Environmental Planning Committee

Agenda

Monday 12 April 2021

6.00pm

Compliance with social distancing requirements to limit the spread of COVID-19 virus at Council and Committee Meetings:
Amendments have been made to the *Local Government Act 1993* to allow councils to meet remotely to reduce the risk of COVID-19 and ensure compliance with the Public Health Order.
In line with social distancing requirements to limit the spread of the COVID-19 virus Woollahra Council will be webcasting Council (i.e. Ordinary and Extraordinary) and Committee meetings (i.e. Environmental Planning (EP), Finance, Community & Services (FC&S) and Strategic & Corporate (S&C) (until further notice).

The Mayor, Councillors and staff will be participating in meetings by **attending in person**, however given social distancing requirements members of the public are unable to attend meetings in person. Members of the public are invited to watch and/or listen to Council meetings live by either using conferencing technology or by teleconference. Public participation online or by phone will be managed in accordance with meeting procedures.

Meetings will be webcast and member of the public can watch and listen to meetings live (via Council's website) or dial in to listen to the meetings using a telephone.

You may also submit late correspondence. Instructions on how to do this are provided below:

- **To watch the meeting live (from 6.00pm)**
  Details on how to watch the meeting live will be available at Environmental Planning Committee Agendas, Audio Recordings and Minutes – https://www.woollahra.nsw.gov.au/council/meetings_and_committees/committees/environmental_planning_committee_ep/ep_agendas_and_minutes
- **To submit late written correspondence (submit by 12noon on the day of the meeting)**
  Members of the public may submit late written correspondence on an agenda item being considered at the Council meeting. If you wish to make a written submission on an item on the agenda, please email your submission to records@woollahra.nsw.gov.au by 12noon on the day of the meeting.
- **To register to address the meeting (submit by 12noon on the day of the meeting)**
  Members of the public may register to speak on an agenda item being considered at the Finance, Community & Services Committee meeting, by registering via email records@woollahra.nsw.gov.au by 12noon on the day of the meeting. Following your registration you will be emailed the details and instructions on how to join the meeting.

If you are experiencing any issues in joining the meeting please call (02) 9391 7001.
An audio recording of the meeting will be uploaded to Council's website following the meeting by 5.00pm on the next business day.

Disclaimer:
By using conferencing technology or by teleconference, listening and/or speaking at Council or Committee Meeting members of the public consent to their voice and personal information (including name and address) being recorded and publicly available on Council's website. Councillors, staff and members of the public are advised that meeting are being lived streamed, accessible via a link from Council's website.

By addressing and/or listening to a Council or Committee meeting, members of the public consent to their voice and personal information (including name and address) being recorded and publicly available on Council's website.
Accordingly, please ensure your address to Council is respectful and that you use appropriate language and refrain from making any defamatory statements or discriminatory comments.
Woollahra Council does not accept any liability for statements, comments or actions taken by individuals during a Council or Committee meeting.

Any part of the meeting that is held in closed session will not be recorded.
People connecting to this meeting by conferencing technology or teleconference are reminded that under the *Local Government Act 1993*, the recording of meetings by a member of the public using any electronic recording device including a mobile phone or video camera is not permitted. Any person found recording without the permission of Council may be expelled from the meeting.
The audio recording of each meeting will be retained on Council's website for a minimum period of 6 months. After that period has passed, recordings of meetings may be disposed of in accordance with the *State Records Act 1998*.

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For further information please visit www.woollahra.nsw.gov.au

Recommendation only to the Full Council ("R" Items):

- Such matters as are specified in Section 377 of the Local Government Act and within the ambit of the Committee considerations.
- Broad strategic planning matters including those initiated at State and Federal Government level.
- Urban design studies.
- Planning proposals and local environment plans.
- Development control plans and guidelines.
- Development contribution plans.
- Heritage conservation studies, assessments and controls.
- Commercial centres' studies.
- Residential studies and strategies.
- Parks and Reserves Plans of Management (Strategies, Policies and Objectives).
- Flood Management Strategies.
- Recreation Policies and Strategies.
- Sustainability Policies and Strategies.
- Transport Strategies.
- Tree Policies and Strategies.
- Matters requiring the expenditure of moneys and in respect of which no Council vote has been made.
- Matters requiring supplementary votes to Budget.
- Matters not within the specified functions of the Committee.
- Matters reserved by individual Councillors in accordance with any Council policy on "safeguards" and substantive changes

Delegated Authority to be determined at Committee level ("D" Items):

- To require such investigations, reports or actions as considered necessary in respect of matters contained within the Business Agendas (and as may be limited by specific Council resolutions).
- Confirmation of the Minutes of its Meetings.
- Statutory reviews of Council's Delivery Program and Operational Plan.
- Any other matter falling within the responsibility of the Environmental Planning Committee and not restricted by the Local Government Act or required to be a Recommendation to Full Council as listed above.

Environmental Planning Committee Membership:	7 Councillors
Quorum:	The quorum for Committee meeting is 4 Councillors

Woollahra Municipal Council

Notice of Meeting

8 April 2021

To: Her Worship the Mayor, Councillor Susan Wynne, ex-officio

Councillors	Mary-Lou Jarvis	(Chair)
	Nick Maxwell	(Deputy Chair)
	Luise Elsing	
	Matthew Robertson	
	Isabelle Shapiro	
	Mark Silcocks	
	Toni Zeltzer	

Dear Councillors,

Environmental Planning Committee – 12 April 2021

In accordance with the provisions of the Local Government Act 1993, I request your attendance at Council's **Environmental Planning Committee** meeting to be held in the **Thornton Room (Committee Room), 536 New South Head Road, Double Bay, on Monday 12 April 2021 at 6.00pm.**

Members of the public are advised that you may watch the meeting live via Council's website using conferencing technology. If you would like to register to address the Environmental Planning Committee meeting please email records@woollahra.nsw.gov.au by 12noon on the day of the meeting.

Watch live via Council's website:
https://www.woollahra.nsw.gov.au/council/meetings_and_committees/committees/environmental_planning_committee_ep/ep_agendas_and_minutes

A audio recording of the meeting will be uploaded to Council's website following the meeting by 5.00pm on the next business day.

The safety of our community, Councillors and our staff is Council's number one priority and we thank you for your patience and understanding at this time.

If you have any difficulties accessing the meeting please contact (02) 9391 7001.

Craig Swift-McNair
General Manager

Meeting Agenda

Items to be Submitted to the Council for Decision with Recommendations from this Committee

Item No:	D1 Delegated to Committee
Subject:	**CONFIRMATION OF MINUTES OF MEETING HELD ON 8 MARCH 2021**
Author:	Sue O'Connor, Governance Officer
File No:	21/45190
Reason for Report:	The Unconfirmed Minutes of the Environmental Planning Committee of 8 March 2021 were previously circulated. In accordance with the guidelines for Committees' operations it is now necessary that those Minutes be formally taken as read and confirmed.

Recommendation:

THAT the Minutes of the Environmental Planning Committee Meeting of 8 March 2021 be taken as read and confirmed.

Annexures

1. Unconfirmed Minutes - EP Committee - 8 March 2021

Environmental Planning Committee

Minutes

Monday 8 March 2021

Environmental Planning Committee Minutes

Monday 8 March 2021

Table of Contents

Minutes of the Meeting
held using teleconferencing technology on
8 March 2021 at 6.00pm.

Present:	Councillors:	Mary-Lou Jarvis	(Chair)
		Luise Elsing	
		Matthew Robertson	
		Isabelle Shapiro	
		Mark Silcocks	
		Toni Zeltzer	(Not Item R4)
	Staff:	Petrina Duffy	(Coordinator Integrated Planning)
		Nick Economou	(Acting Director – Planning & Development)
		Paul Fraser	(Manager – Open Space & Trees)
		Michaela Hopkins	(Team Leader–Environment & Sustainability)
		Kelly McKellar	(Team Leader - Strategic Planner)
		Sue O'Connor	(Governance Officer)
		Flavia Scardamaglia	(Strategic Heritage Officer)
		Helen Tola	(Manager – Governance & Council Support)
		Anne White	(Manager – Strategic Planning)

Also in Attendance: Nil

Leave of Absence and Apologies

Apologies were received and accepted from The Mayor, Councillor Susan Wynne & Councillor Nick Maxwell and leave of absence granted.

Late Correspondence

Late correspondence was submitted to the committee in relation to Items: R2 & R4

Declarations of Interest

Nil

Items to be Decided by this Committee using its Delegated Authority

Item No:	D1 Delegated to Committee
Subject:	**CONFIRMATION OF MINUTES OF MEETING HELD ON 1 FEBRUARY 2021**
Author:	Sue O'Connor, Governance Officer
File No:	21/19100
Reason for Report:	The Minutes of the Environmental Planning Committee of 1 February 2021 were previously circulated. In accordance with the guidelines for Committees' operations it is now necessary that those Minutes be formally taken as read and confirmed.

(Silcocks/Shapiro)

Resolved:

THAT the Minutes of the Environmental Planning Committee Meeting of 1 February 2021 be taken as read and confirmed.

Item No:	D2 Delegated to Committee
Subject:	**ECOLOGICAL SUSTAINABILITY TASKFORCE MINUTES - 16 NOVEMBER 2020 & 15 FEBRUARY 2021**
Author:	Micaela Hopkins, Team Leader Environment & Sustainability
Approvers:	Paul Fraser, Manager - Open Space & Trees Tom O'Hanlon, Director - Technical Services
File No:	21/22442
Reason for Report:	To circulate the minutes of the Ecological Sustainability Taskforce meetings held on 16 November 2020 and 15 February 2021.

(Silcocks/Robertson)

Resolved:

THAT Council receive and note the minutes of the Ecological Sustainability Taskforce meetings held on 16 November 2020 and 15 February 2021.

Note: In accordance with section 375A of the Local Government Act a Division of votes is recorded on this planning matter.

For the Motion	***Against the Motion***
Councillor Elsing	Nil
Councillor Jarvis	
Councillor Robertson	
Councillor Shapiro	
Councillor Silcocks	
Councillor Zeltzer	
6/0	

Item No:	D3 Delegated to Committee
Subject:	**DELIVERY PROGRAM 2018 TO 2022 & OPERATIONAL PLAN 2020/21 (DPOP) QUARTERLY PROGRESS REPORT DECEMBER 2020**
Authors:	Petrina Duffy, Coordinator Integrated Planning & Reporting Sue Meekin, Chief Financial Officer
Approvers:	Craig Swift-McNair, General Manager Nick Economou, Acting Director Planning & Development Tom O'Hanlon, Director - Technical Services
File No:	21/36981
Reason for Report:	To review the status of the Priorities and Actions in Council's Delivery Program 2018 to 2022 and Operational Plan 2020/21 for the six months ending 31 December 2020.

(Robertson/Zeltzer)

Resolved:

THAT the December 2020 Progress Report on:
- Goal 4 - Well planned neighbourhoods;
- Goal 7 - Protecting our environment;
- Goal - 8 Sustainable use of resources and
- Goal 9 - Community focused economic development

of Council's Delivery Program 2018 to 2022 and Operational Plan 2020/21 be received and noted.

Note: In accordance with section 375A of the Local Government Act a Division of votes is recorded on this planning matter.

For the Motion	***Against the Motion***
Councillor Elsing	Nil
Councillor Jarvis	
Councillor Robertson	
Councillor Shapiro	
Councillor Silcocks	
Councillor Zeltzer	

6/0

Item No:	D4 Delegated to Committee
Subject:	**SMALL BUSINESS WORKING PARTY MINUTES - 5 FEBRUARY 2021**
Author:	Kate Burgess, Temp Coordinator Placemaking
Approvers:	Anne White, Manager - Strategic Planning Craig Swift-McNair, General Manager
File No:	21/29733
Reason for Report:	To report the minutes of the Small Business Working Party meeting that took place on 5 February 2021.

(Silcocks/Jarvis)

Resolved:

THAT the Minutes of the Small Business Working Party meeting held on 5 February 2021 be received and noted.

Note: In accordance with section 375A of the Local Government Act a Division of votes is recorded on this planning matter.

For the Motion	***Against the Motion***
Councillor Elsing	Nil
Councillor Jarvis	
Councillor Robertson	
Councillor Shapiro	
Councillor Silcocks	
Councillor Zeltzer	
6/0	

Item No:	D5 Delegated to Committee
Subject:	**OXFORD STREET & PADDINGTON WORKING PARTY MINUTES - 18 FEBRUARY 2021**
Author:	Kate Burgess, Temp Coordinator Placemaking
Approvers:	Anne White, Manager - Strategic Planning Craig Swift-McNair, General Manager
File No:	21/29786
Reason for Report:	To report the minutes of the Oxford Street & Paddington Working Party that took place on 18 February 2021.

(Robertson/Elsing)

Resolved:

THAT the Minutes of the Oxford Street & Paddington Working Party meeting held on 18 February 2021 be received and noted.

Note: *In accordance with section 375A of the Local Government Act a Division of votes is recorded on this planning matter.*

For the Motion	***Against the Motion***
Councillor Elsing	Nil
Councillor Jarvis	
Councillor Robertson	
Councillor Shapiro	
Councillor Silcocks	
Councillor Zeltzer	
6/0	

Item No: D6 Delegated to Committee

Subject: **DOUBLE BAY WORKING PARTY MINUTES - 23 FEBRUARY 2021**

Author: Kate Burgess, Temp Coordinator Placemaking
Approvers: Anne White, Manager - Strategic Planning
Craig Swift-McNair, General Manager
File No: 21/29798
Reason for Report: To report the minutes of the Double Bay Working Party meeting that took place on 23 February 2021

(Silcocks/Elsing)

Resolved:

THAT the Minutes of the Double Bay Working Party meeting from 23 February 2021 be received and noted.

Note: *In accordance with section 375A of the Local Government Act a Division of votes is recorded on this planning matter.*

For the Motion	***Against the Motion***
Councillor Elsing	Nil
Councillor Jarvis	
Councillor Robertson	
Councillor Shapiro	
Councillor Silcocks	
Councillor Zeltzer	
6/0	

Items to be Submitted to the Council for Decision with Recommendations from this Committee

Item No:	R1 Recommendation to Council
Subject:	**WAYFINDING**
Author:	Kate Burgess, Temp Coordinator Placemaking
Approvers:	Anne White, Manager - Strategic Planning Craig Swift-McNair, General Manager
File No:	20/220875
Reason for Report:	To recommend that Council terminates the GANDA app contract. To identify other opportunities for Wayfinding in the Woollahra LGA.

Note: The Committee deleted Resolution B.

Motion moved by Councillor Zeltzer
Seconded by Councillor Shapiro

THAT Council cease supporting the GANDA app wayfinding program and terminate the contract between Woollahra Council and the app developer.

Amendment moved by Councillor Robertson

A. THAT Council cease supporting the GANDA app wayfinding program and terminate the contract between Woollahra Council and the app developer.

B. THAT Council notes that funding for a Local Government Area-wide Wayfinding and Visitation Strategy, has been included in the draft 2021-2022 Budget

Amendment lapsed for want of a Seconder.
Motion was put and carried.

(Zeltzer/Shapiro)

Recommendation:

THAT Council cease supporting the GANDA app wayfinding program and terminate the contract between Woollahra Council and the app developer.

Note: In accordance with section 375A of the Local Government Act a Division of votes is recorded on this planning matter.

For the Motion	***Against the Motion***
Councillor Elsing	Nil
Councillor Jarvis	
Councillor Robertson	
Councillor Shapiro	
Councillor Silcocks	
Councillor Zeltzer	
6/0	

Item No:	R2 Recommendation to Council
Subject:	**DRAFT DCP CONTROLS FOR INTER-WAR FLAT BUILDINGS IN THE WOOLLAHRA LOCAL GOVERNMENT AREA AND TIMBER BUILDINGS IN PADDINGTON AND WATSONS BAY**
Author:	Flavia Scardamaglia, Strategic Heritage Officer
Approvers:	Anne White, Manager - Strategic Planning Nick Economou, Acting Director Planning & Development
File No:	21/25385
Reason for Report:	To respond to a Notice of Motion adopted by Council on 11 November 2019 requesting a review of the planning controls for Inter-War Flat Buildings in the Woollahra Development Control Plan 2015. To obtain Council's approval to exhibit a draft development control plan to amend the Woollahra Development Control Plan 2015.

Note: Late correspondence was tabled by Esther Hayter, Paddington Society.

(Robertson/Elsing)

Recommendation:

A. THAT the report on the review of the controls for Inter-War flat buildings in the Woollahra Local Government area and timber buildings in Paddington and Watsons Bay in the Woollahra Development Control Plan 2015 be received and noted.

B. THAT Council resolves to exhibit the *Draft Woollahra Development Control Plan 2015 (Amendment No.14)* as contained in **Annexure 1** of the report to the Environmental Planning Committee on 1 March 2021.

Note: In accordance with section 375A of the Local Government Act a Division of votes is recorded on this planning matter.

For the Motion	***Against the Motion***
Councillor Elsing	Nil
Councillor Jarvis	
Councillor Robertson	
Councillor Shapiro	
Councillor Silcocks	
Councillor Zeltzer	
6/0	

Item No:	R3 Recommendation to Council
Subject:	**POST-EXHIBITION PLANNING PROPOSAL - HERITAGE LISTING OF TRELAWNEY COURT, INCLUDING INTERIORS, AT 3 TRELAWNEY STREET, WOOLLAHRA.**
Author:	Flavia Scardamaglia, Strategic Heritage Officer
Approvers:	Anne White, Manager - Strategic Planning Nick Economou, Acting Director Planning & Development
File No:	21/34524
Reason for Report:	To report on the public exhibition of the planning proposal to list Trelawney Court, including interiors at 3 Trelawney Street, Woollahra as a heritage item in Schedule 5 of the Woollahra Local Environmental Plan 2014. To obtain Council's approval to proceed with the finalisation of the planning proposal and the preparation of a draft LEP.

Note: Ventry Gray addressed the Committee.

(Zeltzer/Robertson)

Recommendation:

A. THAT Council proceed with the planning proposal at **Annexure 1** of the report to the Environmental Planning Committee meeting of 8 March 2021 and proceed with the preparation of a draft local environmental plan to amend Schedule 5 of Woollahra LEP 2014 to list Trelawney Court including interiors at 3 Trelawney Street, Woollahra, as a local heritage item under Woollahra Local Environmental Plan 2014.

B. THAT Council use its authorisation as the local plan-making authority to exercise the functions under section 3.36(2) of the Environmental Planning and Assessment Act 1979 to make the LEP.

Note: In accordance with section 375A of the Local Government Act a Division of votes is recorded on this planning matter.

For the Motion	***Against the Motion***
Councillor Elsing	Nil
Councillor Jarvis	
Councillor Robertson	
Councillor Shapiro	
Councillor Silcocks	
Councillor Zeltzer	
6/0	

Item No:	R4 Recommendation to Council
Subject:	**POST-EXHIBITION REPORT - DRAFT WOOLLAHRA DEVELOPMENT CONTROL PLAN 2015 (AMENDMENT NO. 15) FOR AIR-CONDITIONING AND OTHER MECHANICAL PLANT EQUIPMENT**
Authors:	Kelly McKellar, Team Leader Strategic Planning Emma Williamson, Strategic Planner
Approvers:	Anne White, Manager - Strategic Planning Nick Economou, Acting Director Planning & Development
File No:	21/33798
Reason for Report:	To report on the public exhibition of Draft Woollahra Development Control Plan 2015 (Amendment No. 15). To obtain Council's approval of the Draft DCP which seeks to strengthen the objectives and controls for air-conditioning and other mechanical plant equipment.

Note: Late correspondence was tabled by Esther Hayter, Paddington Society.

(Shapiro/Robertson)

Recommendation:

THAT Council approve the *Draft Woollahra Development Control Plan 2015 (Amendment No. 15)* as attached at **Annexure 1** of the report to the Environmental Planning Committee meeting of 8 March 2021, subject to the removal of the term "reasonably" in all instances where it appears.

Note: In accordance with section 375A of the Local Government Act a Division of votes is recorded on this planning matter.

For the Motion	***Against the Motion***
Councillor Elsing Councillor Jarvis Councillor Robertson Councillor Shapiro Councillor Silcocks	Nil
5/0	

There being no further business the meeting concluded at 7.53pm.

We certify that the pages numbered 66 to 76 inclusive are the Minutes of the Environmental Planning Committee Meeting held on 8 March 2021 and confirmed by the Environmental Planning Committee on 12 April 2021 as correct.

Chairperson **Secretary of Committee**

Item No:	D2 Delegated to Committee
Subject:	**REGISTER OF CURRENT LAND AND ENVIRONMENT COURT MATTERS FOR DEVELOPMENT APPLICATIONS AND REGISTER FOR COURT PROCEEDINGS FOR BUILDING, ENVIRONMENTAL AND HEALTH CONTROL MATTERS**
Authors:	George Fotis, Acting Manager Development Control Tim Tuxford, Manager - Compliance
Approver:	Nick Economou, Acting Director Planning & Development
File No:	21/42285
Reason for Report:	To provide the EPC with an update of all legal matters.

Recommendation:

THAT the attached register of current Land and Environment Court matters for Development Applications and for Court proceedings for Building, Environmental and Health Control matters for the period 2 September 2020 to 31 March 2021 be received and noted.

Background:

Prior to the introduction of the Woollahra Local Planning Panel (WLPP), which was mandated by legislation to be in force from 1 March 2018, Council's former Development Control Committee received a register of current Land and Environment Court matters for Development Applications and for Court proceedings for Building Control, Environmental Control and Health Control, monthly.

With the establishment of the WLPP, there was no forum for the Councillors to be updated on current legal matters relating to development applications and court proceedings relating to compliance matters.

At its meeting of 4 June 2019, Council's Environmental Planning Committee resolved as follows:

"That a register of current Land and Environment Court matters for Development Applications and for Court Proceedings for Building, Environmental and Health Control matters be tabled to the Environmental Planning Committee quarterly."

Conclusion:

Attached is a copy of the current register, listing active legal matters and finalised judgements for the period 2 September 2020 to 31 March 2021. A graph is also attached showing the number of Class 1 appeals lodged from 2010-2021.

Annexures

1. Legal Register ⇩
2. Class 1 Appeals Lodged 2010-2021 ⇩

Applicant v Respondent	Council Reference	Legal Rep	Address	Comment
Development Control – Legal Matters				
Class 1 - Appealed Deemed Refusal				
Awaiting Callover-Mention				
Jasrina Pty Ltd (ABN 82 247 014 003) v WMC	DA10/2021/1	Wilshire Webb Staunton Beattie Lawyers	1A Benelong Crescent BELLEVUE HILL	This is an appeal against the deemed refusal of an application for the construction of a 3 storey residential flat building containing 5 residential apartments, one level of basement, pool and associated landscaping works. First directions was held on 8 April 2021. The DA will be tabled to an LPP meeting in June 2021.
Clutch O'Sullivan Pty Ltd v WMC	DA515/2020/1	HWL Ebsworth Lawyers	195-203 O'Sullivan Road BELLEVUE HILL	This is an appeal against the deemed refusal of an application for the demolition of existing dwelling houses and construction of a 3 storey residential flat building containing 15 apartments with associated basement parking and landscaping. First directions hearing to be held on 20 April 2021. The DA will be tabled to an LPP meeting in June 2021.
14 Boronia Pty Ltd (ACN 624 963 355) v WMC	DA195/2019/2	HWL Ebsworth Lawyers	14 Boronia Road BELLEVUE HILL	This is an appeal against the deemed refusal of a s4.55 application for internal and external modifications. First directions hearing to be held on 27 April 2021 The s4.55 was refused by the LPP on 1 April 2021.
Awaiting s.34 Conference				
Moshav Development Bondi Pty Ltd v WMC	DA108/2020/1	HWL Ebsworth Lawyers	Lot A 8 & 9 Hillside Avenue VAUCLUSE	This is an appeal against the deemed refusal of an application for the construction of a new residential dwelling including basement garage, new swimming pool, and associated landscaping and siteworks. First directions hearing was held on 6 October 2020. The Applicant

Applicant v Respondent	Council Reference	Legal Rep	Address	Comment
				filed a Notice of Motion to have all sets of proceedings consolidated and heard together. At the directions the Motion was consented to. The Court made the following orders: 1. all sets of proceedings be consolidated and heard together; 2. evidence in one set of proceedings is evidence in all sets of proceedings; and 3. the proceedings are listed for a s 34AA conciliation conference and hearing on 7, 8 and 9 April 2021. Council's SOFAC was filed by 27 October 2020 and a without prejudice meeting was held on 16 December 2020. It was noted that Council only needed to prepare a single SOFAC for all sets of proceedings. The DA was refused by the LPP on 29 October 2020.
Moshav Development Bondi Pty Ltd v WMC	DA110/2020/1	HWL Ebsworth Lawyers	Lot B 8 & 9 Hillside Avenue VAUCLUSE	This is an appeal against the deemed refusal of an application for the construction of a new residential dwelling with basement garage, new swimming pool and associated landscaping and siteworks. First directions hearing was held on 6 October 2020. The Applicant filed a Notice of Motion to have all sets of proceedings consolidated and heard together. At the directions the Motion was consented to. The Court made the following orders: 1. all sets of proceedings be consolidated and heard together; 2. evidence in one set of proceedings is evidence in all sets of proceedings; and 3. the proceedings are listed for a s 34AA conciliation conference and hearing on 7, 8 and 9 April 2021. Council's SOFAC was filed by 27 October 2020 and a without prejudice meeting was held on 16 December 2020. It was noted that Council only needed to prepare a single SOFAC for all sets of proceedings. The DA was refused by the LPP on 29 October 2020.
Moshav Development Bondi Pty Ltd v WMC	DA111/2020/1	HWL Ebsworth Lawyers	Lot C 8 & 9 Hillside Avenue VAUCLUSE	This is an appeal against the deemed refusal of an application for a new attached dual occupancy with basement garage, inground private spas, and associated landscaping and siteworks. First directions hearing was held on 6 October 2020.

Applicant v Respondent	Council Reference	Legal Rep	Address	Comment
				The Applicant filed a Notice of Motion to have all sets of proceedings consolidated and heard together. At the directions the Motion was consented to. The Court made the following orders: 1. all sets of proceedings be consolidated and heard together; 2. evidence in one set of proceedings is evidence in all sets of proceedings; and 3. the proceedings are listed for a s 34AA conciliation conference and hearing on 7, 8 and 9 April 2021. Council's SOFAC was filed by 27 October 2020 and a without prejudice meeting was held on 16 December 2020. It was noted that Council only needed to prepare a single SOFAC for all sets of proceedings. The DA was refused by the LPP on 29 October 2020.
Alexandra Lee Jakob v WMC	DA176/2020/1	Peter R Rigg Solicitor & Barrister	50 Wolseley Road POINT PIPER	This is an appeal against the deemed refusal of an application for the change of use from a single dwelling to a residential flat building (three units) and the associated works. First directions hearing was held on 20 January 2021. The relevant directions made by the Court were: 1. The parties to attend a without prejudice meeting by 10 March 2021; 2. A conciliation conference under s34 is arranged for 7 April 2021; 3. The respondent is to file and serve its SOFAC by 19 February 2021; 4. The applicant to file and serve their SOFAC in reply by 12 March 2021 5. Provision was made for any without prejudice amended plans 14 days prior to the conciliation conference; 6. If no agreement is reached at or after the conciliation conference, the proceedings are listed for a second directions hearing on 11 April 2021. The DA was refused by the LPP on 18 March 2021.
SDHA Pty Ltd (ABN 18 141 145 511) v WMC	DA321/2020/1	Lindsay Taylor Lawyers	19-27 Cross Street DOUBLE BAY	This is an appeal against the deemed refusal of an application for the demolition of an existing structure and construction of a shop top housing development. First directions hearing was held on 27 January 2020. The matter is listed for a s34 conciliation conference on 12 April 2021.

Applicant v Respondent	Council Reference	Legal Rep	Address	Comment
				Council to file and serve its SOFAC on 1 March 2021. The Applicant is to file and serve its SOFAC in reply by 15 March 2021. The matter will return to Court for a further directions hearing on 20 April 2021. The DA will be tabled to the SECPP on 27 May 2021.
Vaucluse Early Learning Pty Ltd ACN 63995467 v WMC	DA233/2020/1	Wilshire Webb Staunton Beattie Lawyers	65 Village High Road VAUCLUSE	This is an appeal against the deemed refusal of an application for the demolition of an existing dwelling and construction of a new childcare centre providing 86 places. First directions hearing was held on 14 October 2020. A without prejudice meeting was held on 7 December 2020. Amended plans have been submitted and are currently under review. Without prejudice plans submitted on 7 December 2020. The DA was refused by the LPP on 18 March 2021. A conciliation conference is set down for 15 April 2021.
Crooked River Land Holdings Pty Ltd v WMC	DA274/2020/1	Lindsay Taylor Lawyers	432-440 Oxford Street PADDINGTON	This is an appeal against the deemed refusal of an application for the amalgamation of 3 lots for strata-subdivision, alterations to 5 shops and shop top apartments, construction of a new shop top housing development with basement carpark and associated landscaping. First directions hearing was held on 18 December 2020. The DA was refused by the LPP on 18 February 2021. Council's SOFAC due by 4 March 2021. The matter is listed for a s34 conference on 10 May 2021.
Merman Investments Pty Ltd v WMC	DA325/2020/1	HWL Ebsworth Lawyers	3 Wiston Gardens DOUBLE BAY	This is an appeal against the deemed refusal of an application for the demolition of existing structures and construction of a new residential flat building. First directions hearing was held on 16 December 2020. Further mention on 18 December together with Notice of Motion for amended plans. The DA was refused by the LPP on 17 December 2020. The matter has been listed for a s34 conciliation conference on 11 May 2021
Prominent Ventures Pty Ltd v WMC	DA143/2020/1	Wilshire Webb Staunton Beattie Lawyers	40 Glendon Road DOUBLE BAY	This is an appeal against the deemed refusal of an application for the demolition of the existing dwelling and the construction of a new two storey multi-dwelling housing development with basement car parking, a swimming pool and associated landscaping works. The DA was refused by the LPP on the 19 November 2020. First directions hearing was held on 15 December 2020. Council's SOFAC due by 22 December 2020. The matter is listed for a s34 conciliation

Applicant v Respondent	Council Reference	Legal Rep	Address	Comment
				conference on 7 May 2021. If no agreement reached, the matter is listed for a second directions hearing on 14 May 2021.
117 O'Sullivan Pty Ltd (ACN 642 192 185) v WMC	DA416/2020/1	HWL Ebsworth Lawyers	117-119 O'Sullivan Road BELLEVUE HILL	This is an appeal against the deemed refusal of an application for the demolition of a single dwelling and construction of a new seniors housing development for ten (10) apartments over three storeys with attic and basement parking for 21 car spaces. First directions hearing to be held on 5 February 2021. The following orders were made: Council's SOFAC is due to be filed and served by 26 February 2021. The DA was refused by the LPP on 1 April 2021. A Without Prejudice Meeting to take place before 30 April 2021. A s34 conference has been listed for 14 May 2021 commencing on site at 9:30am. If no agreement reached, a second directions hearing to be held on 21 May 2021.
STM123 No. 16 Pty Ltd v WMC	DA536/2020/1	Lindsay Taylor Lawyers	23 Wolseley Road POINT PIPER	This is an appeal against the deemed refusal of an application for the alterations and additions to an approved residential flat building (approved under DA2018/484 and DA2017/369) including an additional level comprising a 3-bed unit (total of 7 x 3-bed units). Internal reconfiguring to the layout of the approved basement level to include a car lift and basement mezzanine level. First directions hearing was held on 10 March 2021. Council to file and serve its SOFAC by 15 April 2021. The applicant to file and serve its SOFAC in reply by 6 May 2021. A s34 conciliation conference is set down for 21 June 2021. If no agreement reached, a second directions hearing to be held on 28 June 2021. The DA will be tabled to an LPP meeting in May 2021.
EMCON Group Pty Ltd v WMC	DA518/2018/3	Lindsay Taylor Lawyers	164 Victoria Road BELLEVUE HILL	This is an appeal against the deemed refusal of a s4.56 application for the internal and external modifications to the approved residential flat building. First directions hearing was held on 18 March 2021. Council to file its SOFAC by 21 April 2021. A s34 conciliation conference is set down for 7 July 2021. If no agreement reached, a second directions hearing to be held on 14 July 2021. The s4.56 will be tabled to an LPP in June 2021.
Awaiting Hearing				

Applicant v Respondent	Council Reference	Legal Rep	Address	Comment
Hakoah Club Ltd v WMC	DA477/2019/1	Lindsay Taylor Lawyers	30 Alma Street PADDINGTON	This is an appeal against the deemed refusal of an application for the first stage of the development of White City for a multi-purpose sports centre and registered club facilities including site remediation. The matter was listed for a first directions hearing on 26 March 2020. Council's SOFAC was filed on 26 May 2020. Applicant's SOFAC in reply was to be filed by 8 June 2020. Leave was granted on 2 July 2020 to the Applicant's Notice of Motion to vacate hearing dates of 2-5 November 2020 and set the matter down for s34 conference on 2 November 2020. The DA will be considered by SECPP on 3 September 2020. The SECPP approved the DA on 3 September 2020. The s34 conference was terminated by Commissioner Chilcott and the matter was listed for directions before the registrar on 10 November 2020. The matter was listed for a further directions on 26 March 2021. The matter has been listed for a hearing on 2-4 August 2021.
Class 1 - Appealed Determination				
Awaiting Callover-Mention				
Mary E Curtis v WMC	DA76/2020/1	Peter R Rigg Solicitor & Barrister	68E Caledonia Street PADDINGTON	This is an appeal against the refusal of an application for the alterations and additions including a new basement level. First directions hearing was held on 6 April 2021.
Awaiting s.34 Conference				
Fortis Development Group	DA202/2018/2	Lindsay Taylor Lawyers	16/325-335 New South Head Road DOUBLE BAY	This is an appeal against the LPP refusal of a s4.55 application for the modifications to a previously approved pedestrian access easement. First directions hearing was held on 12 November 2020. Council's SOFAC was filed with the Court on 18 November 2020. The matter was listed for a s34 conference on 15 March 2021. The parties did not reach agreement, on that basis, the Commissioner adjourned the conciliation conference to 4:15pm on 6 April 2021.

Applicant v Respondent	Council Reference	Legal Rep	Address	Comment
Ben Shaw v WMC	DA258/2019/1	Wilshire Webb Staunton Beattie Lawyers	157-159 Hargrave Street WOOLLAHRA	This is an appeal against the conditions of consent of an application for a new smoking area to the Bellevue Hotel, alterations to Taylor Street bin room and new entry from Taylor Street. First directions hearing was held on 20 January 2021. The applicant to file and serve its SOFAC by 27 January 2021; the Council filed and served its SOFAC in Reply on 5 February 2021. The matter was listed for its s34 conference on 8 March 2021. The Court has set the following timetable for the progression of the matter: 1. The applicant is to provide an amended acoustic report and odour report by 17 March 2020; 2. Council is to provide its response to the amended acoustic report and odour report by 26 March 2020; 3. The matter is listed for a resumption of the Section 34 conference by Teams at 4.15pm on 26 March 2020. The matter is still in conference.
Tim Casey	DA107/2020/1	Lindsay Taylor Lawyers	8A Cooper Street PADDINGTON	This is an appeal against the refusal of an application for the external alterations and additions to the existing dwelling. First directions hearing was held on 25 November 2020. The DA was refused by the LPP on 15 October 2020. Council's SOFAC was due on 8 December 2020. The matter is listed for a s34AA conciliation conference on 12-13 April 2021.
Blainey North & Associates Pty Ltd v WMC	DA272/2019/2	Peter R Rigg Solicitor & Barrister	7 Paddington Street PADDINGTON	This is an appeal against the refusal of an application for the modification to the approved scheme (new external stairs to the rear to the garage/loft). First directions hearing was held on 27 January 2020. The matter has been listed for a s.34AA conciliation conference on 13-14 April 2021.
Marc Polese v WMC	DA357/2020/1	HWL Ebsworth Lawyers	4 Queens Avenue VAUCLUSE	This is an appeal against the refusal of an application amending a DA involving modifications to the basement level of the dwelling approved under DA279/2019. First directions hearing was held on 26 November 2020. Council to file and serve joint expert report by 22 March 2021. Council to file response to any without prejudice material by 6 April 2021. Draft conditions of consent to be filed by 12 April 2021. The Registrar set the matter down for conciliation and hearing on 19 and 20 April 2021.

Applicant v Respondent	Council Reference	Legal Rep	Address	Comment
Kingsford Property Developments Pty Ltd v WMC	DA226/2019/1	Lindsay Taylor Lawyers	351 & 353 New South Head Road DOUBLE BAY	This is an appeal against the LPP Conditions of Consent of an application for the demolition of existing buildings, construction of a new residential flat building including provision of affordable rental housing (SEPP ARH 2009) with basement parking. First directions hearing was held on 29 January 2021. The proceedings have been listed for a s34 conciliation conference on 9 June 2021. Council to file its SOFAC in reply by 24 February 2021. A without prejudice meeting is to take place prior to the s34 conference. If no agreement reached at the conference, a second directions to be held on 16 June 2021.
Europium Holdings Pty Ltd v WMC	DA19/2020/1	Wilshire Webb Staunton Beattie	780-786 New South Head Road ROSE BAY	This is an appeal against the LPP refusal of an application for the demolition of a residential flat building and ancillary structures and the Interim Heritage Order of the property. First directions hearing was held on 2 February 2021. The matter has been listed for its s34 conciliation conference and hearing on 23 June 2021. The applicant has been directed to file its notice of motion to rely on amended plans by 10 February 2021.
Medium Density Pty Ltd (ABN 19 003 631 810) v WMC	DA209/2019/1	Wilshire Webb Staunton Beattie Lawyers	37 Newcastle Street ROSE BAY	This is an appeal against the LPP refusal of an application for the alterations and additions to an existing residential flat building including a new upper level and an increase in the number of units from 4 to 9. First directions hearing was held on 18 March 2021. Council to file its SOFAC by 1 April 2021. The applicant to file its SOFAC in reply by 3 May 2021. A without prejudice meeting to be held by 31 May 2021. A s34 conciliation conference has been set down for 8 July 2021. If no agreement reached, a second directions to be held on 15 July 2021.
Awaiting Hearing				
Royal Prince Edward Yacht Club v WMC	DA563/2018/1	HWL Ebsworth Lawyers	160 Wolseley Road POINT PIPER	This is an appeal against the refusal of an application for the alterations and additions to an existing ramp and pontoon. The DA was refused by the LPP on 17 October 2019. First directions hearing was held on 19 May 2020. Council's SOFAC was filed on 3 August 2020. The applicant was required to file their SOFAC by 7 September 2020. The matter was listed for a section 34 conciliation conference on 20 November 2020. If no agreement reached at or after the

Applicant v Respondent	Council Reference	Legal Rep	Address	Comment
				conciliation conference, the proceedings are listed for a second directions hearing on 27 November 2020. A further conciliation conference was held on 16 December 2020. Amended plans submitted and the matter was listed for further directions on 20 January 2021. Further amended plans have been submitted. Council to file amended SOFAC by 5 March 2021. The matter has been listed for hearing on 15 & 16 June 2021
Judgement Reserved				
Andrew Griffin	DA193/2020/1	HWL Ebsworth Lawyers	3 Trelawney Street WOOLLAHRA	This is an appeal against the LPP refusal of an application for the alterations and additions to the existing residential flat building including a new level accommodating one additional unit. First directions hearing was held on 29 January 2021. The matter was listed for a s34 conciliation conference on 5 March 2021. A s34 agreement was signed on 10 March 2021.
Nicholas Tang Holdings Pty Ltd ABN 36126 806 237 v WMC	DA10/2020/1	HWL Ebsworth Lawyers	37 Edward Street WOOLLAHRA	This is an appeal against the deemed refusal of an application for the demolition of the existing building and structures, Torrens title subdivision of the site into four (4) allotments and the construction of a semi-detached dwelling on each allotment including landscaping and site works. First directions hearing was held on 9 April 2020. This matter was refused by the LPP on 21 May 2020. Council's SOFAC was filed on 22 June 2020. A without prejudice meeting was held between the parties' experts on 8 July 2020. The matter was listed for a s34 conciliation conference on 24 July 2020, an agreement was not reached. A Notice of Motion for amended plans was listed for 20 January 2021. The matter was set down for hearing on 11 & 12 March 2021. Judgement reserved.
Graeme Shaw v WMC	DA216/2020/1	Peter R Rigg Solicitor & Barrister	62 Queen Street WOOLLAHRA	This is an appeal against the deemed refusal of an application for the alterations and additions to the existing dwelling. First directions hearing was held on 10 November 2020. Council's SOFAC to be filed by 4 December 2020. The matter is set down for a hearing on 25 and 26 March 2021. Judgement reserved.

Applicant v Respondent	Council Reference	Legal Rep	Address	Comment
Judgement Finalised				
Anthony John Reynolds v WMC	DA185/2019/1	HWL Ebsworth Lawyers	76 New Beach Road DARLING POINT	This is an appeal against the conditions of consent of an application for a new swimming pool. First directions hearing was held on 18 February 2020. The Applicant's SOFAC was filed on 6 March 2020; the Respondent's SOFAC in Reply were filed on 3 April 2020. A s34AA conciliation conference was held on 15 and 16 September 2020. The appeal was upheld on 16 September 2020 (amended plans).
Bryant Stokes v WMC	DA154/2019/2	Peter R Rigg Solicitor & Barrister	380 Edgecliff Road WOOLLAHRA	This is an appeal against the refusal of an application for the modifications to the boundary fence including the front fence. First directions hearing was held on 24 January 2020. Joint expert reports were filed on 1 July 2020 for engineering and 3 August 2020 for town planning issues. A s34AA conference was held on 5 and 6 August 2020. The appeal was upheld on 18 September 2020, subject to conditions of consent.
Shaun Keith Alfred Bonett v WMC	DA398/2018	Peter R Rigg Solicitor & Barrister	20 The Crescent VAUCLUSE	This is an appeal against the deemed refusal of an application for alterations and additions to the existing dwelling and the use of the lower ground floor level. First directions hearing was listed for 29 November 2018. Set down for mediation on 15 March 2019 with 'Facts and Contentions' required to be filed by 25 January 2019. Mediation on 15 March 2019 vacated due to extenuating circumstances. Applicant to file and serve his Statement of Facts and Contentions in Reply by 30 October 2019. Mediation re-listed on 12 November 2019. On 26 November 2019 the matter was listed for hearing on 21-23 September 2020 with the Registrar making the following directions: 1. Applicant is to file any notice of motion concerning amendment of the applications by 13 December 2019; 2. Any relevant Motion to amend will be heard by the Registrar on 31 January 2020; 3. Applicant is also directed to file all evidence upon which he proposes to rely by 28 February 2020;

Applicant v Respondent	Council Reference	Legal Rep	Address	Comment
				4. Council's evidence upon which it proposes to rely is to be filed and served by 27 March 2020; 5. Subsequently, experts, grouped in areas of expertise, are to meet and confer to produce a joint report by 30 June 2020 (extended from 10 April 2020). Matter setdown for hearing 21, 22 & 23 September 2020. Section 34 agreement issued on 29 September 2020. Reached in conjunction with a 'Deed of Settlement'.
142C Bellevue Road Pty Ltd (ACN 612 672 437)	DA290/2018/1	Wilshire Webb Staunton Beattie Lawyers	142C Bellevue Road BELLEVUE HILL	This is an appeal against the refusal of an application for the demolition of the existing dwelling and the construction of a new residential flat building. The DA was refused by the LPP on 5 September 2019. First directions hearing was held on 22 January 2020. The following relevant directions were made by the Court, by consent: 1. The Respondent is to file and serve its SOFAC by 6 February 2020; 2. The Applicant is to file and serve its SOFAC by 21 April 2020. 3. A s34 conciliation conference is arranged for 10 August 2020. 4. If no agreement is reached at or after the conciliation conference, the proceedings are listed for second directions on 21 August 2020. The applicant has submitted amended plans for review. These have addressed the experts concern's and in the process of finalising a s34 agreement. Leave was granted to rely on amended plans. The appeal was upheld on 8 October 2020 via a s34 agreement (amended plans).
Green Wall Property Developers Pty Ltd ABN 46618168568 v WMC	DA13/2019/1	Lindsay Taylor Lawyers	590-592 New South Head Road POINT PIPER	This is an appeal against the refusal of an application for the construction of a new residential flat building with underground parking, new landscaping and strata subdivision, and remediation of land. This DA was refused by the LPP on 7 May 2020. First directions hearing was held on 8 July 2020. Council's SOFAC was filed on 22 July 2020. The Applicant filed its SOFAC on 29 July 2020. The s34 conciliation conference held on 11 August 2020, was adjourned to 28 August 2020. The Applicant expects to be in a position to provide amended plans by 20 August 2020. The Commissioner at the s34 conference on 28 August 2020 adjourned the matter to enable the Applicant to submit amended plans and additional information. Key amendments were modifications to the indents and materials to front elevation to ensure that the building reads as three distinct building elements. The appeal is still in conference. The applicant was

Applicant v Respondent	Council Reference	Legal Rep	Address	Comment
				granted leave to amend the DA. The applicant to pay the respondent's costs thrown away. The appeal was upheld on 18 November 2020 via a s34 agreement (amended plans).
CVK Investments Pty Ltd v WMC	DA126/2017/1	HWL Ebsworth Lawyers	16 Manning Rd DOUBLE BAY	This is an appeal against the refusal of an application for the demolition of the existing building and construction of a new 4 storey childcare centre containing 60 places. The DA was refused by the LPP on 2 May 2019. First directions hearing was held on 24 July 2019. 1. The matter was set down for a s34 conciliation conference on 2 March 2020. 2. The respondent to file its SOFAC by 2 August 2019. 3. The applicant to file its SOFAC in reply by 4 October 2019. 4. Any amended plans or additional information proposed by the applicant are to be provided by 17 February 2020. 5. The respondent is to provide the applicant with any response to the amended plans, by 24 February 2020. 6. The respondent is to provide draft conditions of consent by 24 February 2020. 7. If no agreement is reached at the conciliation conference, the matter is listed for a second directions hearing on 24 March 2020. No in principle agreement was reached. At the second directions hearing the following orders were made: 1. The proceedings are fixed for hearing on 17 and 18 November 2020. 2. The hearing is to be a Court hearing and is to commence on site at 9.30am. The appeal was upheld on 20 November 2020.

Applicant v Respondent	Council Reference	Legal Rep	Address	Comment
IUR Australia Holdings Pty Ltd v WMC	DA162/2016/4	Peter R Rigg Solicitor & Barrister	7 Banksia Road BELLEVUE HILL	This is an appeal against Conditions C.1(E) and C.1(F) affixed to a s4.55 application. First directions hearing was held on 1 April 2020. A s34 conciliation conference was held on 26 June 2020 The applicant filed a Notice of Motion to amend the Class 1 Application in July 2020. Council filed its amended SOFAC on 14 August 2020. Hearing dates were to be obtained at a further directions hearing. The Appeal was amended as the applicant relying on amended plans and amended SOFAC. The Registrar heard the Motion to Amend the application on 7 October 2020 and upheld the Motion. Accordingly, the Registrar directed that Council file its Amended Statement of Facts and Contentions in Reply by 16 October 2020. Court Orders including Consent Conditions were made by the Court on 11 December 2020.
Fullerton House Pty Ltd v WMC	DA305/2018/1	Lindsay Taylor Lawyers	30 Kent Rd ROSE BAY	This is an appeal against the refusal of an application for the demolition of an existing building and construction of a residential flat building containing four apartments, with basement level parking, a swimming pool, and associated landscaping and site works. The DA was refused by the LPP on 27 June 2019. First directions hearing was held on 9 August 2019. The matter was set down for a s34 conference on 20-21 February 2020. Commissioner O'Neill terminated the s34 conference and relisted the matter before Registrar Anastasi for 10 March 2020. Orders were also made for the amendment of the applicant's DA and Council's SOFAC, as follows: 1. The applicant to file Notice of Motion to amend its DA by 21 April 2020; 2. Council is to amend its SOFAC by 19 May 2020; 3. Experts are to file individual reports by 31 July 2020; 4. Heritage and planning joint reports are to be filed by 28 August 2020. The matter was set down for a one-day hearing on 25 September 2020. The applicant requested that the matter be heard before another commissioner other than O'Neill C. The appeal was upheld on 17 December 2020.

Applicant v Respondent	Council Reference	Legal Rep	Address	Comment
Donald Angus MacLeod v WMC	DA164/2019/1	Lindsay Taylor Lawyers	1002/85-97 New South Head Road EDGECLIFF	This is an appeal against the refusal of a s8.2 review application for the enclosure of existing part of covered balcony with aluminium roofing, glazed aluminium window frames and 1.0m high glass balustrade. This application was refused by Council's AAP on 12 May 2020. First directions hearing was held on 26 August 2020. The matter was set down for a s34 conciliation conference on 2 October 2020. The second directions hearing following the s34 conciliation conference was held on 9 October 2020. The matter was listed for hearing on 15 and 17 December 2020. The appeal was dismissed on 24 December 2020.
Conrina Living Rosebay Pty Limited v WMC	DA469/2019/1	Wilshire Webb Staunton Beattie Lawyers	598-600 Old South Road ROSE BAY	This is an appeal against the deemed refusal of an application for the demolition of the existing buildings and construction of a new residential flat building with associated landscaping and siteworks. First directions hearing was held on 31 March 2020. Council's SOFAC was filed on 17 April 2020. Applicant to file SOFAC in reply by 15 May 2020. Without prejudice meeting was held on 29 May 2020. The DA was refused by the LPP on 4 June 2020. A s34 conciliation conference was held on 30 November 2020. If no agreement is reached, a second directions is set down for 8 December 2020. Agreement was reached and amended plans were submitted. The Court granted leave to rely on the amended plans. The applicant is to pay the respondent's costs thrown away as a result of the amendment of the DA. The appeal was upheld on 5 January 2021 via a s34 agreement (amended plans).
Bellevue Road Holdings Pty Ltd v WMC	DA344/2019/1	Wilshire Webb Staunton Beattie Lawyers	142, 142A & 142B Bellevue Road BELLEVUE HILL	This is an appeal against the deemed refusal of an application for the demolition of the existing buildings and construction of a new residential flat building with 17 units, basement car parking and swimming pool. First directions hearing was held on 22 January 2020. Council filed its SOFACs on 7 August 2020. The DA was refused at the LPP meeting of 6 August 2020. A s34 conference was held on 12 August 2020. The Court further adjourned the matter to allow the applicant to submit amended plans. Amended plans reviewed and agreed, awaiting arborist report and stormwater documentation. The Senior Commissioner has advised that conditions are to be reviewed prior to finalising. The appeal was upheld on 20 January 2021 via a s34 agreement (amended plans).

Applicant v Respondent	Council Reference	Legal Rep	Address	Comment
Prismena Properties Pty Ltd v WMC	DA458/2017/1	HWL Ebsworth Lawyers	37 Carlotta Rd DOUBLE BAY	This is an appeal against the refusal of an application for the demolition of an existing residence and construction of a residential flat building containing three (3) units, basement level car parking for seven (7) vehicles, new fences, swimming pools, landscaping and siteworks. The DA was refused by the LPP on 16 May 2019. First directions hearing was held on 12 December 2019. The following orders were made: 1. The parties are to seek leave to rely upon expert evidence via Online Court by 29 May 2020; 2. The respondent is to file and serve a Bundle of Documents by 24 September 2020; 3. The respondent is to file and serve draft conditions of consent by 24 September 2020; 4. The applicant is to file and serve it's draft conditions of response by 1 October 2020; 5. The parties are to give notice of any witness required for cross-examination by 1 October 2020; and 6. The parties are to serve any notice of objection by 1 October 2020. The matter was set down for a two-day hearing on 8-9 October 2020. The appeal was upheld on 21 January 2021.
Yarranabbe Property Pty Ltd v WMC	DA233/2018/1	Lindsay Taylor Lawyers	77-81 Yarranabbe Road DARLING POINT	This is an appeal against the deemed refusal of an application for extensive demolition and alterations and additions to the existing residential flat building. First directions hearing was held on 22 January 2020. Council's SOFAC filed on 27 February 2020. Applicant filed SOFAC in reply on 24 March 2020. Without prejudice meeting was held on 30 April 2020. Amended plans submitted. A s34 conciliation conference was held on 6 August 2020. The Court adjourned the matter to allow the applicant to provide additional and updated information (amended plans). The applicant provided additional and updated information (amended plans) to respond to the s34 discussions. An in principle agreement was then reached. Two separate applications for joinder were made by the owner of the adjoining property at 83 Yarranabbe Road, with both applications for joinder being dismissed by the Court. A second s34 conference was held on 14 December 2021, at which the parties came to an agreement. The appeal was upheld on 25 January 2021 via a s34 agreement (amended plans).

Applicant v Respondent	Council Reference	Legal Rep	Address	Comment
RICOLA Pty Ltd v WMC	DA25/2018/1	Lindsay Taylor Lawyers	49-53 Bay Street DOUBLE BAY	This is an appeal against the refusal of an application for the demolition of an existing building and the construction of a new 7 storey mixed development comprising two (2) levels of basement car parking with access from Knox Lane, one (1) retail tenancy and building services on the ground floor level and six (6) levels of residential development above comprising of 24 units. The DA was refused by the LPP on 15 August 2019. First directions hearing was held on 6 February 2020. At the directions hearing the Registrar made the following orders: a) the applicant's SOFAC in reply to be filed by no later than 3 March 2020. b) The parties are to attend a without prejudice meeting before 31 March 2020. c) The matter was set down for a conciliation conference on 23 April 2020. d) If no agreement reached, the matter is listed for a second directions hearing on 30 April 2020. At the second directions hearing the Court made the following directions: a) The hearing was listed on 9-10 December 2020 commencing on site and returning to Court. b) Joint reports due by 9 November 2020. The appeal was dismissed on 28 January 2021.
Triple Blue Pty Ltd v WMC	DA190/2017/1	Wilshire Webb Staunton Beattie Lawyers	593 New South Head Rd ROSE BAY	This is an appeal against the refusal of an application for the alterations and additions to an existing residential flat building including a new upper level. The DA was refused by the LPP on 4 July 2019. First directions hearing was held on 15 October 2019. A s34 conciliation conference was held on 14 February 2020. No agreement was reached. A second directions hearing was held on 21 February 2020. An application for joinder was submitted by the neighbour and approved by the Court. The proceedings were listed for hearing on 8 and 9 December 2020. The appeal was upheld subject to conditions of consent on 12 February 2021.
Joel Isaac Redelman v WMC	DA354/2016/3	Peter R Rigg Solicitor & Barrister	24 Northland Road BELLEVUE HILL	This is an appeal against the refusal of a s4.56 modification for the addition of a new roof terrace, new access to rear garden, new skylight and window modifications. The DA was refused by the LPP on 19 December 2019. First directions hearing was held on 11 February 2020. A s34 conciliation conference was held on 13 July 2020 – the matter was unresolved and the conference was terminated. The matter was considered at a Registrar's directions hearing on 17 July 2020. The Registrar listed the matter for hearing on 10 and 11 February 2021. The appeal was upheld on 22 February 2021.

Applicant v Respondent	Council Reference	Legal Rep	Address	Comment
Collette Potter v WMC	DA316/2019/1	Peter R Rigg Solicitor & Barrister	26-28 Wolseley Road POINT PIPER	This is an appeal against the refusal of an application for the demolition of an existing garage and front fence, and the construction of a new garage with a mechanical parking system to accommodate six (6) cars and new front fence. The DA was refused by the LPP on 9 July 2020. First directions hearing was held on 13 August 2020. A s34AA conciliation conference was set down for 21, 22 & 23 February 2021. The appeal was upheld via a s34 conference on 9 March 2021 (amended plans).
Clutch Capital Pty Ltd ACN 632362979 v WMC	DA117/2020/1	HWL Ebsworth Lawyers	9 Carlisle Street ROSE BAY	This is an appeal against the deemed refusal of an application for the demolition of an existing dwelling and construction of a residential flat building with basement parking and associated landscaping and siteworks. First directions hearing was held on 3 September 2020. The DA was refused under staff delegation on 22 September 2020. Council to file its SOFAC by 30 October 2020. A 'without prejudice meeting' to be held on 25 September 2020. A s34 conciliation conference was set down for 8 February 2021. If no agreement reached, a second directions hearing is set for 16 February 2021. The appeal was upheld on 17 March 2021 via a s34 agreement (amended plans).
Brewster Murray Pty Ltd v WMC	DA495/2019/1	Lindsay Taylor Lawyers	17-19 Cranbrook Road BELLEVUE HILL	This is an appeal against the refusal of an application for the demolition of an existing building and construction of a new dwelling house with basement car parking, swimming pool, associated landscaping, and site works. First directions hearing was held on 7 October 2020. The following orders were made at the directions hearing: 1. The s34AA conciliation conference and hearing was listed for 18-19 March 2021. 2. Council's SOFAC to be filed by 14 October 2020. The parties are then to seek orders for expert evidence by 30 October 2020. The appeal was upheld on 29 March 2021 via a s34 agreement (subject to conditions of consent).

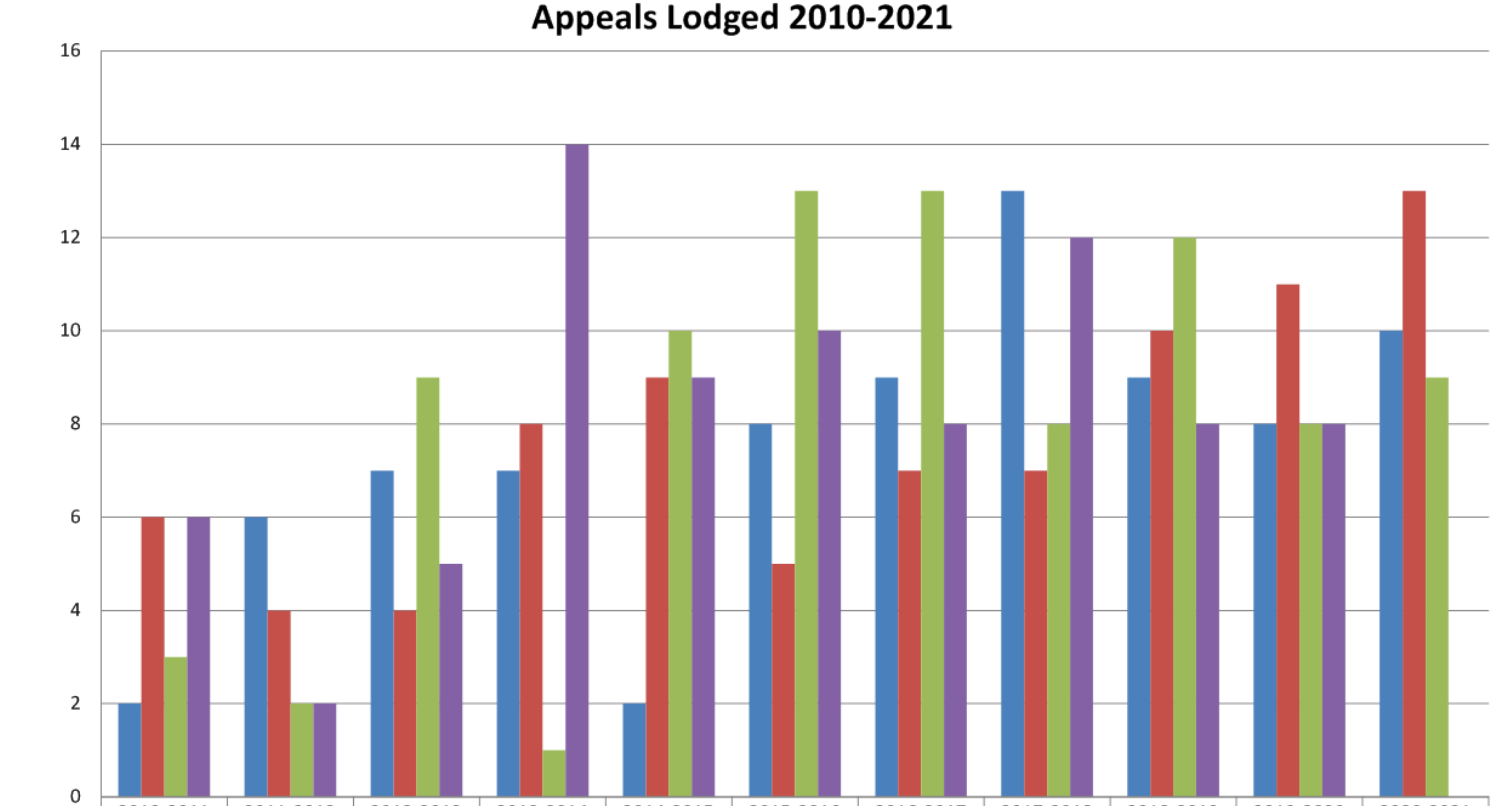
Applicant v Respondent	Council Reference	Legal Rep	Address	Comment
Discontinued				
66 Wilberforce Pty Limited (ACN 636 785 110) v WMC	DA101/2020/1	Wilshire Webb Staunton Beattie Lawyers	66-68 Wilberforce Avenue ROSE BAY	This is an appeal against the deemed refusal of an application for the demolition of the existing structures and the construction of a three storey residential flat building with associated basement parking, landscape works. First directions hearing was held on 7 July 2020. The matter was listed for a s34 conciliation conference on 21 September 2020. The Council filed and served its SOFAC on 28 July 2020. The Court directed the parties to participate in a without prejudice meeting before 31 August 2020. Notwithstanding the above direction, the DA was approved via the LPP on 20 August 2020. The appeal was discontinued on 4 September 2020.
AMA Holdings Pty Ltd ABN 80 003 432 424 v WMC	DA463/2019/1	Lindsay Taylor Lawyers	2A Cooper Street DOUBLE BAY	This is an appeal against the deemed refusal of an application for the substantial alterations and additions to the existing commercial building. First directions hearing was held on 23 June 2020. This DA was refused by the LPP on 16 July 2020. Council's SOFAC was filed on 22 July 2020. Applicant's SOFAC in reply was filed on 27 July 2020. Joint expert reports were due in November 2020. The matter was listed for a 3 day hearing on 18 January 2021 to 20 January 2021. The matter was discontinued on 16 September 2020.
Yarranabbe Property Pty Ltd v WMC	DA233/2018/1	Lindsay Taylor Lawyers	77-81 Yarranabbe Road DARLING POINT	This is an appeal against the refusal of an application for extensive demolition, alterations and additions to the existing residential flat building. The matter was refused by the LPP on 6 February 2020. First directions hearing was held on 2 September 2020. The application was kept in abeyance due to an earlier deemed refusal appeal. This appeal against the determination is the second appeal for the DA. The appeal was lodged in the event that a challenge was made that the first appeal was not properly lodged. The appeal was discontinued on 15 October 2020.
Light Brigade Properties Pty Ltd (ACN 606 519 108) v WMC	DA391/2019/1	Lindsay Taylor Lawyers	2A Oxford Street WOOLLAHRA	This is an appeal against the deemed refusal of an application for new hours of operation to the upper levels of the Light Brigade Hotel. First directions hearing was held on 17 July 2020. The court made the following orders: a) the proceedings were set down for a s34 conference on 5 February 2020; b) Council's SOFAC to be filed by 20 August 2020; c) the parties and their experts are to participate in a without prejudice meeting by 25 September 2020. The DA was deferred

Applicant v Respondent	Council Reference	Legal Rep	Address	Comment
				by the LPP on 27 August 2020 to enable a further review of the recommended conditions. The DA was approved by the LPP on 22 September 2020. The matter was discontinued on 22 October 2020.
Richard Chapman v WMC	DA133/2020/1	Wilshire Webb Staunton Beattie Lawyers	10 Spring Street DOUBLE BAY	This is an appeal against the deemed refusal of an application for the construction of a new residential flat building with basement parking, swimming pool and strata subdivision. First directions hearing was held on 28 July 2020. Council filed its Statement of Facts and Contentions by 17 August 2020. This DA was refused by the LPP on 6 August 2020. A s34 conciliation conference was set down for 10 November 2020. Without prejudice amended plans were submitted on 26 October 2020. A joinder application was submitted on 19 November 2020 in regards to GFA calculations. A second directions hearing was held on 17 November 2020. The appeal was discontinued on 2 March 2021.

Applicant v Respondent	Council Reference	Legal Rep	Address	Comment
Building Control - Legal Matters				
Class 4 - Orders & Civil Enforcement				
Awaiting Callover-Mention				
Robert Kaufmann v WMC	Order 271/2021	Wilshire Webb Staunton Beattie Lawyers	35 Glenview Street PADDINGTON	A Class 1 appeal has been lodged against Council's Order 271/2020 issued on 16 February 2021, requiring the removal of unauthorised work contrary to development consent DA 599/2000.
Judgement Finalised				
Shaun Keith Alfred Bonett v WMC	BC 46/2018	Peter R Rigg Solicitor & Barrister	20 The Crescent VAUCLUSE	A Class 1 appeal has been lodged against the deemed refusal of building information certificate application BC 46/2018. The certificate was lodged to address significant unauthorised works which is the subject of separate Class 4 proceedings that is listed for mediation on 15 March 2019. Initial call-over for the Class 1 proceedings is 14 February 2019. Mediation on 15 March vacated due to hospitalisation of Mrs Bonett. Applicant to file and serve his Statement of Facts and Contentions in Reply by 30 October 2019. Mediation occurred on 12 November 2019. On 26 November 2019 listed for hearing on 21-23 September 2020 with the Registrar making the following directions; 1. Applicant is to file any notice of motion concerning amendment of the applications by 13 December 2019; 2. Any relevant Motion to amend will be heard by the Registrar on 31 January 2020; 3. Applicant is also directed to file all evidence upon which he proposes to rely by 28 February 2020; 4. Council's evidence upon which it proposes to rely is to be filed and served by 27 March 2020;

Applicant v Respondent	Council Reference	Legal Rep	Address	Comment
				5. Subsequently, experts, grouped in areas of expertise, are to meet and confer to produce a joint report by 26 August 2020 (extended from 10 April 2020 & 30 June 2020). Matter set down for hearing 21, 22 & 23 September 2020. Section 34 agreement issued on 29 September 2020. Reached in conjunction with a 'Deed of Settlement'.
WMC v Shaun Bonett	Order 421/2017	Peter R Rigg Solicitor & Barrister	20 The Crescent VAUCLUSE	Class 4 Land & Environment Court proceedings initiated to address significant unauthorised works on a heritage item. Direction hearing orders of 13/04/2018 - 1. Inspection by 19/05/2018; 2. By 28/05/2018 council to file and serve points of claim and any further affidavits; 3. Respondent to serve affidavits in chief and points of defence by 02/07/2018; 4. Council to serve any affidavits in reply by 16/07/2018. On 14/09/2018 respondent submitted an application to the Court for the matter to be adjourned pending determination of DA 398/2018. Respondent's application was dismissed an the Respondent was ordered to file a defence by 27/09/2018. Matter adjourned to direction's list on 5/10/2018. Court stood matter over to 26 October 2018. Mention on 16/11/2018 'Notice of Motion' filed by Respondent to strike out part of Council's Summons and Points of Claim was dismissed by the Court; Council's Motion to amend its Summons and Points of Claim to take into account additional evidence relating to heritage works was stood over to a later time; Judge stated Court's resources were extremely stretched and in his view the Class 4 and the Class 1 proceedings (appeal of DA 398/2018 'use' application) could both be more quickly resolved if the Class 1 matters were dealt with first and the Class 4 travel with the Class 1 application. Setdown for mediation on 15 March 2019 with 'Facts and Contentions' required to be filed by 25 January 2019. Mediation on 15 March vacated due to hospitalisation of Mrs Bonett. Applicant to file and serve his Statement of Facts and Contentions in Reply by 30 October 2019. Mediation of Class 1 appeals occurred on 12 November 2019. On 26 November 2019 the Class 1 appeals were listed for hearing on 21-23 September 2020 with the Registrar making the following directions; 1. Applicant is to file any notice of motion concerning amendment of the applications by 13 December 2019; 2. Any relevant Motion to amend will be heard by the Registrar on 31 January 2020; 3. Applicant is also directed to file all evidence upon which he proposes to rely by 28 February 2020; 4. Council's evidence upon which it proposes to rely is to be filed and served by 27 March 2020; 5. Subsequently, experts, grouped in areas of expertise, are to meet and confer to produce a joint report by 26 August 2020 (extended from 10 April 2020 & 30 June 2020).

Applicant v Respondent	Council Reference	Legal Rep	Address	Comment
				Section 34 agreement in Class 1 matters issued on 29 September 2020. Class 4 proceedings listed before Justice Duggan on 2 October 2020. By Consent the Court ordered that: 1. The proceedings are dismissed. 2. The respondent [Bonett] is the pay the Applicant's [Council] costs of the proceedings in the sum of $200,000 within 7 days from the date of the orders. Monies received in accordance with the Court Order.
WMC v AMA Holdings Pty Ltd	31.2003.14	Lindsay Taylor Lawyers	2A Cooper St DOUBLE BAY	Court election of Penalty Infringement Notices PIN 3198903960 - Fire safety statement 2 week overdue; PIN 3199054100 - Fire safety statement 3 weeks overdue and PIN 3199054174 - Fire safety statement 4 weeks over due. At directions hearing on 11 August 2020 all matters were set down for hearing on 11 December 2020. Defendant found guilty with the following Judgement on Sentence handed down on 22 February 2021; 1. Magistrate ordered that: a. in respect of the first sequence, convict the Defendant pursuant to s10A of the CSP Act and not impose any further penalty, b. in respect of the second sequence, convict the Defendant and impose a fine of $2,000, c. in respect of the third sequence, convict the Defendant and impose a fine of $4,000. 2. Magistrate also awarded $12,000 to Council in costs pursuant to s215 of the Criminal Procedure Act 1986.
Discontinued				
Marion Nicolas v WMC	Swimming Pool Application 23/2020	Wilshire Webb Staunton Beattie Lawyers	209 Edgecliff Road WOOLLAHRA	Appeal against Council's refusal to grant an exemption from compliance with the Swimming Pools Act. Matter is listed for mention on 26 August 2020. At mention on 26/8 the matter was stood over for 2 weeks to allow the parties to discuss solutions to the non-compliances with the pool barrier. The applicant discontinued the whole proceedings on 22/09/2020.



	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
1st Qtr	2	6	7	7	2	8	9	13	9	8	10
2nd Qtr	6	4	4	8	9	5	7	7	10	11	13
3rd Qtr	3	2	9	1	10	13	13	8	12	8	9
4th Qtr	6	2	5	14	9	10	8	12	8	8	

Item No:	D3 Delegated to Committee
Subject:	**WOOLLAHRA LOCAL PLANNING PANEL REGISTER OF PLANNING DECISIONS AND ANALYSIS**
Authors:	Helen Tola, Manager - Governance & Council Support George Fotis, Acting Manager Development Control
Approver:	Nick Economou, Acting Director Planning & Development
File No:	21/42738
Reason for Report:	Woollahra Local Planning Panel - Register of Planning Decisions and Analysis - Period 7 August 2020 to 18 March 2021.

Recommendation:

THAT the register of planning decisions for matters determined by the Woollahra Local Planning Panel (WLPP) for the period 7 August 2020 to 18 March 2021 be received and noted.

1. Background:

The Woollahra Local Planning Panel (WLPP) assesses and determines development applications and provides advice to Council on planning proposals and other matters. The WLPP is established under Part 2, Division 2.5 of the *Environmental Planning and Assessment Act 1979*.

In accordance with the provisions of the *Environmental Planning and Assessment Act 1979* and *Local Government Act 1993*, Council is required to maintain a register that records which panel members vote for and which panel members vote against each planning decision of the WLPP.

A planning decision is a resolution of the Woollahra Local Planning Panel that determines a matter, i.e. approves or refuses a development application. The register as prepared details the matters considered by the Woollahra Local Planning Panel and will continue to be updated on a regular basis and is available on Council's website at www.woollahra.nsw.gov.au

Councillors have requested that a report be prepared on the decisions made and that this be reported to the Environmental Planning Committee (EPC) on a regular basis. Staff have used the planning decisions register as a basis and extended this to provide a summary of the applications considered by the WLPP, including the staff recommendation and the final WLPP decision in response to the request.

Following feedback from Councillors at the Environmental Planning Committee in August 2018 meeting, cost of works, full reasons of referral and key issues have now been included in the annexure.

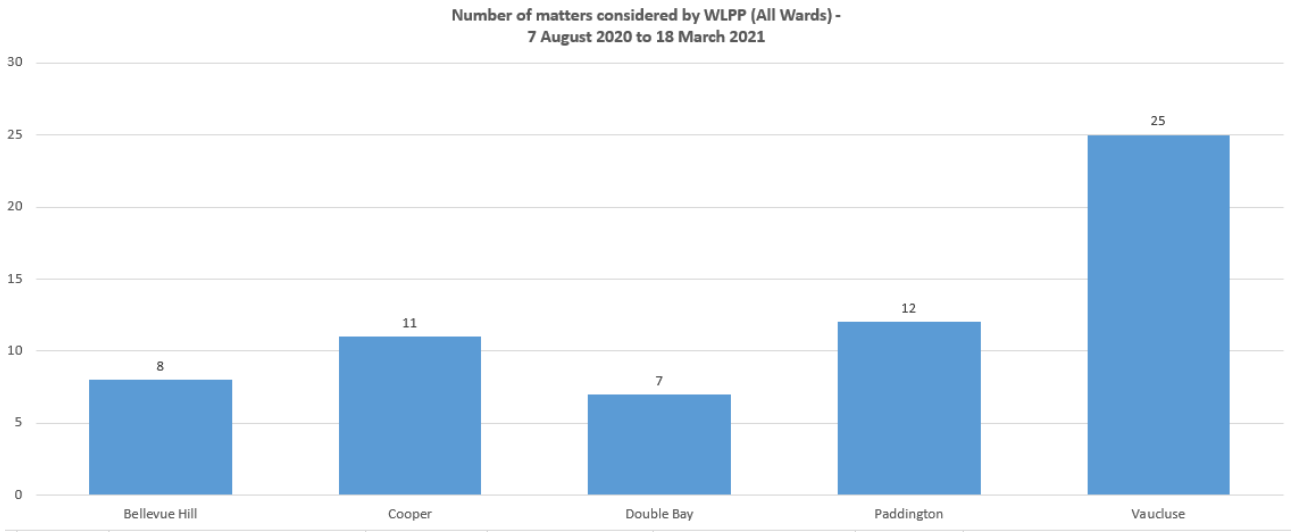
In total 63 Development Applications and 4 Planning Proposals were considered by the Woollahra Local Planning Panel during the period of **7 August 2020 to 18 March 2021**.

Provided below is an analysis of the following:

- the number of development applications considered per ward
- staff recommendation vs WLPP Decision
- reason(s) for referral to WLPP.

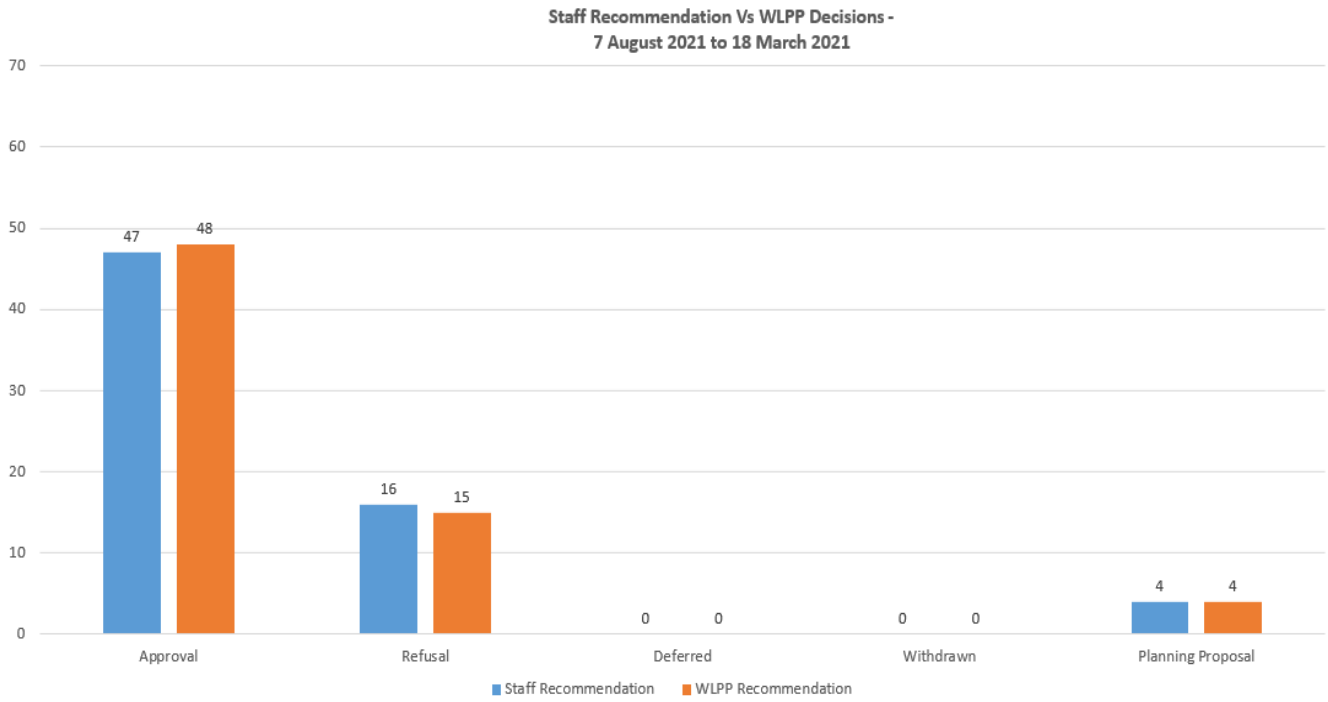
Number of Development Applications (excluding Planning Proposals) considered per ward:

The following graph illustrates the number of Development Applications (excluding Planning Proposals) considered by the Panel (per Ward).



Staff Recommendation vs WLLP Decision:

The graph below provides a comparison of the staff recommendation versus the WLPP decision.

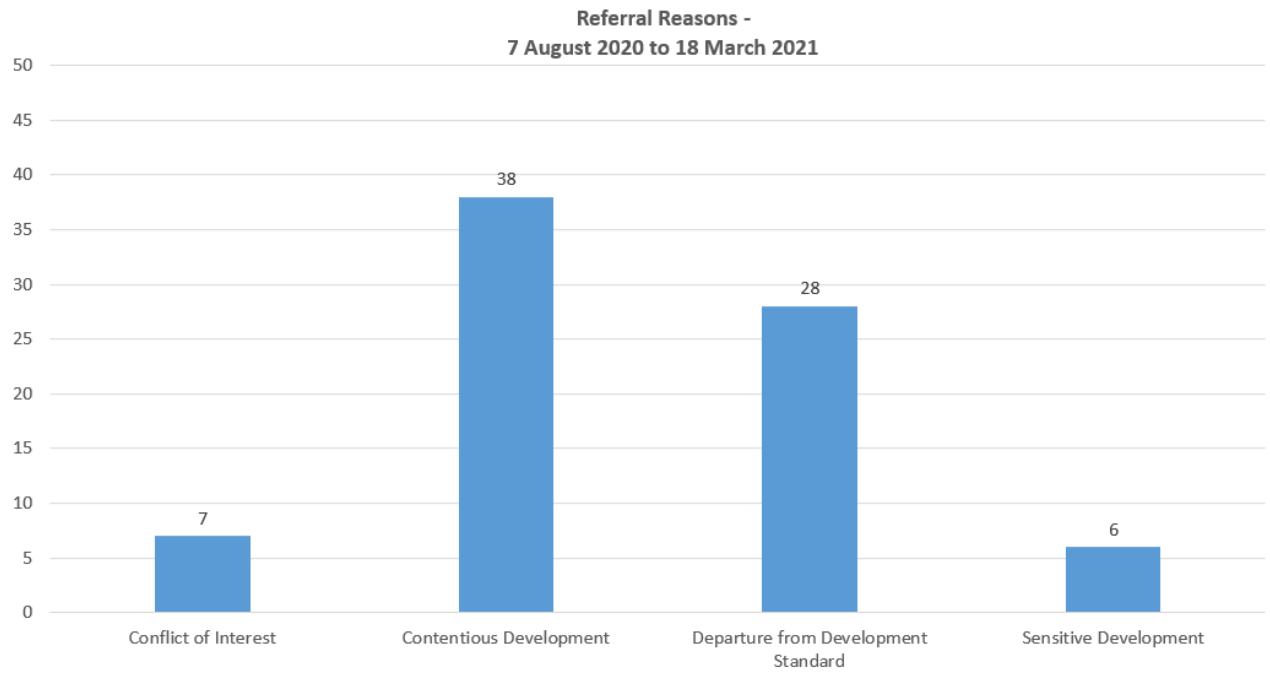


Reasons for Referral to WLLP:

The principal function of the WLPP is to determine local development applications (DAs) that fall within any of the following categories:

- conflict of interest;
- contentious development;
- departure from development standards (> 10%); and
- sensitive development.

The graph below indicates the reason for referral to the WLPP, noting that some applications fall within more than one category. Further details are available in **Annexure 1**.



Annexure 1 presents the Woollahra Local Planning Panel - Register of Planning Decisions, for the period **7 August 2020 to 18 March 2021.**

2. Other Relevant Information - Operations of the Woollahra Local Planning Panel

2.1 Re-appointment of Chair, Alternate Chairs and Experts of Woollahra Local Planning Panel (WLPP)

The Minister for Planning and Public Spaces has requested the Department of Planning, Industry and Environment (DPIE) to conduct an expression of interest process during early 2021 to refresh the chair and expert pools from which councils make appointments to their local planning panels.

As this timing coincides with the end of the first three-year term of office for local planning panel members, on 28 February 2021, councils have been requested to reappoint current chairs, alternate chairs and experts up to 30 June 2021.

In light of the above, Council at its meeting on 22 February 2021 considered a Report seeking the re-appointment of the current chair, alternate chairs and experts to 30 June 2021. The Report was adopted by Council.

Council resolved as follows:

A. THAT Council reappoints the current chairs, alternate chairs and expert pool members of the Woollahra Local Planning Panel (WLPP) to the 30 June 2021.

B. THAT Council notes that the Department is currently seeking applications from candidates to be approved by the Minister for the roles of chair and/or expert member, for councils to appoint to their Local Planning Panels before 1 July 2021.

C. THAT a further report be prepare to appoint a Panel Chair, Alternate Chairs and Experts from 1 July 2021.

A copy of the report as considered by Council is attached as **Annexure 2**.

3. Appeals

The table below provides a brief snapshot of Applications determined by the Panel where Class 1 Appeals have been filed and/or finalised within the period from 7 August 2020 to 18 March 2021.

DA No.	Property Address	Staff Recommendation	Panel's Recommendation	L&E Court Decision/Outcome
176/2020/1	50 Wolseley Rd POINT PIPER	Refusal	Refusal	Ongoing
233/2020/1	65 Village High Rd VAUCLUSE	Refusal	Refusal	Ongoing
108/2020/1	Lot A, 8-9 Hillside Ave VAUCLUSE	Refusal	Refusal	Ongoing
110/2020/1	Lot B, 8-9 Hillside Ave VAUCLUSE	Refusal	Refusal	Ongoing
111/2020/1	Lot C, 8-9 Hillside Ave VAUCLUSE	Refusal	Refusal	Ongoing
325/2020/1	3 Wiston Gdns DOUBLE BAY	Refusal	Refusal	Ongoing
274/2020/1	432-440 Oxford St PADDINGTON	Refusal	Refusal	Ongoing
143/2020/1	40 Glendon Rd DOUBLE BAY	Refusal	Refusal	Ongoing
193/2020/1	3 Trelawney St WOOLLAHRA	Refusal	Refusal	Ongoing
226/2019/1	351 & 353 New South Head Rd DOUBLE BAY	Approval	Approval	Ongoing
19/2020/1	780-786 New South Head Rd ROSE BAY	Refusal	Refusal	Ongoing
202/2018/2	16/325-335 New South Head Rd DOUBLE BAY	Approval	Refusal	Ongoing
107/2020/1	8A Cooper St PADDINGTON	Refusal	Refusal	Ongoing
209/2019/1	37 Newcastle St ROSE BAY	Approval	Refusal	Ongoing
563/2018/1	160 Wolseley Rd POINT PIPER	Approval	Refusal	Ongoing
10/2020/1	37 Edward St WOOLLAHRA	Refusal	Refusal	Ongoing
233/2018/1	77-81 Yarranabbe Rd DARLING POINT	Refusal	Refusal	The appeal was upheld via a s34 agreement – satisfactory outcome

DA No.	Property Address	Staff Recommendation	Panel's Recommendation	L&E Court Decision/Outcome
316/2019/1	26-28 Wolseley Rd POINT PIPER	Refusal	Refusal	The appeal was upheld via a s34 agreement – satisfactory outcome
354/2016/3	24 Northland Rd BELLEVUE HILL	Refusal	Refusal	The appeal was upheld
469/2019/1	598-600 Old South Head Rd ROSE BAY	Refusal	Refusal	The appeal was upheld via a s34 agreement – satisfactory outcome
344/2019/1	142, 142A, 142B Bellevue Rd BELLEVUE HILL	Refusal	Refusal	The appeal was upheld via a s34 agreement – satisfactory outcome
290/2018/1	142C Bellevue Rd BELLEVUE HILL	Refusal	Refusal	The appeal was upheld via a s34 agreement – satisfactory outcome
13/2019/1	590-592 New South Head Rd POINT PIPER	Approval	Refusal	The appeal was upheld via a s34 agreement – satisfactory outcome
25/2018/1	49 & 51-53 Bay St DOUBLE BAY	Refusal	Refusal	The appeal was dismissed
458/2017/1	37 Carlotta Rd DOUBLE BAY	Approval	Refusal	The appeal was upheld
126/2017/1	16 Manning Rd DOUBLE BAY	Refusal	Refusal	The appeal was upheld
305/2018/1	30 Kent Rd ROSE BAY	Refusal	Refusal	The appeal was upheld
190/2017/1	593 New South Head Rd ROSE BAY	Approval	Refusal	The appeal was upheld via a s34 agreement – satisfactory outcome
133/2020/1	10 Spring St DOUBLE BAY	Refusal	Refusal	Discontinued
101/2020/1	66-68 Wilberforce Ave ROSE BAY	Approval	Approval	Discontinued
463/2019/1	2A Cooper St DOUBLE BAY	Refusal	Refusal	Discontinued
233/2018/1	77-81 Yarranabbe Rwd DARLING POINT	Refusal	Refusal	Discontinued
391/2019/1	2A Oxford St WOOLLAHRA	Approval	Approval	Discontinued

Note: Annexure 1 in the Legal Register Report tabled to the Environmental Planning Committee Agenda on 12 April 2021 provides further details in relation to the Development Applications and current legal status.

4. Commentary on planning controls

On 7th September 2020, Council's Environmental Planning Committee resolved, in part, as follows:

> *C. THAT Council requests that future reports include an analysis and commentary on the effectiveness of Council current planning controls*

In response to the above resolution, the following points are made:

- In the last review period, the Panel has not provided any feedback nor highlighted any shortcomings in the effectiveness of Council's current planning controls
- Council's Senior Planning staff are of the opinion that the current suite of planning controls in both the WLEP 2014 and WDCP 2015 are clear, concise and moreover effective in delivering the key planning objectives.

- Where issues are raised regarding the effectiveness of our current planning provisions, these are communicated to Council's Strategic Planning Team. The Team will then research best practice, and where appropriate recommend amendments. A current example is the implementation of a Floor Space Ratio development standard for low density residential land to replace the Floorplate controls.

5. Conclusion:

It is recommended that Register of Planning Decisions for the period 7 August 2020 to 18 March 2021 be received and noted.

