

Epping Road westbound widening between Essex Street and Blaxland Road at Epping

Addendum REF Submission Report

Roads and Maritime Services | April 2018

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Executive summary

A review of environmental factors (REF) was prepared for the Epping Road westbound widening project between Essex Street and Blaxland Road in November 2015 (referred to in this document as the project REF). The REF detailed that the project would take approximately 18 months to complete, based on a night works schedule of two nights per week and six nights per calendar month.

The first stage of works for the approved project commenced in mid 2017 and the civil works commenced in early 2018. Based on this program position and working in accordance with the night works restrictions detailed in the project REF, the project would be completed in early 2019.

Following the commencement of construction, it was subsequently identified that the project was required to be completed prior to the shutdown of the rail services between Epping and Chatswood in late 2018, in order to minimise potential increased traffic impacts resulting from increased bus services in the Epping precinct associated with the Sydney Metro Northwest Temporary Transport Plan.

Because of this requirement and the restrictions imposed on day time works by Road Occupancy Licences (ROLs), an accelerated night works program was identified to meet this deadline. As such, an addendum REF was prepared in February 2018 to assess the impacts of the accelerated night works schedule.

The proposed modification was to increase the schedule of night works as described in the project REF from two nights per week and six nights per month to up to five nights per week for approximately four months, including undertaking high impact noise works (including jackhammering, concrete sawing and rock breaking) until 12am. Approximately 15 shifts would also be required over the duration of the accelerated night works where intermittent high impact noise works would extend past 12am.

Due to the potential community impacts of noise associated with this accelerated night works schedule, the addendum REF was placed on public display 19 March 2018 and submissions invited on the accelerated night works schedule. The public display closed on 3 April 2018 and a total of 36 submissions were received, all from the community.

15 submissions were against the accelerated night works schedule, one supported the schedule and 20 did not offer a position on the schedule but were interested in temporary relocation and/or concerned about specific issues not related to the proposed modification.

The primary concern of those opposed to the accelerated night works schedule was the impact on sleep, however other issues raised included dust impacts, concerns with relocation and cumulative impacts with other developments in the area.

The addendum REF acknowledged and assessed the potential noise impacts from the accelerated night works schedule and proposed numerous safeguards to minimise and/or manage night time noise and sleep impacts, including the consideration of temporary relocation (alternative accommodation) to receivers that are predicted to be highly noise impacted.

No changes to the schedule are proposed and the proposed modification is still considered justified as it will reduce traffic congestion that would result if the project were not completed in time for the trial period of the rail replacement buses.

The safeguards detailed in the addendum REF, including the consideration of temporary relocation for highly noise impacted receivers, are considered appropriate to manage noise impacts associated with the accelerated night works schedule and no additional safeguards are proposed.

Roads and Maritime will continue to liaise with noise affected receivers prior to and throughout the accelerated night works schedule to ensure that works schedules and potential noise impacts are communicated and eligible noise affected receivers are provided temporary relocation as required.

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1. Introduction and background

1.1 The proposed modification

A review of environmental factors (REF) was prepared for the Epping Road westbound widening project between Essex Street and Blaxland Road in November 2015 (referred to in this document as the project REF). The REF detailed that the project would take approximately 18 months to complete, based on a night works schedule of two nights per week and six nights per calendar month.

The first stage of works for the approved project commenced in mid 2017 and the civil works commenced in early 2018. Based on this program position and working in accordance with the night works restrictions detailed in the project REF, the project would be completed in early 2019.

Following the commencement of construction, it was subsequently identified that the project was required to be completed prior to the shutdown of the rail services between Epping and Chatswood in late 2018, in order to minimise potential increased traffic impacts resulting from increased bus services in the Epping precinct associated with the Sydney Metro Northwest Temporary Transport Plan.

Because of this requirement and the restrictions imposed on day time works by Road Occupancy Licences (ROLs), an accelerated night works program was identified to meet this deadline. As such, an addendum REF was prepared in February 2018 to assess the impacts of the accelerated night works schedule (the proposed modification).

The proposed modification was to increase the schedule of night works as described in the project REF from two nights per week and six nights per month to up to five nights per week for approximately four months, including undertaking high impact noise works (including jackhammering, concrete sawing and rock breaking) until 12am. Approximately 15 shifts would also be required over the duration of the accelerated night works where intermittent high impact noise works would extend past 12am.

Due to the potential community impacts of noise associated with this accelerated night works schedule, the addendum REF was placed on public display 19 March 2018 and submissions invited on the accelerated night works schedule. The public display closed on 3 April 2018 and a total of 36 submissions were received, all from the community.

A more detailed description of the accelerated night works schedule is found in the Epping Road westbound widening between Essex Street and Blaxland Road at Epping - Addendum review of environmental Factors – Accelerated night works schedule, prepared by Roads and Maritime in February 2018.

1.2 REF display

Roads and Maritime prepared an addendum REF to assess the potential environmental impacts of the accelerated night works schedule. The addendum REF was publically displayed for 16 days between 19 March 2018 and 3 April 2018 at two locations, as detailed in Table 1-1. The REF was placed on the Roads and Maritime project website and made available for download.

Table 1-1: Display locations

Location	Address
Epping Library	Chambers Court (off Pembroke Street), Epping
Epping and the Christian Chinese Community Service Centre	41 Essex Street, Epping

Location	Address
Project website	http://www.rms.nsw.gov.au/projects/sydney-north/epping-town-centre/stage-2.html

1.3 Purpose of the report

This submissions report relates to the Epping Road westbound widening between Essex Street and Blaxland Road at Epping - Addendum review of environmental Factors – Accelerated night works schedule and should be read in conjunction with that document.

The addendum REF was placed on public display and submissions relating to the proposed modification and the addendum REF were received by Roads and Maritime. This submissions report summarises the issues raised and provides responses to each issue (Chapter 2).

It is noted that no changes are proposed, and no revisions have been made to the assessment or environmental management measures as described in the addendum REF.

