



Insurance implications review - Draft Development Control Plan Amendment – Flood

May 2023

Disclaimer: The following discussion paper on flood insurance is intended to provide general information and should not be considered as specific advice tailored to individual circumstances. It is important to note that the content presented here is not intended to replace professional guidance or consultation with a specialist in the field.

While every effort has been made to ensure the accuracy and currency of the information contained in this paper, the nature of flood insurance policies and regulations necessitates ongoing updates and revisions. The information provided is of a general nature and should not be relied upon as a substitute for seeking professional advice. Therefore, it is strongly advised that readers seek their own independent advice from their insurer or a qualified specialist or professional regarding their specific circumstances. Only a specialist familiar with your unique circumstances can offer appropriate advice and guidance tailored to your specific needs.

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1. Background

In response to concerns raised by residents during the public exhibition of a draft amendment relating to flood planning controls in the Waverley Development Control Plan (WDPC), research has been undertaken to investigate the potential insurance implications of having a lot identified as part in a Flood Risk Precinct (FRP) and as part of the Flood Planning Area (FPA).

2. Considerations for insurers

2.1 Definition of Flooding

Flood insurance has only been widely available on the Australian insurance market since 2009. Prior to this information regarding flooding was considered unreliable and therefore insurers did not provide flood insurance. Since 2014 all insurers have adopted a common definition of 'flood' for the purposes of insurance as follows:

"The covering of normally dry land by water that has escaped or been released from the normal confines of any lake, or any river, creek or other natural watercourse, whether or not altered or modified; or any reservoir, canal, or dam."

This is demonstrated in **Figure 1**, which is an extract from an NRMA fact sheet on flood insurance.

All Australian insurers now define a flood as:

The covering of normally dry land by water that has escaped or been released from the normal confines of any lake, river, creek or other natural watercourse, whether or not altered or modified; or any reservoir, canal, or dam.

Things that aren't considered a flood:

(Your insurance policy may cover these water hazards even if it does not cover flood)



Figure 1 NRMA Fact Sheet¹.

¹ https://www.floods.asn.au/client_images/1787686.pdf

The Waverley LGA Flood Study² indicated that most of the inundation which could occur throughout the Waverley LGA could be considered as stormwater for insurance assessment purposes:

“There are only a few defined watercourses within the study area (such as Tamarama Gully and Bronte Gully) and thus, most of the inundation modelled and presented in this study would be regarded as “stormwater” for the purposes of the assessment of insurance claims”.

A Fact sheet prepared by the Floodplain Management Australia (FMA)³, the peak flood planning body in Australia, in conjunction with the Insurance Council of Australia (ICA) also provides the following discussion on Riverine Flooding vs Overland Flow in relation to the previously outlined definition of ‘Flood’ for insurance purposes:

“This definition does not include the impacts of overland flow, which is typically covered as a standard inclusion in home insurance policies. Councils are not obliged to use the mandated insurance definition of flood. Where a council has created local flood data that includes flooding from sources other than those considered by insurers as flood risk, difficulties can arise for a small number of insurers. There are two ways in which these insurers can address this issue:

- *Where a Council chooses to differentiate between overland flow and riverine flooding, the insurer would review how this assessment relates to the definition of flooding and preferably use only the riverine flooding output as determined by Council’s processes;*
- *Where a Council chooses not to differentiate between overland flow and riverine flooding as per the definition, the insurer will need to make this differentiation. This would take into account hydrology consultations, topographic and hydrological features of the catchment and the definition of flooding above. Only the riverine flooding component would then be used in flood premium calculations.”*

In considering the above two options presented in the fact sheet, it is noted that Council chose to differentiate between overland flow and riverine flooding in the Waverley LGA Flood Study which formed the basis of the draft amendment to the DCP. As such, it should be simple for insurers to review the description provided as an excerpt from the Waverley LGA Flood Study to determine how water inundation should be considered for the purposes of insurance. This definition has not been specifically referenced within the draft DCP amendment; however, the Waverley LGA Flood Study is referenced as the source of data for the purposes of the defined Flood Risk Precincts (High, Medium and Low).

2.2 Considerations for insurers when assessing flood risk

Insurers consider a variety of factors when undertaking an assessment of risk for an individual property. This includes information as listed in **Figure 2**, including:

- History of flooding in an area, including instances of flooding and associated claims.
- The severity of any flood event and the likelihood this will occur (based on flood studies and models undertaken by either local or state governments or separate studies commissioned by insurers themselves).

² <https://haveyoursay.waverley.nsw.gov.au/waverley-flood-study>

³ https://www.floods.asn.au/client_images/1787682.pdf

- The materials a house is made from.
- The size of the house and the floor level.