Annexures

1. Woollahra Local Planning Panel (WLPP) Register of Planning Decisions 7 August 2020 to 18 March 2021

2. Council Report - Reappointment of Chair, Alternate Chairs and Experts of Woollahra Local Planning Panel

Woollahra Local Planning Panel (WLPP)
Register of Planning Decisions 7 August 2020 to 18 March 2021

Meeting Date	Reference	Address	Ward	Proposal	Cost of Works	Referral Reason					Staff Reco	WLPP Decision	Key Planning Issues & Commentary	Voting For	Voting Against	Chair	Site Visit (Yes / No)
						Conflict of Interest	Contentious Development	Departure from Development Standard	Pre-Existing	Sensitive Development							
DEVELOPMENT APPLICATIONS																	
20 Aug 2020	Item D1 - DA91/2020	13 Collins Avenue, Rose Bay	Vaucluse	Build a new amenities block in Percival Park	$235,289.00	✓	×	×		×	Approval	Approval	The key planning issues related to heritage and landscaping (tree protection). Panel's comments Endorsed staff recommendation.	Mark Carleton Keri Huxley John McInerney Annelise Tuor		Annelise Tuor	Yes
20 Aug 2020	Item D2 - DA314/2019/1	17 Gilliver Avenue, Vaucluse	Vaucluse	Demolition of the existing structure including the removal of four trees and construction of a new dwelling with swimming pool, landscaping and double garage	$3,474,045.00	×	✓	×		×	Approval	Approval	The key planning issues related to height, scale and bulk, streetscape character, DCP non-compliances and amenity impacts (i.e. view loss, excavation, privacy, vehicular and pedestrian safety). Panel's comments Endorsed staff recommendation with the inclusion of additional conditions requiring increased setbacks to address privacy and views.	Mark Carleton Keri Huxley John McInerney Annelise Tuor		Annelise Tuor	Yes
20 Aug 2020	Item D3 - DA212/2019/1	6A Hillside Avenue & 1 Ashgate Avenue, Vaucluse	Vaucluse	Amalgamation of two allotments into one (6A Hillside Ave and 1 Ashgate Ave), alterations and additions to the existing building at 6A Hillside Ave and a new pool side structure (pavilion), a new swimming pool, associated landscaping, boundary fencing and site works	$3,350,000.00	×	×	✓		×	Refusal	Refusal	The key planning issues related to height, non-compliance with DCP building envelope controls, streetscape presentation, insufficient information and amenity impacts (i.e. view loss and privacy). Panel's comments Endorsed staff recommendation.	Mark Carleton Keri Huxley John McInerney Annelise Tuor		Annelise Tuor	Yes

Meeting Date	Reference	Address	Ward	Proposal	Cost of Works	Referral Reason					Staff Reco	WLPP Decision	Key Planning Issues & Commentary	Voting For	Voting Against	Chair	Site Visit (Yes / No)
						Conflict of Interest	Contentious Development	Departure from Development Standard	Pre-Existing	Sensitive Development							
20 Aug 2020	Item D4 - DA101/2020/1	66-68 Wilberforce Avenue, Rose Bay	Vaucluse	Demolition of the existing structures and the construction of a three storey residential flat building with associated basement parking, landscape works, amalgamation of Nos. 66 and 68 Wilberforce Avenue and strata subdivision	$6,185,053.00	×	✓	×		✓	Approval	Approval	The new RFB primarily complied with the key development standards, DCP envelope controls. Key issues related to SEPP No 65, consistency with the desired future character objectives of the precinct and residential amenity impacts (i.e. privacy, traffic, solar access and excavation). Panel's comments Endorsed staff recommendation subject to the inclusion of additional conditions requiring the provision of an additional car space, allocation of a visitor car space and the submission of a site waste minimisation plan. Note: The Class 1 Appeal to the L&E Court was subsequently discontinued.	Mark Carleton Keri Huxley John McInerney Annelise Tuor		Annelise Tuor	Yes
20 Aug 2020	Item D5 - DA476/2019/1	72 Sutherland Street, Paddington	Paddington	Extensive demolition of the existing terrace building (Sutherland Street elevation retained) and alterations and additions including a new basement level and new garage	$1,381,936.00	×	×	✓	Height Control 9.5m Existing 12.49m (RL 33.00) Proposed 11.96m (RL 32.47) Replacement roof	×	Approval	Approval	The key planning issues related to the proposed extensive demolition of the principle building form and height non – compliance. Panel's comments Endorsed staff recommendation.	Mark Carleton Keri Huxley John McInerney Annelise Tuor		Annelise Tuor	Yes
20 Aug 2020	Item D6 - DA410/2019/2	8A Cooper Street, Paddington	Paddington	Alterations to the existing building including re-roofing, replacement of windows, excavation and internal modifications	N/A	×	✓	×		×	Approval	Approval	The key planning issues related to heritage, unauthorised works and residential amenity impacts (i.e. noise and privacy from construction works). Panel's comments Endorsed staff recommendation with the inclusion of additional conditions addressing internal and external heritage (design, materials and BCA compliance).	Mark Carleton Keri Huxley John McInerney Annelise Tuor		Annelise Tuor	Yes
27 Aug 2020	Public - Item D1 - DA347/2018/2	12 Greycliffe Avenue, Vaucluse (Lot 29)	Vaucluse	New dual occupancy, swimming pool, siteworks and strata subdivision	N/A	×	✓	×		×	Refusal	Approval	The key planning issues related to parking and traffic (basement level), floorplate non-compliance and deep soil landscaping. Panel's comments Approved the s4.55 on the grounds of the late correspondence tabled at the meeting addressed the staff's reasons for refusal (car parking layout).	Graham Brown Sheridan Burke Graham Humphrey Annelise Tuor		Annelise Tuor	Yes

Meeting Date	Reference	Address	Ward	Proposal	Cost of Works	Referral Reason					Staff Reco	WLPP Decision	Key Planning Issues & Commentary	Voting For	Voting Against	Chair	Site Visit (Yes / No)
						Conflict of Interest	Contentious Development	Departure from Development Standard	Pre-Existing	Sensitive Development							
27 Aug 2020	Public - Item D2 - DA348/2018/2	12 Greycliffe Avenue, Vaucluse (Lot 28)	Vaucluse	Demolition of dwelling, new dual occupancy, swimming pool, siteworks and strata subdivision	N/A	×	✓	×		×	Refusal	Approval	The key planning issues related to parking and traffic (basement level), floorplate non-compliance and deep soil landscaping. Panel's comments Approved the s4.55 on the grounds of the late correspondence tabled at the meeting addressed the staff's reasons for refusal (car parking layout).	Graham Brown Sheridan Burke Graham Humphrey Annelise Tuor		Annelise Tuor	Yes
27 Aug 2020	Pubic - Item D3 - DA391/2019/1	2A Oxford Street, Woollahra	Cooper	New hours of operation to the upper levels of the Light Brigade Hotel	N/A	×	✓	×		×	Approval	Deferred	The key planning issues related to an intensification of use, increased trading hours and resultant residential amenity impacts (i.e. noise, lack of parking, increased traffic, anti-social behaviour). Panel's comments The Panel accepted the Applicant's request to defer the application on the basis of the additional information (acoustic report) tabled at the meeting. The Panel considered that there would be utility in this additional information being reviewed by Council's planning staff prior to the determination of the application. Note: The DA was subsequently tabled to the LPP meeting on 22 September 2020	Graham Brown Sheridan Burke Graham Humphrey Annelise Tuor		Annelise Tuor	Yes
27 Aug 2020	Electronic - Item D1 - DA137/2019/1	19 Wunulla Road, Point Piper	Double Bay	Demolition and reconstruction of a boat shed, dwelling, swimming pool, seawall, associated decking, and landscaping works.	$4,795,165.00	×	×	✓		×	Approval	Approval	The key planning issues related to height, DCP building envelope non-compliances, visual presentation to the harbour and residential amenity impacts (i.e. solar access, privacy, view loss and excavation). Panel's comments Endorsed staff recommendation subject to the inclusion of an additional condition which reduced the size of the garage and restricted the height of the green roof/landscaping above (to address views).	Graham Brown Sheridan Burke Graham Humphrey Annelise Tuor		Annelise Tuor	Yes

Meeting Date	Reference	Address	Ward	Proposal	Cost of Works	Referral Reason					Staff Reco	WLPP Decision	Key Planning Issues & Commentary	Voting For	Voting Against	Chair	Site Visit (Yes / No)
						Conflict of Interest	Contentious Development	Departure from Development Standard	Pre-Existing	Sensitive Development							
27 Aug 2020	Electronic - Item D2 DA103/2020/1	55 New Beach Road, Darling Point	Double Bay	Alterations & additions to the existing dwelling	$1,963,176.00	×	×	✓	Height Control 9.5m Existing 10.91m Proposed 10.91m	×	Approval	Approval	The key planning issues related to the height non-compliance and residential amenity impacts (i.e. view loss and construction related issues). Panel's comments Endorsed staff recommendation.	Graham Brown Sheridan Burke Graham Humphrey Annelise Tuor		Annelise Tuor	Yes
27 Aug 2020	Electronic - Item D3 DA146/2019/1	126-140 Oxford Street, Paddington	Paddington	Alterations and additions to an existing commercial building including a new third level commercial space (gym/fitness facility) incorporating a mansard roof form with dormer windows to the front façade (Oxford Street) and rear	$1,270,000.00	×	×	✓		×	Approval	Approval	The key planning issues related to existing use rights, height and FSR, heritage and residential amenity impacts (parking, privacy, stormwater disposal). Panel's comments Endorsed staff recommendation.	Graham Brown Sheridan Burke Graham Humphrey Annelise Tuor		Annelise	Yes
3 Sep 2020	Public - Item D1 DA119/2018/4	4 Belah Avenue, Vaucluse	Vaucluse	Demolition of the existing duplex and the construction of a new dual occupancy, landscaping and associated works	N/A	×	✓	×		×	Refusal	Refusal	The key planning issues related to unauthorised works, DCP setback non-compliances, intrusive building bulk and residential amenity impacts (i.e. view loss, privacy, sense of enclosure). Panel's comments Endorsed staff recommendation.	James Colman Nicola Grieve John McInerney Peter Wells		Peter Wells	Yes
3 Sep 2020	Public - Item D2 DA481/2019/1	6 Glendon Road, Double Bay	Cooper	Demolition of the existing single dwelling and construction of a new two storey dwelling with attached garage and swimming pool	$1,814,614.00	×	✓	×		×	Approval	Approval	The key planning issues related to height, bulk and scale, design, streetscape presentation and residential amenity (i.e. privacy, solar access, overdevelopment of the site). Panel's comments Endorsed staff recommendation subject to the inclusion of additional conditions addressing privacy, finish of driveway surface and height of boundary fencing abutting the Sydney Water stormwater channel.	James Colman John McInerney Peter Wells	Nicola Grieve	Peter Wells	Yes

Meeting Date	Reference	Address	Ward	Proposal	Cost of Works	Referral Reason					Staff Reco	WLPP Decision	Key Planning Issues & Commentary	Voting For	Voting Against	Chair	Site Visit (Yes / No)
						Conflict of Interest	Contentious Development	Departure from Development Standard	Pre-Existing	Sensitive Development							
3 Sep 2020	Electronic - Item D1 DA489/2019/1	3/14 Benelong Crescent, Bellevue Hill	Bellevue Hill	Alterations and Additions	$30,000.00	×	×	✓		×	Approval	Approval	The key planning issues related to height non-compliance, streetscape presentation and residential amenity impacts (i.e. privacy - roof terrace). Panel's comments Endorsed staff recommendation subject to the inclusion of an additional condition requiring the proposed roof terrace being setback a further 1.5m from the existing northern (front) elevation of the building.	James Colman John McInerney Peter Wells	Nicola Grieve	Peter Wells	Yes
3 Sep 2020	Electronic - Item D2 - DA184/2020/1	2, 4 & 18/4 Waimea Avenue, Woollahra	Cooper	Lot consolidation and boundary adjustment	N/A	×	×	✓		×	Approval	Approval	The key planning issue related to the minimum lot size. Panel's comments Endorsed staff recommendation.	James Colman Nicola Grieve John McInerney Peter Wells		Peter Wells	Yes
3 Sep 2020	Electronic - Item D3 - DA83/2020/1	1 & 2/98 Bellevue Road, Bellevue Hill	Cooper	Additions of a new level to the existing attached dual occupancy and other alterations and additions	$385,500.00	×	×	✓		×	Approval	Approval	The key planning issues related to height, DCP building envelope non-compliances (floorplate, setbacks), streetscape presentation - and residential amenity impacts (i.e. solar access, privacy, sense of enclosure, view loss). Panel's comments Endorsed staff recommendation.	James Colman John McInerney Peter Wells	Nicola Grieve	Peter Wells	Yes
22 Sep 2020	Electronic - Item D1 - DA391/2019/1	2A Oxford Street, Woollahra	Cooper	New hours of operation to the upper levels of the Light Brigade Hotel	N/A	×	✓	×		×	Approval	Approval	The DA was initially considered by the LPP on 27 August 2020 (see above). The key planning issues related to an intensification of use, increased trading hours and resultant residential amenity impacts (i.e. noise, lack of parking, increased traffic, anti-social behaviour). Panel's comments Endorsed staff recommendation Note: The Class 1 Appeal filed on the grounds of deemed refusal was subsequently discontinued.	Graham Brown Sheriden Burke Graham Humphrey Annelise Tuor		Annelise Tuor	No

Meeting Date	Reference	Address	Ward	Proposal	Cost of Works	Referral Reason					Staff Reco	WLPP Decision	Key Planning Issues & Commentary	Voting For	Voting Against	Chair	Site Visit (Yes / No)
						Conflict of Interest	Contentious Development	Departure from Development Standard	Pre-Existing	Sensitive Development							
24 Sep 2020	Public - Item D1 - DA428/2019/1	50 Old South Head Road, Vaucluse	Vaucluse	The demolition of an existing residential flat building consisting of 4 units and ancillary structures and the construction of a new residential flat building consisting of 8 units under existing use rights	$3,663,444.00	×	✓	×		✓	Approval	Approval	The key planning issues related to existing use rights, height, FSR, streetscape character, DCP non-compliances and residential amenity impacts (i.e. view loss, excavation, privacy, vehicular and pedestrian safety, traffic). Panel's comments Endorsed staff recommendation with additional conditions relating to privacy and a reduction in the overall height (250mm).	Graham Brown Mark Carleton Peter Webber	Keri Huxley	Peter Webber	Yes
24 Sep 2020	Public - Item D2 - DA115/2020/1	1 Moncur Street, Woollahra	Cooper	Provision for live entertainment and the associated acoustic treatment measures, operational changes to trading hours and security provision	$9,000.00	×	✓	×		×	Approval	Approval	The key planning issues related to increased trading hours, live entertainment, acoustic impacts and number of security staff. Panel's comments Endorsed staff recommendation with an additional condition relating to improved signage (trading hours and patron numbers).	Graham Brown Mark Carleton Keri Huxley Peter Webber		Peter Webber	Yes
24 Sep 2020	Public - Item D3 - DA206/2019/1	11 & 13 Buller Street, Bellevue Hill	Bellevue Hill	Demolition of two existing dwellings and construction of a new three storey residential flat building containing 6 units (inclusive of 2 affordable housing units).	$7,388,736.00	×	✓	×		✓	Approval	Approval	The new RFB complied with the key development standards and DCP envelope controls. Key issues related to SEPP 65, consistency with the desired future character objectives of the precinct and residential amenity impacts and (i.e. privacy, traffic, solar access and excavation). Panel's comments Endorsed staff recommendation with the inclusion of an additional condition requiring a minor redesign of the entry lobby area.	Graham Brown Mark Carleton Keri Huxley Peter Webber		Peter Webber	Yes
24 Sep 2020	Electronic - Item D1 - DA154/2020/1	49 & 51 Suttie Road, Bellevue Hill	Bellevue Hill	Alterations and additions to the existing dwelling including extension of swimming pool, new street wall & entry portico and new soft landscaping	$685,000.00	×	×	✓		×	Approval	Approval	The key planning issue related to the height non-compliance. Panel's comments Endorsed staff recommendation.	Graham Brown Mark Carleton Keri Huxley Peter Webber		Peter Webber	Yes

Meeting Date	Reference	Address	Ward	Proposal	Cost of Works	Referral Reason					Staff Reco	WLPP Decision	Key Planning Issues & Commentary	Voting For	Voting Against	Chair	Site Visit (Yes / No)
						Conflict of Interest	Contentious Development	Departure from Development Standard	Pre-Existing	Sensitive Development							
15 Oct 2020	Public)- Item D2 - DA448/2019/1	4 Loch Maree Place, Vaucluse	Vaucluse	Demolition of the existing dwelling and the construction of a new 3 storey dwelling, swimming pool and landscaping works	$3,267,373.00	×	✓	×		×	Refusal	Refusal	The key planning issues related DCP building envelope non-compliances (floorplate, setbacks, incline plane and wall height), building bulk and view affectation. Panel's comments Endorsed staff recommendation.	Mark Carleton Graham Humphrey Sandra Robinson Annelise Tuor		Annelise Tuor	Yes
15 Oct 2020	Public - Item D3 - DA107/2020/1	8A Cooper Street, Paddington	Paddington	External alterations and additions to the existing dwelling	$100,000.00	×	✓	×		×	Refusal	Refusal	The key planning issues related to the impact the proposed elevated terrace structure would have on the heritage item and residential amenity issues (i.e. privacy). Panel's comments Endorsed staff recommendation. Note: A Class 1 Appeal was filed on 3 November 2020.	Mark Carleton Graham Humphrey Sandra Robinson Annelise Tuor		Annelise Tuor	Yes
15 Oct 2020	Electronic - Item D1 - 20/187951	Quarterly Report	N/A	Quarterly Report on the status of all appeals relating to applications determined by the Local Planning Panel and Deemed Refusal for applications to be determined by the Local Planning Panel	N/A	×	×	×		×		Received and noted		Mark Carleton Graham Humphrey Sandra Robinson Annelise Tuor		Annelise Tuor	N/A
29 Oct 2020	Public - Item D1 - DA108/2020/1	8-9 Hillside Avenue, Vaucluse (Lot A)	Vaucluse	The construction of a new residential dwelling including basement garage, new swimming pool, and associated landscaping and siteworks	$1,505,569.00	×	✓	×		×	Refusal	Refusal	The key planning issues related to DCP building envelope non-compliances (floorplate, setbacks, excavation), visual bulk, presentation to the street, insufficient information and residential amenity impacts (i.e. view loss, solar access, sense of enclosure and privacy Impacts). Panel's comments Endorsed staff recommendation. Note: A Class 1 Appeal was filed on 14 September 2020.	Sheridan Burke Nicola Grieve John McInerney Peter Webber		Peter Webber	Yes

Meeting Date	Reference	Address	Ward	Proposal	Cost of Works	Referral Reason					Staff Reco	WLPP Decision	Key Planning Issues & Commentary	Voting For	Voting Against	Chair	Site Visit (Yes / No)
						Conflict of Interest	Contentious Development	Departure from Development Standard	Pre-Existing	Sensitive Development							
29 Oct 2020	Public - Item D2 - DA110/2020/1	8-9 Hillside Avenue, Vaucluse (Lot B)	Vaucluse	Construction of a new residential dwelling with basement garage, new swimming pool and associated landscaping and siteworks	$1,957,268.00	×	✓	×		×	Refusal	Refusal	The key planning issues related to DCP building envelope non-compliances (floorplate, setbacks, excavation), visual bulk, presentation to the street, insufficient information and residential amenity impacts (i.e. view loss, solar access, sense of enclosure and privacy Impacts). Panel's comments Endorsed staff recommendation. Note: A Class 1 Appeal was filed on 14 September 2020	Sheridan Burke Nicola Grieve John McInerney Peter Webber		Peter Weber	Yes
29 Oct 2020	Public - Item D3 - DA111/2020/1	8-9 Hillside Avenue, Vaucluse (Lot C)	Vaucluse	New attached dual occupancy with basement garage, in-ground private spas, and associated landscaping and siteworks	$1,868,144.00	×	✓	×		×	Refusal	Refusal	The key planning issues related to DCP building envelope non-compliances (floorplate, setbacks, excavation), visual bulk, presentation to the street, insufficient information and residential amenity impacts (i.e. view loss, solar access, sense of enclosure and privacy Impacts). Panel's comments Endorsed staff recommendation. Note: A Class 1 Appeal was filed on 14 September 2020	Sheridan Burke Nicola Grieve John McInerney Peter Webber		Peter Webber	Yes
29 Oct 2020	Electronic - Item D1 - DA44/2020/1	20 Boronia Road, Bellevue Hill	Bellevue Hill	Demolition of dwelling, and construction of a residential flat building with associated earthworks and landscaping, and strata subdivision	$3,200,000.00	×	×	×		✓	Approval	Approval	New RFB which generally complied with the key development standards and DCP envelope controls. Key planning issues related to SEPP 65, consistency with the desired future character objectives of the precinct and residential amenity impacts and (i.e. privacy, traffic, solar access and excavation). Panel's comments Endorsed staff recommendation with the inclusion of an additional condition which required the retention of 2 existing trees and an increase in the level of deep soil landscaping.	Peter Webber Sheriden Burke John McInerney Nicola Grieve		Peter Webber	Yes
19 Nov 2020	Public - Item D3 - DA226/2019/1	351 & 353 New South Head Road, Double Bay	Double Bay	Demolition of existing buildings, construction of a new residential flat building including provision of affordable rental housing (SEPP ARH 2009) with basement parking	$6,521,183.00	×	✓	✓		×	Approval	Deferred for a site inspection	The key planning issues related to Height and FSR breaches, non-compliance with DCP building envelope controls, SEPP 65, heritage, inconsistency with the desired future character objectives of the precinct and residential amenity impacts (i.e. solar access, excavation, privacy, traffic view loss, overdevelopment of the site)	Graham Brown Andrew Petrie Annelise Tuor James Colman		Annelise Tuor	Yes

Meeting Date	Reference	Address	Ward	Proposal	Cost of Works	Referral Reason					Staff Reco	WLPP Decision	Key Planning Issues & Commentary	Voting For	Voting Against	Chair	Site Visit (Yes / No)
						Conflict of Interest	Contentious Development	Departure from Development Standard	Pre-Existing	Sensitive Development							
													Panel's comments Deferred to allow the panel to carry out an inspection on 30 November 2020 of the subject site and the adjoining properties. Note: The DA was subsequently tabled to the LPP meeting on 30 November 2020 Note: A Class 1 Appeal was filed on 17 November 2020.				
19 Nov 2020	Public - Item D4 - DA143/2020/1	40 Glendon Road, Double Bay	Double Bay	Demolition of the existing dwelling & the construction of a new two storey multi-dwelling housing development with basement car parking, a swimming pool and associated landscaping works	$2,605,900.00	×	✓	×		×	Refusal	Refusal	The key planning issues related to building height and FSR non-compliances, insufficient information, volume of excavation, dewatering, and adverse residential amenity impacts (i.e. privacy, traffic, solar access, impact on heritage trees). Panel's comments Endorsed staff recommendation. Note: A Class 1 Appeal was filed on 19 November 2020.	Graham Brown Andrew Petrie Annelise Tuor James Colman		Annelise Tuor	Yes
19 Nov 2020	Public - Item D5 DA503/2016/5	1 Yawang Lane, Bellevue Hill	Bellevue Hill	Demolition of all existing dwellings and ancillary structures, the amalgamation of the three lots, the erection of a new residential flat building with associated car parking and associated landscaping and siteworks	$0.00	×	✓	×		×	Refusal	Refusal	The key planning issues related to the proposal, as modified, not being substantially the same as the approved development, height and FSR non-compliances and resultant residential amenity impacts (i.e. privacy and views loss). Panel's comments Endorsed staff recommendation.	Graham Brown Andrew Petrie Annelise Tuor James Colman		Annelise Tuor	Yes
19 Nov 2020	Electronic - Item D1 DA193/2020/1	3 Trelawney Street, Woollahra	Cooper	Alterations and additions to the existing residential flat building including a new level accommodating one additional unit	$675,000.00	×	×	✓		×	Refusal	Refusal	The key planning issues related to heritage, incompatibility with the desired future character and residential amenity impacts (i.e. privacy and solar access). Panel's comments Endorsed staff recommendation. Note: A Class 1 Appeal was filed on 18 December 2020.	Graham Brown Andrew Petrie Annelise Tuor James Colman		Annelise Tuor	Yes

Meeting Date	Reference	Address	Ward	Proposal	Cost of Works	Referral Reason					Staff Reco	WLPP Decision	Key Planning Issues & Commentary	Voting For	Voting Against	Chair	Site Visit (Yes / No)
						Conflict of Interest	Contentious Development	Departure from Development Standard	Pre-Existing	Sensitive Development							
19 Nov 2020	Electronic - Item D2 DA312/2020/1	49 Beresford Road, Bellevue Hill	Bellevue Hill	Alterations and additions including a new first floor addition	$531,625.00	×	×	✓		×	Approval	Approval	The key planning issues related to the height non-compliance and objector's concern (i.e. privacy). Panel's comments Endorsed staff recommendation.	Graham Brown Andrew Petrie Annelise Tuor James Colman		Annelise Tuor	Yes
19 Nov 2020	Electronic - Item D3 DA199/2020/1	161 Hopetoun Avenue, Vaucluse	Vaucluse	Alterations and additions to existing attic level and a new enclosure to existing swimming pool	$160,000.00	×	×	✓	Height Control 9.5m Existing 10.46m Proposed 10.46m	×	Approval	Approval	The key planning issues related to the height non-compliance, DCP building envelope non-compliances, siting of the pool enclosure and residential amenity impacts (privacy, solar access, sense of enclosure). Panel's comments Endorsed staff recommendation.	Graham Brown Andrew Petrie Annelise Tuor James Colman		Annelise Tuor	Yes
30 Nov 2020	Electronic - item D1 DA226/2019/1	351 & 353 New South Head Road, Double Bay	Double Bay	Demolition of existing buildings, construction of a new residential flat building including provision of affordable rental housing (SEPP ARH 2009) with basement parking	$6,521,183.00	×	✓	✓		✓	Approval	Approval	The DA was initially considered by the LPP at its meeting of 17 October 2019. The key planning issues related to Height and FSR breaches, non-compliance with DCP building envelope controls, SEPP 65, heritage, inconsistency with the desired future character objectives of the precinct and residential amenity impacts (i.e. solar access, excavation, privacy, traffic view loss, overdevelopment of the site). Panel's comments Endorsed staff recommendation subject to the inclusion of additional conditions requiring the deletion of the top most apartment (Apt 17) and a further setback of the basement level from the side boundary. Note: A Class 1 Appeal was filed on 17 November 2020.	Graham Brown Andrew Petrie Annelise Tuor		James Colman	Yes
3 Dec 2020	Public - Item D1 - DA198/2020/1	35 Glenview Street, Paddington	Paddington	Alterations & additions including a new two- level extension into the side passage with parking and attic space	$450,000.00	×	✓	✓	Height Control 9.5m Existing 10.9m Proposed 10.9m	×	Approval	Approval	The key planning issues related to the building height non-compliance, heritage, design streetscape presentation and residential amenity impacts (i.e. privacy, solar access). Panel's comments Endorsed staff recommendation with additional conditions relating to materiality and finishes of the façade and roof.	Mark Carleton Keri Huxley Sandra Robinson Peter Wells		Peter Wells	Yes

Meeting Date	Reference	Address	Ward	Proposal	Cost of Works	Referral Reason					Staff Reco	WLPP Decision	Key Planning Issues & Commentary	Voting For	Voting Against	Chair	Site Visit (Yes / No)
						Conflict of Interest	Contentious Development	Departure from Development Standard	Pre-Existing	Sensitive Development							
3 Dec 2020	Public - Item D2 - DA621/2017/3	2-8 Elizabeth Street, Paddington	Paddington	Change of use from a food and drink premises to a licensed restaurant including a liquor license	$0.00	×	✓	×		×	Approval	Approval	The key planning issues related to the extension of the operating hours and residential amenity impacts (i.e. noise). Panel's comments Endorsed staff recommendation	Mark Carleton Keri Huxley Sandra Robinson Peter Wells		Peter Wells	Yes
3 Dec 2020	Public - Item D3 - DA510/2019/1	16 Olphert Avenue, Vaucluse	Vaucluse	Alterations and additions to existing dwelling including new swimming pool and cabana	$3,364,209.00	×	✓	×		×	Approval	Approval	The key planning issues related to height, desired future and streetscape character, design, DCP non-compliances (setbacks) and residential amenity (i.e. privacy, solar access, view loss, siting and extent of excavation). Panel's comments Endorsed staff recommendation with the inclusion of additional conditions relating to the location of replacement trees/plantings and clarifying the status of the roof area being non-trafficable.	Mark Carleton Sandra Robinson Peter Wells		Peter Wells	Yes
3 Dec 2020	Public - Item D4 - DA258/2019/1	157-159 Hargrave Street, Paddington	Paddington	New smoking area to the "Bellevue Hotel", alterations to the Taylor Street bin room, and new fire exit from Taylor Street	$87,863.00	×	✓	×		×	Approval	Refusal	The key planning issue related to health and amenity impacts from smoke drift from the proposed smoking area. Panel's comments Refused the DA on the grounds of adverse health and amenity impacts, insufficient information (to determine potential health impacts and how these impacts may be mitigated) and not being in the public interest. Note: A Class 1 Appeal was filed on 27 November 2020.	Mark Carleton Keri Huxley Sandra Robinson Peter Wells		Peter Wells	Yes
3 Dec 2020	Electronic - Item D1 - DA340/2020/1	43 & 45 Grosvenor Street, Woollahra	Cooper	Consolidation of two dental practices into one and associated works	$25,000.00	×	×	✓		×	Approval	Approval	The key planning issues related to permissibility and the FSR non-compliance. Panel's comments Endorsed staff recommendation.	Mark Carleton Keri Huxley Sandra Robinson Peter Wells		Peter Wells	Yes
3 Dec 2020	Electronic - Item D2 - DA320/2020/1	20 Bathurst Street, Woollahra	Cooper	Alterations and additions to the existing dwelling	$365,000.00	×	×	✓	Height Control 9.5m Existing 11.18m Proposed 10.88m	×	Approval	Approval	The key planning issue related to the height non-compliance. Panel's comments Endorsed staff recommendation.	Mark Carleton Keri Huxley Sandra Robinson Peter Wells		Peter Wells	Yes

Meeting Date	Reference	Address	Ward	Proposal	Cost of Works	Referral Reason					Staff Reco	WLPP Decision	Key Planning Issues & Commentary	Voting For	Voting Against	Chair	Site Visit (Yes / No)
						Conflict of Interest	Contentious Development	Departure from Development Standard	Pre-Existing	Sensitive Development							
3 Dec 2020	Electronic - Item D3 - DA304/2019/1	41 Birriga Road, Bellevue Hill	Bellevue Hill	Demolition of existing residential flat building and construction of a replacement residential flat building with basement car parking	$2,671,335.00	×	×	✓		✓	Approval	Approval	The new RFB primarily with the key development standards and DCP envelope controls. Key issues related to SEPP No 65, consistency with the desired future character objectives of the precinct and residential amenity impacts and (i.e. privacy, traffic, solar access and excavation). Panel's comments Endorsed staff recommendation with the inclusion of an additional condition reinforcing the roof area being non-trafficable.	Mark Carleton Keri Huxley Sandra Robinson Peter Wells		Peter Wells	Yes
3 Dec 2020	Electronic - Item D4 - DA422/2020/1	7 Palmerston Street, Vaucluse	Vaucluse	Enclosure of an existing first floor balcony at the rear	$9,000.00	✓	×	×		×	Approval	Approval	No planning issues. Panel's comments Endorsed staff recommendation.	Mark Carleton Keri Huxley Sandra Robinson Peter Wells		Peter Wells	Yes
17 Dec 2020	Public – Item D2 - DA365/2020/1	27 Caledonia Street, Paddington	Paddington	Alterations and additions to an existing residential dwelling including modifications to the rear of the property, landscape works and a new plunge pool	$1,005,000.00	×	✓	×		×	Approval	Approval	The key planning issues related heritage, design and form of the rear pavilion structure and residential amenity impacts (visual bulk, privacy). Panel's comments Endorsed staff recommendation with the inclusion of an additional condition requiring a redesign of the roof form of the pavilion structure.	Sheridan Burke John McInerney Andrew Petrie Annelise Tuor		Annelise Tuor	Yes
17 Dec 2020	Public – Item D3 - DA325/2020/1	3 Wiston Gardens, Double Bay	Double Bay	Demolition of existing structures and construction of a new residential flat building on land at 3 Wiston Gardens Double Bay	$22,615,000.00	×	✓	✓		✓	Refusal	Refusal	Key planning issues related to Height and FSR breaches, non-compliance with DCP building envelope controls, SEPP 65, heritage, inconsistency with the desired future character objectives of the precinct and residential amenity impacts (i.e. solar access, privacy, view loss, overdevelopment of the site). Panel's comments Endorsed staff recommendation. Note: A Class 1 Appeal was filed on 17 November 2020.	Sheridan Burke John McInerney Andrew Petrie Annelise Tuor		Annelise Tuor	Yes
17 Dec 2020	Public - Item D4 - DA407/2019/1	Lyne Park Access Road, Rose Bay (aka. Catalina Restaurant)	Vaucluse	Substantial alterations and additions to Catalina Restaurant including an increased seating capacity from 140 to 220 patrons under existing use rights	$3,828,736.00	✓	✓	×		×	Refusal	Deferred	The key planning issues related to height, visual presentation to Lyne Park and the Harbour, traffic/parking, and acoustic impacts. Panel's comments Deferred the DA to enable the applicant to submit amended plans requiring a reduction in the overall height, increased modulation and improved pedestrian amenity.	Sheridan Burke John McInerney Andrew Petrie Annelise Tuor		Annelise Tuor	Yes

Meeting Date	Reference	Address	Ward	Proposal	Cost of Works	Referral Reason					Staff Reco	WLPP Decision	Key Planning Issues & Commentary	Voting For	Voting Against	Chair	Site Visit (Yes / No)
						Conflict of Interest	Contentious Development	Departure from Development Standard	Pre-Existing	Sensitive Development							
													Note: The DA was subsequently tabled to the LPP meeting on 11 March 2021.				
17 Dec 2020	Public - Item D5	Woollahra Local Planning Panel (WLPP) Delegations Assumed Concurrence	N/A	Woollahra Local Planning Panel (WLPP) Delegations Assumed Concurrence	N/A	×	×	×		×		Received and noted		Sheridan Burke John McInerney Andrew Petrie Annelise Tuor		Annelise Tuor	N/A
17 Dec 2020	Electronic – Item D1 - DA520/2019/1	57 Wentworth Road, Vaucluse	Vaucluse	Demolition of existing dwelling and construction of replacement dwelling, with associated landscaping and site works	$3,057,665.00	×	×	✓		×	Approval	Approval	The key planning issues, related to height, desired future and streetscape character, DCP building envelope non-compliances (setbacks) and residential amenity impacts (view loss, privacy, solar access, excavation, landscaping). Panel's comments Endorsed staff recommendation.	Sheridan Burke John McInerney Andrew Petrie Annelise Tuor		Annelise Tuor	Yes
17 Dec 2020	Electronic – Item D2 - DA375/2020/1	11-13 Wentworth Road, Vaucluse	Vaucluse	Alterations & additions to existing dwelling	$694,258.00	×	×	✓	Height Control 9.5m Existing 11.8m Proposed 11.6m	×	Approval	Approval	The key planning issue related to height. Panel's comments Endorsed staff recommendation.	Sheridan Burke John McInerney Andrew Petrie Annelise Tuor		Annelise Tuor	Yes
17 Dec 2020	Electronic – Item D3 - DA242/2020/1	245 Underwood Street, Paddington	Paddington	Alterations & additions to the existing dwelling, first & second floor additions, new swimming pool & workshop	$649,237.00	×	×	✓	Height Control 9.5m Existing 10.8m Proposed 10.8m	×	Approval	Approval	The key planning issue related to the height. Panel's comments Endorsed staff recommendation.	Sheridan Burke John McInerney Andrew Petrie Annelise Tuor		Annelise Tuor	Yes
17 Dec 2020	Electronic – Item D4 - DA496/2019/1	398 Oxford Street, Paddington	Paddington	Demolition of the existing building, site remediation and construction of a new two storey building (infill development) with a basement level and roof top terrace to be used as a restaurant with trading hours of 8am to 12am on Monday - Saturday and 8am -10pm on Sunday with the roof terrace to close at 10pm	$1,925,000.00	×	×	✓		×	Approval	Approval	The key planning issues related to height and FSR non-compliances, heritage (infill development), use of the roof terrace in conjunction with the restaurant use and residential amenity impacts (i.e. noise from the roof top terrace). Panel's comments Endorsed staff recommendation with the inclusion of additional conditions relating to reflectivity, minor redesign of the Oxford Street façade and use of the roof terrace (noise – no live or piped music).	Sheridan Burke John McInerney Andrew Petrie Annelise Tuor		Annelise Tuor	Yes

Meeting Date	Reference	Address	Ward	Proposal	Cost of Works	Referral Reason					Staff Reco	WLPP Decision	Key Planning Issues & Commentary	Voting For	Voting Against	Chair	Site Visit (Yes / No)
						Conflict of Interest	Contentious Development	Departure from Development Standard	Pre-Existing	Sensitive Development							
28 Jan 2021	Public - Item D1 - DA61/2020/1	41 Salisbury Road, Rose Bay	Vaucluse	Demolition of existing dwelling, construction of a three unit residential flat building with basement parking, two swimming pools, landscaping and siteworks	$3,022,538.00	×	✓	×		×	Approval	Approval	The new RFB primarily complied with the key development standards and DCP envelope controls. Key issues related to SEPP No 65, consistency with the desired future character objectives of the precinct and residential amenity impacts and (i.e. privacy, traffic, solar access and excavation). Panel's comments Endorsed staff recommendation with the inclusion of additional conditions relating to the protection of assets owned by Sydney Water and a reduction to the boundary fence height.	Mark Carleton Graham Humphrey John McInerney Annelise Tuor		Annelise Tuor	Yes
28 Jan 2021	Public - Item D2 - DA347/2018/3	12 Greycliffe Avenue, Vaucluse (Lot 29)	Vaucluse	Modifications to approved dual occupancy development including deletion of Condition C.1(h)	N/A	×	✓	×		×	Approval	Deferred	The key planning issues related to unauthorised works, BCA compliance and residential amenity impacts (i.e. privacy impacts, finished materials and landscaping/trees). Panel's comments Deferred the s4.55 to enable the applicant to provide additional information that addresses tree impacts, combustibility of the proposed cladding and privacy treatment of windows. Note: The DA was subsequently tabled to the LPP meeting on 11 March 2021.	Mark Carleton Graham Humphrey John McInerney Annelise Tuor		Annelise Tuor	Yes
28 Jan 2021	Public - Item D3 - DA348/2018/4	12 Greycliffe Avenue, Vaucluse (Lot 28)	Vaucluse	Modification s to approved dual occupancy development including deletion of Condition C.1(h)	N/A	×	✓	×		×	Approval	Deferred	The key planning issues related to unauthorised works, BCA compliance and residential amenity impacts (i.e. privacy impacts, finished materials and landscaping/trees). Panel's comments Deferred the s4.55 to enable the applicant to provide additional information that addresses tree impacts, combustibility of the proposed cladding and privacy treatment of windows. Note: The DA was subsequently tabled to the LPP meeting on 11 March 2021.	Mark Carleton Graham Humphrey John McInerney Annelise Tuor		Annelise Tuor	Yes
28 Jan 2021	Public – Item D4	N/A	N/A	Update of Woollahra Local Planning Panel Operational Procedures	N/A	×	×	×		×		Received and noted		Mark Carleton Graham Humphrey John McInerney Annelise Tuor		Annelise Tuor	No

Meeting Date	Reference	Address	Ward	Proposal	Cost of Works	Referral Reason					Staff Reco	WLPP Decision	Key Planning Issues & Commentary	Voting For	Voting Against	Chair	Site Visit (Yes / No)
						Conflict of Interest	Contentious Development	Departure from Development Standard	Pre-Existing	Sensitive Development							
28 Jan 2021	Electronic - Item D1 - DA281/2020/1	48 Grosvenor Street, Woollahra	Cooper	New garage with loft above	$220,000.00	×	×	✓		×	Approval	Approval	The key planning issues related to the FSR non-compliance and the provision of a loft above a garage (lanescape presentation). Panel's comments Endorsed staff recommendation.	Mark Carleton Graham Humphrey John McInerney Annelise Tuor		Annelise Tuor	Yes
28 Jan 2021	Electronic - Item D2 - DA191/2019/2	22 Military Road, Watsons Bay	Vaucluse	Date adjustment to approved annual market due to COVID-19 from 20 September 2020 to 20 December 2020, with a reserve date of 14 March 2021, the addition of a petting farm and pony rides, and the addition of fencing if required for crowd control during COVID-19	N/A	✓	×	×		×	Approval	Approval	There were no planning issues in changing the date of the already approved market to be held at Robertson Park. Panel's comments Endorsed staff recommendation.	Mark Carleton Graham Humphrey John McInerney Annelise Tuor		Annelise Tuor	No
28 Jan 2021	Electronic - Item D3	N/A	N/A	Quarterly report on the status of all appeals relating to applications determined by the local planning panel & deemed refusals for applications to be determined by the local planning panel	N/A	×	×	×		×	I	Received and noted		Mark Carleton Graham Humphrey John McInerney Annelise Tuor		Annelise Tuor	No
18 Feb 2021	Public - Item D1 - DA274/2020/1	432-440 Oxford Street, Paddington	Paddington	Amalgamation of 3 lots for strata-subdivision, alterations and additions to 5 shops & shop top apartments, construction of new shop top housing development with basement carpark & associated landscaping	$9,930,966.00	×	×	✓		×	Refusal	Refusal	The key planning issues related to Height and the FSR non-compliances, heritage, design, SEPP 65, traffic/parking, stormwater and residential amenity impacts (i.e. solar access, sense of enclosure, privacy, traffic, drainage and excavation). Panel's comments Endorsed staff recommendation but added two additional reasons for refusal which related to FSR and SEPP 65. Note: A Class 1 Appeal was filed on 20 November 2020.	Sheridan Burke Peter Webber Andrew Petrie		Peter Webber	Yes

Meeting Date	Reference	Address	Ward	Proposal	Cost of Works	Referral Reason					Staff Reco	WLPP Decision	Key Planning Issues & Commentary	Voting For	Voting Against	Chair	Site Visit (Yes / No)
						Conflict of Interest	Contentious Development	Departure from Development Standard	Pre-Existing	Sensitive Development							
18 Feb 2021	Public - Item D2 - DA131/2020/1	3 Serpentine Parade, Vaucluse	Vaucluse	Alterations & additions to the existing dwelling	$194,500.00	×	✓	×		×	Approval	Approval	The key planning issue related to view loss. Panel's comments Endorsed staff recommendation.	Sheridan Burke Andrew Petrie Sandra Robinson Peter Webber		Peter Webber	Yes
18 Feb 2021	Electronic – Item D1 - DA169/2017/4	9A Cooper Park Road, Bellevue Hill	Bellevue Hill	Modifications to the driveway alignment to accommodate fire hydrant enclosure	N/A	✓	×	×		×	Approval	Approval	The key planning issues related to driveway design and streetscape presentation. Panel's comments Endorsed staff recommendation.	Sheridan Burke Sandra Robinson Peter Weber		Peter Webber	Yes
11 Mar 2021	Electronic – Item D1 - DA407/2019/1	Lyne Park Access Road, Rose Bay (aka. Catalina Restaurant)	Vaucluse	Substantial alterations and additions to Catalina Restaurant including an increased seating capacity from 140 to 220 patrons under existing use rights	$3,828,736.00	✓	✓	×		×	Approval	Approval	The DA was initially considered by the LPP at its meeting of 17 December 2020. The key planning issues related to height, visual presentation to Lyne Park and the Harbour, traffic/parking, and acoustic impacts. Panel's comments Endorsed staff recommendation with the inclusion of an additional condition limiting the height of ancillary structures on the roof.	Sheridan Burke John McInerney Andrew Petrie Annelise Tuor		Annelise Tuor	Yes
11 Mar 2021	Electronic – Item D1 - DA347/2018/3	12 Greycliffe Avenue, Vaucluse (Lot 29)	Vaucluse	New dual occupancy, swimming pool, siteworks and strata subdivision	N/A	×	✓	×		×	Approval	Approval	The s4.55 was initially considered by the LPP at its meeting of 28 January 2021. See above. Panel's comments Endorsed staff recommendation with minor changes to the privacy treatment of windows.	Mark Carleton Graham Humphrey John McInerney Annelise Tuor		Annelise Tuor	Yes
11 Mar 2021	Electronic – Item D2 - DA348/2018/4	12 Greycliffe Avenue, Vaucluse (Lot 28)	Vaucluse	Demolition of dwelling, new dual occupancy, swimming pool, siteworks and strata subdivision	N/A	×	✓	×		×	Approval	Approval	The s4.55 was initially considered by the LPP at its meeting of 28 January 2021. See above. Panel's comments Endorsed staff recommendation with minor changes to the privacy treatment of windows.	Mark Carleton Graham Humphrey John McInerney Annelise Tuor		Annelise Tuor	Yes
18 Mar 2021	Public - Item D1 - DA176/2020/1	50 Wolseley Road, Point Piper	Double Bay	Change of use from a single dwelling to a residential flat building (three units) and the associated works	$5,043,436.00	×	✓	×		×	Refusal	Refusal	The key planning issues related to a breach of the height development standard, non-compliance with the DCP battle-axe site area controls, streetscape presentation, visual presentation to the Harbour, and residential amenity impacts (i.e. view loss, solar access and excavation). Panel's comments Endorsed staff recommendation. Note: A Class 1 Appeal was filed on 26 November 2020.	Mark Carleton Keri Huxley Sandra Robinson Peter Webber		Peter Webber	Yes

Meeting Date	Reference	Address	Ward	Proposal	Cost of Works	Referral Reason					Staff Reco	WLPP Decision	Key Planning Issues & Commentary	Voting For	Voting Against	Chair	Site Visit (Yes / No)
						Conflict of Interest	Contentious Development	Departure from Development Standard	Pre-Existing	Sensitive Development							
18 Mar 2021	Public - Item D2 - DA233/2020/1	65 Village High Road, Vaucluse	Vaucluse	Demolition of existing dwelling and construction of a new child care centre providing 86 places	$2,836,134.00	×	✓	×		×	Refusal	Refusal	The key planning issues related to DCP non-compliances with the Child Care provisions, design, inconsistency with the desired future character objectives, streetscape presentation, traffic, parking, pedestrian safety, public interest and residential amenity impacts and (i.e. privacy, solar access, excavation). Panel's comments Endorsed staff recommendation for refusal. Note: A Class 1 Appeal was filed on 14 September 2020.	Mark Carleton Keri Huxley Sandra Robinson Peter Webber		Peter Webber	Yes
18 Mar 2021	Public - Item D3 - DA241/2020 /1	11 Village Lower Road, Vaucluse	Vaucluse	Demolition of existing dwelling and shed, the retention of the existing swimming pool, the construction of an attached dual occupancy, new swimming pool, and associated landscaping and siteworks	$1,958,865.00	×	✓	×		×	Approval	Approval	The key planning issues related to streetscape presentation, design and residential amenity impacts (i.e. privacy, view loss, solar access and excavation). Panel's comments Endorsed staff recommendation.	Mark Carleton Keri Huxley Sandra Robinson Peter Webber		Peter Webber	Yes
18 Mar 2021	Electronic – Item D1 - DA301/2020/1	100 Queen Street, Woollahra	Cooper	Alterations and additions to the existing shop top housing	$320,000.00	×	×	✓		×	Approval	Approval	The key planning issue related to the FSR non-compliance. Panel's comments Endorsed staff recommendation.	Mark Carleton Keri Huxley Sandra Robinson Peter Webber		Peter Webber	Yes
18 Mar 2021	Electronic - Item D2 - DA230/2020/1	Fern Place, Woollahra	Cooper	Lot consolidation and Torrens Title subdivision	$0.00	×	×	✓		×	Approval	Approval	The key planning issue related to non-compliance with the minimum lot size. Panel's comments Endorsed staff recommendation.	Mark Carleton Keri Huxley Sandra Robinson Peter Webber		Peter Webber	Yes
18 Mar 2021	Electronic – Item D3 - DA289/2019/5	30-36 Bay Street, Double Bay	Double Bay	Alterations and additions to the existing commercial building including two additional levels and car parking	N/A	×	×	✓		×	Approval	Approval	The key planning issue related to a further exceedance of the FSR standard (approximately 80 sq. metres). Panel's comments Endorsed staff recommendation.	Mark Carleton Keri Huxley Sandra Robinson		Peter Webber	Yes
18 Mar 2021	Electronic - Item D4 - DA410/2019/3	8A Cooper Street, Paddington	Paddington	Modifications including internal and external modifications and corresponding amendment of conditions of consent	N/A	×	✓	×		×	Approval	Approval	The key planning issue related to heritage. Panel's comments Endorsed staff recommendation with minor amendments relating to internal design.	Mark Carleton Keri Huxley Sandra Robinson Peter Webber		Peter Webber	Yes

Meeting Date	Reference	Address	Ward	Proposal	Cost of Works	Referral Reason					Staff Reco	WLPP Decision	Key Planning Issues & Commentary	Voting For	Voting Against	Chair	Site Visit (Yes / No)
						Conflict of Interest	Contentious Development	Departure from Development Standard	Pre-Existing	Sensitive Development							
PLANNING PROPOSALS																	
15 Oct 2020	Public - Item D1 - 20/176176	Planning Proposal	N/A	Amended Planning Proposal to Introduce an FSR Control for low density residential development and urban greening provisions.	N/A	×	×	×		×	Approval	Approval	Planning proposal supported in principle subject to amendments to the wording of the proposed clauses.	Mark Carleton Graham Humphrey Sandra Robinson Annelise Tuor		Annelise Tuor	No
19 Nov 2020	Public - Item D1	Planning Proposal - Interpretation of desired future character in Woollahra LEP 2014.	N/A	To seek the advice of the Woollahra Local Planning Panel in relation to a planning proposal to clarify the interpretation of desired future character as contained in various aims and objectives of the Woollahra LEP 2014.	$0.00	×	×	×		×	Approval	Approval	Planning Proposal supported.	Graham Brown Andrew Petrie Annelise Tuor	James Colman	Annelise Tuor	No
19 Nov 2020	Public - Item D2	Planning Proposal - Double Bay Club at Kiaora Road, Double Bay	N/A	To seek the advice of the Woollahra Local Planning Panel in relation to a planning proposal for land known as the Double Bay Bowling Club at 18 Kiaora Road, Double Bay.	$0.00	×	×	×		×	Approval	Approval	Planning Proposal supported.	Graham Brown Andrew Petrie Annelise Tuor James Colman		Annelise Tuor	No
17 Dec 2020	Public - Item D1	Planning Proposal - Hillcrest - 780-786 New South Head Road, Rose Bay	N/A	To seek the advice of the Woollahra Local Planning Panel in relation to a planning proposal to list "Hillcrest" at 780-786 New South Head Road, Rose Bay, and its interiors and gardens, as a local heritage item in Woollahra Local Environmental Plan 2014	N/A	×	×	×		×	Approval	Approval	Planning Proposal supported.	John McInerney Andrew Petrie Annelise Tuor		Annelise Tuor	No

Item No:	12.2
Subject:	**WOOLLAHRA LOCAL PLANNING PANEL - REAPPOINTMENT OF CHAIR, ALTERNATE CHAIRS & EXPERTS**
Authors:	Helen Tola, Manager - Governance & Council Support Nick Economou, Acting Director Planning & Development
Approver:	Don Johnston, Director Corporate Services
File No:	21/25248
Reason for Report:	To seek the reappointment of the Woollahra Local Planning Panel Chair, Alternate Chairs and Experts to 30 June 2021.

Recommendation:

A. THAT Council reappoints the current chairs, alternate chairs and expert pool members of the Woollahra Local Planning Panel (WLPP) to the 30 June 2021.

B. THAT Council notes that the Department is currently seeking applications from candidates to be approved by the Minister for the roles of chair and/or expert member, for councils to appoint to their Local Planning Panels before 1 July 2021.

C. THAT a further report be prepare to appoint a Panel Chair, Alternate Chairs and Experts from 1 July 2021.

Background:

The Minister for Planning and Public Spaces has requested the Department of Planning, Industry and Environment (DPIE) to conduct an expression of interest process during early 2021 to refresh the chair and expert pools from which councils make appointments to their local planning panels.

As this timing coincides with the end of the first three-year term of office for local planning panel members, on 28 February 2021, councils have been requested to reappoint current chairs, alternate chairs and experts up to 30 June 2021.

It's important to note, Councils can choose to re-appoint current expert members or choose different experts from the expert pool for appointment up to 30 June 2021. The selection and appointment of community representatives remains a council responsibility.

Advice of this from DPIE is attached as **Annexure 1**.

Council's current Woollahra Local Planning Panel (WLPP) chairs, experts and community representative's members are:

- **Chair & Alternate Chairs**

  Ms Annelise Tuor (Chair)
  Mr Peter Webber (Alternate Chair)
  Mr Peter Wells (Alternate Chair)

- **Expert members**

  Mr Graham Brown*
  Ms Sheridan Burke
  Dr Mark Carleton
  Mr James Colman
  Mr John McInerney
  Ms Gabrielle Morrish*
  Ms Sandra Robinson*

  Note: * Mr Brown, Ms Morrish, Ms Robinson were appointed as additional experts on the 9 December 2019

For the purpose of continuity until June 2021 and in line with the request from the Minister for Planning and Public Spaces it is recommend that the Chair, Alternate Chairs and Expert Members of the Woollahra Local Planning Panel be re-appointed to 30 June 2021.

The Minister for Planning and Public Spaces approves a pool of independent experts including chairs from which councils select and appoint to their local planning panels. Councils separately select and appoint community members. The Department is currently seeking applications from candidates (applications closing on Sunday 28 February 2021) to be approved by the Minister for the roles of chair and/or expert member, for councils to appoint to their Local Planning Panels before 1 July 2021.

Council should also note that, at its meeting on 27 July 2020, it resolved to reduce the pool of council's community representatives for the Woollahra Local Planning Panel from 9 to 4, with all 4 community representatives having equal status and no alternatives.

Our current community representatives are:

- Ms Nicola Grieve, *Bellevue Hill Ward*
- Ms Keri Huxley *Cooper and Paddington Wards*
- Mr Andrew Petrie, *Double Bay Ward*
- Mr Graham Humphrey, *Vaucluse Ward*

It was noted at the time that 4 community representatives provided an ample number for rotation in the event of absences or conflicts of interest. The new pool of community representatives took effective from the first Woollahra Local Panel Meeting in August 2020 and is scheduled for review within three months of the next Local Government Election (effective from 30 September 2021) and every two years after that. It is intended that an expression of interest process would be established in a similar way to when the planning panel was first established in 2018 to call for nominations for community representatives.

Subject to Council's consideration of this report, a further report will be prepared for consideration by Council prior to 30 June 2021 to determine the selection and makeup of the Woollahra Local Planning Panel (WLPP) specifically the Chairs, Alternate Chairs and Experts, again in a similar way to when the Panel was first established in 2018.

Conclusion:

The end of the first three-year term of office for Local Planning Panel Chairs, Alternate Chairs and Experts members expires on 28 February 2021. Councils have been requested to reappoint current Chairs and alternate Chairs and experts up to 30 June 2021. The Minister for Planning and Public Spaces approves a pool of independent experts including chairs from which councils select and appoint to their local planning panels. Councils separately select and appoint community members.

The Department is currently seeking applications from candidates to be approved by the Minister for the roles of chair and/or expert member, for councils to appoint to their Local Planning Panels before 1 July 2021.

Subject to consideration by Council, it is intended that a further report be prepared for consideration by Council on the appointment of a Panel Chairs, Alternate Chairs and Experts from 1 July 2021.

Annexures

1. Local Planning Panel Members - Term expiration and appointment request from Planning Panels Secretariat - Dec 2020

Helen Tola

From: Stuart Withington <Stuart.Withington@planning.nsw.gov.au>
Sent: Friday, 5 February 2021 1:54 PM
To: Stuart Withington
Subject: FW to GMs : Local Planning Panel Members - term expiration and appointment procedure

From: Planning Panels Mailbox <enquiry@planningpanels.nsw.gov.au>
Sent: Wednesday, 2 December 2020 10:52 AM
To: Planning Panels Mailbox <enquiry@planningpanels.nsw.gov.au>
Subject: Local Planning Panel Members - term expiration and appointment procedure

Planning Panels Secretariat

Dear General Managers and Chief Executive Officers,

The Minister for Planning and Public Spaces has requested the Department of Planning, Industry and Environment conduct an expression of interest during early 2021 to refresh the chair and expert pools from which councils make appointments to their local planning panels.

As this timing coincides with the end of the first three-year term of office for local planning panel members, on 28 February 2021, councils have been requested to reappoint current chairs and alternate chairs up to 30 June 2021. Councils can choose to re-appoint current expert members or choose different experts from the expert pool for appointment up to 30 June 2021.

The selection and appointment of community representatives remains a council responsibility.

If councils need access to the expert list please email a request to Planning Panels Secretariat Manager Stuart Withington or call Stuart on 02 8217 2061.

1

For further information on local planning panels visit the LPP webpage.

Your sincerely,

Monica

Monica Gibson

Executive Director

Local and Regional Planning

Department of Planning, Industry and Environment

Department of Planning, Industry & Environment, Parramatta Square, 12 Darcy Street, Parramatta, NSW 2150, Australia

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Item No:	D4 Delegated to Committee
Subject:	**PADDINGTON MARKETING STRATEGY**
Author:	Kate Burgess, Temp Coordinator Placemaking
Approvers:	Matthew Gollan, Manager - Placemaking Craig Swift-McNair, General Manager
File No:	21/54783
Reason for Report:	To report the 2020 Paddington Marketing Strategy prepared for Council by the Sparrowly Group.

Recommendation:

THAT the Environmental Planning Committee note the Paddington Marketing Strategy.

Background:

Oxford St & Paddington Place Plan 2019-2023

The *Oxford Street & Paddington Place Plan 2019 to 2023* (the Place Plan) was adopted by Council on 27 May 2019. The Place Plan aims to build on the Placemaking approach established by the *Oxford Street Roadmap Report*, to enhance the vitality of Paddington's shopping areas in a balanced and responsible manner. The *Place Plan* is consistent with Council's *Community Strategic Plan 2030* and our *Delivery Program 2018 – 2020 and Operational Plan 2018 – 2023*. Many strategies, priorities and actions are ongoing and spread over the life of the *Place Plan*. Others are timed to occur at specific milestones. Strategy 4.2 of the Place Plan is to:

Promote Oxford Street as a walkable iconic high street filled with one-of-a-kind global and local destinations. Paddington's authentic day and night meeting place.

Under this strategy there are six operational plan actions/projects. Project 4.2.1 is:

A comprehensive marketing strategy is developed for Oxford Street utilising a variety of media with an emphasis on fashion, furnishings and food, while being receptive to any new direction and future trends

Oxford Street & Paddington Marketing Strategy

In accordance with 4.2.1 of the Place Plan, in February 2020 the (former) Manager - Placemaking commenced the procurement process for the preparation of a Marketing Strategy for the Oxford Street shopping neighbourhood. In response to the brief Council received a number of submissions from a variety of strategic marketing and communications firms, and in June 2020 the Sparrowly Group were appointed. It is noted that in September 2020 the brief for the marketing strategy was expanded from being focused solely on Oxford Street to apply to Paddington more generally.

Insights were gathered and analysed from various sources including: spend data, stakeholder consultation, social listening, mystery shopping, and desktop research and in November 2020 Sparrowly Group provided the Final *Paddington Marketing Strategy* (the Strategy) (see **Annexure 1**).

The strategy includes challenges and opportunities for Paddington, as well as marketing initiatives, with the aim of creating a consistent and positive voice to re-position and re-frame Paddington to change perceptions and build advocacy. The Strategy is divided into the following sections:

- *What is Paddington?*
- *What is Happening Now?*
- *Challenges and Opportunities*
- *The Future*
- *Action Plan*

Under *The Future* section of the Strategy, the Strategy identifies four key strategic pillars to address the business challenges and marketing opportunities for Paddington. These are:

- *Internal Alignment:*
  To make doing business in Paddington more desirable to attract and retain consumers.
- *Audience Engagement:*
  Increase footfall, spend and advocacy.
- *Stakeholder Engagement and Collaboration:*
  To maintain a collaborative and innovative approach to stakeholder engagement.
- *Measuring for Success:*
  Using economic and behavioural insights to guide decision making for Placemaking, business attraction, driving demand and ultimately assisting businesses better understand and respond to consumer needs. Capture insights and behaviour driving visitation and the wants and needs of an evolving audience.

The Action Plan then contains short, medium and long-term priority project recommendations for the next three years.

2021 Paddington Marketing Campaign

Having reviewed and synthesised the actions in the Strategy and in light of Councils current budgetary considerations, the Placemaking team have developed the *2021 Paddington Marketing Campaign* (the Campaign) in consultation with stakeholders including Paddington Business Partnership (PBP) and the City of Sydney (CoS).

The primary intention of this Campaign is to take ownership of 2021 for Paddington (noting that 2021 is the postcode of Paddington), working closely with businesses to build advocacy and collective pride for Paddington. Staff are working with key stakeholders to amplify the message through existing channels as well as creating a new program of curated and bespoke content and events.

$40,000 has been allocated in the Placemaking Budget for the 2020/2021 year to implement the Campaign. The committee should be advised of the following marketing initiatives implemented so far in 2021:

- Development of the *2021: The Year of Paddington – Celebrate with Us* brand, style guide and business toolkit as well as branding materials for businesses to utilise for communications in store and via marketing activities. It will also include design elements for Placemaking e.g. street banners.

- Staff to manage bespoke and proactive customer facing public relations and content (written, video and imagery) development, placement and amplification (through media buy). CoS have committed $20,000 to fund a media partnership with Time Out to promote the campaign launch event *A 2021 Night Out* and a broader promotion of Paddington throughout 2021.
- Staff to work closely with businesses in supporting their digital amplification of the campaign to drive conversation, including the provision of suitable branding materials.
- Consumer events – supporting community led events (subject to relevant COVID-19 restrictions in place at the time). The launch event for the campaign, *A 2021 Night Out* took place on 25 March 2021 in collaboration with the PBP & the CoS, with 123 Paddington businesses participating in the event from a range of industries including fashion, homewares, health and beauty and drinking and dining. The event was promoted via an extensive mix of marketing including a $20,000 media partnership with Time Out which was funded by City of Sydney. Spendmapp data (spending analysis data) will be available in June 2021 to measure the economic impact of the event, however initial feedback from participating businesses and attendees is positive with many excited for repeat events.

The Oxford Street & Paddington Working Party will be consulted on the continued development of the Campaign and its associated initiatives.

Paddington businesses will be invited to submit proposals for initiatives which can be incorporated into the Campaign. Initiatives which appropriately compliment the objectives of the Campaign will be provided with in-kind support from Council.

Feedback on Marketing Strategy

It should be noted that Council staff have received and noted feedback on the Paddington Marketing Strategy from multiple internal and external stakeholders including

- ***Oxford St and Paddington Working Party***

  At the meeting on 18 February 2021, staff presented the initial activities planned for the 2021 Paddington Marketing Campaign. The Paddington Marketing Strategy was discussed at length by those present at the meeting, including concerns regarding the content of the Strategy and the procurement process. The Working Party were invited to submit additional feedback on the Strategy in writing to staff.

- ***Councillor Feedback***

  Some Councillors provided feedback via email in February 2021 and requested a meeting with the Mayor, General Manager and relevant staff to discuss the Strategy. This meeting took place in late March 2021, with the Mayor, Councillors Zeltzer and Price present as well as the General Manager and the Manager Strategic Planning, who at the time had been involved with a range of Placemaking initiatives.

  Discussion at this meeting revolved around the processes that led to the development of the Strategy i.e. the various reports and resolutions from the Working Party and relevant Committees of Council, through to the delivery of the final Strategy in late 2020.

- ***External feedback***

  CoS and PBP representatives were both consulted as part of the development of the Strategy. Upon receipt of the final Strategy, the PBP and the City of Sydney enthusiastically committed to participating in the development and execution of initiatives related to the 2021 Paddington Marketing Campaign. One result of this collaboration was the *2021 Night Out*, as detailed earlier in this report.

For clarity, a project timeline detailing important dates and milestones relating to the development of the Strategy has been provided at **Annexure 2.** It should be noted that whilst Council staff have facilitated engagement initiatives associated with the Strategy, none of the current management involved in Placemaking were employed by Council during the preparation of the brief for the Strategy, nor with the procurement process that was undertaken, therefore the information presented in this report is to the best of current Council staff's knowledge.

Conclusion

The Paddington Marketing Strategy provides a resource for Council and other stakeholders and provides internal and external perceptions of Paddington as a place. The analysis and actions proposed in the Strategy have guided the development of the 2021 Paddington Marketing Campaign and will continue to inform future marketing initiatives.

Annexures

1. Paddington Marketing Strategy 2020 - prepared by Sparrowly Group ⇩

2. Paddington Marketing Strategy 2020 - Project Timeline ⇩

Paddington Marketing Strategy

November 2020

Acknowledgement of Country

Sparrowly Group acknowledges the Traditional Custodians of this land, the Gadigal and Birrabirragal people, and recognises the cultural diversity of our local Aboriginal and Torres Strait Islander communities. We are committed to creating innovative opportunities by building stronger relationships, mutual respect and encouraging cultural practices that strengthen and support a harmony between Aboriginal and Torres Strait Islander peoples and the broader community. Sparrowly Group values the input from Aboriginal and Torres Strait Islander peoples into decision-making processes at a local level and encourages their active participation.

Prepared by

SPARROWLY GROUP

Table of Contents

Executive Summary

Woollahra Municipal Council (WMC) is committed to revitalising the Oxford St and Paddington shopping neighbourhood through a range of initiatives which are set out in the Oxford Street and Paddington Place Plan.[1] This marketing strategy forms part of these initiatives.

Paddington has a reputation associated with the fashion industry, with outlets for high end established and emerging brands. It has a vibrant pub scene with diverse food and beverage offerings. More recently an expanding array of furniture and lifestyle stores have opened particularly on Oxford St. These are all located in a unique heritage setting, alongside institutional landmarks such as Victoria Barracks, Paddington Market, University of NSW Art Design, Notre Dame University and St Vincent's Hospital. In close proximity is the Sydney CBD, Moore Park Parklands, Fox Studios, SCG and Centennial Park.

Woollahra Municipal Council works closely with their partners, the City of Sydney (CoS) and the Paddington Business Partnership (PBP), in supporting Paddington businesses. The intention of this marketing strategy is to build upon and complement the current activity undertaken by Woollahra Municipal Council, City of Sydney and Paddington Business Partnership.

Supporting this is an embracing marketing campaign that promotes Paddington as a vital destination not only where the shopping is great but there is so much more to experience. This strategy outlines a coordinated program across all forms of media that is fresh, innovative and exciting. A program that leverages promotional work already being done, existing and new activations (William Street Festival, Head On Photo Festival, Perry Lane Art Project) and reaches out to new audiences using the Helix Persona Model identifying *Leading Lifestyles* and *Aspirationals* as the key audience segments, additionally *Business Networkers* will be critical for business to business collaborations and continued growth across Paddington.

[1] Woollahra Municipal Council 2019, *Paddington and Oxford Street Place Plan 2019 - 2023*, https://www.woollahra.nsw.gov.au/__data/assets/pdf_file/0006/207384/Oxford_Street_and_Paddington_Place_Plan.pdf

Current State

The following analysis provides a high-level review of the current situation and performance of Paddington. Insights have been gathered from various sources including: spend data, stakeholder consultation, social listening, mystery shopping, and desktop research. It lays the foundation for the development of the marketing strategy.

What is Paddington?

Place Story

The Oxford St and Paddington Place Plan 2019 - 2023, adopted on 27 May 2019, outlines the following place story:

'Oxford St is celebrated as an iconic heritage high street with rich history, a destination for global and local fashion, food and furniture offerings, as the gateway to the heritage enclave of Paddington, its cultural and artistic life, community meeting places and beautifully preserved terrace streetscapes. The Oxford St retail experience is one of stepping back in time, onto a walkable Victorian streetscape, into a village destination for locals and a destination for visitors seeking authentic heritage feel.'

Value Proposition

Value Proposition	What makes it true
Paddington provides a multi sensory experience	• Paddington is an authentic local village that encapsulates its heritage through an engaging and contemporary lens. • The care and attention to its presentation provide an excellent balance between location, greenery, action vs. respite. It's interesting topography and precinct design creates a sense of curiosity. • It provides a safe and welcoming space for visitors, residents and businesses. • High quality and variety of shopping and entertainment experiences are available. • It's a gem in Australian shopping precincts with high quality, yet, inclusive mix of shopping, entertainment and recreation.
Paddington is a collaborative and welcoming place to do business	• Paddington attracts a mix of business that puts a high value on customer experience. • Paddington businesses represent quality and provide a diverse mix for consumers. • "A" list tenancy mix e.g. The Intersection, Merivale, Paddington Markets,

	Five Ways and planned mixed use building developments underway e.g The Cambrian. • A well established business group, Paddington Business Partnership. • A dedicated consumer facing brand, Visit Paddington, that sees the investment and collaboration of businesses run by local businesses. • A high number of businesses where the owner is present and connecting with customers. • Placemaking continues to be a focus for Paddington. • Diverse customer base.
Paddington provides an eclectic canvas of creativity	• Events - e.g Perry Lane Art Festival, William St Festival. • It Is visually beautiful with a mix of green space, a unique topography, high quality and maintained architecture, public art (street art, installations, etc.). • Business mix that attracts creative entrepreneurs. • Contemporary Art Galleries peppered throughout Paddington. • Home to Australian and international fashion in both design and homewares. • Aesthetically merchandised shop fronts. • A mix of professional services residing in Paddington, e.g. architects, PR agencies and interior designers.

Paddington is a self contained, multi-use village	• Safe and secure.
	• Easy to get around.
	• Diverse, high quality mix of retail and services:
	  ○ Department stores
	  ○ Dining and entertainment
	  ○ Furniture and other housing goods
	  ○ Personal Services
	  ○ Professional services
	  ○ Specialised and luxury goods
	  ○ Specialised Food retailing
	  ○ Trades and contractors
	• A beautiful and natural environment.
	• Aesthetically pleasing and well maintained.
	• Home to many flagship stores.

What is Happening Now?

Business Activity

Today, the business community in Paddington is diverse, and operates together in a retail environment that is performing. As highlighted in the following map, Paddington's broad mix of business types is also spatially diverse.

Source: Oxford Street and Paddington Place Plan 2019-23.

Shop Front audit data:[2]

Closed	Empty	For lease	Operating	Under construction
2	10	2	49	2

N.B. *The data provided indicated there were 68 entries that were first story doors without street frontage. These were unidentifiable and classified as blank because it was not clear if they were residential or commercial and as such, have not been included.*

[2] Woollahra Municipal Council 2020, Oxford Street Shopfront audit (September 2020), supplied within.

An analysis of spending data shows that throughout the September 2019 - August 2020 period, the Woollahra LGA had a total local spend of $1.545 billion.[3] This includes spend from both LGA residents as well as visitors. The largest contributing suburb to this total was Double Bay ($448.9 million), followed by Paddington ($350.8 million) and Rose Bay ($295.3 million).

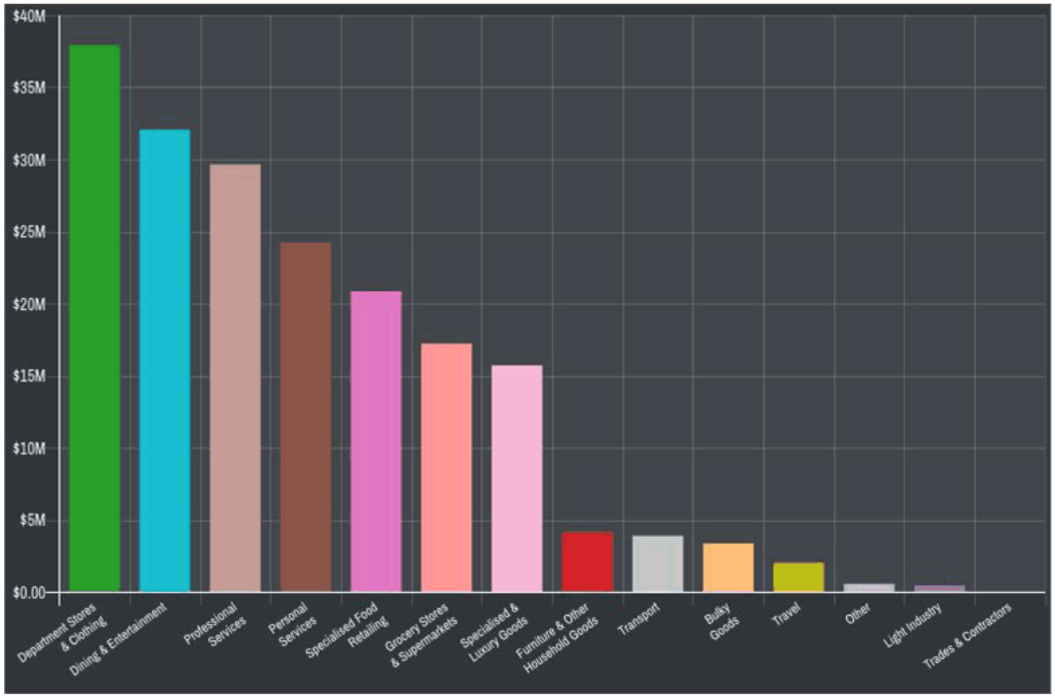
Total Local Spend Sep 2019 - Aug 2020

	Total Local Spend			Proportional LGA Contribution			
Suburb	**Work Hours**	**Non Work Hours**	**All Hours**	**Work Hours**	**Non Work Hours**	**All Hours**	**Non Work vs All Hours**
Double Bay	$ 285,400,000	$ 163,500,000	$ 448,900,000	29.4%	28.5%	29.0%	36%
Paddington	$ 192,400,000	$ 158,400,000	$ 350,800,000	19.8%	27.6%	22.7%	45%
Rose Bay	$ 189,600,000	$ 105,700,000	$ 295,300,000	19.5%	18.4%	19.1%	36%
Woollahra	$ 123,200,000	$ 70,310,000	$ 193,510,000	12.7%	12.3%	12.5%	36%
Edgecliff	$ 122,600,000	$ 47,000,000	$ 169,600,000	12.6%	8.2%	11.0%	28%
Vaucluse	$ 26,470,000	$ 13,730,000	$ 40,200,000	2.7%	2.4%	2.6%	34%
Bellevue Hill	$ 23,730,000	$ 8,700,000	$ 32,430,000	2.4%	1.5%	2.1%	27%
Darling Point	$ 7,127,000	$ 5,433,000	$ 12,560,000	0.7%	0.9%	0.8%	43%
Point Piper	$ 1,187,000	$ 875,100	$ 2,062,100	0.1%	0.2%	0.1%	42%
	$ 971,714,000	**$ 573,648,100**	**$ 1,545,362,100**				

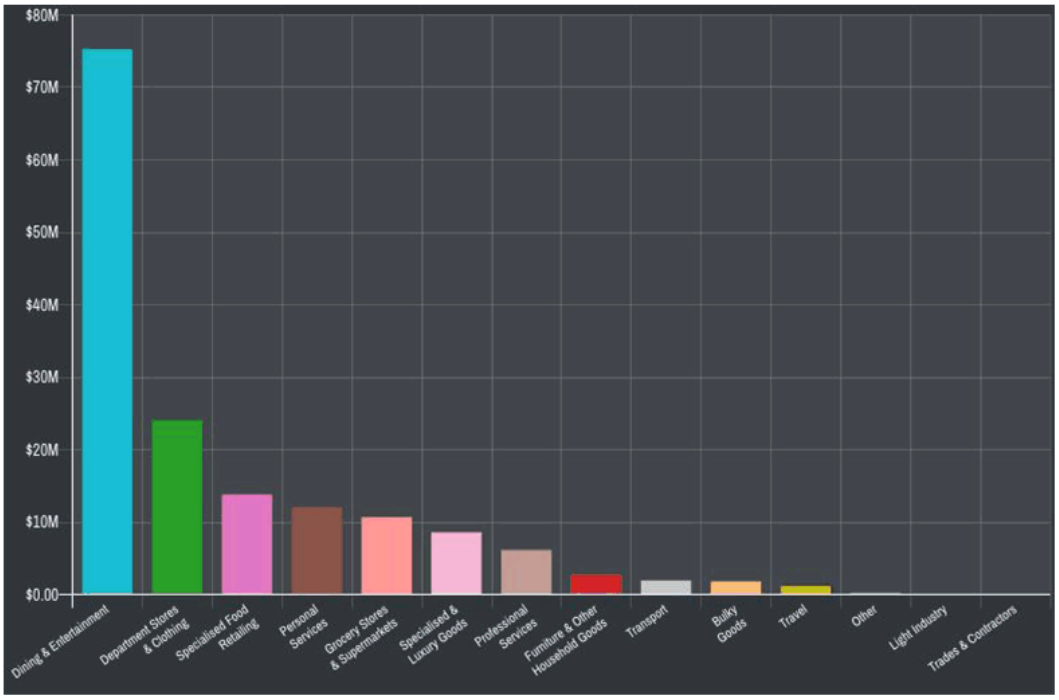
Whilst total spend for Double Bay exceeds Paddington's by almost $100 million, it is important to highlight that their respective spends during non work hours (e.g. their night time economies) are relatively commensurate. Their totals diverge due to work hour spending that as a result, there is significantly more spending in grocery stores and supermarkets in Double Bay ($129 million) compared to Paddington ($35 million) - approximately 4-times as much.

Across the LGA, the primary categories for spending are Dining and Entertainment, Grocery Stores and Supermarkets, Professional Services, Specialised Food Retailing, and Personal Services. For Paddington, these categories also represent key areas of spend. However, during work hours, Paddington's largest area of spend is department stores and clothing, representing 44% of the LGA's total spend in this category. Conversely, during non work hours, Paddington's total spend is dominated by the dining and entertainment category, representing almost half (47.5%) of its night-time economy. Further, 45% of Paddington's total spend occurs outside work hours, again demonstrating the significance of its night-time economy.

[3] Spendmapp Woollahra Municipal Council 2020, spendmapp.com.au

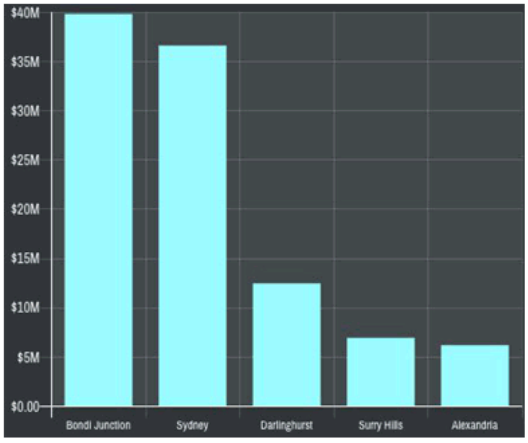


Total spend for Paddington, by category, during work hours (Sep 2019 - Aug 2020).

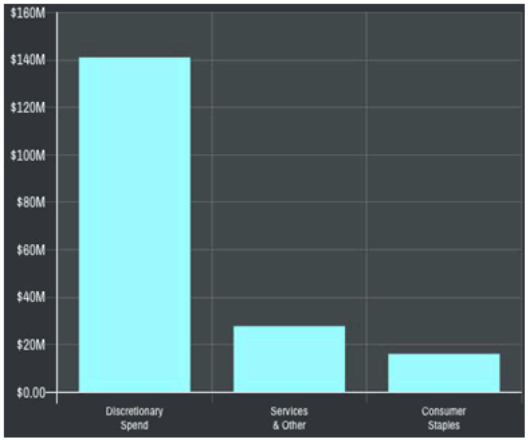


Total spend for Paddington, by category, during non work hours (Sep 2019 - Aug 2020).

In the same time period for Paddington, the escape spend from Paddington residents is attributed to Bondi Junction, Sydney City, Darlinghurst, Surry Hills and Potts Point dominated by discretionary spend in the categories of: department stores and clothing, dining and entertainment, specialised luxury goods, travel (including hotels, airlines etc.).[4]

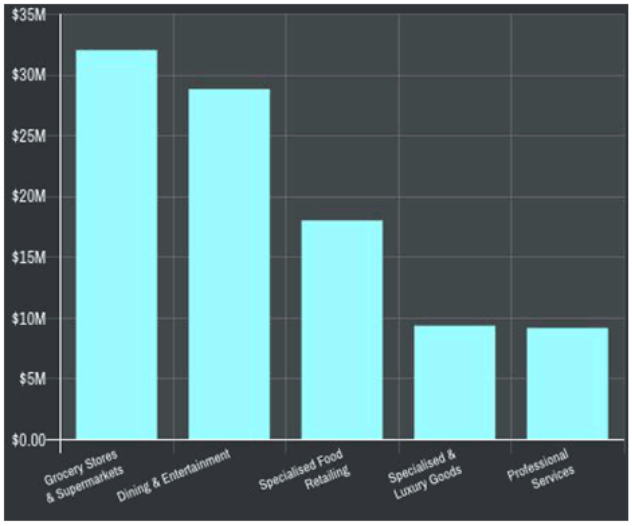


Dominant locations of escape spend from Paddington (Sep 2019 - Aug 2020).



Dominant categories of escape spend from Paddington (Sep 2019 - Aug 2020).

Within the LGA, Paddington resident escape spend is attributed to grocery and supermarkets (most likely Double Bay), dining and entertainment (primarily during the evening), specialised food retailing, specialised and luxury goods and professional services to Woollahra, Edgecliff, Double Bay and Rose Bay.



Dominant categories of resident escape spend from Paddington (Sep 2019 - Aug 2020).

[4] Spendmapp Woollahra Municipal Council 2020, spendmapp.com.au

Within Paddington, resident spend during work hours is attributed to dining and entertainment, department stores and clothing, grocery stores and supermarkets, professional services, specialised food retailing and personal services. In non-work hours, spending is attributed to dining and entertainment with the other aforementioned categories halved.

Activating Paddington

Events

Within Paddington, and more broadly across Woollahra Municipal Council, there are a number of key event landmarks encouraging visitors to the area that include: Paddington Market, Perry Lane Art Project, William Street Festival and Head On Photo Festival. The knock on effect of visitation to the Paddington Market into broader Paddington is one that should be noted and reinforced. The Market is an establishment in its own right with their own brand recognition and visitor awareness.

COVID-19 has impacted on all activations with Head On Photo festival transitioning online, William Street Festival being cancelled and Paddington Market ceasing operation until September 2020.

Interestingly, in stakeholder consultation, the only stakeholders to see the value of the festivals were the festival organisers. All the other stakeholders consulted knew about the festivals and how the Council supported the associated activities, but there was a lack of clarity around the benefits or specific outcomes of these events. This is not to say that the events are not successful or relevant, but rather that there is a lack of data to measure these outcomes and a sense of apathy towards them by stakeholders.

Visit Paddington Brand

As identified above, the Paddington Business Partnership is responsible for the rollout of marketing and promotion under the "Visit Paddington" brand. Visit Paddington is not currently working to a specific marketing program, but the reputation and representation for the neighbourhood does present well and appears to be strong and growing, in particular with active and responsive involvement from the business community. Whilst their Instagram is consistent, other channels and marketing activity are sporadic.

Individual Business Marketing

A marketing audit of Paddington businesses was undertaken indicating that there are varying levels of proactive offline and online marketing that could, in many cases, be related to varying levels of expertise within the businesses.

The Intersection

The Intersection is located partly on Oxford Street and onto Glenmore Road, featuring a small cluster of fashion retail, some cafes and a traditional public bar. It is characterised by the presentation of historical and fashion interpretation, and planter boxes in the built environment. The Intersection village curates a dedicated brand and marketing program to promote the offering as a destination. It is consistent and active across all digital platforms, including a translated website in simplified Chinese.

Wayfinding - The Ganda App

An App for precinct navigation has been created, however, execution and uptake have been beneath expectations. Further examination of consumer behaviour is outlined on page 24 (Wayfinding and Visitor Experience Trends).

Visit Paddington Map

The Visit Paddington Map was created by the Paddington Business Partnership and Local Publishing Co. The map was supported by Woollahra Municipal Council, and was produced in consultation with Destination NSW for domestic and international tourists through placement at airports and hotels. This map was also made available on the Big Red Bus on the Bondi Route.

It was a paper map featuring the member businesses of PBP acting as a handheld graphically presented guide to what Paddington has to offer of walking or shopping trails. This map had more than one print run, and anecdotally was well regarded, however, consultation indicated that the design was not great, in that it was not well presented, making it difficult to see all that Paddington had to offer and some member businesses were excluded based on space and crowding in the map design.

Paddington Trails

Paddington Trails is an evolution of the Visitor Paddington Map and will be a handheld guide showcasing what Paddington has to offer, presented as walking and shopping trails that are aligned to various categories. It will be released by PBP and Local Publishing Co in mid-November 2020. The 68-page booklet will have an initial distribution of 10k copies around Paddington and eventually the Big Red Bus when the Bondi Route recommences.

The Big Red Bus

Under normal operating conditions, The Big Red Bus stops at Oxford St and Oatly Road as part of the 'Bondi Tour' route. This stop is to give visitors access to Sydney Cricket Ground and is the only shopping stop in Paddington.

Public Art

Public art is featured predominantly through murals and wall art across Paddington. This is seen as making a positive impact and contributing to the overall sense of place. Public Art is supported by

Council via the Place Making Grants and Event and Activation activities such as Perry Lane Art Project as part of the William Street Festival.

Local Marketing and Place Promotion

The May 2020 installation in Fiveways around Mothers Day, #Paddotogether, was highly commented on in consultation as positive and uplifting to locals and business owners in the area. The installation #paddotogether gathered over 500 tags in 2020 commencing from this installation collaborating with a local business owner.

Local Publications

The Local Paddo magazine launched in Autumn 2020. Approximately 20,000 copies are distributed bi-annually from Darlinghurst to Woollahra covering topics on food, fashion, local life, history and retail in Sydney's Paddington region. This seasonal publication has outstanding journalistic and production values which clearly represent and align with Paddington's Value Proposition. Currently, *Local Paddo* is the strongest presence in publishing for the area. Woollahra Municipal Council has subsidised the *Local Paddo* and *Local Bayside* editions of this magazine allowing for businesses to participate.

Other publications from the same publisher, Local Publishing Co, include: *Local Bondi* and *Local East*. Both also have a strong representation of Paddington and its businesses. Additionally the *Wentworth Courier* remains a weekly publication for the Eastern suburbs. Current circulation is at 144k print reach and 18.5k total digital reach of unique visitors (July 2019 - June 2020). [5]

[5] News Corp Australia 2020, Wentworth Courier, https://www.newscorpaustralia.com/brand/wentworth-courier/.

City of Sydney's #Sydneylocal Campaign

#Sydneylocal is the social media campaign launched in 2018. This campaign and associated activity has been very well taken up and utilised. City of Sydney advises that it is their intention to continue with #Sydneylocal for the foreseeable future.

Paddington appears within #Sydneylocal on Instagram as:

- #Paddingtonsydney (17k posts)
- #paddingtonterraces (12.5k posts)
- #visitpaddington (12.4k posts)
- #VisitPaddington (12.3k posts)
- #Paddotogether (524 posts)
- #localpaddo (100+ posts)
- #paddingtonlocal (under 10)
- #sydneyfoodie (over 1 million posts)

Woollahra Municipal Council Social Media Accounts

Woollahra Municipal Council's communications team has an ongoing organic process of amplifying and boosting content featuring local business across Council social media channels. This is driven by activities related to grant recipient activations, local success stories, posts shared by PBP and other legitimate sources.

Night Time Economy

In December 2019, Woollahra Municipal Council ratified the Night Time Economy Policy which seeks to support and acknowledge the importance of the night time economy to vibrant food precincts across the Woollahra LGA. Additionally, in line with COVID-19 operating conditions, variations have been allowed in some parts of the LGA including Paddington to make outdoor seating and dining possible, including a waiver in footpath trading fees.

Outdoor Dining

Woollahra Municipal Council has a Footway Dining Policy that covers Paddington and the entire LGA so that approvals are available to suitable and compliant businesses. Where seat topography allows, this has resulted in a cosmopolitan and active street dining experience.

Signage

Woollahra Municipal Council uses the Woollahra Development Control Plan (May 2015). This instrument has a thorough and clear chapter which can be found on the Woollahra Municipal Council website: Chapter E7, Signage - Woollahra Municipal Council created specifically for commercial areas in the Woollahra Local Government Area. Chapter E7, Signage, outlines placement and signage treatments suitable for fit-out, including awnings, fascias, shingles, windows and doors for signage location and suitable sizings.

Within the Control Plan it is not necessary to apply for approval (as exempt and complying development) for real estate 'for sale and for lease' signboards. This has led to real estate agents placing large double facing signboards on top of awnings. These signboards are outside what Chapter 7 allows in the Control Plan and the street would have greater visual appeal if such signage was removed. Real estate signage should comply with the guidelines outlined as other local business signage does.

Along Oxford Street, occasionally, awning fascias are unpainted, or in disrepair. As part of the standard fit out, businesses should include fascias presentation to enhance the overall visual appeal of the streetscape. Awning fascias make a valuable impact when viewing a business from the street or across the road.

Display of Goods Policy

The Display of Goods Policy outlines the outdoor trading guidelines which are fair, equitable and enforceable. Currently businesses are not optimising the opportunities presented in this policy. Business should be supported and encouraged to take advantage of such a display opportunity wherever possible and applicable. A-frames and free standing signage are excluded from the public domain and should not be used by businesses. Such signage is a barrier for people with visual impairment and reduced mobility, as well as being detrimental to the visual appeal of the street.

Who is Involved?

Partners and Stakeholders

The Paddington business community is diverse with each business acting as an individual representative of Paddington. There are a number of existing partners and stakeholders, some more engaged than others. A full list of stakeholders captured in consultation can be found in the Appendix.

Paddington Business Partnership (PBP)	
About	• The Paddington Business Partnership is a member-based registered organisation for Paddington businesses, managed by a committee of business owners on a volunteer basis. • 'Visit Paddington' is the consumer facing brand managed by PBP. • The committee is ultimately responsible for membership and seeks their input and feedback on a continual basis. • Volunteer run, business led organisation. • They receive funding from both CoS and WMC.
Intended Roles and	• Growing its reputation as being the 'go to' place for information that allows business to enhance its skill base, explore new directions and grow its market

Responsibilities	share. • Deliver marketing activities under the "Visit Paddington' brand. • Manage the delivery of the William Street Festival. • Maintain proactive and results driven relationships with WMC, CoS, PBP members and Paddington business more broadly. • Present on outcomes to funding partners including WMC and CoS.

