- become warmer, on average, with more hot days over 35°C (and with a consequently higher risk of bushfires);
- experience a decline in average annual rainfall with a corresponding reduction in rainfall runoff and stream flows:
- suffer the effects of more frequent, extreme storms and intense rainfall events as well as more severe drought cycles; and
- incur more severe coastal erosion and coastal inundation as a result of more powerful storm surges combined with a rising sea level.

Substantial mitigation measures and adaptation responses at global, national and local scales are urgently required if the rate of global warming is to be reduced and the most severe impacts of climate change are to be avoided.

Policy Statement

Pittwater Council accepts the growing body of convincing scientific research making it increasingly clear that our climate is currently being modified by human activities, at a rate unprecedented throughout human history.

Council recognises that collectively, the negative impacts of climate change potentially represent the most significant challenge to the future of humanity during the 21st Century and beyond.

Council considers that the abatement of greenhouse gas emissions and the management of climate change impacts are a mutual and shared obligation of all nations and all levels of government.

Council acknowledges the important role of local government in helping to reduce greenhouse gas emissions and manage climate change impacts at the local level, particularly through its statutory responsibilities and regulatory powers relating to land use planning, environmental planning, environmental protection and natural resource management. As the level of governance closest to the people, Council also has a vital role to play in educating, mobilising and responding to the public to promote community climate action at the local level.

Council encourages further scientific research and a better understanding of climate change and energy issues in order to support and steer policy, to refine adaptation and mitigation strategies and to foster the necessary behavioural changes within our society.

Council is committed to building on the greenhouse gas reduction initiatives already undertaken through programs such as Cities for Climate Protection and in partnership with the Pittwater community, developing appropriate adaptation actions for the climate change impacts that will most affect the Pittwater LGA.

Council understands the importance of a "Triple Bottom Line" management approach to sustainability and is mindful that greenhouse gas abatement and climate change adaptation can only be successfully sustained in association with responsible economic management, appropriate societal changes and biodiversity conservation.

Climate change and its potential impacts must feature as a primary consideration in every aspect of Council's business whilst appropriate actions in response to the causes and effects of global warming must be integrated as a core part of every strategic and operational management activity undertaken by Council.

C10.3 Minutes of the Ingleside Community Reference Group Meeting held on 1 July 2015

Meeting: Natural Environment Committee Date: 3 August 2015

COMMUNITY STRATEGIC PLAN STRATEGY: Land Use & Development

COMMUNITY STRATEGIC PLAN OBJECTIVE:

 To establish land uses that respond to environmental, cultural, social and economic needs in a sustainable manner

DELIVERY PROGRAM ACTION:

 Commence and progress the Ingleside Precinct Planning Process with the Stage Government

1.0 EXECUTIVE SUMMARY

1.1 **SUMMARY**

At the Ingleside Community Reference Group meeting of 1 July 2015, members were given presentations on the following:

- The revised program,
- Ecological issues,
- Mona Vale Road upgrade,
- Traffic and transport,
- Infrastructure Delivery Plan, and
- On-site effluent management capability.

2.0 RECOMMENDATION

That the minutes of the Ingleside Community Reference Group meeting of 1 July 2015 be noted.

3.0 BACKGROUND

3.1 **PURPOSE**

3.1.1 To present to Council the minutes of the Ingleside Community Reference Group Meeting held on 1 July 2015.

3.2 Ingleside Community Reference Group

- 3.2.1 At its meeting of 24 June 2013, Council resolved (in part) as follows:
 - 1. "That the establishment of the Ingleside Community Reference Group for the Ingleside Precinct Plan in accordance with 3.5 of this report be endorsed and the attached Terms for Reference be adopted.
 - 2. That an Expression of Interest for the membership of the Ingleside Community Reference Group be called."

- 3.2.2 The Ingleside Community Reference Group was established to provide a forum for discussion between Council, the Ingleside Project Control Group and Precinct Working Group (comprising officers from the Department of Planning & Infrastructure, UrbanGrowth NSW and Pittwater Council), the community and other interested groups on a range of issues throughout the various stages of the Precinct Planning Process. The Reference Group brings together the expertise and diverse community knowledge required to suitably manage any potential release of land in Ingleside.
- 3.2.3 To fulfil its role, the Ingleside Community Reference Group is to:
 - provide a safe and equitable forum where members, derived from registered community groups, community organisations and Pittwater residents, have equal opportunity to contribute and be involved in discussions with the Ingleside Project Team on relevant issues;
 - complement other elements of the broader consultation framework established for the Ingleside Precinct Planning project;
 - act as another mechanism through which Council and the Ingleside Project Team can bring items where consultation is required;
 - be a means of identifying innovative ideas that can enhance the precinct planning for Ingleside.

