

UTILITIES INFRASTRUCTURE REPORT

NEWCASTLE JOCKEY CLUB
STABLES DEVELOPMENT
CHATHAM AND DARLING STREETS
BROADMEADOW, NSW, 2292

PREPARED BY

AVID PROJECT MANAGEMENT PTY LTD
45 HARGRAVE STREET, CARRINGTON, NSW, 2294

REVISION: 1

DATED: SEPTEMBER 2021





CONTENTS

1.00 INTRODUCTION

- 1.01 Purpose
- 1.02 Proposed Development

2.00 ELECTRICAL AND COMMUNICATIONS

- 2.01 Power Supply
- 2.02 Ausgrid Consultation
- 2.03 Communications Services

3.00 HYDRAULIC SERVICES

- 3.01 Water Supply
- 3.02 Sewer Connection
- 3.03 Hunter Water Consultation
- 3.04 Natural Gas

4.00 CONCLUSION

ATTACHMENT 1 – ELECTRICAL SERVICES REVIEW

ATTACHMENT 2 – CONCEPT ELECTRICAL PLANS

**ATTACHMENT 3 – AUSGRD PRELIMINARY ENQUIRY
RESPONSE**

ATTACHMENT 4 – CONCEPT HYDRAULIC DESIGN

ATTACHMENT 5 – STATEMENT OF AVAILABLE PRESSURE

**ATTACHMENT 6 – HUNTER WATER NOTICE OF FORMAL
REQUIREMENTS AND STAMPED PLAN**

1.00 INTRODUCTION

1.01 PURPOSE

The purpose of this Utilities Report is to outline the required utilities and services connections for the proposed stables development at Newcastle Jockey Club (NJC) in Broadmeadow, NSW, as well as identify any risks associated with these services connections.

The development will require electrical, sewer, water and communications services. Specialist services engineers have been appointed to consider these connections, and the relevant authorities have been consulted as required.

1.02 PROPOSED DEVELOPMENT

The proposed development comprises the demolition of existing structures and the construction of the following main items:

- a. Seven x two storey stable blocks capable of accommodating up to 520 horses
- b. Horse walkers
- c. New equine pool
- d. Wash bays, sand roll bays and feed bays
- e. Dedicated waste handling and storage facility
- f. Materials and equipment sheds
- g. Staff office
- h. Track access
- i. Driveways and parking
- j. Associated ramps, stormwater detention basins, landscaping and fencing.

As indicated in Figure 1 below, the proposed development is located on the south-west corner of the Newcastle Jockey Club site, on the corner of Chatham and Darling Streets, Broadmeadow. Once completed, the project will replace the existing stables facilities that are on the south-eastern corner of the site.



Figure 1 – Location of Proposed Stables Development

2.00 ELECTRICAL AND COMMUNICATIONS SERVICES

2.01 POWER SUPPLY

Electrical Projects Australia (EPA) have been appointed by Newcastle Jockey Club (NJC) to consider the anticipated power supply for the project and report on the options available.

A copy of EPA's report is included in Attachment 1 to this Report.

EPA found there are two (2) options for power supply to the new development, which are summarized below:

- Option 1 - Provide a new dedicated supply (around 400A) to the new stables complex from the Ausgrid network to replace the existing 100A supply, and leave the existing 1000A supply to the NJC as is.
- Option 2 - Provide a new supply from the existing 1000A NJC main feed to the new stables complex, which would involve removal of the existing 100A supply to the stables site, and an upgrade to both the existing NJC main switchboard and substation to 1400A.

The advantages of Option 1 outweigh the advantages of Option 2, and provide better flexibility for both the proposed and future development in terms of remaining capacity, and disruption minimisation.

EPA have developed concept electrical plans for the development, which reflect Option 1, and are included in Attachment 2 to this Report.

2.02 AUSGRID CONSULTATION

Based on the commentary above and the EPA report included in Attachment 1, Option 1 is preferred. A Preliminary Enquiry was issued to Ausgrid on this basis. Ausgrid's response is included in Attachment 3 to this Report, which advises that the following works are likely to be required:

- Installation of a second site kiosk substation
- A new kiosk will create a second supply to the site. Both supplies shall be segregated and this arrangement must be approved by Ausgrid's Installation Inspectors who have agreed in principle.

Importantly, Ausgrid have agreed in principle with Option 1. A formal Connection Application will be made to Ausgrid following approval of the Development Application to commence the necessary design and approval process for the new electrical supply.

2.03 COMMUNICATIONS SERVICES

It is anticipated that any necessary communications connection could either be taken from the existing supply to Newcastle Jockey Club, or by a separate supply specific to the development (subject to approval by NBN Co, or another communication provider).

Requirements for tenant (trainer) communications will be determined during the detailed design phase for the project.

3.00 HYDRAULIC SERVICES

Wallace Design Group (WDG) have been engaged by NJC to prepare a concept hydraulic design for the project, which is included in Attachment 4 to this Report.

3.01 WATER SUPPLY

A Statement of Available Pressure has been obtained from Hunter Water Corporation to check the available flow and pressure in the main. A copy of the Statement of Available Pressure is included in Attachment 5 to this Report. At this stage, it is anticipated that the available flow will be adequate, however the pressure requirements will need to be determined during detailed design period (post Development Application).

It is anticipated that there will be a booster assembly required at the water connection point. The location of the water connection point may need to be relocated from the existing position depending on Deemed to Satisfy provisions in the Building Code of Australia. Again, these details will be addressed during the detailed design phase of the project.

3.02 SEWER CONNECTION

The proposed development has the potential to discharge trade waste into Hunter Water's sewerage system. NJC's existing Trade Waste Agreement with Hunter Water may need to be amended to reflect the requirements of the new development.

There is an existing sewer running through the site. It has been confirmed that this sewer is privately owned and will not be subject to any Major Works from Hunter Water Corporation.

3.03 HUNTER WATER CONSULTATION

An application has been lodged to Hunter Water for the development. Hunter Water have provided a Notice of Formal Requirements, as well as a stamped plan. The Notice of Formal Requirements and stamped plans are included in Attachment 6 to this Report, and the requirements are summarised as follows:

- The Development Consent Conditions need to be submitted to Hunter Water.
- A Trade Waste Agreement may be required for the development.
- A Hydraulic Design Assessment will be required by Hunter Water.

3.04 NATURAL GAS

The requirement for a gas connection unlikely, however this will be determined during the detailed design phase of the project (post DA).

Natural Gas is available in the street, as identified in the Dial Before you Dig plans that have been sourced for design purposes of the development. Any necessary natural gas connection could be taken from the existing supply to Newcastle Jockey Club, or by a separate supply specific to the development (subject to approval by Jemena).

4.00 CONCLUSION

The requirements for electrical and hydraulic services have been considered for the development. Both Ausgrid and Hunter Water have been consulted, and their respective requirements have been received and will be considered during the detailed design phase of the project.

It is anticipated that the utilities requirements for the project will be able to be satisfied from the existing infrastructure surrounding the development.

ATTACHMENT 1

ELECTRICAL SERVICES REVIEW PREPARED BY ELECTRICAL PROJECTS AUSTRALIA

**ELECTRICAL SERVICES REVIEW
FOR
NJC NEW STABLES COMPLEX**

Prepared by:

Electrical Projects Australia
368 Maitland Road
PO Box 365
MAYFIELD NSW 2304
Phone: 02 4967 5999
Facsimile: 02 4967 5933

Email: mail@electricalprojectsaustralia.com.au

Project Title: NJC New Stables Complex

Project Number: 20484

Revision History

Rev No.	Date	Description	By	Checked	Approved
A	09.02.21	Preliminary Issue	PM	JC	PM

TABLE OF CONTENTS

1.1 GENERAL 4

1.2 EXISTING SUPPLIES TO SITE 4

1.3 ESTIMATED LOAD FOR NEW STABLES COMPLEX..... 4

1.4 SUPPLY UPGRADE OPTIONS 4

1.5 SUMMARY 5

APPENDIX 1 – SITE PLAN SHOWING EXISTING SUPPLIES TO THE SITE

1.1 GENERAL

This report describes the existing electrical services at the Newcastle Jockey Club (NJC) site on Darling St and Chatham Road Broadmeadow, and an assessment of the required electrical services for the proposed new stables complex development.

The report also outlines the possible supply upgrade options to provide the required power supply for the new stables complex.

1.2 EXISTING SUPPLIES TO SITE

The NJC site is currently fed from several supplies from the Ausgrid network, which is not unusual as this is a very large overall site, however our understanding from previous works at the site, that the site segregation is poor as there is very little source identification throughout the site.

This report focuses on just two of these supplies to site which are the existing supply to the stables area, which is a 100A overhead supply (see figure 1), and the main supply to the NJC site which is via an Ausgrid Kiosk Substation (see figure 2). The supply capacity to the existing stables area is 100A per phase, and the main NJC supply is currently 1000A, based on the SPD (service protection) setting and Ausgrid requirements, although the main switchboard has a busbar rating of 1250A. (see figure 4)

These supplies are noted on the plan shown at Appendix A, and the existing supply to the stables area is generally within the red boundary, and the main NJC supply is generally within the green boundary.

1.3 ESTIMATED LOAD FOR NEW STABLES COMPLEX

We have done a review on the expected power demand for the site based on the current site layout,

Table 1 shows the electrical load requirements, based on maximum demand calculations we have carried out for the new stables complex. At this stage, we believe that these numbers are relatively conservative, so they represent worse case, with a view that this demand could be reduced as part of the detailed design, so that the required load is under 400A per phase.