2. Response to issues

Roads and Maritime Services received 36 submissions, accepted up until the 3 April 2018. Table 2-1 lists the respondents and each respondent's allocated submission number. The table also indicates where the issues from each submission have been addressed in Chapter 2 of this report.

Table 2-1: Respondents

Respondent	Submission No.	Section number where issues are addressed
Individual	1	2.3, 2.5, 2.8
Individual	2	2.7, 2.8
Individual	3	2.3
Individual	4	2.3, 2.5
Individual	5	2.3, 2.4, 2.6
Individual	6	2.3, 2.6
Individual	7	2.3, 2.5
Individual	8	2.5
Individual	9	2.4, 2.8
Individual	10	2.5
Individual	11	2.3, 2.5
Individual	12	2.5, 2.8
Individual	13	2.5
Individual	14	2.5, 2.8
Individual	15	2.5
Individual	16	2.5
Individual	17	2.5
Individual	18	2.5
Individual	19	2.6, 2.8
Individual	20	2.5, 2.8
Individual	21	2.3, 2.5
Individual	22	2.3, 2.4, 2.5, 2.6, 2.8
Individual	23	2.2, 2.3, 2.8
Individual	24	2.3, 2.5
Individual	25	2.3, 2.5
Individual	26	2.5
Individual	27	2.3, 2.8
Individual	28	2.5, 2.8

Respondent	Submission No.	Section number where issues are addressed
Individual	29	2.5
Individual	30	2.3
Individual	31	2.5
Individual	32	2.3, 2.6, 2.8
Individual	33	2.5, 2.8
Community group	34	2.4
Individual	35	2.4, 2.5
Individual	36	2.5

2.1 Overview of issues raised

A total of 36 submissions were received in response to the display of the addendum REF, all from the community. No submissions were received from government agencies.

Each submission has been examined individually to understand the issues being raised. The issues raised in each submission have been extracted and collated, and corresponding responses to the issues have been provided.

15 submissions were against the accelerated night works schedule, one supported the schedule and 20 did not offer a position on the schedule but were interested in temporary relocation and/or concerned about specific issues not related to the proposed modification. A number of respondents also suggested alternative forms of compensation for the predicted night time noise impacts.

The primary concern of those opposed to the accelerated night works schedule was the impact on sleep, however other issues raised included dust impacts, concerns with relocation and cumulative impacts with other developments in the area.

2.2 Justification of the proposed modification

Submission number(s)

23.

Issue description

Rejection of the addendum REF justification that the traffic impacts would worsen as a result of the increased buses associated with the Temporary Transport Plan resulting from the closure of the Epping to Chatswood rail line.

Response

The Temporary Transport Plan modelled and analysed the performance results of each key intersection that may be impacted as a result of the rail replacement buses, including within the Epping precinct. This analysis and the resulting traffic impacts detailed in the Temporary Transport Plan were undertaken on the assumption that the road changes planned for the Epping Town Centre Activation Precinct (UAP) would be completed prior to the implementation of the rail replacement buses.

The traffic modelling in the Temporary Transport Plan also detailed that the road network in the Epping precinct could not accommodate the rail replacement buses without modification. These required modifications include the approved Epping Road widening project. Therefore, in order to ensure that predicted traffic impacts from the increased bus services around the Epping precinct are minimised, the approved Epping Road widening project is required to be completed by mid-2018, in time for the trial period of the rail replacement buses.

Because much of the works associated with the approved Epping Road widening project can only be undertaken at night time due to the restrictions imposed by the ROLs, this is proposed to be achieved by accelerating the schedule of night works in order to minimise the project duration.

The accelerated night works schedule is considered justified as it will reduce traffic congestion that would result if the project were not completed in time for the trial period of the rail replacement buses associated with the Temporary Transport Plan.

2.3 Noise and socio-economic impact

Submission number(s)

1, 3, 4, 5, 6, 7, 11, 21, 22, 23, 24, 25, 27, 30, 32.

Issue description

Concerns about sleep impacts and the impact on health, work and study (including impacts to Higher School Certificate students).

Response

The addendum REF acknowledged and assessed the potential noise impacts from the accelerated night works schedule and proposed numerous safeguards to minimise and/or manage night time noise and potential sleep impacts, including:

- High impact noise works to be undertaken as early in the shift as possible and not after 12am, except for the approximately 15 nights where this will be unable to be avoided.
- Additional notification to sensitive receivers to be undertaken prior to works where high impact noise activities are expected to be extended past midnight.
- Acoustic curtains to be utilised around night works locations where it is practical to erect them between the noise source and sensitive receivers.
- The offer of temporary relocation (alternative accommodation) to receivers that are predicted to be highly noise impacted.

The accelerated night works schedule is considered justified as it would reduce traffic congestion that would result if the project were not completed in time for the trial period of the rail replacement buses associated with the Temporary Transport Plan.

Roads and Maritime will continue to liaise with all highly noise affected receivers to ensure that noise impacts would be minimised where possible and eligible noise affected receivers are aware of the option for temporary relocation throughout the accelerated night works schedule.

2.4 Alternative compensation

Submission number(s)

5, 9, 22, 34, 35.

Issue description

Other compensation should also be provided in addition to or as an alternative to temporary relocation, such as the provision of noise cancelling headphones and payment of rental and electricity bills.

Response

Roads and Maritime will work closely with those respondents who would be noise affected as a result of the accelerated night works schedule. Roads and Maritime would implement all reasonable and feasible noise safeguards during the accelerated night works schedule, including the offer of temporary relocation for highly noise impacted receivers.

If the accelerated night works schedule proceeds, Roads and Maritime would also liaise further with respondents who have provided compensation suggestions to discuss reasonable alternative measures to assist in minimising noise and/or socio-economic impacts.

2.5 Interest in temporary relocation

Submission number(s)

1, 4, 7, 8, 10, 11, 14, 15, 16, 17, 18, 20, 21, 22, 24, 25, 26, 28, 29, 31, 33, 35, 36.