3.3 POLICY IMPLICATIONS

Precinct Planning for Ingleside comprises evidence based investigations facilitated by the Environmental Planning & Assessment Act 1979 and Regulations, and associated legislation.

3.4 RELATED LEGISLATION

Nil

3.5 FINANCIAL ISSUES

3.5.1 **Budget**

Nil

3.5.2 Resources Implications

Nil

4.0 KEY ISSUES

- 4.1 At the Ingleside Community Reference Group meeting of 1 July 2015, Ms Liz Gonzalez from the Department of Planning & Environment gave a presentation on the revised program. The presentation informed members of new key project milestones such as the field surveys for the Angus Onion Orchid.
- 4.2 Reference Group members heard presentations from technical consultants and State agencies on the following topics:
 - Ecological issues Dr Steven Ward of EcoLogical Australia,
 - Update on the Mona Vale Road upgrade Richard Hine and Con Lambrous of the NSW Roads and Maritime Service,
 - Traffic and transport issues Dan Riley of AECOM,
 - Infrastructure Delivery Plan Sean Porter of Cardno, and
 - On-site effluent management capability Daniel Saunders of SMEC.

The presentations are available on the Ingleside Planning website: www.inglesideplanning.com.au

5.0 ATTACHMENTS / TABLED DOCUMENTS

Attachment 1 – Minutes of the Ingleside Community Reference Group meeting of 1 July 2015

6.0 SUSTAINABILITY ASSESSMENT

A sustainability report is not required for minutes of meetings.

Report prepared by Robbie Platt – Assistant Planner Land Release

Andrew Pigott MANAGER, PLANNING & ASSESSMENT

Minutes Ingleside Community Reference Group

held at the Monash Country Club, Powderworks Road, Ingleside on

1 July 2015

Commencing at 4:10pm

ATTENDANCE:

Cr Jacqueline Townsend, Chairperson

Community Representatives:

Mr David Seymour, Katandra Bushland Sanctuary

Mr David Palmer, Pittwater Natural Heritage Association

Mr Dick Clarke, Elanora Heights Residents Association

Mr Stephen Choularton, Bayview & Ingleside Residents Association

Ms Linda Haefeli, Climate Action Pittwater

Ms Jacqui Marlow, Friends of Narrabeen Lagoon Catchment

Mr Stephen Smith, Wirreanda Valley Residents Association

Mr Ian Longbottom, Galstaun College

Mr Conrad Grayson, Pittwater Resident Representative

Ms Lynne Czinner, Warriewood Valley Residents Association

Mr Glen Ilic, Wilga Wilson Residents Association

Ms Roberta Conroy, Bayview - Church Point Residents Association

Ms Anne Jeffrey, Bayview Heights Estate Owners Group

Technical Advisors

Ms Liz Gonzalez, NSW DP&E

Mr Brendan O'Brien, NSW DP&E

Mr Aaron Nangle, NSW DP&E

Dr Steven Ward, EcoLogical Australia

Mr Sean Porter, Cardno

Mr Dan Riley, AECOM

Mr Con Lambrous, Roads & Maritime Services

Mr Richard Hine, Roads & Maritime Services

Mr Daniel Saunders, SMEC

Ms Lydia Aristuti, Sydney Water

Mr Greg Joblin, Sydney Water

Council Advisors

Mr Chris Hunt, Director, Urban & Environmental Assets

Mr Andrew Pigott, Manager, Planning & Assessment

Ms Jane Mulroney, Manager, Community Engagement & Corporate Strategy

Mr Mark Beharrell, Manager, Natural Environment & Education

Mr Paul Reid, Acting Manager, Urban Infrastructure

Ms Robina Bramich, Principal Officer – Environmental Health

Ms Liza Cordoba, Principal Officer - Land Release

Ms Anja Ralph, Strategic Planner - Land Release

Mr Robbie Platt, Assistant Strategic Planner - Land Release

Mr David Bremner, Community Engagement Officer

Ms Pamela Tasker, Minute Secretary / Administration Officer

Observers:

Mr Dennis White (Wirreanda Valley Residents Association)

Ms Carol White (Wirreanda Valley Residents Association)

Mr Antony Edve (Climate Action Pittwater)

Mr Ben De Montemas (MIRVAC)

Mr Ivor Dacic (Sunland Group Limited)

Mr Graeme Jessup (Sustainability Pittwater)

