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Our Ref: MA08365-1
Date: 1 September 2010

Attn: Frank Ko
Randwick City Council
30 Frances Street
Randwick NSW 2031

Via: hand delivery

Dear Frank

RE: PREFERRED PROJECT REPORT – WALLACE WURTH BUILDING (MP 09_075)

We refer to your recent conversation with Geoffrey Leeson from UNSW and subsequent correspondence of 23 August 2010 requesting submission of a Preferred Project Report for the Wallace Wurth project (MP 09_0075). This letter is provided in response to this request and seeks to address a number of outstanding issues raised by Council, Sydney Water and Sydney Airports Corporation. Revised plans have also been prepared which seek to alter the configuration of the atrium at the southern end of the proposed building. These issues are discussed in further detail below.

1. Sydney Water

Sydney Water have been consulted throughout the design process, both prior and post lodgement of the application. The latest feedback from Sydney Water raised the following issues:

- The cantilever extension on Botany Street encroaches approximately 3m over the easement on Botany Street and would need to be referred to their Property Division for final approval. The Property Division made no comment and referred the access issues back to the Operational Division for final approval.
- The planter structure along High Street presented a significant structure within the easement zone and was unlikely to be supported. The plans have since been amended to move the planter structure out of the easement, as per the attached section (**Attachment 1**). These have been provided to Sydney Water for comment. A condition of consent requiring Sydney Water approval of final designs is considered an appropriate mechanism to deal with any further issues in relation to the proposed encroachment. This has been communicated to Sydney Water and it is requested that Council seek to liaise with them in formalising this arrangement.

2. Sydney Airports Corporation

Council received correspondence from Michael Turner of Sydney Airports Corporation (SAC) on 15 August in response to the Wallace Wurth application. SAC confirmed that the proposed building encroached within the Airport's OLS conical surface and would therefore require the approval of the Department of Infrastructure.

Additional information was also requested in relation to the exit speed of exhaust fumes and whether any plumes would result from the exhaust. On this basis, a further study was conducted by Windtech, a copy of which is provided in **Attachment 2**. As part of the study, flue exhaust speed measurements were made from the top of the flue to 45m above the stack, for two cases:

1. The flue exhausts located on the roof with an exit velocity of 10m/s.
2. The flue exhausts located on the roof with an exit velocity of 14m/s inspected only from the NE.

The results of the study found that exit flue velocity will decrease from 10m/s to less than 4.3m/s at a height of approximately 33m above the stack (RL 128m). The corresponding height above the stack in the case of a 14m/s exit velocity is RL 140m.

This is in excess of the 110m height threshold specified by CASA, beyond which a detailed Impact Assessment Report is required. The attached report by Windtech investigates the potential for gases from the exhaust flues to impact on neighbouring buildings and houses. The findings of report are summarised as follows:

1. Flue gases impacted on nearby buildings and land for winds from all directions. However, they were diluted.
2. The highest estimated gas dilution ratio impacting on nearby buildings was 0.004.
3. The exit stream can be further diluted with the inclusion of dilution fans at the exits of the flues.
4. The exhaust gases impacted intermittently on neighbouring buildings for winds from the North, North-East, South, South-West, West and North- West.
5. The exhaust gases impacted frequently on the Matthew and Library building for winds from the North-East.
6. By increasing the exit velocity to 14m/s the exhaust gases no longer impacted on the Matthews and Library building.
7. For the fume cupboard and flue design discussed in this report, conditions will be acceptable for pedestrians at ground level if the quotient of the mass of a chemical that is permitted in fume cupboard divided by its permissible exposure limit is not greater than 250.
8. The exit flue speed will decrease from 10m/s to less than 4.3 m/s at a height of approximately 33m above the stack or RL 128m. As these measurements were made for the calm case they represent the upper height limit. For the with wind case the plume rise velocity decreases dramatically as it moves laterally away from the development.

As detailed in Michael Turner's email, we request that Council provide this information to SAC, who will discuss the application with CASA and inform if there are any further requirements.

3. Randwick City Council

Boundary Treatment & Landscaping

In correspondence received from Council on 19 August, clarification was sought in relation to the proposed structures and design details along the Botany and High Street boundaries, including corner treatment.

A number of the plans submitted with the project application included anomalies in the CAD detail along the Botany and High Street boundaries, which may have resulted in some confusion in relation to the treatment of this area. These anomalies have been corrected in the revised plans (**Attachment 4**). In addition, updated landscape plans (**Attachment 5**) have been prepared to clarify the proposed treatment along the Botany and High Street frontages. The following is proposed (refer **Attachment 5** for further detail):

- The brick retaining walls at (and to the north of) Gate 10 will be demolished and replaced with new off-form concrete walls, sandblasted to match the C25 entry. The retaining wall to the immediate south of Gate 10 will be rebuilt using bricks salvaged on-site. Further south of Gate 10 the existing brick retaining wall and boundary treatments will be retained to ensure consistency with the boundary treatment along this part of the Botany Street frontage.
- The existing hedge and palisade fence will be removed along Botany and High Streets and replaced with native plantings. Existing street trees will be retained where possible.

- The existing concrete footpath on Botany Street will be retained, with improvement works where damaged. New paving is proposed along the High Street frontage and will connect with the existing pathway to the west.
- Signage at the Botany/High Street corner will be replaced with new signage, comprising a 1600 high x 6400 long x 750 deep stainless steel box with lettering.
- As discussed with UNSW, despite a request from Council to reconsider the location and form of the bus stop on High Street, it is proposed to retain the structure as currently proposed. This will ensure the provision of bus shelters in line with requirements of the relevant bus companies and will maintain a consistent, uniform design along High Street.

Further detail is also provided in relation to landscaping in the vicinity of the new Gate 10 entry (refer **Attachment 5**). Detailed lighting design is considered to be best addressed prior to issue of construction certificate and is therefore not provided at this stage. This will enable an integrated approach to the lighting design, based on the approved architectural and landscape plans and in accordance with relevant Council policy.

