



**Planning &
Infrastructure**

***MODIFICATION REQUEST:
Pacific Highway Upgrade
Tintenbar to Ewingsdale
Extension of Construction Hours***



Director-General's
Environmental Assessment Report
Section 75W of the
Environmental Planning and Assessment Act 1979

December 2013

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EXECUTIVE SUMMARY

The Pacific Highway Upgrade – Tintenbar to Ewingsdale Project (07_0051) was approved by the then Minister for Planning in January 2010 under Part 3A of the *Environmental Planning and Assessment Act 1979* (the EP&A Act). The approved project, referred to as the Tintenbar to Ewingsdale section of the Pacific Highway upgrade, is approximately 16.3 km in length, starting at the northern end of the Ballina Bypass at Ross Lane and extending to the Ewingsdale interchange.

The project is being delivered in two stages. The first stage, the tie-in with the Ballina Bypass at Ross Lane, was opened to traffic in March 2011. Construction of the second stage commenced in September 2012 and is expected to be completed in the second half of 2014.

The Roads and Maritime Services (RMS) has submitted a modification request (07_0051 MOD 7) under section 75W of the EP&A Act to modify the approved construction hours for the project as specified in the Minister's condition of approval 2.12. The modification application includes the following extension of construction hours:

- Currently approved hours of 7am to 6pm Mondays to Fridays to extend to 6.30am to 7.00pm;
- Currently approved hours of 8am to 1pm Saturdays to extend to 7am to 4pm; and
- Currently no work is permitted on Sundays or public holidays, to remain unchanged.

The proposal is required to offset lost construction time due to wet weather that occurred in mid-2013. The overarching benefit of the proposal would be the completion of construction works approximately 4.2 months earlier than is enabled by the current construction schedule.

The Proponent has assessed potential impacts that would result from the extended hours and has identified local noise, air quality and traffic impacts would arise over an 18 month period, including exceedences of the Interim Construction Noise Guideline (ICNG) at residences along the road easement. The Proponent has proposed to manage impacts through implementation of mitigation measures in the approved project Construction Environmental Management Plan (CEMP) and sub-plans. Further, the Proponent has prepared a Communications Strategy for Modification Request for an Extension to Working Hours (CSMREWH) to govern community consultation and the communication of appropriate mitigation measures in relation to the proposal.

The Department placed the modification request on its website. No submissions were received from the general public. The Department also referred the modification request to the Environment Protection Authority (EPA) who raised concern to the proposal given the predicted noise exceedence impacts at residential properties. The Proponent's use of buffer zones has been considered by the Department to be suitable to offset certain noise and dust impacts at residential receivers.

The Department has undertaken a comprehensive assessment of the modification request and considers the modification to be acceptable as a three-month trial period, subject to conditions which limit the extended morning construction hours to Saturdays only. Monthly complaints and compliance reporting requirements have also been stipulated.

The Department is satisfied that the modification request is justified as it would enable road safety benefits to be realised sooner and therefore has recommended its approval, subject to conditions.

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1. BACKGROUND

The Pacific Highway Upgrade – Tintenbar to Ewingsdale Project (07_0051) was approved by the then Minister for Planning in January 2010 under Part 3A of the *Environmental Planning and Assessment Act 1979* (the EP&A Act). The approved project, referred to as the Tintenbar to Ewingsdale section of the Pacific Highway upgrade is approximately 16.3 km in length, starting at the northern end of the Ballina bypass at Ross Lane and extending to the Ewingsdale interchange.

The project is being delivered in two stages. The first stage, the tie-in with the Ballina bypass at Ross Lane, was opened to traffic in March 2011. Construction of the second stage commenced in September 2012 and is expected to be completed in the second half of 2014.

The project location and layout is shown in **Figure 1**.



Figure 1 Project location (Source: EA — Arup 2008)

The project traverses mostly rural land uses between Tintenbar and Ewingsdale. However the project runs in close proximity to Bangalow and Ewingsdale townships. The Project is designed to separate local traffic and highway traffic by providing a continuous alternative local road link.

Key components of the approved project include:

- Four-lane divided carriageways (two lanes each way), with a wide median allowing for the future addition of a third lane in each direction;
- Six twin bridges and four underpasses allowing roads and creeks to pass underneath the upgrade;
- Two bridges carrying local roads over the upgrade;
- Twin parallel tunnels under St Helena ridge (one tunnel for each carriageway). The tunnels would each be approximately 434 metres long and approximately 45 metres below St Helena Road;
- Construction of a Tunnel Control Centre (TCC) associated with the St Helena tunnels; and
- Retention of the existing highway for local and regional traffic.

