Appendix K

Stakeholder consultation
6 June 2012

Our reference: D/00323

Bob Birch
Wyong Shire Council
PO Box 20
Wyong NSW 2259

Dear Bob

Pacific Highway HW10/Wyong Road MR335 Intersection and Approaches Upgrade

Roads and Maritime Services (RMS) is proposing to upgrade the intersection on the Pacific Highway and Wyong Road at Tuggerah. A Review of Environmental Factors (REF) is currently being prepared by Sinclair Knight Merz (SKM) on behalf of RMS.

While recognising Council’s involvement in the project development to date, the RMS is required to undertake formal consultation in accordance with clauses 13, 14, and 15 of the State Environmental Planning Policy (Infrastructure) 2007 due to potential impacts to council related infrastructure and services, local heritage, and flood liable land.

Maps of the proposed alignment and drainage design are attached as Appendix A. A brief outline of the proposal is attached below.

It would be appreciated if you could provide any comments regarding this proposal by 27 June 2012, 21 days from the date of this letter.

We would be pleased to provide further information if required. In this regard our Project Development Manager Ms Teresa Ting may be contacted on 02 4379 7037 or by email Teresa.TING@rms.nsw.gov.au.

Yours sincerely

Craig Leckie
A/ Central Coast Manager
Central Coast
Background

Roads and Maritime Services (RMS) propose to upgrade the intersection between the Pacific Highway and Wyong Road at Tuggerah (the proposal). The intersection is currently a four-leg dual-lane circulating roundabout. The RMS proposes to replace the existing round-about configuration with a modified and fully signalised intersection. The proposed intersection upgrade location is shown in Appendix B.

The intersection provides a main connection between the Sydney-Newcastle Freeway (F3) Freeway and the Entrance, carrying approximately 52,000 vehicle movements per day in total. Currently the intersection experiences significant delays during the morning and afternoon peak periods, which leads to risk taking and numerous crashes. The intersection is located in the Wyong Local Government Area.

Proposal description

The general features of the proposal include:

- Three lanes in each direction on Wyong Road.
- Dual right turn lanes from Wyong Road into Pacific Highway (northbound and southbound), and from Pacific Highway into Wyong Road (eastbound).
- Building a new bridge beside the existing railway over bridge to accommodate new travel lanes.
- Retaining and extending the existing pedestrian bridge.
- Provision of on road cycle lanes on Wyong Road connecting to existing facility.

The existing roundabout is proposed to be upgraded with a set of traffic signals to enable better management of the traffic volumes at this intersection. A new bridge would be constructed on Wyong Road over the railway beside the existing bridge to accommodate eastbound movements along Wyong Road when the existing bridge is utilised for all westbound movements, including turning lanes to the Pacific Highway (north). The intersection would be widened locally to accommodate extra lanes in all four directions and tie in with the recently completed Pacific Highway upgrade, Tuggerah Straight, north of the intersection at Anzac Road.

Due to the small pedestrian desire to cross at this intersection and the inefficiency in traffic operation caused by pedestrian crossing phases, it is proposed to limit the at-grade pedestrian crossing to the eastern leg only. Alternative pedestrian routes will also be provided utilising the existing pedestrian underpass and pedestrian bridge to connect with existing footpaths.

To the north of this intersection the proposal would generally follow the alignment of the existing highway, including:

- An upgrade of the northbound carriageway for approximately 230 metres.
- Three right turn lanes from Pacific Highway into Wyong Road.
- Dual left turn lanes from Pacific Highway into Wyong Road.

The intersection of Anzac Road and Pacific Highway will remain the same.

Program

The proposal is currently in the concept design stage and an environmental assessment of that design is being completed as an REF. The REF of the concept design is planned to go on public display in the later part of 2012. Following determination of the REF, the design would proceed into detailed design. It is anticipated that the design work would be completed by the end of 2013 and construction would commence in 2014 (subject to confirmation of funding in future State budgets).
Construction stage activities

The work methodology for the proposal will be refined during the detailed design phase. Construction activities would be guided by a Construction Environmental Management Plan (CEMP) so that work would be located within the specified works area and completed to incorporate all safeguards as described in this REF. The proposal would involve the following general work methodology:

- Early works (dependent on RMS approval) including utility relocations.
- Pre-construction identification and marking of sensitive areas as identified in this REF and the relevant CEMP.
- Establishment of permanent and temporary fencing.
- Installation of temporary erosion, sediment and water quality controls, including sediment retention basins and traffic management controls.
- Establishment of construction compound sites and accesses.
- Installation of temporary traffic signals and controls.
- Marking of trees that require clearing.
- Vegetation clearing and grubbing.
- Stripping, stockpiling and management of topsoil.
- Removal and stockpiling of unsuitable material.
- Utility adjustments. If not completed during early works, stage during construction as required.
- Rail over bridge works (including piling, pile caps, piers, headstocks, raising girders, deck pour, barriers, asphalting).
- Pedestrian underpass to be extended (both sides) prior to earthworks and retaining walls.
- Earthworks preparation including piling of foundations etc (if required).
- Earthworks.
- Retaining walls.
- Cross drainage (staged).
- Longitudinal drainage and pits.
- Sub-grade preparation and pavement works.
- Topsoil rehabilitation and revegetation.
- Rehabilitation of temporary stockpiles.
- Landscaping.
- Installation of permanent traffic control signals.
- Finishing works including installation of safety barriers, fencing, pavement marking, signposting, and street lights.
- Cross fall adjustment and new barriers on the existing bridge.

The detailed work methodology for the proposal would be refined during detailed design and the development of the construction methodology by the construction contractor. Construction staging drawings have been produced as part of the concept design however will be refined during the detailed design phase.

Stockpile and compound sites

Four potential compound and stockpile sites have been identified for the proposal see Appendix C. Site 1 and 2 are both located to the north-west of the proposal along Anzac Parade. Site 1 is located on the northern side of Anzac Parade on a series of vacant lots of land owned by Wyong Shire Council. Site 2 is located on the southern side of Anzac Parade and is also owned by Wyong Shire Council. Both sites have been used previously by the RMS for other road work projects and are approved stockpile sites.
Sites 3 and 4 are located to the south-west of the proposal on the western side of the Pacific Highway. Site 3 can be accessed from the Pacific Highway and site 4 can be accessed from the Pacific Highway and Gavenlock Road. Site 3 is a residential property that RMS might be acquiring for the proposal and site 4 is an old roadway that is owned by Westfield.

The lot and DP numbers for each of the possible stockpile/compound sites are as follows:

- Site 1: Lot3 DP840949; Lot5 DP706640; Lot2 DP4608; Lot3 DP4608; Lot4 DP4608
- Site 2: Lot3 DP246382
- Site 3: Lot2 DP521487; Lot101 DP740706; Lot100 DP740706
- Site 4: Lot3 DP521487; Lot100 DP740706

There would be no clearing of vegetation required at any of the potential stockpile/compound sites. It is anticipated that compound facilities such as a self-contained portable toilet and a site shed would be established at the preferred compound site, with the exception of site 3 which would use the existing residential property as the site compound. Access would be required 24 hours a day. The preferred stockpile and compound sites is yet to be selected and input from the consultation process will be considered in the selection process.

**Working hours**

It is anticipated that the majority of the works for the proposal would be undertaken during the standard working hours which are outlined in **Table 1**. However, a small amount of work including construction of the bridge, and certain parts of the intersection would be required to be undertaken outside of these hours to avoid impacts to road and rail traffic and infrastructure. This would include night works and work on the weekends. All work outside of standard working hours would be minimised and all stakeholders that would be impacted including RailCorp, local residents and businesses would be contacted prior to any works commencing. Approval from the Office of Environment would also be required regarding the work that would occur outside of the standard working hours.