Mr Harry Groves

Mr Terry Peck

Mr David Grice

Ingleside Community Reference Group Meeting

TABLE OF CONTENTS

Item No	Item	Page No
1.0	Apologies	4
2.0	Declarations of Pecuniary / Non Pecuniary Conflicts of Interest	4
3.0	Confirmation of Minutes	4
4.0	Issues Arising from Last Meeting	5
4.1	Infrastructure Delivery Plan Brief	5
4.2	Sustainability Brief	5
4.3	Registration of the Garigal Deep Creek Residents Association	5
5.0	Discussion Topics	6
5.1	Program Update	6
5.2	Ecological Issues	6
5.3	NSW RMS Update on the Mona Vale Road Upgrade	7
5.4	Presentations	8
6.0	General Business	10
7.0	Next Meeting	10

1.0 Apologies

- 1. The following apologies were received and leave of absence from the Ingleside Community Reference Group Meeting was granted:
 - Cr Julie Hegarty (Chairperson)
 - Mr Chris Hornsby (Warriewood Residents Association)
 - Mr Paul Robilliard (Department of Planning & Environment)
 - Mr Stuart McCowan (UrbanGrowth NSW)
 - Mr Mark Ferguson (General Manager, Pittwater Council)
 - Mr Steve Evans (Director, EP&C, Pittwater Council)
- 2. Cr Jacqueline Townsend attended the meeting as alternative Chairperson.
- 3. Ms Lynne Czinner attended as alternative delegate on behalf of the Warriewood Residents Association.
- 4. Mr John Simmonds, Director Sydney Conference Training Centre, has tendered his resignation. The resignation of Mr Simmonds is addressed further under Item 6 General Business.

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

Nil.

3.0 Confirmation of Minutes

COMMITTEE RECOMMENDATION

That the Minutes of the Ingleside Community Reference Group Meeting held on 1 July 2015, copies of which were distributed to all Reference Group Members, be and are hereby accepted as a true and accurate record of that meeting.

(Mr Longbottom / Mr Palmer)

4.0 Issues Arising From Last Meeting

4.1 Infrastructure Delivery Plan Brief

Mr Andrew Pigott clarified the issue of sustainability within the Infrastructure Delivery Plan (IDP) brief for the information of members. The study objectives for the preparation of the Infrastructure Delivery Plan state:

"At a minimum, the following objectives apply:

- ..
- Embedded within the IDP objectives for the sustainable provision and use of services provided through the infrastructure."

4.2 Sustainability Brief

Mr Pigott advised that Kinesis have been engaged as Sustainability Consultants to undertake a sustainability peer review. The scope of work has been uploaded to the project website and is available via the following link:-

www.inglesideplanning.com.au/about/background

- **Q:** What will be gained by engaging this consultant?
- **A:** Kinesis will provide comments on the overarching process so far from a sustainability perspective and identify areas we can improve on. They will also assist in the preparation of the submission to the Green Building Council of Australia (GBCA) for the Green Star Communities rating tool.
- **Q:** What would be considered a good sustainability rating outcome under the Green Star Communities tool?
- **A:** We have spoken with the GBCA and they understand the project and the site constraints. Given the disparate land ownership in Ingleside and the precinct location in terms of public transport, they advised that achieving a 4 star rating of 'Australian best practice' would be considered a great outcome.
- A Reference Group member commented that the Green Star Communities tool optimises the long term benefit to Ingleside stakeholders into the future – creating better financial returns and a more liveable community.
- **Q:** Has there been any research done into whether people will pay more for higher Green Star energy rated houses?
- **A:** The Green Star Communities tool rates the overall Masterplan and not individual dwellings. One of the selling points for more efficient houses is that they also provide ongoing economic savings for households.

4.3 Registration of the Garigal Deep Creek Residents Association

Mr David Bremner advised that the Garigal Deep Creek Residents Association is now a registered community group with Council.

5.0 Discussion Topics

5.1 Program Update

Ms Liz Gonzalez of the Department of Planning & Environment (DP&E) addressed the meeting on this item. A copy of the presentation is at Appendix 1 to the Minutes.

Ms Gonzalez advised that a community newsletter had been sent out last week with the revised program for the Ingleside Precinct Planning Process.

Reference Group members were advised that they would receive presentations from the technical consultants on traffic & transport, onsite effluent assessment and the Infrastructure Delivery Plan. These presentations will be uploaded to the project website following the meeting and the technical studies will be available on the website within the next couple of weeks.

