

Figure 5-1 Flood Free Areas with Access to Medical Emergency Centres during a PMF Flood Event

5.2 Evacuation vs Shelter-in-Place

Unlike property damage assessments of flood risk, such as the methodology outlined within the *Managing Flood Risk through Planning Opportunities Guideline* (HNFMSC), when determining the flood risk to life the flood hazard for an area does not directly imply the danger posed to people in the floodplain. This is due to the capacity for people to respond and react to flooding, ensuring they do not enter floodwaters.

To help minimise the flood risk to occupants, it is important that developments have provisions to facilitate flood emergency response. There are two main forms of flood emergency response that may be adopted by people within the floodplain:

- > Evacuation: The movement of occupants out of the floodplain before the property becomes flood affected; and,
- > Shelter-in-place: The movement of occupants to a building that provides vertical refuge on the site or near the site before their property becomes flood affected.

As discussed in **Section 5.1**, the evacuation potential of Pittwater LGA in the event of flooding is considered to be limited due to the following:

- > The flash flooding nature of the catchments within the LGA. Based on the SES evacuation timeline approach, there is insufficient time to co-ordinate a regional evacuation process, however there is potential for localised evacuation of sites near the edge of the floodplain; and,
- > Due to the wide-spread nature of flooding in the Pittwater LGA, access to medical services for the majority of the Pittwater LGA is not available in the event of flooding, therefore most evacuation centres located within the LGA would be considered a High Flood Island.

Therefore it is concluded that safe evacuation is not possible for the majority of floodplains in Pittwater LGA. In instances where localised evacuation is feasible, it is considered the preferred primary emergency response, however shelter-in-place is considered an acceptable alternative.

This conclusion is in accordance with the following relevant sources:

- > The AFAC guideline states that evacuation is the most effective strategy, provided that evacuation can be safely implemented, however it may be worse than not evacuating at all. It suggests determination of whether there are barriers to evacuation posed by available warning time, availability of safe routes, and resources available, which has conducted in **Section 5.1**, with evacuation potential found to be minimal.
- > Tweed Shire Council Flood Risk Management Policy (2007) states that evacuation is the preferred risk management approach for developments, however shelter-in-place is considered an acceptable alternative when designed to meet specific development controls.
- > Newcastle City Council Flood Policy (2003) states that as flood waters have the potential to rise within half an hour, there will generally be insufficient warning time to allow safe evacuation across flood-affected land. Consequently on-site refuge will normally be required to satisfy the acceptable risk to life criteria. The policy requires on-site refuge for all high hazard developments that are greater than 40 metres from the perimeter of the PMF extent which is the majority of the floodplain.
- > Review of flood fatalities in Australia has found that the vast majority (75.7%) of fatalities occurred outside when people have entered flood waters in a vehicle or on foot, with only 12.4% of fatalities occurring in a house (Haynes et al, 2009). Conversely, it should also be noted that flooding in the Lockyer Valley showed the hazard associated with shelter-in-place, with 13 of the 19 fatalities being people sheltering in buildings that were either completely inundated or collapsed under the force of the flood flows (Rogencamp and Barton, 2012)

6 Flood Life Hazard Categories

The level of flood risk to life is proportional to the flood hazard for the area, that is to say, as the flood hazard increases, the cumulative risk to life also increases. Therefore the objective of this section is to establish mapping of 'flood life hazard' categories which represent the risk to life caused by flood hazard.

The determination of flood life hazard categories is based on consideration of the following factors:

- > Flood hazard curves to identify the degree of flooding which poses a risk to life for demographics of the population.
- > The design flood event to be adopted as the basis of the life hazard categories.

Discussion of the adopted life hazard category approach is summarised in the following sections.

6.1 Hazard

The hazard thresholds presented within the paper *Updating National Guidance on Best Practice Flood Risk Management* (McLuckie D et al, 2014) (refer to **Section 3.6**) have been used as the basis for flood life hazard categories.

The combined flood hazard curves are shown in **Figure 6-1**. The associated vulnerability thresholds are shown in **Table 6-1**.

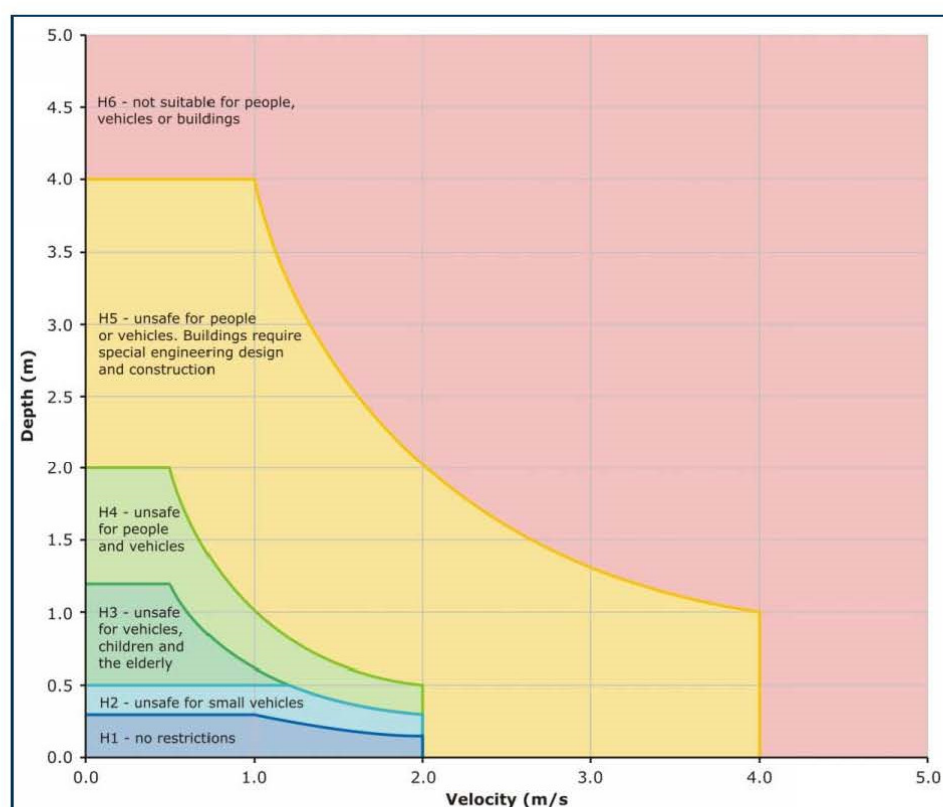


Figure 6-1 Combined Flood Hazard Curves

Source: McLuckie et al, 2014

The increase in cumulative flood risk for occupants within the floodplain is not expected to be significantly impacted by the potential de-stabilisation of small vehicles, as pedestrian stability for all demographics is not compromised at this hazard level. Therefore for the purposes of this flood risk to life assessment, hazard thresholds H1 and H2 have been grouped into the lowest possible risk category.

Similarly, there are assumed to be minimal increases in the cumulative flood risk to the population between H3 and H4 thresholds. The difference between the two hazard thresholds is that adult pedestrians are considered to be stable in H3 and not in H4, however as a significant portion of pedestrians (children and the elderly) will be unstable, the level of risk is similar. Therefore the two hazard groups have been grouped.

Table 6-1 Combined Hazard Thresholds

Hazard Classification	Description
H1 – H2	Relatively benign flow conditions. Unsafe for small vehicles.
H3 – H4	Unsafe for all pedestrians and all vehicles.
H5	Unsafe for all pedestrians and all vehicles. Buildings require special engineering design and construction.
H6	Unconditionally dangerous. Not suitable for any type of development or evacuation access. All building types considered vulnerable to failure.

6.1.1 Comparison to Other Policies

Note that the adoption of hazard thresholds as the basis for flood risk to life is in keeping with the following:

- > Newcastle City Council DCP 2012 Section 4.01 Flood Management establishes hydraulic behaviour thresholds H1 – H5, which are factors in the determination of risk to life hazard categories L1 – L5;
- > In the paper relating to Moreton Bay flood risk planning (Molino Stewart, 2012) (see **Section 3.5**) the flood risk assessment matrices use flood hazard categories H1 – H5, the same as those adopted in the Newcastle DCP.

The velocity and depth thresholds adopted in the two documents above for hazard definitions differ from those presented in the paper *Updating National Guidance on Best Practice Flood Risk Management* (McLuckie D et al, 2014) which are adopted within this policy.

Nevertheless the adopted hazard thresholds are expected to be adopted within the forthcoming AEM *Handbook 7: Managing the floodplain: best practice in flood risk management in Australia* (2014), a national guideline relevant for floodplain management across Australia. Therefore the adoption of these hazard thresholds is considered appropriate.

6.2 Adopted Design Event

The NSW Government's Floodplain Development Manual (2005) states the following:

"Response planning for the consequences of the PMF provides for effective management of smaller events, particularly those rarer than the flood event selected as the basis of the Flood Planning Level (FPL). For example, where 1% AEP flood is used as the basis for minimum floor levels or protection from a levee, a 0.5% AEP flood event will probably overwhelm these measures. This event, whilst smaller, but significantly more likely than the PMF, will have major consequences to people, property, and infrastructure and needs to be accounted for in emergency response planning."

"An assessment of the full range of events therefore provides key information for flood response studies".

"It is critical that relevant information on evacuation is provided on events up to the PMF".

A literature review has been conducted based on the guidelines and papers summarised in **Section 3**. The guidelines have the following comments on design flood events when considering flood risk to life and emergency response:

- > Discussion within Chapter 11 of the *Managing Flood Risk through Planning Opportunities – Guidance on Land Use Planning in Flood Prone Areas* (HNFMSC, 2006) stresses the importance of considering flood emergency response for all events up to the PMF;

- > The Flood Emergency Response Planning guideline also states that categories should be considered for the PMF event (as well as the 20yr and 100yr events);
- > The AFAC guidelines state that ideally shelter-in-place buildings should have habitable floors that will be flood free in a PMF event; and,
- > The paper *Updating National Guidance on Best Practice Flood Risk Management* (McLuckie et al., 2014) recommends the national adoption of PMF as the design event for emergency response classifications similar to those presented in the NSW Flood Emergency Response Planning guidelines (see **Section 3.4**).

Therefore, in consideration of flood risk to life, the Probable Maximum Flood (PMF) has been adopted as the design event for Pittwater LGA. The adoption of the PMF event represents a level of risk aversion that reflects the severity of potential loss of life of occupants.