Table 1 – Estimated load using AS3000:2018 (Tables C2 and C3)

Item	Load (Amps)
VA/m ² - Office / Sheds / Stables	377.50
Equipment Loads - Walkers / External Lighting etc	93.75
TOTAL	471.25

1.4 SUPPLY UPGRADE OPTIONS

There will be an need for additional power supply for the new stables complex as the existing 100A supply will not be adequate. There are two possible supply upgrade options for the site which we have outline below:

Option 1

Provide a new dedicated supply (around 400A) to the new stables complex from the Ausgrid network to replace the existing 100A supply, and leave the existing 1000A supply to the NJC as is, with the exception of a review of the existing segregation on the site and an update to labelling etc, to clearly demonstrate the separation of the supplies.

This new dedicated supply would most likely need to be provided by a new dedicated on site substation for the new stables complex area, but it may be possible, but unlikely that this supply could come from the Ausgrid network without an on-site substation. This would need to be investigated further with Ausgrid as part of the detailed design if this power supply upgrade option is chosen.

Option 2

Provide a new supply from the existing 1000A NJC main feed to the new stables complex, which would involve removal of the existing 100A supply to the stables site, and an upgrade to both the existing NJC main switchboard and substation to 1400A. By upgrade of NJC main switchboard and substation this would require replacement with new as it would not be possible to modify the existing to provide additional capacity.

The advantages of each option are listed below:

Option 1

	Advantages
1	Will not use existing spare capacity of main NJC supply.
2	Not limited by the available supply from the existing NJC site supply.
3	The upgrade to the existing 1000A NJC supply, including new 1400A substation and 1400A main switchboard is likely to be a similar order of cost as a new 400A to 500A substation and main switchboard, but you provide much more capacity to the site.
4	No disruption to the existing main NJC supply as this is left as is. Leaving the existing main supply as is may also be of benefit in regards to compliance issues with Ausgrid.

Option 2

	Advantages
1	Simpler process with Ausgrid in relation to site segregation as supplies will be consolidated.
2	Potentially Less space will be required with only one substation on site, particularly if option 1 requires a substation for the stable complex.

1.5 SUMMARY

We have found in our review that additional power will be required to the site for the proposed new stable complex. We have noted that there are two options, and have listed advantages for either option, however our recommended option would be option 1, as it has least disruption to the existing site operations, and provides additional future capacity for the overall NJC site complex.



Figure 1 - Existing overhead supply to stables site



Figure 2 - Existing NJC Substation and Main Switchboard (circled in red)



Figure 3 - Existing NJC Main Switchboard

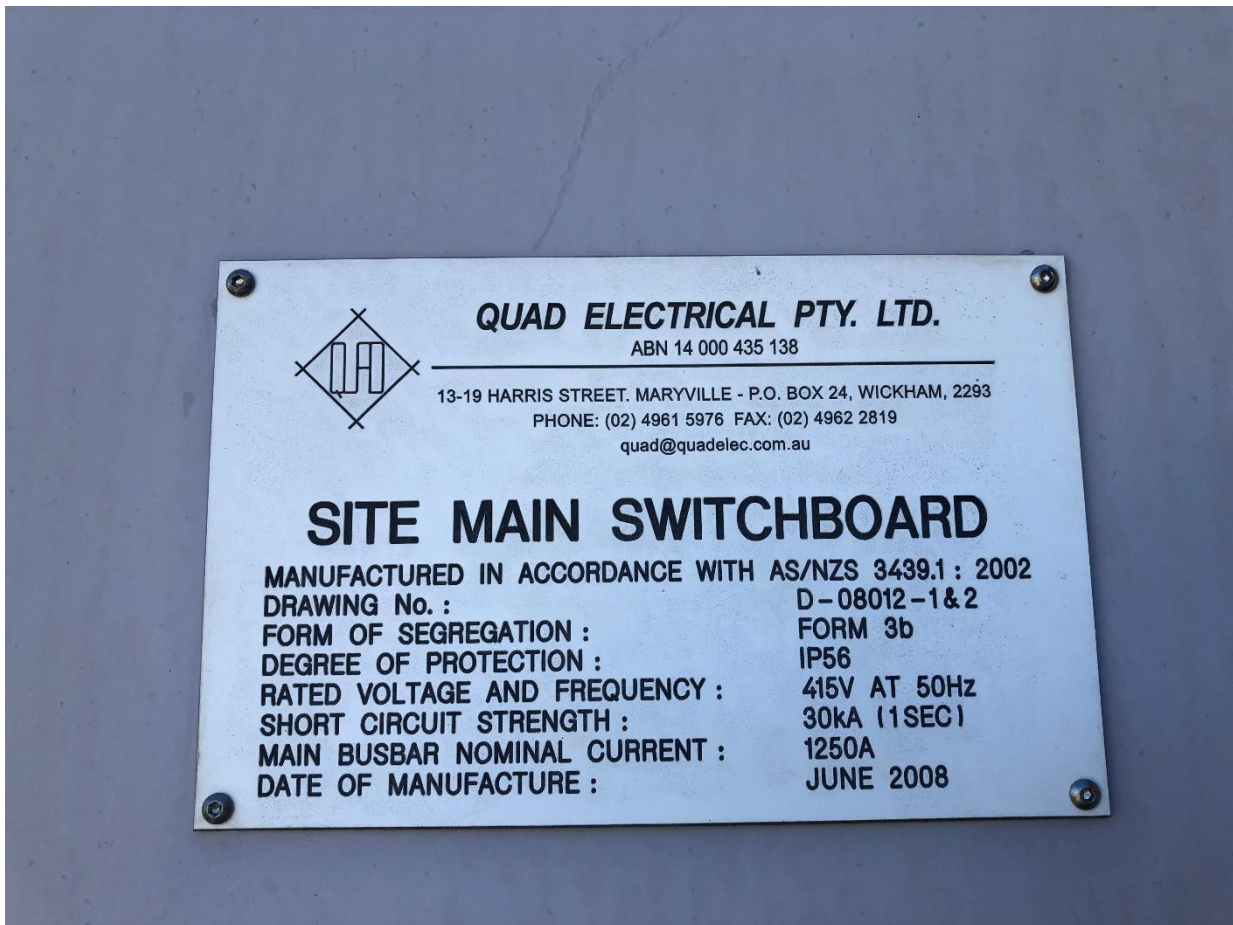


Figure 4 - Existing NJC Main Switchboard nameplate

APPENDIX 1 – SITE PLAN SHOWING EXISTING SUPPLIES TO SITE



100A Overhead supply from Street

Supply to Stables area is rated at 100A, and supplies facilities within the red border

Main Supply to NJC is rated at 1000A and supplies the main NJC facilities within the green border

Main Switchboard

Kiosk substation

ATTACHMENT 2

CONCEPT ELECTRICAL PLANS PREPARED BY ELECTRICAL PROJECTS AUSTRALIA

NJC
NEW STABLES COMPLEX
ELECTRICAL SERVICES

DRAWING SCHEDULE

20484-E00 - COVER SHEET

20484-E01 - GROUND FLOOR ELECTRICAL SERVICES CONCEPT RETICULATION LAYOUT

20484-E02 - FIRST FLOOR ELECTRICAL SERVICES CONCEPT RETICULATION LAYOUT

A	PRELIMINARY ISSUE	SP	PH	01.03.21
REV	REVISION DETAILS	BY	APP.	DATE

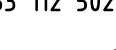
Completion of the Drawing Status is evidence that the design has been verified as conforming to the requirements of the Project Quality Plan			
DRAWING STATUS	Reviewed By:	Signature	Date
Preliminary	PM	PM	01.03.21
For Information Only			
For Approval			
For Tender			
For Construction			

DESIGN BY:

ELECTRICAL PROJECTS AUSTRALIA P/L

(Pty Ltd / A.C.N. 053 112 502)

386 Maitland Road,
P.O. Box 365
MAYFIELD NSW 2304
PHONE: (02) 4967 5999
FAX: (02) 4967 5933



PROJECT:
NJC NEW STABLES COMPLEX

CLIENT:
AVID PROJECT MANAGEMENT

LOCATION:
CNR. CHATHAM & DARLING ST,
BROADMEADOW

DRAWING:
COVER SHEET

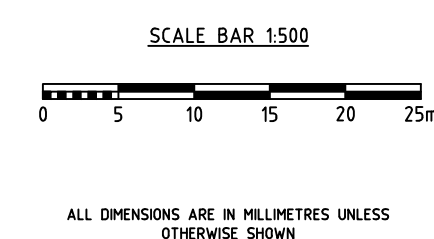
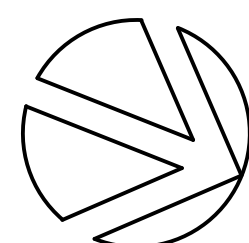
DATE: 01.03.21 DRAWN: SP
SCALE: NTS@A1 DESIGN: PM
PROJECT No. DRAWING No. ISSUE:
20484 E00 A



NOTES

1. DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL AND OTHER SERVICES LAYOUTS.
2. CONDUITS SHOWN ARE DIAGRAMMATIC ONLY FOR CLARITY. EXACT LOCATIONS TO BE DETERMINED ON SITE.
3. DB PER LEVEL PER BLOCK LOCATED IN CENTRAL OFFICE/AMENITIES AREA. LOCATE DB ON FIRST FLOOR OVER THIS LOCATION.