<table>
<thead>
<tr>
<th>Standard working hours</th>
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<tbody>
<tr>
<td>Monday – Friday</td>
<td>7.00 am to 6.00 pm</td>
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<td>Saturday</td>
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<td>Sunday and Public Holiday</td>
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**Previous consultation**

Consultation regarding the proposed works has been undertaken with Wyong Shire Council, RMS and SKM on the 14 March 2012, and the minutes of this meeting are attached as **Appendix D**. SKM are the contractors responsible for completing the concept design and environmental impact assessment for the proposed works.
Appendix A – Proposed 20% concept and drainage design
Appendix A | Proposed 20% concept design including drainage design
Appendix B – Locality map
Upgrade of the Pacific Highway and Wyong Road Intersection - Project REF

Pacific Highway and Wyong Road Intersection

DATA SOURCES
LPMA (2010)
SKM (2012)
Bing Maps (@ Microsoft Corporation)

Appendix B | Locality map
Appendix C – Proposed stockpile and compound sites
Appendix C | Possible stockpile and compound sites

DATA SOURCES
Ausimage (2010)
LPMA (2010)
SKM (2012)

LEGEND
- 20% Concept Design
- Railway
- Waterway
- Possible compound and stockpile site

Upgrade of the Pacific Highway and Wyong Road Intersection - Project REF

Site 1
Mardi Creek
Site 2
Anzac Parade
Tuggerah Creek
Wyong Road
Site 3
Site 4
Pacific Highway
Gavenlock Road
Main North Railway

DATA SOURCES
Ausimage (2010)
LPMA (2010)
SKM (2012)
Appendix D – Minutes from previous consultation meeting
## Minutes

### Purpose of Meeting

**Wyong Shire Council Utilities Meeting Number 1**

<table>
<thead>
<tr>
<th>Project</th>
<th>Pacific Highway &amp; Wyong Road Intersection and Approaches Upgrade</th>
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<tr>
<td>Project No</td>
<td>NB11462</td>
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<table>
<thead>
<tr>
<th>Prepared By</th>
<th>Jimi Taylor</th>
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<tr>
<td>Phone No</td>
<td>+61 2 9032 1591</td>
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<table>
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<tr>
<td>Date</td>
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### Present

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
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<tbody>
<tr>
<td>Jimi Taylor (JT)</td>
<td>SKM</td>
</tr>
<tr>
<td>Michael Collins (MC)</td>
<td>SKM</td>
</tr>
<tr>
<td>Mal Ray (MR)</td>
<td>Technical Officer Water &amp; Sewer (WSC)</td>
</tr>
<tr>
<td>Bob Burch (BB)</td>
<td>Principal Transport Engineer (WSC)</td>
</tr>
<tr>
<td>Intesar Naoum</td>
<td>Team Leader Water &amp; Sewer Design (WSC)</td>
</tr>
<tr>
<td>Daniel Kemp</td>
<td>Engineer Water &amp; Sewer Design (WSC)</td>
</tr>
<tr>
<td>Paul Watson</td>
<td>Technical Officer Water &amp; Sewer (WSC)</td>
</tr>
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### Distribution

- All attendees
- Teresa Ting (RMS)
- Rob Casimir (SKM)

### Item | Action By/Date

1) **Introduction**

 JT and MC introduced themselves and their project roles.

 MC is the utilities team leader for the project and is to be the main point of contact for all matters regarding the relocation of WSC sewer and water assets. JT is to be cc’d into all communications.

 The current strategic layout and features of the project were presented by MC and JT.

2) **Review of Existing Services & Proposed Services in the Area**

 It was noted that WSC Dial Before You Dig (DBYD) data is indicative and not to be scale.

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**SINCLAIR KNIGHT MERZ**

NB11462-AAA-MI-0007 WSC Utilities Meeting 120314.doc PAGE 1
<table>
<thead>
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<tr>
<td>Sewer</td>
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<tr>
<td>A WSC condition survey of sewer mains within the project area is due to take place in approx 3 months time. WSC will be able to provide the results of this survey to SKM once completed.</td>
<td>Noted</td>
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<tr>
<td>All WSC sewer mains are gravity fed.</td>
<td>Noted</td>
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<tr>
<td>A single privately owned rising main services the property/properties on the south west corner of the Wyong Road and Pacific Highway intersection. This rising main is not featured on DBYD. A private pump station is also located adjacent to the properties on this corner however this is featured on DBYD plans.</td>
<td>Noted</td>
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<td>A second private pump station also serves the Bunnings on the northern side of Wyong Road.</td>
<td>Noted</td>
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<tr>
<td>It was highlighted that the sewer main passing between the pedestrian underpass and the existing bridge is not very deep (approx 1100/1200mm) and exists on a very shallow grade.</td>
<td>Noted</td>
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<tr>
<td>WSC informed that the protection of sewer mains by concrete encasement is no longer undertaken. Should a pipe require protection it will either be replaced with a stronger alternative pipe or relocated clear of the impact zone.</td>
<td>Noted</td>
</tr>
<tr>
<td>A current proposal is in place to provide a 250mm rising main running west to east along Wyong Road. It was suggested that provision for this main is provided in the new bridge design.</td>
<td>Noted</td>
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<tr>
<td>Water</td>
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<tr>
<td>WSC confirmed that there are existing asphaltic concrete (AC) (Bonded Asbestos) watermains in the project area. WSC’s preference is to replace all AC mains in the project area as part of the works.</td>
<td>Noted</td>
</tr>
<tr>
<td>WSC informed that the protection of watermains by concrete encasement is no longer undertaken. Should a pipe require protection it will either be replaced with a stronger alternative pipe or relocated clear of the impact zone.</td>
<td>Noted</td>
</tr>
<tr>
<td>It was noted that surface water features picked up by the RMS survey may relate to reticulation in the project area to service road medians. It was advised that the WSC Median Vegetation Operations Group should be contacted to determine the location of this infrastructure. SKM to contact Bob Browning (Operational Supervisor) – 0419 145 065 for information.</td>
<td>MC 26/03/12</td>
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Item                                                                                                             Action By/Date
Post Meeting Note

In the Pacific Highway and Wyong Road Intersection Upgrade - Risk Management Workshop (19/03/12) it was noted that impact on the existing 600mm Mild Steel trunk main running parallel to Wyong Road on the southern should be avoided. This is the main trunk main for eastern Wyong Shire and management of the shutdown of this main would be a complex task.

3) Design Criteria

It was confirmed that Wyong Shire Council water and sewer design criteria is driven by:

- Water Services Association of Australia (WSAA) design codes

It was noted that the following policies are available on the Wyong Shire Council website for download:

- Sewer mains - requirements for building adjacent to or over
- Plans and notes on building over or adjacent to sewer mains

The above policies are applicable to both sewer and water design and should be followed during design development in addition to WSAA design codes and Streets Opening Conference guidelines.

4) Development of Concept Design

MR confirmed that he would be the main point of contact regarding the works (both water and sewer) going forward.

It was confirmed that WSC would be interested in taking part in Services Coordination Group meetings to aid in the development of the design.

WSC confirmed that there is no formal submission process for concept relocation designs for water or sewer.
Mr Leckie  
Central Coast Network Manager  
Roads and Maritime Services  
PO Box 766  
WOY WOY NSW  2256

Dear Craig

PACIFIC HIGHWAY HW10/WYONG ROAD MR335 INTERSECTION AND APPROACHES UPGRADE

I refer to your letter dated 6 June 2012 (reference D/00323) requesting comments on the proposed Pacific Highway HW10/Wyong Road MR335 Intersection and Approaches Upgrade.

Council’s comments on the concept plan are listed on the attached.

Council would like to thank you for the opportunities given to it to be involved in the project to date.

Yours faithfully

Bob Burch  
PRINCIPAL TRANSPORTATION ENGINEER
Comments on the Pacific Highway HW10/Wyong Road MR335 Intersection and Approaches Upgrade Concept plan.

1. The northbound Highway approach lane does not align with the departure lane on the northern side of the intersection.

2. Please confirm that northbound Highway traffic will be able to turn right into Wyong Road.

3. Pacific Highway northbound vehicles turning right into Wyong Rd may have problems due to the width of the intersection (turning geometry). The location of the crown in Wyong Rd (making the turn lane line only partially visible creating problems with definition of the required travel path) & resulting in required clearances to the opposing turning traffic not being satisfied. It may be better to reduce crossfalls across the intersection. However, slower sheeting runoff from the paved area may be a problem, but open graded asphalt may solve this. The number of turn lines should also be increased (incl possible through lanes) to assist in providing appropriate travel path definition for all turning vehicles, not just the dual turning lanes.

4. It is understood that more retaining walls are to be provided to limit the footprint of the project due to soil & water management issues & disturbance to EEC areas.

5. Greater advanced warning is required for vehicles turning right from Anzac Rd into the Pacific Highway southbound who are then turning left into Wyong Rd eastbound to limit weaving & conflict manoeuvres, especially due to the reduced weaving length available.