As part of the environmental assessment for the Mona Vale Road Upgrade, Roads and Maritime Services (RMS) have identified the Angus Onion Orchid along the road corridor in Ingleside. This species of orchid is listed as endangered under both the NSW *Threatened Species Conservation Act 1995* and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*. We now need to conduct field surveys to find out if the orchid is present in other parts of Ingleside. Dr Steven Ward of EcoLogical Australia will present to the meeting on the Angus Onion Orchid field surveys. Following the field surveys it is anticipated that the remaining technical studies will be released ahead of a public exhibition.

It is proposed to release draft planning controls and the biodiversity certification package in early 2016. Gazettal of the final precinct plan will be in mid-2016 and there will be rezoning information sessions following gazettal. These timings are dependent on the outcomes of the orchid field surveys.

5.2 Ecological Issues

Dr Steven Ward of EcoLogical Australia addressed the meeting on this item, providing a presentation on the RMS Angus Onion Orchid findings, the upcoming field surveys, and the biocertification process. A copy of Dr Ward's PowerPoint presentation is at Appendix 2 to the Minutes.

Discussion:

Q: Are you sure that it is this endangered orchid that has been found in the precinct?

A: Yes, the species has been confirmed by genetic testing.

Q: What does it mean if the orchid is endemic to Ingleside?

A: We will have to work out how to manage its habitat. The location of the orchid could force a rethink of the work we have done to date. The first step is understanding its distribution. The field survey will including adjacent portions of the surrounding National Parks. It is important to wait until the survey is completed to understand the full extent of its distribution.

- Q: I saw on the Internet that there is a colony in South Australia. Is that true?
- **A:** No. There will be other similar species of orchid around but genetic testing has confirmed that they are different species.
- **Q:** Can it be propogated?
- **A:** The RMS have engaged the Royal Botanic Gardens and investigations into propogation are currently underway. The have established a laboratory population but we don't know whether this will susccessfully translate to natural sites. Opportunities for field propogation are being investigated.
- The Chair expressed that while many Ingleside stakeholders may be upset regarding potential
 delays as a result of the Angus Onion Orchid, Reference Group members have a responsibility
 to pass on accurate information to their respective community networks. Everyone shares a
 view that we have one opportunity to complete this land release process and it must be done
 properly.
- **Q:** With only a couple of months flowering window for identification of the orchid, is it possible that the investigations might roll into next year's flowering season?
- **A:** We anticipate a good flowering season due to all the recent wet weather however the orchid's life cycle is still a bit unknown. If we are wrong there may be delays but we anticipate that if the orchid is present we will document it this flowering season. If the orchid is not seen during a successful flowering season then we may assume that it is not present.
- Q: Presumably, if the orchid is found in areas proposed for conservation it is not a problem?
- A: Correct.
- **Q:** Have you looked at other threatened species such as pygmy possums? How will you ensure that you don't miss threatened fauna species?
- **A:** Under the Biodiversity certification process, if fauna habitat exists, the associated fauna species are assumed to be present. Existing Council data is being used where possible and we have mapped habitat to the east and west of Mona Vale Road. Wildlife will be impacted but we will take a precautionary approach in terms of habitat conservation outcomes.
- The Chair asked that a further meeting is to be arranged with Dr Steven Ward (EcoLogical), Mr Mark Beharrell (Manager - Natural Environment and Education) and Ms Jacqui Marlow to discuss this matter further.

5.3 NSW RMS Update on the Mona Vale Road Upgrade

Mr Con Lambrous and Mr Richard Hine from the NSW Roads and Maritime Services addressed the meeting on this item, providing an update on the Mona Vale Road upgrade. A copy of Dr Ward's PowerPoint presentation is at Appendix 3 to the Minutes.

Reference Group members viewed a video on the Mona Vale Road updgrade which is available via following link:

http://www.rms.nsw.gov.au/projects/sydney-north/mona-vale-road/index.html

Questions on the Mona Vale Road upgrade were held until after AECOM's presentation on traffic & transport.

5.4 Presentations

Traffic and Transport - Mr Dan Riley of AECOM

A copy of the presentation presentation is at Appendix 4 to the Minutes.

