

Donnelley Simpson Cleary Consulting Engineers

NSW DEPARTMENT OF EDUCATION

LIVERPOOL BOYS AND GIRLS HIGH SCHOOL UPGRADE PROJECT

Review of Environmental Factors

for

Hydraulic Services

Project No : 8347

Revision : 3 – Final Issue

REVISION SCHEDULE

No.	DATE	DESCRIPTION
1	13 th January 2025	Draft Issue
2	31 st January 2025	Final Issue
3	12 th February 2025	Final Issue

TABLE OF CONTENTS

1	INTRO	DUCTION4
	1.1	SITE DESCRIPTION
	1.2	SIGNIFICANCE OF ENVIRONMENTAL IMPACTS5
	1.3	SITE CONTEXT SUMMARY6
	1.4	PROJECT SCOPE SUMMARY
2	ASSES	SSMENT OF UTILITIES - WATER AND WASTEWATER7
3	EXISTI	NG SERVICES INFRASTRUCTURE8
	3.1	WATER
	3.2	SEWER
4	PROPO	DSED INFRASTRUCTURE10
	4.1	WATER
	4.2	SEWER
5	ENVIR	ONMENTAL CONSIDERATIONS11
6	HYDR	AULIC MITIGATION MEASURES11
7	COMP	LIANCE WITH STANDARDS AND REGULATIONS11
8	STAKE	EHOLDER CONSULTATION11
9	CONC	LUSION12
10	APPEN	NDIX A – HYDRAULIC SERVICES SITE PLAN13
11	APPEN	NDIX B – ARCHITECTURAL SITE PLAN14

1 INTRODUCTION

This hydraulic services report has been prepared by DSC on behalf the NSW Department of Education (the **Applicant**) to assess the potential environmental impacts that could arise from the redevelopment of the Liverpool Boys High School and Liverpool Girls High School, at 18 Forbes Street, Liverpool NSW, 2170 (the **site**).

This report has been prepared for the Hydraulic Services.

This report accompanies a Review of Environment Factors that seeks approval for redeveloping the Liverpool Boys and Liverpool Girls High Schools into a single co-educational school, including:

- Construction and operation of a six-storey school building, including school hall and gymnasium;
- Associated parking and building services;
- Tree removal;
- Associated landscaping and play spaces;
- Augmentation of service infrastructure; and
- Associated off-site infrastructure works to support the school, including (but not limited to) services, kiss and drop point and pedestrian crossings.

Refer to the Review of Environmental Factors prepared by Ethos Urban for a full description of works.

1.1 SITE DESCRIPTION

The site is located at 18 Forbes Street, Liverpool, within the Liverpool Local Government Area (LGA). The site is legally described as Lot 1 DP1137425 and has a total area of approximately 74,973m2.

The site comprises a broadly rectangular portion of land which currently contains the existing Liverpool Boys High School, Liverpool Girls High School, and the Gulyangarri Public School, which commenced operations in January 2024 and is located to the east of the wider site.

The site's western portion contains Liverpool Boys High School and Liverpool Girls High School. Liverpool Girls High School in the site's southwest comprises three, two-storey buildings. Liverpool Boys High School in the site's northwest, comprises approximately four, two-storey buildings, with adjacent atgrade carparking and various sports courts.



An aerial image of the site is shown at Figure 1 below.

Figure 1 – Site Aerial

Source: Metro Map, edits by DSC

1.2 SIGNIFICANCE OF ENVIRONMENTAL IMPACTS

Based on the identification of potential issues and an assessment of the nature and extent of the impacts of the proposed development, it is determined that:

• The extent and nature of potential impacts are low and will not significantly impact the locality, community, and/or the environment.

• Potential impacts can be appropriately mitigated or managed to ensure that there is no significant impact on the environment.

1.3 SITE CONTEXT SUMMARY

The site is a large urban block in the suburb of Liverpool within the Liverpool Health and Academic Precinct. The site is located approximately 25 km south-west of the Sydney central business district (CBD) and approximately 12 km south of the Parramatta CBD. The surrounding context of the site is experiencing significant transformation due to the development of Liverpool Health precinct and the larger context of the Liverpool CBDs rapid housing growth in the demolition of brownfield sites and redevelopment into high rise apartment towers to accommodate its growing population.

Recent and proposed developments, as part of the Liverpool Health and Education Sub Precinct immediately south and east of the site includes the recently constructed Liverpool Hospital Carpark and Gulyangarri Public School. Predominantly 1970s and 1980s medium density 3 – 6 storey residential flats comprise the immediate northern and western context around the site, with Warwick Farm station situated further north of the site. The school masterplan demonstrates comprehensive examination & implementation of urban and master planning opportunities. The design has overcome challenges, reflecting a proactive stance, particularly in response to riverine flood risk and the site's topographical features such as level changes. Placing all school buildings on the perimeter of the site creates a protected play space and adhering to a Flood Risk Management Plan showcases a commitment to safety and compliance with regulatory standards. The landscaped topography, designed to integrate organically with the existing terrain, reflects a thoughtful response to environmental challenges.

1.4 PROJECT SCOPE SUMMARY

The Liverpool Boys and Girls High School Upgrade Project (Note: The school's name is yet to be confirmed but the project will be referred to as LBGHS hereafter) is situated in Liverpool CBD in the Liverpool LGA and will occupy part of Lot 1 (DP) 1137425, a 7.47 HA site. The school facilities will be designed to SINSW's standard hub layout designs and are registered to achieve 5-star-GBCA Green Star rating.

The school has been designed to deliver facilities consistent with Department of Education Educational Facilities and Standards Guidelines (EFSG) including core facilities such as administration, gym/hall, general learning spaces, support learning spaces, and specialist facilities including additional learning units, a Wood and Metal Technology, Performing Arts, Visual Arts, Food and Textiles, Health and PE and Science. The school will also include a variety of outdoor spaces including sports fields, courts, Covered Outdoor Learning Areas (COLA), and outdoor learning areas.