6.2.1 Comparison to Other Policies

The adoption of the PMF flood event as the design event for consideration of flood risk to life aligns with the following existing policies:

- > In the current Pittwater 21 DCP (2014), all developments within PMF extents must assign evacuation routes through PMF low hazard.
- > Newcastle City Council Flood Policy (2003) states because of the very high value placed on life, the acceptable risk to life criteria adopted by this policy relate to the PMF; and,
- > For the Tweed Shire Council Flood Risk Management Policy (2007) the policy applies to all developments below the PMF level, and the PMF level is the minimum requirement for all emergency response measures.

6.2.2 S117 Directive

The S117 Directive for *Development Controls on Low Flood Risk Areas* (NSW Government, 2012) states that flood related development controls should not be applied to developments outside the 100 year ARI plus 0.5m freeboard, or Flood Planning Level (FPL). However, the directive does state that the “*safety of people and associated emergency response management needs to be considered and may result in:*”

- > *Restrictions on types of development which are particularly vulnerable to emergency response, for example developments for aged care; and,*
- > *Restrictions on critical emergency response and recovery facilities and infrastructure. These aim to ensure that these facilities and the infrastructure can fulfil their emergency response and recovery functions during and after a flood event. Examples include evacuation centres and routes, hospitals and major utility facilities.*

The development controls associated with this policy are proposed to provide controls that relate to the flood emergency response provisions for residential development. The development controls do not specifically relate to the residential development itself, but the shelter-in-place refuge areas or evacuation routes proposed for the development. Both are deemed to fall under the definition of ‘*critical emergency response and recovery facilities and infrastructure*’ in accordance with the second bullet point from the above directive extract, where evacuation routes are listed as an example.

This means that the development controls proposed in this study are in accordance with the S117 directive.

6.2.3 Climate Change Consideration

The outcomes of this policy primarily focus on future development, which is expected to have a design life that extends beyond when climate change is projected to significantly impact flood behaviour (the year 2050 onwards). Therefore the impacts of climate change on future flood behaviour need to be acknowledged. The effects of climate change on flooding are typically incorporated in two ways:

- > Sea Level Rise: Flooding of low lying coastal floodplains is expected to be affected by potential sea level rise in the future;
- > Rainfall Increase: In NSW, it is common for rainfall intensity increases to be modelled resulting from climate change.

Control B2.23 of the current Pittwater 21 DCP states that all intensification of development should consider the impact of climate change on FPL's (100 year ARI plus freeboard). As stated above the flood risk classification is based on the PMF event as the design event. In accordance with the current Pittwater 21 DCP no consideration of climate change is required for the PMF event, therefore no consideration of climate change has been incorporated in the flood risk classification mapping.

This is in keeping with current practice across NSW where PMF climate change is not typically adopted within planning instruments. For example the following do not consider climate change in their emergency response development controls:

- > Newcastle City Council Flood Policy (2003); and,
- > Tweed Shire Council Flood Risk Management Policy (2007).

In addition none of the guidelines and papers specifically relating to flood risk to life summarised in **Section 3** make reference to climate change considerations.

6.3 Flood Life Hazard Category Mapping

Detailed mapping of the flood life hazard categories (based on the flood hazard classifications in **Section 6.1**) for Pittwater LGA has been undertaken.

6.3.1 Life Hazard Outside Existing Flood Categories

As established in **Section 6.2** the PMF event is the design event for this policy. Comparing this to the three existing flood planning mapping categories within Pittwater 21 DCP:

- > The "Flood Planning Area" is all land affected by mainstream flooding to the 100 year ARI plus 0.5 metre freeboard;
- > All land affected by mainstream flooding below the PMF flood level; and,
- > All land affected by overland flow flooding up to the 100 year ARI flood level plus 5m horizontal buffer.

Under the current flood affectation categories implemented by Council listed above overland flow is based on the 100 year ARI event.

The majority of these overland flow affected lands within Pittwater LGA are steep, narrow flowpaths, with flowpath widths often not exceeding the width of most properties, meaning there is flood free land on most overland flow affected properties. This is assumed to have the following implications on flood risk to life:

- > If an overland flowpath does not have stream forming flows within the 100 year ARI design event then the flowpath and associated flood risk is not considered significant;
- > If development is proposed within these areas then it can be reasonably assumed localised evacuation to flood free portions of properties will be conducted without the necessity for detailed emergency response planning; and,
- > Areas of significant life hazard (H5 and H6), building stability is compromised in these overland flow areas, will relate to shallow depth, high velocity flows across narrow flowpath widths meaning cumulative flood forces on potential buildings may not be as severe as the life hazard category mapping suggests.

As a result, overland flow paths outside of the 100 year ARI areas has not been included in the life hazard mapping.

6.3.2 Flood Islands

Note that while the stability of pedestrians is not at risk for H1-H2, the duration of exposure must also be taken into account, if exposed to low hazard for a long duration then occupants are likely to be overwhelmed. Therefore the assumption of acceptable risk only applies where it can be assumed occupants will be capable of evacuating through flood waters to flood free land.

Therefore H1-H2 risk to life category areas that are "low flood islands", or areas completely surrounded by greater risk categories, have been assigned a H3-H4 risk category as no evacuation to flood free land is available and risk to life is significant.

6.4 Likelihood of Loss of Life

To provide background on flood risk to life using principles established in the NERAG (Commonwealth Government, 2010), for flood risk to life there is one consequence, which is the loss of life as a result of flooding. As the consequence is not a variable, the analysis of risk relates only to the analysis of the probability. That is, if the likelihood of loss of life is rare enough, then risk is considered acceptable.

The following likelihood ratings are presented in the NERAG (Commonwealth Government, 2010):

- > Almost Incredible;
- > Very Rare;
- > Rare;
- > Unlikely;
- > Possible;
- > Likely; and,
- > Almost Certain.

The life hazard categories detailed in **Section 6.1** have been assigned a loss of life likelihood rating based on the risk to life posed to all potential demographics within the floodplain for Pittwater LGA.

As discussed in **Section 5**, both flood emergency response measures; evacuation and shelter-in-place, are considered effective in reducing flood risk to life through avoiding exposure of occupants to flood hazard.

Therefore the only developments that could result in certain loss of life are those where neither of the flood emergency responses may feasibly be implemented. This is defined as areas where:

- > Evacuation is not possible as there is insufficient time available or capacity of the evacuation route to evacuate all occupants; and,
- > Shelter-in-place buildings cannot be guaranteed to be stable, which is flood risk category H6.

A summary of the likelihood rating assessment for the life hazard categories is included in **Table 6-2** below.

Table 6-2 Life Hazard Categories – Likelihood of Loss of Life Rating

Life Hazard Category	Hazard Description	Likelihood of Loss of Life Rating	Discussion
H1 – H2	Relatively benign flow conditions. Unsafe for small vehicles.	Unlikely	Risk to life within the floodplain is not expected to be significantly impacted by the potential de-stabilisation of small vehicles as pedestrian stability for all demographics is not compromised at this hazard level. Therefore loss of life in these regions is unlikely.
H3 - H4	Unsafe for all pedestrians and all vehicles.	Possible	All pedestrians and vehicles are unstable, posing a risk to a significant portion of the population, meaning loss of life is possible.
H5	Unsafe for all pedestrians and all vehicles. Buildings require special engineering design and construction.	Likely	All pedestrians and vehicles are unstable, buildings that are not specially designed are at risk, posing a risk to a significant portion of the population, meaning loss of life is likely.
H6 – Evacuation Possible	Unconditionally dangerous. Not suitable for any type of development or evacuation access. All building types considered vulnerable to failure.	Likely	All pedestrians, vehicles, and buildings are unstable, however as there is still an opportunity to evacuate, loss of life is likely (but not almost certain).
H6 – Evacuation Not Possible		Almost Certain	All pedestrians, vehicles, and buildings are unstable, as people cannot evacuate, shelter-in-place is the only response option. As the stability of refuge buildings is compromised, loss of life is almost certain.

7 References

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- Building Code of Australia (2008) *Building Code of Australia*
- Cardno (2008) *Mona Vale / Bayview Flood Risk Management Study and Plan*, November, Version 3, prepared for Pittwater Council
- Cardno (2013) *Pittwater LGA Overland Flow Mapping and Flood Study*, October, Final Version 4, prepared for Pittwater Council
- Commonwealth Government (2010) *National Emergency Risk Assessment Guideline (NERAG)*, October
- NSW Government (2005) *Floodplain Development Manual*, April
- Hawkesbury Nepean Flood Management Steering Committee (HNFMSC) (2006) *Managing Flood Risk through Planning Opportunities – Guidance on Land Use Planning in Flood Prone Areas*
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- Newcastle City Council (2003) *Newcastle Flood Policy 2003*, November
- Newcastle City Council (2012) *Newcastle Development Control Plan 2012*, Section 4.01 Flood Management
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- Pittwater Council (2014) *Pittwater 21 Development Control Plan*, April, Amendment 13
- Pittwater Council (2014) *Pittwater Local Environment Plan 2014*, August
- Rogencamp, G. and Barton, J. (2012) *The Lockyer Creek Flood of January 2011: What Happened and How Should We Manage Hazard for Rare Floods*, 2012 NSW Floodplain Management Conference
- SMEC (2004) *Newport Beach Floodplain Risk Management Study and Plan*, February, prepared for Pittwater Council

Tweed Shire Council (2007) *Flood Risk Management Policy*, December, Version 1.0
US Flood Emergency Management Authority (FEMA) (2000) *Design and Construction Guidance for Community Shelters*
WMA Water (2013) *Careel Creek Flood Study*, July, Final Version 4, prepared for Pittwater Council
WMA Water (2010) *Great Mackerel Beach Floodplain Risk Management Study and Plan*, November, Final, prepared for Pittwater Council

APPENDIX A

FLOOD RISK TO LIFE DISCUSSION

Establishing the Context

In accordance with principles established in the NERAG (refer to **Section 3.1**), there are three subjective risk assessment categories. The definition of these categories in a generalised risk context has been analysed in the context of this flood emergency response planning policy, as summarised in **Table A1**.

