

Andy Nixey

From: Philip Corne <philipcorne@icloud.com>
Sent: Wednesday, 14 February 2018 6:14 PM
To: Sally Webster
Cc: Nicholas Wolff; Don Smith; Bob Lee; Richard Paula McPhail; Hilde Gerathy
Subject: Meeting Tomorrow

Hi Sally,

Confirming tomorrows meeting at 11.00 at the AGNSW - assume we meet you at the entry on ground level.

Unfortunately, I am now unable to make the meeting. I am Chairman of a Cure Cancer Australia (a charity that funds young cancer researchers) and need to attend a meeting with a the CEO of major corporate supporter (worth approx. \$500,000 per year - so very important).

However Don Smith - Strata Chairman and others copied above, all of whom you have met will be in attendance.

Building on your proposed agenda - which is very much aligned with our - we would like to add,

1. management of the the Cowper Wharf Rd./Lincoln Cresc. intersection so that we do not lose current ease of entry/exit - how to work together in the best interests of both parties.

Potential re-positioning of lights integration of pedestrian crossing.

Understand incremental traffic impact and how were traffic volumes determined.

Management of traffic during demolition and construction.

2. management of delivery times to limit as much as possible impact on TWT.

What are consent conditions regarding operating hours.

Plans intentions regarding corporate and other events etc - time windows and noise restrictions.

3. beautify the "bunker wall" - planting/hanging garden discussion of options.

4. plantings - trees - at the top of the wall to provide relief from the facade.

Better understand polished white concrete wall, reflection issues, note loss of tress - some replacement to soften wall.

Access to virtual model - Revit Model - day and night visuals.

5. expected use of our lift.

6. Sea Water Heat Exchanger noise.

Copy of water exchange report.

7. update on Sub-Station.

8. timeline for submissions, meetings and determination.

Thank you

Best regards

Philip

Philip Corne

m : philipcorne@icloud.com

p : +61 400 482 825

On 9 Feb 2018, at 5:04 pm, Sally Webster <Sally.Webster@ag.nsw.gov.au> wrote:

Hello Philip

Thanks for your email.

The ESD consultant working with the Gallery is WSP/Atelier 10.

We can update you a little further when we meet next week as to some more recent discussions with potential suppliers.

The following agenda items are proposed for our meeting – please let me know if you have any further to add:

- Communication Strategy
- Ausgrid – update on future of substation
- Seawater heat exchange
- Visual impact – oil tank wall / Gallery 3
- Lincoln Crescent / Cowper Wharf Road traffic intersection
- Proposed ferry
- Pedestrian access / lift

Best wishes

Sally



SALLY WEBSTER
Head Sydney Modern Project

ART GALLERY OF NEW SOUTH WALES
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From: Philip Corne [<mailto:philipcorne@icloud.com>]

Sent: Friday, 9 February 2018 3:35 PM

To: Sally Webster <Sally.Webster@ag.nsw.gov.au>; Nicholas Wolff
<Nicholas.Wolff@ag.nsw.gov.au>

Subject: Solar

Dear Sally and Nick,

Would you mind passing to me the details of the company/consultants you are using with respect to your solar installations.

Thank you

Best regards

Philip

Philip Corne

m : philipcorne@icloud.com

p : +61 400 482 825

Sally and Nick,

Re: Meeting Tuesday 6 March 2018

I refer to our meeting of the 15 February 2018, your email of the 16th February with a copy of your Power Point Presentation/ Draft SSDA Response and my reply of the same date. I also have a copy of your Draft SSDA Response dated 28 February 2018 to the WFW submission.

I note you are meeting again tonight with TWT, however, I send this email in a personal capacity to draw attention to the matters I will seek to raise.

Visual Impact

I note that SM still has not (after numerous requests over 8 months) provided a photomontage showing the lower gallery from TWT's perspective. I.e, from the area opposite the lower Gallery eg our gym. I attach the two photographs showing our gym and its view over the bunker that I tabled at the meeting of 15/2/18.

All perspectives you have produced in both Draft SSDA Responses, are from TWT's perspective false. They are based on the premise that our roof top garden is the visual base of the lower Gallery. This is not so.

When will you provide an appropriate photomontage?

Similarly, the proposal for a green wall below the lower Gallery wall, is, as advised by you, only a proposal. The diagram enclosed with your Draft SSDA Response 15/2/18 needs full details and explanation before we can reasonably comment.

These matters are not newly raised, they have been on the table for months.

No attempt has been made by SM to provide architectural relief of the lower Gallery wall. The colour /finish is still not finalised.

I attach a photo taken in Turin of two different periods of architectural relief of a Museum building.

Seawater Heat Exchange

The plan presented with Draft SSDA Response 15/2/18 is vastly different to the EIS Plan with the pump exchange moved approx. 40-50 metres north of the original location (outside Units 17.34 TWT). The photo of these units taken from the original location of the pump exchange, tabled on the 15/2/18, is attached.

The new plan shows entirely different pipe locations, however, the plan attached to Draft SSDA Response WFW dated 28 February 2018 relies on the original plan.

There are still no details of the pump exchange station.

Any above ground installation is strongly objected to, particularly if it is moved north of TWT, as a totally unacceptable invasion on the open space along the TWT boardwalk and RBG waterfront and of the views of this area from Units 17 and 34.

We are not able to assess this part of SM's proposal and to suggest that we should rely on "The projects main contractor's construction methodology and plans" is totally unacceptable.

I reserve the right to further submission when the Seawater Heat Exchange system is finally designed.

Traffic and Transport.

New Ferry Terminal

I fully support the proposal for AGSM to work on establishing a Forum (including TWT, WFW and local businesses and residents) to approach the Premier/ Ministers to establish this service.

I have been requested to represent TWT in this forum.

Lincoln Crescent/Cowper Wharf Rd Intersection

The figures provided for existing movements do not accord with my experience of approx. twenty (20) years nor the 500 -1000 vehicles per day referred to in the EIS.