A	PRELIMINARY ISSUE	SP	PH	01.03.21
REV	REVISION DETAILS	BY	APP.	DATE



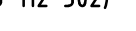
Completion of the Drawing Status is evidence that the design has been verified as conforming to the requirements of the Project Quality Plan.			
DRAWING STATUS	Reviewed By:	Signature	Date
Preliminary	PM	PM	01.03.21
For Information Only			
For Approval			
For Tender			
For Construction			

DESIGN BY:

ELECTRICAL PROJECTS AUSTRALIA P/L

(Pty Ltd / A.C.N. 053 112 502)

386 Maitland Road,
P.O. Box 365
MAYFIELD NSW 2304
PHONE: (02) 4967 5999
FAX: (02) 4967 5933



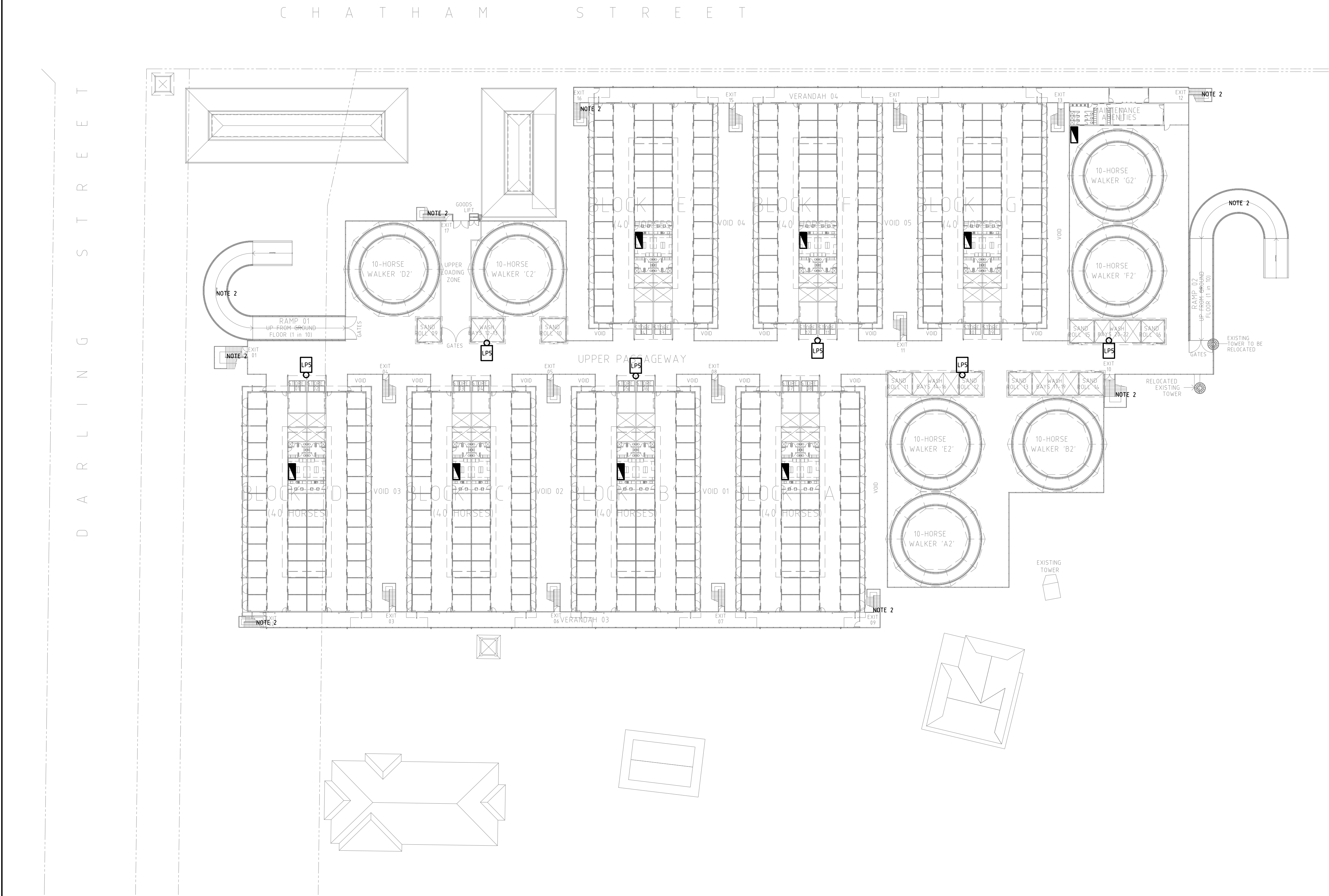
PROJECT:
NJC NEW STABLES COMPLEX

CLIENT:
AVID PROJECT MANAGEMENT



LOCATION:
CNR. CHATHAM & DARLING ST,
BROADMEADOW

DRAWING:
FIRST FLOOR ELECTRICAL SERVICES
CONCEPT RETICULATION LAYOUT

DATE: 01.03.21 DRAWN: SP
SCALE: 1:500@A1 DESIGN: PM
PROJECT No. DRAWING No. ISSUE:
20484 E02 A



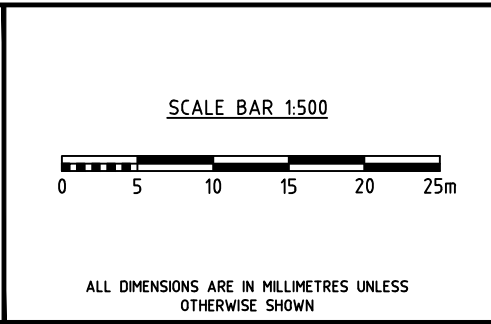
LEGEND

-  DISTRIBUTION BOARD
-  WE-EF PFL230 LED-18/18W/350mA - 4000K S65 DISTRIBUTION MOUNTED AT 3.5m AFFL ON AWNING OF BUILDINGS

NOTES

- DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL AND OTHER SERVICES LAYOUTS.
- EXTERNAL STAIRS AND RAMPS TO BE LIT WITH RECESSED LED PUCK 'HANDRAIL' LIGHTING SYSTEM.


A	PRELIMINARY ISSUE	MC	PM	19.07.21
REV	REVISION DETAILS	BY	APP.	DATE



Completion of the Drawing Status is evidence that the design has been verified as conforming to the requirements of the Project Quality Plan			
DRAWING STATUS	Reviewed By:	Signature	Date
Preliminary	PM	PM	19.07.21
For Information Only			
For Approval			
For Tender			
For Construction			

DESIGN BY:
ELECTRICAL PROJECTS AUSTRALIA P/L
(Pty Ltd / A.C.N. 053 112 502)

386 Maitland Road,
P.O. Box 365
MAYFIELD NSW 2304
PHONE: (02) 4967 5999
FAX: (02) 4967 5933



PROJECT:
NJC NEW STABLES COMPLEX

CLIENT:
AVID PROJECT MANAGEMENT

LOCATION:
CNR. CHATHAM & DARLING ST,
BROADMEADOW

DRAWING:
FIRST FLOOR EXTERNAL
LIGHTING LAYOUT

DATE:	19.07.21	DRAWN:	MC
SCALE:	1:500@A1	DESIGN:	PM
PROJECT No.	20484	DRAWING No.	E04
ISSUE:			A

ATTACHMENT 3

AUSGRID RESPONSE TO PRELIMINARY ENQUIRY

Preliminary Enquiry – Response Letter



15 March 2021

Webform ref: 217362

Electrical Projects Australia
Attention: Paul Malanchuk
Via email: paul@electricalprojectsaustralia.com.au

Premises address: **NEWCASTLE JOCKEY CLUB CHATHAM STREET, BROADMEADOW**

Ausgrid AE Reference: **700007119**

Dear Paul

I refer to your preliminary enquiry regarding the electricity connection at the above address and provide the following information.

- ☐ The Ausgrid network does not have the capacity to connect the proposed 471 amp 3 phase low voltage electricity connection. An extension/augmentation of the Ausgrid network is required. Following is the likely work(s) required to provide the request capacity.
 - Installation of a second site kiosk substation.
 - A new kiosk will create a second supply to the site. Both supplies shall be segregated and this arrangement must be approved by the Installation Inspectors who have agreed in principle.
 - The existing kiosk supplying the Racecourse is at capacity. Readings to the site indicate 1000-1100 amp peak loads.
- ☐ An extension/augmentation of the Ausgrid network is Contestable and requires the customer to engage accredited service providers to undertake the design and construction of the required works. Information on how to connect to the Ausgrid network can be found on our website at the following link: <https://www.ausgrid.com.au/Connections>
- ☐ Ausgrid is unable to provide costs or timeframes for Contestable works. However, accredited service providers may be able to provide the information.
- ☐ The electrical connection will require Ausgrid to provide auxiliary services that only Ausgrid can provide. The auxiliary services and the associated fee are detailed in the Ausgrid document **Alternative control services fee schedule**. The document is available on our website at the following link: <https://www.ausgrid.com.au/Connections/charges>
- ☐ To proceed further in obtaining a new or altered electrical connection to the property a Connection Application will need to be submitted. The various application forms are available on our website at the following link: <https://www.ausgrid.com.au/Connections>

It should be noted that the above advice is based on Ausgrid's policies and network status as of today and are subject to change.

Connections to the Ausgrid network are governed by a set of laws and rules referred to as the National Energy Customer Framework (NECF). Included in the NECF is the National Electricity Rules (NER). Under these rules, a binding contract may only be formed after a connection application is lodged and Ausgrid has made a connection offer in response to that application. Accordingly, to make arrangements for the electricity connection of the development to the Ausgrid network you should lodge a completed connection application.

Should you require any further information please contact me.