Table A1 - Risk Assessment Categories in the Context of Flood Risk to Life

Risk Assessment Category	General Definition (based on the NERAG)	Flood Risk to Life Definition
Acceptable	<ul style="list-style-type: none"> > Risk is negligible. > No risk treatment measures are required. 	<ul style="list-style-type: none"> > The risk to life resulting from flooding for all occupants within Pittwater LGA is negligible; > Therefore the definition of acceptable flood risk to life is, 'areas where flood hazard does not pose a risk to life'; > No risk treatment through flood risk to life development controls are required for developments;
Tolerable	<ul style="list-style-type: none"> > Risk is significant. > Risk treatment should be implemented to reduce risk levels to 'As Low As Reasonably Possible'. 	<ul style="list-style-type: none"> > The risk to life resulting from flooding is significant, meaning flood hazard poses a significant risk to life; > Flood risk to life development controls are required; > The intention of the development controls is to ensure all occupants will not come into contact with significant flood hazard, or any other risk to life sources that arise from the implementation of emergency response.
Unacceptable	<ul style="list-style-type: none"> > Risk is severe. > No feasible treatment measures may be implemented that may reduce risk to acceptable levels. 	<ul style="list-style-type: none"> > As emergency response is a risk avoidance strategy it is assumed that any risk to life can be suitably avoided by implementation of emergency response; > Therefore the definition of 'unacceptable' in this context does not relate to level of risk, but rather whether emergency response is feasible; > This category only applies to developments where safe evacuation or shelter-in-place cannot be implemented.

Defining Likelihood

This risk assessment is focused on one consequence, loss of life as a result of flooding. As the consequence is not a variable, the analysis of risk relates only to the analysis of the probability. That is, if the likelihood of loss of life is rare enough, then risk is considered acceptable.

The NSW Dam Safety Committee, in accordance with ANCOLD, in their *Risk Management Policy Framework for Dam Safety* (DSC, 2006) defines the limits of probability for individual loss of life for new dams:

- > Acceptable risk to life is probability of 1 in 1,000,000;
- > Tolerable risk to life is probability of 1 in 10,000.

With respect to flooding there are two key factors that influence the likelihood of the loss of life:

- > The likely loss of life during the flood event. As emergency response is not considered in the determination of acceptable flood risk, this is directly proportional to the flood hazard; and,
- > The probability of the flood event itself. The PMF event is the design event for this assessment.

The combination of these two factors result in the likely loss of life:

Likelihood of loss of life from flood = likelihood of loss of life during flood event x probability of flood event

Probability of the Flood Event

As discussed in **Section 6.2**, the Probable Maximum Flood has been adopted as the design event in consideration of flood risk to life for Pittwater LGA.

A Probable Maximum Flood (PMF) event does not have a defined probability. However, general suggestions are that the event is in the order of a 1 in 10,000 to 1 in 100,000 year ARI event. Therefore this range of probability has been adopted as the probability of the flood event.

Likelihood Thresholds

Re-arranging the equation from above it is possible to determine the likelihood thresholds for loss of life during a flood event:

$$\text{Likelihood of loss of life from flood} = \text{likelihood of loss of life during flood event} \times \text{probability of flood event}$$

Where,

Limit of acceptable likelihood of loss of life = 1 in 1,000,000;

Limit of tolerable likelihood of loss of life = 1 in 10,000

Probability of flood event (PMF) = 1 in 10,000 – 1 in 100,000

Therefore,

Limit of acceptable likely loss of life during a PMF flood event = 1 in 10 – 1 in 100 (or a probability of 1% – 10%); and,

Limit of tolerable likely loss of life during a PMF flood event = 1 in 1 (or a probability of 100%).

Likelihood Rating

The following likelihood ratings are presented in the NERAG (Commonwealth Government, 2010):

- > Almost Incredible;
- > Very Rare;
- > Rare;
- > Unlikely;
- > Possible;
- > Likely; and,
- > Almost Certain.

A summary of the translation of the likelihood thresholds presented in Section into the likelihood rating scale is presented in **Table A2** below.

Table A2 - Assessment of Probable Loss of Life for Flood Risk Categories

Assessment Category	Likelihood Threshold	Likelihood Rating Threshold
Acceptable	1 in 10 – 1 in 100 (or a probability of 1% – 10%)	Unlikely
Tolerable	1 in 1 (or a probability of 100%)	Almost Certain

Relating to Life Hazard Categories

The likelihood of loss of life for the life hazard categories within Pittwater LGA has been summarised in **Table 6-2**.

Using the link between acceptable and tolerable flood risk and the likelihood of loss of life associated to life hazard categories, the risk categories have been summarised in **Table B3** below.

Table A3 - Life Hazard Categories - Subjective Risk Categories

Life Hazard Category	Hazard Description	Likelihood of Loss of Life Rating	Subjective Risk Category
H1 – H2	Relatively benign flow conditions. Unsafe for small vehicles.	Unlikely	Acceptable
H3 - H4	Unsafe for all pedestrians and all vehicles.	Possible	Tolerable
H5	Unsafe for all pedestrians and all vehicles. Buildings require special engineering design and construction.	Likely	Tolerable
H6 – Evacuation Possible	Unconditionally dangerous. Not suitable for any type of development or evacuation access. All building types considered vulnerable to failure.	Likely	Tolerable
H6 – Evacuation Not Possible		Almost Certain	Unacceptable

A graphical representation of the outcomes of the assessment are shown in **Table A4** below.

Table A4 - Flood Risk Assessment Outcomes Summary

Adopted Emergency Response	Flood Life Hazard Category			
	H1 - H2	H3 – H4	H5	H6
Evacuation				
Shelter-in-Place				

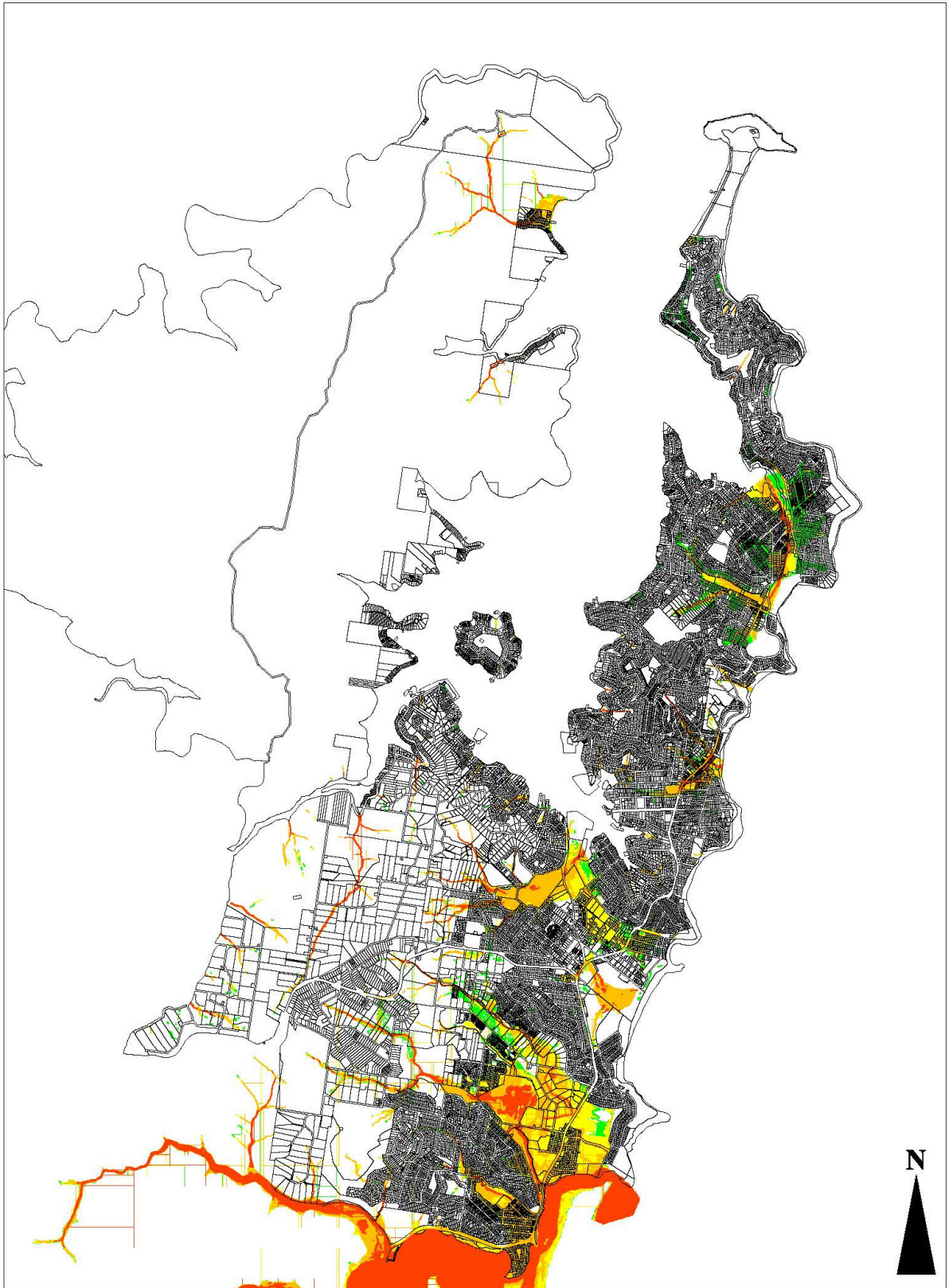
Where, Green = Acceptable risk, flood emergency response planning policy does not apply;

Yellow = Tolerable risk, flood emergency response planning policy applies for all developments; and,

Orange = Unacceptable risk, no developments should be permitted in these areas due to severe flood risk.

APPENDIX B

FLOOD LIFE HAZARD CATEGORY MAPPING FOR PITTWATER LGA



Flood Life Hazard Categories



Map not to Scale

C10.3	Minutes of the McCarrs Creek, Mona Vale & Bayview Flood Study Community Working Group held on 12.2.15
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Meeting: Natural Environment Committee

Date: 2 March 2015

COMMUNITY STRATEGIC PLAN STRATEGY: Disaster, Emergency & Risk Management

COMMUNITY STRATEGIC PLAN OBJECTIVE:

- To promote a well-informed community and that the Council knows how to effectively respond to disaster and emergency situations before during and after
- To effectively respond to disasters, emergency situations and provide effective relief measures
- To work effectively with all emergency and utility agencies to improve emergency response
- To adhere to best practice risk management principles to facilitate more effective decision-making
- To manage public liability and risks associated with public infrastructure
- To increase community awareness on effective risk management
- To incorporate risk management in all business activities
- To plan for risks due to natural and manmade hazards
- To provide for business continuity in the event of a major disruption to the Council

DELIVERY PROGRAM ACTION:

- Develop and implement programs to increase resilience to flood and coastal storms
 - Develop, review and implement flood and coastal storm risk studies and plans in accordance with NSW Government guidelines
-

1.0 EXECUTIVE SUMMARY

1.1 SUMMARY

1. The working Group has been formed to provide advice in the preparation of the McCarrs Creek, Mona Vale & Bayview Flood Study.
 2. The Draft Working Papers 1 and 2 have been completed for the Flood Study
-

2.0 RECOMMENDATION

That the information provided in the report be noted.