Discussion:

- **Q:** It is pleasing to see fauna crossings incorporated into the road upgrade but there are a number of green corridors that end at Mona Vale Road. Have the RMS been working with the Ingleside Project Team?
- A: The Ingleside Project Team and the RMS have been working closely together. The Mona Vale Road upgrade proposes a number of culverts, underpasses, rope crossings and overpasses. Fauna fencing to direct wildlife to the crossings is also proposed. Details of this will be included in the RMS Review of Environmental Factors Report which is anticipated to be on public exhibition later this month.
- **Q:** With local bus routes you mention a minimum 3.5m lane width. What assumptions are being made on the size of bus to passenger ratios? Transport NSW don't use smaller buses but they may work better in Ingleside.
- **A:** Small feeder buses to enhance services are being investigated in the Bus Rapid Transport (BRT).
- **Q:** Are the roundabouts on Powderworks Road big enough for the larger buses and will buses be able to turn around at Mona Vale Road to head back down Powderworks Road?
- **A:** The roundabouts along Powderworks Road will be large enough to accommodate bus movements. Buses are unlikely to turn around at Mona Vale Road but they may make a loop trip by travelling along other roads via the proposed town centre and back down Manor Road for example.
- **Q:** Will the Powderworks Road / Mona Vale Road intersection cope given that the level of service is likely to be lower than indicated?
- **A:** At this intersection the traffic disruption results from the merge lane on Mona Vale Road. Modelling indicates that this intersection will be greatly improved following the Mona Vale Road west upgrade.
- **Q:** Will the lights at the Lane Cove Road / Mona Vale Road intersection have a longer signal to accommodate the increased traffic?
- **A:** Improvements to the Lane Cove Road intersection are planned. Lane Cove Road and Manor Road may be realigned to feed into the proposed town centre. The resulting road will improve traffic flow at the intersection.
- **Q:** Will there be barriers between the shared pathway along Mona Vale Road to protect pedestrians?
- **A:** The shared pathway will be 3m wide and will be located off road to ensure safety.
- **Q:** Do we have detailed costings on the Mona Vale Road upgrade?
- **A:** Construction of Mona Vale Road East (3.2km) is estimated to cost in the order of \$140m. Similar estimates have been given for Mona Vale Road West. We have only secured funding for the planning and design stage of the Mona Vale Road upgrade to date.
- Q: What surface will be put on the shared pathways? Have horse riders been considered?
- **A:** It is intended that the shared pathway will be used by pedestrians, cyclists and horse riders. The path surface will be investigated in the detailed design.

- **Q:** Will we have longer turning lanes given the increase in traffic impacting on the Pittwater Road / Garden Street / Powderworks Road intersections?
- **A:** Garden Street and Powderworks Road may need turning lanes up to 50m. This may result in a loss of on-street parking but will improve traffic flows.

<u>Infrastructure Servicing – Mr Sean Porter of Cardno</u>

A copy of the presentation is at Appendix 5 to the Minutes.

Questions were held over until after SMEC's presentation on on-site effluent assessment.

On-Site Effluent Assessment - Mr Daniel Saunders of SMEC

A copy of the presentation is at Appendix 6 to the Minutes.

Discussion:

- Q: Will Bayview have underground power lines?
- **A:** Yes. In new subdivisions all new services are required to be provided in a shared underground trench arrangement.
- Q: Did you consider the provision of microgrids for electricity?
- **A:** No. The fragmented land ownership means that off grid solutions, while potentially achievable, are not the most efficient way to service the rezoning.
- The IDP identifies the base case for traditional infrastructure provision in order to facilitate a rezoning. This does not preclude any future sustainable options which may require landowners to come together to progress an alternate solution.
- **Q:** Can we develop Wirreanda Valley and how big would lot sizes be?
- **A:** Given the significant environmental constraints in Wirreanda Valley and parts of Bayview and North Ingleside, conventional on-site effluent disposal systems will not work. However, this doesn't necessarily preclude these areas from future development. Various alternate systems may be available but it is not a one size fits all approach. Some alternate on-site effluent disposal systems may require landowners to come together to achieve an acceptable outcome.
- **Q**: So Wirreanda Valley could contribute to development outcomes?
- **A:** SMEC investigated soil capacity for standard on-site effluent disposal. The results of the investigation indicate that conventional systems are not feasible. We need to look at alternative systems and Kenesis can help with that. It is too early to determine potential subdivision lot sizes.
- **Q:** Is localised sewage treatment for Ingleside possible?
- **A:** Greg Joblin from Sydney Water addressed the meeting and indicated that this would be a very expensive solution. The assessment is at a very high level at this point. It may be possible to consider alternative solutions when we start to drill down into further detail. Sydney Water has considered cogeneration.
- The IDP identifies the base case which relies on standard utility provision to facilitate rezoning. In this case, standard utility provision is connection to the sewer, but that does not preclude other alternate options for landowners later in the process. It may be possible to further address alternate systems at the development stage when developers will liaise with service providers in more detail.