Yours sincerely,

Brian Mottley

Ausgrid

Direct Telephone Number: 0249101411
Email: brian.mottley@ausgrid.com.au

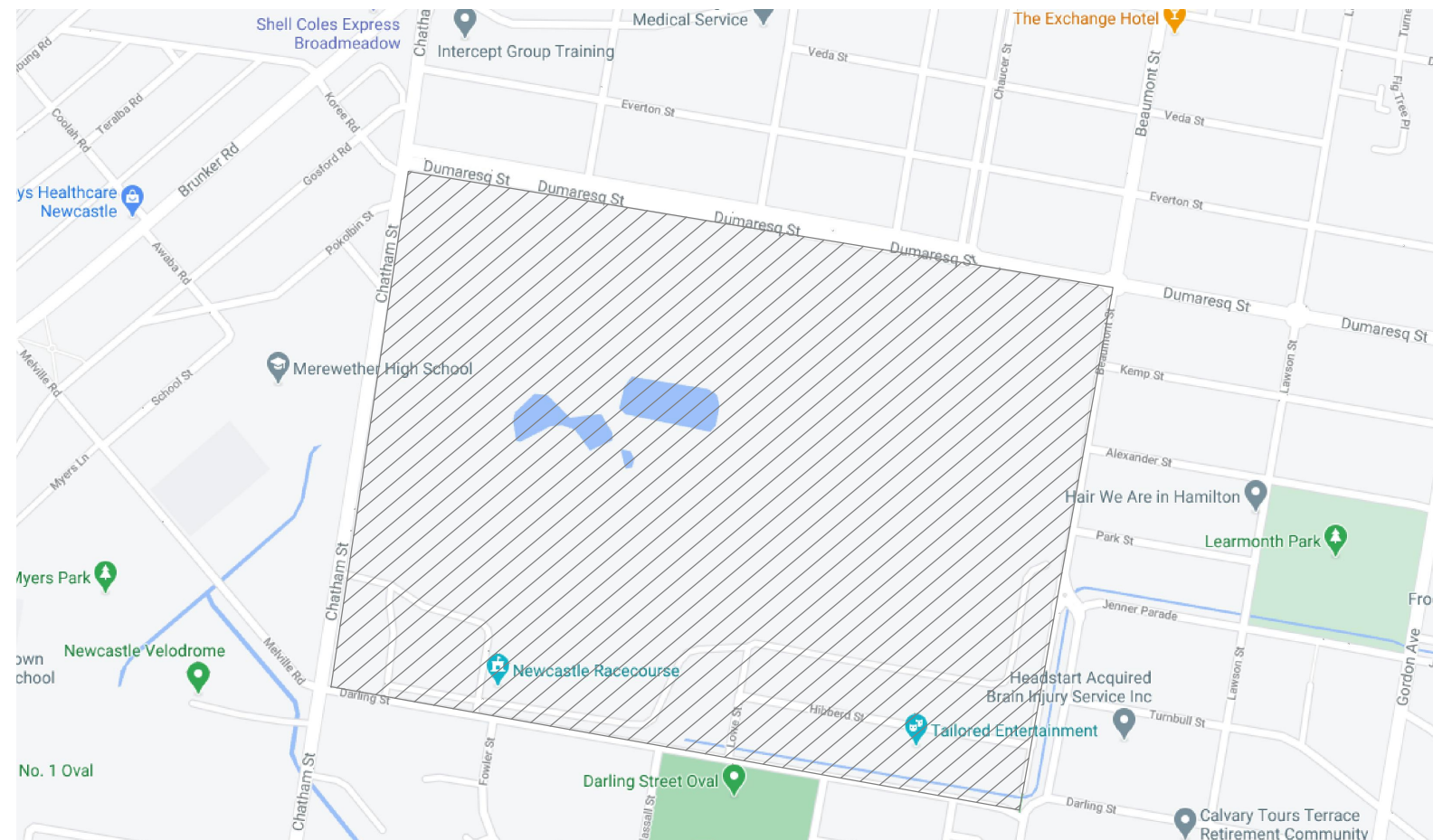
ATTACHMENT 4

CONCEPT HYDRAULIC DESIGN PREPARED BY WALLACE DESIGN GROUP



HYDRAULIC & FIRE PROTECTION SERVICES for NEWCASTLE JOCKEY CLUB, CNR CHATHAM & DARLING STREETS, BROADMEADOW, NSW 2292

Prepared by
WALLACE PLUMBING & FIRE DESIGN PTY LTD



SITE PLAN
SCALENTS

ABBREVIATIONS





AAV	AIR ADMITTANCE VALVE	NRV	NON RETURN VALVE
AB	ABOVE BENCH	OD	OVERFLOW
AD	AERIAL DRAINAGE	OF	OVERFLOW
AFFL	ABOVE FINISHED FLOOR LEVEL	PD	PLANTER DRAIN
B	BASIN	PLV	PRESSURE LIMITING VALVE
BTH	BATH	PRV	PRESSURE REDUCTION VALVE
BCWU	BOILING/CHILLED WATER UNIT	PVC	POLYVINYLCHLORIDE
BFPD	BACK FLOW PREVENTION DEVICE	PV	PRESSURE VENT
BTFW	BUCKET TRAP FLOOR WASTE	PVP	PRESSURE VENT PIPE
BO	BALCONY OUTLET	R	REFLUX VALVE
BT	BOUNDARY TRAP	RL	REDUCED LEVEL
CD	CONDENSATE DRAIN	RPZD	REDUCED PRESSURE ZONE DEVICE
CO	CLEAR OUT	RV	RELIEF VENT PIPE
CS	CLEANERS SINK	RWO	RAIN WATER OUTLET
CT	COOKTOP	RWH	RAIN WATER HEAD
Cu	COPPER	SFW	SEALED FLOOR WASTE
CVP	CHAMBER VENT PIPE	SHR	SHOWER
CW	COLD WATER	SK	KITCHEN SINK
DFH	DOUBLE FIRE HYDRANT	SL	SURFACE LEVEL
DG	DISCONNECTOR GULLY	SMH	SEWER MAN HOLE
DP	DOWNSPIPE	SMV	SEWER MAIN VENT
DR	DRENCHER	SOD	SIDE OUTLET DRAIN
DTU	DRAINAGE TURNUP	SP	SPRINKLER
DW	DISH WASHER	SST	REDUCED VELOCITY AERATOR STACK
Ex.	EXISTING	ST	SOIL STACK
FG	FRIDGE	STV	STACK VENT PIPE
FH	FIRE HYDRANT	STW	STORMWATER
FHR	FIRE HOSE REEL	SV	STOP VALVE
FFL	FINISHED FLOOR LEVEL	SWP	STORMWATER PIT
FW	FLOOR WASTE	S/S	STAINLESS STEEL
GB	GAS BAYONET	TD	TUNDISH
GL	GROUND LEVEL	TMV	THERMOSTATIC MIXING VALVE
GMS	GALVANISED MILD STEEL	TPR	TEMPERATURE PRESSURE RELIEF VALVE
HL	HIGH LEVEL	TTD	TRAPPED TUNDISH
HT	HOSE TAP	TWCV	TRADE WASTE CHAMBER VENT
HW	HOT WATER	TWST	TRADE WASTE STACK
HWC	HUNTER WATER CORPORATION	TWVP	TRADE WASTE VENT PIPE
HWR	HOT WATER RETURN	UR	URINAL
HWU	HOT WATER UNIT	VB	VACUUM BREAKER
IG	INGROUND	VC	VITRIFIED CLAY PIPE
IL	INVERT LEVEL	VP	VENT PIPE
IO	INSPECTION OPENING	VR/CO	VERTICAL RISER/CLEAR OUT
IPMF	INDUCT PIPE MICA FLAP	WC	WATER CLOSET
KIP	KERB INLET PIT	WM	WASHING MACHINE
LL	LOW LEVEL	WS	WASTE STACK
LT	LAUNDRY TUB	WW	WARM WATER
LU	LOADING UNITS	WWR	WARM WATER RETURN
NG	NATURAL GAS		