The project has been modified six times as follows:

- MOD 1 (July 2010) to extend the construction hours for the tie-in with the Ballina bypass;
- MOD 2 (November 2010) to modify the definition of construction to permit certain pre-construction activities;
- MOD 3 (November 2012) to modify the definition of an ancillary facility and the approval process for minor ancillary facilities;
- MOD 4 (November 2012) to make changes to condition 2.22 in regards to heritage site H29 and H39;
- MOD 5 (March 2013) to modify the blasting hours, airblast overpressure and ground vibration levels for works at the St Helena hill tunnel; and
- MOD 6 (April 2013) to allow construction and operation of a tunnel control centre at the St Helena tunnel.

2. PROPOSED MODIFICATION

2.1 Modification Description

The RMS (the Proponent) has submitted a request (07_0051 MOD 7) under section 75W of the EP&A Act for extension of construction hours for the remainder of construction of the project in order to reduce the overall duration of construction works until completion. The Proponent has determined that this extension of construction hours would enable the overall construction works to be completed 4.2 months earlier than would otherwise be expected, and therefore enable overall project benefits, primarily in terms of road safety to be realised sooner.

The Pacific Highway Upgrade – Tintenbar to Ewingsdale Project was initially expected to be completed in the second half of 2014. However, according to information provided by the Proponent, since the commencement of substantial construction on 24 September 2012 high wet weather incidents have delayed progress. The Proponent reported that a total of 112.5 days out of an available 199 working days (or 57%) up to end-July 2013 were lost due to wet weather. Based on 'normal' weather patterns, a further 90 to 120 days could be expected to be lost between now and the construction completion date. Therefore, the modification application aims to mitigate this lost time by extending approved construction hours to enable the achievement of key milestones and timely delivery of the project.

The MCoA currently states the following:

2.12 Construction activities associated with the project shall only be undertaken during the following hours:

- (a) 7:00 am to 6:00 pm, Mondays to Fridays, inclusive;
- (b) 8:00 am to 1:00 pm on Saturdays; and
- (c) at no time on Sundays or public holidays.

Notwithstanding the above, construction activities are permitted between the hours of 7:00am and 4:00pm on Saturdays between chainages 134810 and 136000, and including the operation of the Cumbalum and Ross Lane ancillary facilities for Stage 1.

This condition does not apply to:

- (i) any works that do not cause construction noise to be audible at any sensitive receiver; or
- (ii) for delivery of materials required outside these hours by the police or other authorities for safety reasons; or
- (iii) where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm.

The modification application seeks to make the following changes:

Table 1: Modification 7 Extension of Construction Hours

| Currently Approved Construction Hours | Modification Application |
|---------------------------------------|---------------------------------------|
| Mondays to Fridays 7am to 6.00pm | Mondays to Fridays 6.30am to 7.00pm |
| Saturdays 8.00am to 1.00pm | Saturdays 7.00am to 4.00pm |
| No work on Sundays or public holidays | No work on Sundays or public holidays |

The modification application does not seek to change the wording of conditions 2.12(i), 2.12(ii) or 2.12(iii).

The proposed extension of construction hours would maximise the use of daylight hours, specifically the longer daylight hours available during the months of October to March. The modification application seeks to maximise the construction schedule efficiency and ensure project timing milestones are achieved.

Limitations on the proposed extended construction hours to minimise any environmental impact include, but are not limited to the following measures:

- restrictions on the type and timing of high noise and vibration generating activities within 300m of sensitive receivers who have previously lodged an objection to the proposal. The modification request states that clearing and grubbing, topsoil strip and stockpiling, crushing, screening and sheet piling would not be conducted within 300m of these sensitive receivers;
- no extended construction hours of work that generates noise or vibration above background levels within a 100 metre buffer of a colony of Myotis Fishing Bats, the Emigrant Creek Culvert or any other identified roosting site, in accordance with the project approved Flora and Fauna Management Sub-plan (FFMSP);
- no work within 100 metres of Emigrant Creek Culvert or any other identified roosting site during the period 30 minutes prior to and following published sunset times and maintenance of flyways at all times; and
- this modification request does not extend to the St Helena tunnel construction works which will continue to be undertaken in accordance with the existing project schedule.

It is proposed to undertake the extended construction hours in accordance with the approved Construction Environmental Management Plan (CEMP) and Community Consultation Strategy. The Proponent has prepared a Communications Strategy for Modification Request for an Extension to Working Hours (CSMREWH) for community consultation measures of the proposal. In addition, the existing complaints management procedure managed by the project team would continue to operate.

A key driver for the overall project is improved road safety. Since the start of substantial construction, in excess of eight serious traffic accidents and four fatalities have reportedly occurred within this length of the existing Pacific Highway. Earlier completion of the project would allow the full spectrum of socio-economic, environmental and road safety outcomes of the project to be realised as soon as possible.