- Q: Do we have contingencies should dams burst their banks? Do they have run off paths?
- **A:** Large dams of a certain volume, height or location are 'prescribed', being those dams whose failure would cause serious community consequences. These prescribed dams need to meet the requirement of the Dam Safety Committee (DSC). Currently the only prescribed dam in the land precinct is the Elanora Country Club Main Dam. Prescribed dam owners have to arrange for proper operation and maintenance by trained personnel; regular dam surveillance also by trained personnel; appropriate emergency planning and security precautions; ongoing assessment and regular review of compliance with current DSC requirements and ensure that the dam is maintained in a safe condition.

Notes:

- 1. The above studies and the presentations will be released on the project website following the Ingleside Community Reference Group meeting.
- 2. An email will be sent to Reference Group members to inform them of the release.
- 3. Any further questions should be directed to Ms Liza Cordoba.
- 4. The Chair thanked all consultants for their presentations.
- 5. The consultants left the meeting at 6.25pm.

6.0 General Business

Mr John Simmonds, Director – Sydney Conference Training Centre, has tendered his resignation as a result of the recent sale of the Sydney Conference Training Centre. Mr Simmonds expressed his thanks for the opportunity to participate and advised that he believes the Reference Group has been effective in assisting the various Government bodies in delivering a land release that takes in the concerns and desires of the local community.

COMMITTEE RECOMMENDATION

That a letter be sent to Mr Simmonds in appreciation of his contribution to the Ingleside Community Reference Group and his kind comments regarding the Group.

(Cr Townsend / Mr Palmer)

7.0 Next Meeting

The next meeting date of the Ingleside Community Reference Group is anticipated to be held in late 2015.

THERE BEING NO FURTHER BUSINESS THE INGLESIDE COMMUNITY REFERENCE GROUP MEETING CLOSED AT 6.28PM ON WEDNESDAY 1 JULY 2015

PROGRAM

Key steps	Estimated timeframe
Survey for the Angus Onion Orchid and report back on findings	September/October 2015
Consultation with Ingleside Community Reference Group and land owners on draft ILP and technical studies prior to formal public exhibition	Following completion of the orchid field surveys, late 2015
Public exhibition of draft planning controls (including infrastructure contributions and biodiversity certification package)	Early 2016
Review of submissions	Following public exhibition
Gazettal of final Precinct Plan	Mid 2016
Post-rezoning information sessions	Following Gazettal



1

Appendix 2 to the Minutes





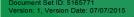




Ingleside – Angus Onion Orchid (Microtis angusii)

Dr Steven Ward







Identification and Data Needed



- Small cryptic plant
- Genetic testing to confirm identification
- Number individuals needed for biocertification calculations
- Need to survey when flowering



Photo from DECCW Recovery Plan



Life Cycle



	Month	Activity	
	Jan	Dormant	
	Feb	Dormant	
	March	Dormant	
	April	Starts to grow from tuber. Small leaves can appear	
	Мау	Likely to start producing a flowering stem (inflorescence)	
	June	Continues to develop inflorescence slowly	
	July	Continues to develop inflorescence	
	Aug	Continues to develop inflorescence and flowering	
	Sept	Flowering, starts to produce fruit	lowering
	Oct	Flowering, fruit and seeding	lowering
	Nov	Flowering, fruit and seeding	
577 ate:	1 Dec 07/07/2015	Starts to die off	



Status

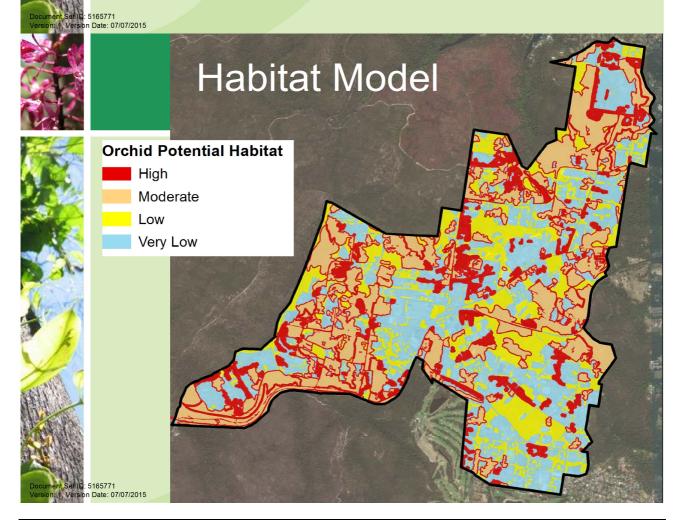


- Endangered under both NSW and Commonwealth legislation
- Historically known to occur just to the west of the Ingleside Precinct (Warringah Council area)
- Only known to occur around Ingleside
- Recent new data from Roads and Maritime surveys – found within Ingleside Precinct