6. There are three (3) slip lanes controlled by signals. There is a likelihood that motorists may try & race the signals to beat the red lights or where there the traffic is light some motorists may try and negotiate these slip lanes and corners at a higher speed where they loose control crashing into queued traffic waiting to turn. I understand that this was/is an issue at the intersection of the Hume Highway & the Cumberland Highway at Liverpool where the RMS improved the turn and slip lanes (similar to this proposal) resulting in a number of crash occurrences.

7. Pacific Highway southern leg northbound there appears to be an on road cycleway (shoulder ext) that is not provided for on the northern leg of the Pacific Highway. Should check other cycleway & pedestrian provisions.

8. Some pavement widths (7 lanes and on road cycleway) are very wide & stormwater runoff will create probable hydro/aqua planing situations. Consideration to either breaking up catchments by providing continuous piping with vertical slots or an open graded asphalt to convey runoff below the tyre/pavement interface to receiving (pavement edge) drainage systems.

9. With such wide pavement areas street lighting may also be a challenge.
10. Need to include conduits or similar for future & possible future services/utilities. Discuss with all authorities incl NBN & Council's Water & Sewer.

11. Consider including acoustic protection as an extension/part of the retaining walls to be provided. Consistency, visually the same, costs, etc.

12. Need to provide for major blockage of drainage systems, emergency flow paths for events greater than 100 yr, etc.

13. Stormwater maintenance:
   - Council does not want proprietary in-ground water quality systems because they are maintenance intensive. Council prefers open basins, which will also serve to protect against fuel spills.
   - Possibly the temporary controls can become the permanent controls.
   - Ensure that any water quality control devices are elevated well above flood levels.
   - Easy maintenance access to the structures is required.
   - All concrete pipes are to be rubber ring jointed and class 4 or above.

14. Flooding:
   - The works are unlikely to exacerbate flooding in the local area. Note however that the Pacific Highway is significantly flood prone north of Anzac Road, just north of the proposed works, such that every several years, traffic will be effectively funneled into floodwaters from the proposed intersection.

15. Stockpile sites:
   - Site 1 not suitable because of high flood frequency and high velocities at this location, such that stockpiled materials would be mobilised by floodwaters. Site 2 may be suitable from a risk perspective; it is still subject to infrequent flooding, but velocities would be low. Sites 3 & 4 are fine.

16. Water and sewerage:
   - Council has provided previous comments on the impact on these, including required clearances etc. Please contact Mal Ray for any clarification.
30 July 2011

D/00323/04

Mr Bob Burch
Wyong Shire Council
PO Box 20
Wyong NSW 2259

Dear Mr Burch,

Pacific Highway and Wyong Road intersection upgrade, Tuggerah

Thank you for your letter of responses dated 29 June 2012 regarding the ISEPP consultation and comments on the RMS’s proposed upgrading of the intersection.

Please find attached responses to Council’s comments on the concept design plan.

If you have any questions please feel free to call the project manager Teresa Ting or myself, on 4379 7001.

Yours sincerely

Craig Leckie
Network Manager
Central Coast
1. The northbound Highway approach lane does not align with the departure lane on the northern side of the intersection.

The transition from 1 lane on the southern leg of the intersection to 2 lanes on the northern leg paired with the taper on the northern leg median nose may lead to the perception that the lanes do not align. However, it is confirmed that these lanes do indeed align. The visibility across these lanes to the line marking on the opposite side of the intersection is good, hence motorists should be able to align themselves. The situation could be improved through the additional line marking across the intersection but care would be needed to ensure this does not conflict with T1 turn lines. Although there are precedents for this sort of treatment it is not common practice.

2. Please confirm that northbound Highway traffic will be able to turn right into Wyong Road

It is confirmed that the right turn movement for the Pacific Highway (northbound) into Wyong Road (eastbound) will be maintained upon the upgrade of the intersection.

3. Pacific Highway northbound vehicles turning right into Wyong Rd may have problems due to the width of the intersection (turning geometry). The location of the crown in Wyong Rd (making the turn lane line only partially visible creating problems with definition of the required travel path) & resulting in required clearances to the opposing turning traffic not being satisfied. It may be better to reduce crossfalls across the intersection. However, slower sheeting runoff from the paved area may be a problem, but open graded asphalt may solve this. The number of turn lines should also be increased (incl possible through lanes) to assist in providing appropriate travel path definition for all turning vehicles, not just the dual turning lanes.

Development of the design since Wyong Shire Council’s review has led to the re-grading of the intersection to be a single plane, which has improved the visibility across the intersection for all turns. In addition, Turn Lines have been added for all turns.

4. It is understood that more retaining walls are to be provided to limit the footprint of the project due to soil & water management issues & disturbance to EEC areas.

This understanding is correct. Development of the design since submission to Wyong Shire Council reflects these changes.

5. Greater advanced warning is required for vehicles turning right from Anzac Rd into the Pacific Highway southbound who are then turning left into Wyong Rd eastbound to limit weaving & conflict manoeuvres, especially due to the reduced weaving length available.

This strategy will be considered during the development of the project signposting and delineation scheme.
6. There are three (3) slip lanes controlled by signals. There is a likelihood that motorists may try & race the signals to beat the red lights or where there the traffic is light some motorists may try and negotiate these slip lanes and corners at a higher speed where they lose control crashing into queued traffic waiting to turn. I understand that this was/is an issue at the intersection of the Hume Highway & the Cumberland Highway at Liverpool where the RMS improved the turn and slip lanes (similar to this proposal) resulting in a number of crash occurrences.

This statement is not fully understood, would Council please clarify.

7. Pacific Highway southern leg northbound there appears to be an on road cycleway (shoulder ext) that is not provided for on the northern leg of the Pacific Highway. Should check other cycleway & pedestrian provisions.

A comprehensive review of the cyclist and pedestrian strategy has been undertaken since the submission of the 20% Concept Design. The final design will reflect an integrated intersection upgrade which caters for the requirements of both pedestrian and cyclist movements through the project area.

The cycleway and pedestrian strategy for the project has developed greatly since initial submission to Wyong Shire Council for review.

8. Some pavement widths (7 lanes and on road cycleway) are very wide & stormwater runoff will create probable hydro/aqua planing situations. Consideration to either breaking up catchments by providing continuous piping with vertical slots or an open graded asphalt to convey runoff below the tyre/pavement interface to receiving (pavement edge) drainage systems.

The following steps have been taken to address potential hydro/aqua planning issues associated with the intersection upgrade:

- Inclusion of a ACO slotted kerb drain alongside the face of median kerbs within super-elevated sections at the following locations:
  - Wyong Road (CH50–295), median kerb alongside northbound traffic.
  - Pacific Highway (CH195–210, 260-425), median kerb alongside southbound traffic.
- Adjustment of road geometry to provide a water film depth lower than the 5mm maximum allowable for following surface flow patterns shown in the diagram below.
9. With such wide pavement areas street lighting may also be a challenge.

   This comment is noted and the street lighting design will be developed to comply with Category V3 of AS/NSZS1158.

10. Need to include conduits or similar for future & possible future services/utilities. Discuss with all authorities incl NBN & Council's Water & Sewer.

   The utilities relocation design has been developed in conjunction with utility authorities and provision for future services has been catered for in the design.

11. Consider including acoustic protection as an extension/part of the retaining walls to be provided. Consistency, visually the same, costs, etc.

   A Noise and Vibration Study is being undertaken as part of the project REF. The outcomes of this study will determine the level of acoustic protection required for sensitive receivers.

12. Need to provide for major blockage of drainage systems, emergency flow paths for events greater than 100 yr, etc.

   As per the requirements of the RMS brief the design for cross drainage considers only events up to the 100yr ARI.

   For storm events greater than 100yr ARI the excess flow maintains the current flow path which is across the sag section of Wyong Road at around CH60. For the catchment areas southeast of the intersection, the design allows for the excess flow to be diverted through to the existing pedestrian underpass therefore preventing the intersection from flooding.

13. Stormwater maintenance:
   - Council does not want proprietary in-ground water quality systems because they are maintenance intensive. Council prefers open basins, which will also serve to protect against fuel spills.
   - Possibly the temporary controls can become the permanent controls.
   - Ensure that any water quality control devices are elevated well above flood levels.
   - Easy maintenance access to the structures is required.
   - All concrete pipes are to be rubber ring jointed and class 4 or above.

   The strategy to be adopted is to remove both permanent basins and GPTS from the design based on the preferences of RMS and WSC. Water quality monitoring will be undertaken to determine the level of water quality control provided by the existing wetlands in the project area and supplementary controls will only be provided if required post construction.