3. STATUTORY CONTEXT

3.1 Modification of the Minister's Approval

In accordance with clause 3 of schedule 6A of the Act, section 75W of the Act as in force immediately before its repeal on 1 October 2011 and as modified by schedule 6A, continues to apply to transitional Part 3A projects.

Section 75W of the Act provides that a Proponent may request the Minister to modify the approval of a transitional Part 3A project. The Minister's approval is not required if the project, as modified, will be consistent with the original approval. The subject modification is not consistent with the approval, but does not constitute a project in its own right, and therefore a modification in accordance with section 75W of the Act is considered appropriate.

3.2 Delegated Authority

An application to modify a transitional Part 3A project approval may be determined by the Director, Infrastructure Projects of the Department of Planning and Infrastructure under delegation from the Minister for Planning and Infrastructure, dated 14 September 2011, where the local council does not object, a political disclosure statement has not been made in relation to the application, and less than 10 objections are received. This proposed modification meets the terms of this delegation, and may be determined by the Director, Infrastructure Projects.

4. CONSULTATION AND SUBMISSIONS

4.1 Exhibition

Under Section 75X(2)(f) of the Act, the Director General is required to make the modification request publicly available. Accordingly, the Department placed a copy of the modification request on its website. The Department also referred the modification request to the Environment Protection Authority (EPA).

No submissions were received by the Department from the general public or interest groups. One submission was received from the EPA who provided comments in response to the Department's referral.

The **EPA** raised concern with the proposal and noted that the issues raised previously have not been adequately addressed to date. The EPA raised issues concerning predicted noise exceedences at residential properties, use of tailored mitigation measures, restricting high noise impact activities to certain areas and suggestion of a 3-month trial period and approval of certain activities. The EPA also recommended conditions of approval, should the Department approve the modification application.

Additionally, the Department notes that the Proponent has undertaken a program of consultation with project stakeholders including directly affected residents, the broader community and agencies during preparation of the application. Consultation activities by the Proponent have included:

- mail-outs containing a feedback form to 2351 potentially affected households and businesses;
- telephone briefings to key organisations followed by a community information session held on 25 June 2013 (advertised in media releases);
- notices to the project data base and website updates; and
- use of a Variable Message Signs on the Pacific Highway.

The Department notes that 12.34% of the households responded to the mail-out feedback form and the vast majority of respondents were located in Bangalow. Objections were received by the Proponent by 41 residences and businesses. The main issues raised by respondents included a potential increase in noise, vibration, traffic, dust and lifestyle impacts in the short term impacts, if unmitigated.

The Proponent also presented the modification application to environmental review group (ERG) meeting on 27 February 2013 and discussed its details in subsequent meetings. The Department notes that members of the ERG for the project, including EPA, Rous Water, Department of Primary Industries, and Byron Shire Council have been provided the opportunity to review and comment on the proposal, during development of the proposal and the draft modification request.

5. ASSESSMENT

5.1 Noise and vibration

Noise

Based on noise monitoring and impact assessment undertaken for the Environmental Assessment, the Proponent conducted a further noise impact assessment was conducted in relation to the proposed extended construction hours modification application. Noise-generating activities were divided into three types as follows:

- Type 1: Activities with a sound power level of 116 to 120 dB(A), equivalent to 91 to 95 dB(A) at 7 metres;
- Type 2 Activities with a sound power level of 111 to 115 dB(A), equivalent to 86 to 90 dB(A) at 7 metres; and
- Type 3 Activities with a sound power level of less than 110 dB(A), equivalent to less than 85 dB(A) at 7 metres.

The Proponent used noise contours of Types 1, 2 and 3 activities as guidance to estimate noise-generating construction impacts during the proposed extended hours. Contours corresponding to noise emissions at the upper end of each source type (i.e. 120dB(A) sound power for Type 1, 115 dB(A) sound power for Type 2, and 110 dB(A) for Type 3) were mapped and found that relevant Interim Construction Noise Guideline (ICNG) management level across noise catchment areas are expected to be exceeded for evening and night time periods due to the extended working hours. This took into consideration buffer zones for work as defined in the approved project FFMSP at Emigrant Creek.

The noise impact assessment also considered 'shoulder periods' on the basis that the proposed extended construction hours would actually occur at the border between night/day and day/evening periods, as opposed to midnight hours. The ICNG refers to the Industrial Noise Policy (INP) (NSW EPA 2000) which states that exceedences of shoulder period background noise levels (ie. 5am-7am) may be assessed using a mid-point value between the rating background levels of the two assessment periods on either side of the shoulder

period. This assessment methodology was applied for the proposal and it was determined that while fewer exceedences would occur, there still would be exceedences of evening and night time noise levels during shoulder periods across the noise catchment areas. This is the case for Type 1, 2 and 3 activities.