The proposed landscaping and boundary treatment will promote a strong visual connection between the street and the building and will emphasise the importance of the corner as a key entry to the university. As demonstrated in the amended landscape plans, the proposed boundary and entry treatments are of high quality and create visual interest at street level. The connection between the campus and the adjacent public domain is enhanced through appropriate plantings and structural elements.

Parking

In their correspondence of 20 August, Council requested further clarification with regards to the impact of increased staff associated with the proposal on parking at the campus. Council have requested that the net additional parking required should be addressed in terms of the requirements of the UNSW Transport/Parking strategy.

The net additional staff numbers resulting from the proposal are all associated with the Institute of Virology (IoV) tenancy proposed within the building. The IoV is being relocated to the Wallace Wurth Building from 3 separate premises around Sydney, none of which currently provide parking for staff. As outlined in the attached letter from UNSW (**Attachment 3**), this arrangement is proposed to continue and the staff will not be provided with additional parking on the campus.

This approach is entirely appropriate for the University, which has excellent access to public transport and is attempting to discourage vehicular travel by staff and students. UNSW parking survey results have shown a distinct and positive reduction in vehicular travel to and from the campus and UNSW are committed to continuing this trend.

Other local government areas employ similar approaches to parking, with positive results. For example, the City of Sydney has a parking policy which stipulates a *maximum* parking provision for new residential developments and regularly approves proposals which do not include any parking. A reduction in the availability of parking discourages people from driving and inevitably results in an increase in public transport use.

The UNSW policy of travel demand management is consistent with the objectives of the campus DCP. One of the key objectives of the UNSW Kensington Campus Development Control Plan (DCP) is to reduce car dependence through a combination of:

- reduction of parking supply
- public transport upgrades
- location of university accommodation
- parking charges, and
- an interactive information system.

Consequently, the proposal does not include the provision of car parking.

4. Design Amendments to Atrium

Some minor amendments have been incorporated into the overall design of the building. These include amendments to the atrium within the southern section of the proposed building, minor changes to accommodate a fire stair to the lower ground floor and some subtle changes to the north and east elevations (refer amended plans in **Attachment 4**).

The changes to the elevations include minor alterations to the glazing on the northern facade and the inclusion of the proposed UNSW signage. These minor amendments will have a negligible impact on the proposed building and will not result in any additional environmental impacts.

The amendments to the atrium design have been proposed to improve the visual amenity and outlook from within the Wallace Wurth Building. The design as submitted has the atrium along the southern façade of the building at full height, allowing clear sightlines from within the proposed building to the façade of the Biological Sciences building. The current façade of the Biological Sciences building is ageing and of low aesthetic quality. There are no plans in the short to medium term to upgrade the entire façade, which will be contemplated as part of a broader campus master planning exercise.

The design amendments for this part of the atrium propose to reduce its height to Level 3. A new façade "skin" is proposed on those parts of the Biological Sciences building that would be visible from within the proposed Wallace Wurth Building following the amendments to the atrium (i.e. the ground floor, level 1 and level 2).

The new atrium roof will comprise a concrete slab, overlain with a membrane and stone ballast to enable drainage. Skylights are also proposed along the southern boundary adjoining the Biological Sciences Building to maximise solar access to the levels below.

The proposed amendments will not result in any adverse environmental impacts and will result in an improvement to the amenity for future occupants of the building. The portion of the atrium to be modified is small, with the majority to be retained at full height. The design impact of the feature will not be reduced as a result of the proposed amendments.

The proposed amendments are minor in nature and will predominantly impact on the outlook from within the Wallace Wurth Building. On this basis, and given that no submissions were received from surrounding properties in relation to the design of the building, the re-exhibition of the proposal is not considered necessary.

We trust this information is sufficient for your purposes, however should you require any further details or clarification, please do not hesitate to contact the writer by telephone.

Yours sincerely
RPS

Belinda Lewis
Senior Planner

cc: Geoffrey Leeson, UNSW
Ron Meyer, BLL

enc: Attachment 1: Amended Section – Relocation of Planter on High Street
Attachment 2: Air Quality and Exhaust Profile Study, prepared by Windtech
Attachment 3: UNSW Letter re Additional Staff Parking
Attachment 4: Revised Architectural Drawings (separate cover)
Attachment 5: Revised Landscape Plans (separate cover)