SM's plan in the EIS showing the new Pedestrian Crossing appears to change the Lincoln Cr intersection with Cowper Wharf Rd. Whether two lane queuing will be maintained is debatable.

However, practice demonstrates that most of the time vehicles attempting Right Hand Turns into Cowper Wharf Rd can only do so by standing in the small area (approx. 5 M in depth) between the traffic islands and waiting for a gap in west bound traffic or being invited by west bound traffic to proceed. To turn right into Cowper Wharf and then left into Sir John Young Crescent requires both west bound traffic lanes to be gapped or invited.

I tabled at the meeting of 15/2/18 a photograph of this intersection (copy attached) showing (with red cups/yellow markings) the outline of a 12.5 M truck in this intersection, both east bound lanes in Cowper Wharf Rd would be totally blocked and create an extremely dangerous situation for traffic exiting the Cahill Expressway off ramp (especially motor bikes).

The Finger Wharf is serviced by traffic lights and traffic movements would be similar, if not less , to Lincoln Cres.

SM should, as with the Ferry Service proposal, work to establish a Forum of all interested parties (TWT, Car Park West, WFW residents, hotel and restaurants, local residents and

businesses) to approach the Premier/ Minister to establish new traffic lights at this intersection.

Alternatively to Traffic Lights , right hand turns into Cowper Wharf Rd will have to be restricted to vehicles not exceeding 7 M in length. Attached is a photo of a similar sign at the intersection of Palmer St and Sir John Young Cr.

Movements to and from the SM Docks will also need to be excluded from peak times as previously submitted by me.

Pedestrian Access and Lift.

Alternate general or restricted lift access to the proposed above ground SM lift could be provided by an SM lift incorporated into the fire escape tunnel proposed on the southern boundary of the lower Gallery to Lincoln Cres.

Your Draft SSDA Response to TWT 15/2/18 does not reflect SM's concurrence that a Formal Agreement for use of the TWT lift will be negotiated in the event, that despite our representations to the contrary, TWT's lift will ultimately be used in accordance with the terms of the Easement. The use proposed by SM was certainly not contemplated by the Grantor or Grantee of the Easement.

Although this email is sent in my personal capacity, I look forward to discussing these matters tonight.

Hi Sally,

21 March 2018

Re: SM "Draft" Final Response to Submission 13 March 2018

I note we are meeting next Monday 3.00pm to again review your Draft Final RtS presented at the community meeting on 13 March last. The RtS was poorly received by the community attendees. A number of shortfalls in SM's SSDA and subsequent Responses to Submissions were ventilated. I will only canvas two issues as I understand others will raise other issues.

I will be attending in two capacities, firstly as a member of TWT BMC Sub Committee and secondly personally.

In my former role, I am charged with resolving the BMC's position and then submitting that position to the Department of Planning regarding the PROPOSED Seawater Exchange Chamber System.

Seawater Exchange Chamber System

That SM has provided, as late as 13/3/18, "**some**" details of this chamber is incredible and certainly not in the spirit of the Act's consultative process. How SM could proceed to SSDA with such scant detail on a major component that extends SM so far from its site, involving RBGD lands, Sydney and TWT's interests beggars belief.

Up until 13/3/18 – all we had was an ever changing simple site plan, showing a small blue rectangle with pipes shown as dotted lines to the harbour and the dock area of SM.

As recently as 15/2/18 the blue rectangle in the EIS Plan had moved 40-50 metres north to a most conspicuous and undesirable place at the end of TWT's boardwalk area on or near RBGD's waterfront land. Another lease?

I raised these matters with you in my letter of 6/3/18 (attached) and SM presented its new plan on 13/3/18 in basic form.

Most had always assumed from the material supplied in the EIS and until 13/3/18 that the Cooling Chamber etc was to be within the SM substructure – this now appears not to be the case.

The small blue rectangle shown on ALL previous iterations is now the rather formidable concrete structure 7m long, 3m deep and ? wide (the plan does not show this vital detail) with a pop up cylinder 840 mm high and 2800mm diameter with a 250mm high 2800mm diameter **brass vent** (referred to by SM as a brass top plate) to expel heat, air and noise from the chamber.

Its siting 13m (**not 19m as shown at P50 RtS**) from my bedroom window, with its brass venting and in the corner of the rock cutting, are grounds for serious objection: -

1. The location in the corner of the rock wall will only bounce and extenuate any **noise**, which is inevitable - running essentially turbo pumps, penstock and backflush.
2. The brass top plate is far from what SM purported to describe at our meeting of 13/3/18. It is a 250mm high cylindrical vent on top of a 840mm high ,2800mm diameter pop up.
3. There is no detail (nor scale) on what is to be on top of the 7m approx. long by ????? wide concrete chamber / cooling pond. Bare concrete, grass or landscaping?
4. The construction drawing supplied at P56 RtS - makes no sense, does not correlate with the original EIS plan shown at P47 RtS and requires full and accurate to scale drawings. Two heat exchangers?
5. Sea water outlet pipes are shown at the same diameter as the 1200mm inlet pipes with a penstock valve --**noise** -!! All other plans and information show the outlet pipes are 400mm.
6. Who designed the Chambers -? Can we have their contact details so that we can save time and clarify these matters?
7. Back wash pump --**noise**!
8. Inlet and outlet pipe locations to the harbour keep changing. Can we have their final location.
9. There is no way, on the information supplied, to test your assessment of 29dBLA at unit 34's windows (13 metres not 19 metres away).
10. I reserve TWT BMC's and my personal right to make further submission regarding this Seawater Exchange Chamber until sufficient detailed information is supplied to enable proper assessment and submission.

Visual Impact

On my behalf, I need to state categorically that I have asked SM for the past two (2) years to provide a photomontage of the Bunker and the Gallery Three wall as proposed by SM. Originally SM representatives agreed to produce such a photomontage, but never have.

