

## Memo

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**To** Regional Director West

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**From** Project Manager Parkes Bypass

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**Priority** ROUTINE

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**Date** 07/09/2023

**Subject** Parkes Bypass Addendum 5 Review of Environmental Factors – NOA Encapsulation Cells beneath the Noise Mound

### Proposed modification

Modification to the Parkes Bypass Review of Environmental Factors (July 2019).

### Background

Transport for NSW (TfNSW) is building a new 10.5 kilometre bypass of the Newell Highway at Parkes (the Parkes Bypass, the project). The Parkes Bypass will divert heavy vehicle traffic out of the Parkes town centre. It will be located about 1.5 to two kilometres west of the existing Newell Highway and will generally include one lane in each direction. The Parkes Bypass will depart from the existing Newell Highway to the south near Parkesborough Road and will re-join the highway to the north of Parkes near Maguire Road. The key features of the project include:

- A two-lane road (one lane in each direction) with five key intersections including:
  - Two T-intersections, north and south between the existing Newell Highway and the Bypass:
  - A split T-intersection at London Road
  - A four-way roundabout at Condobolin Road
  - A T-intersection with Bogan Road.
- Two bridges:
  - A bridge over two rail lines and Hartigan Avenue
  - A bridge over the Bypass on Victoria Street.
- An extension of Hartigan Avenue (Henry Parkes Way) with intersection with Brolgan Road, Billy Mac Place and Condobolin Road.
- Realignment, reconfiguration, and changes to local roads including:

- Shifting part of Moulden Street to the west
- Maguire Road and Nock Road converted to cul-de-sacs
- New connection between Brolgan Road and Hartigan Avenue
- Connection between Thomas Street and Mitchell Street via the Reedsdale Road extension.
- A new shared path for pedestrians and cyclists which will connect Brolgan Road, Condobolin Road and Victoria Street.

A Review of Environmental Factors (REF) was prepared for the Parkes Bypass in July 2019 (referred to as the project REF; RMS 2019). The project REF was placed on public display between 1 July 2019 and 9 August 2019 for community and stakeholder comment.

A Submissions report, dated December 2019 (TfNSW 2019) was prepared to respond to issues raised during the public display and assessed proposed changes as a result of design refinement.

An addendum REF was prepared in March 2021 to assess changes as a result of the detailed design.

Two addendum REFs were prepared in December 2022 to assess changes as a result of utilities relocations and Parkes Golf Course Reconfiguration.

Naturally Occurring Asbestos (NOA) was discovered on site on 9th September 2022 at various locations. A Naturally Occurring Asbestos Management and Remediation Plan (Appendix G) was developed which recommended onsite encapsulation as the preferred remediation strategy.

An addendum REF was prepared in March 2023 for the construction of six NOA Encapsulation cells. The cells were approved to be constructed below the existing ground level at strategic locations between Thomas Street (Chainage 33750) and Bogan Road (Chainage 35850) on the eastern side of the current road design.

To date, with the exception of Cell N8, all area approved for cells as identified in Parkes Bypass Addendum REF 4 has been utilised for the following cells:

- Cell N1 - N2 (combined cell)
- Cell N4 - N5 (combined cell)
- Cell N6
- Cell N7

Currently the cells have been temporarily overfilled with NOA material above the approved 500 mm below existing surface level. The NOA material has been temporarily encapsulated with a geofabric delineation layer overlaid with clean fill/topsoil. Approximately 25,000 m<sup>3</sup> of NOA material remains within the overfilled existing cells above the approved fill level.

The proposed work for Cell N8 has not yet commenced. N8 is intended to have capacity to encapsulate of approximately 9,500 m<sup>3</sup> of NOA material subject to underlying geology.

Additional NOA encapsulation cells are required due to the underlying geology limiting the depth of the existing cells and the material exceeding the predicted bulking factor. Approximately 41,000 m<sup>3</sup> (in-situ) of NOA material remains onsite, this accounts for material within cuttings (in-situ volume) as well as existing crushed stockpiles – it is prudent to allow for additional storage volume for bulking factors and associated formation remediation works (which is difficult to accurately quantify) including batter trimmings, service installation and some contingency – which may result in around 60,000 m<sup>3</sup> of remaining NOA storage required (not including the overfilled existing cells).