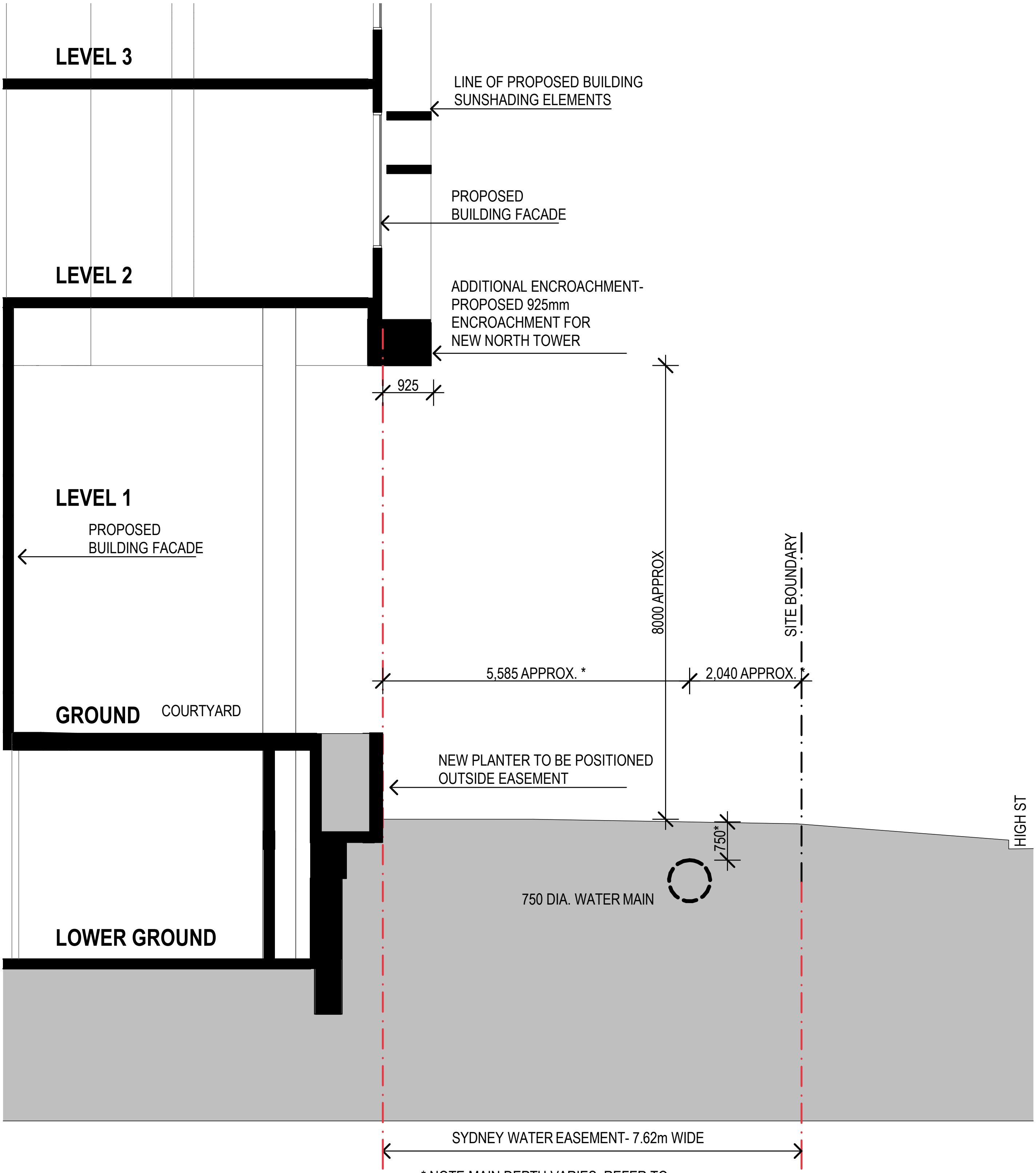
RPS

ATTACHMENT I

Revised Section – Planter on High Street

Prepared by

lahznimmo architects



* NOTE MAIN DEPTH VARIES- REFER TO
LAND SURVEY FOR RLs OF MAIN
\- LOCATION OF MAIN TO BE CONFIRMED.
APPROXIMATE LOCATION TAKEN FROM LAND SURVEY

1 **SECTION 3**
1:100

CLIENT

PROJECT MANAGER

ARCHITECTS IN ASSOCIATION

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30/07/2010

RPS

A T T A C H M E N T 2

Air Quality & Exhaust Profile Study

Prepared by

Windtech

Air Quality and Exhaust Profile Study

for the proposed Fume Cupboard Flues for

Wallace Wurth Redevelopment, UNSW, Kensington

August 31, 2010

Report Reference No. WA817-01F02(rev3)- AQ Report.doc

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Document Control

Revision Number	Date	Revision History	Prepared By (initials)	Initial Review By (initials)	Reviewed & Authorised By (initials)
0	23/08/10	Initial	SR/NT		TR
1	25/8/2010	Comments	NT		TR
2	26/8/2010	Comments	NT		TR
3	31/8/2010	Chemical Dilution	NT		TR

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The information contained herein is for the purpose of wind, thermal and or solar effects only. No claims are made and no liability is accepted in respect of design and construction issues falling outside of the scope of this report.

1.0 Introduction

The Wallace Wurth upgraded is the proposed redevelopment of the Wallace Wurth building located at the Kensington Campus of UNSW, Sydney. A visualisation study has been performed on the proposed development by modelling the dispersion of gases from a roof top exhaust and assessing the potential impact for winds from eight directions. The exhaust flue exist speed profile has also been measured.

A study was conducted to investigate the potential for gases from the exhaust flues to impact on neighbouring buildings and houses. Where gases impacted on neighbouring buildings the dilution ratio was estimated. The layout of the proposed outlet is illustrated in Figure 1.

