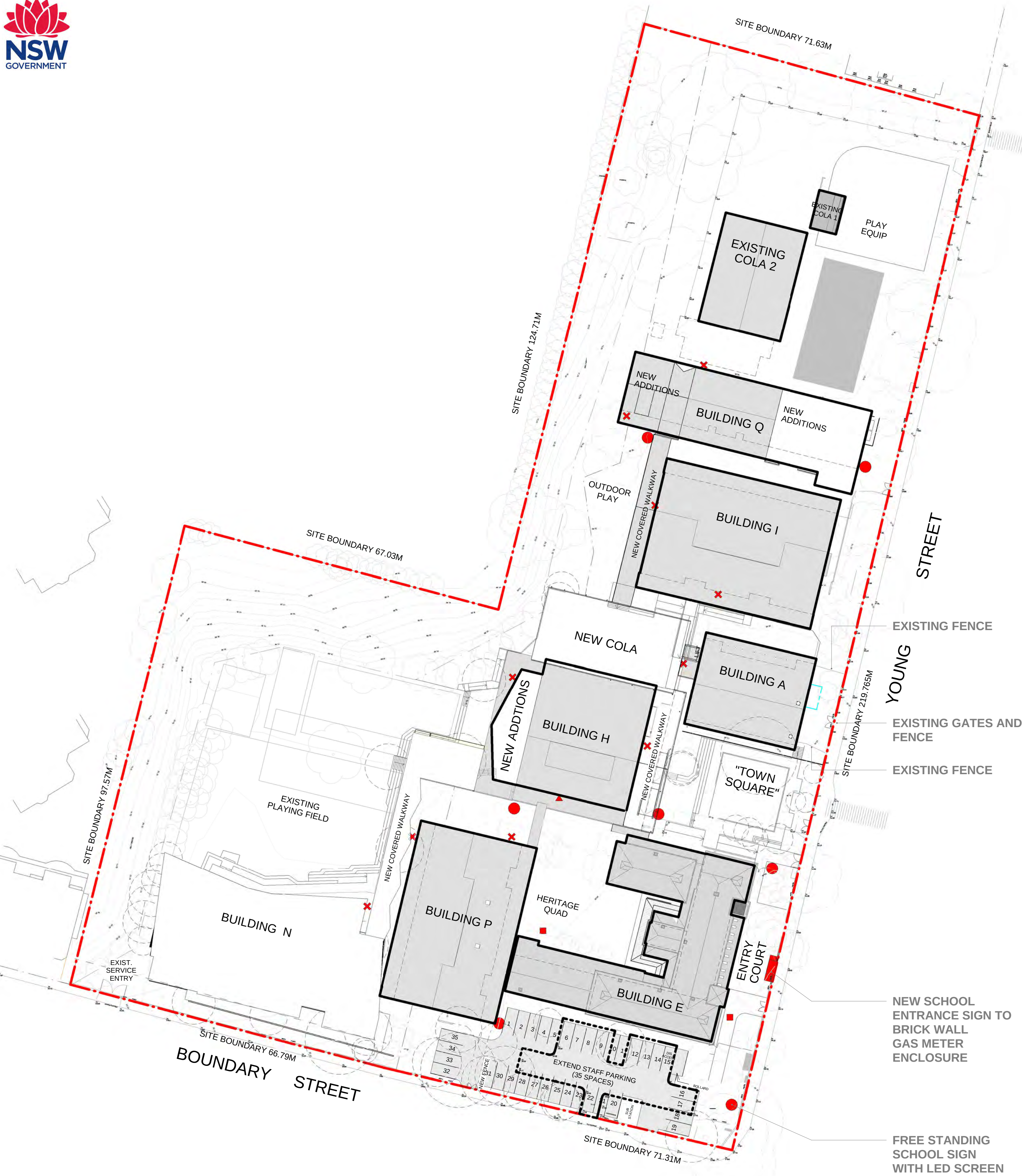
Drawing Reference
17469-NBRSEARCHITECTURE-A- ST2-DA S1015

0 5m 10m 15m 20m 25m 30m 35m 40m 1:500

LEGEND

- SCHOOL ENTRANCE WALL SIGN
- FREE STANDING WAYFINDING MULTI DESTINATION SIGN
- WALL MOUNT BLADE SIGN
- WALL MOUNT BUILDING SIGN
- FREE STANDING LOW HEIGHT BUILDING SIGN

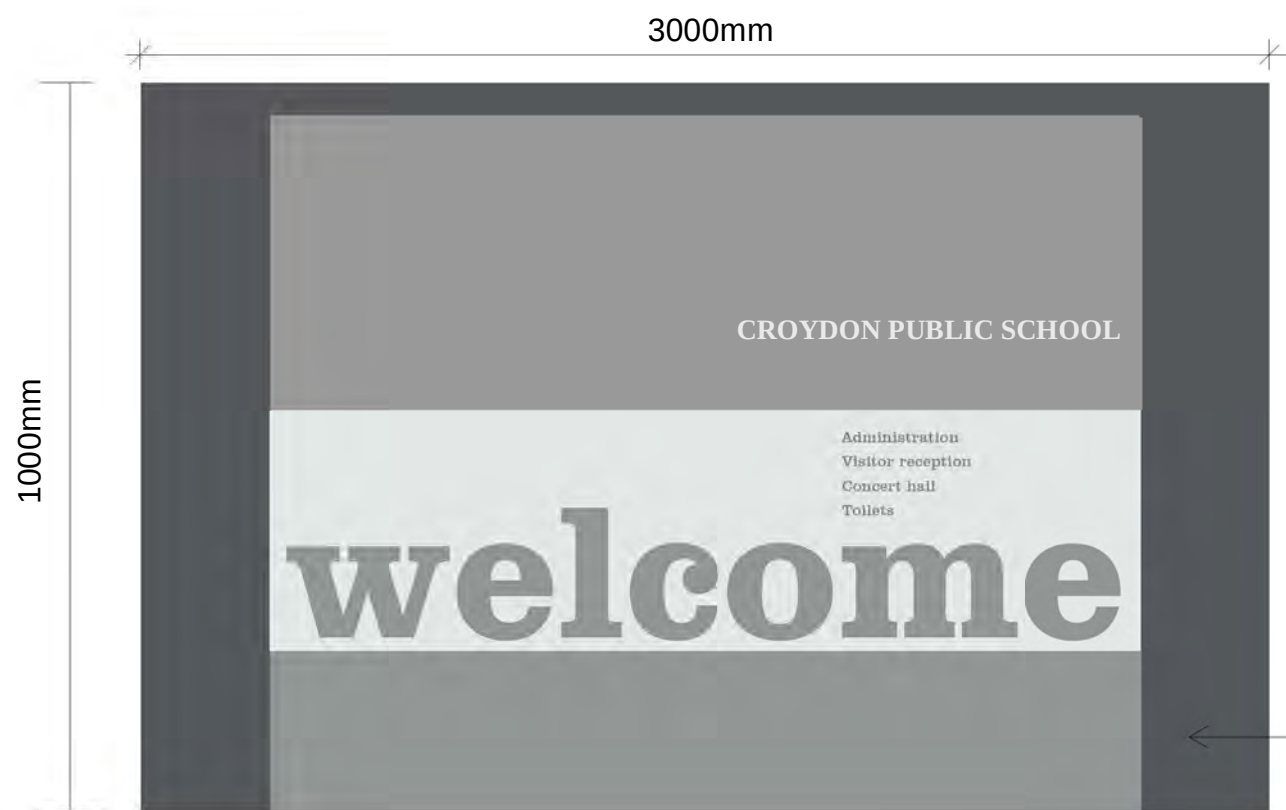
NOTE:
DRAWINGS TO BE
PRINTED IN COLOUR.



P SIGNAGE LOCATION PLAN
1 : 500

Issue No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK

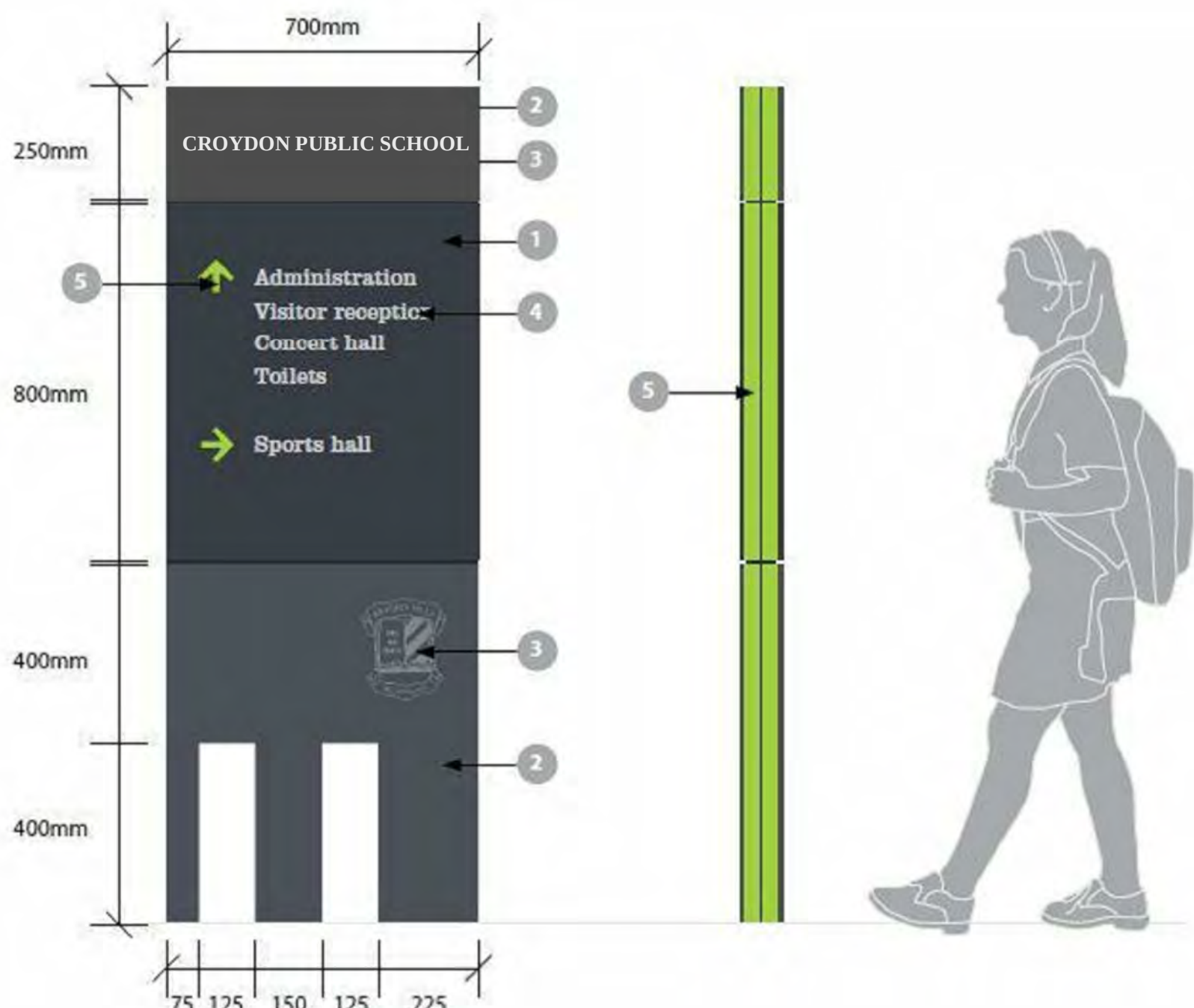
DEVELOPMENT
APPLICATION



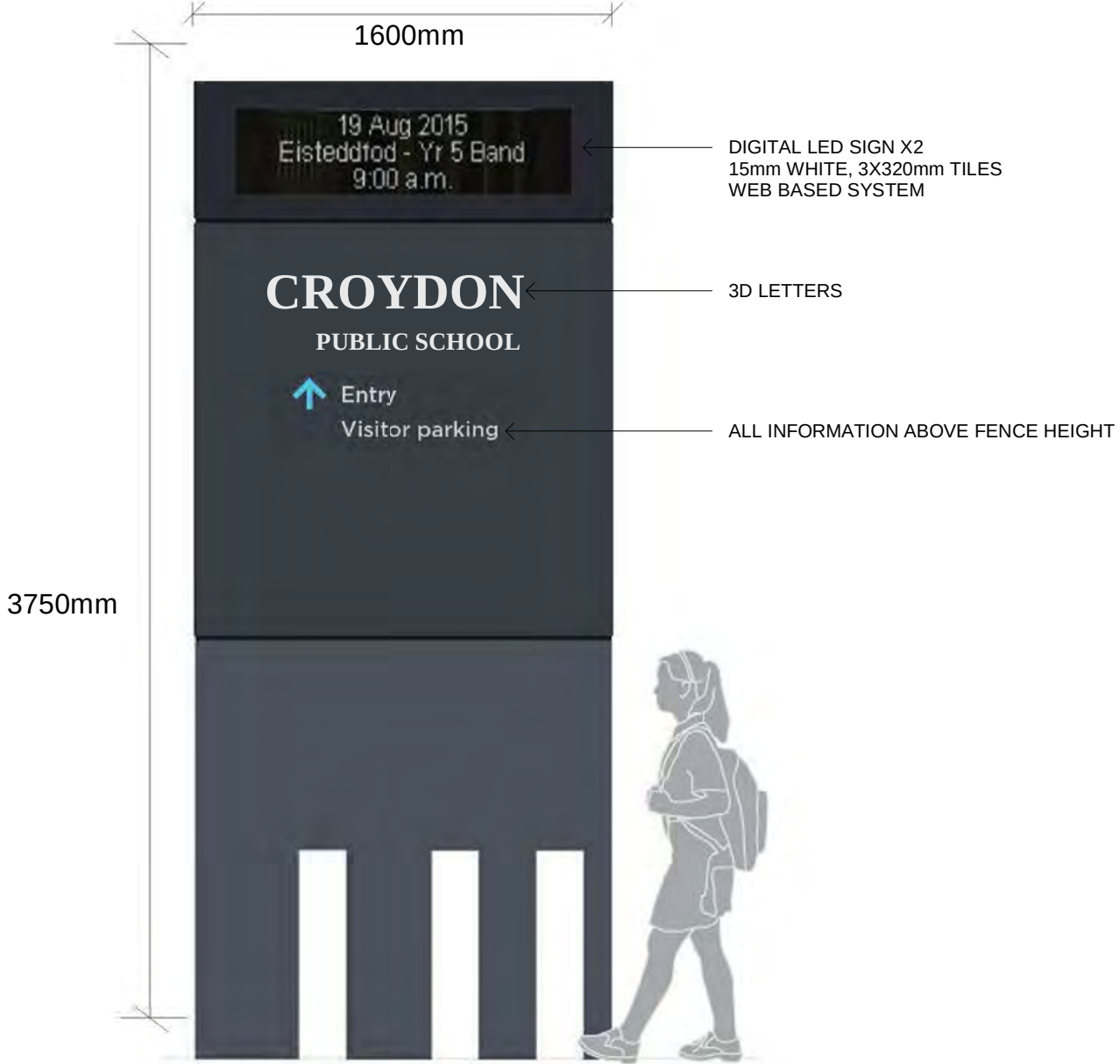
MAIN SCHOOL ENTRANCE SIGN- LOW SANDSTONE WALL TO BE SET UP BEHIND EXISTING GAS METER AND FACING BOUNDARY STREET



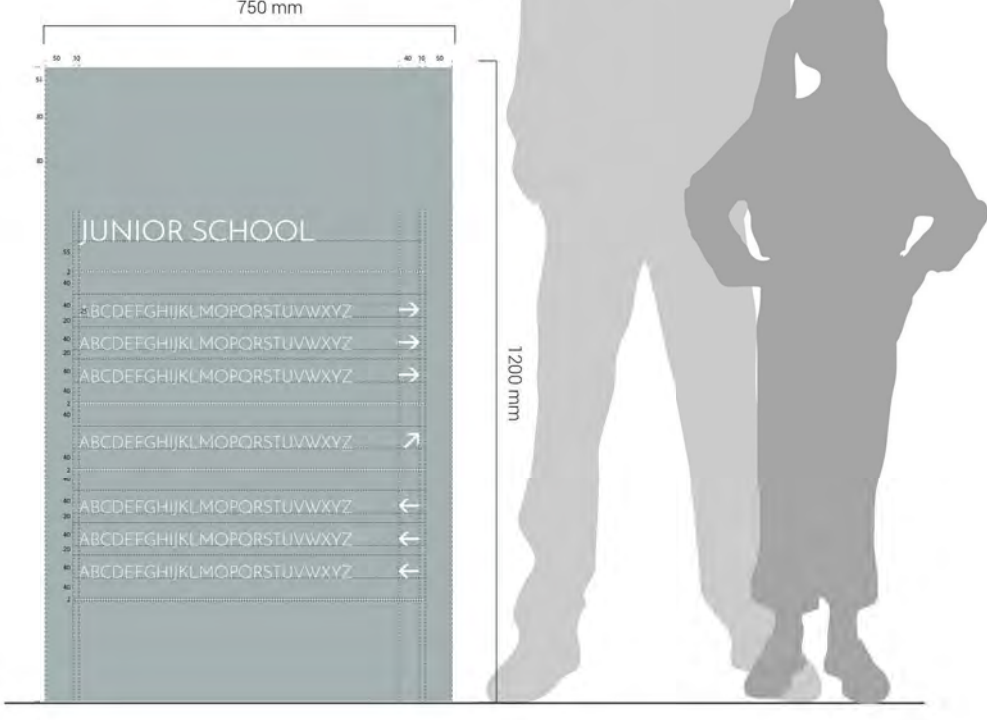
SANDSTONE CLADDING TO REAR OF EXIST. GAS METER ENCLOSURE



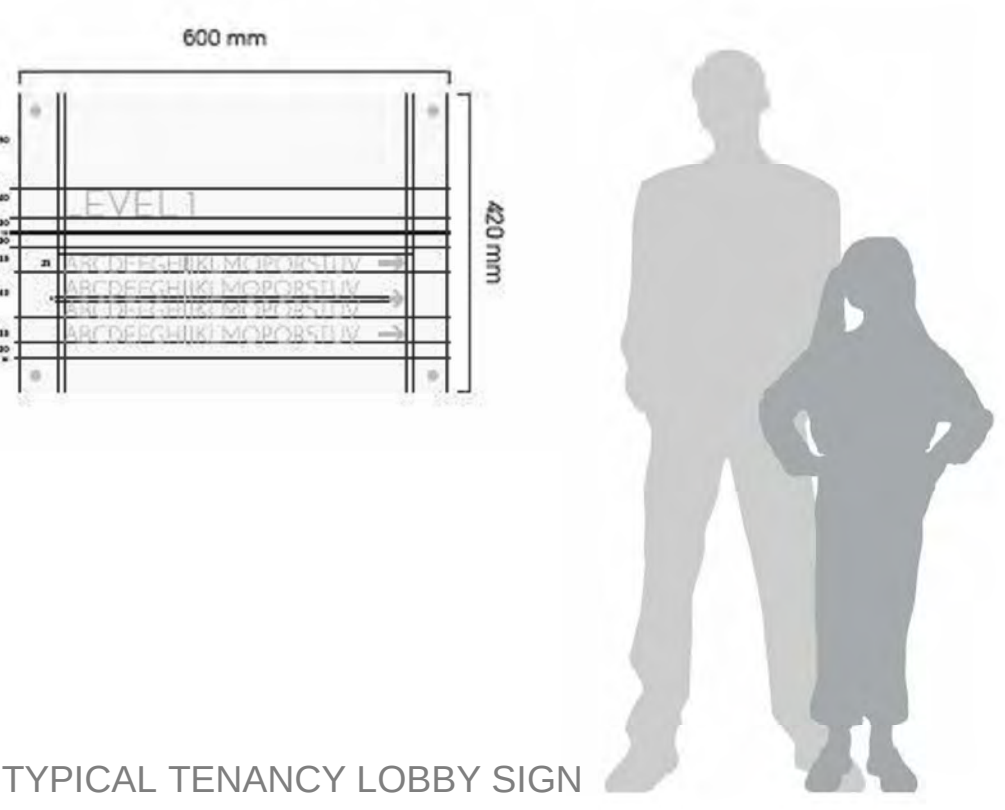
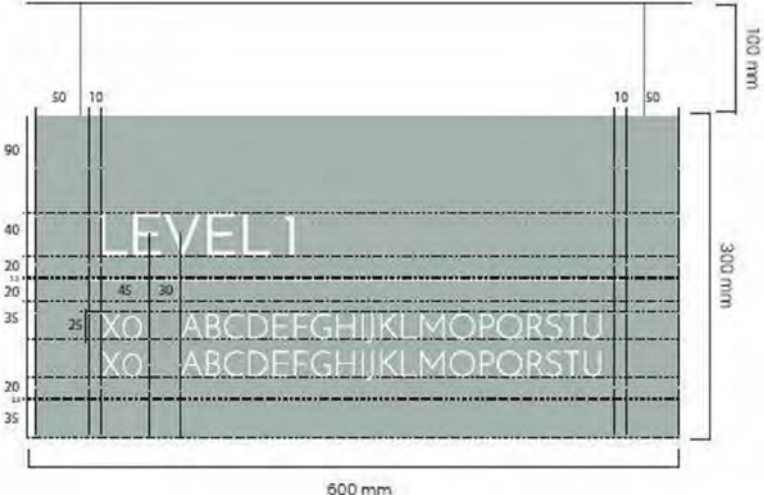
TYPICAL FREE STANDING WAYFINDING MULTI DESTINATION SIGN



TYPICAL FREE STANDING SIGN LED mono



TYPICAL FREE STANDING LOW HEIGHT BUILDING SIGN



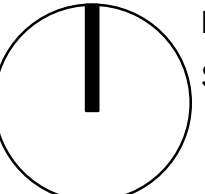
TYPICAL TENANCY LOBBY SIGN

Drawing Title
Site Signage Diagram

Project
CROYDON PUBLIC SCHOOL
at
39 YOUNG STREET, CROYDON
for
NSW DEPARTMENT OF EDUCATION

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Date
26/02/2019 5:03:29 PM
Scale
As indicated @ A1
Drawing Reference
17469-NBR-A- ST2-DA S1017



0 1 2 3 4 5 6 7 8 9 10



BLOCK		EXIST. (m²)	NEW (m²)
BLOCK N	G	0	703.1
	F	0	703
	S	0	703
	SUBTOTAL:		2109.1 m²
BLOCK Q	LG		48.5
	G	188.55	188.55
	M	51.2	
	F	201.7	201.7
BLOCK H	G	522.2	187
	SUBTOTAL:		709.2 m²
BLOCK A	G	312.8	0
	F	366.5	0
	SUBTOTAL:		679.3 m²
BLOCK E	G	778	
	SUBTOTAL:		778 m²
BLOCK P	G	592.9	0
	F	399.2	0
	SUBTOTAL:		992.10 m²
BLOCK I	G	692.5	0
	F	474.7	0
	SUBTOTAL:		1167.2 m²
		TOTAL AREA :	6685.1 m²
		SITE:	22616.50 m²
		FSR:	0.295

FSR CALCULATIONS

EXCLUDED :

- STAIRS, LIFTS

- BASEMENT STORAGE,VEHICULAR ACCESS, LOADING AREAS, GARBAGE AND SERVICES

- PLANT ROOMS, LIFT TOWERS, MECHANICAL SERVICES AND DUCTING AREAS

- CAR PARKING

-AREA FOR LOADING AND UNLOADING OF GOODS

-TERRACES AND BALCONIES WITH OUTER WALLS LESS THAN 1.4m HIGH

- VOIDS ABOVE A FLOOR AT THE LEVEL OF A STOREY OR STOREY ABOVE

Issue			
No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK

DEVELOPMENT
APPLICATION

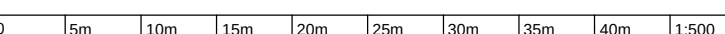
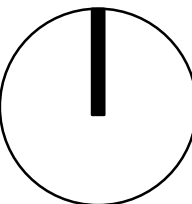
Drawing Title
Floor Space Calculation Diagram

Project
CROYDON PUBLIC SCHOOL

at
39 YOUNG STREET, CROYDON
for
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Date
26/02/2019 5:03:40 PM
Scale
1:500 @ A1 or 1:1000 @ A3
Drawing Reference
17469-NBRS-A- ST2-DA S1018



LEGEND

- DEVELOPMENT APPLICATION
- SUBJECT TO SEPARATE APPROVAL
- NO CHANGE TO EXISTING
- EXISTING TREE
- EXISTING TREE REMOVED



ISSUE	No.	Date	Description	Applicant	City
1	1	26/02/2019	Development Application	NK	

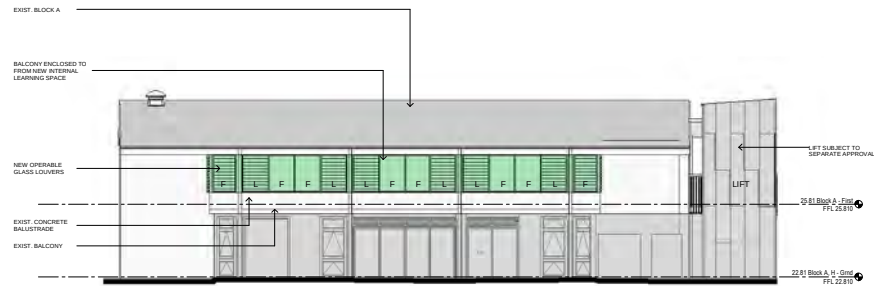
**DEVELOPMENT
APPLICATION**

Drawing Title
Notification- Site Plan

Project
CROYDON PUBLIC SCHOOL
at
39 YOUNG STREET, CROYDON
for
NSW DEPARTMENT OF EDUCATION

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Date 26/02/2019 12:50:15 PM
Scale 1:500 @ A1 or 1:1000 @ A3
Drawing Reference
17469-NBR-A- ST2-DA S1019



1 BLOCK A - NORTH ELEVATION - DA - NOTIFICATION
1 : 100



2 BLOCK A - SOUTH ELEVATION - DA - NOTIFICATION
1 : 100



3 BLOCK A - WEST ELEVATION - DA - NOTIFICATION
1 : 100

Issue			
No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK

DEVELOPMENT APPLICATION

Drawing Title
Notification - Block A Elevations

Project
CROYDON PUBLIC SCHOOL
at
39 YOUNG STREET, CROYDON
for
NSW DEPARTMENT OF EDUCATION

Architect
NBRS ARCHITECTURE.

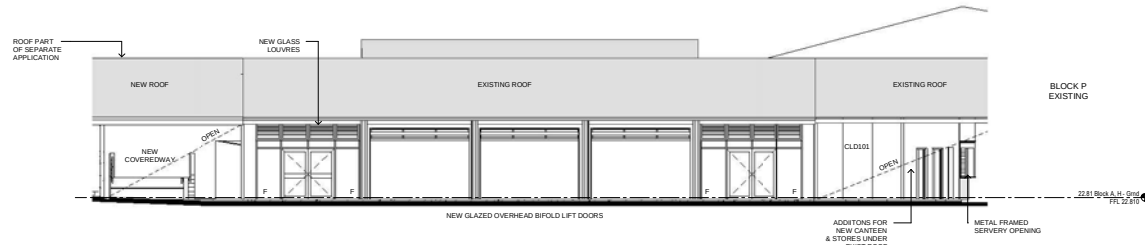
Sydney
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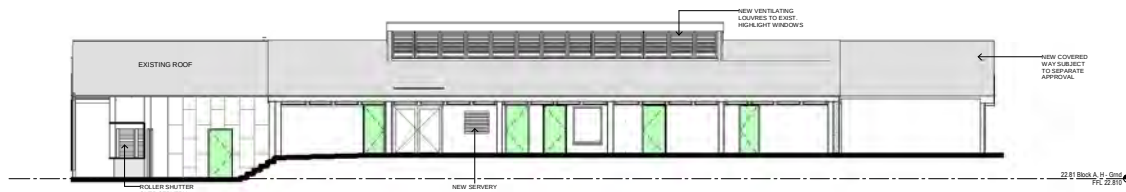
Nominated Architects:
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Date 26/02/2019 12:50:15 PM
Scale 1 : 100 @ A1

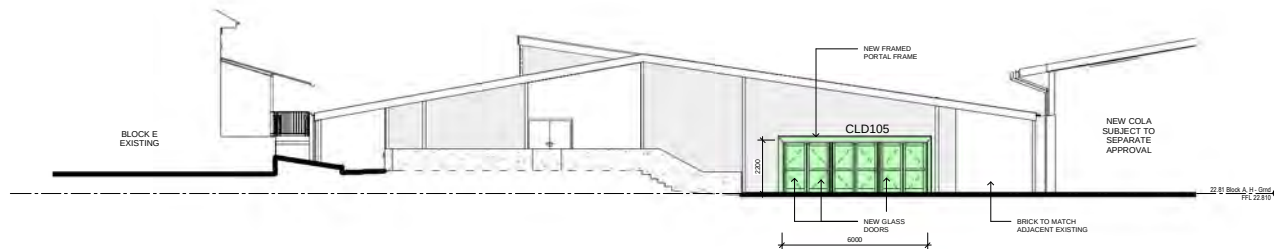
Drawing Reference
17469-NBRS-A- ST2-DA S1020



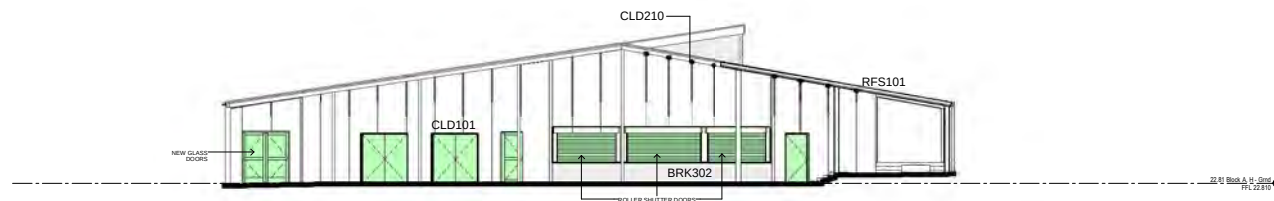
2 BLOCK H - NORTH ELEVATION - DA - NOTIFICATION
1 : 100



4 BLOCK H - SOUTH ELEVATION - DA - NOTIFICATION
1 : 100



1 BLOCK H - EAST ELEVATION - DA - NOTIFICATION
1 : 100



3 BUILDING H - WEST ELEVATION - DA - NOTIFICATION
1 : 100

Issue			
No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK

DEVELOPMENT APPLICATION

Drawing Title
Notification - Block H Elevations

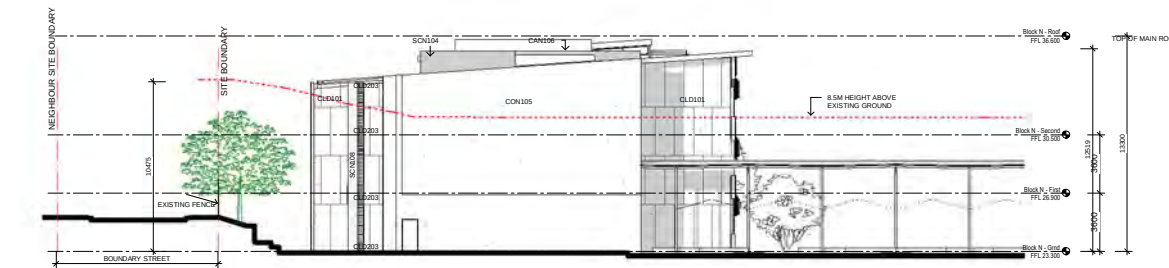
Project
CROYDON PUBLIC SCHOOL
at
39 YOUNG STREET, CROYDON
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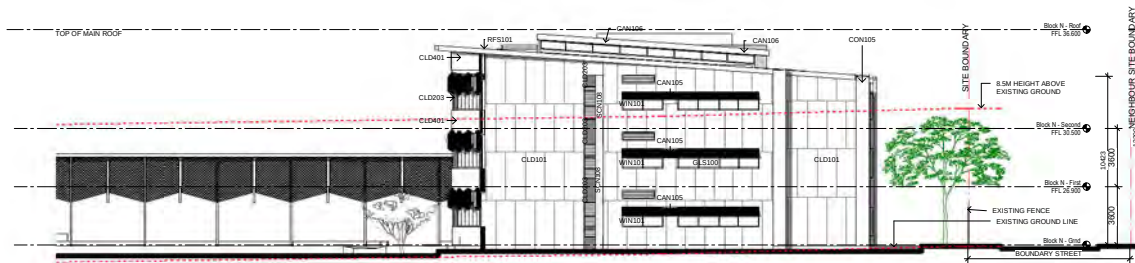
Date 26/02/2019 12:50:16 PM
Scale 1:100 @ A1 or 1:200 @ A3

Drawing Reference
17469-NBRS-A- ST2-DA S1021

[illegible]



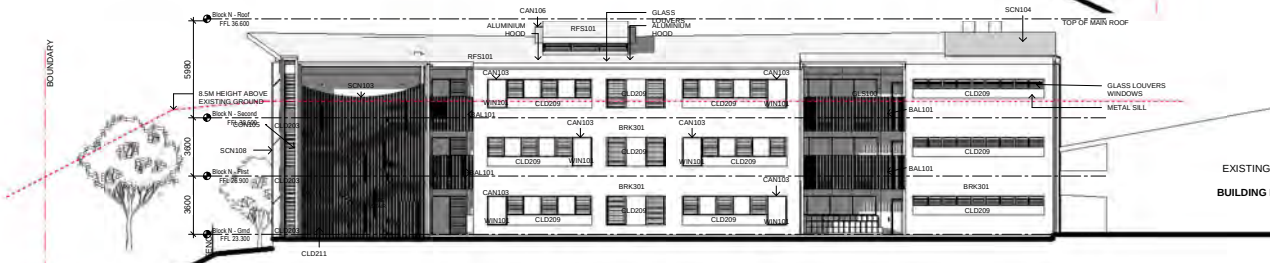
1 BUILDING N - EAST ELEVATION - NOTIFICATION
1 : 150



2 BUILDING N - WEST ELEVATION - NOTIFICATION
1 : 150



3 BUILDING N - NORTH ELEVATION - NOTIFICATION
1 : 150



4 BUILDING N - SOUTH ELEVATION - NOTIFICATION
1 : 150

LEGEND

	EXISTING
	DEMOLISH
	NEW WORKS
	SEPARATE APPROVAL
	EX. GROUND
	8.5m ABOVE EX. GROUND
	FIRE WALL

LEGEND - clone 1

CODE	MATERIAL
BAL101	ALUMINIUM RHS BATTEN BALUSTRADE FINISH ANODISED SATIN BLACK
BRK301	BRICK CLADDING CHARCOAL
CAN103	ALUMINIUM BOXHOOD 'AQUA MATT SAPPHIRE'
CAN105	FOLDED ALUMINIUM HOOD 'GREY COLOUR TO MATCH CLADDING'
CAN106	ALUMINIUM AWNING HOOD 'COLOUR TO MATCH ROOF SHEETING'
CLD101	CFC CLADDING 'NATURAL GREY'
CLD203	ALUMINIUM COVER PLATE 'SATIN BLACK'
CLD209	ALUMINIUM COVER PLATE 'AQUA MATT SAPPHIRE'
CLD210	ALUMINIUM ANGLE FEATURE 'TABASCO MATT'
CLD211	ALUMINIUM ANGLE FEATURE POWDERCOAT MOONLIGHT DULUX
CLD401	SANDSTONE CLADDING PANEL
CON105	OFF-FORM CONCRETE FINISH WITH SEALER. JOINTS TO MATCH CLD101
GLS100	LOW E GLASS CLEAR
LVR201	GLASS LOUVRE
RFS101	METAL ROOF SHEETING-COLOUR WINDSPRAY
SCN103	ALUMINIUM BATTEN SCREEN 'SATIN ORIENTAL GOLD'
SCN104	ALUMINIUM LOUVRE PLANT SCREEN POWDERCOAT COLOUR TO MATCH ROOFING
SCN105	ALUMINIUM BATTEN SCREEN 'SATIN BLACK'
SCN107	ALUMINIUM BATTEN SCREEN 'SATIN BLACK' WITH 'AQUA MATT SAPPHIRE' BOTTOM BATTEN CAP
SCN108	PERFORATED ALUMINIUM SUN SHADE 'SATIN SANDSTONE'
WIN101	ALUMINIUM WINDOWS ANODISED SATIN BLACK



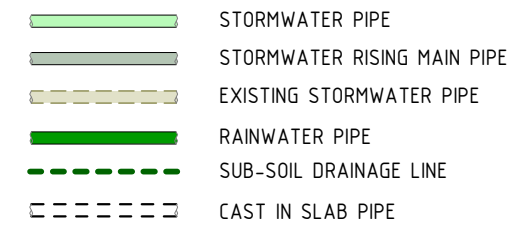
LEGEND - clone 3	
CODE	MATERIAL
BAL01	ALUMINIUM RHS BATTEN BALUSTRADE FINISH ANODISED SATIN BLACK
BHK101	FACE BRICKWORK 1
CAN101	FOLDED ALUMINIUM AWNING 'BLACK'
CAN102	FOLDED ALUMINIUM AWNING 'BLACK'
CLD101	CLC CLADDING 'NATURAL GREY'
CLD103	CFC PANEL 'DULUX 'OASIS SPRINGS'
CLD104	CFC PANEL 'DULUX 'MITHCELL BLUE'
CLD201	METAL CLADDING TO MATCH EXISTING
CLD203	ALUMINIUM COVER PLATE 'SATIN BLACK'
CLD208	ALUMINIUM ANGLE FEATURE 'AQUA MATT'
FEN101	CUSTOM GATE
GAL	HOT DIPPED GALVANISED FINISH
GLS100	LOW E GLASS CLEAR
GLS104	COLOURED LAMINATED GLASS 'COOL BLUE'
GLS105	COLOURED LAMINATED GLASS 'CORAL ROSE'
LVR201	GLASS LOUVER
RFS102	METAL ROOF SHEETING TO MATCH EXISTING
RFS301	TRANSLUCENT FIBRE GLASS ROOF SHEETING OPAL
RWS103	HALF ROUND GUTTER
RWS201	DOWNPIPES 'SHALE GREY'
SCN104	ALUMINIUM LOUVRE PLANT SCREEN POWDERCOAT COLOUR TO MATCH ROOFING
SCN109	PERFORATED ALUMINIUM SCREEN 'AQUA MATT'
WIN101	ALUMINIUM WINDOWS ANODISED SATIN BLACK

CROYDON PUBLIC SCHOOL

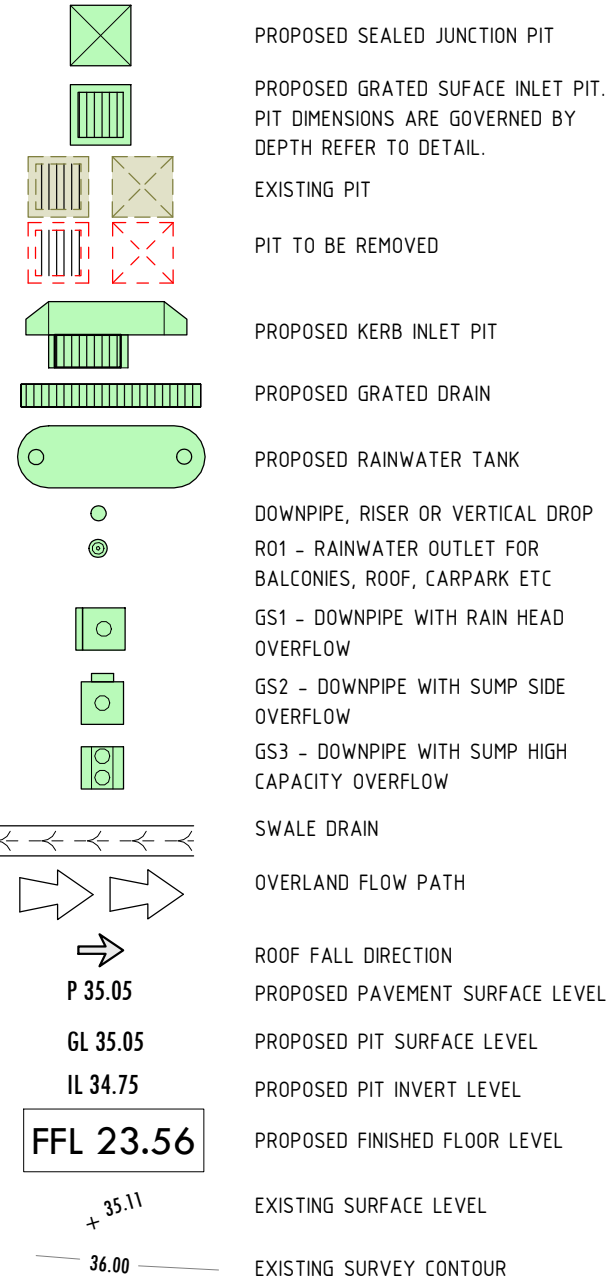
39 YOUNG STREET, CROYDON

Job No. 17011156

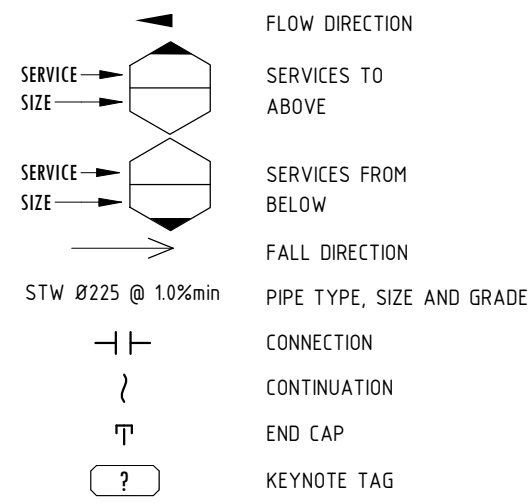
STORMWATER SERVICES



STORMWATER LEGEND



GENERAL PIPEWORK LEGEND



CIVIL ABBREVIATIONS

AFFL	ABOVE FINISHED FLOOR LEVEL
CIS	CAST IN SLAB
CL	CENTRELINE
CS	CEILING SPACE
Cu	COPPER
DIA	DIAMETER
DP	DOWNPIPE
Ex.	EXISTING
FFL	FINISHED FLOOR LEVEL
GD	GRATED DRAIN
GL	GROUND LEVEL
HBS	PIPES HUNG BELOW SLAB
HL	HIGH LEVEL
IG	IN-GROUND
IL	INVERT LEVEL
LL	LOW LEVEL
O/F	OVERFLOW
PVC	POLYVINYLCHLORIDE
RL	REDUCED LEVEL
RWR	RAINWATER REUSE
SL	SURFACE LEVEL
S/S	STAINLESS STEEL
STW	STORMWATER
UB	UNDER BENCH
uPVC	UNPLASTICISED POLYVINYLCHLORIDE
U/S	UNDER SIDE

PROJECT INFORMATION TABLE

THE TABLES BELOW ARE TO BE READ IN CONJUNCTION WITH THE ADJACENT NOTES

GEOTECHNICAL INFORMATION

COMPANY	REPORT No.	DATED
JK GEOTECHNICS	310398B2RPT2	07.08.18

SURVEY INFORMATION

THE SURVEY INFORMATION ON THESE DRAWINGS HAS BEEN PROVIDED BY

COMPANY	DATED
PROJECT SURVEYORS	NOV 17

PROOF ROLLING

PROOF ROLLING SPECIFICATIONS

(min) ROLLER WEIGHT	(min) NUMBER OF PASSES
5 TONNE	10

COMPACTION TESTING

RATE OF TESTS	TEST AREA PER LAYER
2	1000m ²

-TESTING SHALL BE CARRIED OUT BY A REGISTERED NATA LABORATORY.

FLEXIBLE PAVEMENT DESIGN

DESIGN LIFE	40YEARS	
DESIGN CBR	5%	
DESIGN VEHICLE	MAX LOAD	DESIGN TRAFFIC
MRV	2.5T	5x10 ⁴ ESA

CIVIL DRAWING LIST - DA	
No.	SHEET NAME
C003	NOTES & LEGEND - STAGE 2
C013	SITE STORMWATER PLAN - STAGE 2
C055	TYPICAL STORMWATER DETAILS SHEET 1 - STAGE 2
C056	TYPICAL STORMWATER DETAILS SHEET 2 - STAGE 2
C060	OSD & WSUD DETAILS - STAGE 2
C091	LANDSCAPE STORMWATER PLAN - STAGE 2
C101	BLOCK N - GROUND FLOOR STORMWATER PLAN - STAGE 2
C111	BLOCK N - LEVEL 1 STORMWATER PLAN - STAGE 2
C121	BLOCK N - LEVEL 2 STORMWATER PLAN - STAGE 2
C131	BLOCK N - ROOF STORMWATER PLAN - STAGE 2
C201	BLOCK Q - GROUND FLOOR STORMWATER PLAN -STAGE 2
C211	BLOCK Q - LEVEL 1 STORMWATER PLAN - STAGE 2
C221	BLOCK Q - ROOF STORMWATER PLAN - STAGE 2
C301	BLOCK A - GROUND FLOOR STORMWATER PLAN - STAGE 2
C311	BLOCK A - ROOF STORMWATER PLAN - STAGE 2

GENERAL

- ALL EXISTING LEVELS TO BE CONFIRMED ON SITE PRIOR TO COMMENCEMENT OF WORKS
- ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE NOMINATED OR APPLICABLE COUNCIL SPECIFICATION. WHERE A SPECIFICATION HAS NOT BEEN NOMINATED THEN THE CURRENT NSW DEPARTMENT OF HOUSING CONSTRUCTION SPECIFICATION IS TO BE USED. THE NOMINATED SPECIFICATION SHALL TAKE PRECEDENCE TO THESE NOTES.
- ALL DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE RELEVANT ARCHITECTURAL DRAWINGS & DRAWINGS FROM OTHER CONSULTANTS.
- THE CONTRACTOR SHOULD REPORT ANY DISCREPANCIES ON THE DRAWINGS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN.
- THE CONTRACTOR SHOULD LOCATE AND LEVEL ALL EXISTING SERVICES PRIOR TO COMMENCING CONSTRUCTION AND PROTECT AND MAKE ARRANGEMENTS WITH THE RELEVANT AUTHORITY TO RELOCATE AND/OR ADJUST IF NECESSARY. INFORMATION GIVEN ON THE DRAWINGS IN RESPECT TO SERVICES IS FOR GUIDANCE ONLY AND IS NOT GUARANTEED COMPLETE NOR CORRECT.
- CONTRACTOR IS NOT TO ENTER UPON NOR DO ANY WORK WITHIN ADJACENT LANDS WITHOUT THE PERMISSION OF THE OWNER.
- SURPLUS EXCAVATED MATERIAL SHALL BE PLACED WHERE DIRECTED OR REMOVED FROM SITE.
- ALL NEW WORKS SHALL MAKE A SMOOTH JUNCTION WITH EXISTING.
- ALL DRAINAGE LINES THROUGH ADJACENT LOTS SHALL BE CONTAINED WITHIN EASEMENTS CONFORMING TO COUNCIL'S STANDARDS.
- THE CONTRACTOR SHALL CLEAR THE SITE BY REMOVING ALL RUBBISH, FENCES AND DEBRIS ETC. TO THE EXTENT SPECIFIED.
- PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL PROVIDE A TRAFFIC MANAGEMENT PLAN PREPARED BY AN ACCREDITED PERSON IN ACCORDANCE WITH RMS REQUIREMENTS, FOR ANY WORK ON OR ADJACENT TO PUBLIC ROADS, PLAN TO BE SUBMITTED TO COUNCIL & RMS.

SURVEY

- JONES NICHOLSON IS NOT RESPONSIBLE FOR THE ACCURACY OF ANY 3rd PARTY INFORMATION PROVIDED ON THIS DRAWING.
- ALL LEVELS ARE TO A.H.D.
- ALL CHANGES AND LEVELS ARE IN METRES, AND DIMENSIONS IN MILLIMETRES.
- CONTRACTORS SHALL ARRANGE FOR THE WORKS TO BE SET OUT BY A REGISTERED SURVEYOR.

EARTHWORKS

- PROVIDE PROTECTION BARRIERS TO PROTECTED/SENSITIVE AREAS PRIOR TO ANY BULK EXCAVATION.
- OVER FULL AREA OF EARTHWORKS, CLEAR VEGETATION, RUBBISH, SLABS ETC. AND STRIP TOP SOIL. AVERAGE 200mm THICK. REMOVE FROM SITE, EXCEPT TOP SOIL FOR RE-USE.
- CUT AND FILL OVER THE SITE TO LEVELS REQUIRED.
- PRIOR TO ANY FILLING IN AREAS OF CUT OR IN EXISTING GROUND, PROOF ROLL THE EXPOSED SURFACE. REFER TO PROJECT INFORMATION TABLES FOR MINIMUM ROLLER WEIGHT AND THE MINIMUM NUMBER OF PASSES.
- EXCAVATE AND REMOVE ANY SOFT SPOTS ENCOUNTERED DURING PROOF ROLLING AND REPLACE WITH APPROVED FILL COMPACTED IN LAYERS. THE WHOLE OF THE EXPOSED SUBGRADE AND FILL SHALL BE COMPACTED TO 98% STANDARD MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT $\pm 2\%$.
- FOR ON SITE FILLING AREAS, THE CONTRACTOR SHALL TAKE LEVELS OF EXISTING SURFACE AFTER STRIPPING TOPSOIL AND PRIOR TO COMMENCING FILL OPERATIONS.
- WHERE HARD ROCK IS EXPOSED IN THE EXCAVATED SUB-GRADE, THIS WILL BE INSPECTED AND A DECISION MADE ON THE LEVEL TO WHICH EXCAVATION IS TAKEN.
- FILL IN 200mm MAXIMUM (LOOSE THICKNESS) LAYERS TO UNDERSIDE OF BASECOURSE USING THE EXCAVATED MATERIAL AND COMPACTED TO 98% STANDARD (AS 1289 5.11). MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT $\pm 2\%$ SHOULD THERE BE INSUFFICIENT MATERIAL FROM SITE EXCAVATIONS, IMPORT AS NECESSARY CLEAN GRANULAR FILL TO THE DESIGN ENGINEERS APPROVAL.
- COMPACTION TESTING TO BE CARRIED OUT IN ACCORDANCE WITH THE PROJECT INFORMATION TABLE. THE COSTS OF TESTING AND RE-TESTING ARE TO BE ALLOWED FOR BY THE BUILDER.
- BATTERS TO BE AS SHOWN, OR MAXIMUM 1 VERT : 4 HORIZ. ALL CONDUITS AND MANS SHALL BE LAID PRIOR TO LAYING FINAL PAVEMENT.
- ALL BATTERS AND FOOTPATHS ADJACENT TO ROADS SHALL BE TOP SOILED WITH 150mm APPROVED LOAM AND SEEDED UNLESS OTHERWISE SPECIFIED.

SAFETY IN DESIGN

THERE ARE INHERENT RISKS WITH CONSTRUCTING, MAINTAINING, OPERATING, DEMOLISHING, DISMANTLING AND DISPOSING THIS DESIGN THAT ARE TYPICAL OF SIMILAR DESIGNS. AS FAR AS IS REASONABLY PRACTICABLE RISKS HAVE BEEN ELIMINATED OR MINIMISED THROUGH THE DESIGN PROCESS. HAZARD CONTROLS MUST STILL BE IMPLEMENTED BY THE CONTRACTOR, OWNER OR OPERATOR TO ENSURE THE SAFETY OF WORKERS.