## Purpose

The purpose of this memo is to:

- Describe the proposed modification.
- Document and assess the likely impacts of the proposed modification on the environment.
- Detail protective measures to be implemented.
- Document the recommendation of the Transport Senior Manager Environment and Sustainability and the decision by the Transport delegated manager whether or not to determine the modification to the project.

This memo is an addendum to and is to be read in conjunction with the:

- Parkes Bypass Review of Environmental Factors (July 2019)
- Parkes Bypass Addendum Review of Environmental Factors (March 2021)
- Parkes Bypass Addendum 2 Review of Environmental Factors (December 2021)
- Parkes Bypass Addendum 3 Review of Environmental Factors (December 2021)
- Parkes Bypass Consistency Review Memo (July 2022)
- Parkes Bypass Addendum 4 Review of Environmental Factors (March 2023)

## Description of proposed modification

TfNSW propose to modify the Parkes Bypass project as outlined below:

### NOA Encapsulation Cells

Two additional containment cell locations (N9 and N10) are required to continue the remediation scope for the project. The location of the new cells was determined based on the underlying geology, environmental constraints and proximity to the existing NOA remediation zones. The cells are proposed to be located on the Western side of the alignment MC10 between CH33550 and CH34150 below the existing approved noise mound excluding the area of the twin-cell 1800x900 box culvert at Chainage 33785. The location of the proposed cells including the extension to the clearing limits from the existing limits can be found in Appendix C. The containment cell design will be consistent with the existing design approved in Addendum 4 REF.

The proposed Scope of works for the encapsulation cells is as follows:

- 1) Strip topsoil and stockpile in approved location or incorporate into the works.
- 2) Excavate cell to required depth (nominally up to 8.5m depending on underlying geology).
- 3) Haul clean excavated material to fill where available or alternatively to approved stockpile location.
- 4) Haul NOA material (areas identified in the project RAP) to store within encapsulation cell. Material will be rolled and compacted sufficiently to prevent future settlement of the material. NOA material will be filled to 500 mm below existing ground level.
- 5) Orange non-woven geofabric marker-layer will then be placed over the NOA material.
- 6) 500 mm of clean fill will be backfilled over the marker-layer.
- 7) Containment cell revegetated with topsoil and hydro mulch.

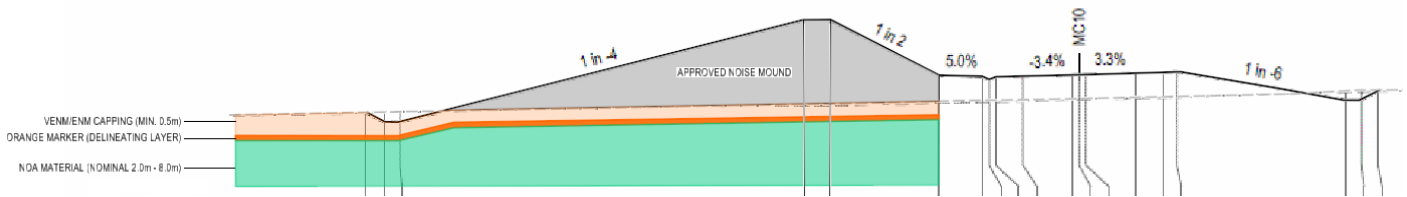


Figure 1: Typical cross section of NOA encapsulation cell below the noise mound

The handling and management of the NOA material will be in accordance with the NOA Management and Remediation Plan.

Additional Temporary Stockpile Areas for Clean Fill:

Additional areas are required to assist with the storage and double handling of clean fill material. The temporary stockpile areas will be located adjacent the NOA encapsulation cells and their locations can be found in Appendix C.