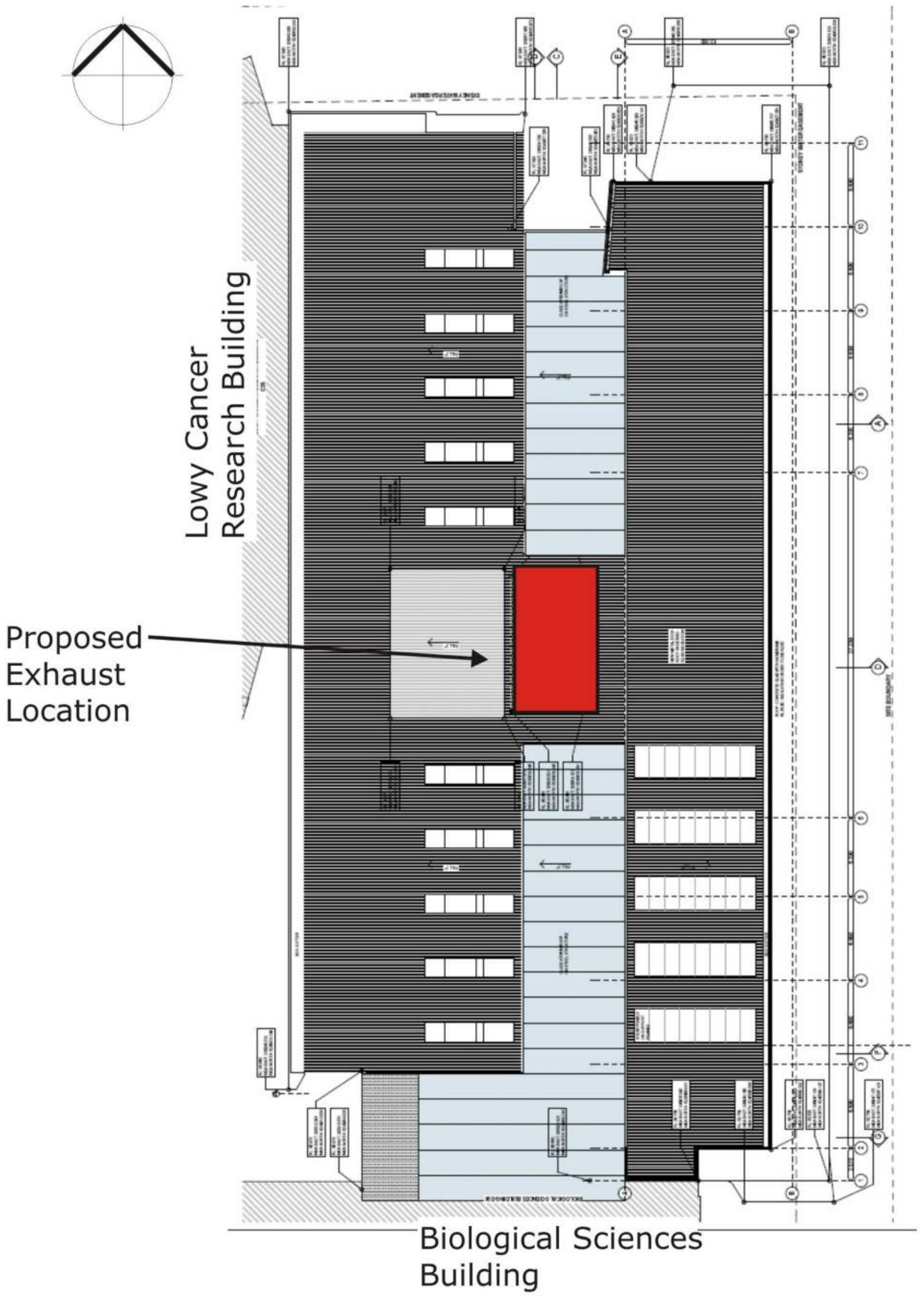

Figure 1: Plan view of Roof Level the proposed development including location of exhaust vent.

2.0 Methodology and Model Description

2.1 Model of the Study Building and Surrounds

Measurements were carried out using a 1:400 scale model of the development known as the Wallave Wurth Updgrade, UNSW, including the land topography and surrounding buildings for a radius of approximately 500m. Figures 2a to 2d show photographs of the model and surrounds as set up in the wind tunnel from four directions. Additionally, Figures 2e and 2f show close up shots from two directions with the vent locations highlighted.

The wind tunnel was set up to model the velocity gradient, longitudinal turbulence profile and the size of the eddies (represented by the power spectral density function) for a 1:400 suburban terrain. The wind speed in the wind tunnel was set based on Froude number similarity. This is defined as follows:

$$F_r = U * (L.g)^{-1/2}$$

Table 1 summarises the reference wind speeds based on 3-hourly mean wind speed data from Sydney International Airport from 1939 to 2008. The frequency column indicates the percentage of events that wind occurs from that 45-degree directional sector.

2.2 Smoke Visulisation method

The smoke visualisation technique employed used a smoke generator connected to an extended nozzle. The nozzle was then place at the base of the exhaust ports. The fine particles that make up the smoke cloud have a momentum or velocity response time of less than 1 millisecond which means that they will rapidly respond to changed in flow direction. The amount of smoke and speed of discharge of the smoke from the nozzle of the smoke generator could be altered, such that a suitable amount of smoke could be produced to identify the mean flow mechanisms around the exhaust locations and surrounding areas.

The dispersion characteristic from these outlets was examined for each of the eight sector wind directions (at 45-degree intervals). For each wind direction video footage was produced, illustrating the flow mechanics of the exhaust.

The video recording was analysed and potentially critical wind directions have been identified. Where the exhaust gases impacted buildings or ground levels the frequency and gas dilution ratio have been noted. As the type and quantity of chemicals to be used in the proposed building has not been finalised only the dilution ratios have been presented in this report.

For this study we have used a discharge velocity of 10m/s which was then scaled using the Froude number relationship. This is the allowable minimum discharge velocity for fume hood exhaust flues.

2.3 Flue exhaust profile

The flue exhaust mean speed profile was measured using Dantec hot wire probe anemometers. The probe support was mounted such that the probe mounting had minimal impact on the measured flow. In addition, care was taken in the alignment of the probe wire and in avoiding wall-heating effects

Table 1: Reference Wind Speeds at 200m Height

Wind Direction	Frequency (% of total)	Daily Average (m/s)
N	8	5.1
NE	14	7.0
E	8	5.4
SE	12	6.5
S	19	8.4
SW	9	6.6
W	15	5.6
NW	15	4.1

Figure 2a: Model of the proposed development and surrounds (from North).

Figure 2b: Model of the proposed development and surrounds (from East).

Figure 2c: Model of the proposed development and surrounds (from South).

Figure 2d: Model of the proposed development and surrounds (from West).