   All structures will be reviewed to ensure that suitable maintenance access is provided.

   Comments regarding pipe specifications are noted.

14. Flooding:
   - The works are unlikely to exacerbate flooding in the local area. Note however that the Pacific Highway is significantly flood prone north of Anzac Road, just north of the proposed works, such that every several years, traffic will be effectively funnelled into floodwaters from the proposed intersection.

   The above comment is noted. A flood model is being developed to determine the impact of the proposed works within the project area.
15. Stockpile sites:
   - Site 1 not suitable because of high flood frequency and high velocities at this location, such that stockpiled materials would be mobilised by floodwaters. Site 2 may be suitable from a risk perspective; it is still subject to infrequent flooding, but velocities would be low. Sites 3 & 4 are fine.

   The above comments are noted. The preferred stockpile sites are yet to be finalised.

16. Water and sewerage:
   - Council has provided previous comments on the impact on these, including required clearances etc. Please contact Mal Ray for any clarification.

   The project team will continue to consult with Mal Ray regarding any potential impacts to water and sewer services.
Minutes

Purpose of Meeting
Progress Meeting

Project
Pacific Highway & Wyong Road Intersection and Approaches Upgrade

Project No
NB11462

Prepared By
Robert Casimir

Phone No
+61 2 9032 1068

Place of Meeting
RMS Woy Woy

Date
5 March 2012

Present
Robert Casimir (RC)
Teresa Ting (TT)

Distribution
All attendees
Andrew Spinks
Jimi Taylor
Rachel Vazey

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<tr>
<td>1) <strong>Previous Minutes</strong></td>
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<td>2) <strong>Services Program</strong></td>
<td>RC</td>
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<td>ID134: Review of hydrology and hydraulics models. RC to confirm progress in obtaining model from Wyong Council.</td>
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<td>ID162: Traffic Model Development. RC to confirm date for presentation of model to RMS.</td>
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<tr>
<td>ID284: Community Involvement Plan. RC to confirm date for submission of Plan to RMS.</td>
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<tr>
<td>3) <strong>Services Coordination Group</strong></td>
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</tr>
<tr>
<td>No new issues</td>
<td>Noted</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Action By/Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>4) <strong>RailCorp</strong></td>
<td>RC</td>
</tr>
<tr>
<td>Site inspection scheduled for 29 February 2012 postponed as approval of Corridor Access Application not confirmed by RMS. Updated Corridor Access Application to be submitted by SKM using Form in Master Access Deed (MAD).</td>
<td>RC</td>
</tr>
<tr>
<td>RMS/RailCorp meeting held on 5 March 2012 (refer notes in Attachment A).</td>
<td>Noted</td>
</tr>
</tbody>
</table>
5) **Flood Model (RFI 003)**

Still some uncertainty around the flood model in particular who has it and what format is it available in. SKM to confirm.

RC

7) **Risk Management**

Preparations for workshop on 19 March 2012 progressing. List of attendees to be confirmed (anticipated at around 30).

Noted

8) **Geotechnical REF & EMP**

RMS confirmed they would undertake consultation with Wyong Council under clause 14 of the I SEPP in relation to the additional geotechnical investigations. Letter prepared to be issued to Wyong Council this week.

TT

10) **Additional Survey (HP 003)**

SKM to confirm additional survey priorities.

RC

11) **Next Meeting**

9:30AM Wednesday 21 March 2012, SKM St Leonards (date and time to be confirmed)

Noted
Attachment A – Notes from RMS/RailCorp Meeting 5 March 2012, RMS Woy Woy

Attendees: Craig Leckie (RMS), Teresa Ting (RMS), Robert Casimir (SKM), Eddie Blackwell (RailCorp), Kate Hendrikson (RailCorp).

<table>
<thead>
<tr>
<th>Item</th>
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</thead>
<tbody>
<tr>
<td>1) Project Briefing</td>
<td>Noted</td>
</tr>
<tr>
<td>RMS/SKM provided a briefing of the strategic concept design to RailCorp and outline of the objectives of the concept design and environmental assessment.</td>
<td>Noted</td>
</tr>
<tr>
<td>2) RailCorp Interfaces</td>
<td>Noted</td>
</tr>
<tr>
<td>RMS/SKM will require RailCorp to process and approve Corridor Access Applications for site inspections (non-intrusive works)</td>
<td>Noted</td>
</tr>
<tr>
<td>RMS/SKM will require RailCorp to process and approve a Corridor Access Application for additional geotechnical investigations in the rail corridor</td>
<td>Noted</td>
</tr>
<tr>
<td>RMS/SKM will require RailCorp to review the 20%, 80% and 100% concept designs.</td>
<td>Noted</td>
</tr>
<tr>
<td>Impacts on RailCorp include the following:</td>
<td>Noted</td>
</tr>
<tr>
<td>▪ Maintenance Access</td>
<td></td>
</tr>
<tr>
<td>▪ Adjustment of existing overhead wiring in coordination with the new Wyong Road overbridge (eg. relocation of OHW structures, direct fix of OHW to underside of bridge(s))</td>
<td></td>
</tr>
<tr>
<td>▪ Adjustment of existing HV distribution in coordination with the new Wyong Road overbridge</td>
<td></td>
</tr>
<tr>
<td>▪ Potential impacts on existing rail systems in coordination with the new Wyong Road overbridge</td>
<td></td>
</tr>
<tr>
<td>RMS/SKM will require RailCorp to process and approve Engineering Authority Applications.</td>
<td>Noted</td>
</tr>
<tr>
<td>3) Requests for Information (RFI)</td>
<td>Noted</td>
</tr>
<tr>
<td>SKM have submitted two RFI’s to date; RFI 006 in relation to DSS and RFI 007 in relation to WAE. RailCorp requested these and future RFI’s be submitted through RMS.</td>
<td>Noted</td>
</tr>
<tr>
<td>4) RailCorp Concerns</td>
<td></td>
</tr>
<tr>
<td>Design for new Wyong Road overbridge to consider constructability in the rail corridor including:</td>
<td></td>
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<tr>
<td>▪ Limited access to erect girders during track possessions</td>
<td></td>
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<tr>
<td>▪ Temporary works to allow construction of foundations and</td>
<td></td>
</tr>
</tbody>
</table>
superstructure to progress safely outside track possessions (eg. temporary safety barriers, handrails etc.)

- Access for cranes during bridge erection
- Impact of works on drainage through rail corridor
- Provision for future tracks (under Wyong Road overbridge and at Tuggerah Station)
- Fencing of the rail corridor to prevent public access

5) Corridor Access Applications

RailCorp confirmed Corridor Access Applications to be submitted through RMS in format provided in the Master Access Deed. Noted

Corridor Access Applications to include details of each attendee’s RISI and OH&S General Induction. Applications to also include details of the Protection Officer and Pre-work Briefing. Noted

RailCorp confirmed that any vehicles parked inside the rail corridor need to be clearly identified (eg. copy of approved Corridor Access Application to be left on the dashboard). Noted

Attendees need to where appropriate PPE including approved safety vests, hard hats, safety glasses and boots. Noted

Corridor Access Applications submitted previously to be resubmitted in accordance with the above. Noted

RailCorp suggested additional geotechnical investigations be carried out during the planned June long weekend possession. Noted

6) Design Reviews

RailCorp confirmed that a three day block has been assigned each month for review of external party works designs. Noted

SKM advised that it was critical that the right people within RailCorp review the design at the 20% submission to identify any issues and incorporate them in the design development. RailCorp concurred and advised that a presentation meeting could be arranged at 20% design (including options for interfacing with the OHW and HV Distribution). Noted

7) Risk Management Workshop

RailCorp to be invited to the Risk Management Workshop on 19 March 2012. Noted

8) Actions

SKM to resubmit RFI’s to RMS for forwarding to RailCorp SKM/RMS
<table>
<thead>
<tr>
<th>Item</th>
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<tbody>
<tr>
<td>SKM to resubmit Corridor Access Applications to RMS for forwarding</td>
<td>SKM/RMS</td>
</tr>
<tr>
<td>to RailCorp</td>
<td></td>
</tr>
<tr>
<td>RMS to forward invitation for Risk Management Workshop to RailCorp</td>
<td>RMS</td>
</tr>
<tr>
<td>SKM to confirm dates for design reviews with RMS for forwarding to</td>
<td>SKM/RMS</td>
</tr>
<tr>
<td>RailCorp</td>
<td></td>
</tr>
<tr>
<td>SKM requested RailCorp provide any flood information they have in</td>
<td>RailCorp</td>
</tr>
<tr>
<td>relation to the rail corridor in this area.</td>
<td></td>
</tr>
<tr>
<td>SKM/RMS to submit details of any works planned for the June long</td>
<td>SKM/RMS</td>
</tr>
<tr>
<td>weekend possession as soon as possible (eg. geotechnical investigations)</td>
<td></td>
</tr>
</tbody>
</table>
Mr Craig Leckie  
A/ Central Coast Manager  
Roads and Maritime Services  

(c/o: Teresa.TING@rms.nsw.gov.au)  

Dear Craig,

RE: Pacific Highway HW10/Wyong Road MR335 Intersection and Approached Upgrade

Thank you for your letter dated 15 June 2012 notifying Fisheries NSW of the proposed works stated above.