Landlords	
About	• Property owners who have been in ownership of land for generations and, in some instances, have little or limited interest in maintaining, improving their buildings or improving the tenancy mix. • Identified major landlords, in particular, being Merivale, The Intersection Paddington and The Cambrian each owning multiple venues and curating a tenant mix of premium standards.
Intended Roles and Responsibilities	• Curating a tenant mix that reflects community demand and expectations. • Support the marketing and promotion of their establishments and more broadly Paddington. • Comply with policies as set out by WMC. • Operate within the integrity of Paddington as outlined in the Place Plan. • Maintain building infrastructure to ensure safety.

Individual Businesses	
About	• Tenants of properties - key business owners and representatives across retail, food and beverage, specialty food and specialty beauty.
Intended Roles and Responsibilities	• Operate their own businesses. • Promote their business and more broadly Paddington as a place to visit and shop at. • Deliver exceptional customer experience. • Comply with policies as set out by WMC. • Operate within the integrity of Paddington as outlined in the Place Plan.

Paddington Market	
About	• Sydney's oldest continuous weekly community and artisan market hosting designers and artistic traders, celebrating their craft since 1973. • Currently expanding to fresh food and produce offering.
Intended Roles and Responsibilities	• Event operations and logistics. • Driving demand to Paddington through its offering. • Create a space that drives community transformation.

City of Sydney	
About	• Neighbouring LGA.
Intended Roles and Responsibilities	• Work cooperatively in driving demand to Paddington through its Marketing programming. • Work collaboratively with WMC in the delivery of the Place Plan. • Economic development programs for businesses and tourism growth. • Work closely with Paddington businesses regardless of LGA borders.

Woollahra Municipal Council	
There has been a renewed focus on Placemaking within Woollahra Municipal Council (WMC) including the creation of two new roles, Placemaking Coordinator and Economic Development Officer. This signals an intention to increase support to businesses and build a greater direct personal relationship with the Council. This is in addition to the resource allocated to placemaking and communications. However, there is no dedicated marketing resource driving consistent, proactive demand activity for Paddington. Whilst it could be argued that this is the role of the Paddington Business Partnership, this is not occurring at the level it needs to within the current funding arrangement and as such marketing activity is ad-hoc.	
Council	**Intended Roles and Responsibilities** • Place Making, including economic development, support and guide the growth and community within Paddington (renewed focus with the economic development officer role a new position) • Communications amplifies messaging through Council-owned and third party channels.

	• All teams present a unified Council position to support the successful delivery of the Paddington Place Plan and Marketing Strategy. • Provide a connection between businesses and the Council. • Provide insights to inform the success of businesses, Place Plan and Marketing Strategy.
Working Parties	1. The **Oxford Street and Paddington Working Party** includes the Mayor, Paddington and Cooper Ward Councillors and representatives of the Paddington business community, e.g. PBP, UNSW. 2. The **Small Business Working Party** is a representative body from WMC including the Mayor, Council General Manager and Councillor representatives across the Woollahra municipality. **Intended Roles and Responsibilities** • Support the development and implementation of the Place Plan and Marketing Strategy. • Provide a mechanism for consultation with key stakeholders. • Provide a connection between businesses and the Council. • Provide insights to inform the success of businesses, Place Plan and Marketing Strategy.

What is Happening Elsewhere?

The following provides a high-level review of global and domestic trends that are of relevance to Paddington. It considers trends impacting the retail industry, dining preferences, and the use of precincts.

Retail Trends

The retail industry constantly evolves based on global trends and consumer behaviour. In Australia, the fashion industry has changed dramatically with the growth of online stores, artisan and maker-style producers, fast-fashion and more. Importantly, though, are the foundations in retail being customer service led and the importance of bricks and mortar in having a larger role to play than just sales. Key global retail trends impacting Australia include:[6]

Retail Trend	Description
Bricks and mortar retail	Despite the pressure of online shopping, the importance of bricks and mortar is paramount as it acts as a physical brand presence for businesses. It helps to control a business' outward-facing image and impression of its brand narrative, as well as building emotional connections with their customers. In addition, shopping in-store offers higher satisfaction among purchasing options, as indicated by 92% of customers, resulting in less returns and packaging. Finally, a physical presence is more effective than that of a billboard with respect to customer acquisition.[7]
Integration into homewares	Methods to offer customers a 'one-stop shop' destination have seen traditional 'fashion-only' retailers now offering an assortment of clothing, homewares, and niche products. This rise in a 'lifestyle store' has seen a combination of products including furniture, clothing and homewares, merchandised in elaborate displays to recreate living room or kitchen setups. Consumers are looking for new retail experiences, and are now approaching the homeware category in the same way they buy their clothes: trend-oriented, impulsive and seasonal.[8]
The need for E-commerce	Today, online is considered vital, however, it can be difficult to stay current with frequent changes and updates. However, in line with COVID-19, due to social isolation, consumers are craving personal interactions. This has seen a rise in 'buy online-pick up in-store' (BOPIS) sales which focuses on convenience and control for customers. Additionally is the typical consumer behaviour of looking at something online and then purchasing in-store.[9]
Circular economy	Consumers are more environmentally conscious about reducing waste than ever before with the circular economy being at the forefront of retail trends. The desire to reuse products and give new life to raw materials and products has seen the clothing rental market expected to double

[6] Retail Dive 2020, *The Comeback of the Brick-and-Mortar Store*, https://www.retaildive.com/news/the-comeback-of-the-brick-and-mortar-store/570290/
[7] The Intersection Paddington, *Bricksmortar vs Ecommerce*, https://www.theintersectionpaddington.com.au/bricksmortar-vs-e-commerce/
[8] Edited 2019, *Fashion retailers inside plan to shake up the homeware industry*, *https://edited.com/resources/is-homeware-the-secret-weapon-for-fashion-retailers/*
[9] Retail Dive 2020, *Why the growth in BOPIS will continue to accelerate (and how to make the shift now)*, https://www.retaildive.com/spons/why-the-growth-in-bopis-will-continue-to-accelerate-and-how-to-make-the-sh/585282/

	its current market share in the next five years. Alongside this is the emergence of the secondhand market that is expected to grow to nearly 1.5 times that of fast fashion by 2028 ($64 billion vs $44 billion), especially amongst the Generation Z demographic.[10]
Customisation	Additional trends post-COVID-19 will see the growth of private labels offering more personalised products that are also exclusive to brick and mortar stores. Due to highly competitive demands, many brands and retailers are increasing their investment in product development, products, services and experiences that differentiate their brand using new supply and data sources (e.g. increase of 3D printers). There will be new integrated e-commerce experiences with shoppable TV ads and integration with communication apps (e.g. WhatsApp) connecting programs to a mobile phone app enabling viewers to purchase what's on the screen. Above all though, is that great customer experience is paramount. The experiences a brand provides to consumers must be personalized, seamless, intuitive and entertaining, all whilst leaving a lasting impression.[11]

Precinct Trends

An established destination of its own, Paddington offers a diversity of experiences across the villages of The Intersection, Five Ways, Oxford Street and William Street. This is a like-model for traditional High Street's synonymous with high-fashion retail and homewares. Key global precinct trends impacting Australia include:

Precinct Trend	Description
Traditional shopping centres	Consumers are demanding greater choice and an experience. Centre and mall developers need to connect with consumers not just physically, but also digitally, to offer an omnichannel experience. Curated shopping precincts will play a bigger part in moving forward if landlords create their centres as a more localised, shoppable experience that connects with their customers and curates an offering consistent with demand drivers.[12]
Mixed-use space	There has been a rise in the repurposing and conversion of 'dead malls' or empty department stores. Often a conversion of a dead mall is to transition into industrial centres to act as large logistics hubs or manufacturing plants. This is also seen in out-of-centre development including bulky goods centres located away from traditional centres.[13]
High Street precinct	Understanding the unique characteristics and opportunities of having a shop on a 'High Street' retail precinct, then competing on price and the pressure of online selling, individual retailers have long term potential for growth. In the United Kingdom, key trends which shape the traditional High Street includes the rise of out of town shopping, increasing vacancy rates,

[10] Smartsheet 2019, *A Digital Transformation Report: 5 emerging trends in the retail industry*, https://www.smartsheet.com/sites/default/files/2019-07/56513_Smartsheet_Retail_Whitepaper_DIGITAL_FINAL.pdf
[11] Retail DIve 2020, *The Unsung Customer-Loyalty Hero? The Post Purchase Experience*, https://www.retaildive.com/spons/the-unsung-customer-loyalty-hero-the-post-purchase-experience/574764/
[12] Retail Dive 2020, *A case for Radical Reinvention*, https://www.retaildive.com/news/a-case-for-radical-retail-reinvention/584880/
[13] Grant Thorton 2017, *Reinventing the High Street retail shops*, https://www.grantthornton.com.au/insights/blogs/reinventing-the-high-street-retail-strip/

	changes in shopping patterns and the homogenisation of the High Street and 'brand grabbing' by landlords.[14]
Community focus	The uniformity of the standard retail model fails to reflect the identity of the local community as it favours chain stores over individual local businesses. Moving forward, landlords have to move beyond retail, entertainment, and food and beverage, and find new ways to actively engage consumers within their existing properties. Being involved with the community and local artisans brings a shared responsibility and potentially provides economic sustainability.[15]
The national role of local councils	Local Governments are key in ensuring that retail precincts are set up to succeed by approving and supporting the right mixture of services, food and other retailers and ensuring the right mix of tenants are in operation based on community demand. As well as this, is proactive planning with a mix of economic development, community buy-in, planning and design, and marketing. Importantly is the investment in the area, particularly for buildings and assets entrusted to (or owned by) Councils to; protect heritage, whilst also encouraging new investment and development seen to add value to improve public built amenities.[16]

Dining Trends

Paddington is an established dining precinct boasting some of Sydney's best gastropubs, restaurants and a vibrant café culture. Key global dining trends impacting Australia include:

Dining Trend	Description
Dining precincts	In the changing retail landscape, shopping centres are facing competition from online shopping, high street food deliveries, high street dining precinct and the inevitable introduction of smart casual/ family restaurants within the building footprint of stand-alone cinemas and other entertainment precincts. The evolving dining precinct in a shopping centre will aim to create a community environment that will drive everything from personal choices in shopping, healthier eating, on trend foods, entertainment, lifestyle choices and social spaces. External dining zones or "food precincts" are an emerging trend within the master planning retail design. Food precincts have become a popular solution that not only create visual interest and activate the high street, but also encourages customers to visit the shopping centre with the promise of a new experience. The role of the food precinct in this overall scheme is to create an area that connects the community with the sometimes obtrusive nature of the shopping centre. This additional layer between the two zones blurs the lines between public and private and helps infuse the mall with its surrounding context and streetscape, thus creating a more integrated structure overall.[17]

[14] Financial Review, *Shopping Conversion could Kickstart 'deadmalls' trend*, https://www.commercialrealestate.com.au/news/shopping-centre-conversion-could-kickstart-dead-malls-trend-893088/
[15] Hames Sharley, *Five steps to thriving main street shopping precincts*, https://www.hamessharley.com.au/knowledge/thriving-main-st-retail
[16] SGS Economic & Planning 2013, *Easter Suburbs Economic Profile*, https://drive.google.com/drive/u/2/search?ths=true&q=%2322
[17] Upserve 2020, *2020 Restaurant Industry Trends: Shaping the Future of Food*, https://upserve.com/restaurant-insider/restaurant-industry-trends/

Dining preferences	Out-of-restaurant consumption is rising, with dine-in restaurant visits currently the minority. Providing takeaway and delivery options is vital to success as a food and beverage retailer. Restaurants with outdoor spaces increase consumer appeal as well as increase the use of community spaces to leverage a city's night time economy. Sensitivity to COVID-19 operating conditions also make outdoor dining very desirable.[18]
Food and beverage tech takeover	In the United States, for example, revenue in the online food delivery segment will reach $26.5 billion by the end of 2020. With the market's largest segment of *restaurant-to- consumer* delivery expecting a market volume of $15.6 billion. Online ordering subscription models that eliminate per-delivery fees in favour of a flat-rate subscription will emerge to present a clearer value proposition for consumers. As well as this, are the all-in-one restaurant management platforms considered an essential valuable tool for restaurant owners and managers to integrate point-of-sale, analytics, online ordering, inventory management, and more, allowing them more time to pay attention to their guests and watch for emerging trends that could make their business the next big thing.[19]
Conscious consumers	Customers are more aware than ever before and demand full transparency on health and sanitation practices, pricing and hidden costs, emphasising fair trade and publicising a business' real environmental impact and conservation initiatives.

[18] Future Food 2018, *Creating Food & Beverage Precincts to Anchor Local Communities*, https://futurefood.com.au/blog/2018/08/creating-food-beverage-precincts-to-anchor-local-communities
[19] I2c 2015, *The Emerging Food Precinct: Five Design Considerations for Shopping Centre Development*, https://www.i2c.com.au/2015/07/the-emerging-food-precinct-five-design-considerations-for-shopping-centre-developments/

Wayfinding and Visitor Experience Trends

A unified suite of Wayfinding navigational features is critical for visitor experience and satisfaction. A complete Wayfinding Plan would be considered essential for any contemporary precinct or village attracting non-local visitors. Key global wayfinding and visitor experience trends impacting Australia include:

Wayfinding Trend	Description
Built environment	Beyond the technology that people now hold in their hands with their phone and other smart devices, research shows that people still rely on physical markers in the built environment such as directional pillars and signage which are used along with smart technologies.
Specialist delivery	Wayfinding is a very specialised field with much research and development supporting the science of best practice and therefore is best executed by a specialist Wayfinding business or organisations. A unified Wayfinding Plan provides for all aspects of palace navigation and delivery.
Handheld maps	Current research and best practice for precinct-based wayfinding and navigation directly point to printed handheld maps as superior and providing better visitor experience: • People prefer printed handheld maps above all other navigation and wayfinding tools. • People still prefer a handheld printed map for walking and trip planning. • A printed map is easier to record notes and plan pathways (desirable pathways - not just the most direct route) to take in key locations or vistas. • People navigate holding a map whilst consulting key landmarks and physical signage in the public domain. • People save handheld maps as souvenirs. • Locals use printed maps as a future planning resource - people will pocket a map to remind them to return in the future.
Best practice in navigation methods	An extraction from 2019 Wayfinding Thesis - 'Visitors' wayfinding strategies and navigational aids in unfamiliar urban environment':[20] *"The way visitors to a new city wayfind in the digital era has been given less research attention than might be expected. The main aim of this study is to examine differences in wayfinding strategies between three groups of participants who used different navigational aids: a group with a paper map, a group with the Google Maps app, and a group relying on local signage only.'* *'Contrary to expectations, GPS navigation is also not necessarily going to make navigation a less anxious cognitive process. The type of navigational aid did not have any significant impact on reporting uncertain, anxious or negative statements. GPS navigation may have been more efficient, but whilst navigating the participants made similar proportions of uncertain and*

[20] Sima Vaez, Matthew Burke & Rongrong Yu (2019): Visitors' wayfinding strategies and navigational aids in unfamiliar urban environment, Tourism Geographies, DOI: 10.1080/14616688.2019.1696883

	anxious statements, compared to the other two groups. *Paper maps have advantages that GPS navigation does not yet provide. Whereas the local-signage-group and GPS groups provided the least number of positive statements about the surrounding environment, having spent too much time walking along navigation friendly edges, such as major highways, or on less attractive street segments, it was the paper map group that made the most positive statements. The tourist paper map provided helped participants identify and choose street segments that offered more than just a shortest-path to their destination. This included key land uses such as retail, cafes and green areas.'* *'Implications of this paper include that we can bring much of what we have found out about wayfinding strategies from studies inside buildings across to the urban neighbourhood scale, albeit with some notable cautions. We need to continue to invest in wayfinding signage systems and other visual treatments in cities, and avoid the impulse to rely only on digital GPS navigation, given the way that even the GPS users relied often on other wayfinding strategies and aids in navigating the city centre. Cities also need to consider when and how they might wish to disrupt GPS navigation, especially for out-of-town visitors and tourists; to bring people back to routes that help maximize commercial and retail opportunity, to re-engage visitors with the built environment, and to reduce the tendency to be antisocial when using GPS navigation."*

Challenges and Opportunities

Business Challenge

Businesses are working hard to ensure their own success and there is an overall positiveness towards the success of Paddington. However, there is a lack of working knowledge of the lived experiences of businesses by those that are in place to make decisions on behalf of the businesses - Council and elected members.

For many businesses, Council is faceless to them with the only interactions on an 'as needs' compliance basis and one of nervousness (or obstruction) as opposed to collaboration. Apart from a few key businesses, most have no working relationship with their elected representatives.

Yet, Paddington is undergoing a revival in many aspects. The last four to six years has seen a significant improvement in the variety and quality of businesses. There is clear passion and a number of trailblazers who are investing in its success and attracting strong brands to the area.

A lack of a collaborative approach, adequate structure and resourcing to capitalise on this momentum has affected the ability to adequately shift the perception of Paddington past the commercial lull of recent years and reframe it into one that showcases the depth of experiences that make it an approachable option leaving it without the audience it richly deserves.

Marketing Opportunity

There is an opportunity to create a consistent positive voice to re-position and re-frame Paddington to change perceptions and build advocacy. This goes beyond one off marketing initiatives and moves towards consistent communication from the inside out to reframe the narrative.

This has to be a collaborative effort. In order to '*keep in touch'*, stakeholders including Council and elected members need to *'be in touch'* with businesses and create a culture of one team.

The campaign, *Paddington 2021,* opens a conversation with individuals and businesses who represent Paddington creating new ways to talk about the place and interact with the audiences. This growth mindset needs to start with cultural change from within to create a unified voice and celebrate success and the future.

Council and elected members are ideally placed to play an integral role in supporting and growing the visitor base for Paddington with targeted proactive and consistent marketing and collaborating closer with business. Additionally, protecting the suburb with a realistic approach with relevant planning instruments, Woollahra Municipal Council can work collaboratively with it's partners and stakeholder to lift and reginite Paddington.

The Future

Place Positioning

Paddington imbues approachable sophistication. Welcoming villages where you can connect and reconnect, explore, shop and play in one of the most beautiful parts of Sydney.

Source: Oxford Street and Paddington Place Plan 2019-23.

Strategic Priorities

Four key strategic pillars have been identified to address the business challenge and marketing opportunity:

- **Internal Alignment**
- **Audience Engagement**
- **Stakeholder Engagement and Collaboration**
- **Measuring for Success**

Internal Alignment	
Objective	To make doing business in Paddington more desirable to attract and retain consumers.
Issues	1. There are mixed perceptions of Council and how they support the success of Paddington. 2. There are processes that exist to enable the success of businesses in Paddington such as; working parties, small business working group, Paddington Business Partnership, City of Sydney marketing alignment, programming within Council and various grants. However, there is a lack of understanding and alignment of these processes. This can lead to mixed messages delivered externally. 3. Businesses and stakeholders don't understand the role of Council and their involvement in building demand. As such, there is a perceived lack of tangible action by Council leads to the perception that there has been a lack of measurable and positive outcomes for Paddington.
Insight	Internally there are many people in Council responsible and involved in the success of Paddington but a lack of internal alignment.
Approach	Create a culture internally that supports optimum outcomes for Paddington encourages aligning with Paddington Place Plan and Paddington Values.

Audience Engagement	
Objective	Increase footfall, spend and advocacy.
Issues	1. There is a consumer perception that Paddington is unapproachable. 2. There is a perception that Paddington lacks the depth of offerings.
Insight	Paddington offers sophisticated, but approachable experiences for its residents and visitors.
Approach	Develop consistent demand driving messaging to shift perceptions, continual consumer responsive improvements to the environment and work with businesses to deliver outstanding customer experiences.

Stakeholder Engagement and Collaboration	
Objective	To maintain a collaborative and innovative approach to stakeholder engagement.
Issues	1. There are a number of stakeholders and stakeholder groups established with the view to support the prosperity of Paddington. These have a high investment of collective time. 2. Businesses aren't clear who they should be "going to" to gain accurate information and build a collaborative relationship with. 3. Success is only viewed positively through a narrow parameter leading to a lack of advocacy.
Insight	There are many people, working groups and processes set up to enable engagement and connectivity, but inconsistency in messaging and attitudes leads to apathy.
Approach	Establish and empower resources to bring alignment to, educate and build advocacy amongst stakeholders. Council to consider if fewer working groups and parties with more targeted participants focusing on a mix of the right people and the right skills can increase productivity and engagement.

Measuring for Success - Economic Insights	
Objective	Create a data-led culture to guide decision making for placemaking, business attraction, driving demand and ultimately assisting businesses better understand and respond to consumer needs.
Issues	1. Spendmapp is a new tool available within Council now. As an organisation this new information can be gathered, shared and analysed. 2. Insights that are available can now be analysed regularly leading to an increase in perspectives given and decisions made. 3. Insights can be shared transparently with stakeholders and Councillors.

Insight	Data exists to enable better decision making.
Approach	Build a culture of using data and insights to regularly inform and educate stakeholders, fine-tune marketing and help businesses succeed.

Measuring for Success - Behavioural Insights	
Objective	Capture insights and behaviour driving visitation and the wants and needs of an evolving audience.
Issues	Assumptions about visitors and customers are not necessarily accurate.
Insight	No data exists to enable decision making.
Approach	Recommended approaches to measuring behavioural shifts include: 1. Connecting directly with businesses and stakeholders. It is important to establish a baseline which can be drawn from the current state of this strategy, capturing data, applying to marketing and communications activity and communicating back to businesses and stakeholders. 2. Capturing sentiment on a daily basis through social listening via news, social media and review sites, identifying key themes and applying to proactive marketing messaging and communicating back to businesses and stakeholders. 3. Formal surveying through omnibus dipstick research. An omnibus survey is a method of quantitative marketing research where data on a wide variety of subjects is collected during the same interview and the specific sections relevant to your organsiation are extracted and presented.

Key Success Metrics

Behavioural: Change perceptions of Paddington to position it as a competitive shopping and entertainment option.

Economic: Reduce leakage spend out of Paddington and increase visitor spend into Paddington.

Empower: Provide education and support to help business owners understand how to leverage marketing activity implemented from this strategy for their business.

Educate: Share insights with businesses to help them make informed decisions for their independent sales and marketing.

Key Audiences

Primary Audience

These following audience segments have been identified for the purpose of driving demand to Paddington.

Consumers audience segments have been identified using Helix Personas - a classification system beyond geo-demographic modelling to incorporate attitudes, values and behavioural aspects as well as psychographic modelling. The consumer audiences cover both residents and visitors to Paddington.

Geographically, to maximise efficiencies, consumer activity should target visitors from the Western Sydney region, visitors from within a 5km radius and residents matching the audience profiles. It is recommended that Woollahra work in collaboration with Destination NSW to target interstate and international visitors as borders reopen.

Audience Segment	Persona	Who they are
Leading Lifestyles *Focused on success, career and family, people in this community are proud of their prosperity and achievements. They are progressive, big spenders and enjoy cultured living to the max .*	Social Progressives	Educated, high income, intellectual and focused on success. They are living the big city dream. A mix of young singles and couples, and mid-life households, typically living in inner city areas in metropolitan cities.
	Visible Success	Focused on achievement and very family orientated. Typically young families and mid-life families residing in metropolitan cities or well resourced regional cities.
	Success Matters	Achievement is key. Typically young families and young couples are highly focused on creating success and showing their achievements to the world - be it through their home, their car, or the designer labels they wear. Approximately half live in Sydney's North-West.
Asprationals *Driven by dreams of a big future, Aspirationals are highly ambitious and culturally diverse up and comers. Progressive in attitude, working hard today to create a successful tomorrow.*	Lifestyle Seekers	Well educated, progressive and socially aware. Skewing older with 4 in 10 people 50 years+.
	Trend Hunters	Youngest and most culturally diverse of the aspirational segment. Half were born in Asia, while 8 in 10 are under 35. They

		live exclusively in Sydney, renting apartments.
	Experience Seeker	Includes a high proposition of young people - teenagers still living at home and young adults starting their independent lives with a keenness to explore and build their independence.

Secondary Audience

Audience Segment	Persona	Who they are
Business Networkers *Business to business which is the cornerstone to the community and the ability to attract consumers, deliver an outstanding experience and add to the fabric of a liveable and highly desirable neighbourhood.*	Retain and Collaborate	Local businesses both independently owned and national brands, landowners and developers currently operating in Paddington.
	Acquire	Potential businesses that can provide a product or service that responds to consumer demand.

Action Plan

This road map is based on activity recommendations for the next three years. It is encouraged that the road map is reviewed regularly and refined on an annual basis to ensure data, and current and emerging trends are being reflected in marketing programming.

It does not cover specific marketing and communications actions for specific operational initiatives but rather provides a working tool to build upon.

The marketing themes and supporting campaign ideas have been presented separately to this strategy.

The lead stakeholder has been identified in bold with additional stakeholders identified for collaboration and engagement.

The budget allocation primarily falls around the development and execution of the three-year marketing campaign. A majority of the action plan utilises existing budget requires no additional budget. The following is a guide only and does not take into account additional resourcing within Council that could be allocated to tasks to enable cost savings.

Short Term (0-12 months)

Action	Strategic Priorities	Stakeholders	Indicative Costs
Appoint resources empowered to deliver the Place Plan and Marketing Strategy and drive specific stakeholder engagement and collaboration internally and externally: ● Place Planning ● Economic Development ● Marketing	All	**Council** PBP	Internal
Clarify working relationships with Council roles and PBP including the setting of KPIs.	All	**Council** **PBP** Paddington Working Party	N/A
Development and delivery of 2021 Marketing Program: ***2021 - The Year of Paddington*** The intent of this program is to take ownership of 2021 (rightfully so as its postcode) working closely with businesses to build advocacy and collective pride for Paddington communicating as one voice and collaborating together as businesses and on the consumer facing program of activity. This program will work closely with businesses to amplify	All	**Council** **CoS** **PBP** Businesses Paddington Working Party Paddington Small Business Group	$230, 000

through their channels as well as a dedicated program of curated and developed content (e.g. *20 reasons to love Paddington, 21 reasons to visit Paddington),* amplified through digital marketing integrated with user generated content to build advocacy and relevance. This program should roll over the entire year, with an always on earned digital and PR program, business participation and ramp up during the year to incorporate events and paid digital advertising. The consumer facing call to action should direct to visitpaddington.com Key actions should include: • Development of *2021 - Year of Paddington - Celebrate with Us* brand mark, style guide and business toolkit as well as branding materials for businesses to utilise for outward facing consumer communications in store and via marketing activity. It will also include design elements for placemaking e.g. street banners. • WMC to manage proactive consumer facing PR and content (written, video and imagery) development, placement and amplification (through media buy). • WMC to work closely with businesses in supporting their digital amplification of the campaign to drive conversion e.g. marketing grants including digital marketing training program (to ensure spend is optimised). • Our Paddington B2B Events - series of events specifically for Paddington businesses to build skills and resilience through educational workshops (broader) and 1:1 mentoring program (tailored). Key areas of focus to include marketing, operations, understanding and using data and finance. • Consumer Events - noting that, events should be community led and subject to competitive grant application processes to ensure the best ideas and opportunities are supported. Consideration can be given to the value of extending William Street Festival into a Paddington Streets and Laneways Festival, but only in full collaboration with Paddington Business Partnership (PBP) for example.			

Commence roll out of marketing theme and associated campaign 2021 - The Year of Paddington	All	**Council** **PBP** **CoS** Businesses Paddington Working Party Paddington Small Business Group	Outlined above
Quarterly reporting to commence on business performance (e.g. Spendmapp, economic ID, survey results, anecdotal information including setting a baseline for future analysis) analysed and communicated to stakeholders to make informed and measurable decisions to build demand, identify gaps and educate stakeholders.	Measuring for Success Continue to build a culture of using data	**Council** PBP Businesses Paddington Working Party Paddington Small Business Group	N/A
Review and take expressions of interest for future event concepts and partnership opportunities at varying scales in response to COVID safe practices.	Audience Engagement Stakeholder Engagement and Collaboration	**Council** PBP Event Organisers/ Producers Paddington Working Party Paddington Small Business Group	Internal
Create a Wayfinding Plan for better location navigation and presentation including; finger signs, wall-mounted printed maps, handheld maps, wall maps and directional pillars.	Audience Engagement Stakeholder Engagement and Collaboration	**Council** PBP Businesses	$15, 000

Medium Term (12-24 months)

Action	Strategic Priorities	Stakeholders	Indicative Costs
Dedicated resources empowered to deliver the Place Plan and Marketing Strategy and drive specific stakeholder engagement and collaboration internally and externally: • Place Planning • Economic Development • Marketing	All	**Council** PBP	Internal
Continue roll out of 2021 - The Year of Paddington (as outlined above)	All	**Council** **PBP** **CoS** Businesses Paddington Working Party Paddington Small Business Group	See above
The Big Red Bus - Tourism Operator - Negotiations for the inclusion of stops at Oxford Street and Jersey Road Intersection and also Oxford Street and Glenmore Road intersection bus stops (existing Sydney Bus stops) to encourage visitors to disembark, and walk (downhill) and rejoin the tour after sightseeing and shopping in Paddington as part of the Bondi Tour Route.	Audience Engagement	**Council** PBP	Internal
Create a subscription list of ALL registered businesses for ongoing communication and connection.	All	**Council** PBP	N/A
Introduction of a Paddington specific business electronic direct mail (EDM) (this can be rolled out similarly across the LGA) quarterly to ALL registered businesses with targeted information relevant to Paddington.	Audience Engagement Stakeholder Engagement and Collaboration	**PBP** Council	Existing budget - PBP funding

Review and take expressions of interest for future event concepts and partnership opportunities at varying scales in response to COVID safe practices.	Audience Engagement Stakeholder Engagement and Collaboration	**Council** PBP Event Organisers/ Producers Paddington Working Party Paddington Small Business Group	Existing budget - event grant funding
Quarterly reporting to commence on marketing and business performance (e.g. Spendmapp, economic ID, survey results, anecdotal information including setting a baseline for future analysis) analysed and communicated to stakeholders to make informed and measurable decisions to build demand, identify gaps and educate stakeholders.	Measuring for Success	**Council** PBP Businesses Paddington Working Party Paddington Small Business Group	N/A
Development and delivery of 2022 Marketing Programming: ***Paddington - Whatever You Fancy***. This will include a fully integrated program to build on the *Year Of* marketing theme with a focus to shift perceptions and build advocacy and will include: • Content creation and amplification . • Social Campaign (as outlined in supporting campaign outline). • Marketing and campaign development and associated assets (including the appointment of marketing agency). • Lock in media buy schedule (including the appointment of a media agency). • PR plan (including the appointment of a PR agency). • Business toolkit. • Events.	All	**Council** **CoS** **PBP** Businesses Paddington Working Party Paddington Small Business Group	$147, 500
Apply the wayfinding plan with the development and implementation of design assets, particularly around maps.	Audience Engagement Stakeholder Engagement and	**Council** PBP Businesses	Applied to Place making budget e.g. design of a precinct map with

	Collaboration		consideration of Legible Sydney Wayfinding System - approximately $5, 000
Enforce Woollahra Development Control Plan Chapter E7, Signage, with the removal of real estate signage above awnings to better align with Woollahra Development Control Plan, Chapter E7, Signage, and more active 'open for business' outward appearance.	Internal Alignment Audience Engagement Stakeholder Engagement and Collaboration	**Council** PBP	Internal
Enforce Woollahra Development Control Plan, Chapter E7, Signage, so that all businesses present consistently. All businesses should present a relevant fascia treatment as part of their business signage, or at the very least have a clean painted awning fascia with the building number applied.	Internal Alignment Audience Engagement Stakeholder Engagement and Collaboration	**Council** PBP	Internal

Long Term (24-36 months)

Action	Strategic Priorities	Stakeholders	Indicative Costs
Dedicated resources empowered to deliver the Place Plan and Marketing Strategy and drive specific stakeholder engagement and collaboration internally and externally: • Place Planning • Economic Development • Marketing	All	**Council** PBP	Internal
Apply the wayfinding plan with the development and implementation of design assets, particularly around maps.	Audience Engagement	**Council** PBP Businesses	Applied to Place making budget

	Stakeholder Engagement and Collaboration		e.g. design of a precinct map with consideratio n of Legible Sydney Wayfinding System - approximatel y $5, 000
Continue roll out of Development of 2022 Marketing Programming: ***Paddington - Whatever You Fancy***.	All	**Council** **PBP** **CoS** Businesses Paddington Working Party Paddington Small Business Group	See above
Development and delivery of 2023 Marketing Programming: ***Paddington - Whatever You Fancy***. This will include a fully integrated program to build on the *Year Of* and 2022 *Whatever You Fancy* marketing theme with a focus to shift perceptions and build advocacy and will include: • Content creation and amplification. • Social Campaign (as outlined in supporting campaign outline). • Marketing and campaign development and associated assets (including the appointment of marketing agency). • Lock in media buy schedule (including the appointment of amedia agency). • PR plan (including the appointment of a PR agency). • Business toolkit. • Events.	All	**Council** **CoS** **PBP** Businesses Paddington Working Party Paddington Small Business Group	$147, 500
Work with Paddington Business Partnership in creating forums whereby hero businesses can share their expertise acting as an informal peer mentor.	Internal Alignment Stakeholder Engagement and	**PBP**	Existing budget - PBP funding

	Collaboration		
Enforce Woollahra Development Control Plan, Chapter E7, Signage, with the removal of real estate signage above awnings to better align with Woollahra Development Control Plan, Chapter E7, Signage, for more active 'open for business' outward appearance.	Internal Alignment Audience Engagement Stakeholder Engagement and Collaboration	**Council** PBP	Internal
Enforce Woollahra Development Control Plan Chapter E7, Signage, so that all businesses present consistently. All businesses should present a relevant fascia treatment as part of their business signage, or at the very least have a clean painted awning fascia with the building number applied.	Internal Alignment Audience Engagement Stakeholder Engagement and Collaboration	**Council** PBP	Internal
Quarterly reporting to commence on marketing and business performance (e.g. Spendmapp, economic ID, survey results, anecdotal information including setting a baseline for future analysis) analysed and communicated to stakeholders to make informed and measurable decisions to build demand, identify gaps and educate stakeholders.	Measuring for Success	**Council** PBP Businesses Paddington Working Party Paddington Small Business Group	Internal
Review and take expressions of interest for future event concepts and partnership opportunities at varying scales in response to consumer demand and behaviour in a post-COVID world.	Audience Engagement Stakeholder Engagement and Collaboration	**Council** PBP Event Organisers/ Producers Paddington Working Party Paddington Small Business	Existing budget - event grant funding

		Group	

Appendix

Appendix 1 - A historical perspective of Paddington

Predating the below timeline is the settlement and establishment of Paddington as a village following residential settlement. By the turn of the 20th century, Paddington was in its prime, with rows of Victorian terraces transforming the appearance and character of Paddington, familiar to this day. 50 years ago a significant feature of Paddington was that it was a place where residents could live and shop locally, and visitors could come to experience the various artisans, food and fashion. It had a diverse range of businesses including a number of butchers, greengrocers, delicatessens, art, antiques, eateries and fashion boutiques. In many instances, this was also reflective of the owner/occupier arrangement.

However, with the arrival of Westfield Bondi Junction, the Global Financial Crisis, clearway traffic, a changing of the guard in terms of landowner moving away from owner/occupier (and a lack of motivation to maintain buildings and cultivate tenant occupancy and relationships), a strong Australian dollar and the surge of online shopping have all contributed to the decline of Paddington over the decades. It's important to acknowledge that it is not due to one single event but rather a combination of events, attitudes and behaviours that have impacted Paddington over the years.

This timeline has been developed to provide context to better understand and appreciate the key ebbs and flows that have impacted and influenced Paddington.

1950s	• Evidence of the gentrification in the 1950s and 1960s where inner-city areas were rediscovered as desirable places in which to live.[21]
1960s	• Rise of the preservation and conservation movement. • The Middle class 'Bohemian' invasion began and the area became 'multicultural'. • Oxford Street began to emerge as the place to go to find fashion, both Australian and international. • 1960 - Trams to Bondi and Bronte were discontinued. • 1964 - Formation of the Paddington Society. • 1967 - Realignment of municipal boundaries and the formation of the new municipality of South Sydney. • 1968 - Four hundred acres of terrace housing was rezoned as the first conservation area in Australia.
1970s	• 1973 - Paddington Markets began. • 1974 - The Paddington suburb was classified as an Urban Conservation Area by the National Trust of Australia (NSW). Paddington was then placed on the Register of the National Estate. • 1978 - The first Gay and Lesbian Mardi Gras parade was held.

[21] NSW Government, Office of Environment & Heritage, *Oxford Street Heritage Conservation Area*, https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2424247

1980s	• In the 1980s, a refurbishment of Oxford Street's body and soul was underway, the professional and intellectual elite displacing the Greek, Italian and Jewish working-class families who had kept the terraces and Victorian facades safe from developers' sights.[22] • 1988 - Sydney Football Stadium built.
1990s	• By the 1990's, Oxford Street was considered the centre of fashion in Australia. • 1994 - Westfield bought a controlling stake in Bondi Junction Plaza from AMP and renamed it Westfield Bondi Junction Plaza. • 1998 - The relocation of the Showgrounds to Homebush and the subsequent development of Fox Studios. • 1999 - Development of Stadium Australia (ANZ Stadium) to serve as a venue for the 2000 Summer Olympics.
2000s	• The post-Olympic period coincided with strong demand for inner-city sites for new apartments, part of a long term trend for higher income households to favour inner city living. • Into the new millennium, Oxford Street's place as the gay heart of Sydney became less certain. As LGBT+ businesses failed and venues closed, for a time, King Street in Newtown dominated as a queer alternative. • 2000 - Sydney Olympics were held and generated $653 million in additional tax revenue from visitors, leaving a loss of $1.325 billion to the Australian economy. The Olympics saw the airport updated and the Eastern Distributor developed. Also in 2000, Westfield purchased the Carousel Centre and the remaining stake in Bondi Junction Plaza. • 2003 - Area of Oxford Street under South Sydney Council incorporated into the City of Sydney. • 2004 - The Intersection Paddington Australian Fashion precinct began with the first tenant to anchor being Scanlon and Theodore. The Westfield Bondi Junction opened in December, which was blamed for the downturn in trade in surrounding shopping hubs. Retail trade in Oxford Street, Paddington dropped 30% in the four months after the opening of the shopping centre with other locations in Double Bay and Woollahra experiencing a similar downturn in trade. • 2005 - Cross City Tunnel opens. The impacts of Westfield Bondi Junction significantly impacted shops in Paddington, Woollahra and Double Bay. Oxford Street, in particular, was the hardest hit where vacancy rates were the worst they had ever been in decades. Rents became as high as $150,000 a year for a single-fronted shop, and from $180,000 to $300,000 for a double-front.[23] • 2006 - Clover Moore brought stakeholders together to explore the creation of Oxford Street as a cultural quarter • 2007-8 - Global Financial Crisis hit, and as rents crept up with the strip's retail popularity, by 2007 many tenants were working solely for their landlords. • 2009 - William Street Festival was founded. After extensive conservation and adaptive reuse works, Paddington Reservoir Gardens was opened to the public.[24]
2010s	• 2010 - The Darlinghurst section of Oxford Street was fast becoming a nadir, with its many

[22] The Dictionary of Sydney, *The Road East*, https://dictionaryofsydney.org/entry/the_road_east
[23] Wikiwand, *Westfield Bondi Junction*, https://www.wikiwand.com/en/Westfield_Bondi_Junction
[24] The Sydney Morning Herald 2015, *Store Wars*, https://www.smh.com.au/national/store-wars-20050430-gdl883.html

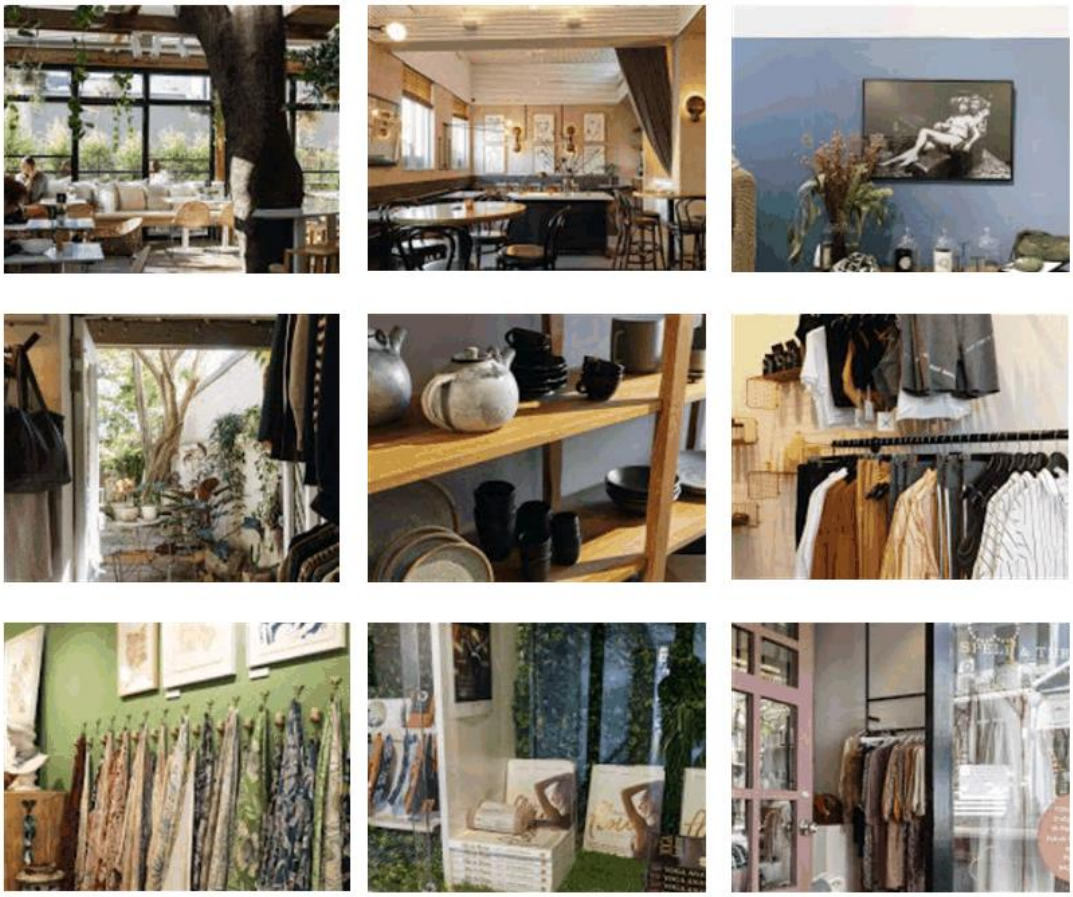
	run-down or closed shops, with numerous drunk and aggressive revellers on weekends. Whilst in Paddington, it was able to retain its name for being a retailer heaven with boutiques and exclusive shops, and crowds attending the Paddington Markets.[25] • 2011 - Pitt Street Mall opened in Sydney's CBD. Clover Moore proposed new directions for lower Oxford Street, and on 22 August 2011 the City of Sydney Council resolved to undertake a number of short, medium and long term initiatives to activate City owned properties in the precinct. 16 organisations were announced as being successful applicants and were granted office space as part of the Sydney 2030 plan to revitalise the Oxford Street Precinct with creative and cultural organisations that could help to drive foot traffic to the area as well as promote the community. • 2012 - Rents started to come back down by 20-30%. The first mention of developing a new vision for Oxford Street was announced in a WMC meeting. • 2013 - Oxford Street Working Party was launched. A DIY rainbow crossing protest movement emerged to protest the removal of a temporary rainbow crossing from Oxford Street. The temporary crossing was created by the City of Sydney as part of the 35th-anniversary celebration of the Sydney Mardi Gras. The rainbow crossing in Sydney proved popular with tourists and locals and many people hoped it would be made a permanent feature of the Oxford Street landscape. The temporary crossing was eventually removed in April. • 2014 - The iconic Oxford Street is in desperate need of help. In Paddington, there are 46 empty shops with a vacancy rate of just over 18%. The population shifted and moved out of Sydney's east, due in part to housing pricing. Looking positively, the Activate Oxford Street Report by Village Well, was a step in the right direction. For some, however, it failed to hit the mark and queries were raised if the report recommendations were going to be able to be implemented. Also in 2014, measures were taken to reduce the impact of alcohol-fuelled violence with aims to create a safer city after dark. • 2019-20 - Lockdown laws were reduced.
2020s	• 2020 - The COVID-19 pandemic hit and significantly impacted all sectors in Australia. (Further economic analysis of the impacts of COVID-19 on Paddington can be seen in the Business Activity section on page 8). • Following a 2020s recovery period, it anticipated that Paddington shopping precinct will be experiencing a renaissance.
2030s - future planning	• Fashion and homewares trend forecasters such as Paddington locals Robby Ingham and Theo Onisforou predict that anyone wanting to know what is going to be mainstream in Westfield shopping offerings in ten or fifteen years time can start by looking in Paddington and Oxford Street now.

[25] The Sydney Morning Herald 2015, *The Perfect Storm*, https://www.smh.com.au/interactive/2014/oxford-street/index_m.html

Appendix 2 - Stakeholder Engagement

The stakeholder consultation was undertaken over three weeks in September and focused on objectives around communication with business and residents.

Mayor	Cr Susan Wynne
Councillor WMC Paddo Ward	Cr Peter Cavanagh
Councillor WMC Cooper Ward	Cr Anthony Marano
Councillor WMC Paddo Ward	Cr Harriett Price
Councillor WMC Paddo Ward	Cr Matthew Robertson
Councillor WMC Cooper Ward	Cr Megan McEwin
City of Sydney - City Manager	Victoria Moxey
Councillor	Cr Toni Zeltzer
Small Business Working Party	Cr Nick Maxwell
Small Business Working Party	Cr Mark Silcocks
Small Business Working Party	Cr Mary-Lou Jarvis
Small Business Working Party/ General Manager	Craig Swift McNair
Paddington Business Partnership (Visit Paddington)	Michael Fegent
Paddington Markets / Paddington Uniting Church	Rev. Danielle Hemsworth-Smith
Merivale	Sam Egerton
Head On Photo Festival	Moshe Rosenzveig
Perry Lane Art Project	Rebecca Hearty
UNSW Art + Design	Kelly Doley
Local Publishing Co.	Elizabeth Meryment
The Intersection	Theo Onisforou
Robby Ingham	Robby Ingham
Journal	Andrew Packham
Dot Dash	Despina Macris
Village Well	Gilbert Rochecouste



Prepared by

SPARROWLY GROUP

Paddington Marketing Strategy Project Timeline

August 2014 – Council adopted Oxford St, Paddington Placemaking Roadmap Report – prepared for WMC by Village Well.
Similar format and content to the Marketing Strategy. Includes a section on Street Identity, Marketing and Communication which involves similar suggestions to the Marketing Strategy. Included a Quick Win Implementation Program.

May 2019 - Oxford Street & Paddington Place Plan 2019 to 2023 (the Place Plan) adopted by Council

Oct 2019 – Update on Place Plan action 4.2.1 requested by OSPWP

February 2020 – Manager – Placemaking commenced procurement process for consultant to deliver the Strategy

May 2020 – Question on Notice from Cr Robertson requesting update from Director of Planning on the delivery of action 4.2.1

May 2020 – Working Party Terms of Reference revised

From report to EPC on 11 March 2020
Following the Mayoral election in September last year the Mayor decided to review the role of both working parties to make sure the support we provide for our shopping neighbourhoods continues to be relevant and efficient. Part of this review was a survey of the members of both working parties. The Mayor was briefed on the survey responses and it was consequently decided that the Terms of Reference under which both working parties operate be completely reviewed.

Following the adoption of revised Terms of Reference by Council on 25 May 2020, the working parties were disbanded to be reformed according to the new membership guidelines.

June 2020 – Peter Kauter and Emily Edwards conducted assessment of RFQ submissions

23 June 2020 – Sparrowly Group appointed

30 June 2020 – first inception meeting – due to concerns regarding the ability of Sparrowly Group to consult with the OSPWP, the project was delayed until the working party was reformed.

8 September 2020 – Second inception meeting – due to the delay in reforming the working party, it was decided that all Councillors would be invited to participate in consultations sessions as well as key community stakeholders including former OSPWP members.

21 September 2020 – GM advised approval of revised quote from Sparrowly Group to amend scope of project to all of Paddington

October 2020 – Mayor Wynne sent OSPWP member invitation

19 October 2020 – Draft Marketing Strategy received

Paddington Marketing Strategy Project Timeline

27 October 2020 – Sparrowly Group provided with consolidated feedback on draft from GM, Justine Henderson, Anne White and Kate Burgess

11 November 2020 – Final Strategy and Campaign concepts received

2 December 2020 – OSPWP meeting – the status of the Marketing Strategy was brought up as part of General Business. The Working Party were advised that the Strategy would be shared with Councillors and then submitted as an agenda item at the next OSPWP meeting.

23 December 2020 – GM shared Strategy with Councillors via email

18 February 2021 – OSPWP meeting – Strategy reported as an agenda item for discussion

Item No:	R1 Recommendation to Council
Subject:	**DOUBLE BAY - HYDROGEOLOGICAL GEOTECHNICAL IMPACTS - GROUNDWATER AND GEOTECHNICAL ASSESSMENT REPORT**
Author:	Neda Vandchali, Strategic Planner
Approvers:	Kelly McKellar, Team Leader Strategic Planning Anne White, Manager - Strategic Planning Nick Economou, Acting Director Planning & Development
File No:	21/42641
Reason for Report:	To present the Double Bay – Hydrogeological Geotechnical Impacts Groundwater and Geotechnical Assessment Report prepared by GHD Pty Ltd. To obtain Council's approval to prepare a planning proposal to amend the Woollahra Local Environmental Plan 2014 and refer it to the Woollahra Local Planning Panel for advice. To obtain Council's approval to prepare and exhibit a draft development control plan to amend the Woollahra Development Control Plan 2015.

Recommendation

A. THAT a planning proposal be prepared to amend the *Woollahra Local Environmental Plan 2014* consistent with the staff recommendations identified in **Table 1** of **Annexure 4** of the report to the Environmental Planning Committee meeting on 12 April 2021.

B. THAT the planning proposal be referred to the Woollahra Local Planning Panel for advice.

C. THAT the advice of the Woollahra Local Planning Panel be reported to a future meeting of the Environmental Planning Committee.

D. THAT a draft development control plan is prepared and publicly exhibited to amend the *Woollahra Development Control Plan 2015*, consistent with the staff recommendations identified in **Table 2** of **Annexure 4** of the report to the Environmental Planning Committee meeting on 12 April 2021.

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1. Background

On 25 February 2019, Council considered a Notice of Motion (see **Annexure 1**) relating to concerns raised by residents about cracking and structural movement in houses in Double Bay. Subsequently, on 25 February 2019 Council resolved:

THAT Council:

A. Staff meet with concerned Double Bay residents and outline the approval process that was undertaken in relation to the DA and dewatering of 4-8 Patterson Street, Double Bay and other sites that have been approved for dewatering in Double Bay.

B. Follow up with the NSW Department of Primary Industry to ascertain the results of their enquiries into this issue.

C. *Obtain a report from an expert hydro-geologist (and/or appropriate expert) informing Council as to whether there is any short, medium or long-term impacts associated with excavation, subterranean building and dewatering in the Double Bay area on the structural and geological integrity of Double Bay residential and commercial buildings, with a view to informing any amendments required to existing planning controls.*

In response to part C of Council's resolution, engineering consultants GHD Pty Ltd (GHD) were engaged in August 2019 to undertake an assessment of geotechnical and hydrogeological impacts associated with development in the Double Bay area. The study area comprises land in the Double Bay Catchment (see **Figure 1** below) and focused on development that has the capacity to intersect with the water table, including development with one or more basement levels.

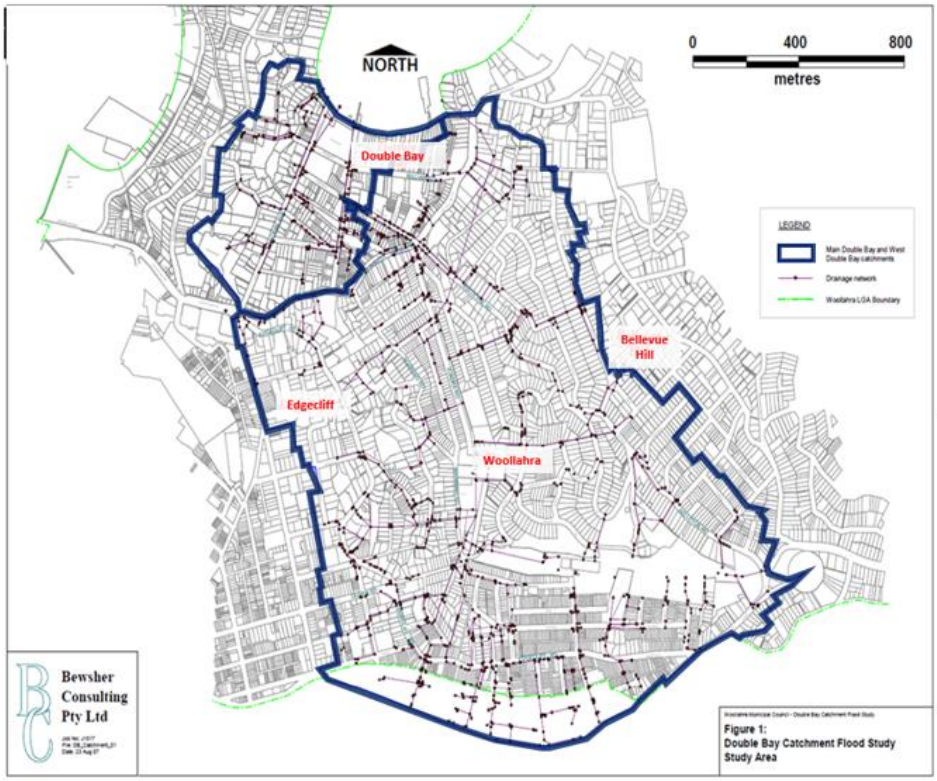

Figure 1: The study area.
(Source: Bewsher Consulting Pty Ltd – Double Bay Catchment Flood Study 2007)

A Councillor briefing was held on 26 August 2020 to present the Report, including its draft implications for the *Woollahra Local Environmental* Plan (LEP) 2014, *Woollahra Development Control Plan (DCP) 2015*, and Development Application Guide (DA Guide).

2. Double Bay – Hydrogeological Geotechnical Impacts Groundwater and Geotechnical Assessment Report by GHD

GHD identified the following objectives to guide their work:

i. assess potential cumulative impact of future developments on long-term groundwater change
ii. assess short term construction risk from dewatering damaging adjacent buildings
iii. identify any required amendments to the existing planning controls.

To meet these objectives, the project was carried out in four stages:

- Stage 1 Identification of the groundwater catchment and establishment of the project study area
- Stage 2 Desktop review
- Stage 3 Assessment of impacts
- Stage 4 Review of Council's planning framework.

The finalisation of this work consists of two documents being:

- *Double Bay Hydrogeological Geotechnical Impacts - Groundwater and Geotechnical Assessment Report* (the Report) (see **Annexure 2**).
- *Double Bay Hydrogeological Geotechnical Impacts - Proposed Modifications to LEP, DCP and DA Guidelines* (the Recommendations (see **Annexure 3**).

2.1. Double Bay Hydrogeological Geotechnical Impacts - Groundwater and Geotechnical Assessment Report

This report (at **Annexure 2**) summarises Stages 1 to 3 of the project. It discusses GHD's findings regarding short-term and cumulative long-term impacts associated with excavation, subterranean building and dewatering on the structural and geological integrity of existing development in the Double Bay catchment.
The assessment report comprises three components:

i. identification of groundwater study area and its groundwater setting
ii. assessment of potential cumulative impact of future developments on long-term groundwater change
iii. assessment of short-term construction dewatering on risks of damage of adjacent buildings.

Importantly, the Report has classified parts of the Double Bay Catchment into different Settlement Zones as shown in **Figure 2** below. These zones are more susceptible to having a shallow water table (close to the ground surface) following wet periods. An explanation of the differences between the three zones is summarised in **Table 1**.

Table 1: Settlement Zones in the Double Bay Catchment

Zone Assignment	Description	Typical Settlement for given Drawdown Levels
A	Areas which are highly sensitive to drawdown due to the ground conditions. Consequently, higher settlement magnitude can likely occur and adversely impact adjacent properties.	• Settlement of more than 15 mm for 1 m drawdown depth • Differential settlement which can exceed 15 mm for drawdown up to 4 – 5 m
B	Areas which are moderately sensitive to drawdown due to the ground conditions. Although the assessed settlement was generally less than Zone A, this zone can continue settling with the increase in drawdown due to thicker soil profile or compressible layer located at deeper strata.	• Settlement of up to 15 mm for 1 m drawdown depth • Settlement can exceed 15 mm for excessive drawdown up to about 4 – 5 m
C	Areas which are less sensitive to drawdown due to ground condition (e.g. shallow bedrock, lower original water table with respect to soil layers)	• Settlement of less than 5 mm for 1 m drawdown depth • Settlement is likely to be limited with the increase in drawdown depth due to shallow rock profile

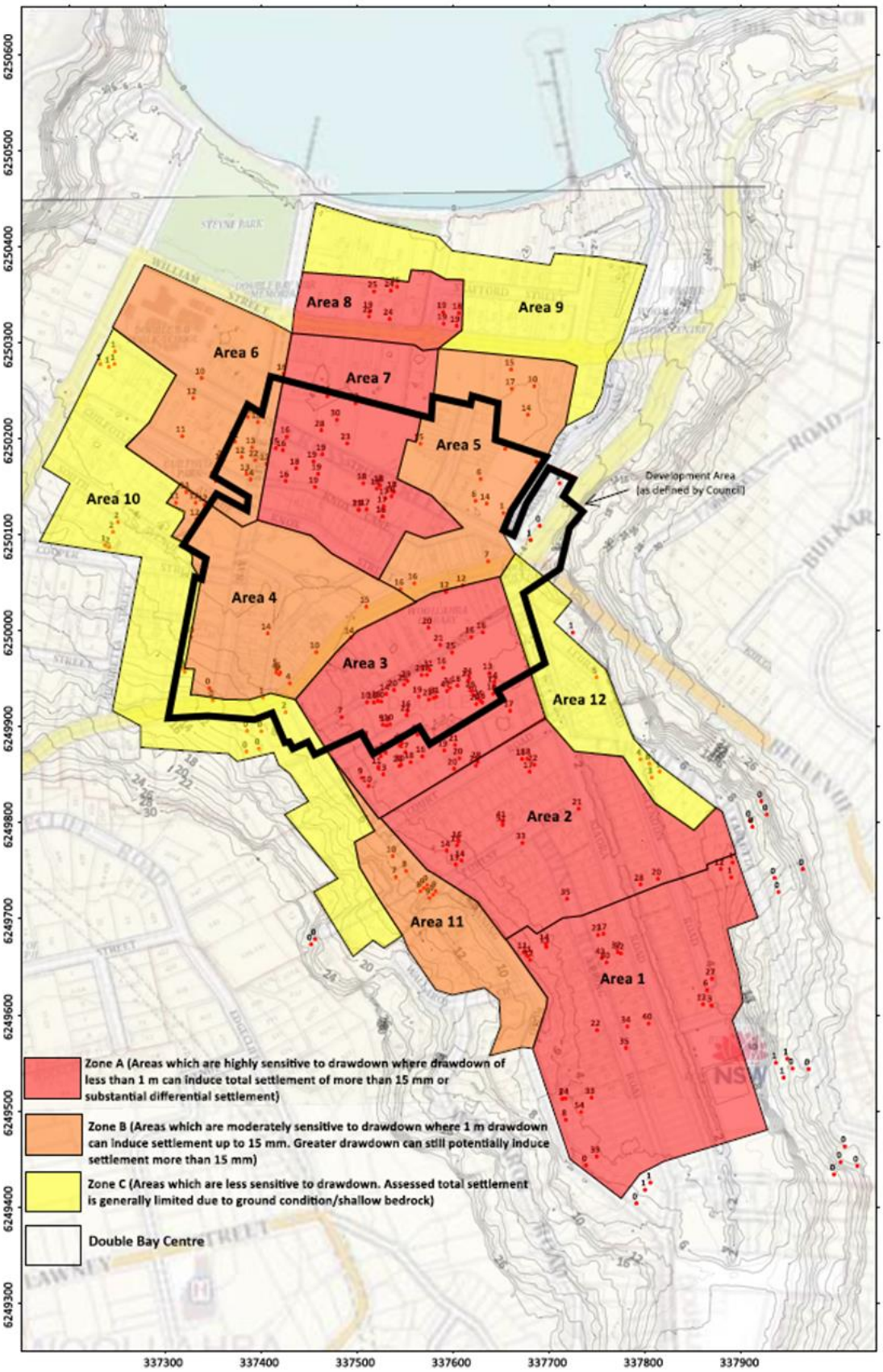

Figure 2: Settlement Zones in the Double Bay Catchment Area, as identified by GHD
Source: the Report by GHD

Based on GHD's comprehensive analysis, the report has identified new threshold/control measures for mounding and drawdown of the water table to minimise the potential short and long-term impacts of basement construction in these Settlement Zones.

The proposed analysis, limits and control measures identified in the report have been used to recommend amendments to Woollahra LEP 2014, Woollahra DCP 2015 and the DA Guide.

2.2. Double Bay Hydrogeological Geotechnical Impacts - Proposed Modifications to LEP, DCP and DA Guidelines

This document (at **Annexure 3**) addresses Stage 4 of the project. It sets out GHD's assessment of Council's existing planning controls and guidelines based on the findings of the assessment report. It recommends amendments to the following:

- Woollahra LEP 2014
  Cl. 1.2 Aims of the plan
  Cl 6.2 Earthworks

- Woollahra DCP 2015: Ch D5 Double Bay Centre
  Chapter *D5.6.7 Geotechnology and hydrogeology*
  D5.6.7 Geotechnology and hydrogeology

- Council's DA Guide
  Attachment 6 - Geotechnical and Hydrogeological Reports.

The proposed amendments to the Woollahra LEP 2014 put a greater emphasis on the consideration of groundwater dewatering as part of the development assessment process. It provides an overarching statement on the requirement to assess and mitigate the adverse impact of groundwater drawdown.

The proposed amendments to the Woollahra DCP 2015 and DA Guide provide further guidelines and technical advice to support the objective in the Woollahra LEP 2014 and to indicate the requirements to mimimise the impacts of groundwater drawdown as a consequence of underground structures.

3. Recommendations[1]

Council Staff have reviewed the amendments recommended by GHD, consulted with staff from the *Department of Planning, Industry and Environment*, Council's Development Control and Engineering Services Teams. Council staff generally support the recommendations from GHD, subject to modifications. The table in **Annexure 4** contains the recommendations from GHD and a response from staff which includes a commentary on whether staff support the recommendation with or without modification.

[1] Note: To undertake construction dewatering in NSW, additional approvals must be obtained from WaterNSW, and this forms part of *the integrated development application process* under *Section 4.46 of the Environmental Planning and Assessment Act 1979.* GHD and Council Staff have considered these requirements in the preparation of both the assessment report and the proposed amendments to Council's planning controls and guidelines.

Overall, Staff support the proposed amendments to Woollahra LEP 2014, Woollahra DCP 2015 and the DA Guide, including the technical information which has resulted from the extensive context analysis by GHD. The proposed amendments are location based, and will enhance the existing controls by focusing on the development of subterranean structures. This will help to minimise the adverse impacts of groundwater drawdown in the Double Bay area associated with the short and long term impacts of basement construction.

However, Council staff do not support locating the amendments in Chapter D5 of the Woollahra DCP 2015. Chapter D5 only applies to the Double Bay Centre which is shown in the map above. The proposed controls should apply to the Zone A, B and C Settlement Zones which includes land zoned R2 Low Density Residential and R3 Medium Density Residential. As such, the controls should be inserted into *Chapter E2 Stormwater and Flood Risk Management* which would apply to all development applications in the Double Bay Area. This issue has been discussed with representatives from GHD, who agree with the staff recommendation.

In summary, staff recommend the following:

- Prepare a planning proposal to amend Clauses 1.2 and 6.2 of the Woollahra LEP 2014, subject to modifications to GHD's proposed amendments to Clause *1.2 Aims of the plan*.

- Prepare a draft development control plan to amend *Chapter E2 Stormwater and Flood Risk Management* of the Woollahra DCP 2015 subject to the modifications recommended in **Annexure 4**. These proposed DCP controls primarily seek to elevate existing or updated guidelines which are already contained in Council's DA Guide *Attachment 6 Geotechnical and Hydrogeological Reports*.

- Make consequential amendments to Council's DA Guide *Attachment 6 - Geotechnical and Hydrogeological Reports*.

4. Next steps

If Council supports amending the Woollahra LEP 2014 and Woollahra DCP 2015, the next steps are as follows:

- Prepare a planning proposal to amend Clauses 1.2 and 6.2 of the Woollahra LEP 2014 and refer this to the Woollahra Local Planning Panel for advice. This advice will be reported to a future meeting of the Environmental Planning Committee.

- Prepare and publicly exhibit a draft development control plan to amend the Woollahra DCP 2015, consistent with **Table 1** of **Annexure 4**. Given the nature of the proposed amendments it is recommended that this process occurs separately to the planning proposal to avoid delays associated with the lengthy Gateway Determination process.

  The process for exhibiting a DCP is set out in the EP&A Act 1979, the *Environmental Planning and Assessment Regulation 2000*, and the *Woollahra Community Participation Plan 2019*.

  The draft DCP must be publicly exhibited for a minimum of 28 days. Public notice will be given in the Wentworth Courier each week of the exhibition and on Council's website. The outcome of the public exhibition will be reported to a future Committee meeting.

- Amendments to Council's DA Guide do not require public exhibition and can be made under instruction from Council's Director Planning and Development.

5. Conclusion

In response to part C of Council's resolution of 25 February 2019, engineering consultants GHD were engaged in August 2019 to undertake an assessment of geotechnical and hydrogeological impacts associated with future development in Double Bay.

To mitigate the potential impacts of groundwater alteration as a result of future development, the Report prepared by GHD recommends a number of amendments to the Woollahra LEP 2014, Woollahra DCP 2015 and Council's DA Guide. Staff have reviewed these recommendations and have identified in **Annexure 4** several modifications for their implementation.

Overall, staff support the proposed amendments. The proposed amendments are location based, and will enhance the existing controls by focusing on the development of subterranean structures. This will help to minimise the adverse impacts of groundwater drawdown in the Double Bay area associated with the short and long term impacts from construction.

Staff recommend that Council resolve to support the proposed amendments to Woollahra LEP 2014 and Woollahra DCP 2015, subject to the modifications recommend by Staff, consistent with **Annexure 4** of the report to the Environmental Planning Committee meeting on 12 April 2021.

Annexures

1. Council Agenda 25 February - Notice of Motion- Hydro Geological report on Double Bay Dewatering ⇩

2. Double Bay - Hydrogeological Geotechnical Impacts Groundwater and Geotechnical Assessment Report ⇩

3. Double Bay - Hydrogeological Geotechnical Impacts - Proposed Modifications to LEP, DCP and DA Guidelines ⇩

4. Double Bay - Hydrogeological Geotechnical Impacts Report Groundwater and Geotechnical Assessment Report by GHD Pty Ltd - Proposed amendments and Staff recommendations - EPC 12 April 2021 - Annexure 4 - 7 April 2021 ⇩

Item No:	11.1
Subject:	**NOTICE OF MOTION - HYDRO GEOLOGICAL REPORT ON DOUBLE BAY DEWATERING**
From:	Councillors Megan McEwin, Matthew Robertson, Anthony Marano, Luise Elsing, Mark Silcocks and Toni Zeltzer
Date:	20 February 2019
File No:	19/26691

THAT Council obtain a report from an expert hydro geologist (and/or other appropriate expert) informing Council as to:

A. if the dewatering that occurred or is occurring at Patterson Street, Double Bay and/or in Cross Street, Double Bay:

   i. is likely to be causing the structural movement and cracking which is appearing in residential houses in Double Bay; and/or
   ii. is likely to have any impact on the structural integrity of nearby Council buildings such as the Kiaora Lands development.

B. whether there are any short, medium or long-term impacts or risks associated with dewatering in the Double Bay area on the structural and geological integrity of Double Bay residential and commercial buildings.

Background

A number of residential houses in Double Bay are experiencing serious cracking and structural movement which had not previously occurred. The residential houses experiencing structural movement are in the vicinity of Court and Forest Roads and the Northern half of Epping Road. It has been submitted to Council by the residents affected that the cracking and structural movement is severe and recent and cannot be reasonably ascribed to a dry season or other climatic events. The attached map indicates the properties experiencing structural movement and cracking.

The development at 4-8 Patterson Street, Double Bay has a Dewatering Permit and has undertaken dewatering. It is understood that another development in Cross Street is also undertaking dewatering.

The owners and occupiers of the affected properties are seeking Council assistance in determining the potential causes of the damage which has occurred and which in most cases is continuing.

The Council-owned Kiaora Land development is in close proximity to the development undertaking dewatering.

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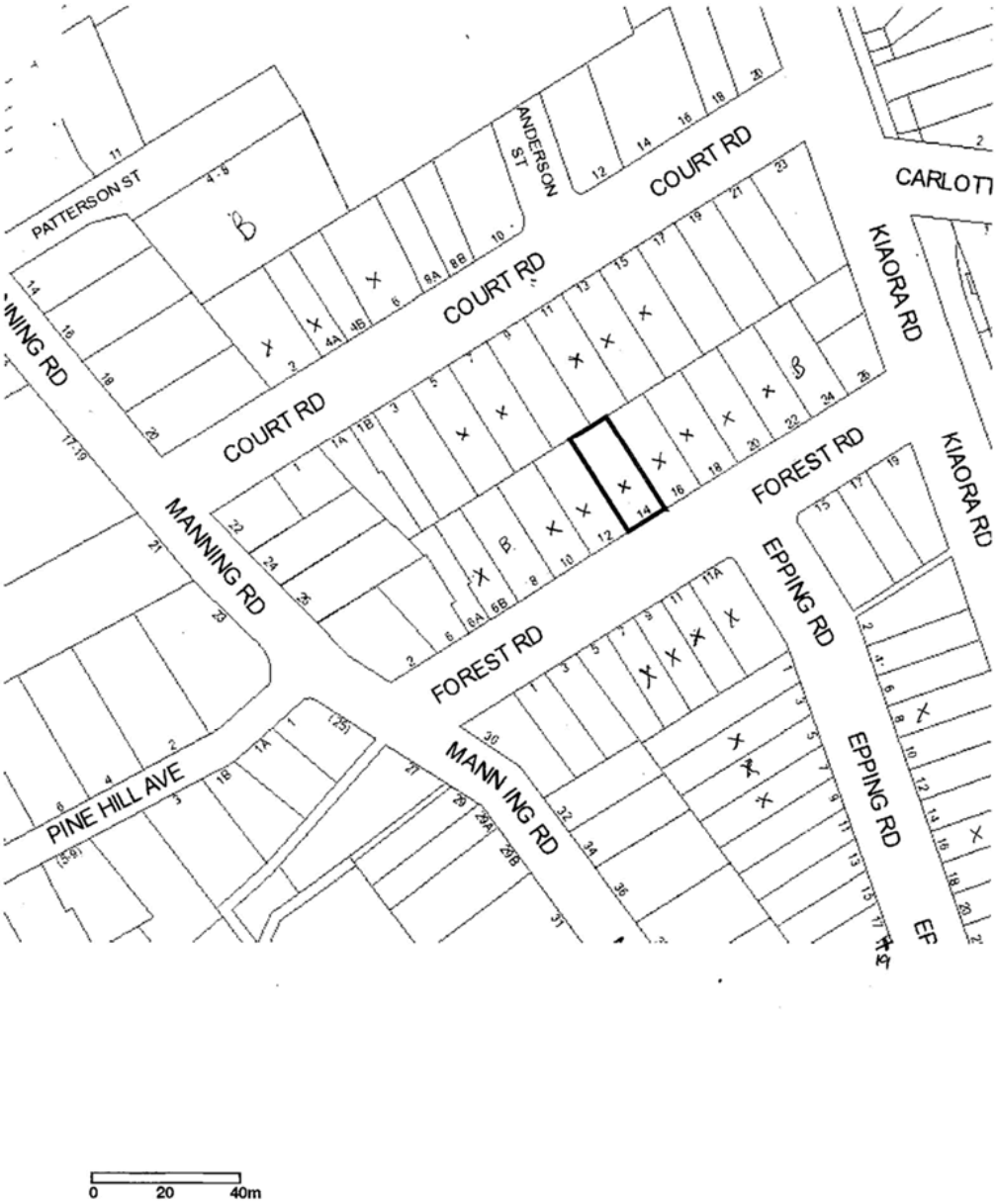

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Woollahra Municipal Council

Double Bay - Hydrogeological Geotechnical Impacts
Groundwater and Geotechnical Assessment Report

June 2020

WATER | ENERGY & RESOURCES | ENVIRONMENT | PROPERTY & BUILDINGS | TRANSPORTATION

Executive summary

This report describes the findings of a hydrogeological and geotechnical study for assessing short and cumulative long term impacts associated with excavation, subterranean building and dewatering in the Double Bay area on the structural and geological integrity of Double Bay residential and commercial buildings. The study comprised three main components, namely, (i) identification of groundwater study area and its groundwater setting; (ii) assessment of potential cumulative impact of future developments on long-term groundwater change; and (iii) assessment of short term construction dewatering on risks of damage of adjacent buildings.

The identified groundwater study area within Double Bay is situated in the valley between the ridgelines of Edgecliff/Darling Point and Bellevue Hill/Point Piper, occupying the low elevation harbour front area. The normally consolidated sediments within the valley underlying the Double Bay area form a highly productive water table aquifer (Alluvium), which is underlain by the less permeable fractured Bedrock aquifer. The Alluvium, comprising sand with minor silts, clay and peat, has high hydraulic conductivity and is readily replenished by rainfall-derived recharge, resulting in fresh groundwater with salinity of typically less than 400 mg/L. The water table fluctuates in response to seasonal variations in rainfall, with up to 1 m of variation observed in monitoring bores constructed within the Alluvium.

Due to the shallow water table in the Double Bay area, there is high potential for future developments to interact with groundwater. The nature of interaction may be short term, during construction when the water table is lowered to enable dry excavations, or long term when the basements are constructed below the water table and alter the natural flow regime. To assess the latter, a regional groundwater model has been developed and calibrated to available groundwater level data, using hydrogeological parameters that are considered realistic based on prior investigations and conditions observed to date. The modelling of cumulative impacts associated with multiple subterranean structures (basements) has shown that mounding and lowering of the water table could occur over the long term albeit this is generally estimated to be less than 0.3 m assuming full cut-off (basements extending to the Bedrock) and up to 0.2 m assuming partial cut-off, with mounding of <0.2 m in areas of shallow water table.

For the sandy alluvium generally encountered within the Double Bay valley, the impact of construction dewatering is expected to extend far beyond the excavation footprint. The lateral impact can extend up to some 800 m away from the excavation near the recharge point at the sandstone hillside. Further, the severity of the dewatering-induced settlement is strongly related to ground conditions on site. The lowering of groundwater in areas with presence of compressible upper peat soils would cause a much greater settlement than other areas without the peat layers. Consequently, a “Settlement Index Plot” in response to a fixed groundwater drawdown depth was developed based on 271 analysed settlement points, each was assessed based on available site specific geotechnical investigation data. Based on the Settlement Index Plot, a more generalised “Settlement Map” was developed, which shows the different degrees of susceptibility to dewatering-induced ground surface settlements for different sub-divided zones within the Double Bay study area (refer to Figure 27 of this report).

To effectively control the potential damage caused by dewatering, it is essential to assess the likely maximum settlement tolerable by the buildings in the Double Bay area. For the purposes of current assessment of dewatering, we have considered a ground surface settlement of 15 mm as being the limiting value to minimise potential damages of existing buildings. The settlement criteria applicable to the existing buildings, typically one to two storey structures supported on shallow footings, have been developed primarily based on Australian Standard AS2870-2011 and relevant published works by Burland et al. (2002) on building settlements and

associated damages. Other considerations including possible past damages of the buildings, flexibility of the structures, pipe drain tolerances and historic groundwater level fluctuation have also been given as part of the assessment process. This threshold surface movement of 15 mm is associated with deflection ratio of 0.075% for a typical wall length of a residential structure. This ratio is commensurate with that of Category 1 damage to walls and concrete floors given in Tables C1 and C2 of AS2870-2011 respectively. The damage Category 1 is described as fine cracks to walls and concrete floors of less than 1 mm which typically do not need repair.

For the different subdivided areas identified in the "Settlement Map", the allowable drawdown depths associated with proposed settlement limit of 15 mm were assessed to vary between 0.2 m and 1.2 m. A corollary of this finding is that a 0.2 m depth of dewatering can be considered as a relatively safe limit to minimise potential building damages with zone of influence up to some 800 m away from the location of dewatering. From constructability viewpoint, it can be necessary to dewater sufficiently to enable dry excavation during construction. If the abovementioned drawdown limits cannot be achieved, other controls are then needed to effectively reduce groundwater drawdown in the surrounding areas to within the acceptable limit. These controls could include the following:

- Systematic groundwater reinjection/recharge during excavation dewatering
- Sufficient cut-off depth to limit groundwater drawdown outside of the excavations
- Elimination of the need for the dewatering by providing a sealing layer at the excavation base which needs to be adequately designed to resist uplift pressure

Alternative measures can be considered on a case-by-case basis to allow for a review of the drawdown limit. These measures should include the undertaking of sufficient additional geotechnical investigation and subsequent analysis to demonstrate that settlement impacts of surrounding buildings are within acceptable limit.

This report is subject to, and must be read in conjunction with, the limitations set out in Section 2 and the assumptions and qualifications contained throughout the Report.

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Appendices

1. Introduction

1.1 General

Urban development is increasingly aiming to maximise the value of land in the Double Bay region. Many developments are considering the construction of basements, underground car parking and other associated below ground structures. Where the water table is intersected temporary dewatering is required to ensure safe and stable construction conditions, and longer term dewatering occurs where drained subsurface structures have been built. The construction of these underground structures can have implications for the groundwater environment in short term and long term, and the magnitude of these implications can be significant when the developments are considered from a cumulative perspective. In terms of the built environment, the depressurisation of compressible sediments can lead to consolidation settlement, and settlement differentials can have significant impacts on the existing buildings. Dewatering can also result in other impacts associated with managing (disposal) of the seepage, reduced access to groundwater by the environment, and activation of acid generating geological materials.

1.2 Project Objective and Scope

1.2.1 Objective

GHD Pty Ltd (GHD) has been engaged by Woollahra Municipal Council (Council) to undertake an assessment of geotechnical and hydrogeological impacts associated with urbanised development of the Double Bay region in the southern edge of Sydney Harbour. The main project objective is to provide Council with a review of the geotechnical and hydrogeological risks associated with latest development plan in their service area which would then inform amendments or further review, where appropriate, to Council's development guidelines and relevant Local Environmental Plan (LEP), as well as the Development Control Plan (DCP) provisions.

1.2.2 Scope of work

Upon the acceptance of GHD fee proposal dated 31 May 2019, Council has prepared a brief document (Brief) for the geotechnical and hydrogeological study (dated July 2019) which outlines the delivery of the project in 4 stages:

- Stage 1 – Identification of the groundwater catchment and establishment of the project study area.
- Stage 2 – Desktop review. Information from Council and publicly available sources was interrogated to characterise the geological and hydrogeological setting of the study area.
- Stage 3 – Assessment of impacts.
- Stage 4 – Review of the planning framework.

In particular, there are two main components for the Stage 3 work, namely, (i) the impact of long term regional groundwater level change due to future developments and (ii) the impact of surface settlement as a result of groundwater drawdown caused by short term construction dewatering.

At present, the project has advanced to Stage 3 of the scope of works outlined above.

1.2.3 Report structure

This report presents the outcome of our review on relevant information and development of geotechnical and hydrogeological models of the study area (Stage 1 and Stage 2 work), as well as the findings of our geotechnical and hydrogeological impact assessment for Stage 3. The report structure is broadly outlined below:

- Compilation of available information – Section 3
- Regional setting, geological setting and groundwater setting of the study area – Sections 4 to 6
- Regional groundwater modelling – Sections 7 to 8
- Assessment of groundwater induced settlement and discussion – Sections 9 to 10
- Summary – Section 11

2. Limitations

This report has been prepared by GHD for Woollahra Municipal Council and *may only be used and relied on by Woollahra Municipal Council for the purpose agreed between GHD and Woollahra Municipal Council as set out in section 1 of this report.*

GHD otherwise disclaims responsibility to any person other than Woollahra Municipal Council arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

GHD has prepared this report on the basis of information provided by Woollahra Municipal Council and others who provided information to GHD (including Government authorities)], which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

3. Available information

Different sources of information that have been used to assist with the hydrogeological and geotechnical impact assessment are listed below:

- Geotechnical and hydro-geotechnical data provided by Council
- Data from GHD archive
- Data from public domain
- Australian Standards and relevant published technical papers
- Observations from site visit (discussed in Section 5.2.2)

As part of our Stages 1 and 2 work, we have reviewed and used available information relevant to our assessment. We have treated each point, where previous geotechnical investigation was conducted, as data point with factual information relating to the ground conditions. The locations of these data points within the study area are indicated in Figure 1 below. This figure also shows the location of Double Bay commercial centre with several outlines showing future potential developments. Other information in relation to the future potential developments, such as basement depth for some of these developments, were given in the Brief document.

3.1 Data Supplied by Council and from GHD Archive

Council has supplied GHD with information which comprised previous and current Development Control Plan (DCP), geotechnical investigation data and relevant assessment reports as well as drawings related to the Development Application (DA) submissions. These information were supplied in 2 packages. The first package of information was provided at the commencement of the work and throughout Stages 1 and 2. The second package was provided prior to the start of Stage 3 work (end of February 2020).

The information received in the first package included those originally listed in the Brief, which are summarised in Table 1 below. The remaining information from the first package that is not listed in Table 1, as well as information provided in the second package are tabulated in Appendix A. The information provided comprised typically geotechnical investigation reports for residential properties.

Data retrieved from GHD archive as listed in Table 2 has also been used in the present groundwater impact assessment. Together with the data supplied by Council, we have plotted the locations of all relevant geotechnical and hydrogeological data in Double Bay area on Figure 1.

Table 1 Summary of information listed in the Brief

Set of information	Reference ID	Description of information	Issued by
Package 1 information listed in the Brief	R1	Report on Groundwater and Geotechnical Study for Double Bay Commercial Centre.	GHD Longmac Associates Pty Ltd, 2001
	R2	Report on the Geotechnical and Hydrogeological aspects of the draft Double Bay Centre DCP, commissioned by the Double Bay Residents Association.	Douglas Partners Pty Ltd

Set of information	Reference ID	Description of information	Issued by
	R3	Double Bay Catchment Flood Study	Bewsher Consulting Pty Ltd.
	R4	Initial Geotechnical Investigation for Proposed Residential Development at 12-16 William Street, Double Bay	JK Geotechnics, 2015
	R5	Report on Geotechnical and Hydrogeological Investigation, Proposed Multi-Storey Development, 16-18 Cross Street, Double Bay (ref. *Douglas Partners Pty Ltd, 2016b*)	Douglas Partners Pty Ltd
	R6	Report on Preliminary Geotechnical Investigation, Proposed Mixed Use Development, 20-26 Cross Street, Double Bay	Douglas Partners Pty Ltd
	R7	Report on Hydrogeological Assessment, Proposed Residential Development, 4-8 Patterson Street, Double Bay, Project 36739.08 Rev 2 (ref. *Douglas Partners Pty Ltd, 2016d*)	Douglas Partners Pty Ltd
	R8	Report on Preliminary Geotechnical and Hydrogeological Investigation, 4-8 Patterson Street, Double Bay (ref. *Douglas Partners Pty Ltd, 2016c*)	Douglas Partners Pty Ltd
	R9	Letter to Mr John Hall, 14 Forest Road, Double Bay	JK Geotechnics, 2019
	R10	Woollahra Local Environmental Plan 2014, in particular its earthworks and flood planning provisions in sections 6.2 and 6.3.	Woollahra Council
	R11	Woollahra DCP 2015, Part D5.6.7 – Geotechnology and Hydrogeology	Woollahra Council
	R12	Guidelines for Geotechnical and Hydrogeological Reports, Attachment 6 to the Woollahra DA Guide	Woollahra Council
	R13	Standard conditions of consent relating to geotechnical and hydrogeological requirements	Woollahra Council

Table 2 Information retrieved from GHD archive

Set of information	Reference ID (1)	Description of information	Issued by
Information retrieved	R76	Geotechnical Study – 47-53 William Street, Double Bay	GHD Longmac Associates Pty Ltd, 1998

Set of information	Reference ID (1)	Description of information	Issued by
from GHD archive	R77	Supplementary Geotechnical and Groundwater Investigation – Kiaora Ln & Jamberoo Ln, Double Bay	GHD Longmac Associates Pty Ltd, 1998
	R78	Draft Double Bay Centre Development Control Plan Geotechnical ad Hydrogeological Issues	GHD Longmac Associates Pty Ltd, 1998
	R79	Hydrogeological Report – Kiaora Road Development	Coffey Pty Ltd 2003
	R80	Report on Geotechnical Investigation for Proposed Development – Kiaora Place Double Bay	Douglas Partners Pty Ltd, 2010
	R81	GHD's previous advices to Council during the preparation of Development Control Plan which was in place from 2002 to 2015	GHD Longmac Associates Pty Ltd, 2001
	R82	Various letters and memos in relation to the Double Bay DA Assessment for Kiaora Place development	GHD Longmac Associates Pty Ltd
	R83	Initial Geotechnical Investigation for Hotel & Retail Development – New South Head Road, Double Bay	Coffey & Partners Pty Ltd, 1989
	R84	Combined Stage 1 Preliminary and Stage 2 Detailed Site Investigation Report on Kiaora Lane Site, Double Bay	GHD Longmac Associated Pty Ltd, 1990
	R85	Groundwater and Geotechnical Assessment – Double Bay Commercial Centre	GHD Longmac Associated Pty Ltd, 1990
Note to Table 2: (1) References R14 to R75 have been listed in Appendix A.			

Figure 1 Study area showing the data points and locations of potential future developments

3.2 Data from Public Domain

Data from public domain in relation to geological and hydrogeological mapping, topographical information and groundwater base have been referenced, where relevant, throughout the report and a list of references is as follows:

- Bewsher Consulting Pty Ltd, 2008: Double Bay catchment flood study
- Groundwater databases including WaterNSW and the Bureau of Meteorology (Groundwater atlas).
- Herbert C., 1983, Sydney 1:100 000 Geological Sheet 9130, 1st edition. Geological Survey of New South Wales, Sydney
- Department of Environment, Climate Change and Water 2009, Sydney 1:100,000 Soil Landscape Map 9130, 4th edition.
- New South Wales Government 2015, Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources 2011, version dates 1 January 2015, accessed via <https://www.legislation.nsw.gov.au/#/view/regulation/2011/111/full>
- Topographical information provided by the NSW Government Spatial Services

3.3 Australian Standards and Relevant Published Technical Papers

Technical standards and papers pertinent to groundwater flow and building settlement damage have been employed in present assessment, with a list of references as follows:

- AS2870-2011 Residential slabs and footings. Standards Australia.
- Barnett, B, Townley, L.R., Post ,V., Evans, R.E., Hunt, R.J., Peeters, L., Richardson, S., Werner, A.D., Knapton, A., and Boronkay, A, 2012. Australian groundwater modelling guidelines National Water Commission, Waterlines Report Series No. 82 June 2012 ISBN: 978-1-921853-91-3 (online).
- Burland, J.B. 1997. Assessment of risk of damage to buildings due to tunnelling and excavations. Invited special lecture. *IS Tokyp '95: 1 Int Conf on Earthquake Geotechnical Engineering*. Balkema, Rotterdam, 1189 -1201.
- Burland, J.B., Standing, J.R. and Jardine, F.M. 2002. Assessing the risk of building damage due to tunnelling – lessons from the Jubilee Line Extension, London. *Proc. 2nd Int. Conf on Soil Structure Interaction in Urban Civil Engineering*, 11-37.
- Doherty, J 2016, PEST, Model-Independent Parameter Estimation User Manual, v6. Brisbane: Watermark Numerical Computing, 2016.
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- Ladd, C. C. and Foott, R. (1974). New design procedure for stability of soft clays. ASCE Journal of Geotechnical and Geonenvironmental Engineering, Vol. 100, Issue GT7, pp. 763 – 786.
- Lake, L.M., Rankin, W.J., and Hawley, J.,1996. Prediction and effects of ground movements caused by tunnelling in soft ground beneath urban areas. Prepared under contract to CIRIA Project Report 30.
- Mesri, G. and Ajlouni, M. (2007). Engineering properties of fibrous peats. ASCE Journal of Geotechnical and Geoenvironmental Engineering, Vol. 133, No. 7, pp. 850 – 866.

