

## SCEGGS Wilkinson House

Infrastructure Report

Prepared for: Sandrick Project Directions

Project No:SYD1685Date:22 NovenRevision:02

SYD1685 22 November 2021 02





Project:	SCEGGS Wilkinson House
Location:	215 Forbes St Darlinghurst NSW 2010
Prepared by:	ADP Consulting Pty Ltd Level 3, 8 Spring Street Sydney NSW 2000
Project No:	SYD1685
Revision:	02
Date:	22 November 2021

Rev	Date	Comment	Author	Signature	Technical Review	Signature	Authorisation & QA	Signature
01	30/06/21	Final Issue	TC, FM	TC, FM	MR	MR	JC	JC
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Project Team	
Project Manager	Sandrick Project Directions
Architect	Smart Design Studio
Services Consultant (MEP)	ADP Consulting





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## 1. Executive Summary

This report provides an infrastructure due diligence of the existing in-ground infrastructure surrounding and serving Wilkinson House at 215 Forbes St, Darlinghurst NSW 2010. The project involves the upgrade of Wilkinson House which is a 1928 building designed by Emile Soderston. SCEGGS has a 20 year masterplan which the upgrade of this building is a part of. The scheme is to repurpose the building to suit their current and future teaching needs. Wilkinson House's upgrade will involve excavation to increase the floor area on the lower ground floor and the addition of an extra level to bring the building to 5 levels.

ADP have undertaken a desktop review of the information provided from the site Dial Before You Dig (DBYD) search. The report provides an overview the following information relating to each service:

- > Existing infrastructure surrounding and serving the site from the following in-ground services:
  - Water & Sewer (Sydney Water)
  - Power (Ausgrid)
  - Telecommunications (Telstra, NBN and Optus)
  - Gas (Jemena)
- > Estimated new infrastructure works associated with the development.
- > A summary of additional infrastructure items to be resolved as part of the project design.

The following information sources have been utilised to prepare this report:

- > Dial before you dig (DBYD) information packages.
- > Architectural drawings by Smart Design Studio.
- > Preliminary feedback received to date from authorities.
- > Ausgrid GIS HV/LV distribution software.





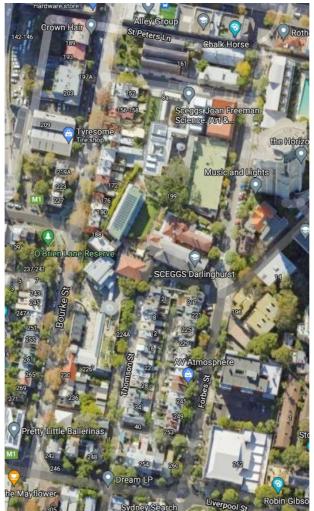
# 2. Introduction

## 2.1 **Project Description**

The building is located within SCEGGS located at 215 Forbes St, Darlinghurst NSW 2010. The new floor plate will incorporate the below:

- > Sports GLAs
- > Common GLAs
- > Meeting Rooms
- > Staff Areas
- > Careers Spaces
- > Multipurpose Room
- > Courtyard
- > Bathrooms
- > Stores
- > Hydrant and Sprinkler Pump room serving Wilkinson House and Joan Freeman

Figure 1 Site location (Source: Google maps)





## 3. Electrical Infrastructure

## 3.1 Existing Infrastructure

Based on information from Ausgrid, Wilkinson House is fed from an above ground supply pole on St Peters Street (Pole number SY22365). The supply pole is fed from a Chamber substation (Substation No. S000830) located within a high-rise residential development on Forbes Street.

The point of attachment at the premises is located on the Northern face of the building. The point of attachment is connected to the supply pole via. an overhead LV cable.

This type of connection can support a maximum supply of 200A 3 Phase.