Issue description

23 submissions expressed interest in the option of temporary relocation or requested further information about relocation, including if relocation was mandatory or optional, when night works and relocation would start, if the public would have to outlay money upfront and be reimbursed and if their relocated accommodation would be comparable to their existing situation and needs for their family and access to work.

Response

If the accelerated night works schedule proceeds, the project Communications and Stakeholder Engagement Plan would be updated to include the communication strategy of the proposed modification and implementation of community related safeguards, including the implementation of a relocation strategy.

Roads and Maritime will work closely with those respondents who have registered an interest in temporary relocation through the submissions process to determine those eligible for relocation, explain the relocation process and timing and then to find suitable accommodation.

In addition to those who responded through the submissions process, Roads and Maritime will continue to liaise with all highly noise affected receivers to ensure that eligible noise affected receivers are aware of the option for temporary relocation throughout the accelerated night works schedule.

2.6 Cumulative impacts

Submission number(s)

5, 6, 19, 22, 32.

Issue description

Cumulative impacts, particularly noise, dust and traffic from the Epping Road widening project in combination with other projects, including private developer works, in the Epping area.

Response

Roads and Maritime acknowledge the potential for cumulative impacts and note that these were assessed in the project REF and addendum REF. Roads and Maritime will continue to work closely with the community to minimise and manage impacts where possible.

2.7 Support for the proposed modification

Submission number(s)

2

Issue description

General support for the proposed modification

Response

Roads and Maritime acknowledge support for the accelerated night works schedule

2.8 General and out of scope issues

Submission number(s)

1, 2, 9, 12, 14, 22, 27, 28, 32, 33,

Issue description

10 submissions were received that included requests for general project information or raised issues that were outside of the scope of the proposed modification. Issues raised included bus stop impacts, approved project scope, potential asbestos from a house being demolished, road safety, traffic lights and signals and dust impacts.

Response

Roads and Maritime acknowledges the general project issues and while not related to the proposed modification to accelerate night works, they will be followed up by the project team. The potential for dust was assessed in the project REF and safeguards implemented to minimise dust impacts.

3. Environmental management

The addendum REF for the Epping Road westbound widening between Essex Street and Blaxland Road at Epping - Accelerated night works schedule, identified the framework for environmental management, including safeguards and management measures that would be adopted to avoid or reduce environmental impacts (section 7 of the addendum REF).

Should the proposed modification proceed, environmental management will be guided by the framework and measures outlined below.

3.1 Environmental management plans (or system)

A Construction Environment Management Plan (CEMP) is in place for the approved project, which includes all safeguards and management measures from the project REF, Submissions Report and addendum REFs prepared to date.

Following determination of the addendum REF for the accelerated night works schedule, the CEMP would be updated to include the additional safeguards detailed in the addendum REF.

3.2 Summary of safeguards and management measures

The addendum REF for the Epping Road westbound widening between Essex Street and Blaxland Road at Epping - Accelerated night works schedule, identified a range of environmental outcomes and management measures that would be required to avoid or reduce the environmental impacts. These included a number of additional or amended safeguards from those detailed in the project REF, project Submissions Report and subsequent addendum REFs.

After consideration of the issues raised in the public submissions for the proposed modification, the environmental management measures detailed in Chapter 7 of the addendum REF have been determined as appropriate to manage potential impacts as a result of the proposed modification. No additional or amended safeguards are proposed.

Should the proposed modification proceed, the environmental management measures detailed in the addendum REF and included in Table 3-1 of this Submissions Report will guide the subsequent phases of the project. The additional or amended safeguards from the addendum REF are shown in bold and italicised font.

Table 3-1: Summary of environmental safeguards and management measures

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
1	General	<p>All environmental safeguards must be incorporated within the following:</p> <ul style="list-style-type: none"> • Project Environmental Management Plan • Detailed design stage • Contract specifications for the proposal • Contractor's Environmental Management Plan 	DM EM Subcontractor	Pre-construction
2	General	<p>A risk assessment has been/ must be carried out on the proposal in accordance with project pack and risk assessment procedures to determine an audit and inspection program for the works. The recommendations of the risk assessment are to be implemented.</p> <p>A review of the risk assessment must be undertaken after the initial audit or inspection to evaluate is the level of risk chosen for the project is appropriate.</p> <p>Any work resulting from the proposal and as covered by the review of environmental factors may be subject to environmental audit(s) and/or inspection(s) at any time during their duration.</p>	DM EM	Pre-construction
3	General	<p>The environmental contract specification must be forwarded to the Roads and Maritime Environment Manager for review at least 10 working days prior to the tender stage.</p> <p>A contractual hold point must be maintained until the CEMP is reviewed by the Roads and Maritime Environment Manager.</p>	DM EM	Pre-construction
4	General	<p>The Project Manager must notify the Roads and Maritime Services Environmental Officer Sydney Region at least five days prior to work commencing.</p>	DM EM	Pre-construction
5	General	<p>All businesses and residences likely to be affected by the proposed works must be notified at least five days prior to the commencement of the proposed activities.</p>	DM Comms Team	Pre-construction and Construction
6	General	<p>Environmental awareness training must be provided, by the contractor, to all field personnel and subcontractors.</p>	DM Project Manager (PM) Subcontractor	Pre-construction and construction
7	Traffic and Access	<p>Residents and businesses would be notified of any specific impacts to property access and arrangements required during construction during detailed design.</p>	Roads and Maritime	Pre-construction
8	Traffic and Access	<p>Proposals to provide signage such as 'do not queue across intersection' and other road markings would be considered as part of the detailed design stage including extending the markings across the proposed left turn lane.</p>	DM PM Roads and Maritime	Detailed design
9	Traffic and Access	<p>A detailed traffic management plan would be prepared in accordance with Traffic Control at Work Sites (RTA, 2010) and Specification G10 - Control of Traffic. The plan would be approved by Roads and Maritime before implementation to provide</p>	DM PM Subcontractor	Pre-construction