- Panday, S, Langevin, CD, Niswonger, RG, Ibaraki, M & Hughes, J, 2013, MODFLOW–USG Version 1: An Unstructured Grid Version of MODFLOW for Simulating Groundwater Flow and Tightly Coupled Processes Using a Control Volume Finite-Difference Formulation, chapter 45 of Section A, Groundwater Book 6, Modelling Techniques. Techniques and Methods 6–A45.
- Powers, J. P. 1985. Dewatering – avoiding its unwanted side effects. Groundwater Committee of the Underground Technology Research Council of the ASCE technical Council on Research.
- Rau, GC, Acworth, TI, Halloran, LJS, Timms, WA & Cuthbert, MO, 2018, 'Quantifying Compressible Groundwater Storage by Combining Cross-hole Seismic Surveys and Head Response to Atmospheric Tides', Journal of Geophysical Research: Earth Surface 123(8),1910-1930.
- Tammetta, P., and Hawkes, G. 2009, Analysis of aquifer tests in Mesozoic sandstones in western Sydney, Australia. IAH NSW, Groundwater in the Sydney Basin Symposium, Sydney, NSW.
- W.A. Milne-Home (Ed).Tóth, J. 1963. A theoretical analysis of groundwater flow in small drainage basins. Journal of Geophysical Research 68, no. 16:4795-4811.

4. Regional Setting

4.1 Council service area and study area

The Council service area is shown in Figure 2, however, the focus area is within Double Bay. Double Bay sits in the valley between the ridgelines of Edgecliff/Darling Point and Bellevue Hill/Point Piper, occupying the low elevation harbour front area.

Elevations along the Edgecliff / Darling Point ridgeline are around 90 m in the south and fall towards the north to around 50 m. The eastern ridgeline in the Bellevue Hill area is approximately 100 m above sea level. South of Syd Einfeld Drive on the margins of the Council service area and towards Bondi Junction the topography rises to between 70 m and 110 m.

In terms of the hydrogeological study area, a broader area has been adopted as there is a need to consider regional groundwater flow systems.

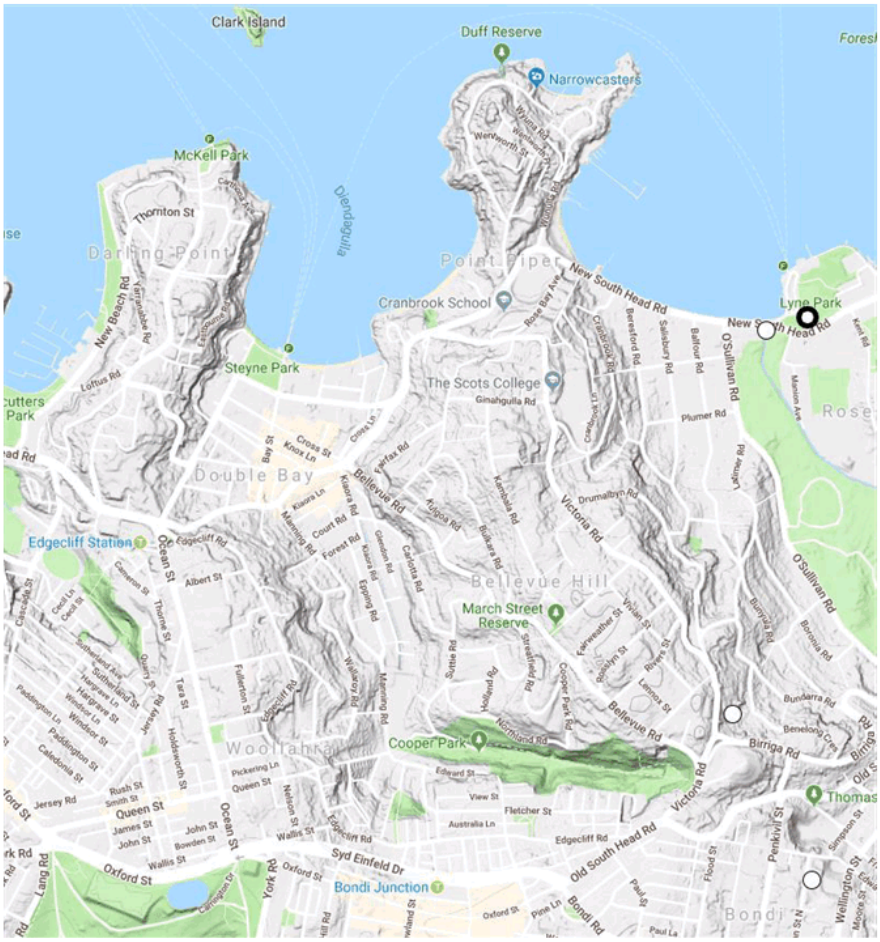


Figure 2 Study area

4.2 Waterways and drainage

The valley follows the former Cooper Creek alignment, which emanates from Cooper Park, running from Bellevue Hill, north to the harbour. The creek, now channelised, generally runs along Kiaora Road, below New South Head Road, to the eastern edge of the bay. Within

Cooper Park the alignment of the creek is interpreted to be influenced by the Jurassic volcanic dyke.

This watercourse, and its entry into the harbour, has resulted in variably deep alluvial sediments within the valley base, with the greatest depth of soils close to the bay, where boreholes have encountered greater than 50 m of mainly coarse grained sediments, occasionally peaty sands with stiff clay basal layers.

4.3 Climate

Climate data was obtained from the Bureau of Meteorology Sydney Royal Botanic Gardens station (66006) and at Rose Bay (Royal Sydney Golf Club – 66098). The mean rainfall data is summarised in Table 3 for these two stations, which indicates an average annual rainfall of around 1230 mm occurs in this region.

Table 3 Summary of rainfall data

Month	Monthly rainfall (mm)			
	Royal Botanic Gardens		Rose Bay (Royal Sydney Golf Club)	
	Since 1950	Since 1990	Since 1950	Since 1990
January	116.0	100.3	114.2	91.5
February	138.5	144.7	134.4	139.3
March	145.7	123.2	139.2	115.3
April	115.6	125.6	124.0	127.8
May	111.8	106.6	115.3	117.3
June	155.3	151.6	156.7	152.4
July	78.8	80.3	87.2	97.7
August	93.7	85.7	89.9	85.2
September	64.6	71.4	64.7	72.3
October	89.2	71.8	85.2	66.0
November	103.1	95.9	96.7	86.4
December	81.2	78.5	84.9	82.7
Annual	1289.6	1227.3	1288.4	1226.2

Note:
1. Site elevation: Botanic Gardens: 15 m, Rose Bay 8 m

The annual rainfall and average annual rainfall (since 1990) for the two stations has been presented in Figure 3. A monthly residual mass curve of rainfall has been prepared to identify long term rainfall trends and has also been presented in Figure 3. This has been undertaken to characterise the influence of climate on groundwater levels.

The absolute value of the residual mass curve is not important, but rather the slope:

- A positive slope indicates a wetter than average period
- A negative slope indicates a drier than average period
- A section of both negative and positive indicates a period of generally average rainfall
- The grade of the slope indicates how much wetter or drier than average the climate is

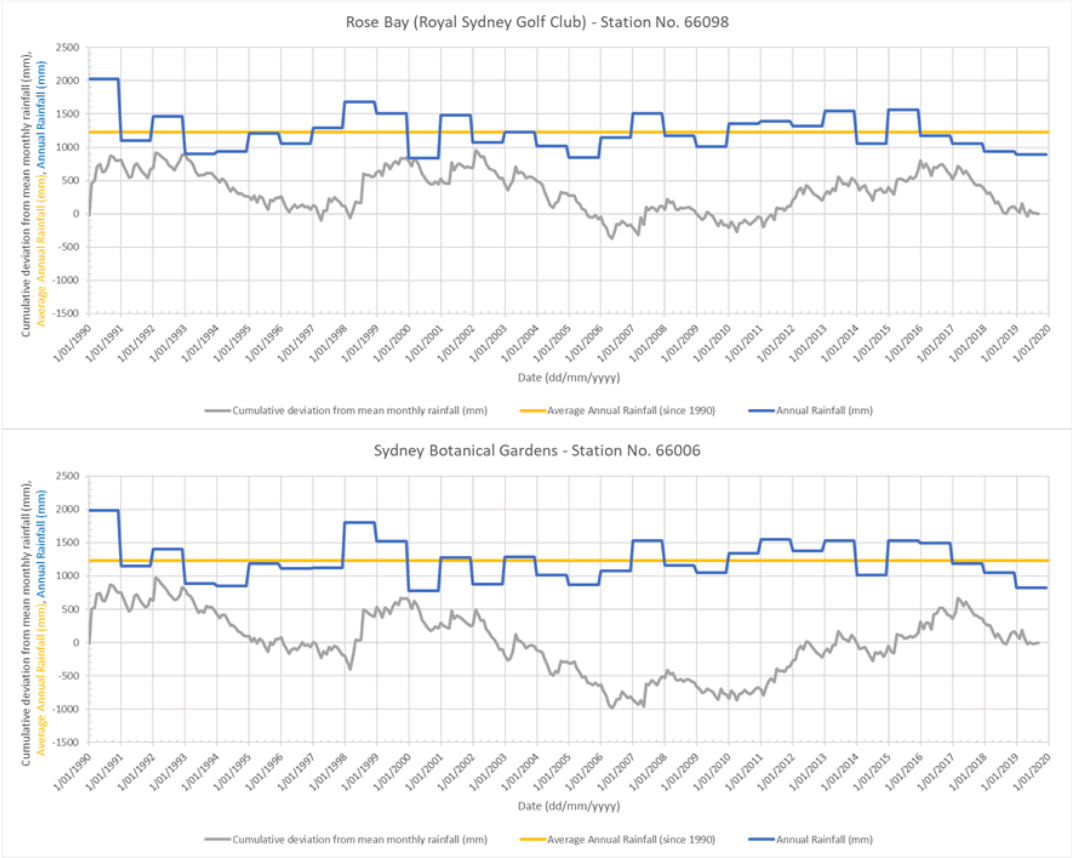


Figure 3 Study area rainfall

5. Geological setting

5.1 Regional Geology

A summary of the stratigraphy has been presented in Table 4 which indicates geology of the study area can be broadly simplified into a two layer system, with Quaternary age unconsolidated sediments overlying Mesozoic age sandstones.

The early Triassic and older geology has been omitted for brevity.

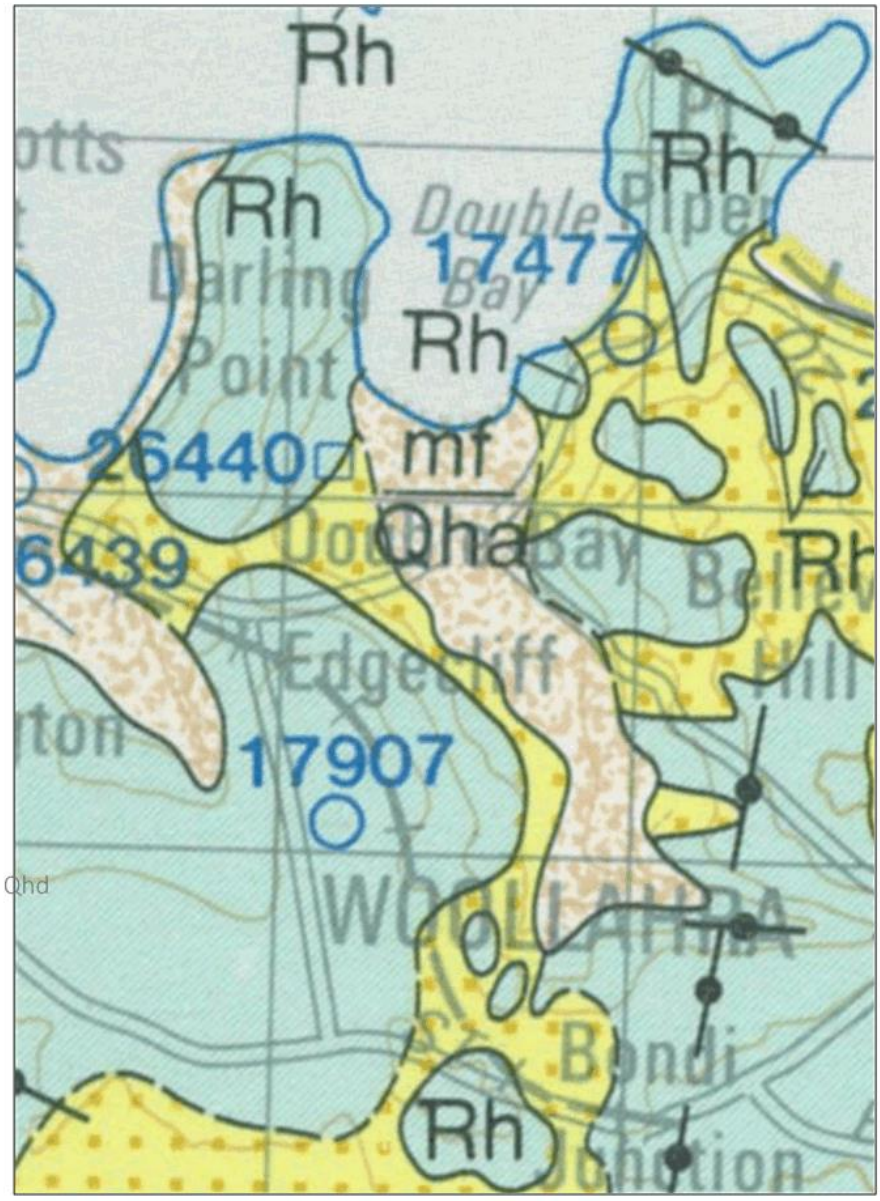
Table 4 Summary of study area stratigraphy

Era	Period	Epoch	Formation
Cainozoic	Quaternary	Holocene	Anthropogenic filling
		Pleistocene	Undifferentiated sands, silts, peaty sands, shell beds.
	Tertiary	Miocene	Absent from Study Area
Mesozoic	Jurassic		Absent from Study Area A period of erosion, forming valleys within the Hawkesbury Sandstone, with some volcanic intrusions.
	Triassic	Middle	Hawkesbury Sandstone

An extract of the 1:100,000 scale geological sheet for Sydney, showing the bedrock zones of Point Piper and Darling Point either side of the fill and valley sediments has been shown in Figure 4. The alluvial region generally follows the shape of the valley, which suggests that the valley was drowned and filled with sediments during the Quaternary (Holocene) period.

Within the incised valley at Cooper Park, there is an east-west trending dyke shown in Figure 4. Another dyke, with a north-south trend, intersects perpendicular to the dyke at Cooper Park. Much of the study area falls within the Hawkesbury Sandstone and soils developed over such terrain.

The 1:100,000 Sydney Soil Landscape Map (Sheet 9130 4th edition) indicates that the majority of the study area (middle and southern portion) is underlain by Deep Creek soil landscape. This is typically described as deep soil on well-drained terraces. The sand in current floodplain typically comprises Siliceous Sand. Such landscape is also characterised by flooding, soil erosion hazard and permanently high water table. The remaining portion of the study area located between the harbour and middle portion consists of Disturbed Terrain. This type of soil landscape is typically associated with the terrain which has been disturbed by human activity which includes the disturbance, removal or burial of original soil materials. The limitation of this soil type comprises the mass movement hazard, low fertility, soil permeability and poor drainage as well as the potential contamination.



mf	*Man-made fill. Dredged estuarine sand and mud, demolition rubble, industrial and household waste.*
Qha	*Silty to peaty quartz sand, silt, and clay. Ferruginous and humic cementation in places. Common shell layers.*
Qhs	*Peat, sandy peat, and mud.*
Qht	*Sandy mud and muddy sand.*
Qhd, Qpd } Qd	*Medium to fine-grained "marine" sand with podsols.*
Qhbr	*Quartz sand, minor shell content, interdune (swale) silt and fine sand.*
Qhf	*Medium to fine "marine" sand*
Qhb	*Coarse quartz sand, varying amounts of shell fragments.*

Rh – Hawkesbury Sandstone – Medium-coarse grained, quartz sandstone, very minor shale and laminite lenses

Figure 4 Double Bay Geological Map (Extract of 1:100,000 scale Sydney geological map sheet)

5.2 Geological model

5.2.1 Subsurface conditions

Relevant information summarised in Section 3.1 have been reviewed and used in our assessment to develop a geological model. The construction of the geological model was undertaken using Leapfrog Works 2.3. Leapfrog Works is a commercially available software specifically designed to create dynamic 3D geological models for engineering designs and flow models. The 1-m grid Digital Elevation Model (DEM) gathered from NSW Government Spatial Services was used to develop the topographic surface.

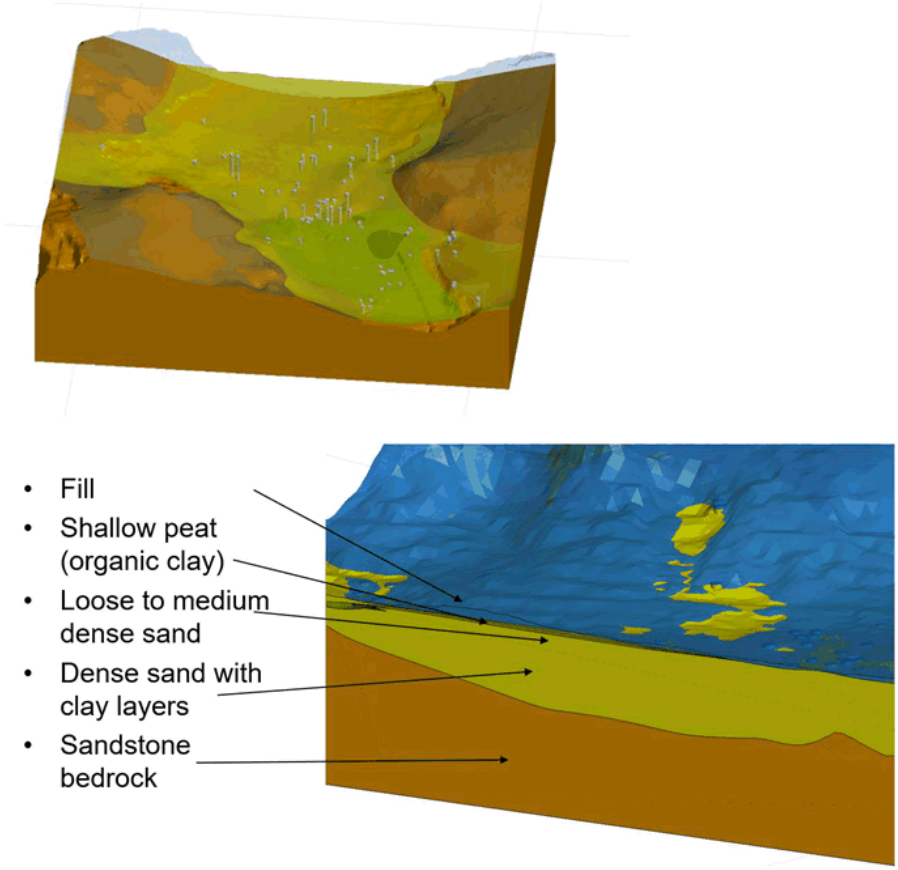


Figure 5 3D geological model generated using Leapfrog

Figure 5 shows the 3D geological model generated using Leapfrog. Five geotechnical sections were prepared for the study area and the locations of these sections are shown in Figure 6. The main geotechnical Section AA was developed in north-south direction roughly parallel to the direction of groundwater flow.

Geotechnical section AA is shown in Figure 7 . Plots of Geotechnical Sections BB, CC, DD and EE are presented as Figures B1, B3, B5 and B7, respectively, in Appendix B.

Description of subsurface conditions by material types

The subsurface profile encountered in the Double Bay study area and delineated in our geological model can be broadly categorised into fill, sand, peat and bedrock as follows:

- *Fill* - The fill profile is generally consisted of concrete, topsoils and/or sand composites. The fill extends across the majority of the study area associated with commercial and residential developments.
- *Upper Peat* – The upper peat layers were considered to be the most compressible deposits and are generally encountered at shallow depth of 0.5 – 2.5 m. Previous investigations indicated that the dark grey peat lenses are of high plasticity with high moisture content organic clay materials. The presence of peat has been observed intermittently although it was consistently noted in the area located to the south of Forest Rd (see Figure 8). The upper peat layers are considered to have significant influence on dewatering induced footing settlements and further discussion of this material is given in Section 5.2.2 below.
- *Alluvial Sand* – The underlying alluvial sand is generally clean and medium to fine grained. It varies in consistency from loose at shallow depth to very dense at depth. Interlayered sandy clays, clays and lower peats of typically stiff to very stiff consistency are also encountered. It appears that these bands are found at lower depths and encountered mainly at the southern Double Bay study area to the south of Kiaora Lane (see Figure 6). The alluvial sands generally fill the incised valley and in topographic depressions and extend to a maximum depth of about 35 m.
- *Bedrock* - Hawkesbury Sandstone underlies the Quaternary deposits. Hawkesbury Sandstone generally comprises medium to coarse grained quartz sandstone with minor shale and laminate lenses. It is typically extremely to highly weathered and fractured at the top and becomes moderately to slightly weathered and only slightly fractured with depth. Collation of available data suggests that the weathered sandstone bedrock surface follows the general shape of ground surface. An assessed contour of bedrock level is presented in Figure 6.

The general site geology within Double Bay study area has been subdivided into geological units based on the available geotechnical investigation data. A summary is presented in Table 5.

Description of subsurface conditions by areas

The subsurface conditions in the areas of Double Bay North, Central commercial development and Double Bay South can be described as follows:

- *Double Bay North* – With reference to the geological sections BB and CC given in Figures B3 and B5, the subsurface profile comprises fill overlying aeolian sands and sandstone bedrock. Aeolian sand extends up the valley terraces. Few peat lenses have been identified in this area. Aeolian sand occupies the western depressions in topography. Little to no Aeolian sand is interpreted along eastern side of valley.
- *Central commercial development (Development Area)* – With reference to the geological section AA given in Figure 7, the bedrock contact is relatively deep around Kiaora Lane. Bedrock was observed at surface along the incised valley terraces. Lower peat lenses have been identified at depths of 20 m to 30 m depth. Sparse shallow peat lenses have also been identified in this area.
- *Double Bay South* – With reference to the geological section AA given in Figure 6, a distinct peat lens at shallow depths of 0.5 - 2.5 m is observed from Court Road to the southern end of Epping Road and sparsely present at Kiaora Lane. Aeolian sand deposits are observed to occupy the incised valley and extends to topographic depressions towards the west and south east area of Double Bay.

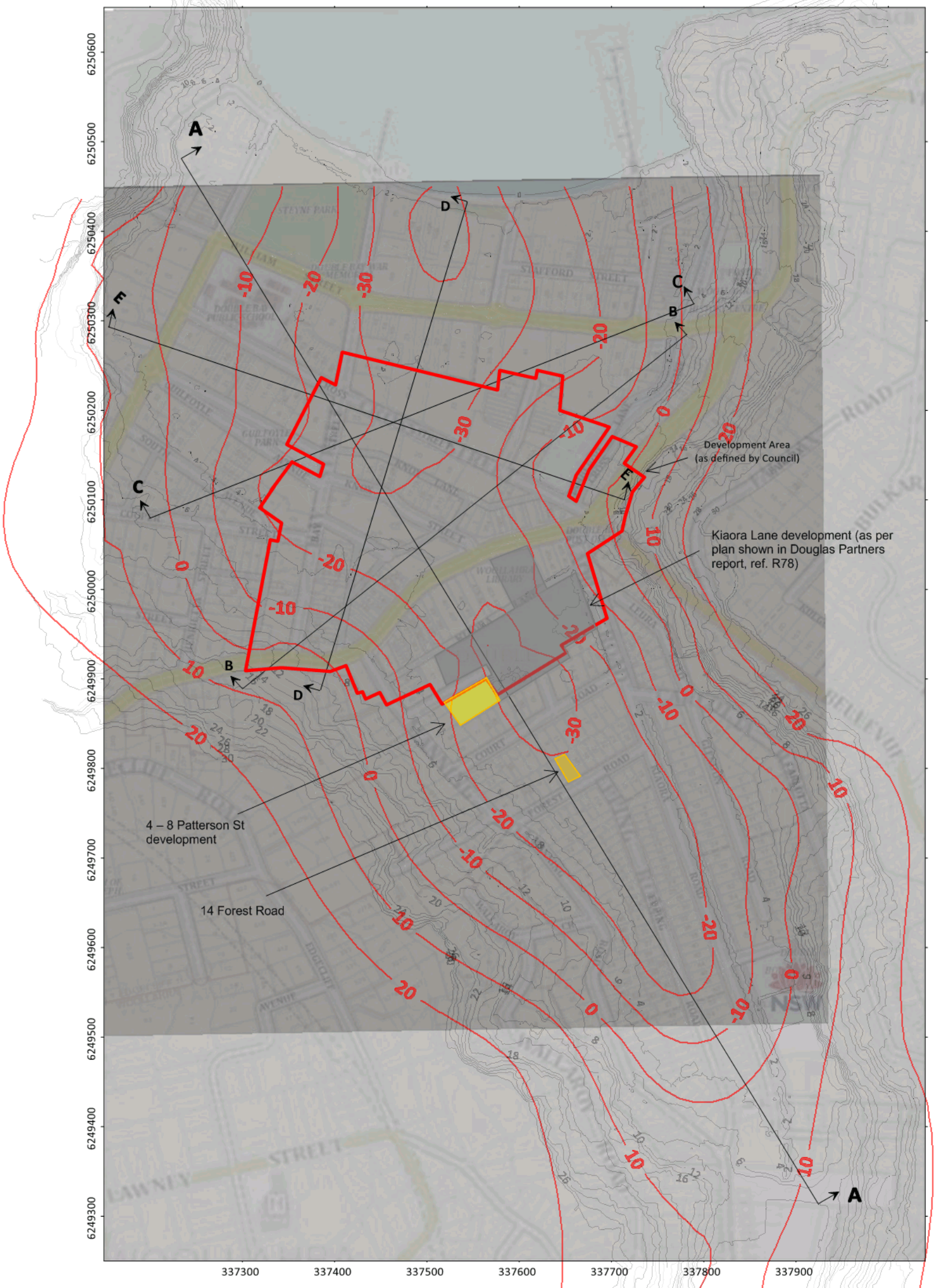


Figure 6 Contours of Top Elevation of Bedrock with Geotechnical Sections

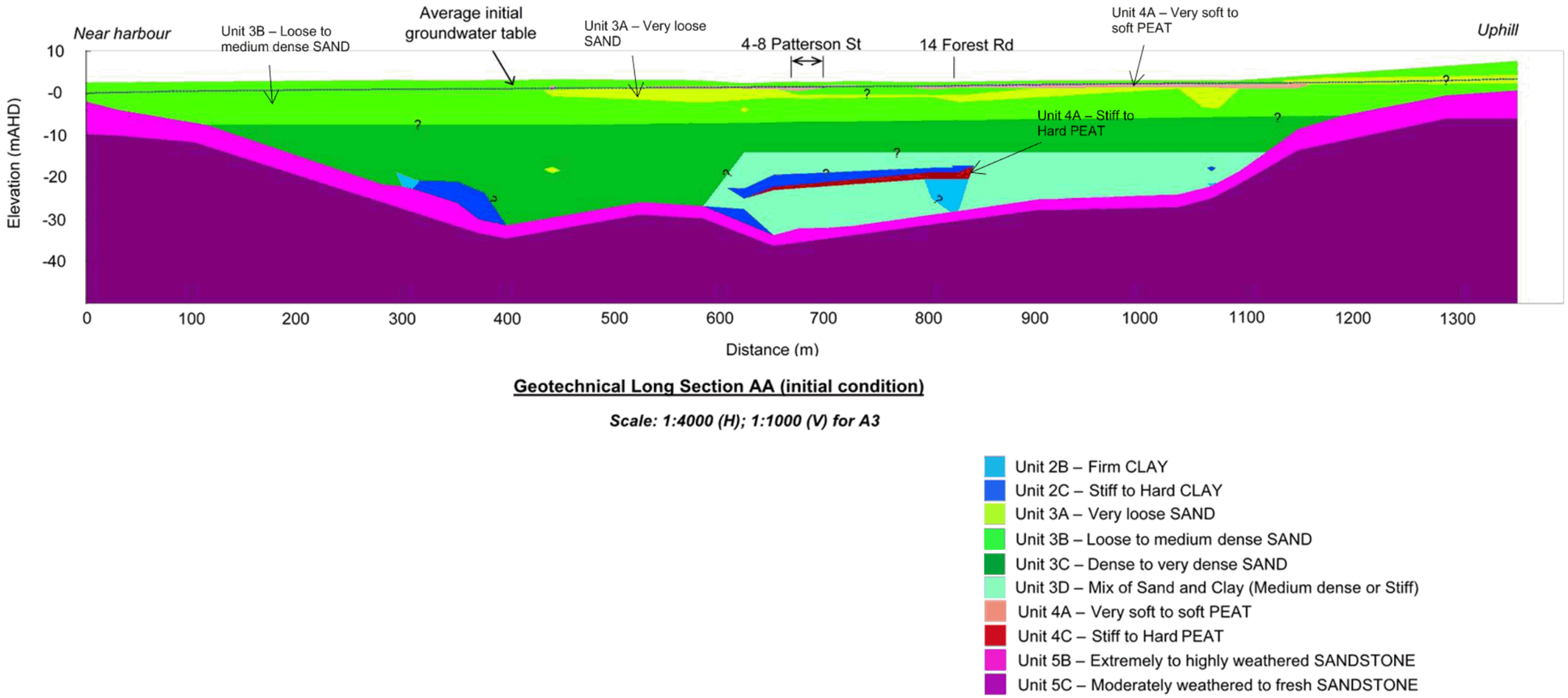


Figure 7 Geotechnical Long Section AA

Table 5 Geotechnical units identified with Double Bay area

Unit	Typical Depth (m bgl) to the top of layer	Unit thickness (m)	Description and Comments[3]
1 – Fill	0 – 2.4	0.1 – 2.4	Concrete, topsoil and/or sand, dry to moist
2A – Very soft to soft Clay	*Note 1*	0.2 – 5	CLAY or silty CLAY, medium to high plasticity, very soft to soft consistency
2B – Firm Clay	*Note 2*	0.2 – 5	CLAY or silty CLAY or sandy CLAY, medium to high plasticity, firm consistency
2C – Stiff to Hard Clay	13.8 – 28.9	0.3 – 16.9	CLAY or silty CLAY or sandy CLAY, medium to high plasticity, stiff to hard consistency
3A – Very Loose Sand	0.1 – 7	0.2 – 8.4	SAND or silty (clayey) SAND, fine to medium, dry to wet, very loose
3B – Loose to Medium Dense Sand	2 – 12	0 – 8	SAND or silty (clayey) SAND, fine to medium, dry to wet, loose to medium dense
3C – Dense to Very Dense Sand	8 – 12	0.5 – 10	SAND or silty (clayey) SAND, fine to medium, wet, dense and very dense
3D – Mix of Sand and Clay	17 – 28.9	1 - 14	Sandy CLAY or clayey SAND, fine grained, low plasticity clay, typically wet, medium dense
4A – Very soft to soft Peat	0.2 – 1.5	0.3 – 5.2	PEAT or Clayey PEAT, moisture content (MC) of above 145, very soft to soft, with organic odour and materials
4B – Very loose Peaty Sand/very soft Sandy Peat			Peaty SAND or sandy PEAT, fine to medium grained, typically wet, very loose sand or very soft peat, with organic odour and materials
4C – Firm Peat	7.5 – 21.6 (3)	0.4 – 0.7	PEAT or Clayey PEAT or Peaty CLAY, natural MC of about 110, firm, with organic odour and materials

Unit	Typical Depth (m bgl) to the top of layer	Unit thickness (m)	Description and Comments[3]
4D – Stiff to Hard Peat	1.7 – 28.9 (3)	0.3 – 6	PEAT or Clayey PEAT or Peaty CLAY, natural MC of about 100, stiff to hard, with organic odour and materials
5A – Residual Soil	27 – 40.31	0.5	Sandy CLAY or Clayey SAND, medium to high plasticity clay, fine to medium grained sand, typically dense to very dense sand, very stiff clay
5B/5C Bedrock	0.5 – 42.5	Not proven	Fine to medium grained SANDSTONE, extremely low to medium (estimated) strength, defect partings 0-5° planar, crushed seams, clay seams and joints (variable angles)

Notes to Table 5:

1. Unit 2A was rarely encountered in the data points and can be considered as isolated and localised layers.
2. Unit 2B was encountered at various depths
3. Units 4C and 4D occurred intermittently across the data points, at varying depths and thicknesses
4. Soil type in capital letters indicates primary constituent material

5.2.2 Upper peats and our observations during site visit

The upper peat layers were considered to be the most compressible deposits compared to other soil units identified. The isopach map shown in Figure 8 illustrates the assessed upper peat layer thicknesses within Double Bay study area. The upper peat lenses have been observed at shallow depth (about 0.2 – 1.5 m below ground surface) along the incised valley terraces. These lenses are observed to distribute intermittently, but mainly to the south of Forrest Road and towards the southern end of Epping Road.

During the site visit undertaken by Mr. Kim Chan and Mr. Mark George from GHD and accompanied by Mr Allan Coker from the Council on 29 August 2019, substantial cracking was observed within a residential property located at 14 Forest Road. It was understood that cracking began to occur in about October 2018 and has worsened in the following months. This coincided with the period of construction occurred downslope at 4-8 Patterson Street where substantial dewatering has been carried out to allow basement construction. Several properties located to the south of Court Road were understood to also have experienced some damages. However, cracking or building damages were not reported in some of the buildings immediately to the north of Court Road, albeit in close proximity to the development at 4-8 Patterson Street. It is not clear if the observed cracking/ damages to the existing residences were associated with the construction activities undertaken at Patterson Street.

Figure 8 Isopach map of upper peat layer thickness

6. Groundwater Setting

6.1 Groundwater management and use

6.1.1 Groundwater management

The study area is subject to a Groundwater Management Plan, the Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources. The plan has multiple objectives to protect groundwater as a resource and ecosystems that rely on groundwater. It also sets the long-term average annual extraction limits, performance indicators and water management and licensing rules. The study area sits within the Sydney Basin Central Groundwater Source which has a long-term average annual extraction limit of 45,915 ML/year.

6.1.2 Groundwater use

Groundwater use within the study area is based on the data extracted from the Bureau of Meteorology's Australian Groundwater Explorer. The bores on the Explorer are based on bore information collected by State and Territory lead water agencies which have fed into the National Groundwater Information System (NGIS) as shown in Figure 9. The limitations associated with this dataset include the following:

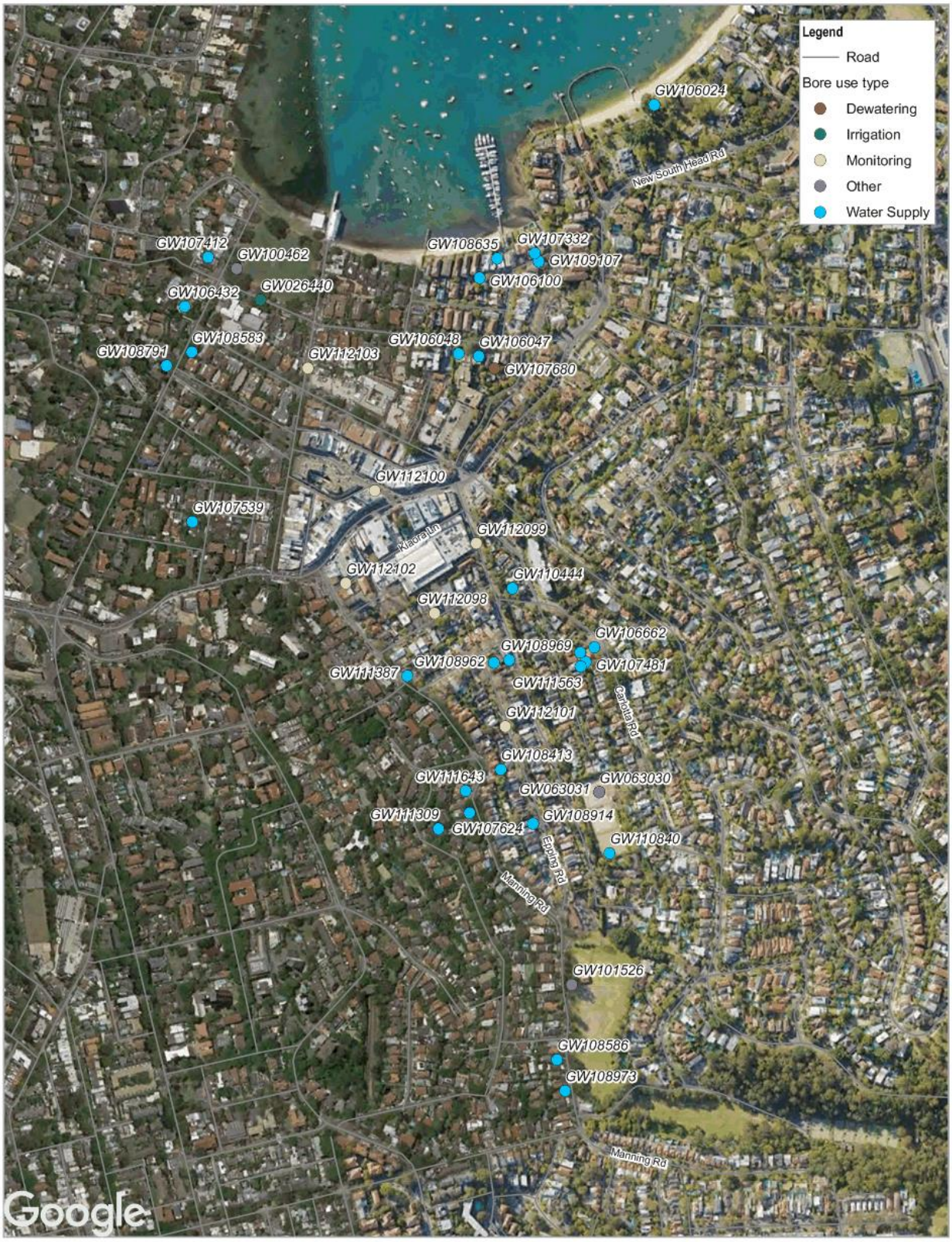
- Older bores may not be identified where such bores were installed prior to there being any mandatory requirements to license bores.
- Information regarding the operational status of groundwater bores is not known.
- Many bores have not been surveyed for location. Final locations often have a positional accuracy greater than ± 250 m.
- The information registered on the database is subject to the accuracy of bore completion reports submitted by drilling contractors.
- Information registered on the database is subject to change since the completion of the bore e.g. groundwater level information, pump setting depth and groundwater quality.
- Some information is not available on the database, e.g. pump setting depth, bore ownership.

A search of BoM's Australian Groundwater Explorer identified 40 bores in the approximate Double Bay area. The uses of these bores were identified as following:

- Water Supply (28 bores)
- Monitoring (6 bores)
- Irrigation (1 bore)
- Dewatering (1 bore)
- Other (4 bores)

The depths of these bores range from 2.75 m to 52 m, with an average depth of 9.6 m.

A search of WaterNSW also identified 48 bores in the approximate Double Bay area, however, this dataset did not identify the use of each bore. The data obtained from the review of existing geotechnical and hydrogeological investigation reports indicate several bores constructed within the Double Bay area specifically for monitoring purposes. The data available from these bores provide the basis for interpreting the groundwater flow directions and trends, which are described in detail in Section 6.4.



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0 50 100 150 200
Metres
Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

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GHD

Woollahra Municipal Council
Double Bay Hydrogeological Impacts

Project No. 12512436
Revision No. A
Date 22/04/2020

NGIS groundwater bores

FIGURE 9

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Print date: 22 Apr 2020 - 14:33

Data source: WPC, roads, 2019; BOM, NGIS bores, 2019; GEPro. Imagery, captured 22/05/2017, extracted 07/10/2019; . Created by: bsmyth

6.2 Hydrostratigraphy and aquifer types

Hydrostratigraphic units (HSUs) are zones within the groundwater system that have similar hydrogeological properties and behave in a similar manner from the point of view of groundwater flow. For the study area, the hydrostratigraphy is broadly divided into the Alluvium, comprising unconsolidated sediments, and the Bedrock, which underlies the Alluvium and forms a fractured rock aquifer. The Alluvium forms an unconfined aquifer, within which the water table (upper surface of the shallow groundwater system) is located. The Bedrock is confined beneath the Alluvium within the Double Bay area, and becomes unconfined where it outcrops outside of the valley and forms a regional aquifer. The hydrostratigraphy of the study area is summarised in Table 6.

Table 6 Study area hydrostratigraphy

HSU	Period	Lithology	Aquifer type
Alluvium	Quaternary	Undifferentiated sands, silts, clay, peaty sands, shell beds.	Unconfined
Bedrock	Triassic	Hawkesbury Sandstone	Unconfined / confined

6.3 Groundwater quality

6.3.1 NGIS data

A search of BoM's Australian Groundwater Explorer identified that one (GW107539) of the 40 bores in the Double Bay area had a groundwater salinity record. The groundwater salinity at this location is indicated to be 193 mg/L, with a bore depth of 13 m. The bore is listed as being used for water supply.

As the groundwater quality data from the BoM database was limited within Double Bay, the search area was expanded by approximately 2 km to provide indications of typical range of groundwater salinity. This identified 23 additional bores with salinity data. Table 7 summarised the salinity data based on the lithologies encountered, with sand and peat representing the Alluvium and sandstone representing the Bedrock.

Table 7 Salinity summary

Lithology	Salinity range (mg/L TDS)	Number of bores with TDS information	Salinity range (µS/cm EC) (Number of bores)	Number of bores with EC information
Sand	90 to 646	10	N/A	0
Sand and peat	140 to 160	2	222 to 320	9
Sandstone	150 to 360	5	N/A	0
Unknown	181 to 385	3	255	1

Note: N/A – Not available
TDS – Total Dissolved Solids
EC – Electrical Conductivity

6.3.2 Existing investigation reports

The review of existing geotechnical and hydrogeological investigation reports within the Double Bay area indicate the following additional information on water quality:

- A groundwater sample collected from a monitoring bore constructed at a site referred to as the Kiaora Lane Car Park recorded a field EC measurement of 359 µS/cm (GHD, 1999).
- Groundwater samples collected from 8 monitoring bores constructed for the Kiaora Road Development project indicated Total Dissolved Solids (TDS) concentrations ranging from 172 to 424 mg/L, with an average of 247 mg/L based on the laboratory analysis (Coffey, 2003).

The salinity data from these bores are generally consistent with the salinity data available from the BoM database, indicating that groundwater in the Double Bay area is fresh with a TDS of typically below 400 mg/L.

6.4 Groundwater flow system

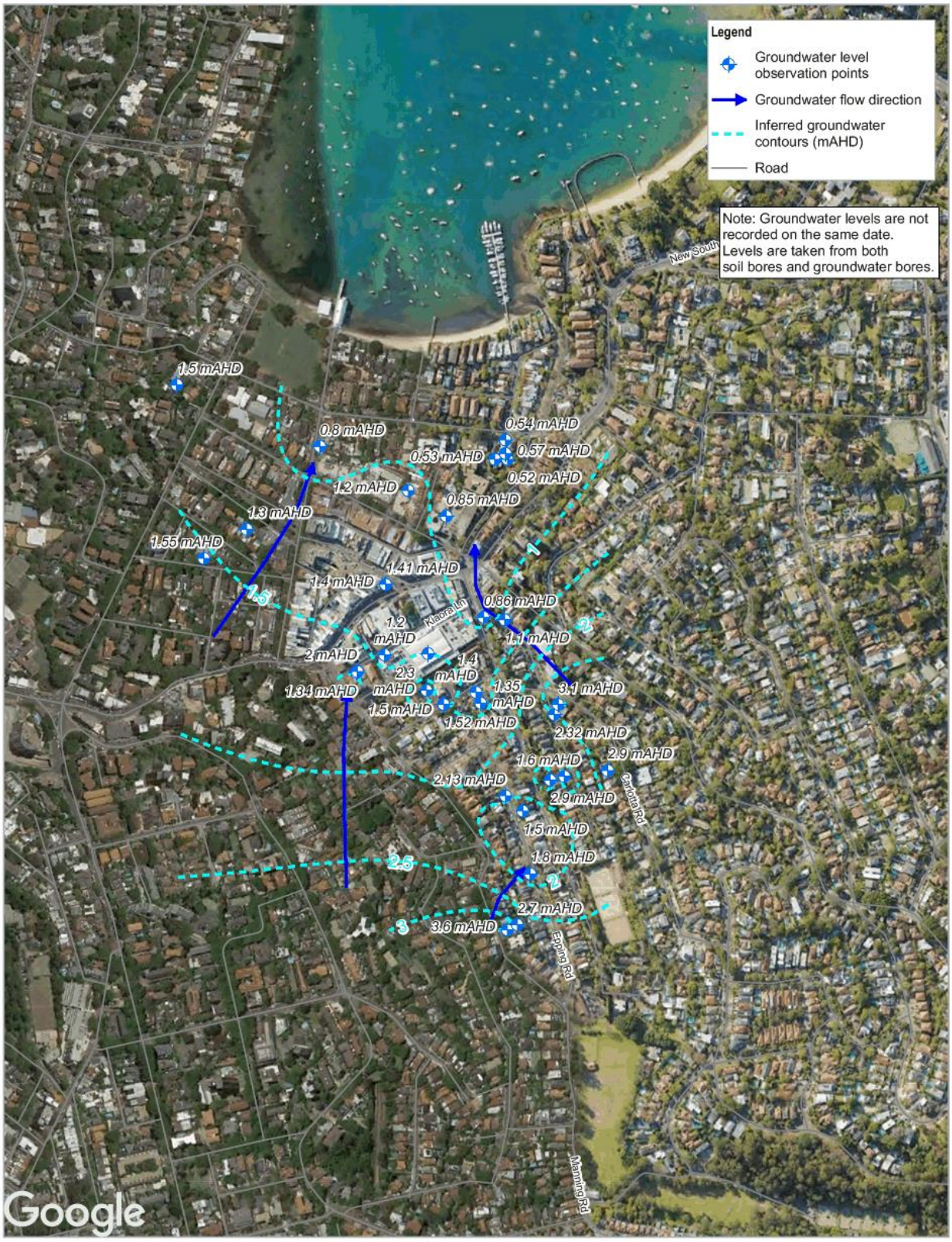
6.4.1 Groundwater flow directions

Groundwater is derived from rainwater that percolates through cracks and pores in rocks and sediments. Groundwater discharges at surface in low-lying areas and along coastal boundary to the north, whereas in topographically elevated areas the water table rises to higher elevations. The difference in the elevation of hydraulic heads resulting from these recharge and discharge mechanisms drives the flow of groundwater from topographically higher levels to topographically lower levels. This results in the water table typically being a subdued reflection of the ground surface, with shallow groundwater potentially interacting with surface watercourses along drainage lines and vegetation (via evapotranspiration). In the deeper part of the system, within the regionally extensive Bedrock aquifer, groundwater flows via longer flow paths driven by regional difference in hydraulic heads associated with regional differences in topography (Tóth, 1963).

Groundwater contour maps previously developed by Longmac Associates (1990) indicate northerly flow of groundwater, with a gentle hydraulic gradient. The contours also indicate a component of flow from west to east, from a topographically elevated area to a low-lying area in the valley, with a hydraulic gradient of around 0.08. The contours are consistent with a topographically controlled flow system, which is maintained by rainfall-derived recharge and discharge along the costal boundary.

To undertake a further analysis of groundwater flow directions, contours of water table have been prepared using groundwater level data extracted from the existing geotechnical and hydrogeological investigation reports (see Figure 10). The contours are interpreted from groundwater levels taken at different points in time, many of which are opportunistic measurements collected from open-holes at the time of field investigations. As such, there are some local variability and the contours should be considered indicative only. Despite these limitations, the interpreted contours provide useful indications of groundwater flow directions, confirming the northerly groundwater flow towards the coastal boundary along the centreline of the valley and flow from topographically elevated areas along the valley edges towards the valley centre. The hydraulic gradient is around 0.003 along the valley centreline, indicating a gentle hydraulic gradient across the Alluvium comprising permeable valley-filled sediments.

The data currently available is insufficient to ascertain local variability in the water table due to anthropogenic influences such as groundwater pumping and existing basement structures.



Paper Size ISO A4
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Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56
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Woollahra Municipal Council
Double Bay Hydrogeological Impacts

Interpreted groundwater contours and flow directions

Project No. 12512436
Revision No. 0
Date 22/04/2020

FIGURE 10

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Data source: WPC, roads, 2019; GHD, groundwater contours, 2020; Various geotechnical reports, groundwater levels; GEPro, Imagery, captured 22/08/2017, extracted 07/10/2019; . Created by: bsmyth

6.4.2 Groundwater trends

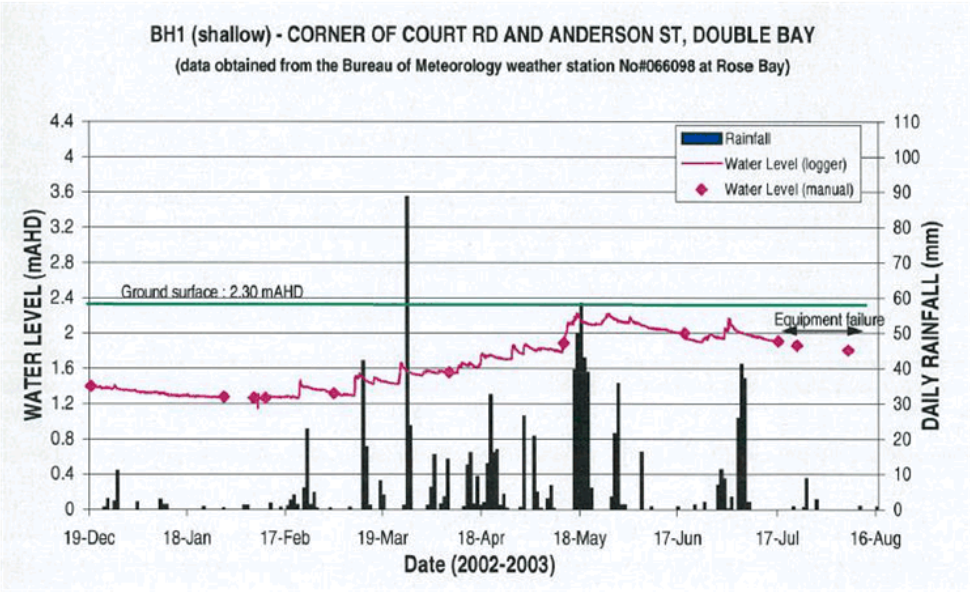
The most comprehensive record of groundwater level measurements over time are available from 8 monitoring bores constructed for the Kiaora Lane Development project by Coffey (2003). The continuous monitoring record is available over two time periods, from December 2002 to August 2003 (Coffey, 2003) and from December 2004 to August 2005 (Douglas Partners, 2010). Although the raw data have not been provided, the hydrographs included in the reports show seasonal variations ranging from around 0.5 to 1 m over the long term with clear correlation with rainfall. This indicates that the water table within the Alluvium is sensitive to rainfall-derived recharge, consistent with low salinity (the Alluvium is readily replenished by recharge). At some locations the water table reaches close to ground surface (see BH1 in Figure 11, located on the corner of Anderson Street and Court Road).

In general, the range of seasonal fluctuation is smaller at bores closer to the coastal boundary where the groundwater level is constrained at mean sea level. This can be seen in Figure 11, where BH6 is approximately 200 m from the coastal boundary and shows much smaller seasonal variations than BH1 located approximately 400 m farther inland. Hydrographs from December 2004 to August 2005 indicate that some bores during this period displayed trends that appear to be inconsistent with the rainfall-trend. For example, groundwater levels at BH6 in early 2004 were close to sea level until rapid recovery commenced in May 2005, potentially reflecting the influence of groundwater pumping or temporary dewatering.

Douglas Partners (2016e) present groundwater levels recorded in three monitoring bores at 4 – 8 Patterson Street from December 2004 to November 2014. Although the record is not continuous (only up to 5 readings per bore), the data indicates a seasonal range of around 0.6 m and groundwater levels are similar to those of the nearby bores constructed by Coffey (2003)

Jeffrey and Katauskas (2007) recorded groundwater levels over a period of about 2 months (May 2005 to July 2005), prior to the commencement of a dewatering trial at 59 William Street. During this period, the groundwater levels were reported to vary due to daily tidal effects and rainfall, and the average groundwater levels were around 0.6 mAHD. Jeffrey and Katauskas (2011) also recorded groundwater levels at a property between December 2010 and March 2011. The groundwater levels showed little variations during this period, with a general declining trend. While these monitoring periods were brief, small seasonal variations and tidal influence are consistent with the proximity of the site to the coastal boundary.

The BoM Australian Groundwater Explorer did not identify any bores within Double Bay with time series of groundwater levels. However, several bores were identified to the south of Double Bay, in a similar alluvial aquifer system, with time series groundwater level data. Figure 12 presents hydrographs of bores with more than 1,000 groundwater level recordings (and where the lithology is known), showing long term trends dating back to the late 1990's. Most of these bores show seasonal range that is broadly consistent with that observed in Double Bay with the exception of bores GW075020.1.1 and GW075025.1.1, which may be influenced by their proximity to water supply bores and other groundwater interfering activities.



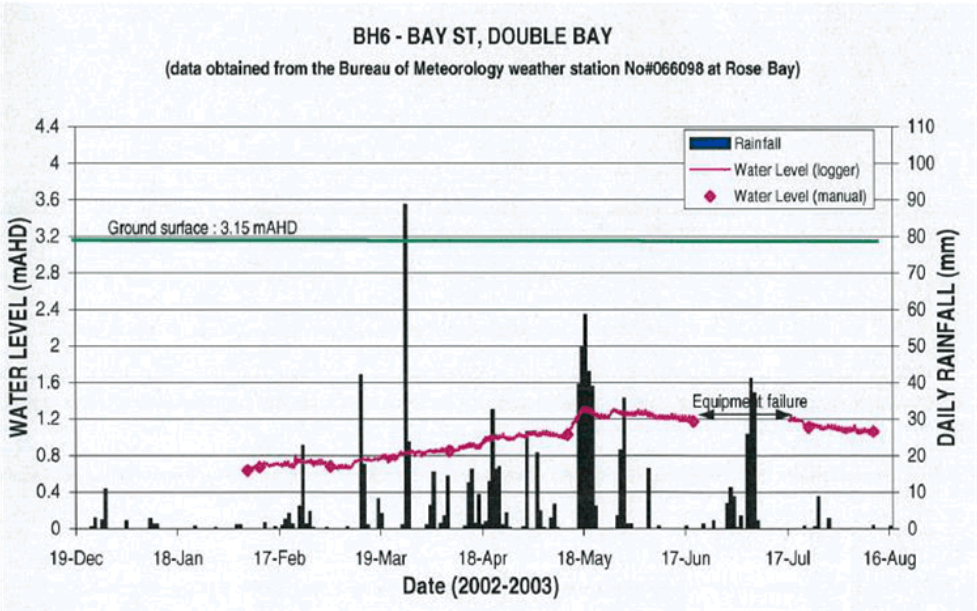


Figure 11 Seasonal trends (after Coffey, 2003)

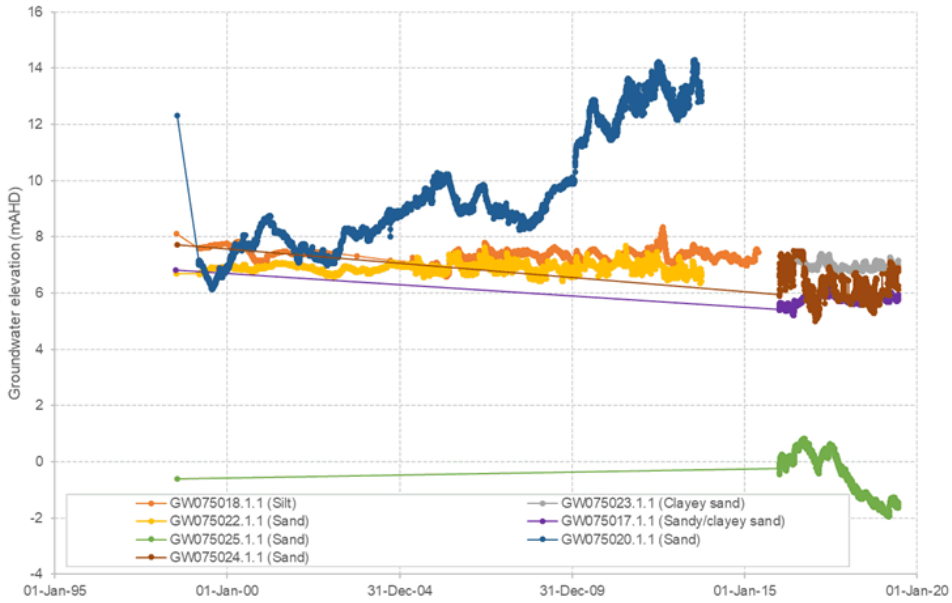


Figure 12 Seasonal trends – NGIS bores outside of study area

6.5 Groundwater dependent ecosystem

6.5.1 Definitions

A groundwater dependent ecosystem (GDE) is an ecosystem which has its species composition and natural ecological processes determined by groundwater. That is, GDEs are natural ecosystems that require access to groundwater to meet all or some of their water requirements so as to maintain their communities of plants and animals, ecological processes and ecosystem services. If the availability of groundwater to GDEs is reduced, or if the quality is allowed to deteriorate, these ecosystems are impacted.

It is widely acknowledged that a poor understanding exists in recognising GDEs, or understanding the hydrogeological processes affecting GDEs, or their environmental water requirements. Common types of GDEs include:

- Ecosystems that depend on the surface expression of groundwater:
  - Swamps and wetlands can be sites of groundwater discharge and may represent GDEs. The sites may be permanent or ephemeral systems that receive seasonal or continuous groundwater contribution to water ponding or shallow water tables. Tidal flats and inshore waters may also be sites of groundwater discharge. Wetlands can include ecosystems on potential acid sulphate soils and in these cases maintenance of high groundwater levels may be required to prevent water from becoming acidic.
  - Permanent or ephemeral stream systems may receive seasonal or continuous groundwater contribution to flow as baseflow. Interaction would depend upon the nature of stream bed and underlying aquifer material and the relative groundwater level heads in the aquifer and the stream.
- Ecosystems that depend on the subsurface presence of groundwater. Terrestrial vegetation such as trees and woodlands may be supported either seasonally or permanently by groundwater. These may comprise shallow or deep rooted communities that use groundwater to meet some or all of their water requirements. Animals may

depend upon such vegetation and therefore indirectly depend upon groundwater. Groundwater quality generally needs to be high to sustain vegetation growth.

6.5.2 GDEs in study area

A review of regional mapping (BoM GDE Atlas) was undertaken as a preliminary means of identifying potential GDEs at a broad scale. Aquatic GDEs were not identified in the study area. Terrestrial GDEs were identified either on the margins, or outside of the study area in the following areas:

- Coastal sandstone gully forest and littoral thickets at Vaucluse (north east)
- Coastal sand swamp forest in Centennial Park (south).

While broad scale mapping did not identify GDEs, it is possible that some of the trees within the Double Bay area intercept the water table due to the shallow depth to groundwater. However, no information is currently available on the environmental water requirements of these trees and whether or not some of these are sourced from groundwater.

6.6 Acid generating materials

6.6.1 Definitions

Acid sulfate soils are soils, sediments, unconsolidated geological material or disturbed consolidated rock mass that contain elevated concentrations of the metal sulfide. It occurs principally in the form of pyrite (iron sulfide). These soils can be rich in organics and were formed in low oxygen or anaerobic depositional environments.

The soils are stable when undisturbed or located below the water table. However, when oxygen is introduced, the sulfides oxidise to sulfate, with resultant soils having low pH and potentially high concentrations of the heavy metals.

Groundwater levels may rise as a result of recovery from construction dewatering activities, or leaching of infiltrating rainfall through the sulfate rich zones. This can result in oxidisation of materials and the mobilisation of pH and heavy metals into the environment where they can potentially impact deep-rooted vegetation, aquatic flora and fauna, and can be aggressive to reactive materials (such as concrete, steel) of foundations, underground structures (such as piles, pipes, basements) or buried services in contact with groundwater. It can also result in the discharge of acid groundwater to receiving surface water systems.

The occurrence of acid sulfate soil can be present in the form of:

- Potential Acid Sulfate Soil (PASS) – Soil that contains unoxidised metal (iron) sulfides. This is usually in oxygen free or waterlogged conditions. When exposed to oxygen through drainage or disturbance, these soils produce sulfuric acid.
- Actual Acid Sulfate Soil (AASS) – Potential acid sulfate soil that has been exposed to oxygen and water, and has generated acidity.

There are two main pathways for the activation of acid sulfate soil to form groundwater impacts:

- Excavation of PASS soils above the water table and their management, such as acid run-off from stockpiles and treatment areas.
- Dewatering required as part of construction of features below the water table, such as for the excavation of basements.

6.6.2 Occurrence within study area

Acid-generating materials in Sydney are commonly found in a number of broad settings:

- Typically geologically young sediments (Holocene age) near sea level.
- Sediments and tidal lakes of marine origin, and estuarine sediments.
- Coastal wetlands, mangroves and swamps.
- Ligneous rich deposits.
- Indurated sediments that may contain elevated concentrations of metal sulphides (Cambrian to Middle Devonian age).

A review of regional mapping (SEED NSW Government) has been undertaken, which is presented in Figure 13. This suggests that the bulk of the study area has a low probability of acid sulfate soils.

Figure 13 Study area acid sulfate soil risk (after SEED NSW)

7. Hydrogeological Parameters

7.1 Overview

From the point of view of groundwater flow, the critical in-situ material properties are the hydraulic conductivity and storage coefficients (specific yield and specific storage). These properties control the resistance of the subsurface material to flow and the rate in which it is drained and/or re-saturated in response to stresses (and the rate in which aquifer pressure is propagated in a fully confined system at depth). Components of inflow and outflow, such as recharge and evapotranspiration, are also important although these are rarely measured in the field and more commonly inferred through other means (such as model calibration), using field-derived estimates of in-situ properties as constraints.

This section provides a summary of prior estimates of hydrogeological properties derived from field testing and modelling undertaken in the Double Bay area. These estimates provide the basis for parameterising and calibrating the regional numerical groundwater model described in Section 8.

7.2 Aquifer testing

Aquifer testing completed as part of geotechnical and hydrogeological investigations in the Double Bay area include CPTU dissipation testing and in-situ permeability testing (such as falling and rising head tests). Table 8 summarises the horizontal hydraulic conductivity values collected during field investigations. The majority of these tests have targeted discrete horizons within the Alluvium, as flow into shallow excavations are controlled by the properties of this shallow aquifer. While low hydraulic conductivity values have been derived from discrete clay lenses, the abundance of sand within the Alluvium and high hydraulic conductivities associated with the sand intervals indicate that the aquifer as a whole behaves as a high transmissivity system.

Limited information is available from the Bedrock. Testing undertaken by Longmac Associates (1990, 1998) indicates low hydraulic conductivity values although Longmac Associates (1998) note that the hydraulic conductivity of the weathered sandstone bedrock could be variable depending upon the weathering profile and presence of jointing in the rock. Information available from other parts of the Sydney area indicate that the mean horizontal hydraulic conductivity in the upper 100 m of the Hawkesbury Sandstone ranges from around 0.01 to 0.1 m/d (around $1x10^{-5}$ to 1 $x10^{-4}$ cm/sec) (Tammetta and Hawkes, 2009).

There are no estimates of vertical hydraulic conductivity although a horizontal to vertical permeability ratio of 10:1 has been reported (Longmac Associates, 1990), which is common in layered sedimentary aquifer systems.

There are no site specific estimates of storage coefficients. Specific yield of 0.1 to 0.3 is commonly assumed for the Alluvium comprising fine sands and specific storage of $1x10^{-6}$ to $1x10^{-4}$ /m is reported in the literature for the confined Hawkesbury Sandstone (GHD, 2015). For most lithologies, specific storage of $1x10^{-6}$ to $1x10^{-5}$ /m is considered realistic, with recent work by Rau et al (2018) suggesting a plausible upper threshold of around $1.3x10^{-5}$ /m for specific storage in confined aquifers.

Table 8 Aquifer test data

Lithology	Method	Reference	Number of tests	Horizontal permeability (cm/sec)
Sand with silt	In-situ permeability	Longmac Associates (1998)	3	$4.9x10^{-4}$* to $2.3x10^{-3}$
Sand with silt	In-situ permeability	Coffey (2003)	1	$<1x10^{-3}$
Sand	In-situ permeability	Longmac Associates (1990)**	-	$6x10^{-4}$ to 2 $x10^{-2}$
Sand	In-situ permeability	Coffey (2003)	7	$1x10^{-3}$ to $1x10^{-2}$
Sand	In-situ permeability	Douglas Partners (2016b)	1	$1.2x10^{-2}$ to $2.3x10^{-2}$
Clay	CPTU	Longmac Associates (1998)	10	$2.5x10^{-5}$ to $2x10^{-4}$
Clay bands	Laboratory testing	Coffey (1989)	2	$7.1x10^{-9}$ to $5.8x10^{-8}$
Clay/peat	In-situ permeability	Longmac Associates (1990)**	-	$1x10^{-7}$ to $6x10^{-4}$
Hawkesbury Sandstone	In-situ permeability	Longmac Associates (1998)	1	$9.4x10^{-6}$^
Hawkesbury Sandstone	In-situ permeability	Longmac Associates (1990)**	-	Negligible small to $9x10^{-4}$

Notes:

*Based on falling and rising head tests and Hvorslev analytical solution
^Based on packer testing
**Desk study – values inferred from other reports provided by Council and test numbers are not specified

Note: 1 cm/sec = 864 m/day

7.3 Groundwater modelling

Several local scale groundwater models have been developed previously at individual sites to estimate the potential impact of temporary construction dewatering activities. Most of the models have adopted parameter values that are considered plausible based on field data available at the time or literature derived values for representative lithologies. The modelled parameter values are summarised as follows:

- Longmac Associates (1990) assumed horizontal hydraulic conductivity of 5 m/d (6 x 10^{-3} cm/sec) for the Alluvium and 0.05 m/d (6 x 10^{-5} cm/sec) for the Bedrock with the horizontal to vertical hydraulic conductivity ratio of 10:1.
- Coffey (2003) assumed horizontal hydraulic conductivity of 5 m/d (6 x 10^{-3} cm/sec) and vertical hydraulic conductivity of 1 m/d for the Alluvium (1.16 x 10^{-3} cm/sec), with a recharge rate of 120 mm/year and evapotranspiration rate of 1200 mm/year (with an extinction depth of 1.5 m).
- Douglas Partners (2016b) assumed horizontal hydraulic conductivity of 10 to 20 m/d (1.2 x 10^{-2} to 2.3 x 10^{-2}cm/sec) based on in-situ testing at one bore.
- Douglas Partners (2016d) assumed horizontal hydraulic conductivity of 5 to 20 m/d (6 x 10^{-3} to 2.3 x 10^{-2}cm/sec) and vertical hydraulic conductivity equal to 20 % of the horizontal hydraulic conductivity.

8. Regional Groundwater Modelling

8.1 Modelling objectives

Due to the shallow water table in the Double Bay area, there is high potential for future developments to interact with groundwater. The nature of interaction may be short term, during construction when the water table is lowered to enable dry excavations, or long term when the basements are constructed below the water table and alter the natural flow regime.

The purpose of regional groundwater modelling is to provide outputs that would assist with the quantification of potential impacts and risks, and ultimately the planning framework. Specifically, the modelling is undertaken to provide:

- Spatial distribution of piezometric heads, depth to groundwater and associated seasonal range across the study area, such that the likely level of groundwater interference at future development sites could be understood.
- Potential cumulative long-term impacts of multiple subterranean structures (basements), including the magnitude and spatial extent of changes to the water table.

In order to achieve this intended use, the model must be appropriately designed and calibrated, using the available geological and hydrogeological data. The modelling described in this section is undertaken at a regional scale, to provide outputs across the study area. Local scale impacts associated with individual sites, such as during dewatering, are examined separately using models appropriate for that scale (Section 10). The outputs from the regional scale modelling, such as the distribution of piezometric heads and calibrated hydrogeological parameters, provide inputs to the local scale modelling.

The local scale modelling is presented in Section 10.3 of this report.

8.2 Model design and construction

8.2.1 Modelling software

An unstructured grid version of the industry standard MODFLOW code, called MODFLOW-USG (Panday et al., 2013), has been selected as the most appropriate groundwater modelling software for this study. Features of MODFLOW-USG that are particularly suited to address the modelling needs and objectives include efficient local mesh refinement around areas of interest within a regional model domain while retaining larger cells elsewhere, minimising model size (total cell count) and run times without compromising resolution in critical areas. The model layers can also 'pinch out' where hydrostratigraphic units (HSUs) are not present and cells are not required throughout the model domain, reducing the total cell counts and improving numerical stability.

The unstructured mesh of the MODFLOW-USG model has been generated using a graphical user interface GMS10.4.4. Although the model was originally designed to be fully contained within GMS, not all aspects of the modelling could be addressed efficiently using the features available within this interface. This meant the model input files needed to be prepared using a combination of GMS, Geographic Information Systems (GIS) and a range of in-house and third-party utilities.

8.2.2 Model domain and mesh

Figure 14 shows the model domain and model mesh. The model domain is based on the local groundwater catchment delineated using the Digital Elevation Model (DEM), with the coastal

boundary representing the zone of groundwater discharge in the north and no-flow boundary elsewhere along topographical ridges where a natural groundwater divide is expected. The domain is large enough to fully enclose the extent of the Alluvium and capture the influence of key hydrological stresses.

The model mesh uses a layered quadtree-mesh and the model cells are progressively refined in areas of interest to provide greater numerical accuracy. The minimum cell size is 3 m by 3 m over the footprint of the future development areas, which is small for the size of the model and allows the influence of subterranean structures to be readily incorporated into the regional domain.

8.2.3 Model layers

The model layers are based on the Leapfrog geological model and includes the Alluvium, Peat and Bedrock. Although the Peat lenses are generally thin or localised, they have been incorporated into the model for consistency with the geological and geotechnical modelling. Once incorporated, the model can also be used to examine the sensitivity of model outputs to the properties of Peat. For the purpose of groundwater modelling, only the thin (but laterally extensive) upper Peat layer and two Peat lenses at depth have been incorporated.

Table 9 summarises the model layers and Figure 15 presents a cross-section through the model, showing the relationship between model layers and HSUs. With the exception of the Bedrock layer (layer 7), each model layer is discontinuous and pinched out against the adjacent unit. This means there are areas where some model layers are absent e.g. layer 1 locally overlies and connected to layer 4. In order to accommodate the future basements of different depths, an additional layer (layer 4) has been incorporated into the Alluvium.

The model top is based on the DEM and the bottom of the Bedrock is set at -100 mAHD. The model has 98,236 cells in total.

Table 9 Model layers

Layer	Cells	Continuity	HSU
1	27,226	Pinch out	Alluvium
2	4,290	Pinch out	Peat
3	4,331	Pinch out	Alluvium
4	24,744	Pinch out	Alluvium
5	871	Pinch out	Peat
6	855	Pinch out	Alluvium
7	35,919	Continuous	Bedrock

8.2.4 Model boundary conditions

Along the coastal boundary, a constant head boundary condition is assigned with a head value of 0.1 mAHD. Elsewhere, a no-flow boundary condition is assumed along the model boundary. Recharge and evapotranspiration are prescribed to the uppermost nodes (the highest node in a 2-d array, using option 2 of MODFLOW-USG's recharge and evapotranspiration packages). Two recharge zones have been defined based on the modelled extent of the Alluvium and outcropping Bedrock, to account for different recharge rates expected in these units of different properties. Both recharge and evapotranspiration rates have been adjusted during model calibration and are described further in Section 8.3.2.

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Metres
Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

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Project No. 12512436
Revision No. B
Date 22/04/2020

Model domain and model mesh

FIGURE 14

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Data source: GHD_groundwater model data, 2020; Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Created by: bsmyth

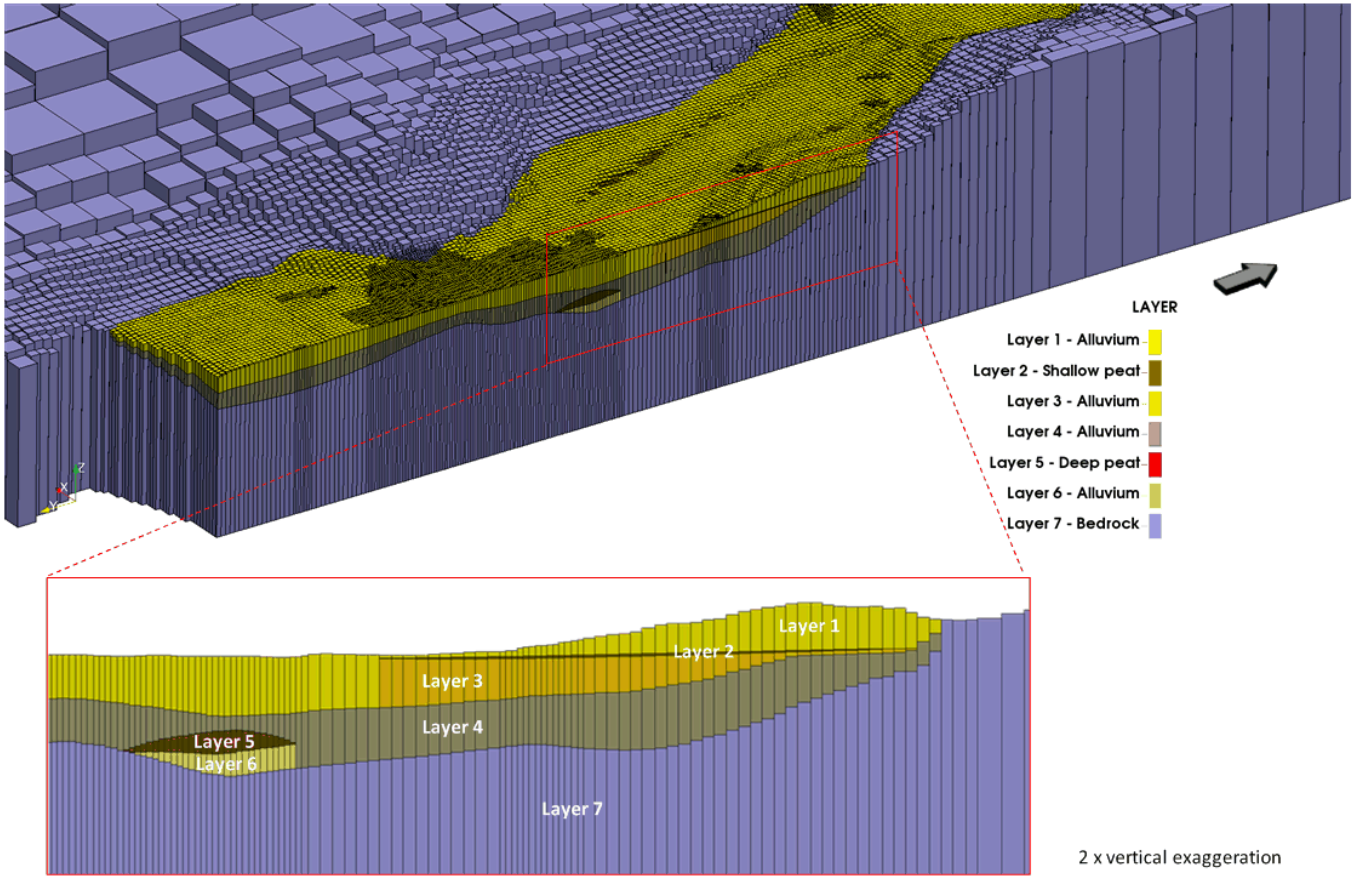

Figure 15 Model cross-section

8.3 Model calibration

8.3.1 Calibration methodology

Model calibration is a process by which model parameter values are altered within realistic bounds until the model outputs fit historical measurements, so that the model can be accepted as a reasonable representation of the physical system of interest (Barnett et al., 2012).

In order to make use of all available groundwater level data, the model has been calibrated transiently using a combination of single groundwater level measurements collected from 25 bores at different times and time series of groundwater level measurements obtained from 8 monitoring bores constructed by Coffey (2003). As the raw data from Coffey (2003) and Douglas Partners (2010) were not available, the groundwater levels from hydrographs were extracted manually to provide sufficient data points to enable meaningful transient calibration. The model calibration period starts in January 2002 and finishes at the end of 2019, capturing 18-years of climate data. The model uses a combination of quarterly and monthly stress periods to capture seasonal variability, with monthly stress periods used from December 2002 to August 2003 and from December 2004 to August 2005, when the time series data are available.

The model parameters have been adjusted during calibration on a HSU-basis, to derive representative hydraulic conductivity (horizontal and vertical), specific yield and specific storage for each HSU. The exception is the Alluvium, where the hydraulic conductivity has been varied spatially via interpolation of parameter values assigned to pilot points located on a 300 m by 300 m grid (a total of 10 adjustable pilot points). The spatial variability enables the model to better account for spatial differences in the measured groundwater levels. The vertical hydraulic conductivity has been estimated by calibrating the horizontal to vertical hydraulic conductivity ratio (anisotropy factor).

Recharge is calculated as a percentage of average daily rainfall for each stress period. Rainfall is first converted to recharge using a factor and applied over the Alluvium. This Alluvium recharge is then converted to Bedrock recharge using another factor. This two-stage approach maintains a sensible ratio between the two recharge rates throughout the calibration process, ensuring that recharge applied over less permeable Bedrock is no greater than recharge over more permeable Alluvium. Evapotranspiration rate and extinction depth are adjusted as single model-wide values.

The calibration has been undertaken rigorously using the automated parameter estimation code PEST(Doherty, 2016) and PEST_HP in a parallelized computing environment (Doherty, 2017). The minimum and maximum parameter values permitted during calibration are derived from relevant prior studies, as discussed in Section 7, and those that are considered appropriate based on the conditions observed at the site.

8.3.2 Calibration performance

Table 10 summarises the calibrated model parameters. These parameter values are generally consistent with the parameter values derived from field studies and previous modelling. Recharge applied over the Alluvium is higher than that used previously by Coffey (2003) and this is likely to reflect the rigorous nature of calibration to transient groundwater levels (as opposed to steady state calibration), where the influence of recharge, and its relationship to specific yield and hydraulic conductivity, can be better estimated.

Table 10 Calibrated model parameters

Parameter	Calibrated values
Alluvium horizontal hydraulic conductivity (K_H)	0.5 to 10 m/d (average 3 m/d)
Alluvium hydraulic conductivity anisotropy (K_H/K_V)	10.47
Peat horizontal hydraulic conductivity (K_H)	0.035 m/d
Peat hydraulic conductivity anisotropy (K_H/K_V)	6.36
Bedrock horizontal hydraulic conductivity (K_H)	0.044 m/d
Bedrock hydraulic conductivity anisotropy (K_H/K_V)	11.05
Alluvium specific yield (Sy)	0.08
Alluvium specific storage (Ss)	1.2×10^{-5} /m
Peat specific yield (Sy)	0.085
Peat specific storage (Ss)	2.7×10^{-6} /m
Bedrock specific yield (Sy)	0.022
Bedrock specific storage (Ss)	5×10^{-6} /m
Alluvium recharge	20% rainfall (average 237 mm/yr)
Bedrock recharge	4.4% rainfall (average 52 mm/yr)
Evapotranspiration	1200 mm/yr
Evapotranspiration extinction depth	2.5 m

Figure 16 presents hydrographs from several monitoring bores from Coffey (2003), roughly along a north to south transect across the study area to demonstrate the modelled responses to climate variability, and how these compare against the observed data. The hydrographs show that the modelled heads match the observed heads reasonably well, with seasonal fluctuations appropriately replicated. In particular, smaller seasonal fluctuations observed closer to the coastal boundary are also simulated by the model consistent with the expected groundwater behaviour. The only exception is at BH6, where low groundwater levels were observed in 2005 (effectively reaching sea level), which may reflect the influence of localised pumping/dewatering that has not been accounted for in the model.

Figure 17 and Figure 18 show the modelled groundwater contours within the Alluvium for the wettest and driest periods within the 18-year simulation period, respectively. The contours indicate that the model simulates overall flow to the north, towards the coastal boundary, with components of flow from topographically elevated areas along the valley edges to valley centre. The contour intervals are narrower towards the south during the wet periods when the water table is raised by higher recharge and the hydraulic gradient becomes steeper.

The Root Mean Squared (RMS) error between the simulated and observed heads is 0.3 m and the modelled groundwater levels are generally accurate to within this range where data is available.

The model currently simulates some flooded cells in the very southern end of the valley (further to the south of the extent shown in Figure 17), where there is uncertainty in the thickness of the Alluvium/depth to Bedrock due to absence of data. The Leapfrog model (and hence the groundwater model) currently assumes thinning of the Alluvium in this area and there is insufficient transmissivity for shallow groundwater to laterally drain following recharge events. This occurs some distance away from the proposed development areas and have no effect on model's performance in areas critical for this assessment.

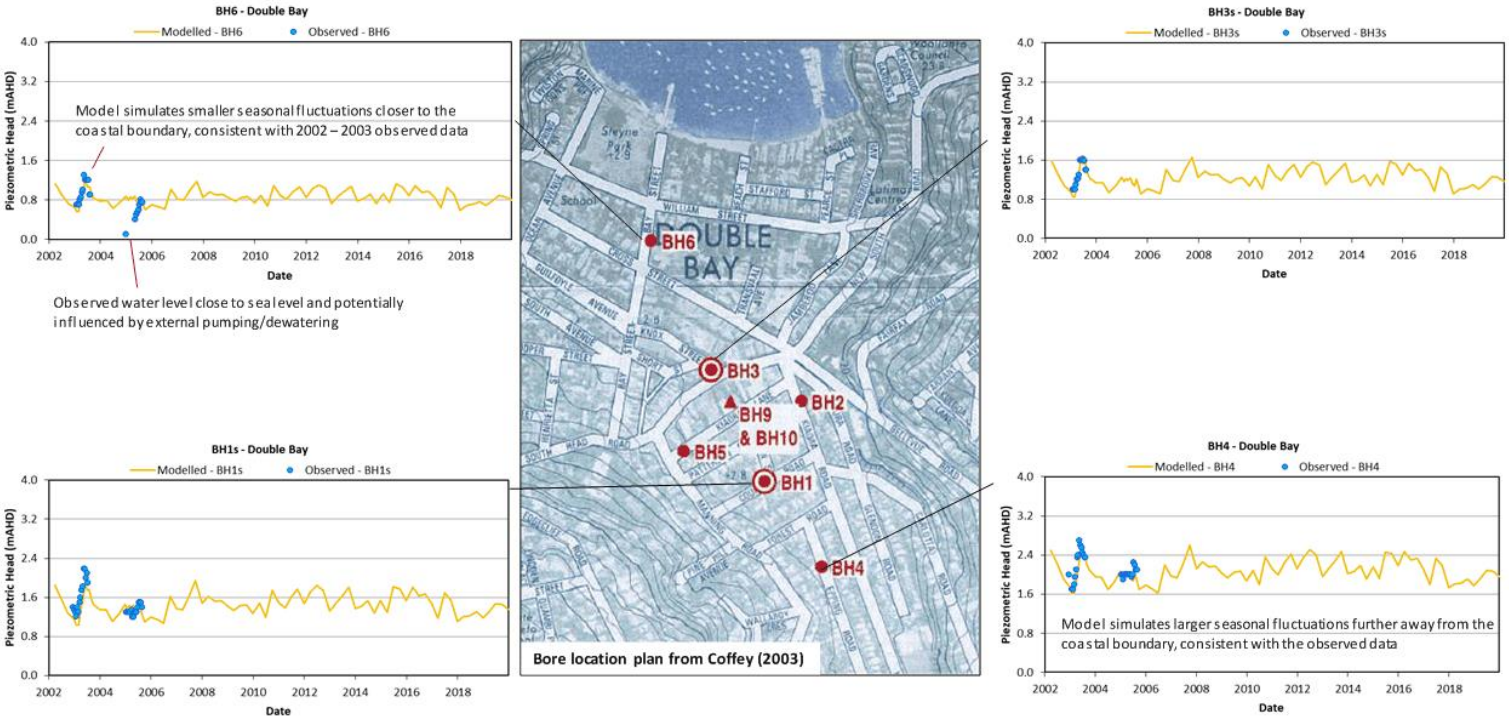

Figure 16 Modelled hydrographs

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Metres
Map Projection: Transverse Mercator
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Grid: GDA 1994 MGA Zone 56

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Double Bay Hydrogeological Impacts

Modelled groundwater contours - wet period

Project No. 12512436
Revision No. C
Date 22/04/2020

FIGURE 17

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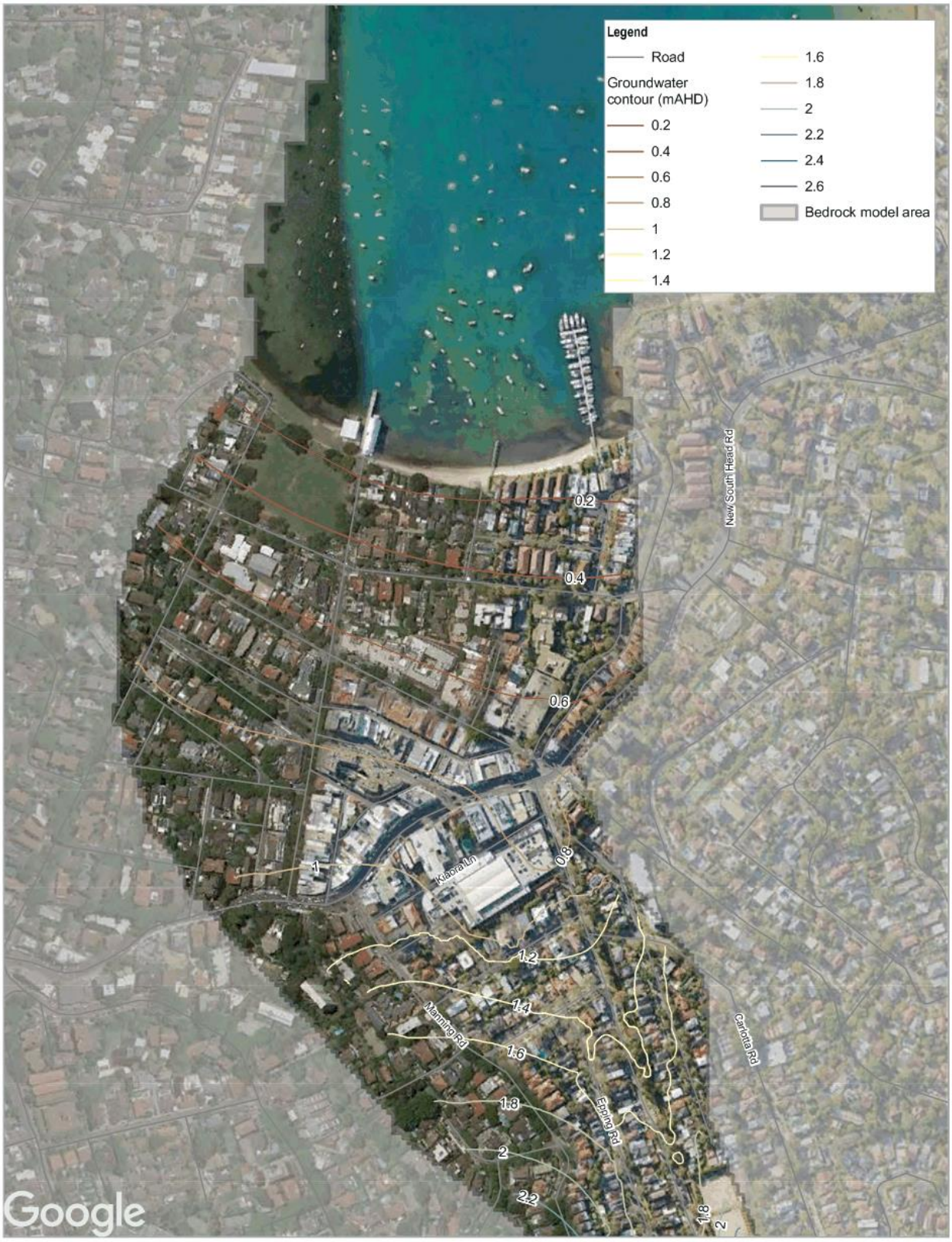

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Woollahra Municipal Council
Double Bay Hydrogeological Impacts

Modelled groundwater contours - dry period

Project No. 12512436
Revision No. C
Date 22/04/2020

FIGURE 18

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Data source: WPC, roads, 2019; GHD, groundwater model data, 2020; GEPro, Imagery, captured 22/08/2017, extracted 07/10/2019; . Created by: bsmyth

8.4 Model outputs to inform future developments

8.4.1 Depth to groundwater and groundwater interference risks

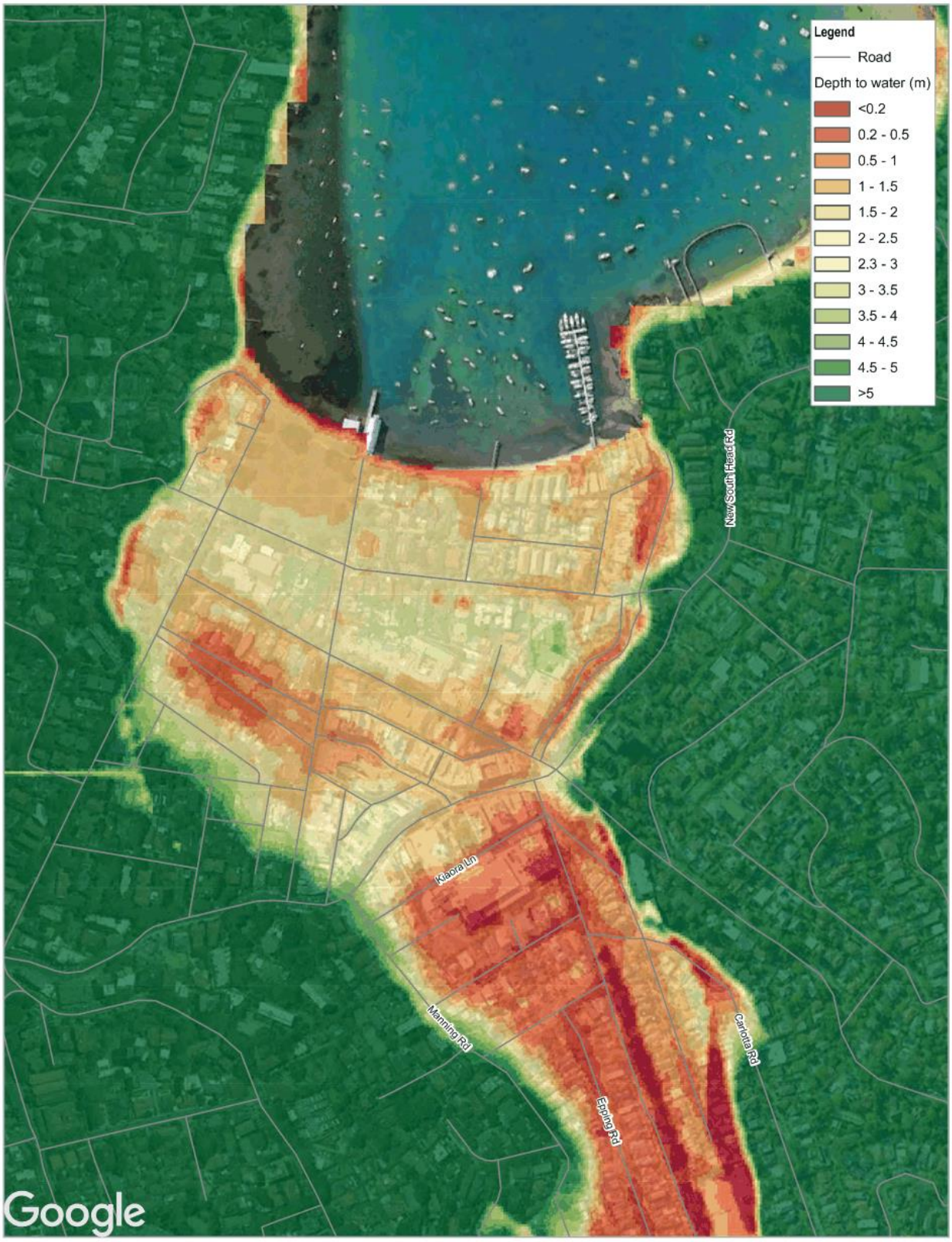
Figure 19 and Figure 20 present the maps of depth to groundwater for the wet and dry periods respectively. These maps have been generated by subtracting the modelled surface of the water table from the DEM. The maps provide indications of areas where the water table is shallow and the expected seasonal range. For example, Figure 19 indicates areas of very shallow water table along Patterson Street and Kioara Road during wet period, consistent with high groundwater levels measured in a monitoring bore located in this area (refer to BH1 in Figure 11). Similarly, a relatively narrow area of shallow water table is simulated along the drain parallel to Kiaora Road, which forms a local low point that is potentially penetrating the water table.