An example of the types of things that the NRMA consider in calculating flood insurance premiums as displayed in **Figure 2** and a further discussion is provided in this report.

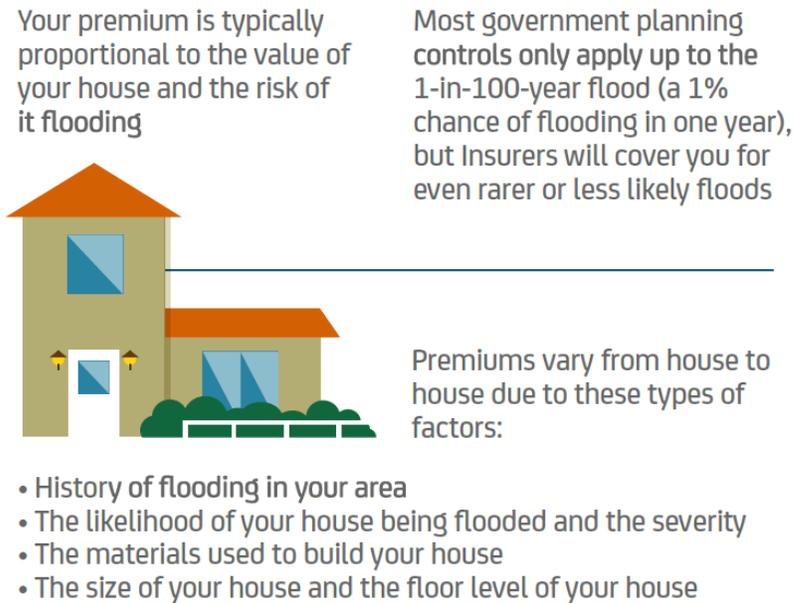


Figure 2 NRMA Factsheet

2.2.1 Data

According to information prepared by the FMA in conjunction with the ICA⁴, insurers prefer to utilise the highest quality flood modelling available. This can include local or state government flood studies and modelling incorporated into the industry's National Flood Information Database (NFID). The NFID is an Australia-wide database that provides insurers with information about the relevant flood depths for different sized flood events. Insurers having the best available information improves their ability to assess flood risk at an individual address level and they will be less likely to overprice or under-price flood insurance premiums. It is noted that the information from the Waverley LGA Flood Study has been publicly available since its adoption in 2021 and that information would also be available for insurers, should they wish to consider this in their assessment of risk for insurance purposes. Whilst Council does not have access to the NFID, it is likely that the Flood Study is contained within the NFID. The Flood Study report and relevant flood depth data (including mapped peak flood depths) is also publicly available on the SES NSW Flood Data Portal⁵ and has been since 2021.

A recent article in the Australian Financial Review⁶ (AFR) also explained insurers often supplement with

⁴ https://www.floods.asn.au/client_images/1787680.pdf

⁵ <https://flooddata.ses.nsw.gov.au/flood-projects/waverley-lga-flood-study>

⁶ <https://www.afr.com/companies/financial-services/home-owners-in-flood-prone-areas-get-wildly-different-insurance-quotes-20220520-p5an2g>

government data from external data sources and the use of different sources can vary widely dependent on the insurer. Major insurance provider Allianz was quoted as stating that the different types of data sources used by insurers ends up being reflected in the differences of the prices provided, explaining that “differences in pricing could be linked to insurers having different flood rating capabilities, commercial strategies and data sources”.

2.2.2 Re-insurance

Information made available by both the ICA and commentary in the AFR noted that the cost of re-insurance (insurance for insurers) has increased substantially as a result of the major weather events, such as the major flooding across the East Coast of Australia, which have occurred over the past 2 years. These increased costs are passed on to the consumer with those addresses considered to have a higher flood risk receiving more of these costs, than those with little flood risk.

2.2.3 Section 10.7 Certificates

A Fact Sheet prepared by the FMA and the ICA explained that insurers also do not typically use information from Section 10.7 certificates to calculate risk or set premiums, rather they consider the combination of factors discussed in this report⁷.

2.2.4 Historical claims and events

A factor considered by insurers in the cost of insurance is the history of flooding in an area and claims which have been made relating to flooding. Recent high-level insurance claims data made available from the ICA⁸ in 2023 showed that claims were made for flooding, in the postcodes of 2022, 2024 and 2026 (which cover all postcodes in the Waverley LGA) for the following recent weather events as described by the ICA:

- Description of event: 2022 - Record breaking flooding across NSW and SEQ. Consistent rain for weeks, with water levels rapidly rising. Reported 23 deaths. Lismore notably affected, waters reaching 14.4m.
- Description of event: 2021 - Following intense rainfall on 18th-22nd March, flooding and storm damage affected Sydney, The Hunter Valley and the Mid North Coastal areas. Major impact in Taree where the Manning River reached a peak of 5.6m and areas around Port Macquarie. The Western Sydney suburbs around Penrith and along the Nepean River were submerged after the river burst its banks. 150mm of rain to the Warragamba Dam catchment caused it to spill adding to the already swollen Nepean River. Downstream suburbs of Richmond, Windsor, Pitt Town and into Wisemans Ferry were also affected by flooding.