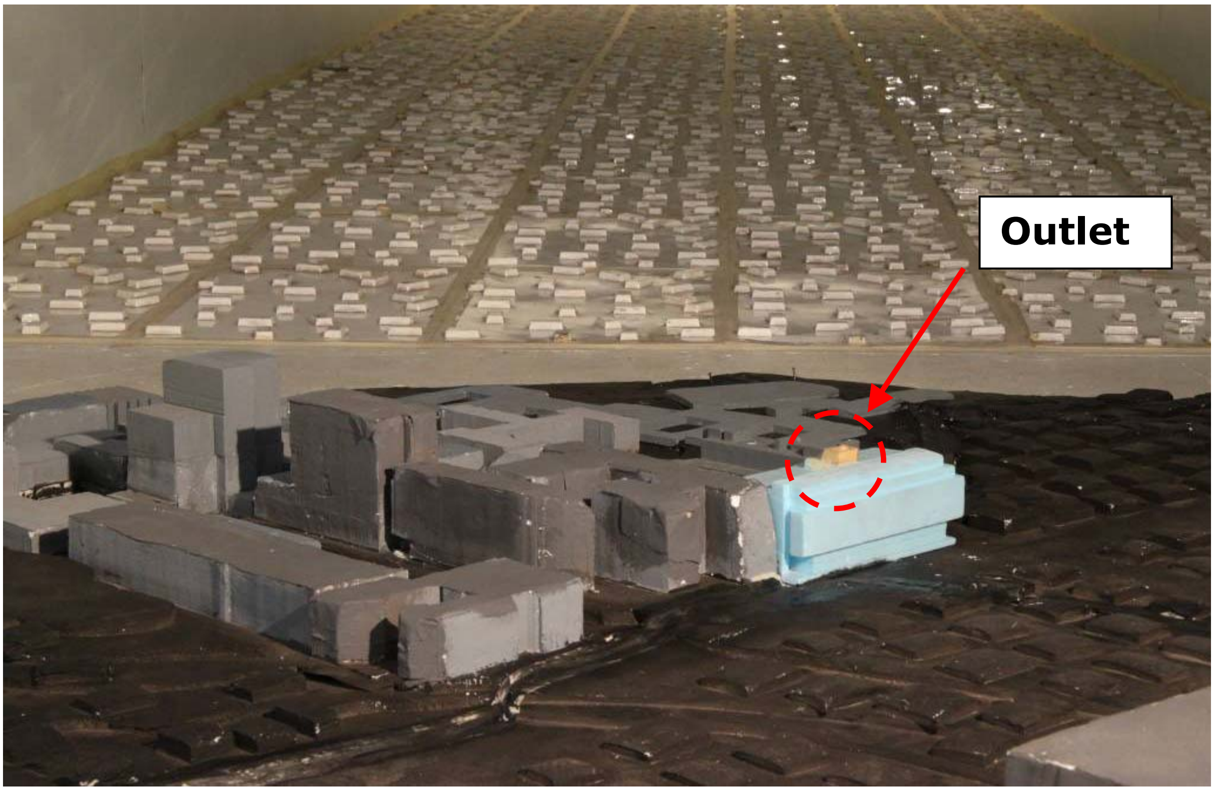

Figure 2e: Model of the proposed development and surrounds (close up showing exhaust from the South-East).

3.0 Sumary of Initial Air Quality Results

Table 2 below summarises the effects observed for two cases for the various wind directions investigated. These effects can also be seen in the accompanying videos. Figure 3 shows the locations that were subject to exhaust gas effects.

The two outlet cases that were examined are:

1. The flue exhausts located on the roof with an exit velocity of 10m/s.
2. The flue exhausts located on the roof with an exit velocity of 14m/s inspected only from the NE.

Table 2: Summary of Observations

Case No	Wind Direction	Impacts	Comments
1	N	Intermittent	Intermittent contact with ground and houses (Location 1, Figure 3)
	NE	**Frequent**	Frequent contact with Matthews and Library Building (Location 2a, Figure 3)
		Intermittent	Intermittent contact with ground and houses (Location 2b, Figure 3)
	E	Intermittent	Intermittent contact with Library Building (Location 3a, Figure 3)
		Intermittent	Intermittent contact with university buildings (Location 3b, Figure 3)
	SE	Intermittent	Intermittent contact with the race course (Location 4, Figure 3)
	S	Intermittent	Intermittent contact with race course and houses(Location 5, Figure 3)
	SW	Intermittent	Intermittent contact with houses (Location 6, Figure 3)
	W	Intermittent	Intermittent contact with houses and hospital (Location 7, Figure 3)
	NW	Intermittent	Intermittent contact with houses and hospital (Location 8, Figure 3)
2	NE	No	Exhaust blown over Matthews and Library buildings.