The following project objectives apply to the Liverpool Boys and Girls High School Upgrade:

- To provide a high-quality learning environment.
- To create welcoming facilities which prioritise the care and well-being of the school community.
- To ensure the school responds to the historical context of the site and the cultural knowledge of the traditional custodians of the land thus providing spaces and design aspects that reflect the cultural context.
- To create agile and responsive places using biophilic design principles, be accessible and welcoming, and respond to the urban fabric of the neighbourhood that will be a source of joy and pride to staff, students, and the local community.
- To consider positioning, massing, bulk, and scale of buildings to respond to the urban and environmental context.
- Design to enable staged construction and operation.

The Review of Environmental Factors prepared by Ethos Urban provides a full description of the proposed works.

2 ASSESSMENT OF UTILITIES - WATER AND WASTEWATER

Requirement	Y	N	N/A	Comments
Utilities		_		
Does the REF broadly set out how the proposal will be serviced by necessary services and utilities?	\boxtimes			Sections 3 and 4.
Does the REF assess any works required to provide necessary services and utilities and conclude that these would not have significant environmental affects?				Sydney Water will undertake an assessment of the water and sewer mains and provide the notice of requirements in the next phase of design.
If on site water treatment is required, does the REF include an on-site wastewater management plan / land capability assessment that concludes that the site would be capable of accommodating wastewater without significant affects on the environment?				Authority sewer mains are available. Refer to Section 3.2 of this report.

3 EXISTING SERVICES INFRASTRUCTURE

A desktop Before You Dig Australia (BYDA) study was conducted for the proposed Liverpool Boys and Girls High School site and the surrounding area. The following outlines the existing services and infrastructure around the site, providing context for the proposed development's servicing strategy.

3.1 WATER

The Sydney Water BYDA water services plan indicates an existing water main varying in size from 200mm to 100mm. The proposed fire water connection is proposed to the existing 200mm CICL and the domestic cold water connection to the 100mm CICL main section, located on the eastern side of Forbes Street, is available for the site's fire connection and domestic water connection. See **Figure 2** below.

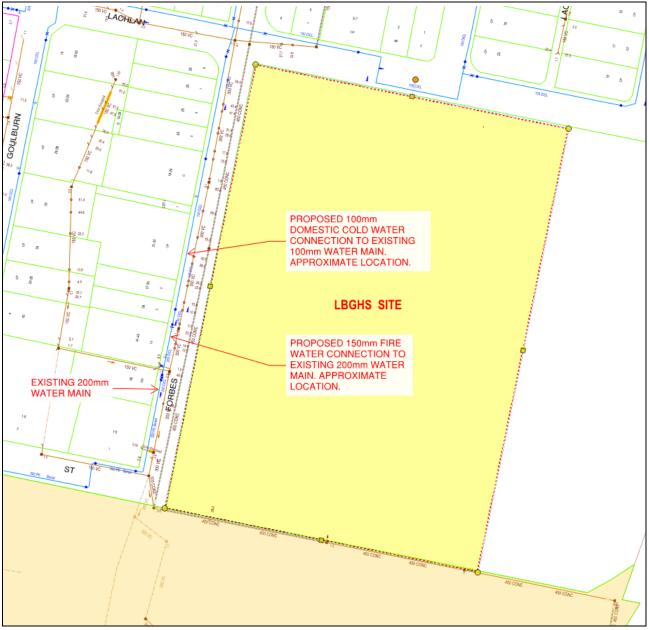


Figure 2 – Sydney Water BYDA – Water Main Source: BYDA – Sydney Water, edits by DSC

3.2 SEWER

The Sydney Water sewer services plan indicates that the existing 300mm and 450mm sewer mains located on Forbes Street on the site's eastern boundary are both available for connection. The proposed site sewer connection could connect to either sewer main, with the 450mm sewer main located closer to the site boundary, reducing the amount of work for the sewer service connection in relation to a connection to the 300mm sewer main. See **Figure 3** below.

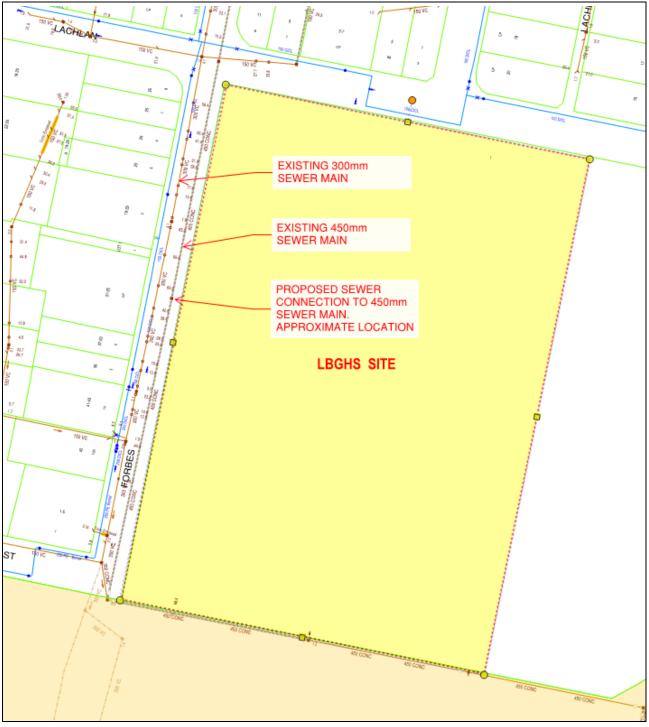


Figure 3 – Sydney Water BYDA – Sewer Main Source: BYDA – Sydney Water, edits by DSC

4 PROPOSED INFRASTRUCTURE

4.1 WATER

The current water mains in Forbes Street are expected to be able to support the water demand for the activity. A Section 73 application to Sydney Water will be required in the next design phase. The proposed water infrastructure consists of:

- Domestic cold water connection 100mm diameter pipe with an authority water meter.
- Fire hydrant system water connection 150mm diameter pipe.
- Fire hydrant booster assembly and fire hydrant pump room.
- Domestic cold water pumps for boosting the water pressure within the site.
- 160 kL inground rainwater tank for irrigation for the sports field and landscaped areas.