JONES NICHOLSON'S ASSESSMENT DID NOT IDENTIFY ANY UNIQUE RISKS ASSOCIATED WITH THE DESIGN

STORMWATER DRAINAGE

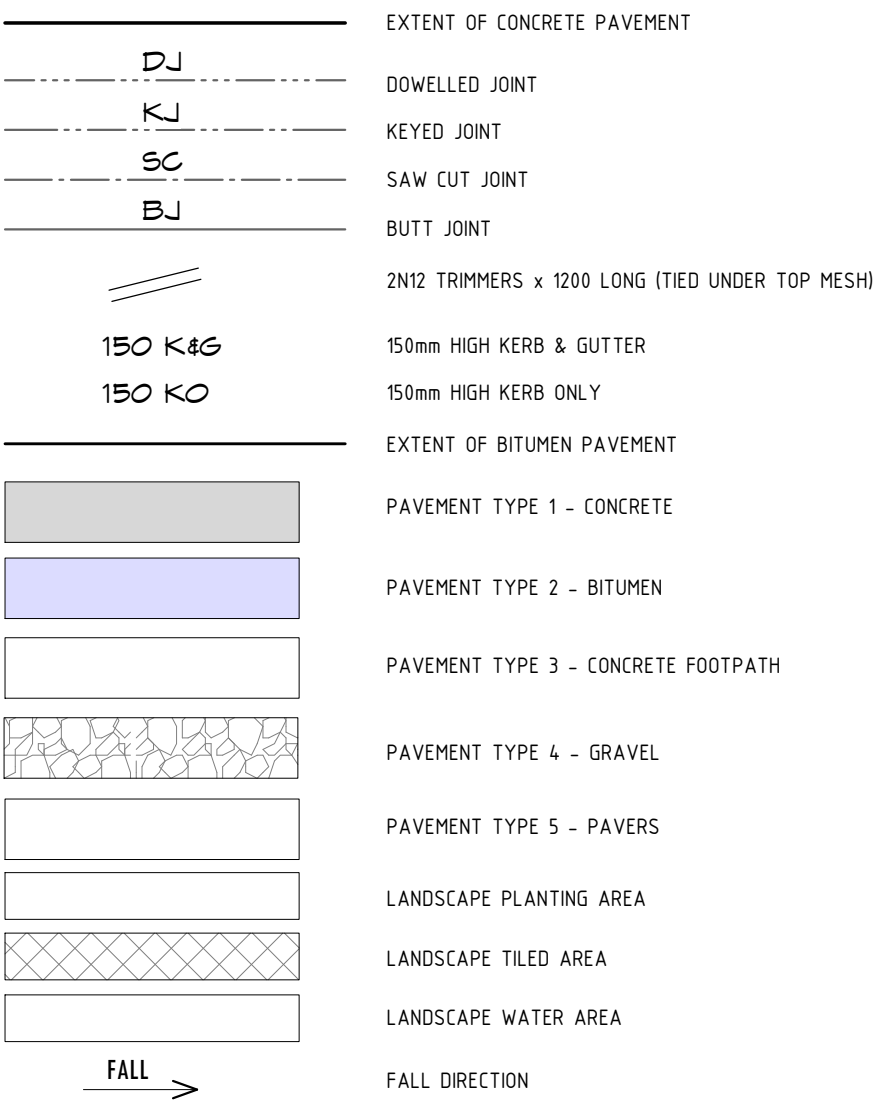
- STORMWATER DRAINAGE SHALL BE GENERALLY IN ACCORDANCE WITH CURRENT AUSTRALIAN STANDARDS AND COUNCIL'S SPECIFICATION.
- PIPES OF 225mm DIA. AND UNDER SHALL BE UPVC.
- PIPES OF 300mm DIA. AND LARGER SHALL BE FRC OR CONCRETE CLASS 2 RUBBER RING JOINTED UNO.
- ALL FRC OR RCP STORMWATER PIPES WITHIN ROAD RESERVE AREAS TO BE CLASS 3 UNO.
- MINIMUM COVER TO PIPES 300mm DIA. AND OVER GENERALLY SHALL BE 600mm IN CARPARK & ROADWAY AREAS UNO.
- PIPES SHALL GENERALLY BE LAID AT THE GRADES INDICATED ON THE DRAWINGS.
- PIPES UP TO 150mm DIA SHALL BE LAID AT 10% MIN. GRADE UNO.
- PIPES 225mm DIA AND OVER SHALL BE LAID AT 0.5% MIN. GRADE UNO.
- BACKFILL TRENCHES WITH APPROVED FILL COMPACTED IN 200mm LAYERS TO 98% OF STANDARD DENSITY.
- ANY PIPES OVER 16% GRADE SHALL HAVE CONCRETE BULKHEADS AT ALL JOINTS.
- PITS SHALL BE AS DETAILED WITH METAL GRATES AT LEVELS INDICATED. ALL PITS DEEPER THAN 1200mm TO HAVE CLIMB IRONS.
- BUILD INTO UPSTREAM FACE OF ALL PITS A 3.0m SUBSOIL LINE FALLING TO PITS TO MATCH PIT INVERTS.
- ALL COURTYARD & LANDSCAPED PITS TO BE 450 SQUARE UNLESS NOTED OTHERWISE.
- ALL DRIVEWAY & OSD PITS TO BE 600 SQUARE UNLESS NOTED OTHERWISE.
- INSTALL TEMPORARY SEDIMENT BARRIERS TO INLET PITS, TO COUNCIL'S STANDARDS UNTIL SURROUNDING AREAS ARE PAVED OR GRASSED.
- PITS & DOWNPIPE LOCATIONS AND LEVELS MAY BE VARIED TO SUIT SITE CONDITIONS AFTER CONSULTING THE ENGINEER.
- DOWNPIPES SHOWN ARE INDICATIVE ONLY, ALL ROOF GUTTERING AND DOWNPIPES TO THE CURRENT AUSTRALIAN STANDARDS.
- ALL PLANTER BOXES AND BALCONES TO BE CONNECTED TO THE PROPOSED STORMWATER DRAINAGE LINE.
- HAND-EXCAVATE STORMWATER PIPES IN VICINITY OF TREE ROOTS.
- FOOTPATH CROSSING LEVELS SHOWN ARE TO BE ADJUSTED TO FINAL COUNCIL'S ISSUED LEVELS.
- GEOTEXTILE FABRIC TO BE PLACED UNDER RIP RAP SCOUR PROTECTION.
- ALL BASES OF PITS TO BE BENCHED TO HALF PIPE DEPTH AND PROVIDE GALVANISED ANGLE SURROUNDINGS TO GRATE.
- SUBSOIL LINE PIPES AND FITTINGS SHALL BE PERFORATED PLASTIC TO CURRENT AUSTRALIAN STANDARDS. LAY PIPES ON FLOOR OF TRENCH GRADED AT 1% MIN. AND OVERLAY WITH FILTER MATERIAL EXTENDING TO WITHIN 200mm OF SURFACE. PROVIDE FILTER FABRIC OF PERMEABLE POLYPROPYLENE BETWEEN FILTER MATERIAL AND TOPSOIL.
- SHOULD THE CONTRACTOR ELECT TO INSTALL PRECAST STORMWATER PITS AND THEY ARE PERMITTED BY COUNCIL AND THE CLIENT, THE PRECAST PITS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH RMS STANDARDS INCLUDING:
 - SEAL THE SEGMENTS TOGETHER USING A SITE-APPROVED NON-SHRINK GROUT OR MASTIC-TYPE PRODUCT. APPLY THE SEALANT IN ACCORDANCE WITH THE PRODUCT MANUFACTURER'S REQUIREMENTS.
 - ENSURE THAT NO GAPS REMAIN AND THAT A SMOOTH FACE EXISTS BETWEEN MULTIPLE UNITS.
 - LEAVE THE SEGMENTS UNDISTURBED UNTIL THE PERIOD OF CURING IS COMPLETED IN ACCORDANCE WITH THE GROUT OR SEALANT PRODUCT MANUFACTURER'S REQUIREMENTS.

STORMWATER DRAINAGE INSTALLATION

- SUPPLY & INSTALLATION OF DRAINAGE WORKS TO BE IN ACCORDANCE WITH THESE DRAWINGS, THE COUNCIL SPECIFICATION AND THE CURRENT APPLICABLE AUSTRALIAN STANDARDS.
- BEDDING OF THE PIPELINES IS TO BE TYPE 'HS2' IN ACCORDANCE WITH THE STANDARDS AND AS FOLLOWS:
 - COMPACTED GRANULAR MATERIAL IS TO COMPLY WITH THE FOLLOWING GRADINGS:

SIEVE SIZE (mm)	19	2.36	0.60	0.30	0.15	0.075
% MASS PASSING	100	50-100	20-90	10-60	0-25	0-10
 - AND THE MATERIAL PASSING THE 0.075 SIEVE HAVING LOW PLASTICITY AS DESCRIBED IN APPENDIX D OF AS1328.
 - BEDDING DEPTH UNDER THE PIPE TO BE 100mm.
 - BEDDING MATERIAL TO BE EXTENDED FROM THE TOP OF THE BEDDING ZONE UP TO 0.3 TIMES PIPE OUTSIDE DIAMETER. THIS REPRESENTS THE 'HAUNCH ZONE.'
 - THE BEDDING & HAUNCH ZONE MATERIAL IS TO BE COMPACTED TO A MINIMUM RELATIVE COMPACTION OF 98% WITHIN ROAD RESERVES AND TRAFFICABLE AREAS AND 95% ELSEWHERE FOR COHESIVE MATERIAL OR A MINIMUM DENSITY INDEX OF 10% IN ACCORDANCE WITH THE STANDARDS FOR COHESIONLESS MATERIAL.
 - COMPACTION TESTING SHALL BE CARRIED OUT BY AN APPROVED ORGANISATION WITH A NATA CERTIFIED LABORATORY FOR ALL DRAINAGE LINES LAID WHOLLY OR IN PART UNDER THE KERB & GUTTER OR PAVEMENT.
- BACKFILL SHALL BE PLACED & COMPACTED IN ACCORDANCE WITH THE SPECIFICATION. A GRANULAR GRAVEL AGGREGATE MATERIAL (<10mm) BACKFILL IS RECOMMENDED FOR THE BEDDING, HAUNCH SUPPORT AND SIDE ZONE DUE TO ITS SELF COMPACTING ABILITY.
- A MINIMUM OF 150mm CLEARANCE IS TO BE PROVIDED BETWEEN THE OUTSIDE OF THE PIPE BARREL AND THE TRENCH WALL FOR PIPES < 600 DIA. 200mm CLEARANCE FOR PIPES 600 TO 1200 DIA AND D/6 CLEARANCE FOR PIPES > 1200 DIA.

PAVEMENT LEGEND



PAVEMENT - FLEXIBLE

- THE PAVEMENT DESIGN AS DETAILED ASSUMES A PROPERLY PREPARED UNIFORM AND STABLE SUBGRADE. CONFIRMATION OF DESIGN CBR RATIO IS REQUIRED BY A GEOTECHNICAL ENGINEER PRIOR TO WORKS COMMENCING.
- ASSUMED DESIGN CBR TO BE CONFIRMED ONSITE DURING CONSTRUCTION PRIOR TO PLACEMENT OF PAVEMENT MATERIALS. THE CONTRACTOR IS TO UNDERTAKE SUFFICIENT CBR TESTING TO CONFIRM THE ASSUMED VALUE. WHERE A LESSER VALUE HAS BEEN DETERMINED, THE SUPERVISING ENGINEER IS TO BE NOTIFIED TO DETERMINE A REVISED PAVEMENT DESIGN.
- PAVEMENT TO BE CONSTRUCTED AS FOLLOWS:

SURFACE COURSE	- DENSE GRADED ASPHALT
PRIMERSEAL	- EMULSION BASED HOT BITUMEN
BASE COURSE	- DGB 20
SUB BASE	- DGS 40
- SUBGRADE SHALL BE COMPACTED TO 100% STANDARD MAXIMUM DRY DENSITY RATIO AT OPTIMUM MOISTURE CONTENT $\pm 2\%$ IN ACCORDANCE WITH CURRENT AUSTRALIAN STANDARDS.
- SUBBASE COURSE SHALL BE COMPACTED TO 95% MODIFIED MAXIMUM DRY DENSITY.
- BASECOURSE SHALL BE COMPACTED TO 98% MODIFIED MAXIMUM DRY DENSITY.
- PRIOR TO THE PLACEMENT OF THE PRIMERSEAL AND AFTER THE REQUIRED DENSITY IS ACHIEVED, THE PAVEMENT IS TO BE ALLOWED TO DRY BACK TO APPROXIMATELY 60% TO 70% OPTIMUM MOISTURE CONTENT.
- ALL SUBGRADES TO BE ROOF ROLLED & APPROVED BY SUPERVISING ENGINEER.
- COMPACTION TESTS ARE TO BE UNDERTAKEN FOR ALL PAVEMENT LAYERS INCLUDING SUBGRADE AT A RATE TO BE DETERMINED BY THE SUPERVISING ENGINEER & THE RESULTS TO BE SUPPLIED TO THE ENGINEER PRIOR TO PLACEMENT OF THE NEXT PAVEMENT LAYER.

PAVEMENT - SEGMENTAL

- THE PAVEMENT DESIGN AS DETAILED ASSUMES A PROPERLY PREPARED UNIFORM AND STABLE SUBGRADE. CONFIRMATION OF DESIGN CBR RATIO IS REQUIRED BY A GEOTECHNICAL ENGINEER PRIOR TO WORKS COMMENCING.
- PREPARATION FOR PAVEMENT: CLEAR SITE, STRIP TOPSOIL, CUT AND FILL AND PREPARATION OF SUBGRADE SHALL BE AS DESCRIBED IN "EARTHWORKS".
- SUBGRADE SHALL BE COMPACTED TO 98% STANDARD MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT $\pm 2\%$ IN ACCORDANCE WITH AS 1289 5.11.
- BASECOURSE SHALL BE CONSTRUCTED FROM FINE CRUSHED ROCK DGB20 COMPACTED TO 100% STANDARD MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT $\pm 2\%$ IN ACCORDANCE WITH AS 1289 5.11.
- PROVIDE CONCRETE WORKING SLAB 20MPa MIN 100mm THICK AS DETAILED ON DRAWING.
- SEGMENTAL PAVING SHALL BE AS DETAILED ON THE DRAWINGS, AND ARE TO BE SUPPLIED WITH UNITS OF MAXIMUM GROSS PLAN AREA <0.1m². WHERE THIS AREA IS EXCEEDED REFER CONCRETE FLAG PAVEMENT SPECIFICATION.
- ALL WORKMANSHIP AND MATERIALS FOR PAVER WORK SHALL BE IN ACCORDANCE WITH ALL AS 4455, AS4456, AS4459, T44, T45, T46. CURRENT EDITIONS WITH AMENDMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENT.
- PAVER QUALITY:

APPLICATION	CHARACTERISTIC BREAKING LOAD (KN)	CHARACTERISTIC FLEXURAL STRENGTH (MPa)
RESIDENTIAL PEDESTRIAN	2	2
RESIDENTIAL DRIVEWAYS	5	3
PUBLIC FOOTPATHS	5	3
ROADS	10	4
INDUSTRIAL PAVEMENTS		

PROJECT CONTROL TESTING SHALL BE CARRIED OUT IN ACCORDANCE WITH AS 4456.4 AND AS 4456.5.

PAVERS TO BE BEDDED AND SOUND EDGE RESTRAINTS ARE TO BE PROVIDED. JOINTS TO BE FULLY GROUTED.

Issue No.	Date	Description	Chkd
P1	08.02.19	ISSUED FOR DA	ELR

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Sydney
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Nominated Architects: Geoffrey Deane 3766; Andrew Duffin 5602; Garry Hodnett 5286
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PRELIMINARY

Drawing Title
CIVIL DESIGN
NOTES & LEGEND - STAGE 2

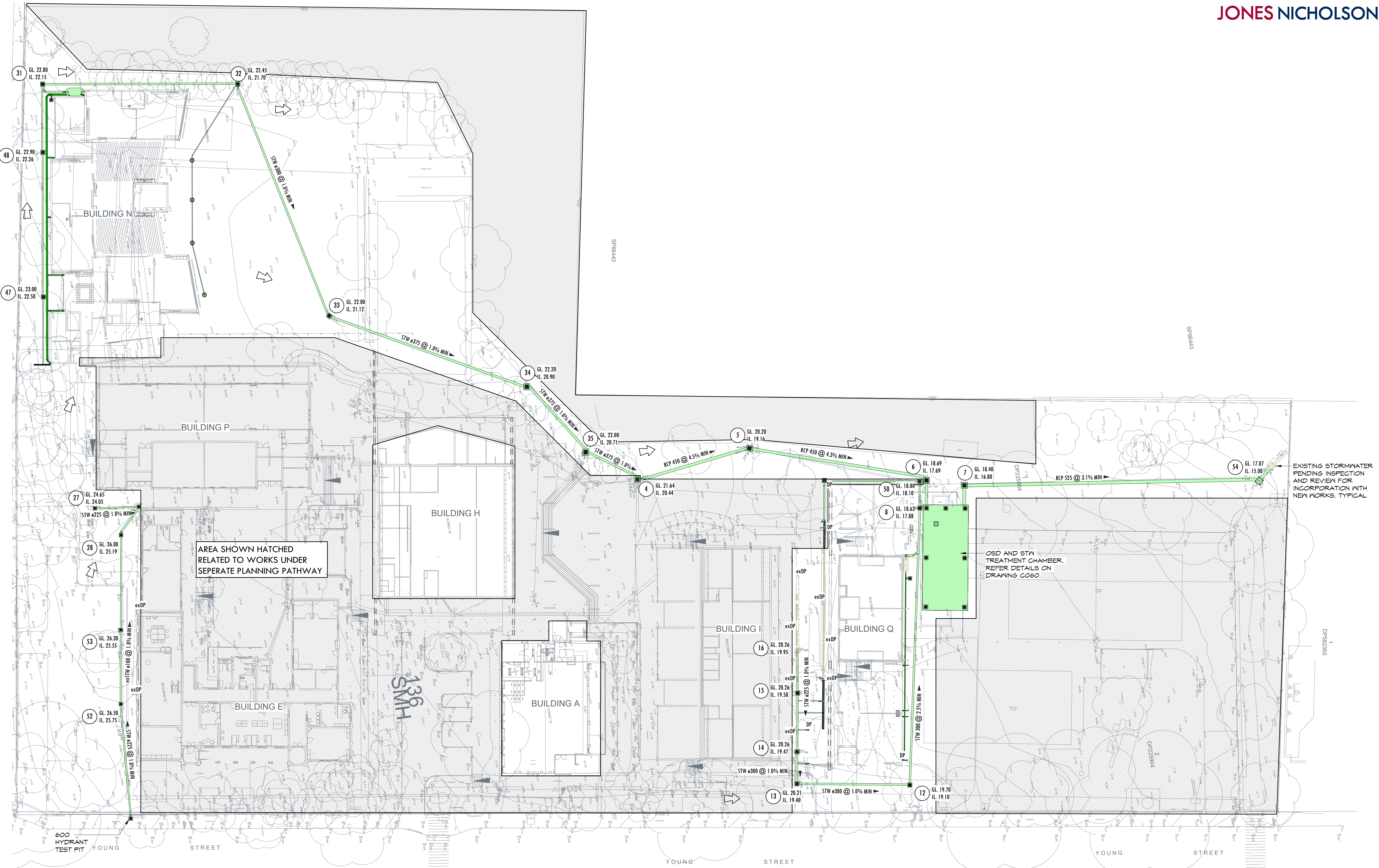
Drawn: ER Design: LAM

Project
CROYDON PUBLIC SCHOOL
at
39 YOUNG STREET, CROYDON
for
Department of Education
Contract No.
SINSW 18-1658

Engineers
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Date 08.02.19

Drawing Reference
17011156-C003-
Revision
P1



SITE STORMWATER PLAN - STAGE 2
SCALE 1 : 300

PRELIMINARY

Issue No.	Date	Description	Chkd
P1	08.02.19	ISSUED FOR DA	ELR

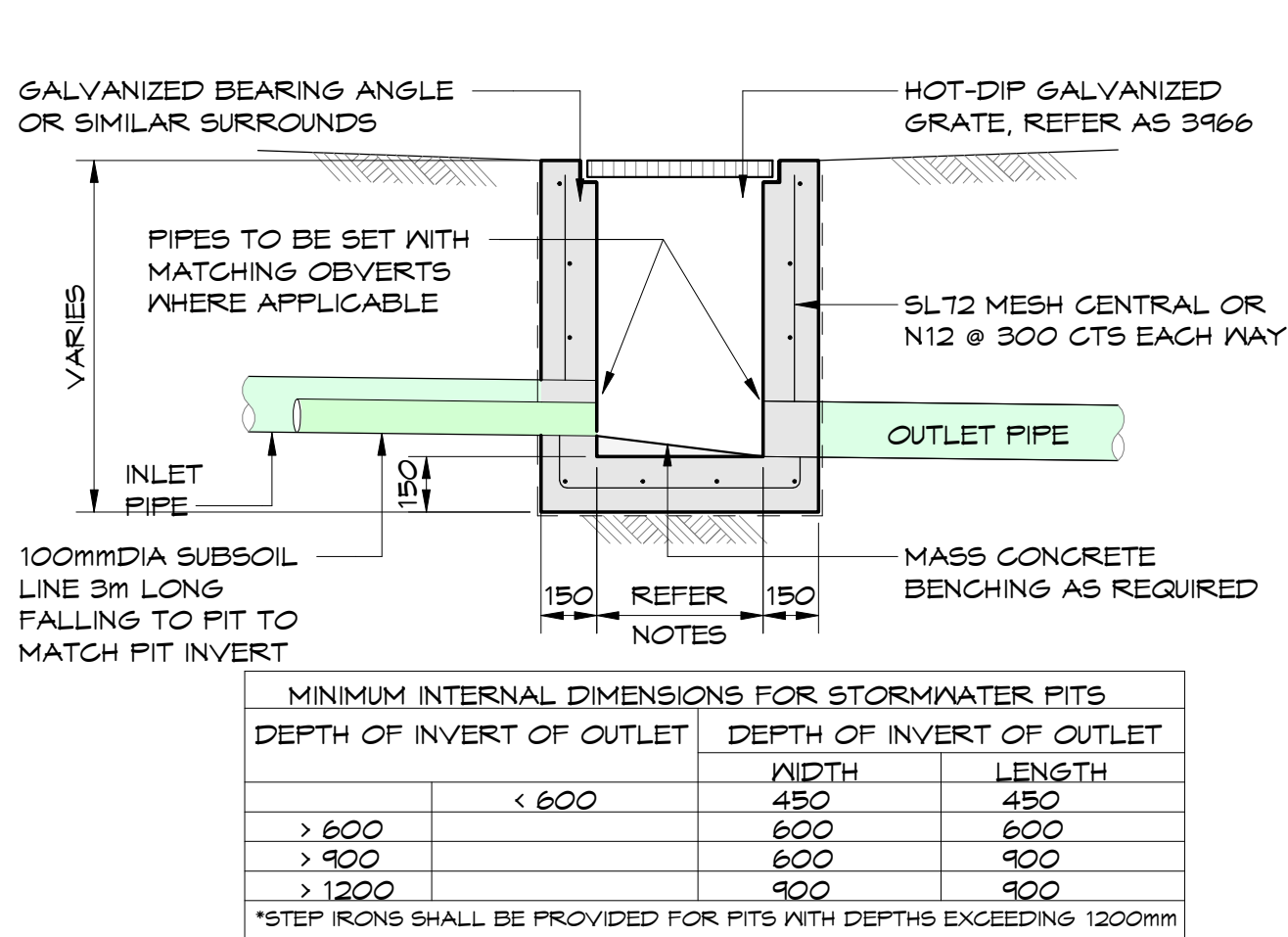
Architect
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Drawing Title
SITE STORMWATER PLAN - STAGE 2
Drawn: Design:

Project
CROYDON PUBLIC SCHOOL
at
39 YOUNG STREET, CROYDON
for
Department of Education
Contract No.
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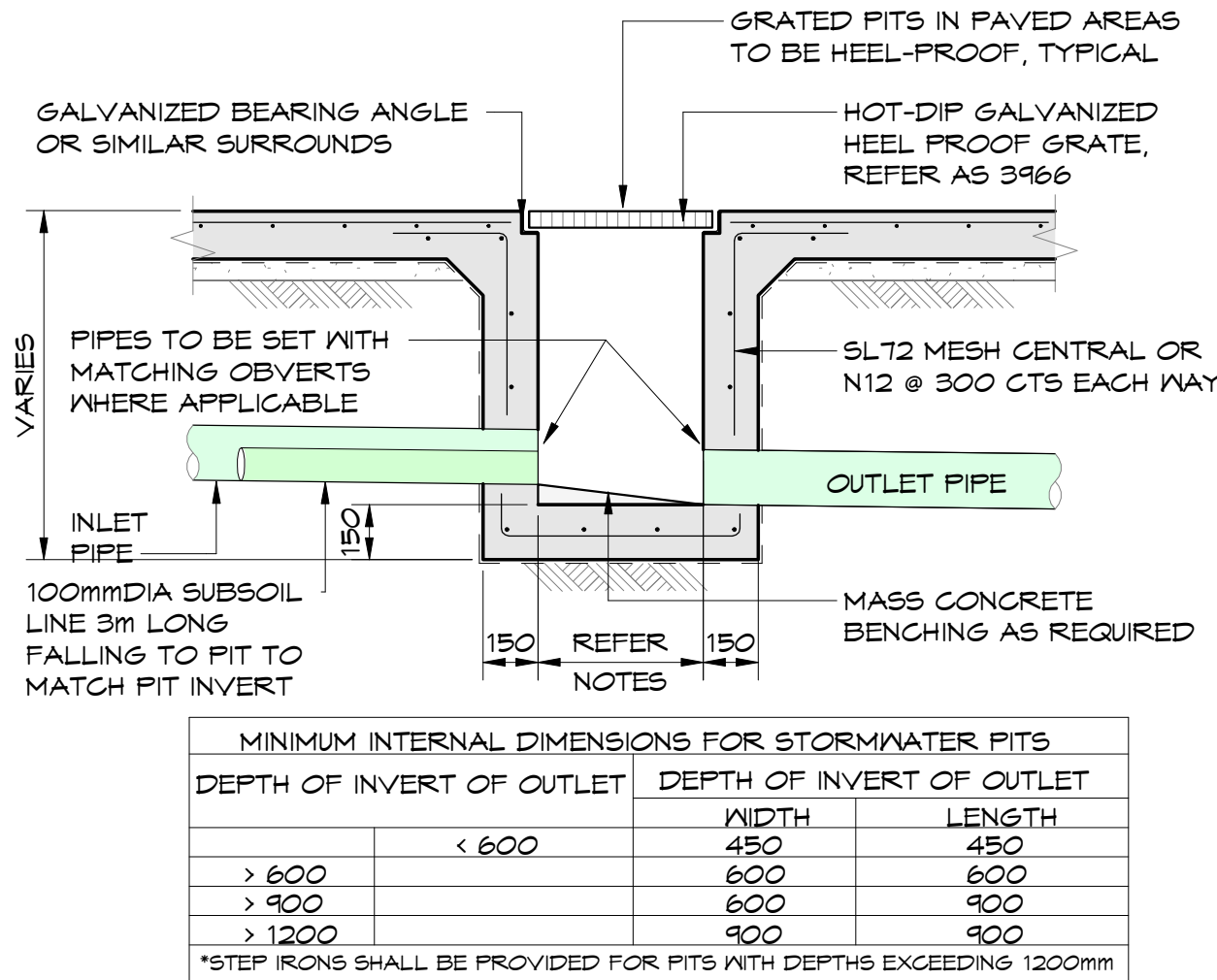
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Date 08.02.19
Scale 300@A1 or 600@A3
Drawing Reference 17011156-C013-
Revision P1



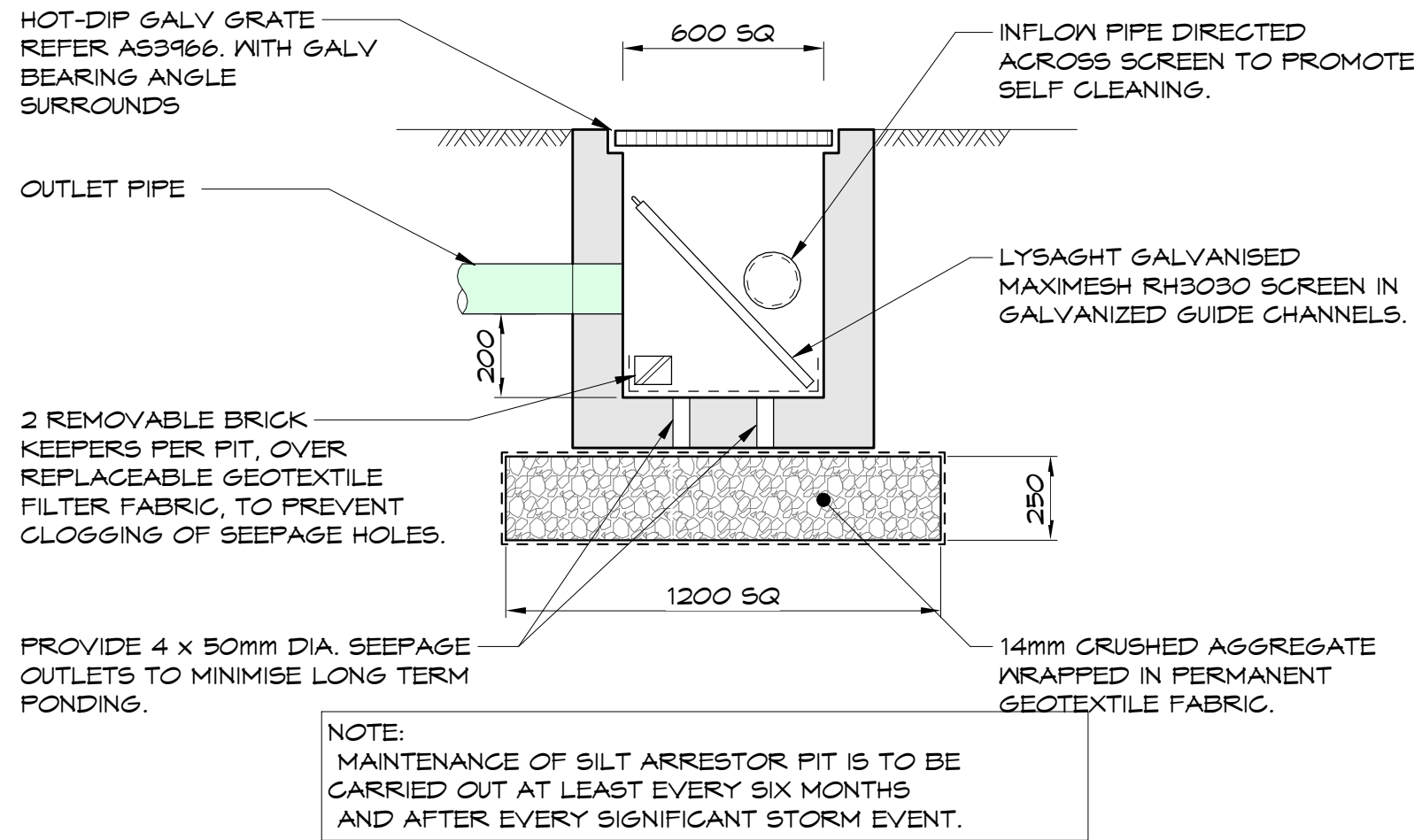
- NOTE:
1. CLIMB IRONS SHALL BE PROVIDED UNDER LID AT 300 CTS TO COUNCIL STANDARDS WHERE PIT DEPTH IS DEEPER THAN 1000.
 2. REINFORCEMENT NOTED IS ONLY REQUIRED FOR PITS EXCEEDING 900 DEEP, SUBJECT TO COUNCIL REQUIREMENTS. PITS GREATER THAN 3000 DEEP WILL REQUIRE STRUCTURAL ENGINEERS DESIGN.
 3. PROVIDE 100Dia x 3000 LONG SUBSOIL DRAINAGE STUB PIPE SURROUNDED WITH 100mm THICKNESS OF NOMINAL 20mm COARSE FILTER MATERIAL WRAPPED IN GEOTEXTILE FILTER FABRIC. (BIDUM A24 OR APPROVED SIMILAR). TO BE PARALLEL TO UPSTREAM SIDE OF EACH INLET PIPE.
 4. ALTERNATIVE PIT CONSTRUCTION MAY BE USED SUBJECT TO THE ENGINEERS APPROVAL.
 5. CONCRETE STRENGTH F_c = 32 MPa

TYPICAL CONCRETE INLET PIT - NATURAL SURFACE

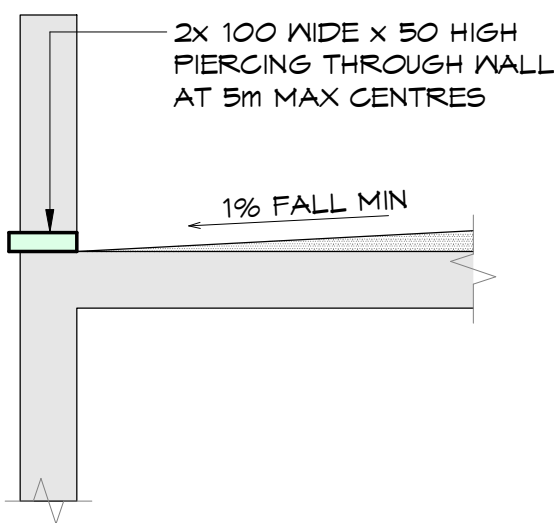


- NOTE:
1. CLIMB IRONS SHALL BE PROVIDED UNDER LID AT 300 CTS TO COUNCIL STANDARDS WHERE PIT DEPTH IS DEEPER THAN 1000.
 2. REINFORCEMENT NOTED IS ONLY REQUIRED FOR PITS EXCEEDING 900 DEEP, SUBJECT TO COUNCIL REQUIREMENTS. PITS GREATER THAN 3000 DEEP WILL REQUIRE STRUCTURAL ENGINEERS DESIGN.
 3. PROVIDE 100Dia x 3000 LONG SUBSOIL DRAINAGE STUB PIPE SURROUNDED WITH 100mm THICKNESS OF NOMINAL 20mm COARSE FILTER MATERIAL WRAPPED IN GEOTEXTILE FILTER FABRIC. (BIDUM A24 OR APPROVED SIMILAR). TO BE PARALLEL TO UPSTREAM SIDE OF EACH INLET PIPE.
 4. ALTERNATIVE PIT CONSTRUCTION MAY BE USED SUBJECT TO THE ENGINEERS APPROVAL.
 5. CONCRETE STRENGTH F_c = 32 MPa

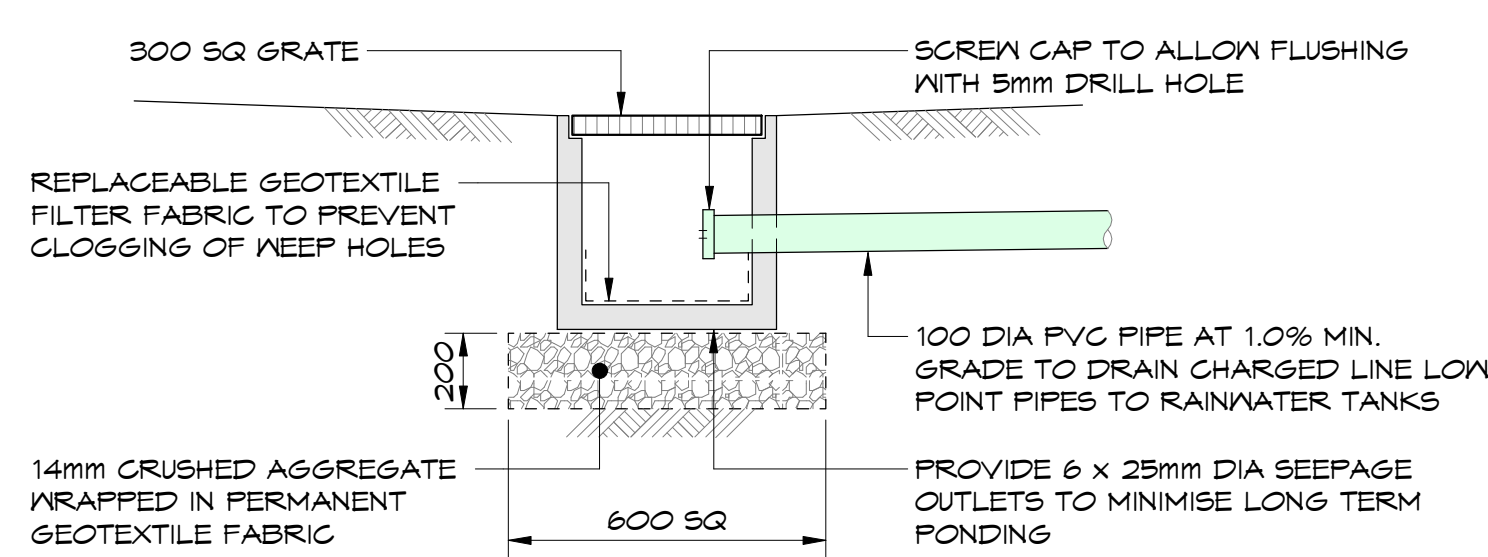
TYPICAL CONCRETE INLET PIT - CONCRETE SURFACE



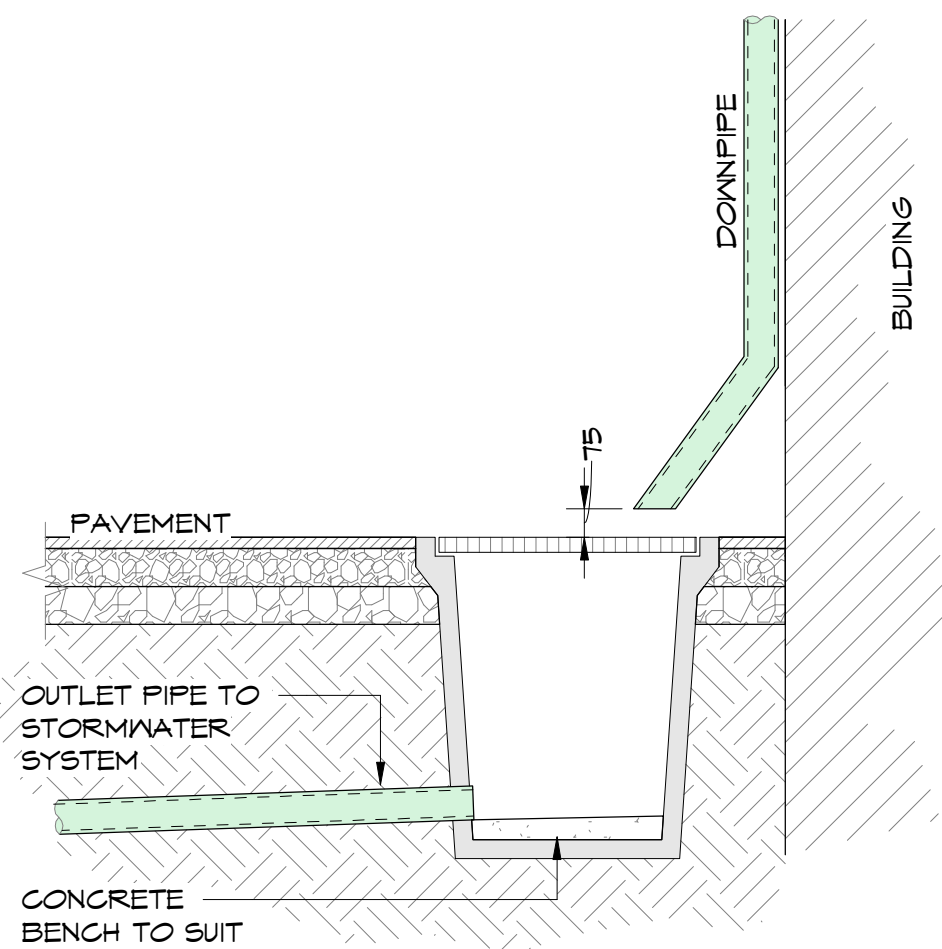
TYPICAL SILT ARRESTOR PIT



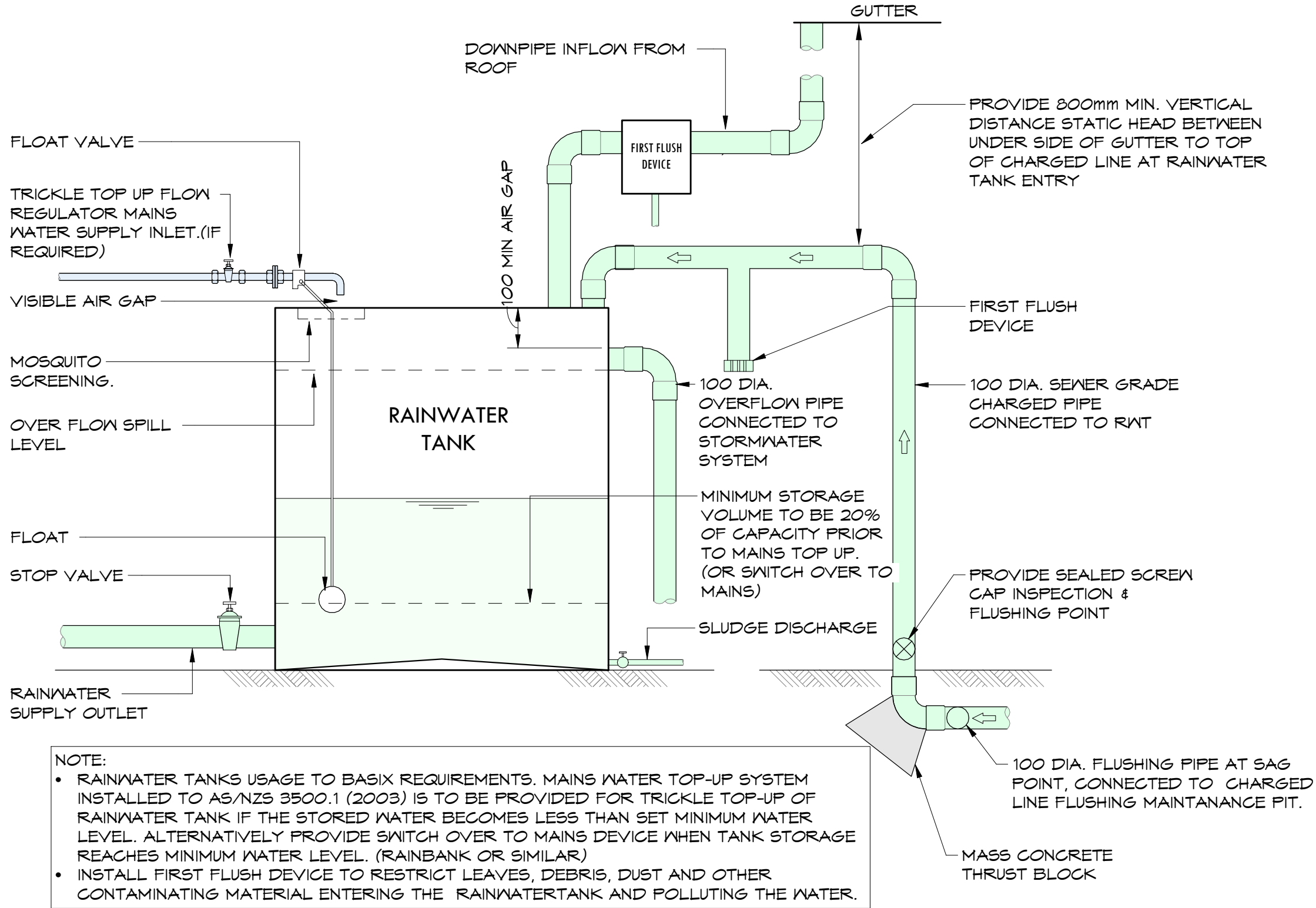
TYPICAL BALCONY SPITTER DETAIL



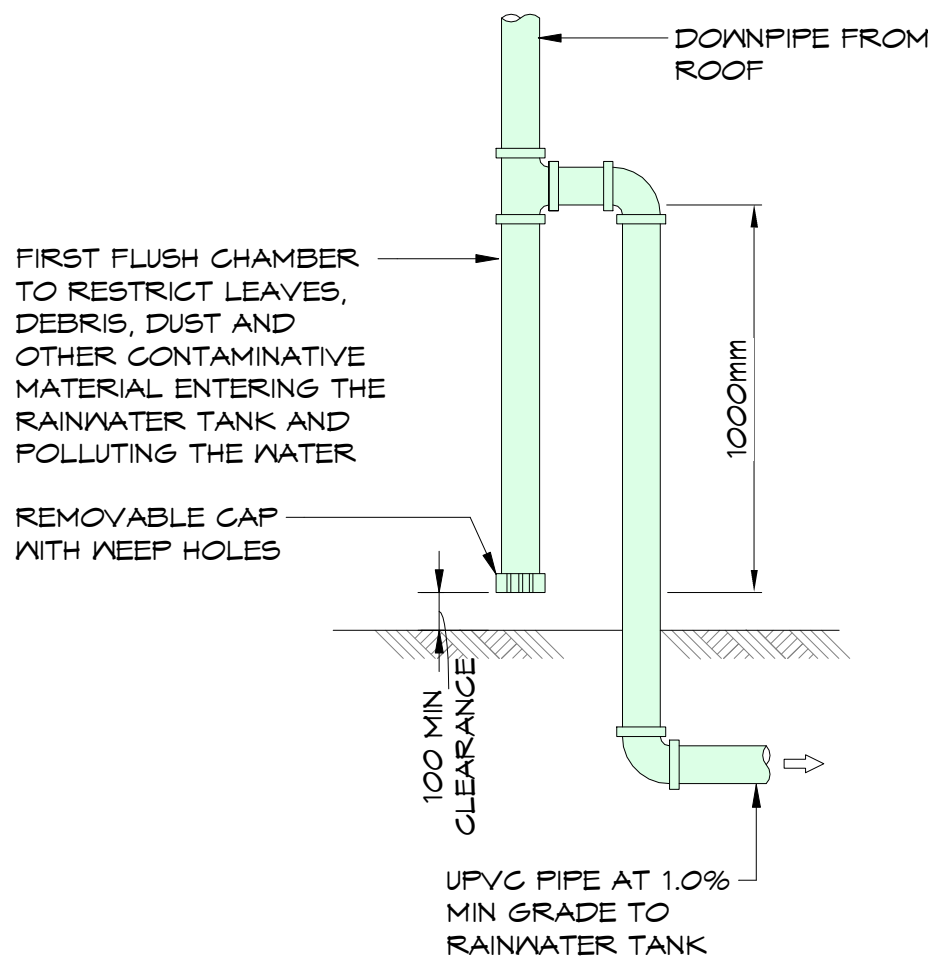
CHARGE LINE FLUSHING MAINTENANCE PIT



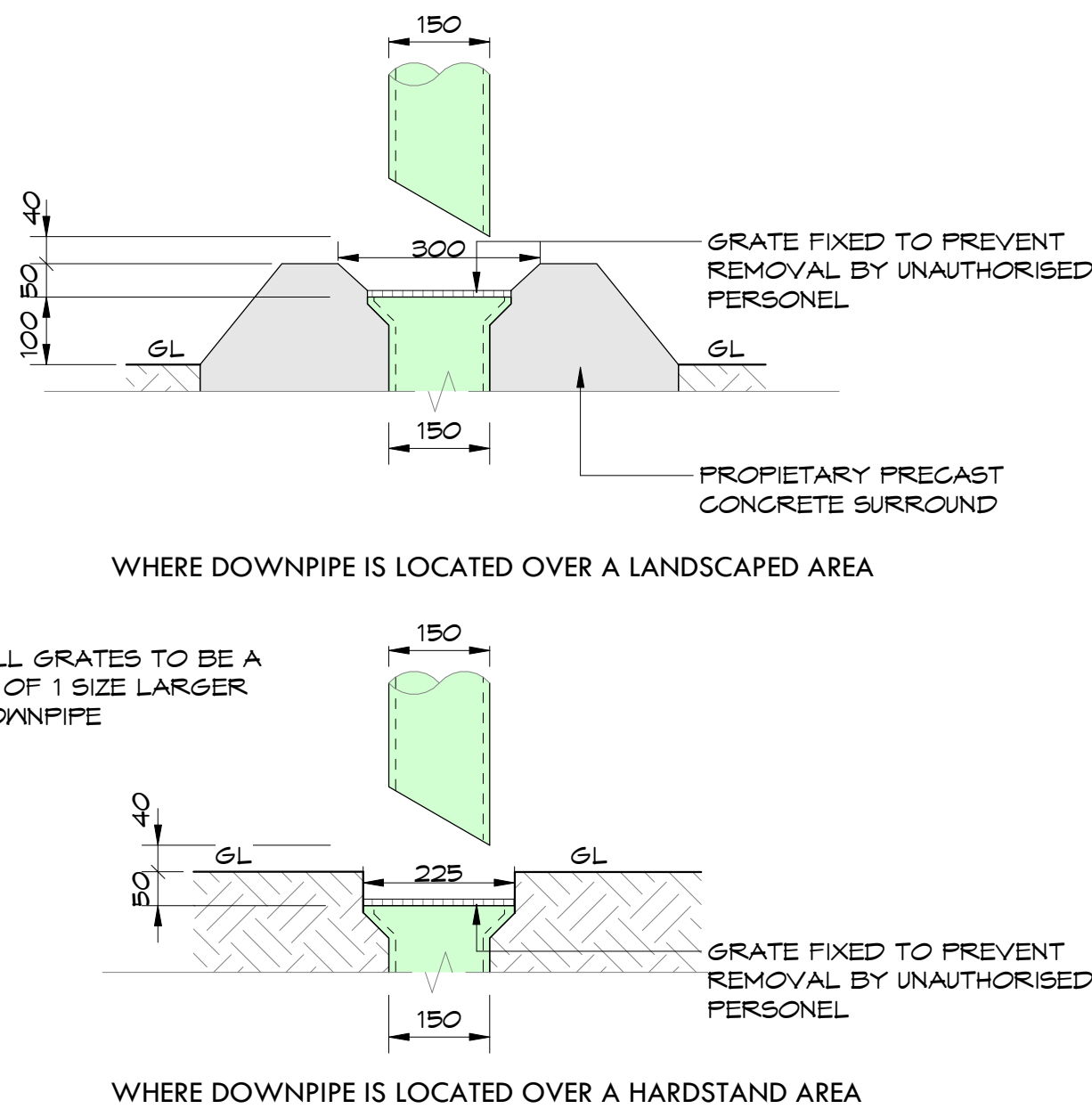
TYPICAL DOWNPIPE TO PIT DETAIL



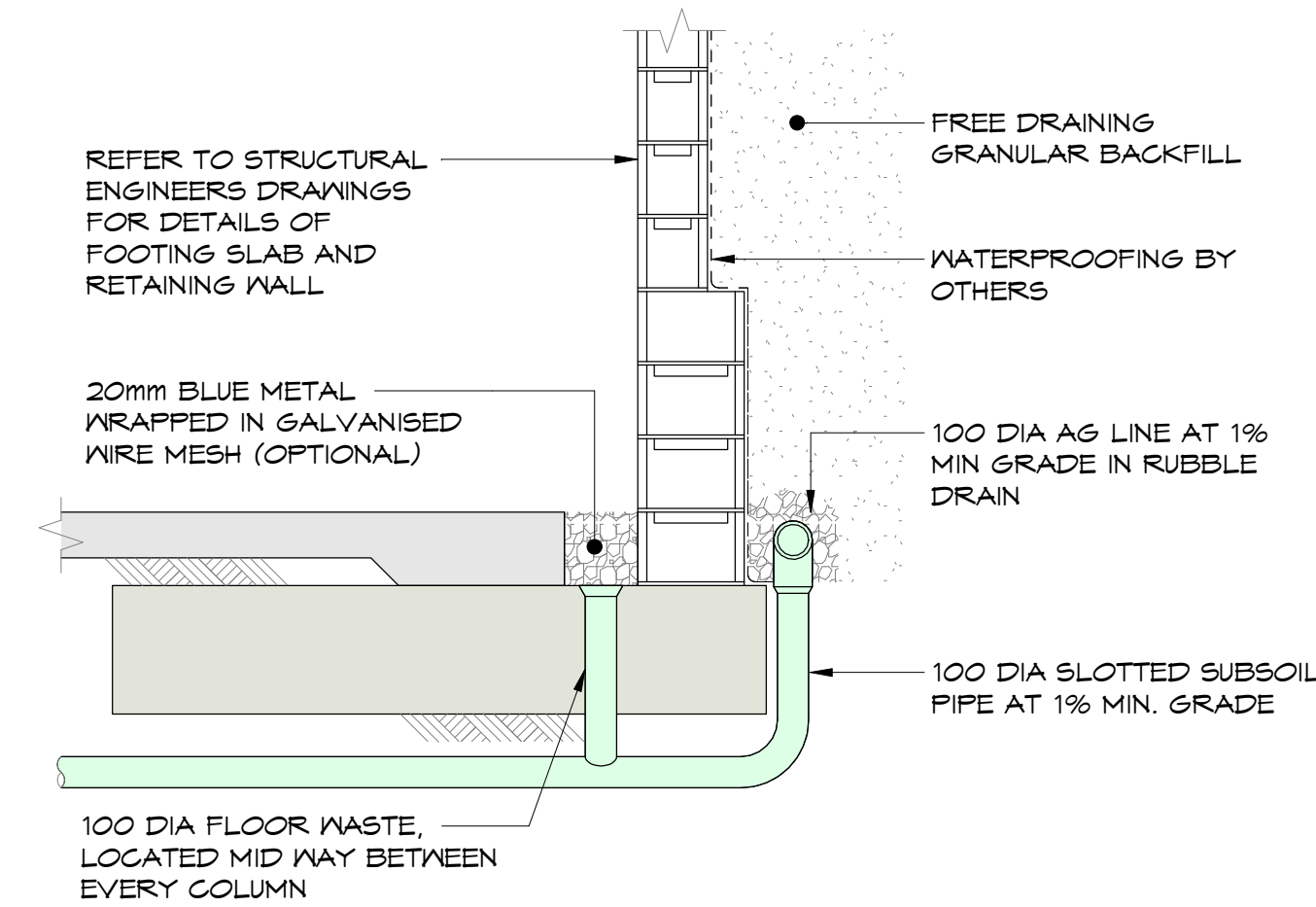
TYPICAL RAINWATER TANK DETAIL - CHARGED LINE