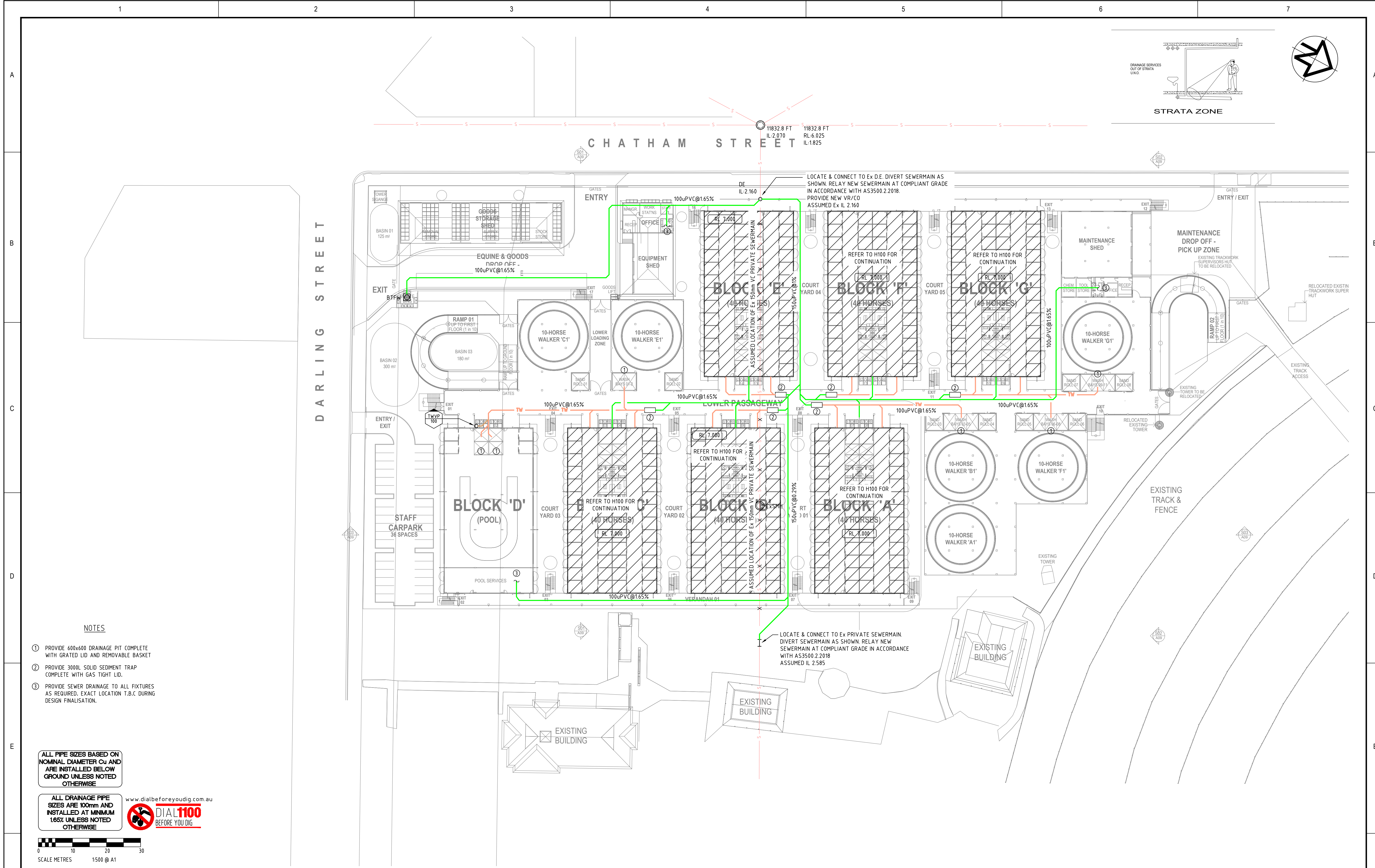
LINE TYPES

CW	COLD WATER	RW	RECYCLED WATER
CW	COLD WATER EXISTING	X	REDUNDANT SERVICE
CW	CONDENSATE	S	SEWER
CW	DELETED SERVICE	S	SEWER EXISTING
DE	DIESEL EXHAUST	SRM	SEWER RISING MAIN
E	ELECTRICAL EXISTING	STW	STORMWATER
FH	FIRE HYDRANT	STW	STORMWATER EXISTING
FH	FIRE HYDRANT EXISTING	SWRM	STORMWATER RISING MAIN
FHR	FIRE HOSE REEL	/	SUBSOIL
FHR	FIRE HOSE REEL EXISTING	/	SUBSOIL WITH FLOW ARROW
FS	FIRE SPRINKLER	SSRM	SUBSOIL RISING MAIN
GF	GAS FLUE EXHAUST	TW	TRADEWASTE
HW	HOT WATER	eTW	TRADEWASTE EXISTING
HW	HOT WATER EXISTING	TMPO	TRADEWASTE PUMP-OUT
HW	HOT WATER RETURN	TWRM	TRADEWASTE RISING MAIN
HW	HOT WATER RETURN EXISTING	TWV	TRADEWASTE VENT
IR	IRRIGATION	V	VENT
N	NATURAL GAS	V	VENT EXISTING
N	NATURAL GAS EXISTING	W	WATER EXISTING
NPC	NON POTABLE COLD WATER	W	WARM WATER
NPH	NON POTABLE HOT WATER	W	WARM WATER EXISTING
NP	NON POTABLE WATER	W	WARM WATER RETURN
PCW	POTABLE COLD WATER	W	WARM WATER RETURN
PHW	POTABLE HOT WATER	W	WARM WATER RETURN
erW	RAINWATER EXISTING	W	WARM WATER RETURN
	REVISION CLOUD		

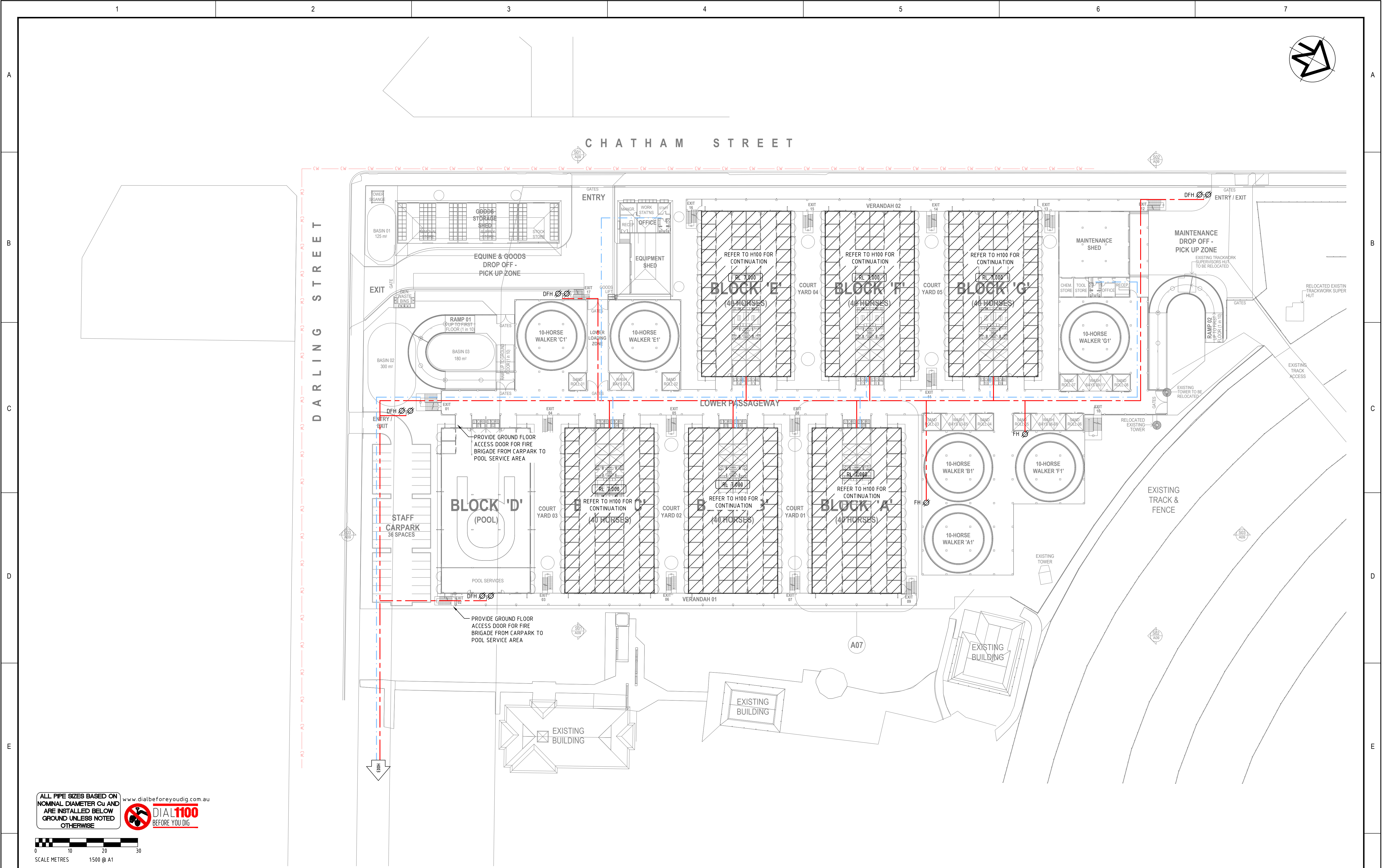
SYMBOLS

AAV	AIR ADMITTANCE VALVE	FHR	FIRE HOSE REEL EXISTING
BT	BOUNDARY TRAP	FH	FIRE HYDRANT
IPMF	INDUCT PIPE MICRO FLAP	FH	FIRE HYDRANT EXISTING
BTFW	BUCKET TRAP FLOOR WASTE	H	STREET HYDRANT
DG	DISCONNECTOR GULLY	NH	WATER METER
FW-EX	FLOOR WASTE EXISTING	GM	GAS METER
OFG	OVERFLOW GULLY	M	METER (EXISTING)
FV	FLOAT VALVE	M	METER (FUTURE)
BV	BALANCING VALVE	HT+	HOSE TAP
FW	FLOOR WASTE	ICP	IN-LINE CIRCULATING PUMP SET
SV	SOLENOID VALVE	PLV	PRESSURE LIMITING VALVE
BV	BALL VALVE	PRV	PRESSURE REDUCTION VALVE
Z	CHECK VALVE	RPZD	REDUCED PRESSURE ZONE DEVICE
DCV	DOUBLE CHECK VALVE		RISER
FV	FLOAT VALVE	XX	SERVICE SIZE
RV	REFLUX VALVE		DROPPER
GB	GAS BAYONET	D3	DETAIL NUMBER
GR	GAS COOKTOP VALVE	H04	DRAWING REFERENCE
GR	GAS REGULATOR		FOR CONTINUATION
GV	GAS VALVE		
GV	GAS VALVE IN PATH	SIP	SEWER INSPECTION PIT
GV	VALVE IN PATH	SMH	SEWER MANHOLE
ISV	ISOLATION VALVE	SWP	STORMWATER PIT
SV	STOP VALVE	SWS	STORMWATER SUMP
NRV	NON-RETURN VALVE	T	TEMPERING VALVE
CE	CONNECTION TO EXISTING SERVICE 0°	TMV	THERMOSTATIC MIXING VALVE
CE	CONNECTION TO EXISTING SERVICE 45°	T	TUNDISH
CE	CONNECTION TO EXISTING SERVICE 90°	U	UNION
DFH	DUAL PILLAR FIRE HYDRANT	W	WINDOW DRENCHER
FHR	FIRE HOSE REEL		