Refer to Appendix A – Hydraulic site plan for the water connections and reticulation strategy.

4.2 SEWER

The current sewer mains in Forbes Street are expected to be able to support the sewer demand for the activity. A Section 73 application to Sydney Water will be required in the next design phase. The proposed sewer infrastructure consists of:

Gravity sewer mains serve all buildings up to 150mm diameter size and drain into an onsite

- Gravity sewer mains serve all buildings up to 150mm diameter size and drain into an onsite sewer pumping station.
- Sewer rising main from the onsite sewer pumping station to connect to the authority sewer main.
- Sewer access chambers located on main lines and at changes of direction.
- Trade waste grease arrestor serving trade waste drainage from kitchens.
- Dilutions pit serving science lab trade waste drainage.

Refer to Appendix A – Hydraulic site plan for the sewer connection and reticulation strategy.

5 ENVIRONMENTAL CONSIDERATIONS

Environmental impact considerations from hydraulic and fire services:

- Trenching for underground water and drainage services could disturb soil and vegetation.
- Noise from construction activities may temporarily affect surrounding areas.
- Visual impact from above-ground installations such as fire hydrant booster assembly, water meters and services plant rooms.

6 HYDRAULIC MITIGATION MEASURES

ID	Mitigation Measure	Timing	Reason For Measure
HY1	To minimise soil disturbance during trenching, plan service routes efficiently, reuse excavated soil for backfilling, stabilise exposed areas with mulch or vegetation, and implement silt barriers to prevent erosion and runoff.	Construction	To minimise soil disturbance
HY2	To minimise noise disturbance, restrict noisy activities to standard working hours, use noise barriers near sensitive areas, maintain equipment with noise-dampening devices, and inform residents and businesses about high-noise activities in advance as per the traffic consultant's report.	Construction	To minimise noise during construction
НҮЗ	To minimise visual impact from above-ground hydraulic services using neutral or natural-coloured materials for utility structures, positioned discreetly, landscaping for screening, and incorporating aesthetic design elements to blend with the surroundings as per the landscape architect's report.	Design	To minimise visual impact

7 COMPLIANCE WITH STANDARDS AND REGULATIONS

The design aligns with:

- NCC 2022 and relevant Australian Standards, including AS3500 & AS2419.1
- NSW Department of Education's EFSG 2.0 and Pattern Book
- Australian Standards
- Sydney Water Technical Standards and Guidelines
- Local Council Engineering Standards
- Fire and Rescue NSW Access for Fire Brigade Vehicles and Firefighters

8 STAKEHOLDER CONSULTATION

- BYDA enquiry for Sydney Water is complete.
- Liaison with Sydney Water regarding sewer connection and discharge requirements for the site.
- A Section 73 application will be submitted at the next design stage to Sydney Water to confirm the notice of requirements.
- Coordination of water connections and approvals will commence at the next design stage.

9 CONCLUSION

The hydraulic and fire services proposed for the Liverpool Boys and Girls High School Upgrade Project have been assessed carefully, considering environmental, regulatory, and operational factors. Existing infrastructure has been evaluated, and planned enhancements to water and sewer services will adequately support the proposed development while complying with Sydney Water standards and other regulatory requirements.

Potential environmental impacts, such as soil disturbance, vegetation disruption, noise, and visual effects, have been identified, and mitigation strategies have been outlined to address these issues effectively. The project aligns with relevant standards, including the NCC 2022, Australian Standards, and NSW Department of Education guidelines, ensuring sustainable and safe implementation.

Through diligent planning and stakeholder engagement, this development is well-positioned to meet the community's needs while minimising adverse environmental effects.