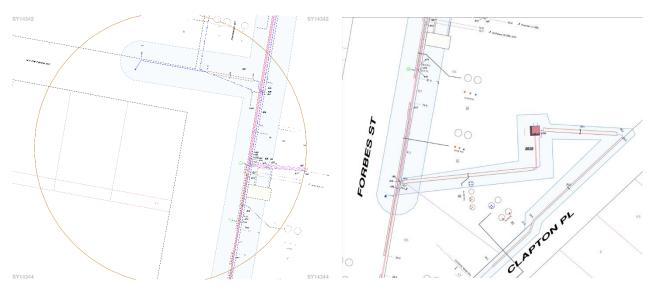


Figure 2 Supply Pole and Point of Attachment to Site



## 3.2 New works Associated with Electrical Infrastructure

There is an existing meter (NMI No. 14/2/38) and a Main Switchboard within Wilkinson House. These are in an electrical cupboard in the ground floor foyer area. The Main Switchboard currently supplies power for the following services:

- Fire protection services i.e. Fire Pumps and Control Panels (which are connected to the Joan Freeman building also)
- Emergency and Exit Lighting
- General Lighting
- General Power
- Build access Controls and Security
- Communications Rack



- Kilns (Located in the carpark. Currently assuming the Joan Freeman building carpark), further investigation required.

The anticipated scope of works associated with the redevelopment of the Wilkinson House building:

- Relocation of existing meter and meter panel
- Relocation of existing Main Switchboard
- New Electrical Cupboard for existing Main Switchboard
- Modification of existing Main Switchboard as required.

ADP have provided the Supply Authority, Ausgrid with a preliminary estimate of the anticipated demand for the development and are waiting to hear back. Please refer to Appendix A for a copy of this documentation.

A preliminary estimate of the sites maximum demand is estimated at less than 200 Amps 3 Phase which is within the limits of the existing supply. Therefore, ADP anticipates no issues with re-use of the existing supply for the redevelopment. The existing connection, and meter panel are expected to be retained and re-used However a new Main switchboard will be required.

### 3.3 Next steps

ADP requests the following information to progress the design:

> Site and Building As-Built drawings for electrical services



## 4. Telecommunications

## 4.1 Existing Infrastructure

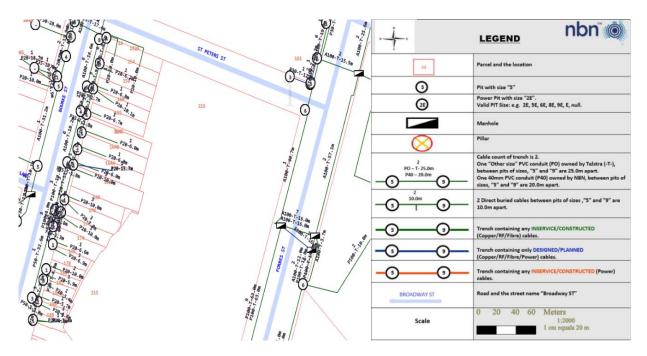
The DBYD information indicates the following service providers have assets in the immediate vicinity of the site.

- NBN
- Vocus
- TPG

#### 4.2 NBN

NBN Co. has inground HFC services in the area. NBN Co. telecommunications assets are located along Forbes Street and St Peters Street frontages of Wilkinson House, as indicated in the figure 4 below.

Figure 4 NBN Co telecommunication assets in the vicinity of the development area



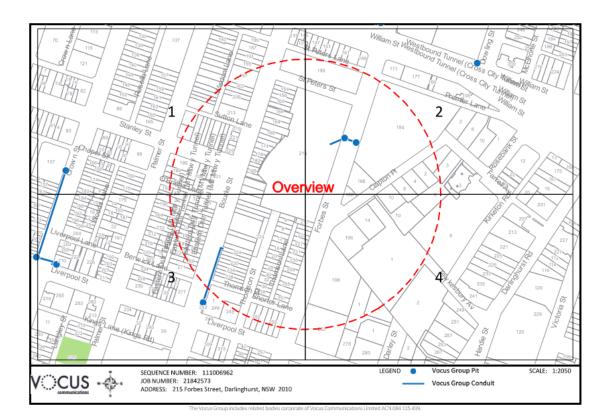
Although these assets may not be utilised for the re-development, minimum to no disruption is expected to existing NBN assets that are reticulated along adjacent sections of the development frontage on Forbes Street and Bourke Street.