No further suburb by suburb breakdown was available.

Beyond the high-level data outlined above, detailed street by street or address level information on historical claims is not something Council has access to and would only be specifically available to insurers.

⁷ https://www.floods.asn.au/client_images/1787684.docx

⁸ <https://insurancecouncil.com.au/wp-content/uploads/2023/04/ICA-Historical-Catastrophe-April-2023.xlsx>

One example of a major flood which would have resulted in substantial insurance claims was the large-scale flooding event which occurred in 1984. This flooding event was mentioned by a number of Waverley residents during the public exhibition process. In order to determine the intensity of this flood, research was undertaken to determine what the flood was equivalent to in the metrics used in 2023. The 2010 Rose Bay Catchment Flood Study⁹ undertaken by Woollahra Council determined the November 1984 flood to be approximately a 100 year ARI (1% AEP or 1 in 100 year) rainfall event. Historical newspaper excerpts are provided in the below figures 3 and 4.

⁹ https://www.woollahra.nsw.gov.au/data/assets/pdf_file/0003/119154/Rose_Bay_Flood_Study.pdf



Figure 3 Exert from the Sun Herald on Flooding in North Bondi 1984¹⁰



Figure 4 Exert from the Daily Mirror on Flooding in North Bondi 1984¹⁰

¹⁰ <https://flooddata.ses.nsw.gov.au/dataset/sydney-metropolitan-area-storms-floods-november-1984-newspaper-articles-report>

3. Empirical evidence of insurance premiums in Waverley

Research was undertaken to ascertain whether or not there was a correlation between flood affectation and an increased premium in insurance prices. In undertaking this process, a number of variables were considered:

- Properties with no flood affectation.
- Properties tagged in the *Waverley Local Environmental Plan* Flood Maps (old LEP Flood Maps) which are no longer relevant due to State Government changes in 2021 but still present.
- Properties categorised as A, B or C in the Waverley Flood Study.
- Properties tagged as being in a Low, Medium or High Flood Risk Precinct in the proposed new Flood Planning Area as part of the Draft DCP Amendment.
- A range of geographical locations.

Insurance premium quotes were obtained during February 2023. A total of 24 different addresses were selected across the LGA, with particular attention given to areas and streets where Council received submissions and concerns from residents, such as Queens Park and North Bondi. Quotes were obtained from reputable insurers including St George Bank (Quote 1), GIO Insurance (Quote 2) and AHM (Quote 3). Insurers were also chosen with different underwriters. The controlled variables were the value of the replacement build, recent claim history, date of birth and types of materials and structure present on the site. While these variables remained constant, the property address (and its associated flood affectation) was isolated to understand how insurance premiums relate to specific flood risks. St George was the only insurer that provided a separate line fee for flood insurance, while GIO and AHM both included this as part of the overall premium price, AHM also included a separate \$500 flood excess, beyond any standard excess, in the instance a claim was to be made for flood damage.

The tables overleaf provide details of the quotes received. Individual street number addresses have been redacted for privacy purposes.

3.1 Old LEP Maps

Consideration was given to properties affected on the old LEP Flood Planning Maps. The key findings of this exercise found that the most expensive quotes correlate with areas in North Bondi identified on the previous LEP Maps, but there did not appear to be a clear correlation with an address having an old LEP flood affectation and a higher premium being charged. Addresses with affectations on the old LEP maps were also among some of the cheapest quotes received, this included an address in both Bondi Beach and two addresses in

Bronte. It should be noted that the area around Elliot and Roe Street generally returned the highest premiums, indicating that other factors, such as historic events or claims in this area are likely driving higher premiums. This is discussed further in section 3.4 Outliers of this report.

Quotes obtained filtered by LEP Map affectation are listed in the below figures from most to least expensive. Where a 'flood' component of an insurance premium quote was provided (Quote 1), the cost of the flood component was filtered. The different colours align with the colours used in the old LEP flood maps (light blue – Flood Planning Area and no colour – not in the Flood Planning Area).