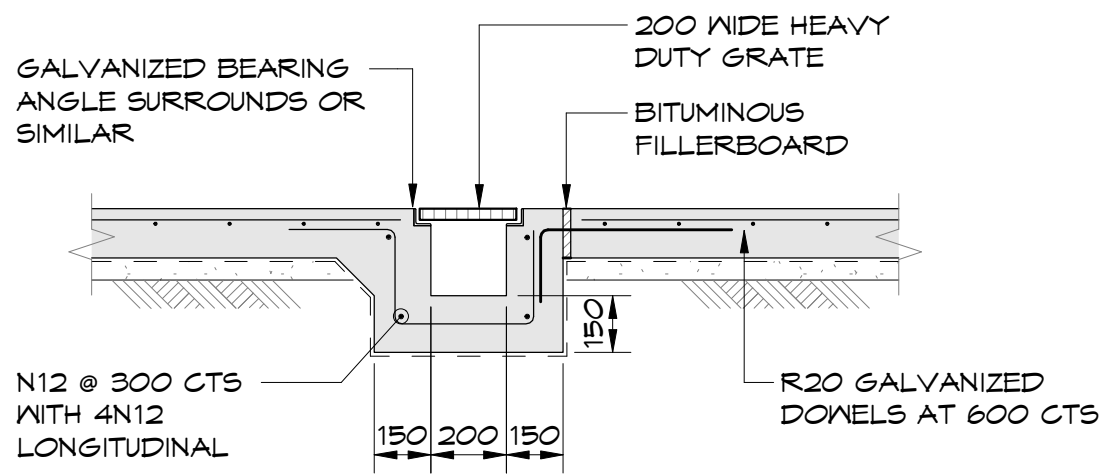
TYPICAL FIRST FLUSH DETAIL



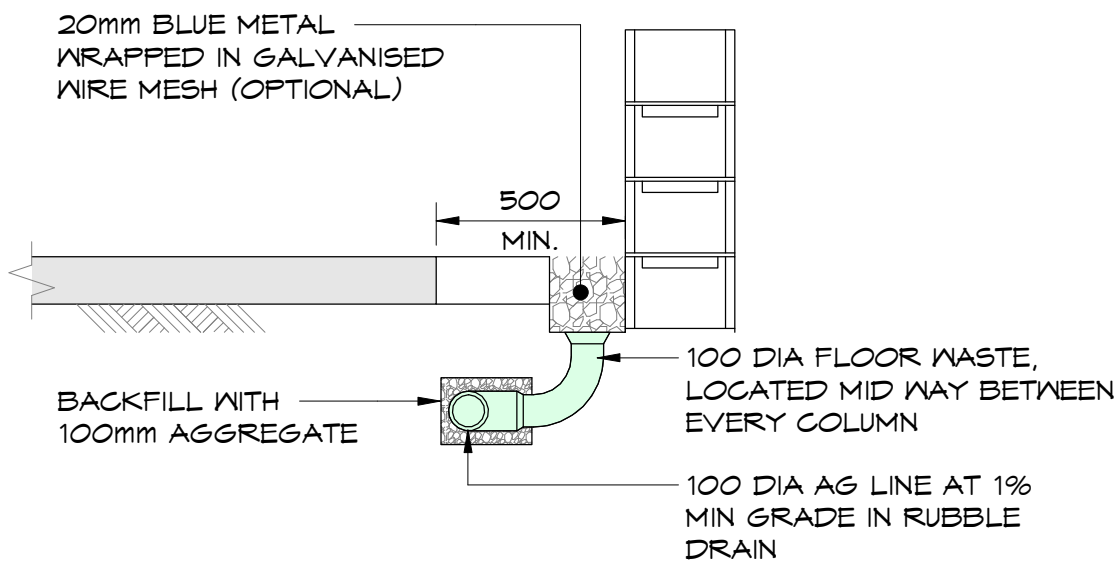
TYPICAL DOWNPIPE DISCHARGE DETAIL



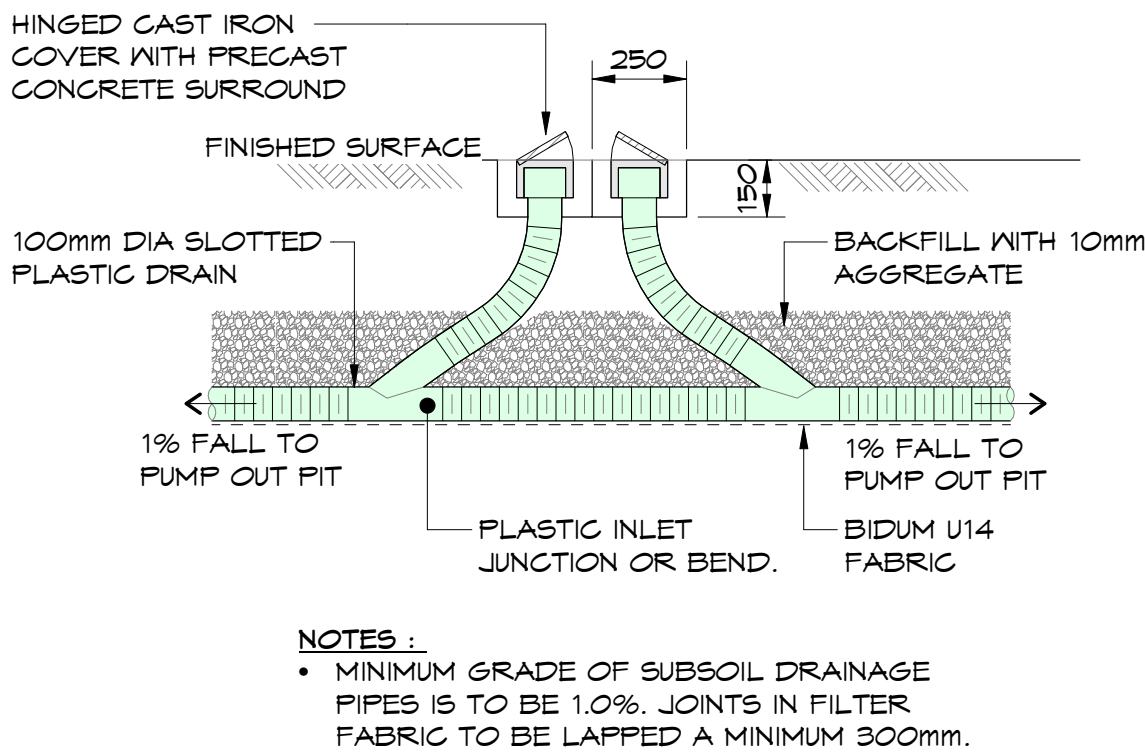
TYPICAL GROUNDWATER DRAINAGE DETAIL



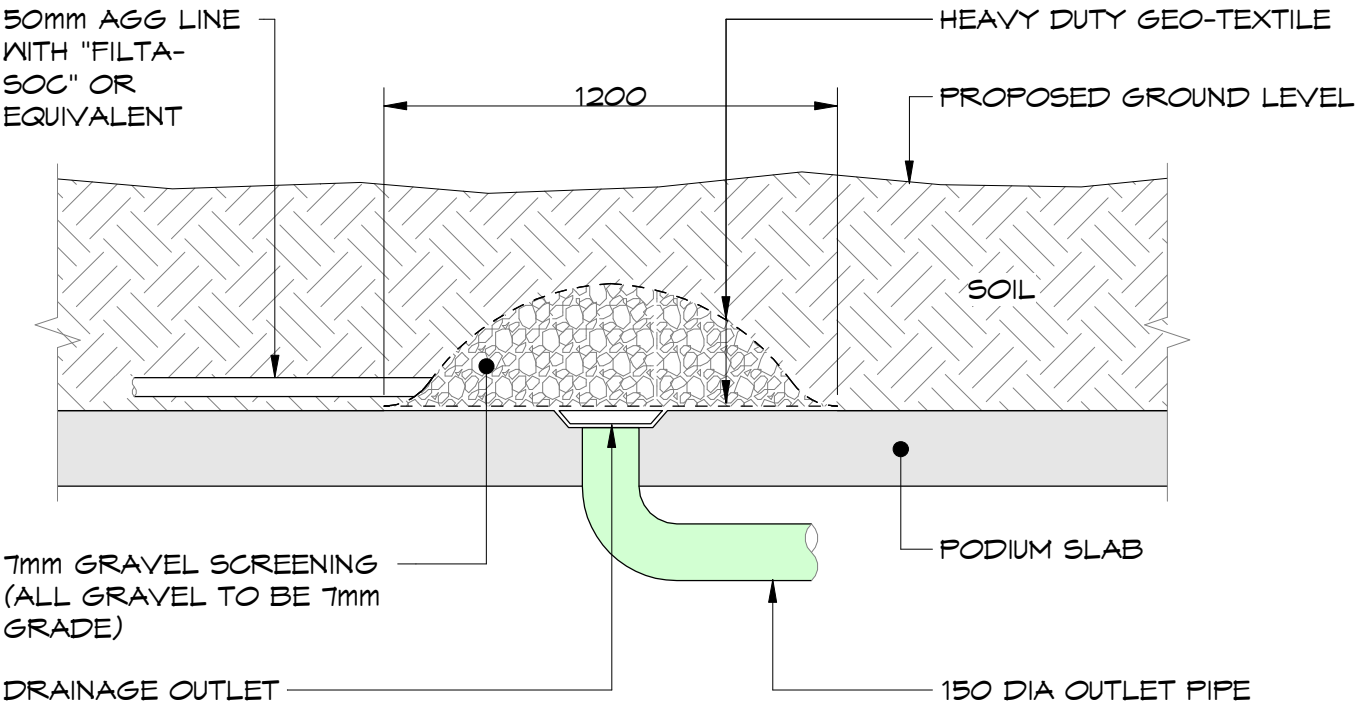
TYPICAL GRATED DRAIN DETAIL



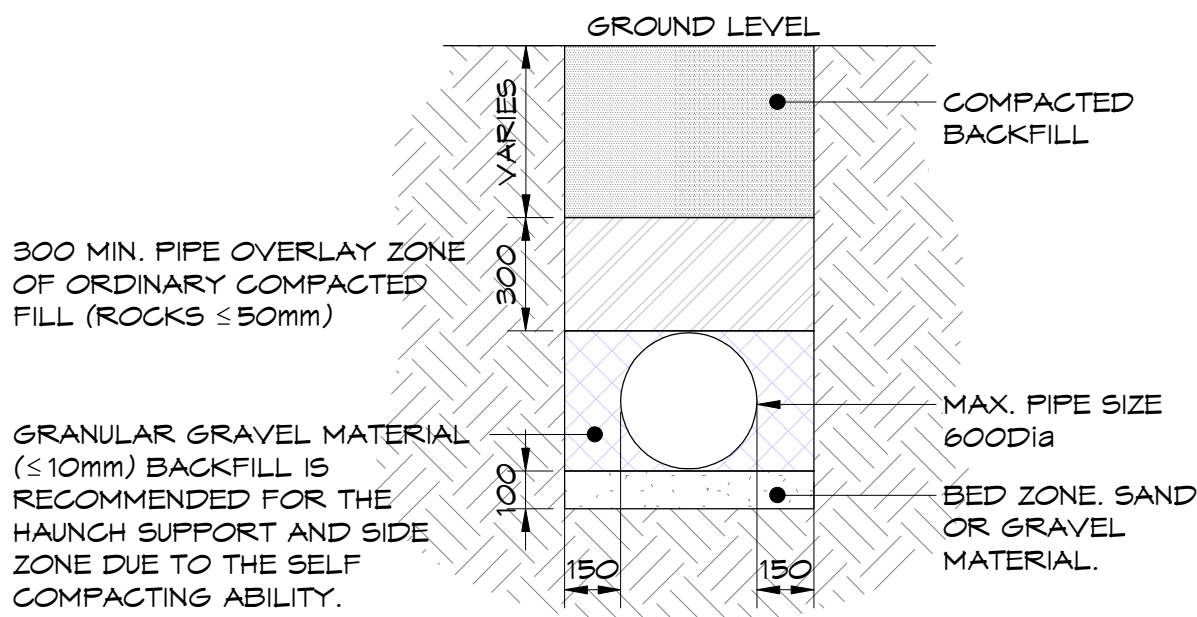
BUILDING E TYPICAL GROUNDWATER DRAINAGE DETAIL



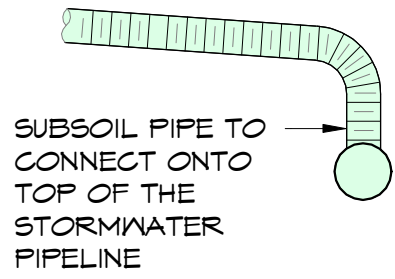
SUBSOIL PIPE FLUSHING POINT



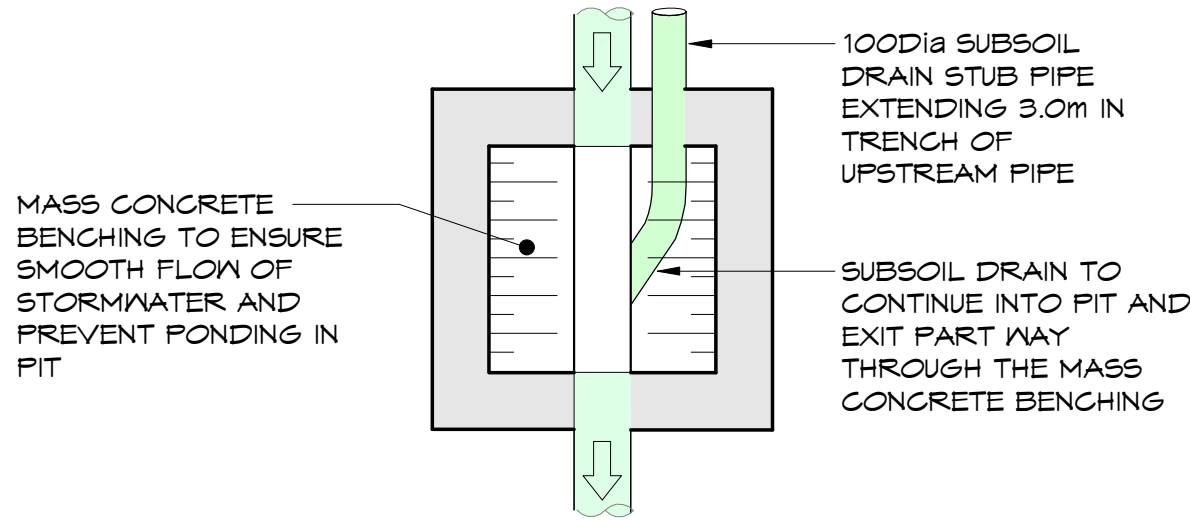
TYPICAL SUBSOIL OUTLET DETAIL



TYPICAL SCHEMATIC PIPE TRENCH DETAIL



SUBSOIL PIPE CONNECTION



TYPICAL SUBSOIL PIPE/PIT BENCHING

DESIGN SUMMARY

ON-SITE DETENTION:

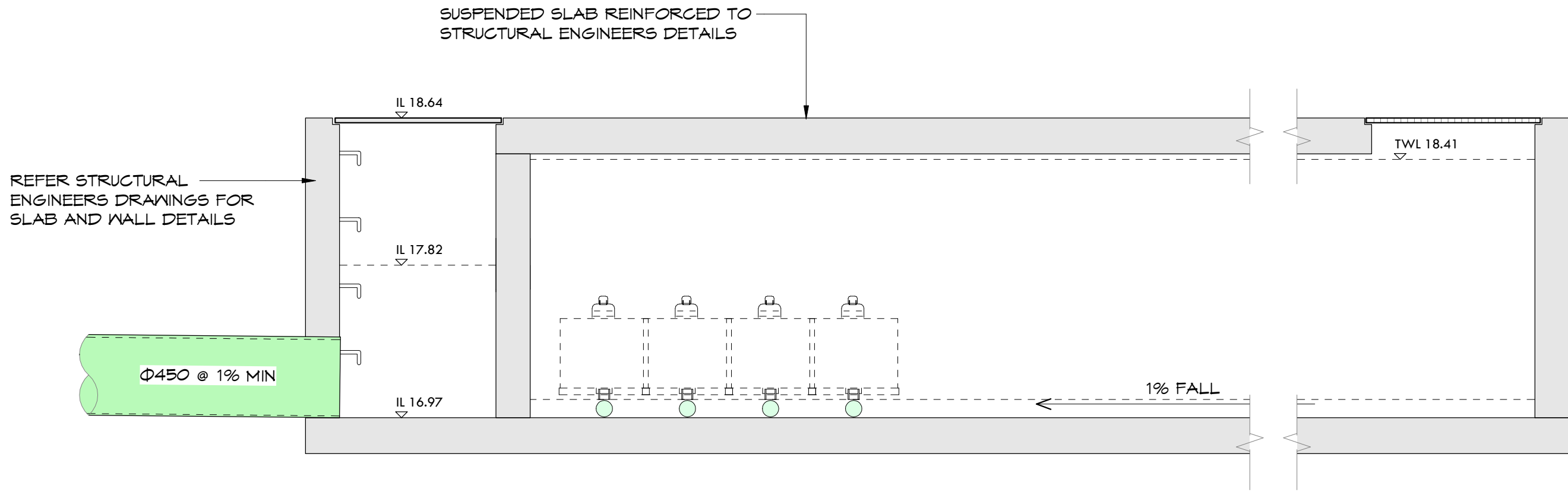
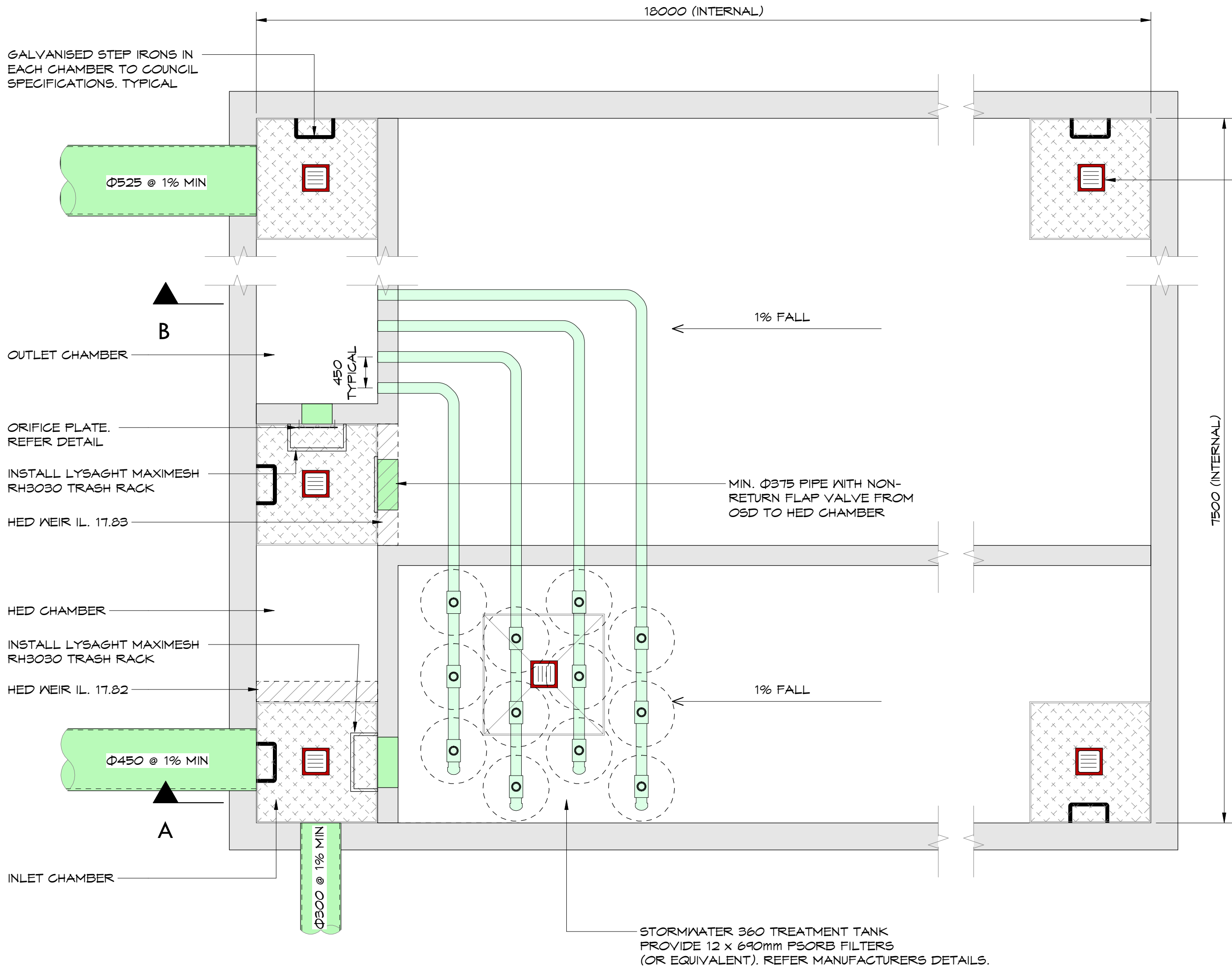
DESIGN BASIS:
· BURWOOD COUNCIL
· LIMITED DISCHARGES FROM THE DEVELOPMENT SITE TO ITS PRE DEVELOPMENT CONDITIONS FOR ALL STORM EVENTS FROM 2 TO 100 YEAR ARI

AEP	PRE (L/s)	POST (L/s)
50%	251	250
20%	326	294
10%	374	304
5%	417	317
2%	401	378
1%	437	435

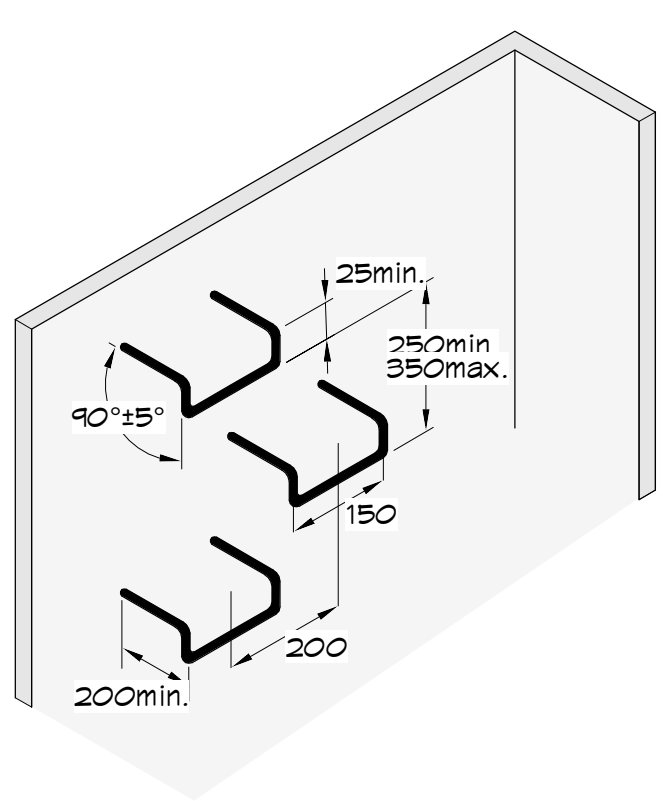
OSD VOLUME = 160m³

POLLUTANTS	REDUCTION STANDARDS	REDUCTION ACHIEVED
GROSS POLLUTANTS	90%	100%
TOTAL SUSPENDED SOLIDS	80%	87.8%
TOTAL PHOSPHORUS	55%	66.3%
TOTAL NITROGEN	40%	45%

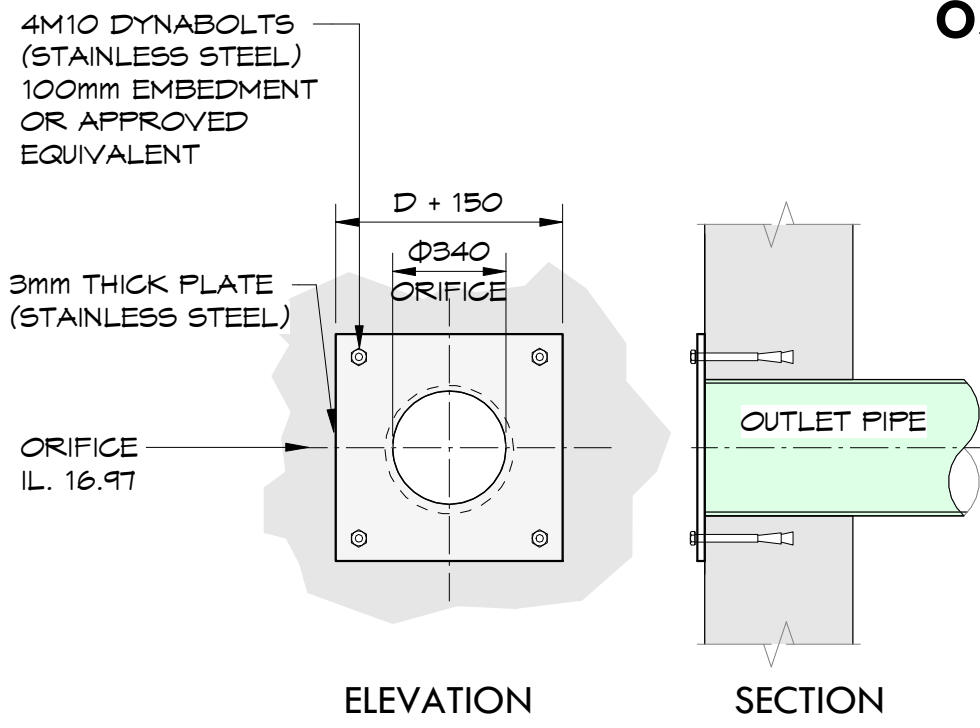
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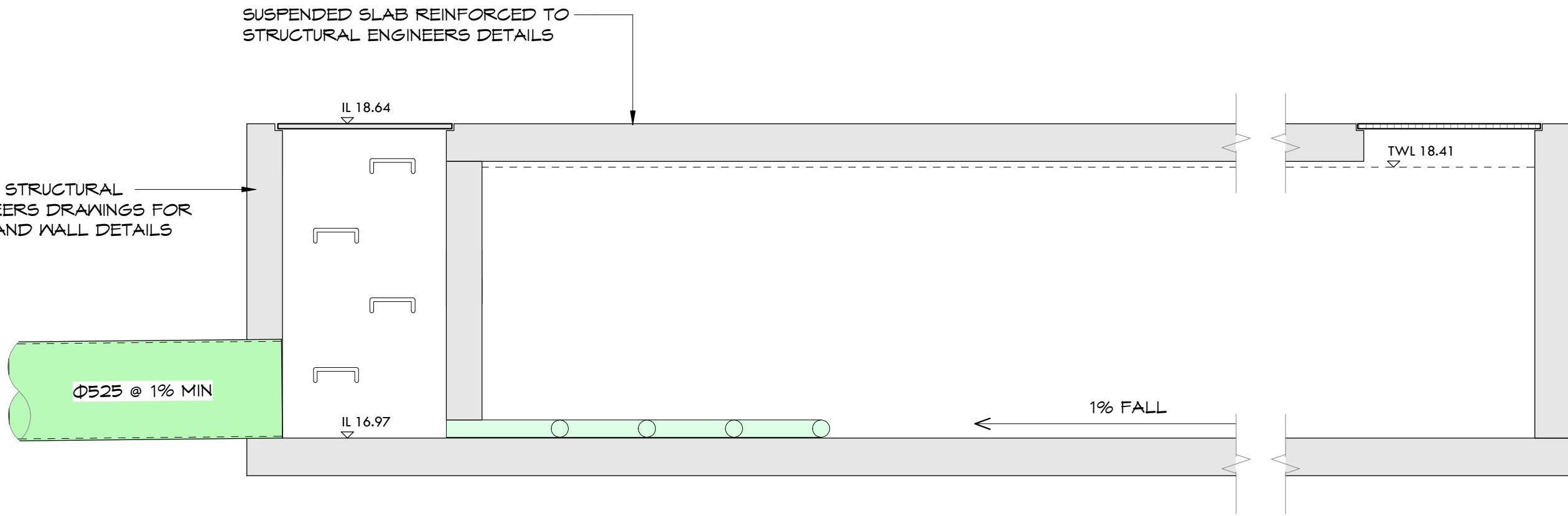
SECTION A-A



STEP IRON DETAIL



TYPICAL ORIFICE PLATE DETAIL



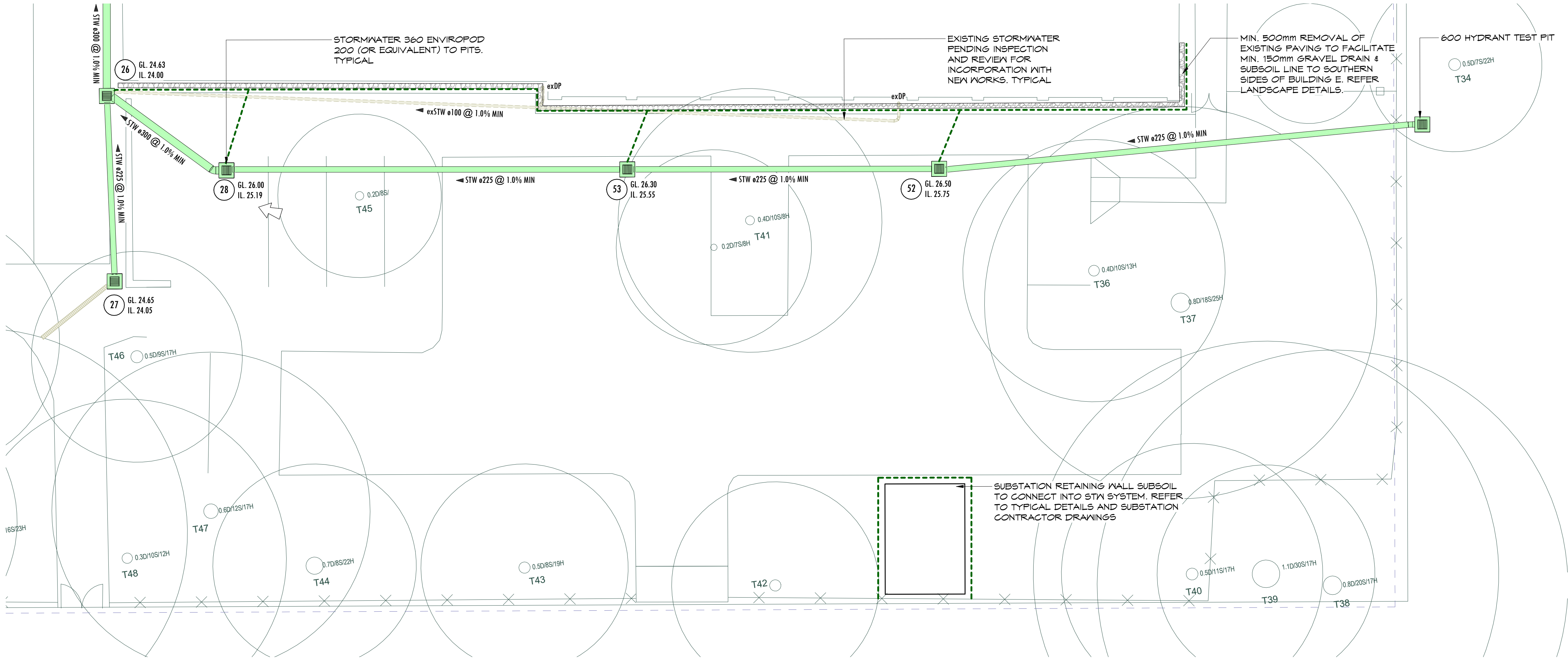
SECTION B-B

ON SITE DETENTION TANK DETAILS

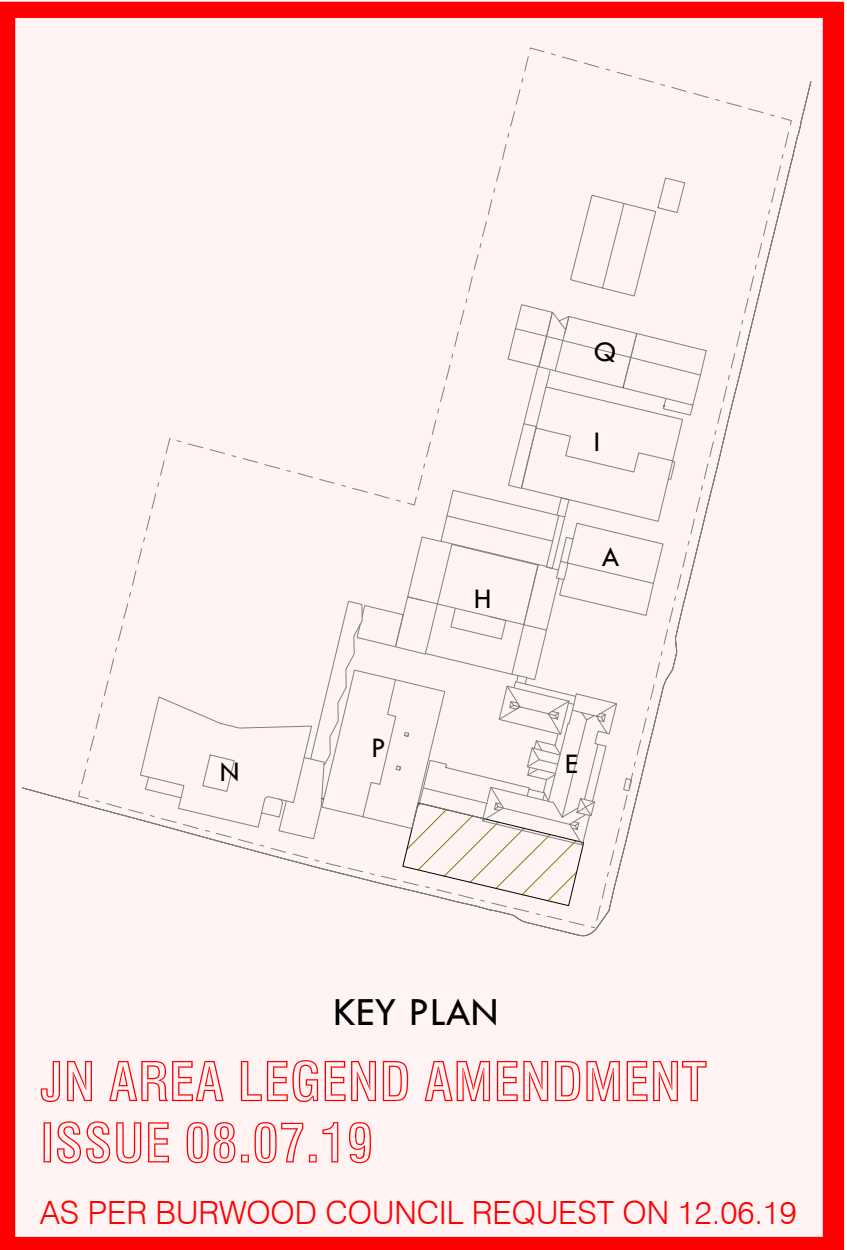
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Date 08.02.19

Drawing Reference 17011156-C060- Revision P2



CARPARK - STORMWATER PLAN - STAGE 2
SCALE 1 : 100



Issue	No.	Date	Description	Chkd
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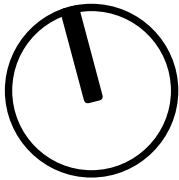
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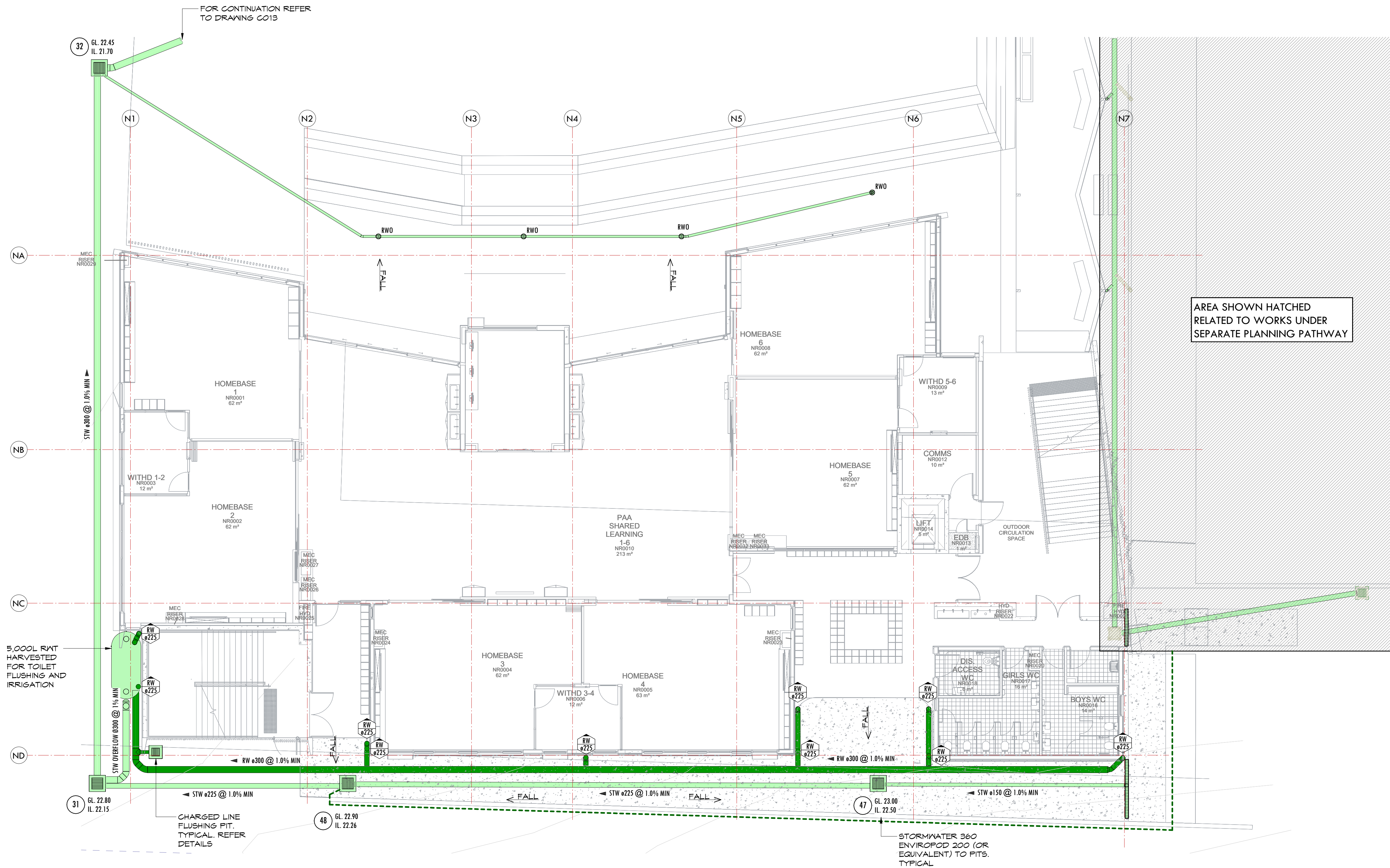
Drawing Title
CIVIL DESIGN
LANDSCAPE STORMWATER PLAN -
STAGE 2
Drawn: ER Design: LAM

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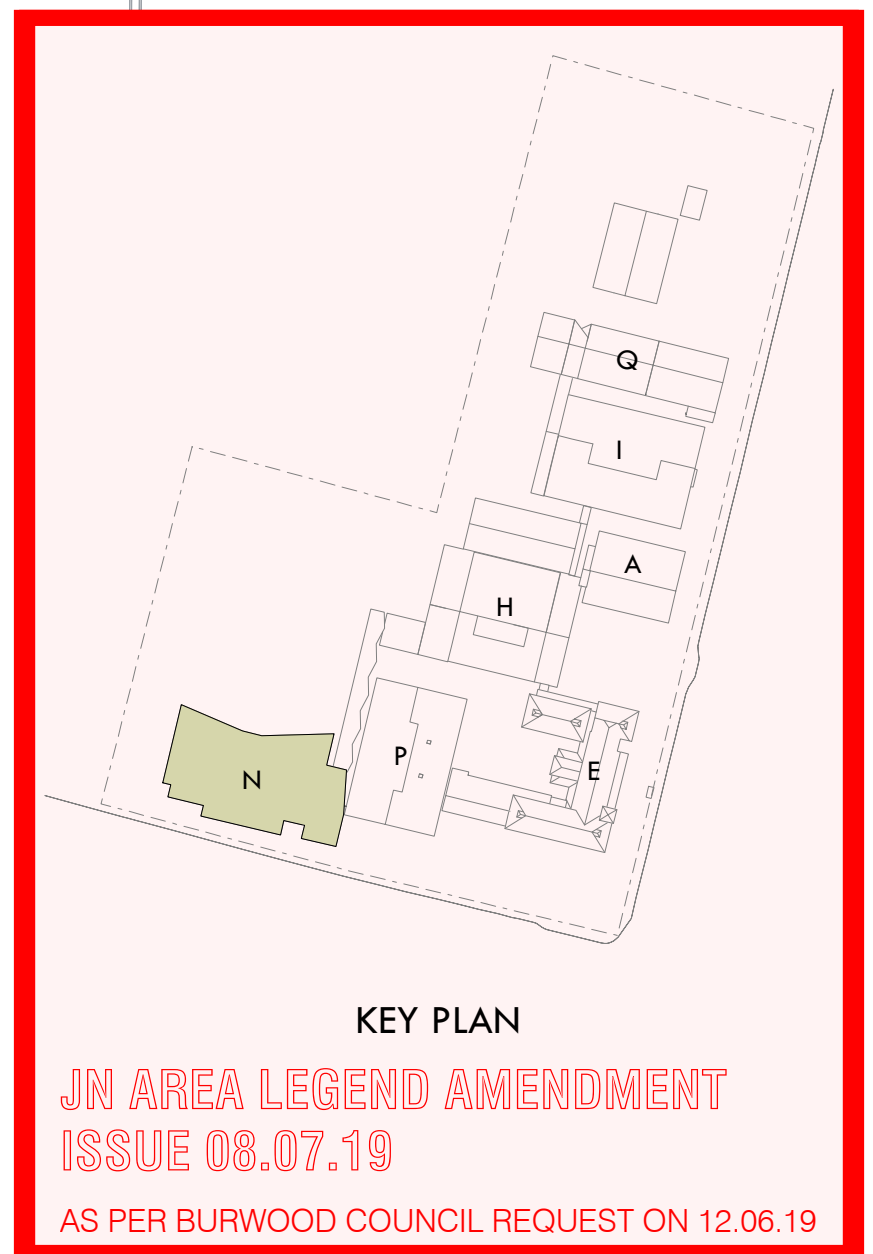
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Drawing Reference 17011156-C091-
Revision P1



BLOCK N - GROUND FLOOR STORMWATER PLAN - STAGE 2
SCALE 1 : 100



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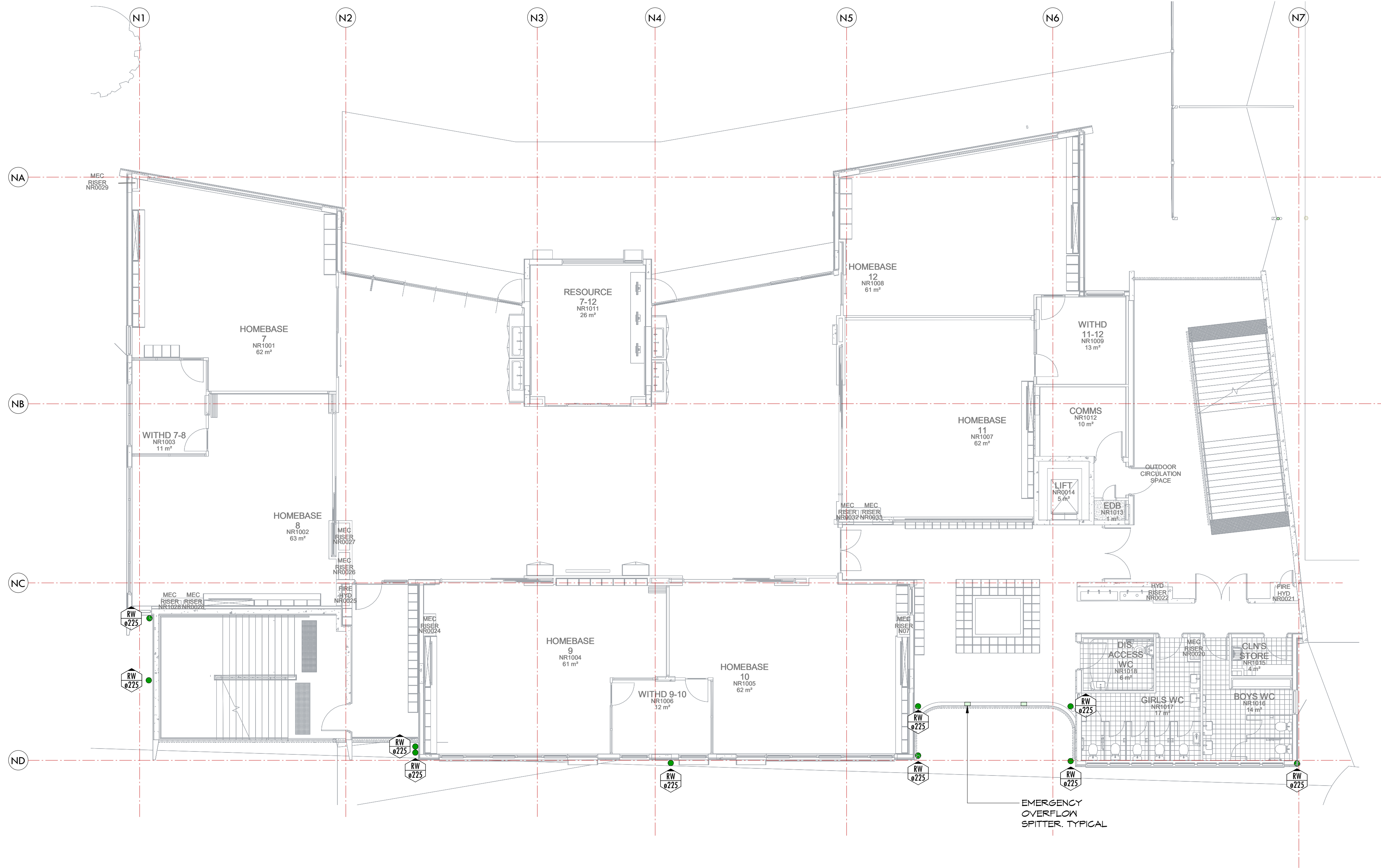
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Drawing Title
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BLOCK N - GROUND FLOOR
STORMWATER PLAN - STAGE 2
Drawn: ER Design: LAM

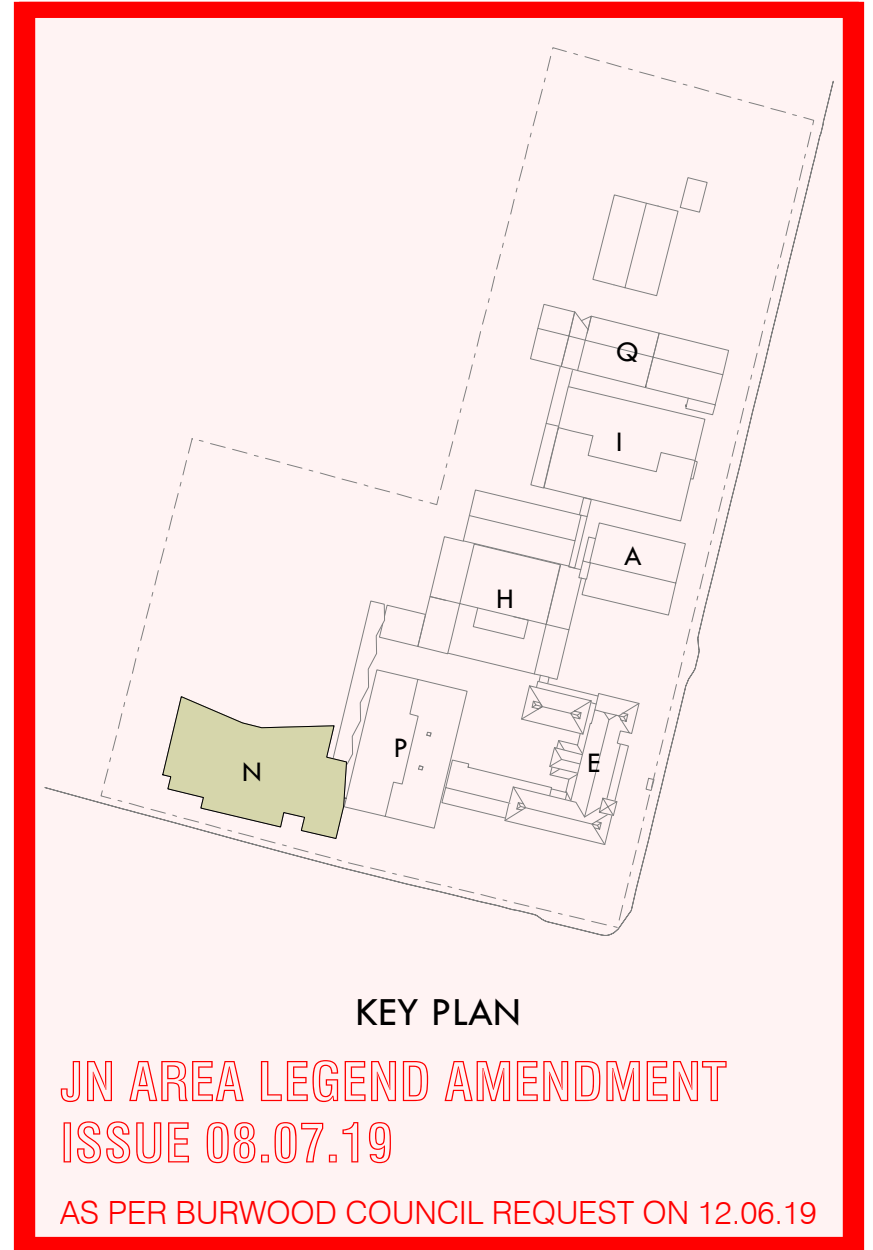
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BLOCK N - LEVEL 1 STORMWATER PLAN - STAGE 2
SCALE 1 : 100



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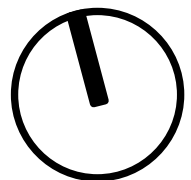
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Drawing Title
CIVIL DESIGN
BLOCK N - LEVEL 1 STORMWATER
PLAN - STAGE 2

Drawn: ER Design: LAM

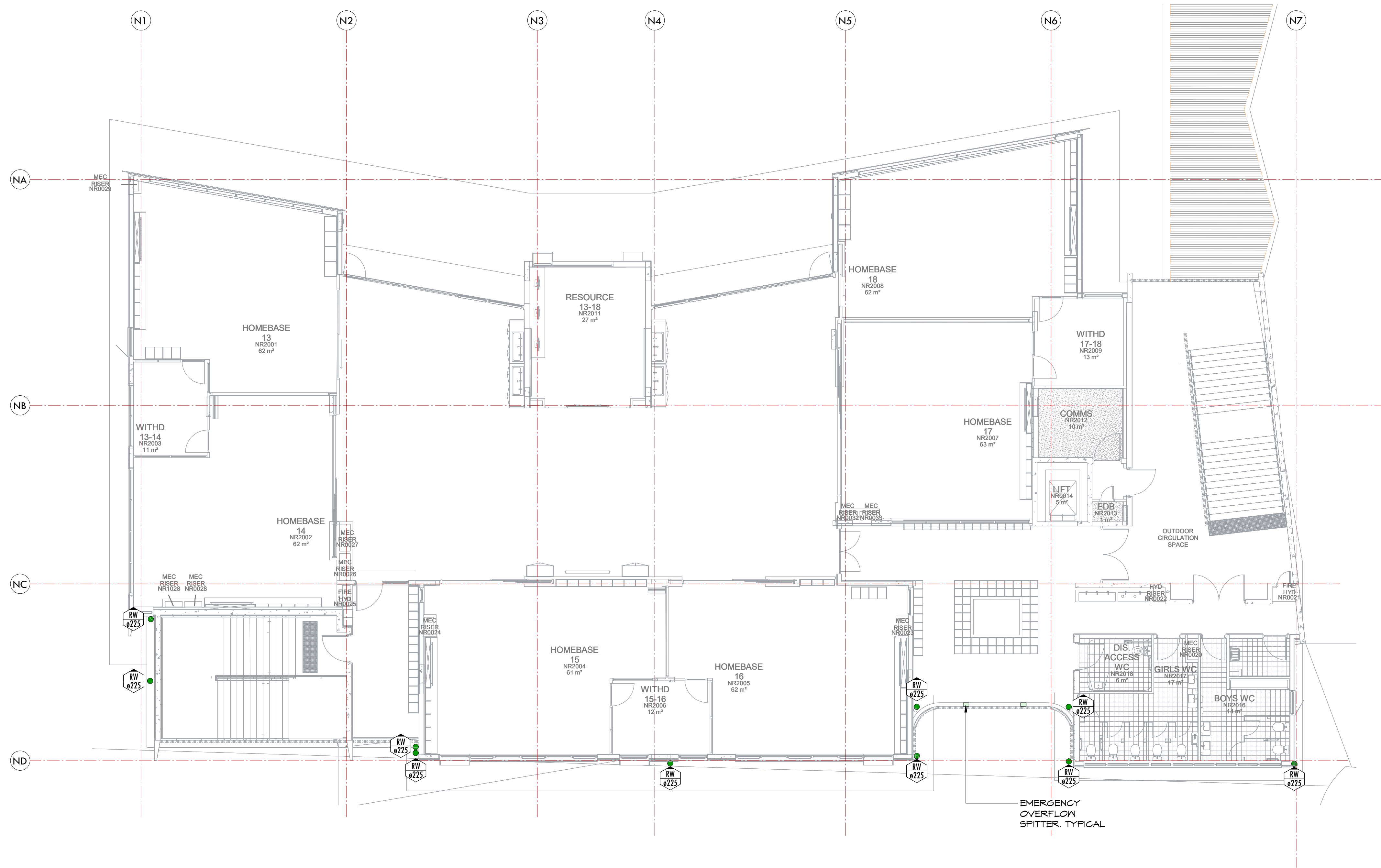
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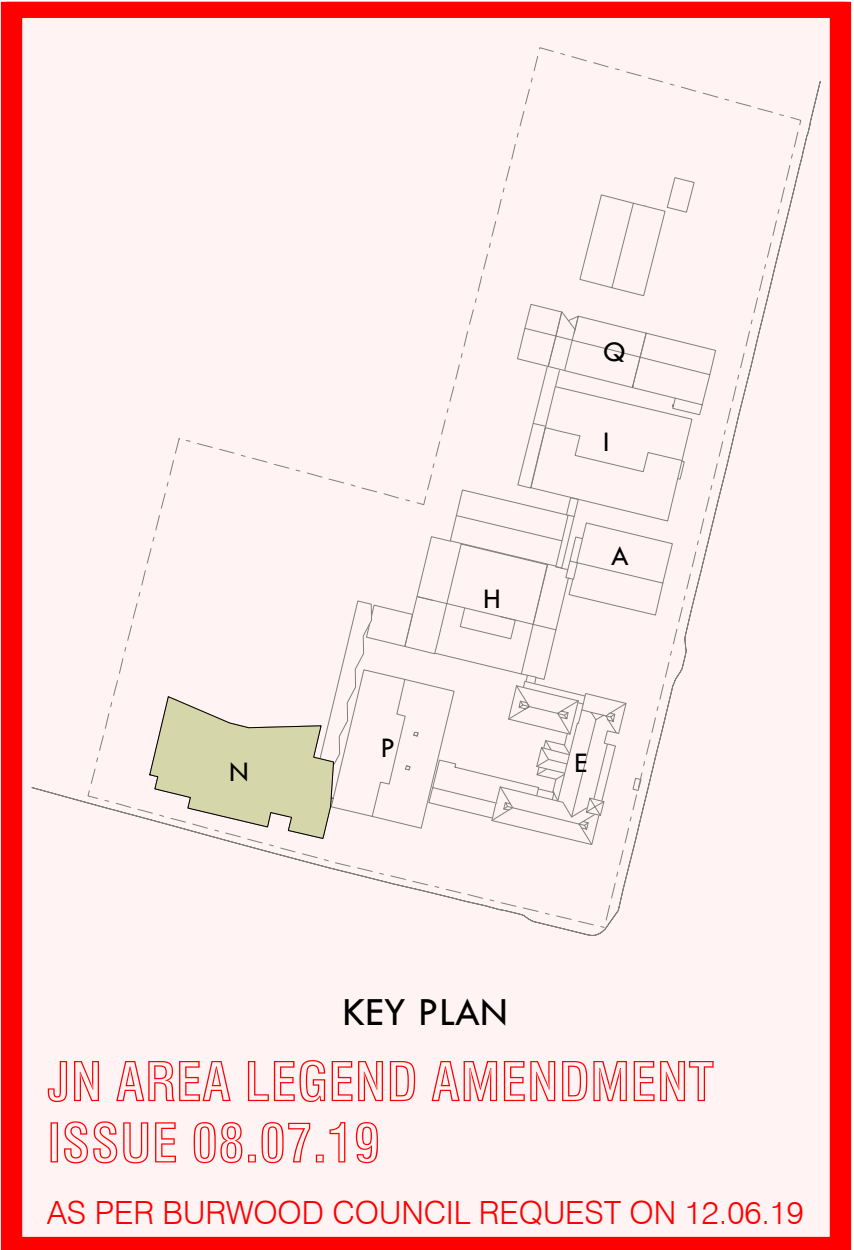