### 4.3 Vocus Group

Vocus Group has inground Fibre Optic Services within the vicinity of the development site. Vocus Telecommunications assets are located along Forbes Street frontage of the existing site as indicated in the figure 5 below. It appears that Vocus has an existing connection point for the campus.

Figure 5 Vocus Group telecommunication assets in the vicinity of the development area

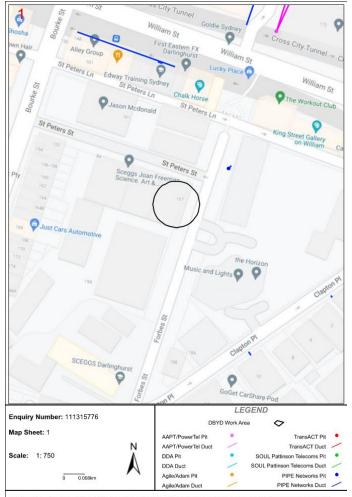




### 4.4 TPG

TPG has inground services in the area. TPG telecommunications assets are located along William St as shown in blue in the figure 6 below.

Figure 6 TPG telecommunication assets in the vicinity of the development area



DISCLAIMER: No responsibility/liability is taken by TPG Corporation Limited for any inaccuracy, error, omission or action based on the

### 4.5 New Works Associated with Telecommunications Infrastructure

There is a communications rack located in a comms cupboard in the ground floor foyer area adjacent to the existing electrical cupboard. It was mentioned by campus facilities staff that there is no PABX service on site and that the school has moved to Voice Over IP (VOIP) telephony. The fibre cable to the communications rack comes from the main campus distributor located in the administration building.

The existing communications rack serves as the building distributor for the site. The rack appears to be in poor condition and is proposed to be replaced.

### 4.6 Next Steps

ADP requests the following information to progress the design:

> Site and Building As-Built drawings for ICT and Security services



## 5. Water & Sewer Infrastructure

The current DBYD information indicates there are in-ground water services which run along St Peters Street and Forbes Street. The following sewer and water services are available to the development site.

### 5.1 Existing Infrastructure

#### 5.1.1 Sewer

The DBYD information provided by Sydney Water Corporation indicates:

- > An existing 450mm SGW sewer main located on Forbes Street, running along the eastern boundary of the site.
- > An existing 300mm PVC sewer main located on Forbes Street, running along the eastern boundary of the site.
- > An existing 225mm VC sewer main located on St Peters Street, running along the northern boundary of the site.
- > An existing 225mm VC sewer main located parallel to Bourke Street, running within the boundary of the site.

There is an existing sewer connection on St Peters Street. However, the size of the connection is yet to be confirmed, likely to be 100mm which would be adequate for the new development. A Sewer Services Diagram (SSD) application has been submitted to Sydney Water to confirm this information.

#### 5.1.2 Water

The DBYD information provided by Sydney Water indicates:

- > An existing 150mm oPVC water main located on Forbes Street, running along the eastern boundary of the site.
- > An existing 100mm DICL water main located on St Peters Street, running along the northern boundary of the site.

There is an existing connection to the water main in Forbes Street serving the Wilkinson House potable water demands. This connection shall be capped off and made redundant with the water meter within Wilkinson House to be removed. The existing connection on St Peters Street that is currently serving the Joan Freeman Science and Technology building shall be used to service the site. The connection to Wilkinson house shall be extended from the pump sets located in the Joan Freeman carpark. An analysis shall be carried out to determine if the existing pump sets can serve both the Joan Freeman building and the Wilkinson House. A new private meter for Wilkinson House can be installed should there be a requirement to monitor water usage within Wilkinson House.