3.0 BACKGROUND

3.1 PURPOSE

To consider the draft minutes of the McCarrs Creek, Mona Vale & Bayview Flood Study Community Working Group meeting held at the conference room, Mona Vale Customer Service on 12 February 2015 (refer **Attachment 1**).

3.2 BACKGROUND

- The McCarrs Creek, Mona Vale & Bayview Flood Study Community Working Group is a forum that assists Pittwater Council in the preparation, development and implementation of floodplain management plans for all flood prone properties in the suburbs of Mona Vale, Bayview, Church Point and parts of Ingleside. The Working Group is administered by Pittwater Council.
- The formation of the Floodplain Working group by Council is the first formal step in the Floodplain Management Process, as outlines in the NSW Governments Floodplain Development Manual.
- The primary function of this working group is to be an advisory body to Council on matters concerning the development, implementation and review of the McCarrs Creek, Mona Vale & Bayview Flood Study. The working group meetings provide a forum for the discussions between Council staff, local residents, interested groups and government authorities on technical, social, economic, environmental and cultural issues.

3.3 POLICY IMPLICATIONS

- Nil

3.4 RELATED LEGISLATION

NSW Government Flood Prone Land Policy and Floodplain Development Manual (2005)

3.5 FINANCIAL ISSUES

3.5.1 Budget

- Nil

3.5.2 Resources Implications

- Nil

4.0 KEY ISSUES

Pittwater Council is commencing the first stages of the Floodplain Management Process with the McCarrs Creek, Mona Vale & Bayview Flood Study to identify possible flood risks and hazards for the study area.

Royal HaskoningDHV, an independent company specializing in flooding and floodplain risk management, is currently undertaking the study.

Under the NSW Government Flood Prone Land Policy, management of flood prone land is primarily the responsibility of councils. The Floodplain Management Process that councils follow in order to identify, understand and manage flood risk is outlined below:

- The Flood Study (current stage) defines the nature and extent of the flood problem.
- The Floodplain Risk Management Study assesses management options with respect to existing and proposed development.
- The Floodplain Risk management Plan provides Council with a management plan for the floodplain, and is often undertaken in conjunction with the Floodplain Risk Management Study.
- Implementation of the Plan involves enacting the recommendations of the Floodplain Risk Management Plan to mitigate flood risks to life and property.

Community consultation is an important component of the McCarrs Creek, Mona Vale & Bayview Flood Study. The local knowledge of residents and business operators personal experiences of flooding are an important source of information.

There are a number of ways Council is engaging with the owners of flood prone land in the study area:

- Through an online questionnaire. The questionnaire greatly assists in collating people's knowledge and experience about previous flooding history and existing flood problem areas.
- A Community Working Group has been formed from self-nominated community representations.
- A webpage has been established to keep the community informed on the study progress.

McCarrs Creek, Mona Vale & Bayview Flood Study Update – A verbal update by Pittwater Council and Royal HaskoningDHV was provided on the progress of the flood study.

5.0 ATTACHMENTS

Attachment 1: Draft minutes of the McCarrs Creek, Mona Vale & Bayview Flood Study Community Working Group Meeting on 12 February 2015

6.0 SUSTAINABILITY ASSESSMENT

A sustainability assessment is not required for Minutes of Meetings.

Report prepared by
Melanie Schwecke, A/Principal Officer – Floodplain Management

Jennifer Pang
MANAGER, CATCHMENT MANAGEMENT & CLIMATE CHANGE



Minutes

McCarrs Creek, Mona Vale & Bayview Flood Study Community Working Group

Date:	4:00 pm – 6:00 pm, 12 February 2015	
Location:	Mona Vale Customer Service Centre, Village Park, 1 Park Street, Mona Vale	
In Attendance:	Cr Kylie Ferguson (Pittwater Council Member) Cr Sue Young (Pittwater Council Member) Rob (Roberta) Conroy (Citizen Representative) John Lindsay Gordon (Citizen Representative) David Stone (Bayview Golf Club, Citizen Representative) Dr Jenny Rosen (Bayview Church Point Residents Association, Stakeholder Representative)	Chris Kavanagh (Mona Vale Chamber of Commerce, Stakeholder Representative) Stephen Brown (Roads and Maritime Services) Greg Davis (OEH) Lynn Larri (SES Warringah/Pittwater Unit) Paul Hart (Royal HaskoningDHV) Jennifer Pang (Pittwater Council) Dr Melanie Schwecke (Pittwater Council) Melanie Thomas (Pittwater Council)
Apologies:	Allison Flaxman (SES Sydney Northern Region), Wayne Lyne (Unit Controller, SES Warringah/Pittwater Unit), Fernando Ortega (Sydney Water)	

Meeting commenced at 4.05pm

Item	Discussion Topics
	WELCOME Cr Kylie Ferguson – Gave the official welcome.
	INTRODUCTIONS
1.0	Apologies Apologies received from: <ul style="list-style-type: none"> Allison Flaxman (SES Sydney Northern Region), Wayne Lyne (Unit Controller, SES Warringah/Pittwater Unit) and Fernando Ortega (Sydney Water)
2.0	Declaration of Pecuniary Interest None declared.
3.0	Induction – A presentation was given by Jennifer Pang (Pittwater Council). This presentation is provided in Attachment 1.

Item	Discussion Topics
	<p>The presentation provided background on the formation of the working group that originated from the Overland Flow Community Working Group. Referred members to the Terms of Reference that were provided were members joined the Community Working Group committee. Highlighted that general business items are requested to be sent to Dr Melanie Schwecke prior to the meeting via the email: floodplain@pittwater.nsw.gov.au.</p>
4.0	Committee Business
4.1	<p>Introduction to McCarrs Creek, Mona Vale and Bayview Flood Study A verbal introduction to the flood study along with presentation was given by Melanie Schwecke (Pittwater Council). This presentation is provided in Attachment 2.</p> <p>Melanie Schwecke provided an overview of the stages of the Floodplain Risk Management process as outlined in the NSW Government Floodplain Development Manual and in particular highlighted the differences in the stages of progression from the Flood Study where Flood Emergency Response Planning Classification of Communities are established; whilst the Floodplain Risk Management Study and Plan identify flood behaviour and dangers then provide options for addressing the flooding.</p> <p>Greg Davis (OEH) made specific mention of the legal protection provided under section 733 of the <i>NSW Local Government Act 1993</i> by following the Floodplain Risk Management Process as outlined in the Floodplain Development Manual 2005.</p>
4.2	<p>Progress update on the Flood Study A verbal update to the flood study along with presentation was given by Paul Hart (Royal HaskoningDHV). This presentation is provided in Attachment 3.</p> <p>The study will comprise mainstream flooding, local overland flow flooding and tidal inundation. Climate change projections will be incorporated by using the best available science for increased rainfall intensity and sea level rise.</p> <p>Data collated has included a topographic survey of the area provided by Pittwater Council. A letter was sent out to around 4,500 residents and in response flood photos and videos have been collected from residents.</p> <p>John Gordon made the comment that the Mona Vale Local History section has a collection of flood videos which can be viewed.</p> <p>Paul Hart specified that once the draft maps had been produced by the modelling, ground truthing would occur to ensure that the flood extents represent local conditions.</p> <p>A link to an online survey was sent out to residents which received a 1% response rate which was greater than usual and from varied demographic range. Dr Jenny Rosen emphasised that this was not a statistically representative sample size. Melanie Schwecke responded that the aim of this working group committee is to provide representation from the community and gain further information from the community.</p> <p>Cr Kylie Ferguson commented that lots of community members have photos for example of the floods that occurred two years ago in Newport and encouraged submissions, including videos, to be sent to Melanie Schwecke.</p>


Item	Discussion Topics
4.3	<p>Managing Flood Risk – Melanie Schwecke</p> <p>A verbal introduction to the Managing Flood Risk DVD was given by Melanie Schwecke (Pittwater Council).</p> <p>The DVD can be viewed at the following link: https://www.youtube.com/playlist?list=PLiDzhwADz3YsX_Wb-B9JUeEI9PEiX0-Y</p> <p>Lynn Larri (SES) also recommended that ABC Catalyst program and episode shown in 2013 titled 'Don't Panic': http://www.abc.net.au/catalyst/stories/3900777.htm</p>
5.0	<p>General Business</p> <ul style="list-style-type: none"> John Gordon referred to p. 11 of the consultants Working Paper No. 1 where the residents reported a 'king tide' as incorrect use of the terminology and that Professor Eric Bird had undertaken a coastal geomorphology study where king tides are defined. <p>Melanie Schwecke clarified that this reference was provided by a resident. Stephen Brown noted that the term 'king tide' is generally referred to and accepted in the community. Paul Hart confirmed that whilst John Gordon's comments were scientifically correct, that the term had slipped into common language. Melanie Schwecke concluded that this point would be taken on notice but that the report would not be able to be changed.</p> <ul style="list-style-type: none"> Discussion was had around the Ingleside release area and Melanie Schwecke informed the committee that housing density projection would be incorporated into the model's calculations. Melanie Schwecke clarified that Sydney Water doesn't own any stormwater assets in Pittwater but they do have sewage pumping stations. Pittwater Council owns most of the stormwater system with the exception of those on Roads and Maritime Roads. Paul Hart concluded that what's an effective solution for mitigating floods in one area may not be effective in another which is why the NSW Government undertakes the Floodplain Risk Management Process. Chris Kavanagh raised concern of chemicals stored in low lying areas on industrial premises prone to flooding and that businesses often rent the properties so may not be aware of the letter on the flood study that was sent out to the property owner. Lynn Larri suggested that teams of SES volunteers could door knock the businesses identified in flood prone areas. Melanie Schwecke contributed that engagement with businesses has been attempted previously in Pittwater and that staff were often busy and the manager not present or unavailable to discuss flood related issues. Rob Conroy requested that there be greater events with photo displays of flood impacts. Melanie Thomas replied that this was being addressed through the Northern Beaches Flood and Coastal Storm Education Strategy and that the photo boards created would soon be on display at the Mona Vale library. Additionally, Pittwater Council had recently been successful in obtaining a grant