Date 08.02.19
Scale 100@A1 or 200@A3

Drawing Reference
17011156-C111-
Revision
P1



BLOCK N - LEVEL 2 STORMWATER PLAN - STAGE 2
SCALE 1 : 100



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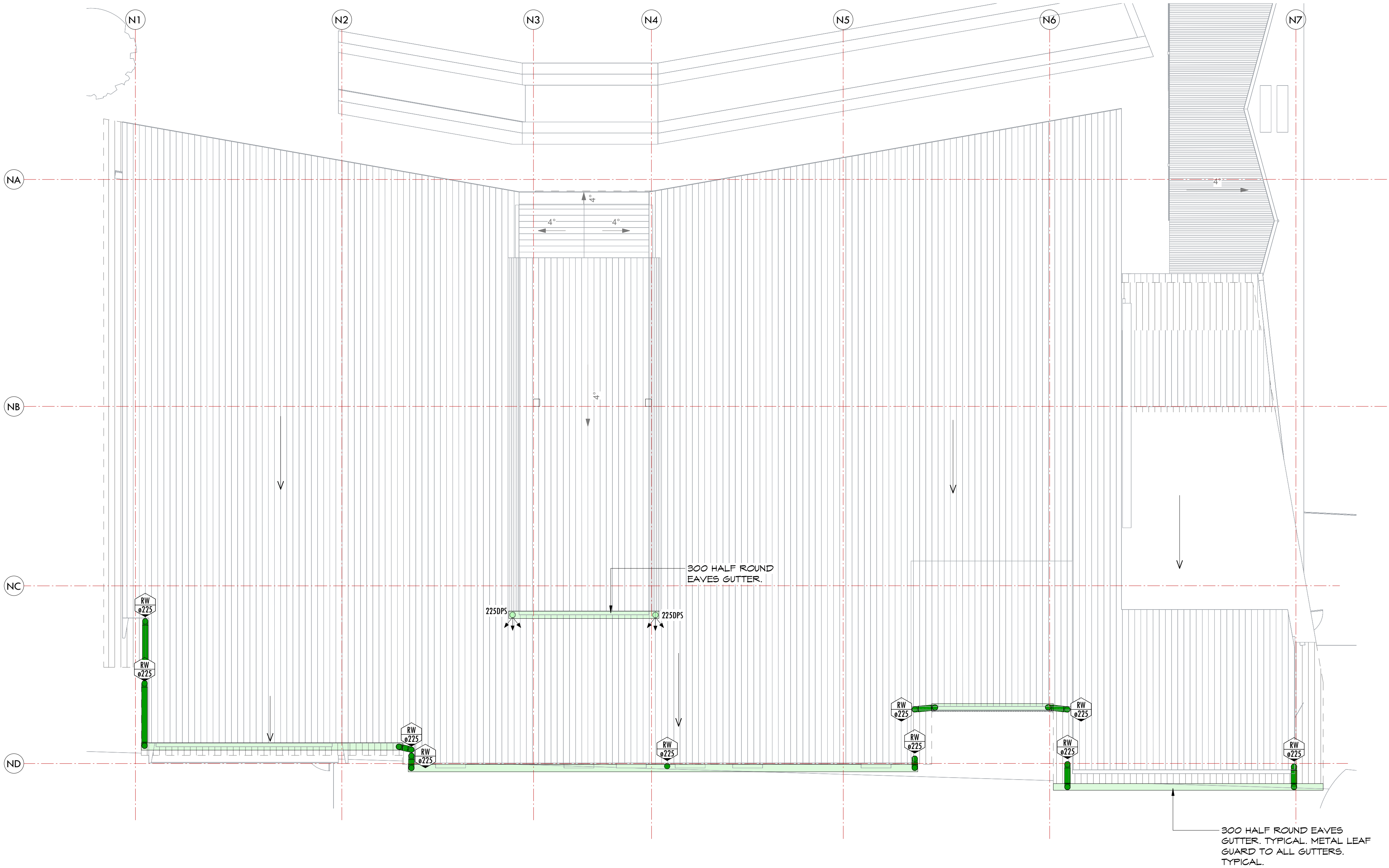
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Drawing Title
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BLOCK N - LEVEL 2 STORMWATER
PLAN - STAGE 2
Drawn: ER Design: LAM

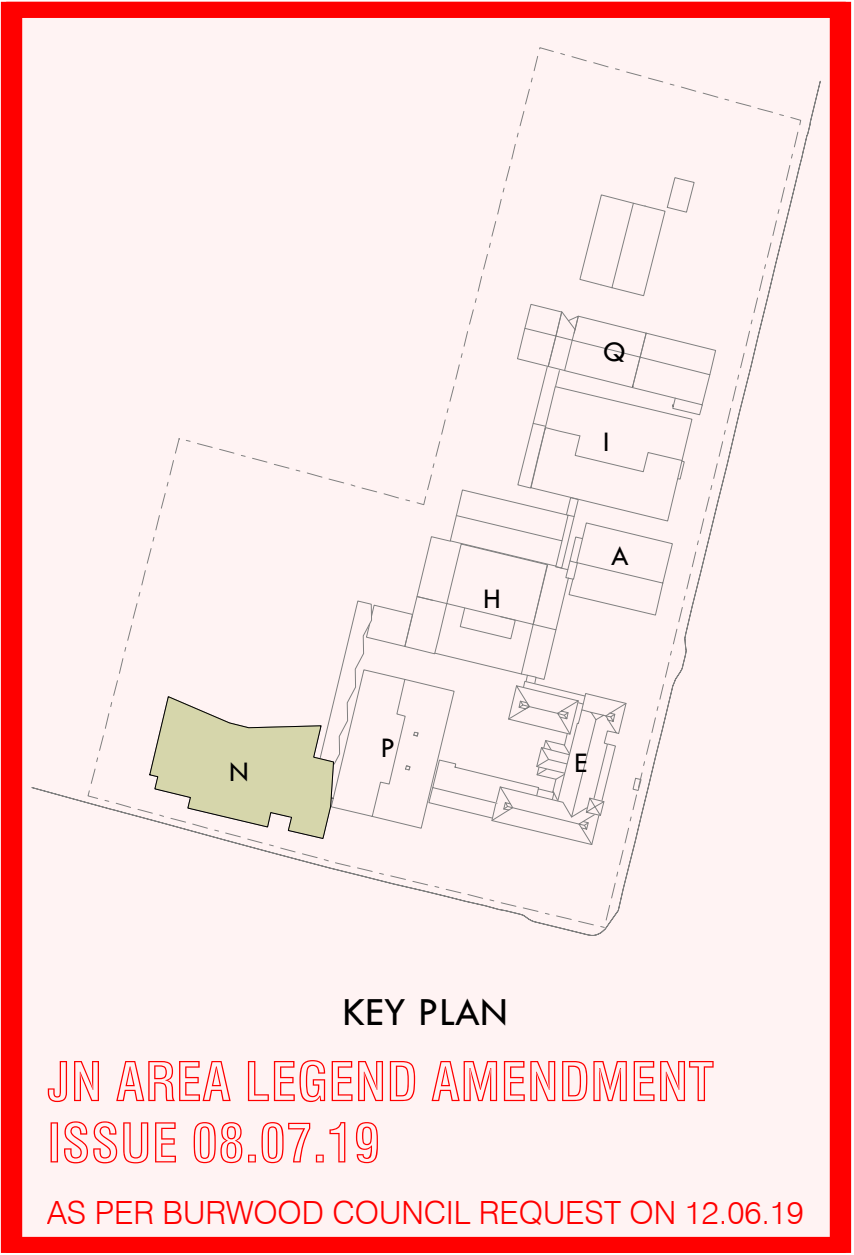
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BLOCK N - ROOF STORMWATER PLAN - STAGE 2
SCALE 1 : 100



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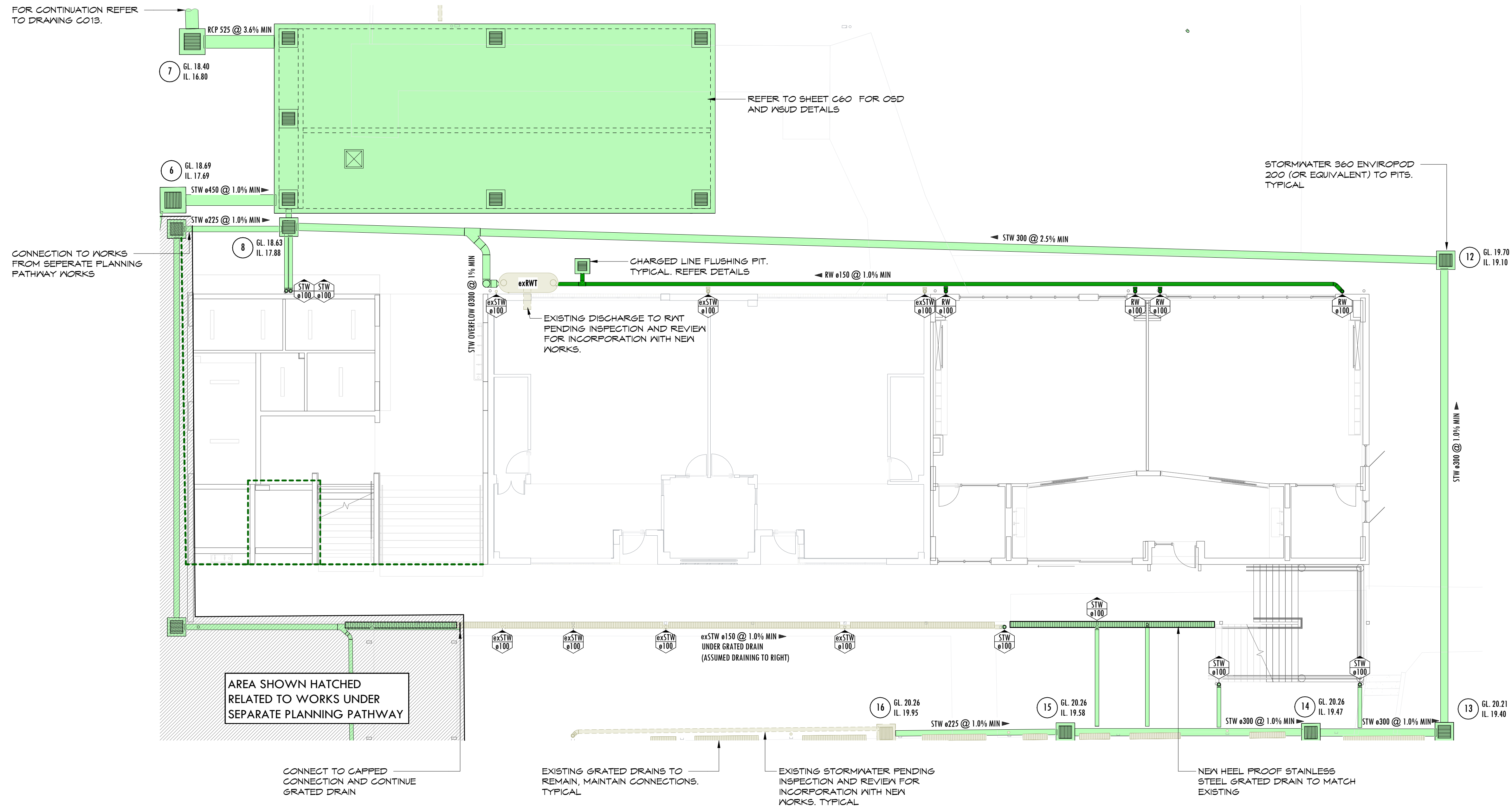
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Drawing Title
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BLOCK N - ROOF STORMWATER
PLAN - STAGE 2
Drawn: ER Design: LAM

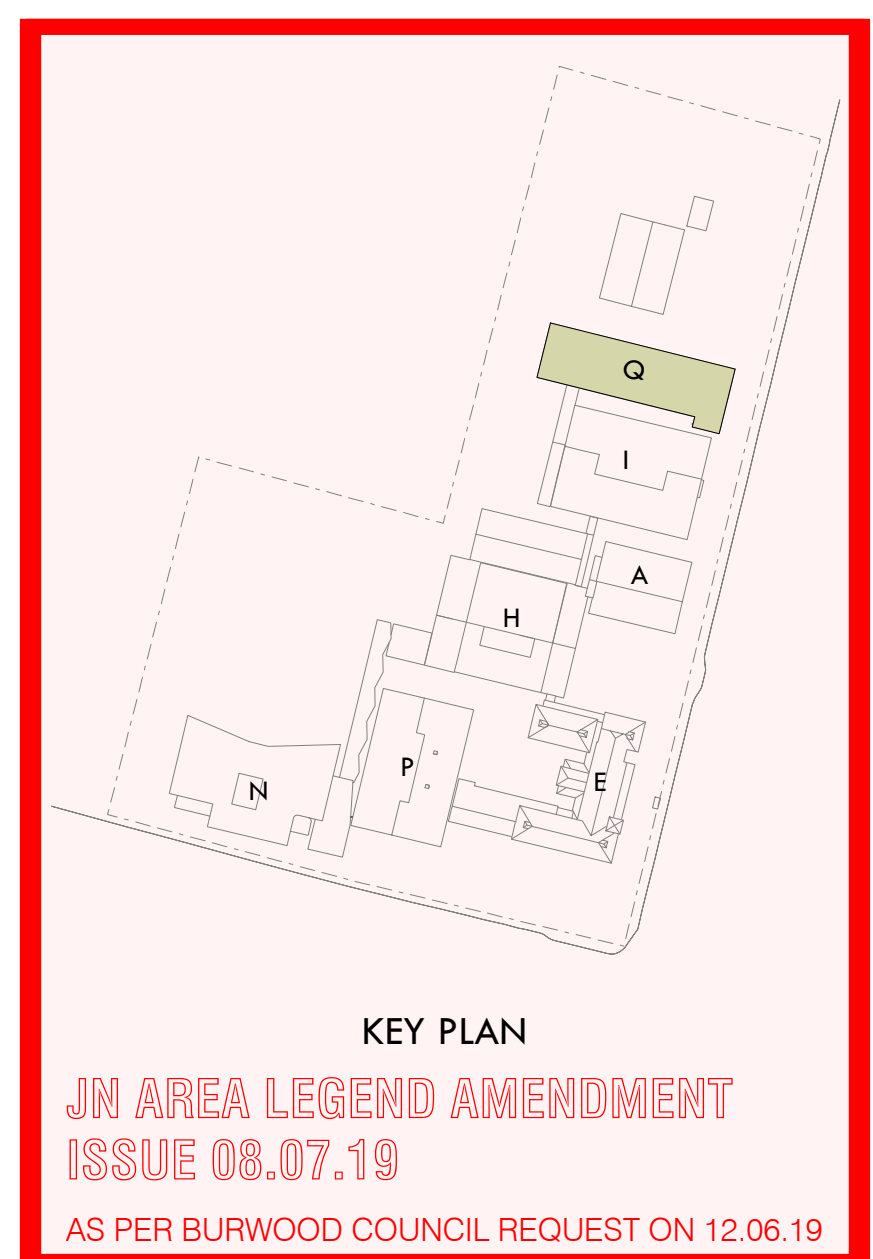
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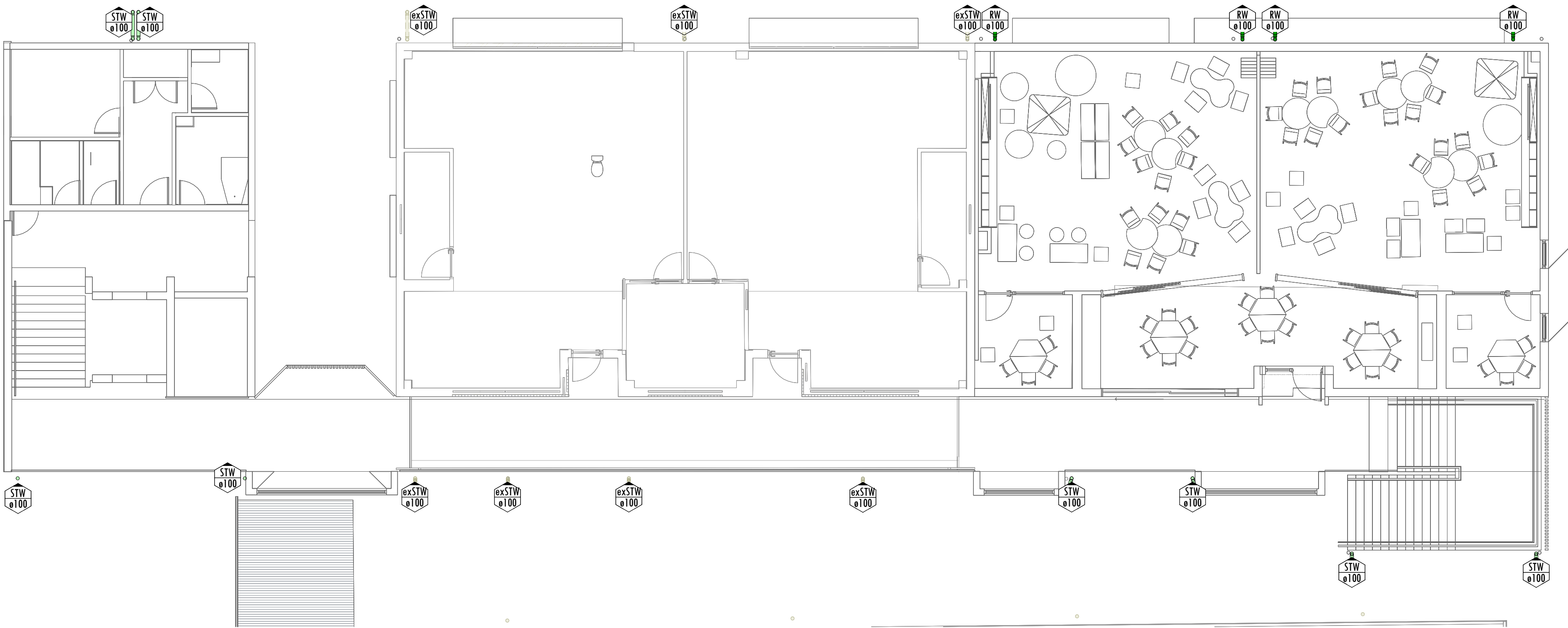
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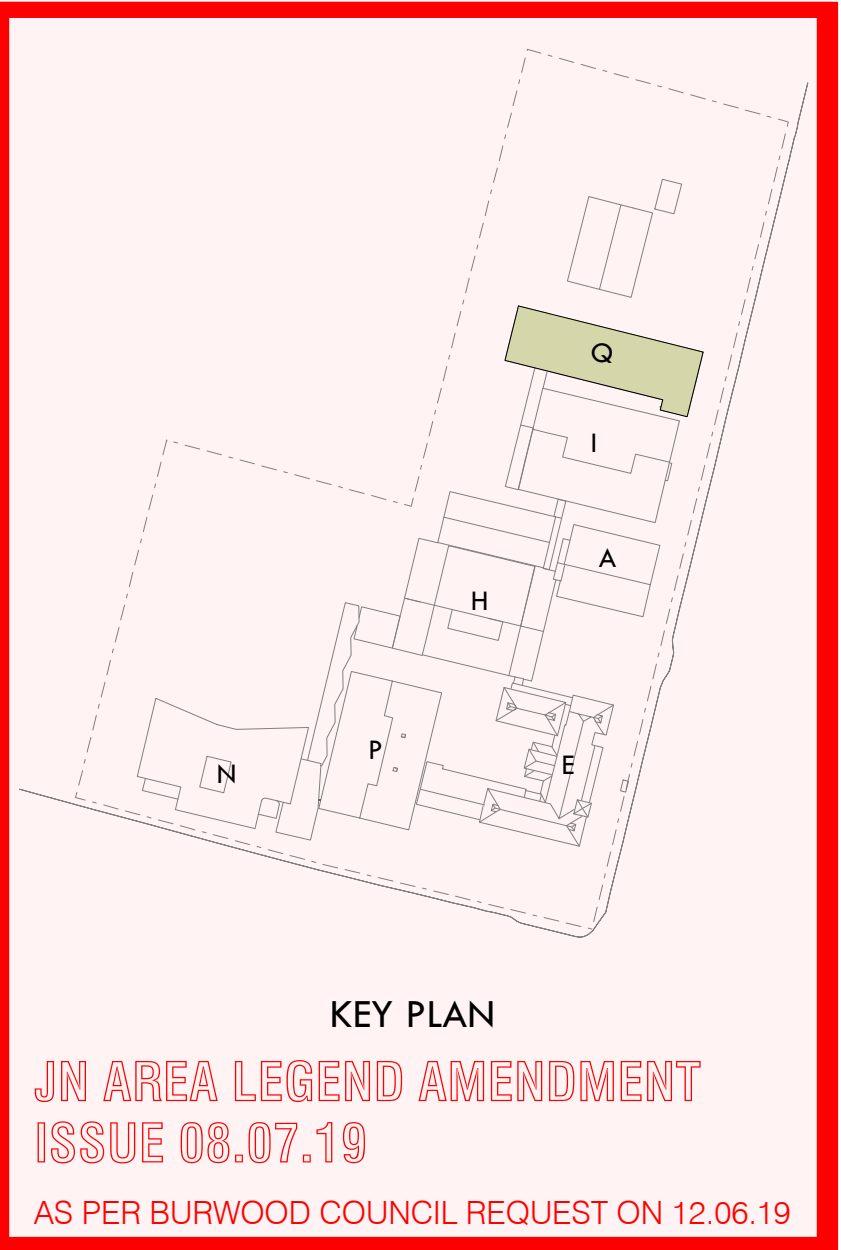


BLOCK Q - GROUND FLOOR STORMWATER PLAN - STAGE 2
SCALE 1 : 100





BLOCK Q - LEVEL 1 STORMWATER PLAN - STAGE 2
SCALE 1 : 100



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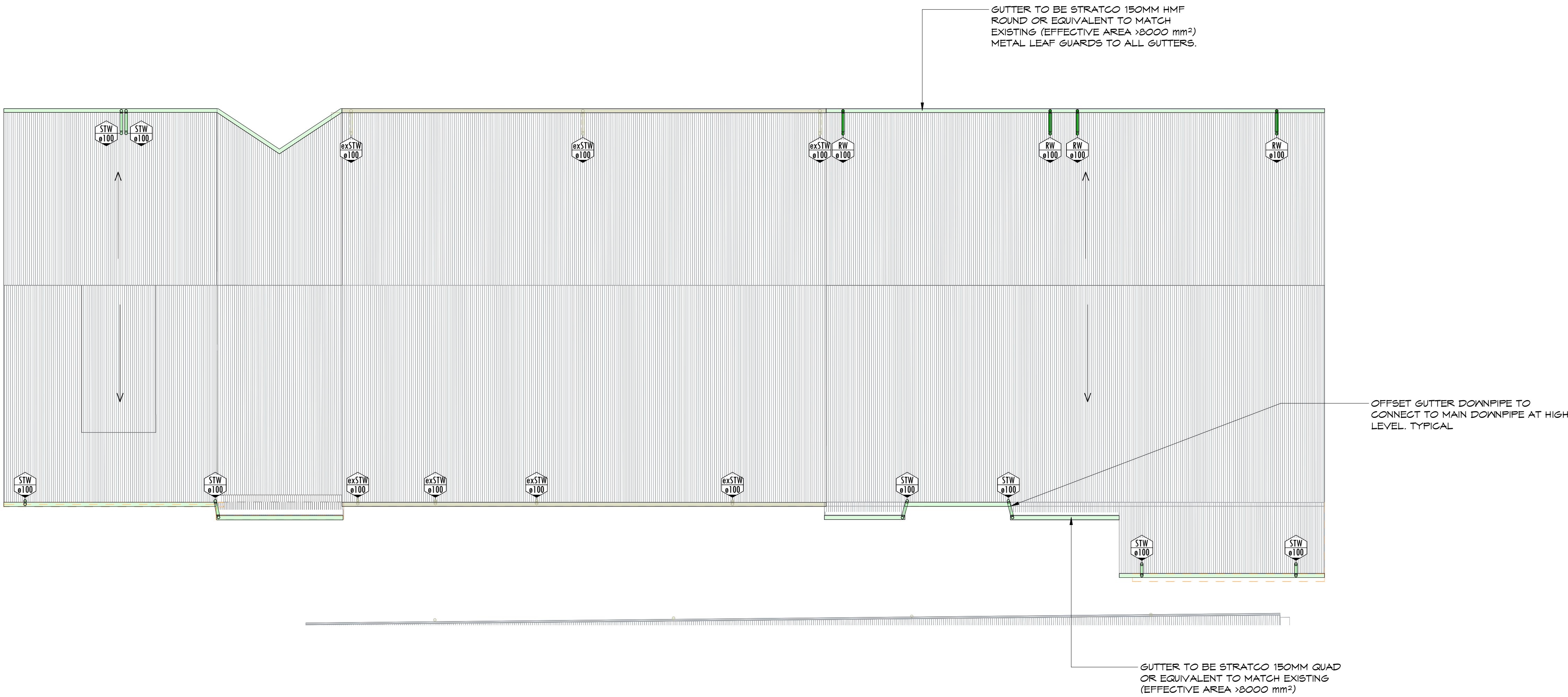
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Drawing Title
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BLOCK Q - LEVEL 1 STORMWATER
PLAN - STAGE 2
Drawn: ER Design: LAM

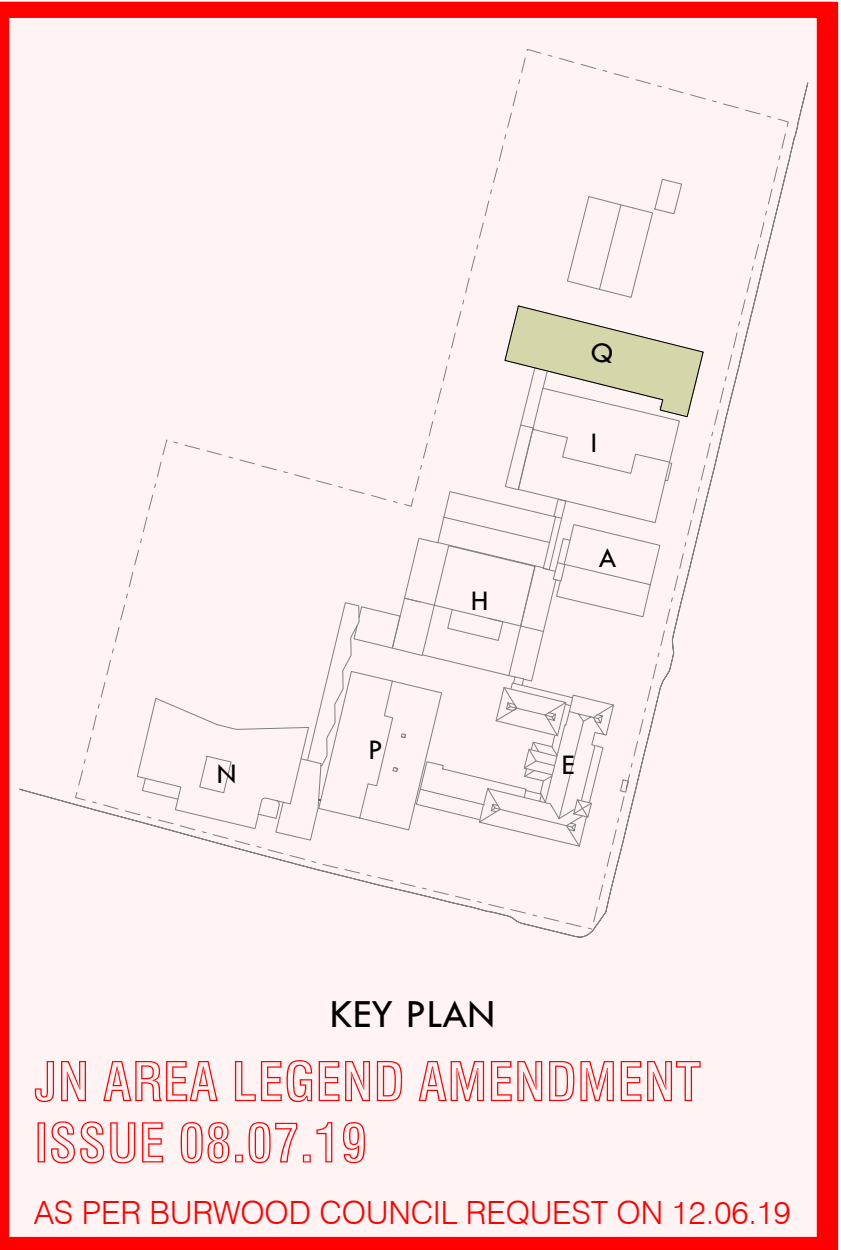
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BLOCK Q - ROOF STORMWATER PLAN - STAGE 2
SCALE 1 : 100



Issue	No.	Date	Description	Chkd
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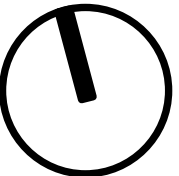
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BLOCK Q - ROOF STORMWATER
PLAN - STAGE 2
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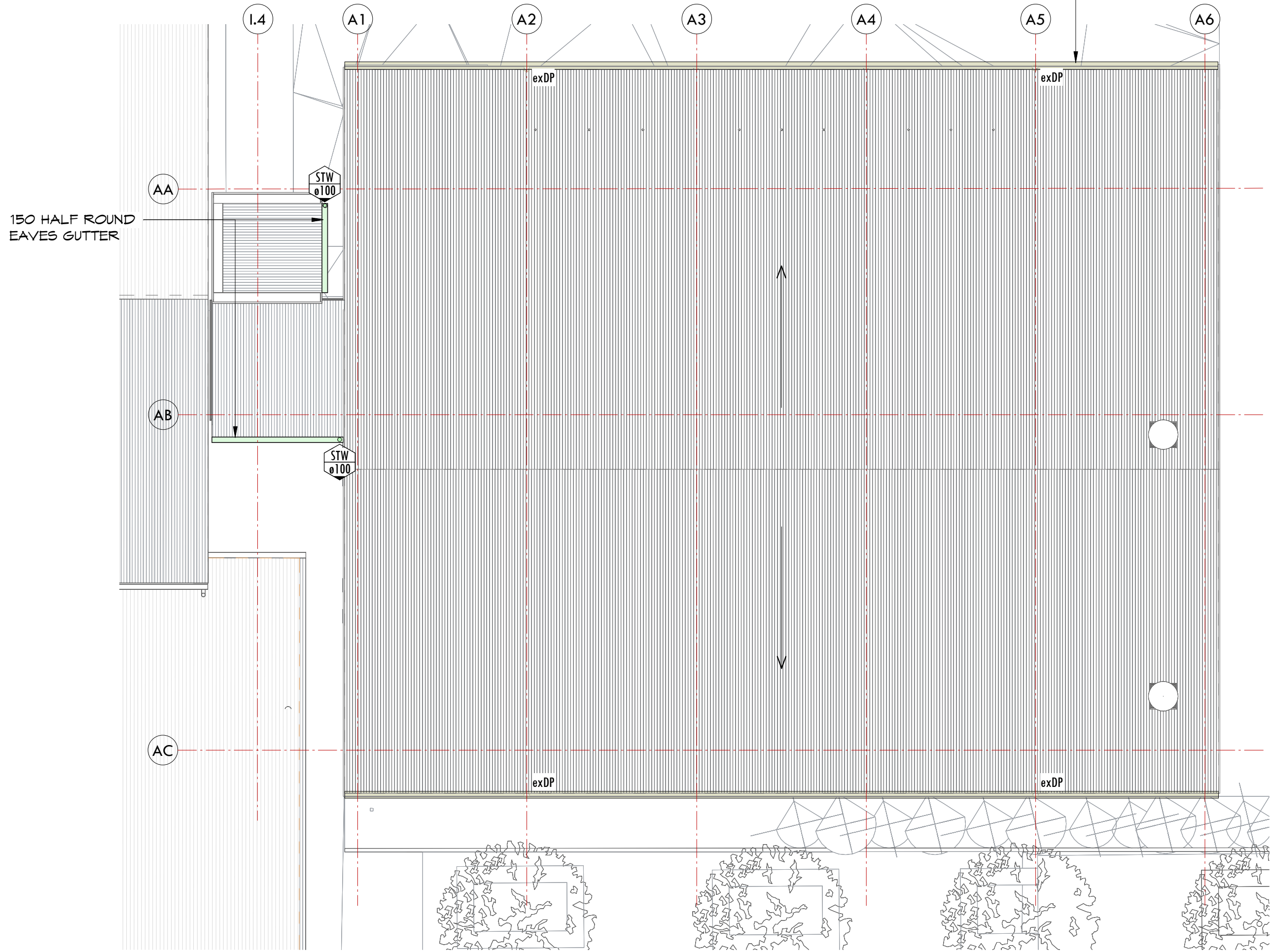
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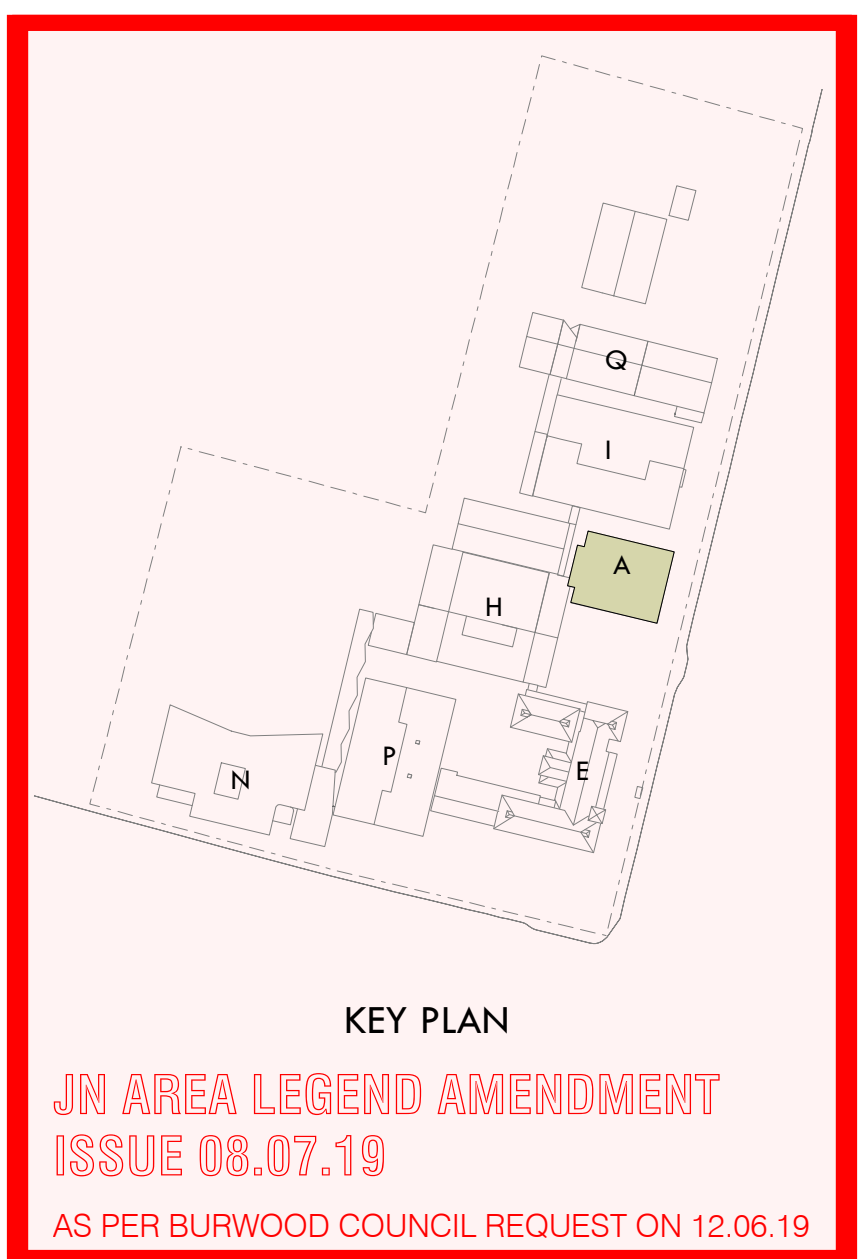
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Drawing Reference 17011156-C221-
Revision P1



 Date 08.02.19
Scale 100@A1 or 200@A3
Drawing Reference Revision
17011156-C301- P1

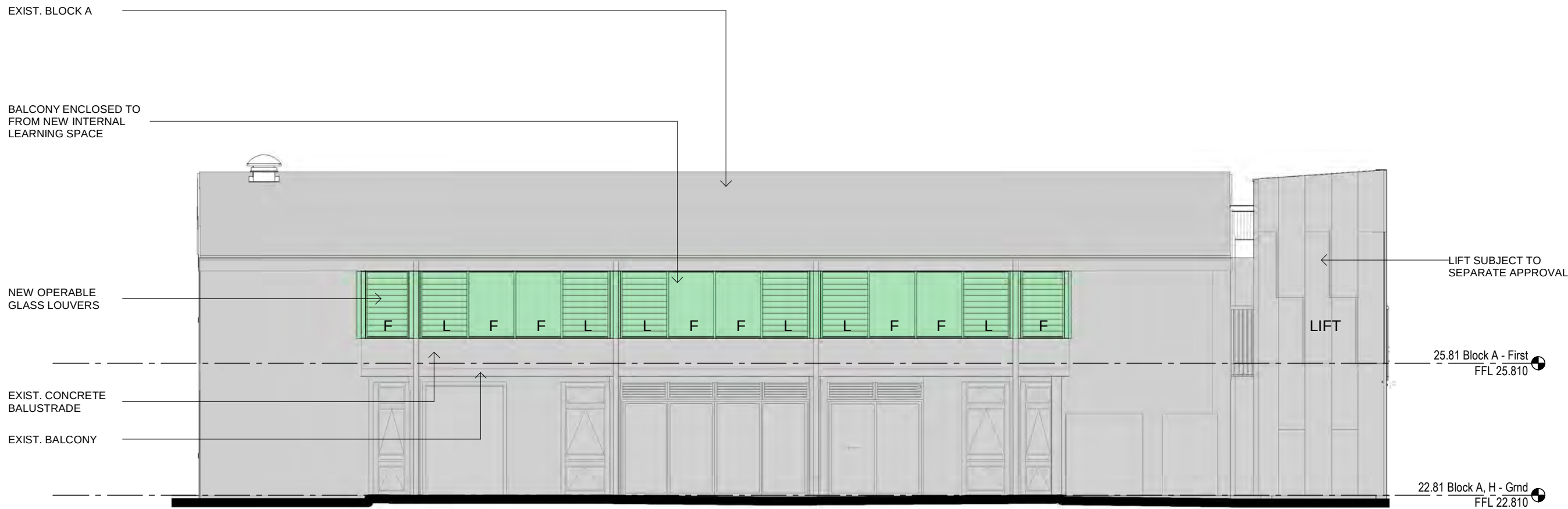


BLOCK A - ROOF STORMWATER PLAN - STAGE 2
SCALE 1 : 100

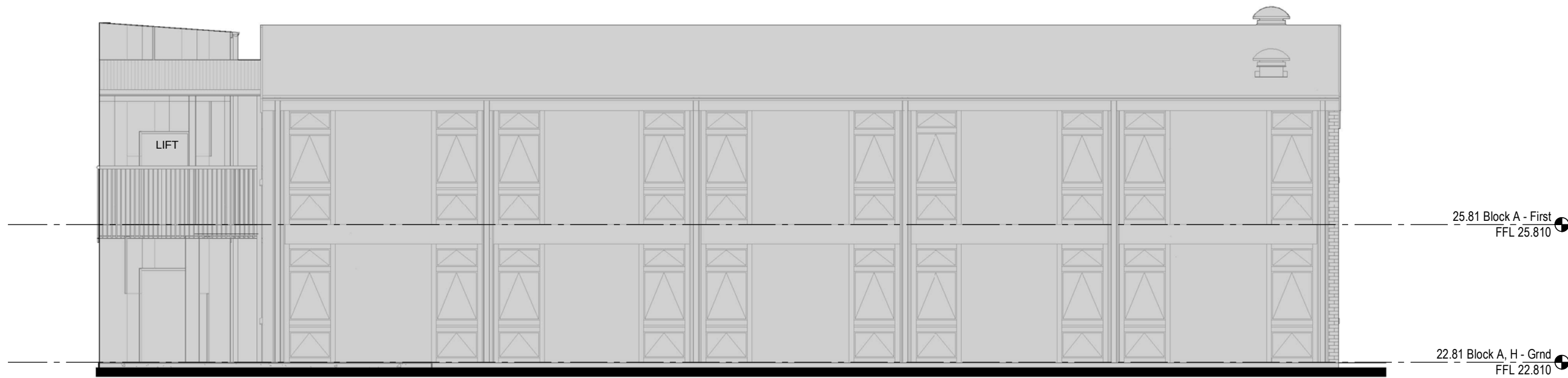


LEGEND

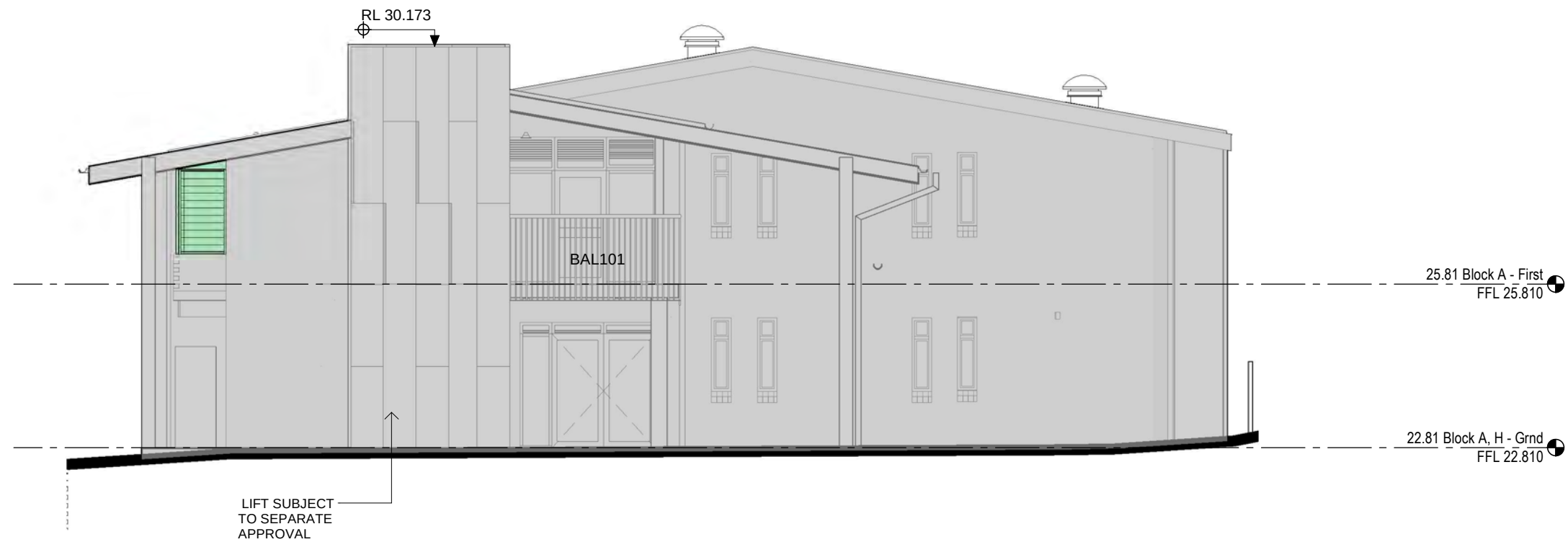
- NEW WORKS
- EXISTING
- DEMOLISH
- SEPARATE APPROVAL (STSA)
- EX. GROUND
- 8.5m ABOVE EX. GROUND
- FIRE WALL



1 BLOCK A - NORTH ELEVATION - DA
1 : 100



2 BLOCK A - SOUTH ELEVATION - DA
1 : 100



3 BLOCK A - WEST ELEVATION - DA
1 : 100

Issue No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK

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Drawing Title
Block A Elevations - Sheet 1

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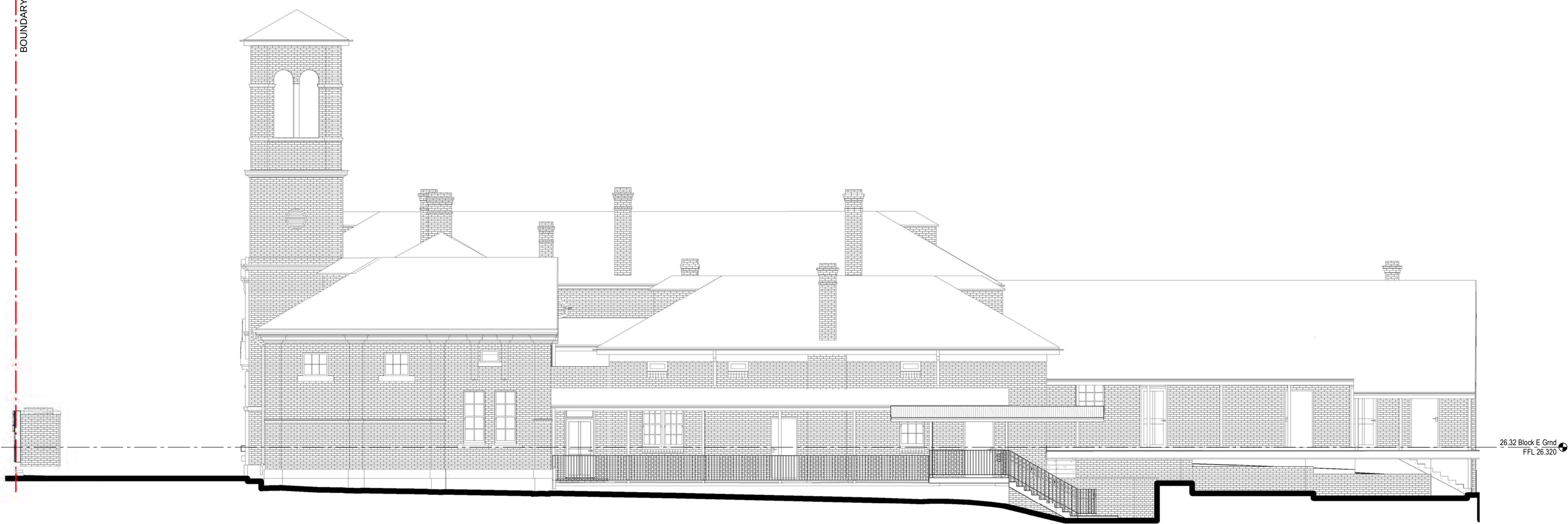
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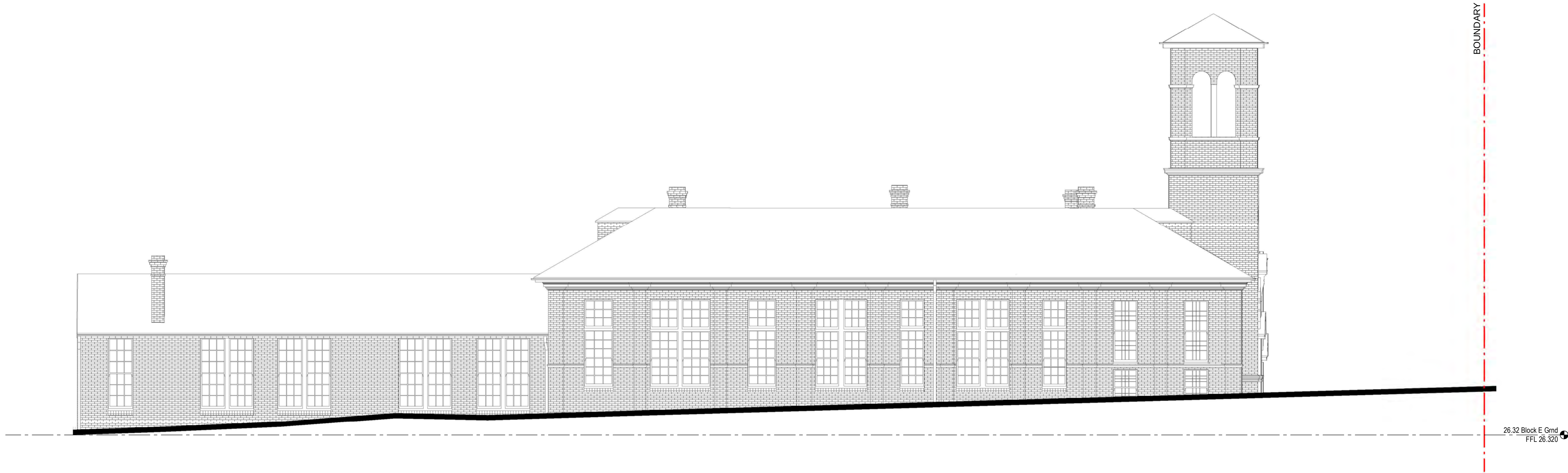
Drawing Reference
17469-NBR-A- ST2-DA A3001

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NB:
HERITAGE CONSERVATION WORKS & MINOR
ALTERATIONS SUBJECT TO SEPARATE
APPROVAL



1 BLOCK E - NORTH ELEVATION - DA
1 : 100



2 BLOCK E - SOUTH ELEVATION - DA
1 : 100 NO CHANGE TO EXISTING

Issue No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK

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Drawing Title
Block E Elevations - Sheet 1

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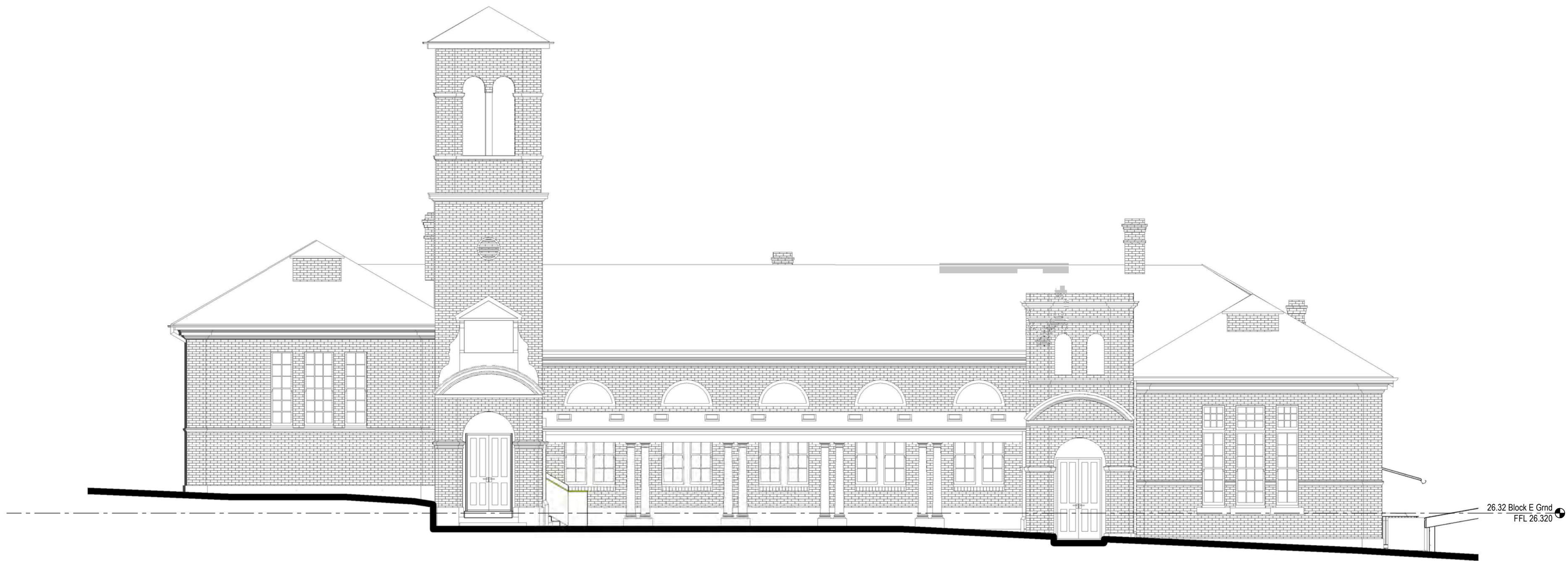
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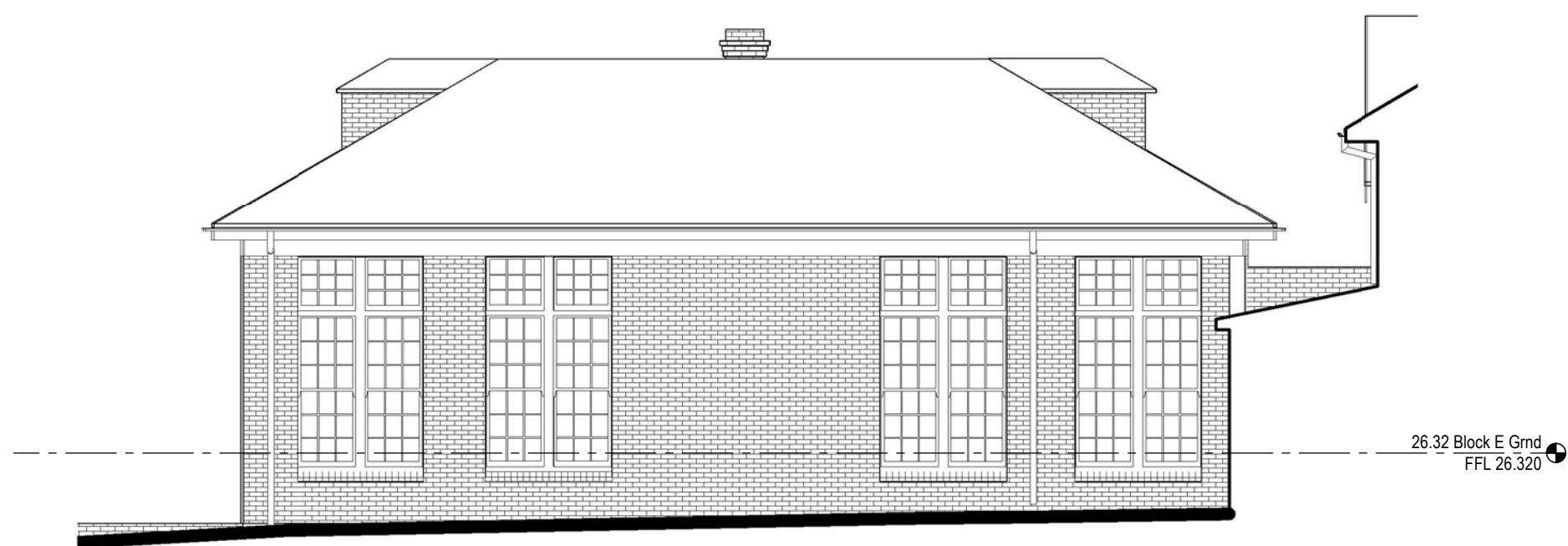
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HERITAGE CONSERVATION WORKS & MINOR
ALTERATIONS SUBJECT TO SEPARATE
APPROVAL