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
		<p>a comprehensive and objective approach to minimise any potential impacts on road network operations during construction. The traffic management plan would include measures such as:</p> <ul style="list-style-type: none"> • Safe access points to work areas from the adjacent road network • Safety barriers where necessary • Temporary speed restrictions when necessary • Maintaining adequate sight distance • Displaying prominent warning signage • Minimise the use of local roads by construction vehicles <p>The plan would be reviewed when complaints are received.</p>		
10	Traffic and Access	<p>Consultation would be undertaken with local bus operators before and during construction. The community would be kept informed about construction through advertisements in the local media and by prominently placed advisory notices or variable message signs.</p>	Roads and Maritime DM Comms Team	Pre-construction
11	Traffic and Access	<p>Traffic control would be provided to manage and regulate traffic movements during construction. For example, construction and delivery vehicles entering or leaving the site compound and/or stockpile sites would use arterial roads. These movements would be restricted to non-peak traffic periods.</p>	Subcontractor	Construction
12	Traffic and Access	<p>Property access would be maintained at all times, where practicable. Where changes to access arrangements are necessary, Roads and Maritime would advise owners and tenants and consult with them in advance regarding alternate access arrangements. Construction workers would be advised to use public transport since there are limited parking spaces at the potential compound sites. Workers are to be advised on suitable alternative parking locations including the eastern side of Forest Park, along Forest Grove, or on the southern side of Forest Grove.</p>	Subcontractor	Construction
13	Traffic and Access	<p>Right turn ban signs would be clearly displayed at Langston Place, Smith Street and Forest Grove.</p>	Roads and Maritime	Operation
15	Noise and Vibration	<p>Detailed design would consider at-property treatments for sensitive receivers predicted to exceed the Noise Mitigation Guideline (RMS 2014).</p>	DM PM	Pre-construction
16	Noise and Vibration	<p>A construction noise and vibration management plan would be prepared as part of the construction environmental management plan. This plan would include, but not be limited to:</p> <ul style="list-style-type: none"> • A map indicating the locations of sensitive receivers including residential properties • Management measures to minimise the potential noise impacts from the quantitative noise assessment and for potential works outside of standard working hours (including implementation of Interim Construction Noise 	DM EM	Pre-construction

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
		<p>Guidelines (DECC 2009)</p> <ul style="list-style-type: none"> • A risk assessment to determine potential risk for activities likely to affect receivers (for activities undertaken during and outside of standard working hours) • Mitigation measures to avoid noise and vibration impacts during construction activities including those associated with truck movements • A process for assessing the performance of the implemented mitigation measures • A process for documenting and resolving issues and complaints • A process for updating the plan when activities affecting construction noise and vibration change • Identify in toolbox talks where noise and vibration management is required • Detailed monitoring and other noise and vibration safeguards required specifically as a result of the accelerated night works schedule 		
17 (16, AREF)	Noise and Vibration	<p>An out of hours procedure would be prepared and include as a minimum:</p> <ul style="list-style-type: none"> • Background levels for noise criteria in accordance with the Interim Construction Noise Guideline (DECC 2009) • Locations of the works • Locations of sensitive receivers • Predicted noise levels • Communications plan • Management measures where works are unable to comply with Interim Construction Noise Guideline (DECC 2009) and the Construction Noise and Vibration Guideline (RMS, 2016). • Specific information and safeguards related specifically to the accelerated night works schedule 	DM EM	Pre-construction
18	Noise and Vibration	<p>Where the noise levels are predicted to exceed construction noise management levels after implementation of the general work practices, the following additional mitigation measures will be implemented:</p> <ul style="list-style-type: none"> • High impact noise works would be undertaken as early in the shift as possible and not after 12am, except for the approximately 15 nights where this will be unable to be avoided. • Consultation / specific Notifications as detailed in the revised Community and Stakeholder Engagement Plan (which would include a relocation strategy) • Where high impact noise activities such as the use of jackhammers, concrete saws or rock breakers are expected to be extended past midnight, additional notification to sensitive receivers will be undertaken prior to works. • Verification noise monitoring of night time noise at least fortnightly throughout the accelerated night works schedule and following a main change in construction scenario or works location • The additional safeguards as detailed in the Roads and Maritime CNVG based on the level of exceedance of the NML at each receiver 	DM PM DM EM DM Comms Team	Construction

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
19	Noise and Vibration	<ul style="list-style-type: none"> Construction compounds would be laid out to maximise the distance of noise sources and loading areas from residences with solid structures (sheds etc) placed between residences and noise sources, where possible. Acoustic curtains will be utilised around night works locations where it is practical to erect them between the noise source and sensitive receivers. 	Subcontractor	Construction
20a	Noise and Vibration	All equipment would be selected to minimise noise emissions and priority given to the use of quieter and less vibration emitting construction methods and plant alternatives. Equipment would be fitted with appropriate silencers and would be appropriately maintained to ensure optimum running conditions with periodic monitoring.	Subcontractor	Construction
20b	Noise and Vibration	Noise-emitting plant would be directed away from sensitive receivers where possible.	Subcontractor	Construction
20c	Noise and Vibration	Traffic flow, parking and loading and unloading areas would be planned to minimise reversing movements within the proposal site.	Subcontractor	Construction
20d	Noise and Vibration	Non-tonal reversing beepers (or an equivalent mechanism) would be fitted and used on all construction vehicles and mobile plant regularly used on site and for all vehicles used during works outside of standard working hours.	Subcontractor	Construction
21	Noise and Vibration	<p>Site inductions would be provided to train staff on ways to minimise construction noise impacts on-site. Responsible working practices include:</p> <ul style="list-style-type: none"> Avoid the use of outdoor radios during the night-time period Avoid shouting and slamming of doors Where practical, operate machines at low speed or power and switched off when not being used rather than left idling for prolonged periods Minimise reversing Avoid dropping materials from height and avoid metal to metal contact on material. 	Subcontractor	Construction
22	Noise and Vibration	<p>Where non-vibration inducing construction methods are impractical, the following principles from the Assessing Vibration: A Technical Guideline (DEC 2006) would be utilised to assist with minimisation of adverse reactions from the community:</p> <ul style="list-style-type: none"> Confining vibration generating operations to the least vibration sensitive part of the shift which could be when the background disturbance is highest Determining an upper level for vibration impact also considering what is achievable using feasible and reasonable mitigation 	Subcontractor	Construction