Within the context of potential future developments, the maps provide useful indications of the risk of groundwater interference. For example, where the depth to groundwater is shallow and is less than the proposed depth of excavation, the maps would indicate the need to consider dewatering during temporary construction works. Greater the depth of excavation relative to depth to groundwater, greater the temporary drawdown of the water table required to maintain dry/safe construction conditions. Similarly, where the peak water table is shallow, there may be the need to consider management of groundwater levels over the long term to minimise the potential for subterranean structures (basements) to exacerbate conditions of shallow water table.

Figure 21 presents an example of a groundwater interference risk map based on the wet period depth to groundwater. The map delineates areas of low to very high risk of groundwater interference based on the following classifications:

- Very high risk – the wet period depth to groundwater of <0.5 m
- High risk - the wet period depth to groundwater of 0.5 – 1 m
- Moderate risk - the wet period depth to groundwater of 1 – 2 m
- Low risk - the wet period depth to groundwater of > 2 m

The risk map is intended to assist with the preliminary screening of risks associated with long-term impacts of subterranean structures (basements), where incremental changes in the water table depth could be problematic depending on the natural range of water table. Section 8.4.2 presents outputs from predictive modelling to provide indications of the potential cumulative impact of future developments.



Paper Size ISO A4
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Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

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GHD

Woollahra Municipal Council
Double Bay Hydrogeological Impacts

Modelled depth to groundwater
Wet period

Project No. 12512436
Revision No. B
Date 20/04/2020

FIGURE 19

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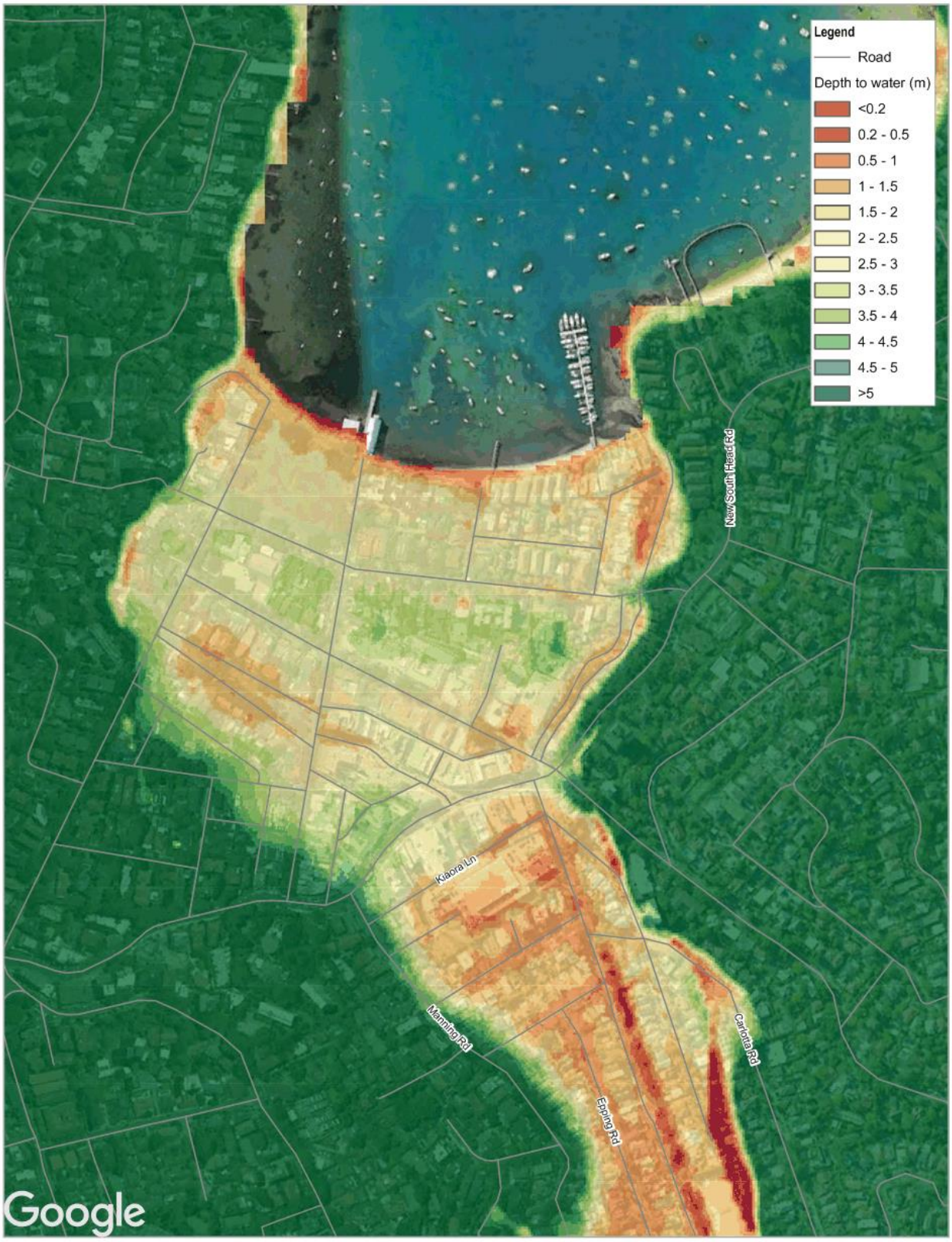
Print date: 20 Apr 2020 - 15:55

Data source: WPC, roads 2019; GHD, groundwater model data 2020; GEPro, Imagery, captured 22/08/2017, extracted 07/10/2019; . Created by: bsmyth



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Map Projection: Transverse Mercator
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Grid: GDA 1994 MGA Zone 56

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GHD

Woollahra Municipal Council
Double Bay Hydrogeological Impacts

Modelled depth to groundwater
Dry period

Project No. 12512436
Revision No. B
Date 20/04/2020

FIGURE 20

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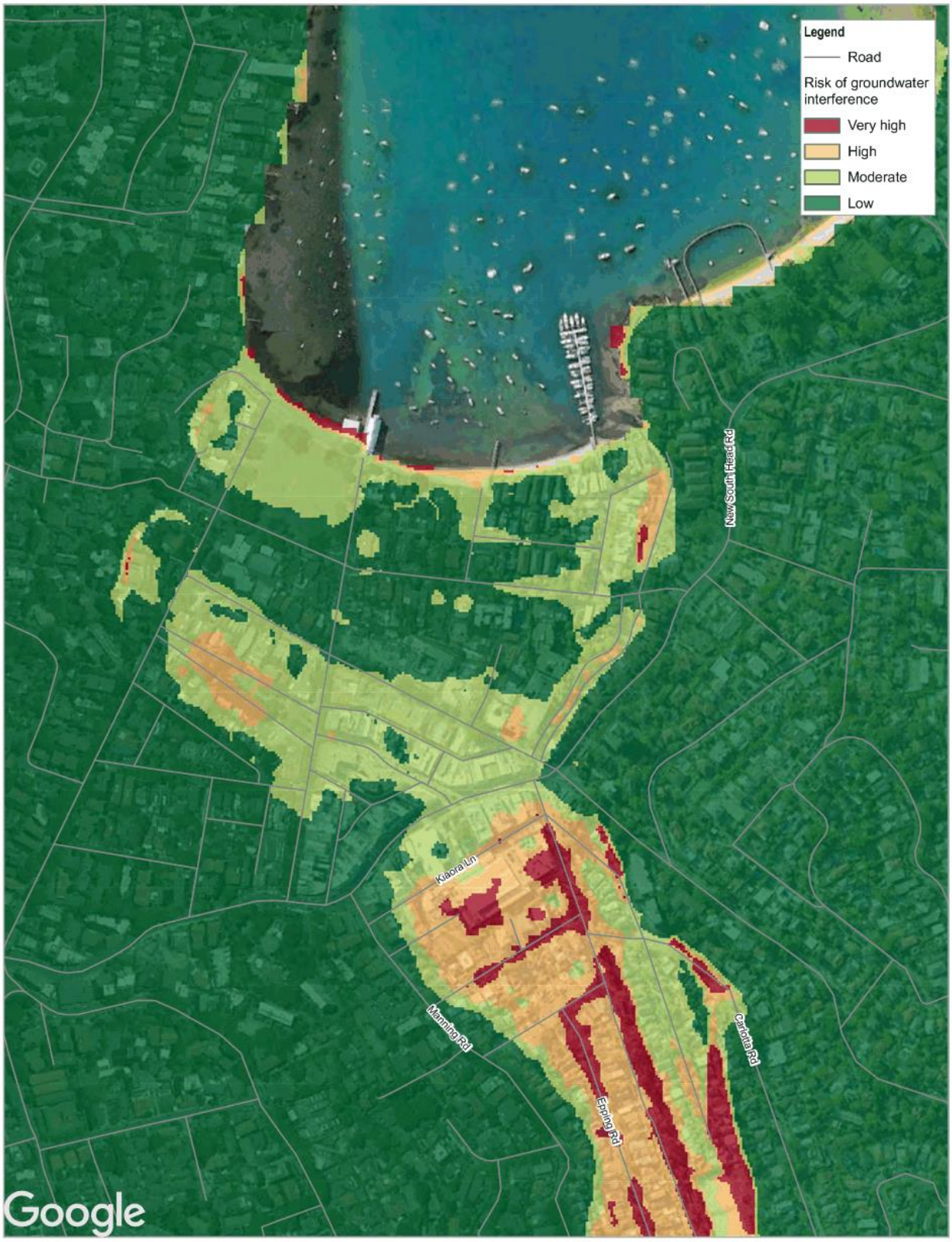
Data source: WPC, roads 2019; GHD, groundwater model data 2020; GEPro, Imagery, captured 22/08/2017, extracted 07/10/2019; . Created by: bsmyth



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Metres
Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

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GHD

Woollahra Municipal Council
Double Bay Hydrogeological Impacts

Project No. 12512436
Revision No. B
Date 22/04/2020

Groundwater interference risk map

FIGURE 21

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Print date: 22 Apr 2020 - 14:28

Data source: WPC, roads, 2019; GHD, groundwater model data, 2020; GEPro, Imagery, captured 22/08/2017, extracted 07/10/2019; . Created by: bsmyth

8.4.2 Potential long term changes to water table

The potential long term cumulative impacts of future basements have been assessed by incorporating these features into the calibrated model as zones of low permeability material, based on the information provided by Council. Two scenarios have been modelled:

1. A full cut-off scenario where the basements/low permeability zones are assumed to fully extend to the base of the Alluvium/ top of Bedrock.
2. A partial cut-off scenario where the basements are assumed to terminate 12 m below ground surface, allowing groundwater to flow below them.

Brief explanation regarding the cut-off scenario and its impact on the groundwater flow is provided in Section 9.1.

For both scenarios, the predictive models have been run for the same 18-year period used in the calibration so that the change in groundwater levels under a range of climatic conditions can be simulated. This is important because the effects of groundwater flow impedance are typically greater during wetter periods with steeper hydraulic gradients. The basements are represented using a low hydraulic conductivity value of 1×10^{-5} m/d with zero recharge applied over their footprint.

Figure 22 and Figure 23 present the modelled maximum change in the water table for the full and partial cut-off scenarios, respectively. Also indicated in the figures are the assumed location of basements considered in the predictive modelling and bores from the NGIS. These figures are composite maps based on the maximum change in water table simulated at every location in the model, which can occur at different times at different locations. It provides a snapshot of the maximum extent of impact. The positive change indicates drawdown (lowering) of the water table and negative change indicates mounding (raising) of the water table.

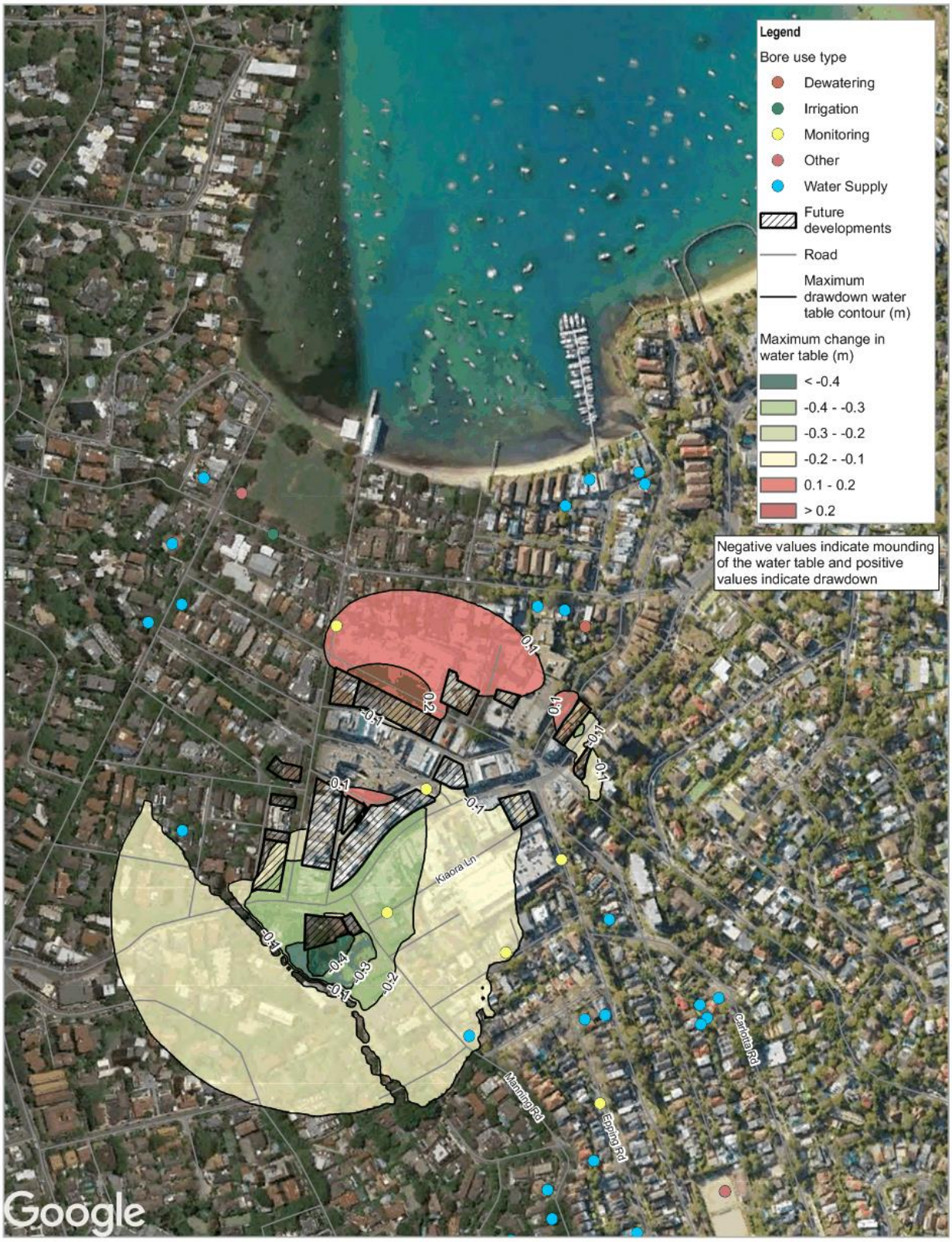
The figures indicate the following:

- The area of influence of the full cut-off scenario is larger than that of the partial cut –off scenario, as expected.
- The full cut-off results in mounding of the water table on the up gradient side and drawdown on the down gradient side due to impedance of groundwater flow. The partial cut-off results in very localised drawdown and mounding.
- The maximum drawdown and mounding simulated by the model are generally less than 0.3 m. Up to around 0.4 m of mounding is simulated in the southwest, where groundwater flows from the valley edge; however, this occurs in an area of low risk of groundwater interference where the depth to groundwater is greater than 2 m.

The cumulative effect may result in mounding of 0.1 to 0.2 m in high risk areas between Kiaora Road and Court Road where the water table is known to reach close to ground surface. This has the potential to increase the extent of shallow groundwater albeit an incremental change of <0.2 m would be difficult to quantify in practice. Only one water supply bore from the NGIS is located within the modelled area of influence, on the boundary of the 0.1 m mounding contour.

8.4.3 Limitations

Hydrogeological systems are complex natural systems whose properties cannot be measured at all spatial and temporal scales. While the regional model has been appropriately calibrated, reliable long term data are not available at all locations within the study area and uncertainty is inherent in model outputs. As additional data become available, the model can be updated progressively and confidence in model outputs would increase over time.



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Metres
Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

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GHD

Woollahra Municipal Council
Double Bay Hydrogeological Impacts

Contours of maximum change in water table - full cut-off

Project No. 12512436
Revision No. B
Date 22/04/2020

FIGURE 22

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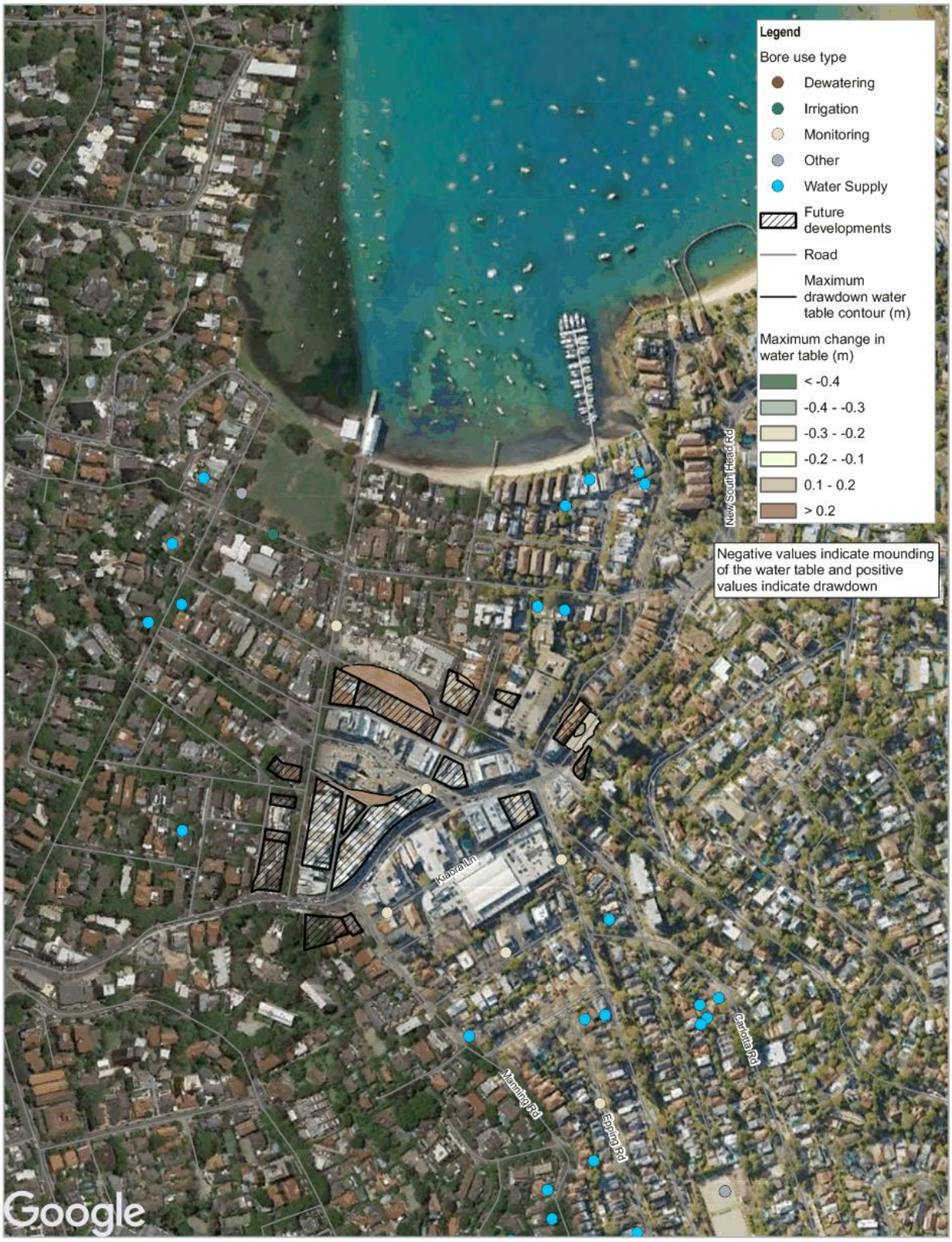
Data source: WPC: roads, 2019; GHD, groundwater model data: 2020; BOM, NGIS bore data: 2019; GEPro: Imagery, captured 22/08/2017, extracted 07/10/2019; . Created by: bsmyth



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Grid: GDA 1994 MGA Zone 56

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Woollahra Municipal Council
Double Bay Hydrogeological Impacts

Contours of maximum change in water table - partial cut-off

Project No. 12512436
Revision No. B
Date 22/04/2020

FIGURE 23

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Print date: 22 Apr 2020 - 14:37

Data source: WPC, roads, 2019; GHD, groundwater model data, 2020; BOM, NGIS data, 2019; GEPro, Imagery, captured 22/08/2017, extracted 07/10/2019; . Created by: bsmyth

9. Impact of groundwater lowering (construction dewatering)

9.1 Why buildings settle upon dewatering

When new developments involves basement construction, excavation into existing ground is required. Such excavation when carried out below the water table can be difficult to execute and the excavation side walls often become unstable due to the presence of groundwater within the construction site. In that instance, side wall retention and dewatering can be adopted to facilitate the excavation work and to allow the construction to proceed in dry soil conditions.

There are many forms of retention system for the support of the excavation side walls. In areas where groundwater flow rate is high, vertical cut-off walls are often adopted to act as both the retention system and flow barrier to control groundwater seepage. However, the cut-off walls need to be properly designed to minimise the groundwater flow into the excavation site effectively. Such cut-off walls could be constructed as full depth penetration by extending the walls to the relatively impermeable bedrock or as partial cut-off system. In situations where the groundwater seepage into the excavation is relatively high and the cut-off system does not extend to full depth, dewatering within the construction site is employed to supplement the cut-off system.

However, such dewatering method could cause the lowering of water table not only within the site and in the vicinity of the excavation footprint, but also extend to a certain distance away from the excavation. The extent or zone of influence of dewatering depends on a number of factors including the cut-off system, initial groundwater conditions, and ground conditions, etc.

The lowering of water table by dewatering can induce soil settlement which is detrimental to buildings and structures located above the affected water table. When the water table is lowered, the effective load on the underlying soil is increased by amount equal to the difference between the drained and submerged weights of the entire soil mass between the original and lowered water table. If the underlying soil is compressible, the increased overburden pressure will cause compression of the soil, inducing settlement of the ground.

Such phenomena could occur in most soil types. However, in situations involving weak compressible soils, dewatering can cause more substantial settlements. When there are spatial variability in ground conditions within a given region, it is clear that difference in settlement (i.e. differential settlement) can be expected.

Such total settlement and differential settlement will then impact the structures bearing on the ground surface including residential and commercial buildings, leading to movement and distortion of the structures.

9.2 Adopted settlement criteria

To effectively control the potential damage caused by dewatering, it is essential to assess the maximum acceptable settlement for the buildings in the Double Bay area. The settlement criteria applicable to the existing buildings, typically one to two storeys constructed on shallow footings, have been developed primarily based on Australian Standards AS2870-2011 and relevant published literature by Burland *et al*. (2002) on building settlements and associated damages. Other considerations including possible past damages of the buildings, flexibility of the structures, pipe drain tolerances and groundwater fluctuation have also been given as part of the assessment process.

9.2.1 Assessment of settlement criteria

The Australian Standard AS2870-2011 has been developed for the purpose of site classification, design and construction of foundation systems associated with typical residential buildings. This standard also provides typical surface movements for various site classifications along with the related damage category.

Consistent with the works presented by Burland *et al*. (2002), AS2870-2011 provides five categories of damage with reference to walls, numbered 0 to 4 in increasing severity. Normally categories 0, 1 and 2 relate to 'aesthetic' damage, 3 relates to 'serviceability' damage and 4 represents damage affecting 'stability'. Burland *et al*. (2002) have indicated that the dividing line between categories 2 and 3 damage is particularly important. If the damage exceeds Category 2 the cause is usually much easier to identify and is frequently associated with ground movement. To minimise the residual risks of property damages in Double Bay, the design settlement criterion should be selected based on a more cautious Category of 1 or better.

Cracking in masonry walls is usually, but not always, caused by differential settlement. With reference to the schematic representation shown in Figure 24 regarding the deflection ratio Δ/L at which cracking is initiated, Burland (1997) provided the limiting Δ/L values in percentage for the different categories of damage for masonry wall with zero horizontal strain (see Table 11). With a clear notion of minimising the risks of property damages in the Double Bay area, the threshold for a cautious damage Category 1 was considered. Then using Δ/L of 0.075% (maximum value for category 1) and for a building comprising full masonry construction with a typical wall length of 20 m, a differential wall settlement of 15 mm could be adopted as the maximum tolerable value before cracking become visible and is classified as being at risk of Category 2 damage.

In relation to pipe drain tolerances, the acceptance criteria of 0.1 degree for joint rotation of relatively rigid pipes such as cast iron pipe can be adopted based on consultation with Sydney Water for past projects, as well as CIRIA (1996) publication titled "Prediction and effects of ground movements caused by tunnelling in soft ground beneath urban areas". The aforementioned threshold deflection ratio of 0.075% corresponds to a rotation of about 0.043 degrees, which is deemed to be satisfactory for the allowable joint rotation of rigid pipes.

Theoretically correct and simple as it may seem, the evaluation of differential wall settlement is not always straight forward. Alternatively, total ground (surface) settlement limits could be used as an ultimate measure to control damage of buildings caused by dewatering. Table 2.2 of AS2870-2011 indicates that damage categories 0 to 1 for masonry (veneer or full) are normally present in Class S site, where the site classifications are defined in Table 2.1 of AS2870-2011. Further, the characteristic surface movements (y_s) for Site S is 0 - 20 mm in accordance with Table 2.3 of AS2870-2011. This threshold surface movement is commensurate with the above differential wall settlement of 15 mm for category 1 damage. If the building is conservatively assumed to have no stiffness so that it conforms to the 'greenfield site' subsidence trough, then it is possible to consider y_s to be conservatively the same as the differential wall settlement. The adoption of this conservative assumption is reasonable because the surface settlement limit that is applicable to existing buildings will have to be assessed in light of possible past damage and flexibility of the buildings. Relatively rigid and damaged structures now are likely to be more sensitive to increased surface movement due to loss of stiffness, and therefore some reduction in the settlement limit might be appropriate. The above differential wall settlement of 15 mm occurs within the conditions of Class S Sites, where damage Category 1 ('aesthetic' damage) is applicable. In Tables C1 and C2 of AS2870-2011, damage Category 1 is described as fine cracks to walls and concrete floors of less than 1 mm which typically do not need repair.

For the purposes of current assessment of dewatering, we have considered a total ground surface settlement of 15 mm as being the limiting value to control potential damage of existing buildings.

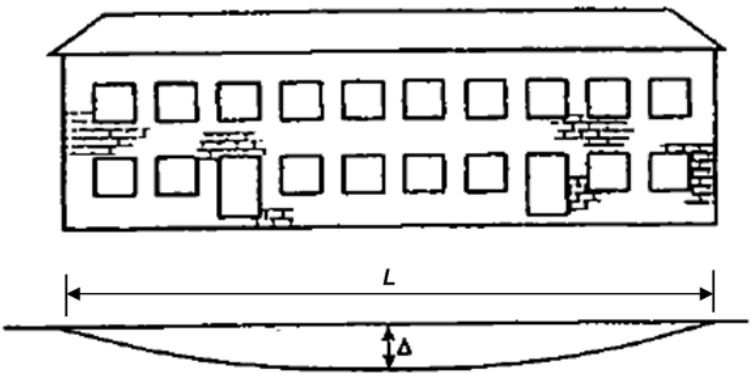


Figure 24 Schematic representation of wall deflection

Table 11 Relationship between category of damage and limiting Δ/L for zero horizontal strain in accordance with Burland *et al.* (2002)

Category of damage	Normal degree of severity	Limiting Δ/L (%)
0	Negligible	0.05
1	Very slight	0.075
2	Slight	0.15
3	Moderate	0.3
4	Severe to very severe	> 0.3

9.2.2 Surface settlement and water table fluctuation

The amount of settlement which could be induced into the existing buildings in the vicinity of a construction site will depend upon the extent of external water table lowering caused by the dewatering and the intrinsic soil properties.

For a water table fluctuation of typically within 1 m, the surface settlement caused by the initial loading (i.e. the initial drop of groundwater level) would be the greatest. The settlement induced by the subsequent groundwater variation of the same magnitude would be only about one-tenth to one-half of that experienced under initial loading. Therefore, if the drawdown of the groundwater level is within the range of the water table fluctuation, then the induced surface settlement is anticipated to be small and should be similar to that observed due to groundwater variation. However, a further drop in water table beyond the historic groundwater fluctuation range would lead to settlements of increased magnitude rapidly approach the estimate for the initial loading. For the assessment of dewatering induced settlement presented in the following sections, our adopted initial groundwater level has generally been based on the relatively low side of the fluctuation range in accordance with the available groundwater records.

10. Geotechnical Assessment of dewatering-induced settlement

10.1 Methodology

10.1.1 Overview of assessment approach

The general methodology for the geotechnical assessment of settlement can be described as per the flowchart given in Figure 25 below. In essence, the severity of the dewatering-induced settlement is strongly related to ground conditions present on site. For example, the lowering of groundwater in areas with presence of highly compressible peaty soils would cause a much greater settlement than other areas without peat. It is essential to examine the variability of ground conditions and to identify areas susceptible to ground movements upon dewatering. Therefore, the "first part" of the settlement assessment was to develop site specific geotechnical models and to assess and compare the ground settlement responses upon dewatering for the different sub-divided areas within the Double Bay study area. These results were presented on 'settlement index plots' to provide a visual identification of areas with different degrees of ground settlement response to groundwater drawdown due to construction dewatering. The "second part" of the settlement assessment was to establish the relationship between dewatering of the developments and the groundwater lowering for the different sub-divided areas identified in the first part of the assessment. The ultimate goal of the assessment is to establish groundwater drawdown limit that can be used to develop recommendations in relation of dewatering controls.

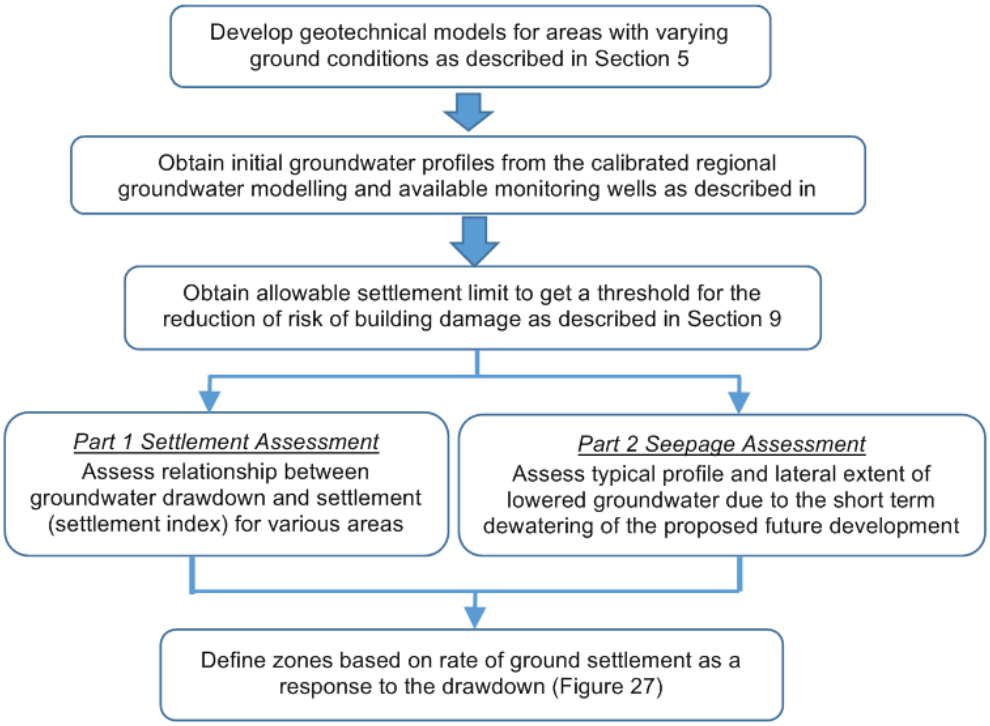


Figure 25 Flow chart showing general methodology for the settlement assessment

10.1.2 Settlement index analysis

Settlement analyses corresponding to predefined depths of groundwater drawdown were conducted for the majority of the data points outlined in Figure 1. For each data point, site specific geotechnical model was developed based on the available geotechnical investigation data. The results of all assessed settlement points were subsequently compiled to form a "Settlement Index Plot" in response to an assumed fixed groundwater drawdown depth. The drawdown depth of up to 5 m was considered because an uncontrolled dewatering of 2-level basement construction could potentially result in up to 5 m lowering of the original water table.

Based on this Settlement Index Plot together with the consideration of the spatial variability in ground conditions between the data points, a more generalised settlement map was developed, which shows degrees of susceptibility to dewatering-induced ground surface settlement for different sub-divided zones within the Double Bay study area. The settlement index provides a means to understand the response of ground settlement to various levels of drawdown for a given location, irrespective of any profile of groundwater drawdown caused by any particular development.

The dewatering induced settlement for each data points was analysed based on one-dimensional (1D) method where soil layers were modelled as follows:

- Elastic models with characteristic Young's moduli for granular materials
- Consolidation models with recompression and compression coefficients for fine grained soils

The compressibility properties adopted for the different soil / rock units are summarised in Table 12. These engineering parameters were derived on the basis of:

- Available information from past studies (e.g. GHD Longmac's Groundwater and Geotechnical Study in 2001, ref. R1)
- Review of in-situ testing results from available geotechnical investigation data
- Review of geotechnical laboratory testing results where available
- Use of empirical or semi-empirical correlations applicable for similar soil types
- Our experience on local geology, projects with similar soil types and challenges

Groundwater levels obtained from the regional groundwater modelling as well as from calibration against monitoring wells were adopted as initial groundwater levels in the settlement analyses. This assumption had to be made as the actual timing of future construction relative to the dry and wet seasons was not known at the time of our assessment.

10.1.3 Seepage analysis - relationship between dewatering and groundwater lowering

The influence of dewatering at the development sites on the levels of groundwater lowering in the adjacent areas depends on a number of factors including depth of dewatering, depth of the cut-off level in relation to an impermeable sub-soil layer, and the soil types generally encountered on site. Seepage analysis has been carried out to assess typical characteristics of groundwater lowering due to future construction dewatering. The analysis was conducted by using two-dimensional (2D) Finite Element (FE) method by means of a commercially available computer program Seep/W (Geostudio 2019).

The short-term seepage analysis was carried out on 5 geotechnical sections (Sections AA, BB, CC, DD and EE) as outlined in Figure 6.

The employed procedure for seepage analysis is described below:

- Each of the analysed models was extended between the fixed boundaries at which the influence of the dewatering could be considered to be negligible due to constant water recharge or discharge. For Sections AA and EE, the model started at the uphill side at the south and ended near the harbour at the north where the water discharged into the bay. These represented the two boundary conditions with fixed total head. The remaining geotechnical sections were extended between the eastern hillside and the western hillside.
- The initial conditions were modelled and compared against the regional groundwater modelling and available monitoring well data to calibrate the assumed total head at the boundary conditions as well as the foundation permeability.
- Only one development excavation was considered in each analysis. The selected future development was based on the excavation which would likely induce the highest magnitude of drawdown depth and furthest lateral impact covering greater extent beyond both sides of the excavation. Typically this was related to the deepest excavation with respect to the elevation and partial depth cut-off (refer Section 9.1 for theoretical background)
- The size and depth of basement excavation was modelled as per the details supplied by Council in the Brief. Where this information was not provided in the brief for a given location, a 2-basement excavation with dewatering and partial cut-off was assumed. As the detailed configuration of the adopted retention system and dewatering plan are not available at the time of this assessment, the following assumptions were incorporated:
    - The adopted retention system has been conservatively assumed to provide partial cut-off and extended up to a minimum depth below the excavation of equal to the excavation depth. This assumption was necessary as the seepage flow path depends on the groundwater cut-off condition (refer to Section 9.1). For a 2-basement excavation, the excavated depth was assumed to be typically about 6 m below existing ground surface. The depth of the retention system that also served as partial groundwater cut-off was assumed to be typically about 12 m below existing ground surface.
    - The groundwater was lowered to about 0.5 m deep below the base of excavation by using spear points installed along the perimeter of the retention system inside the excavation footprint.
- The model (Geotechnical Section AA) extending along the main groundwater flow direction was calibrated against known information of groundwater drawdown likely induced by the construction of 4-8 Patterson St. Based on this information (ref. R9 and R17), it is understood that the groundwater at 14 Forest Road was encountered at about 2 to 2.55 m at the time of investigation which roughly occurred during the construction of 4-8 Patterson St where the dewatering took place.

Additional seepage analysis was also conducted to assess the impact of full-depth cut-off for comparison purposes. This latter analysis was carried out for the assumed future development at 1 Cross Street which comprise 4-level basement as per the Brief. Although the basement excavation for 1 Cross St (ref. Figure 1 for location) development will be relatively deep compared to those of other developments, the site is located adjacent to the hillside in the northeast of the Double Bay study area. As such, we have assumed a full-depth cut-off system for this development (ref. Figure 35).

Table 12 Summary of geotechnical properties for all foundation units

Unit/Material	Bulk Unit Weight (kN/m^3)	Compressibility parameters for fine-grained soil		Undrained Shear Strength s_u (kPa)	Young's Modulus of Elasticity E for sandy soils (MPa)	Young's Modulus of Elasticity E for sandy soils (MPa)	
		Compression Ratio CR (1)	Recompression Ratio RR (2)			Horizontal permeability k_h (m/day)	Vertical permeability k_v (m/day)
1 – Fill	18	N/A	N/A	N/A	10	5	0.5
2A – Very soft to soft Clay	16	0.1	0.014	12	N/A	4.3×10^{-5}	4.3×10^{-6}
2B – Firm Clay	17	0.1	0.014	30	N/A	2.1×10^{-5}	2.1×10^{-6}
2C – Stiff to hard Clay	19	0.1	0.014	85	N/A	8.6×10^{-6}	8.6×10^{-7}
3A – Very loose to loose Sand	17	N/A	N/A	N/A	5	2.5	0.25
3B – Loose to medium Dense Sand	18	N/A	N/A	N/A	10	1.5	0.15
3C – Dense to very dense Sand	20	N/A	N/A	N/A	30	1.0	0.1
3D – Mix of Sand and Clay (typically Clayey Sand)	18	N/A	N/A	N/A	10	0.2	0.02
4A – Very soft to soft Peat 4B – Very soft Sandy Peat	14	0.35	0.058	7	N/A	4.3×10^{-4}	4.3×10^{-5}
4C – Firm Peat	15	0.325	0.054	30	N/A	8.6×10^{-5}	8.6×10^{-6}
4D – Stiff to hard Peat	17	0.3	0.05	85	N/A	8.6×10^{-6}	1.3×10^{-7}
5A – Residual Soil (Clayey Sand)	19	N/A	N/A	N/A	50	1.0	0.1
5B – Extremely to highly weathered Sandstone	21	N/A	N/A	N/A	100	0.1	0.01
5C – Moderately weathered to Fresh Sandstone	23	N/A	N/A	N/A	250	0.02	0.002

Notes to Table 12:

(1) CR = $c_c/(1+e_0)$ where c_c is compression index and e_0 is the initial void ratio.

(2) RR = $cr/(1+e_0)$ where cr is recompression index and e_0 is the initial void ratio.

10.2 Settlement Index Plot and settlement zones

The analysed settlement index obtained for various drawdown depths was used to assess the sensitivity of ground settlement response to the groundwater drawdown due to construction dewatering. The contours of assessed settlement index in response to an assumed 1m depth of groundwater drawdown are presented as Figure 26. This assessed Settlement Index Plot shows similarity to the isopach map of upper peat layer thickness depicted in Figure 8 in terms of the locations of peat and the assessed settlement concentrations.

Note that there are inherent uncertainties associated with the settlement index plot owing to the following factors:

- Potential spatial variability in ground conditions between settlement points that could result in differential settlements beneath structures
- Uncertainty within locations where sufficient investigation data was not available.

Based on the Settlement Index Plot depicted in Figure 26 and the uncertainties outlined above, a more generalised settlement map was developed that delineates three settlement zones with different degrees of susceptibility to dewatering-induced ground surface settlement. The settlement zones and their descriptions are given in Table 13 below. The zones and their extent were superimposed in a plan with topographical contours as shown in Figure 27. Further, the variation of settlement with drawdown depths was plotted for various areas. These plots are shown as Figure 28 to Figure 31. The significance of these settlement plots are further discussed in Section 10.4.

Table 13 Description of various Settlement Zones

Zone Assignment	Description	Typical Settlement for given Drawdown Levels
A	Areas which are highly sensitive to drawdown due to the ground conditions. Consequently, higher settlement magnitude can likely occur and adversely impact adjacent properties.	• Settlement of more than 15 mm for 1 m drawdown depth • Differential settlement which can exceed 15 mm for drawdown up to 4 – 5 m
B	Areas which are moderately sensitive to drawdown due to the ground conditions. Although the assessed settlement was generally less than Zone A, this zone can continue settling with the increase in drawdown due to thicker soil profile or compressible layer located at deeper strata.	• Settlement of up to 15 mm for 1 m drawdown depth • Settlement can exceed 15 mm for excessive drawdown up to about 4 – 5 m
C	Areas which are less sensitive to drawdown due to ground conditions (e.g. shallow bedrock, lower original water table with respect to soil layers)	• Settlement of less than 5 mm for 1 m drawdown depth • Settlement is likely to be limited with the increase in drawdown depth due to shallow rock profile

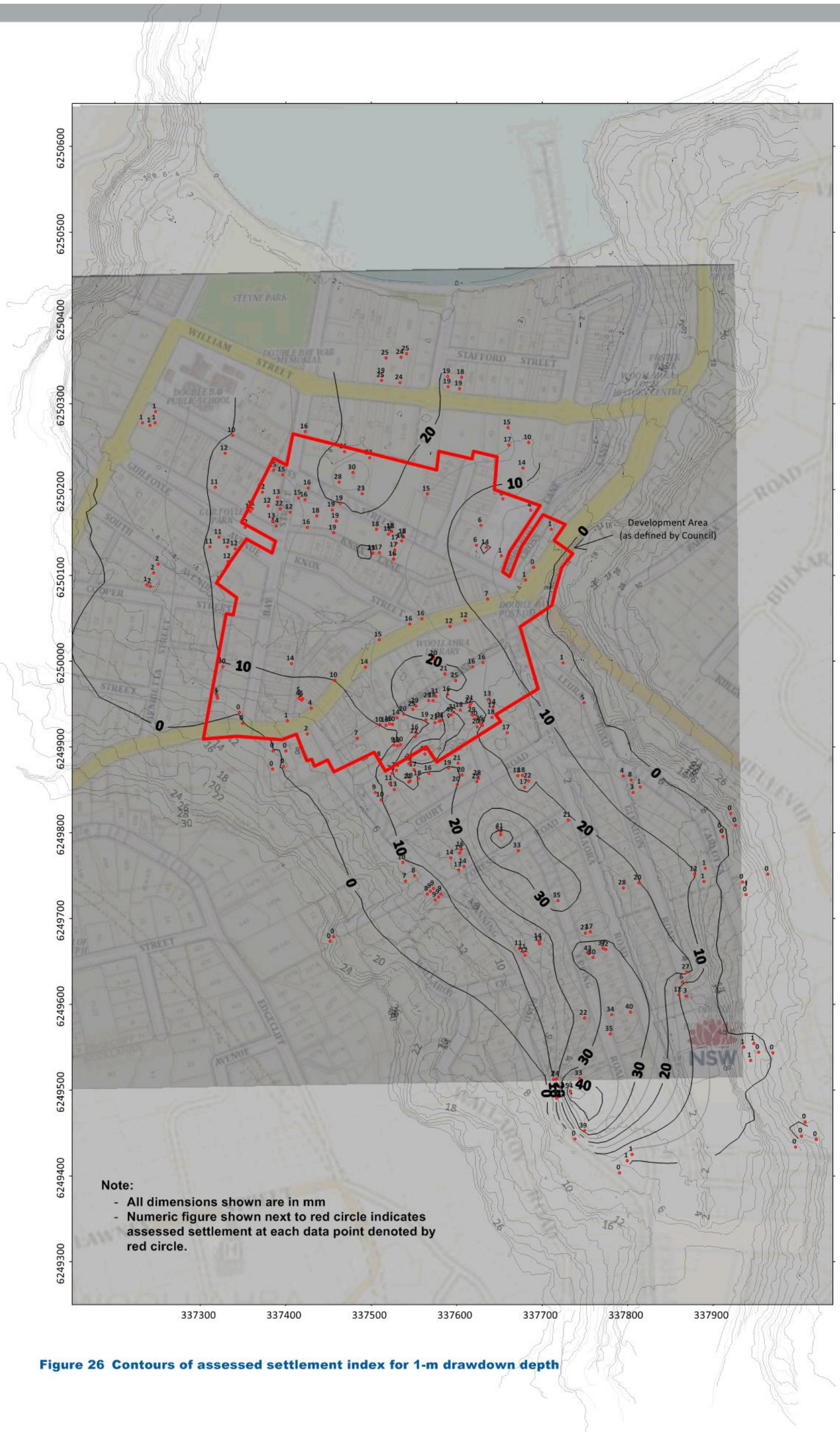


Figure 26 Contours of assessed settlement index for 1-m drawdown depth

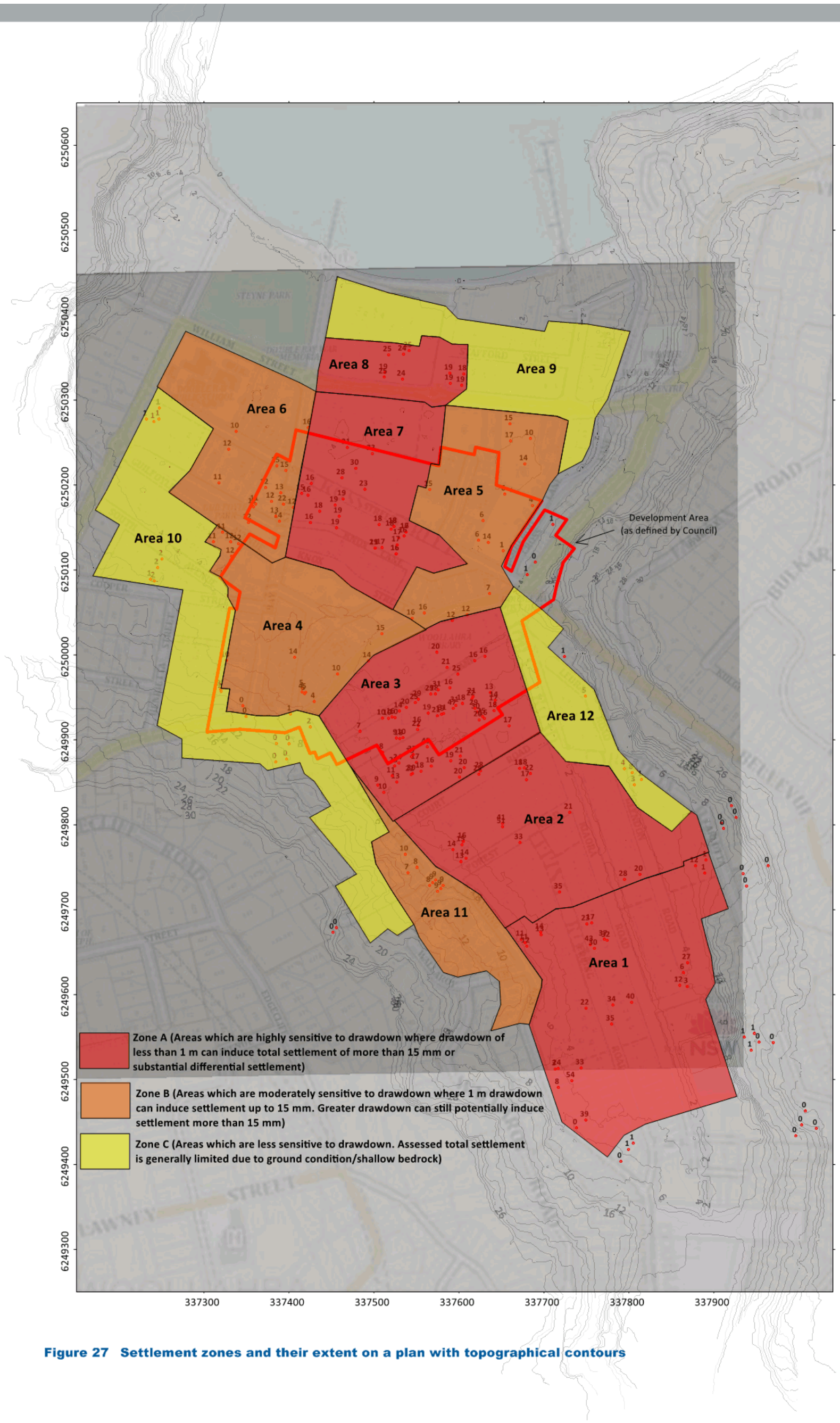


Figure 27 Settlement zones and their extent on a plan with topographical contours

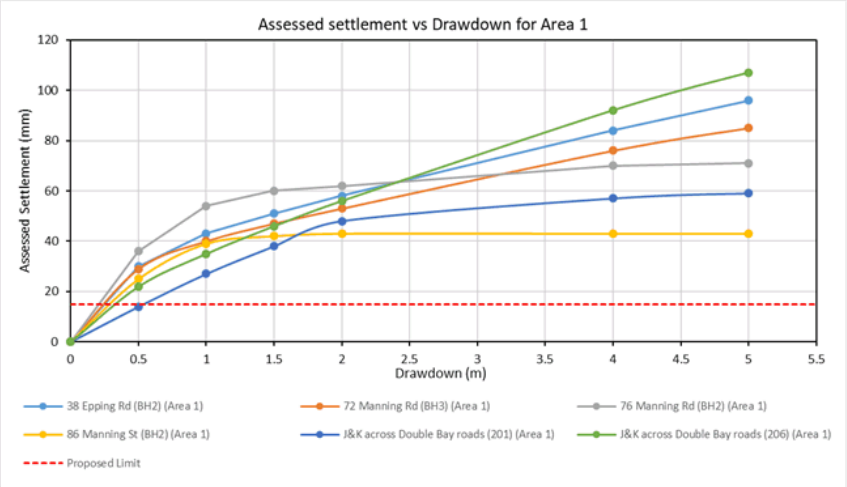


Figure 28 Settlement Index for various drawdown for Area 1 (Settlement Zone A)

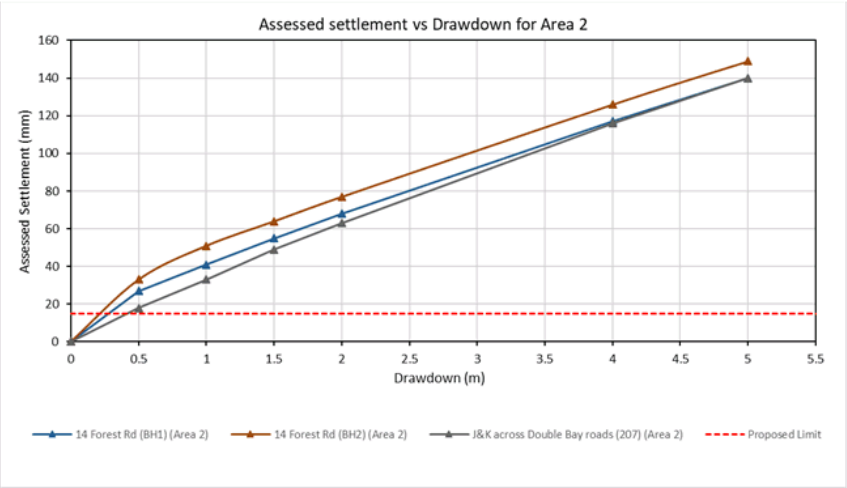


Figure 29 Settlement Index for various drawdown for Area 2 (Settlement Zone A)

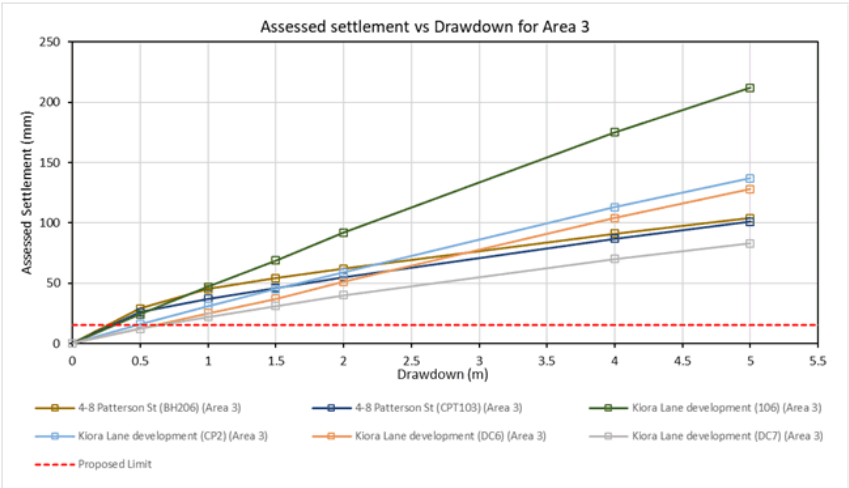


Figure 30 Settlement Index for various drawdown for Area 3 (Settlement Zone A)

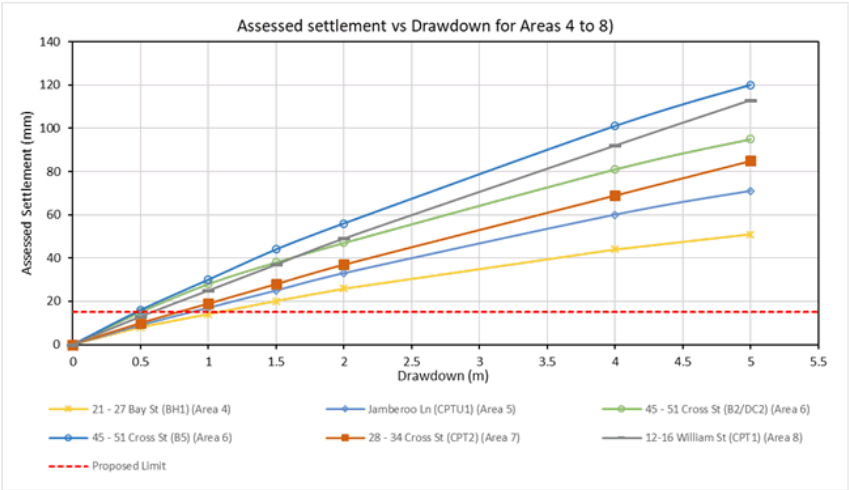


Figure 31 Settlement Index for various drawdown for Areas 4 to 8 (Settlement Zones A and B)

10.3 Seepage analysis

The groundwater levels related to the initial conditions for geotechnical section AA is indicated in Figure 7. For other geotechnical sections, the initial groundwater levels adopted in the seepage analysis are given in Appendix B (Figures B1, B3, B5 and B7 for Geotechnical Sections BB, CC, DD and EE, respectively).

Figure 32 shows the seepage analysis result for geotechnical section AA carried out for calibration purposes. This analysis incorporated the construction work at 4-8 Patterson St and the consequential lowering of the water table as observed within the property of 14 Forest Road. By adopting the configuration of retention system given in the respective reports (refs. R7 and

R8) as well as the dewatering depth of 0.5 m deep below the base of excavation, the resulting groundwater drawdown at 14 Forest Rd was assessed to be consistent with that observed during the investigations (refs. R9 and R17).

The change in water table due to the construction dewatering of the future development (7 – 17 Knox St) is presented as Figure 33 for geotechnical section AA. The resulting groundwater levels from this analysis are plotted in Figure 34 for comparison.

Similar assessment was also carried out for other geotechnical long sections by adopting the future development which caused the highest magnitude of drawdown. The results of these assessments are presented as Figures B2, B4, B6 and B8 in Appendix B.

Figure 35 presents the groundwater profile induced by the construction of 1 Cross St where dewatering and full depth cut-off were assumed. The result indicates that the assessed groundwater profile due to the full-depth cut-off underwent only minor change from the initial groundwater level for geotechnical section BB (Figure B1 of Appendix B) despite the application of dewatering within the excavation.

It should be noted that all figures referenced above were plotted with either 2 times or 4 times vertical scale exaggeration to fit the report page. As a result, any inclined straight line can appear to be have a steeper slope than what the actual slope is.

10.4 Discussions

10.4.1 Settlement due to short-term dewatering

The results of our seepage analysis pertinent to the impact of short term construction dewatering can be described as follows:

- The shape of lowered groundwater profile as a result of construction dewatering appeared to be relatively flat (refer to Figure 32 and Figure 33). This observation can usually be expected in soil layers with relatively high permeability such as sandy soils.
- Due to the shape of the lowered groundwater profile, the impact of construction dewatering in sandy soil layers can be expected to extend a fair distance beyond the excavation footprint (refer to Figure 33 and Figures B2, B4 and B6 in Appendix B). Based on Figure 34, this lateral impact can extend up to 800 m away from the excavation near the recharge point at the sandstone hillside. In a 3-dimensional context, this impact can cover substantial areas located within the above distance or areas between the excavation and hillside, whichever is the least, beyond all four sides of the excavation.
- Since groundwater reinjection/recharge was not considered in our seepage analysis, the depth of groundwater drawdown in the immediate vicinity of the excavation footprint was similar to that within the excavation where the dewatering took place. It is inferred that a drawdown of up to 4 – 5 m can potentially occur in the nearby area if appropriate control measures are not put in place.

The groundwater drawdown will induce settlement as described in Section 9. As inferred by the seepage analysis result (Figure 33) for geotechnical section AA, the settlement-related impact of such drawdown could extend over a distance of up to about 800 m which is close to the uphill boundaries.

The magnitude of assessed settlement will depend on the original and lowered groundwater levels as well as the ground conditions. The settlement index analysis has been conducted by considering an increasing drawdown depth of up to a maximum of 5 m below the original groundwater levels as shown in Figure 28 to Figure 31. These figures indicates the following points:

- The general trend of the analysis results indicates that the greater the groundwater drawdown depth, the greater surface settlement will be experienced in the different sub-divided areas. For example, the total settlement at Kiaora Lane in Area 3 can be up to as high as 210 mm for a total drawdown depth in excess of 5 m as shown in Figure 30.
- The shape of Settlement Index Plot gives an indication regarding the ground conditions. This can be discussed as follows:
  - It is interesting to highlight that the assessed total settlement experienced at certain areas in Area 1 towards Double Bay South (e.g. 76 and 86 Manning St) appear to plateau beyond 2 m depth of groundwater drawdown (see Figure 28). The main reason to this assessed behaviour is that the upper peat layers within this area are generally occurred at shallow depth and are within or above the existing groundwater fluctuation range. The further drop of water table due to dewatering will not incur additional loading to these shallow peat layers.
  - Settlement index assessed for data points located in the areas where bedrock is relatively deep indicate continuing increase in settlement with the increase in the groundwater drawdown. This increase is expected to continue further until the lowered groundwater level reaches the layer that is least susceptible (i.e. bedrock) to the drawdown induced settlement.
- Some variability in the assessed total settlements could be observed among the data points located within the same area. These spatial variability become more pronounced with the increase in total settlements which consequently can increase the risk of the occurrence of differential settlement. It can be recalled from Section 9.2.1 that certain value of differential settlement would be sufficient to increase the risks of building damage.
- For the different subdivided areas, the allowable drawdown depths associated with proposed settlement limit of 15 mm were assessed to vary between 0.2 m and 1.2 m. A corollary of this finding is that a 0.2 m depth of dewatering can be considered as a relatively safe limit to control building damage.
- As discussed above, the impact of dewatering the groundwater and water table drawdown could extend up to a considerable distance away from the dewatering location due to a relatively flat shape of the lowered groundwater profile. By considering this along with the sensitivity of ground settlement response in some areas to the drawdown, it is practical that the safe limit of dewatering of 0.2 m is applied throughout the Double Bay area.

From constructability viewpoint, it can be necessary to dewater sufficiently to enable the dry excavation during construction. If the above drawdown limits cannot be achieved, other controls are also available to reduce groundwater drawdown in the adjacent areas to within the acceptable limit. These include the following:

- Systematic groundwater reinjection/recharge during excavation dewatering
- Sufficient cut-off depth to limit groundwater drawdown outside of the excavations
- Elimination of the need for dewatering by providing a sealing layer on the excavation base which needs to be adequately designed to resist uplift pressure

Alternative measures can be considered on a case-by-case basis to allow for a review of the drawdown limit. These measures should include the undertaking of sufficient additional geotechnical investigations and subsequent analysis to demonstrate that settlement impacts of surrounding building are within acceptable limit.

It is noted that the water table will likely stabilise to a level that is near the original groundwater levels (see Section 8.4.2) following a certain period after the dewatering is terminated. However,

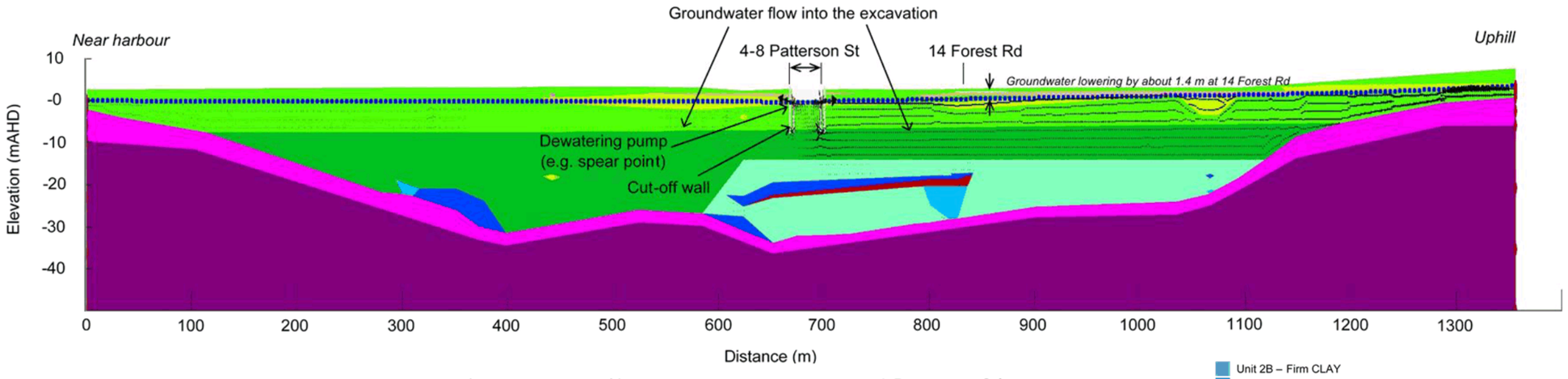
the settled ground and other environmental features impacted by the groundwater drawdown will not likely return to the original conditions.

10.4.2 Settlement due to long term drawdown

As described in Section 8.4.2, assessment of long term impact of the completed developments on the regional groundwater condition has been addressed by the regional groundwater modelling. This impact is expected to be mainly related to the cut-off system left in place which can affect the long-term groundwater flow. For this assessment, the impact of full depth cut-off was assumed to provide a critical scenario due to more blockage to groundwater flow. Our assessment indicates that the drawdown values due to the presence of full depth cut-off (ref. Figure 22) and partial depth cut-off (ref. Figure 23) considering all future developments (Figure 1) are about 0.3 m and 0.2 m, respectively.

The maximum drawdown induced by the presence of full depth cut-off (i.e. all future basement structures extending to bedrock) was assessed to be more than the proposed safe limit of groundwater drawdown of 0.2 m (per Section 10.4.1). Therefore, the permanent groundwater cut-off provided by full-depth basement structures without any mitigation measures should be avoided as part of future developments.

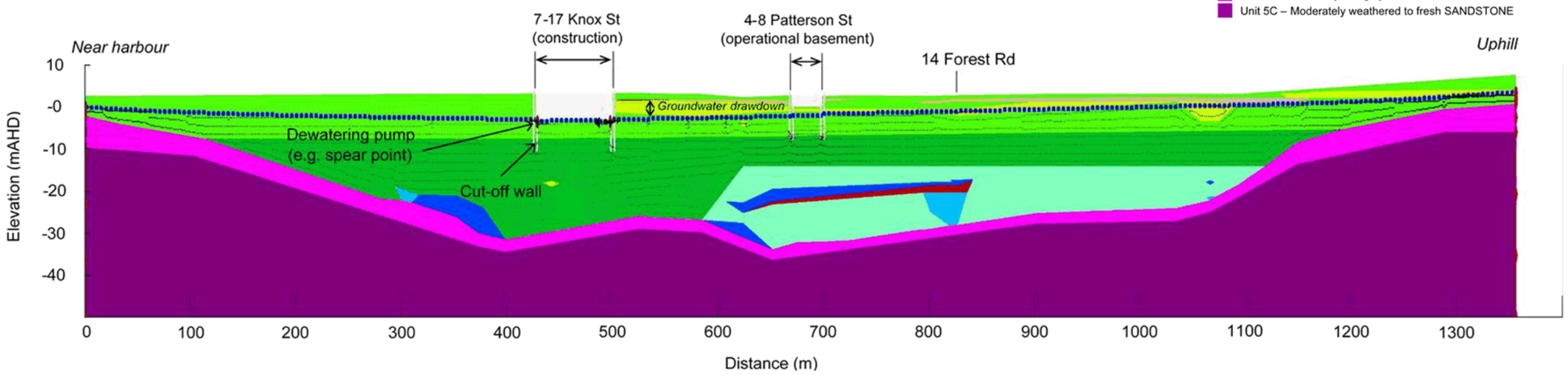
It can be inferred from our assessment that the groundwater drawdown of no more than 0.2 m can be achieved by limiting the permanent groundwater cut-off to a maximum of 12 m deep below the ground surface (i.e. partial depth cut-off). Alternatively, some forms of drainage measures could be adopted for full depth cut-off walls to control the long term impact of the completed developments on adjacent existing structures.



Calibration case (Construction dewatering at 4 – 8 Patterson St)

Scale: 1:4000 (H); 1:1000 (V) for A3

Figure 32 Seepage Analysis showing groundwater drawdown due to the construction dewatering of 4-8 Patterson Rd (Geotechnical Section AA)



Future development (7-17 Knox St)

Scale: 1:4000 (H); 1:1000 (V) for A3

Figure 33 Seepage Analysis showing groundwater drawdown due to the future construction dewatering at 7 – 17 Knox St (Geotechnical Section AA)

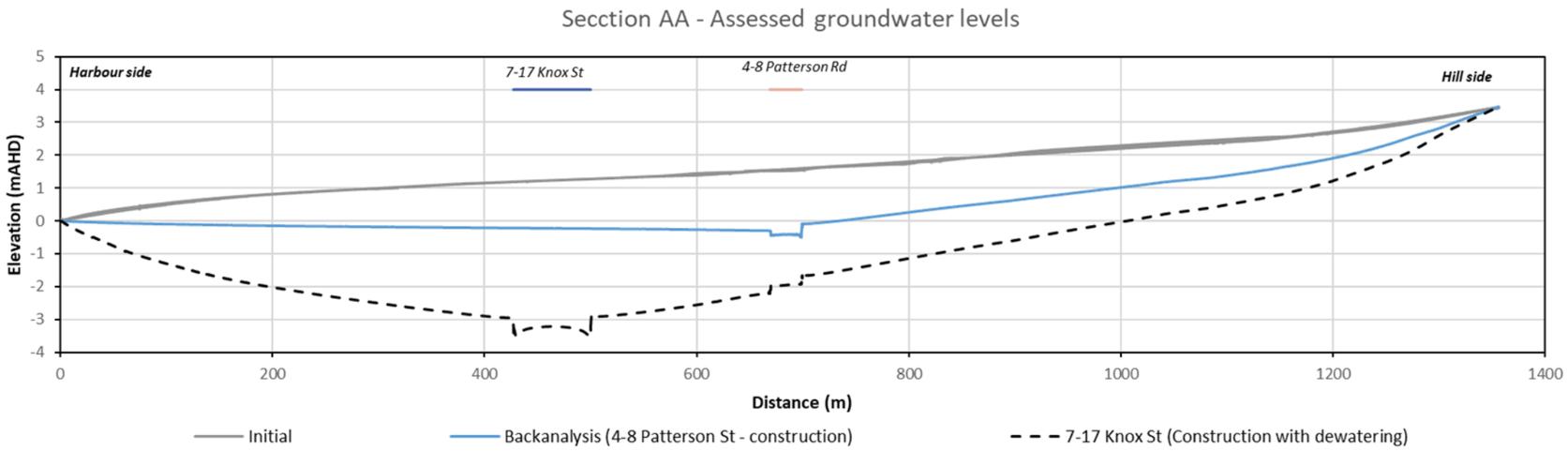


Figure 34 Seepage Analysis showing groundwater drawdown due to the construction dewatering for Geotechnical Section AA

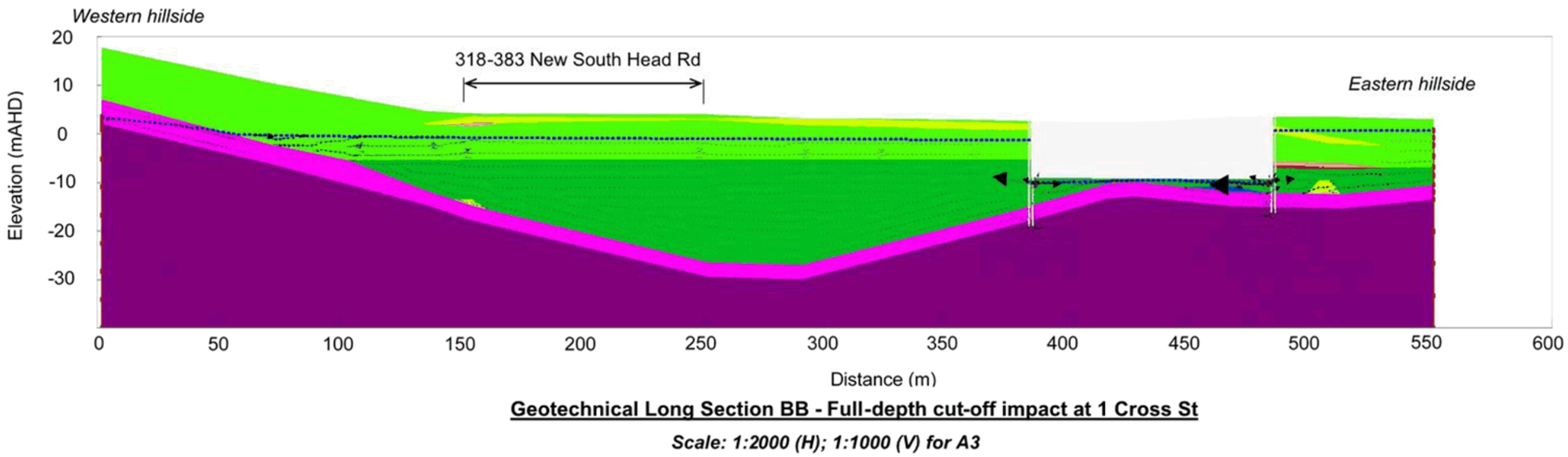


Figure 35 Seepage Analysis showing groundwater drawdown due to the construction dewatering of 1 Cross St with full-depth cut-off (Geotechnical Section BB)

11. Summary

The normally consolidated sediments within the valley underlying the Double Bay area form a highly productive water table aquifer (Alluvium), which is underlain by the less permeable fractured Bedrock aquifer. The Alluvium, comprising sand with minor silts, clay and peat, has high hydraulic conductivity and is readily replenished by rainfall-derived recharge, resulting in fresh groundwater with salinity of typically less than 400 mg/L. The water table fluctuates in response to seasonal variations in rainfall, with up to 1 m of variation observed in monitoring bores constructed within the Alluvium. In the area between Court Road and Epping Road, the water table has been observed to reach close to ground surface following wet periods. Groundwater within the Alluvium flows to the north, towards the coastal boundary which acts as a major point of discharge of groundwater. Groundwater also flows locally from topographically elevated areas on the valley edges to low-lying areas in the valley centre. The seasonal water table variations are less pronounced closer to the coastal boundary where the water table is constrained at mean sea level. The search of the Australian Groundwater Explorer identified 28 water supply bores and one irrigation bore within the Double Bay area, which are potentially utilising the shallow groundwater resource.

Due to the shallow water table in the Double Bay area, there is high potential for future developments to interact with groundwater. The nature of interaction may be short term, during construction when the water table is lowered to enable dry excavations, or long term when the basements are constructed below the water table and alter the natural flow regime. To assist with the quantification of potential impacts and risks, a regional groundwater model has been developed and calibrated to available groundwater level data, using hydrogeological parameters that are considered realistic based on prior investigations and conditions observed to date.

The modelling provides an indication of areas within Double Bay that are naturally susceptible to shallow water table following wet periods, when the water table reaches close to ground surface. The depth to groundwater map, and associated seasonal range, provides useful screening tools for identifying future developments that have high potential/risk of groundwater interference. The modelling of cumulative impacts associated with multiple subterranean structures (basements) has shown that mounding and drawdown of the water table could occur over the long term albeit this is generally estimated to be less than 0.3 m conservatively assuming full depth cut-off (basements extending to the Bedrock), with mounding of <0.2 m in areas of shallow water table. On the other hand, the assessed drawdown due to cumulative impacts associated with multiple basements with partial depth cut-off is 0.2 m.

Our seepage analysis indicates that short term construction dewatering has a potential to lower the water table in the vicinity of the excavation to almost the same level as that in the excavation. Although the magnitude of this lowering reduced with the increase of distance away from the excavation, this lowering can occur over a long distance due to relatively high permeability of sand layers. This potentially covers a substantial majority of the Double Bay study area where residential and commercial buildings are located.

By referring to the Settlement Index Plots, such excessive dewatering if uncontrolled can potentially result in substantial amount of drawdown which can induce a total settlement in excess of 210 mm. Relatively high magnitude of total settlement and spatial variability in ground conditions are expected to increase the differential settlement. It should be noted that some structures, particularly old buildings and buried pipes, are sensitive to differential settlement. Consequently, an allowable settlement limit of 15 mm has been proposed for the purpose of this study based on the relevant Australian Standard AS2870-2011 and widely referred literature on the topic of building damage (Burland *et al.*, 2002). The corresponding

dewatering drawdown to cause 15 mm settlement varies between 0.2 m and 1.2 m for areas grouped as Settlement Zone A (red) and Settlement Zone B (orange) respectively.

Imposing a drawdown limit to an acceptable value of 0.2 m is expected to assist in limiting the settlement and differential settlement to values related to 'aesthetic' damage category. The risk of settlement impact to the structures is still present if the assessed groundwater drawdown due to uncontrolled dewatering exceeds 0.2 m in some areas. The developed settlement zones can be used to highlight various areas and their sensitivity of settlement response to various drawdown depths.

For practical and constructability purposes, a drawdown which is greater than the acceptable limit may be required to allow for a dry condition in a multi-level basement construction. In this case, additional control measures should be put in place such as the reinjection of groundwater, controlled provision of full depth cut-off system or base seal capable of resisting uplift pressure. Alternatively, a review of this limit can be considered on a case-by-case basis by undertaking additional site investigations and impact assessment for the affected structures.

GHD understands the appropriate limits and control measures mentioned above will need to be documented in a Development Control Plan. It is expected that the outcome of this Geotechnical and Hydrogeological Study can be used as inputs to the formulation of this plan.

Appendices

Appendix A – List of supplied information

Set of information	Reference ID	Property associated with the Geotechnical Investigation Report [1]	Issued by
Information Package 1 from Council	R14	1 Transvaal Avenue	JK Geotechnics
	R15	10 Leura Road	JK Geotechnics
	R16	12 Carlotta Road	JK Geotechnics
	R17	14 Forest Road	JK Geotechnics
	R18	14 Pinehill Avenue	JK Geotechnics
	R19	15 Cooper Street	JK Geotechnics
	R20	17 Carlotta Road	JK Geotechnics
	R21	17 Ocean Avenue	JK Geotechnics
	R22	18-20 Carlotta Road	JK Geotechnics
	R23	19 Court Road	JK Geotechnics
	R24	20 Epping Road	JK Geotechnics
	R25	20 Glendon Road	JK Geotechnics
	R26	26 Epping Road	JK Geotechnics
	R27	31 Epping Road	JK Geotechnics
	R28	324 New South Head Road	JK Geotechnics
	R29	38 Epping Road	JK Geotechnics
	R30	38 Ocean Avenue	JK Geotechnics
	R31	45 Carlotta Road	JK Geotechnics
	R32	450 New South head Road	JK Geotechnics
	R33	47 Carlotta Road	JK Geotechnics
	R34	5 Carlotta Road	JK Geotechnics
	R35	55 Carlotta Road	JK Geotechnics
	R36	6 Transvaal Avenue	JK Geotechnics
	R37	72 Manning Road	Longmac
	R38	76 Manning Road	JK Geotechnics
	R39	8 Court Road	JK Geotechnics
	R40	382 New South Head Road	JK Geotechnics

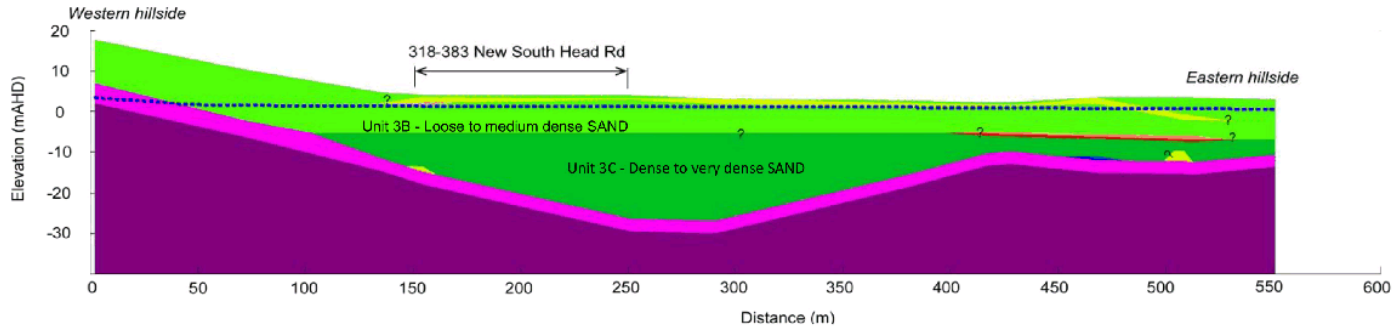
Set of information	Reference ID	Property associated with the Geotechnical Investigation Report [1]	Issued by
	R41	42 Glendon Road	JK Geotechnics
	R42	Pole investigation along New South Head Road	JK Geotechnics
	R43	Compliance with dewatering plan, 59 William Street, Double Bay, Ref: 17512W4 Let2.	JK Geotechnics, 2007
	R44	Groundwater Monitoring at 1 – 9 marathon Mews Double Bay NSW, Ref: 23626WH2Let.	JK Geotechnics, 2011
Information Package 2 from Council	R45	4 - 6 Forest Road	Douglas Partners
	R46	9 Clarence Place	
	R47	4-12 Guilfoyle Ave	JK Geotechnics
	R48	69 Bay St	
	R49	14 - 16 Court Rd	Douglas Partners
	R50	15 Cooper St	Douglas Partners
	R51	11 - 15 Guilfoyle Ave	JK Geotechnics
	R52	23 Manning Rd	JK Geotechnics
	R53	25 Manning Rd	JK Geotechnics
	R54	59 William St	JK Geotechnics
	R55	98 Manning Rd	Douglas Partners
	R56	12-16 William St	JK Geotechnics
	R57	4-8 Patterson St	JK Geotechnics
	R58	351 - 353 New South Head Rd	Martens
	R59	1 Court Rd	Grant Alexander
	R60	40 Manning Rd	JK Geotechnics
	R61	22 William St	JK Geotechnics
	R62	86 Manning St	GeoEnviro
	R63	16 Manning Rd	JK Geotechnics
	R64	61 - 63 Bay St	N/A
	R65	45 - 51 Cross St	Ground Test
	R66	36 - 48 Bay St	URS
	R67	19 - 27 Cross St	

Set of information	Reference ID	Property associated with the Geotechnical Investigation Report [1]	Issued by
	R68	20-26 Cross St	Douglas Partners
	R69	16-18 Cross St - Groundwater assessment for proposed mixed use development (ref. *Douglas Partners Pty Ltd, 2016b*)	Douglas Partners
	R70	21 - 27 Bay St	JK Geotechnics
	R71	28 - 34 Cross St	Douglas Partners
	R72	434 - 440 New South Head Rd	Douglas Partners
	R73	2 - 10 Bay St	Douglas Partners
	R74	55 Bay St	Geotechnique
	R75	49 - 53 Bay St	Douglas Partners

Note:

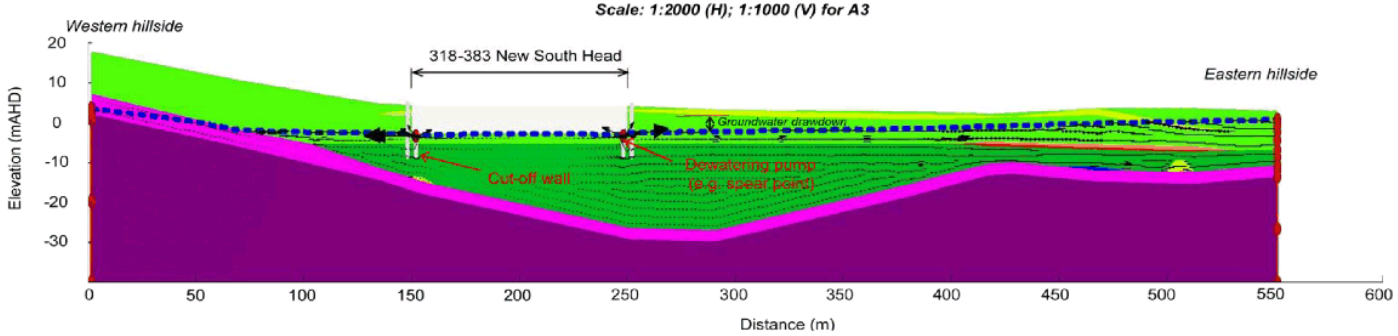
1. Unless otherwise noted, reports listed in the table are associated with the Geotechnical Investigation Report.