Fisheries NSW is responsible for ensuring that fish stocks are conserved and that there is no net loss of key fish habitats upon which they depend. To achieve this, Fisheries NSW ensures that developments comply with the requirements of the Fisheries Management (FM) Act 1994 (namely the aquatic habitat protection and threatened species provisions in Parts 7 and 7A of the Act, respectively), and the associated Policy and Guidelines for Aquatic Habitat Management and Fish Conservation (1999). In addition, Fisheries NSW is responsible for ensuring the sustainable management of commercial and recreational fishing in NSW.

Tuggerah Creek is important key fish habitat within central coast region and the Department recommends that the project is designed to:

- maintain fish passage at all stages during and following construction, and
- minimise potential erosion and sedimentation impacts to the river during and following construction.

The Department’s preference is for the bridge to be designed so that pilons do not encroach within the banks of Tuggerah Creek.

Fisheries NSW notes that these works are likely to involve dredging and reclamation activities as defined under the Fisheries Management Act. Therefore, Roads and Maritime Services are required to formally notify the Department of these works under s.199 of the FM Act.

In order to provide formal comments on this proposal which consider potential impacts from an aquatic habitat perspective in accordance with s.199 of the FM Act, Fisheries NSW will require the following information:

- a copy of the Review of Environmental Factors for these works. Including details of environmental mitigation measures.
- plans of the proposed works. In particular, detail of the works proposed along Tuggerah Creek.

Please note that information requirements that may be of assistance in the preparation of a review of environmental factors from an aquatic habitat perspective for this proposal are listed in Attachment 1.

Should you require any further information concerning this proposal, please contact Carla Ganassin on 9527 8552 or carla.ganassin@industry.nsw.gov.au.
Yours sincerely,

[signature]

Carla Ganassin
Fisheries Conservation Manager, Aquatic Habitat Protection Unit

28 June 2012
ATTACHMENT 1: Environmental Assessment Requirements for an Environmental Assessment of the proposed Intersection and Approached Upgrade at Pacific Hishway HW10/Wyong Road MR355

A: General Requirements

- site address and contact details,
- property description (e.g. Lot and DP numbers)
- a clear description of the proposal
- map(s) of the development area and adjacent areas - this should include nearby waterways, adjacent infrastructure and land use,
- clear photographs of the site, including photographs of any riparian and aquatic vegetation present,
- a clear description of the physical and hydrological features of the development area (which may extend upstream and downstream of the development site in the case of flowing rivers),
- a clear description of aquatic environments including:
  - including threatened and protected species, populations, ecological communities, pest species or presence of ‘critical habitat’ under the FM Act and EPBC Act,
  - an aquatic and riparian vegetation survey map of the area which shows the location and/or coverage of macrophytes, riparian vegetation and snags,
- details of the nature, timing, magnitude and duration of the proposed disturbance to the aquatic environment,
- assessments of predicted impacts upon any threatened species (fish and marine vegetation) (i.e. completion of a 7 part test and/or species impact statement(s)) and other aquatic flora and fauna,
- details of any mitigation measures to limit environmental impacts,
- details of the general regional context, any protected areas, other developments in the area, and/or cumulative impacts,

Dredging and reclamation activities

- Purpose of works
- Type(s) and distribution of marine vegetation in the vicinity of the proposed works
- Method of dredging to be used
- Timing and duration of works
- Dimension of area of works including levels and volume of material to be extracted or placed as fill
- Nature of sediment to be dredged, including Acid Sulphate Soil, contaminated soils etc
- Method of marking area subject to works
- Environmental safeguards to be used during and after works
- Measures for minimising harm to fish habitat under the proposal
- Spoil type and source location for reclamation activities
- Method of disposal of dredge material
- Location and duration of spoil stockpiling, if planned

Activities that damage marine vegetation

- Type of marine vegetation to be harmed
- Map and density distribution of marine vegetation
- Reasons for harming marine vegetation
- Methods of harming marine vegetation
- Construction details
- Duration of works/activities
- Measures for minimising harm to marine vegetation under the proposal and details of compensatory habitat development to replace lost vegetation.
- Method and location of transplanting activities or disposal or marine vegetation.
Activities that block fish passage
• Type of activity eg works in a stream that change flow or morphological characteristics
• Length of time fish passage is to be restricted
• Timing of proposed restriction
• Remediation works

B. Aquatic habitat assessment
The aim of the aquatic assessment should be to define the presence of ‘key fish habitat’ within the study site, adjacent areas. Some points to consider include:

- description of the water quality (e.g. discolouration, sedimentation, turbidity, pH, dissolved oxygen, nutrients),
- types of surrounding land use (e.g. agricultural, urban, aquaculture),
- condition of riparian vegetation (i.e. Is the vegetation continuous or sparse in coverage? What is the aerial extent? Is the vegetation healthy or degraded?),
- substrate type (e.g. rock, sand, gravel, silt),
- presence of any listed threatened or protected aquatic species or ‘critical habitat’ under the FM Act and EPBC Act.

C. Assessment of likely impacts
• indicate the location, nature and extent of habitat removal or modification (both direct and indirect) which may result from the proposed action;
• discuss the potential impact of the modification or removal of habitat (potential direct and indirect sources of impact are stated in the letter with this attachment).

Note: In defining the proposal area, discussion must be provided in regard to possible indirect effects of the proposal on species/habitats in the area surrounding the subject site: for example, through altered hydrological regimes, soil erosion or pollution.

D. Ameliorative measures
The environmental assessment should consider and provide detail on how the proposal has been or may be modified and managed to minimise impacts and conserve aquatic habitat on the subject site and in the study area.
ATTENTION: MS TERESA TING

13 June 2012

Dear Sir or Madam

ENQUIRY NO: TENQ12-08690W1
PACIFIC HIGHWAY HW10/WYONG ROAD MR335 INTERSECTION
AND APPROACHES UPGRADE AT TUGGERAH.

This property is not within a proclaimed Mine Subsidence District and is not subject to any building restrictions imposed by the Mine Subsidence Board.

The provisions of the Mine Subsidence Compensation Act cover any improvement erected on this land.

Yours faithfully

Tom Hole
District Manager
Minutes

Purpose of Meeting  Ausgrid Utilities Meeting Number 1

<table>
<thead>
<tr>
<th>Project</th>
<th>Pacific Highway &amp; Wyong Road Intersection and Approaches Upgrade</th>
<th>Project No</th>
<th>NB11462</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>Prepared By</th>
<th>Jimi Taylor</th>
<th>Phone No</th>
<th>+61 2 9032 1591</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Place of Meeting</th>
<th>RMS Office, Woy Woy</th>
<th>Date</th>
<th>28 February 2012</th>
</tr>
</thead>
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<table>
<thead>
<tr>
<th>Present</th>
<th>Jimi Taylor (JT)</th>
<th>SKM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teresa Ting (TT)</td>
<td>RMS</td>
<td></td>
</tr>
<tr>
<td>Wayne Armstrong (WA)</td>
<td>Ausgrid</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Distribution</th>
<th>All attendees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michael Collins</td>
<td>SKM</td>
</tr>
<tr>
<td>Rob Casimir</td>
<td>SKM</td>
</tr>
<tr>
<td>Scott Short</td>
<td>Ausgrid</td>
</tr>
</tbody>
</table>