10 APPENDIX A – HYDRAULIC SERVICES SITE PLAN

LIVERPOOL BOYS AND GIRLS HIGH SCHOOL **AT FORBES ST LIVERPOOL - FOR SINSW**

LEGEND

ABBREVIATION

AAV	AIR ADMITTANCE VALVE
AB	ACCESSIBLE BASIN
AC	AIR CONDITIONING
A/P	ACCESS PANEL
ASM	AUTHORITY SEWER MAIN
AWM	AUTHORITY WATER MAIN
AV	AIR RELEASE VALVE
AWC	ACCESSIBLE TOILET (WATER CLOSET)
В	BASIN
	BOILING/CHILLED WATER UNIT
BFW	BUNDED FLOOR WASTE
BG	BOX GUTTER
BO	BALCONY OUTLET
BT	BOUNDARY TRAP
BTFW	BUCKET TRAP FLOOR WASTE
BTH	BATH
BV	BALANCING VALVE
BWU	
CAC	
CBO	COMBIOVEN
	CIRCULAR COVER
CC	
CD	CONDENSATE DRAIN
CI	CAST IRON
CIC	CAST IN COLUMN
CIS	CAST IN SLAB
CO	CLEAR OUT
CS	CLEANERS SINK
CSO	COMBI STEAMER OVEN
CT	COOK TOP
	COPPER
Cu	
CW	COLD WATER
DCDV	
DCP	DISCHARGE CONTROL PIT
DF	DRINKING FOUNTAIN
DFH	DUAL FIRE HYDRANT
DCW	DOMESTIC COLD WATER
DHWF	
DI	DUCTILE IRON
DP	DOWN PIPE
DRO	DOMED RAINWATER OUTLET
DST	DRAINAGE STACK
DTU	DRAINAGE TURN-UP
DW	DISHWASHER
DWG	DRAWING
е	EXISTING
EJ	EXPANSION JOINT
Ex	EXISTING
FFL	
FH	FIRE HYDRANT
FHR	
FW	FLOOR WASTE
GAS	GAS SERVICE
GBP	GAS BAYONET POINT
GD	GRATED DRAIN
GDO	GRATED DRAIN OUTLET
GFW	GARBAGE FLOOR WASTE
GMS	GALVANISED MILD STEEL
GVP	GREASE WSTER VENT PIPE
GW	GREASE WASTE
GWM	GLASS WASHING MACHINE
GWS	GREASE WASTE STACK
HDC	HEAVY DUTY COVER
HDG	HEAVY DUTY GRATE
HDPE	
HL	HIGH LEVEL
HPF	HEAT PUMP FLOW
HPR	HEAT PUMP RETURN
HR	HALF ROUND
HT	HOSE TAP
HW	HOT WATER
HWF	HOT WATER FLOW
HWR	HOT WATER RETURN
HWU	HOT WATER UNIT
IL	INVERT LEVEL
IM	ICE MACHINE
IPMF	
KIP	KERB INLET PIT
KFW	KITCHEN FLOOR WASTE
KO	KEY OPERATED
KS	KITCHEN SINK
LDC	LIGHT DUTY COVER
LDG	LIGHT DUTY GRATE
LL	LOW LEVEL
LO	LOCKED OPEN
LT	LAUNDRY TUB
LPG	LIQUIFIED PETROLEUM GAS
LTG	LONGITUDINAL TRENCH GRATE
-	

NG	NATURAL GAS
NPCW	NON-POTABLE COLD WATER
NPHW	NON-POTABLE HOT WATER
NTS	NOT TO SCALE
O/F	OVERFLOW
OLF	OVERLAND FLOW
ORG	OVERFLOW RELIEF GULLY
Р	PENETRATION
PAA	PRACTICAL ACTIVITY AREA
PAT	PRACTICAL ACTIVITY TROUGH
PCW	POTABLE COLD WATER
PFS	PAN FLUSH SANITISER
PFW	PLANTROOM FLOOR WASTE
PHT	PLANTER HOSE TAP
PLRO	PLANTER RAINWATER OUTLET
PLV	PRESSURE LIMITING VALVE
PRO	PARAPET RAINWATER OUTLET
PRV	PRESSURE REDUCING VALVE
RC	REFRIGERATION CABINET
RCP	REINFORCED CONCRETE PIPE
RGB	RECESS GAS BAYONET POINT
RL	REDUCED LEVEL
RO	RAINWATER OUTLET
RPZD	REDUCED PRESSURE ZONE DEVICE
RS	RISING SHAFT
RST	RECESSED STOP TAP
RTD	RECESSED TUNDISH
RV	RELIEF VENT
RW	RAIN WATER
RWH	RAINWATER HEAD
S	SEWER/SANITARY
SD	SEWER DRAINAGE
SHR	SHOWER
SK	SINK
SL	SUCTION LINE
SMH	SEWER MANHOLE
SMS	SEWER MAINTENANCE SHAFT
SPR	SPRINKLER SERVICE
SRA	SPRAY RINSE ARM
SRM	SEWER RISING MAIN
SRO	SQUARE RAINWATER OUTLET
SRZ	STRUCTURAL ROOT ZONE
SSD	SUB-SOIL DRAINAGE
SST	SOIL STACK
ST	STOP TAP
SV	STOP VALVE (ISOLATION VALVE)
STW	STORWATER
SWDTU	STORMWATER DRAINAGE TURN-UP
SWP	STORMWATER PIT
SWRM	STORMWATER RISING MAIN
TD	TUNDISH
TG	TRENCH GRATE
TMV	THERMOSTATIC MIXING VALVE
TOK	TOP OF KERB
TPZ	TREE PROTECTION ZONE
TTD	TRAPPED TUNDISH
TRO	TERRACE RAINWATER OUTLET
TV	TEMPERING VALVE
TWCV	TRADE WASTE CHAMBER VENT
TWS	TRADE WASTE STACK
TWVP	TRADE WASTE VENT PIPE
U.N.O.	UNLESS NOTED OTHERWISE
uPVC	UNPLASTICISED POLYVINYL CHLORIDE
Ur	URINAL
UV	ULTRAVIOLET
UW	UTENSIL WASHING MACHINE
VB	VANITY BASIN
VFW	VINYL FLOOR WASTE
VP	
WA	
WC	TOILET SUITE (WATER CLOSET)
WM	WATER METER WASTE PIPE
WP WST	WASTE PIPE WASTE STACK
	WASTE STACK WASH TROUGH
WT	