Appendix B – Geotechnical Long Sections and Initial Groundwater Levels



B1. Geotechnical Long Section BB (initial condition)

Scale: 1:2000 (H); 1:1000 (V) for A3



B2. Future development (7-17 Knox St) – Geotechnical Long Section BB

Scale: 1:2000 (H); 1:1000 (V) for A3

- Unit 2B – Firm CLAY
- Unit 2C – Stiff to Hard CLAY
- Unit 3A – Very loose SAND
- Unit 3B – Loose to medium dense SAND
- Unit 3C – Dense to very dense SAND
- Unit 3D – Mix of Sand and Clay (Medium dense or Stiff)
- Unit 4A – Very soft to soft PEAT
- Unit 4B – Firm PEAT
- Unit 4C – Stiff to hard PEAT
- Unit 5B – Extremely to highly weathered SANDSTONE
- Unit 5C – Moderately weathered to fresh SANDSTONE

GHD GEOTECHNICS

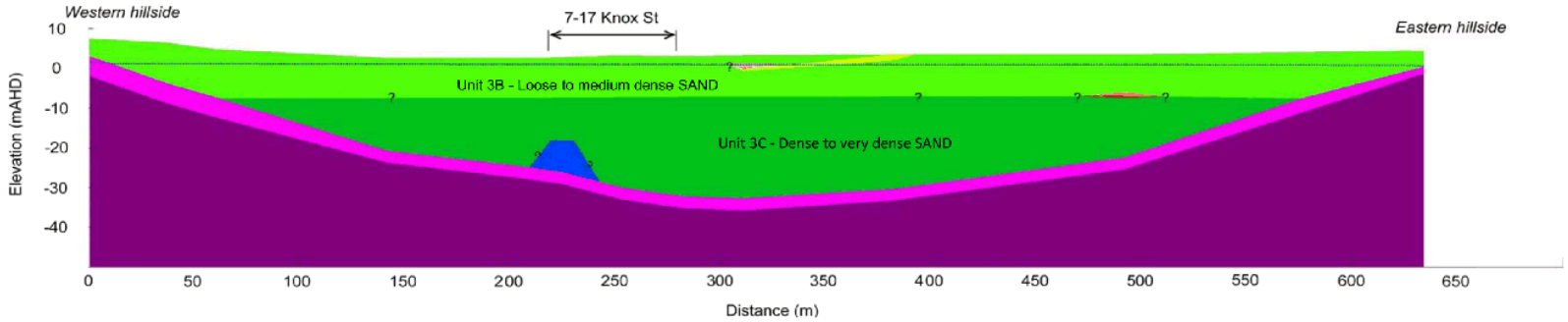
Woollahra Municipal Council
Double Bay - Hydrogeological and Geotechnical Study
Initial and lowered groundwater profile for geotechnical section BB

scale as shown date May 2020

job no 21-12512436
file ref 21-12512436-REP-1

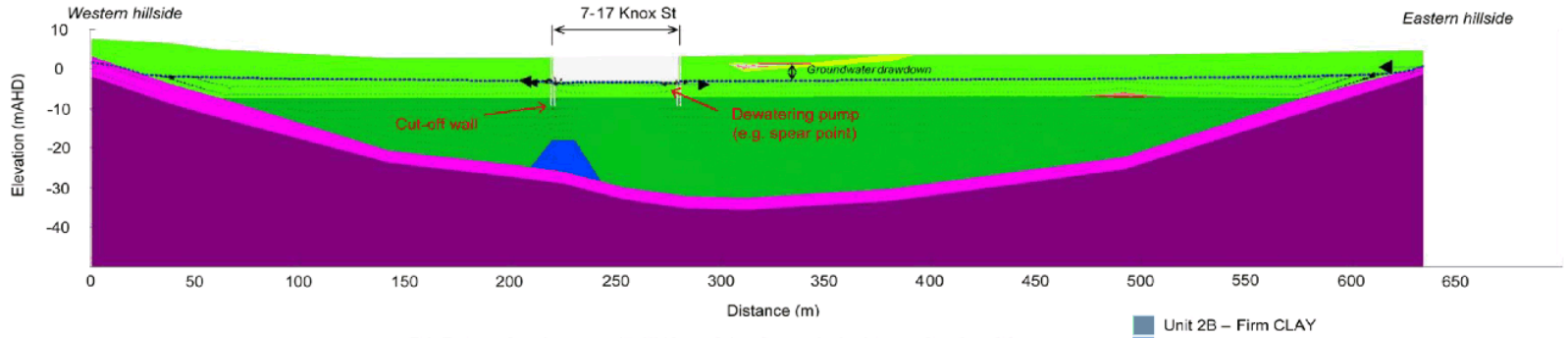
Figures B1 and B2

Level 2 29 Christie Street St Leonards NSW 2065 Australia T 61 2 9462 4700 F 61 2 9462 4710 E atnmail@ghd.com.au



B3. Geotechnical Long Section CC (initial condition)

Scale: 1:2000 (H); 1:1000 (V) for A3



B4. Future development (7-17 Knox St) – Geotechnical Long Section CC

Scale: 1:2000 (H); 1:1000 (V) for A3

- Unit 2B – Firm CLAY
- Unit 2C – Stiff to Hard CLAY
- Unit 3A – Very loose SAND
- Unit 3B – Loose to medium dense SAND
- Unit 3C – Dense to very dense SAND
- Unit 3D – Mix of Sand and Clay (Medium dense or Stiff)
- Unit 4A – Very soft to soft PEAT
- Unit 4B – Firm PEAT
- Unit 4C – Stiff to hard PEAT
- Unit 5B – Extremely to highly weathered SANDSTONE
- Unit 5C – Moderately weathered to fresh SANDSTONE

GHD GEOTECHNICS

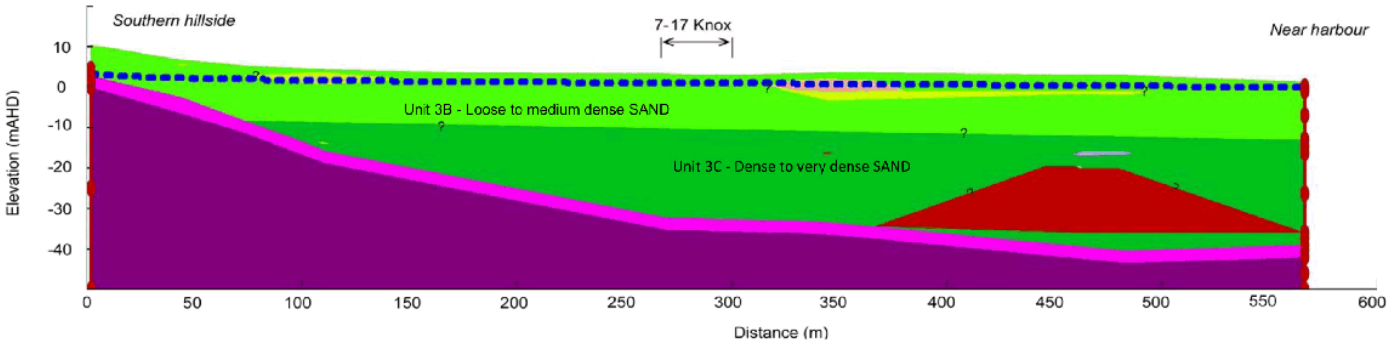
Woollahra Municipal Council
Double Bay - Hydrogeological and Geotechnical Study
Initial and lowered groundwater profile for geotechnical section CC

scale as shown date May 2020

job no 21-12512436
file ref 21-12512436-REP-1

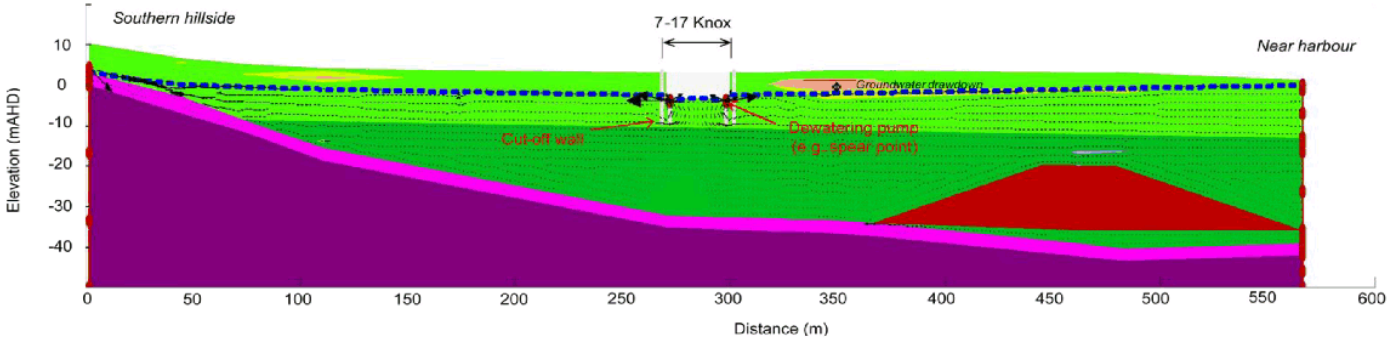
Figures B3 and B4

Level 2 29 Christie Street St Leonards NSW 2065 Australia T 61 2 9462 4700 F 61 2 9462 4710 E atnmail@ghd.com.au



B5. Geotechnical Long Section DD (initial condition)

Scale: 1:2000 (H); 1:1000 (V) for A3



B6. Future development (7-17 Knox St) – Geotechnical Long Section DD

Scale: 1:2000 (H); 1:1000 (V) for A3

- Unit 2B – Firm CLAY
- Unit 2C – Stiff to Hard CLAY
- Unit 3A – Very loose SAND
- Unit 3B – Loose to medium dense SAND
- Unit 3C – Dense to very dense SAND
- Unit 3D – Mix of Sand and Clay (Medium dense or Stiff)
- Unit 4A – Very soft to soft PEAT
- Unit 4C – Stiff to Hard PEAT
- Unit 5B – Extremely to highly weathered SANDSTONE
- Unit 5C – Moderately weathered to fresh SANDSTONE

GHD GEOTECHNICS

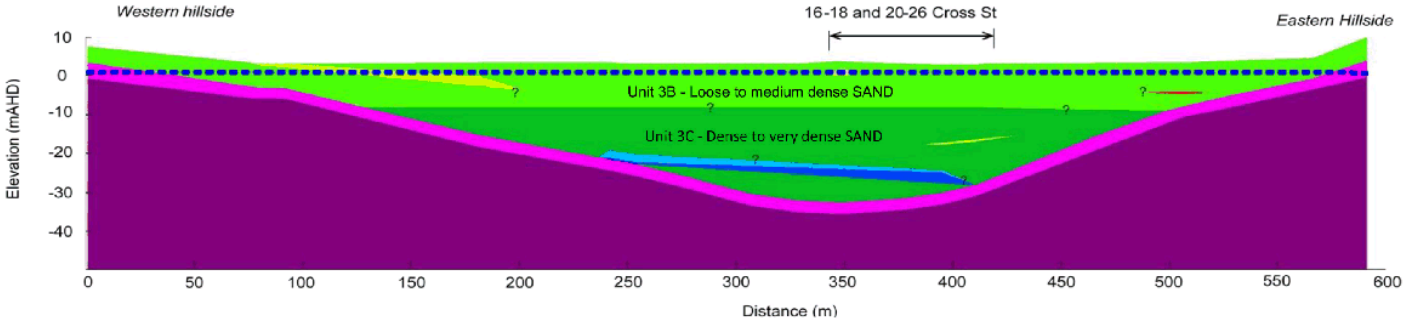
Woollahra Municipal Council
Double Bay - Hydrogeological and Geotechnical Study
Initial and lowered groundwater profile for geotechnical section DD

scale as shown date May 2020

job no 21-12512436
file ref 21-12512436-REP-1

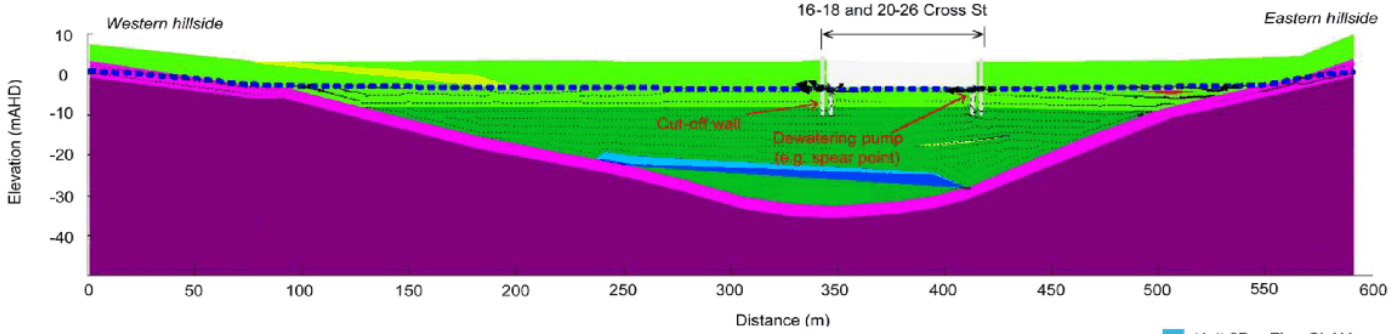
Figures B5 and B6

Level 2 29 Christie Street St Leonards NSW 2065 Australia T 61 2 9462 4700 F 61 2 9462 4710 E atnmail@ghd.com.au



B7. Geotechnical Long Section EE (initial condition)

Scale: 1:2000 (H); 1:1000 (V) for A3



B8. Future development (16-18 and 20-26 Cross St) – Geotechnical Long Section EE

Scale: 1:2000 (H); 1:1000 (V) for A3

- Unit 2B – Firm CLAY
- Unit 2C – Stiff to Hard CLAY
- Unit 3A – Very loose SAND
- Unit 3B – Loose to medium dense SAND
- Unit 3C – Dense to very dense SAND
- Unit 3D – Mix of Sand and Clay (Medium dense or Stiff)
- Unit 4A – Very soft to soft PEAT
- Unit 4B – Firm PEAT
- Unit 4C – Stiff to hard PEAT
- Unit 5B – Extremely to highly weathered SANDSTONE
- Unit 5C – Moderately weathered to fresh SANDSTONE

GHD GEOTECHNICS

Woollahra Municipal Council
Double Bay - Hydrogeological and Geotechnical Study
Initial and lowered groundwater profile for geotechnical section EE

scale as shown date May 2020

job no 21-12512436
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Figures B7 and B8

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Revision	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
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30 September 2020

Allan Coker
Director - Planning and Development
Woollahra Municipal Council
536 New South Head Road
Double Bay NSW 2028

Our ref: 24DJSZNHUEPC-1850682920-7
Your ref:

Dear Allan,

Double Bay - Hydrogeological Geotechnical Impacts
RE: Proposed Modifications to LEP, DCP and DA Guidelines

1 Introduction

As commissioned by Woollahra Municipal Council (Council), GHD Pty Ltd (GHD) has previously carried out the Geotechnical and Hydrogeological Study in relation to the potential impacts of groundwater alteration as a result of future developments to the existing properties in Double Bay. This study was conducted in 3 stages comprising the identification of study area, desktop review and the impact assessment ("Stage 3 assessment"). The outcomes of these studies are presented in our Groundwater and Geotechnical Assessment Report/GAR (ref. 12512436-6968-21 dated June 2020). Upon the completion of this study, GHD was requested to proceed with the subsequent Stage 4 work which involved the following:

- Review of Council's planning framework and guidelines to determine whether or not the controls and guidelines, which are currently in place to mitigate the potential impacts of the lowering of groundwater table on the existing structures, are adequate. The reviewed documents consisted of:
    - Local Environmental Plan (LEP) 2014
    - Development Control Plan (DCP) 2015
    - Council's Development Application (DA) Guide/DA guideline
- Recommend any changes and their precise nature, where required.

This letter report presents the description and rational for the proposed modifications. The draft changes proposed on the abovementioned documents are presented as the attachments of this cover letter for Council's review and consideration.

2 Proposed Modifications on Planning Framework and Guidelines

2.1 Overview

Based on our review and initial consultation with Council, we consider that a number of modifications are warranted on the abovementioned planning documents administered by Council. The proposed draft changes on the LEP 2014, DCP 2015 and DA Guideline are specifically denoted in Appendices A, B and

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C, respectively, in the attachments. GHD proposed these changes on the basis of outcomes of our Stage 3 assessment. In proposing the modifications, GHD has considered the following functionality of these documents based on information given in Council's website including the hierarchy of development rules (Figure 1 below):

- LEP 2014 is Council's main legal instrument for controlling development and guiding planning decisions made by Council to ensure that growth and development occurs in a planned and coordinated manner consistent with Council and community expectations and needs. It is understood that the LEP is the legally binding document which is available exclusively to the Council. Other legally-binding documents (e.g. State Environmental Planning Policies/SEPPs and Regional Environmental Plans/REPs) are not specific to the Council due to their wider jurisdictional coverage.
- DCP 2015 is the document used by Council in the assessment and determination of Development Applications. A DCP operates with the Council's LEP and contains detailed planning provisions.
- DA Guideline provides guidelines for the preparation of DA submission.

Figure 1 Hierarchy of Development Rules (source: Woollahra Municipal Council website)

Consequently, GHD has adopted the following review process and subsequent assessment:

- We have reviewed the documents in accordance with the hierarchy starting from LEP, followed by DCP and ending with DA Guidelines.
- In proposing the applicable controls, these controls should only be provided in the DCP. They should not be repeated elsewhere to prevent potential discrepancy if any of the 3 documents is to be modified.
- The outcome of previous assessments (including Stage 3 assessment) has been incorporated in our review and assessment.
- GHD has considered comments given by Council's engineers and provided during our presentation to the Council on 26 August 2020.
- Our review has not been carried out from a legal perspective. However, GHD will be able to assist Council in the finalisation of the documents by providing input from the engineering perspective.

The description of the proposed modifications along with the rationales are given in the following sections based on the order shown in the hierarchy of development rules.

2.2 Proposed Changes to Local Environmental Plan (LEP)

The impact of construction (including excavation) to the existing properties and utilities in the vicinity of the construction site could typically be due to several causes including ground movement as a direct result of excavation (loss of support), settlement as a result of groundwater drawdown induced by dewatering as well as the ground-borne vibration. As the current aims of LEP (Section 1.2 of LEP 2014) have not included any direct reference to the impact of groundwater drawdown during the construction on surrounding properties, it is important that these aims are revised to provide a clear reference. We propose to modify Item (m) of Section 1.2 (2). The proposed new sentence is shown below where the additional wording is shown using a red italics style.

> *(m) to minimise excavation and manage impacts, including the potential impact of the change in the groundwater regime induced by the development.*

Subsequent to above, the following changes to Points (1), (2) and (3) of Section 6.2 (Earthworks) are proposed in order to put emphasis on the consideration of groundwater dewatering as part of the development approval process by the consent authority.

> ***6.2 Earthworks***
>
> *(1) The objective of this clause is to ensure that earthworks and associated groundwater dewatering for which development consent is required will not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land.*
>
> *(2) Development consent is required for earthworks and associated groundwater dewatering unless —*
>
> ***(a)** the earthworks and associated groundwater dewatering are exempt development under this Plan or another applicable environmental planning instrument, or*
>
> *(b) the earthworks and associated groundwater dewatering are ancillary to development that is permitted without consent under this Plan or to development for which development consent has been given*
>
> *(3) In deciding whether to grant development consent for earthworks and associated groundwater dewatering (or for development involving ancillary earthworks), the consent authority must consider the following matters—*
>
> *(a) the likely disruption of, or any detrimental effect on, drainage patterns and soil stability in the locality of the development,*
>
> *(b) the effect of the development on the likely future use or redevelopment of the land,*
>
> *(c) the quality of the fill or the soil to be excavated, or both,*
>
> *(d) the effect of the development on the existing and likely amenity of ~~adjoining~~ surrounding properties,*
>
> *(e) the source of any fill material and the destination of any excavated material,*

(f) the likelihood of disturbing relics,

(g) the proximity to, and potential for adverse impacts on, any waterway, drinking water catchment or environmentally sensitive area,

(h) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.

GHD assumes that the above modifications in LEP will provide an overarching statement on the requirement of assessing and limiting the adverse impact of groundwater drawdown. The detailed provisions including controls are to be provided in the DCP.

2.3 Proposed Changes on Development Control Plan (DCP)

The proposed modifications in the DCP consist of new controls or the revisions of existing content which are relevant to the impact of groundwater drawdown within the Double Bay precinct. These are detailed in Table 1 below. The rationale for each proposed modification is also given. The party preparing and submitting the Development Application is denoted as "the Applicant".

We note that the proposed controls are applicable for the "below ground structures". The definition of "below ground structures" as proposed in the DCP is any excavation which is deeper than 1 m deep and assumed to have a potential to intersect the groundwater, unless proven otherwise by using site specific information.

Table 1 Details of Proposed Modifications in DCP and Rationales

Item No.	Section in DCP	Description of Proposed Modifications (proposed changes in *italics*) in the order of appearance in DCP	Rationale for Changes
1	General	Change the wording "*adjacent properties*" or "*adjoining properties*" to one of the followings: • *Surrounding properties*; • *Properties in Double Bay precinct*; or • *Properties in the vicinity of the development*. Note: Council should assess the above wording by considering the description given in the right column	Our Stage 3 assessment indicated that the groundwater drawdown as a result of the future development with dewatering could extend up to a considerable distance away from the development site. This observation was consistent with the recent measurement of groundwater levels made by Jeffery and Katauskas (JK) on the property located at 14 Forest Road which occurred concurrently with the excavation work at 4 – 8 Patterson Road. The two sites are at least 100 m apart. Consequently, the extent of impact of groundwater drawdown considered in the assessment of Development Application (DA) should not be confined to the *adjoining* properties.
2	Paragraph 3 of the general overview of Section D5.6.7	Delete the following sentence: *The groundwater level in the valley area is generally high and varies between RL 1.0 and RL 2.5.* Replace with following sentence: *The groundwater level generally varies throughout the Double Bay area and fluctuates with seasons.*	The range of groundwater fluctuations analysed in our Stage 3 assessment was wider than the range given in the DCP 2015. It is understood that this range was likely introduced as part of the earlier DCP (DCP 2002), which was based on the earlier sets of groundwater monitoring data. Usually, this range could vary with time or as a result of man-made activities (i.e. developments). GHD considers that it would be reasonable to request the Applicant to undertake the groundwater monitoring prior to the DA submission and during the construction. It could be beneficial if Council can maintain some operational groundwater wells/standpipes and conduct periodic monitoring to obtain information on the range of groundwater levels. This information would be useful for the internal record, assessing the DA and checking the compliance of any ongoing construction dewatering.
3	New Control C1 in Section D5.6.7	Add new sentence for Control C1: *All development must satisfy the above design objectives*	This control is introduced to impose the overarching design objectives to the Applicant.

Item No.	Section in DCP	Description of Proposed Modifications (proposed changes in *italics*) in the order of appearance in DCP	Rationale for Changes
4	New Control C2 in Section D5.6.7	Add new sentence for Control C2: *Development Applications must include a design statement and supporting drawings (if necessary) that show the design measures proposed to minimise risk to ensure that no adverse impacts will occur.*	As part of the DA submission, the design reports and drawings should be submitted by the Applicant. It is important that approach and assumptions are clearly stated. Drawings should be included to show clearly the adopted design measures, where applicable, for examples: recharge/reinjection well configurations, cut-off wall, locations of monitoring wells/standpipes, etc.
5	New Control C3 in Section D5.6.7	Add new sentence for Control C3: *Geotechnical and Hydrogeological reports with supporting design statements must be submitted with all development applications which include below ground structures.*	As per above (Item 4). The Geotechnical and Hydrogeological reports should form part of the design reports attached in DA submission.
6	New Control C4 in Section D5.6.7	Add new sentence for Control C4: *A qualified and experienced geotechnical and/or hydrogeological engineer must prepare the reports.* *The reports must include a site specific risk assessment matrix with appropriate definitions for qualitative measures of likelihood and consequences for assessing the risk of damage to existing developments by the new development.*	The preparation of Geotechnical and Hydrogeological reports is expected to involve not only technical works but also the identification and assessment of all risks as well as the proposal of appropriate measures to control/ mitigate these risks. Hence, it is imperative that the reports are prepared by qualified and experienced engineers who have relevant competency in undertaking such assessments, i.e. qualified geotechnical engineer.
7	New Control C5 in Section D5.6.7	Add new sentence for Control C5: *Where groundwater is present and dewatering is likely to occur on the site the following measures must be implemented:* • *A minimum of two piezometers must be located within the site or in close proximity to it*	Standpipe piezometers (or groundwater monitoring wells) should be used to monitor the groundwater levels at various locations at any given time. These measurements are conducted for following purposes: • Monitor the pre-construction groundwater levels prior to the DA submission. • Monitor the groundwater levels during the construction when the dewatering takes place. • Monitor the groundwater levels after the dewatering system is turned off.

Item No.	Section in DCP	Description of Proposed Modifications (proposed changes in *italics*) in the order of appearance in DCP	Rationale for Changes
		• *Where piezometers are established in the footpath area a permanent installation with a cast iron cover and concrete surround must be provided* • *Existing piezometers must be used where they are available* • *The groundwater level monitoring must be undertaken using either electronic data loggers, or manual monitoring on regular time intervals commensurate with the expected groundwater level fluctuations. If manual monitoring is employed, daily reading will usually be required. This will allow fluctuations in the site groundwater level to be calibrated against natural fluctuations in the groundwater level.*	We consider that it is reasonably practical to request the Applicant to install at least 2 standpipes within the site or in close proximity to it where full access is available to the Applicant or its representative. These standpipes should be positioned behind the excavation line or shoring wall to avoid damaging them during the excavation. As per Item 4 above, the locations of these standpipes and their configurations (screen depths, lengths, etc) should be shown in the relevant reports and drawings relative to the excavation footprint, dewatering spear points and other important features (e.g. reinjection wells, etc), as applicable. It is prudent that groundwater levels at locations away from the site are monitored during construction to assess the extent of the dewatering impact. There could be possible limitation on available space outside the development site where the Applicant is able to (or allowed to) install and monitor the standpipes. There are some options that Council could consider: • Council imposes a requirement where the Applicant will need to install new standpipe piezometers on "case by case" basis. • Council maintains a number of operational monitoring wells/standpipes within Double Bay precinct which can be used for the purpose of groundwater monitoring. Council can carry out the monitoring independently or may decide to allow the Applicant to access those standpipes for data collection prior to or during construction. The above option should be determined by Council. If Council opts to maintain a number of operational standpipes, it is advisable that a qualified engineer is consulted in relation to the monitoring method and regime to suit Council's program. It is usually convenient that a data logger is installed in each standpipe to allow for the regular monitoring (e.g. every 6 hours, daily, weekly or other intervals over a specific duration depending on the logger capacity). The readings collected in the data logger can be downloaded manually or transmitted remotely via data telemetry.

Item No.	Section in DCP	Description of Proposed Modifications (proposed changes in *italics*) in the order of appearance in DCP	Rationale for Changes
8	New Control C6 in Section D5.6.7	Add new sentence for Control C6: *Temporary changes to the groundwater level, due to construction, will not exceed 0.2 m from the average monitored pre-construction groundwater level unless calculations using the results of specific field testing, support a greater change and demonstrate that the change will not induce settlements greater than the characteristic surface movement of a Class S site as defined in Table 2.3 of Australian Standard AS2870-2011.*	***Limit of Temporary Groundwater Changes due to Dewatering*** Based on our Stage 3 assessment, a drawdown of about 200 mm could induce a settlement of 15 mm in some locations within the Double Bay precinct. The allowable settlement of 15 mm was recommended in our Stage 3 report on the basis of the equivalence of Class S site as defined in AS2870-2011. This allowable settlement was proposed to limit the risk of any damage relating to no worse than a typical "aesthetic" damage. Because the groundwater drawdown caused by dewatering at a given site could extend over a long distance, the minimum drawdown of 200 mm has been recommended for the entire Double Bay precinct. Prior to DA submission, the Applicant should be requested to undertake pre-construction groundwater monitoring to obtain the range of groundwater levels over a period. This monitoring should not be undertaken in concurrence with any ongoing event of dewatering. Then, the average of the monitored range of groundwater levels should be taken as a baseline level. Although a minimum period of pre-construction monitoring is advisable to be at least 6 months, some developers may not have adequate time or resources to undertake this monitoring. Typically, a longer monitoring duration will benefit both the Applicant and the Council as more data and wider range of levels will be available for the assessment. The following points should be highlighted in relation to Control C6: • The proposed 200 mm groundwater drawdown limit has taken into consideration the critical scenario when the baseline level obtained from pre-construction monitoring coincides with the historic low groundwater level, whereby the additional lowering of 200 mm brings the groundwater to below the lowest level which has occurred in the past. • To limit the settlement of any recently constructed buildings (or old buildings with newly rendered walls) to less than 15 mm, the proposed drawdown limit is considered to be suitably applied even when the current water level is within the historical range of groundwater fluctuation.

Item No.	Section in DCP	Description of Proposed Modifications (proposed changes in *italics*) in the order of appearance in DCP	Rationale for Changes
			• Owing to the sandy ground conditions within the Double Bay area, the lowering of groundwater caused by dewatering at a given construction site is likely to extend over a long distance away of the dewatering source. Therefore, it is prudent to adopt a blanket 200 mm drawdown limit across the Double Bay area in order to limit the influences on housings within the settlement susceptible areas such as to the south of Kiaora Lane where the compressible peat layers was observed to be extensive. As presented in our GAR, it is highlighted that a number of design measures may be available to limit the groundwater drawdown whilst allowing for the dewatering. These measures include the provision of groundwater recharge/reinjection wells, fully sealed excavation, etc. These design measures, if introduced, should be assessed and presented in the reports lodged as part of the DA submission. ***Comparison between the newly proposed groundwater drawdown limit and the existing limits stated in the current DA guidelines*** There are four drawdown limits given in the current DA guidelines that are associated with the different conditions. They are: (a) temporary change to the groundwater level during construction will not exceed 300 mm. (b) within a shadow zone of an earlier construction, temporary changes in the level of the water table during construction will not exceed 150 mm. (c) permanent change in the water table due to the carrying out of the development will not exceed 200 mm. (d) within a shadow zone of an earlier construction, the permanent change in the water table due to the carrying out of the development will not exceed 100 mm. We propose to replace the above four limits by a single drawdown limit of 200 mm on the basis of the following:

Item No.	Section in DCP	Description of Proposed Modifications (proposed changes in *italics*) in the order of appearance in DCP	Rationale for Changes
			• The proposed new limit is slightly more stringent than the current temporary drawdown limit of 300 mm for condition (a). • For condition (b) where an earlier construction dewatering has already caused a temporary groundwater drawdown of 300 mm, any further developments within the area can still exercise a groundwater drawdown of up to 150 mm. The newly proposed drawdown limit of 200 mm is however a non-negotiable total limit. Where a new development with dewatering is to occur while another construction dewatering is ongoing, the new development will not be able to dewater any further if a total drawdown limit of 200 mm has been reached by the ongoing construction. • The drawdown limits for conditions (c) and (d) for the permanent ground water changes are no longer considered to be relevant to the DCP. Based on our Stage 3 assessment presented in the GAR, the cumulative impact of the basements (providing partial depth cut-off or full depth cut-off) in long term within the residential and commercial area was not expected to induce drawdown of more than 200 mm except for a localised area to the north of Double Bay Centre, but the induced settlement for this area is less than 15 mm because of the absence of compressible peat layer in this localised area. ***Analysis/Calculations using Site Specific Data*** As outlined above, the ground conditions could have a significant influence on the groundwater drawdown and induced settlement. The limiting drawdown of 200 mm was recommended on the basis of areas which were assessed to have more sensitivity of settlement response to the groundwater drawdown. In the GAR, it was noted that ground conditions vary across the Double Bay precinct. To give a degree of flexibility, the Applicant can be allowed to cause more drawdown if it can be demonstrated (*by means of an engineering analysis*) that additional drawdown will not result in settlement greater that the characteristic surface movement related to Class S site (AS2870-

Item No.	Section in DCP	Description of Proposed Modifications (proposed changes in *italics*) in the order of appearance in DCP	Rationale for Changes
			2011). This analysis should only be conducted by using the results of specific field testing comprising adequate geotechnical/hydrogeological investigation and laboratory testing. It is advisable that Council seeks an advice from qualified personnel to assist in assessing the analysis submitted by the Applicant.
9	New Control C7 in Section D5.6.7	Add new sentence for Control C7: *As required by Council's Guidelines, geotechnical and hydrogeological reports must contain an Implementation Plan, including a Monitoring Program, Contingency Plan and Construction Methodology..*	To ensure that the design objectives are satisfied and all controls implemented, it should be made compulsory that an Implementation Plan is developed and submitted along with or within the Geotechnical and Hydrogeological Report. This plan should present the summary of construction methodology and monitoring program. A contingency plan should also be included to outline the steps which need to be conducted to respond to any unforeseen adverse situation (e.g. situation involving potential structure damage due to excessive drawdown).

2.4 Proposed Changes on DA Guidelines

In the DA guidelines, the modifications are generally proposed to maintain consistency with the proposed changes in DCP, for example: the replacement of terminology "adjoining properties" by "surrounding properties". In the sub-section "Investigation", a change is proposed on the third point of "the required level of investigation" which results in 2 options of method for obtaining continuous strength log of the subsurface soils for the development with below ground structures:

- Option 1 employs Cone Penetration Test (CPT) with or without pore pressure measurement to allow for the assessment of thicker soil profile (>3 m) or soil profile with compressible layers (e.g. soft to firm peat, soft to firm clay).
- Option 2 employs Dynamic Cone Penetration (DCP) test with can be typically undertaken by using portable equipment. This test can be employed for soil profile comprising soil with a total thickness of no more than 3 m and without compressible soil layers.

To obtain the information regarding the soil type, it is recommended that the borehole investigation is completed prior to the undertaking of CPT or DCP.

In the sub-section "Hydrogeology", the majority of existing content is proposed to be removed as they have been proposed for insertion in the DCP and should not be repeated in the DA guidelines.

3 Other Matters

It is our understanding that the matter relating to the approval for the undertaking of dewatering may potentially involve WaterNSW. Based on our experience, WaterNSW is currently responsible for reviewing and approving/rejecting the application for the temporary dewatering licence for the developments. It is understood that this is associated with "Water Supply Works" approval administered in accordance with Water Management Act 2000. GHD appreciates that Council may not be able to influence the internal procedure within WaterNSW. However we understand that Council will be able to determine the outcome of Development Application. Based on information supplied by Council, we understand that a similar clause to the one proposed for LEP (refer Section 2.2 above) has been incorporated in some form in the LEP documents for Hunter's Hill council and Northern Beaches council (including Manly). Therefore, we consider that the proposed modifications to the LEP, DCP and DA guidelines above can be implemented within the Council's process of approving the DA.

GHD understands that Council is currently in the process of consulting legal counsel pertinent to the proposed modification of LEP. It is also understood that Council is reviewing the proposed modifications in the DCP and DA guidelines. GHD can work with Council in finalising the proposed modifications.

Sincerely
GHD

Bosco Poon
Technical Director - Geotechnical
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Appendix A – Proposed Modification to Local Environmental Plan (LEP)

Woollahra Local Environmental Plan 2014

New South Wales

Part 1 Preliminary

1.1 Name of Plan

This Plan is *Woollahra Local Environmental Plan 2014*.

1.1 AA Commencement

This Plan commences 4 months after it is published on the NSW legislation website.

1.2 Aims of Plan

(1) This Plan aims to make local environmental planning provisions for land in Woollahra in accordance with the relevant standard environmental planning instrument under section 3.20 of the Act.

(2) The particular aims of this Plan are as follows—

(a) to ensure that growth occurs in a planned and co-ordinated way,

(b) to promote the management, development, conservation and economic use of property,

(c) to provide for an appropriate balance and distribution of land for commercial, retail, residential and tourist development and for recreation, open space, entertainment and community facilities,

(d) to provide greater population densities in and around centres that are well serviced by public transport,

(e) to facilitate opportunities, in suitable locations, for diversity in dwelling density and type,

(f) to conserve built and natural environmental heritage,

(g) to protect amenity and the natural environment,

(h) to minimise and manage stormwater and flooding impacts,

(i) to protect and promote public access to and along the foreshores,

(j) to promote a high standard of design in the private and public domain,

(k) to minimise and manage traffic and parking impacts,

(l) to ensure development achieves the desired future character of the area,

(m) to minimise excavation and manage impacts, including the potential impact of the change in the groundwater regime induced by the development.

1.3 Land to which Plan applies

This Plan applies to the land identified on the Land Application Map.

1.4 Definitions

The Dictionary at the end of this Plan defines words and expressions for the purposes of this Plan.

1.5 Notes

Notes in this Plan are provided for guidance and do not form part of this Plan.

1.6 Consent authority

The consent authority for the purposes of this Plan is (subject to the Act) the Council.

1.7 Maps

(1) A reference in this Plan to a named map adopted by this Plan is a reference to a map by that name—

(a) approved by the local plan-making authority when the map is adopted, and

(b) as amended or replaced from time to time by maps declared by environmental planning instruments to amend or replace that map, and approved by the local plan-making authority when the instruments are made.

(1AA) (Repealed)

(2) Any 2 or more named maps may be combined into a single map. In that case, a reference in this Plan to any such named map is a reference to the relevant part or aspect of the single map.

(3) Any such maps are to be kept and made available for public access in accordance with arrangements approved by the Minister.

(4) For the purposes of this Plan, a map may be in, and may be kept and made available in, electronic or paper form, or both.

Note. The maps adopted by this Plan are to be made available on the official NSW legislation website in connection with this Plan. Requirements relating to the maps are set out in the documents entitled *Standard technical requirements for LEP maps* and *Standard requirements for LEP GIS data* which are available on the website of the Department of Planning and Environment.

1.8 Repeal of planning instruments applying to land

(1) All local environmental plans and deemed environmental planning instruments applying only to the land to which this Plan applies are repealed.

Note. The following local environmental plans are repealed under this provision—

Woollahra Local Environmental Plan 1995

(2) All local environmental plans and deemed environmental planning instruments applying to the land to which this Plan applies and to other land cease to apply to the land to which this Plan

the works, and

(b) the preliminary assessment has been provided to the consent authority and the consent authority has confirmed the assessment by notice in writing to the person proposing to carry out the works.

(5) Despite subclause (2), development consent is not required under this clause for the carrying out of any of the following works by a public authority (including ancillary work such as excavation, construction of access ways or the supply of power)—

(a) emergency work, being the repair or replacement of the works of the public authority, required to be carried out urgently because the works have been damaged, have ceased to function or pose a risk to the environment or to public health and safety,

(b) routine maintenance work, being the periodic inspection, cleaning, repair or replacement of the works of the public authority (other than work that involves the disturbance of more than 1 tonne of soil),

(c) minor work, being work that costs less than $20,000 (other than drainage work).

(6) Despite subclause (2), development consent is not required under this clause to carry out any works if—

(a) the works involve the disturbance of less than 1 tonne of soil, and

(b) the works are not likely to lower the watertable.

6.2 Earthworks

(1) The objective of this clause is to ensure that earthworks and associated groundwater dewatering for which development consent is required will not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land.

(2) Development consent is required for earthworks and associated groundwater dewatering unless—

(a) the earthworks and associated groundwater dewatering are exempt development under this Plan or another applicable environmental planning instrument, or

(b) the earthworks and associated groundwater dewatering are ancillary to development that is permitted without consent under this Plan or to development for which development consent has been given.

(3) In deciding whether to grant development consent for earthworks and associated groundwater dewatering (or for development involving ancillary earthworks), the consent authority must consider the following matters—

(a) the likely disruption of, or any detrimental effect on, drainage patterns and soil stability in the locality of the development,

(b) the effect of the development on the likely future use or redevelopment of the land,

(c) the quality of the fill or the soil to be excavated, or both,

(d) the effect of the development on the existing and likely amenity of ~~adjoining~~ surrounding properties,

(e) the source of any fill material and the destination of any excavated material,

(f) the likelihood of disturbing relics,

(g) the proximity to, and potential for adverse impacts on, any waterway, drinking water catchment or environmentally sensitive area,

(h) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.

Note. The *National Parks and Wildlife Act 1974*, particularly section 86, deals with harming Aboriginal objects.

6.3 Flood planning

(1) The objectives of this clause are as follows—

(a) to minimise the flood risk to life and property associated with the use of land,

(b) to allow development on land that is compatible with the land's flood hazard, taking into account projected changes as a result of climate change,

(c) to avoid significant adverse impacts on flood behaviour and the environment.

(2) This clause applies to—

(a) land identified as "Flood planning area" on the Flood Planning Map, and

(b) other land at or below the flood planning level.

(3) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that the development—

(a) is compatible with the flood hazard of the land, and

(b) will not significantly adversely affect flood behaviour resulting in detrimental increases in the potential flood affectation of other development or properties, and

(c) incorporates appropriate measures to manage risk to life from flood, and

(d) will not significantly adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses, and

(e) is not likely to result in unsustainable social and economic costs to the community as a consequence of flooding.

(4) A word or expression used in this clause has the same meaning as it has in the *Floodplain Development Manual (*ISBN 0 7347 5476 0*)* published by the NSW Government in April 2005, unless it is otherwise defined in this clause.

(5) In this clause—

flood planning level means the level of a 1:100 ARI (average recurrent interval) flood event, plus 0.5 metre freeboard.

Appendix B – Proposed Modification to Development Control Plan (DCP)

D5.6.7 Geotechnology and hydrogeology

Council will ~~normally~~ require geotechnical and hydrogeological reports for development applications which include below ground structures.

This is because the subsurface conditions within the Double Bay Commercial Centre generally comprise water charged alluvial sediments to great depth. The alluvium is predominantly sand which is typically loose near the surface but may at some locations be interlayered with soft compressible clay or peat bands at depth.

~~The groundwater level in the valley area is generally high and varies between RL 1.0 and RL 2.5.~~ The groundwater level generally varies throughout the Double Bay area and fluctuates with the seasons.

Any proposed development with below ground structures must consider the sub-surface conditions and the effects of construction on ~~adjacent~~ surrounding properties. In addition, those which are likely to extend below the level of seasonal fluctuations in the groundwater table, must also consider the effect of any changes induced in the sub-surface water levels and the groundwater flow patterns on ~~adjacent~~ surrounding properties. Unless site specific information exists to the contrary, excavations deeper than 1m must be assumed to have this potential to intersect the groundwater level and shall be considered as below ground structures.

Council's principal objective is to ensure there are no adverse geotechnical and hydrogeological impacts on any surrounding properties and infrastructure as a result of development, during and after construction. Typically, adverse geotechnical impacts may include vibration induced settlements from construction methods and equipment and inadequate support of adjacent land during and after construction. Typically adverse hydrogeological impacts may include settlement induced by changes in the groundwater level and seepage problems.

Objectives

Buildings must be designed and constructed with appropriate support and retention systems to ensure that:

O1 There will be no ground settlement or movement, during and after construction, sufficient to cause an adverse impact on ~~adjoining~~ surrounding properties and infrastructure.

O2 There will be no change to the ground water level, during and after construction, sufficient to cause an adverse impact on surrounding properties and infrastructure.

O3 Vibration during construction is minimised or eliminated to ensure no adverse impact on surrounding properties and infrastructure.

O4 The risk of damage to adjacent existing property and infrastructure by the new development will be reduced to a level no greater than that from an event with an "unlikely" likelihood of occurrence and "minor" consequence.

Note: "adverse impact" means any damage caused to the improvements on properties by the demolition, excavation or construction on the development site.

Controls

C1 All development must satisfy the above design objectives.

C2 Development applications must include a design statement and supporting drawings that show the design measures proposed to minimise risks and to ensure that no adverse impacts will occur.

C3 ~~Excavation below 1m is accompanied by a geotechnical report and a structural report to demonstrate that the works will not have any adverse effect on the neighbouring structures.~~ Geotechnical and hydrogeological reports with supporting design statements must be submitted with all development applications which include below ground structures.

Note: Council may identify other circumstances where these reports are required. All reports must be prepared in accordance with Council's guidelines. Council may also require the preparation and submission of a pre-commencement dilapidation report for properties neighbouring the development.

~~Development applications include a design statement and supporting drawings (if necessary) that show the proposed design measures minimise risk and ensure that no adverse impacts will occur.~~

C4 A qualified and experienced geotechnical and/or hydrogeological engineer must prepare the reports. The reports must include a site specific risk assessment matrix with appropriate definitions for qualitative measures of likelihood and consequences for assessing the risk of damage to existing developments by the new development.

C5 Where groundwater is present and dewatering is likely to occur on the site the following measures must be implemented:

- A minimum of two piezometers must be located within the site or in close proximity to it
- Where piezometers are established in the footpath area a permanent installation with a cast iron cover and concrete surround must be provided
- Existing piezometers must be used where they are available
- The groundwater level monitoring must be undertaken using either electronic data loggers, or manual monitoring on regular time intervals commensurate with the expected groundwater level fluctuations. This will allow fluctuations in the site groundwater level to be calibrated against natural fluctuations in the groundwater level.

C6 *Temporary* changes to the groundwater level, due to construction, must not exceed 0.2 m from the average monitored *pre-construction groundwater level* unless calculations using the results of specific field testing, support a greater change and demonstrate that the change will not induce settlement greater than the characteristic surface movement of a Class S site as defined in Table 2.3 of Australian Standard AS2870-2011.

C7 As required by Council's Guidelines, geotechnical and hydrogeological reports must contain an Implementation Plan, including a Monitoring Program, Contingency Plan and Construction Methodology.

The applicant is advised to have an appropriate current insurance policy to cover the reinstatement/repair of damages to surrounding properties as a result of new development. In addition, statements for the design and construction of the below ground structures must be supplied from a suitably qualified and experienced geotechnical or hydrogeological engineer. The design statement must confirm that the design of the below ground structures has been undertaken in accordance with approved standards (such as Australian or British Standards, etc.) where applicable. The engineer must also provide a certificate to confirm that the completed structure conforms to the design.

Appendix C – Proposed Modification to the Development Application (DA) Guidelines for Geotechnical and Hydrogeological Reports

Attachment 6
Geotechnical and Hydrogeological Reports

Guidelines for geotechnical and hydrogeological reports

Introduction

Guidelines have been prepared to assist applicants, architects and engineers to understand our requirements for the preparation of geotechnical and hydrogeological reports.

If your development proposal is on land to which Chapter D5 Double Bay Centre and Chapter C1 Paddington Heritage Conservation Area of the Woollahra Development Control Plan 2015 applies and includes below ground structures, you must submit geotechnical and hydrogeological reports which contain the information set out in these guidelines. For the purpose of these guidelines, below ground structures means excavation to a depth greater than 300mm below the existing groundwater level, for excavations within 900mm of the boundary, or otherwise greater than 1.0m in depth.

A geotechnical and hydrogeological report may also be required in the areas of high water table such as Rushcutters Bay, Rose Bay, Watsons Bay as well as other sites requiring excavation

Applicants are advised to discuss these requirements with our Technical Services Division prior to the submission of a development application.

Objective

To ensure there are no adverse geotechnical or hydrogeological impacts on any surrounding property and infrastructure as a consequence of the carrying out of development.

Design Principles

Buildings must be designed and constructed with appropriate support and retention systems to ensure that:

- there will be no ground settlement or movement, during and after construction, sufficient to cause an adverse impact on ~~adjoining~~ surrounding properties and infrastructure.
- there will be no change to the ground water level, during and after construction, sufficient to cause an adverse impact on surrounding properties and infrastructure.
- vibration during construction is minimised or eliminated to ensure no adverse impact on surrounding properties and infrastructure
- the risk of damage to adjacent existing property and infrastructure by the new development will be reduced to a level no greater than that from an event with an 'unlikely' likelihood of occurrence and 'minor' consequence.
- all below ground structures are fully sealed to prevent the entry of all ground water such that they are fully tanked and no on-going dewatering of the site is required.

Adverse Impact Definition

Generally, an adverse impact can be assumed to be any damage caused to the improvements on ~~adjoining~~ surrounding properties by the demolition, excavation or construction on the development site.

Development Application - Report Requirements

Geotechnical and Hydrogeological reports must be submitted with all development applications and address the following items. The extent to which each of the items is addressed must be determined having regard to the nature of the development, site investigations and sensitivity of the surrounding properties and infrastructure. The author of the report must be satisfied as to the information provided and must be satisfied that, as a consequence of the carrying out of the development, the objectives and design principles of these guidelines will be satisfied.

General

Reports must be site specific and relate directly to the proposed development. Previous reports and data may be utilised or provided as supplementary information where certified by the author of the report as suitable for the new development.

A qualified and experienced geotechnical and/or hydrogeological engineer must prepare the reports

Should the architectural drawings be changed from a previous application or during the DA process then Council may require a revised geotechnical and hydrogeological report to be submitted

The reports must include a site specific risk assessment matrix with appropriate definitions for qualitative measures of likelihood and consequences for assessing the risk of damage to existing developments by the new development

Visual inspection and use of geological mapping alone will not be satisfactory for geotechnical and/or hydrogeological reports.

Investigations

Reports must demonstrate:

- investigation of geotechnical conditions below the proposed depth of excavation and/or founding depth for the development. Generally, the depth to bedrock should be established. As a minimum the following level of investigation is required:
  - a minimum of 2 boreholes extended to at least the likely depth of influence of construction for any site
  - Standard Penetration testing within the boreholes. The tests must be carried out at regular depth intervals not exceeding 1.5m in the upper 10m and 3m below 10m depth
  - If below ground structure is proposed, the investigation should also target at least one continuous strength log of the subsurface soils ~~by Cone Penetrometer Testing (CPT)~~ to supplement the information from the boreholes. As a guide, the following tests can be considered for the continuous strength log:
    - Cone Penetration Test (CPT) where the soil strata as proven during the borehole investigation shows the presence of compressible soil (soft to firm clay/clayey soil; soft to firm peat/peaty soil) or where the soil strata has a total thickness of greater than 3 m.
    - Dynamic Cone Penetration (DCP) where the soil strata as proven during the borehole investigation comprises soil with a total thickness of no more than 3 m and without

compressible soil layers.

- that the presence of groundwater has been investigated. Where present, the *pre-construction groundwater level* must be measured and monitored. (A longer historical record of natural groundwater fluctuations will be valuable as part of the implementation program. A minimum monitoring period of six months is recommended).
- that where groundwater is present and dewatering is likely to occur on the site, the piezometric monitoring of the groundwater will be required as per the requirements given in Clause D5.6.7 of the Development Control Plan.
  - ~~a minimum of two piezometers will be located within the site or in close proximity to it.~~
  - ~~a minimum of 2 piezometers will be located off site, as close to the site as possible, but outside the zone of influence of groundwater level disturbance by the new development.~~
  - ~~where established in the footpath area a permanent installation with a cast iron cover and concrete surround is required.~~

  ~~The groundwater level monitoring must be undertaken using either electronic data loggers, or manual monitoring on regular time intervals commensurate with the expected groundwater level fluctuations. This will allow fluctuations in the site groundwater level to be calibrated against natural fluctuations in the groundwater level.~~
- that investigations have been carried out to determine the design parameters appropriate to the development and site. This could include:
  - foundations
  - permanent and temporary supports
  - settlements
  - retaining walls
  - groundwater levels
  - batter slopes
  - vibration
  - dewatering including seepage and off site disposal rates.

Support and Retention

Reports must:

- include recommendations as to appropriate temporary and permanent site support and retention measures.
- predict ground settlements in areas adjacent to the development site resulting from temporary and permanent site support and retention measures and demonstrate that settlement will have no adverse impact on the surrounding properties and infrastructure.
- demonstrate that permanent earth or rock anchors will not be required on or below any road reserve or other Council property. Council may accept the use of temporary anchors if the applicant can adequately demonstrate that the use of temporary anchors would sufficiently improve the safety of the retention of excavations that may be proposed. The installation of such temporary anchors must comply with the Council's Rock Anchor Policy. (Use of permanent and/or temporary anchors on private property is not allowed without written confirmation by the property owners).
- show that permanent support and retention measures will be set back a minimum of 900mm (or minimum as advised in the relevant Development Control Plan) from the adjacent property boundaries. This is aimed at minimising the localised damage created by the installation of retention systems and to provide a corridor for perimeter drainage.

- It may be possible for a new development to be built up to the boundary on a merit-based assessment of the development. This assessment will require the geotechnical/hydrogeological report to confirm the structural adequacy of any adjacent structure including any necessary additional support for the structure~~ as well as suitable groundwater drainage systems as outlined in Hydrogeology~~.

Hydrogeology

Reports must demonstrate:

- the method and rate of dewatering, including the location and disposal of site dewaterings. This includes seepage and stormwater trapped in excavations.
- that there will be no adverse impact on surrounding property and infrastructure as a result of changes in local hydrogeology (behaviour of groundwater) created by the method of construction. This includes the short-term effects resulting from construction practices, including the method and rate of dewatering and the long-term effects resulting from the impediment of the critical groundwater flow path due to support and retention of property and infrastructure after construction has been completed.
- that *temporary* changes to the groundwater level, during construction, will be kept within the limits as specified in Clause D5.6.7 of the Development Control Plan.~~historical range of natural groundwater fluctuations. Where data is limited or unavailable, reports must demonstrate that changes in the level of the natural water table, due to construction, will not exceed 0.3m unless calculations using the results of the site specific field testing, supporting a greater change can be provided and can demonstrate no adverse impact to surrounding properties and infrastructure.~~
- ~~that in areas where the construction affects existing development within a shadow zone of an earlier construction, *temporary* changes in the level of the water table during construction will not exceed 0.15m, unless calculations using the results of the site specific field testing, supporting a greater change are provided and demonstrate no adverse impact to surrounding properties and infrastructure. The temporary shadow zone during dewatering should be taken as an area within 20m of the earlier construction, unless site specific calculations can demonstrate that a different lateral extent should be adopted.~~
- ~~that where data is limited or unavailable, the *permanent* change in the level of the natural water table due to the carrying out of the development willnot exceed 0.2m unless calculations using the results of the site specific field testing, supporting a greater change can be provided and can demonstrate no adverse impact to surrounding property and infrastructure.~~
- ~~that in areas where the construction affects existing development within a shadow zone of an earlier construction, the *permanent* change in the water table due to the carrying out of the development will not exceed 0.1m. The permanent shadow zone of an earlier construction with full penetrating cut-off walls but without appropriate subsurface drainage should be taken as a distance equal to one building width along the groundwater flow path both in front and behind the earlier construction, unless site specific calculations can demonstrate that a different lateral extent should be adopted.~~
- ~~that groundwater drainage systems have been designed to transfer groundwater through or under the proposed development without a change in the range of the natural groundwater level fluctuations.~~

- that all below ground structures are fully sealed to prevent the entry of all ground water such that they are fully tanked and no on-going dewatering of the site is required.

For short term dewatering during construction a separate approval is required from Council under S138 of the *Roads Act 1993* where the water is to be discharged to the public road.

Where an impediment to the critical natural groundwater flow path is created as a result of the nature of the construction methods utilised and/or the bulk of the below ground structure, artificial drains such as perimeter drains and through drainage may be utilised. These systems may only be utilised where it can be demonstrated that the natural groundwater flow regime is re-established both upstream and downstream of the site without any adverse effects on surrounding property or infrastructure.

- ~~that groundwater drainage systems are designed for a design life of 100 years.~~
- ~~that the groundwater drainage system is designed to be easily maintained. Council will require a positive covenant to ensure the continued functioning and maintenance of the approved groundwater system. Laboratory tests to approved standards should be carried out to determine the clogging potential of any proposed filters used in the design of the drainage system for the new development.~~
- ~~that where there is the potential for a damming effect created by several consecutive below ground structures, this potential impact has been the subject of hydrogeological modelling to demonstrate no adverse impact on the surrounding property or infrastructure. The extent of modelling must consider the potential for future development to extend the damming effect and must, as a minimum, extend between street blocks.~~
- ~~that where below ground structures are in close proximity to each other (typically less than 3m) no allowance for natural groundwater flow through these narrow corridors has been included in the design of perimeter or through drainage.~~

Vibration

Reports must:

- demonstrate that there will be no adverse impact on the surrounding properties and infrastructure as a result of vibration created by the method of construction used for the development. As a minimum, reports must demonstrate compliance with the requirements of AS2187.2 Appendix J.
- recommend appropriate plant, equipment and construction methods.

Implementation Plan

The Implementation Plan will normally be part of the Conditions of Consent for the development and generally are not required to be submitted in association with the DA.

The implementation plan will comprise of the *monitoring program*, *contingency plan* and *construction methodology*.

Monitoring Program

The geotechnical and hydrogeological monitoring program for the development should include pre-set acceptable limits for the variation of:

- settlements associated with temporary and permanent structures;
- deflection or movement of retaining mechanisms (shoring, braces, etc.)
- vibration in accordance with AS 2187.2 Appendix J, including acceptable velocity of vibration;
- groundwater changes calibrated against natural groundwater fluctuations.

It should also:

- include the location and type of monitoring systems to be utilised;
- include recommended hold points to allow for the inspection and certification of geotechnical and hydrogeological measures by a geotechnical engineer.
- relate back to the contingency plan should the present acceptable limits for variation be exceeded.

Contingency Plan

A *Contingency Plan* must be prepared for situations where the monitoring shows the pre-set acceptable limits for the geological and hydrogeological parameters are exceeded. This could include details of measures to be adopted for restoring groundwater, additional support or bracing, remedial works and alternative procedures. Where possible, the contingency measures should be linked back to the monitoring program to enable early warning and time for preventative measures to be implemented

Construction Methodology

The construction methodology must address all aspects of the construction process as it relates to the geotechnical and hydrogeological requirements. Generally, this will include the method and staging the excavation, installing monitoring devices, support and retention measures, groundwater control, retention of groundwater flow paths and reinstatement. It may also include appropriate plant and equipment to minimise vibration, localised damage from installation of supports and noise.

Further Investigations

Reports may include recommendations for further investigations to be carried out prior to construction. Each case will be consider on their merits and whether or not further investigations are required prior to the granting of development consent or whether the additional information can be provided after the granting of consent but before the issue of a construction certificate.

Construction Certificate Application - Report Requirements

The following additional information may, as a condition of consent, be required before issue of the Construction Certificate:

- dilapidation reports
- details of dewatering method with licences as appropriate
- finalised Implementation Plan incorporating finalised Geotechnical and Hydrogeological Monitoring Program, Contingency Plan and Construction Methodology.
- further geotechnical and hydrogeological investigations as may be required by special consent conditions or as recommended in the geotechnical and/or hydrogeological report submitted with the Development Application
- design certificate from suitably qualified and experienced geotechnical and/or geotechnical engineer confirming that the design of the new below ground structure has been undertaken in accordance with approved standards (such as Australian or British Standards, etc) where applicable.

Construction Phase

The works on the site must be inspected and monitored in accordance with the Implementation Plan, Geotechnical and Hydrogeological Monitoring Program and any other recommendations made in the geotechnical and/or hydrogeological engineer must conduct monitoring and inspection. Copies of inspections and monitoring reports must be supplied to the Principal Certifying Authority.

Occupation Certificate - Report Requirements

A record of inspections and monitoring as required by the Implementation Plan and Geotechnical and Hydrogeological Monitoring Program must be submitted in report from to the Principal Certifying Authority for approval prior to release of the Occupation Certificate. A geotechnical/hydrogeological engineer must certify that all work, including groundwater drainage systems has been carried out in accordance with the applicable development consent conditions and the recommendations of the geotechnical and hydrogeological reports.

Further Information

A checklist of the above-mentioned geotechnical and hydrogeological requirements is attached. If you need further information about our requirements for geotechnical and hydrogeological reports please telephone our Development Engineer on 9391 7000.

Definitions

Geotechnical Engineer means NPER registered with a minimum of 10 years practice in the geotechnical field in the last 15 years

Geotechnical and Hydrogeological Requirement Check List

Development Application

Geotechnical and/or hydrogeological reports to include:

- ❑ Site specific risk assessment matrix
- ❑ Results of geotechnical investigation including boreholes, CPT and groundwater level piezometers.
- ❑ Recommended pertinent geotechnical design parameters.
- ❑ Recommendations on appropriate temporary and permanent site support and retention measures.
- ❑ Method and rate of dewatering where required.
- ❑ Proposed groundwater drainage systems and laboratory tests to determine filter clogging potential.
- ❑ Recommenced appropriate plant, equipment and construction methods to limit vibration.

Implementation Plan comprising the following:

- ❑ Monitoring program including various preset acceptable limits, location and type of monitoring systems and recommended hold points.
- ❑ Contingency Plan including details of measures to be adopted to restore groundwater level or to provide any necessary additional support.
- ❑ Construction Methodology to address all aspects of the construction process relating to the geotechnical and hydrogeological requirements.

Recommendations for further investigations to be carried out prior to construction.

Development Consent

The approval of the Development Application by the Council may contain the following conditions:

- ❑ DA Standard Conditions of Consent – Geology and Hydrogeology
- ❑ Special Conditions of Consent

Construction Certificate Application

Depending upon the conditions of consent, the following information may be required:

- ❑ Dilapidation reports
- ❑ Details of dewatering
- ❑ Finalised implementation plan
- ❑ Further geotechnical and hydrogeological investigation report when required
- ❑ Design Certificate from a suitably qualified and experienced geotechnical and/or hydrogeological engineer

Construction Phase

A suitably qualified and experienced geotechnical and/or hydrogeological engineer must supply the following reports:

- ❑ Construction inspection reports
- ❑ Geotechnical and hydrogeological monitoring reports
- ❑ Occupation Certificate

Prior to the release of the Occupation Certificate, the following information must be supplied:

- ❑ Final construction inspection report
- ❑ Final geotechnical and hydrogeological monitoring report
- ❑ Certificate from a geotechnical and/or hydrogeological engineer to confirm that the completed structure conforms to the design

Double Bay - Hydrogeological Geotechnical Impacts Report Groundwater and Geotechnical Assessment Report by GHD Pty Ltd

Proposed amendments and Staff recommendations

GHD have recommended amendments to Council's existing planning controls and guidelines based on the findings of their assessment report. The report recommends amendments to the following:

- Woollahra Local Environmental Plan (LEP) 2014
- Woollahra Development Control Plan (DCP) 2015
- Council's DA Guide.

This document outlines the proposed amendments identified in the report and a response from Staff which includes a commentary as to whether Staff support the recommendation with or without modification.

Note:
BLUE underline is new text as proposed by GHD.
~~RED strikethrough~~ is existing text which will be deleted as proposed by GHD.

GREEN text shows the proposed modifications recommended by Council Staff.
Underline is new text.
~~Strikethrough~~ is deleted text.

Table 1: Proposed amendments to Woollahra LEP 2014

Proposed amendments	Staff recommendation
Clause 1.2 *Aims of Plan* (m) to minimise excavation and manage impacts, including the potential impact of the change in the groundwater regime induced by the development. **Modification by Staff:** (m) to minimise excavation and manage impacts, including the potential impact of the change in the groundwater regime ~~induced by the development~~.	Staff support the proposed amendment to Cl1.2(m) subject to the simplification of the wording. Proposed amendments shown in green.
Clause 6.2 *Earthworks* (1) The objective of this clause is to ensure that earthworks and associated groundwater dewatering for which development consent is required will not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land. (2) Development consent is required for earthworks and associated groundwater dewatering unless— (a) the earthworks and associated groundwater dewatering are exempt development under this Plan or another applicable environmental planning instrument, or (b) the earthworks and associated groundwater dewatering are ancillary to development that is permitted without consent under this Plan or to development for which development consent has been given. (3) In deciding whether to grant development consent for earthworks and associated groundwater dewatering (or for development involving ancillary earthworks), the	Staff support the proposed amendment to Cl6.2. **Commentary:** Cl6.2 is a model local provision under the Standard Instrument which was incorporated into Woollahra LEP 2014. The GHD report recommends amending this model local provision. Accordingly, Staff discussed the proposed changes with DPIE to ensure there are no inconsistencies with the intent of the model clause. DPIE noted that the LEPs for Manly and Hunters Hill include reference to "groundwater dewatering" in their relevant clause, and the proposed wording is according to the Hunters Hill LEP 2012. Accordingly, there is a precedent for this type of amendment to place a greater emphasis on groundwater and dewatering.

Proposed amendments	Staff recommendation
consent authority must consider the following matters— (a) the likely disruption of, or any detrimental effect on, drainage patterns and soil stability in the locality of the development, (b) the effect of the development on the likely future use or redevelopment of the land, (c) the quality of the fill or the soil to be excavated, or both, (d) the effect of the development on the existing and likely amenity of ~~adjoining~~ surrounding properties, (e) the source of any fill material and the destination of any excavated material, (f) the likelihood of disturbing relics, (g) the proximity to, and potential for adverse impacts on, any waterway, drinking water catchment or environmentally sensitive area, (h) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.	Regarding the use of the word "surrounding", GHD notes that the potential impacts of dewatering may extend a considerable distance away from the development site and that this should be considered when designing development. Accordingly, Staff have no objection to the proposed change. Given the restrictions of the standard instrument, the amendments proposed by GHD are considered to be an appropriate response. Council Staff support the proposed amendment to Cl.6.2.

Table 2: Proposed amendments to D2.2.11 Geotechnology and hydrogeology in the Double Bay Settlement Zones

GHD has recommended amendments to *Chapter D5 Double Bay Centre* - Section D5.6.7 *Geotechnology and hydrogeology* as shown in **Table 2**. Staff support the majority of the proposed recommendations with some modifications. However, Council Staff do not locating the amendments in Chapter D5 of the Woollahra DCP 2015. Chapter D5 only applies to the Double Bay Centre.

The proposed controls should apply to A, B and C Settlement Zones which includes land zoned R2 Low Density Residential and R3 Medium Density Residential (as shown in Figure 1). As such, the controls should be inserted into *Chapter E2 Stormwater and Flood Risk Management* which would apply to all development applications in the Settlement Zones. This issue has been discussed with representatives from GHD, who agree with the Staff recommendation.

Staff recommend deleting the existing section D5.6.7 Geotechnology and hydrogeology from *Chapter D5 Double Bay Centre*, and insert a new and combined section into Chapter E2 *Stormwater and Flood Risk Management termed D2.2.11 Geotechnology and hydrogeology in the Double Bay Settlement Zones.*

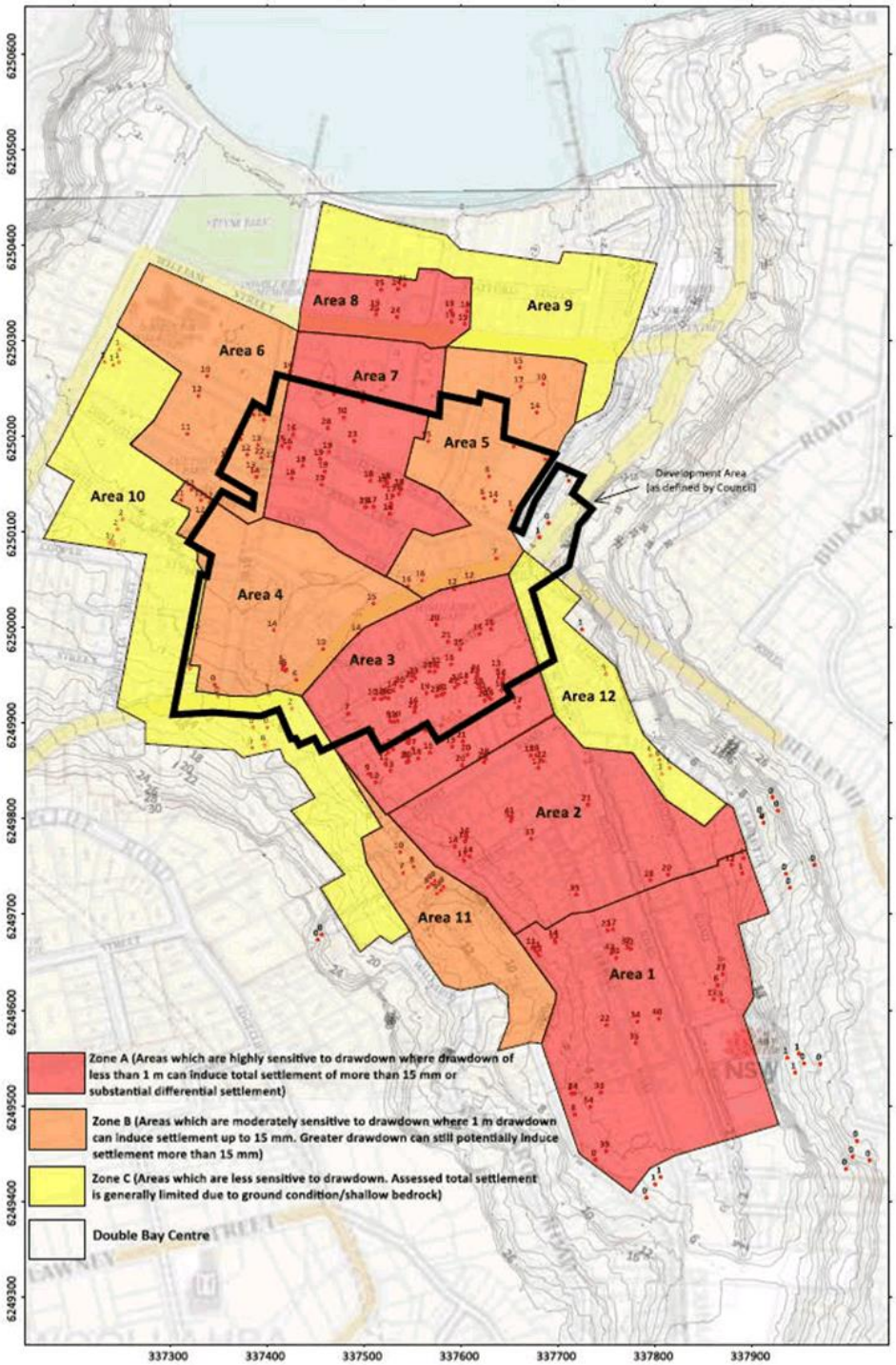

Figure 1: Settlement Zones in the Double Bay Catchment Area, as identified by GHD

Proposed amendments	Staff recommendation
Staff modification: Delete: ~~D5.6.7 Geotechnology and hydrogeology~~ in **Chapter D5: Double Bay Centre** Replace in: **Chapter E2: Stormwater and Flood Risk Management in** D2.2.11 Geotechnology and hydrogeology in the Double Bay Settlement Zones	Delete section *D5.6.7 Geotechnology and hydrogeology* from Chapter D5 Double Bay Centre, and insert a new and combined section into Chapter E2 Stormwater and Flood Risk Management termed *D2.2.11 Geotechnology and hydrogeology in the Double Bay Settlement Zones.*
D5.6.7 Geotechnology and hydrogeology ***Introduction*** Council will ~~normally~~ require geotechnical and hydrogeological reports for development applications which include below ground structures. This is because the subsurface conditions within the Double Bay Settlement Zones ~~Commercial Centre~~ generally comprise water charged alluvial sediments to great depth. The alluvium is predominantly sand which is typically loose near the surface but may at some locations be interlayered with soft compressible clay or peat bands at depth. ~~The groundwater level in the valley area is generally high and varies between RL 1.0 and RL 2.5.~~ The groundwater level generally varies throughout the Double Bay area and fluctuates with the seasons. Any proposed development with below ground structures must consider the sub-surface conditions and the effects of construction on ~~adjacent~~ surrounding properties. In addition, those which are likely to extend below the level of seasonal fluctuations in the groundwater table, must also consider the effect of any changes induced in the sub-surface water levels and the groundwater flow patterns on ~~adjacent~~ surrounding properties. Unless site specific information exists to the contrary, excavations deeper than 1m must be assumed to have this potential to intersect the groundwater level and shall be considered as below ground structures. Council's principal objective is to ensure there are no adverse geotechnical and hydrogeological impacts on any surrounding ~~property~~ properties and infrastructure as a result of development, during and after construction. Typically, adverse geotechnical impacts may include vibration induced settlements from construction methods and equipment and inadequate support of adjacent land during and after construction. Typically adverse hydrogeological impacts may include settlement induced by changes in the groundwater level and seepage problems.	Staff support the proposed amendments (with some minor modifications). **Commentary:** Staff support enhancing the introduction to this section, to recognise the unique characteristics that exist in the Double Bay catchment, and using the word "surrounding" to recognise that the potential impacts of dewatering may extend a considerable distance away from the development site. The introduction has amended to clarify that this section applies to the whole of the Double Bay Settlement Zones (not just the Double Bay Centre).

Proposed amendments	Staff recommendation
Objective O1: O1 There will be no ground settlement or movement, during and after construction, sufficient to cause an adverse impact on ~~adjoining~~ surrounding properties and infrastructure.	Staff support the proposed amendment to the objective. **Commentary:** Staff support using the word "surrounding" to recognise that the potential impacts of dewatering may extend a considerable distance away from the development site.
Insert new control C1 All development must satisfy the above design objectives.	Staff do not support the new Control proposed by GHD. **Commentary:** All development must respond to the objectives of Woollahra DCP 2015 and this does not need to be stated as a control. Staff do not recommend that the proposed C1 is included in amendments to the Woollahra DCP 2015.
Delete existing control and replace with new controls ~~C1: Excavation below 1m is accompanied by a geotechnical report and a structural report to demonstrate that the works will not have any adverse effect on the neighboring structures.~~ C2: Development applications must include a design statement and supporting drawings that show the design measures proposed to minimise risks and to ensure that no adverse impacts will occur. C3: Geotechnical and hydrogeological reports with supporting design statements must be submitted with all development applications which include below ground structures. **Staff modification:** C2 Development applications which include below ground structures must include the following documents: • Structural report • Geotechnical and hydrogeological reports • Design statement and supporting drawings that show the design measures proposed to minimise risks and to ensure that no adverse impacts will occur.	Staff support the new controls subject to them being combined due to their similar nature. Modified text is identified in green. **Commentary:** The proposed controls have strengthened the requirement for an applicant to provide additional consultant reports. Currently these are only required if excavation is proposed below 1m. GHD are recommending that this requirement is applied to all development. However, Staff recommend that the controls specify that only development applications which include below ground structures must include these technical documents. This will prevent the unnecessary burden or confusion for applicants proposing minor works that do not involve below-ground structures. In addition, GHD have not explained why the requirement for a 'structural report' has been removed. Council's Drainage Engineer has advised that issues relating to structure are not always adequately address in the geotechnical and hydrogeological report. Accordingly, and for abundant certainty, Staff recommend retaining the requirement for a structural report.

Proposed amendments	Staff recommendation
Insert new control C4 A qualified and experienced geotechnical and/or hydrogeological engineer must prepare the reports. The reports must include a site-specific risk assessment matrix with appropriate definitions for qualitative measures of likelihood and consequences for assessing the risk of damage to existing developments by the new development.	Staff support the proposed control. **Commentary:** This matter is currently addressed in Council's DA Guide, Attachment 6 (pages 3 and 10). Staff support elevating this guideline into a new control in the DCP.
Insert Control C5 C5 Where groundwater is present and dewatering is likely to occur on the site the following measures must be implemented: • A minimum of two piezometers must be located within the site or in close proximity to it • Where piezometers are established in the footpath area a permanent installation with a cast iron cover and concrete surround must be provided • Existing piezometers must be used where they are available • The groundwater level monitoring must be undertaken using either electronic data loggers, or manual monitoring on regular time intervals commensurate with the expected groundwater level fluctuations. This will allow fluctuations in the site groundwater level to be calibrated against natural fluctuations in the groundwater level. **Staff modification:** C5: Where groundwater is present and dewatering is likely to occur on the site, the requirements of Council's DA Guide under the 'Investigations' section must be implemented.	Staff do not support the proposed Control C5. **Commentary:** The proposed controls, except for the third bullet point highlighted, are currently included in Council's DA Guide, Attachment 6 (page 4). These are highly detailed technical matters which are not appropriate for inclusion in the DCP. However, to ensure that these matters are addressed during the DA process, Staff recommend that this matter is included in the DA Guide and a cross-reference is included in the DCP control. (Recommended text is shown in green).
Proposed new control C6 *C6 Temporary changes to the groundwater level, due to construction, must not exceed 0.2 m from the average monitored pre-construction groundwater level unless calculations using the results of specific field testing, support a greater change and demonstrate that the change will not induce settlement greater than the characteristic surface movement of a Class S site as defined in Table 2.3 of Australian Standard AS2870-2011.*	Staff support the proposed control to ensure that the impacts of construction are appropriately considered during the DA assessment process.
Proposed new Control C7 C7 As required by Council's Guidelines, geotechnical and hydrogeological reports must contain an Implementation Plan, including a Monitoring Program, Contingency Plan and Construction Methodology. *The applicant is advised to have an appropriate current insurance policy to cover the reinstatement/repair of damages to surrounding properties as a result of new development.*	Staff generally support the proposed Control C7, subject to its simplification. However, Staff do not support the proposed additional text which relates to highly detailed technical matters which are not appropriate for inclusion in the DCP (and would not form part of the assessment process). **Commentary:** The proposed control is currently contained in Council's DA Guide, Attachment 6

Proposed amendments	Staff recommendation
In addition, statements for the design and construction of the below ground structures must be supplied from a suitably qualified and experienced geotechnical or hydrogeological engineer. The design statement must confirm that the design of the below ground structures has been undertaken in accordance with approved standards (such as Australian or British Standards, etc.) where applicable. The engineer must also provide a certificate to confirm that the completed structure conforms to the design. **Staff modification:** C7: Any geotechnical and hydrogeological reports must contain an Implementation Plan, including a Monitoring Program, Contingency Plan and Construction Methodology. *Note: All reports and requirements must be prepared in accordance with Council's DA Guide. Geotechnical reports must be prepared by an appropriately qualified Geotechnical Engineer who is NER registered with a minimum of 10 years practice in the geotechnical field in the last 15 years.*	(page 7). Staff have no objection to elevating this requirement to the DCP. However, we recommend simplifying the control as shown in green. In addition, Council's Drainage Engineer has advised that a note should be included to ensure that all reports are prepared consistent with the DA Guide and by an appropriately qualified consultant. (Recommended text is shown in green).
Note: Section, objective and control numbers will be amended so that these are consequential, should Council endorse the changes for public exhibition.	

Table 3: Proposed amendments to Attachment 6: Geotechnical and Hydrogeological Reports Council's DA Guide

Proposed amendments	Staff recommendation
Design Principles (P 2) ***Amend text in point one:*** • There will be no ground settlement or movement, during and after construction, sufficient to cause an adverse impact on ~~adjoining~~ surrounding properties and infrastructure.	Staff support the proposed amendment to this part of the Guide. **Commentary:** Staff support enhancing the design principle to recognise that the potential impacts of dewatering may extend a considerable distance away from the development site.
Adverse Impact Definition (P 3) ***Amend text for Adverse Impact Definition*** Generally, an adverse impact can be assumed to be any damage caused to the improvements on ~~adjoining~~ surrounding properties by the demolition, excavation or construction on the development site.	Staff support the proposed amendment to this part of the Guide. **Commentary:** Staff support amending the definition to recognise that the potential impacts of dewatering may extend a considerable distance away from the development site.
Development Application – Report Requirements Investigations (P 3-4) ***Amend dot point three under Investigations*** - If below ground structure is proposed, the investigation should also target at least one continuous strength log of the subsurface soils ~~by Cone Penetrometer Testing (CPT)~~ to supplement the information from the boreholes. As a guide, the following tests can be considered for the continuous strength log: • Cone Penetration Test (CPT) where the soil strata as proven during the borehole investigation shows the presence of compressible soil (soft to firm clay/clayey soil; soft to firm peat/peaty soil) or where the soil strata has a total thickness of greater than 3 m. • Dynamic Cone Penetration (DCP) where the soil strata as proven during the borehole investigation, comprises soil with a total thickness of no more than 3 m and without compressible soil layers.	Staff support the proposed amendment to this part of the Guide. **Commentary:** This detailed technical information is based on GHD's analysis and assessment. Staff have no objection to revising and enhancing the existing guidelines based on GHD's updated analysis.
Amend dot point four under Investigations - that the presence of groundwater has been investigated. Where present, the pre-construction groundwater level must be measured and monitored. (A longer historical record of natural groundwater fluctuations will be valuable as part of the implementation program. A minimum monitoring period of six months is recommended).	Staff support the proposed amendment to this part of the Guide to clarify that the groundwater level must be measured pre-construction.
Amend dot point four under Investigations - that where groundwater is present and dewatering is likely to occur on the site, the ~~following measures will be implemented:~~the piezometric monitoring of the groundwater will be required as per the requirements given in Clause D5.6.7 of the Development Control Plan. ~~• a minimum of two piezometers will be located within the site or in close proximity to it.~~	Staff do not support removing the existing technical requirement from this guideline to Chapter D5.6.7, new Control C5 of Woollahra DCP 2015. **Commentary:** Due to the detailed and highly technical nature of this control, Staff recommend that the requirements for the new Control C5 in Chapter D5.6.7 of Woollahra DCP

Proposed amendments	Staff recommendation
• ~~a minimum of 2 piezometers will be located off site, as close to the site as possible, but outside the zone of influence of groundwater level disturbance by the new development.~~ • ~~where established in the footpath area a permanent installation with a cast iron cover and concrete surround is required.~~ ~~The groundwater level monitoring must be undertaken using either electronic data loggers, or manual monitoring on regular time intervals commensurate with the expected groundwater level fluctuations. This will allow fluctuations in the site groundwater level to be calibrated against natural fluctuations in the groundwater level.~~ **Staff modification:** - that where groundwater is present and dewatering is likely to occur on the site, the following measures must be implemented: • A minimum of two piezometers must be located within the site or in close proximity to it • Where piezometers are established in the footpath area a permanent installation with a cast iron cover and concrete surround must be provided • Existing piezometers must be used where they are available • The groundwater level monitoring must be undertaken using either electronic data loggers, or manual monitoring on regular time intervals commensurate with the expected groundwater level fluctuations. This will allow fluctuations in the site groundwater level to be calibrated against natural fluctuations in the groundwater level.	2015 are retained in this section of the Guide and not included as a DCP control. The proposed inclusion in the DA Guide which incorporates the advice from GHD is identified in the Staff modification.
Development Application – Report Requirements: Support and Retention (P 5) ***Amend last dot point*** - It may be possible for a new development to be built up to the boundary on a merit- based assessment of the development. This assessment will require the geotechnical/hydrogeological report to confirm the structural adequacy of any adjacent structure including any necessary additional support for the structure ~~as well as suitable groundwater drainage systems as outlined in Hydrogeology.~~ -	Staff support the proposed amendment to this part of the Guide. **Commentary:** GHD have identified that this is unnecessary text which can be removed, as it is implied by the earlier text.
Development Application – Report Requirements: Hydrogeology (P 5) ***Amend dot point two under Hydrogeology*** - that there will be no adverse impact on surrounding property and infrastructure as a result of changes in local hydrogeology (behaviour of groundwater) created by the method of construction. This includes the short-term effects resulting from construction practices, including the method and rate of dewatering and the long-term effects resulting from the impediment of the	Staff support the proposed amendment to this part of the Guide. **Commentary:** The proposed amendment clarifies the technical nature of the requirement to ensure its consistent interpretation.

Proposed amendments	Staff recommendation
critical groundwater flow path due to support and retention of property and infrastructure after construction has been completed.	
Amend dot point three under Hydrogeology that temporary changes to the groundwater level, during construction, will be kept within the limits as specified in Clause D5.6.7 of the Development Control Plan ~~historical range of natural groundwater fluctuations. Where data is limited or unavailable, reports must demonstrate that changes in the level of the natural water table, due to construction, will not exceed 0.3m unless calculations using the results of the site specific field testing, supporting a greater change can be provided and can demonstrate no adverse impact to surrounding properties and infrastructure.~~ **Staff modification:** that temporary changes to the groundwater level, during construction, will be kept within the limits as specified in Chapter D5.6.7 of Woollahra DCP 2015.	Staff support the proposed amendment to this part of the Guide. **Commentary:** Staff support the deletion of this element, as this has been included as a control in Chapter D5.6.7, of the Woollahra DCP 2015. However, Staff recommend simplifying the cross reference.
Development Application – Report Requirements: Hydrogeology (P 5) ***Delete dot points four to seven*** ~~- that in areas where the construction affects existing development within a shadow zone of an earlier construction, temporary changes in the level of the water table during construction will not exceed 0.15m, unless calculations using the results of the site specific field testing, supporting a greater change are provided and demonstrate no adverse impact to surrounding properties and infrastructure. The temporary shadow zone during dewatering should be taken as an area within 20m of the earlier construction, unless site specific calculations can demonstrate that a different lateral extent should be adopted.~~ ~~- that where data is limited or unavailable, the permanent change in the level of the natural water table due to the carrying out of the development willnot exceed 0.2m unless calculations using the results of the site specific field testing, supporting a greater change can be provided and can demonstrate no adverse impact to surrounding property and infrastructure.~~ ~~- that in areas where the construction affects existing development within a shadow zone of an earlier construction, the permanent change in the water table due to the carrying out of the development will not exceed 0.1m. The permanent shadow zone of an earlier construction with full penetrating cut-off walls but without appropriate subsurface drainage should be taken as a distance equal to one building width along the groundwater flow path both in front and behind the earlier construction, unless site specific calculations can demonstrate that a different lateral extent should be adopted.~~	Staff support the proposed amendment to this part of the Guide. **Commentary:** The three thresholds have been summarised into a single threshold which has been elevated into the DCP. This simplified, and strengthened approach is supported by Staff. The final bullet point refers to groundwater drainage systems. However, Council's Drainage Engineer has identified that our preferred approach is to tank basements, and therefore a reference to a groundwater drainage system is not required.

Proposed amendments	Staff recommendation
- ~~that groundwater drainage systems have been designed to transfer groundwater through or under the proposed development without a change in the range of the natural groundwater level fluctuations.~~	
Development Application – Report Requirements: Hydrogeology (P 6) ***Amend from second paragraph on page 6*** Where an impediment to the critical natural groundwater flow path is created as a result of the nature of the construction methods utilised and/or the bulk of the below ground structure, artificial drains such as perimeter drains and through drainage may be utilised. These systems may only be utilised where it can be demonstrated that the natural groundwater flow regime is re-established both upstream and downstream of the site without any adverse effects on surrounding property or infrastructure. • ~~that groundwater drainage systems are designed for a design life of 100 years.~~ • ~~that the groundwater drainage system is designed to be easily maintained. Council will require a positive covenant to ensure the continued functioning and maintenance of the approved groundwater system. Laboratory tests to approved standards should be carried out to determine the clogging potential of any proposed filters used in the design of the drainage system for the new development.~~ • ~~that where there is the potential for a damming effect created by several consecutive below ground structures, this potential impact has been the subject of hydrogeological modelling to demonstrate no adverse impact on the surrounding property or infrastructure. The extent of modelling must consider the potential for future development to extend the damming effect and must, as a minimum, extend between street blocks.~~ • ~~that where below ground structures are in close proximity to each other (typically less than 3m) no allowance for natural groundwater flow through these narrow corridors has been included in the design of perimeter or though drainage.~~ **Staff modification:** Where an impediment to the critical natural groundwater flow path is created as a result of the nature of the construction methods utilised and/or the bulk of the below ground structure, artificial drains such as perimeter drains and through drainage may be utilised. These systems may only be utilised where it can be demonstrated that the natural groundwater flow regime is re-established both upstream and downstream of the site without any adverse effects on surrounding property or infrastructure. The groundwater drainage systems must be designed for a design life of 100 years.	Staff support the deletion of four of the bullet points. However, the top one relating to a design life of 100 years should be retained. The Staff modification shows our recommendation, with the amendments shown in green. **Commentary:** Staff do not support removing the first bullet point, which refers to: *'that groundwater drainage systems are designed for a design life of 100 years'.* As all groundwater drainage systems should be designed to operate for 100 years. The top four bullets can be deleted as these refer to groundwater drainage systems. However, Council's Drainage Engineer has identified that our preferred approach is to tank basements, and therefore a reference to a groundwater drainage system is not required.

Item No:	R2 Recommendation to Council
Subject:	**REVIEW OF PLANNING CONTROLS TO ADDRESS THE VISUAL IMPACTS OF FIRE HYDRANT AND BOOSTER INSTALLATIONS**
Author:	Jacquelyne Della Bosca, Executive Planner
Approvers:	Kelly McKellar, Team Leader Strategic Planning Anne White, Manager - Strategic Planning Nick Economou, Acting Director Planning & Development
File No:	21/40991
Reason for Report:	To respond to a Notice of Motion adopted by Council on 26 October 2020 requesting a review of planning controls to address fire hydrants and boosters so that these installations are not visible in the streetscape. To obtain Council's approval to exhibit a draft development control plan to amend the Woollahra Development Control Plan 2015.

Recommendation:

A. THAT the report on the review of planning provisions for hydraulic fire services such as fire hydrant and booster installations be received and noted.

B. THAT Council resolve to exhibit *Draft Woollahra Development Control Plan 2015 (Amendment No 17)* as contained in **Annexure 1** of the report to the Environmental Planning Committee on 12 April 2021.

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1. Background

On 26 October 2020 Council adopted the following Notice of Motion (NOM):

THAT Council:

A. undertake a review of, and prepare a report to Council, on measures that can be taken in its planning instruments (including any amendment to its current Development Control Plan or Local Environmental Plan, amongst others) to ensure that:

1. all development in the municipality properly and thoroughly considers all possible mechanisms to avoid having to install fire hydrant and/ or fire hydrant boosters, including investigation as to potential upgrade to existing water pipes and water pressure measures;

2. any fire hydrant and/ or fire hydrant booster required in relation to development in the municipality is properly catered for onsite and is situated, as far as possible, away from the street and/ or public domain such that it is not visible from the street; and

3. in the event that the objectives of (A) or (B) above cannot be met despite the best endeavours of developers of sites, that any fire hydrant and/or fire hydrant booster that is visible from the street be properly enclosed and hidden from public view, and

B. consider and report to Council on what measures may (if any) be employed to retrospectively mandate that exposed and visible fire hydrants and/or fire hydrant boosters be enclosed from public view.

The following background information accompanied the NOM on the meeting agenda:

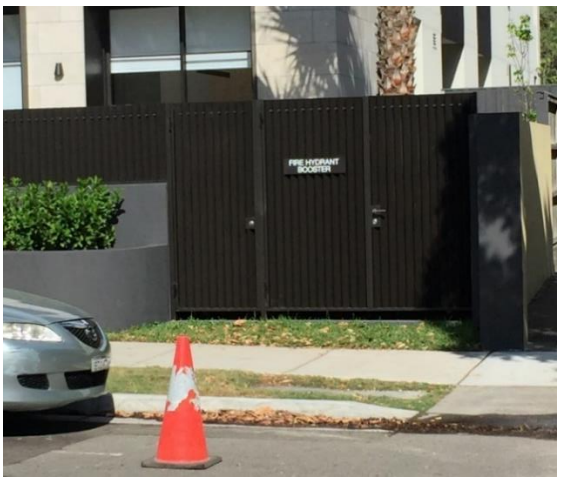
Council's current planning instruments are unclear and uncertain as to the installation of fire hydrant and fire hydrant boosters in developments that are occurring in the municipality.

This infrastructure seems to be increasingly required, especially in multi-unit developments to boost water pressure on site and is an increasing blight on the streetscape, as they are often installed at eye level by the footpath.

Some developments have enclosed this infrastructure, whilst other developments have not.

New South Head Road, Rose Bay opposite "Embrace" sculpture and Lyne Park

Old South Head Road, Rose Bay



Newcastle St, Rose Bay

2. Definition of Fire hydrant installations

Australian Standard AS2419.1. 2005 Fire hydrant installations (AS2419.1) defines a fire hydrant system as: *an assembly of pipes and other component that is dedicated for firefighting to permit the fire brigade to access a controlled supply of water*.

On-site fire hydrant systems form part of a building's essential safety measures. This includes fire hydrants, sprinkler systems and the fire brigade booster assembly. These fire services are typically required for residential flat buildings or commercial buildings of three or more storeys to allow the fire brigade to access high pressure water as quickly and efficiently as possible.

3. Requirements of the National Construction Code and Australian Standards

The *National Construction Code 2019 Volume One, Building Code of Australia* (BCA), *E1.3 Fire hydrants* requires the installation of a fire hydrant system to serve a building having a total floor area greater than 500m^2 and where a fire brigade station is:

- No more than 50 km from the building as measured along roads; and
- Equipped with equipment capable of utilising a fire hydrant.