Habitat Preferences

- Still many unknowns
 - Known sites occur in disturbed areas
 - Appears to prefer damper areas
 - Needs mycorrhizal fungus
 - Roads and Maritime results used to generate a habitat model





Next Steps



- Undertake survey
 - Monitor known sites for survey timing
 - Within Ingleside (letter to residents)
 - In surrounding National Parks
- Allowance made for genetic testing by Royal Botanic Gardens
- Test the habitat model produced
- Further steps will depend on results

t ID: 5165771 ersion Date: 07/07/2015



Update on Mona Vale Road Upgrades

1 July 2015



- 1. Overview of both Mona Vale Road Projects
- 2. Mona Vale Road East REF
- 3. Mona Vale West Key Issues and Progress

Mona Vale Road Upgrades





1 July 2015

- 4 -

every journey matters

Mona Vale Road East - Key Features





1 July 2015

- 6

every journey matters

Mona Vale Road East







1 July 2015

every journey matters

Mona Vale Road East

- Key Features





Agenda for the Council Meeting to be held on 3 August 2015.

1 July 2015

every journey matters





1 July 2015 -9- every Journey matters



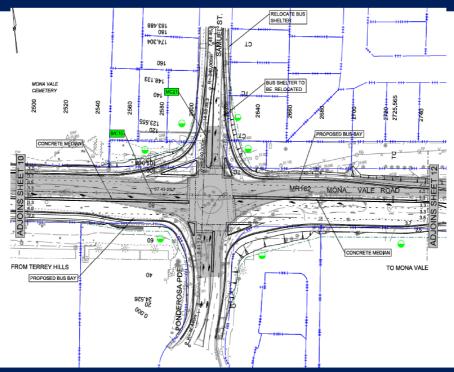


Agenda for the Council Meeting to be held on 3 August 2015.

Mona Vale Road East



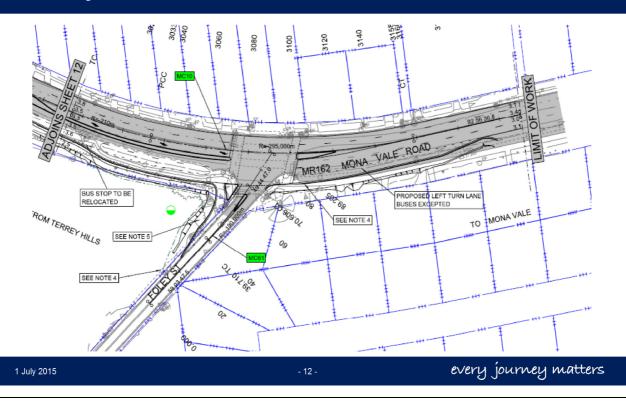
- Ponderosa/Samuel St Intersection



1 July 2015 -11- every journey matters

Mona Vale Road East - Foley St Intersection







- Draft REF for MVRE being finalised now
- Some Key issues



Review of Environmental Factors - Mona Vale Road East



Biodiversity

- Microtis angusii avoided through re-design
- Fauna connectivity Narrabeen Creek culvert
 - Rope crossing
- Native vegetation removal no threatened ecological communities impacted (State or Commonwealth). No Duffys Forest impacted



Heritage

- Aboriginal heritage 3 sites identified within 200m
 - No direct impacts
 - Exclusion zones to be established
- Historic heritage
- Cemetery Gates
- No direct impacts
- Vibration monitoring

Review of Environmental
Factors - Mona Vale Road East

every journey matters

**Every journey matters

Iransport Roads & Maritime Services

Traffic

- Same consultant used as for Ingleside land release planning
- Modelling for "do nothing", MVR east only upgrade, MVR east and west upgrade
- 2014 base year, 2019, 2021, 2031, 2036 modelled



Travel Time Between Pittwater Rd and McCarrs Ck Rd

00:00				
00.00	2036 AM Do Nothing	2036 AM EAST	2036 AM FULL	2036 AM WEST
95th	26:34.00	11:08.88	10:48.09	21:25.13
Max	35:08.50	13:30.00	12:48.00	26:06.00
Median	Median Median			
Min	11:16.70	07:29.10	07:04.60	08:49.90
5th	13:15.07	08:06.75	07:41.63	10:49.44