Property Address	LEP FLOOD	SUBURB	Quote 1	FLOOD
Elliott Street	YES	NORTH BONDI	\$ 7,377.04	\$ 5,196.83
Elliott Street	YES	NORTH BONDI	\$ 7,655.44	\$ 5,196.83
Roe Street	YES	NORTH BONDI	\$ 7,600.63	\$ 3,729.21
Denison Street	NO	QUEENS PARK	\$ 2,473.97	\$ 488.59
Alt Street	NO	QUEENS PARK	\$ 2,473.97	\$ 417.70
Alt Street	NO	QUEENS PARK	\$ 2,473.97	\$ 417.70
Wallis Parade	YES	NORTH BONDI	\$ 2,737.38	\$ 278.77
Murriverie Road	NO	NORTH BONDI	\$ 3,006.19	\$ 218.83
Simpson Street	YES	BONDI BEACH	\$ 2,363.33	\$ 86.37
Old South Head Road	NO	NORTH BONDI	\$ 2,502.52	\$ 43.91
Dickson Street	YES	BRONTE	\$ 2,452.78	\$ 2.76
Dickson Street	YES	BRONTE	\$ 2,452.78	\$ 2.76
Liverpool Street	NO	ROSE BAY	\$ 2,476.87	\$ 2.76
Liverpool Street	NO	ROSE BAY	\$ 2,476.87	\$ 2.76
Liverpool Street	NO	ROSE BAY	\$ 2,476.87	\$ 2.76
Reina Street	NO	NORTH BONDI	\$ 2,458.61	\$ 2.76
Alt Street	NO	QUEENS PARK	\$ 2,473.97	\$ 2.76
Alt Street	NO	QUEENS PARK	\$ 2,473.97	\$ 2.76
Murray Street	NO	BRONTE	\$ 2,452.78	\$ 2.76
Wallis Parade	NO	NORTH BONDI	\$ 2,458.61	\$ 2.76
Murray Street	NO	BRONTE	\$ 2,452.78	\$ 2.76
Simpson Street	NO	BONDI BEACH	\$ 2,363.33	\$ 2.76
Bronte Road	NO	BRONTE	\$ 2,452.78	\$ 2.76
Liverpool Street	NO	ROSE BAY	\$ 2,476.87	\$ 2.76

Figure 5 Old LEP Map Comparison, Insurer 1

Property Address	LEP FLOOD	SUBURB	Quote 2	FLOOD
Roe Street	YES	NORTH BONDI	\$ 6,657.09	Included
Elliott Street	YES	NORTH BONDI	\$ 5,207.74	Included
Elliott Street	YES	NORTH BONDI	\$ 4,996.06	Included
Alt Street	NO	QUEENS PARK	\$ 4,668.33	Included
Old South Head Road	NO	NORTH BONDI	\$ 4,534.77	Included
Murriverie Road	NO	NORTH BONDI	\$ 3,846.20	Included
Alt Street	NO	QUEENS PARK	\$ 2,883.36	Included
Denison Street	NO	QUEENS PARK	\$ 2,682.75	Included
Simpson Street	YES	BONDI BEACH	\$ 2,532.40	Included
Murray Street	NO	BRONTE	\$ 2,530.24	Included
Wallis Parade	YES	NORTH BONDI	\$ 2,445.92	Included
Simpson Street	NO	BONDI BEACH	\$ 2,369.89	Included
Alt Street	NO	QUEENS PARK	\$ 2,317.57	Included
Liverpool Street	NO	ROSE BAY	\$ 2,303.83	Included
Dickson Street	YES	BRONTE	\$ 2,299.16	Included
Liverpool Street	NO	ROSE BAY	\$ 2,280.14	Included
Murray Street	NO	BRONTE	\$ 2,189.27	Included
Reina Street	NO	NORTH BONDI	\$ 2,132.26	Included
Liverpool Street	NO	ROSE BAY	\$ 2,100.57	included
Bronte Road	NO	BRONTE	\$ 2,072.19	Included
Wallis Parade	NO	NORTH BONDI	\$ 2,058.90	Included
Liverpool Street	NO	ROSE BAY	\$ 2,052.73	Included
Dickson Street	YES	BRONTE	\$ 2,051.26	Included
Alt Street	NO	QUEENS PARK	\$ 2,038.10	Included