The continuing use of photomontages taken from the Finger Wharf's perspective, using TWT's rooftop gardens (10m high) as the base of the Gallery Wall is positively and persistently deceptive. It is not consistent with the Act's consultative process.

Will you provide a photomontage showing the Bunker wall and Gallery 3 wall taken from our Gym's veranda perspective?

If NOT we will provide one from KANN FINCH architects for submission to the Department in support of our argument, that the unrelieved Bunker and Gallery 3 walls create an unacceptable industrial canyon effect separating quality residences from what is purported to be a world class modern art gallery. The area is far from industrial. I have proposed leaving a 5m section at the northern end in its existing state to exemplify the alleged item.

To keep reverting to a photomontage taken from our entry, using the street trees and vague SM details to great effect, does not satisfy our reasonable request. Your photomontage base photograph has photo shopped out the very visible city skyline.

You are hiding from the parties most seriously affected, TWT residents, information which is clearly damning in the community's eyes to your proposal.

I am not a fan of the expanse of the bare modern white (may be limestone) walls set in what is a Heritage Precinct (everything around this precinct and harbour is Sydney Sandstone – been there before Cook -- before our indigenous inhabitants—to repaint TWT we need to satisfy Sydney City Council that any colour chosen must be sympathetic to the sandstone of the Heritage Precinct) yet SM still won't tell us the finish proposed at this very last stage of your SSDA – “maybe Mediterranean Limestone” . Destroying what we bought into as green open space.

SM has provided little information about the 15/2/18 proposal for a” 1.2m or maybe 1.5 m” greening affect at the top of the Bunker. This information is too late and far too scant to assess. I reserve my right to make further submission.

There has been NO ARCHITECTURAL INPUT TO RELIEVE THE IMPACT OF THIS WALL AND THE BUNKER WALL. Yet SM holds out its development as outstanding architecture. It cannot meet that claim by failing to sympathise with its surroundings.

CLAIMS OF HERITAGE LIMITATION on the Bunker wall cannot be supported without express objection from NSW Heritage and Environment Department and the Heritage Council. Both would find it difficult to object yet approve SM's re use of the SAME ITEM.

Will you provide the photomontage?

Will you provide proposed green wall details?

Will you confirm the finishes?

Will you provide copies of the proposed leases upon which the SM is based ?

Regards

John Gerathy

Re: SM – SSDA

Hi Sally,

I refer to your email of 23/4/18 “capturing” the issues raised at our meeting on 12/4/18 and advising that SM had lodged its RtS notwithstanding that nearly ALL of the issues we have raised in our Submissions to SM’s EIS and discussed with SM since mid December last are still unresolved and our respective consultants are still meeting to discuss traffic lights and an SM lift.

I will address the issues as I see them as follows :-

Photomontage – Bunker/Gallery Wall

Over the past two and a half years, I have met Nick Wolf on at least 8 occasions. On each occasion, I requested SM provide a photomontage of the Bunker /Gallery 3 Wall from TWT’s perspective, typically from TWT’s gym.

Nick initially agreed to do so but none was provided in SM’s EIS and every subsequent request (6 times) has been ignored.

At our meeting on site on Thursday 19/4/18 Nick told Don Smith and myself that SM would not provide a photomontage. He certainly was not embarrassed in refusing our request but was clearly uncomfortable when the canyon industrial effect was raised.

Nick stated 19/4/18 that SM was still preparing plans for greening of the bunker wall. When will plans be available?

Sally you state TWT sought an increase in height of vegetation on top of the bunker wall as recently proposed by SM – that is not, as I understand it , TWT’s position. What is wanted is a concerted effort to green the whole bunker wall as shown in Sanna’s Competition Winning Plans as well as relief of the bare “limestone? “ Gallery 3 Wall.

Sally your email of 23rd April 2018 does not resolve many outstanding issues.

I again request SM to agree to provide within seven (7) days (1/5/18) a photomontage as requested alternatively you provide to Kann Finch ,at the joint architects’ meeting this Friday 27 April, such elevations, revit plans ,photos etc that Kann Finch may require to prepare such a photomontage

Heritage Stepped (Bunker) Wall.

SM quotes a listing on the State Heritage Register as the basis for not greening this wall as originally proposed by Sanna. Surely Sanaa was appraised of the potential heritage issue and determined that landscaping the Bunker wall was in keeping with its design cascading down

from the RBGD to Sydney Harbour and Woolloomooloo . Refer 6.2.1 of GML's Impact Assessment.

The wall is not in itself a Listed Item , it falls into part of State Heritage Register Item No 01070 Royal Botanic Gardens and Domain .

Does SM have confirmation in writing from Heritage Council / EOH (Heritage) that greening of the wall is objected to? Please produce.

Does SM have confirmation in writing from Heritage approving the demolition of the internal bunker to provide SM's development? Please produce.

Nick, stated on site (Thursday 19/4/18) that Heritage opposed moving the Seawater Exchange Chamber to the south - away from TWT bedroom windows as requested by me. Please provide written confirmation of this position from Heritage.

Maintenance of the Bunker Wall

The word patina was used by me as a quip to an off the cuff response by a member of our Sub Cmttee in reply to SM's unheralded proposal to CLEAN the bunker wall. We have at all times wanted the bunker wall greened and the Gallery 3 Wall relieved.

Photomontages would have resolved the best way to treat the bunker wall.

Seawater Exchange

SM's belated delivery of hardly discernible or detailed Seawater Exchange Chamber plans leaves interested parties in much the same position as with the bunker wall , being unable to make considered response.

I do not accept the Substation as a major contributor to the background noise , as it has always been proposed (since well before TWT was completed in 1998) that the Substation be decommissioned. The substation should be taken out of the equation in determining background noise for TWT. SM and TWT will have to live together for a long time without the Substation. This fact seems to have escaped SM's appropriate attention in addressing TWT issues.

Nick on 19/4/18 agreed to provide up to date acoustic reports on both the Seawater Exchange Chamber AND the 500 PAX Café/Entertainment Centre only 50 metres from TWT bedrooms. Arups 54.8m is the maximum distance.