Areas of NOA will be managed and delineated in accordance with the Naturally Occurring Asbestos Management and Remediation Plan. Machinery moving from areas of NOA to clean areas will be decontaminated prior to starting works.

Noise Mound:

The Parkes Bypass REF: Operational Road traffic noise and construction noise and vibration assessment report (Jan 2019) considers the application of noise mounds as an option for operational noise mitigation on the project. The noise mound will be constructed from clean fill won from the project. The detailed design of the control measures will be determined based on advice from the project hygienist and/or contamination specialist.

**Need for the proposed modification**

The proposed modifications are needed to safely, economically, and sustainably manage the NOA material and complete the project.

**Options considered**

Options considered are in line with REF Addendum 4 – as follows:

Do Nothing – Continue project without NOA Management and Remediation

This option would have unacceptable health, safety, and environmental outcomes. This option would not be acceptable to the community, regulators, or construction partners. This option would have unacceptable legal and reputational risks. This option would have short time financial advantages, however in the long term there would likely be increased costs due to third party litigation claims, rework, and remediation costs.

### Offsite Disposal of NOA

This option would involve transporting all NOA material offsite to appropriately licenced disposal facilities. It would involve additional transportation resulting increased truck volumes on public roads and associated emissions. Storage of NOA material would take up valuable space in local or regional disposal facilities or require long expensive haulage to other licensed disposal facilities. This option would acceptably manage the NOA health and safety risks. This option would not require the onsite construction of the NOA encapsulation cells and associated long term management requirements. The disadvantages of this option are significantly increased costs, increased impacts on local roads, increased impacts on local waste disposal facilities with limited storage capacity.

### Onsite encapsulation of naturally occurring Asbestos (preferred option)

This option (the proposal) involves construction of NOA encapsulation cells and additional temporary stockpile areas. The location of the new cells was determined based on the underlying geology, environmental constraints and proximity to the existing NOA remediation zones. This option would be in accordance with the Naturally Occurring Asbestos Management and Remediation Plan developed for the project and would be acceptable from a health and safety perspective. The environmental impacts associated with this option are negligible if managed with the controls detailed in the Naturally Occurring Asbestos Management and Remediation Plan. The Long Term Environmental Management Plan (LTEMP) would need to be updated to include the additional locations of the NOA encapsulation cells. This option best meets the overall project needs and objectives.

## **Consultation**

The NSW Environment Protection Authority (EPA), Safework NSW and Parkes Shire Council have been previously consulted regarding the methodology for onsite encapsulation of NOA material.

The latest information on the NOA management and encapsulation cells is published on the TfNSW Parkes Bypass project website as a part of community notification.

In May 2023, the community drop-in sessions were organised by TfNSW in partnership with head contractor. The May 2023-NOA Community Information and FAQs for the Parkes Bypass provide information on location of existing containment cells, location of confirmed NOA, air monitors, Parkes Bypass alignment, and project boundary.

## **Impact assessment**

Attachment A addresses the environmental factors specified in section 171 of the Environmental Planning and Assessment Regulation 2021.

## **Contamination and Soils**

The proposed modification would have a minor additional impact on soil from the increased ground disturbance associated with the works.

Movement of NOA material from known surface locations to the NOA cells has the potential to have additional short-term impacts associated with cross contamination without appropriate controls/safeguards.

There will be associated additional risks regarding long-term management of the NOA cells such as exposure to NOA material that has a safeguard of the delineating layer, capping and Long term Environmental Management Plan.

The impacts are consistent with the determined project REF, occur within the current EPL premises boundary and can be managed with additional and existing safeguards.

### **Waterways and water quality**

Minor short term negative impacts compared to the determined project. The additional ground disturbance has the potential to increase the erosion hazard onsite. The progressive erosion and sediment control plan will need to be updated to include relevant controls for the additional clearing footprint. The REF section 6.10.2 identifies groundwater standing levels in nearby bores at >20m bgl and geo-technical investigations did not encounter ground water for the proposed depth of the encapsulation cell. The impacts from the proposed modification are consistent with the determined REF and would not result in any new impact to water quality.