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
23	Noise and Vibration	<p>Compliance vibration monitoring would be undertaken when vibration generating activities occur within the structural damage buffer distances as described in DIN 4150-3 classifications.</p> <p>Building condition surveys should be undertaken when vibration generating activities occur within the structural damage buffer distances as described in DIN 4150-3 classifications.</p>	DM PM Subcontractor	Construction
24 (23, AREF)	Noise and Vibration	The local community would be contacted and informed of the proposed work, location, duration of work, and hours involved. The contact would be made a minimum five days before work starts. The Construction Noise and Vibration Guideline (RMS, 2016) would be followed for road works outside normal working hours.	DM PM DM Comms Team	Pre-construction and Construction
25	Noise and Vibration	<p>A complaints management procedure would be put in place, with a mechanism for responding to complaints.</p> <p>Attended compliance noise or vibration monitoring would be undertaken to confirm the predicted noise or vibration levels upon receipt of a complaint in accordance with the Interim Construction Noise Guideline (DECC 2009).</p> <ul style="list-style-type: none"> • Avoid the use of equipment which generates impulsive noise • Avoid dropping materials from a height • Avoid metal-to-metal contact on equipment • Schedule truck movements to avoid residential streets • Avoid mobile plant clustering near residences and other sensitive land uses. 	DM EM DM PM	Construction
26	Soil and Water	<p>A soil and water management plan (SWMP) will be prepared as part of the construction environmental management plan in accordance with the requirements of Roads and Maritime Services contract specification G38 prior to the commencement of construction. The SWMP will also address the following:</p> <ul style="list-style-type: none"> • Roads and Maritime Services Code of Practice for Water Management, the Roads and Maritime Services' Erosion and Sedimentation Procedure • The NSW Soils and Construction – Managing Urban Stormwater Volume 1 “the Blue Book” (Landcom 2004) and Volume 2 (DECC 2008) • Roads and Maritime Services Technical Guideline: Temporary Stormwater Drainage for Road Construction, 2011 • Roads and Maritime Services Technical Guideline: Environmental Management of Construction Site Dewatering, 2011 	DM EM Subcontractor	Pre-construction

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
27	Soil and Water	<p>The SWMP would detail the following as a minimum:</p> <ul style="list-style-type: none"> • Identification of catchment and sub-catchment areas, high risk areas and sensitive areas • Sizing of each of the above areas and catchment • The likely volume of run-off from each road sub-catchment • Direction of flow of on-site and off-site water • Separation of on-site and off-site water • The direction of run-off and drainage points during each stage of construction • Dewatering plan which includes process for monitoring, flocculating and dewatering water from site (ie sediment basin and sumps) • A mapped plan identifying the above • Include progressive site specific Erosion and Sedimentation Control Plans (ESCPs). The ESCP is to be updated at least fortnightly • A process to routinely monitor the BOM weather forecast • Preparation of a wet weather (rain event) plan which includes a process for monitoring potential wet weather and identification of controls to be implemented in the event of wet weather. These controls are to be shown on the ESCPs • Provision of an inspection and maintenance schedule for ongoing maintenance of temporary and permanent erosion and sedimentation controls 	Subcontractor	Construction
28	Soil and Water	A Contamination Management Plan (CMP) would be prepared in accordance with the Contaminated Land Act 1997 and relevant EPA Guidelines. This would be reviewed by RMS Senior Environment Officer and RMS Land Management Specialist prior to the commencement of works.	DM EM Subcontractor	Pre-construction
29	Soil and Water	Completion of a hazardous materials surveys and a soil contamination assessment for lead paint, asbestos following building demolition and from underground fuel storage infrastructure relating to the Auto Centre. Procedure would be prepared and implemented to manage any lead paint or asbestos identified following building demolition.	DM PM Subcontractor	Pre-construction
30	Soil and Water	Upon closure of the works compound, site assessment would be undertaken to assess the risk posed by contamination (if any) introduced during use of the works compounds and remediation undertaken as required.	Subcontractor	Construction

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
31	Soil and Water	<p>Erosion and sediment control measures would be implemented and maintained (in accordance with the Landcom/Department of Housing Managing Urban Stormwater, Soils and Construction Guidelines (the Blue Book)) to:</p> <ul style="list-style-type: none"> Prevent sediment moving off-site and sediment laden water entering any water course, drainage lines, or drain inlets. Reduce water velocity and capture sediment on site. Minimise the amount of material transported from site to surrounding pavement surfaces. Divert clean water around the site. 	Subcontractor	Construction
32	Soil and Water	<ul style="list-style-type: none"> Erosion and sediment controls would be implemented before any construction starts and inspected regularly, particularly prior to and after a rainfall event of 10 mm or greater. (including clearing of sediment from behind barriers) and records kept and provided on request. Maintenance work would be undertaken as needed. Site stabilisation of disturbed areas would be undertaken progressively as stages are completed. All stockpiles would be designed, established, operated and decommissioned in accordance with Roads and Maritime Services' Stockpile Management Procedures (RTA 2011). Controls would be implemented at exit points to minimise the tracking of soil and particulates onto pavement surfaces. Any material transported onto pavement surfaces would be swept and removed at the end of each working shift. Excess spoil not required or able to be used for backfilling would be stockpiled in a suitable location before being reused or removed from the site, and disposed of at an appropriately licensed facility. A fully equipped emergency spill kit would be kept on-site at all times. If an incident (eg spill) occurs, the RMS's Environmental Incident Classification and Management Procedure is to be followed and the Roads and Maritime Services Contract Manager notified as soon as practicable. All staff would be inducted about incident and emergency procedures and made aware of the location of emergency spill kits. Machinery would be checked daily to ensure there is no oil, fuel or other liquid leaking from the machinery. Any fuel, oils or other liquids stored on site would be stored in an appropriately sized impervious bunded at least 120% larger than the greatest container and in an area least 50 metres away from water bodies. Final waste classification is required once the volumes of waste requiring offsite disposal during construction are confirmed. Waste soils should be classified in accordance with the NSW EPA Waste Classification Guidelines (2014) 	Subcontractor	Construction
33	Soil and Water	Erosion, sedimentation and contamination measures would be implemented.	Subcontractor	Construction