Figure 6 Old LEP Map Comparison, Insurer 2

Property Address	LEP FLOOD	SUBURB	Quote 3	FLOOD
Roe Street	YES	NORTH BONDI	\$ 2,461	Included
Liverpool Street	NO	ROSE BAY	\$ 2,439	Included
Liverpool Street	NO	ROSE BAY	\$ 2,424	Included
Old South Head Road	NO	NORTH BONDI	\$ 2,410	Included
Liverpool Street	NO	ROSE BAY	\$ 2,398	Included
Murriverie Road	NO	NORTH BONDI	\$ 2,379	Included
Elliott Street	YES	NORTH BONDI	\$ 2,359	Included
Reina Street	NO	NORTH BONDI	\$ 2,358	Included
Elliott Street	YES	NORTH BONDI	\$ 2,345	Included
Denison Street	NO	QUEENS PARK	\$ 2,322	Included
Alt Street	NO	QUEENS PARK	\$ 2,317	Included
Alt Street	NO	QUEENS PARK	\$ 2,316	Included
Alt Street	NO	QUEENS PARK	\$ 2,316	Included
Alt Street	NO	QUEENS PARK	\$ 2,316	Included
Wallis Parade	YES	NORTH BONDI	\$ 2,309	Included
Simpson Street	YES	BONDI BEACH	\$ 2,299	Included
Murray Street	NO	BRONTE	\$ 2,263	Included
Wallis Parade	NO	NORTH BONDI	\$ 2,263	Included
Murray Street	NO	BRONTE	\$ 2,263	Included
Simpson Street	NO	BONDI BEACH	\$ 2,260	Included
Bronte Road	NO	BRONTE	\$ 2,258	Included
Dickson Street	YES	BRONTE	\$ 2,256	Included
Liverpool Street	NO	ROSE BAY	\$ 2,237	Included
Dickson Street	YES	BRONTE	\$ 2,223	Included

Figure 7 Old LEP Map Comparison, Insurer 3

3.2. Flood Study Categorisation

Consideration was given to the lot tagging categories from the Waverley Flood Study (types A, B and C). There appeared to be no clear correlation between Flood Study categorisation and a higher premium, with properties particularly in the A and B categories having varied

quoted prices. Some properties with A categories also returned quotes cheaper than those with No category at all. It should be noted that the area around Elliot and Roe Street generally returned the highest premiums, indicating that other factors, such as historic events or claims in this area are likely driving higher premiums. This is discussed further in section 3.4 Outliers of this report.

Quotes obtained filtered by Flood Study categorisation are listed in the below figures from most to least expensive. Where a 'flood' component of an insurance premium quote was provided (Quote 1) the cost of this component was filtered. The different colours align with the colours used in the lot tagging maps in the Flood Study (pink – A, yellow – B and light blue – C).

Property Address	SUBURB	FLOOD STUDY CAT	Quote 1	FLOOD
Elliott Street	NORTH BONDI	A	\$ 7,377.04	\$ 5,196.83
Elliott Street	NORTH BONDI	A	\$ 7,655.44	\$ 5,196.83
Roe Street	NORTH BONDI	A	\$ 7,600.63	\$ 3,729.21
Denison Street	QUEENS PARK	A	\$ 2,473.97	\$ 488.59
Alt Street	QUEENS PARK	B	\$ 2,473.97	\$ 417.70
Alt Street	QUEENS PARK	B	\$ 2,473.97	\$ 417.70
Wallis Parade	NORTH BONDI	A	\$ 2,737.38	\$ 278.77
Murriverie Road	NORTH BONDI	A	\$ 3,006.19	\$ 218.83
Simpson Street	BONDI BEACH	A	\$ 2,363.33	\$ 86.37
Old South Head Road	NORTH BONDI	C	\$ 2,502.52	\$ 43.91
Murray Street	BRONTE	A	\$ 2,452.78	\$ 2.76
Wallis Parade	NORTH BONDI	A	\$ 2,458.61	\$ 2.76
Simpson Street	BONDI BEACH	A	\$ 2,363.33	\$ 2.76
Dickson Street	BRONTE	A	\$ 2,452.78	\$ 2.76
Liverpool Street	ROSE BAY	B	\$ 2,476.87	\$ 2.76
Liverpool Street	ROSE BAY	B	\$ 2,476.87	\$ 2.76
Liverpool Street	ROSE BAY	B	\$ 2,476.87	\$ 2.76
Murray Street	BRONTE	B	\$ 2,452.78	\$ 2.76
Alt Street	QUEENS PARK	C	\$ 2,473.97	\$ 2.76
Bronte Road	BRONTE	C	\$ 2,452.78	\$ 2.76
Reina Street	NORTH BONDI	NIL	\$ 2,458.61	\$ 2.76
Alt Street	QUEENS PARK	NIL	\$ 2,473.97	\$ 2.76
Liverpool Street	ROSE BAY	NIL	\$ 2,476.87	\$ 2.76
Dickson Street	BRONTE	NIL	\$ 2,452.78	\$ 2.76