<div>© COPYRIGHT. THIS DOCUMENT AND DESIGN REMAIN THE COPYRIGHT OF WALLACE PLUMBING & FIRE DESIGN PTY LTD. THIS DRAWING MUST NOT BE REPRODUCED IN ANY FORM WITHOUT THE CONSENT OF WALLACE PLUMBING & FIRE DESIGN PTY LTD. THIS DRAWING HAS BEEN PRODUCED FOR THE PURPOSE OF INDICATING THE DIAGRAMMATIC DESIGN INTENT AND SCOPE OF WORKS REQUIRED FOR THE INSTALLATION OF SERVICES AS DETAILED AND PREPARED WITHIN THE SPECIFICATION AND SHOULD BE READ IN CONJUNCTION WITH THE ARCHITECTURAL SPECIFICATION, ASSOCIATED SPECIFICATION, CODES AND STANDARDS. ALL DIMENSIONS, LEVELS AND EXISTING SERVICES SHALL BE INVESTIGATED AND CONFIRMED ON SITE BY THE SUBCONTRACTOR AND BUILDER PRIOR TO THE COMMENCEMENT OF ANY WORKS.</div>				ARCHITECT:		CLIENT:		<div><div></div><div><div>WALLACE PLUMBING & FIRE DESIGN PTY LTD</div><div>PART OF WALLACE DESIGN GROUP PTY LTD</div><div>ABN: 96 154 894 952</div><div>PO BOX 850, WARNERS BAY, NSW 2282</div><div>phone: (02) 49 294 109</div><div>email: mail@wddsgroup.com.au</div><div>web: www.wddsgroup.com.au</div></div></div>		<div><div></div><div><div>WALLACE PLUMBING & FIRE DESIGN PTY LTD</div><div>PART OF WALLACE DESIGN GROUP PTY LTD</div><div>ABN: 96 154 894 952</div><div>PO BOX 850, WARNERS BAY, NSW 2282</div><div>phone: (02) 49 294 109</div><div>email: mail@wddsgroup.com.au</div><div>web: www.wddsgroup.com.au</div></div></div>		<div>PROJECT:</div> <div>NEWCASTLE JOCKEY CLUB</div> <div>CNR CHATHAM & DARLING STREETS</div> <div>BROADMEADOW NSW 2292</div>		<div>DRAWING TITLE:</div> <div>HYDRAULIC & FIRE PROTECTION SERVICES</div> <div>LEGEND, DRAWING SCHEDULE & LOCATION PLAN</div>		<div>DRAWING STATUS</div> <div>PRELIMINARY ONLY</div> <div>NOT TO BE USED FOR CONSTRUCTION</div>	
				<div></div>		<div></div>											



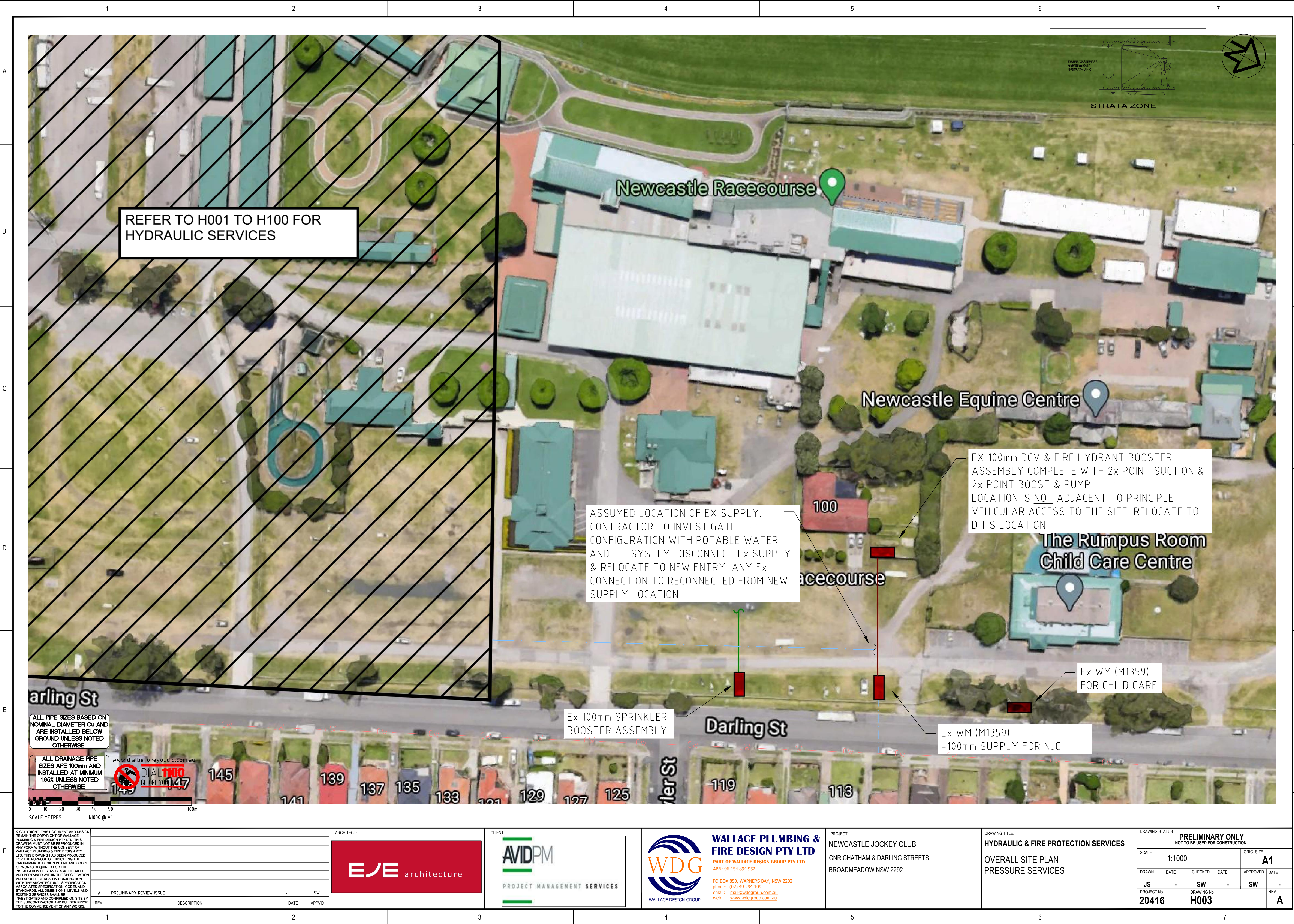
© COPYRIGHT. THIS DOCUMENT AND DESIGN REMAIN THE COPYRIGHT OF WALLACE PLUMBING & FIRE DESIGN PTY LTD. THIS DRAWING MUST NOT BE REPRODUCED IN ANY FORM WITHOUT THE CONSENT OF WALLACE PLUMBING & FIRE DESIGN PTY LTD. THIS DRAWING HAS BEEN PRODUCED FOR THE PURPOSE OF INDICATING THE DIAGRAMATIC DESIGN INTENT AND SCOPE OF WORKS REQUIRED FOR THE INSTALLATION OF SERVICES AS DETAILED, AND PERTAINED WITHIN THE SPECIFICATION AND SHOULD BE READ IN CONJUNCTION WITH THE ARCHITECTURAL SPECIFICATION, ASSOCIATED SPECIFICATION, CODES AND STANDARDS. ALL DIMENSIONS, LEVELS AND EXISTING SERVICES SHALL BE INVESTIGATED AND CONFIRMED ON SITE BY THE SUBCONTRACTOR AND BUILDER PRIOR TO THE COMMENCEMENT OF ANY WORKS.			ARCHITECT: 		CLIENT: 		 WALLACE PLUMBING & FIRE DESIGN PTY LTD PART OF WALLACE DESIGN GROUP PTY LTD ABN: 96 154 894 952 PO BOX 850, WARNERS BAY, NSW 2282 phone: (02) 49 294 109 email: mail@wddsgroup.com.au web: www.wddsgroup.com.au		PROJECT: NEWCASTLE JOCKEY CLUB CNR CHATHAM & DARLING STREETS BROADMEADOW NSW 2292		DRAWING TITLE: HYDRAULIC & FIRE PROTECTION SERVICES SITE PLAN DRAINAGE SERVICES		DRAWING STATUS PRELIMINARY ONLY NOT TO BE USED FOR CONSTRUCTION			
SCALE: 1:500			ORIG. SIZE A1		DRAWN JS		CHECKED SW		APPROVED SW		DATE -		PROJECT No. 20416		DRAWING No. H001	
REV			DESCRIPTION		DATE		APPROVED		DATE		REV		A			
1			PRELIMINARY REVIEW ISSUE													