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
34	Soil and Water	<ul style="list-style-type: none"> All fuels, chemicals, and liquids would be stored at least 50 metres away from the existing stormwater drainage system and would be stored in an impervious bunded area within the compound site. The refuelling of plant and maintenance of machinery would be undertaken in impervious bunded areas in the designated compound area. Vehicle wash downs and/or concrete truck washouts would be undertaken within a designated bunded area of an impervious surface or undertaken off-site. Low lying areas of construction formations and excavations that collect stormwater would be dewatered in accordance with the Roads and Maritime Services' Technical Guideline for Dewatering. 	Subcontractor	Construction
35	Flora and Fauna	<p>Biodiversity management measures would be included within the construction environmental management plan. Measures would include (but not necessarily be limited to) the following:</p> <ul style="list-style-type: none"> Fauna handling and vegetation removal would be in accordance with the Roads and Maritime Services' Biodiversity Guidelines 2011 (RTA 2011a) Trees to be retained would be protected during construction, where appropriate Content of toolbox talks and records of attendance Compliance with Roads and Maritime Services' Biodiversity Guidelines 2011 (RTA 2011a). 	DM EM Subcontractor	Pre-construction
36	Flora and Fauna	Declared noxious weeds are to be managed according to requirements under the Noxious Weeds Act 1993 and Guide 6 (Weed Management) of the RTA Biodiversity Guidelines 2011.	Subcontractor	Construction
37	Flora and Fauna	<p>If unexpected threatened fauna or flora species are discovered, stop works immediately and follow the RTA Unexpected Threatened Species Find Procedure in the RTA Biodiversity Guidelines 2011 – Guide 1 (Pre-clearing process).</p> <p>Erosion and sedimentation mitigation measures would be implemented to minimise any erosion and sedimentation impacts.</p>	Subcontractor	Construction
38	Aboriginal Heritage	In the event of an unexpected find of an Aboriginal heritage item (or suspected item), work would cease in the affected area and Roads and Maritime's Environment Officer, Sydney Region and the Roads and Maritime Aboriginal Cultural Heritage Officer, would be contacted for advice on how to proceed. The Roads and Maritime Services Standard Procedure' Unexpected Heritage Finds 2015 would be followed in the event a potential artefact is uncovered.	Subcontractor DM PM DM EM	Construction
39	Non-Aboriginal Heritage	Re-instatement of suitable vegetation, including semi-mature trees and fencing comparable with the period of the conservation area. A landscape plan detailing revegetation, landscaping and fencing would be submitted to Council for comment.	Roads and Maritime DM PM	Detailed design
39 (AREF)	Non-Aboriginal Heritage	Visual screening would be installed on the perimeter fencing of 38 Essex Street to obscure direct views into the site. Screening would be of a sympathetic colour such as green or brown.	Subcontractor	Construction

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
41	Non-Aboriginal Heritage	All property adjustments would be completed in accordance with the Land Acquisition (Just Terms Compensation) Act 1991. These negotiations would include consultation regarding potential reinstatement of the stone edging and landscaping selections The stone garden edging along properties fronting Epping Road would be carefully deconstructed and the material stockpiled at the compound. This material would be kept for the life of the construction of the proposal in the event that there is scope to reuse the stone. This would be dependent on the outcome of negotiations with the property owners.	Roads and Maritime Subcontractor	Construction
42	Non-Aboriginal Heritage	The landscape plan is to consider the use of semi-mature specimens if feasible within the Essex Street Conservation.	Roads and Maritime DM PM	Detailed design
43	Non-Aboriginal Heritage	If the final design of the proposal changes considerably from that currently proposed, additional assessment may be required.	DM PM DM EM	Construction
44	Non-Aboriginal Heritage	For compound D, maintain remaining vegetation along the southern property boundary of 4 Forest Grove.	Subcontractor DM PM DM EM	Construction
45	Non-Aboriginal Heritage	An exception (section 139) excavation permit would be required for impacts to the area of moderate archaeological potential at the corner of Blaxland Road and Epping Road.	DM EM Roads and Maritime	Pre-construction
46	Non-Aboriginal Heritage	A construction noise and vibration management plan would be prepared as part of the construction environmental management plan to determine what construction methods would be used in the vicinity of heritage listed items. This would include measures to minimise the likelihood of vibration impacts. Vibration management measures would be implemented to minimise structural vibration impacts to heritage items.	DM EM Subcontractor	Pre-construction
47	Non-Aboriginal Heritage	Any trees or shrubs removed at 38 Essex Street would be reinstated. Any trees, fences, edging and gardens impacted at 4, 6, 8, 10, 12, 14, 16, 18, 20, 22 and 24 Epping Road would be reinstated if practicable at the completion of construction. If any unanticipated archaeological deposits are identified within the study area during construction the Roads and Maritime Services Standard Procedure 'Unexpected Heritage Finds 2015' would be followed in the event a potential artefact is uncovered.	Subcontractor	Construction
48	Landscape and Visual Character	Ensure the design of the proposal is consistent with the Roads and Maritime Services Urban Design Policy. Permanent signage would be located in a manner that does not impede views. Lighting would be designed to minimise light spill into residential properties and sensitive receptors.	Roads and Maritime	Pre-construction