Figure 8 Flood Study Categorisation Comparison, Insurer 1

Property Address	SUBURB	FLOOD STUDY CAT	Quote 2	FLOOD
Roe Street	NORTH BONDI	A	\$ 6,657.09	Included
Elliott Street	NORTH BONDI	A	\$ 5,207.74	Included
Ellliott Street	NORTH BONDI	A	\$ 4,996.06	Included
Alt Street	QUEENS PARK	B	\$ 4,668.33	Included
Old South Head Road	NORTH BONDI	C	\$ 4,534.77	Included
Murriverie Road	NORTH BONDI	A	\$ 3,846.20	Included
Alt Street	QUEENS PARK	B	\$ 2,883.36	Included
Denison Street	QUEENS PARK	A	\$ 2,682.75	Included
Simpson Street	BONDI BEACH	A	\$ 2,532.40	Included
Murray Street	BRONTE	A	\$ 2,530.24	Included
Wallis Parade	NORTH BONDI	A	\$ 2,445.92	Included
Simpson Street	BONDI BEACH	A	\$ 2,369.89	Included
Alt Street	QUEENS PARK	NIL	\$ 2,317.57	Included
Liverpool Street	ROSE BAY	B	\$ 2,303.83	Included
Dickson Street	BRONTE	NIL	\$ 2,299.16	Included
Liverpool Street	ROSE BAY	B	\$ 2,280.14	Included
Murray Street	BRONTE	B	\$ 2,189.27	Included
Reina Street	NORTH BONDI	NIL	\$ 2,132.26	Included
Liverpool Street	ROSE BAY	B	\$ 2,100.57	included
Bronte Road	BRONTE	C	\$ 2,072.19	Included
Wallis Parade	NORTH BONDI	A	\$ 2,058.90	Included
Liverpool Street	ROSE BAY	NIL	\$ 2,052.73	Included
Dickson Street	BRONTE	A	\$ 2,051.26	Included
Alt Street	QUEENS PARK	C	\$ 2,038.10	Included

Figure 9 Flood Study Comparison, Insurer 2

Property Address	SUBURB	FLOOD STUDY CAT	Quote 3	FLOOD
Roe Street	NORTH BONDI	A	\$ 2,461	Included
Liverpool Street	ROSE BAY	B	\$ 2,439	Included
Liverpool Street	ROSE BAY	B	\$ 2,424	Included
Old South Head Road	NORTH BONDI	C	\$ 2,410	Included
Liverpool Street	ROSE BAY	B	\$ 2,398	Included
Murriverie Road	NORTH BONDI	A	\$ 2,379	Included
Elliott Street	NORTH BONDI	A	\$ 2,359	Included
Reina Street	NORTH BONDI	NIL	\$ 2,358	Included
Elliott Street	NORTH BONDI	A	\$ 2,345	Included
Denison Street	QUEENS PARK	A	\$ 2,322	Included
Alt Street	QUEENS PARK	B	\$ 2,317	Included
Alt Street	QUEENS PARK	B	\$ 2,316	Included
Alt Street	QUEENS PARK	C	\$ 2,316	Included
Alt Street	QUEENS PARK	NIL	\$ 2,316	Included
Wallis Parade	NORTH BONDI	A	\$ 2,309	Included
Simpson Street	BONDI BEACH	A	\$ 2,299	Included
Murray Street	BRONTE	A	\$ 2,263	Included
Wallis Parade	NORTH BONDI	A	\$ 2,263	Included
Murray Street	BRONTE	B	\$ 2,263	Included
Simpson Street	BONDI BEACH	A	\$ 2,260	Included
Bronte Road	BRONTE	C	\$ 2,258	Included
Dickson Street	BRONTE	A	\$ 2,256	Included
Liverpool Street	ROSE BAY	NIL	\$ 2,237	Included
Dickson Street	BRONTE	NIL	\$ 2,223	Included

Figure 10 Flood Study Comparison, Insurer 3

3.3 Draft DCP Flood Risk Categorisation

Consideration was given to the draft Flood Risk Precinct category for properties in the draft amendment to the WDCP. There appeared to be no clear correlation between Flood Risk Categorisation in the draft DCP and high insurance quotes. In some instances, addresses with 'Low' or no risk classification ('Nil') had more expensive quotes than addresses tagged with 'High' or 'Medium' classifications. It should be

noted that the area around Elliot and Roe Street generally returned the highest premiums, indicating that other factors, such as historic events or claims in this area are likely driving higher premiums. This is discussed further in section 3.4 Outliers of this report.

Quotes obtained filtered by Flood Risk Precinct categorisation are listed in the below figures from most to least expensive. Where a 'flood' component of an insurance premium quote was provided (Quote 1) the cost of the flood component was filtered. The different colours align with the colours used in the draft Flood Risk Precincts (Pink – High, Yellow – Medium and Blue – Low).