TWT owners/occupiers, especially those from mid to southern TWT units, are cognisant of acoustic issues with entertainment venues on the Finger Wharf across Woolloomooloo Bay, although three (3) times further away from them than SM's Cafe Entertainment area will be.

Arups Report – Rev H dated 28 February 2018 was attached to your email. Why was this report (Rev H) not presented to TWT before now? TWT needs reasonable time to seek expert advice on Arup's "opinions"/ CONCLUSIONS as follows :-

3 Existing Environment

The substation should be specifically excluded from any assessment of background noise. SM was fully aware of the proposed demolition of the substation.

5.2.2 Seawater Exchange

Independent assessment of Arup's report to acoustics and maritime / marina issues is required following the production of extremely belated, incomplete and vague plans by SM. I note there is some further material in Arups Appendix H to your RtS.

5.4.1 Outdoor Café.

Independent assessment of Arup's report is required. I have raised with SM whether the glass wall on the eastern side of the Entertainment area should be higher and denser to increase acoustic protection for TWT residents. SM has not responded.

5.5.1 Affect on the Community.

We dispute that only "the interim Construction Noise Guideline" applies. The massive SM construction within a Residential Area requires higher standards than what the "construction HMS/Noise within the Central Business District document" requires. Working hours to 6.00 pm are strongly objected. Site should shut down at least by 4.00 pm during demolition to facilitate traffic management and general amenity for TWT in Lincoln CR.

5.5.4

Works to be carried out outside Gallery Hours will need to meet strict compliance with noise and hours at TWT.

Table 13

Needs independent verification.

I am disappointed that SM has lodged its RtS before most of the issues we have been raising with SM since Dec 17 are still not resolved.

There is a feeling that there has been a lack of resolve on the part of SM to do so.

Lift

I did suggest using an upgraded southern fire escape as a means of accessing a lift. This matter is currently with our respective architects.

My and TWT's response to SM's Universal Access proposal will follow the outcome of the architects' discussions.

I do not accept that it is not architecturally possible to incorporate a one stage lift from Lincoln Cr into the SM development.

SM's "couple of inclusions" in the R+S relating to TWT are noted, however, they beg the questions:-

What is the Loading Dock Management Plan?

Directing trucks to turn left into Cowper Wharf Rd does not auger well for SM's support for upgraded traffic lights at the intersection which is still under discussion by our respective traffic consultants.

The addition of soft landscaping on top of the bunker wall is not landscaping of the bunker wall.

TWT has always supported the Ferry Proposal (in fact raised by me) and will shortly nominate representatives to the Forum.

Kind regards
John Gerathy
26/4/18

Andy Nixey

From: Jason Wall <jwall@ausgrid.com.au>
Sent: Monday, 14 May 2018 1:14 PM
To: jhgerathy@gmail.com
Cc: Tiago Cura
Subject: Decommissioning of City East substation

Hi John,

Thanks for your enquiry and the brief chat.

I can confirm that Ausgrid's current plans are to decommission the City East Substation in 2025/2026.

The most recent information about our plans for this substation have been published in mid-April and I include a link to the report on our website for your information.

<https://www.ausgrid.com.au/-/media/Files/Industry/Regulation/Regulatory-Investment-Test/DPAR--Ensuring-reliability-requirements-in-the-Sydney-CBD.pdf?la=en&hash=9B2559D775DEB6147C70D213031A8FD83DA356C1>

Regards,

Jason Wall
Program Development Manager - Ausgrid
(02) 9269 7133

This e-mail may contain confidential or privileged information. If you have received it in error, please notify the sender immediately via return e-mail and then delete the original e-mail. If you are the intended recipient, please note the change of sender email address to @ausgrid.com.au. Ausgrid has collected your business contact details for dealing with you in your business capacity. More information about how we handle your personal information, including your right of access is contained at <http://www.ausgrid.com.au/>

Date 14 May, 2018

Reference PKA11247 R01v2

Project Sydney Modern Art Gallery - Acoustic Review

Contact John Gerathy

Email jhgerathy@gmail.com

Address Unit 34, 10 Lincoln Crescent
Woolloomooloo NSW 2011

File PKA11247 R01v2 Acoustic Review



Dear John,

Re: Sydney Modern Art Gallery - Acoustic Review

PKA Acoustic Consulting (PKA) have been engaged by John Gerathy (client), resident within the Wharf Terraces of 10 Lincoln Crescent Woolloomooloo, to present an acoustic review of the proposed Art Gallery of NSW (AGNSW) expansion "Sydney Modern" project.

Our commissioning and works began on the 9th May 2018, allowing 6 days prior to close of final submissions on the 14th May 2018. The short timeframe prevented a detailed review of the full proposal scope, instead this letter addresses the following matters:

- Potential noise impacts from the indoor and outdoor likely noise generating areas to the Wharf Terraces
- Potential noise impacts from the Sea Water Exchange to the Wharf Terraces

We have reviewed the following documents provided by NSW Planning [Ref: SSD 6471]

- Appendix P: ARUP Environmental Impact Statement, Acoustic Report prepared for the Sydney Modern project [Job: 246695-00, Revision H, 28th February 2018], "ARUP Report"
- Appendix C: SANAA and Architectus architectural plans [Job: 140419 Revision G, 20th April 2018], "Architectural Plans"
- Appendix H: Sea Water Heat Exchange Report [Job: 14702 can020, Revision 06, 16th March 2018], "Sea Water Report"

1.0 SUMMARY

PKA does not object to the Sydney Modern project. It our opinion that the project can feasibly comply with the relevant acoustic criteria. However, the acoustic works undertaken by ARUP to date are insufficient which may result in substantial noise impacts to the Wharf Terraces due to the lack of proposed acoustic treatment options, and application of the relevant noise criteria.