A Pressure and Flow application has been submitted to Sydney Water Corporation and shows the existing connections to the water main are adequate to service the new development.

Wilkinson House has two existing water main connections located on Forbes Street, to service the fire protection services, it is assumed both of these connections are 100mm.



Figure 7 Sydney Water DBYD



### 5.2 Next Steps

Water Services Coordinator (WSC) has been engaged to lodge a Feasibility Assessment application to gauge if Sydney Water requires any upgrades of the mains due to this development. This has been lodged with Sydney Water. Refer to Appendix B for



## 6. Gas Infrastructure

## 6.1 Existing Infrastructure

The DBYD information provided by Jemena indicates:

- > A 50mm NY (Nylon) 210kPa medium pressure gas main within Forbes Street along the eastern boundary of the site
- > A 50mm NY (Nylon) 210kPa medium pressure gas main within St Peters St, along the Northern boundary for the site.

Figure 8 Jemena DBYD



There is an existing connection to the gas main in Forbes Street which services multiple buildings on site as well as Wilkinson House. All gas pipework to Wilkinson House will be made redundant, but the gas meter and regulator are to be retained to serve existing fixtures within the site.



## Appendix A Ausgrid Application



## A.1 Ausgrid Application

Appendix A contains the Application to Ausgrid with supporting documentation. Original documents can be provided on request.





Reference Code : 0292150

#### -

DCATION		
Land Title Type		
Torrens		
Street Number/RMB		
167		
Location Address		
Forbes Street, Darlinghurst, 2010		
Land Zoning		
Urban		
Location Diagram		
File name	Ausgrid filename reference	Size
Aus Grid Location Diagram.pdf	LocationAttachmentFilePath_1	0.521 MB

#### APPLICANT

Applicant Type Other On Behalf Of A Retail Customer Or Real Estate Developer Full Name Ms Monica Eaton Email Address m.eaton@adpconsulting.com.au Company Name Adp Consulting Street Number/RMB 8 Applicant Address Spring Street Sydney 2000 Phone Number 0430442624

#### CUSTOMER

Customer Type Real Estate Developer Full Name Ms Jenny Allum Email Address JennyAllum@sceggs.nsw.edu.au Phone Number 0293321133 ABN/ACN 16001421727 Company Name Sceggs Darlinghurst Ltd

Project:SYD1685 SCEGGS Wilkinson HouseReport:Infrastructure ReportDate:22 November 2021 Rev: 02



#### LOAD DETAILS

INSTALLATION CHAN	GE						
Alter Switchboard	GE						
Yes							
Existing Point Of Common Coup	ling						
Pole Existing Asset Identifier							
Unknown							
Existing Connection Point							
Main Switchboard							
Existing Service Length 19							
Service Voltage							
Low Voltage 230/400v							
Are You Proposing To Increase 1 No	The Service Connection Size	e?					
Existing Maximum Demand	Number Of Phases:	Phase A:	200	Phase B:	200	Phase C:	200
Proposed Maximum Demand	3 Number Of Phases: 3	Phase A:	198	Phase B:	198	Phase C:	198
Proposed Maximum Demand Cal	+						
File name		Aug	rid filename	e reference		Size	
		-				5120	
Prelim Maximum Demand 0	1.10.21.xlsx	WFAN	MaxDemano	JCalc_1		0.026 MB	
Construction Of The Premises C 27-Nov-2021 Ausgrid Has Provided A Certified No Asp 1 Has Been Appointed No Do You Have Development Cons No Do You Wish To Underground / F No	d Design Number(Cdn) For / sent (Da) For Your Proposal	A Network Augm		-		remises	
EXPEDITED CONNECTION	ON						
Do you want to expedite yo	our connection offer for all	premises?				Yes 🖲 No	
Ausgrid will send you an offe	er that meets your supply re	equirements.					
DECLARATION							