Property Address	SUBURB	DCP RISK CAT	Quote 1	FLOOD
Elliott Street	NORTH BONDI	HIGH	\$ 7,655.44	\$ 5,196.83
Elliott Street	NORTH BONDI	MEDIUM	\$ 7,377.04	\$ 5,196.83
Roe Street	NORTH BONDI	MEDIUM	\$ 7,600.63	\$ 3,729.21
Denison Street	QUEENS PARK	HIGH	\$ 2,473.97	\$ 488.59
Alt Street	QUEENS PARK	MEDIUM	\$ 2,473.97	\$ 417.70
Alt Street	QUEENS PARK	MEDIUM	\$ 2,473.97	\$ 417.70
Wallis Parade	NORTH BONDI	MEDIUM	\$ 2,737.38	\$ 278.77
Murriverie Road	NORTH BONDI	MEDIUM	\$ 3,006.19	\$ 218.83
Simpson Street	BONDI BEACH	HIGH	\$ 2,363.33	\$ 86.37
Old South Head Road	NORTH BONDI	MEDIUM	\$ 2,502.52	\$ 43.91
Liverpool Street	ROSE BAY	HIGH	\$ 2,476.87	\$ 2.76
Liverpool Street	ROSE BAY	HIGH	\$ 2,476.87	\$ 2.76
Liverpool Street	ROSE BAY	MEDIUM	\$ 2,476.87	\$ 2.76
Liverpool Street	ROSE BAY	NIL	\$ 2,476.87	\$ 2.76
Alt Street	QUEENS PARK	LOW	\$ 2,473.97	\$ 2.76
Alt Street	QUEENS PARK	NIL	\$ 2,473.97	\$ 2.76
Reina Street	NORTH BONDI	NIL	\$ 2,458.61	\$ 2.76
Wallis Parade	NORTH BONDI	MEDIUM	\$ 2,458.61	\$ 2.76
Murray Street	BRONTE	HIGH	\$ 2,452.78	\$ 2.76
Murray Street	BRONTE	MEDIUM	\$ 2,452.78	\$ 2.76
Bronte Road	BRONTE	LOW	\$ 2,452.78	\$ 2.76
Dickson Street	BRONTE	HIGH	\$ 2,452.78	\$ 2.76
Dickson Street	BRONTE	LOW	\$ 2,452.78	\$ 2.76
Simpson Street	BONDI BEACH	MEDIUM	\$ 2,363.33	\$ 2.76

Figure 11 Flood DCP Comparison, Insurer 1

Property Address	SUBURB	DCP RISK CAT	Quote 2	FLOOD
Roe Street	NORTH BONDI	MEDIUM	\$ 6,657.09	Included
Elliott Street	NORTH BONDI	MEDIUM	\$ 5,207.74	Included
Elliott Street	NORTH BONDI	HIGH	\$ 4,996.06	Included
Alt Street	QUEENS PARK	MEDIUM	\$ 4,668.33	Included
Old South Head Road	NORTH BONDI	MEDIUM	\$ 4,534.77	Included
Murriverie Road	NORTH BONDI	MEDIUM	\$ 3,846.20	Included
Alt Street	QUEENS PARK	MEDIUM	\$ 2,883.36	Included
Denison Street	QUEENS PARK	HIGH	\$ 2,682.75	Included
Simpson Street	BONDI BEACH	HIGH	\$ 2,532.40	Included
Murray Street	BRONTE	HIGH	\$ 2,530.24	Included
Wallis Parade	NORTH BONDI	MEDIUM	\$ 2,445.92	Included
Simpson Street	BONDI BEACH	MEDIUM	\$ 2,369.89	Included
Alt Street	QUEENS PARK	LOW	\$ 2,317.57	Included
Liverpool Street	ROSE BAY	HIGH	\$ 2,303.83	Included
Dickson Street	BRONTE	LOW	\$ 2,299.16	Included
Liverpool Street	ROSE BAY	MEDIUM	\$ 2,280.14	Included
Murray Street	BRONTE	MEDIUM	\$ 2,189.27	Included
Reina Street	NORTH BONDI	NIL	\$ 2,132.26	Included
Liverpool Street	ROSE BAY	HIGH	\$ 2,100.57	included
Bronte Road	BRONTE	LOW	\$ 2,072.19	Included
Wallis Parade	NORTH BONDI	MEDIUM	\$ 2,058.90	Included
Liverpool Street	ROSE BAY	NIL	\$ 2,052.73	Included
Dickson Street	BRONTE	HIGH	\$ 2,051.26	Included
Alt Street	QUEENS PARK	NIL	\$ 2,038.10	Included