WW WARM WATER WWF WARM WATER FLOW

WWR WARM WATER RETURN YG YARD GULLY

SYMBOLS

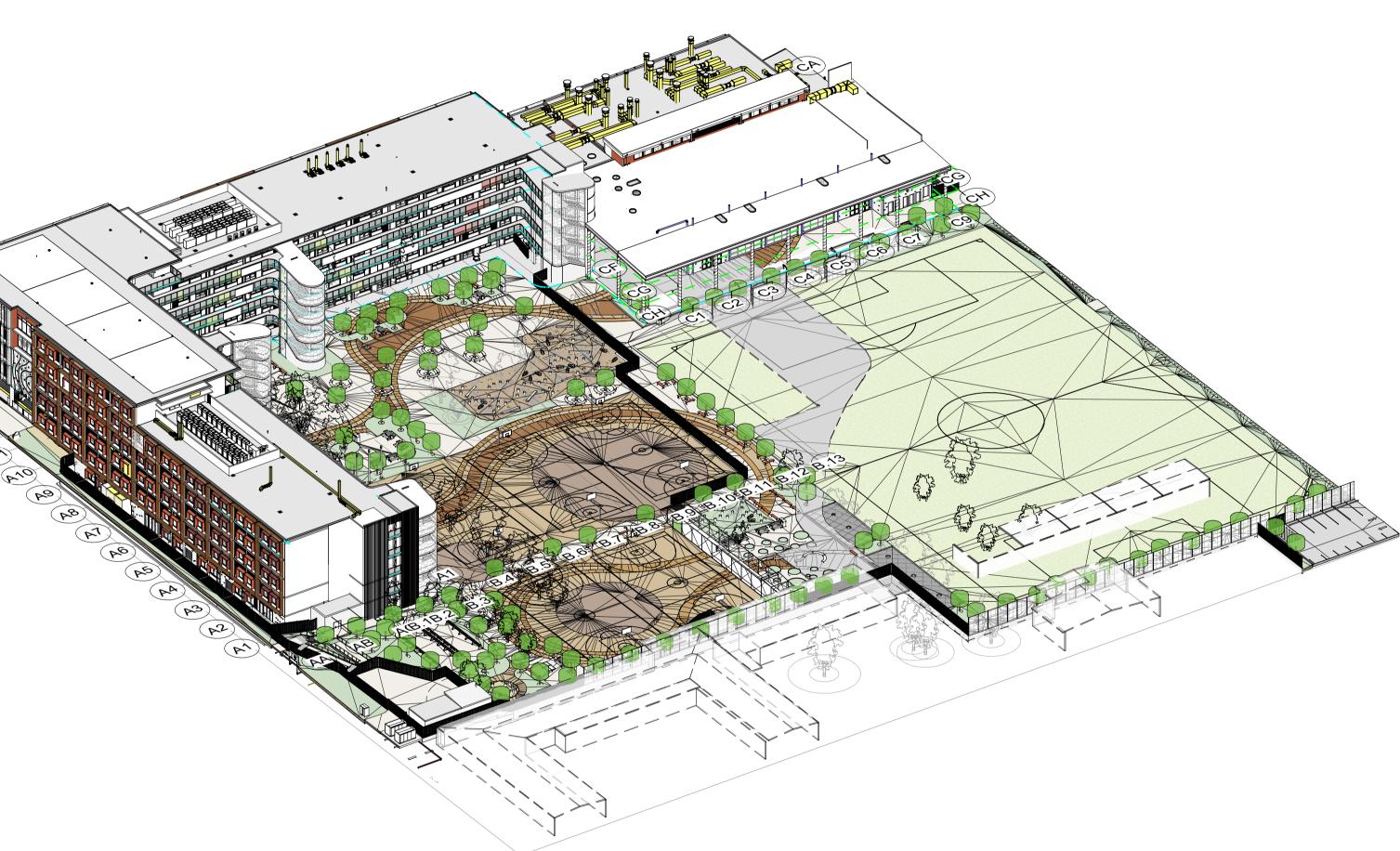
WATER METER AIR ADDMITANCE VALVE **BOUNDARY TRAF** CLEAR OUT FIRE HOSE REEL CONTINUATION ARROW

NORTH ARROW

PATH VALVE
REFLUX VALVE
REDUCED PRESSURE ZONE DEVICE
SOLENOID VALVE
STRAINER
OVERFLOW RELIEF GULLY
RAINWATER OUTLET
STOP VALVE

PIPE LEGEND

SD	
SIP	SANITARY DRAINAGE
TW	SIPHONIC DRAINAGE
	TRADEWASTE DRAINAGE
SW	STORMWATER DRAINAGE
VP	VENTLINE
RV	RELIEF VENT
TWVP	
CW	TRADEWASTE VENTLINE
HW	COLD WATER
	HOT WATER
HWR	HOT WATER RETURN
WW	WARM WATER
	NON POTABLE COLD WATER



NOTES

- 1. DRAWINGS ARE DIAGRAMMATIC ONLY. FOR DIMENSIONS AND CONSTRUCTION DETAILS OF BUILDING REFER ARCHITECTURAL DRAWINGS AND SITE.
- 2. PIPEWORK SIZES ARE NOMINAL BORE FOR COPPER AND CAST IRON AND INTERNAL
- 4. ANY PENETRATIONS TO FIRE RATED ELEMENTS TO BE PROTECTED IN ACCORDANCE WITH AS1530.4-2014 AND AS4072.1-2005.

2 1 NO.		100% SCHEMATIC DES 75% SCHEMATIC DES DESCRIP	SIGN ISSUE	RB RB ISSUED BY	
	PROVED		sued for the process		
ARCHITE		ED Content in this docu in the latest revision	ument may differ from า	that contained	
N	B	RS [•]			
Nomina Andrev	922 2344 ated Archit v Duffin NS	ects: SW 5602		nbrs.com.au	
Jonathan West NSW 9899 NBRS & Partners Pty Ltd VIC 51197 ABN 16 002 247 565					
			onsulting En 59 Hill Stre	gineers et, Roseville	
			ا Tel 9416 1177 Fa Email mail@		
Mechanical Electrical Hydraulic Lighting Fire Lifts PROJECT					
LIVE AT F	RPOOL	BOYS AND GI	RLS HIGH S	SCHOOL	
LIVE AT F FOR	RPOOL ORBES SINSW G TITLE	BOYS AND GI	RLS HIGH S	SCHOOL	
LIVE AT F FOR DRAWIN PR(RPOOL ORBES SINSW G TITLE	- BOYS AND GI S ST LIVERPOC /	RLS HIGH S		
LIVE AT FOR DRAWIN PRO	RPOOL ORBES SINSW G TITLE DJEC	- BOYS AND GI S ST LIVERPOC /	RLS HIGH S DL TION PROJECT NUMBE 834	R	
LIVE AT F FOR DRAWIN PRC	RPOOL ORBES SINSW G TITLE DJEC	- BOYS AND GI S ST LIVERPOC / T INFORMA	RLS HIGH S	R	
LIVE AT FOR DRAWIN PRC	RPOOL ORBES SINSW G TITLE DJEC ==ERENCE @ A1	BOYS AND GI S ST LIVERPOC T INFORMA 1 : 50 01/10/25 or Designed Desig	RLS HIGH S DL ATION PROJECT NUMBE 834 NO IN SET NO IN SET	R	
LIVE AT FOR DRAWIN PRC	RPOOL ORBES SINSW G TITLE DJEC ==ERENCE @ A1	BOYS AND GI S ST LIVERPOC T INFORMA 1 : 50 01/10/25 or Desig C-00-ZZ-DR-H-00	RLS HIGH S DL ATION PROJECT NUMBE 834 NO IN SET NO IN SET	R 7 Checker	