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<tr>
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<tr>
<td>1) Introduction</td>
<td>JT and TT introduced themselves and their project roles. The current strategic layout and features of the project were presented by JT.</td>
</tr>
<tr>
<td>2) Review of Existing Services</td>
<td>General discussion comparing SKM information (DBYD and survey of existing utilities) and Ausgrid information (from internal database) was undertaken. Generally the information was consistent with no major differences identified. WA confirmed that future works proposed within the project area are as noted on Ausgrid plans. Future works which are potentially impacted by the project will be flagged for attention in the Ausgrid Design Information Pack. WA to provide JT with extra data (including depth) re: existing underground services from Ausgrid GIS database.</td>
</tr>
<tr>
<td>3) Design Criteria</td>
<td>WA commented that Ausgrid may request that the duplicate bridge design provides provision for future Ausgrid assets.</td>
</tr>
</tbody>
</table>

SINCLAIR KNIGHT MERZ

NB11462-AAA-MI-0005_A_Ausgrid Utilities Meeting 120228 Draft.doc
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Generally the <em>NSW Streets Opening Conference – Guide to Codes and Practices for Streets Opening</em> is applicable guideline for the relocation of Ausgrid assets. However, Ausgrid have detailed design specifications (Ausgrid Network Standards) which are available on the Ausgrid website and should be used as the first point of reference for design criteria.</td>
<td>Noted</td>
</tr>
<tr>
<td>4) Development of Concept Design</td>
<td></td>
</tr>
<tr>
<td>JT to provide TT with electronic copy of Application for Provision of Electricity Network Relocation for RMS sign-off.</td>
<td>JT 28/02/12</td>
</tr>
<tr>
<td>JT to issue completed Application for Provision of Electricity Network Relocation to Ausgrid to allow for engagement of Ausgrid services.</td>
<td>JT 29/02/12</td>
</tr>
<tr>
<td>WA informed that the $1700 fee associated with the Application for Provision of Electricity Network Relocation is a default fee and is generally applicable to small relocation works only. The payment of $1700 will ensure that an Ausgrid Contestable Project Controller is allocated to the project to start production of the Ausgrid Design Information Pack. However, it is highly likely that additional fees will apply prior to the provision of the final Design Information Pack due to the size of the project.</td>
<td>Noted</td>
</tr>
<tr>
<td>WA informed that approved Ausgrid relocation designs have a 12-month validity period. Should SKM/RMS wish to produce a relocation design for submission and approval to Ausgrid, a level 3 Service Provider would need to be engaged to undertake the design.</td>
<td>Noted</td>
</tr>
<tr>
<td>WA stated that Ausgrid personnel would be available to attend project coordination meetings. However further fees would apply above those required for provision of the Design Information Pack (partial cost recovery only).</td>
<td>Noted</td>
</tr>
</tbody>
</table>
Michael,

As previously identified, Ausgrid’s assets are located inside the proposed RMS scope of works for this project. In order to facilitate the relocation or augmentation of Ausgrid assets, a contestable project will need to be undertaken by the RMS with Ausgrid.

Information for the contestable process and Ausgrid’s requirements for this project have been issued to SKM in previous correspondence. Documentation provided, but not limited to, includes the following:

- Application for Provision of Electricity Network Connection Services
- Getting Connected to the Electricity Network Information Sheet
- ContestableConnectionorRelocationProcessflowchart
- Design Information

The design information already provided by Ausgrid expires in 12 months from the date of issue. Ausgrid will need to be contacted for further requirements and information if a Level 3 Authorised Service Provider (ASP) design has not been certified in this 12 month period or if the scope of the existing project changes.

Also any property issues related to existing or proposed Ausgrid easements will need to be addressed with the Ausgrid property group.

If you have any further questions or require additional copies of previously provided documentation, please don’t hesitate to contact me.

Kind regards

Scott, 

As you are aware, SKM is preparing a Concept Design and Review of Environmental Factors (REF) for the Pacific Highway and Wyong Road Intersection on behalf of Roads and Maritime Services (RMS).

On 6 June 2012, a formal consultation letter was mailed to you by Craig Leckie (RMS) in order to seek formal correspondence on the project to be included in the project REF. I would like to make it clear that the correspondence you have had with me (and
other SKM personnel) to date has been considered in the design, however this is a formal opportunity for Ausgrid to provide input into the project REF.

I have attached a copy of the letter for your convenience if by chance you have not yet received it.

I would also like to remind you that the closing date for submission is the 27 June 2012.

I am happy for you to reply to this email with your submission or alternatively you can contact the RMS Project Development Manager, Ms Teresa Ting, as mentioned in the attached letter.

Kind regards,

Michael Collins
Civil Engineer - Buildings & Infrastructure
Sinclair Knight Merz
100 Christie Street, St Leonards NSW 2065
T +61 2 9928 2344 M +61 4 5754 4968 F +61 2 9032 1355 E mcollins@globalskm.com
www.globalskm.com

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Minutes

Purpose of Meeting: Nextgen Utilities Meeting Number 1

Project: Pacific Highway & Wyong Road Intersection and Approaches Upgrade

Project No: NB11462

Prepared By: Jimi Taylor

Phone No: +61 2 9032 1591

Place of Meeting: Nextgen, Rosebury, NSW

Date: 20 March 2012

Present:

Jimi Taylor (JT) - SKM
Michael Collins (MC) - SKM
Gary Southwell (GS) - Nextgen

Distribution:

All attendees
Teresa Ting - RMS
Rob Casimir - SKM

<table>
<thead>
<tr>
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<td>1)</td>
<td></td>
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<tr>
<td></td>
<td><strong>Introduction</strong></td>
</tr>
<tr>
<td></td>
<td>JT and MC introduced themselves and their project roles.</td>
</tr>
<tr>
<td></td>
<td>The current strategic layout and features of the project were presented by MC.</td>
</tr>
<tr>
<td></td>
<td>MC is the utilities team leader for the project and is to be the main point of contact for all matters regarding the relocation of Nextgen assets. JT is to be cc’d into all communications.</td>
</tr>
<tr>
<td>2)</td>
<td><strong>Review of Existing Services and Proposed Works in Project Area</strong></td>
</tr>
<tr>
<td></td>
<td>General discussion comparing SKM information (DBYD and survey of existing utilities) and Nextgen information (from internal database) was undertaken. Generally the information was consistent with no major differences identified.</td>
</tr>
<tr>
<td></td>
<td>Noted</td>
</tr>
<tr>
<td></td>
<td>It appears that all Nextgen assets are located beyond the limit of works for the project. However, it is noted that there is a Nextgen asset crossing the Pacific Highway at the intersection with Anzac Road which is very close to the project limit of works. Further survey to pick up the location of this asset has been requested from RMS.</td>
</tr>
<tr>
<td></td>
<td>Noted</td>
</tr>
<tr>
<td></td>
<td>GS informed that the Nextgen service runs in the vicinity of the project area and is the inter-capital trunk fibre network. Any relocation of this asset is likely to require replacement between node points on the fibre. As node points are approx 5-10km apart, relocation of the network would be complicated and expensive.</td>
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<td></td>
<td>Noted</td>
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### Item

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<td>Noted</td>
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</table>

**GS noted that all Nextgen assets in the vicinity of the project works are located in Telstra ducts (Nextgen lease the ducts from Telstra).**

**GS can provide accurate As-Built data to SKM for information (no depths noted on As-Builts). As-Built survey is located using GPS (undertaken between 2002 – 2005). MC to contact GS with details of the preferred file format for this data.**

**MC 27/03/12**

**GS informed that 24 hour access to all Nextgen services is a requirement and must be considered during construction staging.**

**GS informed that (at this stage) there are no future works proposed within the project area.**

**3) Design Criteria**

As all Nextgen assets in the vicinity of the project are in ducts leased from Telstra, Telstra will dictate the criteria for the relocation of assets. Telstra will liaise directly with Nextgen to ensure that any additional requirements Nextgen may have are allowed for in any relocation designs which impact Nextgen assets.

**4) Development of Concept Design**

GS confirmed that SKM do not need to directly liaise with Nextgen regarding input into the concept designs for the relocation of their assets.

However GS requested that he be kept up to date with the progress of the design and that SKM provide him with concept design drawings for his information.

GS confirmed that he would be interested in attending any Service Coordination Group Meetings (in addition to Telstra representatives) held during the development of the concept design so that he can stay up to date with the project.
Michael,

As per our phone conversation I have reviewed the attachment from your original email, I believe all the information we discussed at our previous meeting is reflected in this document.

If you require additional information don’t hesitate to contact me thanks Michael.