PKA ACOUSTIC CONSULTING

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2.0 SITE DESCRIPTION SUMMARY

The proposed Sydney Modern project is located to the east of the existing AGNSW. We anticipate the Lower Level 2 and Lower Level 1 to involve the most noise generating areas. These include the Multi-Purpose Space, Outdoor Café, and outdoor terrace areas.

The Wharf Terraces are located to the south east beyond Lincoln Crescent, with the habitable spaces located approximately 51m from the proposed site boundary.

Lower Level 2, Architectus Drawing in Appendix C (DA1003, Revision I, 2018-04-20)



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3.0 OUTDOOR CAFE

The ARUP Report, in Section 5.4.1, states the following:

*Outdoor Café is proposed to accommodate 100 people under the normal operation, and up to 500 people during functions. Functions will not include any external amplified music.
People would interact at normal conversation levels*

Based on the above, the ARUP Report assumes a Sound Power Level of $L_{Aeq15min}$ 105 dB, which PKA considers reasonable for such an outdoor café space.

We have received clarifying information about the typical Café operation from Sally Webster, Head of the Sydney Modern project, stating that the Café can seat 208 inside and 70 outdoors. It is our opinion that this does not dramatically change the ARUP assumptions.

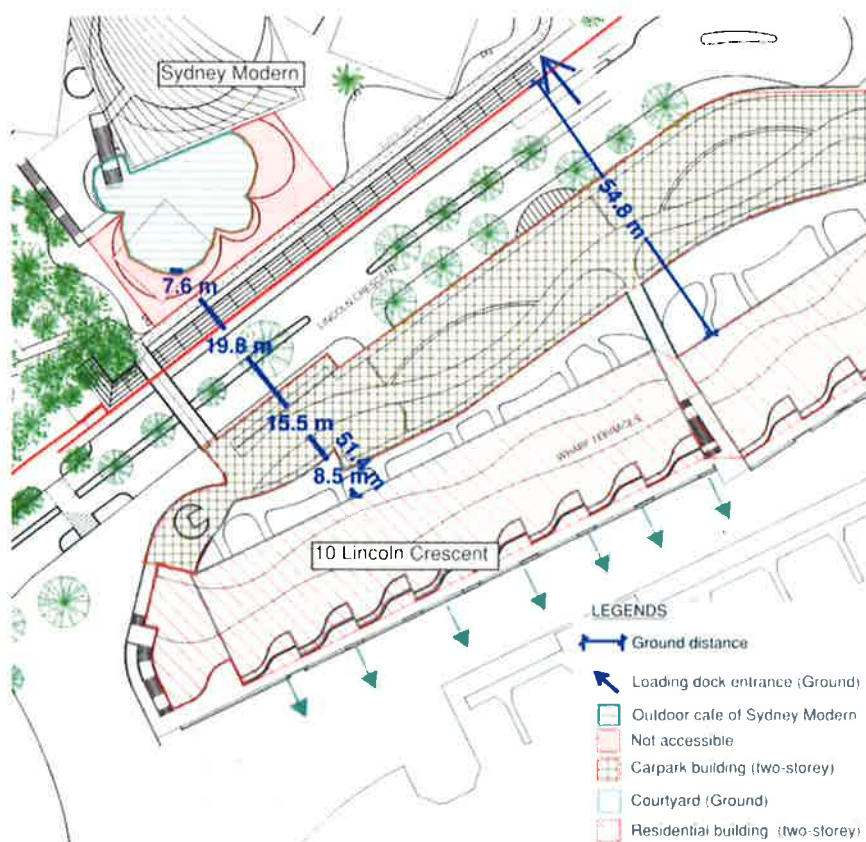
The ARUP Report then calculates the noise impacts to the Wharf Terraces at 10 Lincoln Crescent assuming distance loss and acoustic barrier effects to be $L_{Aeq15min}$ 43 dB.

The ARUP Report states this noise impact at the Wharf Terraces is compliant with the daytime (55dBA) and evening (44dBA) noise criteria of the NSW Industrial Noise Policy (INP) and unlikely to be noticeable.

PKA disputes ARUP's calculated noise impacts and noise criteria.

ARUP does not provide any noise modelling or detail regarding their assumptions of distance loss. PKA's preliminary calculated distance (D) loss of approximately 60m, assuming a best-case of $20\log(D)$, is a 36dBA reduction.

ARUP Markup Contained Within Report



ARUP does not provide any noise modelling or detail regarding their assumptions of acoustic barrier effects. During PKA's inspection of the proposed site and the Wharf Terraces we estimated the existing shielding provided by the non-habitable (western) portion of the Wharf Terraces to be minimally line-of-sight shielding as follows:

PKA Markup of Site Photo Taken During Inspection



PKA ACOUSTIC CONSULTING

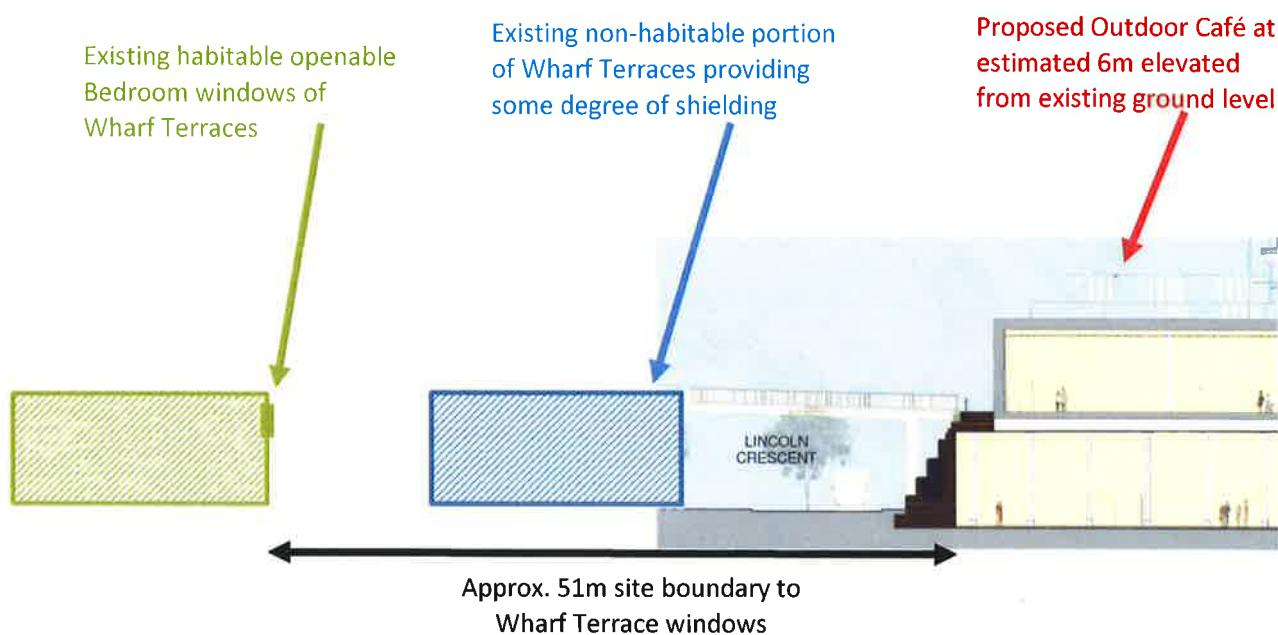
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To further highlight the location of the Outdoor Café in relation to the Wharf Terraces, the markup below incorporates a portion of an Architectus section drawing with PKA's approximate locations and distances of the Wharf Terrace windows. As PKA has not conducted a detailed noise model, we anticipate at best a 10dBA shielding reduction.

PKA Markup of Architectus Drawing in Appendix C (DA2000, Revision I, 2018-04-20)



PKA's preliminary calculations, assuming best case attenuation from distance and shielding, show that the Outdoor Café is non-compliant during the evening periods:

Description	L _{Aeq} dB	
ARUP predicted Outdoor Café Sound Power Level	105	
ARUP Contingency correction for Occasional Speeches	+ 5	
PKA Estimated Best-Case Distance Loss Attenuation	- 36	
PKA Estimated Best-Case Barrier Shielding Attenuation	- 10	
PKA Estimated Sound Power to Sound Pressure Correction	- 8	
PKA Estimated Noise Level at the Wharf Terraces	56	
ARUP Daytime INP Noise Criterion	55	Marginal Compliance
ARUP Evening INP Noise Criterion	44	Non-compliance by over 10dBA

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PKA recommends that ARUP conduct a more detailed acoustic assessment of the Outdoor Café noise impacts to determine the feasibility of the current design. The detailed assessment would then inform whether additional acoustic treatment is required, which may include, but not be limited to, the following:

- Increasing the proposed outdoor café balustrade height to provide the necessary barrier shielding
- Limiting the number of patrons in the outdoor areas and/or event types in the evening periods

Additionally, ARUP has applied the INP noise criteria which is suitable for Outdoor Cafés in some instances, however PKA suspects that during large functions alcohol will be served. Licenced premises are governed by the Liquor and Gaming NSW (L&GNSW) noise criterion. This criterion can be more stringent in some instances as the assessment is not simply an L_{Aeq} criterion, but rather an “ L_{A10} average maximum” octave band frequency assessment.

During our site visit we conducted an octave band noise measurement at the Wharf Terrace window location to provide data for a future assessment if needed.

The noise measurement was taken over a 15 minute period during the daytime from 11:15 to 11:30 on the 9th May 2018 as follows:

Entry walkway of #25 and #26 Wharf Terraces	Descriptor	dBA	Octave Band Centre Frequency (Hz) dBZ								
			31.5	63	125	250	500	1,000	2,000	4,000	8,000
Noise dominated by distant traffic from Cahill Expressway	L_{90} (Background)	45	58	59	52	47	41	40	35	22	20

Instrumentation used during the noise survey consisted of a NTi XL2TA Sound Level Analyser Type 1, Serial number A2A-09351-E0 and Larson Davis Calibrator CAL200, Serial number 11419. The equipment was calibrated before and after noise measurements with no adverse deviation between the two.

Location of PKA Noise Measurements at Wharf Terraces (facing toward proposed site)



PKA requests that ARUP clarifies whether the Outdoor Café and/or associated areas will be licenced. If so, PKA recommends that a detailed acoustic assessment of the Outdoor Café noise impacts be undertaken to inform whether additional acoustic treatment and/or operation limitations are required.