Project:SYD1685 SCEGGS Wilkinson HouseReport:Infrastructure ReportDate:22 November 2021 Rev: 02



Applicant Name Ms Monica Eaton Application Date 10-Nov-2021 Price Description Above 100 Amps Connection Offer - Technical Assessment required 1 x 473.25 Total Price <u>Terms and Conditions:</u>

Price Including GST AUD \$473.25 AUD \$473.25

In submitting this application you are engaging Ausgrid to provide you with a connection offer. Once submitted the fee charged is consumed. Ausgrid will aim to provide you with a written response within 10 business days. If additional work and/or fees are required, we will contact you to advise prior to providing the response.

Where this application requests an expedited connection, I declare that I have read and understood the terms and conditions of the connection offer and agree that if the connection is expedited that a contract based on that offer will be formed with Ausgrid on the date that Ausgrid receives the application. Where this application is being made on behalf of a retail customer or real estate developer, I declare that I have obtained the authority of that person to make this application of their behalf, including where applicable, making a request for expedition of the connection application.

\*I acknowledge the terms & conditions.

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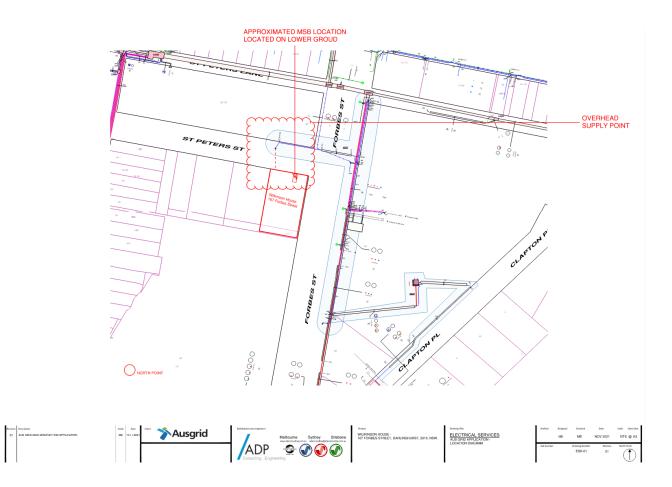


Prelim. Max Demand Summary									
Project Name:	SCEGGS Wilkinson House Adaptive Re-Use								
Project Number	SYD1685								