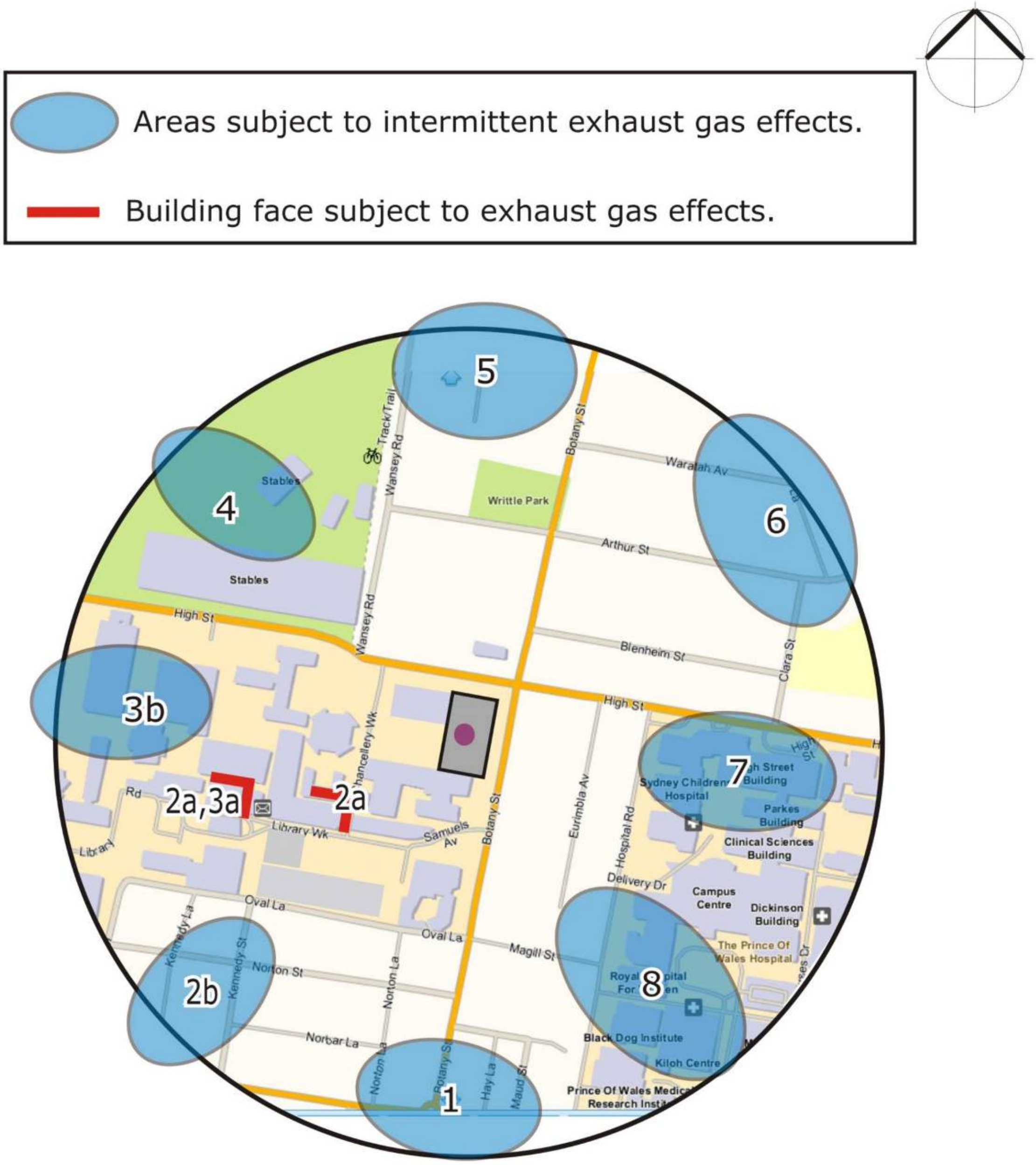

Figure 3 Locations subject to gas effects

For case 1 the width of the smoke plume was measured where it impacted either buildings or the ground. From these measurements the dilution ratio was calculated. These results are shown in Table 3. The exit stream can be further diluted with the inclusion of dilution fans at the exits of the flues.

Table 3: Estimated Dilution Ratios

Wind Direction	Location	Dilution Ratio
N	1	0.002
NE	2a	0.004
NE	2b	0.003
E	3a	0.003
E	3b	0.003
SE	4	0.004
S	5	0.001
SW	6	0.001
W	7	0.002
NW	8	0.002

4.0 Anaylsis of Air Quality Results and Treatment options

4.1 Case 1

Exhaust gases from the flue may impact either on neighbouring buildings or nearby land for winds from all directions. In all of these cases the exhaust plume has been heavily diluted before the smoke impacts. For all wind directions other than the North-East the contact is intermittent.

Intermittent Cases

As can be seen from the accompanying video the turbulent nature of the wind breaks up the exhaust plume resulting in the exhaust stream oscillating. This means that when these exhaust plumes impact either on the buildings or the ground, the contact point varies with time. The result of this effect is that in the intermittent case the time averaged dilution ratio may be lower than that stated in Table 3. An example is shown in Figure 4. The highest estimated dilution ratio impacting on nearby buildings or ground was 0.004.

Frequent Case

For winds form the North-East the exhaust plume impacts the Matthews and Library buildings. Although the exhaust plume still oscillates as in the intermittent cases the exhaust impacts these buildings with an increased frequency. An example is shown in Figure 5. The highest estimated dilution ratio impacting on nearby buildings or ground was 0.004.

Figure 4 Case 1, Wind from the North-West

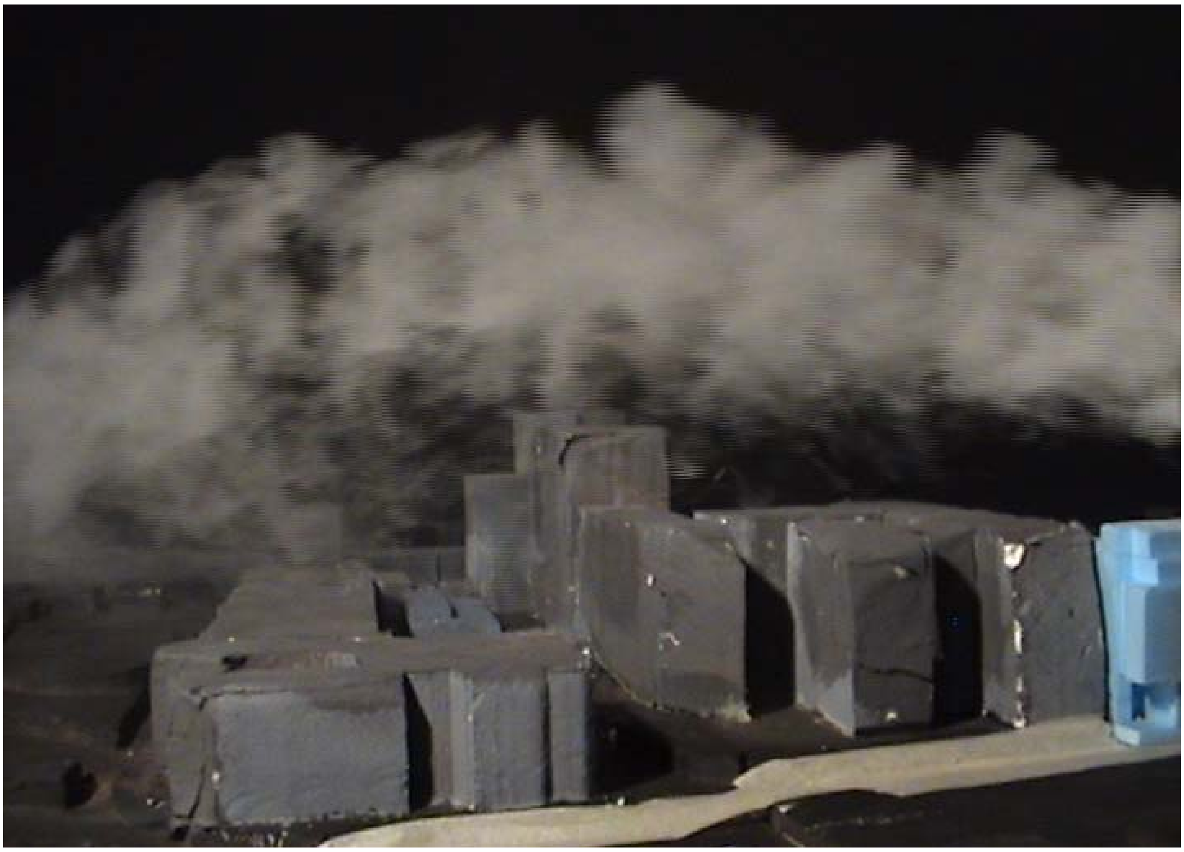

Figure 5 Case 1, Wind from the North-East.