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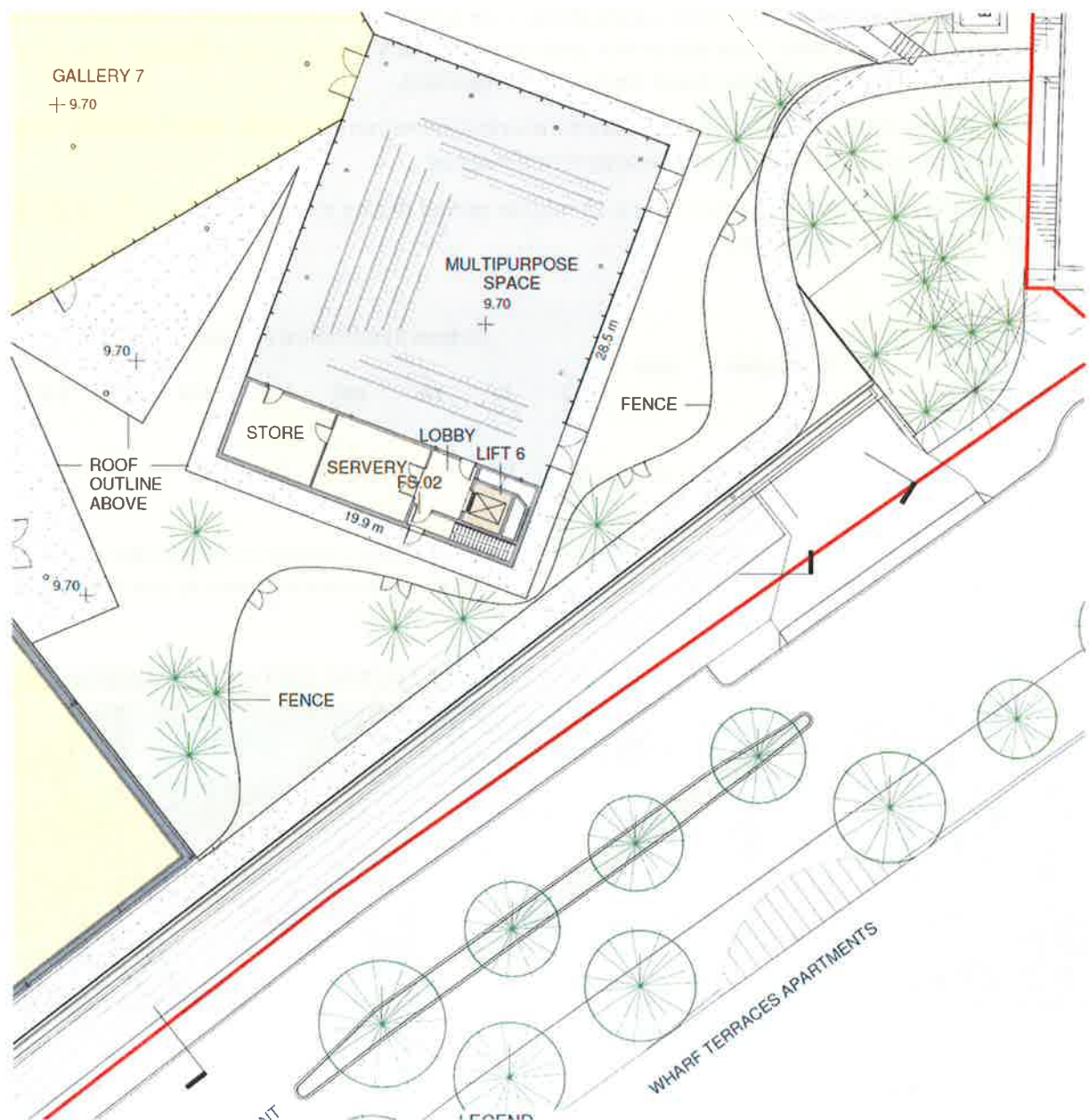
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4.0 MULTI-PURPOSE SPACE

The ARUP Report does not cover the potential noise impacts from the proposed Multi-Purpose Space. We anticipate that this space will be a licenced premise that may include amplified live music.

It also appears that the internal space opens out to a terrace area. This could result in noise breakout from the internal spaces as well as patron noise impacts associated with the outdoor terrace area use.

Architectus Drawing in Appendix C (DA1003, Revision I, 2018-04-20)



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Architectus Drawing in Appendix C (DA2001, Revision I, 2018-04-20)



PKA requests that ARUP clarify the use of this space, and if necessary, undertake an acoustic assessment to determine whether compliance is achieved for the Wharf Terrace occupants.

The acoustic assessment would then inform whether acoustic treatment is required, which may include, but not be limited to, the following:

- Acoustic upgrades to the building, including glazing, roof, and ingress/egress doors
- Limiting the use of the outdoor terrace and/or event types within the space

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5.0 SEA WATER EXCHANGE

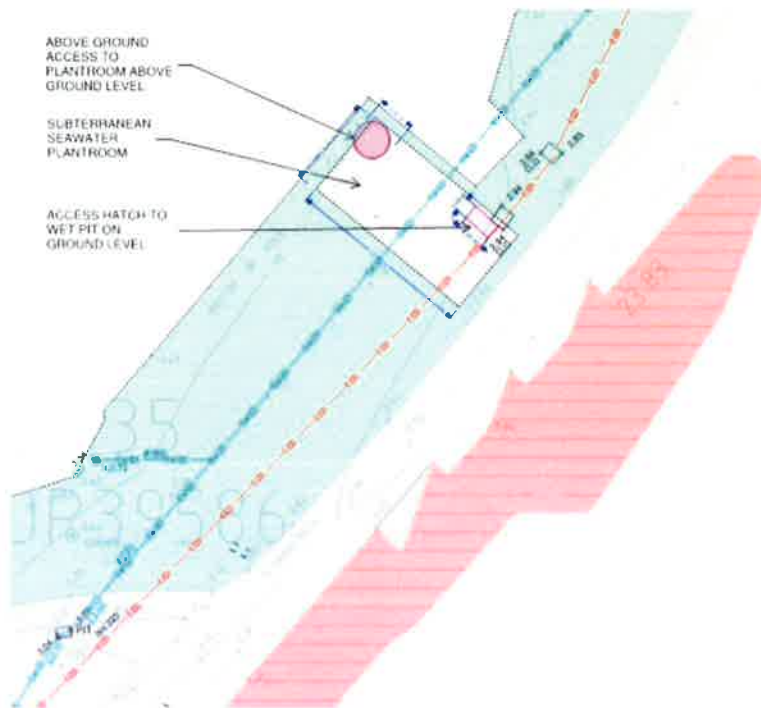
The ARUP Report, in Section 5.2.2, conducted an acoustic assessment into the Seawater Heat Exchange Cooling System.

The proposed plantroom is in close proximity to the Wharf Apartments, specifically our client located on Level 1, Apartment 34 with openable windows facing the proposed location.