PITTWATER COUNCIL

Item	Discussion Topics
	<p>to undertake an all-hazards historic photograph exhibition and workshops in September 2015. Melanie Thomas also noted that the next upcoming event would be held on 17 March which would include a photographic presentation from the Climate Institute on the impacts of climate change around coastal storms followed by tips from the SES on being StormSafe.</p> <ul style="list-style-type: none">• Chris Kavanagh recommended including an article on the flood study in the local member's newsletter which reaches around 100 people at once.• Paul Hart recommended that a suite of methods of raising awareness in the community of the risks associated with flooding and educating the community on being prepared for floods.• Melanie Schwecke referred the Community Working Group members to the Pittwater Council website on Flooding: http://www.pittwater.nsw.gov.au/flooding
6.0	<p>Next Meeting Date - Thursday 7 May Time - 4:00 pm – 6:00 pm Location - Mona Vale Customer Service Centre, Village Park, 1 Park Street, Mona Vale</p>

There being no further business, the meeting concluded at 5.54pm

Attachment 1: **PITTWATER COUNCIL**
Induction Session
**McCarrs Creek, Mona Vale &
Bayview Flood Study Community
Working Group**

Thursday 12th February 2015 **PITTWATER COUNCIL**
Contents

- Floodplain Risk Management Committee
- Functions
- Relationship to other Committees
- Membership
- Responsibilities of Working Group Members
- Meeting Protocols
- Administration



PITTWATER COUNCIL

Floodplain Risk Management Committee

- The Working Group is a "Floodplain Risk Management Committee" as recognised in the ***Floodplain Development Manual: the management of flood liable land*** (NSW Government, 2005).
- Provision is made in the **NSW Government Flood Prone Land Policy** for Councils to establish these committees, "through which local community groups and individuals can effectively communicate their aspirations concerning the management of the flooding problem."



PITTWATER COUNCIL

Functions

- Advisory body to council on the draft McCarrs Creek, Mona Vale & Bayview Flood Study.
- Forum for discussions between Council, the community and stakeholder agencies on technical, social, economic, environmental and cultural issues.
- Working Group is a Council appointed Special Committee.

 **PITTWATER COUNCIL**

Relationship to other Committees

- Pittwater Overflow Risk Management Community Working Group (dissolved)
- Narrabeen Lagoon Floodplain Risk Management Working Group
- Avalon to Palm Beach Floodplain Risk Management Study and Plan Community Working Group
- Natural Environment Reference Group

 **PITTWATER COUNCIL**

Membership

- Cr Kylie Ferguson (Chairperson) & Cr Sue Young (Alternative Delegate)
- Citizen Representatives (up to 5)
- Community group representatives (up to 2)

Advisors

- Agencies (eg. SES, OEH, Sydney Water, RMS)
- Council staff

Membership

Terms of Appointment:

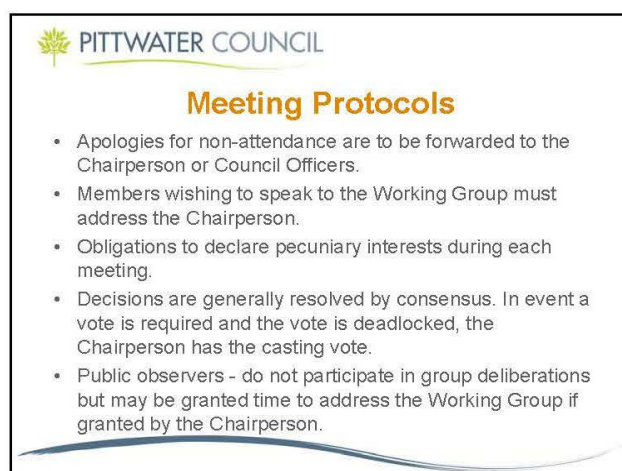
- Community members appointed up to the completion of the Flood Study.

Quorum:

- Three members provided:
 - One (1) Councillor


Responsibilities of Working Group Members

- Objectively consider and actively participate in group deliberations.
- Represent the views of residents/stakeholder interests and contribute on behalf of the community.
- Actively engage members of the community about Group deliberations. Members do not have the authority to make representations to the media on behalf of either Council or the Working Group.
- Abide by Council's Core Values, Code of Conduct and Terms of Reference for the Working Group.




 **PITTWATER COUNCIL**

Administration

Dr Melanie Schwecke
A/Principal Officer – Floodplain Management
floodplain@pittwater.nsw.gov.au
Phone 9970 1111 **PITTWATER COUNCIL**

Any Questions?


Attachment 2:

 **PITTWATER COUNCIL**

**McCarrs Creek, Mona Vale & Bayview Flood Study
Community Working Group**


1st Meeting
Thursday 12 February 2015

Melanie Schwecke – A/Principal Officer:
Floodplain Management


 **PITTWATER COUNCIL**

What is flooding?

- What is "flooding"?:
 - Defined in Floodplain Development Manual
 - "mainstream" flooding
 - "overland flow" flooding
 - Tidal inundation including "king tides"
 - Coastal inundation from elevated sea levels and/or wave action
 - Includes all floods up to Probable Maximum Flood:
 - Largest flood that could conceivably occur.




Photos Source: unknown – Old Samuel Street 1989


 **PITTWATER COUNCIL**

Why Council is undertaking the study?

- NSW Government Flood Prone Land Policy:
 - Management of flood prone land is primarily responsibility of local councils
- Primary objectives:
 - Reduce impact of flooding on owners and occupiers of flood prone property
 - Reduce existing and future



Mona Vale Main Drain

 **PITTWATER COUNCIL**

Why Council is undertaking the study?

- NSW Government Flood Prone Land Policy
- Impact of EXISTING flooding to be reduced by:
 - Flood mitigation works such as bigger pipes and wider channel
 - House raising and voluntary purchase if appropriate
 - On-going emergency management
 - On-going community awareness
- Potential for FUTURE flood losses to be contained by application of flood-related development controls





Photo Source unknown. Damage after 1989 flood

 **PITTWATER COUNCIL**

Why Council is undertaking the study?

- NSW Government Floodplain Development Manual:
 - Provides practical guidance to assist local Councils fulfil obligations of Flood Prone Land Policy
 - Outlines a Risk Management Process to be followed:
 - Floodplain Risk Management Process
 - First released in 1986, current is 2005
 - Manual has required assessment of impacts of climate change (sea level rise and increased rainfall intensities) as part of Floodplain Risk Management Process since 1986!


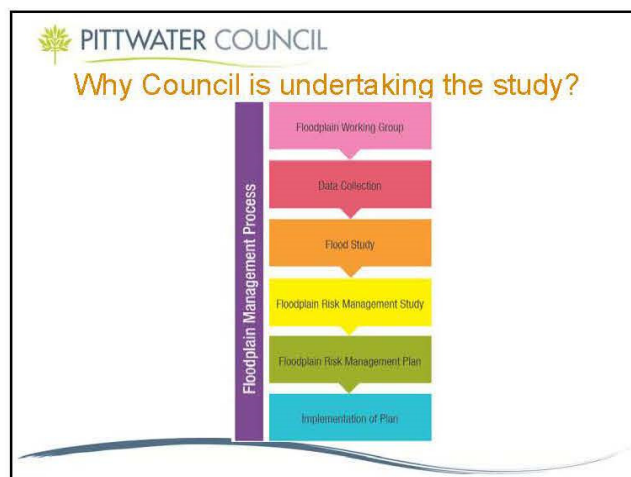



Photo Source: unknown. Bayview 1977 flood event



 **PITTWATER COUNCIL**

Updating the Mona Vale/Bayview Flood Study

- The original flood study was completed in 2002
- Current study incorporates changes to the catchment, as well as expanding the flood study area to include McCarrs Creek


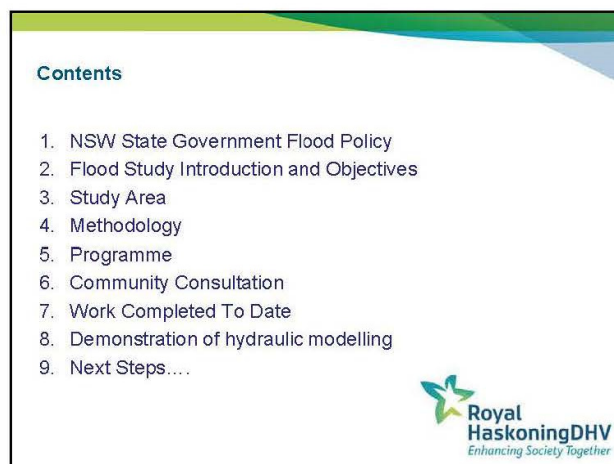
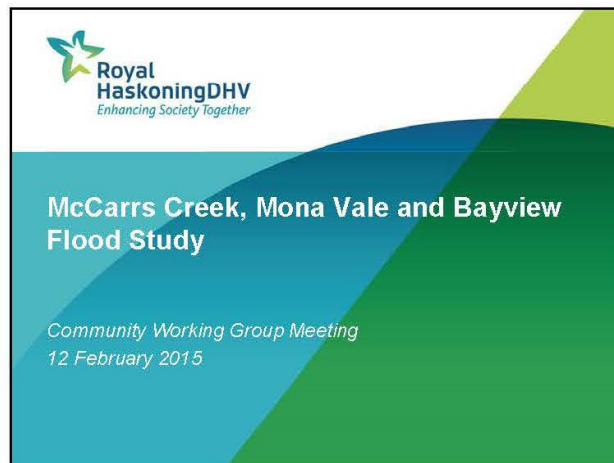