Summary and Recommendations

Although the exhaust gas impacts either on neighbouring buildings or nearby land for winds from all directions the exhaust is heavily diluted as shown in Table 3.

If it is deemed that the frequency and concentration of gases impacting on the Matthews and Library buildings, in the case where the winds come from the North-East, is unacceptable the exit velocity of the exhaust can be increased. This treatment option was tested in case 2. The same effect can be achieved by significantly increasing the height of the exhaust flue. This option would require additional testing to determine suitable combinations of flue height and exit velocity.

4.2 Case 2

For winds from the North-East the exhaust plume impacts the Matthews and Library buildings. This situation can be avoided by increasing the exit velocity of the exhaust plume. This was the treatment option that was tested.

It was found that by increasing the exit velocity to 14 m/s the exhaust plume passed over the top of the Matthews building and the Library. An example is shown in Figure 7.

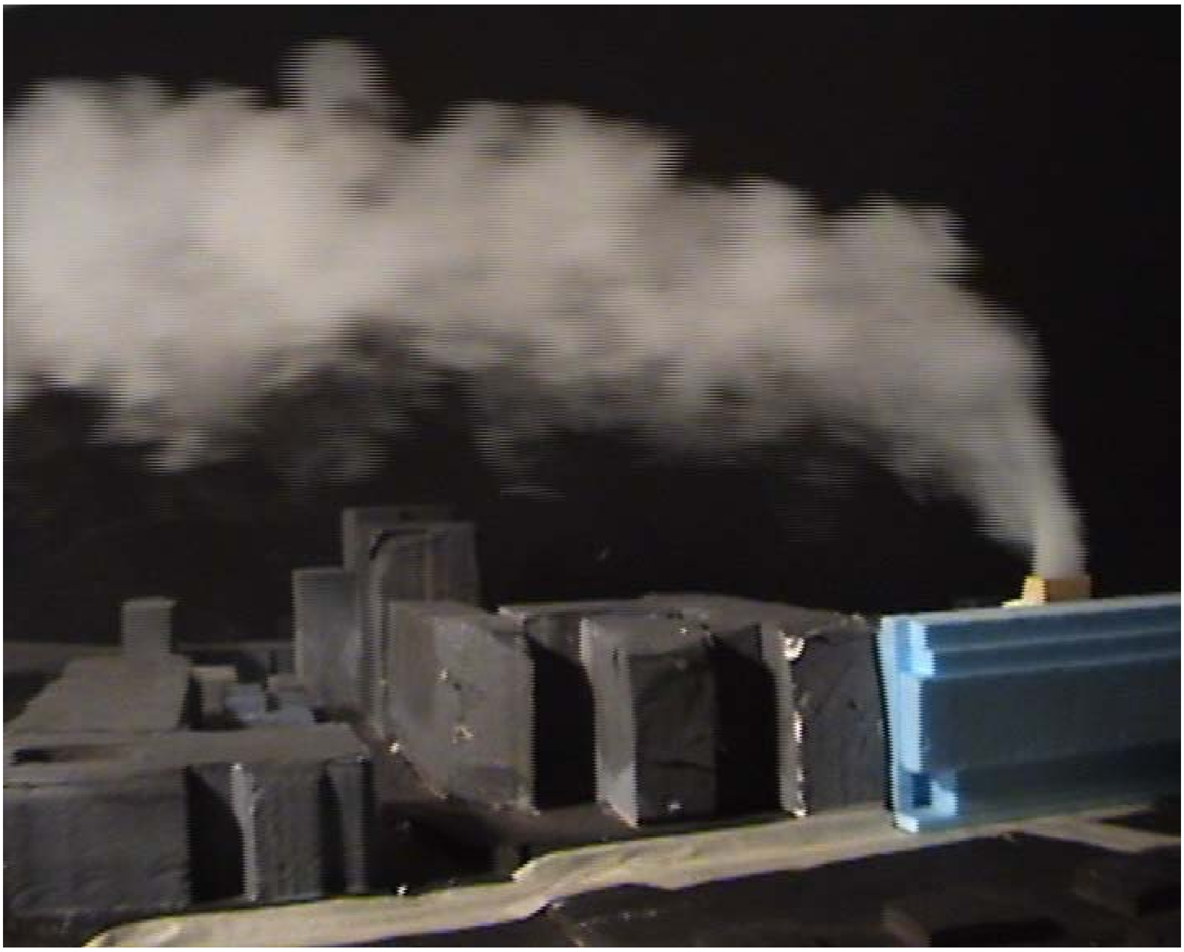

Figure 7 Case 2, Wind from the North-East.

4.3 Chemical Exposure Limits

Based on the dilution ratios presented in Table 3 the concentration of chemicals vented from the flues at ground level can be estimated. For a particular fume cupboard and flue design the mass of a chemical that is permitted in fume cupboard that will result in a permissible exposure limit for pedestrians can be calculated.

Cupboard and Flue Specification

- Peak Fume Cupboard Exhaust: 0.6m^3/s
- Fume Cupboard Internal Dimensions: 1.2m wide x 0.5m deep x1m high
- Flue outlet diameter: 350mm
- Flue outlet speed: 10m/s
- Flue volume flow rate: 1m^3/s

The worst case dilution ratio shown in Table 3 is 0.004 at the top of the Matthews Buildings (under the effect of the North-Easterly winds).