The BCA, *E1.5 Fire sprinkler systems,* also specifies that most buildings that are four-storeys or more in height need sprinkler systems.

Under the BCA, the installation of a fire hydrant system must be in accordance with *Australian Standard AS2419.1. 2005 Fire hydrant installations*. The AS2419.1 specifies when and how fire hydrant systems must be installed, maintained and serviced.

For example, Section 7 of AS2419.1 addresses fire brigade booster assemblies including when a booster assembly is required and where it should be located. The fire brigade booster assembly is defined in the AS2419.1 as "*a connecting device enabling the fire bridge to pressurize or pump water into a fire hydrant system*". The booster may be for the fire hydrant and/or the sprinkler system. The booster is generally installed along the front property boundary to provide fast, efficient, and effective access to the fire brigade.

Staff have <u>underlined</u> for emphasis some of the locational requirements in AS2419.1 for booster assemblies that are particularly relevant to the matters raised in the NOM.

7.2 When a booster assembly is required

A fire brigade booster assembly shall be fitted to each fire hydrant system where—

(a) internal fire hydrants are installed;
(b) external on-site fire hydrants are installed more than 20 m from a fire brigade pumping appliance hardstand;
(c) more than 6 external on-site above ground fire hydrants are installed;
(d) a pumpset is installed;
(e) on-site storage tanks are installed; or
(f) more than one external on site fire hydrant is required to serve a building where the floor area of any fire compartment is greater than 2000 m^2.

7.3 Location

Fire brigade booster assemblies shall be located so that they meet the following requirements:

(a) They are readily accessible to firefighters.
(b) They are operable by fire brigade pumping appliances located within 8 m.
(c) <u>If within, or affixed to, the external wall of the building, the booster shall be—</u>
  (i) <u>within sight of the main entrance to the building; and</u>
  (ii) <u>separated from the building by a construction with a fire resistance rating of not less than FRL 90/90/90 for a distance of not less than 2 m each side of and 3 m above the upper hose connections in the booster assembly</u>
(d) <u>If remote from the building, the booster shall be—</u>
  (i) <u>at the boundary of the site and be within sight of the main entrance of the building;</u>
  (ii) <u>adjacent to the principal vehicular access to the site; and</u>
  (iii) <u>located not less than 10 m from the external wall of any building served</u>
(e) The booster enclosure shall only contain firefighting pipework and equipment.
(f) In a position not less than 10 m from any high voltage main electrical distribution equipment such as transformers and distribution boards, and from liquefied petroleum gas and other combustible storage.

(g) *In a position so that the booster assembly is not obstructed or obscured by obstacles, stored goods, vehicles, vegetation, etc.*

C7.3 The location of the fire brigade booster assembly should be chosen so as to afford maximum accessibly for and protection of firefighting personnel. It should ideally be located within sight of the main entrance of the building. Specific requirements for the booster location should be discussed with the relevant fire brigade.

2.1.3 Hardstand: A hardstand shall be provided where a fire brigade pumping appliance is required to be located adjacent to a tank, hydrant or booster in accordance with Section 3, 5 or 7.

Having considered these requirements, the fire brigade booster assembly is usually located along the front property boundary and near the main entrance to the site where access is optimal, but where there is also the greater potential to impact on streetscape amenity. However, we note that AS2410.1 identifies that installations may be affixed to or recessed into the building façade, provided solutions for heat shield are suitably addressed. AS2419.1 (sections 3 and 7) also allows fire hydrants, fire hydrant boosters and sprinkler boosters to be housed in a cabinet.

4. Current planning controls

The BCA and AS2419.1 provide the primary framework for specifying building fire safety requirements and there are only a few other instruments which address the location and/or design of fire hydrant and booster systems.

4.1. State planning controls

State legislation and planning instruments that address fire hydrant and booster systems include:

- *Fire and Rescue NSW Act 1989 No 192* Section 32 Concealing fire hydrant
  It is an offence for a person to:
  (a) wilfully cover up, enclose or conceal any fire hydrant so as to make it difficult to find, or
  (b) obliterate or remove any mark, sign or letter used to indicate the position of or distinguish a fire hydrant.

- *Environmental Planning and Assessment Regulation 2000 (the Regulation)*
  Part 9 sets out fire safety and matters concerning the BCA. This Part requires a fire safety schedule (which identifies all existing and proposed fire safety measures to be installed in the building as required by the BCA) is to be provided when issuing a construction certificate for proposed building work. A final fire safety certificate is then issued when the building work is completed to confirm that the fire safety measures have been installed and checked. The occupation certificate cannot be issued until the principal certifier has received the final fire safety certificate.

  Part 9, also establishes provisions for other matters including fire safety orders, fire safety statements (i.e. annual checks of the building's essential fire safety measures) and when fire sprinklers are required in residential aged care facilities.

- *SEPP (Exempt and Complying Development Codes) 2008* (Codes SEPP)
  Part 8 Fire Safety Code specifies certain development as complying development.

- Subdivision 3 establishes standards for fixed on-site fire pump sets and the construction of enclosures related to a fire sprinkler system or other hydraulic fire safety system. Relevant to Council's NOM, it includes the following development standard:

  8.5(b) the wall of any pump house or any enclosure of a pump set must have an external wall finish that is the same colour palette as the existing premises so that the pump room or enclosure is in keeping with the existing premises.

It is noted that *State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development* and the accompanying *Apartment Design Guide* do not address fire hydrant systems.

4.2. Local planning controls

- *Woollahra Local Environmental Plan 2014, clause 5.8 Conversion of fire alarms* is the only provision that addresses fire safety systems. However, it is not relevant to fire hydrant systems.
- *Woollahra Development Control Plan 2015* (Woollahra DCP 2015) includes objectives and controls for site facilities and includes specific reference to hydrants and boosters in *Chapter B3 General Development Controls*, *Chapter D5 Double Bay Centre* and *Chapter D6 Rose Bay Centre*.

5. Comparable controls from other Sydney Councils

As part of the review, staff reviewed other council DCPs. A summary of relevant provisions relating to hydraulic fire services such as hydrants and boosters is provided in **Table 1** below.

Table 1: Controls for fire safety systems from other council DCPs

Council	Extract of relevant provisions
Bayside	***Botany Bay Development Control Plan 2013*** *Part 4C - Apartment Buildings; Part 3L - Landscaping and Tree Management; Part 3L.2 General Requirements; Part 10 Landscaping Guidelines for Development Sites* • Electrical kiosk, fire booster assembly or similar utilities will be in a location visible from the main entrance of the development, unable to be obstructed, and readily accessible to vehicles and service staff. • Fire booster assemblies are a minimum of 10m to an electrical kiosk, and housed in the external face of the building structure or in a built enclosure with screen doors. The enclosure is integrated with the architectural design of the development and compliant with AS2419. • Applicants are encouraged to provide landscaping that will not impede access to, and effective use of the utilities to reduce the visual impact of the utilities on the streetscape and public domain. • Fire booster valve assemblies should be housed in the external face of the building structure or otherwise screened from view from public domain such as located near side boundaries, behind boundary walls, within an enclosure or screened by landscaping.
Inner West	***Marrickville Development Control Plan 2011*** *Section 2.21 Generic Provisions; Site facilities and waste management* • Relevant authorities/service providers must be contacted at the early design stages to determine convenient locations for public utilities such as electricity substations, fire hydrants or gas and water meters.

Council	Extract of relevant provisions
Ku-ring-gai	***Ku-ring-gai DCP 2020*** *Part 23 General Building Design and Sustainability Section 23.6 Building services* • Applicants must consult with service providers such as energy, electricity, gas, water, telephone and fire. • Services and structures required by providers are located in basements or concealed in the facade with appropriate access. Where not possible, the proposal must demonstrate an alternative method of minimising street impact, such as screening with landscape or built elements. Particular care should be taken in mixed use precincts to ensure substations and fire hydrants are not visible from the primary street and principal active street frontages.
Lake Macquarie	***Lake Macquarie City Council Development Control Plan 2012*** *Part 3 - Development within Residential Zones; 2.20 Utilities* • To identify utility requirements and new infrastructure at an early stage of development. • To ensure utilities structures are integrated in the site planning and design of development. • To protect and improve the visual amenity of the primary street frontage. • Existing and additional utility infrastructure must be identified at site planning stage. • The location of existing and proposed electricity kiosk sub-stations, fire hydrants, along with clearance areas and access ways must be identified and shown on building and landscape plans.
North Sydney	***North Sydney Development Control Plan 2013*** *Table B-8.2: Minimum setback to street infrastructure and furniture: Essential services* • Fire hydrants; hose reel cupboards; fire exit doors; fire equipment stores; substations; communication poles - setback: 900mm
Waverley	***Waverley Development Control Plan 2012*** *Part C - Residential Development; C3: Other Residential Development* • Ensure that building services are integrated into the design of buildings. Building service elements include garbage rooms, mailboxes, fire hydrant boosters, electrical substations, downpipes, and plant rooms and satellite/communications structures.

6. Consultation with key stakeholders

In reviewing the provisions in Woollahra DCP 2015, staff have considered the requirements of AS2419.1, other council DCPs and the matters raised in Council's NOM. We have received initial advice from Fire and Rescue NSW (FRNSW) and consulted internally with Council's Fire Safety Officer, Development Control staff and Heritage Officers.

Part of Council's NOM requested staff to consider the following:

- Mechanisms to avoid having to install fire hydrant and/or boosters, such as upgrades to existing water pipes and water pressure measures
- Require fire hydrants and boosters to be situated as far as possible away from the street and/ or public domain such that they are not visible from the street.

Staff advise that it is not appropriate for local planning controls to address these matters. A DCP must not seek to establish solutions for fire safety that are contrary to AS2419.1 and would not be acceptable to FRNSW. As discussed in Section 3 of this report, AS 2419.1 sets out requirements for the location of fire systems e.g. it requires the booster assembly to be located at the boundary of the site and within sight of the main building entrance.

FRNSW's stated position is to endorse the use of AS 2419.1 in the design and installation of fire hydrant systems. Concessions to use a street fire hydrant in lieu of providing an on-site fire hydrant will only be considered by FRNSW for an existing premises that is subject to a fire safety order under Division 9.3 of the *Environmental Planning and Assessment Act (EP&A Act) 1979*.

7. Proposed amendments to the Woollahra DCP 2015

Having regard to the above, staff recommend that Council's DCP controls are amended to address the potential visual impact of fire hydrant and booster assemblies by requiring that these installations are enclosed. This approach is consistent with AS2419.1 and generally acceptable to FRNSW. The proposed controls will apply to development in the Woollahra LGA when a hydraulic fire service such as a fire hydrant and booster is installed[2]. **Annexure 1** contains *Draft Woollahra DCP 2015 (Amendment No.17)* which contains the proposed amendments. Notes in the right hand margin identify the origin of the proposed changes. **Table 2** summarises the proposed DCP controls.

Table 2: Draft controls for fire hydrant and booster installations

Proposed DCP controls	Relevant DCP chapters
Hydraulic fire services such as fire hydrants and booster installations are housed in a cabinet or enclosure. The design, colour and material of the cabinet or enclosure is visually unobtrusive and suitably integrated with the development, including fencing and landscaping.	***Part B: General Residential*** • B3 General Development Controls ***Part C: Heritage Conservation Areas*** • C1 Paddington HCA, • C2 Woollahra HCA • C3 Watsons Bay HCA
Hydraulic fire services like fire hydrants and booster installations are integrated into the front of the building façade and enclosed with doors. The enclosure is visually unobtrusive and suitably integrated with the development.	***Part D: Business Centres*** • D3 General Controls for Neighbourhood and Mixed Use Centres • D4 Edgecliff Centre • D5 Double Bay Centre • D6 Rose Bay Centre

8. DA conditions of consent and the DA Guide

Should Council support the proposed DCP amendments, Council's standard DA conditions of consent and DA Guide will be amended to reflect the DCP requirements for hydraulic fire services such as fire hydrant and booster installation to be housed in a cabinet or enclosure that is suitably integrated with the development. This standard condition will be applied to all new residential flat buildings and commercial buildings, and other development where relevant.

Furthermore, Council's Fire Safety Officer advised that similar conditions could also be applied when Council issues fire safety orders requiring upgrades to existing buildings.

[2] This is typically multi-unit residential or commercial development of three or more storeys or having a total floor area greater than 500m^2 as prescribed in the BCA and AS2419.1.

9. Existing visible fire hydrants and/or fire hydrant boosters

Council's NOM requested that we consider measures to retrospectively mandate that exposed and visible fire hydrants or boosters be enclosed from public view. Section 4.17 of the EP&A Act 1979 requires that a condition of development consent may only be imposed where it is relevant to the subject development application (DA) or modification. This means that Council can only apply conditions to enclose existing fire hydrants and booster systems when a DA for an existing premises reasonably relates to the existing fire hydrants and boosters.

To encourage property owners to enclose existing fire hydrant and boosters, Council could consider providing financial support or other incentives through its placemaking initiatives. However, given current budget constraints this may be something that Council wants to investigate at a future date.

10. Next steps

If Council supports the proposed amendments to Woollahra DCP 2015, the next step is exhibit the draft DCP. The process for exhibiting a DCP is set out in the EP&A Act 1979, the *Environmental Planning and Assessment Regulation 2000*, and the *Woollahra Community Participation Plan 2019*.

The draft DCP must be publicly exhibited for a minimum of 28 days. Public notice will be given in the Wentworth Courier each week of the exhibition and on Council's website. We will also further consult with FRNSW. The outcome of the public exhibition will be reported to a future Committee meeting.

Amendments to Council's standard conditions of consent and the DA Guide do not require public exhibition, and can be made under instruction from Council's Director Planning and Development.

11. Conclusion

In response to Council's NOM adopted on 26 October 2020, staff have proposed amendments to the Woollahra DCP 2015 which seek to address the potential visual impacts of hydraulic fire services, such as fire hydrant and boosters. The proposed controls seek to ensure that at the design and DA stage, these systems are housed in a suitably designed cabinet or enclosure that is visually unobtrusive and suitably integrated with the development.

The proposed amendments are consistent with and complementary to AS2419.1 and seek to provide a reasonable and practical solution to minimising visual impacts while recognising that accessibility and functionality needs to be the priority for building fire safety services.

Staff recommend that Council resolve to exhibit the *Draft Woollahra Development Control Plan 2015 (Amendment No 17)* as contained in **Annexure 1**. Should Council endorse this approach, staff will update the standard DA conditions and the DA Guide.

Annexures

1. Draft Woollahra Development Control Plan for Fire hydrant and boosters (Amendment No 17) ⇩

Draft Woollahra Development Control Plan 2015
(Amendment 17)

Prepared Date:	April 2021
Adopted:	*TBC*
Commenced:	*TBC*
Division/Department:	Strategic Planning
HPE CM Record Number:	21/45659

Contents

Woollahra Development Control Plan 2015 (Amendment No 17)

Part 1 Preliminary

1.1 Background

On-site fire hydrant systems form part of a building's essential safety measures. This includes services such as fire hydrants, sprinkler systems and the fire brigade booster assembly which are typically required for residential flat buildings or commercial buildings three or more storeys, to provide an on-site supply water for firefighting.

These hydraulic fire systems need to be installed and located in accordance with *Australian Standard AS2419.1. 2005 Fire hydrant installations* to ensure that the fire brigades have access to high pressure water as quickly and efficiently as possible. These installations are generally located at or near the street frontage where access for firefighting is optimal, but where there is also greater potential to impact on streetscape amenity.

On 26 October 2020 Council adopted the following notice of motion (NOM):

THAT Council:

A. *undertake a review of, and prepare a report to Council, on measures that can be taken in its planning instruments (including any amendment to its current Development Control Plan or Local Environmental Plan, amongst others) to ensure that:*

   1. *all development in the municipality properly and thoroughly considers all possible mechanisms to avoid having to install fire hydrant and/ or fire hydrant boosters, including investigation as to potential upgrade to existing water pipes and water pressure measures;*
   2. *any fire hydrant and/ or fire hydrant booster required in relation to development in the municipality is properly catered for onsite and is situated, as far as possible, away from the street and/ or public domain such that it is not visible from the street; and*
   3. *in the event that the objectives of (A) or (B) above cannot be met despite the best endeavours of developers of sites, that any fire hydrant and/or fire hydrant booster that is visible from the street be properly enclosed and hidden from public view*

B. *consider and report to Council on what measures may (if any) be employed to retrospectively mandate that exposed and visible fire hydrants and/or fire hydrant boosters be enclosed from public view.*

The following background information accompanied the NOM on the meeting agenda:

> *Council's current planning instruments are unclear and uncertain as to the installation of fire hydrant and fire hydrant boosters in developments that are occurring in the municipality.*
>
> *This infrastructure seems to be increasingly required, especially in multi-unit developments to boost water pressure on site and is an increasing blight on the streetscape, as they are often installed at eye level by the footpath.*
>
> *Some developments have enclosed this infrastructure, whilst other developments have not.*

This draft development control plan seeks to amend the *Woollahra Development Control Plan 2015* (Woollahra DCP 2015) to update and strengthen the sections on site facilities by introducing objectives and controls to specifically address the visual impact of hydraulic fire services, such as fire hydrant and boosters.

1.2 Name of plan

This plan is the *Woollahra Development Control Plan 2015 (Amendment No 17)*.

1.3 Objectives of the plan

The objectives of the plan are to:

a) Ensure essential site facilities are accessible, functional and unobtrusive.

b) Ensure that hydraulic fire services are visually discreet and do not detract from the streetscape character.

c) Require hydraulic fire services like fire hydrant and booster installations to be housed in a cabinet or enclosure that is thoughtfully integrated into the design of the development (including the building, fencing and landscaping).

1.4 Land to which this plan applies

This plan applies to land within the Woollahra local government area and identified on the map in **Figure 1** where the following chapters of the Woollahra DCP 2015 apply:

- Chapter B3 - General Development Controls
- Chapter C1 - Paddington Heritage Conservation Area
- Chapter C2 - Woollahra Heritage Conservation Area
- Chapter C3 - Watsons Bay Heritage Conservation Area
- Chapter D3 - General Controls for Neighbourhood and Mixed Use Centres
- Chapter D4 - Edgecliff Centre
- Chapter D5 - Double Bay Centre
- Chapter D6 - Rose Bay Centre

Figure 1: Land to which this draft plan applies

1.5 Relationship of this plan to the Act, Regulation and other plans or environmental planning instruments

This plan has been prepared under Division 3.6 of the *Environmental Planning and Assessment Act 1979* and Part 3 of the *Environmental Planning and Assessment Regulation 2000*.

Woollahra Local Environmental Plan 2014 (Woollahra LEP 2014) applies to the land to which this plan applies. In the event of an inconsistency between this plan and the Woollahra LEP 2014, the Woollahra LEP 2014 prevails.

1.6 Approval and commencement of this plan

This plan was approved by Woollahra Council on TBC and came into effect on TBC.

1.7 How this plan amends Woollahra DCP 2015

This plan amends Woollahra DCP 2015 in the manner set out in Part 2 of this plan.

Part 2 Amendments to Woollahra Development Control Plan 2015

This plan amends Woollahra DCP 2015 in the following manner:

Insertions – identified in blue and underlined
Deletions – ~~identified in red and strikethrough~~

Chapter A1 Introduction

2.1 Amendments to clause A1.1.9 Savings and transitional provisions relating to development applications

2.1.1 Insert at the end of the clause

This DCP (as commenced on 23 May 2015) continues to apply to development applications, applications to modify consents under section 4.55 of the EP&A Act and applications for review of determination under Division 8.2 Reviews of the EP&A Act that were made prior to but not determined before the commencement of Amendment No 17 to this DCP.

2.2 Amendments to clause A1.4 List of amendments

2.2.1 Insert at the end of the clause

Amendment	Date of approval and Commencement	Description of amendment
No 17	Date approved – TBC Date commenced - TBC	Amend Chapter A1 by inserting additional savings and transitional provisions. Amend Part B Chapter B3; Part C Chapters C1, C2 and C3; Part D Chapter D3, D4, D5 and D6 to strengthen controls for fire hydrant systems to address streetscape character and amenity impacts.

Chapter B3 General Development Controls

2.3 Amendments to section B3.7.3 Site facilities

2.3.1 Amend the introduction to include specific references to fire safety systems

Some site facilities including fire safety systems, lift overruns, air-conditioning, mechanical ventilation, mail boxes, clothes drying areas and laundry facilities are essential or common features in contemporary residential development. Others such as radio aerials and satellite dishes are less frequently required.

The potential impacts of site facilities on the overall appearance of developments and the local streetscape must be considered. In particular, consideration must be given to the location, size and design of site facilities including fire hydrant and booster installations and ~~including,~~ mechanical plant equipment such as lift overruns, air-conditioning units and condensers, heating, ventilation, and other mechanical systems that maintain or support the operations of a building.

Commented [DCP1]: Amend the introduction by including reference to fire safety systems.

Specific reference is also made to fire hydrant and booster installations as these type of systems are generally required in residential flat buildings and other multi-unit buildings under the BCA and AS2419.1.

2.3.2 Amend existing objective O11

O11 To ensure that site services are accessible, functional and do not have a negative impact on the streetscape.

Commented [DCP2]: This amendment recognises the need to address accessibility and functionality as well as impacts, and is based on existing objectives for site facilities in the Double Bay Centre and Rose Bay Centre chapters in the DCP.

2.3.3 Amend existing control C12 and insert new control C13

C12 Site services ~~including hydrants, boosters and meters~~ are suitably integrated with the development including ~~or incorporated into~~ the landscape design and are not visually intrusive within the streetscape.

C13 Hydraulic fire services like fire hydrants and booster installations are housed in a cabinet or enclosure. The design, colour and material of the cabinet or enclosure is visually unobtrusive and suitably integrated with the development, including fencing and landscaping.

Commented [DCP3]: Amendment to C12 establishes a general control for site services that can be applied to a wide range of services.

Proposed new control C13 specifically addresses fire hydrant and booster installations and seeks to minimise visual impacts by requiring the systems to be housed in an enclosure that is integrated with the development.

Chapter C1 Paddington Heritage Conservation Area

2.4 Amendments to section C1.5.11 Satellite dishes, aerials, air-conditioning units and other site facilities

2.4.1 Amend the introduction by inserting a new paragraph to address other site facilities, including fire safety systems.

Paddington's roofscape is an integral component of its overall significance. The introduction of unsympathetic and uncharacteristic elements such as satellite dishes, aerials and air-conditioning units and external condensers can have a detrimental impact on the aesthetic significance of individual buildings and on the area generally.

The fixing of these structures on roofs and chimneys can also contribute to physical damage and possible loss of original fabric and detail.

The location and design of other site facilities such as fire safety systems, mail boxes, external storage facilities, clothes drying areas and laundry facilities can also have an adverse impact on the appearance and character of the area and must be carefully considered.

Note: Solar energy systems such as photovoltaic electricity generating systems, solar hot water systems, or solar air heating systems are addressed in Chapter E6, Section 6.3 Solar energy systems.

2.4.2 Amend existing objective O3

O3 To ensure that satellite dishes, air handling systems, external hot water heaters, air conditioning units, aerials, fire safety systems and other site facilities do not detrimentally impact on the character and significance of individual buildings and the streetscape.

2.4.3 After C7 insert new subtitles, new control C8 and renumber existing control C8 accordingly

Fire safety systems

C8 Hydraulic fire services like fire hydrants and booster installations must be housed in a cabinet or enclosure. The design, colour and material of the cabinet or enclosure must be visually unobtrusive and suitably integrated with the development, including fencing and landscaping.

Other Site facilities

Commented [DCP4]: Amend the introduction to include reference to a wide range of site facilities including fire safety systems.
The proposed paragraph is based on an existing paragraph in the Woollahra HCA chapter of the DCP.

Commented [DCP5]: Insert specific reference to "fire safety systems" to ensure that where any type of fire safety system is installed the potential impacts on amenity and heritage are considered.

Commented [DCP6]: The proposed control seeks to minimise visual impacts by requiring the systems to be housed in an enclosure that is integrated with the development.

In precincts such as the Paddington HCA most development is for dwelling houses and will not require fire services like fire hydrant and booster installations. The BCA establishes the fire safety requirements based on the class of the building.

Chapter C2 Woollahra Heritage Conservation Area

2.5 Amendments to section C2.5.13 Site facilities and aerial devices

2.5.1 Amend last paragraph of the introduction to include specific reference to fire safety systems.

The roofs of the Woollahra HCA are integral components of its character and heritage significance. The introduction of unsympathetic and uncharacteristic site facilities such as air-conditioning units and condensers, and aerial devices can have an adverse impact on the aesthetic significance of individual buildings and precincts and the area as a whole. Fixing these structures onto roofs and chimneys can also damage the original fabric and detail.

The location and design of other site facilities such as fire safety systems, mail boxes, external storage facilities, clothes drying areas and laundry facilities can also have an adverse impact on the appearance and character of the area and must be carefully considered.

Commented [DCP7]: Amend the introduction to include reference to fire safety systems.

2.5.2 Amend existing objective O5

O5 To ensure that the essential site facilities are functional, ~~and~~ accessible ~~to all residents~~ and are easy to maintain.

Commented [DCP8]: Amend the objective to recognise that not all site facilities should be accessible to residents, such as fire hydrants and boosters.

2.5.3 Insert new control after C6 and renumber existing controls accordingly

C7 Hydraulic fire services like fire hydrants and booster installations must be housed in a cabinet or enclosure. The design, colour and material of the cabinet or enclosure must be visually unobtrusive and suitably integrated with the development, including fencing and landscaping.

Commented [DCP9]: The proposed control seeks to minimise visual impacts by requiring the systems to be housed in an enclosure that is integrated with the development.

In precincts such as the Woollahra HCA most development is for dwelling houses and will not require fire services like fire hydrant and booster installations. The BCA establishes the fire safety requirements based on the class of the building.

Chapter C3 Watsons Bay Heritage Conservation Area

2.6 Amendments to section C3.3.9 Site facilities and aerial devices

2.6.1 Amend the last paragraph of the introduction to include specific reference to fire safety systems

The roofscape of Watsons Bay is an integral component of its overall significance.

The introduction of unsympathetic and uncharacteristic site facilities such as lift overruns, air-conditioning, mechanical ventilation, telecommunication facilities, satellite dishes, solar heating devices and aerials can have a detrimental impact on the aesthetic significance of individual buildings and on the conservation area generally.

The fixing of these structures on roofs and chimneys can also contribute to physical damage and possible loss of original fabric and detail.

In particular, consideration must be given to the location, size and design of site facilities including, mechanical plant equipment such as lift overruns, air-conditioning units and condensers, heating, ventilation, and other mechanical systems that maintain or support the operations of a building.

Commented [DCP10]: Amend the introduction to include reference to fire safety systems.

The location and design of other site facilities such as fire safety systems, mail boxes, garbage storage areas, external storage facilities, clothes drying areas and laundry facilities can also impact upon the appearance and overall character of the area and must be carefully considered.

2.6.2 Insert new control after C5

C6 Hydraulic fire services like fire hydrants and booster installations are housed in a cabinet or enclosure. The design, colour and material of the cabinet or enclosure is visually unobtrusive and suitably integrated with the development, including fencing and landscaping.

Commented [DCP11]: The proposed control seeks to minimise visual impacts by requiring the systems to be housed in an enclosure that is integrated with the development.

In precincts such as the Watsons Bay HCA most development is for dwelling houses and will not require fire services like fire hydrant and booster installations. The BCA establishes the fire safety requirements based on the class of the building.

Chapter D3 General Controls for Neighbourhood and Mixed Use Centres

2.7 Amendments to section D3.10 Site facilities

2.7.1 Amend the introduction to include specific references to fire safety systems

Site facilities include fire safety systems, lift overruns, air-conditioning, mechanical ventilation, mail boxes, storage areas, garbage collection areas, clothes drying areas and laundry facilities, aerials and the like.

The potential impacts of site facilities on the overall appearance of developments and the local streetscape need to be considered. In particular, consideration must be given to the location, size and design of site facilities that can be visually bulky, as is commonly the case with fire hydrant and boosters and ~~including~~, mechanical plant equipment such as lift overruns, air-conditioning units and condensers, heating, ventilation, and other mechanical systems that maintain or support the operations of a building.

Commented [DCP12]: Amend the introduction by including reference to fire safety systems. Specific reference is also made to fire hydrant and booster installations as these type of systems are generally required in mixed use and strata titled commercial buildings under the BCA and AS2419.1.

2.7.2 Insert new objective after O9

O10 To ensure fire safety systems are accessible, functional and do not have a negative impact on the streetscape.

Commented [DCP13]: This objective is similar to existing objectives for site facilities in the DCP chapters for Double Bay and Rose Bay Centres.

2.7.3 Insert new control after C11

C12 Hydraulic fire services like fire hydrants and booster installations are integrated into the front of the building façade and enclosed with doors. The enclosure is visually unobtrusive and suitably integrated with the development.

Commented [DCP14]: The proposed control seeks to minimise visual impacts by requiring the systems to be housed in an enclosure that is integrated with the development.

Chapter D4 Chapter D4 Edgecliff Centre

2.8 Amendments to section D4.2.3 Objectives and controls

2.8.1 Insert after O15 new objectives and renumber existing objectives accordingly

O16 Ensure adequate provision of site facilities.

O17 Ensure site facilities are accessible, functional and unobtrusive.

2.8.2 Insert after C24 new controls and renumber existing controls accordingly

C25 Site facilities are suitably integrated with the development and its landscaping to minimise visibility from the street.

O26 Hydraulic fire services like fire hydrants and booster installations are integrated into the front of the building façade and enclosed with doors. The enclosure is visually unobtrusive and suitably integrated with the development.

Commented [DCP15]: There are currently no objectives for site facilities in Chapter D4. The proposed objective is based on existing objectives for site facilities in the DCP chapters for Double Bay and Rose Bay Centres.

Commented [DCP16]: There are currently no controls for site facilities in Chapter D4. The amendments include general controls for site facilities and specific controls for hydraulic fire services.

The proposed control for hydraulic fire services seeks to minimise visual impacts by requiring the systems to be housed in an enclosure that is integrated with the development.

Chapter D5 Double Bay Centre

2.9 Amendments to section D5.6.8 Parking and servicing

2.9.1 Amend title name

Parking and ~~servicing~~ site facilities

2.9.2 Amend the introduction to include specific reference to fire safety systems.

Site facilities include loading areas, garbage areas, fire safety systems, mailboxes, external stores, laundries and clothes drying areas. Development should provide appropriate site facilities for retail, commercial and residential uses, and minimise impact on the streetscape.

2.9.3 Delete existing C3 and replace with new C3

~~C3 Fire hydrants and booster pumps must be integrated into the front of the building façade and enclosed with doors. The enclosure should be clearly identified in a colour that suitably contrasts the façade.~~

C3 Hydraulic fire services like fire hydrants and booster installations are integrated into the front of the building façade and enclosed with doors. The enclosure is visually unobtrusive and suitably integrated with the development.

Commented [DCP17]: Amend the title to remove ambiguity about the term "servicing"

Commented [DCP18]: Amend the introduction to include a reference to fire safety systems to help enhance consideration of these facilities.

Commented [DCP19]: The proposed control seeks to minimise visual impacts by requiring the systems to be housed in an enclosure that is integrated with the development.

Chapter D6 Rose Bay Centre

2.10 Amendments to section D6.6.9 Site facilities

2.10.1 Amend the introduction to include specific reference to fire safety systems.

Site facilities include loading areas, garbage areas, fire safety systems, mail boxes, external stores, laundries and clothes drying areas. Development should provide appropriate site facilities for retail, commercial and residential uses, and minimise impact on the streetscape.

2.10.2 Delete existing control C2 and replace with new C2

~~C2 Fire hydrants and booster pumps must be integrated into the front of the building façade and enclosed with doors. The enclosure should be clearly identified in a colour that suitably contrasts the façade.~~

C2 Hydraulic fire services like fire hydrants and booster installations are integrated into the front of the building façade and enclosed with doors. The enclosure is visually unobtrusive and suitably integrated with the development.

Commented [DCP20]: Amend the introduction to this section by including reference to fire safety systems to help enhance consideration of these facilities.

Commented [DCP21]: The proposed control seeks to minimise visual impacts by requiring the systems to be housed in an enclosure that is integrated with the development.

Item No:	R3 Recommendation to Council
Subject:	**DRAFT DCP CONTROLS FOR MULTI-STOREY DEVELOPMENT IN THE PADDINGTON HERITAGE CONSERVATION AREA**
Author:	Flavia Scardamaglia, Strategic Heritage Officer
Approvers:	Anne White, Manager - Strategic Planning Nick Economou, Acting Director Planning & Development
File No:	21/50900
Reason for Report:	To respond to two Council resolutions requesting a review of Chapter C1 with a view to providing numerical controls for multi-storey development. To obtain Council's approval to exhibit a draft development control plan to amend the Woollahra Development Control Plan 2015.

Recommendation:

A. THAT the report on the review of the controls for Chapter C1 Paddington Heritage Conservation Area in the Woollahra Development Control Plan 2015 be received and noted.

B. THAT Council resolves to exhibit the *Draft Woollahra Development Control Plan 2015 (Amendment No.16)* as contained in **Annexure 1** of the report to the Environmental Plan Committee on 12 April 2021.

1. Background

This project progresses and complements two previous amendments to *Chapter C1 Paddington Heritage Conservation Area* (Paddington HCA) of the *Woollahra Development Control Plan 2015* (Woollahra DCP 2015) that commenced respectively on 2 January 2020 and 12 October 2020.

The first amendment (No.7) was a major review of controls related to single storey buildings, infill development and side additions to multi-storey terrace style housing in the Paddington HCA.

The second amendment (No.13) amended the terminology for additions to the rear of single storey buildings by introducing the term courtyard housing additions. This amendment also supplemented the numerical controls for additions to the rear of single storey buildings.

The aim of this further amendment is to respond to the request for numerical controls for rear additions to multi-storey buildings. Pertinent to this work are the following Council resolutions.

On 9 December 2019 Council resolved (in part)

B. THAT a meeting of the Paddington Heritage Conservation Area Working Party is convened by mid-February 2020 to discuss potential amendments to the numerical controls for pavilions and linking structures and to give consideration to how the controls should apply to one and two storey terraces.

On 9 March 2020 Council resolved (in part)

B. THAT staff convene a Paddington & Oxford Street Working Party meeting to make recommendations to Council regarding controls for courtyard housing and equivalent development relating to multi-storey development.

2. Engagement with the Paddington HCA Working Party

The Paddington HCA Working Party (the Working Party), includes Paddington Ward Councillors and representatives from The Paddington Society, the National Trust of Australia NSW and the Woollahra History and Heritage Society. A meeting with the Working Party was held at Council Chambers on Thursday 11 February 2020 to discuss numerical controls for single storey buildings rear additions (courtyard housing additions) and potential amendments for multi-storey terrace houses. Minutes from this meeting are attached at **Annexure 3**.

On 28 February 2020, Council staff circulated an email to the members of the Working Party seeking clarification on the proposed changes. In response, members of the Working Party provided a number of comments and examples of recently approved development applications that would help inform the review.

On 11 March 2021, Council staff circulated an email to the members of the Working Party with proposed amendments to Chapter C1 Paddington HCA of the Woollahra DCP 2015. The Paddington Society provided a detailed submission in response, which included a number of recommended changes.

On 23 March 2021, Council staff circulated a second draft with proposed amendments to Chapter C1 Paddington HCA of the Woollahra DCP 2015. The Paddington Society provided a further detailed submission in response, which included a number of recommended changes. Other members of the working party also provided feedback on the second draft.

In both of these submissions the Paddington Society requested an extension of time. However, it was considered by staff that in this instance, an extension of time is not necessary for the following reasons

- Since February 2020, the members of the Working Party have sent emails to staff with recommendations and case studies
- The Paddington Society have provided two detailed submissions on the proposed amendments
- The members of the Working Party will be notified of the meeting of the Environmental Planning Committee (EPC) of 12 April 2021
- The members of the Working Party will be notified at the commencement of the public exhibition period, should the proposed controls be placed on public exhibition. All submissions will be reported to a future meeting of the EPC.

3. Amendments to Chapter C1 Paddington HCA of the Woollahra DCP 2015

3.1. Numerical controls

It is noted that the resolution from 9 December 2019 requires the consideration of numerical controls for pavilions and linking structures and to give consideration to how the controls should apply to single and multi-storey terraces. The previous amendments (identified above) addressed amended controls for single storey terraces/buildings.

As part of this review, staff have considered how numerical controls could be applied to multi-storey terrace style housing. Chapter C1 Paddington HCA already contains a number of provisions that inform the design, scale and bulk of multi-storey terrace style housing. A full analysis of numerical controls applying to multi-storey terrace style housing in Chapter C1 Paddington HCA is attached at **Annexure 4**, including recommended amendments. A summary of these is included in

the following table. Overall, these amendments seek to supplement existing provisions for multi-storey terrace style housing, including the height, form and presentation of rear elevations.

Table 1: Opportunities for improvements based on the analysis of the numerical controls

	Aim of the amendment	DCP Sections affected by changes
1	Restrict the height of rear additions to multi-storey terraces.	Amend C1 of *C1.4.3 Rear elevations, rear additions, significant outbuildings and yards* and include new graphics
2	Restrict the bulk, height and scale of lofts built above studios, where the site has no rear laneway access.	Amend *C1.5.7 Lofts over garages or studios* so that these provisions also apply to lots with no rear laneway access. Amendments include enhancing the introductory text, adding a new objective O7 and amend C1 (h)
3	Ensure the form and pitch of rear skillion roofs is consistent within the same group or pair.	Add new objective O4 and control C11 to *C1.4.4 Roofs and roof forms.*

3.2. Additional proposed amendments to the Woollahra DCP 2015

In addition to the changes identified in Table 1 above, and as a consequence of discussions with the members of the Working Party, staff have identified further changes that can be made to enhance the provisions in Chapter C1 Paddington HCA. In summary, these controls will strengthen a number of provisions across the chapter including provisions for pairs or groups of buildings, side additions for multi-storey terrace housing and the maintenance of elements that contribute to the significance of the HCA. These are summarised in the following table.

Table 2: Additional amendments based on engagement with the Working Party

	Aim of the amendment	DCP Sections affected by changes
1	Strengthen provisions to retain coherent forms and character of rear elevations of pairs or groups of single storey buildings.	Add a new objective O4 and control C12 (a) to *C1.3.1 Single storey buildings.*
2	Ensure side additions provisions currently in C1.3.4 Multi-storey terrace style apply to all building types.	Move provisions from *C1.3.4 Multi-storey terrace style housing to Part C1.4. General Controls for all development.*
3	Strengthen controls for elements that contribute to the HCA.	Add new control C1 (m) in C1.5.7 *Lofts above garage and studios*. Also add new objective O5 and amend control C3 (b) in C1.3.13 *Infill development (new development).*
4	Ensure the character of side elevations of principal building forms are retained.	Amend C2 of C1.4.2 *Side elevations to streets and lanes*.
5	Ensure a second dormer is allowed only on the rear roof plane of a courtyard housing addition.	Amending existing C18 (c) of C1.3.1 *Single storey buildings.*

3.3. Draft Woollahra DCP Amendment No. 16.

As a consequence of the issues discussed at the meeting of the Working Party, the detailed feedback from the Paddington Society and other working party members, and having consulted with Council's Development Control Staff, *Draft Woollahra Development Control Plan 2015 (Amendment No.16)* seeks to strengthen the provisions for multi-storey development in Paddington.

The draft DCP Amendment with the changes included is attached at **Annexure 1**. **Annexure 2** contains the relevant extracts from each of the chapters, and illustrates how the changes identified can be read in context with the other provisions. Notes in the right hand margin provide the justification for the proposed changes.

4. Next steps

If Council supports amending the Woollahra DCP 2015, the next step is exhibit the draft development control plan. The process for amending a DCP is set out in the *Environmental Planning and Assessment Act 1979*, the *Environmental Planning and Assessment Regulation 2000*, and the *Woollahra Community Participation Plan 2019*.

The draft DCP must be publicly exhibited for a minimum of 28 days. Public notice will be given in the Wentworth Courier and on Council's website each week of the exhibition. Key community groups, including the Paddington HCA Working party will be notified. The outcome of public exhibition will be reported to a future meeting of the EPC.

5. Conclusion

In response to two Council resolutions dated 9 December 2019 and 9 March 2020, Council staff have consulted with the Paddington HCA Working Party on a number of occasions, reviewed existing provisions and identified opportunities for improvement to Chapter C1 Paddington HCA in the Woollahra DCP 2015.

The proposed amendments seek to address a number of issues, including the height, form and presentation of rear elevations to multi-storey buildings in Paddington. Staff recommend that Council resolve to exhibit the *Draft Woollahra Development Control Plan 2015(Amendment No 16)* as contained in **Annexure 1**.

Annexures

1. Woollahra Development Control Plan 201 (Amendment No.16) ⇩
2. Proposed changes to Chapter C1 of the Woollahra DCP 2015 ⇩
3. Minutes of the meeting of the Paddington HCA Working Party 11 Februray 2020 ⇩
4. Analysis of existing numerical controls applicable to multi-storey terrace housing ⇩

Woollahra Development Control Plan 2015
(Amendment 16)

Prepared Date:	April 2021
Adopted:	TBC
Commenced:	TBC
Division/Department:	Strategic Planning
HPE CM Record Number:	21/59228

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Contents

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Woollahra Development Control Plan 2015 (Amendment No 16)

Part 1 Preliminary

1.1 Background

This project progresses and complements two previous amendments to *Chapter C1 Paddington Heritage Conservation Area* (Paddington HCA) of the *Woollahra Development Control Plan 2015* (Woollahra DCP 2015) that commenced respectively on 2 January 2020 and 12 October 2020.

The first amendment (No.7) was a major review of controls related to single storey buildings, infill development and side additions to multi-storey terrace style housing in the Paddington HCA.

The second amendment (No.13) amended the terminology for additions to the rear of single storey buildings by introducing the term courtyard housing additions. This amendment also supplemented the numerical controls for additions to the rear of single storey buildings.

The aim of this further amendment is to respond to the request for numerical controls for rear additions to multi-storey buildings. Pertinent to this work are the following Council resolution.

On 9 December 2019 Council resolved (in part)

B. *THAT a meeting of the Paddington Heritage Conservation Area Working Party is convened by mid-February 2020 to discuss potential amendments to the numerical controls for pavilions and linking structures and to give consideration to how the controls should apply to one and two storey terraces.*

On 9 March 2020 Council resolved (in part)

B. *THAT staff convene a Paddington & Oxford Street Working Party meeting to make recommendations to Council regarding controls for courtyard housing and equivalent development relating to multi-storey development.*

The reviews have involved input from the Paddington Heritage Conservation Area Working Party, which includes Paddington Ward Councillors and representatives from the Paddington Society, the National Trust of Australia NSW and the Woollahra History and Heritage Society.

Draft Woollahra DCP 2015 (Amendment No 16) contains amendments to Chapter C1 Paddington Heritage Conservation Area related to sections C1.3.1 *Single storey buildings*, C1.3.4 *Multi-storey terrace style housing*, C1.3.13 *Infill development (new development)*, C1.4.2 *Side elevations to streets and lanes*, C1.4.3 *Rear elevations, rear additions, significant outbuildings and yards*, C1.4.4 *Roofs and roof forms* and C1.5.7 *Lofts over garages and studios*.

1.2 Name of plan

This plan is the *Woollahra Development Control Plan 2015 (Amendment No 16)*.

1.3 Objectives of the plan

The objectives of the plan are to:

a) Strengthen the existing objectives and controls to retain coherent forms and character of rear elevations of pairs of groups.
b) Constraint and limit the height, bulk and scale of rear additions to multi-storey terrace style housing.
c) Ensure side additions provisions can be applied to any building type, not only multi-storey terrace housing.
d) Ensure rear additions and infill development do not prevent the maintenance and conservation of elements that contribute to the significance of the heritage conservation area, for example sandstone walls.
e) Ensure the character of side elevations of principal building forms are retained.

1.4 Land to which this plan applies

This plan applies to land within the Woollahra local government area and identified on the map in **Figure 1** where Chapter C1 of the Woollahra DCP 2015 apply:

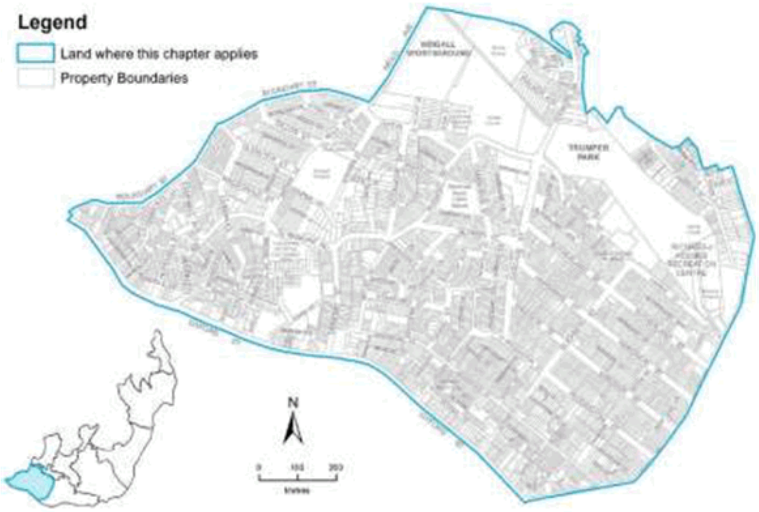


Figure 1: Land to which this draft plan applies

1.5 Relationship of this plan to the Act, Regulation and other plans or environmental planning instruments

This plan has been prepared under Division 3.6 of the *Environmental Planning and Assessment Act 1979* and Part 3 of the *Environmental Planning and Assessment Regulation 2000*.

Woollahra Local Environmental Plan 2014 (Woollahra LEP 2014) applies to the land to which this plan applies. In the event of an inconsistency between this plan and the Woollahra LEP 2014, the Woollahra LEP 2014 prevails.

1.6 Approval and commencement of this plan

This plan was approved by Woollahra Council on TBC and came into effect on TBC.

1.7 How this plan amends Woollahra DCP 2015

This plan amends Woollahra DCP 2015 in the manner set out in Part 2 of this plan.

Part 2 Amendments to Woollahra Development Control Plan 2015

This plan amends Woollahra DCP 2015 in the following manner:

Insertions – identified in blue and underlined
Deletions – ~~identified in red and strikethrough~~

Notes in the right hand margin of each section identify the source of the proposed amendments.

Chapter A1 Introduction

2.1 Amendments to clause A1.1.9 Savings and transitional provisions relating to development applications

2.1.1 Insert at the end of the clause

This DCP (as commenced on TBC) continues to apply to development applications, applications to modify consents under section 4.55 of the EP&A Act and applications for review of determination under Division 8.2 Reviews of the EP&A Act that were made prior to but not determined before the commencement of Amendment No 14 to this DCP.

2.2 Amendments to clause A1.4 List of amendments

2.2.1 Insert at the end of the clause

Amendment	Date of approval and Commencement	Description of amendment
No 16	Date approved – TBC Date commenced - TBC	Amend Part B Chapter C1 by modifying and amending various sections, controls and objectives affecting single storey buildings, multi-storey terrace style housing, infill development, side elevations and additions, rear elevations, roof forms and lofts over garages and studios.

Chapter C1 Paddington Heritage Conservation Area

2.3 Amendments to section C1.3.1 Single storey buildings

2.3.1 Add an additional Objective O4 to ensure the relationship between coherent pairs or groups is retained.

O4 To retain and enhance the distinctive shared characteristics of the rear elevations of pairs or groups.

Commented [DCP1]: Insert an additional objective O4 to ensure the relationship between coherent pairs or groups is retained.

2.3.2 Amend C12 by adding two sub-clauses to ensure the relationship between coherent pairs or groups is retained and renumber following sub-clauses.

C12 A courtyard housing addition may be permitted if:

a) it would not have an adverse impact on the heritage significance of the existing building, adjoining properties, or the group of buildings, where the building forms part of a group;

b) it does not disrupt a coherent pattern of pairs or groups;

c) ~~b)~~ it is not visible, directly or obliquely, from any part of the street to which the property's street front zone abuts and from the front yard within the street front zone;

d) ~~c)~~ it will have a negligible impact on the amenity of neighbouring properties in terms of loss of sunlight, ventilation and privacy;

e) ~~d)~~ it will not adversely affect the setting of the existing building; and

f) ~~e)~~ it is subsidiary to the existing building and will not dominate the existing building in terms of bulk and scale.

Commented [DCP2]: Insert additional sub-clause b) to ensure the relationship between coherent pairs or groups is retained. Renumber the following provisions.

2.3.3 Amend the wording of C15 (g) to identify courtyard housing as additions:

C15 Where a courtyard housing addition is appropriate:

a) a narrow, non-habitable linking structure may be provided between the principal building form and the courtyard housing addition;

b) the linking structure must be single storey, with a maximum height of 2.4m or below the eaves of the principal building form, whichever is the lower;

c) the width of the linking structure must be a maximum of 1.5m internally;

d) the linking structure must be a narrow, non-habitable lightweight construction to differentiate the new work from the original. Lightweight construction should comprise appropriate materials, roof form and overall design. Appropriate materials include glass, steel and timber. Very minor masonry material may be included;

e) it must include a usable courtyard, provided that a compliant rear building alignment can be achieved and the bulk and scale of the addition does not result in adverse privacy and overshadowing impacts on adjoining properties;

f) the inclusion of a courtyard must comply with the controls and minimum requirements in Section C1.4.9 Private open space, swimming pools, courtyards and landscaping; and

g) the height of the courtyard housing addition must not exceed the ridge height of the principal building form (chimneys not included).

Note: see Figure 3B for reference.

Commented [DCP3]: Enhance wording of existing control to make it consistent with other provisions by including the word 'addition'.

2.3.4 Amend the wording of C18 (c) so that two dormers can only be accommodated in the same roof plane.

C18 An attic is permitted within the roof space of the courtyard housing addition, provided that:

a) satisfactory floor to ceiling height standards are achieved;

b) the form and pitch of the courtyard housing addition roof matches the form and pitch of the roof of the principal building;

c) only one dormer is permitted (in either the front or rear roof plane). Where the width of the addition is greater than 6m, a second dormer may be permitted in the same roof plane, provided that each dormer is identical in type, size and no greater than 1.2m maximum width overall. The top of the dormer must be set below the main ridge by at least 300mm. The inclusion of a dormer must comply with the controls in Section C1.4.11 Acoustic and visual privacy; and

d) no more than 2 skylights (compliant with the controls for Skylights in C1.5.1 Dormers and Skylights) are located within the entire roof plane.

Commented [DCP4]: Clarify wording of this control to ensure a second dormer is permitted only in the same roof plane.

2.3.5 Add a new note after C19, consistently with other sections of Chapter C1:

C19 Roofing materials must comply with C1.5.8.

Refer to objectives and controls in C1.4 General controls for all development and C1.5 Spcific policy for building and site elements.

Commented [DCP5]: For ease of cross-referencing, insert new note referencing relevant other sections of Chapter C1.

2.4 Amendments to section C1.3.4 Multi-storey terrace style housing

2.4.1 Remove objectives O6, O7 and O8 as they will be included in C1.4.2.

~~O6 To ensure that side additions to existing buildings are designed and located to achieve a cohesive relationship between the existing buildings, and which retains and enhances the cultural significance of the heritage conservation area.~~

~~O7 To ensure that side additions respect the scale and setting of adjacent contributory buildings.~~

~~O8 To protect the amenity of adjoining or adjacent residential uses.~~

Commented [DCP6]: Delete provisions for side additions as they duplicate existing Objectives O3, O4 and O5 in (amended) C1.4.2 *Side elevations and side additions.*

2.4.2 Remove controls C2 to C14, including the final Note as they will be included in C1.4.2. Control C4 is deleted as it contradicts C3 (a)

~~**Side additions between buildings**~~

~~*Character*~~

~~C2 Side additions must:~~

~~a) maintain the significant features and qualities that combine to represent the character of the neighbourhood and area;~~

~~b) make a positive contribution to the character of the neighbourhood and area; and~~

~~c) maintain a contextual relationship between the existing building to which it is attached, the adjoining buildings and the streetscape in which it will be located by maintaining the development pattern.~~

~~*Scale*~~

Commented [DCP7]: Move these provisions into (amended) C1.4.2 *Side elevations and side additions* so they can apply to other typologies of buildings (not only multi-storey terraces).

This will also ensure consistency with the overall structure of this Chapter that is organised with C1.3 "Building Types" and C1.4 "General controls for all development."

~~C3 Side additions must not overwhelm the context and should be subservient to and consistent with the predominant scale of the building to which it is attached, significant development adjoining the site and in the group/row in terms of:~~

a) ~~maximum height pattern (measured to the uppermost ridge of the principal building to which it is attached [or the base of the parapet where existing], not including chimneys); and~~

b) ~~massing (building volume and size).~~

~~C4 Additional storeys are not permitted within the side addition.~~

Commented [DCP8]: Delete control C4 as it directly contradicts C3 (a) which may allow side additions to multi-storey terrace style housing.

~~*Form*~~

~~C5 Side additions must be consistent with the predominant built form (volume and configuration) of the building to which it is attached and significant development adjoining the site and in its immediate area in terms of aspects including, but not limited to:~~

a) ~~roof forms and pitch;~~

b) ~~three dimensional modelling of neighbouring buildings;~~

c) ~~modulation and articulation;~~

d) ~~relationship of solids and voids;~~

e) ~~fenestration patterns; and~~

f) ~~relationship of floor to ceiling heights and horizontal alignment of features (especially ground and first floor levels of the existing buildings to which it is attached).~~

~~Refer also to Section 1.4.4 Roofs and roof forms, Section 1.4.5 Building height, bulk, form and scale, and Section 1.4.6 Site coverage, setbacks and levels.~~

~~*Siting*~~

~~C6 Side additions must adopt the established orientation pattern of the existing building to which it is attached.~~

~~C7 Where there is a uniform building front setback, the side addition must be set back behind the front wall of the principal building form (not including the balcony) to which it is attached and adjoining buildings.~~

~~C8 Where building front setbacks vary, the side addition must be set back behind the front wall of the principal building form (not including the balcony) to which it is attached.~~

~~C9 If the side addition occurs on a corner site, the controls in C1.4.2 apply.~~

~~C10 Rear and side setbacks (including side passages) must align with existing patterns, where visible from the public domain.~~

~~C11 Side additions must be sited to:~~

a) ~~include sufficient deep soil landscaped area; and~~

b) ~~have no adverse impact on significant trees on the site or adjoining land, including public land.~~

~~Refer also to Section 1.4.8 Private open space, swimming pools, courtyards and landscaping.~~

~~*Materials, finishes, textures and colours*~~

~~C12 Materials, finishes, textures and colours must be appropriate to the historic context. They must be similar to the characteristic materials, finishes, textures and colours of the existing building to which it is attached and existing contributory buildings within the streetscape.~~

~~C13 Contemporary materials are permitted where their proportions, detailing, quantities and location on the building are in keeping with the character elements (refer to C1.2.3) and the desired future character of the heritage conservation area (refer to C1.2.4).~~

~~Refer also to Section 1.5.8 Materials, finishes and details and Section 1.5.9 Exterior colours.~~

~~C14 Side additions must:~~

a) ~~use render, masonry and/or timber;~~

b) ~~avoid large expanses of glass and reflective wall cladding;~~

c) ~~if visible from the street or public domain, use roof cladding which matches the existing building to which it is attached;~~

d) ~~not have solid masonry front boundary walls; and~~

e) ~~use colour schemes which respect the character of the neighbourhood.~~

~~Note:~~
~~For side additions between buildings, a draft site and context analysis is to be submitted to Council for comment as part of a predevelopment application meeting between Council representatives and the applicant.~~
~~The following information is to be submitted for comment prior to the lodgement of the development application:~~
~~design options explored and the applicant's preferred design proposal;~~

~~a statement outlining the proposed measures to minimise the adverse impact of the side addition on neighbouring lands, including the public domain;~~

~~the philosophy of how the design elements relate to the proposal's context in terms of architectural form, materials and character; and~~

~~the historic context and impact sections of a draft statement of heritage impact.~~

~~For development applications, applicants are required to provide the following information, not limited to:~~
~~design options and final preferred design;~~

~~a detailed site and context analysis;~~

~~profiles of adjoining development;~~

~~RLs for the subject site and adjoining properties;~~

~~an accurate survey (including accurate RLs, and the accurate location of eaves/gutters, chimneys and other structures on adjoining properties);~~

~~the structural relationship with the existing building and any adjoining properties (including shared party walls, footings and chimneys); and~~

~~the final version of the statement of heritage impact.~~

~~Other required documentation to be submitted with the development application can be found in the Development Application Guide.~~

2.5 Amendments to section C1.3.13 Infill development (new development)

2.5.1 Add a new objective O5 to protect contributory items.

O5 To ensure that infill development does not prevent the maintenance and conservation of elements that contribute to the significance of the heritage conservation area.

2.5.2 Amend C3 by adding a new sub-clause aiming to the maintenance of contributory items, including sandstone walls.

C3 Infill development must:

a) maintain the significant features and qualities that combine to represent the character of the neighbourhood and area; ~~and~~

b) not adversely affect the maintenance of elements that contribute to the significance of the heritage conservation area, for example sandstone walls; and

c) ~~b)~~ make a positive contribution to the character of the neighbourhood and area.

2.6 Amendments to section C1.4.2 Side elevations to streets and lanes

2.6.1 Rename this section Side elevations and side additions.

C1.4.2 Side elevations and side additions ~~to streets and lanes~~

2.6.2 Add introductory text related to side additions taken from C1.3.4 *Multi-storey terrace style housing*.

Some sites have the opportunity to develop additions to the sides or adjacent to the principal building form between a row of buildings. Where these are on the same registered land parcel, and where they do not affect 'night soil' or right of way passageways, they may be developed in ~~accordance with the following~~ provisions below. Significant 'night soil' or right of way passageways are to be retained in place and interpreted without additional structures other than fencing.
Note: Side elevations are to a street or lane, whilst side additions adjoin other buildings.

Refer also to corner terrace style houses in Section 1.3.3 Corner buildings and other relevant sections in C1.3 Building types.

2.6.3 Amend O3 by removing the word 'cultural' to give more emphasis on the fabric of the context.

O3 To ensure that side additions to existing buildings are designed and located to achieve a cohesive relationship between the existing buildings, and which retains and enhances the ~~cultural~~ significance of the heritage conservation area.

2.6.4 Amend C2 to ensure the character of side elevations to a principal building form is not impacted by minor alterations

C2 Minor alterations to a side elevation of the principal building form or the secondary wing will be permitted if they do not ~~significantly~~ impact on the architectural form and character.

Commented [DCP9]: Insert new objective O5 which aims to maintain and conserve elements that contribute to the significance of the heritage conservation area.

Commented [DCP10]: Insert new sub-clause b) to maintain and conserve elements that contribute to the significance of the heritage conservation area, for example sandstone walls.

Commented [DCP11]: Amend this heading to include side additions.
The aim of this amendment is to ensure that existing Side additions provisions currently in C1.3.4 *Multi-storey terrace style housing* apply to any building type in C1.3.

This will also ensure consistency with the overall structure of the DCP that is organised with C1.3 "Building Types" and C1.4 "General controls for all development."

Commented [DCP12]: Rationalise the introductory text from 1.3.4 *Multi-storey terrace style housing* so that existing provisions for side additions apply to all building types.

Commented [DCP13]: Remove the word 'cultural' to simplify the objective.

Commented [DCP14]: Amend control C2 to ensure minor alterations to side elevations do not impact on the architectural form and character of a contributory building.

2.6.5 Add C2- to C14 from C1.3.4 and renumber them accordingly. C4 is deleted as it contradicts C2 (a). Also add the final Note.

Side additions between buildings

C1 Side additions must:

a) maintain the significant features and qualities that combine to represent the character of the neighbourhood and area;

b) make a positive contribution to the character of the neighbourhood and area; and

c) maintain a contextual relationship between the existing building to which it is attached, the adjoining buildings and the streetscape in which it will be located by maintaining the development pattern.

C2 Side additions must not overwhelm the context and should be subservient to and consistent with the predominant scale of the building to which it is attached, significant development adjoining the site and in the group/row in terms of:

a) maximum height pattern (measured to below the gutter line of the principal building form to which it is attached [or the base of the parapet where existing], not including chimneys); and

b) massing (building volume and size).

~~C4 Additional storeys are not permitted within the side addition.~~

C3 Side additions must be consistent with the predominant built form (volume and configuration) of the building to which it is attached and significant development adjoining the site and in its immediate area in terms of aspects including, but not limited to:

a) roof forms and pitch;

b) three dimensional modelling of neighbouring buildings;

c) modulation and articulation;

d) relationship of solids and voids;

e) fenestration patterns; and

f) relationship of floor to ceiling heights and horizontal alignment of features (especially ground and first floor levels of the existing buildings to which it is attached).

Refer also to Section 1.4.5 Roofs and roof forms, Section 1.4.6 Building height, bulk, form and scale, and Section 1.4.7 Site coverage, setbacks and levels.

C4 Side additions must adopt the established orientation pattern of the existing building to which it is attached.

C5 Where there is a uniform building front setback, the side addition must be set back behind the front wall of the principal building form (not including the balcony) to which it is attached and adjoining buildings.

C6 Where building front setbacks vary, the side addition must be set back behind the front wall of the principal building form (not including the balcony) to which it is attached.

C7 If the side addition occurs on a corner site, the controls in C1.4.2 apply.

C8 Rear and side setbacks (including side passages) must align with existing patterns, where visible from the public domain.

Commented [DCP15]: Move these controls with some minor changes consistent with consolidating the provisions in C1.3.4 *Multi-storey terrace style housing* with (amended) *C1.4.2 Side elevations and side additions.*

Commented [DCP16]: Delete control C4 as it directly contradicts C2 (a) which may allow side additions to multi-storey terrace style housing. Renumber following controls.

C9 Side additions must be sited to:

a) include sufficient deep soil landscaped area; and

b) have no adverse impact on significant trees on the site or adjoining land, including public land.

Refer also to Section 1.4.9 Private open space, swimming pools, courtyards and landscaping.

C10 Materials, finishes, textures and colours must be appropriate to the historic context. They must be similar to the characteristic materials, finishes, textures and colours of the existing building to which it is attached and existing contributory buildings within the streetscape.

C11 Contemporary materials are permitted where their proportions, detailing, quantities and location on the building are in keeping with the character elements (refer to C1.2.3) and the desired future character of the heritage conservation area (refer to C1.2.4).

Refer also to Section 1.5.8 Materials, finishes and details and Section 1.5.9 Exterior colours.

C12 Side additions must:

a) use render, masonry and/or timber;

b) avoid large expanses of glass and reflective wall cladding;

c) if visible from the street or public domain, use roof cladding which matches the existing building to which it is attached;

d) not have solid masonry front boundary walls; and

e) use colour schemes which respect the character of the neighbourhood.

Note:
For side additions between buildings, a draft site and context analysis is to be submitted to Council for comment as part of a predevelopment application meeting between Council representatives and the applicant.
The following information is to be submitted for comment prior to the lodgement of the development application:
design options explored and the applicant's preferred design proposal;

a statement outlining the proposed measures to minimise the adverse impact of the side addition on neighbouring lands, including the public domain;

the philosophy of how the design elements relate to the proposal's context in terms of architectural form, materials and character; and

the historic context and impact sections of a draft statement of heritage impact.

For development applications, applicants are required to provide the following information, not limited to:
design options and final preferred design;

a detailed site and context analysis;

profiles of adjoining development;

RLs for the subject site and adjoining properties;

an accurate survey (including accurate RLs, and the accurate location of eaves/gutters, chimneys and other structures on adjoining properties);

the structural relationship with the existing building and any adjoining properties (including shared party walls, footings and chimneys); and

the final version of the statement of heritage impact.

Other required documentation to be submitted with the development application can be found in the Development Application Guide.

2.6.6 Re-number existing controls C4 to C11 into C13 to C20.

Side additions - street and lane

C13~~4~~ Additions must be consistent with traditional patterns and proportions of openings and the materials and detailing of the existing building.

C14~~5~~ The overall length of any addition is to be less than, and appear as a form secondary to, the existing building.

C15~~6~~ The addition of balconies is not permitted when the building is built to the side street boundary.

C16~~7~~ Additions must retain the profile of existing traditional party walls and their associated parapets.

C17~~8~~ Additions shall reflect the existing setbacks.

C18~~9~~ Where there is a uniform building front setback, the side addition must be set back behind the front wall of the principal building form (not including the balcony) to which it is attached and adjoining buildings.

C19~~0~~ Where building front setbacks vary, the side addition must be set back behind the front wall of the principal building form (not including the balcony) to which it is attached.

C20~~11~~ Side boundary fencing shall reference traditional height, forms and materials.

2.7 Amendments to section C1.4.3. Rear elevations, rear additions, significant outbuildings and yards

2.7.1 Delete C1, add new control C4 and renumber controls in between.

~~C1 The height of an alteration and addition to the rear of a double storey or higher building must be below the gutter line of the main roof of the existing building.~~

C2~~1~~ Alterations and additions to a building which comprises one of a group, ~~or~~ pair, must be designed with regard to the overall balance of the group, or pair, in terms of height, alignment, form, scale, breezeway pattern and architectural character and detail.

C3~~2~~ The roof of an extension or the new roof for an existing component must be of traditional form appropriate to the building type.

C4~~3~~ Roofs must be visible and not screened partly or wholly be features such as parapets. The exception may be corner sites. Parapet roof forms may only be considered appropriate where it can be demonstrated that a parapet form is consistent with the bulk, scale and character of the existing building and group.

C4 No part of a rear alteration and addition can be higher than the gutter line of the principal building form (chimney excluded).

2.7.2 Add new graphics and caption illustrating intrusive additions in a flat and sloping to the rear scenario.

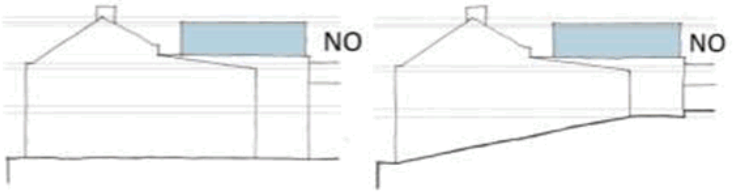
Commented [DCP17]: Remove control C1 which is being replaced by proposed control C4 which duplicates the intention.

Commented [FS18]: Enhance this control so that it applies also to pairs of contributory buildings.

Commented [DCP19]: Insert new control C4 (before new diagrams) which does not support rear additions being higher than the gutter line of the principal building form.

FIGURE 9A Intrusive development: rear additions showing additional levels above the gutter line which are not supported by C5. The difference between the two drawings is the topography of the site.

Commented [DCP20]: Insert new diagrams illustrating intrusive development above the gutter line in a flat scenario and sloping to the rear scenario.



2.8 Amendments to section C1.4.4 Roofs and roof forms

2.8.1 Add new objective O4 and C11 to ensure new roof form and roof pitch retains cohesiveness of coherent pairs or groups.

O4 To ensure new rear additions to multi-storey buildings are designed to retain consistency to the group or pair in terms of roof form and roof pitch.

Commented [DCP21]: Insert a new objective O4 to ensure that the pitch and roof form of rear additions of coherent groups and pairs is retained.

C11 New rear additions to multi-storey buildings must retain consistency to the group or pair they form part of in terms of roof form and roof pitch.

Commented [DCP22]: Insert new Control C11 to ensure that the pitch and roof form of rear additions of coherent groups and pairs is retained.

2.9 Amendments to section C1.5.7 Lofts over garages and studios

2.16.1 Amend the introductory text to give emphasis that these provisions also apply to sites with no rear laneway access.

O7 To ensure that loft structures above garages and studios do not preclude the maintenance and conservation of items that contribute to the significance of the heritage conservation area.

Commented [DCP23]: Insert new objective O7 which aims to maintain and conserve elements that contribute to the significance of the heritage conservation area.

2.16.2 Amend C1 (h) to ensure this control also applies to sites with no rear laneway access and add new sub-clause to ensure the maintenance of elements contributing to the heritage conservation area such as sandstone walls.

C1 Loft structures may be permitted where:

a) the site dimensions are a minimum of 30m long and 5.24m wide and where the structure will not adversely impact on the traditional character of the rear elevations, yards, and laneways;

b) the structure will not adversely impact on the amenity, visual privacy and overshadowing of the property, neighbouring properties and public open space (the controls in Section 1.4.5 Building height, bulk, form and scale apply);

c) the structure does not require the footprint of the garage or studio to be extended so that the controls in Section 1.4.8 Private open space, swimming pools, courtyards and landscaping cannot be satisfied. Where there is an existing non-compliance with these controls, the existing private open space and deep soil landscaping is not to be further reduced;

d) all access to the loft is provided internally;

e) habitable room windows within the loft with a direct sightline to the habitable room windows in the existing building on the site and neighbouring buildings have a separation distance of at least 9m;

f) the structure extends over only a single space garage or studio;

g) the loft and garage (or studio) structure is a maximum of 4.34m wide;

h) the roof structure is gable ended to the rear boundary ~~laneway~~, with a maximum ridge height of 5.5m and maximum wall height of 3.9m (on or adjacent to a side boundary);

i) windows are located only in the centre of gable ends and must be either: a single double hung sash window, or inward opening window of traditional proportions;

j) does not include balconies, decks, or other similar cantilevered structures;

k) a maximum of two skylights per roof plane, provided they comply with controls C28, C29 and C30 in Section 1.5.1 Dormers and skylights; ~~and~~

l) the ground floor level of the principal building form is higher than the natural ground level at the rear boundary~~.~~; and

m) the maintenance of elements that contribute to the heritage conservation area, such as sandstone walls, will not be adversely affected. Also refer to C1.5.6 Fences, walls and gates.

Commented [DCP24]: Enhance control C1 (h) by removing "laneway". With this change, the numerical controls for lofts above garages can be applied also to studios in sites with no rear laneway access.

Commented [DCP25]: Insert new sub-clause m) to maintain and conserve elements that contribute to the significance of the heritage conservation area, for example sandstone walls.

Relevant Extracts from the Woollahra DCP 2015

To accompany Woollahra Draft DCP Amendment No.16 (Chapter C1 Paddington HCA)

April 2021

Annotations:
Insertions - identified in blue and underline
~~Deletions - identified in red and scored through.~~

Notes in the right hand margin of each section identify the source of the proposed amendments.

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C1.3.1 Single storey buildings

Single storey buildings include timber, stone, brick and weatherboard cottages, terraces, semi-detached houses and single storey shops.

Architectural styles include Georgian, Victorian and Federation. The scale of buildings generally range from the typical small and narrow fronted buildings to medium to large houses ranging in date from 1840s to 1920s.

Single storey buildings, in particular the timber cottages, are significant because of their rarity. Many single storey buildings are also significant because of their historical association with the evolution of the early Paddington village and the artisan community that developed at the junction of Glenmore Road and New South Head Road.

Additions to these single storey buildings need to be carefully considered (see Figure 1). Refer to Figures 2 and 3 for examples of intrusive and non-intrusive extensions.

Objectives

O1 To retain and conserve single storey buildings.

O2 To conserve the settings of single storey buildings.

O3 To ensure that the scale and form of single storey buildings are retained and that alterations and additions do not dominate the building.

O4 To retain and enhance the distinctive shared characteristics of the rear elevations of pairs or groups.

Commented [DCP1]: Insert an additional objective O4 to ensure the relationship between coherent pairs or groups is retained.

General Controls

These controls apply to all alterations and additions to single storey buildings, including courtyard housing additions:

C1 Principal building forms and original external materials are to be retained.

C2 Retain or reinstate façade details and open verandahs where physical or documentary evidence exists demonstrating an earlier state.

C3 Where alterations are required to meet the National Construction Code requirements, materials must be consistent with traditional materials and finishes.

C4 Additional storeys are not permitted to the principal building form where the existing roof height will be increased, and changes to the existing roof pitch and eaves height will occur.

C5 Roof space within the principal building form may be used where there will be no change to the existing roof height, roof pitch, eaves height or ceiling below. No change to the rear roof plane is permitted to the principal building form with the exception of a compliant dormer and skylight.

Note: Control C5 is included to ensure that the rear roof of the principal building is not raised to incorporate a higher extension or higher link structure to courtyard housing.

C6 The addition of dormers or skylights in the rear roof slope of the principal building form is to comply with controls in Section 1.5.1 Dormers and skylights.

C7 Ground floor additions and courtyard housing additions to the rear of a single storey building must not compromise the form of the principal building.

C8 Existing setbacks from the front and side boundaries for the principal building form are to be retained.

C9 Additions at the rear of buildings must not extend beyond the predominant rear building setbacks at any level of a group or row of buildings.

C10 Additions of an appropriate form and scale are permitted at the rear of the principal building form if:

a) the addition is a ground floor rear addition attached to the principal building below the existing eve or employs a courtyard housing style addition (refer to controls below); and

b) for additions other than courtyard housing additions, the addition incorporates a skillion roof. Reverse skillion roofs are not permitted.

C11 Additions to single storey semi-detached and terrace groups must not compromise the architectural character of the pair, or the group of houses.

Courtyard housing additions

Courtyard housing is not an infill development or a garage or a loft over a garage or a studio. Controls for infill development are included in C1.3.13. Controls for a loft over a garage or studio are included in C1.5.7.

C12 A courtyard housing addition may be permitted if:

a) it would not have an adverse impact on the heritage significance of the existing building, adjoining properties, or the group of buildings, where the building forms part of a group;

b) it does not disrupt a coherent pattern of pairs or groups;

c) ~~b)~~ it is not visible, directly or obliquely, from any part of the street to which the property's street front zone abuts and from the front yard within the street front zone;

d) ~~c)~~ it will have a negligible impact on the amenity of neighbouring properties in terms of loss of sunlight, ventilation and privacy;

e) ~~d)~~ it will not adversely affect the setting of the existing building; and

f) ~~e)~~ it is subsidiary to the existing building and will not dominate the existing building in terms of bulk and scale.

C13 A courtyard housing addition must be single storey and must not be able to be seen over the roof of the principal building.

Commented [DCP2]: Insert additional sub-clause b) to ensure the relationship between coherent pairs or groups is retained. Renumber the following provisions.

C14 A courtyard housing addition must be wholly located at the rear of the existing principal building. Additions that wrap around the principal building are not appropriate.

C15 Where a courtyard housing addition is appropriate:

a) a narrow, non-habitable linking structure may be provided between the principal building form and the courtyard housing addition;

b) the linking structure must be single storey, with a maximum height of 2.4m or below the eaves of the principal building form, whichever is the lower;

c) the width of the linking structure must be a maximum of 1.5m internally;

d) the linking structure must be a narrow, non-habitable lightweight construction to differentiate the new work from the original. Lightweight construction should comprise appropriate materials, roof form and overall design. Appropriate materials include glass, steel and timber. Very minor masonry material may be included;

e) it must include a usable courtyard, provided that a compliant rear building alignment can be achieved and the bulk and scale of the addition does not result in adverse privacy and overshadowing impacts on adjoining properties;

f) the inclusion of a courtyard must comply with the controls and minimum requirements in Section C1.4.9 Private open space, swimming pools, courtyards and landscaping; and

g) the height of the courtyard housing addition must not exceed the ridge height of the principal building form (chimneys not included).

Note: see Figure 3B for reference.

Commented [DCP3]: Enhance wording of existing control to make it consistent with other provisions by including the word 'addition'.

C16 The roof of the courtyard housing addition must:

a) be an appropriate response to the traditional roof form and pitch of the principal building. Skillion roofs must comprise a single roof plane. Curved roofs, flat roofs, mansard roofs, parapet roofs and reverse skillion roofs are not permitted; and

b) match the pitch of roofs where an unchanged established pattern of rear roofs exists or, where an unchanged pattern does not exist, must be a minimum pitch of 6 degrees.

C17 Provided that C12 and C15 are satisfied, a contemporary design for the courtyard housing may be used.

C18 An attic is permitted within the roof space of the courtyard housing addition, provided that:

a) satisfactory floor to ceiling height standards are achieved;

b) the form and pitch of the courtyard housing addition roof matches the form and pitch of the roof of the principal building;

c) only one dormer is permitted (in either the front or rear roof plane). Where the width of the addition is greater than 6m, a second dormer may be permitted in the same roof plane, provided that each dormer is identical in type, size and no greater than 1.2m maximum width overall. The top of the dormer must be set below the main ridge by at least 300mm. The inclusion of a dormer must comply with the controls in Section C1.4.11 Acoustic and visual privacy; and

Commented [DCP4]: Clarify wording of this control to ensure a second dormer is permitted only in the same roof plane.

d) no more than 2 skylights (compliant with the controls for Skylights in C1.5.1 Dormers and Skylights) are located within the entire roof plane.

C19 Roofing materials must comply with C1.5.8.

Refer to objectives and controls in C1.4 General controls for all development and C1.5 Spcific policy for building and site elements.

Commented [DCP5]: For ease of cross-referencing, insert new note referencing relevant other sections of Chapter C1.

FIGURE 1 Generic version of a single storey terrace

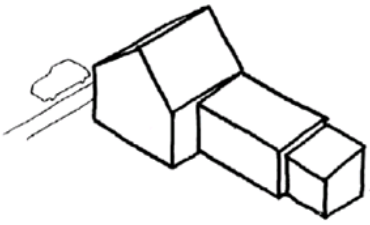


FIGURE 2A Intrusive additions

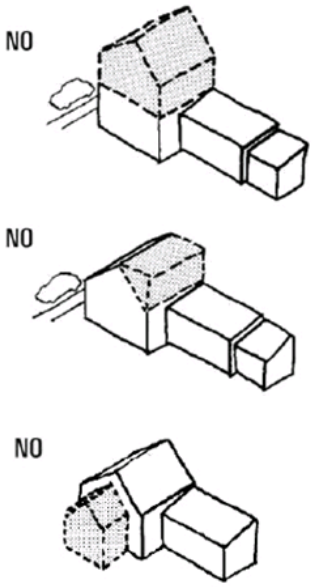


FIGURE 2B Intrusive additions

Commented [DCP6]: All figure numbers will be reviewed post-exhibition for accuracy.

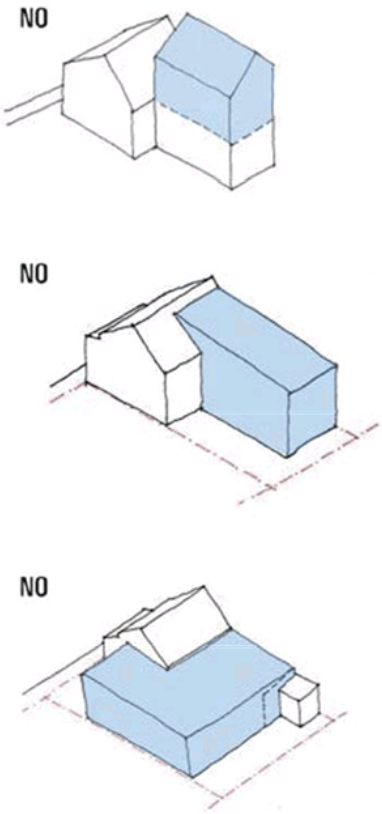


FIGURE 3A Non-intrusive development

Commented [DCP7]: All figure numbers will be reviewed post-exhibition for accuracy.

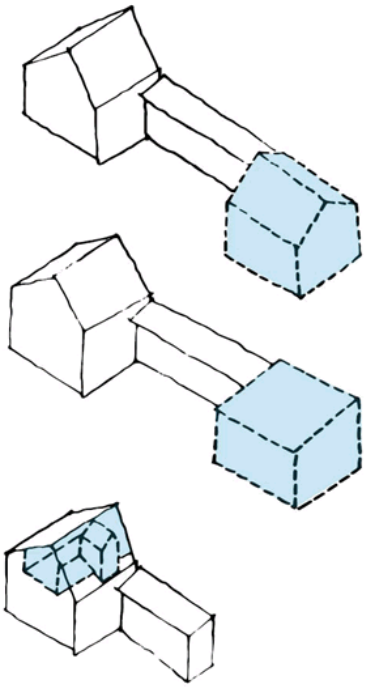
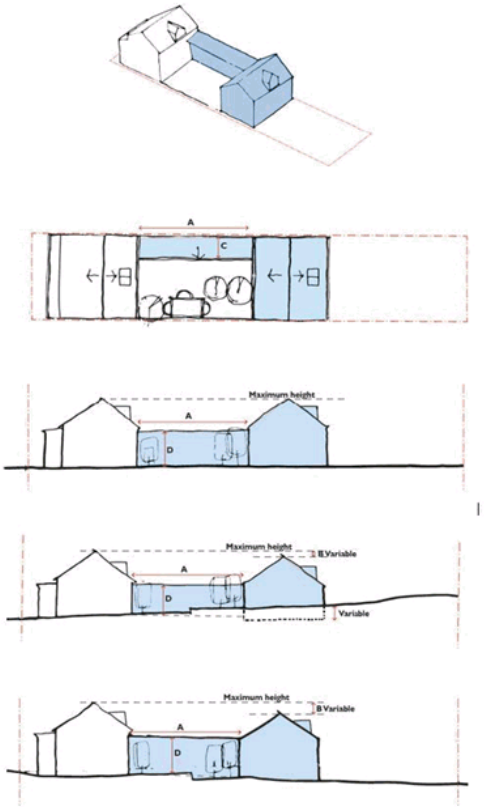


FIGURE 3B Non-intrusive development. Example of a courtyard housing addition with the same pitch, form and orientation as the principal building form.

Commented [DCP8]: All figure numbers will be reviewed post-exhibition for accuracy.



Measurement A: dimension must provide a usable courtyard and must comply with the controls and minimum requirements in Section C1.4.8 - Private open space, swimming pools, courtyards and landscaping - provided that a compliant rear building alignment can be achieved.

Measurement B: dimension must provide an addition that is single storey, may be equal to or lower than the ridge height of the principal building form (not including chimneys), and must not be able to be seen over the roof of the principal building.

Measurement C: dimension must be a maximum of 1.5m internally.

Measurement D: dimension must be a maximum of 2.4m or below the eaves of the principal building form, whichever is lower.

The diagrams in Figures 1, 2A, 2B, 3A and 3B must be read in conjunction with relevant controls which set out detailed additional requirements. The diagrams do not show examples that reflect all the relevant controls.

Commented [DCP9]: All figure numbers will be reviewed post-exhibition for accuracy.

C1.3.4 Multi-storey terrace style housing

Multi-storey terrace housing includes mostly two and three storey terraces, some containing additional basement and attic levels. This housing was traditionally built in uniform rows; occasionally containing distinct subgroups or individual buildings within groups.

The lot width and configuration is the main determinant of the terrace house size, scale and arrangement pattern, with the three storey terraces generally occurring on the larger lots.

Architectural styles and the periods of construction vary and include Georgian, Victorian and Federation.

Predominantly terraces have front verandahs and balconies built to address the street, and party walls which separate the dwellings.

Groups of terrace houses occasionally contain subgroups of varying building widths and detailing, or may be terminated by an individual end terrace (see Section 1.3.3 Corner buildings) or mixed residential/corner shops and commercial buildings (see Sections 1.3.3 and 1.3.8).

Objectives

O1 To retain and conserve the principal building forms of rows and groups of terraces.

O2 To retain significant rear and side forms.

O3 To retain the rear forms of unaltered pairs and groups of terraces.

O4 To retain the shared distinctive characteristics of groups of buildings.

O5 To retain, restore and promote the significance, contribution and relationship of a building within the context of a group of buildings.

~~O6 To ensure that side additions to existing buildings are designed and located to achieve a cohesive relationship between the existing buildings, and which retains and enhances the cultural significance of the heritage conservation area.~~

~~O7 To ensure that side additions respect the scale and setting of adjacent contributory buildings.~~

~~O8 To protect the amenity of adjoining or adjacent residential uses.~~

Commented [DCP10]: Delete provisions for side additions as they duplicate existing Objectives O3, O4 and O5 in (amended) C1.4.2 *Side elevations and side additions.*

Controls

All multi storey terrace style development

C1 Refer to objectives and controls in Section C1.4 General controls for all development and Section C1.5 Specific policy for building and site elements.

~~Side additions between buildings~~

~~*Character*~~

~~C2 Side additions must:~~

a) ~~maintain the significant features and qualities that combine to represent the character of the neighbourhood and area;~~

b) ~~make a positive contribution to the character of the neighbourhood and area; and~~

c) ~~maintain a contextual relationship between the existing building to which it is attached, the adjoining buildings and the streetscape in which it will be located by maintaining the development pattern.~~

~~*Scale*~~

~~C3 Side additions must not overwhelm the context and should be subservient to and consistent with the predominant scale of the building to which it is attached, significant development adjoining the site and in the group/row in terms of:~~

a) ~~maximum height pattern (measured to the uppermost ridge of the principal building to which it is attached [or the base of the parapet where existing], not including chimneys); and~~

b) ~~massing (building volume and size).~~

~~C4 Additional storeys are not permitted within the side addition.~~

~~*Form*~~

~~C5 Side additions must be consistent with the predominant built form (volume and configuration) of the building to which it is attached and significant development adjoining the site and in its immediate area in terms of aspects including, but not limited to:~~

a) ~~roof forms and pitch;~~

b) ~~three dimensional modelling of neighbouring buildings;~~

c) ~~modulation and articulation;~~

d) ~~relationship of solids and voids;~~

e) ~~fenestration patterns; and~~

f) ~~relationship of floor to ceiling heights and horizontal alignment of features (especially ground and first floor levels of the existing buildings to which it is attached).~~

~~Refer also to Section 1.4.4 Roofs and roof forms, Section 1.4.5 Building height, bulk, form and scale, and Section 1.4.6 Site coverage, setbacks and levels.~~

Commented [DCP11]: Move these provisions into (amended) C1.4.2 *Side elevations and side additions* so they can apply to other typologies of buildings (not only multi-storey terraces).

This will also ensure consistency with the overall structure of this Chapter that is organised with C1.3 "Building Types" and C1.4 "General controls for all development."

Commented [DCP12]: Delete control C4 as it directly contradicts C3 (a) which may allow side additions to multi-storey terrace style housing.

~~*Siting*~~

~~C6 Side additions must adopt the established orientation pattern of the existing building to which it is attached.~~

~~C7 Where there is a uniform building front setback, the side addition must be set back behind the front wall of the principal building form (not including the balcony) to which it is attached and adjoining buildings.~~

~~C8 Where building front setbacks vary, the side addition must be set back behind the front wall of the principal building form (not including the balcony) to which it is attached.~~

~~C9 If the side addition occurs on a corner site, the controls in C1.4.2 apply.~~

~~C10 Rear and side setbacks (including side passages) must align with existing patterns, where visible from the public domain.~~

~~C11 Side additions must be sited to:~~

a) ~~include sufficient deep soil landscaped area; and~~

b) ~~have no adverse impact on significant trees on the site or adjoining land, including public land.~~

~~Refer also to Section 1.4.8 Private open space, swimming pools, courtyards and landscaping.~~

~~*Materials, finishes, textures and colours*~~

~~C12 Materials, finishes, textures and colours must be appropriate to the historic context. They must be similar to the characteristic materials, finishes, textures and colours of the existing building to which it is attached and existing contributory buildings within the streetscape.~~

~~C13 Contemporary materials are permitted where their proportions, detailing, quantities and location on the building are in keeping with the character elements (refer to C1.2.3) and the desired future character of the heritage conservation area (refer to C1.2.4).~~

~~Refer also to Section 1.5.8 Materials, finishes and details and Section 1.5.9 Exterior colours.~~

~~C14 Side additions must:~~

a) ~~use render, masonry and/or timber;~~

b) ~~avoid large expanses of glass and reflective wall cladding;~~

c) ~~if visible from the street or public domain, use roof cladding which matches the existing building to which it is attached;~~

d) ~~not have solid masonry front boundary walls; and~~

e) ~~use colour schemes which respect the character of the neighbourhood.~~

~~Note:~~

~~For side additions between buildings, a draft site and context analysis is to be submitted to Council for comment as part of a predevelopment application meeting between Council representatives and the applicant.~~

~~The following information is to be submitted for comment prior to the lodgement of the development application:~~

- ~~design options explored and the applicant's preferred design proposal;~~
- ~~a statement outlining the proposed measures to minimise the adverse impact of the side addition on neighbouring lands, including the public domain;~~
- ~~the philosophy of how the design elements relate to the proposal's context in terms of architectural form, materials and character; and~~
- ~~the historic context and impact sections of a draft statement of heritage impact.~~

~~For development applications, applicants are required to provide the following information, not limited to:~~

- ~~design options and final preferred design;~~
- ~~a detailed site and context analysis;~~
- ~~profiles of adjoining development;~~
- ~~RLs for the subject site and adjoining properties;~~
- ~~an accurate survey (including accurate RLs, and the accurate location of eaves/gutters, chimneys and other structures on adjoining properties);~~
- ~~the structural relationship with the existing building and any adjoining properties (including shared party walls, footings and chimneys); and~~
- ~~the final version of the statement of heritage impact.~~

~~Other required documentation to be submitted with the development application can be found in the Development Application Guide.~~

C1.3.13 Infill development (new development)

The term 'infill development' is defined as the erection of a building that is:

- constructed on an existing vacant registered allotment of land; and
- does not include side, rear or front alterations and additions to an existing building.

Note:

Demolition is generally not supported. All proposals for demolition of a building must be approved via a thorough planning process that includes an assessment of the contribution the building is making to the Paddington Heritage Conservation Area, a fabric analysis and an assessment of the impact that the loss of the building may have on the significance of the heritage conservation area.