Figure 5-2 2036 AM Westbound Travel Time Range

Source: AECOM, 2014

Review of Environmental
Factors - Mona Vale Road East

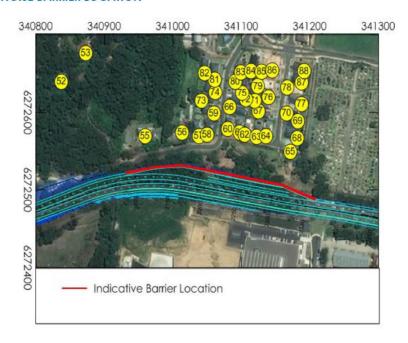
Noise

- Assessments for build and no build scenarios (MVR east and MVR west)
- Properties identified for noise treatment if no mitigation
- Possible mitigation measures:
 - Quieter pavement
 - Noise barriers
 - At property architectural treatments

every journey matters



INDICATIVE NOISE BARRIER LOCATION



1 July 2015 - 19 - every journey matters

Milestones - East

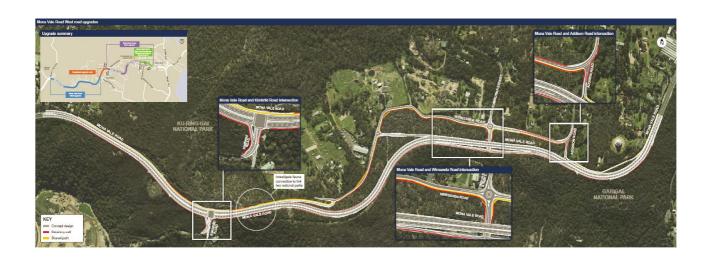


Milestone	Expected date / timeframe
100% concept design	Completed
REF display	Aug 2015
Environmental approval	Oct/ Nov 2015
Commence construction (dependent on funding / procurement strategy)	2016/2017

July 2015 -20- every journey matters

Mona Vale Road West Key Features

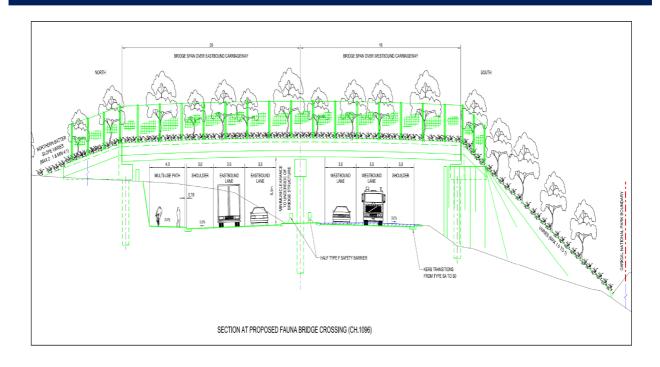






Early Concept Design Fauna Overpass – Cross Section





1 July 2015

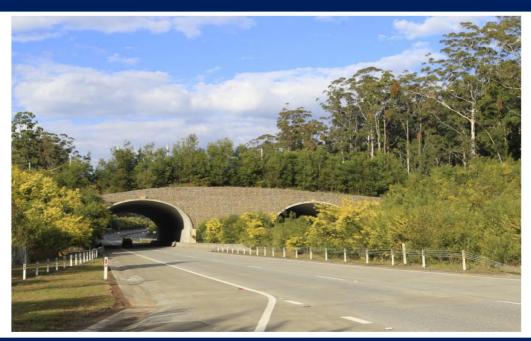
- 24 -

every journey matters

Example of a Fauna Overpass

- Pacific Hwy, Bonville NSW





1 July 2015

- 25 -

every journey matters

Project Status - West



- Concept Design 80% complete.
- Species Impact Statement DGRs issued
- National Park Acquisition- OEH preparing Parliamentary Bill
- REF and SIS preparation commenced



Milestone	Expected date / timeframe
Display preliminary concept design	Completed
REF and SIS display	May 2016
Environmental approval	Aug 2016
National Park revocation	Parliamentary Bill prepared by OEH
Commence construction (dependent on funding / procurement strategy)	2017/18

1.101/2015 -27- every journey matters



1 July 2015 **A=COM**

Document Set ID: 5165769 Version: 1, Version Date: 07/07/2015

Background

The previous presentation to the ICRG provided a review of:

- Existing transport conditions
- Regional policy for future infrastructure development
- The Draft Structure Plan
- Preliminary investigations on local access to North and South Ingleside

Ingleside Transport Study Page 2

Document Set ID: 5165769 Version: 1, Version Date: 07/07/2015