The Proponent stated that a substantial proportion of activities conducted during the extended construction hours would be primarily start-up activities such as plant warm-up and site cleanup activities, vehicle and machinery refuelling and maintenance and sealing of working areas as well as other low noise generating activities. Concrete pouring is included in this list. However the Department notes that this list of low-noise generating activities is not consistent with the proposed activities provided in the modification application document within 300 metres of residences who have lodged an objection to the modification. Furthermore, concrete pouring is not considered to be necessarily a low-noise generating activity. Therefore, the Department's consideration is based upon the proposed list of activities in **Table 2**, which includes the following:

Table 2 Proposed activities to be conducted within extended hours

| Activity proposed across project area during the extended hours | Exceptions within 300 meters buffer zone of residences which lodged objection |
|--|--|
| Fencing | |
| Sediment Basin Construction | |
| Clearing and Grubbing | Not proposed in buffer zones |
| Topsoil strip/Stockpile | Not proposed in buffer zones |
| Foundations Rip and Recompact | Not proposed in buffer zones |
| Foundations Bridging | |
| Earthworks Prelim/Prep Creeklines and Hillside Terracing | 1pm-4pm Saturdays only in buffer zones |
| Cross Drainage | 1pm-4pm Saturdays only in buffer zones |
| Earthworks Cut | |
| Earthworks Fill | |
| Crushing and Screening | Not proposed in buffer zones |
| Cut Foundation | |
| Pavement Drainage | |
| Select Placement | |
| Pavement Works | |
| Working Platform construction (including sheet piling) | Not proposed in buffer zones |
| Bored piling | 1pm-4pm Saturdays only in buffer zones |
| Pile trimming | 1pm-4pm Saturdays only in buffer zones |
| Pile caps construction | |
| Pier construction | |
| Abutments construction | |
| Steel girder erection | |
| Site welding | |
| Girders installation | |
| Deck construction | |
| Barrier construction | |

The Proponent has stated that the predicted noise impacts would occur for 18 months and considers this to be a short term time frame in relation to the operational duration of the approved project. The proposed extended construction hours would allow for faster completion of the overall project and therefore would minimise the longevity of noise impacts of the overall project.

Further to the above, the Proponent has noted that working hour restrictions exist in relation to activities within 100 metres of a colony of Myotis Fishing Bats (*Myotis macropus*) which exist within an existing highway culvert at Emigrant Creek as detailed within the approved Project Flora and Fauna Management Sub-Plan (FFMSP). In relation to works during the proposed extended hours, works that would create noise or vibration above background levels would not occur within a 100 metre buffer of the Emigrant Creek Culvert or any other identified roosting site. In addition, no works may be undertaken within a minimum of 100 metres of Emigrant Creek Culvert or any other identified roosting site during the period of 30 minutes prior to and following the published sunrise time and for the period of 30 minutes prior to and following the published sunset time and flyways must be maintained at all times.

The Proponent has established a range of mitigation measures for managing noise impact during the proposed extended construction in accordance with the project approved Noise and Vibration Management Sub-Plan (NVMS). These include the following:

- installation of noise mitigation measures such as at-residence mitigation, temporary high noise hoarding and permanent landscaped earth mound and noise barriers/screens for properties prior to the commencement of construction;
- implementation of 300 metre buffer zones for residences who have lodged an objection and limitations on construction work within these buffer zones, as detailed in **Table 2** above;
- provision of respite periods in accordance with the approved project NVMS;
- additional noise monitoring at receivers in response to any complaints received; and
- additional consultation with directly affected residents to discuss potential mitigation measures.

Vibration

In relation to vibration impacts, the Proponent referred to vibration modelling that was conducted as part of the project Noise and Vibration Impact Assessment. Continuous and impulsive vibration levels were assessed in relation to the proposed extended construction hours based on the Department of Environment and Conservation (DEC) *Assessing Vibration: a Technical Guideline (AVTG)* for daytime and night time levels.

The project approval includes two sets of criteria to control the vibration impacts of blasting from the project: airblast overpressure and ground vibration/peak particle velocity criteria. Airblast overpressure limits are intended to protect human comfort and annoyance due to blasting, and are based on guidelines prepared by the Australian and New Zealand Environment and Conservation Council (ANZECC) for the assessment of blasting impacts. Peak particle velocity (PPV) ground vibration limits are specified to protect structures from damage from ground movement following blasting, and are based on the ground vibration levels recommended by *AS 2187.2-2006 Explosives — Storage and use (AS 2187.2-2006)* for assessment of damage to buildings. Together, these criteria specify the maximum permissible vibration impacts at sensitive receivers. The criteria are shown in **Table 3**.