Infill development provides the chance for the continuing enrichment of Paddington by adding new built form which is an expression of contemporary life.

Opportunities for infill buildings may occur where existing buildings have been demolished or where vacant allotments exist or have been created. Demolition and subdivision will require assessment through the development application process.

As the opportunities for infill development are rare, designs for such sites are required to demonstrate an appropriate response to context and an approach which enhances the character of Paddington and its cultural significance.

Infill development should not be a 'faux' representation of a historical architectural style. Rather, Council requires a contemporary design approach which respects:

- the historic context;
- siting; and
- architectural forms (including roof form, roof pitch, height, scale, massing, alignment, modulation, articulation and materials);

and achieves a cohesive relationship between the existing and new urban fabric.

Note:

A Pre-DA Meeting is recommended between Council representatives and the applicant for infill development proposals.

The following information is to be submitted for comment for discussion at the Pre-DA Meeting:

- a draft site and context analysis;
- design options explored and the applicant's preferred infill design proposal;
- a statement outlining the proposed measures to minimise the adverse impact of the infill development on neighbouring lands, including the public domain;
- the philosophy of how the design elements relate to the proposal's context in terms of architectural form, materials and character; and
- the historic context and impact sections of a draft statement of heritage impact.

For development applications, applicants are required to provide the following information, not limited to:

- design options and final preferred design;
- a detailed site and context analysis;
- profiles of adjoining development;
- RLs for the subject site and adjoining properties;
- an accurate survey for the subject site (including levels of adjoining buildings and their architectural elements);
- a schedule of materials, finishes and colours. Where contemporary materials are proposed, a statement must be provided that outlines how the contemporary materials are in keeping with the character elements and desired future character of the heritage conservation area, particularly in terms of solid-to-void ratios, detailing and proportions, textures and finishes;
- the structural relationship with adjoining properties (including shared party walls, footings and chimneys); and
- the final version of the statement of heritage impact.

Other required documentation to be submitted with the development application can be found in the Development Application Guide.

Objectives

O1 To encourage development on infill sites which reflects contemporary values and employs contemporary design, and through a design idiom, materials and construction technique provides an appropriate response to relevant aspects of the historical context of Paddington.

O2 To ensure new development on infill sites is designed and located to achieve a cohesive relationship between new and existing urban fabric, and which retains and enhances the cultural significance of the heritage conservation area.

O3 To ensure infill development respects the scale and setting of adjacent contributory buildings.

O4 To protect the amenity of adjoining or adjacent residential uses.

O5 To ensure that infill development does not prevent the maintenance and conservation of elements that contribute to the significance of the heritage conservation area.

Commented [DCP13]: Insert new objective O5 which aims to maintain and conserve elements that contribute to the significance of the heritage conservation area.

Controls

General

C1 Infill development is to comply with all relevant objectives and controls listed elsewhere in this chapter of the DCP. These objectives and controls are contained in sections including (but not limited to) C1.4 and C1.5.

C2 If development is for a dual occupancy, the additional controls for dual occupancies in Part B, Chapter B3 General Development Controls of this DCP also apply (refer to Section B3.8 Additional controls for development other than dwelling houses).

Character

C3 Infill development must:

a) maintain the significant features and qualities that combine to represent the character of the neighbourhood and area; ~~and~~

b) not adversely affect the maintenance of elements that contribute to the significance of the heritage conservation area, for example sandstone walls; and

c) ~~b)~~ make a positive contribution to the character of the neighbourhood and area.

Commented [DCP14]: Insert new sub-clause b) to maintain and conserve elements that contribute to the significance of the heritage conservation area, for example sandstone walls.

Scale

C4 Infill development must not overwhelm its context and should be consistent with the predominant scale of significant contributory development adjoining the site or within the group/row. The scale of infill development must respect and take cues from the lowest adjoining contributory 19th or 20th century development in terms of:

a) maximum height pattern (measured to the uppermost ridge of the principal buildings [or the base of the parapet where existing], not including chimneys); and

b) massing (building volume and size). On sloping streets, the stepped transitional height pattern must be achieved.

Refer also to Section 1.4.5 Building height, bulk, form and scale.

Form

C5 Infill development must be consistent with the predominant built form (volume and configuration) of significant contributory development adjoining the site and in its immediate area in terms of aspects including, but not limited to:

a) roof forms and pitch;

b) three dimensional modelling of neighbouring buildings;

c) modulation and articulation;

d) relationship of solids and voids;

e) fenestration patterns; and

f) relationship of floor to ceiling heights and horizontal alignment of features (especially ground and first floor levels of existing buildings on sloping sites and streets).

Refer also to Section 1.4.4 Roofs and roof forms, Section 1.4.5 Building height, bulk, form and scale, and Section 1.4.6 Site coverage, setbacks and levels.

Siting

C6 Infill development must adopt the established orientation pattern of the streetscape.

C7 Where neighbouring buildings are orientated to face the street, infill development is to adopt the existing pattern of orientation.

C8 Orientation across the site is not permitted unless there is a dominant pre-existing pattern in the street.

C9 Where there is a uniform building front setback, the infill development must align with the existing setbacks of adjoining buildings.

C10 Where building front setbacks vary, the following apply:

a) If there is a dominant pattern and the infill development adjoins that pattern, the infill development must align with that pattern.

b) If there is no dominant pattern, the infill development must align with the existing adjoining development whose scale is more compatible with the proposed infill development. The pattern of setbacks must respect and take cues from the nearest contributory 19th or 20th century development and ensure that infill is recessive and does not visually dominate the streetscape.

c) If there is an existing stepped pattern, the infill development must be consistent with the pattern and proportion of the step.

d) If the infill development occurs on a corner site, the infill development must be sited on the street property boundaries to define the corner.

C11 Rear and side setbacks (including side passages) must align with existing patterns, where visible from the public domain.

C12 Infill development must be sited to:

a) include sufficient deep soil landscaped area; and

b) have no adverse impact on significant trees on the site or adjoining land, including public land.

Refer also to Section 1.4.8 Private open space, swimming pools, courtyards and landscaping.

Materials, finishes, textures and colours

C13 Materials, finishes, textures and colours must be appropriate to the historic context. They must be similar to the characteristic materials, finishes, textures and colours of the existing contributory buildings within the streetscape.

C14 Traditional materials may be used.

C15 Contemporary materials may be permitted for infill development but only where their proportions, detailing, quantities and location on the building are in keeping with the character elements (refer to C1.2.3), the desired future character (refer to C1.2.4) and the heritage significance of the conservation area.

Note: for C13-C15:

Table 2 below sets out appropriate materials and finishes permissible for infill development. Refer also to Section 1.5.9 Exterior colours.

C16 Infill development must:

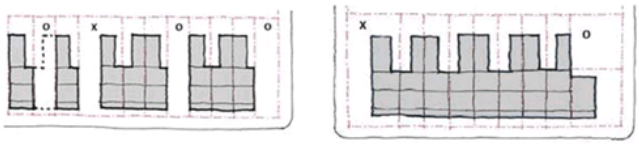
a) use render, masonry and/or timber;

b) avoid large expanses of glass, reflective and metal wall cladding;

c) use roof cladding which conforms with contributing neighbouring development;

d) not have solid masonry front boundary walls; and

e) use colour schemes which respect the character of the neighbourhood.



O = Acceptable infill site X = Unacceptable infill site

TABLE 2 Materials and details for infill development

Building component	External building materials
Roofs	
Permitted	▸ Traditional roof materials including natural slate such as Welsh slate and South Australian slate, corrugated galvanised iron in short lengths and associated galvanised details and fixings, or unglazed terracotta tiles. ▸ Pre-painted corrugated steel in light to mid grey tones, similar in appearance to traditional corrugated iron. ▸ Contemporary corrugated profile sheeting in appropriate colours and subject to low reflectivity.
Intrusive - not permitted	▸ Concrete roof tiles. ▸ Non-traditional metal roof profiles. ▸ Glass (other than permitted in skylights).

Building component	External building materials
Walls	
Permitted	▸ Traditional wall materials including sandstone blocks, timber weatherboard and brick. ▸ Corrugated galvanised iron, zinc coated corrugated steel ripple iron for small expanses only. Must be in appropriate colours and subject to low reflectivity. ▸ Rendered brick, with or without inscribed ashlar coursing where appropriate. ▸ Fibrous cement sheeting with a rendered and painted finish - for rear additions but only if window reveals of minimum 100mm external depth are achieved.
Intrusive - not permitted	▸ Smooth, textured or profiled face brick and exposed concrete blocks. ▸ Stripped sandstock brickwork. ▸ Circular pattern render (mock Spanish). ▸ Glazed walls and glass bricks. ▸ Metal wall cladding. ▸ Metal mesh or perforated metal screens.
Windows	
Permitted	▸ Timber frames. ▸ Steel frames on rear ground floor only. ▸ Metal frames for ground floor shops and commercial premises where appropriate. ▸ Plain clear glass. ▸ Coloured and patterned glass for replacement in appropriate situations. ▸ Fine metal frames in neutral tones.
Intrusive - not permitted	▸ Window walls. ▸ Bubble glass. ▸ Glass blocks. ▸ Timber or metal frames not reflecting traditional proportions. ▸ Roller shutter security and sunscreen windows. ▸ Horizontally sliding windows. ▸ Aluminium framed windows in the front elevation and at the upper levels at the rear

Building component	External building materials
Doors	
Permitted	▸ Timber-framed panelled doors. ▸ Glazed timber-framed doors. ▸ Glazed steel-framed doors. ▸ Glazed doors with film/frosted detailing.
Intrusive - not permitted	▸ Fully glazed doors to the street front elevation of residential properties. ▸ Hollow core and timber doors with detail and panels inappropriate to the architectural style of the building. ▸ Aluminium framed doors within the front elevation and at the upper levels at the rear.0 ▸ Roller shutter doors to residential houses, retail and commercial premises.
Shutters	
	▸ Traditionally detailed timber louvered shutters are applicable for windows and French doors on some building types.
Verandahs	
Permitted	▸ Traditional flooring materials including stone flagging, marble, tessellated tiles, terrazzo, slate, timber. ▸ Polished concrete and large form modern tiles. ▸ Traditional post materials including stone, cast iron or timber. ▸ Materials similar to traditional materials but without elaborate detailing.
Intrusive - not permitted	▸ Pebble-crete. ▸ Polycarbonate or similar type material for roofs. ▸ Glass roofs to street elevations. ▸ Concrete roof tiles. ▸ Non-traditional metal roof profiles.

Building component	External building materials
Balconies	
Permitted	▸ Traditional materials including corrugated iron roofing, slate roofing, timber framing, timber floors, timber balustrades/handrails, cast iron balustrades/handrails or modern-day equivalents. ▸ Pre-painted corrugated steel in light to mid grey tones, similar in appearance to traditional corrugated iron. ▸ Copper sheeting, zinc sheeting (traditional standing seam profile). ▸ Contemporary corrugated profile sheeting in appropriate colours and subject to low reflectivity. ▸ Masonry and metal, other than perforated metal or mesh.
Intrusive - not permitted	▸ Smooth, textured or profiled face brick and exposed concrete blocks. ▸ Corrugated and other profiled metal sheeting balustrading. ▸ Wire balustrading. ▸ Fibrous cement sheeting balustrading. ▸ Glass balustrading. ▸ Perforated metal or mesh screens.
Front Fences	
Permitted	▸ Traditional fences but with consideration to building style and context, including rendered masonry with ashlar coursing, timber (picket or paling), iron palisade on sandstone, brick or rendered bases, brick and timber, or brick with iron inserts. ▸ Contemporary interpretation of traditional fence details and materials such as iron palisade and timber.
Intrusive - not permitted	▸ Smooth, textured or profiled face brick, exposed cement blocks, Ti Tree (brush), or sheet metal fences. ▸ Angled vertical blade palisade fencing. ▸ Full height brick fences. ▸ Materials and forms that are inappropriate to the style of the building.

C1.4.2 Side elevations and side additions ~~to streets and lanes~~

Side elevations of Victorian terrace houses are often built to the street boundary with a strong gabled form reflecting the pitch of the main roof and a lower skillion section at the rear. Side elevations or secondary elevations are less detailed than the main street front elevations.

Due to the high visibility from streets and laneways, changes to side elevations and additions require an approach that retains the architectural form and character of the building.

Some sites have the opportunity to develop additions to the sides or adjacent to the principal building form between a row of buildings. Where these are on the same registered land parcel, and where they do not affect 'night soil' or right of way passageways, they may be developed in ~~accordance with the following~~ provisions below. Significant 'night soil' or right of way passageways are to be retained in place and interpreted without additional structures other than fencing.

Note: Side elevations are to a street or lane, whilst side additions adjoin other buildings.

Refer also to corner terrace style houses in Section 1.3.3 Corner buildings and other relevant sections in C1.3 Building types.

Objectives

O1 To retain and conserve the architectural character of side elevations of contributory buildings.

O2 To ensure that side additions are of sympathetic design and construction to the original building.

O3 To ensure that side additions to existing buildings are designed and located to achieve a cohesive relationship between the existing buildings, and which retains and enhances the ~~cultural~~ significance of the heritage conservation area.

O4 To ensure that side additions respect the scale and setting of adjacent contributory buildings.

O5 To protect the amenity of adjoining or adjacent residential uses.

Controls

Side elevations - street and lane

C1 Original side elevations of contributory buildings including original fabric, side entrance doors, windows, balconies and other details are to be retained and conserved.

C2 Minor alterations to a side elevation of the principal building form or the secondary wing will be permitted if they do not ~~significantly~~ impact on the architectural form and character.

Commented [DCP15]: Amend this heading to include side additions.
The aim of this amendment is to ensure that existing Side additions provisions currently in C1.3.4 *Multi-storey terrace style housing* apply to any building type in C1.3.

This will also ensure consistency with the overall structure of the DCP that is organised with C1.3 "Building Types" and C1.4 "General controls for all development."

Commented [DCP16]: Rationalise the introductory text from 1.3.4 *Multi-storey terrace style housing* so that existing provisions for side additions apply to all building types.

Commented [DCP17]: Remove the word 'cultural' to simplify the objective.

Commented [DCP18]: Amend control C2 to ensure minor alterations to side elevations do not impact on the architectural form and character of a contributory building.

C3 Changes to the roof pitch of the principal building form of contributory buildings are not permitted.

Side additions between buildings

C1 Side additions must:

a) maintain the significant features and qualities that combine to represent the character of the neighbourhood and area;

b) make a positive contribution to the character of the neighbourhood and area; and

c) maintain a contextual relationship between the existing building to which it is attached, the adjoining buildings and the streetscape in which it will be located by maintaining the development pattern.

C2 Side additions must not overwhelm the context and should be subservient to and consistent with the predominant scale of the building to which it is attached, significant development adjoining the site and in the group/row in terms of:

a) maximum height pattern (measured to below the gutter line of the principal building form to which it is attached [or the base of the parapet where existing], not including chimneys); and

b) massing (building volume and size).

~~C4 Additional storeys are not permitted within the side addition.~~

C3 Side additions must be consistent with the predominant built form (volume and configuration) of the building to which it is attached and significant development adjoining the site and in its immediate area in terms of aspects including, but not limited to:

a) roof forms and pitch;

b) three dimensional modelling of neighbouring buildings;

c) modulation and articulation;

d) relationship of solids and voids;

e) fenestration patterns; and

f) relationship of floor to ceiling heights and horizontal alignment of features (especially ground and first floor levels of the existing buildings to which it is attached).

Refer also to Section 1.4.5 Roofs and roof forms, Section 1.4.6 Building height, bulk, form and scale, and Section 1.4.7 Site coverage, setbacks and levels.

C4 Side additions must adopt the established orientation pattern of the existing building to which it is attached.

C5 Where there is a uniform building front setback, the side addition must be set back behind the front wall of the principal building form (not including the balcony) to which it is attached and adjoining buildings.

Commented [DCP19]: Move these controls with some minor changes consistent with consolidating the provisions in C1.3.4 *Multi-storey terrace style housing* with (amended) *C1.4.2 Side elevations and side additions.*

Commented [DCP20]: Delete control C4 as it directly contradicts C2 (a) which may allow side additions to multi-storey terrace style housing. Renumber following controls.

C6 Where building front setbacks vary, the side addition must be set back behind the front wall of the principal building form (not including the balcony) to which it is attached.

C7 If the side addition occurs on a corner site, the controls in C1.4.2 apply.

C8 Rear and side setbacks (including side passages) must align with existing patterns, where visible from the public domain.

C9 Side additions must be sited to:

a) include sufficient deep soil landscaped area; and

b) have no adverse impact on significant trees on the site or adjoining land, including public land.

Refer also to Section 1.4.9 Private open space, swimming pools, courtyards and landscaping.

C10 Materials, finishes, textures and colours must be appropriate to the historic context. They must be similar to the characteristic materials, finishes, textures and colours of the existing building to which it is attached and existing contributory buildings within the streetscape.

C11 Contemporary materials are permitted where their proportions, detailing, quantities and location on the building are in keeping with the character elements (refer to C1.2.3) and the desired future character of the heritage conservation area (refer to C1.2.4).

Refer also to Section 1.5.8 Materials, finishes and details and Section 1.5.9 Exterior colours.

C12 Side additions must:

a) use render, masonry and/or timber;

b) avoid large expanses of glass and reflective wall cladding;

c) if visible from the street or public domain, use roof cladding which matches the existing building to which it is attached;

d) not have solid masonry front boundary walls; and

e) use colour schemes which respect the character of the neighbourhood.

Note:

For side additions between buildings, a draft site and context analysis is to be submitted to Council for comment as part of a predevelopment application meeting between Council representatives and the applicant.

The following information is to be submitted for comment prior to the lodgement of the development application:

- design options explored and the applicant's preferred design proposal;
- a statement outlining the proposed measures to minimise the adverse impact of the side addition on neighbouring lands, including the public domain;

- the philosophy of how the design elements relate to the proposal's context in terms of architectural form, materials and character; and
- the historic context and impact sections of a draft statement of heritage impact.

For development applications, applicants are required to provide the following information, not limited to:

- design options and final preferred design;
- a detailed site and context analysis;
- profiles of adjoining development;
- RLs for the subject site and adjoining properties;
- an accurate survey (including accurate RLs, and the accurate location of eaves/gutters, chimneys and other structures on adjoining properties);
- the structural relationship with the existing building and any adjoining properties (including shared party walls, footings and chimneys); and
- the final version of the statement of heritage impact.

Other required documentation to be submitted with the development application can be found in the Development Application Guide.

Side additions - street and lane

C13~~4~~ Additions must be consistent with traditional patterns and proportions of openings and the materials and detailing of the existing building.

C14~~5~~ The overall length of any addition is to be less than, and appear as a form secondary to, the existing building.

C15~~6~~ The addition of balconies is not permitted when the building is built to the side street boundary.

C16~~7~~ Additions must retain the profile of existing traditional party walls and their associated parapets.

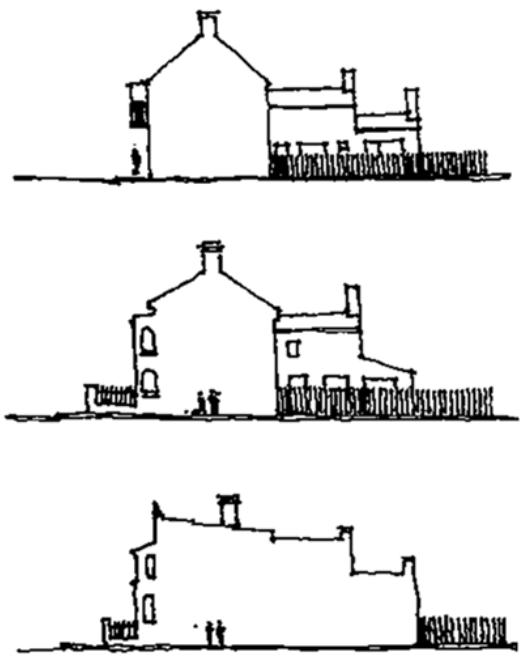
C17~~8~~ Additions shall reflect the existing setbacks.

C18~~9~~ Where there is a uniform building front setback, the side addition must be set back behind the front wall of the principal building form (not including the balcony) to which it is attached and adjoining buildings.

C19~~0~~ Where building front setbacks vary, the side addition must be set back behind the front wall of the principal building form (not including the balcony) to which it is attached.

C20~~11~~ Side boundary fencing shall reference traditional height, forms and materials.

FIGURE 7 Side elevations



There is a variety of shapes and forms, but the general treatment of visible side elevations is simpler than the front elevations.

Ornamentation is rare and in the expanse of walls, fenestration is limited.

C1.4.3 Rear elevations, rear additions, significant outbuildings and yards

There is a distinct visual contrast between the front and the rear of houses.

In a typical Victorian terrace, the highly decorative front contrasts with the restrained and utilitarian finish at the rear. Traditional rear additions are smaller in scale than the main house, with simple forms punctuated with vertically proportioned window openings. The rear of the Victorian style double storey terrace is often characterised by a one or two storey structure, commonly under a single pitched or skillion roof which maintains a side breezeway. The simple pitched or skillion roof form on rear elevations is visible, unlike the front elevation roof which may be screened by a parapet. Street corner buildings sometimes employ a parapet to both front and side elevations. Frequently rear elevations are paired with a neighbouring property.

There is a distinct typology of rear building forms within Paddington. Due to the elevated siting and topography of Paddington, many rear forms of buildings are highly visible.

Some rear building forms survive in unaltered groups of houses and contribute significantly to the character of the heritage conservation area.

An unaltered group is defined as a building or group of buildings that has retained its original form and character, there may be some minor changes to windows and doors or the loss of some original detail, but notwithstanding the original form and character of the group is generally retained.

Traditionally the rear yard of 19th century housing was utilitarian in use and character, usually enclosed by a paling fence with a gate leading to a laneway. Many groups of houses such as terrace houses had a rear passageway for servicing outdoor rear yard brick toilet structures. The remaining 'night soil passageways' and rear yard outdoor toilet structures are a significant element in Paddington. Remnant stable structures are rare.

Objectives

O1 To retain the forms and character of traditional rear elevations of contributory buildings, particularly where they exist in unaltered groups.

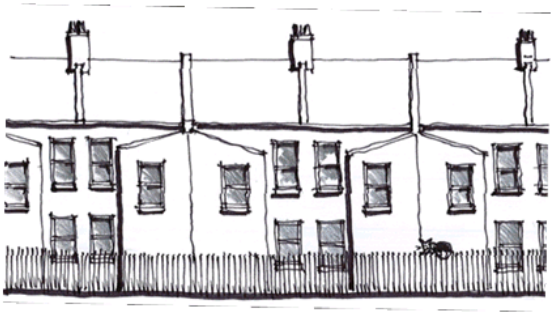
O2 To ensure that rear alterations and additions are of sympathetic design and construction.

O3 To ensure that the distinctive shared characteristics of groups of contributory buildings are retained and enhanced.

O4 To enable sympathetic contemporary design and use of contemporary materials in appropriate circumstances.

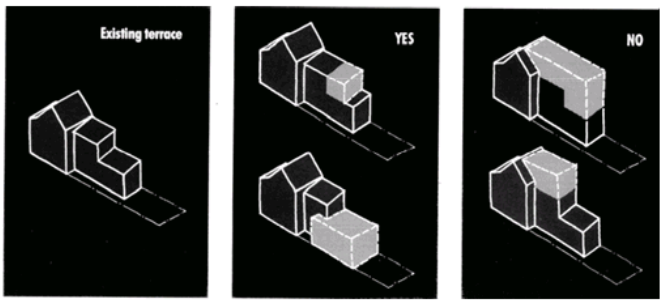
O5 To ensure that significant outbuildings are retained and conserved.

FIGURE 8 Rear elevations



Where a coherent group of rear elevations exist, any development should occur within the existing envelopes. New development which ignores its context will not be permitted.

FIGURE 9 Rear additions



Rear extensions should respect the traditional hierarchy of scale and form. Greater freedom is permitted of the architectural treatment of ground floor extensions than for visible upper floor additions.

Controls

Rear additions

~~C1 The height of an alteration and addition to the rear of a double storey or higher building must be below the gutter line of the main roof of the existing building.~~

C~~2~~1 Alterations and additions to a building which comprises one of a group, or pair, must be designed with regard to the overall balance of the group, or pair, in terms of height, alignment, form, scale, breezeway pattern and architectural character and detail.

C~~3~~2 The roof of an extension or the new roof for an existing component must be of traditional form appropriate to the building type.

Commented [DCP21]: Remove control C1 which is being replaced by proposed control C4 which duplicates the intention.

Commented [DCP22]: Enhance this control so that it applies also to pairs of contributory buildings.

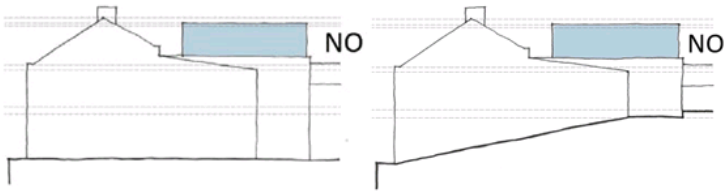
C43 Roofs must be visible and not screened partly or wholly be features such as parapets. The exception may be corner sites. Parapet roof forms may only be considered appropriate where it can be demonstrated that a parapet form is consistent with the bulk, scale and character of the existing building and group.

C4 No part of a rear alteration and addition can be higher than the gutter line of the principal building form (chimney excluded).

Commented [DCP23]: Insert new control C4 (before new diagrams) which does not support rear additions being higher than the gutter line of the principal building form.

FIGURE 9A Intrusive development: rear additions showing additional levels above the gutter line which are not supported by C5. The difference between the two drawings is the topography of the site.

Commented [DCP24]: Insert new diagrams illustrating intrusive development above the gutter line in a flat scenario and sloping to the rear scenario.



C5 Alterations and additions at the rear of buildings must:

a) not dominate or otherwise adversely compete with the form, height, proportions and the scale of that part of the building which is to be retained;

b) not reproduce or match a building which in terms of its height, bulk, scale and detailing is inappropriate to the heritage character of the area;

c) retain traditional solid to void ratios on elevations visible from the public domain;

d) not employ large areas of glass on upper levels;

e) be designed to minimise or avoid an adverse impact on neighbouring properties in terms of overlooking, loss of sunlight and ventilation;

f) not extend beyond the predominant rear building setbacks at any level of a group or row of buildings; and

g) retain all original chimneys.

C6 Building boundary to boundary on the ground floor level is permissible provided that:

a) the development does not adversely affect the privacy, ventilation, light and the amenity of the adjoining properties; and

b) the development does not disrupt an existing pattern of a group of unaltered contributory buildings.

C7 Additions are not permitted where single or double storey rear skillion forms exist in an unaltered group. In such cases alterations are to occur within the existing building envelope.

C8 Where significant original decorative internal elements exist outside of the principal building form they are generally to be retained.

Unaltered groups

C9 Unaltered groups with single storey rear wings must retain their single storey form. Single storey, courtyard housing style additions with attic rooms may be permitted, where the addition does not result in view loss of the main wing from the public domain.

Contemporary design

C10 Sympathetic contemporary design may be permitted at the rear where:

a) intrusive fabric or fabric of low significance exists;

b) the proposal will achieve an aesthetically cohesive relationship between new and existing fabric; and

c) the proposal is consistent with the character of the site, the streetscape and the precinct in which it is contained.

Significant structures and areas at the rear

C11 If development is in the form of a dual occupancy, the additional controls for dual occupancies in Part B, Chapter B3 General Development Controls of this DCP also apply (refer to Section B3.8 Additional controls for development other than dwelling houses) .

C12 Significant backyard toilet structures on rear laneways are to be retained in place if they are one of a group of at least two adjacent original toilets.

C13 Significant 'night soil' passageways are to be retained in place and interpreted without additional structures other than fencing.

C14 Significant ancillary structures including stables, coach houses and wells in the rear yard are to be retained in place.

C1.4.4 Roofs and roof forms

Main roof forms vary with building types and architectural styles. Cottages have hipped or gable roof forms, or a combination of the two. In terrace housing there are two predominant roof forms. Some roofs are pitched both ways from a central ridge. This is often articulated by the projecting gabled party walls. Corner terraces have segmented hipped forms which address the corner site or composite roofs concealed behind a parapet. Less common is the skillion roof form terrace with a parapet to the street front that steps down along the side elevation.

Below main roof forms there are verandah roofs. Some are stepped down from the main roof. They have distinct profiles and include convex or concave and skillion profiles depending on the architectural character of the building.

There are also secondary roof forms. Lower roofs to rear additions are generally skillion forms. When paired with a similar property, roofs produce patterns of gabled forms to the rear of properties. The simple pitched or skillion roof form on rear elevations is visible, unlike the front elevation roof which may be screened by a parapet.

The earliest roofs in the original Paddington village were covered in timber shingles. Later materials used throughout Paddington are slate, corrugated galvanised iron and zinc coated corrugated steel. Consistent with the style, roofs of Federation period buildings have the characteristic unglazed terracotta tiles.

Associated with the roof and the roofscape are a number of important elements such as traditional flashings, barge rolls, eaves and ridge detailing.

The arrangement of terraces stepping down the hills of Paddington affords views to the roofs. As a consequence, the roofscape is a significant element in the urban character of Paddington.

Replacement of original roofing materials with concrete tiles or glazed tiles, and the replacement of original roof details such as the covering over of lower verandah roof profiles are eroding Paddington's roofscape.

Objectives

O1 To retain and conserve the character of the original roofscape of Paddington.

O2 To restore or reconstruct missing roof elements.

O3 To ensure that contemporary roof forms are consistent with the historic roofscape character of Paddington.

O4 To ensure that the roof form and pitch of upper storey rear additions is consistent with the roof form and pitch of the existing group or pair.

Commented [DCP25]: Insert a new objective O4 to ensure that the pitch and roof form of rear additions of coherent groups and pairs is retained.

Controls

C1 The removal of original roofing materials and their details is not permitted unless deteriorated materials are replaced by the same or similar materials and details.

C2 Existing patterns of roof forms within groups of unaltered buildings must be retained.

C3 The roofscape of the principal building form of contributory buildings is to be retained. The possible exceptions are:

a) a dormer and skylight to the rear roof slope where permitted under Section 1.5.1 Dormers and skylights; and

b) a dormer to the front roof slope where permitted under Section 1.5.1 Dormers and skylights.

C4 Missing roof elements must be reinstated when unsympathetic roofs are replaced.

C5 Secondary or rear roof forms must not be raised or altered if the rear skillion forms part of a group of similar roof forms. The possible exception is a dormer and a skylight to the rear roof slope. Refer to Section 1.5.1 Dormers and skylights.

C6 Roof forms are to be consistent with appropriate traditional roof forms, which reflect the diminishing scale of roofscapes towards the rear of buildings.

C7 Reverse skillion roof forms are not permitted to contributory buildings.

C8 Roofs are to be clad in materials with profiles that are appropriate to the architectural style of the building. Appropriate materials are described in Section 1.5.8 Materials, finishes and details.

C9 Unsympathetic roofing materials must only be replaced by roof cladding in either traditional materials or in contemporary materials, which are similar in appearance and profile to traditional materials.

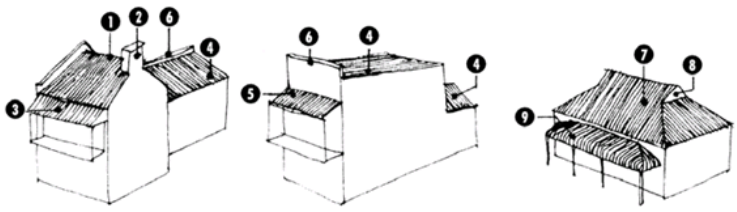
C10 Rear roof planes are not to incorporate more than 25% transparent material. This includes the area of skylights and dormer windows.

C11 New rear additions to multi-storey buildings must retain consistency to the group or pair they form part of in terms of roof form and roof pitch.

Commented [DCP26]: Insert new Control C11 to ensure that the pitch and roof form of rear additions of coherent groups and pairs is retained.

FIGURE 10 Roof elements

1 Gable roof
2 Chimney stack
3 Balcony roof
4 Skillion roof
5 Skillion balcony roof
6 Parapet
7 Hipped roof
8 Gablet
9 Bullnosed verandah roof



C1.5.7 Lofts over garages and studios

There is a demand for additional structures located over single storey garages and studios located at the rear of properties. Lofts provide benefits such as added accommodation, surveillance to laneways, increased public and private security and safety, and in some instances improvements to a laneway appearance.

However, there are many parts of Paddington where loft structures are inappropriate. To determine whether a loft structure over a single storey garage or a studio would be acceptable, consideration must be given to the significance of the existing rear building form and lot size, the relationship to the adjoining properties, the laneway characteristics where relevant and impacts on privacy.

Commented [DCP27]: Changes to this text highlight that these provisions also apply to new rear additions in sites with no rear laneway access.

Objectives

O1 To ensure that loft structures over garages or studios are sympathetic in their location, massing, form and scale to the traditional rear elevations, yards, and laneways.

O2 To ensure that loft structures over garages or studios do not detract from the significance of unaltered groups of buildings.

O3 To ensure that loft structures over garages or studios do not impact on the privacy of adjoining properties.

O4 To ensure that loft structures do not result in a non-compliance with the private open space and deep soil landscaped area requirements.

O5 To ensure that loft structures are appropriately orientated to minimise overshadowing on adjoining/adjacent open space.

O6 To minimise the visual impact of loft structures when viewed from public areas and private land.

O7 To ensure that loft structures above garages and studios do not preclude the maintenance and conservation of items that contribute to the significance of the heritage conservation area.

Commented [DCP28]: Insert new objective O7 which aims to maintain and conserve elements that contribute to the significance of the heritage conservation area.

Controls

C1 Loft structures may be permitted where:

a) the site dimensions are a minimum of 30m long and 5.24m wide and where the structure will not adversely impact on the traditional character of the rear elevations, yards, and laneways;

b) the structure will not adversely impact on the amenity, visual privacy and overshadowing of the property, neighbouring properties and public open space (the controls in Section 1.4.5 Building height, bulk, form and scale apply);

c) the structure does not require the footprint of the garage or studio to be extended so that the controls in Section 1.4.8 Private open space, swimming pools, courtyards and landscaping cannot be satisfied. Where there is an existing non-compliance with

these controls, the existing private open space and deep soil landscaping is not to be further reduced;

d) all access to the loft is provided internally;

e) habitable room windows within the loft with a direct sightline to the habitable room windows in the existing building on the site and neighbouring buildings have a separation distance of at least 9m;

f) the structure extends over only a single space garage or studio;

g) the loft and garage (or studio) structure is a maximum of 4.34m wide;

h) the roof structure is gable ended to the rear boundary ~~laneway~~, with a maximum ridge height of 5.5m and maximum wall height of 3.9m (on or adjacent to a side boundary);

i) windows are located only in the centre of gable ends and must be either: a single double hung sash window, or inward opening window of traditional proportions;

j) does not include balconies, decks, or other similar cantilevered structures;

k) a maximum of two skylights per roof plane, provided they comply with controls C28, C29 and C30 in Section 1.5.1 Dormers and skylights; ~~and~~

l) the ground floor level of the principal building form is higher than the natural ground level at the rear boundary~~.~~; and

m) the maintenance of elements that contribute to the heritage conservation area, such as sandstone walls, will not be adversely affected. Also refer to C1.5.6 Fences, walls and gates.

C2 Loft structures will not be permitted:

a) over garages or studios in the street front zone;

b) if the subject property is part of an original row of houses, comprising an unaltered group, and the proposal demonstrates an adverse impact on this group;

c) if the rear of the property is orientated towards the north between NNE and NNW (true north) (see Appendix 1);

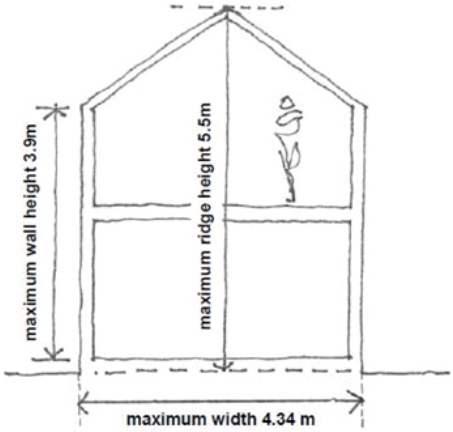
d) with a dormer window; and

e) over a multiple space garage.

Commented [DCP29]: Enhance control C1 (h) by removing "laneway". With this change, the numerical controls for lofts above garages can be applied also to studios in sites with no rear laneway access.

Commented [DCP30]: Insert new sub-clause m) to maintain and conserve elements that contribute to the significance of the heritage conservation area, for example sandstone walls.

FIGURE 27 Loft structure design example including dimensions



MINUTES

PADDINGTON HCA WORKING PARTY MEETING

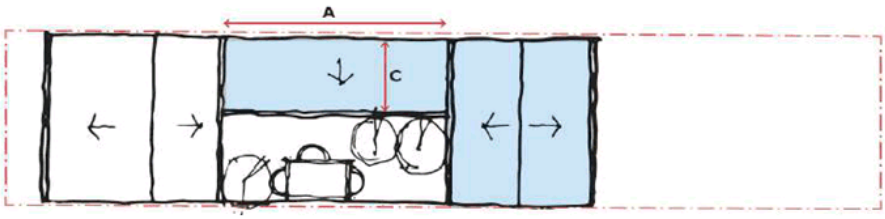
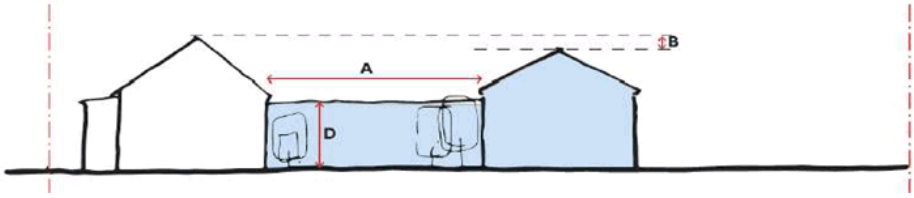
Tuesday, 11 February 2020

6.00pm – 7.30pm

Woollahra Council – Thornton Room

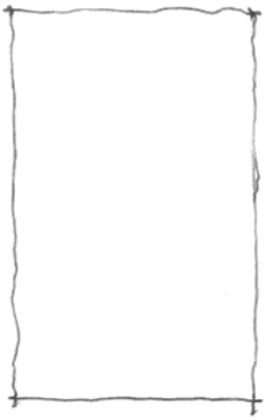
Present	Apologies
Councillor Matthew Robertson Chris Bluett *(Manager - Strategic Planning, Woollahra Council)* Flavia Scardamaglia *(Strategic Heritage Officer, Woollahra Council)* Keri Huxley *(Paddington Resident)* Bill Morrison *(The Paddington Society)* Peter Poland *(Woollahra History & Heritage Society)* John Normyle *(Paddington Resident)* Esther Hayter *(The Paddington Society)* Robyn Attuell *(The Paddington Society)*	Allan Coker *(Director – Planning & Development, Woollahra Council)* George Fotis *(Team Leader – Development Control, Woollahra Council)* Councillor Susan Wynne *(Mayor)* Councillor Anthony Marano Councillor Harriet Price Councillor Megan McEwin Councillor Lucinda Regan Councillor Toni Zeltzer Councillor Mary Lou Jarvis John Richardson *(representing the National Trust of Australia [NSW])*

Item	Subject	Discussion
1	**Apologies**	The apologies were noted (as above).

2	**Council decision – 9 December 2019**	Chris Bluett provided background to the current review which included changes made to Chapters A3 (Definitions) and C1 (Paddington HCA) of Woollahra DCP 2015. The current review arose from a decision by the Council on 9 December 2029: A. That Council note the report to the Environmental Planning Committee meeting of 2 December 2019 which contains potential options to address the inclusion of numerical controls for pavilion and linking structures in the Paddington Heritage Conservation Area. B. That a meeting of the Paddington Heritage Conservation Area Working Party is convened by mid-February 2020 to discuss potential amendments to the numerical controls for pavilions and linking structures and to give consideration to how the controls should apply to one and two storey terrace houses. Flavia Scardamaglia outlined the investigations undertaken to inform proposed numerical controls that had been circulated to the Working Party members. • The investigations used existing sites in Paddington which are occupied by single storey buildings. • The sites varied in size and topography. Sloping and flat sites were included. • Modelling of pavilion extensions incorporated courtyards based on landscape private open space requirements contained in section C1.4.8 of Woollahra DCP 2015. These requirements set the quantity and minimum dimensions for private open space for different sized sites. • Four case studies were used – Shadforth Street, Prospect Street, Broughton Street and Caledonia Street. • The following two diagrams were used to illustrate the components for which numerical controls were established.   Dimension A – length of link - variable This dimension is related to the minimum dimensions prescribed in section C1.4.8 of Woollahra DCP 2015 for private landscaped open space. The dimension may vary depending on site size and the associated minimum dimensions for private open space. Dimension B – height of pavilion – minimum of 100mm below the ridge of the principal building form (excluding chimneys) Because the height of the existing principal building can vary across Paddington, and to ensure that the pavilion extension is subservient in height to the principal building, it is not possible to prescribe a maximum height for the pavilion. Therefore, a minimum of 100mm below the ridge height of the principal building form (chimneys excluded) is recommended. This will allow the pavilion to meet the requirement of being subservient in height to the principal building. Dimension C – width of link - maximum of 1.5m (internally). This dimension allows for disabled access. Dimension D: Maximum height of 2.4m or below the eaves of the principal building form, whichever is lower. No numerical controls for pavilions associated with multi-storey terraces have been tested prior to the meeting. However, the presentation included a brief overview of the existing controls affecting multi-storey terraces. In particular it was noted that existing controls for rear elevations and rear additions (C1.4.3 in Chapter C1 of Woollahra DCP 2015) would apply for pavilions at the rear of multi-storey terraces.

Item	Subject	Discussion
		It was also noted that pavilions for single storey terrace houses would be regulated by the controls in section C1.3.1 (Single storey buildings). The introduction for this section states "Single storey buildings include timber, stone, brick and weatherboard cottages, terraces, semi-detached houses and single storey shops."
3	**Discussion on numerical controls – pavilions to single storey buildings**	Discussion occurred on the following topics. • Renaming of the pavilions to "courtyard housing" given the emphasis of the controls on the mandatory internal courtyard. This would not create anticipations for large rear buildings to the rear of single storey buildings and would emphasise the requirement for an internal courtyard. The Working Party discussed the draft amendments. The following opinions were expressed and recommended amendments were made in the working draft DCP document: • Renaming of the pavilions to "courtyard housing" Given the emphasis of the controls on a mandatory internal courtyard, and the general discomfort with the term pavilion, courtyard housing was considered appropriate. This would not create anticipations for large rear buildings to the rear of single storey buildings and would emphasise the requirement for an internal courtyard. • Control C – width of link. Bill Morrison presented the findings of his investigation on this matter (*see attached*). He tabled sketches based on historical subdivisions which have resulted in the creation of 5 lots (each 3.6m wide), 4 lots (each 4.5m wide), 3 lots (each 6.0m wide) and 2 lots (each 9.0m wide). The width of a pavilion link in relation to the courtyard width for each subdivision followed a 1/3 and 2/3 ratio. Discussion occurred on the pros and cons of this approach. It was identified that for lots smaller than 4.5m in width a link would be less than 1.5m wide. A minimum width of 1.5m is driven by liveability, amenity and also the provision of wheelchair access if needed. Consideration was given to allowing some discretion with a maximum width of 2.0m. Depending on the width, a link could be used for habitable purposes, including a linear kitchen or laundry. Opinions were expressed that a link should be not be used as a room or be capable of being used as a room. This was more likely if the width increased. It was noted that the current controls – C15(c) of C1.3.1 – require the link to be non-habitable. In conclusion, there was general agreement that a maximum internal width of 1.5m should be applied. • Construction materials for a link Lightweight materials are specified in the controls. No changes are necessary to the existing controls. • Control B – height of pavilion. The recommended numerical figure for control B was explained. It was suggested that the proposed numerical control (minimum 100mm distance from the ridge height of the principal building form) be changed to allow the pavilion height to be equal to the maximum ridge height of the principal building form and to require the pitch to match that of the principal building form. The roof pitch of the pavilion was considered to be an important feature. Requiring a lower height for the pavilion roof may impact on the ability to achieve equal roof pitches. As such, the height of the roof could be equal to, but not greater than, the height of the principal building form. Where an equal pitch arrangement could be achieved with a lesser height for the pavilion, the lesser height would be preferable to buildings of equal height. It was concluded that the recommended pavilion height be changed to allow a pavilion height equal to, but not greater than, the principal building height in order to achieve the same roof pitch on both buildings. This change would entail consequential changes to other controls. • Control D – height of link

Item	Subject	Discussion
		The proposed numerical control was accepted (maximum of 2.4m or below the eaves, whichever is lower).
4	**Discussion on amendments for multi-storey terrace houses**	The Working Party discussed amendments for numerical controls applying to pavilions associated with multi-storey terraces. A number of scenarios were identified including: 1. A pavilion on a site which has a rear pedestrian way or a vehicle lane. 2. A pavilion on a site which is bounded on three sides by other properties – the rear boundary abuts another property. No suggested amendments were agreed at this time. It was considered that case studies should be investigated and proposed amendments prepared for consideration at a future meeting of the Working Party.
5	**Next steps**	1. The draft minutes will be emailed to Working Party members. 2. Draft amendments to the DCP will be finalised in accordance with the Working Party discussions. 3. The matter will be reported to Council's Environmental Planning Committee. Notice of the Committee meeting with a link to the report will be sent to all Working Party members.
		The Chair thanked the Working Party for their assistance with the project and their preparation prior to the meeting. The meeting was closed at 7.30pm.

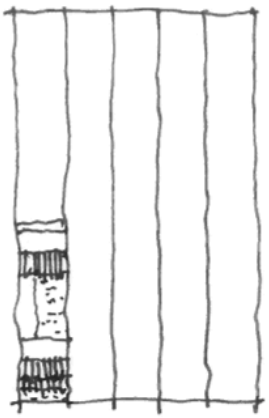


TYPICAL INITIAL SUBDIVISION
60' WIDE (18 M)
DEPTH VARIABLE

SECONDARY SUBDIVISIONS VARIED AS OVER →.

CONSIDER VARIABLE LINK/COURTYARD ACCORDING TO SUBDIVISION WIDTH.

OPTION 1:2
1/3 LINK STRUCTURE
2/3 COURTYARD.

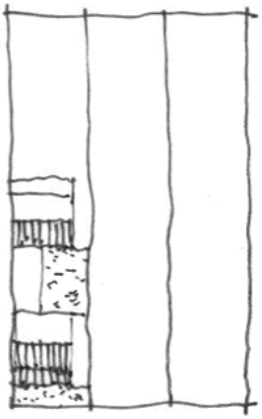


SECONDARY SUBDIVISION
5 LOTS
12' WIDE (3.6 m)

1/3 LINK 1.2m wide
2/3 COURT 2.4m " .

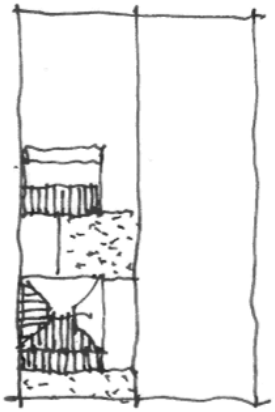
SECONDARY SUBDIVISION
4 LOTS
15' WIDE (4.5m)

1/3 LINK 1.5m wide
2/3 COURT 3.0 m " .



SECONDARY SUBDIVISION
3 LOTS.
20' WIDE (6.0m)

1/3 LINK 2.0m wide
2/3 COURT 4.0 m wide.



SECONDARY SUBDIVISION
2 LOTS.
30' WIDE (9.0m).

1/3 LINK 3.0m wide
2/3 COURT 6.0m wide.

Analysis of existing numerical controls related to multi-storey terrace style housing

Chapter C1 Paddington Heritage Conservation Area contains a number of provisions that address the design, scale and bulk of multi-storey buildings (refer to Figure 1 at page 5 for diagrams related to numerical controls).

Case 1: Multi-storey terrace style housing that is not part of a pair or group

Table 1: Analysis of existing numerical controls for multi-storey terrace style housing that are not part of a pair or group

	Existing numerical control	Existing provision providing a numerical control to an addition to a multi-storey terrace	Recommended amendments
A	Height of secondary wings	C1.4.3 Rear elevations, rear additions, significant outbuildings and yards *C1 The height of an alteration and addition to the rear of a double storey or higher building must be below the gutter line of the main roof of the existing building.* C1.4.4 Roofs and roof forms *C5 Secondary or rear roof forms must not be raised or altered if the rear skillion forms part of a group of similar roof forms. The possible exception is a dormer and a skylight to the rear roof slope. Refer to Section 1.5.1 Dormers and skylights.* *C6 Roof forms are to be consistent with appropriate traditional roof forms, which reflect the diminishing scale of roofscapes towards the rear of buildings.* Clause C1.4.5 Building height, bulk, form and scale *O3 To maintain the visual consistency of established heights in historically significant streetscapes.*	We have received feedback that the wording of C1 of C1.4.3 could be amended to ensure its consistent interpretation. We recommend amending this control to make it clear that no part of a rear addition can be higher than the gutter line of the principal building form (chimney excluded).

1

	Existing numerical control	Existing provision providing a numerical control to an addition to a multi-storey terrace	Recommended amendments
		O4 To ensure that the height of new development conforms to the appropriate heights in the street or lane and the historic character of the street or lane. *C7 Storey heights must conform to those of appropriate adjacent buildings.*	
B	Length of secondary wings	C1.4.3 Rear elevations, rear additions, significant outbuildings and yards *C5 Alterations and additions at the rear of buildings must:* *a)not dominate or otherwise adversely compete with the form, height, proportions and the scale of that part of the building which is to be retained;* *b)not reproduce or match a building which in terms of its height, bulk, scale and detailing is inappropriate to the heritage character of the area;* *c)retain traditional solid to void ratios on elevations visible from the public domain;* *[...]* *f)not extend beyond the predominant rear building setbacks at any level of a group or row of buildings. [...]* C1.4.6 Site coverage, setbacks and levels *O2 To retain established building alignments, setbacks and levels.* *O3 To ensure that new development continues the established alignments and setbacks of the established historic development in the streetscape.* *C1 The proportion of building footprint is to be consistent with similar properties in the immediate vicinity.*	These provisions appropriately address the length of the secondary wing additions. No amendments are recommended.

2

	Existing numerical control	Existing provision providing a numerical control to an addition to a multi-storey terrace	Recommended amendments
		C3 Siting and setbacks of all structures are to continue the immediate established patterns. C1.4.8 Private open space, swimming pools, courtyards and landscaping *C4 A dwelling that is a dwelling house, dual occupancy, semi-detached dwelling or an attached dwelling is to provide the following: an unbuilt upon area including a principal open space area to be located at the rear, and deep soil landscaped area in accordance with Table 2.*	
C	Height of rear garages or studios with above loft	C1.4.5 Building height, bulk, form and scale *O3 To maintain the visual consistency of established heights in historically significant streetscapes.* *O4 To ensure that the height of new development conforms to the appropriate heights in the street or lane and the historic character of the street or lane.* C1.5.7 Lofts over garages and studios does not apply to lots with no rear laneway access. Current numerical controls only apply to sites with rear laneway access.	There are no numerical controls to address the height of rear lofts over studios in sites with no rear laneway access. Expand the scope of existing provisions for lofts over garages and studios so that they also apply to sites with no rear laneway access.
D	Width of rear studios or garages with above loft	C1.4.8 Private open space, swimming pools, courtyards and landscaping *C4 A dwelling that is a dwelling house, dual occupancy, semi-detached dwelling or an attached dwelling is to provide the following: an unbuilt upon area including a principal open space area to be located at the rear, and deep soil landscaped area in accordance with Table 2.* C1.5.7 Lofts over garages and studios does not apply to lots with no rear laneway access. Current numerical controls only apply to sites with rear laneway access.	There are no numerical controls to address the height of rear lofts over studios in sites with no rear laneway access. Expand the scope of existing provisions for lofts over garages and studios so that

3

	Existing numerical control	Existing provision providing a numerical control to an addition to a multi-storey terrace	Recommended amendments
			they also apply to sites with no rear laneway access.
E	Length of rear studios or garages with above loft	C1.4.8 Private open space, swimming pools, courtyards and landscaping *C4 A dwelling that is a dwelling house, dual occupancy, semi-detached dwelling or an attached dwelling is to provide the following: an unbuilt upon area including a principal open space area to be located at the rear, and deep soil landscaped area in accordance with Table 2.* C1.5.7 Lofts over garages and studios does not apply to lots with no rear laneway access. Current numerical controls only apply to sites with rear laneway access.	There are no numerical controls to address the height of rear lofts over studios in sites with no rear laneway access. Expand the scope of existing provisions for lofts over garages and studios so that they also apply to sites with no rear laneway access.

4

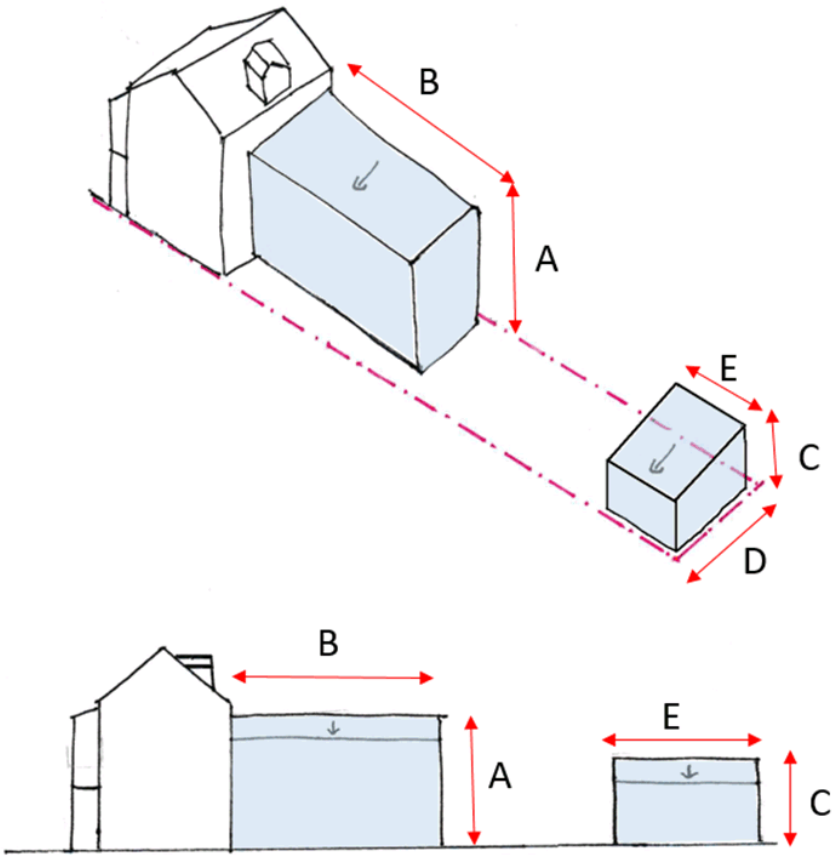


Figure 1: Diagram which illustrates how the numerical controls apply to secondary wings of multi-storey terrace style housing (to be read in conjunction with Table 1 and 2).

5

Case 2: Multi-storey terrace style housing that is part of a pair or group

Where a multi-storey terrace house is part of a pair or a group, the existing provisions require a proposal to have regard to the other terraces that form part of the same pair or group in terms of height, alignment, form, scale, breezeway pattern, architectural character and detail. Unaltered groups as defined in Chapter A3 have further controls which identify that alterations and additions are to occur within the existing building envelope.

The following provisions apply, in addition to the ones listed in Table 1 above.

Table 2: Analysis of existing numerical controls for multi-storey terrace style housing that are part of a pair or group

	Existing numerical control	Existing provision providing a numerical control to an addition to a multi-storey terrace in addition to Table 1	Recommended amendments
A	Height of secondary wings	In addition to Table 1 provisions, the following additional provisions are in place for terraces that are part of a group. C1.3.4 Multi-storey terrace style housing *O3 To retain the rear forms of unaltered pairs and groups of terraces.* *O4 To retain the shared distinctive characteristics of groups of buildings.* *O5 To retain, restore and promote the significance, contribution and relationship of a building within the context of a group of buildings.* C1.4.1 Principal building form and street front zone of contributory buildings *O6 To retain the distinctive shared characteristics of groups of buildings.* *O7 To retain, restore and promote the significance, contribution and relationship of a building within the context of a group of buildings.*	There is no requirement for secondary wings to have the same pitch as adjoining properties in the same pair or group. We recommend adding a new provision to maintain roof form and roof pitch in secondary wings where they form part of a coherent pair or group.

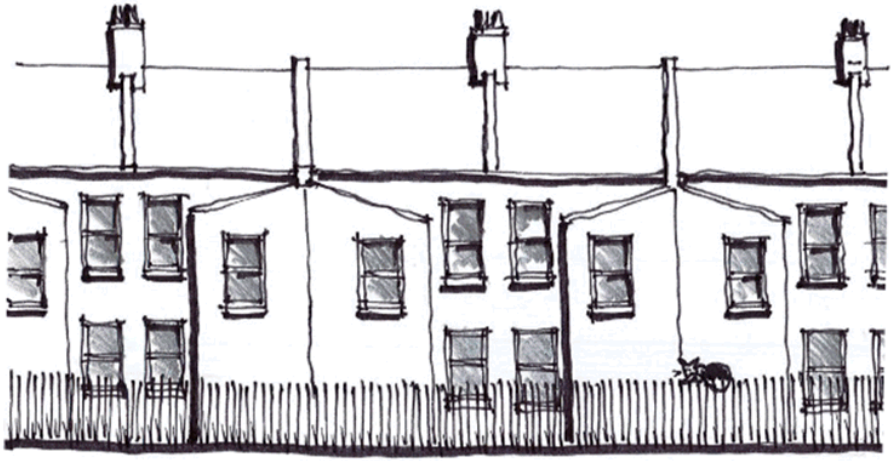
6

	Existing numerical control	Existing provision providing a numerical control to an addition to a multi-storey terrace in addition to Table 1	Recommended amendments
		C1.4.3 Rear elevations, rear additions, significant outbuildings and yards *O1 To retain the forms and character of traditional rear elevations of contributory buildings, particularly where they exist in unaltered groups.* *O3 To ensure that the distinctive shared characteristics of groups of contributory buildings are retained and enhanced* *C2 Alterations and additions to a building which comprises one of a group must be designed with regard to the overall balance of the group in terms of height, alignment, form, scale, breezeway pattern and architectural character and detail.* *C7 Additions are not permitted where single or double storey rear skillion forms exist in an unaltered group. In such cases alterations are to occur within the existing building envelope.*	
B	Length of secondary wings	In addition to Table 1 provisions, the following additional provisions are in place for terraces that are part of a group. C1.4.3 Rear elevations, rear additions, significant outbuildings and yards *C5 Alterations and additions at the rear of buildings must:* *[...]* *f) not extend beyond the predominant rear building setbacks at any level of a group or row of building; [...]* C1.4.8 Private open space, swimming pools, courtyards and landscaping	These provisions appropriately address the length of the secondary wing additions. No amendments recommended.

7

	Existing numerical control	Existing provision providing a numerical control to an addition to a multi-storey terrace in addition to Table 1	Recommended amendments
		C4 A dwelling that is a dwelling house, dual occupancy, semi-detached dwelling or an attached dwelling is to provide the following: an unbuilt upon area including a principal open space area to be located at the rear, and deep soil landscaped area in accordance with Table 2.	

FIGURE 8 Rear elevations



Where a coherent group of rear elevations exist, any development should occur within the existing envelopes. New development which ignores its context will not be permitted.

Figure 2: Multi-storey terrace style housing part of a coherent group as shown in existing Figure 8 at C1.4.3

8

Item No:	R4 Recommendation to Council
Subject:	**SUBMISSION ON THE PROPOSED DESIGN AND PLACE STATE ENVIRONMENTAL PLANNING POLICY**
Authors:	Kelly McKellar, Team Leader Strategic Planning Emma Williamson, Strategic Planner
Approvers:	Anne White, Manager - Strategic Planning Nick Economou, Acting Director Planning & Development
File No:	21/60498
Reason for Report:	To report to Council on the submission to the proposed Design and Place State Environmental Planning Policy

Recommendation:

A. THAT the report on the proposed Design and Place State Environmental Planning Policy be received and noted.

B. THAT Council endorse the draft submission to the Department of Planning, Industry and Environment as attached at **Annexure 1** of the report to the Environmental Planning Committee of 12 April 2021.

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1. Background

On 26 February 2021, *Government Architect NSW* and the *Department of Planning, Industry and Environment* (DPIE) commenced exhibition of the *Expression of Intended Effect* (EIE) on the proposed *Design and Place State Environmental Planning Policy* (SEPP). The EIE is being exhibited in accordance with Section 3.30 of the *Environmental Planning and Assessment Act 1979* (EP&A) and the Departments' Community Participation Plan 2019.

A copy of the EIE is available at the following address:

www.planning.nsw.gov.au/Policy-and-Legislation/State-Environmental-Planning-Policies-Review/Design-and-Place-SEPP

The exhibition material identifies that the aim of the proposed Design and Place SEPP is to simplify and consolidate how good design is delivered in NSW. The material contains the following statement:

> *The Design and Place SEPP puts place and design quality at the forefront of development. Our shared responsibility to care for Country and sustain healthy, thriving communities underpins the policy. The SEPP spans places of all scales, from precincts, significant developments, and buildings to infrastructure and public space.*

The proposed Design and Place SEPP will:

- establish matters for consideration and application requirements that collectively respond to design and assessment principles
- provide a single point of reference for design-related considerations and performance criteria in the planning system
- define scales of development – precincts and significant development, and all other development

- introduce a robust and consistent design process through requirements for design skills, design evaluation and review, and design excellence
- integrate a design-led, place-based approach, which includes embedding the draft *Connecting with Country* Framework
- be supported by existing, revised and new guidance, including a revised *Apartment Design Guide* (ADG), a new *Urban Design Guide* (UDG), and revisions to the *Building Sustainability Index* (BASIX)
- consolidate design and place requirements in other SEPPs in the future.

Importantly, the proposed Design and Place SEPP will repeal and replace *SEPP No 65 – Design Quality of Residential Apartment Development* (SEPP 65) and SEPP *(Building Sustainability Index: BASIX) 2004* (BASIX SEPP).

The exhibition period for the EIE has been extended until 28 April 2021, which allows staff to report the draft submission to Council (see **Annexure 1**).

2. Draft Submission

Local provisions, particularly development control plans and local character statements have been the subject of rigorous community engagement, address local context and desired future character and are a vital element in delivering place-based development that meets community needs and delivers public benefits.

Whilst Council staff support efforts to elevate design and place principles in the NSW planning system, it should not be done at the expense of our local and carefully crafted planning provisions. We are concerned that that the proposed Design and Place SEPP and guidelines may have the unintended result of weakening the scope of our local planning controls.

The submission attached at **Annexure 1** provides our detailed commentary on the proposed SEPP and includes our concerns regarding matters including:

- Green infrastructure and Tree canopy
- Density
- Review and repeal of SEPP 65 – Design Quality of Residential Apartment Development
- Review and repeal of BASIX
- SEPP Housing for Seniors or People with a Disability 2004.

Council staff recommend that Council endorse the submission at **Annexure 1** and that this is submitted to the DPIE by 28 April 2021.

3. Next Steps

The EIE is on exhibition until 28 April 2021. Following the public exhibition period, DPIE will consider the submissions, provide a response to issues raised and prepare the draft SEPP. It is anticipated that the draft SEPP will be placed on public exhibition for further comment in late 2021.

4. Conclusion

Government Architect NSW and DPIE have prepared an EIE on the proposed Design and Place SEPP. The proposed SEPP is seeking to elevate design and place principles in the NSW planning system. Whilst Council staff support this intention, it should not be done at the expense of weakening our existing local planning controls. Council staff have prepared a submission which raises our concerns, and we recommend that this is submitted to DPIE prior to 28 April 2021.

Annexures

1. Woollahra Council Submission - Proposed Design and Place SEPP ⇩

Woollahra Municipal Council

Council Ref: Planning & Development Division
21/52909 / SC2593-02

Jim Betts
Secretary
NSW Department of Planning, Industry and Environment
Locked Bag 5022
Parramatta NSW 2124

Dear Mr Betts

RE: Exhibition of an Explanation of Intended Effect for a Design and Place SEPP

Woollahra Council staff welcome the opportunity to comment on the exhibition of the Explanation of Intended Effect (EIE) for the proposed Design and Place SEPP.

We commend the Government Architects' Office and the Department of Planning, Industry and Environment (DPIE) for seeking to elevate design and place principles in the NSW planning system with a view to maximising public benefit. However, we are concerned that that the proposed SEPP and guidelines may have the unintended result of reducing the scope of local planning controls.

Local provisions, particularly DCPs and local character statements, address local context and desired future character and are developed in consultation with local communities. These documents are a vital element in delivering place-based development that meets community needs and delivers public benefits. The new SEPP must not decrease their critical role in planning for and assessing development.

The attached submission outlines our feedback on the EIE for the proposed Design and Place SEPP.

Thank you for the opportunity to comment on the proposal.

If you require any further information about our submission please contact Kelly McKellar, Team Leader – Strategic Planning, on (02) 9391 7140.

Yours sincerely

Nick Economou
Acting Director Planning and Development

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Submission to the exhibition of the Explanation of intended effect for a Design and Place SEPP

Part 1 Introduction

In March and April 2021 the Department of Planning, Industry and Environment exhibited an explanation of intended effect (EIE) for a new Design and Place State Environmental Planning Policy (SEPP).

We commend the Government Architects' Office and the Department for recognising the importance of design and place and its role in enhancing the wellbeing of our communities, environment and economy.

In principle, staff support the intent to, among other things, strengthening the relationship between place, site analysis, and design outcomes. However, we are concerned that the proposed SEPP may unintentionally weaken local planning controls by introducing principles and matters for consideration applicable at a broad, state-wide level and override local provisions.

An example of this unintended outcome in the Woollahra LGA is residential flat buildings being constructed in the R2 Low Density Residential Zones under the *SEPP Housing for Seniors or People with a Disability 2004*. Some of these developments are located significant distances from business zones without suitable support services. This is causing community dissatisfaction when apartments are being constructed in residential areas characterised by detached housing and leafy streetscapes, inconsistent with adopted local plans and the desired future character.

Councils are committed to strategic planning, which is led by consultation with the community. This has produced local housing strategies, local strategic planning statements, character statements, place plans, and planning provisions. It is vital that these place-based local provisions reflect local character, context and community aspirations and are not unintentionally undermined by the introduction of the SEPP.

Staff are pleased that the draft SEPP and draft design guides (draft Urban Design Guide, revised Apartment Design Guide) will be publicly exhibited in late 2021. Extensive consultation should be at the core of planning across NSW. We look forward to further consultation with the Department about this important planning instrument.

Part 2 Proposed new SEPP

2.2 Aims of the new SEPP

Council staff generally support the stated intent to give effect to the relevant objects under s1.3 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). However, it is unclear how the aims stated in the EIE will inform drafting of aims that will be contained in the draft SEPP instrument and guide its application and interpretation.

We support the stated intent to work with Aboriginal communities on a Country-led approach to the design and planning of places. Representative community consultation is core to Woollahra Council's place-based planning approach and helps us ensure we meet the needs and aspirations of our community. We commend the Department and the Government Architect's Office for elevating Aboriginal cultural knowledge in the planning system.

We look forward to future consultation on the aims of the proposed SEPP.

2.3 Principles of the new SEPP

The EIE identifies that the proposed SEPP is framed around five principles. The proposed SEPP will give effect to these five principles through matters for consideration and a requirement for development to demonstrate that the principles and considerations have been met.

Elevating principles for design and place outcomes is commendable. However, some of the proposed principles, such as Principle 1 and Principle 3, do not contain strong links to give effect to existing local provisions, including development controls plans (DCPs) and local character statements. Local place-based provisions appropriately reflect the needs and aspirations of the community and it is important that they are not unintentionally weakened or sidelined by the introduction of the proposed SEPP.

Principle 1: Design places with beauty and character *that people feel proud to belong to.*

This principle relates to the importance of designing places that respond to a community's needs and desired future character. We support this principle's emphasis of achieving design quality by requiring development to demonstrate an appropriate response to context, site analysis, heritage and local character. However, this needs to make clear that development must be designed in response to site context with emphasis on the local character established by local provisions rather than a generic approach.

Local character and heritage are of critical importance to creating great places for our community. This is reflected in our place based approach to planning and most recently in the *Woollahra Local Strategic Planning Statement 2020* (Woollahra LSPS 2020).

The proposed SEPP must establish a clear link to local character provisions established by councils. We expect the principle and any matters for consideration to give effect to the aspirations of the local community with regard to local character, heritage and public benefits.

Our community is invested in protecting the distinctive heritage and local character of our area and have been engaged in the development of character provisions contained in Council policies and controls. Council is commencing updates to these provisions consistent with the Department's new guidelines and model provisions for local character. This ongoing work must be considered in the new SEPP to give effect to the community's aspirations for their area and ensure that the SEPP promotes good local character outcomes.

Principle 2: Design inviting public spaces *to support engaged communities.*

We support the intent of this principle with regard to ensuring that public places are designed to meet community needs for recreation, green space, socialising and otherwise engaging in public life in great places. However, we note that the EIE does not detail how the principle or relevant mandatory considerations link to existing and proposed guidance, such as the Draft *NSW Public Spaces Charter* (DPIE 2020).

The new SEPP must clearly establish the relationship between the principles, relevant mandatory considerations, guidelines and local provisions. This will help to ensure that best-practice is considered in the design and delivery of inviting public spaces.

Principle 3: Develop productive and connected places *to enable thriving communities.*

Council staff do not support the introduction of residential or street intersection density targets. The EIE does not provide any planning justification or evidence to demonstrate why these targets are necessary or how they would respond to local context and desired future character.

Council's future local housing strategy, the Woollahra LSPS 2020 and the Woollahra LEP 2014 are the appropriate mechanisms to identify and support delivery of suitable residential and intersection density that enhances the liveability and productivity of the local area.

Additionally, while it is commendable that the EIE notes the importance of elements such as needs-based car parking and well-designed footpaths we do not support the introduction of any further guidance on these matters. Car parking and footpaths should respond to local provisions which reflect the local context, and have been established in consultation with the community.

Principle 4: Design sustainable and greener places *for the wellbeing of people and the environment*

We commend the Department and GANSW for seeking to align the proposed SEPP with the NSW Government's Net Zero Plan and to encourage sustainable and regenerative design.

However, it is important that councils have the scope to introduce sustainability targets in excess of those proposed by the SEPP, the Net Zero Plan or BASIX to ensure they appropriate to the local context, best practice, community aspirations and Council programs to enhance sustainability outcomes. For example, Woollahra Council was one of the first in Australia to introduce DCP controls to mandate the installation of circuitry for Elective Vehicle (EV) charging in new developments.

Additionally, we do not support the introduction of prescriptive tree canopy targets or tree replacement rates that would prevent councils from implementing minimum provisions for trees and tree canopy which have been tailored to the local context in consultation with the community. Woollahra Council is in the process of implementing new minimum tree canopy and deep soil landscaping provisions to achieve tree canopy outcomes tailored to the local context. We do not support any provision that would affect this important Council initiative.

Our community is committed to increasing sustainability and enhancing urban greening. We expect that any provisions for these matters would support councils in implementing best practice targets and measures appropriate to the local context and set out in local strategies and planning controls.

Principle 5: Design resilient and diverse places *for enduring communities.*

We support the introduction of a principle to promote resilience. We expect that this will have regard to the local context, council plans and strategies and the needs of local communities.

We also note the explanation for this principle is quite broad. For example, the EIE states that the proposed SEPP will *"optimise opportunities to address and reduce the impact of wider economic and social trends…"* and create *"welcoming, inclusive and equitable places respectful of people of all abilities and form all walks of life"*. However, it is not clear how this will be achieved in the mandatory matters for consideration or how applications will demonstrate consistency with this principle.

2.4 Application of the new SEPP

The EIE identifies that precinct considerations would apply to any areas identified for local strategic planning including amendments to LEPs (that are not planning proposals). However, the SEPP is proposing an approval pathway for local councils to demonstrate that their planning strategies or policies are consistent with the precinct considerations. We are

concerned that this creates additional administration burden for Councils. Councils strive to implement best practice in local planning. The EIE does not provide sufficient justification as to why this precinct approval is necessary for local planning undertaken by councils in consultation with the community.

Part 3 Key components of the new SEPP

3.1 Design processes

3.3.1 Design skills

The EIE identifies that qualified designers (as defined by cl.50 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation)) are required for certain development:

- a registered architect for all buildings with three or more storeys, and multi-residential buildings with four or more dwellings
- a registered landscape architect for open space greater than 1000 m^2
- a qualified designer for master planning of all precincts and significant development.

We are concerned that an unintended impact of this provision is that, under the new SEPP, a registered landscape architect will not be required to design smaller open spaces, particularly for residential flat buildings (RFBs) and sites in key locations such as centres.

Many sites in established urban areas, such as Woollahra, do not have the capacity to contribute 1000m^2 of open space. However, the open space these sites provide is vital for liveability, enhancing local character and achieving positive outcomes for public amenity and wellbeing.

The open spaces of RFBs contribute to residential amenity and are essential to maintaining and enhancing local character. Similarly, the flexible, smaller-scale open spaces of developments in local centres are central to the quality of the public domain and creating great places. As noted above, both of these types of open space are unlikely to meet the 1000m^2 threshold.

Therefore, we recommend that the requirements are updated to ensure that open space in close proximity to a local centre (or development of a certain scale) and in RFBs is required to be designed by a suitably qualified design professional. This will encourage appropriate design quality for all open space that contributes to amenity and wellbeing in areas where it is in high demand.

We support the proposal to enhance design quality by requiring a statement to accompany planning and development applications to verify that suitably qualified design professionals have been engaged. However, the EIE does not provide sufficient detail regarding the format and content of this statement, how this will be established and how councils can ensure that it suitably addresses local character.

3.1.2 Place-based approach

We support the intention to apply a place-based approach that strengthens the relationships between place, site analysis and design outcomes. However, we are disappointed that local character is not specifically highlighted in the description of a place-based design approach. Local character is a vital aspect of place-based planning and design that must be reinforced in the new SEPP. We look forward to seeing this incorporated in the draft SEPP when it is exhibited later in 2021.

3.2 Design and place considerations

3.2.1 Application requirements

We encourage the development of clear application requirements to ensure that the proposed SEPP principles and considerations have been met. However, the EIE does not provide sufficient detail to link the proposed application requirements to the existing planning framework or policies. We are concerned that the EIE has not clearly demonstrated how this will simplify the development assessment process and not increase the complexity and administrative burden.

We look forward to being further consulted on the application requirements.

3.2.2 Mandatory matters for consideration

We commend the Department and GANSW for detailing how the five principles will give effect in the development assessment process. However, we are concerned about the absence of clear links to local character and local planning provisions in the proposed considerations.

Desired future character is established in local plans and strategies and developed in consultation with the community and is central to a place-based design approach. The character statements set out in local environmental plans (LEPs), DCPs, local character statements, and local strategic planning statements must be referenced in the new SEPP.

We do not support the introduction of any prescriptive targets or provisions in the new SEPP that will limit the ability for Council to implement locally targeted solutions. Prescriptive targets must be place-based and established by relevant local authorities (in consultation with the local community), and in this way contribute to State targets.

The following responses relate to the proposed design and place considerations outlined in Table 1 of the EIE:

1. Cultural and built heritage

We support the intent of this consideration to elevate Aboriginal and non-Aboriginal heritage in design and place processes. We note that councils and the community, in particular the Local Aboriginal Land Councils, should be involved in matters of heritage and heritage interpretation.

The EIE identifies that a corresponding strategy has been prepared but there is no information about what it contains or where it applies. The exhibition of the new SEPP must be accompanied by further detail about the requirements of this strategy and how it promotes the celebration, conservation and protection of areas of cultural and built importance.

We note that this proposed consideration only applies at Precinct level. Aboriginal and non-Aboriginal heritage are important considerations at all scales of development to maintain continuous links with land and local context. We recommend this consideration apply to Precinct, Significant Development and All Other Development consistent with the established heritage framework.

5. Street design

We do not support the introduction of a minimum street intersection density. The EIE provides no planning justification as to why a minimum is needed, how it will be introduced through the SEPP, or how this relates to the local context. Street intersections are critical aspects of street design and planning should respond to desired future character objectives. Density targets should be developed in a place-based assessment in consultation with the community and stakeholders; not a state-wide generic standard.

7. Green infrastructure

We support the intent of this consideration to maintain and increase tree canopy and to design sustainable and greener places. We are pleased that council targets for tree replacement rate and tree canopy are included in the consideration, which have been determined using a place-based in response to the local context.

The provision of tree canopy is influenced by the local context and site conditions including deep soil landscaping, topography and dwelling density. The tree canopy targets contained in the Greener Places Design Guide should remain as guidance. LEPs, DCPs, local strategic planning statements and urban forest and greening strategies are the appropriate mechanisms to deliver appropriate tree canopy targets for each LGA.

We also note that weaker wording, such as *'where possible'*, is used in relation to the retention and provision of green infrastructure. We recommend that this is strengthened to ensure additional green infrastructure is provided.

10. Density

The EIE does not provide sufficient justification or planning grounds for the introduction of residential density targets. It is unclear how the minimum density capacity of 15 dwellings per hectare has been reached or how this relates to local context and local character.

Density ranges must be developed at a local level based on a place-based planning approach that considers the site, the local context and local character. We do not support the introduction of density targets. If GANSW wishes to provide advice on density ranges it is more appropriate to provide this in the form of a guideline.

Note: There appears to be a drafting error in this consideration. It references Consideration 10: Housing Diversity, however Housing Diversity is addressed in Consideration 11.

11. Housing diversity

We support the inclusion of a consideration requiring the delivery of housing diversity that responds to the local housing strategy.

12. Transport and parking

We support this consideration in principle and are pleased to see references to existing maximum rates established by councils.

13. Attractive form

We support the intent to ensure developments exhibit high design quality. However, the relationship between this consideration and design excellence clauses in LEPs and DCPs needs to be clarified. Local council provisions contain detailed place-based design guidance to reflect local character and desired future character. The proposed SEPP should not introduce considerations that impact on the application of local planning provisions.

14. Impacts on public space

We support the intent of this proposed consideration to ensure the quality and amenity of open space is not diminished over time. However, the EIE does not clearly establish what constitutes 'encroachment'. We recommend the inclusion of detail about the types of encroachment, for example overshadowing, visual intrusion, and obstruction of public views.

16. Activation

We support the intent of promoting non-residential activation on the ground floor and potentially the first floor in all local centres. We recommend that the concept of mixed use is extended to the entirety of local centres and not limited to activity streets.

Activation should respond appropriately to local and desired future character of an area. The new SEPP must allow for councils to set higher minimum requirements where a place-based analysis has determined they are warranted for the local context and local economy.

17. Emissions and resource efficiency

We support, in principle, the intent of this consideration to provide a pathway to net zero emissions. However, we do not support any targets or provisions that prevent councils from introducing sustainability measures higher than those stated in the SEPP, BASIX or NABERS based on the local context and community aspirations. We note that BASIX currently prevents councils from introducing higher sustainability controls. Councils need to have the ability to develop sustainability controls that respond to the local area and which may be in excess of the targets set by the SEPP.

For example, Woollahra Council was one of the first in Australia to introduce DCP controls to mandate the installation of circuitry for Elective Vehicle (EV) charging in new developments. We would not support any measure in the proposed SEPP that would prevent councils undertaking initiatives like this in the future.

Drafting of the SEPP and revisions to BASIX regulatory controls must incorporate new climate data. Under the *Future Proofing Residential Development to Climate Change Project*, Woollahra, Waverley and Randwick Councils have undertaken detailed research and modelling to develop recommendations to enhance the climate resilient of residential housing in the Eastern Beaches region. This study found that dwellings currently approved under BASIX will be unliveable by 2070 without extremely high levels of mechanical cooling.

We expect that this research and similar studies undertaken by other councils, such as the City of Sydney's performance standards and timing to net zero energy buildings, will be considered in the drafting of the new SEPP and any amendments to BASIX.

18. Tree canopy

We support the intent of this consideration to maintain existing and promote increased tree canopy to design sustainable and greener places. We are pleased that council targets for tree canopy, which have been determined using a place-based in response to the local context, are included in the consideration.

The provision of tree canopy is influenced by the local context and site conditions including available deep soil landscaping, topography and dwelling density.

LEPs, DCPs, local strategic planning statements and urban forest and greening strategies are the appropriate mechanisms to deliver appropriate tree canopy targets.

This consideration also requires proposals to demonstrate that the *'minimum number of trees to give effect to the tree canopy target specified by the local council'* has been achieved. We recommend that this is reworded to require proposals to demonstrate that they comply with the relevant tree canopy target or similar established by councils. Identifying a minimum "number" of trees is a retrograde step.

To strengthen place-based outcomes and give effect to local controls, we also recommend that the terminology is refined as follows:

- *'precinct development control plan'* is replaced with *'relevant development control plan'*
- Strengthen the protection of tree canopy by removing the words *'where possible'*.

Updating the terminology will encourage consistent application of local controls and policies that have been developed in consultation with the community.

19. Affordable housing

We support the intent of this consideration and recommend that the new SEPP refer to existing SEPPs (such as SEPP 70 Affordable Housing and SEPP Seniors Housing) and other mechanisms related to affordable housing to strengthen the overall policy framework.

As noted earlier in this submission, SEPPs seeking to increase the availability of diverse and affordable housing need to support local strategic planning. Recently, many of these SEPPs are having the unintended outcome of weakening local plans and local character whilst not delivering meaningful levels of diversity and affordability.

3.3 Guidance

We welcome the opportunity to review proposed new guidance during the public exhibition period in late 2021. We note that there is a significant volume of new guidance proposed along with amendments to existing guidance. It is recommend that consideration is given to the potential impacts on development assessment timeframes as a result of the increased volume of guidance that must be addressed.

Part 4 Proposed amendments to existing SEPPS

4.1 SEPP 65

Please refer to Appendix for staff feedback relating to SEPP 65 and the Apartment Design Guide.

4.2 BASIX

Whilst it is not clear why transferring and repealing the provisions of the BASIX SEPP into the new Design and Place SEPP is required, it does present an opportunity for the criteria to be updated to incorporate new climate data. The drafting of the new SEPP must ensure that sustainability provisions are future-focused to deliver appropriately resilient and liveable dwellings.

We note that BASIX currently prevents councils from introducing higher sustainability controls. We reiterate that councils need to have the ability to develop sustainability controls that respond to the local area and which may be in excess of the targets set by the SEPP.

The EIE summarises key existing BASIX provisions that are proposed to be transferred into the new SEPP, including:

> *"to promote consistency across the State, councils are currently not able to set their own higher or lower BASIX targets. This provision will continue to apply and is proposed to be transferred to the Design and Place SEPP. However, mechanisms to allow councils some flexibility in this area will be explored during development of the Design and Place SEPP."*

We support BASIX as a minimum standard and expect that Councils have the flexibility to exceed these minimum standards to reflect innovation and local community needs.

Part 5 Relationship with other planning instruments and policies

As noted earlier in this submission, State-level planning provisions may have the unintended outcome of weakening local plans and local character whilst not delivering meaningful levels of diversity and affordability.

An example, of this unintended outcome in the Woollahra LGA is residential flat buildings being constructed in the R2 Low Density Residential Zones under the *SEPP Housing for Seniors or People with a Disability 2004*. Some of these developments are located significant distance from business zones without suitable support services. This is causing community dissatisfaction when apartments are being constructed in residential areas characterised by detached housing and leafy streetscapes inconsistent with local plans and the desired future character.

Councils are committed to strategic planning, which is led by consultation with the community. This has produced local housing strategies, local strategic planning statements, character statements, place plans, and planning provisions. It is vital that these place-based local provisions reflect local character, context and community aspirations and are not unintentionally undermined by the introduction of the SEPP.

5.1.1 EP&A Act and EP&A Regulation

Council expects to be consulted on any proposed changes to the Act or the Regulation.

5.1.2 LEPs and DCPs

We note that the EIE states that the new SEPP does not intend to immediately impact LEPs or DCPs. However, we do not believe this will be the case given the scope of the SEPP. Should the new SEPP introduce targets and mandatory matters for consideration, for example residential density or activation, these will diminish the weight of existing LEP or DCP controls which were prepared with significant consultation with the local community in relation to these matters.

We support the consideration of amendments to cl.4.6 of the S*tandard Instrument (Local Environmental Plans Order) 2006* (SILEP) that will require requests for variations to demonstrate how the proposal will improve planning outcomes and public good. Good planning outcomes should have regard to the objectives, standards, controls and character statements contained in council plans and strategies.

We recommend that any amendments to the SILEP intended to enhance planning outcomes and public good are clearly defined and can be consistently applied, particularly with regard to interpretation in the Land and Environment Court.

5.2.2 State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

We look forward to working with the GANSW and the Department to better link the Codes SEPP to local provisions, including those for local character, heritage conservation, tree canopy and floor space ratio which have been developed by councils in consultation with the local community.

5.4 Ministerial directions

We recommend that a review is undertaken of all ministerial directions to remove duplication with SEPP provisions and improve efficiency within the planning system.

Appendix A & B:Amendments to the Apartment Design Guide and SEPP 65 and proposed new Urban Design Guide

Relationship with local planning controls

The EIE identifies that the Department is undertaking a review of the Apartment Design Guide (ADG) and SEPP 65 – Design Quality of Residential Apartment Development (SEPP 65). This provides an opportunity to reduce inconsistencies and duplication between these documents. The review must better link principles to development types and scales, local LEP provisions, DCP controls and local character statements.

The new SEPP, ADG and Urban Design Guide (UDG) include similar principles and guidelines. However, the universal approach of these principles and guidelines does not provide the same place-based approach to local context and character as local planning controls. It is therefore important that the value of existing local provisions and community knowledge is highlighted in any amendments made to SEPP 65 and the Guides.

The new SEPP and its supporting guidelines should clarify and strengthen the role of the existing controls and strategies in our local planning system to ensure that we create a unique sense of place that enhances local character. Clarifying these relationships will facilitate consistent interpretation and application of the SEPP, Guidelines and local planning controls.

Principle-based vs prescriptive-based guidelines

We commend the GANSW and Department for highlighting the importance of a principle-based planning system that encourages innovative and creative approaches to design. However, local planning controls are a key element in implementing these principles as they establish expectations and standards to help guide development and ensure high quality outcomes for our community.

The new SEPP should strengthen the role of DCPs to ensure that the guidelines are appropriately interpreted based on local context and character. We do not support any prescriptive design criteria that prevents local planning controls from being implemented with a view to achieving the desired future character.

The UDG and ADG provide consistency across councils, however, they often recommend the same numerical controls (such as landscape, deep soil and separation distances) which may not be suitable for the wide range of different local conditions or the wide range of urban areas, densities and character across NSW. DCP controls provide a place-based approach which addresses the local context and character to support high quality design and place outcomes.

Lack of guidelines for housing types other than apartment buildings

Whilst the ADG provides a comprehensive level of guidance to enhance the amenity of apartment buildings, there are not similar guidelines for other housing types such as boarding houses and seniors housing. We expect that local planning provisions to be the assessment standard for these other housing types, not the UDG or the new SEPP.

Appendix C Sustainability in residential buildings

In addition to the BASIX provisions being transferred to the Design and Place SEPP, the EIE notes that broader reforms to help support sustainability in residential buildings are being developed.

C.2.1 Providing more flexibility in the available assessment pathways

In principle, we support the proposal to increase flexibility for meeting NSW sustainability performance requirements. We recommend that qualification and accreditation requirements and standard document requirements are introduced for any independent assessment pathways. This will help consent authorities to assess the development and avoid delays.

C.2.2 Aligning sustainability performance with Design and Place SEPP principles

We are pleased that consideration is being given to expanding NSW sustainability performance requirements to include other potential impacts of residential development on the environment, such as embodied energy and green infrastructure. We expect that councils will be consulted throughout the process of preparing options for proposed options. We note that there may be existing research undertaken by councils and tools or metrics contained within DCPs or other place-based strategies which should be drawn on.

C.2.4 Improving the customer experience and promoting innovation

We support, in principle, the objective to improve the user interface and experience of the BASIX Tool. However, we are concerned that the integration of BASIX into the NSW Planning Portal will not lead to an optimal user experience. The scope of the NSW Planning Portal has expanded rapidly in recent years, and unfortunately the user interface is complicated and confusing.

If the BASIX Tool is going to be integrated into the NSW Planning Portal, we recommend that the project team engage with regular users, including councils, to ensure that the system is simple and easy to use and not a time-consuming process that deters applicants from using the tool.

Conclusion

Overall, we commend the GANSW and Department for seeking to elevate the importance of place and design quality in the NSW planning system.

As detailed in our submission we believe that the new SEPP provides an opportunity to strengthen local character and provide strong links to local planning provisions. However, we are concerned that some of the provisions proposed will have the unintended effect of undermining local provisions, local character and local innovation. Considered drafting of the proposed SEPP can ensure that better links to local provisions prevent this outcome.

We look forward to further consultation on the development of this important planning instrument.

Political Donations: Matters to be considered by Councillors at Council and/or Committee Meetings