Regards
Gary Southwell
Field Technical Manager
Nextgen Networks

---

From: Collins, Michael (SKM) [mailto:MCollins@globalskm.com]
Sent: Monday, 25 June 2012 2:25 PM
To: Southwell, Gary
Cc: Taylor, Jimi (SKM); Vazey, Rachel (SKM); NB11462 (SKM)
Subject: Contract No. 11.2911.1603 : Pacific Highway & Wyong Road Intersection and Approaches Upgrade - Service Authority Consultation

Gary,

As you are aware, SKM is preparing a Concept Design and Review of Environmental Factors (REF) for the Pacific Highway and Wyong Road Intersection on behalf of Roads and Maritime Services (RMS).

On 6 June 2012, a formal consultation letter was mailed to you by Craig Leckie (RMS) in order to seek formal correspondence on the project to be included in the project REF. I would like to make it clear that the correspondence you have had with me (and other SKM personnel) to date has been considered in the design, however this is a formal opportunity for Nextgen to provide input into the project REF.

I have attached a copy of the letter for your convenience if by chance you have not yet received it.

I would also like to remind you that the closing date for submission is the 27 June 2012.
I am happy for you to reply to this email with your submission or alternatively you can contact the RMS Project Development Manager, Ms Teresa Ting, as mentioned in the attached letter.

Kind regards,

Michael Collins  
Civil Engineer - Buildings & Infrastructure  

Sinclair Knight Merz  
100 Christie Street, St Leonards NSW 2065  
T +61 2 9928 2344 M +61 4 5754 4968 F + 61 2 9032 1355 E mcollins@globalskm.com

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Minutes

Jemena Utilities Meeting Number 1

Project | Pacific Highway & Wyong Road Intersection and Approaches Upgrade | Project No | NB11462
---|---|---|---

Prepared By | Michael Collins | Phone No | +61 2 9928 2344
---|---|---|---
Place of Meeting | Jemena Head Office – Olympic Park | Date | 01 March 2012
---|---|---|---

Present | Jimi Taylor (JT) | SKM
---|---|---
| Michael Collins (MC) | SKM
| Tara McTaggart (TT) | Jemena
---|---|---|---

Distribution | All attendees
---|---
| Teresa Ting | RMS
| Rob Casimir | SKM
---|---|---|---

**Item** | **Action By/Date**
---|---
1) **Introduction** | 
JT and MC introduced themselves and their project roles.
The current strategic layout and features of the project were presented by JT.

2) **Review of Existing Services** | 
General discussion comparing SKM information (DBYD and survey of existing utilities) and Jemena information (from internal database) was undertaken. TT noted that generally the information was consistent with no major differences identified.

TT confirmed that there are no future works proposed within the project area.

Generally, gas lines in the area will not be greatly affected by the proposed works.

There is one gas line of concern which will need to be looked at in more detail, namely the 110mm Polyethylene one way fed line which crosses Wyong Road at the intersection with Bryant Ave. Proposed pavement excavation and longitudinal drainage may clash with this line. MC to forward information on depth of excavation and drainage design in this area to TT once information becomes available.

There are two other gas lines which need to be noted during Concept Design phase namely; MC 02/4/12

**SINCLAIR KNIGHT MERZ**
### Secondary gas line on the north side of Anzac Road at the intersection with Pacific Highway.
This pipe (being secondary line) will be difficult to relocate however it currently appears to be located outside the Limit of Works (it is suggested that line is located with survey to confirm). If Limit of Works change and impact on asset is likely, TT to be notified early to discuss possible options.

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A 110mm Polyethylene gas line running on western side of Gavenlock Road and the 150mm secondary pipe on the north side of Anzac Road both cross the intersection at Pacific Highway, Cobbs Road and Gavenlock Road. Both lines currently appear to be located outside the Limit of Works (it is suggested that line is located with survey to confirm). If Limit of Works change and impact on asset is likely, TT to be notified early to discuss possible options.

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### Design Criteria

TT to provide Jemena Construction Notes relevant to affected assets to MC/JT for reference.

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TT confirmed that the criteria documented in the *NSW Streets Opening Conference – Guide to Codes and Practices for Streets Opening* is generally consistent with information in Jemena Construction Notes (however it was noted that this document is strictly a *guide*).

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Generally minimum 300mm cover is required to Jemena assets.

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TT informed that Jemena undertake all relocation designs in house.

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TT informed that Jemena do not undertake the design of asset protection (e.g. concrete encasement) in house. Should asset protection be required SKM will need to produce a design to be certified by Jemena.

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### Development of Concept Design

TT confirmed she will be the main point of contact for any queries re: Jemena asset relocation/protection requirements. TT is able to attend coordination meetings as required, provided that suitable notice is given.

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Afternoon Michael

Please see below correspondence with my Design Department to confirm that there is currently no planned network expansion/upgrades in the area and that they confirm the previously discussed areas of impacts as identified in our meeting notes extract below:

2) Review of Existing Services

General discussion comparing SKM information (DBYD and survey of existing utilities) and Jemena information (from internal database) was undertaken. TT noted that generally the information was consistent with no major differences identified.

TT confirmed that there are no future works proposed within the project area.

Generally, gas lines in the area will not be greatly affected by the proposed works 

There is one gas line of concern which will need to be looked at in more detail, namely the 110mm Polyethylene one way fed line which crosses Wyong Road at the intersection with Bryant Ave. Proposed pavement excavation and longitudinal drainage may clash with this line. MC to forward information on depth of excavation and drainage design in this area to TT once information becomes available.

There are two other gas lines which need to be noted during Concept Design phase namely;

Secondary gas line on the north side of Anzac Road at the intersection with Pacific Highway. This pipe (being secondary line) will be difficult to relocate however it currently appears to be located outside the Limit of Works (it is suggested that line is located with survey to confirm). If Limit of Works change and impact on asset is likely, TT to be notified early to discuss possible options.

A 110mm Polyethylene gas line running on western side of Gavenlock Road and the 150mm secondary pipe on the north side of Anzac Road both cross the intersection at Pacific Highway, Cobbs Road and Gavenlock Road. Both lines currently appear to be located outside the Limit of Works (it is suggested that line is located with survey to confirm). If Limit of Works change and impact on asset is likely, TT to be notified early to discuss possible options.

Do you require any additional correspondence or requirements from us for inclusion in your REF than this?
Hi Tara,

The affected mains from this upgrade have been identified in the RMS scope – which is the 110mm PE one way feed at the intersection of Wyong road and Bryant Ave. This main will require bypasses to maintain supply during the upgrade. All secondary pipelines have been confirmed to be outside of the scope of works – however if this happens to change, a relocation of mains will be required. No upgrades of pipelines are currently foreseen.

Regards,

Mani Dhanrajani
Graduate Engineer
Engineering Strategy and Planning
Jemena

From: Dhanrajani, Manisha
Sent: Tuesday, 26 June 2012 3:35 PM
To: McTaggart, Tara
Subject: RE: Contract No. 11.2911.1603 : Pacific Highway & Wyong Road Intersection and Approaches Upgrade - Service Authority Consultation

hi Mani,
can you have a look at our future infrastructure needs for this location?
Thanks
Veronica

Veronica Wieckowski
Lead Engineer Capacity Planning
Engineering Strategy and Planning
Jemena

From: Wieckowski, Veronica
Sent: Monday, 25 June 2012 5:06 PM
To: Dhanrajani, Manisha
Cc: Chawa, Richard; Kirigin, Boris; McTaggart, Tara
Subject: FW: Contract No. 11.2911.1603 : Pacific Highway & Wyong Road Intersection and Approaches Upgrade - Service Authority Consultation

hi Mani,
can you have a look at our future infrastructure needs for this location?
Thanks
Veronica

Veronica Wieckowski
Lead Engineer Capacity Planning
Engineering Strategy and Planning
Jemena

From: McTaggart, Tara
Sent: Monday, 25 June 2012 2:46 PM
To: Wieckowski, Veronica; Kirigin, Boris
Subject: FW: Contract No. 11.2911.1603 : Pacific Highway & Wyong Road Intersection and Approaches Upgrade - Service Authority Consultation
Guys and gals

Just need to know if we have any future network development in this area and the timeframe to it???