Based on these specifications, for conditions to be acceptable for pedestrians, the mass of a chemical in a fume cupboard over its permissible exposure limit quotient should not be greater than **250**. Note that the quotient can be increased with the use of dilution fans at the exits of the flues.

The results of calculations for three example chemicals are shown in Table 4. Note that the time weighted average permissible exposure limits have been used in these examples. These values are suitable for use with chemicals that are used on a regular basis. For chemicals that are infrequently used the peak exposure limits may be more applicable. The permissible exposure limits for various chemicals can be found on the Hazardous Substances Information System (HSIS) at http://hsis.ascc.gov.au/Default.aspx.

Table 4: Fume Cupboard Mass Calculations for 10m/s Flue Exit Speed

Chemical Name	CAS	Permissible Exposure Limits – TWA (mg/m^3)	Fume Cupboard Mass (mg)
Phosgene	75-44-5	0.08	20
Dimethylformamide (Vapour)	68-12-2	30	7500
Sodium Azide	26628-22-8	0.3	75

5.0 Flue Exhaust Speed Profiles

Flue exhaust speed measurements were made using hot wire anemometer for the no wind case. Measurements were taken from the top of the flue to 45m above the exhaust stack. These results are shown in Table 5. Based on these measurements the exit flue velocity will decrease from 10m/s to less than 4.3 m/s at a height of approximately 33m above the stack or RL 128m. The corresponding height above the stack in the case of a 14m/s exit velocity is RL 140m.

These measurements were made for the calm case and as any wind will reduce the plume rise velocity; these heights are the maximum height when the plume rise will decrease to 4.3 m/s. For the with wind case, the vertical component of the plume rise is localised around the development and the plume rise velocity decreases dramatically as it moves laterally away from the development.

The flue exit velocity cannot be reduced below 10m/s as these flues need to comply with AS/NZS 2243.8 (Safety in Laboratories – Fume cupboards) clause 3.2.7.5 which requires that flue exhaust provided with cone discharge to achieve minimum exhaust discharge velocity of 10m/s.

Table 5: Estimated Flue Exhaust Speed

Height above top of stack (m)	RL (m)	Speed Profile (m/s)	
		Case 1	Case 2
0	95	10	14
3	98	9.3	13.0
6	101	8.4	11.7
9	104	7.6	10.7
12	107	6.7	9.3
15	110	6.3	8.8
21	116	5.3	7.4
30	125	4.6	6.4
45	140	3.1	4.3

6.0 Conclusions

A smoke visualisation test was conducted on a 1:400 scale model of the proposed development known as the Wallace Wurth Upgrade, UNSW. A visualisation study has been performed on the proposed development by modelling the dispersion of gases from a roof top exhaust and assessing the potential impact for winds from eight directions. The exhaust flue exist speed profile has also been measured.

The study was conducted in a boundary layer wind tunnel that was configured to replicate a suburban terrain. The land topography and surrounding buildings for a radius of approximately 500m were included in a detailed model. The wind speed in the wind tunnel was based on a Froude number similarity.

The following results were noted:

1. Flue gases impacted on nearby buildings and land for winds from all directions. However, they were diluted.
2. The highest estimated gas dilution ratio impacting on nearby buildings was 0.004.
3. The exit stream can be further diluted with the inclusion of dilution fans at the exits of the flues.
4. The exhaust gases impacted intermittently on neighbouring buildings for winds from the North, North-East, South, South-West, West and North-West.
5. The exhaust gases impacted frequently on the Matthew and Library building for winds from the North-East.
6. By increasing the exit velocity to 14m/s the exhaust gases no longer impacted on the Matthews and Library building.
7. For the fume cupboard and flue design discussed in this report, conditions will be acceptable for pedestrians at ground level if the quotient of the mass of a chemical that is permitted in fume cupboard divided by its permissible exposure limit is not greater than 250.
8. The exit flue speed will decrease from 10m/s to less than 4.3 m/s at a height of approximately 33m above the stack or RL 128m. As these measurements were made for the calm case they represent the upper height limit. For the with wind case the plume rise velocity decreases dramatically as it moves laterally away from the development.

Attached Video

Roof Flue exhaust.wmv	Flow visualisation for eight directions for the roof top outlet exhaust. Increased velocity case shown at end (case 2).

RPS

ATTACHMENT 3

Letter re Parking

Prepared by

UNSW

UNSW

DAVID COOPER AO
DIRECTOR AND SCIENTIA
PROFESSOR OF MEDICINE
National Centre in HIV Epidemiology
and Clinical Research

27 August 2010

TO WHOM IT MAY CONCERN

The Institute of Virology, currently known as the National Centre in HIV Epidemiology and Clinical Research (NCHECR) will, upon completion of the redevelopment, be relocating to the Wallace Wurth Building on the Kensington Campus of UNSW. The Institute will be the largest incoming organisation to take up residence in the building. All other occupants in the proposed redevelopment already occupy space in the existing building or elsewhere on the Kensington campus.

Since its formation more than 25 years ago, NCHECR has occupied premises in the vicinity of St Vincent's Hospital in Darlinghurst. During this time, NCHECR staff have never had access to off street parking near to their workplace. They have generally relied on public transport, walk or increasingly cycle to work. There is no expectation that this situation will change once the relocation to the main campus in Kensington is completed. Staff, which will number approximately 300 people, understand that UNSW is well serviced by the express bus service from Central Station and it is expected that the majority of staff will make use of that service. Bicycle parking and shower facilities are also to be provided in the development, and it is expected that increasingly staff will use this form of transport to get to work.

Yours sincerely

DAVID A COOPER AO

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RPS

ATTACHMENT 4

Revised Architectural Drawings

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ATTACHMENT 5

Revised Landscape Plans

Prepared by

SMM