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
49	Landscape and Visual Character	<p>Construction equipment, stockpiles, and other visible elements would be located away from key views to and from the identified visual receptors where feasible.</p> <p>Where this is not feasible, screening measures and practices to keep sites tidy would be implemented.</p> <p>Temporary lighting would be sited and designed to avoid light spill into residential properties and identified sensitive receptors.</p>	Subcontractor	Construction
50	Landscape and Visual Character	<p>Where visually important vegetation is removed, revegetation would occur where it is safe and practicable to do so.</p> <p>New plantings would incorporate locally occurring species which reflect the landscape character zone (generally transitioning from a greater variety and informal compositions through the residential areas, to more formal and less diverse plantings through the approach to the commercial centre and around commercial uses).</p> <p>New plantings along the shared path or footpath would be selected and positioned such that they do not present safety hazards and reduce casual surveillance from the road and adjoining properties.</p>	Subcontractor	Pre and post construction
51	Air Quality	<p>An air quality management plan would be prepared as part of the construction environmental management plan. The plan would include but not be limited to:</p> <ul style="list-style-type: none"> • A map identifying locations of sensitive receivers • Identification of potential risks/impacts due to the work/activities as dust generation activities • Management measures to minimise risk including a progressive stabilisation plan • A process for monitoring dust on-site and weather conditions • A process for altering management measures as required. 	DM EM Subcontractor	Pre-construction
52	Air Quality	<ul style="list-style-type: none"> • Stockpiled materials would be covered, stabilised or stored in areas not subject to high wind. • All trucks would be covered when transporting material to and from the site. • Work activities would be reprogrammed if the mitigation measures are not adequately restricting dust generation. • Works (including the spraying of paint and other materials) will not be carried out during strong winds or in weather conditions where high levels of dust or air borne particulates are likely. • Construction plant and equipment would be maintained in a good working condition in order to limit impacts on air quality. • Plant and machinery would be turned off when not in use. • Local residents would be advised of hours of operation and duration of work and supplied with a contact name and number for queries regarding air quality. 	Subcontractor	Construction

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
54	Socio Economic	<p>Roads and Maritime would liaise and consult on an ongoing basis with landowners and tenants whose property would be acquired or leased regarding the status and timing of acquisition.</p> <p>All property valuations, lease fees and acquisition payments would be carried out in accordance with the Roads and Maritime Services' Land Acquisition Information Guide (2011) and the Land Acquisition (JustTerms Compensation) Act 1991. Property acquisition plans would be prepared for each of the properties to be acquired as part of the detailed design.</p> <p>Particular attention should be given to ensuring appropriate consultation is undertaken with any vulnerable (elderly or low income) households.</p> <p>A pedestrian safety assessment is recommended for the Pembroke Street corridor due to the increase in traffic that would occur as a result of the proposal.</p>	Roads and Maritime	Detailed design
55	Socio Economic	A complaint handling procedure and register would be included in the construction environment management plan.	DM EM	Pre-construction
56	Socio Economic	<p>Develop a project communications strategy to include:</p> <ul style="list-style-type: none"> • Communication with the community with timely and relevant information to enable them to understand the likely nature, extent and duration of vibration, dust and noise impacts and access changes • Targeted and specific consultation with sensitive receivers potentially impacted by the accelerated night works schedule to explain the predicted amenity impacts (including noise, lighting and vibration) and the types and timing of additional mitigation measures required as a result of the predicted amenity impacts • Targeted communication with Essex Street Kindy and Christian Chinese Community Service Centre located on Essex Street in regard to timing of the most noise intensive works and in management of adjacent parking and access issues • Particular attention should be given to ensuring any vulnerable (elderly or low income) households are appropriately targeted • Communications should include roadside signage, letterbox dropped newsletters, newspaper advertisements, Roads and Maritime web based information, a complaints line, and advice to specific service providers such as community transport and seniors organisations. <p>Consultation with local residents, businesses and organisations would be undertaken with regard to timing and duration of works, likely impacts on car parking and alternate routes of travel. For residents and businesses directly impacted by changes to access (in and out of their properties), Roads and Maritime would consult with owners and tenants regarding alternate access arrangements.</p> <p>Provide timely information to road users with information about changes to access including the bus stop along Epping Road. Where changes to access arrangements are necessary, Roads and Maritime would advise owners and tenants and consult with them in advance regarding alternate access arrangements to maintain safe pedestrian passage within the proposal site.</p>	DM Comms Team	Construction

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
57	Socio Economic	Provide timely information to road users with information about changes to access or travel delays. Where changes to access arrangements are necessary, Roads and Maritime would advise owners and tenants and consult with them in advance regarding alternate access arrangements.	DM Comms Team	Construction
58	Resource use and waste management	Procurement would endeavour to use materials and products with a recycled content where that material or product is cost and performance effective.	Subcontractor	Pre-construction
59	Resource use and waste management	<p>A resource and waste management plan would be prepared and included in the construction environmental management plan. The plan would include the following (as a minimum):</p> <ul style="list-style-type: none"> • The type, classification and volume of all materials to be generated and used on-site including identification of recyclable and non-recyclable waste in accordance with Waste Classification Guidelines • Quantity and classification of excavated material generated as a result of the proposal (refer Roads and Maritime Service's Waste Management Fact sheets 1-6, 2012) • Interface strategies for cut and fill on-site to ensure re-use where possible • Strategies to 'avoid', 'reduce', 'reuse' and 'recycle' materials • Classification and disposal strategies for each type of material • Destinations for each resource/waste type either for on-site reuse or recycling, offsite reuse or recycling, or disposal at a licensed waste facility • Details of how material would be stored and treated on-site • Identification of available recycling facilities on and off-site • Identification of suitable methods and routes to transport waste • Procedures and disposal arrangements for unsuitable excavated material or contaminated material including asbestos waste • The types of waste collected, amounts, date/time and details of disposal are to be recorded in a waste register. • Site clean-up for each construction stage. 	DM EM Subcontractor	Pre-construction
60	Resource use and waste management	Any additional fill material required would be sourced from appropriately licensed facilities and/or other Roads and Maritime projects, wherever possible.	Subcontractor	Construction
61	Resource use and waste management	<p>Excavated material would be reused on-site for fill where feasible to reduce demand on resources.</p> <p>The following resource management hierarchy principles would be followed:</p> <ul style="list-style-type: none"> • Avoid unnecessary resource consumption as a priority • Avoidance would be followed by resource recovery (including reuse of materials, reprocessing, and recycling and energy recovery) 	Subcontractor	Construction