Regards,

Tara McTaggart | Project Officer
Jemena

“Vital Service… Vital Planet…”

From: Collins, Michael (SKM) [mailto:MCollins@globalskm.com]
Sent: Monday, 25 June 2012 2:17 PM
To: McTaggart, Tara
Cc: Taylor, Jimi (SKM); NB11462 (SKM); Vazey, Rachel (SKM)
Subject: Contract No. 11.2911.1603 : Pacific Highway & Wyong Road Intersection and Approaches Upgrade - Service Authority Consultation

Tara,

As you are aware, SKM is preparing a Concept Design and Review of Environmental Factors (REF) for the Pacific Highway and Wyong Road Intersection on behalf of Roads and Maritime Services (RMS).

On 6 June 2012, a formal consultation letter was mailed to you by Craig Leckie (RMS) in order to seek formal correspondence on the project to be included in the project REF. I would like to make it clear that the correspondence you have had with me (and other SKM personnel) to date has been considered in the design, however this is a formal opportunity for Jemena to provide input into the project REF.

I have attached a copy of the letter for your convenience if by chance you have not yet received it.

I would also like to remind you that the closing date for submission is the 27 June 2012.

I am happy for you to reply to this email with your submission or alternatively you can contact the RMS Project Development Manager, Ms Teresa Ting, as mentioned in the attached letter.

Kind regards,

Michael Collins
Civil Engineer - Buildings & Infrastructure

Sinclair Knight Merz
100 Christie Street, St Leonards  NSW  2065
T  +61 2 9928 2344  M  + 61 4 5754 4968  F  + 61 2 9032 1355  E  mcollins@globalskm.com

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<tr>
<td>1)  Introduction</td>
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JT and MC introduced themselves and their project roles.

The current strategic layout and features of the project were presented by MC.

MC is the utilities team leader for the project and is to be the main point of contact for all matters regarding the relocation of Optus assets. JT is to be cc’d into all communications.

2)  Review of Existing Services and Proposed Works in Project Area | Noted |

General discussion comparing SKM information (DBYD and survey of existing utilities) and Optus information (from internal database) was undertaken. Generally the information was consistent with no major differences identified.

One potential impact on the Optus network was identified where an Optus Optic Fibre crosses beneath Wyong Road just to the east of the intersection with Reliance/Bryant Drive. BG confirmed that the optic fibre in question was not a major cable and no obvious issues with relocation of this asset were apparent at this early stage.

The only other Optus asset in the vicinity of the works crosses the Pacific Highway at Anzac Road in a shared trench with Telstra. This asset is thought to be clear of the limit of works however survey pick-up of this asset has been requested from RMS.
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<td>BG noted that Optus can provide As-Built drawings for their services to SKM. SKM to contact Sue Devenyns (<a href="mailto:sue.devenyns@optus.com.au">sue.devenyns@optus.com.au</a>) to request this information.</td>
<td>MC 26/03/12</td>
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<tr>
<td>BG will issue an email to the Optus fibre planning department (Len Powell- Fibre planner – <a href="mailto:len.powell@optus.com.au">len.powell@optus.com.au</a>) to alert them to the proposed works in the area. Len will then provide information regarding any additional Optus infrastructure currently scheduled to be laid in the project area. BG will forward any details onto MC for information.</td>
<td>BG 02/04/12</td>
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3) **Design Criteria**

BG confirmed that generally Optus design criteria is consistent with the guidelines laid out in the *NSW Streets Opening Conference – Guide to Codes and Practices for Streets Opening.*

BG provided the following general design criteria that apply to Optus assets:

- Standard depth of Optus assets is approximately 1m below finished surface level
- A minimum of 600mm cover is required to Optus assets
- Should cover fall in the range of 600-300mm concrete encasement will be considered as an alternative to lowering/relocation.
- Should cover to an Optus asset be less than 300mm lowering/relocation of the asset will be required.

4) **Development of Concept Design**

BG confirmed that he would be interested in taking part in Services Coordination Group meetings to aid in the development of the design.

BG noted that there is no formal Optus submission process for concept designs.
Michael

The minutes have covered the Optus design criteria in section 3. Please pass my details onto RMS and their contractor, for any relocation or protection works required to Optus assets, they can also email dartnsw@optus.com.au if I am not contactable

Regards

Robert George, Optus Project Engineer, Damage and Relocation Team | NSW Customer Assurance | t: +61 2 808 75611 | f: +61 2 808 75613 | m: +61 (0) 411117711

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-----Original Message-----
From: Collins, Michael (SKM) [mailto:MCollins@globalskm.com]
Sent: Monday, 25 June 2012 2:28 PM
To: Robert George
Cc: Taylor, Jimi (SKM); Vazey, Rachel (SKM); NB11462 (SKM)
Subject: Contract No. 11.2911.1603 : Pacific Highway & Wyong Road Intersection and Approaches Upgrade - Service Authority Consultation

Robert,

As you are aware, SKM is preparing a Concept Design and Review of Environmental Factors (REF) for the Pacific Highway and Wyong Road Intersection on behalf of Roads and Maritime Services (RMS).

On 6 June 2012, a formal consultation letter was mailed to you by Craig Leckie (RMS) in order to seek formal correspondence on the project to be included in the project REF. I would like to make it clear that the correspondence you have had with me (and other SKM personnel) to date has been considered in the design, however this is a formal opportunity for Optus to provide input into the project REF.

I have attached a copy of the letter for your convenience if by chance you have not yet received it.

I would also like to remind you that the closing date for submission is the 27 June 2012.

I am happy for you to reply to this email with your submission or alternatively you can contact the RMS Project Development Manager, Ms Teresa Ting, as mentioned in the attached letter.

Kind regards,

Michael Collins
Civil Engineer - Buildings & Infrastructure
Sinclair Knight Merz
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Minutes

Telstra Utilities Meeting Number 1

Purpose of Meeting

Project
Pacific Highway & Wyong Road Intersection and Approaches Upgrade

Project No
NB11462

Prepared By
Michael Collins
Phone No
+61 2 9928 2344

Place of Meeting
Telstra Head Office - Parramatta
Date
20 February 2012

Present
Jimi Taylor (JT)
Michael Collins (MC)
Mark Schneider (MS)

SKM
Telstra

Distribution
All attendees
Damien Bonser

Telstra

Item | Action By/Date
--- | ---
1) Introduction
JT and MC introduced themselves and their project roles.
The current strategic layout and features of the project were presented by JT.

2) Review of Existing Services
A comparison of SKM information (DBYD and survey pick up of existing utilities) and Telstra information (from Telstra internal database) was undertaken. Generally the information was consistent with no major differences identified.

Generally MS noted that there appeared to be no significant problems associated with the required relocations at this early stage.

Points of note included:
- Sydney to Brisbane Optic Fibre runs along Anzac Road, crosses railway then down Bryant Road. This cable is outside the scope of works
- Main network cable that runs parallel to the railway on the east side of the corridor (in vicinity of existing bridge) has elevated joints. Access to these joints must be maintained. This should be noted during design of bridge duplication. MS informed that there are no formal specifications/drawings detailing access requirements to such joints and SKM should simply ensure that the final design provides the same degree of access as is currently available.

Noted
Lessons Learnt Workshop
10 January 2012

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<td>- Main network cables (CC network) crossing beneath roadways may require protection/relocation.</td>
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3) Design Criteria

MS confirmed that the criteria documented in the *NSW Streets Opening Conference – Guide to Codes and Practices for Streets Opening* would be applicable for Telstra relocation design for this project.

MS confirmed the following parameters for Telstra road crossings:
- Cable must be minimum 300mm below base of finished subgrade level.
- If cable is located between 300mm and 600mm below base of finished subgrade level - protection assessment is required (typically concrete encased).
- If cable is greater than 600mm below base of finished subgrade level, additional protection is not required.

Noted

4) Development of Concept Design

JT/MC/MS discussed the process for progression through to a Telstra approved concept relocation design.

A Telstra Impact Study must first be produced and then a concept design must be developed and approved by Telstra.

MS noted that Telstra are able to undertake the concept design directly but this would be a lower priority item than delivery of detailed designs for other projects.

MS presented two options re: development of concept design for consideration:

1. Engage Telstra directly. Telstra will be able to undertake the works but will have limited availability for participation in coordination exercises/responding to queries.

2. Engage a subcontractor to produce the Impact Study and Concept Design for submission to Telstra and subsequent approval. MS to provide details of CJ Pty Ltd for consideration. Benefit would be lower cost and increased availability of sub-contractor to engage in coordination exercises. MS noted that development of concept designs in this way is now common practice and does not pose any approval risks.

MS to provide quote for Telstra to undertake concept design of relocations. MS – 27/02/12

MS to send through contact details of CJ Pty Ltd. MS – 27/02/12