PKA Markup of Site Photo showing Proposed Plantroom Location



Steensen Varming in Proposed Plan Appendix H (Job: 14702 can020, 2018-03-16)



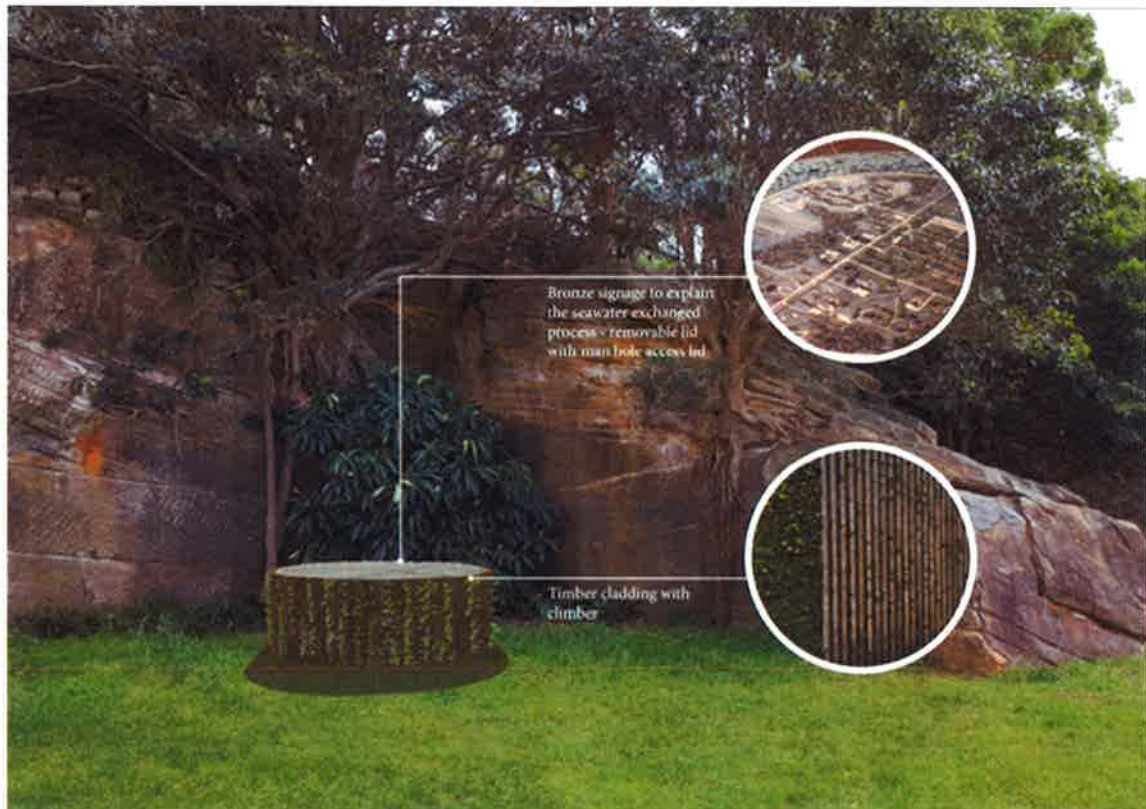
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Steensen Varming in Proposed Markup Appendix H (Job: 14702 can020, 2018-03-16)



The ARUP Report states that plant selections are not currently known, which PKA accepts due to the SEARS stage of the project. However, ARUP goes onto predict the noise level based on the preliminary design and equipment selections.

The ARUP Report does not state the source noise levels assumed in the calculations, making it difficult for PKA to determine whether ARUP's predicted noise level of L_{Aeq} 29dB showing compliance is feasible.

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Additionally, the ARUP Report does not mention the plant noise from the existing substation and whether this impacts on the prevailing ambient noise conditions of the Wharf Terrace receivers.

Location of Substation and rear boundary of Wharf Terraces



During our site visit we conducted an octave band noise measurement at the rear boundary of Apartment #34 the Wharf Terrace to provide data for a future assessment if needed.

The noise measurement was taken over a 5 minute period during the daytime from 12:15 to 12:20 on the 9th May 2018 as follows:

Rear boundary of #34 Wharf Terraces	Descriptor	dBA	Octave Band Centre Frequency (Hz) dBZ								
			31.5	63	125	250	500	1,000	2,000	4,000	8,000
Noise dominated by Substation and some distant traffic from Cahill Expressway	L ₉₀ (Background)	50	55	60	66	51	43	40	33	25	18

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The existing Substation emitted a tonal noise at 100Hz which is not accurately represented in an Octave Band assessment. The following noise measurement was conducted over a 1 minute period during the daytime from 12:14 to 12:15 on the 9th May 2018 as follows:

Rear boundary of #34 Wharf Terraces	Descriptor	Third Octave Band Centre Frequency (Hz) dBZ		
		80	100	125
Noise dominated by Substation and some distant traffic from Cahill Expressway	L ₉₀ (Background)	46	66	44

From the above measurements, PKA have determined that the Substation noise emission at 100Hz is dominating the background noise environment and subsequent 50dBA measured level. However, this imbalance in the background noise will not mask the Sydney Modern noise emission from plant or patrons in the same way a typical 50dBA background noise spectrum dominated by distant traffic noise.

We have calculated the background noise without the Substation noise emission to be 5dBA lower at 45dBA, which we recommend be used when assessing broadband noise sources from the site.

Additionally, our client has provided information from Jason Wall, Program Development Manager of Ausgrid, stating that their current plans for the decommissioning of the Substation to be in the year 2025/2026.

This future decommissioning would have the effect of significantly reducing the background noise at the rear of the Wharf Apartments, particularly in the evening/nighttime, resulting in the Sydney Modern plant and event noise more noticeable.

PKA recommends that ARUP update their acoustic assessment of the Sea Water Exchange to determine the feasibility of the current design taking into account the above information. The detailed assessment would then inform whether additional acoustic treatment is required, which may include potential relocation of the Sea Water Exchange if noise control options prove to be not feasible.

6.0 CONCLUSION

As stated in the Section 1 Summary, PKA does not object to the Sydney Modern project. It is our opinion that the project can feasibly comply with the relevant acoustic criteria. However, the acoustic works undertaken by ARUP to date are insufficient which may result in substantial noise impacts to the Wharf Terraces due to the lack of proposed acoustic treatment options, and application of the relevant noise criteria.

Yours faithfully,



Joel Parry-Jones, Principal

PKA Acoustic Consulting