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
		<ul style="list-style-type: none"> • Disposal would be undertaken as a last resort (in accordance with the Waste Avoidance and Resource Recovery Act 2001). • Cleared weed-free vegetation would be chipped and reused on-site as part of the proposed landscaping and to stabilise disturbed soils where possible. • Excess excavated material would be disposed of at an appropriate facility or reused appropriately for fill on the proposal site. • Excess soil requiring waste disposal would first be assessed against the Waste Classification Guidelines- Part 1: Classifying Waste (EPA 2014). Soil samples would be taken from stockpiled material and analysed. • Transportation would be undertaken by a licensed contractor capable of transporting the waste and waste would be disposed of to an appropriately licensed waste facility with supporting waste classification documentation. • Garbage receptacles would be provided and recycling of materials encouraged. Rubbish would be transported to an appropriate waste disposal facility. • All wastes would be managed in accordance with the POEO Act. • Portable toilets would be provided for construction workers and would be managed by the service provider to ensure the appropriate disposal of sewage. • Noxious weeds removed during work would be managed in accordance with the Department of Primary Industries' requirements that relate to its classification status. • Site inductions would occur and be recorded by a Site Supervisor to ensure staff are aware of waste disposal protocols. • A dedicated concrete washout facility would be provided during construction so that run-off from the washing of concrete machinery and equipment can be collected and disposed of at an appropriate waste facility. 		
62	Hazards and Risk	<p>A Contamination Management Plan (CMP) will be prepared in accordance with the Contaminated Land Act 1997 and relevant EPA Guidelines. This plan will be form part of the CEMP and will include at a minimum:</p> <ul style="list-style-type: none"> • Contaminated Land Legislation and guidelines including any relevant licences and approvals to be obtained. • Identification of locations of known or potential contamination and preparation of a map showing these locations • Identification of rehabilitation requirements, classification, transport and disposal requirements of any contaminated land within the construction footprint • Contamination management measures including waste classification and reuse procedures and unexpected finds procedures • Monitoring and sampling procedure for landfill seepage (leachate) • A procedure for dewatering and disposal of potentially contaminated liquid waste • In the event that indications of contamination are encountered (known and unexpected, including odorous or visual indicators), work in the area will immediately cease until a contamination assessment can be prepared to advise on the need for remediation or other action, as deemed appropriate. • A process for reviewing and updating the plan • The CMP would be reviewed by RMS Senior Environment Officer and RMS Land Management Specialist prior to the commencement of works. 	DM EM Subcontractor	Pre-construction

No.	Impact	Environmental safeguards and management measures	Responsibility	Timing
63	Hazards and Risk	Emergency response plans would be incorporated into the construction environmental management plan	DM EM Subcontractor	Pre-construction
64	Hazards and Risk	<p>Prior to commencement of any demolition activities a pre-demolition hazardous materials survey will be carried out of the building to be demolished to establish the presence of any contaminated materials or hazardous substances which may be impacted by the works and require safe removal and disposal in accordance with relevant Safe Work Australia Codes of Practice and National Standards.</p> <p>Any contaminated materials or hazardous substances encountered would be classified first and then stored, transported and disposed of in accordance with OEH requirements at an OEH licensed waste facility.</p> <p>The handling of asbestos and asbestos work would be carried out in accordance with the following documents published by the Safe Work Australia:</p> <ul style="list-style-type: none"> • 'Guide to the Control of Asbestos Hazards in Buildings and Structures'. • 'Code of Practice for the Safe Removal of Asbestos'. • The handling and removal of any synthetic mineral fibres would be carried out in accordance with the National Standard for Synthetic Mineral Fibres (Safe Work Australia 1990). 	DM PM Subcontractor	Pre-construction
65	Climate Change	The use of alternative fuels and power sources for construction plant and equipment would be investigated and implemented, where appropriate.	Subcontractor	Pre-construction
66	Climate Change	The energy efficiency and related carbon emissions would be considered in the selection of vehicle and plant equipment.	Subcontractor	Pre-construction
67	Climate Change	<p>Materials would be delivered as full loads and local suppliers would be used where possible.</p> <p>Construction equipment, plant and vehicles would be appropriately sized for the task.</p> <p>Equipment would be serviced frequently to ensure they are operating efficiently.</p> <p>Vehicles and machinery would not be left idling when not in use.</p> <p>Clearing of vegetation would be minimised where possible.</p>	Subcontractor	Construction
68	Cumulative Impacts	The construction environmental management plan would be revised to consider potential cumulative impacts from surrounding development activities as they become known.	DM EM	Pre-construction
69 (68, AREF)	Cumulative Impacts	The traffic management plan would be prepared in consultation with TfNSW, the Transport Management Centre and City of Parramatta Council.	DM PM Subcontractor	Pre-construction
70 (69, AREF)	Cumulative Impacts	An 'out of hours work procedure' would be prepared as part of the construction noise and vibration management plan for the proposal in accordance with the requirements of the Interim Construction Noise Guideline (DECC 2009) and the Construction Noise and Vibration Guideline (RMS, 2016) and would consider the cumulative impact from other construction activities occurring in the vicinity of the proposal.	DM EM Subcontractor	Pre-construction

3.3 Licensing and approvals

No additional licences or approvals are required for the proposed modification.

4. References

Roads and Maritime Services 2015, *Epping Road westbound widening between Essex Street and Blaxland Road at Epping – Review of Environmental Factors*. November 2015.

Roads and Maritime Services 2016, *Epping Road westbound widening between Essex Street and Blaxland Road at Epping – Review of Environmental Factors Submissions Report*. August 2016.

Roads and Maritime Services 2018, *Epping Road westbound widening between Essex Street and Blaxland Road at Epping – Accelerated night works schedule - Addendum Review of Environmental Factors*. February 2018. Report prepared for Roads and Maritime by DM Roads.



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