Table 3 Approved standard blasting criteria (conditions 2.17 and 2.18)

| Condition 2.17 Airblast Overpressure (dBL) | Condition 2.18 Ground Vibration—Peak particle velocity (mms⁻¹) | Conditions 2.17 and 2.18 Allowable Exceedence |
|---|--|--|
| 115 | 5 | 5% of a total number of blasts over a 12 month period |
| 120 | 10 | Never |

As part of the modification application for the extended construction hours, RMS conducted an assessment to identify typical vibration impacts at nearby sensitive receivers in terms of human comfort vibration impacts for human occupants of buildings according to the AVTG.

No exceedences of vibration criteria or sleep disturbance impacts were predicted to occur as a result of the modification.

The Department approved an increase in these criteria for works relating to the construction of the St Helena hill tunnel (MOD 5 and MOD 6) where written approval has been obtained from affected landowners. The increase in vibration criteria enables RMS to conduct larger blasts at the St Helena twin tunnels, facilitating a substantial reduction in the blasting program. However, the Department notes that MOD 7 does not apply to the St Helena tunnels construction work.

Department's consideration

The Department notes that while the proposed extension of construction hours would not increase noise levels attributable to the project, noise impact would extend into the proposed extended construction hours which would fall into the definition of ICNG evening and night time work. The Department also considers that while noise modelling conducted for the proposal is based upon a worst-case scenario, the results of the Proponent's assessment undertaken for the modification indicates a substantial number of exceedences of ICNG noise criteria are predicted to occur across the noise catchment areas. While fewer exceedences are predicted to result from the proposed construction activities during shoulder periods at the border of night/day and day/evening where mid-point values can be used, the Department acknowledges that a substantial number of exceedences are still predicted to occur.

The Department considers that while a range of mitigation measures have been provided in accordance with the NVMSPP and specific measures relate to the exceedences during the extended hours, such as additional noise monitoring, specific mitigation measures to address each exceedence within each noise catchment area have not been provided. The Department considers that specific mitigation measures tailored to manage each predicted exceedence in each noise catchment area would be a reasonable and feasible approach. In this regard, the Department concurs with the EPA's concern regarding noise impact during the extended construction hours across the project area.

Further, the Department considers that certain mitigation measures would be difficult to implement in practise. The Proponent states that specific activities with high noise generating characteristics would be restricted within 300 metres of receivers who have previously lodged an objection to the proposal (see **Table 2**). However, the Department is unclear as to how these activity-based, location-based and time-based restrictions would be implemented in practise. It has not been specified whether fencing or other field markings surrounding these particular residences would be provided to ensure the restrictions are complied with at all times. Construction personnel would need to be informed and scheduling adjusted to ensure construction of the overall project proceeds while these specific activities within the specific extended hours in these specific locations are not permitted. In the regard, while the Proponent will be implementing this buffer, given the lack of detailed information, the Department recommends additional restrictions as described below.

Additionally, the Department notes the proposal is not limited to low-noise generating activities within the extended hours. The Proponent states that a 'substantial proportion' of activities during these times would be low-noise generating activities however in practise this may not be the case. No control mechanisms are provided to ensure that only low-noise generating activities are conducted during the extended hours. It is noted that a number of Type 1 activities are proposed to be conducted within 300 metres of receivers who have lodged an objection, namely earthworks cut, earthworks fill and cut foundation. Further, no justification has been provided for conducting some Type 1 activities within the buffer zones but not other Type 1 activities such as clearing and grubbing, topsoil strip/stockpiling and foundations rip and recompacting. Given the large number of noise level exceedences that

have been identified by the noise modelling conducted for the modification application, the Department considers any extension of morning construction hours should be limited to Saturdays only commencing at 7.00am. Further, the Department considers that construction activities within the extended hours should be manageable along the road alignment and remote from residential receivers who have lodged an objection to the proposal. Further, the Department has recommended a three month trial period, including monthly notifications of any complaints and environmental incidents to the Department. This approach would enable the overall construction schedule to be expedited while still avoiding some noise impacts. The work would be conducted in accordance with the approved NVMS and furthermore, the project complaints procedure remains in place for other residences that may be affected by noise exceedances during the extended construction hours.

The Department notes that, while construction noise impacts in the area would exceed the ICNG construction noise criteria during the extended construction hours including shoulder periods, the overall duration of construction works would be reduced by approximately 4.2 months providing medium term relief from all construction noise impacts for residential receivers. To this end, the Department considers that extended construction hours would minimise the duration of noise impacts from construction of the project, and is on balance, in the public interest.