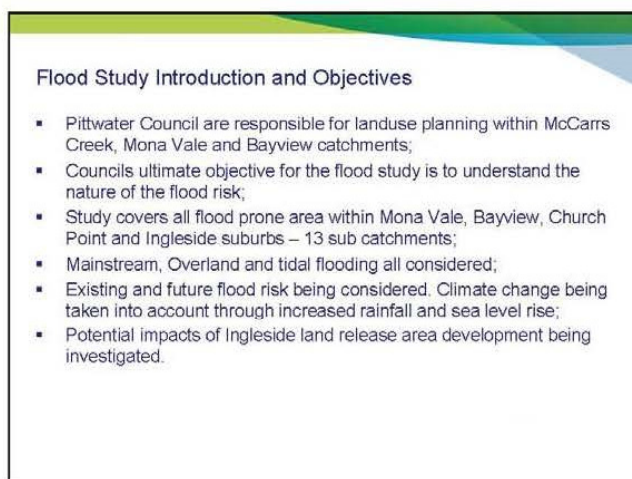
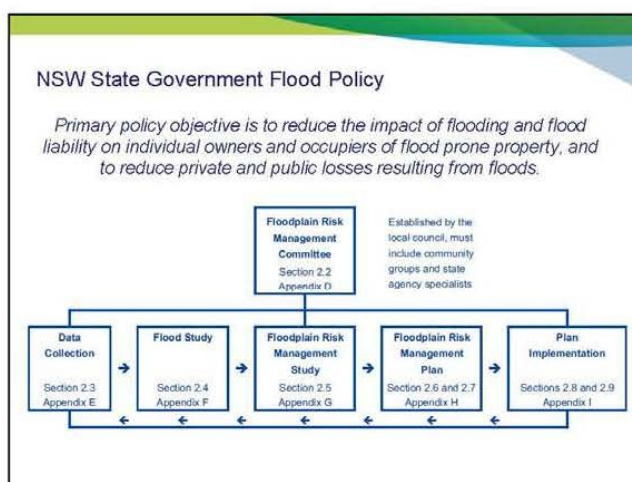
Photo Source – Unknown. Old Samuel Street - 1989 Flood event

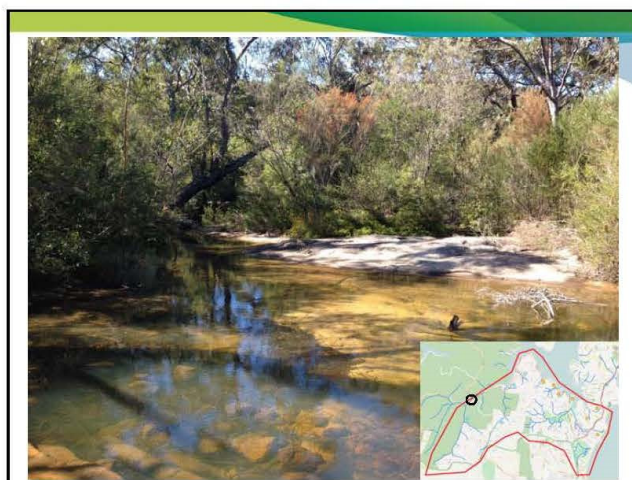
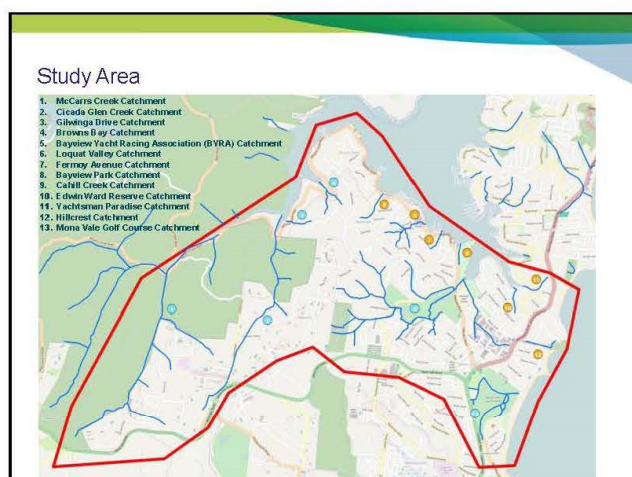
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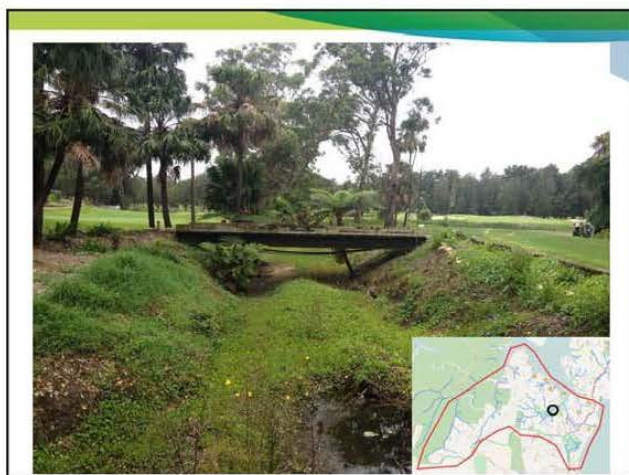
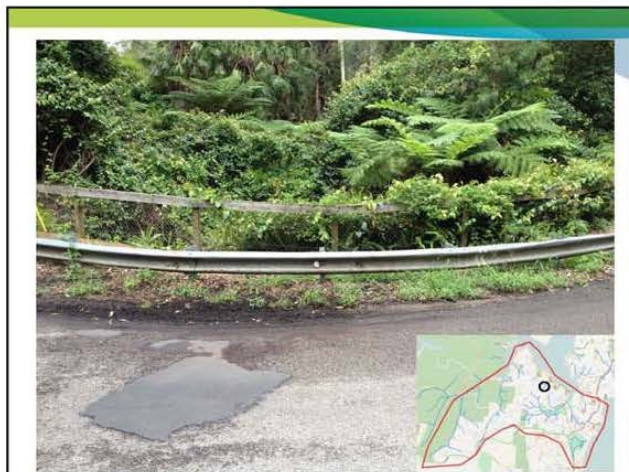


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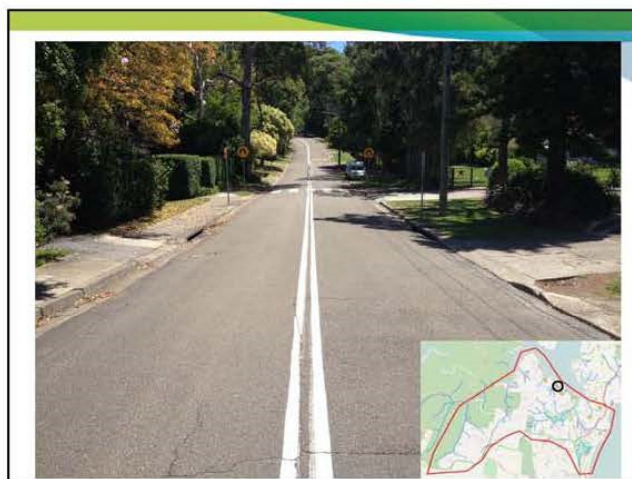
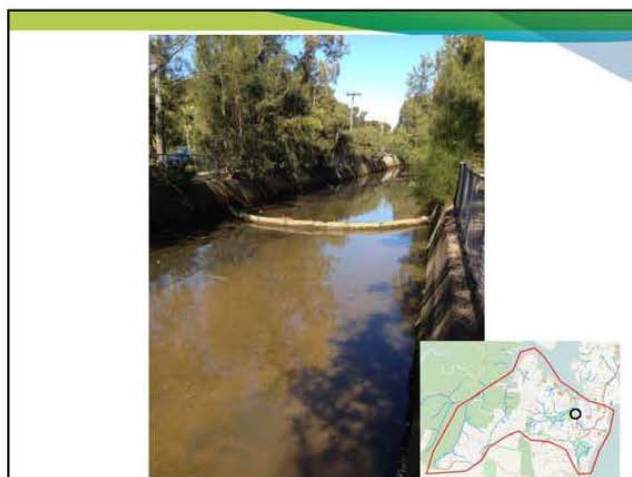


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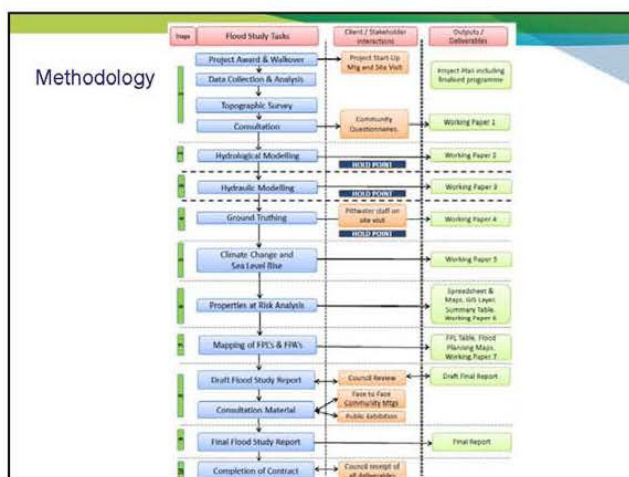
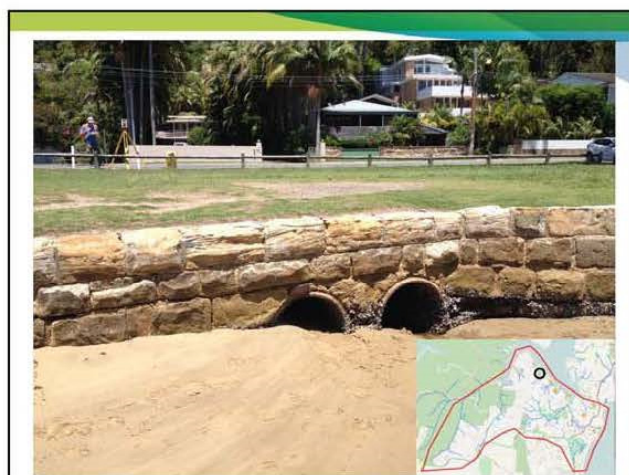


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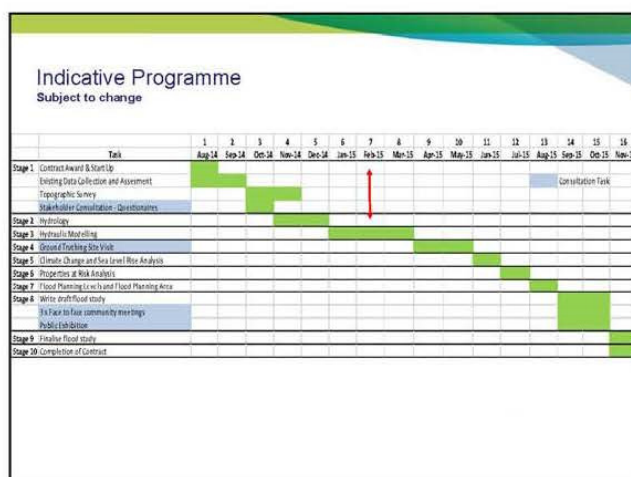
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Community Consultation