Building	Level	Description	Area	Qty.	Lighting	Power	Ventilation	AC	Sub-Total	VA	VA w.	Amps	Amps
					VA/SQM	VA/SQM	VA/SQM	VA/SQM	VA/SQM		A53000	(3 Phase)	(Single
Wilkinson House	Basement	Lift Lobby/Entrance/General Circulation/Stairs	40.17		5.00	20.00			25.00	1,004.25	1,004.25	1.45	4.35
Wilkinson House	Basement	Sports GLA1	131.26	s	6.00	30.00	(		36.00	4,725.36	4,725.36	6.82	20.46
Wilkinson House	Basement	Sports GLA2	122.32		6.00	30.00	(		36.00	4,403.52	4,403.52	6.36	19.07
Wilkinson House	Basement	Fire Pump/Sprinkler Room	20.12	1	4.00	50.00	(		54.00	1,086.48	1,086.48	1.57	4.70
Wilkinson House	Basement	Training Room	24.45	0	6.00	100.00	(		106.00	2,595.94	2,595.94	3.75	11.24
Wilkinson House	Basement	Elec Switch Room	6.26	i	4.00	60.00	(		64.00	400.64	400.64	0.58	1.73
Wilkinson House	Basement	Comms Cupboard	2.30	(	4.00	300.00	(		304.00	699.20	699.20	1.01	3.03
Wilkinson House	Basement	Services Cupboard	3.77		4.00	80.00	(		84.00	316.68	316.68	0.46	1.37
Wilkinson House	Ground Level	Lift Lobby/Entrance/General Circulation/Stairs	103.00	(	5.00	5.00	0		10.00	1,030.00	1,030.00	1.49	4.46
Wilkinson House	Ground Level	Meet 1	24.00		5.00	60.00			65.00	1,560.00	1,560.00		6.75
Wilkinson House	Ground Level	Meet 2	8.00		4.50	80.00			84.50	676.00	676.00		2.93
Wilkinson House	Ground Level	Meet 3	7.00	0	4.50	80.00	0		84.50	591.50	591.50	0.85	2.56
Wilkinson House	Ground Level	Meet 4	8.00		4.50	80.00	(		84.50	676.00			2.93
Wilkinson House	Ground Level	Staff Lounge	27.00		4.50	100.00	0		104.50	2,821.50	2,821.50		12.22
Wilkinson House	Ground Level	Amenities	10.17	1	3.00	50.00	10.00	(	63.00	640.73	640.71	0.92	2.77
Wilkinson House	Ground Level	Staff Room/Admin	32.64		4.50	60.00	- (		64.50	2,105.28	2,105.28	3.04	9.12
Wilkinson House	Ground Level	GLA2	64.01		4.50	50.00	(		54.50	3,488.55	3,488.55	5.04	15.11
Wilkinson House	Ground Level	GLA1	66.73		4.50	50.00	(		54.50	3,636.24	3,636.24	5.25	15.75
Wilkinson House	Level 1	Lift Lobby/Entrance/General Circulation/Stairs	71.00	(	5.00	5.00	(		10.00	710.00	710.00	1.02	3.07
Wilkinson House	Level 1	Staff Lunch Room	15.00	(	5.00	40.00	(		45.00	675.00	675.00		2.92
Wilkinson House	Level 1	Staff Social Science	33.00	(	4.50	50.00	0		54.50	1,798.50	1,798.50	2.60	7.79
Wilkinson House	Level 1	GLAS	56.00	(	4.50	50.00	(		54.50	3,052.00	3,052.00	4.41	13.22
Wilkinson House	Level 1	GLA4	58.00	0	4.50	50.00			54.50	3,161.00	3,161.00	4.56	13.69
Wilkinson House	Level 1	GLA3	67.00		4.50	50.00			54.50	3,651.50	3,651.50		15.81
Wilkinson House	Level 1	Break Out Area	37.89		5.00			**	35.00	1,326.15	1,326.15	1.91	5.74
Wilkinson House	Level 1	Meet 5	13.00	1	5.00	5.00			10.00	130.00	130.00	0.19	0.56
Wilkinson House	Level 2	Lift Lobby/Entrance/General Circulation/Stairs	82.20		5.00	5.00			10.00	822.00	822.00		3.56
Wilkinson House	Level 2	Break Out Area	37.85		5.00	30.00	0		35.00	1,326.15	1,326.15		5.74
Wilkinson House	Level 2	GLAS	56.00	- (	4.50	50.00			54.50	3,052.00	3,052.00	4.41	13.22
Wilkinson House	Level 2	GLA7	58.00		4.50	50.00			54.50	3,161.00	3,161.00		13.69
Wilkinson House	Level 2	GLA6	67.00		4.50	50.00	-		54.50	3,651.50	3,651.50	5.27	15.81
Wilkinson House	Level 2	Acc. Amenities	5.70		3.00	50.00	10.00		63.00	359.10	359.10	0.52	1.55
Wilkinson House	Level 2	Student Amenities	10.05		3.00	50.00	10.00	0	63.00	633.15 1,471.50	633.15 1,471.50		6.37
Wilkinson House	Level 2 Level 3	Staff Room Lift Lobby/Entrance/General Circulation/Stairs							54.50	978.90	978.90		4.24
Wilkinson House Wilkinson House	Level 3	GLA9	97.89 61.00		5.00	5.00			10.00	2,714.50	2,714.50	3.92	4.24
Wilkinson House	Level 3	Multipurpose Common Room	102.00		4.50	50.00			58.00	5,916.00			25.62
Wilkinson House	Level 3	Courtyard	71.00		5.00	35.00			40.00	2,840.00	2,840.00	4.10	12.30
Wilkinson House	Level 3	Waiting Area	12.38		5.00	5.00			10.00	123.80	123.80	0.18	0.54
Wilkinson House	Level 3	Careers Office	18.00		4.50	60.00			64.50	1,161.00	1,161.00	1.68	5.03
Wilkinson House	Level 3	Acc. Amenities	5.67		3.00	50.00			63.00	354.06	354.06		1.53
Wilkinson House	Level 3	Amenities	2.70		3.00	50.00		-	63.00	170.10	170.10	0.25	0.74
Wilkinson House	Mech Load	Outdoor Unit (HVAC)	2.75	1.0					-	33,463.22	33,463.22	48.30	144.90
Wilkinson House	Mech Load	Heat Recovery Unit (Large)		4.0					_	1,778.67	1,334.00	2.57	7.70
Wilkinson House	Mech Load	Heat Recovery Unit (Small)		4.0					_	736.00	552.00	1.06	3.19
Wilkinson House	Mech Load	EXAQ20AVM Indoor Unit		3.0						20.00	15.00	0.03	0.09
Wilkinson House	Mech Load	FXAQ40AVM Indoor Unit		13.0						173.33	130.00		0.75
Wilkinson House	Mech Load	FXAQ50AVM Indoor Unit		3.0						50.00	37.50		0.73
Wilkinson House	Mech Load	FXHQ63MAVE		1.0						38.33	28.75		
Wilkinson House	Mech Load	FXHQ100MAVE		1.0						45.00	33.75	0.06	0.17
Wilkinson House	Mech Load	Lift		1.0						22,170.25			95.00
Wilkinson House	Mech Load	Existing Kiln #1		1.0					_	13,856.41	13,856.41	20.00	60.00
Wilkinson House	Mech Load	Existing Kiln #1		1.0						13,856.41			
an investigional models	Weech Losid	Evaluating and a F		1.0	· · ·				-	13,030,41	10/335:20	20.00	00.00