The Department acknowledges that no exceedances of vibration criteria or sleep disturbance impacts were predicted to occur as a result of the proposed extended construction hours. In recognition of proximity of residents to the construction works during the extended hours, the Department has previously recommended that a number of safeguards be implemented to ensure that the vibration impacts of the proposal are managed appropriately, and with the ongoing agreement of the community.

The Department acknowledges the RMS commitment to ongoing community consultation in accordance with the *CSMREWH*. This strategy prescribes meetings with residents and community briefings to describe construction activities, notification of directly affected residents, and implementation of a complaints management procedure (including ongoing provision of a complaints telephone line).

The Department further acknowledges that to date a number of Out of Hours Work (OOHW) events have taken place with the approval of the Director General and in accordance with MCoA 2.13, and that no incidences or complaints have arisen during these periods. The Department considers that such short-term OOHW events lasting up to a few days in duration and resulting in short-term noise exceedances, while conducted adequately by the Proponent, have been easier to manage than the proposed extended hours which are proposed to continue to the completion of construction works, over a period of 18 months.

The extended hours construction work would be conducted in accordance with the project approved NVMS. The Department acknowledges that management of noise impacts during the extended construction hours of the project would be achieved to some degree by the implementation of 300m buffer zones for residences who have lodged an objection to the Proponent, however this would be difficult to implement in practice and addressing the needs of future objectors has not been addressed. Therefore the Department has proposed a number of conditions for approval of the extended construction hours, including:

- Extended hours work is permitted, with the exception of the 6.30am to 7.00am weekday morning time period, which is not recommended for approval;
- Notification to the Director General of any complaints and environmental incidents on a monthly basis and submission of a compliance report after three months; and
- A requirement for further Director General approval for permanent extended construction hours beyond the initial approved three month trial period.

The Department considers this approach, on balance, to enable faster completion of sections of the easement while avoiding work during evening and night time hours in locations that is predicted to result in ICNG noise exceedences for residences.

5.2 Air Quality

Air quality impacts were assessed in the EA and all measured levels of pollutants were determined likely to be below their respective air quality goals. The primary sources were identified as vehicle exhaust and dust during construction works from the use of bulldozers, excavators and wind erosion of exposed surfaces.

The Proponent indicated that air quality impact due to dust generation is expected to increase to a minor degree during the extended construction hours. This would be offset by a shorter overall construction duration by approximately 4.2 months. While an additional short term cumulative air quality impact during the extended construction hours is expected to occur, the Proponent determined that this increase would be unlikely to exceed the dust goals established in the approved Air Quality Management Sub-Plan (AQMS) and would be limited to a nuisance to the identified sensitive receivers. Further, any non-compliance with dust goals would be managed in accordance with the AQMS.

Sensitive receivers were identified in the project approved AQMS and would also potentially be impacted by dust generation during extended construction hours. The sensitive receivers include:

- High Valley Orchard farm;
- Brook Farm;
- Newrybar Primary School; and
- The communities of Bangalow, Ewingsdale and Newrybar.

The Proponent has committed to undertake construction during the extended hours in accordance with the approved AQMS which includes mitigation measures considered by the Proponent to sufficiently address the predicted potential air quality impacts. Mitigation measures include notification to sensitive receivers prior to commencement of work, use of watering, stabilising and prompt revegetation of exposed areas, covering of loads and speed limit controls in addition to air quality monitoring and complaints management.

Department's consideration

The Department notes that while the proposed extension of construction hours would not substantially increase dust and exhaust emission levels attributable to the project and the approved work would remain within the project alignment and be conducted in accordance with the project approved AQMS, an increase in cumulative dust impact would extend into the extended construction hours and would impact sensitive receivers in the short term.

The Department considers the proposed mitigation measures to be general in nature and not directed to the specific sensitive receivers which are predicted to experience an increase in cumulative dust impact. The Department acknowledges that management of dust impacts during the extended construction hours of the project would be achieved to some degree by the implementation of 300m buffer zones, however this would be difficult to implement in practise and addressing the needs of future residences who object has not been addressed. Therefore the Department has proposed a number of conditions for approval of the extended construction hours, including:

- Extended hours work is permitted, with the exception of the 6.30am to 7.00am weekday morning time period, which is not recommended for approval;
- Notification to the Director General of any complaints and environmental incidents on a monthly basis and submission of a compliance report after three months; and

- A requirement for further Director General approval for permanent extended construction hours beyond the initial approved three month trial period.

The Department considers this approach, on balance, to enable faster completion of sections of the easement while avoiding the highest dust generating activities in locations where objectors are located.

5.3 Traffic Impact

A traffic impact assessment was conducted by the Proponent for the modification request. It is noted by the Proponent that extended construction hours would increase the number of vehicle movements on local roads and the existing Pacific Highway during the extended construction hours, increasing noise impacts for residences. Considering the project alignment is likely to be used for some construction vehicles commuting between various work sites, particularly during later stages of the project, and the capacity of the existing highway to accommodate additional vehicles, the increase in traffic volumes is expected to be minor.