LACHLAN STREET

BUILDING B

SITE KEY PLAN

N.T.S.

BUILDING (

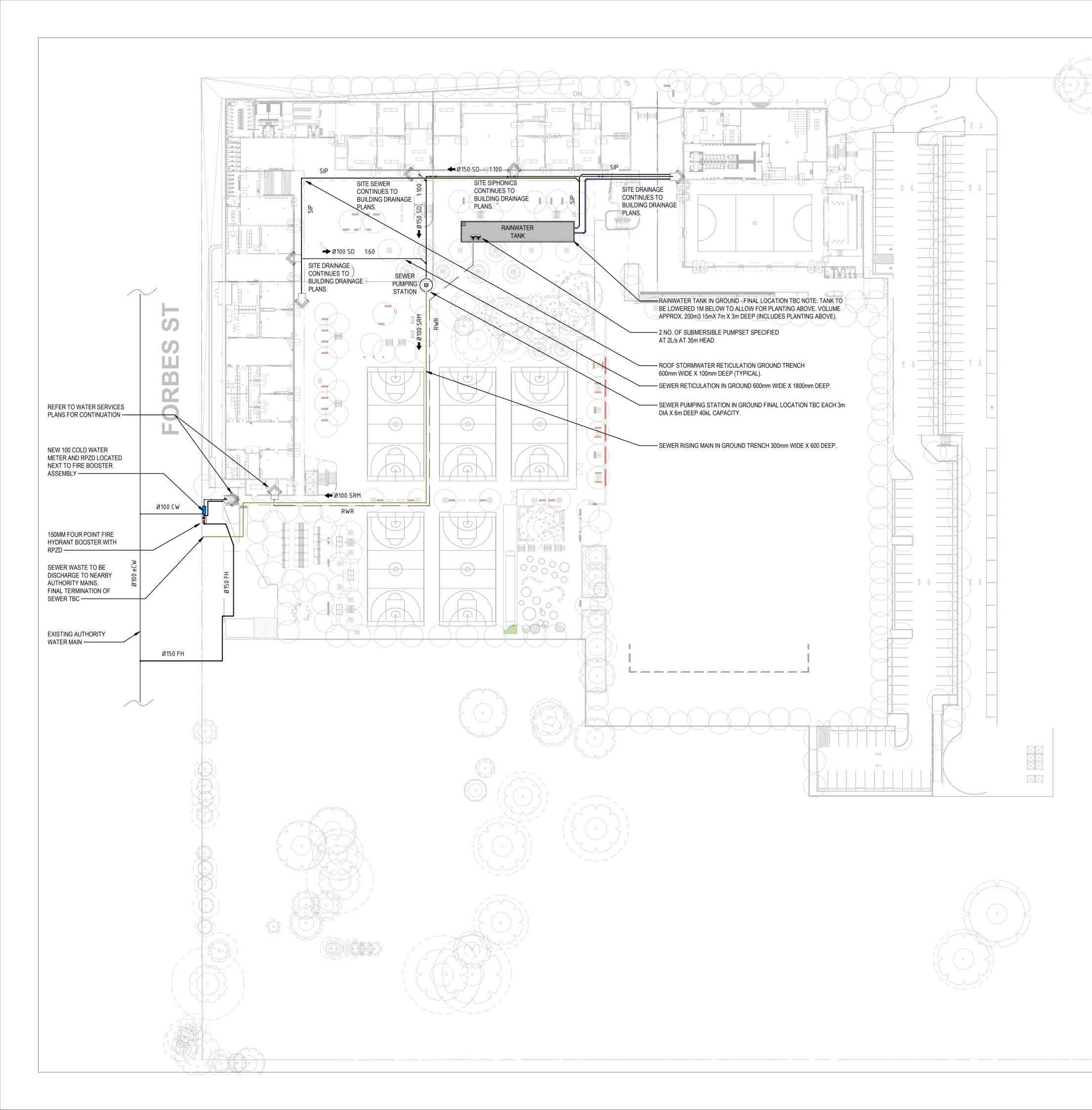
 $\overline{}$

(-)

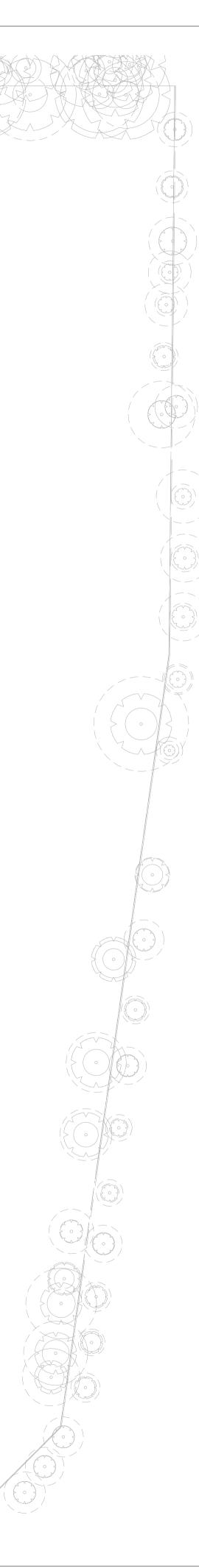
BORE FOR POLYMER BASED PIPEWORK. REFER SPECIFICATION FOR MATERIAL TYPE.