- Central to the study.
- Community confidence in process and results very important
- Two way process.
- 4 stages
 - Community Questionnaire, Online Survey & hardcopy (ongoing)
 - Ground Truthing of Initial Results (April)
 - Public Exhibition of Draft Flood Study (Sept & Oct)
 - 1:1 Consultation Meetings (Sept & Oct)



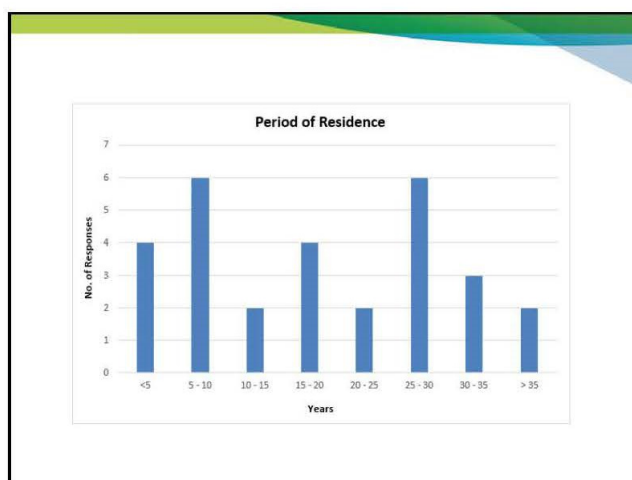
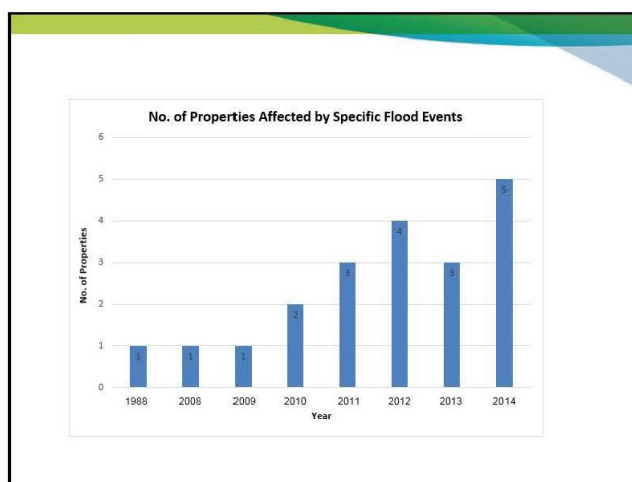
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Community Questionnaire

- Consultation letter sent to 4443 residents and businesses in September 2014.
- Aim of the letter was:
 - Inform community of study and its objectives
 - Request community submit flood information and knowledge
 - Seek community representatives for Working Group.
- Online survey set up to assist community with submitting flood info.
- 48 responses submitted so far (1% return rate)
 - Flood photos from 1977 (?), 1990 and 1998 received
 - 3 videos of flooding at Church Point

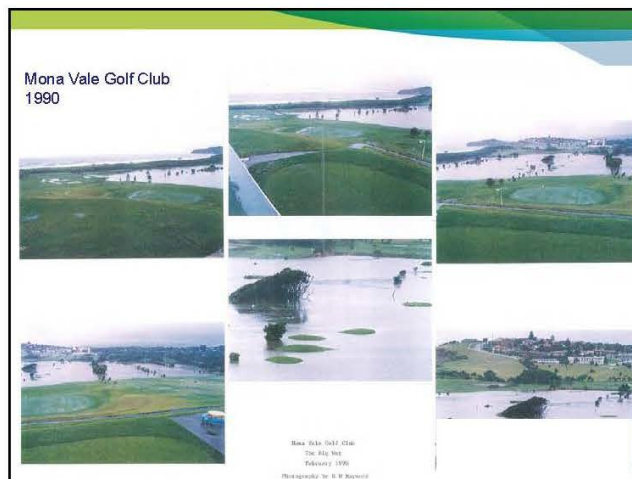
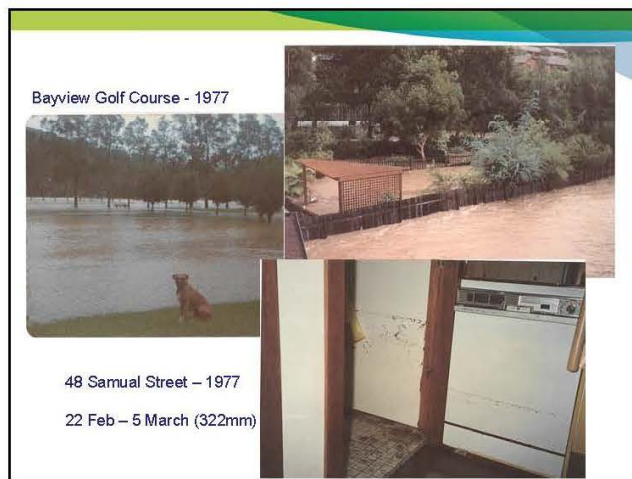


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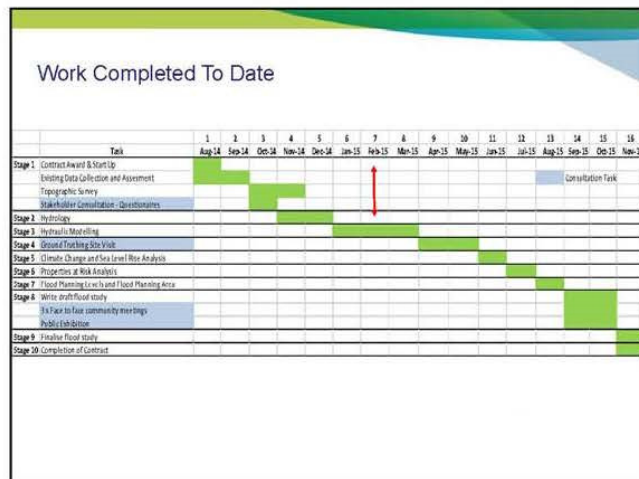
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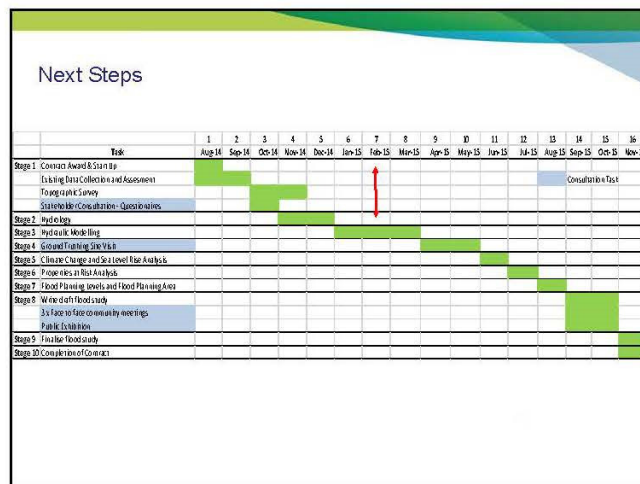
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C10.4	Minutes of the Natural Environment Reference Group Meeting held on 11 February 2015
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Meeting: Natural Environment Committee

Date: 2 March 2015

COMMUNITY STRATEGIC PLAN STRATEGY: Corporate Management

COMMUNITY STRATEGIC PLAN OBJECTIVE:

- To provide leadership through ethical, accountable and legislative decision-making processes
- To ensure local democratic representation
- To engage proactively with the community in a way that is consistent, appropriate and effective

DELIVERY PROGRAM ACTION:

Maintain and Service Council's Range of Committees

1.0 EXECUTIVE SUMMARY

1.1 SUMMARY

The 11 February 2015 Meeting considered the following discussion topics:

- Place Management & Enliven Pittwater Update
 - ANZAC Centenary Tree Planting – consideration of tree planting at the Village Park Memorial space
 - Local Government Reform Update
 - Review of Reference Groups – Survey Results presented and discussed
 - Review of Natural Environment Reference Group Reference Points – to be considered as part of Delivery Plan process.
-

2.0 RECOMMENDATION

1. That Council note the Minutes of the Natural Environment Reference Group Meeting held on 11 February 2015 that relate to the discussion on:
 - Place Management & Enliven Pittwater Update
 - ANZAC Centenary Tree Planting
 - Local Government Reform Update
 - Review of Reference Groups
 - Review of Natural Environment Reference Group Reference Points

2. That Council note the following reference points from that meeting:

2.1 ANZAC Centenary Tree Planting

- *That this matter be brought to the next meeting of the Natural Environment Reference Group with a view to framing a request to Council that the RMS be approached with a formal representation concerning the style of planting as part of the roadworks associated with the Mona Vale Road upgrade and that any planting be in keeping with the current Pittwater Council practice of planting indigenous species.*
- *That the RSL sub-branches be consulted and that we seek support for the planting of a lone pine in Village Park.*
- *Mona Vale Residents Association to take the lead in investigating the signage (plaque) for the Mona Vale Victory Tree including its heritage status and reference to the Uniting Church, and that they liaise with Mr Lawler in this regard.*
- *Mr Hunt to investigate ownership of the site where the Mona Vale Victory Tree and to open up a line of communication with the owners.*
- *Mr Hunt to liaise with Place Management and the State Government re the possible relocation of the bus stop to Village Park and the significant replanting which may result from this relocation.*

2.2 Review of Reference Groups

- *The Natural Environment Reference Group:*
 - *Notes the summary of results provided.*
 - *Supports the renewal of the Community Reference Groups for a new two-year term commencing in May 2015.*
 - *Acknowledges a new Expression of Interest process will be undertaken and that existing members are encouraged to reapply.*

3.0 BACKGROUND

3.1 PURPOSE

To present to Council for consideration, Minutes of the Natural Environment Reference Group Meeting held on 11 February 2015 (refer **Attachment 1**).

3.2 BACKGROUND

The Natural Environment Reference Group has a primary role of assisting the Pittwater 2025 Strategic Plan by critically analysing and reviewing the Strategic Goals aligned to the Pittwater Natural Environment and providing Reference Points for further consideration by Council.

The Natural Environment Reference Group has a specific focus on Key Direction 2 – Valuing and caring for our Natural Environment with the primary aims to:

- Reduce our ecological footprint
- Protect our bushland and biodiversity
- Improve the health of our beaches and waterways.