As a result of construction, the Proponent noted an increase in local traffic impacts and demand for parking spaces within the village of Bangalow would be combined with the existing high tourist-related traffic and pedestrian activity in this area, particularly on weekends. However, the Proponent does not expect this to be a substantial issue given this impact will be offset by a shorter overall duration of the construction of the project and long term traffic benefits to local and regional traffic.

The extended construction hours would be undertaken in accordance with the Project Construction Traffic Management and Safety Plan (CTMSP) which provides a range of mitigation measures to address the potential traffic impacts. Mitigation measures include speed limits and parking restrictions for construction personnel within the village of Bangalow. The Proponent has committed to addressing any issues that arise by developing and implementing additional appropriate mitigation measures.

Department's consideration

The Department notes that while the proposed extension of construction hours would not increase traffic levels attributable to the project during the standard construction hours, an increase in local and Pacific Highway traffic during the extended construction hours would occur, resulting in additional noise and parking issues, particularly within the village of Bangalow.

The Department considers the proposed mitigation measures to be adequate based on predicted additional traffic impacts that would occur during the extended construction hours.

The Department considers the implementation of the CTMSP including parking restrictions for construction personnel within the village of Bangalow and the use of speed limits to be adequate. The Department acknowledges that management of traffic impacts during the extended construction hours of the project would be reviewed and addressed during the course of the extended construction hours. Further, the Department considers that the proposed conditions which have been recommended to manage noise impacts would also reduce traffic impacts along the project alignment during the extended hours. As a result of the Department's proposed conditions relating to the three month trial period, any complaints received in relation to traffic impact would be required to be reported by the Proponent within one month of receipt with the remedial action taken. Therefore, no additional mitigation measures are required to be implemented.

5.4 Cumulative Impacts

The Proponent has stated that extending the construction hours for the project has the potential to exacerbate environmental and community impacts that are already experienced within the project locality. However this is considered to be a short-term impact. Allowing faster completion of the project would reduce the duration of impacts by approximately 4.2 months.

Any future out of hours work requests would need to be assessed in accordance with MCoA 2.13 and approved by the Director General and consider additional cumulative impacts. Further, these works would need to be undertaken in accordance with the Project CEMP and Environmental Protection License.

Department's consideration

The Department considers that the limitation on weekday morning extended construction hours and the three month trial period, including notification requirements that have been recommended as part of this modification, to be appropriate for the management of cumulative impacts. Any additional mitigation measures that result from this reporting would be considered and implemented on a case-by-case basis and in consultation/agreement with the affected residences. The Department considers this approach to be adequate in the management of cumulative impact for the modification.

6. CONCLUSION AND RECOMMENDATIONS

Extending the construction hours for the remaining construction schedule of the project would enable early completion of the project by approximately 4.2 months. The Department recognises that early completion of the project would enable safety benefits of the new road to be realised sooner, which is of paramount importance on the basis of road accident records on this section of the Pacific Highway. The Department also recognises that the proposal seeks to offset lost work days that have occurred due to heavy rainfall experienced earlier in 2013 and to maximise the use of longer daylight during the months of September to March inclusive.


However, the Department considers that there are environmental issues associated with the proposal that would require specific mitigation measures, in particular construction noise impact at nearby sensitive receivers where exceedences of noise management levels are predicted to occur. This includes shoulder period exceedences. Further, an increase in air quality impacts, namely dust and vehicle exhaust, and traffic impacts including parking issues are predicted to occur during the extended construction hours.

The Department considers that the proposed mitigation measures address the potential impacts to sensitive receivers. The EPA has raised a range of concerns during consultation activities and the Department concurs with issues relating to noise impacts. Therefore, the Department approves the modification application with a number of conditions to further minimise the impacts of the proposal. Conditions include extended morning hours to Saturdays only, a three month trial period, and compliance reporting and complaints notification requirements.

Based on its assessment, the Department considers that the modification is justified and in the public interest. The implementation of the RMS' commitments and the recommended conditions of approval would ensure that construction of the project during the extended construction hours can be conducted in a manner that minimises environmental impacts. Therefore, the Department recommends that the application is approved, subject to the recommended conditions of approval.

Joanne Glass
Planning Officer

Approved by


Karen Jones 23.12.13
Director
Infrastructure Projects

APPENDIX A RECOMMENDED MODIFYING INSTRUMENT

Modification of Minister's Approval

Section 75W of the *Environmental Planning & Assessment Act 1979*

As the delegate of the Minister for Planning and Infrastructure, under delegation dated 14 September 2011, I approve the modification of the project application referred to in schedule 1, subject to the conditions in schedule 2.