ALL PIPE SIZES BASED ON
NOMINAL DIAMETER Cu AND
ARE INSTALLED BELOW
GROUND UNLESS NOTED
OTHERWISE

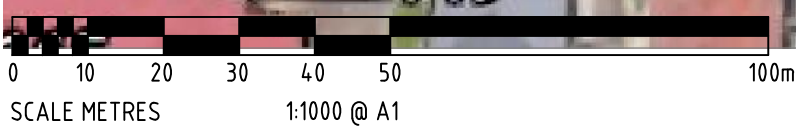


<p>© COPYRIGHT. THIS DOCUMENT AND DESIGN REMAIN THE COPYRIGHT OF WALLACE PLUMBING & FIRE DESIGN PTY LTD. THIS DRAWING MUST NOT BE REPRODUCED IN ANY FORM WITHOUT THE CONSENT OF WALLACE PLUMBING & FIRE DESIGN PTY LTD. THIS DRAWING HAS BEEN PRODUCED FOR THE PURPOSE OF INDICATING THE DIAGRAMMATIC DESIGN INTENT AND SCOPE OF WORKS REQUIRED FOR THE INSTALLATION OF SERVICES AS DETAILED, AND SHOULD BE READ IN CONJUNCTION WITH THE ARCHITECTURAL SPECIFICATION, ASSOCIATED SPECIFICATION, CODES AND STANDARDS. ALL DIMENSIONS, LEVELS AND EXISTING SERVICES SHALL BE INVESTIGATED AND CONFIRMED ON SITE BY THE SUBCONTRACTOR AND BUILDER PRIOR TO THE COMMENCEMENT OF ANY WORKS.</p>			ARCHITECT:		CLIENT:		<p>WALLACE PLUMBING & FIRE DESIGN PTY LTD PART OF WALLACE DESIGN GROUP PTY LTD ABN: 96 154 894 952</p> <p>PO BOX 850, WARNERS BAY, NSW 2282 phone: (02) 49 294 109 email: mail@wdsgr.com.au web: www.wdsgr.com.au</p>		<p>PROJECT: NEWCASTLE JOCKEY CLUB CNR CHATHAM & DARLING STREETS BROADMEADOW NSW 2292</p>		<p>DRAWING TITLE: HYDRAULIC & FIRE PROTECTION SERVICES SITE PLAN PRESSURE SERVICES</p>		DRAWING STATUS		PRELIMINARY ONLY NOT TO BE USED FOR CONSTRUCTION					
			SCALE:		1:500								ORIG. SIZE A1							
			DRAWN		DATE								CHECKED		DATE		APPROVED		DATE	
			JS		-								SW		-		SW		-	
			PROJECT No.		20416								DRAWING No.		H002		REV		A	
			A		PRELIMINARY REVIEW ISSUE								-		SW					
			REV		DESCRIPTION								DATE		APPRVD					

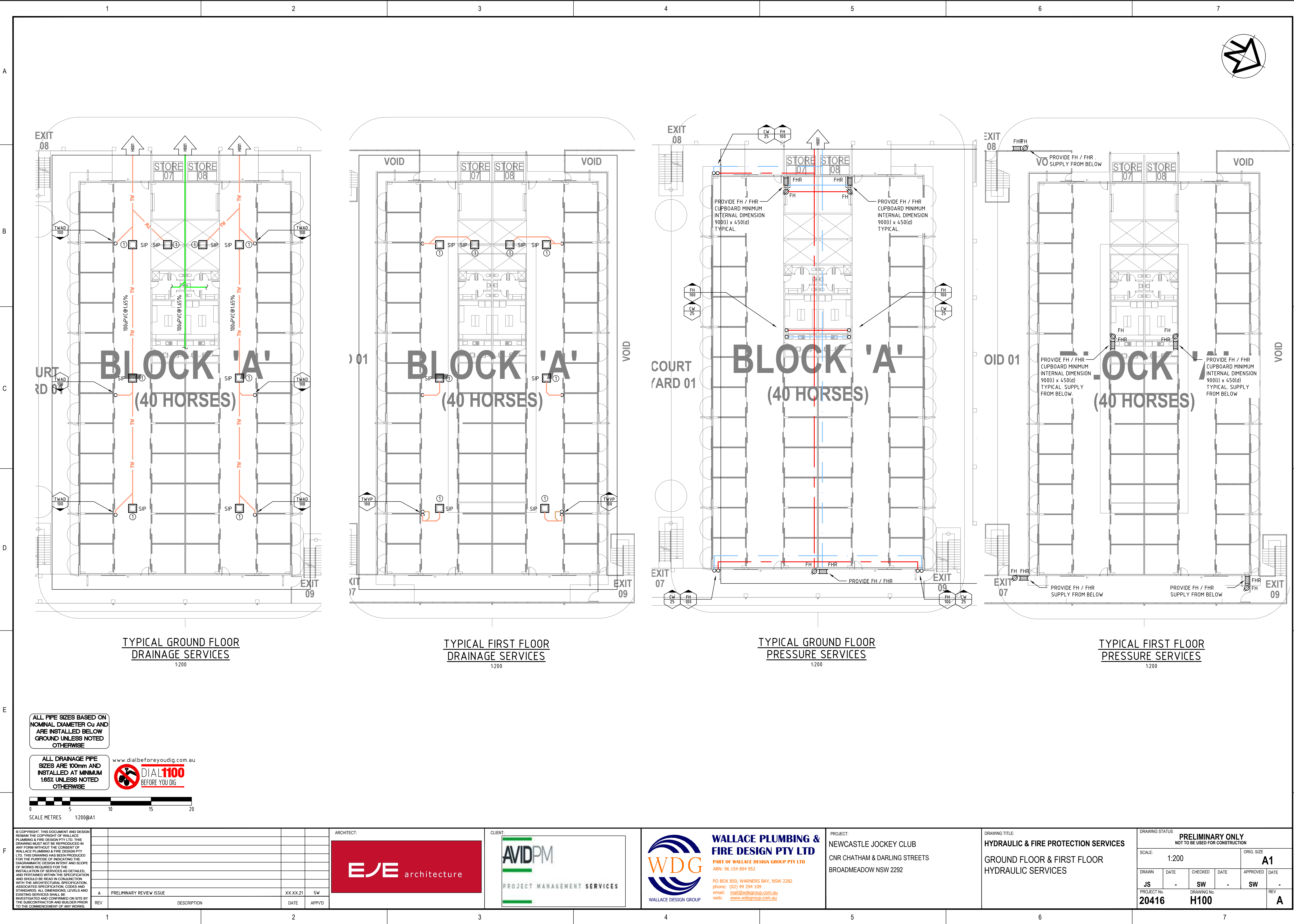


ALL PIPE SIZES BASED ON NOMINAL DIAMETER C_u AND ARE INSTALLED BELOW GROUND UNLESS NOTED OTHERWISE

ALL DRAINAGE PIPE SIZES ARE 100mm AND INSTALLED AT MINIMUM 1.65% UNLESS NOTED OTHERWISE



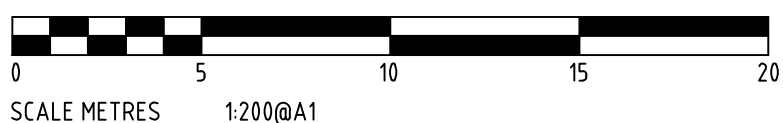
© COPYRIGHT. THIS DOCUMENT AND DESIGN REMAIN THE COPYRIGHT OF WALLACE PLUMBING & FIRE DESIGN PTY LTD. THIS DRAWING MUST NOT BE REPRODUCED IN ANY FORM WITHOUT THE CONSENT OF WALLACE PLUMBING & FIRE DESIGN PTY LTD. THIS DRAWING HAS BEEN PRODUCED FOR THE PURPOSE OF INDICATING THE DIAGRAMATIC DESIGN INTENT AND SCOPE OF WORKS REQUIRED FOR THE INSTALLATION OF SERVICES AS DETAILED WITHIN THE SPECIFICATION AND SHOULD BE READ IN CONJUNCTION WITH THE ARCHITECTURAL SPECIFICATION, ASSOCIATED SPECIFICATION, CODES AND STANDARDS. ALL DIMENSIONS, LEVELS AND EXISTING SERVICES SHALL BE INVESTIGATED AND CONFIRMED ON SITE BY THE SUBCONTRACTOR AND BUILDER PRIOR TO THE COMMENCEMENT OF ANY WORKS.				ARCHITECT: 		CLIENT: 		 WALLACE PLUMBING & FIRE DESIGN PTY LTD PART OF WALLACE DESIGN GROUP PTY LTD ABN: 96 154 894 952 PO BOX 850, WARNERS BAY, NSW 2282 phone: (02) 49 294 109 email: mail@wdsgr.com.au web: www.wdsgr.com.au		PROJECT: NEWCASTLE JOCKEY CLUB CNR CHATHAM & DARLING STREETS BROADMEADOW NSW 2292		DRAWING TITLE: HYDRAULIC & FIRE PROTECTION SERVICES OVERALL SITE PLAN PRESSURE SERVICES		DRAWING STATUS PRELIMINARY ONLY NOT TO BE USED FOR CONSTRUCTION			
												SCALE: 1:1000		ORIG. SIZE A1			
												DRAWN JS		DATE	CHECKED SW	DATE	APPROVED
												PROJECT No: 20416		DRAWING No: H003		REV A	