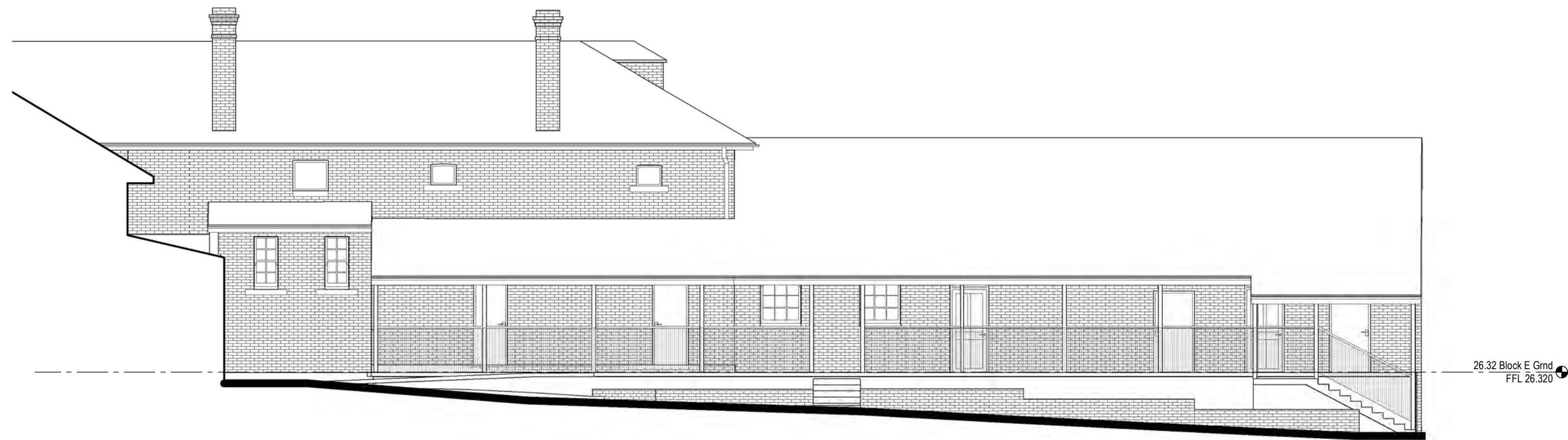
3 BLOCK E - EAST ELEVATION - DA
1 : 100



4 BLOCK E - WEST ELEVATION - DA
1 : 100



5 BUILDING E - COURTYARD NORTH ELEVATION - DA
1 : 100



6 BUILDING E - COURTYARD SOUTH ELEVATION - DA
1 : 100

Issue No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK

DEVELOPMENT
APPLICATION

Drawing Title
Block E Elevations - Sheet 2

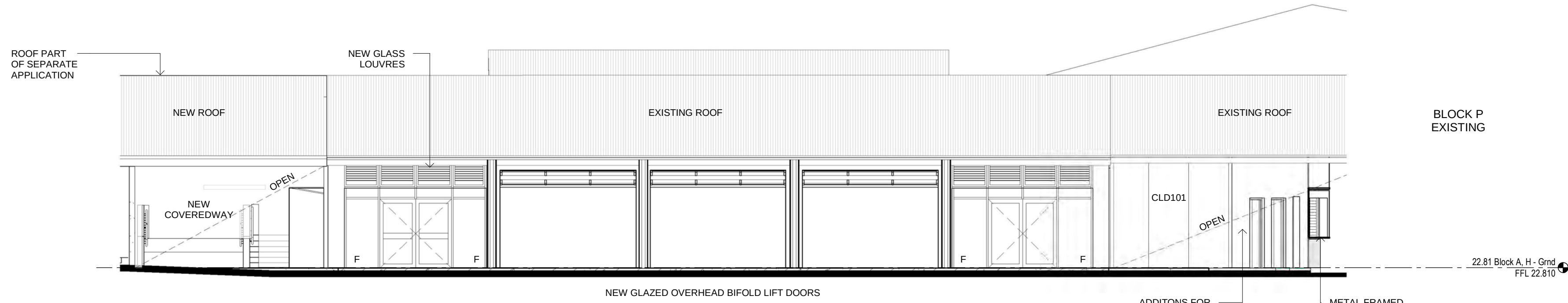
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Scale 1:100 @ A1 or 1:200 @ A3

Drawing Reference
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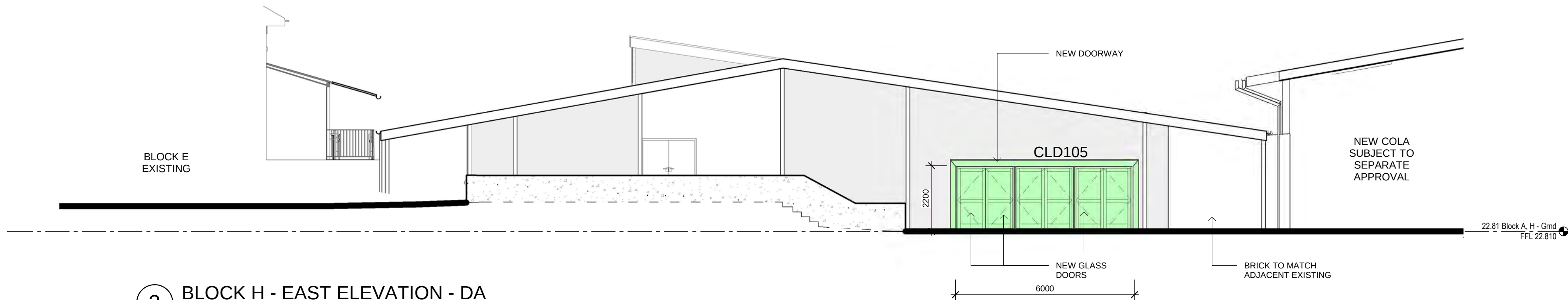
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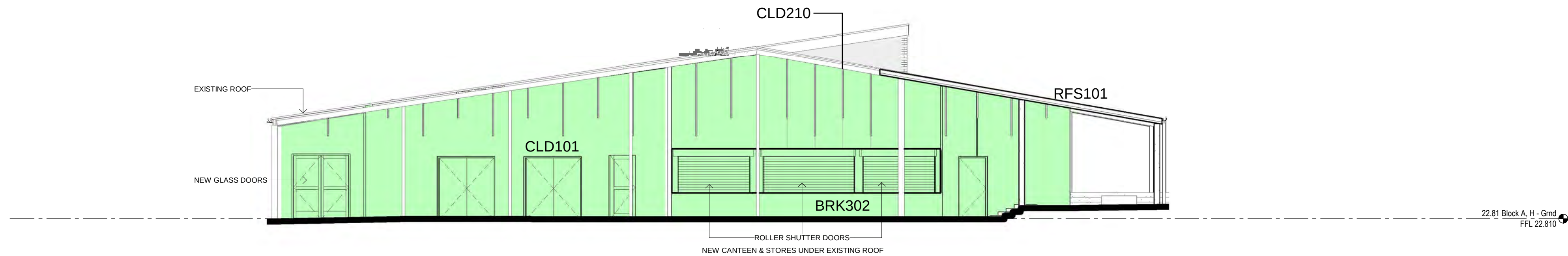
1 BLOCK H - NORTH ELEVATION - DA
1 : 100



2 BLOCK H - SOUTH ELEVATION - DA
1 : 100



3 BLOCK H - EAST ELEVATION - DA
1 : 100



4 BUILDING H - WEST ELEVATION - DA
1 : 100

LEGEND

- NEW WORKS
- EXISTING
- DEMOLISH
- SEPARATE APPROVAL (STSA)
- EX. GROUND
- 8.5m ABOVE EX. GROUND
- FIRE WALL

LEGEND

CODE	MATERIAL
BRK302	BRICK CLADDING GLAZED RED
CLD101	CFC CLADDING 'NATURAL GREY' JOINTS INDICATIVE ONLY
CLD105	CFC CLADDING 'NATURAL DARK GREY'
CLD210	ALUMINIUM ANGLE FEATURE 'TABASCO MATT'
RFS101	METAL ROOF SHEETING-COLOUR 'WINDSPRAY'

Issue No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK

DEVELOPMENT
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Drawing Title
Block H Elevations

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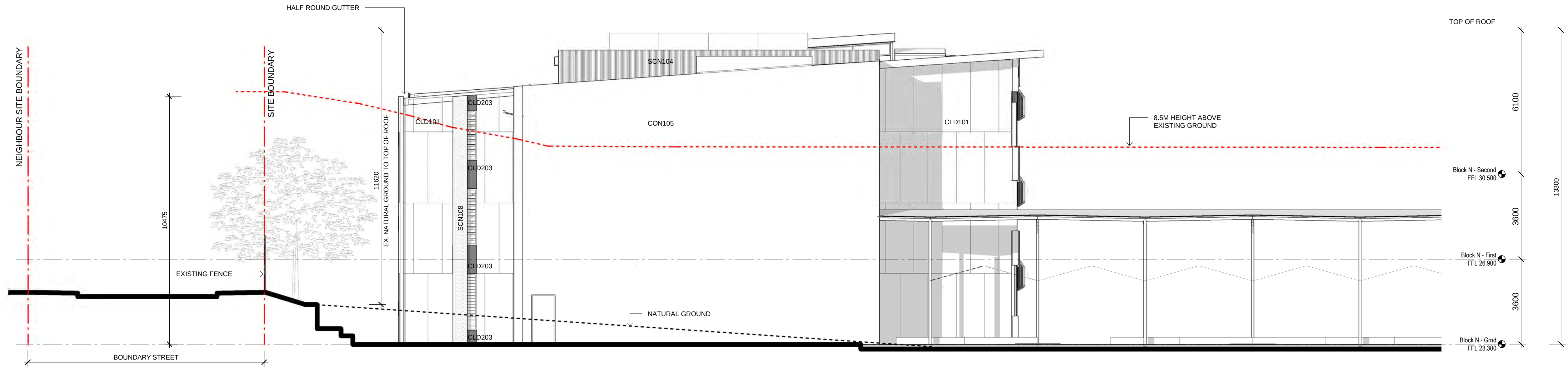
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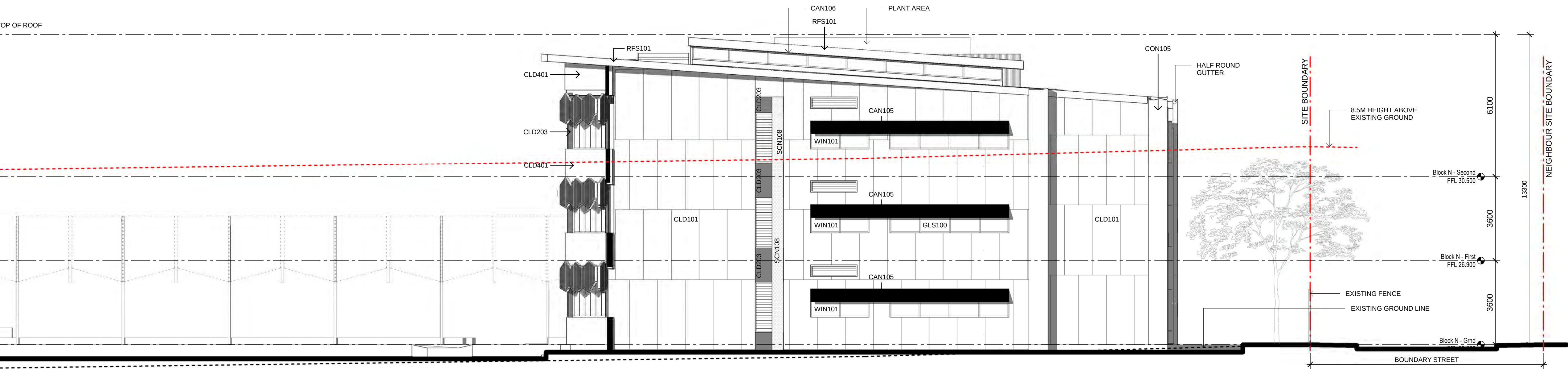
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LEGEND	
	DEMOLISH
	SEPARATE APPROVAL(STSA)
	EX. GROUND
	8.5m ABOVE EX. GROUND
	FIRE WALL

LEGEND	
CODE	MATERIAL
CAN105	FOLDED ALUMINIUM HOOD 'GREY COLOUR TO MATCH CLADDING'
CLD101	CFC CLADDING 'NATURAL GREY' JOINTS INDICATIVE ONLY
CLD203	ALUMINIUM COVER PLATE 'SATIN BLACK'
CLD401	SANDSTONE CLADDING PANEL
CON105	OFF-FORM CONCRETE FINISH WITH SEALER. JOINTS TO MATCH CLD101
GLS100	LOW E GLASS CLEAR
RFS101	METAL ROOF SHEETING-COLOUR 'WINDSPRAY'
SCN104	ALUMINIUM LOUVRE PLANT SCREEN POWDERCOAT COLOUR TO MATCH ROOFING
SCN108	PERFORATED ALUMINIUM SUN SHADE 'SATIN SANDSTONE'
WIN101	ALUMINIUM WINDOWS ANODISED SATIN BLACK



1 BUILDING N - EAST ELEVATION
1 : 100



2 BUILDING N - WEST ELEVATION
1 : 100

Issue			
No.	Date	Description	Chkd
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Scale 1:100 @ A1 or 1:200 @ A3

Drawing Reference
17469-NBRS-A- ST2-DA N3001

0 1m 2m 3m 4m 5m 6m 7m 8m 1:100

LEGEND

- DEMOLISH
- SEPARATE APPROVAL(STSA)
- EX. GROUND
- 8.5m ABOVE EX. GROUND
- FIRE WALL

LEGEND	
CODE	MATERIAL
BAL101	ALUMINIUM RHS BATTEN BALUSTRADE FINISH ANODISED SATIN BLACK
BRK301	BRICK CLADDING CHARCOAL
CAN103	ALUMINIUM BOXHOOD 'AQUA MATT SAPPHIRE'
CAN106	ALUMINIUM AWNING HOOD 'COLOUR TO MATCH ROOF SHEETING'
CLD203	ALUMINIUM COVER PLATE 'SATIN BLACK'
CLD209	ALUMINIUM COVER PLATE 'AQUA MATT SAPPHIRE'
CLD210	ALUMINIUM ANGLE FEATURE 'TABASCO MATT'
CLD211	ALUMINIUM ANGLE FEATURE POWDERCOAT 'MOONLIGHT DULUX'
CLD401	SANDSTONE CLADDING PANEL
CON105	OFF-FORM CONCRETE FINISH WITH SEALER. JOINTS TO MATCH CLD101
GLS100	LOW E GLASS CLEAR
LVR201	GLASS LOUVRE
RFS101	METAL ROOF SHEETING-COLOUR 'WINDSPRAY'
SCN103	ALUMINIUM BATTEN SCREEN 'SATIN ORIENTAL GOLD'
SCN104	ALUMINIUM LOUVRE PLANT SCREEN POWDERCOAT COLOUR TO MATCH ROOFING
SCN105	ALUMINIUM BATTEN SCREEN 'SATIN BLACK'
SCN107	ALUMINIUM BATTEN SCREEN 'SATIN BLACK' WITH 'AQUA MATT SAPPHIRE' BOTTOM BATTEN CAP
SCN108	PERFORATED ALUMINIUM SUN SHADE 'SATIN SANDSTONE'
WIN101	ALUMINIUM WINDOWS ANODISED SATIN BLACK

1 BUILDING N - NORTH ELEVATION
1 : 100

2 BUILDING N - SOUTH ELEVATION
1 : 100

Issue No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK

DEVELOPMENT APPLICATION

Drawing Title
Block N Elevations - Sheet 2

Project
CROYDON PUBLIC SCHOOL

at
39 YOUNG STREET, CROYDON

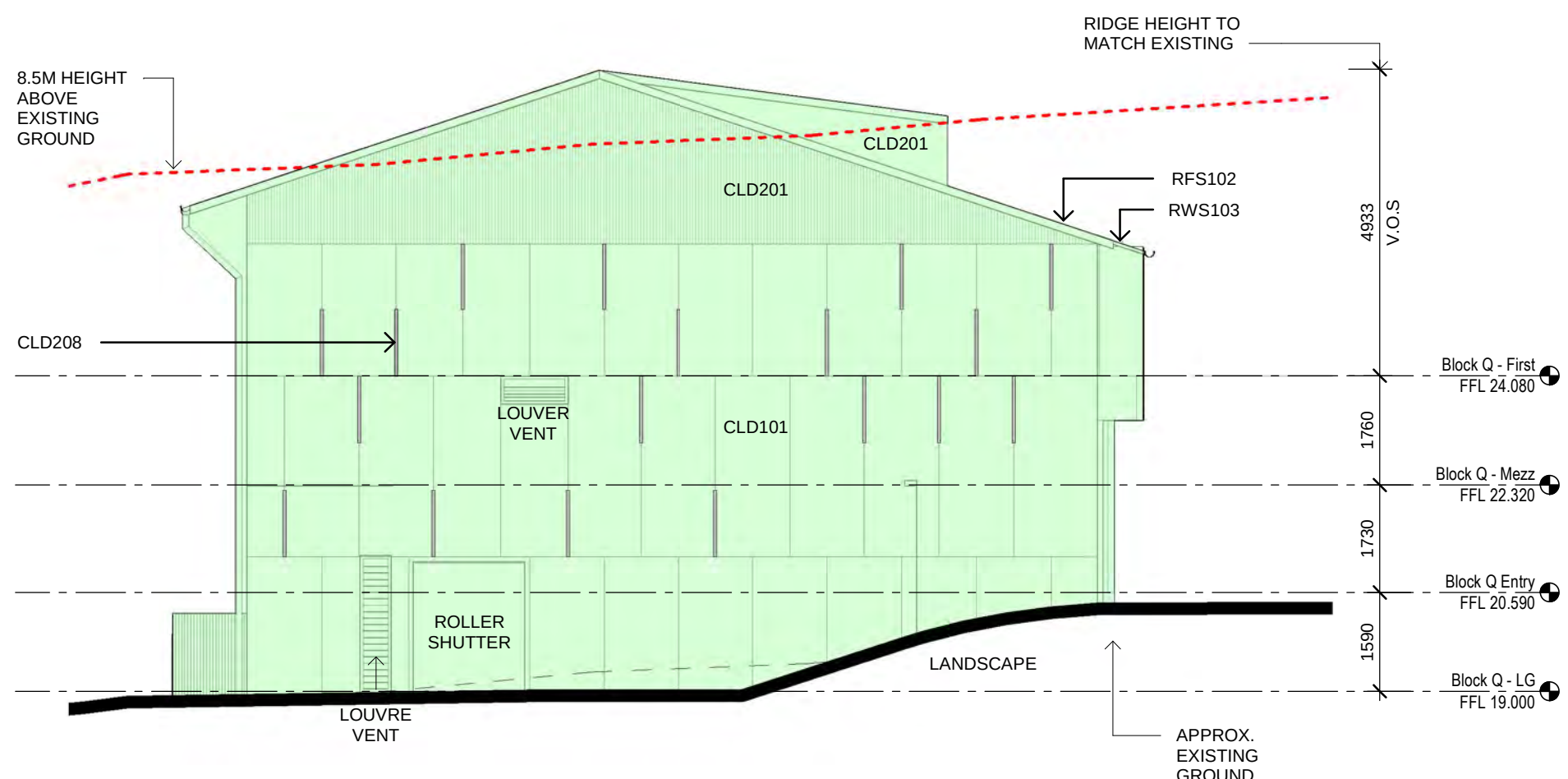
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Drawing Reference
17469-NBR-A- ST2-DA N3002

0 1m 2m 3m 4m 5m 6m 7m 8m 10m 1:100



2 BLOCK Q - WEST ELEVATION
1 : 100

LEGEND

-  NEW WORKS
-  EXISTING
-  DEMOLISH
-  SEPARATE APPROVAL (STSA)
-  EX. GROUND
-  8.5m ABOVE EX. GROUND
-  FIRE WALL

LEGEND	
CODE	MATERIAL
BAL101	ALUMINIUM RHS BATTEN BALUSTRADE FINISH ANODISED SATIN BLACK
BRK101	FACE BRICKWORK 1
CAN101	FOLDED ALUMINIUM AWNING 'BLACK'
CAN102	FOLDED ALUMINIUM AWNING 'BLACK'
CLD101	CFC CLADDING 'NATURAL GREY' JOINTS INDICATIVE ONLY
CLD103	CFC PANEL DULUX 'OASIS SPRINGS'
CLD104	CFC PANEL DULUX 'MITCHELL BLUE'
CLD201	METAL CLADDING TO MATCH EXISTING
CLD203	ALUMINIUM COVER PLATE 'SATIN BLACK'
CLD208	ALUMINIUM ANGLE FEATURE 'AQUA MATT'
FEN101	CUSTOM GATE
GAL	HOT DIPPED GALVANISED FINISH
GLS100	LOW E GLASS CLEAR
GLS104	COLOURED LAMINATED GLASS 'COOL BLUE'
GLS105	COLOURED LAMINATED GLASS 'CORAL ROSE'
LVR201	GLASS LOUVRE
RFS102	METAL ROOF SHEETING TO MATCH EXISTING
RFS301	TRANSLUCENT FIBRE GLASS ROOF SHEETING OPAL
RWS103	HALF ROUND GUTTER
RWS201	DOWNPIPES 'SHALE GREY'
SCN104	ALUMINIUM LOUVE PLANT SCREEN POWDERCOAT COLOUR TO MATCH ROOFING
SCN109	PERFORATED ALUMINIUM SCREEN 'AQUA MATT'
WIN101	ALUMINIUM WINDOWS ANODISED SATIN BLACK

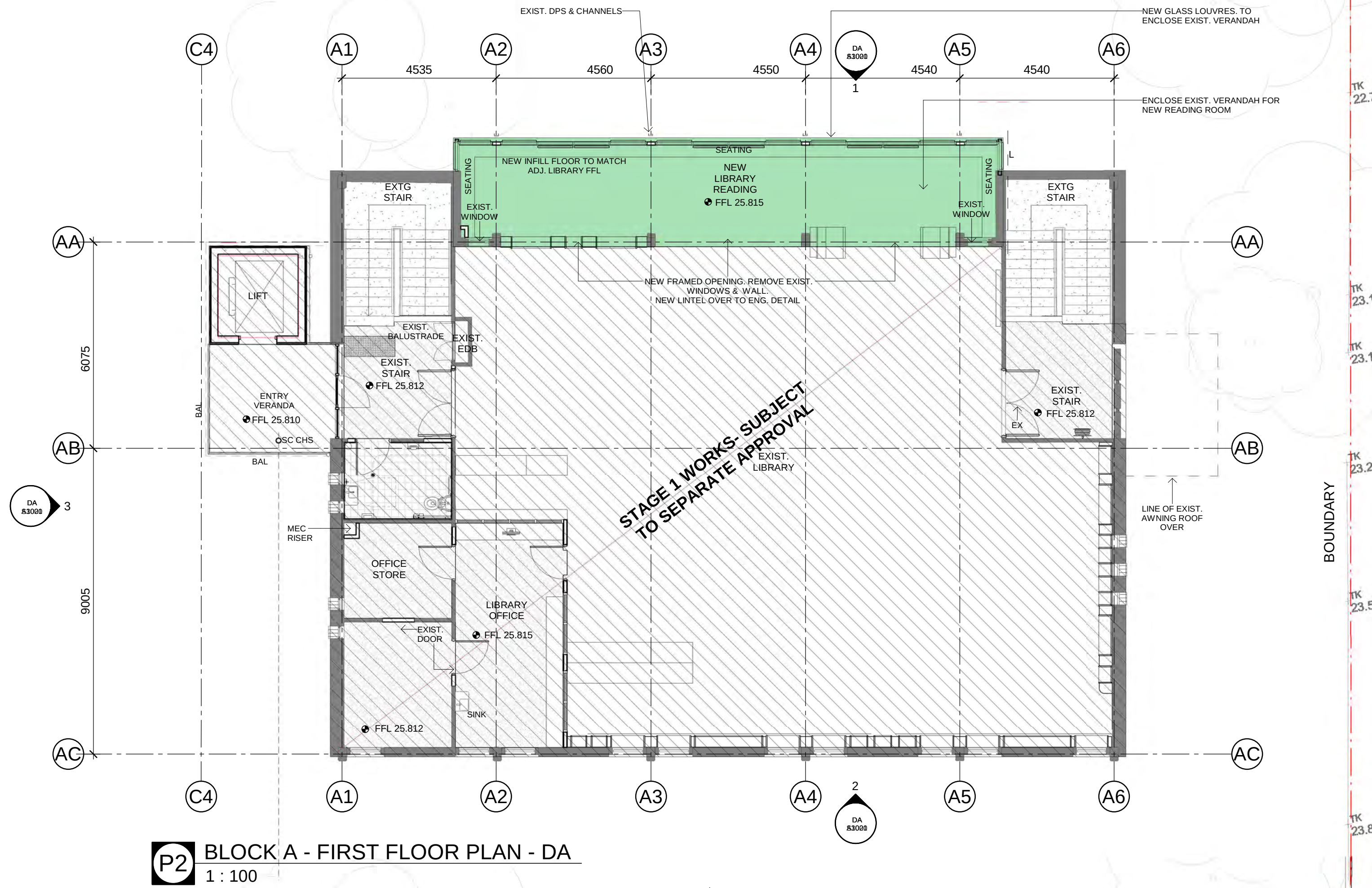


DEVELOPMENT APPLICATION

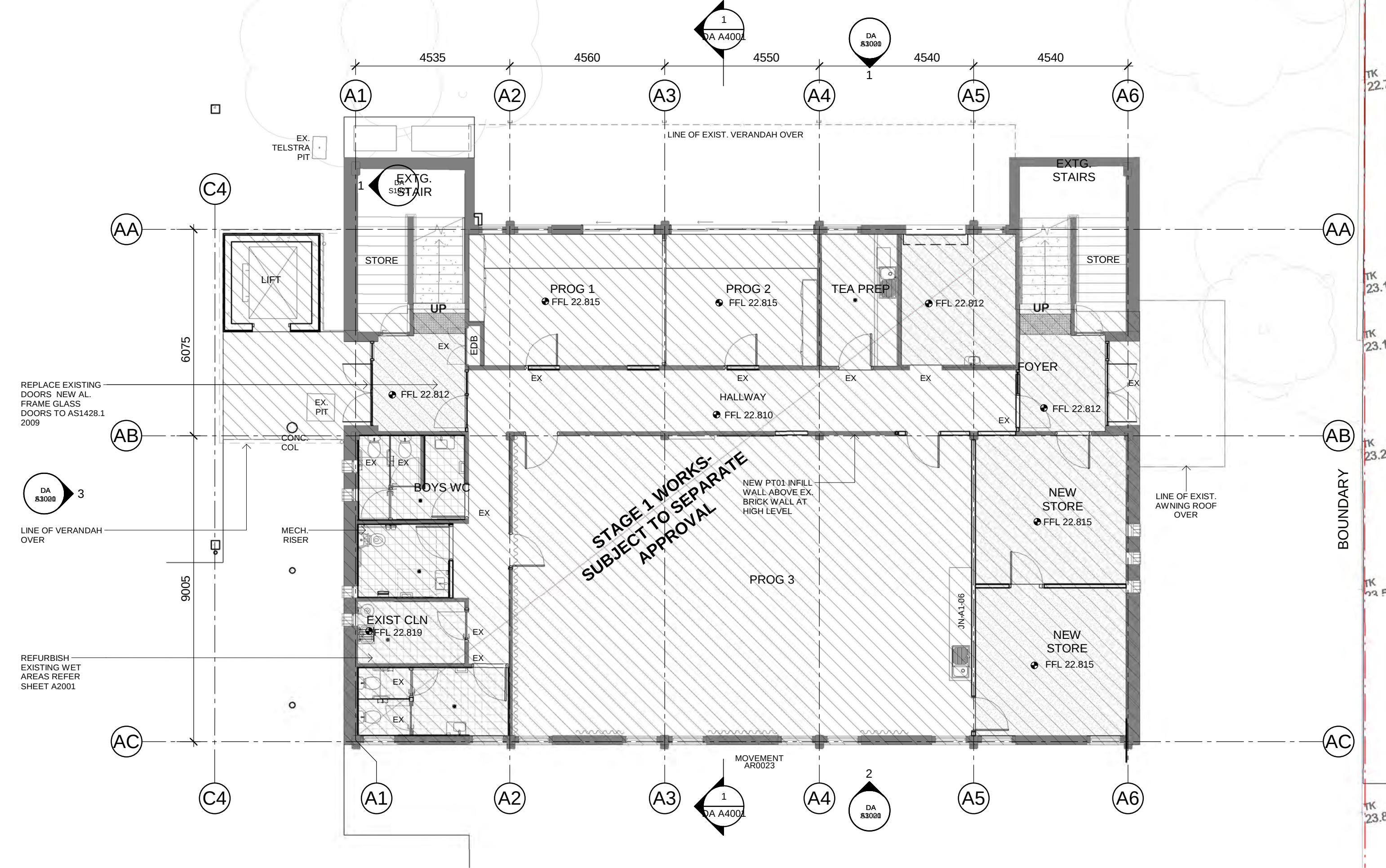
Drawing Reference
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LEGEND

- NEW WORKS
- EXISTING
- DEMOLISH
- SEPARATE APPROVAL (STSA)
- EX. GROUND
- 8.5m ABOVE EX. GROUND
- FIRE WALL



P2 BLOCK A - FIRST FLOOR PLAN - DA
1 : 100



P1 BLOCK A - GROUND FLOOR PLAN - DA
1 : 100

DEVELOPMENT
APPLICATION

Drawing Title
Block A Floor Plans

Project
CROYDON PUBLIC SCHOOL

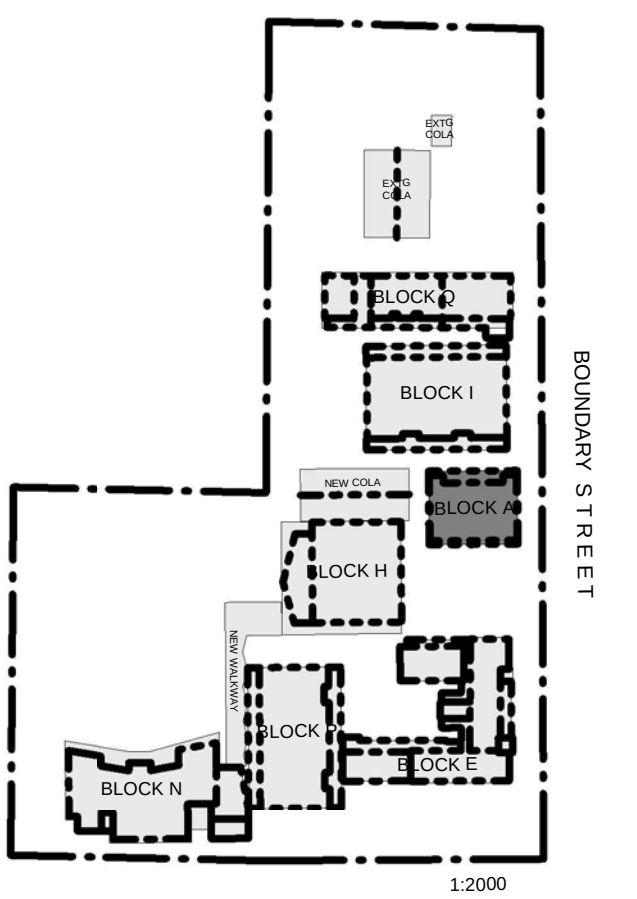
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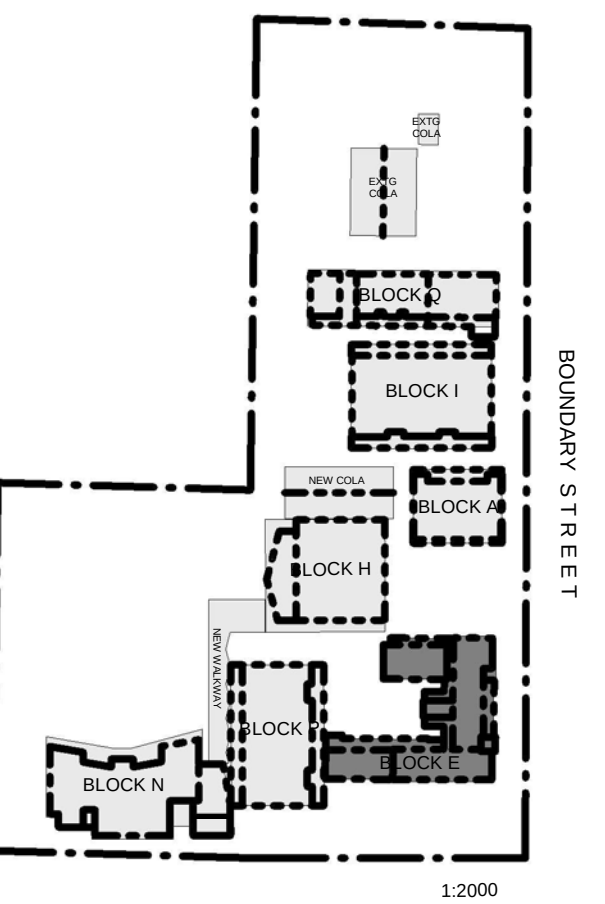
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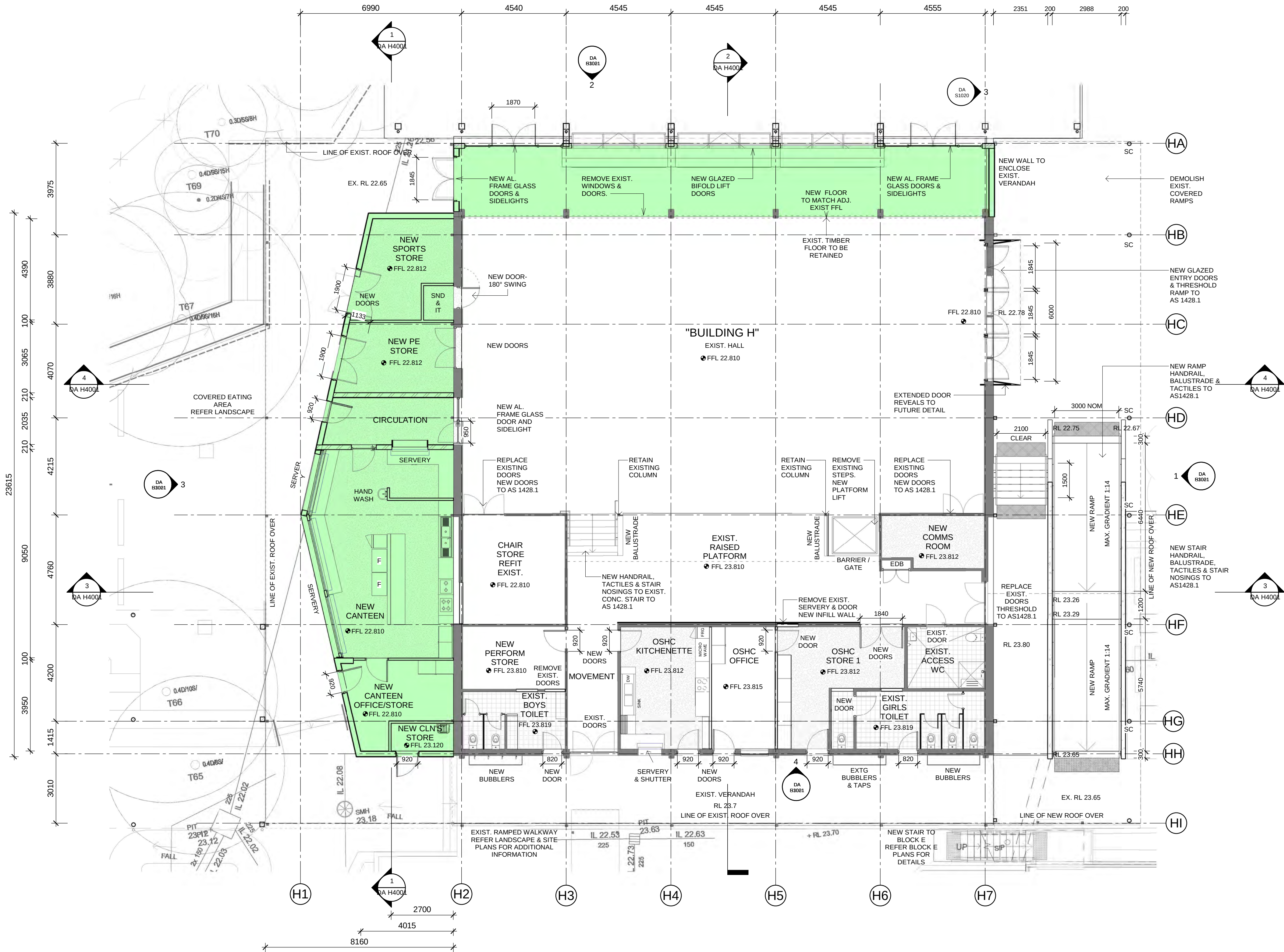
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17469-NBR-A- ST2-DA A2002



Issue			
No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK




 Date 26/02/2019 4:56:33 PM
 Scale 1:100 @ A1 or 1:200 @ A3
 Drawing Reference
 17469-NBRS-A- ST2-DA E2002



NOTES:
 1. GRID SETOUT IS TO CENTERLINE TO EXISTING COLUMNS UNLESS NOTED OTHERWISE. BUILDER TO CHECK ON SITE.
 2. CHECK ALL DIMENSION ON SITE.
 3. REPORT ALL DISCREPANCIES TO CLIENT REPRESENTATIVE BEFORE COMMENCEMENT OF INSTALLATION OR MANUFACTURE.

Issue No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK

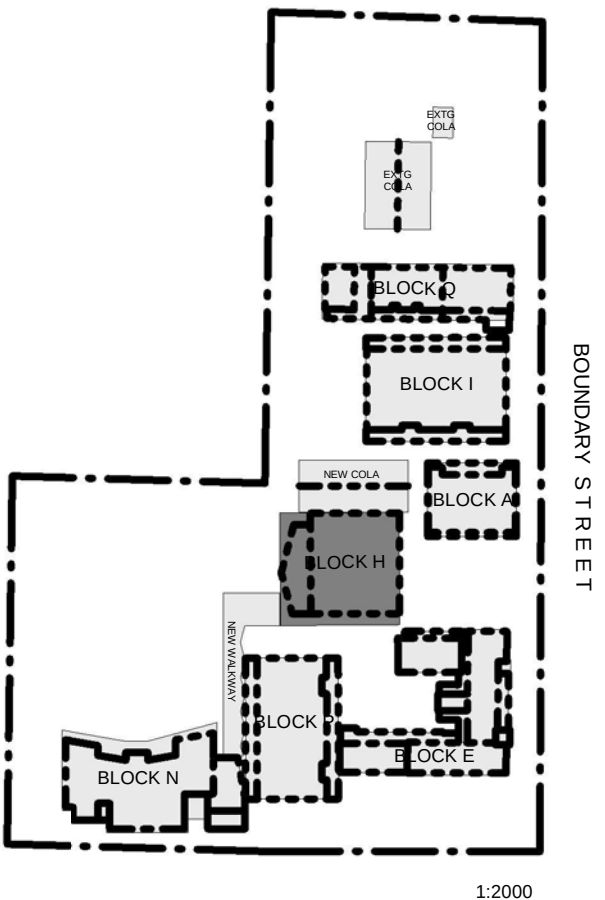
DEVELOPMENT APPLICATION

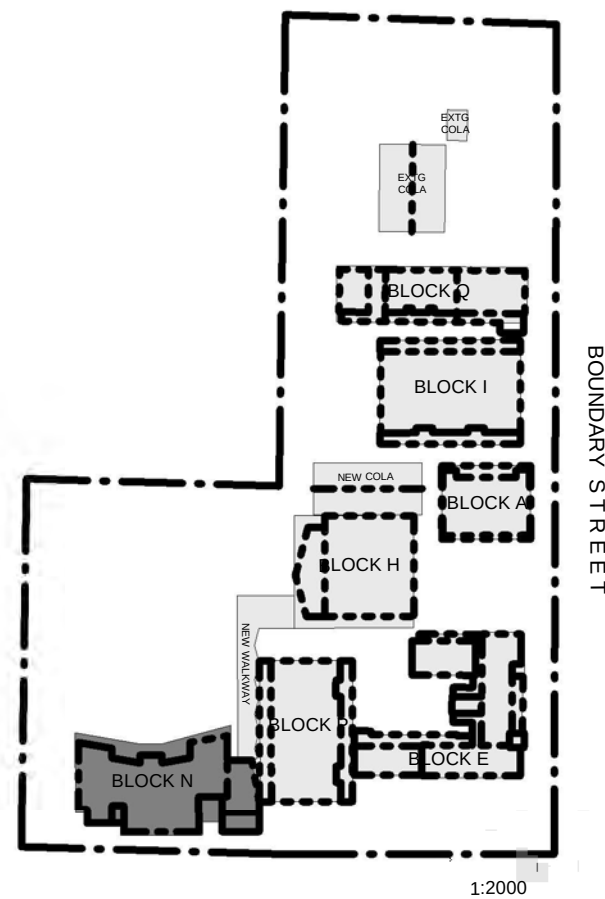
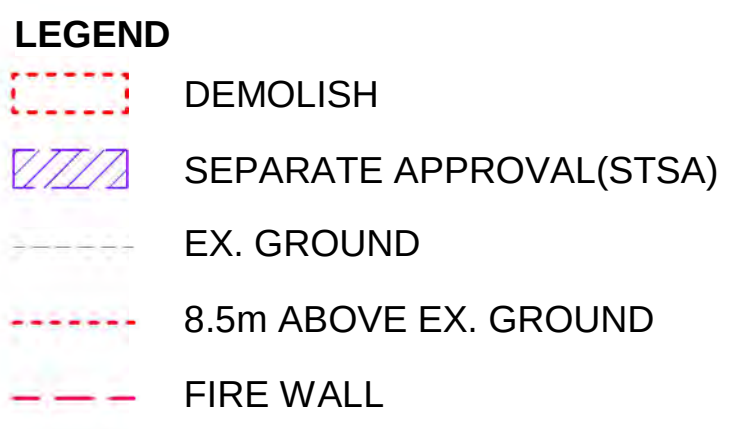
Drawing Title
 Block H Floor Plans & COLAS

Project
 CROYDON PUBLIC SCHOOL
 at
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 for
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 17469-NBRS-A- ST2-DA H2002





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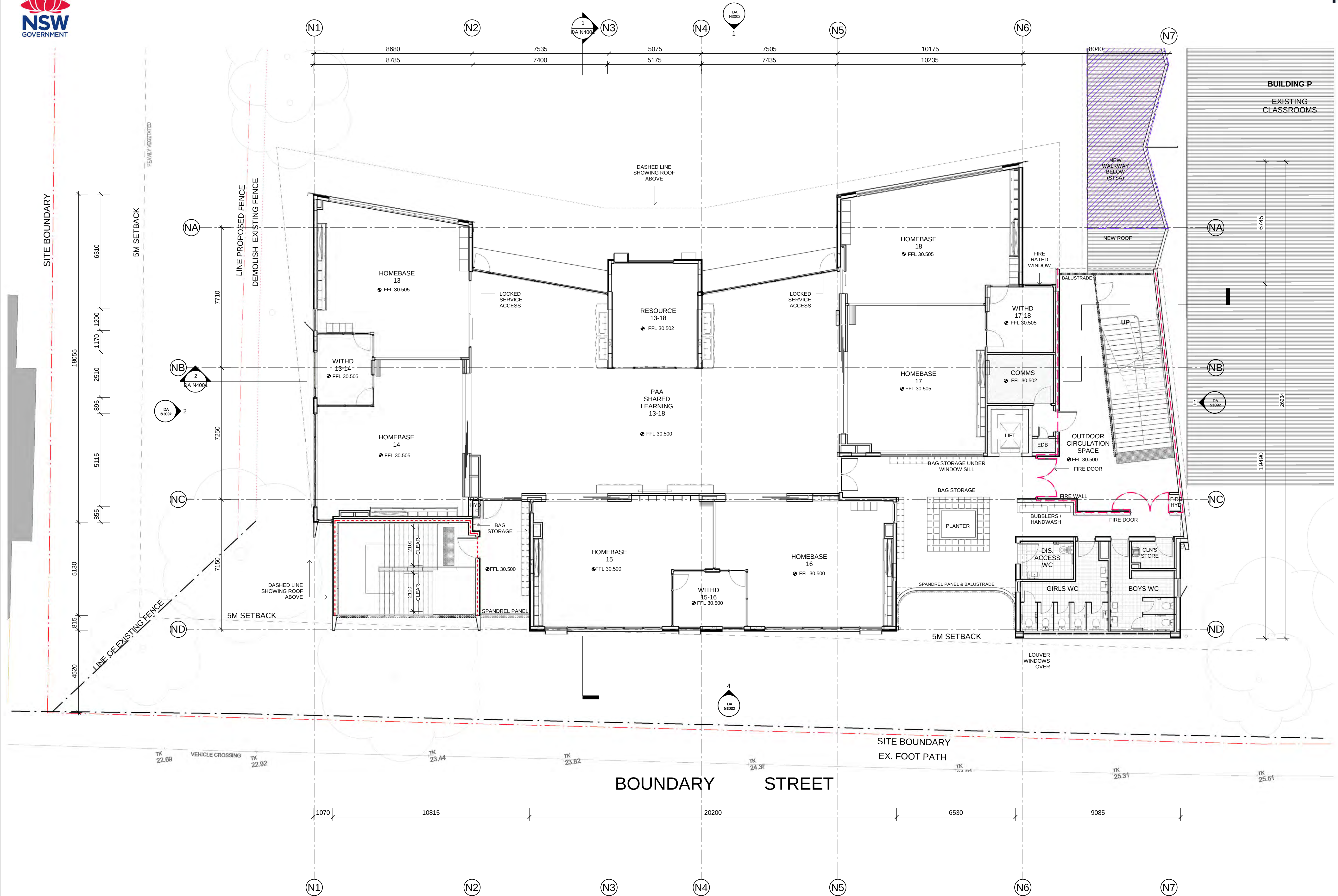
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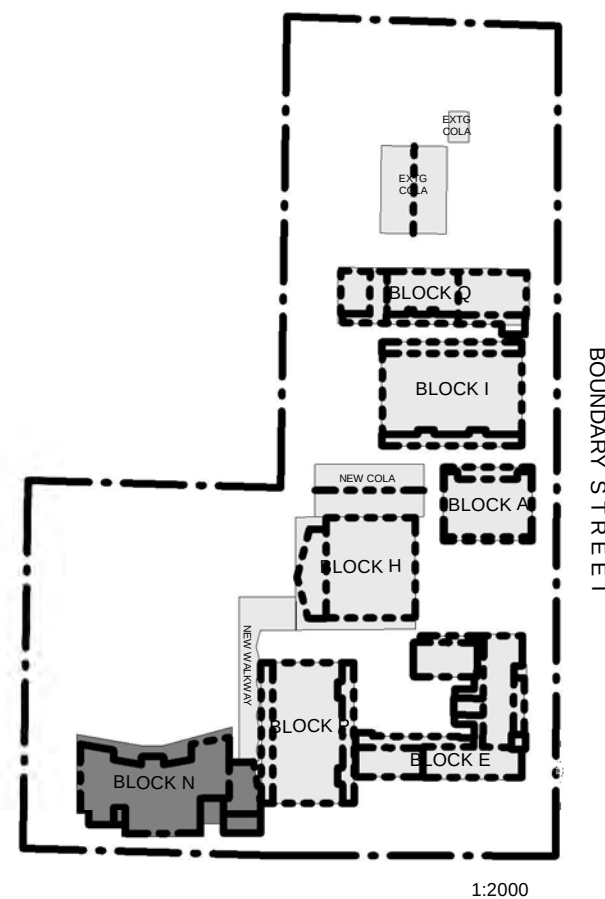
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 Date 26/02/2019 5:14:51 PM
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 Drawing Reference
 17469-NBRS-A- ST2-DA N2001





- LEGEND**
- DEMOLISH
 - SEPARATE APPROVAL(STSA)
 - EX. GROUND
 - 8.5m ABOVE EX. GROUND
 - FIRE WALL



Issue No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK

DEVELOPMENT APPLICATION

Drawing Title
Block N Second Floor Plan

Project
CROYDON PUBLIC SCHOOL

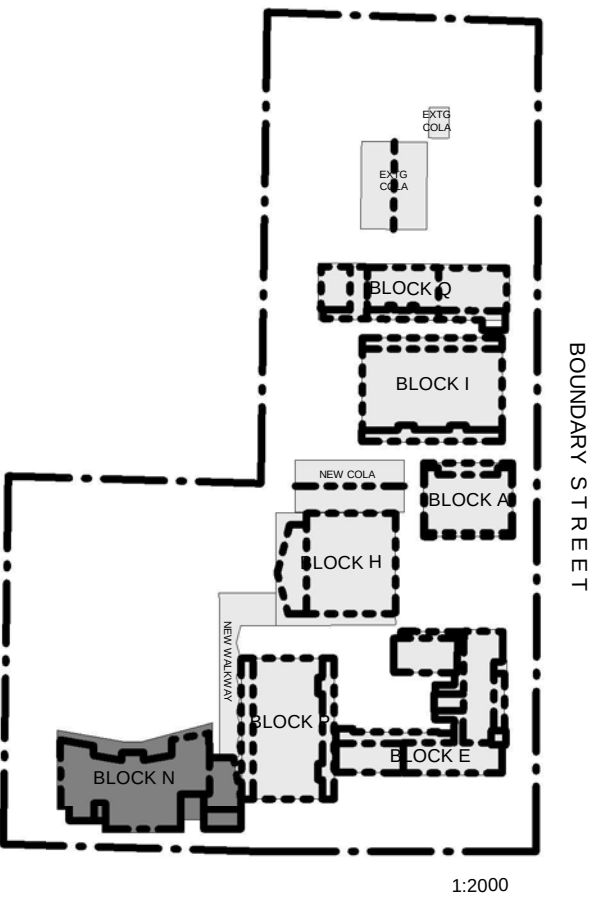
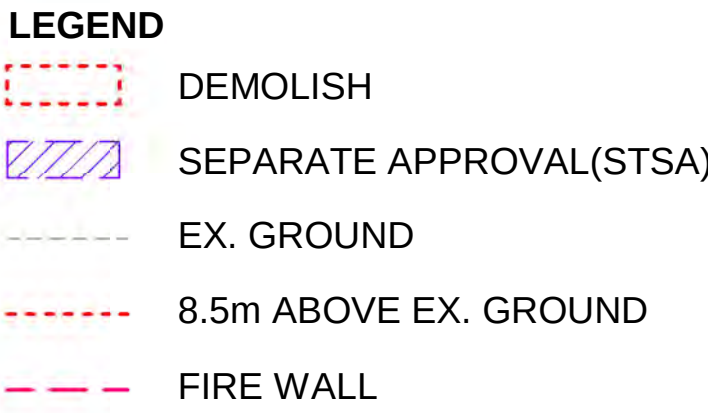
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Drawing Reference
17469-NBR-A- ST2-DA N2003



DEVELOPMENT APPLICATION

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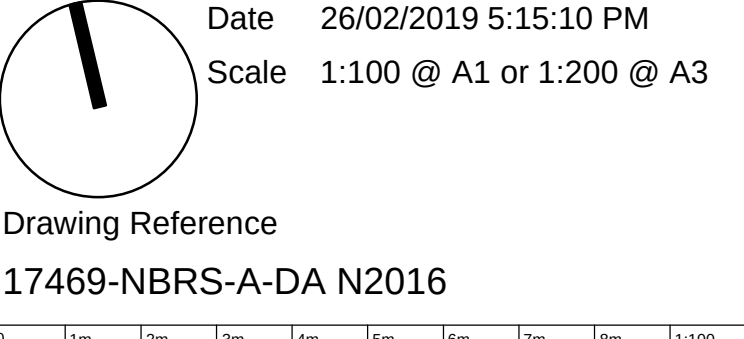
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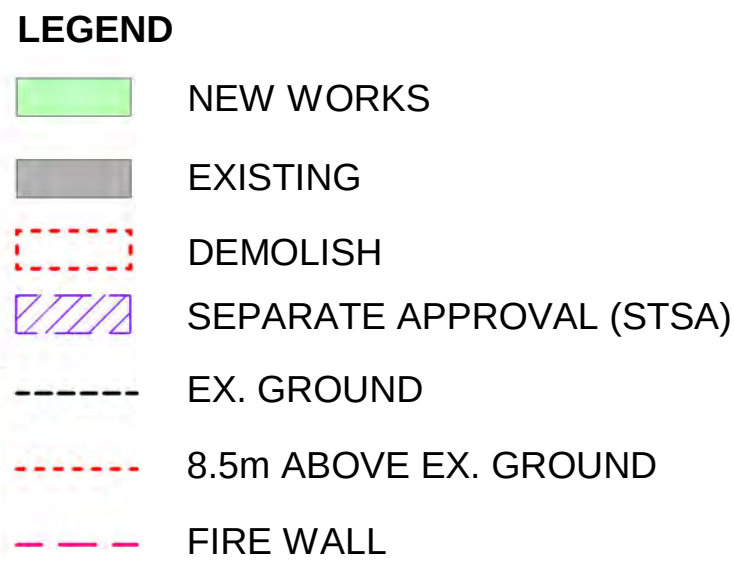
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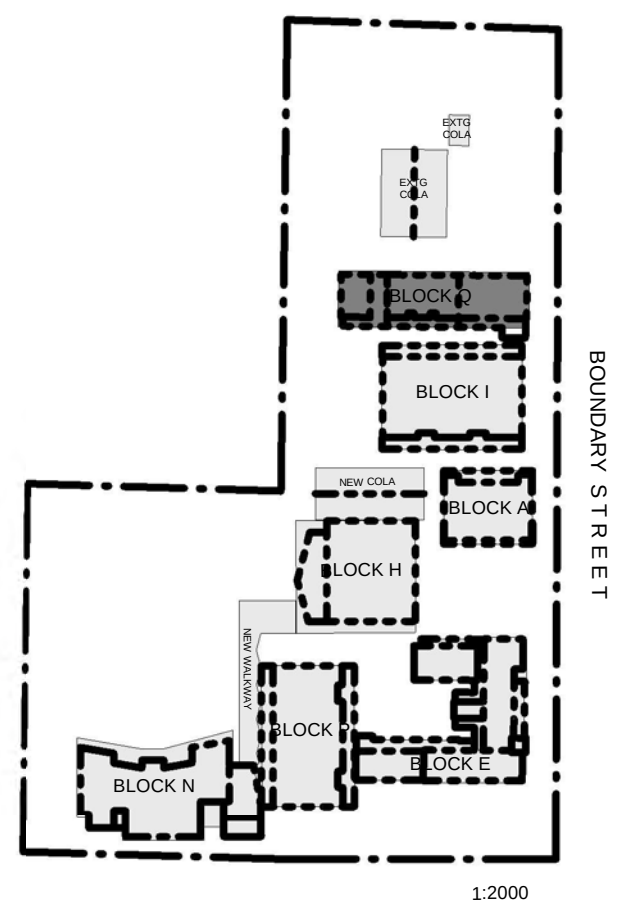
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17469-NBRS-A-DA N2016