Director, Infrastructure Projects

Sydney

23 December

2013

SCHEDULE 1

Project Approval:

07_0051 granted by the Minister for Planning on 29 January 2010

For the following:

The construction and operation of an approximately 17 kilometre four land divided carriageway, comprising a tunnel, six twin bridges, three underpasses, a half interchange and upgrading an existing interchange, referred to as the Pacific Highway Upgrade – Tintenbar to Ewingsdale Project

Modification:

07_0051 MOD 7: Modification to extend construction hours.

SCHEDULE 2 CONDITIONS

The approval is modified by:

1. Deleting condition 1.1 and replacing with the following:

The Proponent shall carry out the project generally in accordance with:

- (a) Major Projects Application 07_0051;
- (b) *Tintenbar to Ewingsdale – Upgrading the Pacific Highway – Environmental Assessment* (volumes 1, 2, 3 and 4), prepared by the Roads and Traffic Authority and dated August 2008;
- (c) *Tintenbar to Ewingsdale – Upgrading the Pacific Highway – Environmental Assessment Submissions Report and Preferred Project Report*, prepared by the Roads and Traffic Authority and dated May 2009, including the revised Statement of Commitments contained therein;
- (d) The Roads and Traffic Authority modification request dated 17 June 2010 and assessment information supplemented by correspondence from the Roads and Traffic Authority on 18 June 2010 (07_0051 MOD 1);
- (e) The Roads and Traffic Authority modification request and letter dated 2 November 2010 (07_0051 MOD 2);
- (f) The Roads and Maritime Services modification request and letter dated 5 October 2012 (07_0051 MOD4);
- (g) The Roads and Maritime Services modification request and letter dated 5 October 2012 (07_0051 MOD3) and additional information dated 25 October 2012;
- (h) The Roads and Maritime Services modification request and letter dated 29 January 2013, and the document titled *Modification request for an extension to blasting hours, airblast overpressure and vibration limits*, prepared by Baulderstone (RPT-ENV-004) dated 25 January 2013 (07_0051 MOD5);
- (i) the Roads and Maritime Services modification request and letter dated 15 April 2013 and the document titled *Pacific Highway Upgrade - Tintenbar To Ewingsdale Modification To Approval: St Helena Tunnel Control Centre*, prepared by Roads and Maritime Services dated April 2013 (07_0051 MOD 6),
- (j) the Roads and Maritime Services modification request and letter dated 14 October 2013 and the document titled *Modification request for an extension to working hours, Pacific Highway Upgrade Tintenbar to Ewingsdale, October 2013*, prepared by Roads and Maritime Services dated October 2013 (07_0051 MOD 7); and
- (k) The conditions of this approval.

2. Replacing condition 2.12 with the following condition:

Construction activities associated with the project shall only be undertaken during the following hours:

- (a) 7:00 am to 6:00 pm, Mondays to Fridays, inclusive; and
- (b) 8:00 am to 1:00 pm on Saturdays; and
- (c) at no time on Sundays or public holidays.

This condition does not apply to:

- (i) any works that do not cause construction noise to be audible at any sensitive receiver; or
- (ii) for delivery of materials required outside these hours by the police or other authorities for safety reasons; or
- (iii) where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm.

3. Inserting after condition 2.12 the following condition:

Extended Construction Hours

2.12A

The construction activities associated with MOD 7 shall only be undertaken during the following extended construction hours:

- (a) 7:00 am to 7:00 pm, Mondays to Fridays, inclusive; and
- (b) 7:00 am to 4:00 pm on Saturdays; and
- (c) at no time on Sundays or public holidays.

The extended construction hours in this condition shall apply for a period of three months from the date the Proponent notifies the Director General it intends to commence extended construction hours, unless otherwise agreed by the Director General in accordance with condition 2.12A(iii).

- (i) Reporting of the environmental performance of the project shall be submitted on a monthly basis to the Director General during implementation of extended construction hours. The report shall include detail of any complaints received by the Proponent or EPA (including the number and nature of complaints and complaints handling) and any environmental incidents that have occurred (including how these have been handled and any measures implemented to prevent future incidents) during each reporting period.
- (ii) A report summarising the environmental performance of the project during the extended construction hours shall be submitted to the Director General no later than two weeks prior to completion of the three month period. The report shall include the number and nature of complaints, complaints handling, details of mitigation measures which have been implemented to respond to any complaints, and the environmental performance of the project during the extended construction hours.
- (iii) The Director General may agree to vary the period of three months for extended construction hours. In determining whether to agree to vary this period, the Director General is to have reference to the report submitted in accordance with condition 2.12A(ii).