Power Demand (VA) 163,252.50 233.66 Power Demand (VA) w. 0.85 Site Diversity Factor 138,764.63 198.63 Current Demand (A) w. 0.85 Site Diversity Factor







## Appendix B Sydney Water Feasibility Assessment Application



### **B.1** Sydney Water Feasability Assessment Application

Appendix B contains the evidence of submission to Sydney Water via a Water Services Coordinator.

#### RE: [#61/27013] Quotation SYD1685 SCEGGS Darlinghurst Feasibility



Amanda Moore <Amanda.Moore@rari.com.au>

Thanks Michael

I have sent this to Sydney water now. Current turn around time is about 8 weeks so we might not see this come back this year.

Amanda Moore | Project Coordinator

**ROSE ATKINS RIMMER (Infrastructure)** Pty Ltd Water Related Infrastructure Design and Management

Shop 7 & 8 M Centre 40 Sterling Road Minchinbury New South Wales 2770

P: (02) 9853 0200 | F: (02) 9671 7399

Imanda.Moore@rari.com.au

www.rari.com.au



### RE: Quotation SYD1685 SCEGGS Darlinghurst Feasibility

Amanda Moore <Amanda.Moore@rari.com.au> To • Michael Rickert i Follow up. Completed on Wednesday, 10 November 2021.

You replied to this message on 10/11/2021 1:13 PM.

Thankyou for that Michael. This application has now been submitted to Sydney water.

Amanda Moore | Project Coordinator

**ROSE ATKINS RIMMER (Infrastructure)** Pty Ltd Water Related Infrastructure Design and Management

Shop 7 & 8 M Centre 40 Sterling Road Minchinbury New South Wales 2770

P: (02) 9853 0200 | F: (02) 9671 7399

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