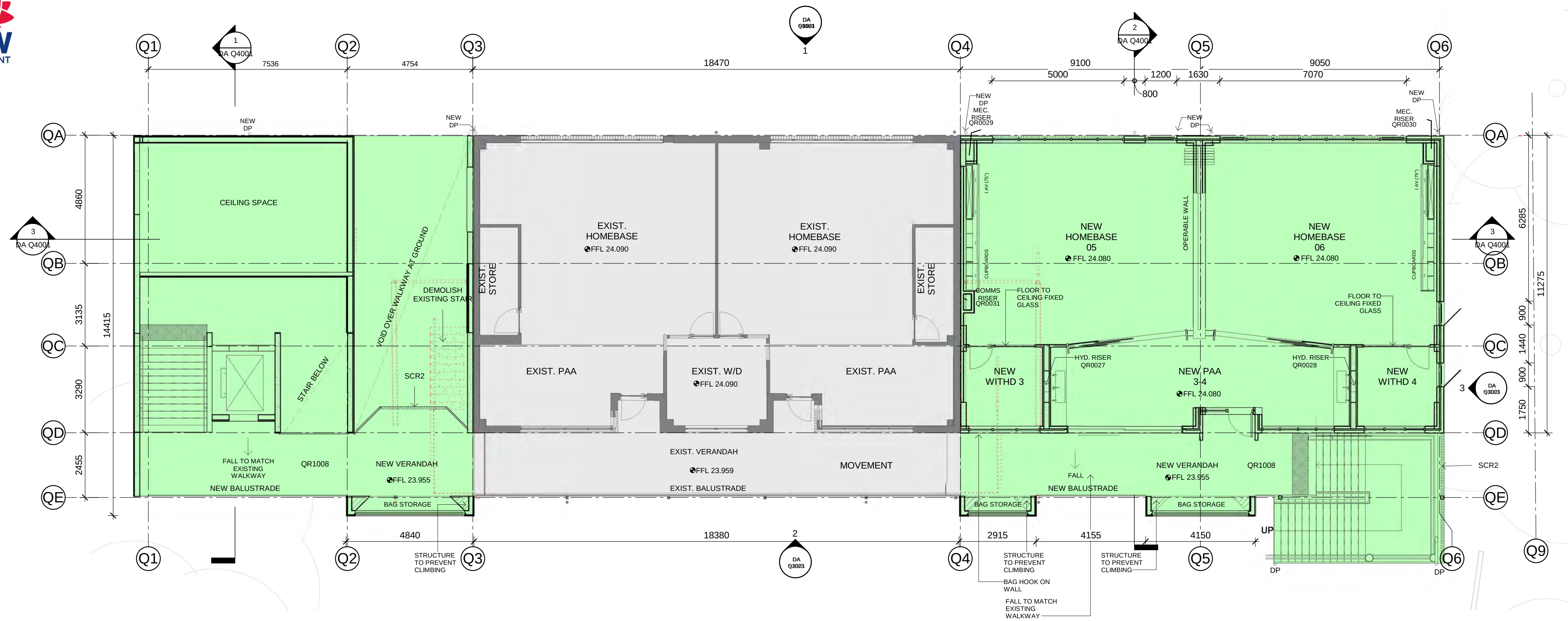
2 BLOCK Q - GROUND FLOOR PLAN
1 : 100



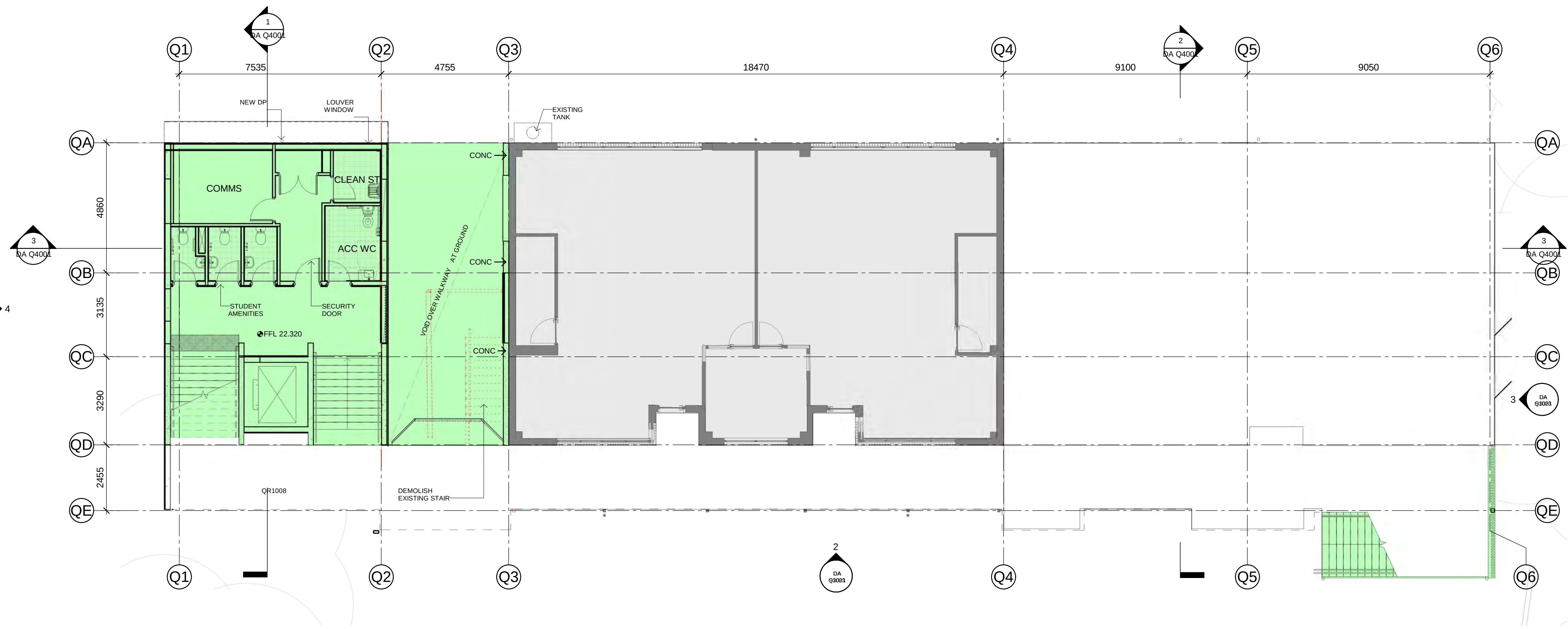
1 BLOCK Q - LOWER GROUND FLOOR PLAN
1 : 100

Drawing Reference
17469-NBRS-A- ST2-DA O2002

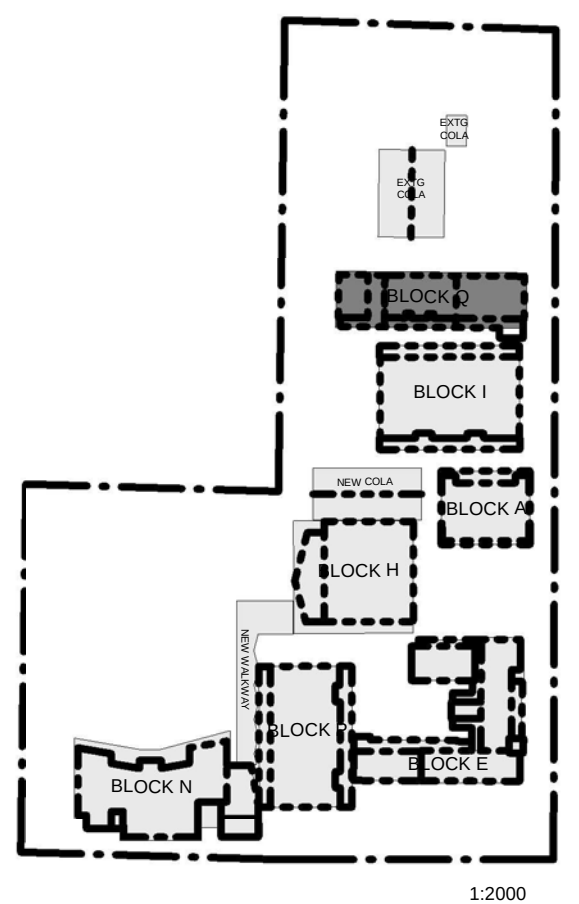
Issue			
No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK



4 BLOCK Q - FIRST FLOOR PLAN
1 : 100



3 BLOCK Q - MEZZANINE FLOOR
1 : 100



Issue No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK

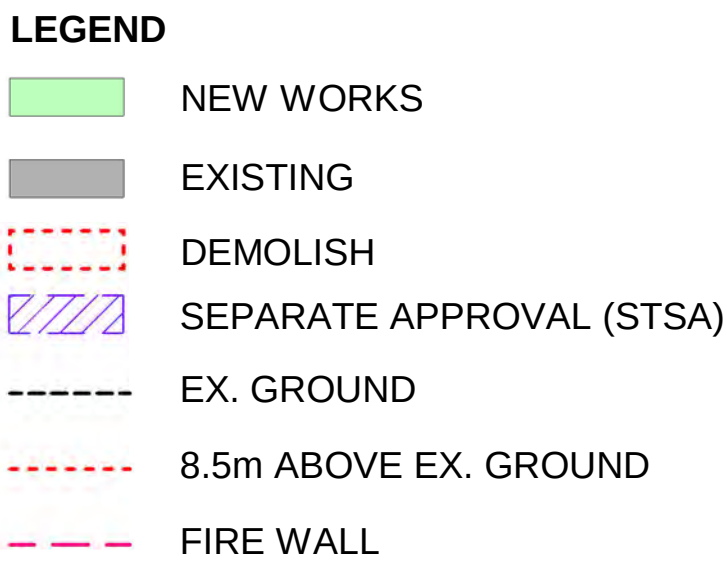
DEVELOPMENT APPLICATION

Drawing Title
Block Q Floor Plans - Sheet 2

Project
CROYDON PUBLIC SCHOOL
at
39 YOUNG STREET, CROYDON
for
NSW DEPARTMENT OF EDUCATION

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Scale 1:100 @ A1 or 1:200 @ A3

Drawing Reference
17469-NBRS-A-DA Q2010

0 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m



SITE LOCATION

1 KEY SITE PLAN
NBS

LANDSCAPE DETAILED DESIGN - DRAWING SCHEDULE

DWG. No.	TITLE	SCALE	ISSUE
LWD00	COVER PAGE	1:400 @ B1	B
LWD01	SITE PLAN	1:200 @ B1	B
LWD02	LANDSCAPE PLAN A	1:100 @ B1	B
LWD03	LANDSCAPE PLAN B	1:100 @ B1	B
LWD04	LANDSCAPE PLAN C	1:100 @ B1	B
LWD05	LANDSCAPE PLAN D	1:100 @ B1	B
LWD06	LANDSCAPE PLAN E	1:100 @ B1	B
LWD07	LANDSCAPE SECTIONS A - B	1:50 @ B1	B
LWD08	LANDSCAPE SECTIONS C - G	1:25 @ B1	B
LWD09	LANDSCAPE PLANTING PALETTE	N/A	B

LEGEND			
	EXISTING BUILDINGS		WET POUR RUBBER (TPV) SURFACE WITH SOFTFALL UNDER (REFER SPEC)
	PROPOSED BUILDINGS		SANDSTONE CLAD BLOCK RETAINING WALL (REFER SPEC)
	NATURAL TURF		COLOURED CONCRETE BLOCK RETAINING WALL (REFER SPEC)
	ARTIFICIAL TURF (REFER SPEC)		SANDSTONE BALLAST BLOCK RETAINING WALL (REFER SPEC)
	MASS PLANTING GRASSES AND GROUNDCOVERS (REFER LWD11)		GAL STEEL DDA COMPLIANT HANDRAILS TO STAIRS AND 1:14 RAMP
	AMPHITHEATRE SEATING CLASS 2 FINISH		PROPOSED 2.1m BLACK PALISADE FENCE & GATES (REFER SPEC)
	COLOURED CONCRETE		EXISTING FENCE TO BE RETAINED
	PERMEABLE PAVING (REFER SPEC)		PROPOSED GAL STEEL BALUSTRADE FENCING
	FEATURE BRICK BANDING FLUSH WITH CONCRETE (REFER SPEC)		PROPOSED SEATING BENCHES ALUMINIUM SLATS (REFER SPEC)
	ASPHALT SURFACE		OFF-FORM CONCRETE SEATING - CLASS 2 FINISH
	ASPHALT SURFACE		



1 LOCALITY PLAN
1:400 @ B1

STAGE 1 NOT IN SCOPE

EXISTING TREES INCLUDED IN SCOPE, REQUIRING APPROVAL

STAGE 2 SCOPE OF WORKS

No.	Date	Description	Chkd
A	14/01/2019	PRELIMINARY DA	CB
B	11/02/2019	DA ISSUE	CB

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Client
NSW Department of Education

Drawing Title
Cover Page

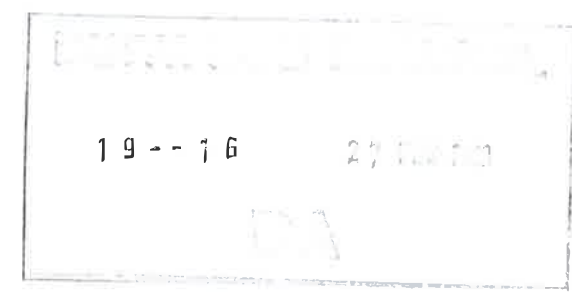
Date 11/02/2019
Scale 1:400 @ B1

Drawing Reference
17469-LWD00-B

LANDSCAPE DEVELOPMENT APPLICATION - STAGE 2

CROYDON PUBLIC SCHOOL | NSW DEPARTMENT OF EDUCATION

39 YOUNG STREET CROYDON NSW



Issue			
No.	Date	Description	Chkd
A	14/01/2019	PRELIMINARY DA	CB
B	11/02/2019	DA ISSUE	CB

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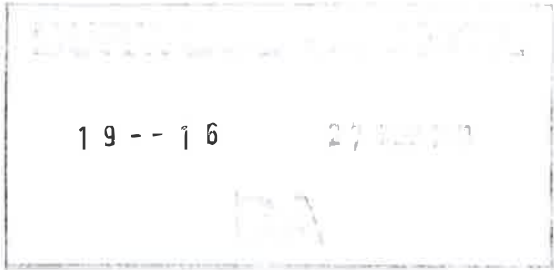
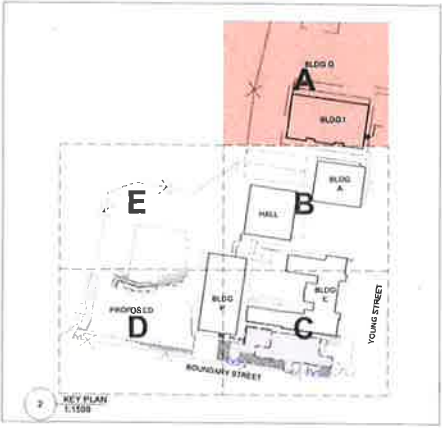
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Project
Crofton Public School
at
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Client
NSW Department of Education

Drawing Title
Landscape Site Plan

Date 11/02/2019
Scale 1:250 @ B1
0 10 M
Drawing Reference
17469-LWD01-B



NOTE: TREE REMOVAL ALSO INCLUDED IN SCOPE,
SUBJECT TO FORMAL DEVELOPMENT
APPLICATION APPROVAL BY BURWOOD COUNCIL

SCOPE OF WORKS: STAGE 2

Issue				
No.	Date	Description	Chkd	
A	14/01/2019	PRELIMINARY DA	CB	
B	11/02/2019	DA ISSUE	CB	

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Landscape Architect

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Project
Croydon Public School

at
39 Young Street, Croydon NSW

Client
NSW Department of Education

Drawing Title
Landscape Plan A

Date 11/02/2019

Scale 1:100 @ B1

Drawing Reference

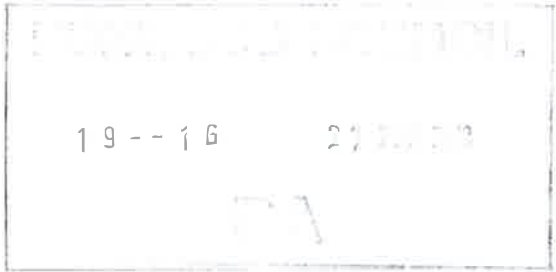
17469-LWD02-B



ADJOINS LWD03

LANDSCAPE PLAN A
1:100 @ B1

ADJOINS LWD03



**NOTE: TREE REMOVAL ALSO INCLUDED IN SCOPE,
SUBJECT TO FORMAL DEVELOPMENT
APPLICATION APPROVAL BY BURWOOD COUNCIL**

SCOPE OF WORKS: STAGE 2

No.	Date	Description	Chkd
A	10/01/2019	PRELIMINARY DA	CB
B	11/02/2019	DA ISSUE	CB

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at
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Client
NSW Department of Education

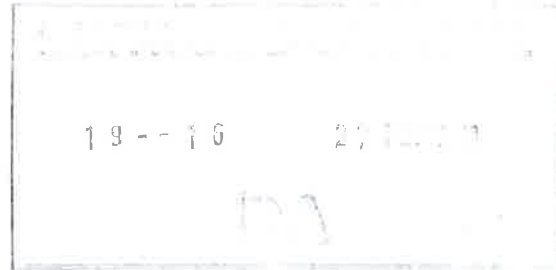
Drawing Title
Landscape Plan B

Date 11/02/2010

Scale 1:100 @ B

Drawing Reference

17469-LWD03-B



NOTE: TREE REMOVAL ALSO INCLUDED IN SCOPE, SUBJECT TO FORMAL DEVELOPMENT APPLICATION APPROVAL BY BURWOOD COUNCIL.

SCOPE OF WORKS, STAGE 2

Issue			
No	Date	Description	Ctrkd
A	14/01/2019	PRELIMINARY DA	CB
B	11/02/2019	DA ISSUE	CB

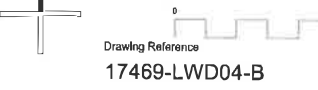
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Drawing Title
Landscape Plan C

Date 11/02/2019
Scale 1:100 @ B1



Drawing Reference
17469-LWD04-B

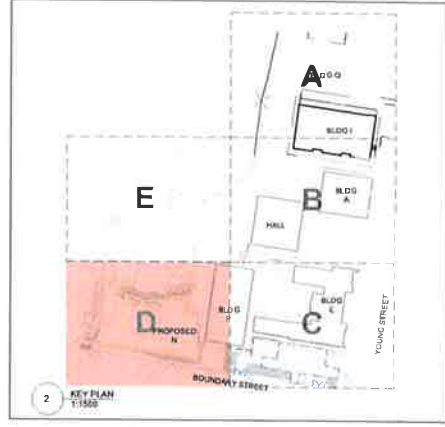
ADJOINS LWD03

ADJOINS LWD03

AD-106

1 LANDSCAPE PLAN C
1:100 @ B1

NOTE: CONTRACTOR TO ALLOW FOR DOUBLE
LOOP GAL. STEEL HANDRAILS AND STAIR CASE
TACTILE INDICATOR PINS TO RAMP AND STAIRS



NOTE: TREE REMOVAL ALSO INCLUDED IN SCOPE, SUBJECT TO FORMAL DEVELOPMENT APPLICATION APPROVAL BY BURWOOD COUNCIL

SCOPE OF WORKS, STAGE 2

Issue				
No.	Date	Description	Chkd	
A	14/01/2019	PRELIMINARY DA	cb	
B	11/02/2019	DA ISSUE	cb	

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Landscape Architect
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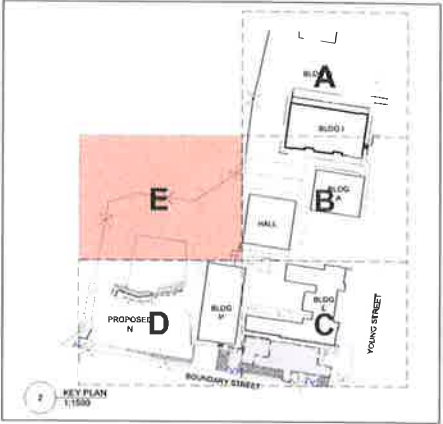
Project
Croydon Public School
at
39 Young Street, Croydon NSW

Client
NSW Department of Education

Drawing Title
Landscape Plan D

Date 11/02/2019
Scale 1:100 @ B1
Drawing Reference
17469-LWD05-B

1 LANDSCAPE PLAN D
1:100 @ B1
NOTE: CONTRACTOR TO ALLOW FOR DOUBLE LOOP GAL STEEL HANDRAILS AND STAINLESS TACTILE INDICATOR PINS TO RAMPS AND STAIRS



19 -- 16

NOTE: TREE REMOVAL ALSO INCLUDED IN SCOPE,
SUBJECT TO FORMAL DEVELOPMENT
APPLICATION APPROVAL BY BURWOOD COUNCIL.

SCOPE OF WORKS: STAGE 2

Issue

No.	Date	Description	Chkd
A	14/01/2019	PRELIMINARY DA	CB
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LANDSCAPE

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Project
Croydon Public School
at
39 Young Street, Croydon NSW

Client
NSW Department of Education

Drawing Title
Landscape Plan E

Date 11/02/2019

Scale 1:100 @ B1

Drawing Reference

17469-LWD06-B

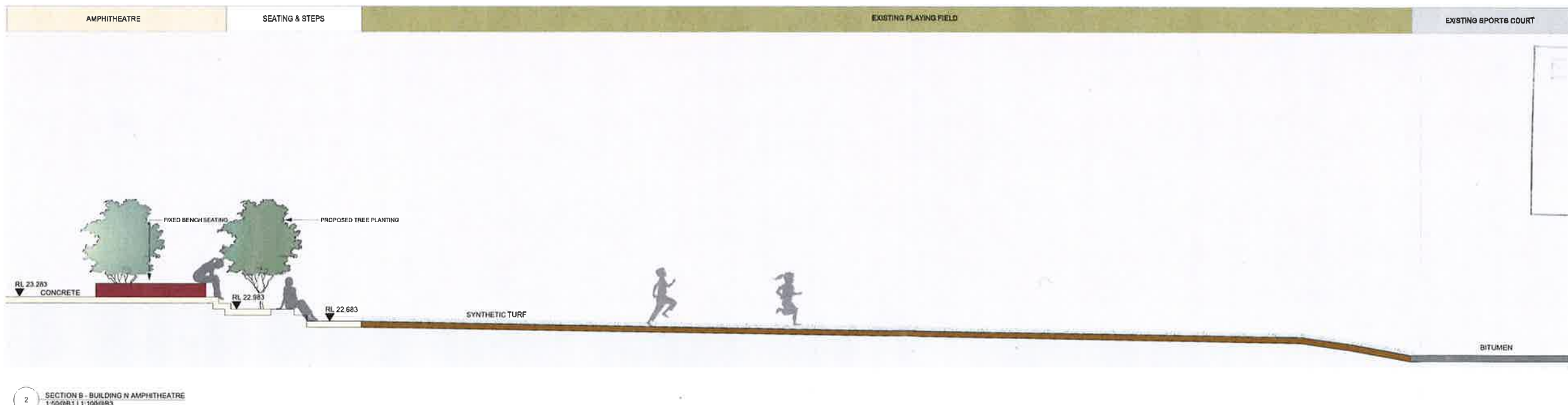
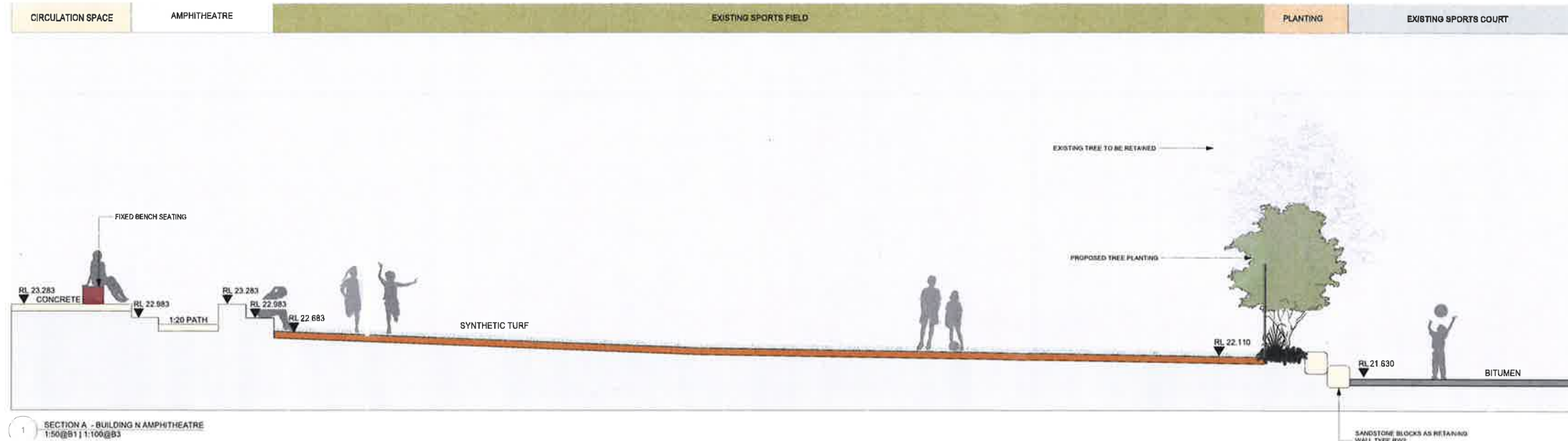
ADJOINS LWD05

LANDSCAPE PLAN D
1:100 @B1

EXISTING TREE T62
TO BE REMOVED IN
DESIGN STAGE ONE

ADJOINS LWD08

ADJOINS LWD03



19 - - 16

No.	Date	Description	Chkd
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Project
Croydon Public School

at
38 Young Street, Croydon NSW

Client
NSW Department of Education

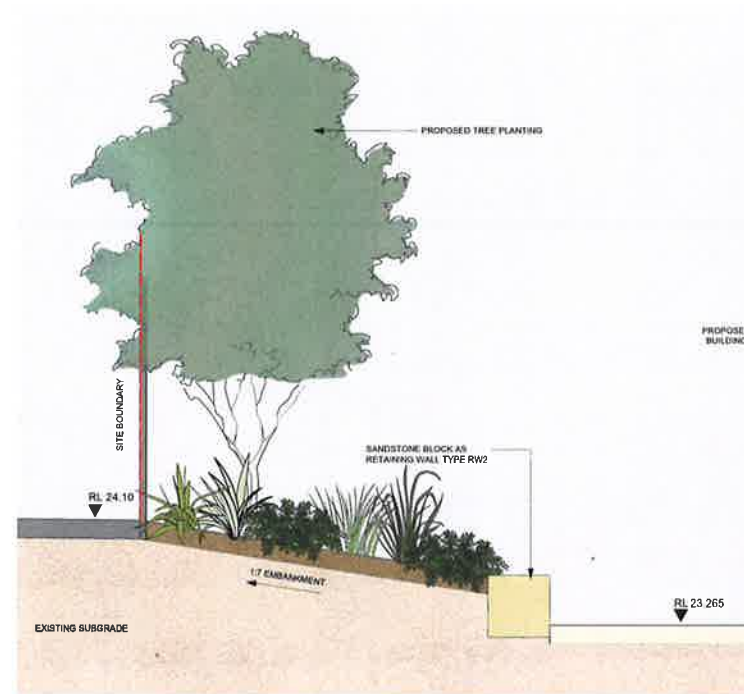
Drawing Title
Landscape Sections A - B

Date 11/02/2019

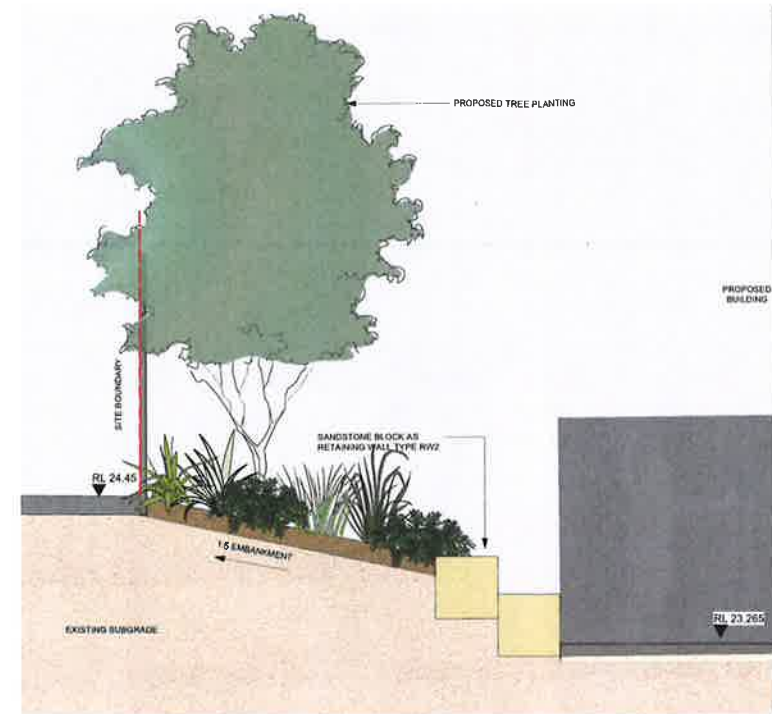
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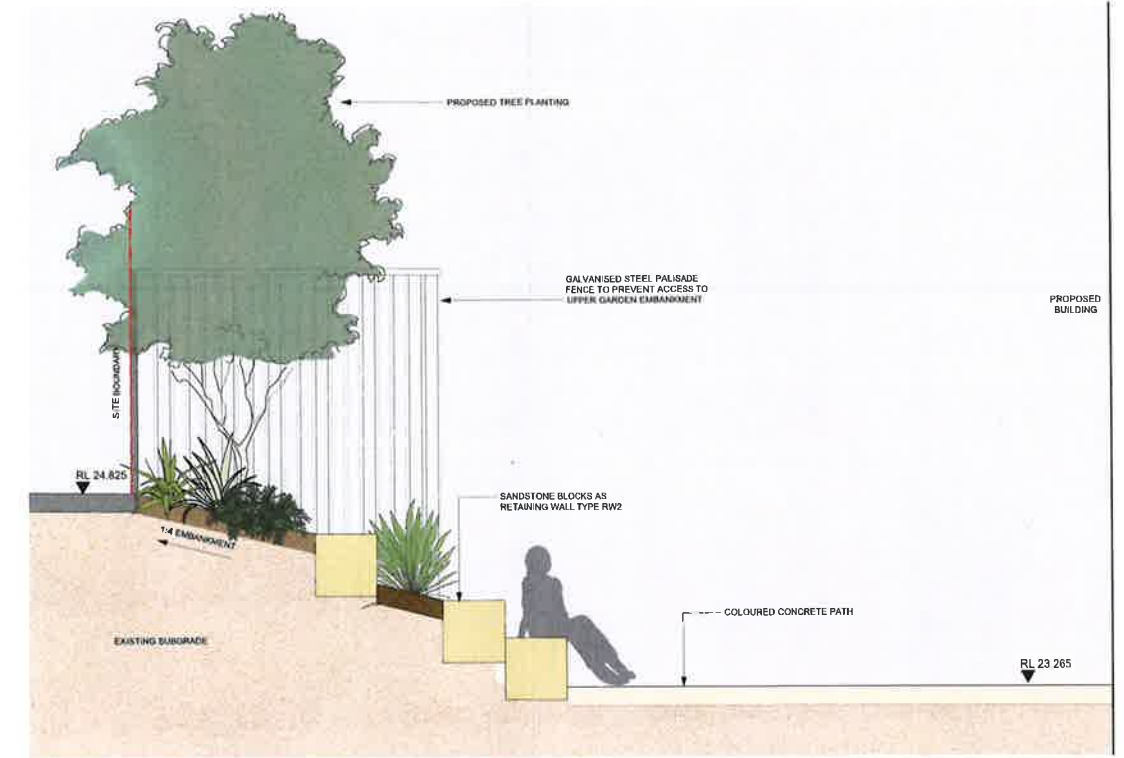
Drawing Reference
17469-LWD07-B



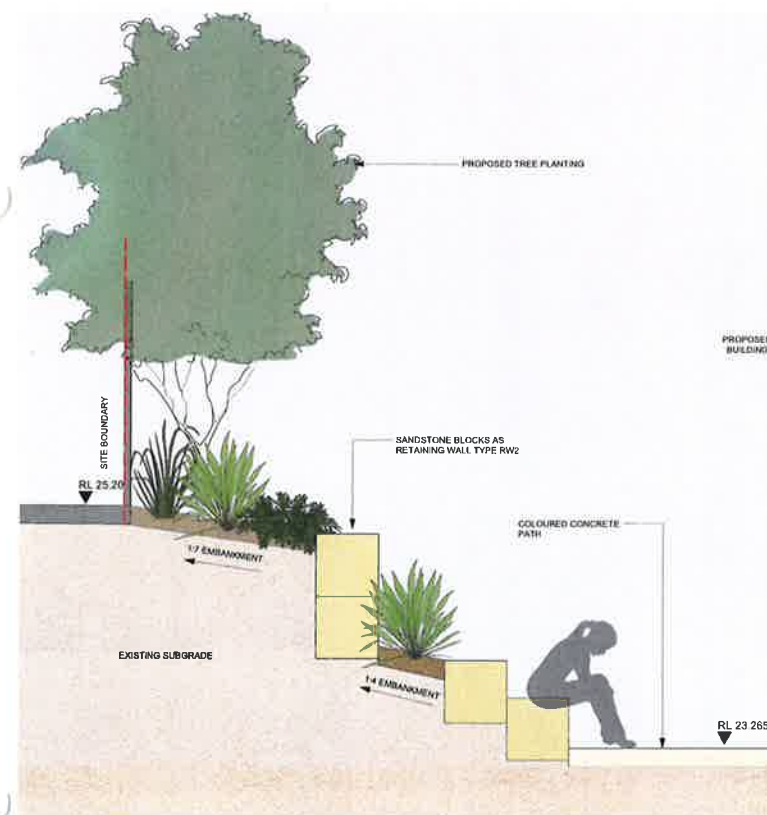
9 SECTION C - REAR BUILDING N EMBANKMENT PLANTING
1:50@B1 | 1:100@B3



8 SECTION D - REAR BUILDING N EMBANKMENT PLANTING
1:50@B1 | 1:100@B3



7 SECTION E - REAR BUILDING N EMBANKMENT PLANTING
1:50@B1 | 1:100@B3



6 SECTION F - REAR BUILDING N EMBANKMENT PLANTING
1:50@B1 | 1:100@B3



5 SECTION G - REAR BUILDING N EMBANKMENT PLANTING
1:50@B1 | 1:100@B3

No.	Date	Description	Chkd
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Project
Croydon Public School
at
39 Young Street, Croydon NSW

Client
NSW Department of Education

Drawing Title
Landscape Sections C - G

Date 11/02/2019
Scale 1:25 @ B1

Drawing Reference
17469-LWD08-B

TREES



Banksia serrata



Elaeocarpus reticulatus



Hymenosporum flavum



Pyrus calleryana 'Capital'



Tristanopsis laurina

SHRUBS AND GRASSES



Dianella caerulea 'Cassa Blue'



Liriope muscari



Lomandra tanika



Philodendron xanadu



Poa labillardieri 'Eskdale'



Westringia fruticosa

EXISTING TREE SCHEDULE

Tree No.	Common Name	Height (m)	DBH (cm)	Age	Condition	Vigor	Notes	Observations/Condition of Tree
1	Banksia serrata	12	100	10	Good	High	Well established tree with good canopy cover.	Well established tree with good canopy cover.
2	Elaeocarpus reticulatus	10	80	10	Good	High	Well established tree with good canopy cover.	Well established tree with good canopy cover.
3	Hymenosporum flavum	10	80	10	Good	High	Well established tree with good canopy cover.	Well established tree with good canopy cover.
4	Pyrus calleryana 'Capital'	10	80	10	Good	High	Well established tree with good canopy cover.	Well established tree with good canopy cover.
5	Tristanopsis laurina	10	80	10	Good	High	Well established tree with good canopy cover.	Well established tree with good canopy cover.
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Extract from Arboricultural Impact Assessment by Mackay Tree Management dated 11 February 2019

NOTE: TREE REMOVAL SUBJECT TO FORMAL DEVELOPMENT APPLICATION - BURWOOD COUNCIL.

PROPOSED PLANT SCHEDULE

ID	Qty	Botanical Name	Common Name	Size	Height	Spread
BSE	4	Banksia serrata	Old Man Banksia	2000	10000	5000
EL	15	Elaeocarpus reticulatus	Blueberry Ash	1000	12000	4000
HF	8	Hymenosporum flavum	Native Frangipanni	2000	12000	6000
PYC	5	Pyrus calleryana 'Capital'	Ornamental Pear	1000	10000	3000
TL	3	Tristanopsis laurina	Water gum	2000	15000	5000
Shrubs						
PX	17	Philodendron Xanadu	Philodendron	250	500	800
WFC	9	Westringia fruticosa	Coastal Rosemary	250	1000	1000
Grasses						
DCB	403	Dianella 'Cassa Blue'	Blue Flax Lily	50	600	500
LIM	403	Liriope muscari	Lily Turf	50	400	400
LT	667	Lomandra tanika	Lomandra	50	500	500
PL	636	Poa labillardieri	Common Tussock Grass	50	600	500
Total	2370					

TOTAL TREES PROPOSED IN STAGE 1 & 2 = 86
TOTAL TREES REMOVED = 54
1:5 TREES PER EVERY 1 REMOVED

No.	Date	Description	Chkd
A	14/01/2019	PRELIMINARY DA	CB
B	11/02/2019	DA ISSUE	CB

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Project

Croydon Public School

at

39 Young Street, Croydon NSW

Client

NSW Department of Education

Drawing Title

Landscape Planting Palette

Date 11/02/2019

Scale N/A

Drawing Reference

17469-LWD09-B



Issue			
No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK

DEVELOPMENT
APPLICATION

Drawing Title
Artist Impression - Boundary Street
Facade

Project
CROYDON PUBLIC SCHOOL
at
39 YOUNG STREET, CROYDON
for
NSW DEPARTMENT OF EDUCATION

Architect
NBRSPARTNERSARCHITECTURE.
Sydney
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Nominated Architects:
Geoffery Deane 3766; Andrew Duffin; Garry Hoddinett 5286
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Date 26/02/2019 5:04:55 PM
Scale NTS

Drawing Reference
17469-NBRS-A-DA S9105



Issue			
No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK

**DEVELOPMENT
APPLICATION**

Drawing Title
Artist Impression - New Home Base
Building North Facade

Project
CROYDON PUBLIC SCHOOL
at
39 YOUNG STREET, CROYDON
for
NSW DEPARTMENT OF EDUCATION

Architect
NBRSARCHITECTURE.
Sydney
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nbrsarchitecture.com
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Nominated Architects:
Geoffrey Deane 3766; Andrew Duffin; Garry Hoddinett 5286
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Date 26/02/2019 5:04:55 PM
Scale NTS

Drawing Reference
17469-NBRS-A-DA S9106



SITE					
PROJECT NUMBER	SHEET NO.	SHEET NAME	Current Revision	Current Revision Date	NBRS-Documentation Stage
17469	DA S0001	Cover Page + Drawing List	DA1	26/02/2019	ST2 - DA
17469	DA S1001	Site Plan	DA1	26/02/2019	ST2 - DA
17469	DA S1001A	Site Plan Neighboring context	DA1	26/02/2019	ST2 - DA
17469	DA S1001B	Site Analysis	DA1	26/02/2019	ST2 - DA
17469	DA S1001C	Site photos	DA1	26/02/2019	ST2 - DA
17469	DA S1001D	Site photos - Neighboring Context	DA1	26/02/2019	ST2 - DA
17469	DA S1008	Shadow Diagrams	DA1	26/02/2019	ST2 - DA
17469	DA S1015	Outdoor Space	DA1	26/02/2019	ST2 - DA
17469	DA S1017	Site Signage Diagram	DA1	26/02/2019	ST2 - DA
17469	DA S1018	Floor Space Calculation Diagram	DA1	26/02/2019	ST2 - DA
17469	DA S1019	Notification- Site Plan	DA1	26/02/2019	ST2 - DA
17469	DA S9101	External Finishes Board BLK Q	DA1	26/02/2019	ST2 - DA
17469	DA S9102	External Finishes Board BLK H	DA1	26/02/2019	ST2 - DA
17469	DA S9103	External Finishes Board BLK N - North Facade	DA1	26/02/2019	ST2 - DA
17469	DA S9104	External Finishes Board BLK N - South Facade	DA1	26/02/2019	ST2 - DA
17469	DA S9105	Artist Impression - Boundary Street Facade	DA1	26/02/2019	ST2 - DA
17469	DA S9106	Artist Impression - New Home Base Building North Facade	DA1	26/02/2019	ST2 - DA

BLOCK - A					
PROJECT NUMBER	SHEET NO.	SHEET NAME	Current Revision	Current Revision Date	NBRS-Documentation Stage
17469	DA A2002	Block A Floor Plans	DA1	26/02/2019	ST2 - DA
17469	DA A3001	Block A Elevations - Sheet 1	DA1	26/02/2019	ST2 - DA
17469	DA A4001	Block A Sections	DA1	26/02/2019	ST2 - DA

BLOCK - E					
PROJECT NUMBER	SHEET NO.	SHEET NAME	Current Revision	Current Revision Date	NBRS-Documentation Stage
17469	DA E2002	Block E Floor Plans	DA1	26/02/2019	ST2 - DA
17469	DA E3001	Block E Elevations - Sheet 1	DA1	26/02/2019	ST2 - DA
17469	DA E3002	Block E Elevations - Sheet 2	DA1	26/02/2019	ST2 - DA

BLOCK - H					
PROJECT NUMBER	SHEET NO.	SHEET NAME	Current Revision	Current Revision Date	NBRS-Documentation Stage
17469	DA H2002	Block H Floor Plans & COLAS	DA1	26/02/2019	ST2 - DA
17469	DA H3001	Block H Elevations	DA1	26/02/2019	ST2 - DA
17469	DA H4001	Block H Sections	DA1	26/02/2019	ST2 - DA

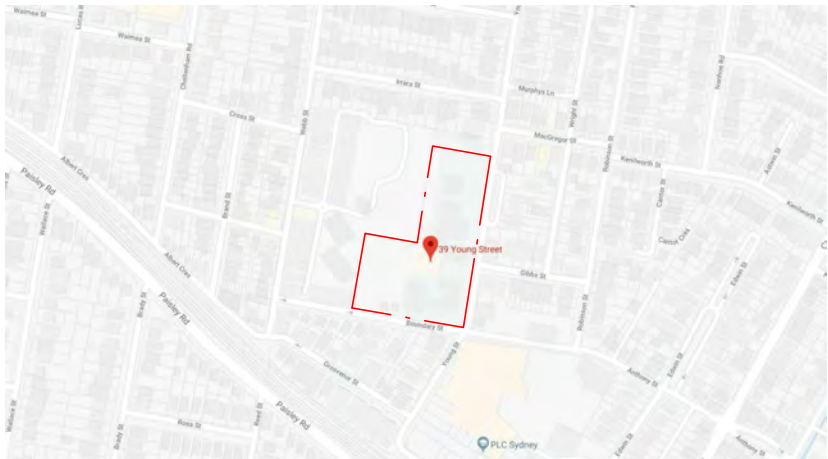
BLOCK - N					
PROJECT NUMBER	SHEET NO.	SHEET NAME	Current Revision	Current Revision Date	NBRS-Documentation Stage
17469	DA N2001	Block N Ground Floor Plan	DA1	26/02/2019	ST2 - DA
17469	DA N2002	Block N First Floor Plan	DA1	26/02/2019	ST2 - DA
17469	DA N2003	Block N Second Floor Plan	DA1	26/02/2019	ST2 - DA
17469	DA N2016	Block N Roof	DA1	26/02/2019	ST2 - DA
17469	DA N3001	Block N Elevations - Sheet 1	DA1	26/02/2019	ST2 - DA
17469	DA N3002	Block N Elevations - Sheet 2	DA1	26/02/2019	ST2 - DA
17469	DA N4001	Block N Sections	DA1	26/02/2019	ST2 - DA

BLOCK - Q					
PROJECT NUMBER	SHEET NO.	SHEET NAME	Current Revision	Current Revision Date	NBRS-Documentation Stage
17469	DA Q2002	Block Q Floor Plans - Sheet 1	DA1	26/02/2019	ST2 - DA
17469	DA Q2003	Block Q Floor Plans - Sheet 2	DA1	26/02/2019	ST2 - DA
17469	DA Q2010	Block Q Roof Plan	DA1	26/02/2019	ST2 - DA
17469	DA Q3001	Block Q Elevations	DA1	26/02/2019	ST2 - DA
17469	DA Q4001	Block Q Sections	DA1	26/02/2019	ST2 - DA

NSW DEPARTMENT OF EDUCATION

CROYDON PUBLIC SCHOOL

DEVELOPMENT APPLICATION



Issue No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK

**DEVELOPMENT
APPLICATION**

Drawing Title
Cover Page + Drawing List

Project
CROYDON PUBLIC SCHOOL

at
39 YOUNG STREET, CROYDON

for
NSW DEPARTMENT OF EDUCATION

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NBRSARCHITECTURE.

Sydney
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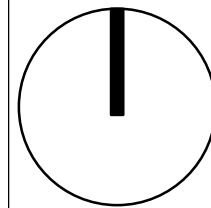
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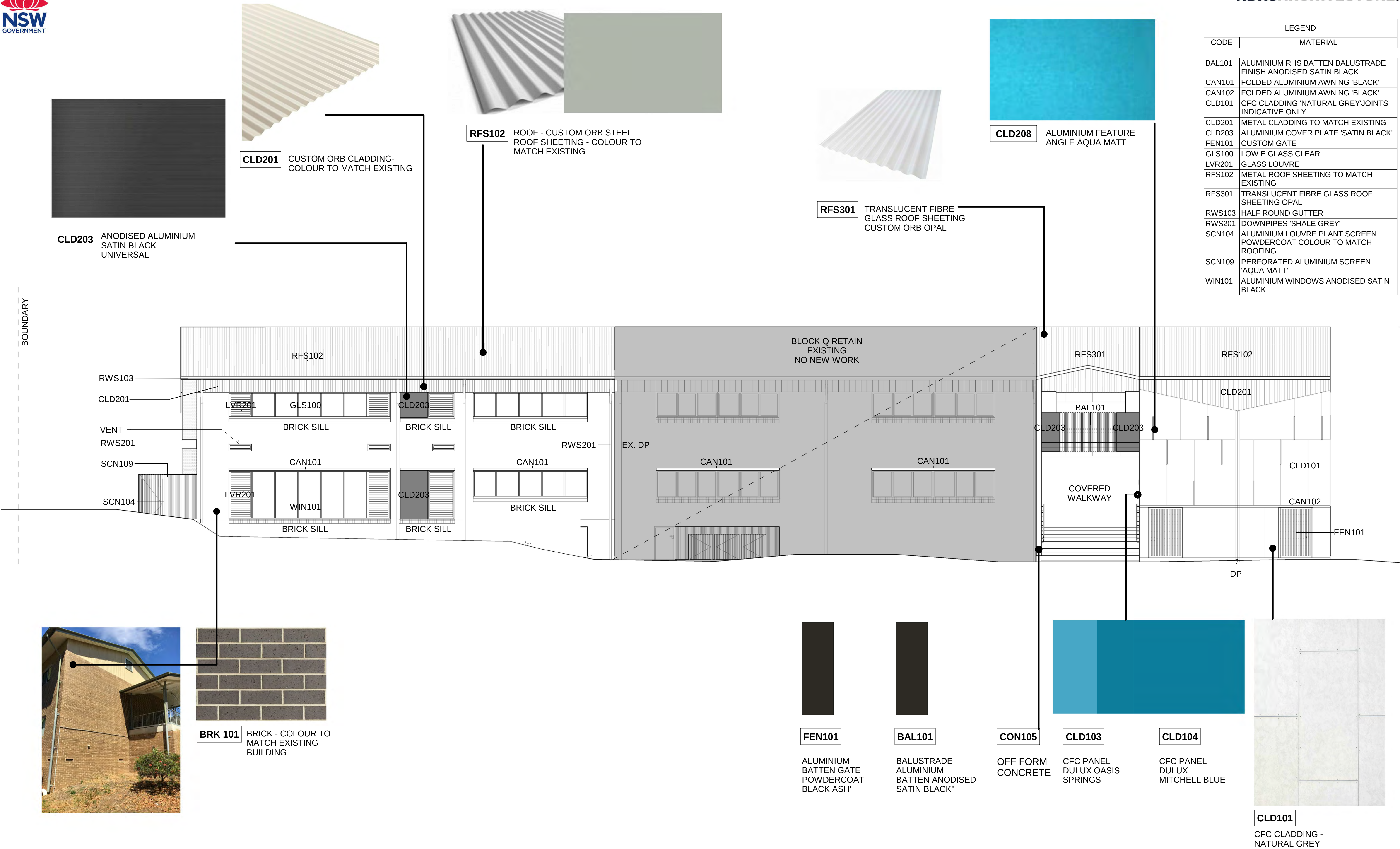
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Date 26/02/2019 5:00:00 PM
Scale NTS

Drawing Reference
17469-NBRS-A- ST2-DA S0001



Drawing Reference
17469-NBRS-A- ST2-DA S0001



Issue No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK

Drawing Title
External Finishes Board BLK Q

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CROYDON PUBLIC SCHOOL

at
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for
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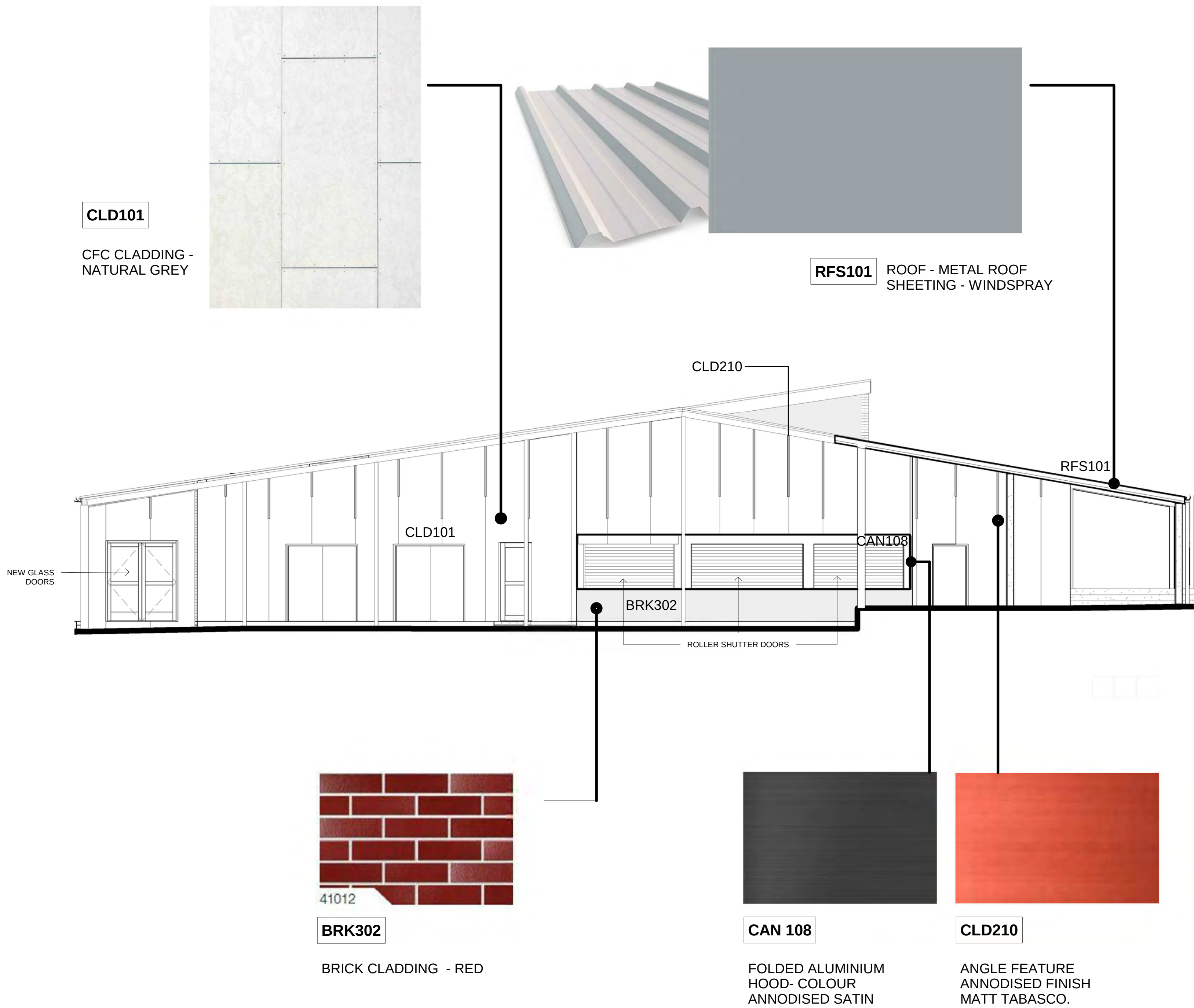
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Scale 1 : 75 @ A1

Drawing Reference
17469-NBRS-A- ST2-DA S9101



LEGEND	
CODE	MATERIAL
BRK302	BRICK CLADDING GLAZED RED
CAN108	FOLDED ALUMINIUM HOOD-COLOUR VARIES
CLD101	CFC CLADDING 'NATURAL GREY'JOINTS INDICATIVE ONLY
CLD210	ALUMINIUM ANGLE FEATURE 'TABASCO MATT'
RFS101	METAL ROOF SHEETING-COLOUR 'WINDSPRAY'