Figure 12 Flood DCP Comparison, Insurer 2

Property Address	SUBURB	DCP RISK CAT	Quote 3	FLOOD
Roe Street	NORTH BONDI	MEDIUM	\$2,461	Included
Liverpool Street	ROSE BAY	HIGH	\$2,439	Included
Liverpool Street	ROSE BAY	HIGH	\$2,424	Included
Old South Head Road	NORTH BONDI	MEDIUM	\$2,410	Included
Liverpool Street	ROSE BAY	MEDIUM	\$2,398	Included
Murriverie Road	NORTH BONDI	MEDIUM	\$2,379	Included
Elliott Street	NORTH BONDI	MEDIUM	\$2,359	Included
Reina Street	NORTH BONDI	NIL	\$2,358	Included
Elliott Street	NORTH BONDI	HIGH	\$2,345	Included
Denison Street	QUEENS PARK	HIGH	\$2,322	Included
Alt Street	QUEENS PARK	MEDIUM	\$2,317	Included
Alt Street	QUEENS PARK	MEDIUM	\$2,316	Included
Alt Street	QUEENS PARK	LOW	\$2,316	Included
Alt Street	QUEENS PARK	NIL	\$2,316	Included
Wallis Parade	NORTH BONDI	MEDIUM	\$2,309	Included
Simpson Street	BONDI BEACH	HIGH	\$2,299	Included
Murray Street	BRONTE	HIGH	\$2,263	Included
Murray Street	BRONTE	MEDIUM	\$2,263	Included
Wallis Parade	NORTH BONDI	MEDIUM	\$2,263	Included
Simpson Street	BONDI BEACH	MEDIUM	\$2,260	Included
Bronte Road	BRONTE	LOW	\$2,258	Included
Dickson Street	BRONTE	HIGH	\$2,256	Included
Liverpool Street	ROSE BAY	NIL	\$2,237	Included
Dickson Street	BRONTE	LOW	\$2,223	Included

Figure 13 Flood DCP Comparison, Insurer 3

3.4 Outliers

It is noted within the exercise undertaken that there were a number of outliers which were subject to far higher flood components or overall premiums than other parts of the LGA with the same flood affectations (whether Old LEP, Flood Study or draft DCP). In particular, this was the case in parts of the suburb of North Bondi around Roe Street and Elliott Street.

Whilst Council does not have access to the risk assessment insurers undertake to determine the potential causes for this, or all information (such as historical claims) it is concluded that the following factors may have influenced the higher premiums in this area:

1. Historical flooding events that have occurred in this area (such as the 1984 flood discussed in this report).
2. Historical claims for flooding (which Council does not have access to).
3. Potential reassessment of risk following the significant rainfall events and natural disasters which occurred in 2021 and 2022.
4. Variances in how individual insurers assess of risk for these addresses (noting that one insurer did not quote noticeably higher premiums for these areas).
5. The former presence of bodies of water within these areas has influenced some insurers interpretation of the definition of 'flood'.

With regards to point number five, prior to colonisation and in the early periods post-colonisation, the Waverley LGA was home to many wetland and lagoon areas, including at Bondi Beach and North Bondi. It may be possible that insurers consider any water inundation that occurs in these areas to be considered as one of the water bodies referenced within the definition of 'Flood' for insurance purposes having been considered as 'modified'.

3.5 Other Observations

Both St George and GIO displayed noticeable fluctuations in prices for quotations across all properties, with AHM displaying consistently low prices across all quotes. It is worth noting that AHM also had a separate 'Flood Excess' that would be effective in the instance of a claim, not part of the annual premium.

4. Conclusions

In concluding the assessment of the quotes received as part of this research exercise, as well as the other information reviewed, the following observations were made:

- Insurance premiums vary widely depending on the insurer.
- Flood affectation on the old LEP flood maps did not directly translate into a higher premium.

- Flood affectation A, B or C in the Flood Study did not directly translate into a higher premium.
- Flood affectation as High, Medium or Low risk in the draft DCP amendment did not directly translate into a higher premium.
- There are some parts of the LGA which are subject to higher premiums, particularly with one insurer who provided a 'flood' component of the price provided. There is no definitive conclusion why this was the case; although historical claims and past flooding events in this area, as well as individual insurers approach, may be driving higher premiums in this area.

It is also worth noting that the AFR article discussed earlier within this document undertook a quoting (referenced as 'mystery shopper') exercise similar to that undertaken for the purposes of this research. The findings of this exercise also showed that prices varied substantially for the same property with the same inputs, depending on the insurer. These findings correlate with the findings in this research paper. For residents who believe the flood premium has been incorrectly charged. The ICA recommends to investigate the following actions:

"If you have evidence that an insurer has incorrectly assessed risk of flooding (e.g. a Council flood study, floor level survey, site-specific flood report or similar), please contact the insurer directly to discuss. Many major insurers have dedicated flood premium review processes in place and welcome information that helps improve the accuracy of their flood risk assessments. The Insurance Council of Australia (ICA) can also assist in reviewing information if an insurer cannot. Providing the insurer or ICA documentation will assist in this discussion.

It is also important to shop around if you are not satisfied by the premium or cover offered by your insurer.