As per the Charter of the Natural Environment Reference Group (Reporting Procedures):

Minutes of meetings to be reported to the Natural Environment Committee of Council for consideration.

3.3 POLICY IMPLICATIONS

Nil.

3.4 RELATED LEGISLATION

Nil

3.5 FINANCIAL ISSUES

Budget & Resources Implications

Reference points arising from Reference Groups are considered by Council as part of the Delivery Plan process

4.0 KEY ISSUES

- Place Management & Enliven Pittwater Update
- ANZAC Centenary Tree Planting
- Local Government Reform Update
- Review of Reference Groups
- Review of Natural Environment Reference Group Reference Points

5.0 ATTACHMENTS / TABLED DOCUMENTS

- **Attachment 1** – Minutes of the Natural Environment Reference Group Meeting held on 11 February 2015.
- Nil tabled documents

6.0 SUSTAINABILITY ASSESSMENT

A sustainability assessment is not required for Minutes of Meetings.

Report prepared by

Chris Hunt
DIRECTOR, URBAN & ENVIRONMENTAL ASSETS

MINUTES

Natural Environment Reference Group Meeting

held at the Coastal Environment Centre,
Lake Park Road, North Narrabeen on

11 February 2015

Commencing at 4.05pm

Attendance:

Cr Alex McTaggart, Chairperson

And the following Community Representatives:

Ms Wendy Attrill, Clareville and Bilgola Plateau Residents Association
Ms Gloria Carroll, Manly Warringah and Pittwater Historical Society
Ms Roberta Conroy, Bayview–Church Point Residents Association
Ms Lynne Czinner, Warriewood Residents Association
Ms Frances Holdaway, Careel Bay, Pittwater Protection Association
Ms Susie Kennedy, Palm Beach & Whale Beach Association
Ms Sharon Kinnison, Scotland Island Residents Association
Ms Karen Lambert, West Pittwater Community Association
Ms Margaret Makin, Pittwater Resident Representative
Mr Dave Murray, Mona Vale Residents Association
Mr Martin Porter, Surfrider Foundation
Mr William Thomson, Newport Residents Association
Mr Roger Treagus, Pittwater Resident Representative

And the following Council Advisors

Mr Chris Hunt, Director, Urban & Environmental Assets
Mr Steve Lawler, Principal Officer Reserves
Ms Melinda Hewitt, Manager, Place Management
Mr David Bremner, Community Engagement Officer
Ms Pamela Tasker, Minute Secretary / Administration Officer

Natural Environment Reference Group Meeting

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NE4.2	ANZAC Centenary Tree Planting	
NE4.3	Local Government Reform Update	
NE4.4	Review of Reference Groups	
NE4.5	Review of Natural Environment Reference Group Reference Points	
5.0	Emerging Business	
6.0	Next Meeting	

1.0 Apologies

Notes:

1. Nil apologies.
2. Mr Stuart Taylor, Palm Beach & Whale Beach Association, has tendered his resignation and has asked that his best wishes be conveyed to the Chair, the members and staff associated with the Natural Environment Reference Group.

Ms Susie Kennedy has been nominated as the new delegate representing the Palm Beach & Whale Beach Association.

3. The Chair welcomed Ms Kennedy, the members of the Natural Environment Reference Group and Pittwater Council staff to the meeting.

2.0 Declarations of Pecuniary Interest / Non-Pecuniary Conflict of Interest

Nil.

3.0 Confirmation of Minutes

Note:

The Minutes of the Natural Environment Reference Group Meeting held on 12 November 2014 were accepted by members as a true and accurate record of that meeting.

4.0 Discussion Topics

NE4.1 Place Management & Enliven Pittwater Update

Ms Melinda Hewitt, Manager - Place Management, addressed the Reference Group and explained the new Mona Vale Place Plan (formerly known as a Masterplan) as an example of Place Management. The Mona Vale Place Planning website is now up and running and can be accessed via the link below:

<http://places.pittwater.nsw.gov.au/>

Discussion Points:

Place Management is a multidisciplinary approach to the planning, designing and management of public places, town and villages. The aim is the integration of social, cultural and economic goals, programs and infrastructure.

Q: How do environmental factors fit into Place Plans?

A: Environmental factors and sustainability underpin a Place Plan.

- This is the community's opportunity to drive the vision for the town centre.
- The unique environment of Pittwater is highly valued by our community and is what attracts visitors and new residents. All the layers such as social, environmental, building design, infrastructure - they all have to be considered in terms of maintaining our existing character and liveability whilst continuing to grow to meet the needs of our communities.
- Sustainability is considered at every stage via checklists, assessments etc. as part of Council's processes.
- Place Planning will be almost entirely done in-house. We will only use consultants for specific expertise not available in Council.
- A number of community engagement events are being planned around the Mona Vale Place Plan. The first, People & Destinations talks and workshops, are being held 19 – 21 February. The panel of speakers will include the Mayors of Pittwater and Canada Bay, the Planning Director of Marrickville Council and the CEO of Super Sydney, a voluntary community project that invites Sydneysiders to share their thoughts and ideas about what they consider to be important for future planning.

Notes:

1. The members noted the Place Management update.
2. The Chair thanked Ms Hewitt for her very interesting presentation.

NE4.2 ANZAC Centenary Tree Planting

The Chair addressed the meeting, providing some background to this initiative and advising that grants through the RSL sub branches may be available to cover the costs of ANZAC Centenary Commemorative tree plantings.

Ms Conroy expressed her disappointment that *Grevillea caleyi* was not considered acceptable, especially as it is an endangered species and unique to Pittwater. Mr Lawler advised that the problem was that it might not grow anywhere else as it is specific to conditions on the Ingleside/Terrey Hills escarpment.

Ms Conroy and Ms Makin also advised of an existing Victory Tree (*Quercus ilex*, Holme Oak) in Mona Vale. They suggested a plaque and perhaps some sympathetic planting around this tree which would serve as a commemoration of the ANZAC Centenary and at the same time would screen an ugly utility box adjacent. Mr Lawler advised that this tree is on private property so access might be limited.

Mr Lawler further advised that a number of Victory Trees were planted in Pittwater in the 1920s and a few still survive to this day. Council is only aware of three Holme Oaks in the Pittwater LGA – Mona Vale, Lakeview Road, Warriewood and the Bible Garden, Palm Beach.

Lone Pine:

Pittwater Council has ordered a tree cultivated from the seeds of the original Gallipoli Lone Pine. This could be planted in Village Park where annual ANZAC ceremonies are held.

REFERENCE POINTS:

- ***That this matter be brought to the next meeting of the Natural Environment Reference Group with a view to framing a request to Council that the RMS be approached with a formal representation concerning the style of planting as part of the roadworks associated with the Mona Vale Road upgrade and that any planting be in keeping with the current Pittwater Council practice of planting indigenous species.***
- ***That the RSL sub-branches be consulted and that we seek support for the planting of a lone pine in Village Park.***
- ***Mona Vale Residents Association to take the lead in investigating the signage for the Mona Vale Victory Tree including its heritage status and reference to the Uniting Church, and that they liaise with Mr Lawler in this regard.***
- ***Mr Hunt to investigate ownership of the site of the Mona Vale Victory Tree and to open up a line of communication with the owners.***
- ***Mr Hunt to liaise with Place Management and the State Government re the possible relocation of the bus stop to Village Park and the significant replanting which may result from this relocation.***

NE4.3 Local Government Reform Update

Mr Chris Hunt, Director Urban & Environmental Assets, addressed the meeting on this item.

Timeline:

- State election March 2015.
- Submissions have to be in by 30 June 2015.
- July-October 2015 independent panel to consider submissions.
- Minister to announce changes by October-November 2015.
- Local Government elections September 2016 based on new Council boundaries.

Discussion Points:

The Chair advised that the Mayor and Councillors at the end of the day will not make the decision concerning amalgamation with our neighbouring Councils. This is a decision for the community. We will gather all the information. Our stated position (see Council resolution below) may not be viable. If following the assessment a better position emerges and the community chooses this, we will stand by the community decision.

Council Resolution 13 October 2014:

- *Council remains committed to a strong independent Pittwater Council providing local representation and delivering local services to the people of Pittwater.*
- *Council is opposed to any proposed merger of Manly, Warringah and Pittwater into one Council.*

NE4.4 Review of Reference Groups

Mr David Bremner, Community Engagement Officer, addressed the meeting on this item. A copy of the PowerPoint presentation on this topic is attached to these Minutes at Appendix 1.

REFERENCE POINTS:

- ***The Natural Environment Reference Group:***
 - ***Notes the summary of results provided.***
 - ***Supports the renewal of the Community Reference Groups for a new two-year term commencing in May 2015.***
 - ***Acknowledges a new Expression of Interest process will be undertaken and that existing members are encouraged to reapply.***

NE4.5 Review of Natural Environment Reference Group Reference Points

Mr David Bremner, Community Engagement Officer, addressed the meeting on this item.

The Chair advised members that either he or Cr White always spoke to the Minutes of the Natural Environment Reference Group Meetings when they were reported to Council for endorsement. Any reference points contained in the Minutes were reiterated during this address and any points requiring further action where agreed were referred to the appropriate Council Officers.

Notes:

1. Mr Martin Porter expressed his appreciation of the level of community involvement possible through Pittwater Council. He advised that most of the Surfrider Foundation members lived in Warringah and that it was much harder for them to have any input with Council or have their concerns addressed. He advised that he felt very lucky to be living in Pittwater and seeing such a positive response to community input.
 2. The members of the Natural Environment Reference Group extended their appreciation to the Chair for all his efforts to promote their concerns.
 3. The Chair thanked the members for their contribution and expressed his hope that all members would seek re-nomination to the Reference Group for the new term.
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5.0 Emerging Business

NE5.1 Inclusion of Aboriginal Names for Streets, Parks and Reserves.

The Chair advised that this issue is currently under discussion at Council. His understanding was that there are differing opinions within the aboriginal community as to how appropriate this is and that Council had referred the issue back to that community to advise us on their preferred practice.

6.0 Next Meeting

The next meeting of the Natural Environment Reference Group will be held at 4.00pm on Wednesday 13 May 2015 at the Coastal Environment Centre.

**There being no further business the meeting of the
Natural Environment Reference Group closed at 6.08pm
On Wednesday, 11 February 2015.**

Council Meeting

**11.0 Adoption of Connecting Communities Committee
Recommendations**

**12.0 Adoption of Natural Environment Committee
Recommendations**