EXISTING HALL BUILDING ON SITE

Issue			
No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK

DEVELOPMENT
APPLICATION

Drawing Title
External Finishes Board BLK H

Project
CROYDON PUBLIC SCHOOL

at
39 YOUNG STREET, CROYDON

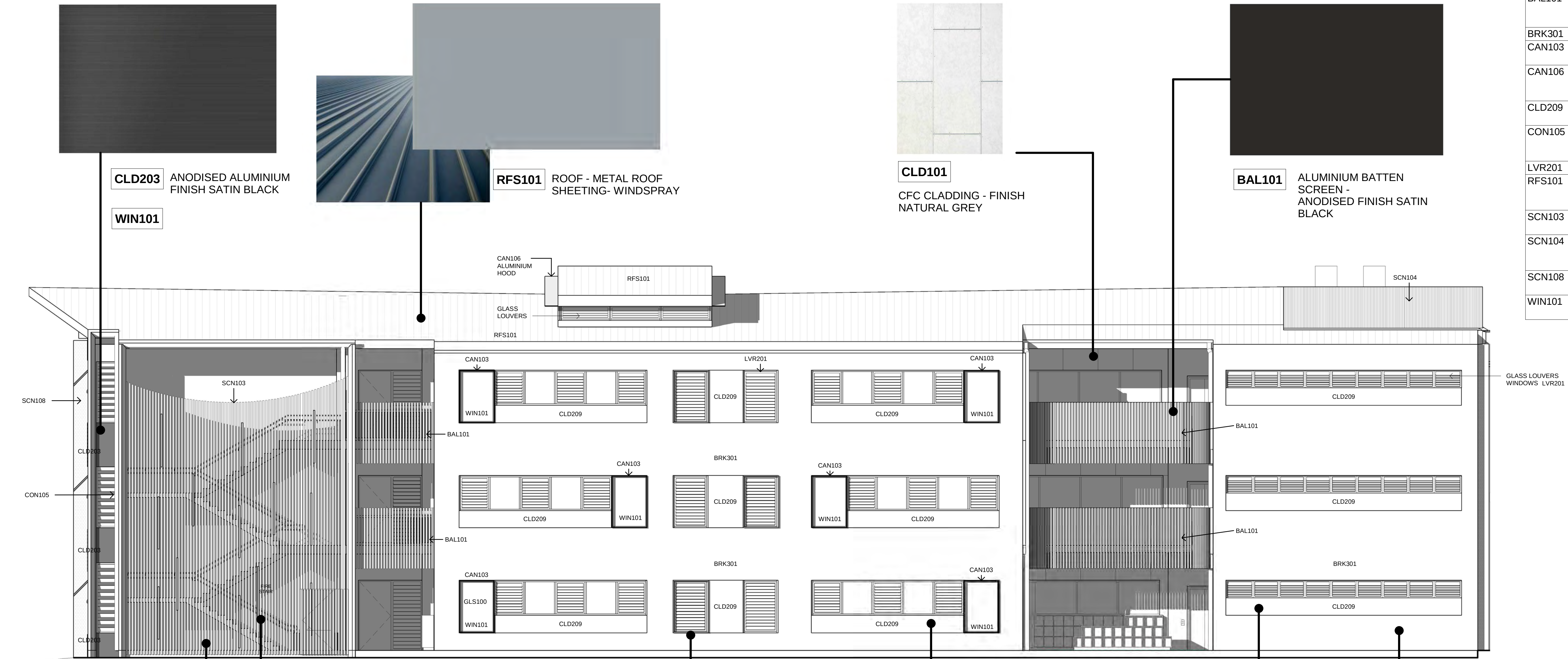
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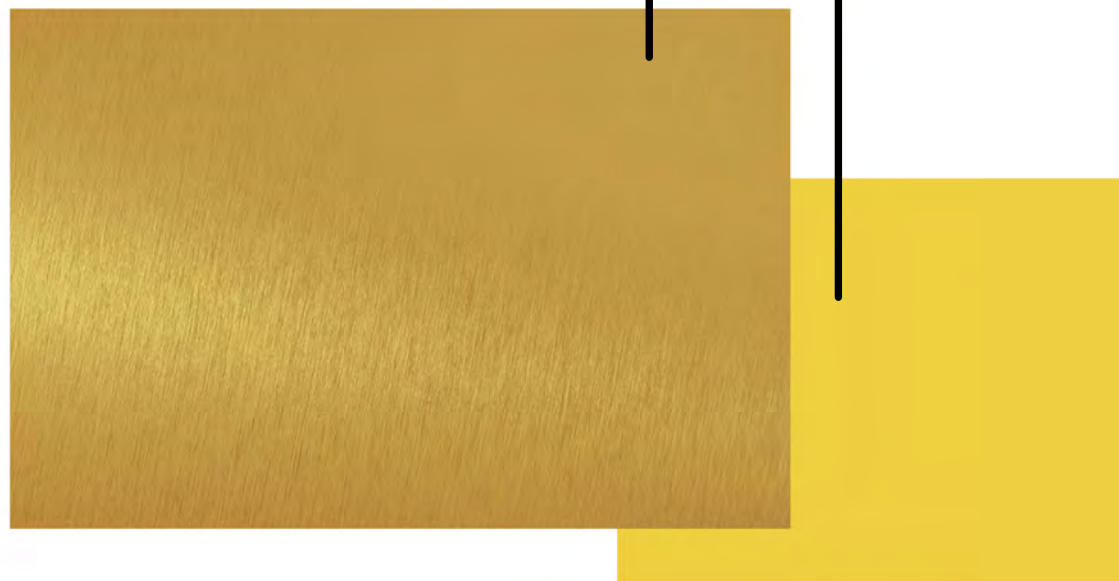
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Scale 1 : 75 @ A1

Drawing Reference
17469-NBRS-A- ST2-DA S9102

LEGEND	
CODE	MATERIAL
BAL101	ALUMINIUM RHS BATTEN BALUSTRADE FINISH ANODISED SATIN BLACK
BRK301	BRICK CLADDING CHARCOAL
CAN103	ALUMINIUM BOXHOOD 'AQUA MATT SAPPHIRE'
CAN106	ALUMINIUM AWNING HOOD 'COLOUR TO MATCH ROOF SHEETING'
CLD209	ALUMINIUM COVER PLATE 'AQUA MATT SAPPHIRE'
CON105	OFF-FORM CONCRETE FINISH WITH SEALER. JOINTS TO MATCH CLD101
LVR201	GLASS LOUVRE
RFS101	METAL ROOF SHEETING-COLOUR 'WINDSPRAY'
SCN103	ALUMINIUM BATTEN SCREEN 'SATIN ORIENTAL GOLD'
SCN104	ALUMINIUM LOUVRE PLANT SCREEN POWDERCOAT COLOUR TO MATCH ROOFING
SCN108	PERFORATED ALUMINIUM SUN SHADE 'SATIN SANDSTONE'
WIN101	ALUMINIUM WINDOWS ANODISED SATIN BLACK



2 BUILDING N - SOUTH ELEVATION - MATERIAL FINISHES
1 : 75



SCN103
ALUMINIUM BATTEN
SCREEN - SATIN
ORIENTAL GOLD

CLD211
ALUMINIUM ANGLE
FEATURE POWDERCOAT
MOONLIGHT YELLOW



CAN103
ALUMINIUM HOOD
FINISH AQUA MATT



CLD209
ALUMINIUM COVERPLATE
FINISH AQUA MATT



BRK 301
BRICK CLADDING -
CHARCOAL

Issue No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK

DEVELOPMENT APPLICATION

Drawing Title
External Finishes Board BLK N - South
Facade

Project
CROYDON PUBLIC SCHOOL
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for
NSW DEPARTMENT OF EDUCATION

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Scale 1 : 75 @ A1

Drawing Reference
17469-NBR5-A- ST2-DA S9104

LEGEND	
CODE	MATERIAL
CAN104	ALUMINIUM BOX HOOD 1.AQUA MATT SAPPHIRE 2.MATT SUNDUNE 3.MATT TABASCO
CLD203	ALUMINIUM COVER PLATE 'SATIN BLACK'
CLD401	SANDSTONE CLADDING PANEL
CON105	OFF-FORM CONCRETE FINISH WITH SEALER. JOINTS TO MATCH CLD101
GLS100	LOW E GLASS CLEAR
LVR201	GLASS LOUVRE
RFS101	METAL ROOF SHEETING-COLOUR 'WINDSPRAY'
SCN105	ALUMINIUM BATTEN SCREEN 'SATIN BLACK'
SCN107	ALUMINIUM BATTEN SCREEN 'SATIN BLACK' WITH 'AQUA MATT SAPPHIRE' BOTTOM BATTEN CAP
SCN108	PERFORATED ALUMINIUM SUN SHADE 'SATIN SANDSTONE'
WIN101	ALUMINIUM WINDOWS ANODISED SATIN BLACK



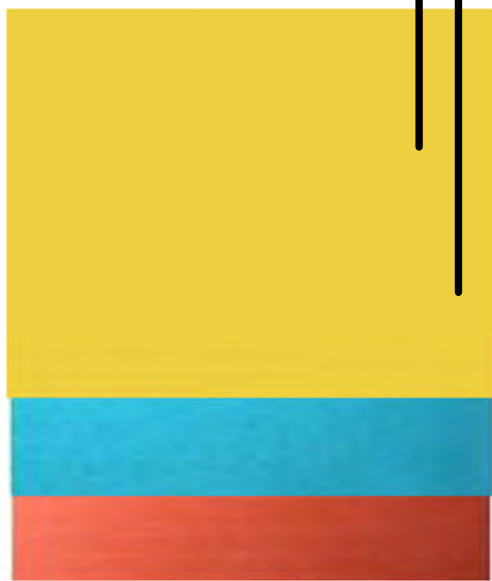
1 BUILDING N - NORTH ELEVATION - MATERIAL FINISHES
1 : 75



SCN107 ALUMINIUM BATTEN SCREEN -
FINISH ANODISED SATIN
BLACK. CAPS AQUA MATT



ALUMINIUM HOOD /
TRIM FINISH AQUA
MATT AND MATT
SANDUNE



CAN104
ALUMINIUM HOOD/
WINDOW REVEAL
FINISH AQUA MATT,
MATT SANDUNE AND
MATT TABASCO



CLD401 SANDSTONE CLADDING
PANEL

Issue No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK

DEVELOPMENT
APPLICATION

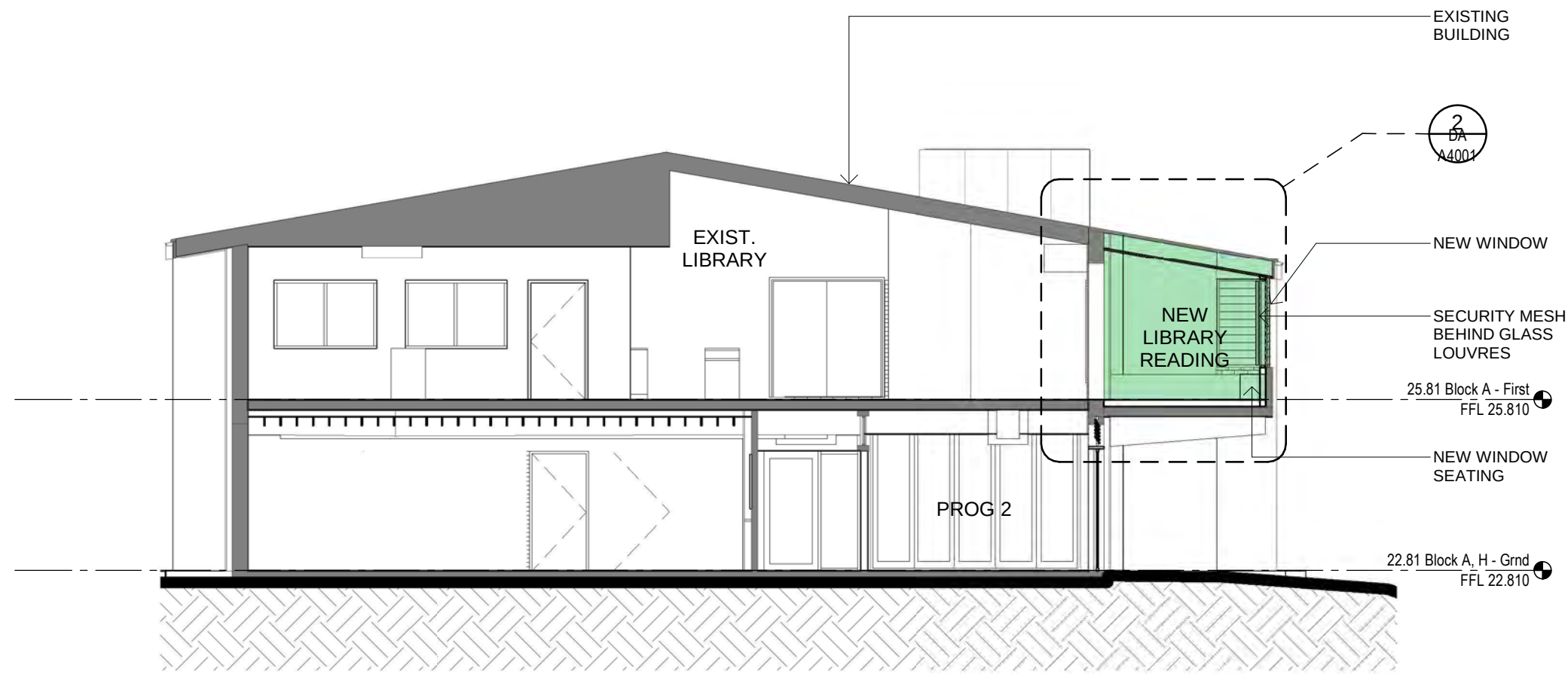
Drawing Title
External Finishes Board BLK N - North
Facade

Project
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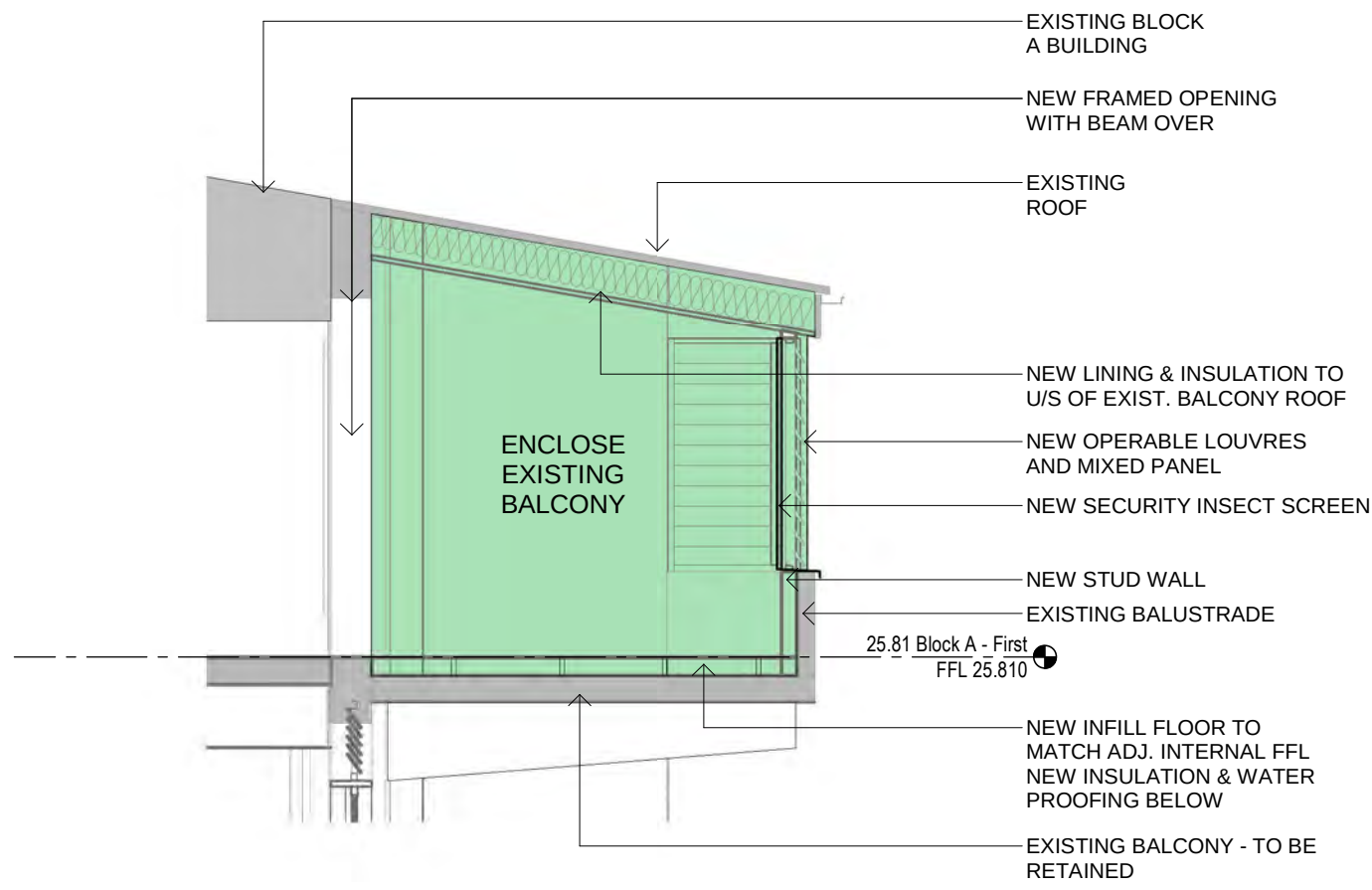
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Drawing Reference
17469-NBRS-A- ST2-DA S9103



1 BLOCK A - SECTION A - DA
1 : 100



2 BLOCK A - SECTION A - DETAIL
1 : 50

LEGEND

- NEW WORKS
- EXISTING
- DEMOLISH
- SEPARATE APPROVAL (STSA)
- EX. GROUND
- 8.5m ABOVE EX. GROUND
- FIRE WALL

Issue			
No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK

DEVELOPMENT
APPLICATION

Drawing Title
Block A Sections

Project
CROYDON PUBLIC SCHOOL

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for
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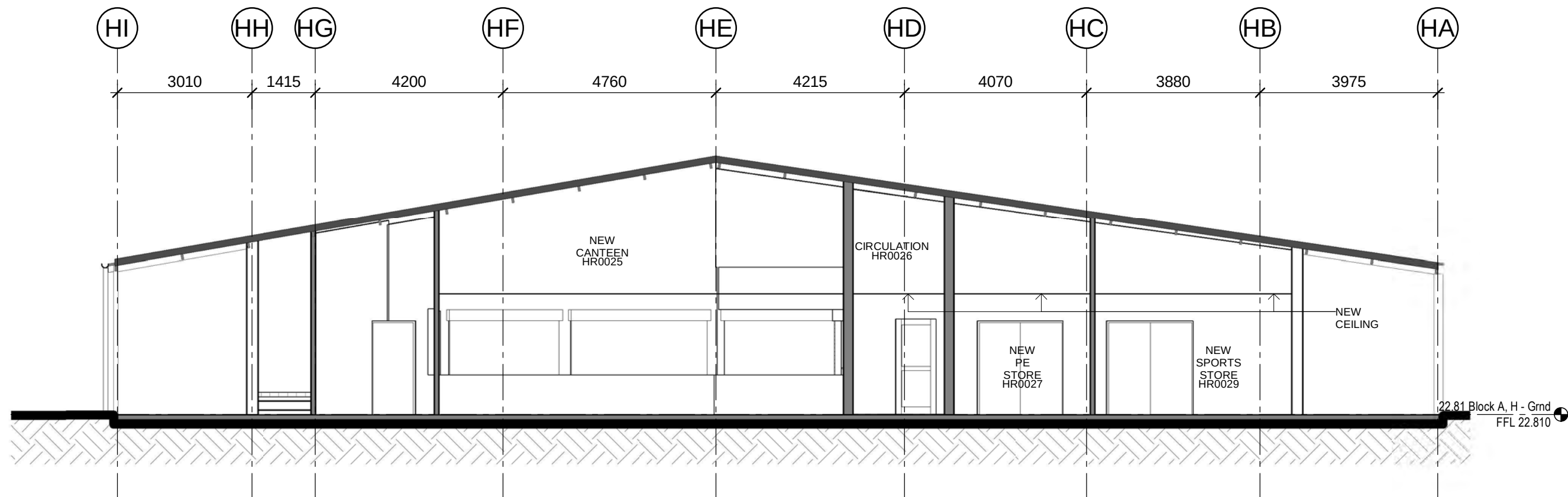
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Scale As indicated @ A1

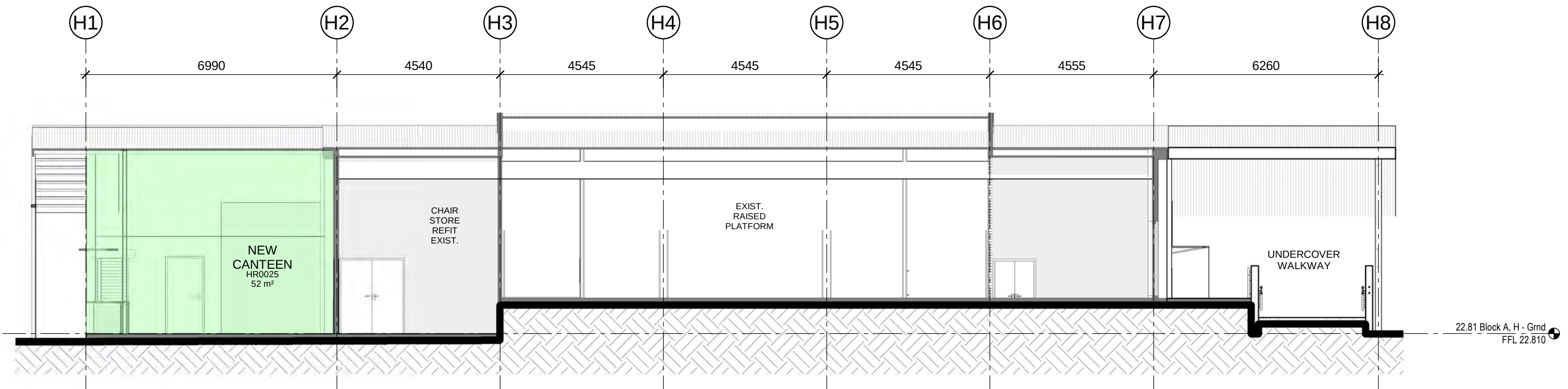
Drawing Reference
17469-NBRS-A- ST2-DA A4001

LEGEND

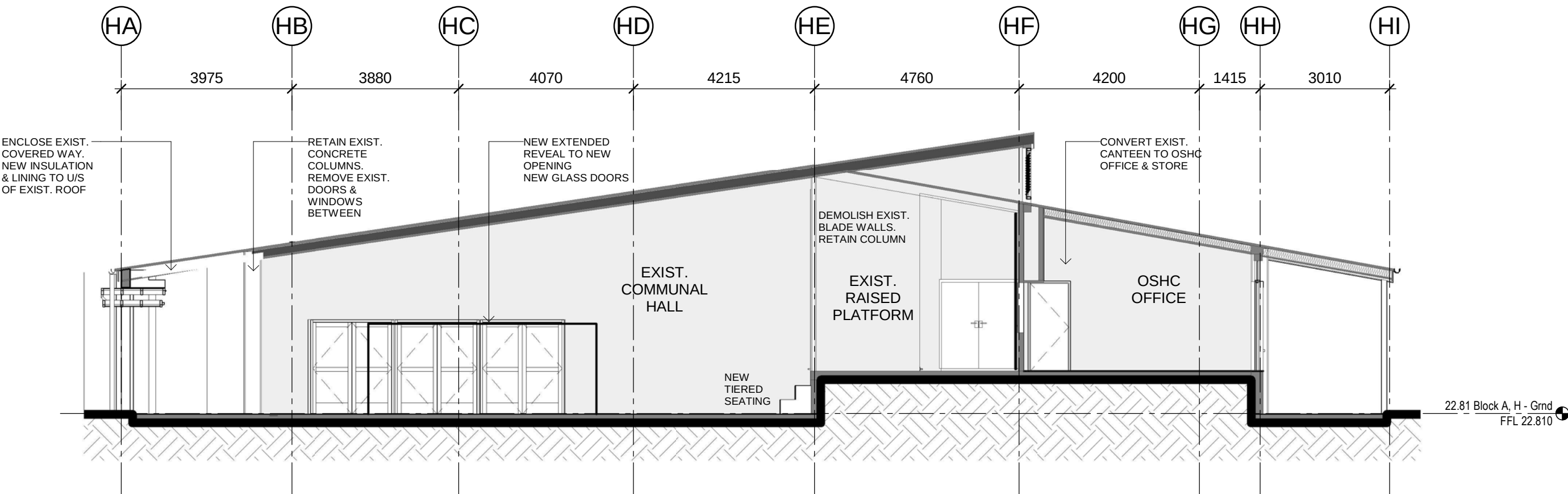
- NEW WORKS
- EXISTING
- DEMOLISH
- SEPARATE APPROVAL (STSA)
- EX. GROUND
- 8.5m ABOVE EX. GROUND
- FIRE WALL



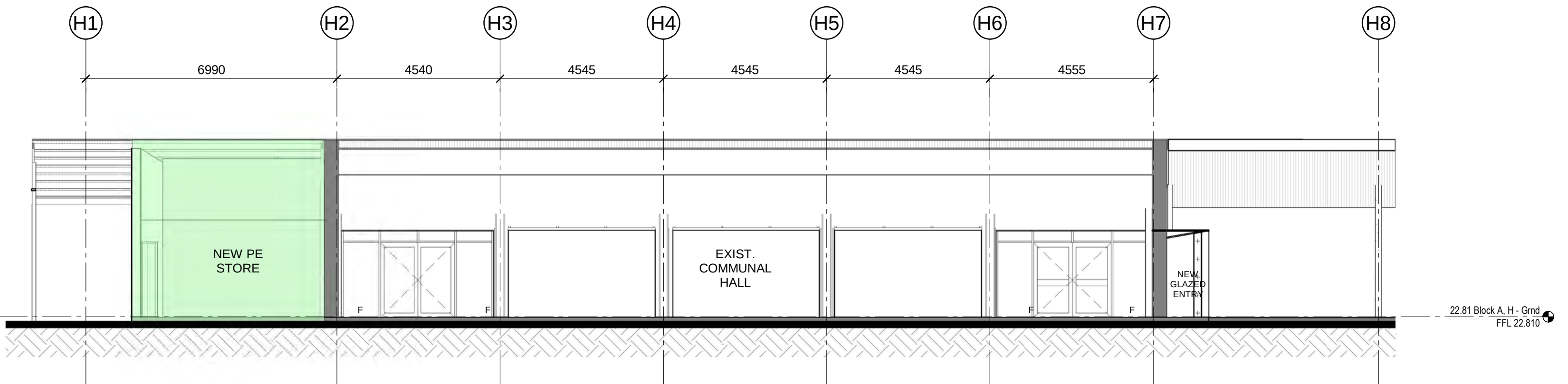
1 BLOCK H - SECTION A - DA
1 : 100



3 BLOCK H - SECTION B - DA
1 : 100



2 BLOCK H - SECTION C - DA
1 : 100



4 BLOCK H - SECTION D - DA
1 : 100

NOTE:

- 1) ALL DIMENSIONS ON ALL DRAWINGS TO BE VERIFIED ON SITE
- 2) ALL DRAWINGS ARE FOR SCHEMATIC DESIGN ONLY AND NOT FOR CONSTRUCTION
- 3) GRID SETOUT TO EXISTING COLUMNS UNLESS NOTED OTHERWISE. BUILDER TO CHECK ON SITE.
- 4) REPORT ALL DISCREPANCIES TO CLIENT REPRESENTATIVE BEFORE COMMENCEMENT OF INSTALLATION OR MANUFACTURE.

Issue			
No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK

DEVELOPMENT
APPLICATION

Drawing Title
Block H Sections

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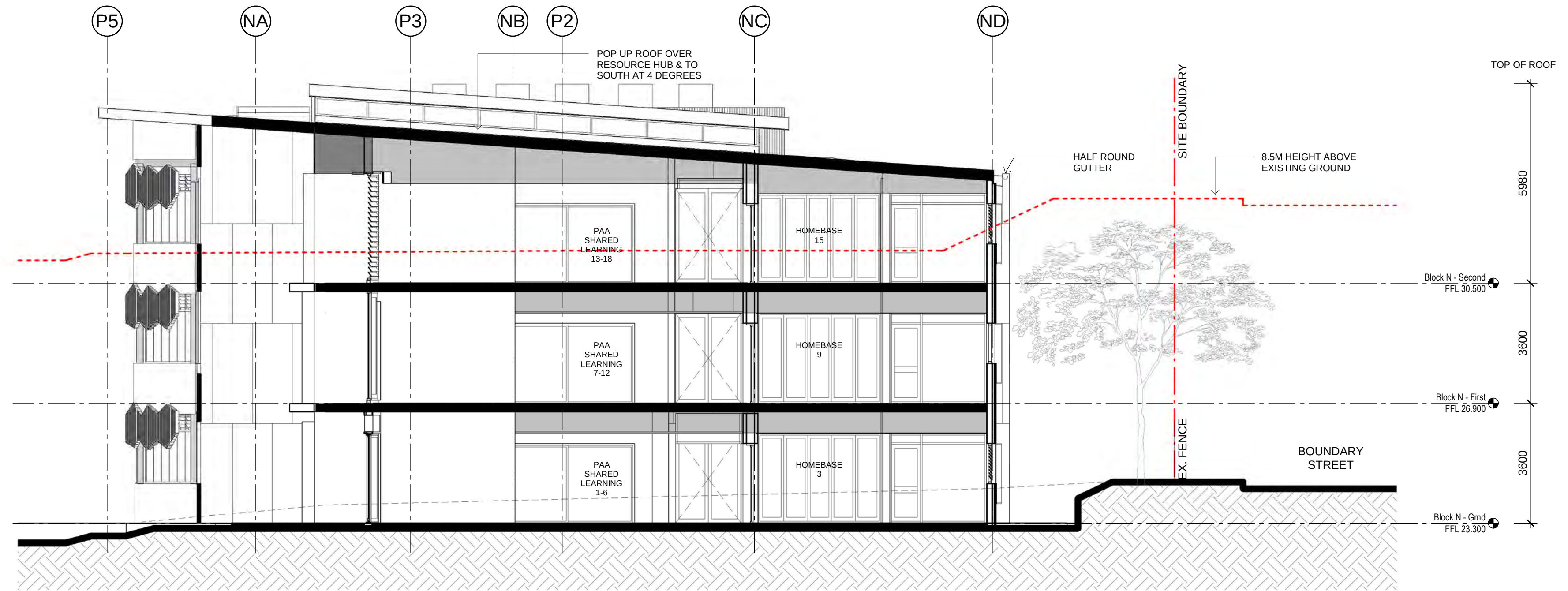
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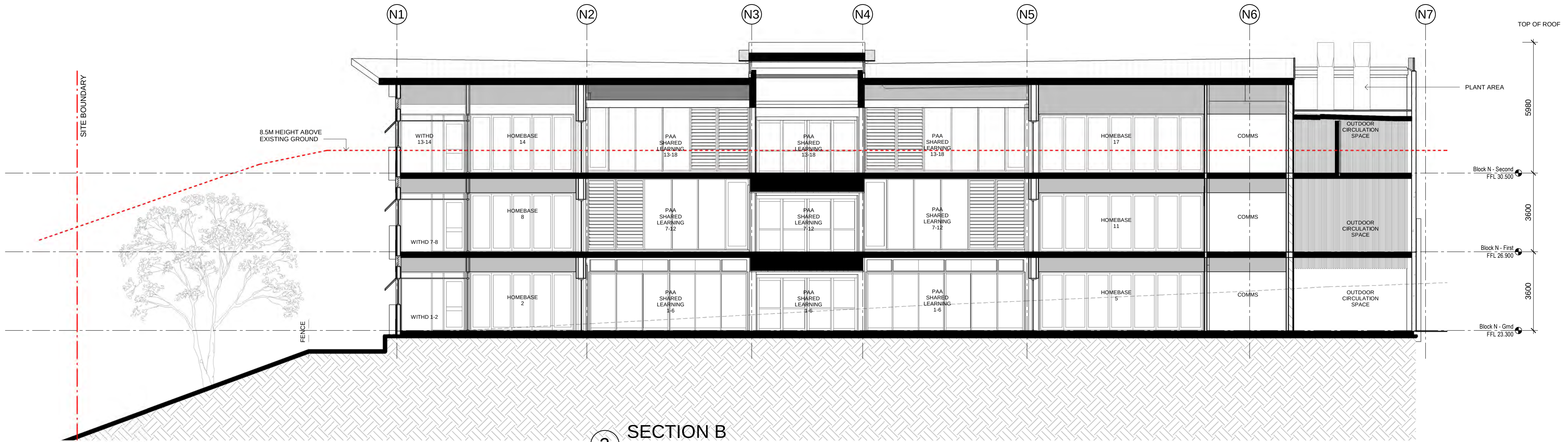
Drawing Reference
17469-NBR-A- ST2-DA H4001

0 1m 2m 3m 4m 5m 6m 7m 8m 10m 1:100

- LEGEND**
- DEMOLISH
 - SEPARATE APPROVAL(STSA)
 - EX. GROUND
 - 8.5m ABOVE EX. GROUND
 - FIRE WALL



1 SECTION A
1 : 100



2 SECTION B
1 : 100

Issue No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK

DEVELOPMENT APPLICATION

Drawing Title
Block N Sections

Project
CROYDON PUBLIC SCHOOL

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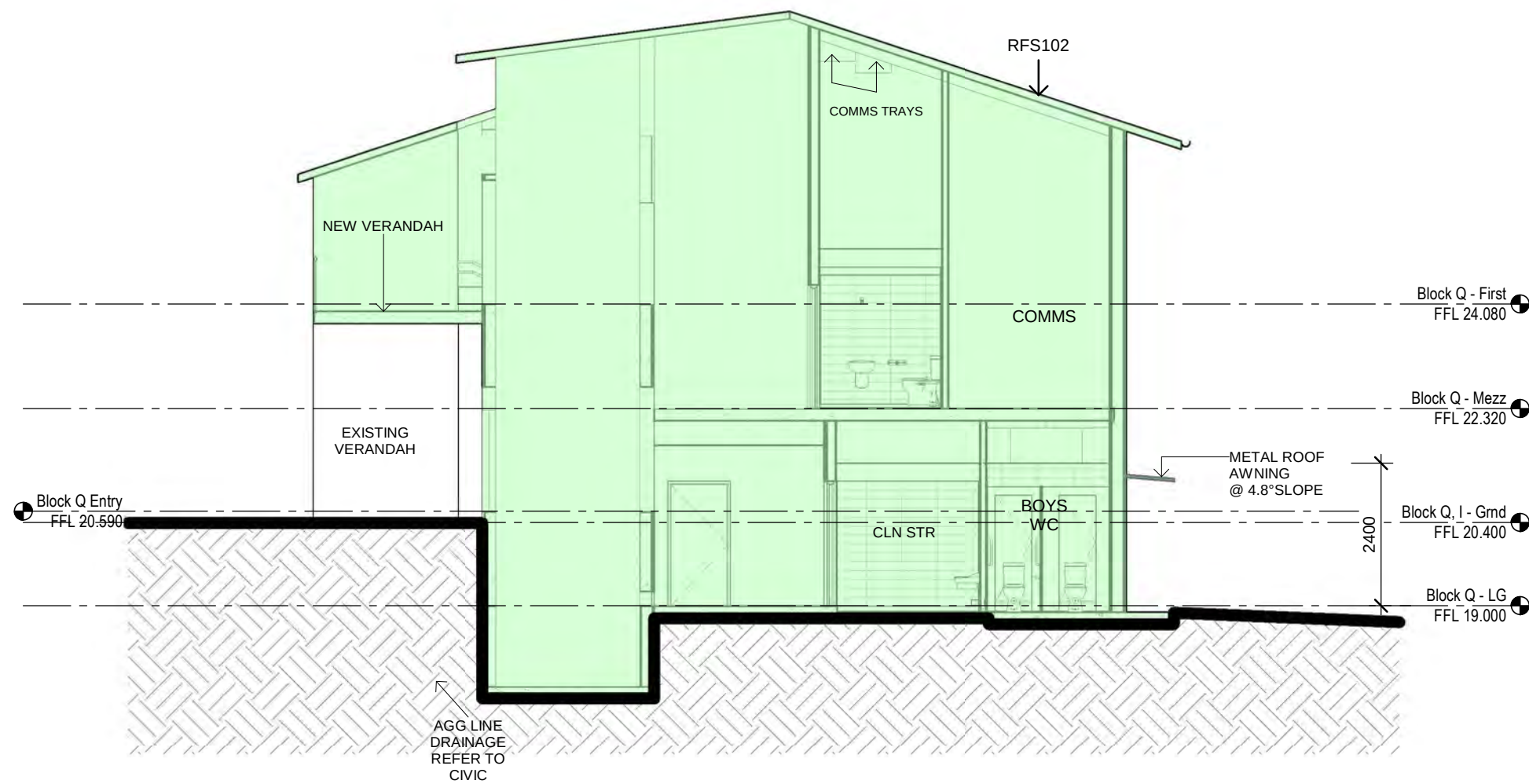
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Drawing Reference
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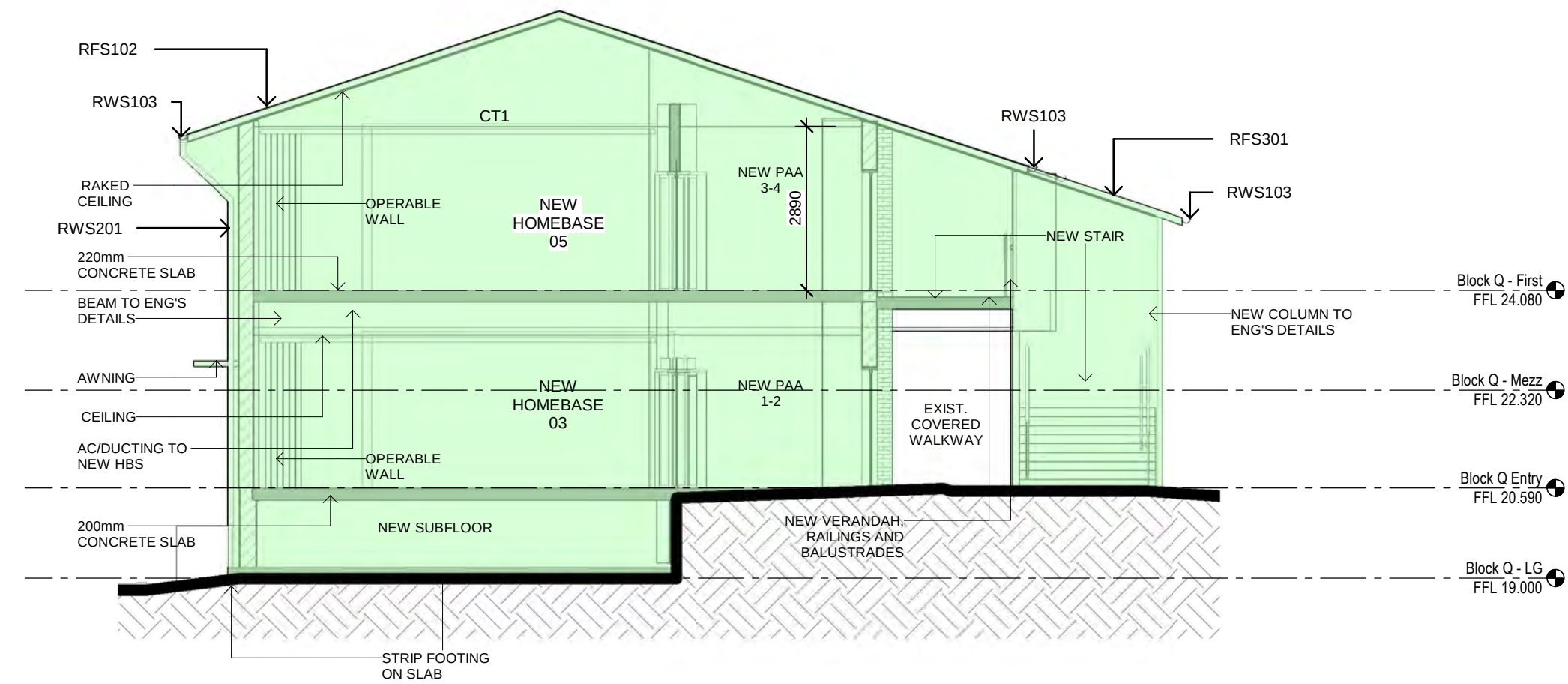
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LEGEND

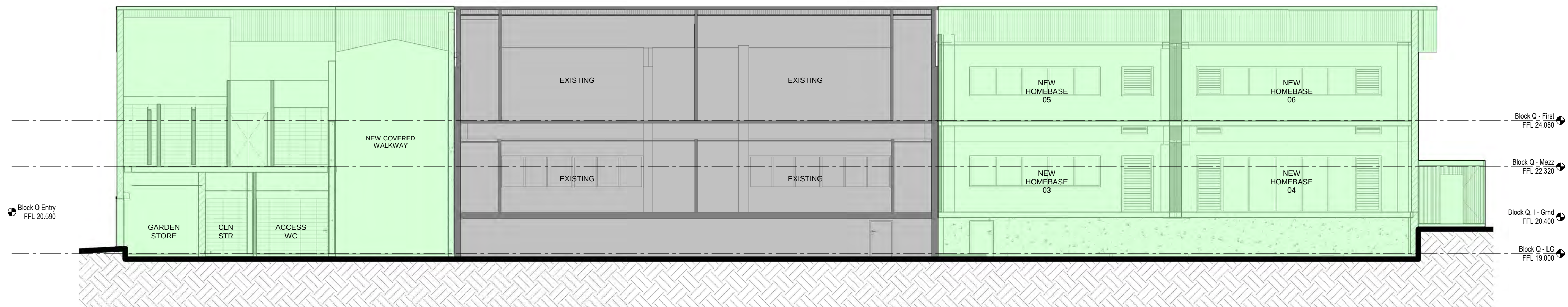
- NEW WORKS
- EXISTING
- DEMOLISH
- SEPARATE APPROVAL (STSA)
- EX. GROUND
- 8.5m ABOVE EX. GROUND
- FIRE WALL



1 SECTION 1
1 : 100



2 SECTION 2
1 : 100



3 SECTION 3
1 : 100

Issue No.	Date	Description	Chkd
DA1	26/02/2019	Development Application	MK

DEVELOPMENT
APPLICATION

Drawing Title
Block Q Sections

Project
CROYDON PUBLIC SCHOOL

at
39 YOUNG STREET, CROYDON

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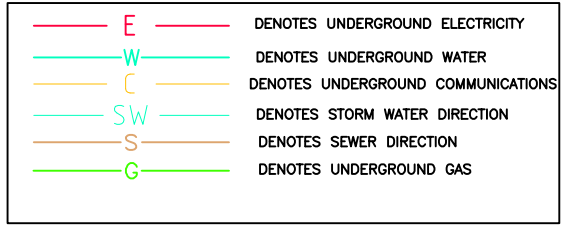
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Drawing Reference
17469-NBRS-A- ST2-DA Q4001

0 1m 2m 3m 4m 5m 6m 7m 8m 1:100

THE TITLE FOR LOT 1 IN DP225904 NOTES:
1. RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S) WITHIN THE PART(S) SHOWN SO INDICATED IN THE TITLE DIAGRAM
2. C129049 EASEMENT FOR REFUSE AFFECTING THAT PART OF THE LAND ABOVE DESCRIBED FORMERLY IN VOL 4538 FOL 217
3. LAND EXCLUDES MINERALS (S.141 PUBLIC WORKS ACT, 1912) AS REGARDS PART

THE TITLE FOR LOT 2 IN DP225904 NOTES:
1. RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S) WITHIN THE PART(S) SHOWN SO INDICATED IN THE TITLE DIAGRAM
2. LAND EXCLUDES MINERALS (S.141 PUBLIC WORKS ACT, 1912) AS REGARDS PART



* THE EXISTENCE OF UNDERGROUND SERVICES HAVE BEEN LOCATED BY ONE SEARCH LOCATORS IN NOVEMBER 2017 USING A COMBINATION OF DIAL BEFORE YOU DIG (DBYD) PLANS AND GROUND PENETRATION RADAR (GPR) AND SERVICE TRACE.
* THE SERVICES HAVE GENERALLY BEEN LOCATED TO A QUALITY LEVEL B STANDARD AS DEFINED IN SECTION 2.6 OF AS 5488-2013, CLASSIFICATION OF SUBSURFACE UTILITY INFORMATION (SUI). AS 5488-2013 STATES THAT LEVEL B QUALITY IS THE "LOCATION OF SUBSURFACE FEATURES MEASURED IN TERMS OF RELATIVE SPATIAL POSITIONING WITH A MAXIMUM HORIZONTAL TOLERANCE OF +/-300mm AND A MAXIMUM VERTICAL TOLERANCE OF +/-500mm".



NOTES :

- * BOUNDARIES HAVE NOT BEEN DEFINED BY SURVEY AND ARE DIAGRAMMATIC ONLY
- * LAND DIMENSIONS AND AREAS HAVE BEEN COMPILED FROM PLANS OBTAINED FROM LPMA
- * BEARINGS RELATE TO MGA NORTH ORIGINATING FROM DP1033975
- * LEVEL DATUM IS AHD ORIGINATING FROM SSM 141063 RL 14.90 LOCATED AT YOUNG STREET.
- * VISIBLE, ACCESSIBLE SERVICES ONLY HAVE BEEN LOCATED. THIS PLAN DOES NOT PURPORT TO SHOW UNDERGROUND SERVICES.
- * THE EXISTENCE OF UNDERGROUND SERVICES HAS NOT BEEN ESTABLISHED.
- * EXISTENCE OF SERVICES MUST BE VERIFIED BY CONTACTING DIAL BEFORE YOU DIG (DBYD) 1100.COM.AU. CRITICAL SERVICES MUST BE EXPOSED AND LOCATED.
- * NEIGHBOURING HOUSES, WINDOWS AND ROOF POSITIONS ARE APPROXIMATELY ONLY.
- * FLOOR LEVELS GENERALLY SURVEYED AT DOOR THRESHOLDS. INTERNAL ROOMS NOT SURVEYED.
- * CONTOURS SHOWN ARE INDICATIVE OF LAND FORM. SPOT LEVELS SHOULD TAKE PRECEDENCE.
- * REFER TO FACE OF PLAN FOR SUBJECT TITLE NOTATIONS.
- * THIS TITLEBLOCK IS AN INTEGRAL PART OF THIS DRAWING AND SHOULD NOT BE REMOVED.



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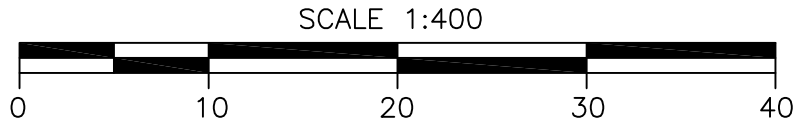


LEGEND

- ELP - ELECTRIC LIGHT POLE
- HYD - HYDRANT
- TW - TOP WALL
- TK - TOP KERB
- TG - TOP GUTTER
- PP - POWER POLE
- SMH - SEWER MANHOLE
- SP - SIGN POST
- SV - STOP VALVE
- TEL - TELSTRA PIT
- VC - VEHICLE CROSSING
- WM - WATER METER

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B	INTERNAL BOUNDARY, ADJOINING BUILDINGS AND LEVELS ADDED	23/01/18
REV	AMENDMENTS	DATE



SHEET 1 OF 6 - DETAIL SURVEY

CLIENT: NBR ARCHITECTURE

SURVEYOR :	SCOTT D
DATUM :	AUSTRALIAN HEIGHT DATUM
ORIGIN :	SSM 141063 RL14.90
JOB REF. :	B04063
DRAWING No.	B04063-1
CHECKED :	NATHAN M.
DATE OF SURVEY:	NOVEMBER 2017
REDUCTION RATIO :	1:400

PLAN OF: CROYDON PUBLIC SCHOOL
CROYDON
BEING: LOTS 1 & 2 IN DP225904
SHOWING: GENERAL DETAIL AND
SITE LEVELS
PURPOSE: ARCHITECTURAL DESIGN
COUNCIL SUBMISSION

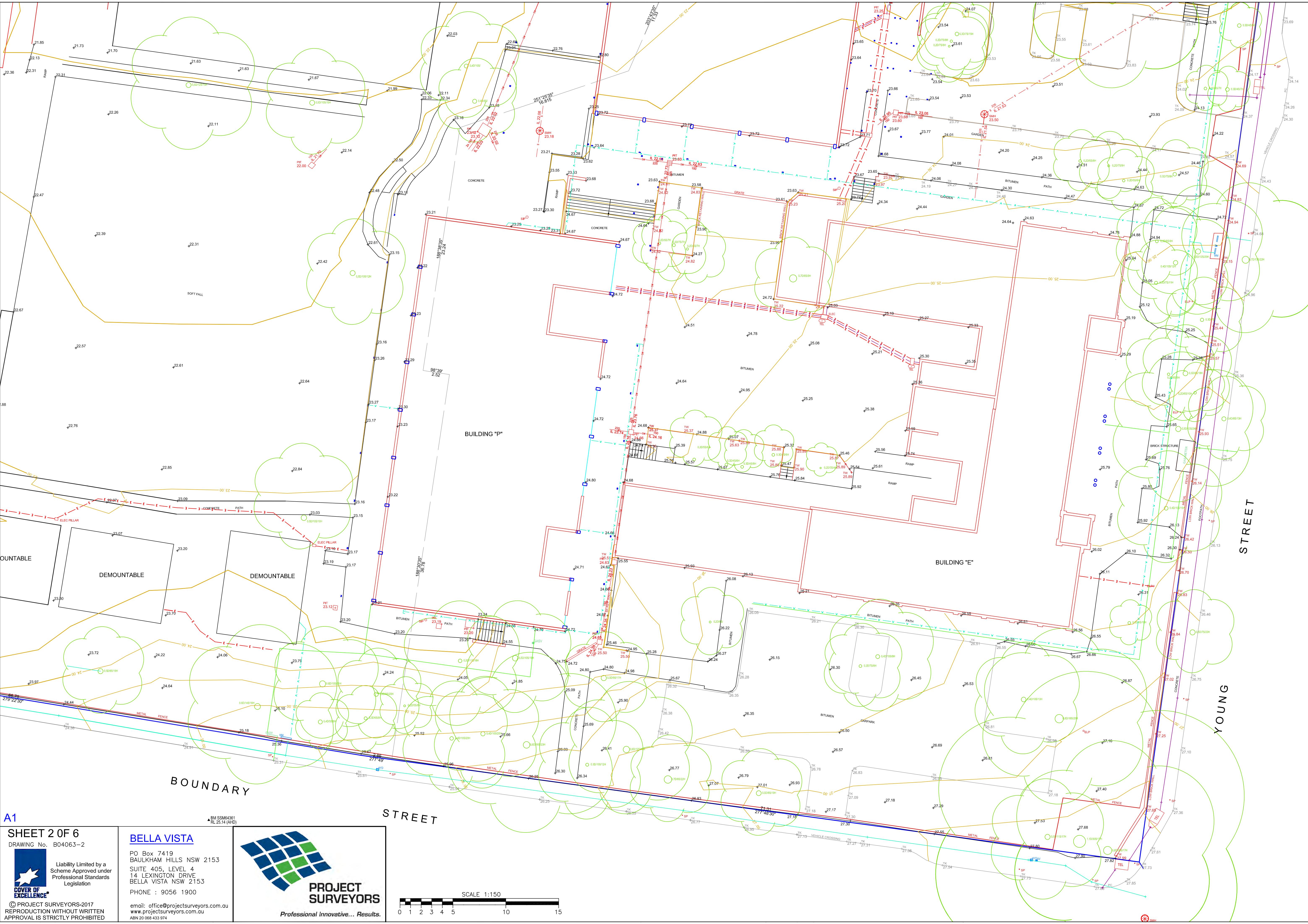
BELLA VISTA

PO Box 7419 BAULKHAM HILLS NSW 2153
SUITE 405, LEVEL 4 14 LEXINGTON DRIVE,
BELLA VISTA NSW 2153
PHONE : 9056 1900
email: office@projectsurveyors.com.au



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SHEET 2 OF 6

DRAWING No. B04063-2



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PHONE : 9056 1900

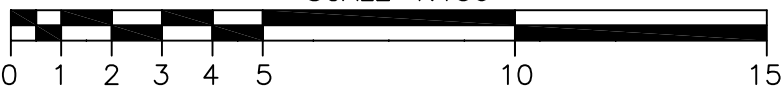
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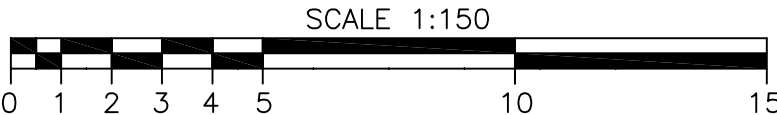
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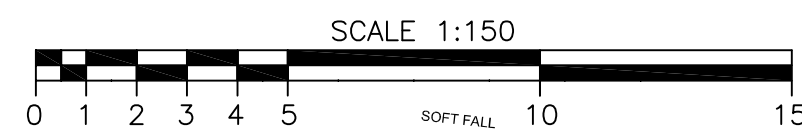
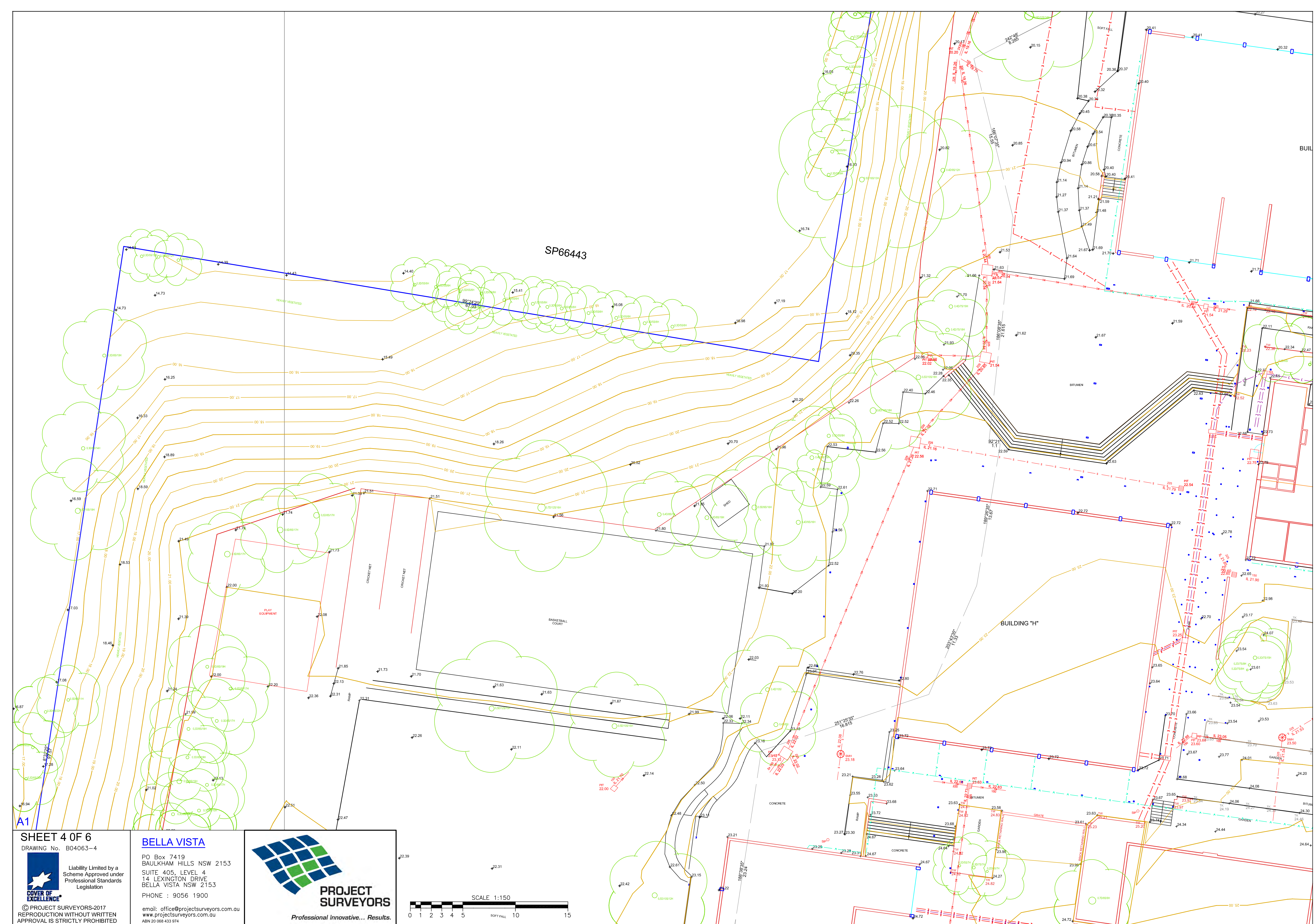
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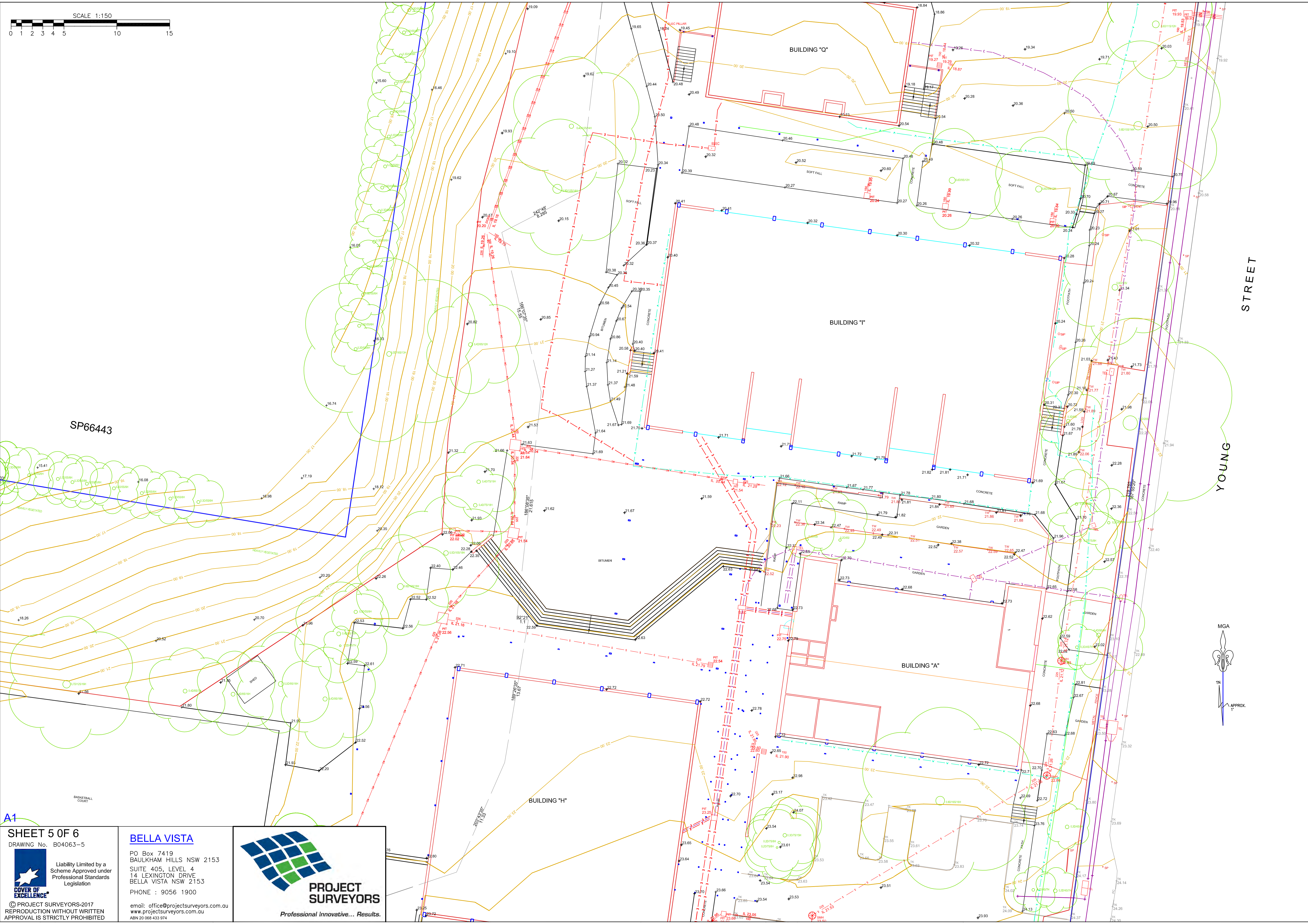




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Croydon Public School: Waste Management Plan

A submission to NBRS Architecture

20th February 2019



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Disclaimer

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Glossary

Terminology	Description
AS	Australian Standard
BC	Burwood Council
BDCP	Burwood Development Control Plan
BLEP	Burwood Local Environmental Plan
C&D	Construction and Demolition
C&I	Commercial and Industrial
DA	Development Application
DCP	Development Control Plan
EPA	Environment Protection Authority
LGA	Local Government Area
MGB	Mobile Garbage Bin
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
WARR	Waste Avoidance and Resource Recovery
WMP	Waste Management Plan
WSP	Waste Service Provider
WSRA	Waste Storage and Recycling Area

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1 Introduction

MRA Consulting Group was engaged by NBRS Architecture to prepare a Waste Management Plan (WMP) for the proposed redevelopment and expansion of Croydon Public School. The development site is located at 39 Young Street, Croydon NSW 2132, situated in the Burwood Council (BC) Local Government Area (LGA). The purpose of this WMP is to address the generation and flow of construction and demolition waste that will occur as a result of the proposed redevelopment and expansion of school facilities, in addition to addressing waste minimisation and management for waste generated through the ongoing operation of the school in association with the proposed increase in student capacity from 680 to 1000.