3. DRAWINGS ARE TO BE READ IN CONJUNCTIONS WITH HYDRAULIC SERVICES SPECIFICATION, ARCHITECTURAL, STRUCTURAL AND OTHER CONSULTANTS DOCUMENTATION.









SITE N.T.S	E KEY PLAN	ET BUILDING	c		
	SERVICES SHOWN	OUT OF STRA	TA		
	100% SCHEMATIC DE 75% SCHEMATIC DES DESCRIP This document is is revision	SIGN ISSUE	RB RB ISSUED BY of the latest		
1 2 9922 2344 ominated Archit odrew Duffin NS nathan West N	Content in this docu in the latest revision RSS ects: wy 5602		nbrs.com.au 002 247 565		
Donnelley Simpson Cleary Consulting Engineers 59 Hill Street, Roseville N.S.W. 2069 Tel 9416 1177 Fax 9416 8251 Email mail@dsc.com.au Mechanical Electrical Hydraulic Lighting Fire Lifts DJECT VERPOOL BOYS AND GIRLS HIGH SCHOOL FORBES ST LIVERPOOL DR SINSW					
ALE @ A1	1 : 500 12/12/24 DESIGNED	PROJECT NUMBE 834 NO IN SET CHECKED	7		
MS WING NUMBER GHS-DSC	© Consulting I ABN 19 050 61 All rights reserv in preference to	DO10	shall be taken shall check		

11 APPENDIX B – ARCHITECTURAL SITE PLAN

LIVERPOOL BOYS AND GIRLS HIGH SCHOOL UPGRADE PROJECT

REVIEW OF ENVIRONMENTAL FACTORS - APPLICATION NSW DEPARTMENT OF EDUCATION

FORBES STREET, LIVERPOOL NSW 2170

Autodesk Docs://24089 - (DC) Liverpool Boys & Girls High School/LBGHS-NBRS-ZZ-ZZ-M3-A-0001.rvt



NBRS•

Sheet Name **COVER SHEET** SITE ANALYSIS **AXONOMETRIC DIAGRAM** SITE PLAN SITE DEMOLITION **OVERALL LOWER GROUND FLOOR PLAN OVERALL GROUND FLOOR PLAN OVERALL LEVEL 1 FLOOR PLAN OVERALL LEVEL 2 FLOOR PLAN OVERALL LEVEL 3 FLOOR PLAN OVERALL LEVEL 4 FLOOR PLAN OVERALL ROOF PLAN** SUMMER SHADOW DIAGRAMS WINTER SHADOW DIAGRAMS **STAGING PLAN 01** STAGING PLAN 02 SITE SIGNAGE SITE ELEVATIONS SHEET 1 SITE ELEVATIONS SHEET 2 SITE SECTIONS **BUILDING A - LOWER GROUND PLAN BUILDING A - GROUND FLOOR PLAN BUILDING A - LEVEL 1 PLAN BUILDING A - LEVEL 2 PLAN BUILDING A - LEVEL 3 PLAN BUILDING A - LEVEL 4 PLAN BUILDING A - ROOF PLAN BUILDING B - LOWER GROUND PLAN BUILDING B - GROUND FLOOR PLAN BUILDING B - LEVEL 1 PLAN BUILDING B - LEVEL 2 PLAN BUILDING B - LEVEL 3 PLAN BUILDING B - LEVEL 4 PLAN BUILDING B - ROOF PLAN BUILDING C - LOWER GROUND PLAN BUILDING C - GROUND FLOOR PLAN BUILDING C - LEVEL 1 PLAN BUILDING C - ROOF PLAN BUILDING A - ELEVATIONS BUILDING A - ELEVATIONS BUILDING B - ELEVATIONS BUILDING B - ELEVATIONS BUILDING C - ELEVATIONS BUILDING A - SECTIONS BUILDING B - SECTIONS BUILDING C - SECTIONS SHEET 1 BUILDING C - SECTIONS SHEET 2 BUILDING A - TYPICAL WALL SECTIONS BUILDING C - TYPICAL WALL SECTIONS** MATERIALS PALETTE **3D PERSPECTIVES SHEET 1 3D PERSPECTIVES SHEET 2 3D PERSPECTIVES SHEET 3 EXTERNAL FINISHES - STREETSIDE EXTERNAL FINISHES - COURTYARD EXTERNAL FINISHES - HALL**

9013

9101

9102

9103

DEVELOPMENT WITHOUT CONSENT **APPLICATION**

lssue No. Date 19.11.2024 31.01.2025 2

Description Draft REF Submission Final REF Submission

ΕK ΕK

Changes to this Revision



+61 2 9922 2344 Nominated Architects: Andrew Duffin NSW 5602 Jonathan West NSW 9899 NBRS & Partners Pty Ltd VIC 51197