ALL PIPE SIZES BASED ON
NOMINAL DIAMETER C_u AND
ARE INSTALLED BELOW
GROUND UNLESS NOTED
OTHERWISE

ALL DRAINAGE PIPE
SIZES ARE 100mm AND
INSTALLED AT MINIMUM
1.65% UNLESS NOTED
OTHERWISE

www.dialbeforeyoudig.com.au



<p>© COPYRIGHT. THIS DOCUMENT AND DESIGN REMAIN THE COPYRIGHT OF WALLACE PLUMBING & FIRE DESIGN PTY LTD. THIS DRAWING MUST NOT BE REPRODUCED IN ANY FORM WITHOUT THE CONSENT OF WALLACE PLUMBING & FIRE DESIGN PTY LTD. THIS DRAWING HAS BEEN PRODUCED FOR THE PURPOSE OF INDICATING THE DIAGRAMMATIC DESIGN INTENT AND SCOPE OF WORKS REQUIRED FOR THE INSTALLATION OF SERVICES AS DETAILED, AND RESTAINED WITHIN THE SPECIFICATION AND SHOULD BE READ IN CONJUNCTION WITH THE ARCHITECTURAL SPECIFICATION, ASSOCIATED SPECIFICATION, CODES AND STANDARDS. ALL DIMENSIONS, LEVELS AND EXISTING SERVICES SHALL BE INVESTIGATED AND CONFIRMED ON SITE BY THE SUBCONTRACTOR AND BUILDER PRIOR TO THE COMMENCEMENT OF ANY WORKS.</p>										<p>ARCHITECT:</p> <div></div>										<p>CLIENT:</p> <div></div>										<div><p>WALLACE PLUMBING & FIRE DESIGN PTY LTD PART OF WALLACE DESIGN GROUP PTY LTD ABN: 96 154 894 952</p><p>PO BOX 850, WARNERS BAY, NSW 2282 phone: (02) 49 294 109 email: mail@wdsdesign.com.au web: www.wdsdesign.com.au</p></div>										<p>PROJECT:</p> <p>NEWCASTLE JOCKEY CLUB CNR CHATHAM & DARLING STREETS BROADMEADOW NSW 2292</p>										<p>DRAWING TITLE:</p> <p>HYDRAULIC & FIRE PROTECTION SERVICES GROUND FLOOR & FIRST FLOOR HYDRAULIC SERVICES</p>										<p>DRAWING STATUS</p> <p>PRELIMINARY ONLY NOT TO BE USED FOR CONSTRUCTION</p>									
																																								SCALE: 1:200										ORIG. SIZE A1																			
DRAWN										DATE										CHECKED										DATE										APPROVED										DATE																			
JS										-										SW										-										SW										-																			
PROJECT No. 20416										DRAWING No. H100																				REV A																																							

ATTACHMENT 5

STATEMENT OF AVAILABLE PRESSURE RECEIVED FROM HUNTER WATER CORPORATION



Hunter Water Corporation
ABN 46 228 513 446

PO Box 5171
HRMC NSW 2310
36 Honeysuckle Drive
NEWCASTLE NSW 2300
1300 657 657 (T)
hunterwater.com.au

AVID Project Management Pty Ltd
P.O Box 206
Carrington NSW 2294

20/01/2021

Dear David,

Statement of Available Pressure and Flow

Thank you for your application for a Statement of Available Pressure and Flow. We have assessed the pressure expected to be available at the nearest hydrant under the demand conditions identified in the table below.

The pressure and flow information provide in the table is to be read in conjunction with notes on the following page.

Your REF: 2019-1295
Property Address: Lot 13 & 14 DP 227704, 100 Darling Street Broadmeadow NSW 2292
Approximate Ground Level: 6 m AHD
Water Main Size and Location: DN100 mm CICL located in Darling Street Broadmeadow NSW 2292
Hydrant No. 348435

Expected Pressure at Hydrant	Additional Fire Flow (L/s)	Pressure (kPa)
Maximum pressure (Average Day Demand)	0	560
Minimum pressure (Peak Day Demand)	0	450
Pressure expected under peak day demand conditions		
Fire hose reel (x2)	0.66	450
Pressure expected under 95%ile peak day demand conditions		
Fire hydrant /sprinkler installations	0.0 L/s	470
Fire hydrant /sprinkler installations	5.0 L/s	465
Fire hydrant /sprinkler installations	10.0 L/s	460
Fire hydrant /sprinkler installations	20.0 L/s	425
Max available flow	30.0 L/s	360

For further information, please direct enquiries to development.planning@hunterwater.com.au





Hunter Water Corporation
ABN 46 228 513 446

PO Box 5171
HRMC NSW 2310
36 Honeysuckle Drive
NEWCASTLE NSW 2300
1300 657 657 (T)
hunterwater.com.au

Notes

This Pressure and Flow Statement is valid for **12 months**.

The provision of additional flow for firefighting is not a requirement under Hunter Water Act or our Operating licence.

We use an InfoWorks hydraulic model for determining flow and pressure in our networks. Pressure and flow in the models are determined using theoretical system demands based on customer connections and peaking factors to adjust peak demand conditions.

While these models are intermittently calibrated using field testing, the accuracy of the results cannot be guaranteed due to ongoing modifications to our networks and increasing demands resulting from growth.

While we endeavour to maintain minimum firefighting pressure above 15m, this cannot be guaranteed into the future and adequate allowance should be made to any firefighting assessment.

The flow and pressure generated by the Info Works model is calculated at the centre of the pipe. Pressure losses due to flow through the hydrant or additional appurtenances, such as standpipes, are not included in the above results and must be factored into any fire flow assessment for the site.

It is the **applicant's responsibility** to ensure that minimum firefighting requirements for the subject site are satisfied.

The use of, and access to, stop valves and hydrants is restricted to Hunter Water employees only. It is an **offence** under Section 25 of the Hunter Water Act to interfere with our assets without prior consent.

Persons accessing our assets without our prior consent may be issued with a **penalty** notice and will be held liable for all costs to repair, rectify and remediate the water supply system impacted by the unauthorised access.

If you require access to our network to perform a flow test please email development.planning@hunterwater.com.au for requirements.



ATTACHMENT 6

NOTICE OF FORMAL REQUIREMENTS AND STAMPED PLAN RECEIVED FROM HUNTER WATER CORPORATION



Hunter Water Corporation
ABN 46 228 513 446

PO Box 5171
HRMC NSW 2310
36 Honeysuckle Drive
NEWCASTLE NSW 2300
1300 657 657 (T)
(02) 4979 9625 (F)
hunterwater.com.au

13 July 2021

Ref:2021-1123

Newcastle Jockey Club
C/- Wallace Plumbing & Fire Design Pty Ltd
PO Box 850
Warners Bay NSW 2282

RECEIVED
17/07/2021

Dear Sir/Madam

RE NOTICE OF FORMAL REQUIREMENTS FOR PROPOSED DEVELOPMENT

Hunter Water's requirements for the provision of water and sewerage facilities to the development of additional Stables and Amenity Blocks at Lot 13 DP 227704, 100 Darling Street, Broadmeadow are as follows:

You Are Required To:

- 1 Submit the Development Consent Conditions determined by Council or the Complying Development Certificate for this specific development. Hunter Water will confirm that the final development description is consistent with the details supplied by you for this application. If there are any subsequent amendments to this development consent, Hunter Water will require you to submit a revision application.
- 2 Your proposed development has been identified as having the potential to discharge trade waste into Hunter Water's sewerage system. You are required to contact Hunter Water's Technical Services Team on (02) 4979 9712 or via email plumbing@hunterwater.com.au in order to confirm if an application for a Trade Wastewater Agreement is required or if an existing agreement will need to be amended. The discharge of trade waste to the sewer will not be permitted without a valid agreement authorising that discharge. (Refer to the Trade Wastewater [factsheet](#) on Hunter Water's website for more information).
- 3 You will be required to submit an application for a hydraulic design assessment of internal water and sewerage services for this development, including rainwater tanks and any alternative water supply systems. Everything you need know when submitting an application for hydraulic assessment can be found on our [website](#). Please follow the 4 easy steps listed in our Hydraulic design assessment process. Alternately, if you need to confirm specific requirements for your development, you can contact our Technical Services Team via email plumbing@hunterwater.com.au.

Please note, the information shown on the plan provided with this letter may not be up to date and Hunter Water accepts no responsibility for its accuracy. Any contractor(s) or consultant(s) engaged by the developer should confirm all levels by field survey.

These requirements are valid for 12 months from the date of this letter and are specific to this development. All fees and charges are subject to adjustment using the Consumer Price Index (CPI) adjustment on 1 July each year.

Please refer to the attached Supplementary Information and Guidance which details the conditions under which water and sewer facilities are available to new customers. Hunter Water reserves its right to amend the requirements set out above prior to issuing a Section 50 Compliance Certificate.

Yours faithfully

A handwritten signature in blue ink, appearing to read 'Ali Binesh', is centered within a light blue rectangular box.

ALI BINESH
Development Services

Unless specified in the above requirements, please direct all correspondence regarding this application to:

Enquiries:	Ali Binesh
Tel:	02 4064 7802
Email:	ali.binesh@hunterwater.com.au



DEVELOPMENT SITE PLAN

1:500 @ A1

Version 2.2 (30 November 2020)
BUILDING PLAN ASSESSMENT

Not Approved

Reference No: 29119

☒ Water available for connection
☒ Sewer available for connection

Development Assessment (Section 50) application is required.

Date Processed: 13-July-2021
Applicant: Wallace Plumbing & Fire Design Pty Ltd Tanya
Property Location: 100 DARLING STREET BROADMEADOW

PLEASE TAKE INTO CONSIDERATION

This is not a compliance certificate. This stamp indicates that Hunter Water has undertaken an initial assessment of the proposed development to identify possible impacts to our infrastructure. Conditions of Hunter Water easements apply. For information on Hunter Water's processes please refer to our 'Land Development Manual' on our website or contact us on

CONCEPT DESIGN