The proposed development will be completed in stages. A breakdown of the proposed works associated with each stage are outlined as follows:

Stage 1 – Subject to an REF:

- Demolition of Block D (single storey amenities block circa 1960, brick & tile);
- Demolition of COLA & covered ramped walkways (generally metal roof, steel frame);
- Relocation of existing demountable classrooms within site & installation of additional temporary demountable classrooms for use throughout works;
- Block A – minor internal alterations at ground & first floor. Installation of external lift;
- Block E – refurbishment/heritage restorations, minor internal alterations disabled access ramp;
- Landscaping works including new ‘town square’, various play areas, entry court;
- Extension to existing carpark to relocate existing site parking for consolidated carpark (maintain existing number of onsite car spaces); and
- New COLA & covered walkways.

Stage 2 – Development Application:

- Block A – enclosure of existing first floor verandah;
- Block Q – alterations & additions for additional classrooms (4) and student amenities;
- Block H – alterations and additions to existing hall to enclose north verandah and new canteen addition; and
- Block N – new three storey homebase building for 18 classroom spaces & student amenities.

This WMP addresses waste management across the site and complies with relevant waste management requirements outlined in the Burwood Development Control Plan (BDCP) 2013 and other statutory requirements. Since the school is already in operation, this waste management plan also summarises how the proposed works will incorporate and change the existing system for the management of ongoing waste.

The following key objectives for waste management are outlined in the BDCP for new developments:

- To reduce the demand for waste disposal through waste separation and resource recovery in demolition, design, construction and operation of buildings and land use activities.
- To achieve the design of waste and recycling storage systems in buildings and land use activities which are hygienic, accessible, quiet to operate, adequate size and visually compatible with their surroundings.

A key consideration in the development of this WMP is to, where feasible; maximise recycling and material reuse, and to reduce waste disposed to landfill. This approach was guided by (Section 6.2) Waste Management Objectives and Controls of the BDCP and other key statutory documents. With reference to these overarching principles, the lack of space on site for considerably expanded operations and ‘hard’ engineering solutions, this presents a significant challenge. Due to specific site constraints, the key focus of this WMP will be to incorporate waste reduction, reuse and alternative methods other than implementing extensive changes to bin and collection infrastructure.

2 Background

2.1 Description of Proposed Development

In total, the site covers approximately 22,650m² of land, with previous development consisting largely consisting of buildings and landscaped areas. The site is currently utilised as primary school education facility, supporting a student base of up to 680 students from years K-6. The purpose of the proposed development is to upgrade existing facilities and construct new infrastructure to support an increase in total student capacity from the current maximum, to a new cap of 1000 students.

CPS is an educational establishment and is situated in residential zoning (Low Density Residential – R2 and General Residential – R1). The site maintains multiple street frontages on Young Street (east) and Boundary Street (south) – and is primarily accessed via Young Street (including current waste collection services).

2.2 Location

The development proposed for Croydon Public School, located at 39 Young Street, Croydon is defined by the following parcels of land:

- Lot 1 DP 225904; and
- Lot 2 DP 225904.

Figure 1 shown below depicts the location of the site in relation to the surrounding land uses and roadways.

Figure 1: Location of CPS and surrounds



Source: Nearmap, 2019.

2.3 Approach

MRA reviewed the proposed development's site plans to design a WMP which addressed the waste management requirements of the SEARs issued by the NSW DP&E (Table 1). Detailed information that satisfies the requirements of the section for waste in the issued SEARs has been addressed in this report. Additionally, to further develop this WMP, consideration was also given to the waste minimisation and management guidelines of the Burwood DCP where applicable and feasible.

In Section 2, MRA reviews the project construction and demolition phases and associated activities, and addresses:

- Types and quantities of waste materials generated on-site;
- Any identified specialist waste management requirements; and
- Method of disposal, including opportunities for recycling and reuse.

A key consideration during the development of Section 3 is the nature of site space constraints for the storage and sorting of waste generated through demolition and construction, and limited access by collection vehicles. Materials separation at the site will involve the sorting of recoverable materials from contaminated or residual materials for appropriate separation at a suitably licenced facility, capable of receiving and processing C&D wastes. To maximise materials recovery, the waste disposal contract shall include a provision requiring processing of the site's wastes prior to landfilling any materials.

In Section 4, MRA reviewed the existing system for managing ongoing waste, how this would be affected by the proposed developments, and how the system would be adapted as a result. This section addresses:

- The nature of the existing waste management system for ongoing waste;
- The extent to which the proposed development would likely modify this system; and
- How the existing system would be adapted to accommodate the proposed development.

2.4 Assumptions

The following assumptions have been made:

- Drawings and information that have been used in waste management planning for this WMP are the final reference/indicative design set from the project architect NBRS Architecture (dated 21st December 2018);
- Waste generation volumes have been modelled based on standard methods and assumptions of typical construction and demolition rates. The amount of waste generated in practice is affected by the level of activity and application of waste management methods;
- Waste management methods include those that are outlined in this WMP and the specific commercial practices of workers (including contractors). The quantitative information presented in the report is therefore indicative only; and
- This WMP is a living document and therefore, waste management equipment and systems described in this report are subject to change based on future operations and available technology.

3 Construction and Demolition Waste Management

Construction and demolition (C&D) activities at the site will generate a variety of wastes. Throughout the development process, all materials will be reused and recycled where possible, minimising the disposal (landfilling) of materials other than those that are contaminated or unsuitable for reuse or processing.

Waste storage during C&D operations will involve stockpiling of excavated and reusable construction materials which will be placed in skip bins for separation. Skip bins will be placed strategically at the site to ensure easy access and safe handling of waste materials (Figure 3, Appendix A). A skip bin for residual waste and/or contaminated material will also be made available at the site for disposal where necessary. The skip bins for C&D waste may require alternative placement during construction operations, to facilitate safe and efficient storage of materials. Skip bins and stockpiles should be placed within property boundaries to avoid illegal dumping and impacts on active street frontages. Potentially windblown waste would be securely stored in closed lidded bins or receptacles. In addition, where site conditions do not allow enough space, an application can be made to Council to place waste bins on public land.

Anticipated waste generation for the demolition and construction phases have been separately addressed in this WMP according to the following sections (3.1 and 3.2). Building types and sizes, structure depths, and typical materials generated during construction and demolition were used for the estimation of C&D waste. The quantities, densities and bulking factors for waste and recyclables experienced during construction and demolition will differ based on actual material use and onsite practices.

The induction of all contractors working at the site will provide a focus on site waste management principles and facilities. Site personnel will be informed that food and food-packaging waste must be disposed separately from C&D waste, to avoid contamination and enhance recovery of C&D materials. Signage will also be used at the site to ensure C&D waste is separated from general waste.

3.1 Demolition Waste

This section details the demolition waste materials expected for the proposed development, including their quantities and management options, and was designed with consideration of the requirements in the BDCP. The information below presents options for materials reuse, recycling and disposal where applicable (e.g. excavation material may be reused as a construction fill or disposed to landfill if contaminated). All materials are intended to be sent to a suitable, licensed landfill or resource recovery facility.

Table 1 below describes the expected demolition material quantities and appropriate management methods for the proposed development, related to the demolition or deconstruction of:

- Internal walls and other structures for renovation;
- Existing demountable classrooms; and
- Existing single storey amenities block.

Table 1: Estimation of demolition materials for reuse, recycling and landfill

Type of waste generated	Quantity	Reuse	Recycling	Disposal	Methods for reuse, recycling and disposal
Concrete	50m ³	✓	✓	-	On site: to be separated wherever possible to enhance resource recovery. Reuse: on-site for filling or under gravel carpark. C&D Processor: crushing and recycling for recovered

Type of waste generated	Quantity	Reuse	Recycling	Disposal	Methods for reuse, recycling and disposal
					products.
Bricks/pavers	50m ³	✓	✓	-	On site: cleaned and separated wherever possible for reuse or to enhance resource recovery. C&D Processor: recovery for reuse where possible, crushing and recycling for recovered aggregate products.
Timber	40m ³	✓	✓	-	On site: to be separated wherever possible to enhance resource recovery. C&D Processor: recovery and recycling for recovered product (e.g. mulch) or organics processing.
Insulation material	20m ³	✓	-	-	Reuse: returned to supplier or manufacturer for reuse.
Metal (ferrous and non-ferrous)	20m ³	-	✓	-	On site: to be separated wherever possible to enhance resource recovery. C&D Processor: metals recovery and recycling.
Plasterboard	10m ³	✓	✓	-	On site: to be separated wherever possible to enhance resource recovery. Reuse: surplus and offcut material returned to manufacturer for reuse where possible or replacement for gypsum in landscaping.
Glass	20m ³	✓	✓	-	On site: to be separated wherever possible to enhance resource recovery. Reuse: surplus and offcut material returned to manufacturer for reuse where possible. Aggregate for concrete production. Glass recycler: recovery and recycling.
Fixtures and fittings	5m ³	✓	✓	-	On site: reuse wherever possible or return to

Type of waste generated	Quantity	Reuse	Recycling	Disposal	Methods for reuse, recycling and disposal
					manufacturer. Reuse: second hand building materials. C&D Processor: recovery and recycling.
Floor coverings	5m ³	✓	✓	-	On site: to be separated wherever possible to enhance resource recovery. C&D Processor: recovery and recycling.
Garden organics	50m ³	✓	✓	-	Garden organics resulting from the removal of some vegetation and trees. Organics Processor: storage on-site (from minor excavations) processing for recovered product (e.g. mulch or other blended recovered fines) or organics treatment.
Containers (cans, plastic, glass)	1m ³	-	✓	-	Commercial contractor: recycling of co-mingled containers.
Paper/cardboard	1m ³	-	✓	-	Commercial contractor: recycling of fibres with segregation of paper, cardboard or other streams.
Residual waste	2m ³	-	-	✓	Separate recyclables where possible and disposal at principal licensed waste facility.
Hazardous/special waste (e.g. spills and contaminated wastes)	Unknown	-	-	✓	Based on the Asbestos Register for the site, it is expected that some asbestos bearing material may be disturbed or removed during demolition works. Appropriate management methods specified by a licensed asbestos and site hygienist should hazardous be found at the site.

3.2 Construction Waste

Table 2 below describes the expected excavation and construction material quantities, including appropriate management methods for material generated at the site during this phase of the development. The following works are proposed to be undertaken during the construction phase:

- Construction of:
 - o Three storey building comprising 18 classrooms/learning areas, amenities and storage rooms;
 - o COLA adjacent to the school hall;
- Alterations to:
 - o Original school building and re-purposing of the building;
 - o Building A including the library at Level 1 and re-purposing the ground floor area;
 - o Building Q comprising 4 new classrooms and new amenities;
 - o School hall building comprising a new canteen, store-rooms; and
- Landscaping of a new 'Town Square' and a new entry court to the original building.

Table 2: Estimation of excavation and construction materials for reuse, recycling and landfill

Type of waste generated	Quantity	Reuse	Recycling	Disposal	Methods for reuse, recycling and disposal
Excavation material (clean fill)	50m ³	✓	-	-	Reuse: on site stockpiling for reuse as fill material.
Concrete	40m ³	✓	✓	-	On site: to be separated wherever possible to enhance resource recovery. Reuse: on-site for filling or under gravel carpark. C&D Processor: crushing and recycling for recovered products.
Bricks/pavers	5m ³	✓	✓	-	On site: cleaned and separated wherever possible for reuse or to enhance resource recovery. C&D Processor: recovery for reuse where possible, crushing and recycling for recovered aggregate products.
Timber	5m ³	✓	✓	-	On site: to be separated wherever possible to enhance resource recovery. Reuse: Surplus and offcut material returned to manufacturer for reuse. C&D Processor: recovery and recycling for recovered product (e.g. mulch) or organics processing.

Type of waste generated	Quantity	Reuse	Recycling	Disposal	Methods for reuse, recycling and disposal
Insulation material	10m ³	✓	-	-	Reuse: returned to supplier or manufacturer for reuse.
Metal (ferrous and non-ferrous)	5m ³	-	✓	-	On site: to be separated wherever possible to enhance resource recovery. C&D Processor: metals recovery and recycling.
Plasterboard	10m ³	✓	✓	-	On site: to be separated wherever possible to enhance resource recovery. Reuse: surplus and offcut material returned to manufacturer for reuse where possible or replacement for gypsum in landscaping.
Glass	<5m ³	✓	✓	-	On site: to be separated wherever possible to enhance resource recovery. Reuse: surplus and offcut material returned to manufacturer for reuse where possible. Glass recycler: recovery and recycling.
Fixtures and fittings	<2m ³	✓	✓	-	On site: reuse wherever possible or return to manufacturer. Reuse: surplus and offcut material returned to manufacturer for reuse where possible. C&D Processor: recovery and recycling.
Floor coverings	<5m ³	✓	✓	-	On site: to be separated wherever possible to enhance resource recovery. Reuse: surplus and offcut material returned to manufacturer for reuse where possible. C&D Processor: recovery and recycling.

Type of waste generated	Quantity	Reuse	Recycling	Disposal	Methods for reuse, recycling and disposal
Packaging (used pallets, pallet wrap)	20m ³	✓	✓	-	On site: to be separated wherever possible to enhance resource recovery. C&D processor: recycling of timbers and plastic.
Garden organics	<3m ³	✓	✓	-	Minimal garden organic waste from landscaping. Organics Processor: storage on-site (from minor excavations) processing for recovered product (e.g. mulch or other blended recovered fines) or organics treatment.
Containers (cans, plastic, glass)	<3m ³	-	✓	-	Commercial contractor: recycling of co-mingled containers.
Paper/cardboard	10m ³	-	✓	-	Commercial contractor: recycling of fibres with segregation of paper, cardboard or other streams.
Residual waste	10m ³	-	-	✓	Separate recyclables where possible and disposal at principal licensed waste facility.
Hazardous/special waste (e.g. spills and contaminated wastes)	Unknown	-	-	✓	It is not expected that any construction materials will contain asbestos or asbestos bearing material. Should any asbestos bearing material be disturbed during construction at the site, appropriate management methods specified by a licensed asbestos and site hygienist should hazardous or special waste be found at the site.

3.3 Waste Contractors and Facilities

To ensure best practice waste management for the site during C&D operations, a suitably qualified C&D waste management contractor will be required to be appointed during this phase of the development. The following table outlines a range of contractors and facilities based on their proximity to the site and service offerings (Table 3).

Table 3: Waste service contractors and facilities

Role	Details
C&D Waste Collection Contractors	Sydney Transwaste Industries, Blue Skip Bin, Bingo Industries, Aussie Skips, or Other suitable contractor, elected by the demolition/construction manager.
Off-Site Recycler	Bingo Greenacre, Sydney Transwaste Industries, or Other suitable recycling facility, elected by the waste contractor.
Licensed Landfill Site	DADI Genesis Landfill, or Other suitably licensed landfill, elected by the waste contractor.

3.4 Site Documentation

This WMP, inclusive of any revisions, will be retained on-site during demolition and construction phases. Any supporting documentation to facilitate the appropriate application of procedures and statutory requirements will also be retained with this and other waste management documentation.

Responsibility for the WMP, waste documentation and processes during the construction and demolition phases will be with the demolition or builder contractor as appropriate, as the key personnel present on the site and managing C&D waste generating operations.

A logbook that records waste management and collection will be maintained on-site, with entries including:

- Time and date;
- Description and waste quantity;
- Destination waste facility; and
- Vehicle registration and company name.

Waste management documentation, the logbook and associated receipts must be made available for inspection by an authorised Council Officer at any time during site works.

4 Ongoing Waste Management

4.1 Site Operation

The proposed works, once completed, are not expected to change the operation of the site in terms of waste management. While increased total waste generation is expected, the generation rate and composition of ongoing waste is not expected to be significantly different post-works. Consequently, waste management associated with the new works will need to integrate into the already established system. This section of the WMP outlines the existing waste management strategies for ongoing waste management at the site and how these and new strategies may be implemented to adequately handle changes occurring as a result of the proposed expansion.

4.2 Existing Waste Management Strategies

CPS currently employs a number of waste management practices to handle general waste and comingled recyclables. No specific management methods are applied at the school to manage other waste streams or problem waste materials

At present, waste at the school is managed using several small bins placed around the school for disposal of general waste and recycling by students and staff. All waste collected in these receptacles is transferred to two larger bulk (4.5m³) bins, one for general waste and one for comingled recycling, where collection of these bins occurs on a weekly basis for both waste streams by separate private waste collection contractors (see Table 4).

Table 4: Existing waste bins and collection frequency

Waste Category	Bin Infrastructure	Infrastructure Location	Collection Frequency	Collection Contractor
General Waste	1 x 4.5m ³ Bulk Bin	Inside gates on driveway at the northern end of Young Street	1 x per week	SUEZ
Comingled Recycling	1 x 4.5m ³ Bulk Bin		1 x per week	Burwood Council

Under the current arrangement, the general waste bin has been observed to regularly reach capacity (or more) immediately before the scheduled weekly general waste collection. The comingled recycling bin has been observed similarly to reach capacity (or more) prior to the regularly scheduled weekly collection. In addition, depending on activity at the school, bins may be more or less full based on school functions/events and periods of student leave (school holidays).

4.3 Waste Management Strategies

Under the existing arrangements for ongoing waste, waste produced through the ongoing operation of the school is separated on site into two separate categories: general waste and comingled recycling. To facilitate waste disposal and separation, bins are stationed across the site, and their contents collected daily by cleaners. Additionally, recycling bins are available in each room. Cleaners deposit the collected waste into a bin area where the waste is collected from site by a waste management contractor. Maintenance and grounds staff use the primary waste bins directly. The bin area is located next to the carpark near the proposed administration building in the north-east of the site. Due to the location of the bin area, the waste is collected directly from the waste management area which is accessed via Young Street.

The waste storage and collection area has a limited amount of additional space for the implementation of additional bins for collection. Despite this limitation, there are several opportunities for CSPS to implement

some infrastructure changes, alter their existing strategies and incorporate some additional strategies to reduce the amount of waste being generated and recover valuable material for reuse.

Appendix B shows the Planet Arc guide for recycling in schools and can be used as a tool to inform various waste management practices at the school.

4.3.1 General waste and recycling

As Council does not provide specific waste generation rates for schools or other education facilities, waste generation rates applied to this WMP were derived from observed waste generation from the existing occupation of the school (at a capacity of 680 students) and comparing it to other similar examples.

Based on bin volume observations for the existing school operation (680 students and associated school staff), the following waste generation rates are proposed for the new proposed maximum student capacity.

General Waste:

- 90% (bin fullness at collection) of 4,500L (bin) = 4,050L
- Collections per week = 2
- Students = 680
- $2 \times 4,050L / 680$ (students) = approximately 12L general waste per student
- $1,000 \times 12L = 12,000L$ (week)

Comingled Recycling:

- 90% (bin fullness at collection) of 4,500L (bin) = 4,050L
- Collections per week = 2
- Students = 680
- $2 \times 4,050L / 680$ (students) = approximately 12L recycling waste per student
- $1,000 \times 12L = 12,000L$ (week)

Table 5 below outlines the proposed changes to existing waste management strategy in terms of general waste and recycling collection. The below options represent various methods that waste produced by an increased number of students due to the proposal could be managed appropriately. All bulk waste bins will be retained in the same location as existing, inside the northern gate on Young Street (as shown in Figure 3, Appendix A).

Table 5: Proposed waste bins and collection frequency

Waste Generation Rate (week)	Waste Management Options	Bin Infrastructure Options	Collection Frequency
General Waste 12,000L	Option 1	1 x 4.5m ³	3 per week
	Option 2	1 x 6m ³	2 per week
	Option 3	2 x 3m ³	2 per week
Recycling 12,000L	Option 1	1 x 4.5m ³	3 per week
	Option 2	1 x 6m ³	2 per week
	Option 3	2 x 3m ³	2 per week

Note: No proposed change to collection contractors from existing arrangement. Waste collection contractors should be reviewed on a regular basis (at end of contractual periods) and engaged based on service provision and cost saving potential.

4.3.2 CDS containers

CPS have an opportunity to participate in the NSW container deposit scheme (CDS) – “return and earn”, to help manage eligible container waste generated at the school on a regular basis. Under this scheme, CPS could contribute to fund raising for the school by exchanging eligible containers for the \$0.10 per container rebate.

Several options are available to introduce CDS container collection under the scheme as follows:

- Contract a service provider such as St George Recyclers to provide dedicated bins and collection service for CDS containers for free. Such a service aids in the reduction of recyclables being placed in the comingled recycling bin, therefore reducing the number of collections required on a weekly basis and reducing overall cost; or
- Organise a separate bin or receptacle for CDS eligible containers that may be maintained by the P&C, student body or school maintenance staff. Once full, this bin could be taken to a public CDS collection point such as the Citizen Blue collection point at Five Dock or the Reverse Vending Machine (RVM) located at Burwood Dan Murphy’s liquor store.

Additionally, the school may also apply for listing on local RVM donation registry to enable people to donate CDS revenue to the school from central collection locations.

4.3.3 Food waste

Compost bins can be retained in garden areas filled with suitable food scraps and soft garden debris and applied to vegetable gardens when mature. Food waste, when not separated from the general (residual) waste stream, represents between 30-40% of waste produced, most of which can be diverted from landfill, therefore reducing disposal costs. There is an opportunity to introduce composting at the school through the implantation of composting bins or a vegetable garden and raise awareness through education of students and staff.

With the proposed increase in total student capacity, it is expected that food waste generation will increase at the school. Composting units can be installed and managed students, teachers and/or site maintenance staff, and may divert a considerable volume of additional waste generated from food consumption. Composting units and additional vegetable gardens are proposed to be relocated near the existing basketball court in the south-west corner of the site. This change will facilitate for the composting of additional food waste expected from the proposed development and will supply additional garden beds for application of composted material.

Compost produced onsite presents a free alternative to expensive fertilisers and assist in the retention of water and nutrients in the soil. Table 6 below outlines a list of compostable materials that may be generated through regular operations at the school.

Table 6: Compostable and Non-Compostable materials list

Compostable	Not-Compostable
✓ Vegetable and food scraps	✗ Meat and dairy products
✓ Fallen leaves (in layers)	✗ Diseased plant material
✓ Tea leaves and tea bags	✗ Metals, plastic, glass
✓ Coffee grounds	✗ Animal manures (especially the droppings of cats and dogs)
✓ Vacuum cleaner dust	✗ Fat
✓ Soft stems	✗ Magazines
✓ Dead flowers	

✓ Old potting mix ✓ Used vegetable cooking oil ✓ Egg shells ✓ Old newspapers (wet) ✓ Grass cuttings in layers ✓ Weeds ✓ Sawdust (from non-treated timber) ✓ Wood ash ✓ Human and animal hair	✗ Large branches ✗ Weeds that have seeds or underground stems ✗ Bread or cake (may attract mice) ✗ Bones ✗ Sawdust from treated timber
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4.3.4 Sustainable ordering of food and materials

A significant amount of waste is produced through unsustainable ordering of food and other school related supplies. It may be possible to reduce the waste generation footprint of the school or prevent large increases to waste generation as a result of the proposed student capacity increase, through the sustainable procurement of food at the canteen, use of recyclable and recycled material products, and reduction in the use of physical mediums of teaching (test papers, worksheets, etc).

4.3.5 Problem waste management

CPS should continue to engage with problem waste management contractors where possible to recover wastes such as E-waste, printer cartridges, batteries, furniture, etc. These systems should be reviewed and increased as necessary with any student population increases resulting from the proposed expansion.

CPS could incorporate a range of different problem waste management practices into their existing systems, including any of the following:

- Batteries and Printer Cartridges – A company called “Close the Loop” (among others) provides bins and collection for batteries and printer cartridges. Bins are collected on an as needed basis, at the request of the user, when the provided bins become full. Bins for this purpose can be retained in the main photocopy room, administrative office or computer labs;
- E-Waste – A waste or specialist E-waste management contractor may be engaged to provide bins for the collection on E-waste generated at CPS. E-waste bins can be serviced on a regular basis or as needed when bins become full, by the engaged contractor;
- Light Globes and Fluorescent Tubes –Light globes and fluorescent tubes are typically managed by the electrical contractor, with old and damaged units being taken away upon their replacement; and
- Bulky Waste (furniture) – Old or unused furniture at public schools can be taken away from the school and relocated at the Department of Education furniture depot and redistributed to other schools in need of additional furniture. Alternatively, unwanted furniture can be stored onsite and emptied on a regular basis or as required.

4.3.6 Improve waste management education and signage

Better practice waste management is fundamentally driven through improved education and understanding the issues surround waste and the way it is managed in a setting. A simple method of increasing the effectiveness of waste management at CPS can be achieved through the display of up-to-date signage and educational material to ensure waste management facilities are used appropriately and best practice methods are followed. Standard signage is outlined in Appendix C.

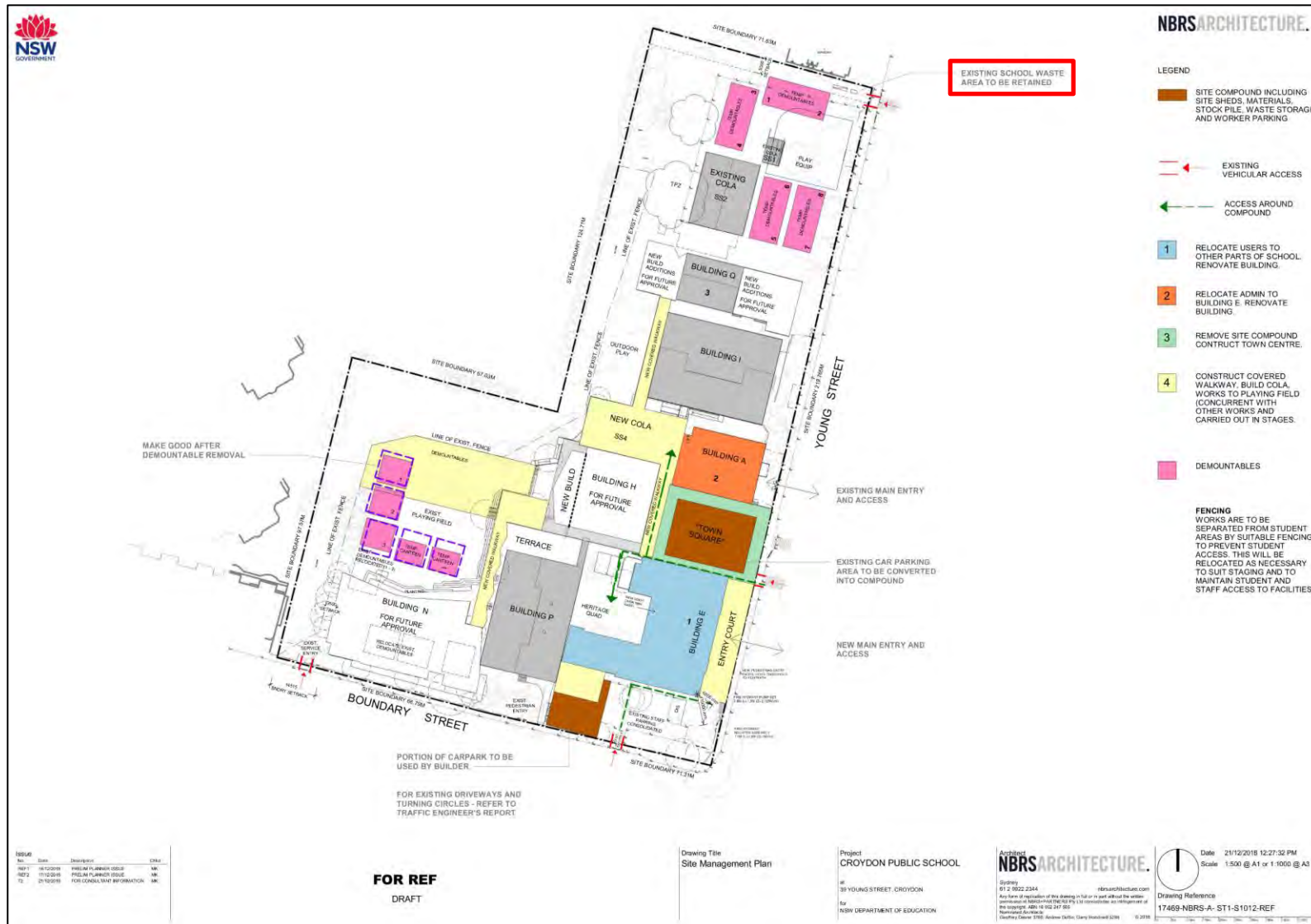
Additionally, waste management workshops can be held at the school to engage students and teachers in their waste generation and provide an interactive approach to managing waste at the school. The school may elect to have students audit their waste to determine what types and quantities of waste are being disposed of on a regular basis. An audit may provide valuable information about where CPS can improve their waste management and resource recovery approach.

5 References

- Australian Department of Sustainability, Environment Water, Population and Communities (2011) Construction and Demolition Waste Guide - Recycling and Re-use Across the Supply Chain.
- Burwood Council (2013) Burwood Development Control Plan.
- Burwood Council (2012) Burwood Local Environmental Plan.
- NSW EPA (2014) NSW Waste Avoidance and Resource Recovery Strategy 2014-21.
- NSW EPA (2014) Waste Classification Guidelines.
- NSW Government (1979) Environmental Planning and Assessment Act.
- NSW Government (1997) Protection of the Environment Operations Act.
- NSW Government (2000) Environmental Planning and Assessment Regulation.
- NSW Government (2001) The Waste Avoidance and Resource Recovery Act.
- Sustainable Schools NSW (2018) Waste – Accessed at:
<https://www.sustainableschoolsnsw.org.au/teach/waste>

[illegible]

Figure 3: Site demolition plan and waste storage area



Appendix B Planet Arc Schools Recycle Right Guide

**Schools
Recycle
Right**



**NATIONAL
RECYCLING WEEK**
PLANET ARK

How To Set Up A Recycling System: A School's Guide



How To Set Up A Recycling System Guide: A School's Guide was developed by Planet Ark Environmental Foundation as a resource for the Schools Recycle Right Challenge, an initiative of National Recycling Week. The Schools Recycle Right Challenge offers a wide range of recycling themed activities, lesson plans and events ideas that have been developed specifically for Australian schools. Each resource has been developed to enable learning by doing, and learning by having fun!

For more information on the Schools Recycle Right Challenge, visit
SchoolsRecycle.PlanetArk.org

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CARTRIDGES 4
PLANET ARK

Introduction

This is a step-by-step guide on how to establish a recycling system at your school. A recycling system involves collecting recyclable materials at school and taking them to (or getting them collected by) a recycler.

Remember though, it is always better to *reduce* waste first, *reuse* where possible, and then *recycle*.

Why set up a recycling system?

Recycling not only benefits the environment (see Box 1) but in some cases can save a school money on waste disposal. Setting up a recycling system is a hands-on, interdisciplinary lesson that educates students about the environment, personal responsibility, community action, sustainability and natural resource management. It can easily link with the curriculums of business studies, commerce, economics, chemical sciences (what materials are made from), geography (mapping and impacts of landfill, agriculture and mining), as well as develop skills in numeracy, and critical and creative thinking. School recycling programs impact students, their families, and the overall waste diversion of a community. They can also provide an opportunity for the school to gain public recognition for its achievements.

A recycling policy can be incorporated into a School Environmental Plan (see Appendix 1). Purchasing items with recycled content could be part of a green purchasing policy (see Appendix 3). If your school needs help becoming more sustainable, see Appendix 2 for details on the Australian Sustainable Schools Initiative.

Outcomes for schools take the form of economic savings, environmental, social and educational benefits.

BOX 1

Why is recycling important?

Your students (and colleagues) may ask you this question. So here are some answers:

- ♻ Recycling reduces the amount of waste going into a landfill, helping to prolong its useful life
- ♻ Recycling saves energy and thus greenhouse gas emissions
- ♻ Recycling creates jobs
- ♻ Recycling saves natural resources such as oil and water
- ♻ Recycling reduces pollution
- ♻ Recycling provides raw materials for industry
- ♻ Recycling makes a difference



Student Involvement



This is a great opportunity to get your students involved in a practical, 'real life' situation, from conducting a feasibility study of setting up a recycling program, to the ongoing management. Students can contribute through:

- ♻️ research / data gathering
- ♻️ sharing information / reporting findings
- ♻️ conducting a school / community education campaign
- ♻️ debating options
- ♻️ decision-making
- ♻️ implementing communication strategies
- ♻️ monitoring, evaluating, modifying
- ♻️ celebrating!

Involvement in your school's recycling scheme can tie in with a number of curriculum areas including maths, science, social science, business studies and commerce. You may wish to consider recognition awards for outstanding individuals or classes e.g. recycling trophies!

Lesson Plans

To get your students enthused, choose from a selection of Planet Ark's **Lesson Plans** that use fun activities to teach kids about recycling and the environmental benefits that follow: recyclingweek.planetark.org/kids-teachers/lesson-plans.cfm

Talks/Excursions

Consider inviting an expert in recycling to talk to your class or school. In some locations, recycling companies such as **Visy** and **Transpacific/Cleanaway** provide school education programs to help teachers and students understand how each product is recycled.

There are also a number of government-funded organisations that may provide workshops and field trips in your state (e.g. www.wow.sa.gov.au and www.compostkids.com.au).

Alternatively, contact your local council or recycling company to find out whether they can help you organise an excursion to a recycling facility.

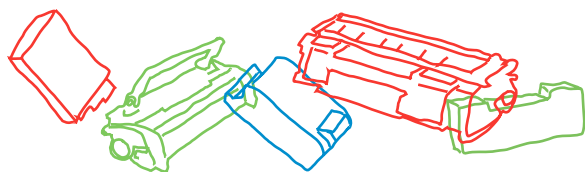
Free programs

There are many free recycling programs that schools can participate in.

'Cartridges 4 Planet Ark'

Cartridges.PlanetArk.org

'Cartridges 4 Planet Ark' is an innovative recycling program that provides Australians with a free, easy and environmentally-accredited way to recycle their used printer cartridges. 'Cartridges 4 Planet Ark' is an example of an effective extended producer responsibility program. The cost of collecting, transporting, and recycling the cartridges, as well as promoting the program, is paid for by the participating manufacturers - Brother, Canon, Epson, HP, Konica Minolta, Kyocera and Lexmark. The program also provides resources to help schools promote printer cartridge recycling. For a free collection box at your school, **register online** or call 1800 24 24 73.



MobileMuster

www.mobilemuster.com.au

MobileMuster is the mobile phone industry's official product stewardship program. It provides an Australia-wide free recycling service for all types of mobile phones, and mobile phone batteries, chargers and accessories. This includes collection boxes for schools, businesses and other organisations. The program also provides learning modules to help students develop a better understanding of the recycling process. **Register online** to receive your MobileMuster collection kit or call 1300 730 070 to find out more.



Cash for Cans

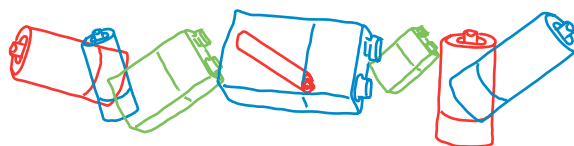
It may be feasible for your school to raise funds by establishing a 'Cash for Cans' collection system. Schools in SA and NT will be able to claim funds under the container deposit schemes in their states, while schools in other states may be able to negotiate a suitable arrangement with a local scrap metal recycling business. Check out Planet Ark's 'Setting Up An Aluminium Can Collection At Your School' guide available here: cans.planetark.org/recycling-info/collection.cfm



Battery World Schools Recycle Program

recycling.batteryworld.com.au/schools-recycle-program

Battery World offers a national opportunity for schools of Australia to recycle, or responsibly dispose of, all types of used batteries. Recycling packages for primary schools are developed according to each school's needs and can include web based teacher resources, presentations at school assemblies, posters, information sessions for staff, battery recycling bins, and mini recycling bins. Schools can **register** their interest for the program online



National Television and Computer Recycling Scheme

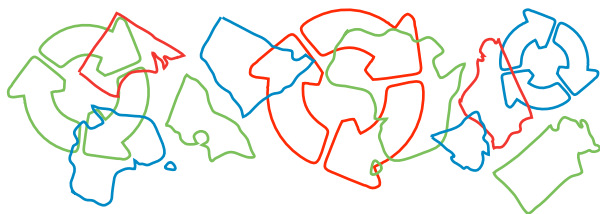
www.environment.gov.au/settlements/waste/ewaste/index.html

A national, industry funded, computer and TV recycling scheme was launched in May 2012. The Federal and State governments joined with the responsible members of the TV and computer manufacturing industries to develop legislation and guidelines for the establishment of this scheme. Free collection points for used TVs and computers are being set up around the country over the five years from launch. Find your nearest recycling option for **computers** or **televisions**.



Council Programs

Some local councils provide recycling services for schools. Check with your local council, or visit www.BusinessRecycling.com.au to find a nearby commercial recycling company.



Is it feasible for my school?

There are some important considerations to take into account when evaluating the feasibility of a recycling system in your school.

Why not involve your students in the process by asking them to analyse the costs and benefits of such a system as part of a recycling lesson plan or in combination with other curriculum studies?

1 What material can we recycle?

Many materials can be recycled, however some recycling options and services may not be available in remote locations. Some recyclers provide co-mingled recycling bins, making it easy to recycle items like:

- ♻ Paper and cardboard
- ♻ Aluminium cans
- ♻ Milk and juice cartons
- ♻ Plastic containers
- ♻ Glass
- ♻ Steel cans

In addition to the free recycling programs mentioned in the section above, you can also recycle these materials through dedicated collection systems:

- ♻ Food and garden scraps
- ♻ Plastic bags
- ♻ Clothing
- ♻ Lights (e.g. fluorescent tubes)

2 How much is likely to be collected?

A collection system may only be worthwhile if your school is likely to collect a reasonable quantity of recyclable materials. If your school has previously done a waste audit, you'll be able to predict the amount of expected materials with good accuracy. If it hasn't done a waste audit before, you could conduct a waste audit with students, using the steps in Box 3 as a guide. You may simply want to choose one or two materials to recycle first, and then review other materials in the future.

Conducting a Waste Audit

Use these steps as a guide to help your class conduct a simple waste audit.

1. Choose a day or a week to commence the audit. You can undertake the waste audit with one class or a number of classes. Ask your students to keep all of their packaging and food scraps from recess and lunch.
2. In the classroom or another designated area, place nine large containers labeled with the following categories: plastic containers, glass, milk and juice cartons, paper and cardboard, metal, squeeze pouches, chip and snack packets, plastic wrap and bags, and food scraps. On the first day, the class can work collectively to identify their packaging items and sort them into these nine categories.
3. After each recess and lunch, for the duration of the audit, ask your students to continue placing their packaging and food scraps into the correct boxes.
4. Keep a tally, or record the weight, of the items collected in each box over the week or the day. Groups of students can be allocated this task over different recess and lunch periods. Ask the students to fill in the results on a large chart.



5. Average the number of items collected per day over the five days, then multiply by 20 to obtain a monthly estimate. You can then extrapolate this amount to calculate the waste generation rate for all the classes in the school, or convert each material type into a percentage of the total amount discarded at your school.
6. If you would like a more comprehensive picture of the waste generated by your school as a whole, select different groups of students to also assist in monitoring the waste generated in the library, computer labs and art studios, offices, the canteen and other parts of your school and repeat steps 1 to 5. You may need to modify the container labels for the different materials collected, and you may need a longer audit period (e.g. a fortnight or a month) to get accurate waste generation rates for all areas of your school.

ITEM	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	TOTAL
Milk and juice cartons						
Plastic containers						
Glass						
Paper and cardboard						
Metal						
Squeeze pouches						
Chip packets						
Plastic wrap and bags						
Food scraps						
Aluminium cans						
Printer cartridges						
Computers and accessories						
Mobile phones and accessories						
Books						
Steel cans						
Metal						
Fluorescent lights						
Other / miscellaneous						

3 Find a recycler

If you are considering participation in one of the free programs mentioned on pages 4 and 5, you can skip ahead to Transportation (step 4).

The first step in finding a recycler is to review your school's current waste management contract. Find out whether the waste removal contract can be renegotiated during the contract term, whether the company your school works with can provide a recycling service or could expand the current service provided, and review any costs that may be incurred by changing or expanding your current waste contract.

If your current contractor can assist you in the way you want, the next step is to consider Transportation (step 4).

If you decide to work with another company, or to get quotes from other recycling providers, simply search on BusinessRecycling.com.au for recycling services in your area. You may also wish to contact your local council to find out about any recycling services they offer schools.

To search:

- go to the 'Search for service' tool

A close-up of the search form from the Business Recycling website. It features a red 'Search for service' button at the top. Below it are four dropdown menus: 'Category' (set to 'Food & Beverage Packaging'), 'Material' (set to 'Aluminium - Cans'), 'State' (set to 'ACT'), and 'Postcode'. A red 'Go' button is at the bottom right of the form.

- select the 'Category' of materials you want to recycle
- select the type 'Material' you want to recycle
- then enter your suburb, state and postcode

The results of your search will feature a map and a list of recycling services, separated into 'Drop Off Locations' and 'Pick Up Locations'.

When contacting the recycling services, ask the questions outlined in Planet Ark's [Choose the Right Recycler Checklist and Factsheet](#). This will ensure you secure an environmentally and legally reputable recycling service provider.

Remember to ask for quotes for the collection of your recycling (if applicable), the recycling transportation fees (if any), and any contract management or equipment leasing expenses your school will be liable for.

4 Transportation

In the event that the school needs to transport its recycling to a drop off point, you may consider establishing a roster of volunteer staff or parents. You'll need to think about how often the recycling will need to be transported, who will coordinate the volunteers, how the recycling will be transported (e.g. inside bulka bags or cardboard boxes) and whether there are any insurance or health and safety considerations.

5 Estimating the costs / savings and time required

Estimate the costs (if any) your school will incur for establishing and maintaining the recycling service including transport, equipment (e.g. bins), storage facilities, as well as the time needed for students and staff to implement the system.

Discuss with your principal whether any funds can be allocated to the program. Consider highlighting the potential for waste minimisation initiatives to save the school money by reducing waste disposal expenses, as well as the environmental benefits and linkages to the curriculum. Reducing paper usage not only saves money, but also reduces

landfill use. Investigate possible funding through grants (see Appendix 4 - Funding opportunities), local businesses, and school fundraising ventures.

Remember, some states (SA and NT) have Container Deposit Schemes, whereby eligible beverage containers can be returned to designated collection depots to earn a 10 cent refund per container. In all states, scrap metal recyclers may pay a nominal amount for materials such as aluminium cans and car batteries. Ask your local council, or find a nearby recycling company for further information at BusinessRecycling.com.au

6 Collecting and storing each material

The best way to collect and store recyclable items will differ from school to school. Things to consider include:

- ♻️ **Location of collection receptacle** – examples include the school canteen or a well-frequented, covered area in the playground. Involve your students, by asking them to map the school and suggest recycling collection points as a lesson in local geography. Placing rubbish bins next to all recycling bins will reduce the chance of non-recyclable items being placed into the recycling bins.

- ♻️ **Type of collection receptacle** – will it be outdoors or indoors, big or small, secured or unsecured? Will it need wheels? Whichever type of container you choose, it will need to be easy to remove the items from the container when the recycler collects them, or when they are emptied for transport to the recycler. The receptacle could be as simple as a box or dedicated recycling bin in the canteen that is emptied into a larger container (e.g. a bulka bag) and stored out of the way.

- ♻️ Who will be responsible for **monitoring and emptying** the collection receptacle? Can students take responsibility as part of the school's sustainability program or the Student Representative Council? If not, your school's cleaners, groundskeeper, or rostered volunteers (if you have them) may need to regularly empty

smaller collection containers into a single, large container for collection by the school's recycling contractor.

- ♻️ Any **health and safety** issues that need to be addressed. Assess any OH&S risks that may arise from your proposed recycling program, and discuss these with your school principal before you begin.

- ♻️ Ensure you have **effective signage** at the collection points (see Step 8 for further information).

7 Goals, record-keeping and reporting

Set a recycling goal based on your original waste audit results (step 2). Ensure your goals are measurable, achievable, and time-bound. Keeping records of any the costs incurred by your recycling program, and reviewing the frequency of collections / drop off trips will help to determine if what you have in place is appropriate for the amount being recycled.

Decide early on whether other data should be collected for a thorough assessment of the program. For example, you may wish to monitor and record the number of wheelie bins / skips of recycling that are collected, compared to the amount filled with rubbish. You may also decide to include records of information sessions and conversations with students and teachers about the new programs and how it works, or even their level of awareness of, and participation in, the new program.



Use this data to evaluate your achievements in relation to your goals. You will then be able to review the effectiveness of your program, make any improvements or adjustments to the way the program works, and to establish new goals for the program in the future. A range of monitoring tools and resources can be found in Sustainability Victoria's **'How to reduce, reuse and recycle waste in schools' guide**

8 Building support, awareness and participation

Once your school has established its collection system, it's important to build awareness amongst students, staff, parents and perhaps even the local community. School assemblies, day sheets, school newsletters and signage can all help with communicating your message within the school community.

When staff and students understand how a recycling system can benefit both the school and the environment, they are more likely to support and participate in the scheme, and less likely to contaminate the collection with other waste materials.

Signage is an important part of getting staff and students to use any recycling program correctly. Designing signs can be a class activity if you would like to have tailored signs and posters for your school. Alternatively, you can download signs as PDFs for printing from Planet Ark:

schoolsrecycle.planetark.org/coords/signage.cfm

recyclingweek.planetark.org/recycling-info/collection-signs.cfm

recyclingweek.planetark.org/recycling-info/rr-posters.cfm

For handy tips on effective signage and creating behaviour change, see 'Sending the right signs' on page 11 and 'Getting a foot in the door' on page 12.

Communicating the success of your recycling program to staff and students is also important, as it will show that their actions are leading to worthwhile results. Where possible, encourage your students to initiate these communication and feedback mechanisms by reporting in:

- ♻ Newsletters
- ♻ Annual reports
- ♻ Special noticeboards
- ♻ The school's home page on the internet
- ♻ Speech nights
- ♻ Charts around the school showing the number of full bins of garbage collected each week, the amount of paper recycled, the amount of paper used etc.

Recycling Case Study

McClelland College significantly reduced the amount of waste going to landfill by installing bins for paper, co-mingled recycling, and food and garden scraps in classrooms, staff offices, photocopy rooms and the canteen. Find more sustainable school case studies here: www.resourcesmart.vic.gov.au/for_educators



Useful Tips and Organisations

- ♻️ Register your school for the **Schools Recycle Right Challenge** (October-November each year) to gain access to Planet Ark's **Waste-Free Lunch Guide** and other great waste reduction ideas for your school.
- ♻️ Schools can collect useful items like clothes and even household items for nearby charity shops or as part of school fundraising initiatives.
- ♻️ A compost or worm farm is one of nature's best recyclers of food and garden scraps. To find out more, or to establish a compost bay or worm farm at your school, check out these resources:
 - **Costa's Guide to Organics for Schools 2012**
schoolsrecycle.planetark.org/coords/videos.cfm
 - **BusinessRecycling Information – Food Scraps** businessrecycling.com.au/recycle/food-scraps
 - **Australian Government's Living Greener Tips for Starting a Worm Farm**
www.livinggreener.gov.au/waste/kitchen-food-waste/start-worm-farm
 - **Compost for Soils National Program**
www.compostforsoils.com.au
- ♻️ Some schools choose to establish chook pens, which are great lunch scrap recyclers and which provide opportunities to explore the responsibilities and rewards of animal husbandry.
- ♻️ **FluoroCycle** is a voluntary recycling recognition scheme that schools can participate in if they recycle their used fluorescent globes.
- ♻️ Schools could raise awareness about the new **Aldi Battery Recycling** program which is supported by Planet Ark. Families can recycle their used batteries simply by dropping them into the dedicated bins at their nearest Aldi store. Any AA, AAA, C, D and 9V batteries (both rechargeable and non-rechargeable) are accepted.

♻️ **SCRAP** stands for School Communities Recycling All Paper Ltd. It's a non-profit company in NSW, existing to help schools, other educational, government, non-profit bodies become environmentally-friendly through paper recycling, worm farming, and waste auditing.

Useful Resources

Planet Ark's Schools Recycle Right Challenge

provides free recycling activity guides, lesson plans and events ideas for Australian schools. The resources have been designed to engage students and teachers to learn by doing and learn by having fun!

Wipe Out Waste (SA) is designed for teachers and students who are interested in reducing waste and making learning interesting.

Waste Wise Schools (WA) offers resources and support for schools to plan, implement and maintain waste minimisation projects such as recycling, composting and worm farming.

Keep Australia Beautiful provides state-based educational programs and funding opportunities for schools.

RecyclingNearYou.com.au provides information on community reuse organisations that offer excellent opportunities to reuse resources.



Appendix C Standard Signage

Waste Signage

Signs for garbage, recycling and organics bins should comply with the standard signs promoted by the NSW Office of Environment and Heritage (NSW OEH 2008b).

Standard symbols for use in signage, bin facade and educational materials are promoted through the NSW Environment Protection Authority. They are available for download from the NSW EPA website (NSW EPA 2016b), in black and white and colour versions. The Australian Standard series AS 4123 (Part 7) details colours for mobile waste containers (Standards Australia 2008).

Figure 4: Examples of standard signage for bin uses



Safety Signs

The design and use of safety signs for waste and recycling rooms and enclosures should comply with AS 1319 (Standards Australia 1994). Safety signs should be used to regulate, and control safety related to behaviour, warn of hazards and provide emergency information, including fire protection information. Below are some examples. Clear and easy to read 'NO STANDING' and 'DANGER' warning signs must be fixed to the external face of each waste and recycling room where appropriate.

Figure 5: Example and layout of safety signage



(d) Horizontal

FIGURE D5 TYPICAL ARRANGEMENTS OF DANGER SIGNS