nbrs.com.au

Project

ABN 16 002 247 565

Liverpool Boys and Girls High School Upgrade Project

Forbes St Liverpool

for

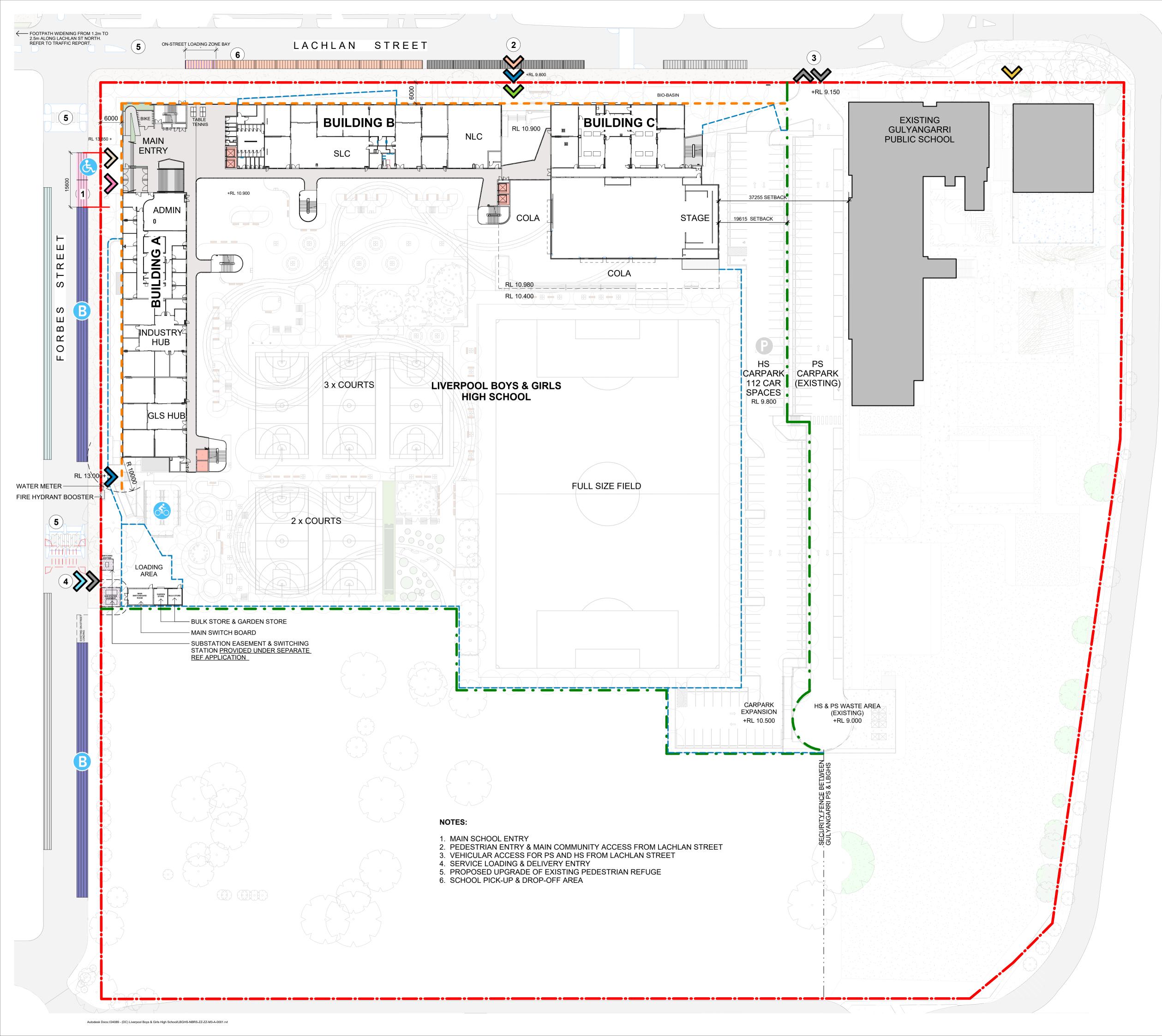
SINSW

Drawing Title COVER SHEET

Date 30/01/2025 4:23:13 PM Scale @ A1 NBRS Project # 24089 Drawing Reference LBGHS-NBRS-00-ZZ-DR-A-0000

Revision 2

Any form of replication of this drawing in full or in part without the written permission of NBRS+PARTNERS Pty Ltd constitutes an infringement of the © 2024 copyright.



NBRS•

LEGEND

B	BUS STOP		MAIN ACCESS
P	CAR PARKING		SECONDARY ACCESS
50	BICYCLE PARKING		SELU ACCESS
	PROPOSED PEDESTRIAN CROSSING	«	VEHICLE ACCESS
	EXISTING PEDESTRIAN CROSSING	$\tilde{\boldsymbol{k}}$	STUDENT ACCESS
	DEMOLISHED PEDESTRIAN CROSSING	\mathbf{v}	PRIMARY SCHOOL
— · —	PROPOSED HIGH SCHOOL SITE		ACCESS
— · —	EXISTING BOUNDARY		DELIVERY ACCESS
	PROPOSED FENCE		AFTER HOURS
	SETBACK		COMMUNITY ACCESS
	PICK UP AND DROP OFF	SLO	2
	ACCESSIBLE PICK UP	LEA	NSORY ARNING COMMONS
	POTENTIAL BUS ZONE		TURAL
	EXISTING PICK UP AND DROP OFF		ARNING COMMONS
	EXISTING PS BUS ZONE		
	FUTURE ON-STREET PARKING		
	SUBSTATION EASEMENT		
	MAIN SWITCHBOARD		
	LIFTS		

DEVELOPMENT WITHOUT CONSENT **APPLICATION**

Issue	9		
No.	Date	Description	
1	19.11.2024	Draft REF Submission	
2	31.01.2025	Final REF Submission	

Changes to this Revision



Jonathan West NSW 9899 NBRS & Partners Pty Ltd VIC 51197

nbrs.com.au

Chkc

ΕK ΕK

ABN 16 002 247 565

Project Liverpool Boys and Girls High School Upgrade Project

Forbes St Liverpool

for

SINSW

. copyright.

Drawing Title SITE PLAN

Date 30/01/2025 4:23:45 PM Scale 1:500 @ A1 NBRS Project # 24089 Drawing Reference Revision LBGHS-NBRS-00-ZZ-DR-A-0201 2 0 5m 10m 15m 20m 25m 30m 35m 40m 1:500 Any form of replication of this drawing in full or in part without the written

permission of NBRS+PARTNERS Pty Ltd constitutes an infringement of the © 2024