### **Noise and vibration**

Neutral impacts compared to the determined project.

The impacts from the proposed modifications are consistent with the noise and vibration impacts assessed in the determined project REF.

### **Air quality**

Minor negative short-term impacts compared to the determined REF without appropriate controls/safeguards in place.

The additional movement of spoil and NOA material has the potential to generate dust, release asbestos fibres and impact air quality. Existing and additional safeguards as per the RAP will be implemented to manage these potential impacts.

Monitoring of controls will continue as per the RAP to ensure the controls are operating effectively.

### **Aboriginal heritage**

Neutral impacts compared to the determined REF.

The proposed modification is to occur within the REF (2019) study area. There were no Aboriginal Heritage items report within or nearby the areas impacted by the proposed modification.

Updated AHIMS searches were completed for the areas impacted by the proposed modification on 14 August 2023, which indicated there were no Aboriginal sites or places recorded in the areas impacted.

The impacts from the proposed modifications are consistent with the Aboriginal Heritage Impacts assessed in the determined project REF.

### **Non-Aboriginal heritage**

Neutral impacts compared to the determined project.

The proposed modification is to occur at locations assessed in the REF (2019) study area. There were no Non-Aboriginal Heritage items report within or nearby the areas impacted.

The impacts from the proposed modification are consistent with the Non-Aboriginal Heritage Impacts assessed in the determined project REF.

### **Biodiversity**

Neutral impacts compared to the determined project.

The footprint of the proposed modification has been assessed in the REF (2019). The proposal will require additional clearing of vegetation mapped as Miscellaneous ecosystems (Highly disturbed areas with no or limited native vegetation (pasture grassland)).

No clearing of native trees or PCT communities is required.

### **Traffic and transport**

Minor negative short-term impacts compared to the determined project. There will be additional trucks on the public roads transporting fill material around the job site.

The impacts from the proposed modification are consistent with the Traffic and transport impacts assessed in the previously determined project REF/AREF. NOA is to be transported as per the RAP.

### **Socio-economic issues**

Neutral impacts compared to the determined project.

The impacts from the proposed modifications are consistent with the socio-economic issues assessed in the determined project REF.

### **Landscape character and visual impacts**

Minor negative short-term impacts to visual amenity would be experienced during construction. The project landscaping plan is consistent as per the approved landscaping design. The landscaping design for areas of impacted pasture grassland will apply for the extended area of disturbance. The long term landscape character and visual impacts are consistent with the determined project REF.

### **Waste**

Positive long-term impacts compared to the determined REF.

The material excavated from the proposed NOA encapsulation cells will be re-used onsite. The NOA material will be encapsulated onsite in the cells, diverting a potential waste from local and regional waste disposal facilities.

### **Cumulative impacts**

Neutral impacts compared to the determined REF. The potential cumulative impacts are consistent with those in the determined REF.



## Summary of additional or revised safeguards

A summary of additional or revised safeguards are included in the table below. A complete list of safeguards as amended is provided in Attachment B.

Safeguards	
Contamination and soils	Naturally Occurring Asbestos (NOA) is to be managed in accordance with the approved revised Naturally Occurring Asbestos Management and Remediation Plan.  A Surveillance Plan will be created and implemented for this scope of works.
Waterways and water quality	No revisions to safeguards
Noise and vibration	No revisions to safeguards
Air quality	Naturally Occurring Asbestos (NOA) is to be managed in accordance with the approved revised Naturally Occurring Asbestos Management and Remediation Plan.
Non-Aboriginal heritage	No revisions to safeguards
Aboriginal heritage	No revisions to safeguards
Biodiversity	No revisions to safeguards
Trees	No revisions to safeguards
Traffic and transport	No revisions to safeguards
Socio-economic	No revisions to safeguards
Landscape character and visual amenity	No revisions to safeguards
Waste	No revisions to safeguards
Cumulative impacts	No revisions to safeguards

## Licences, permits or approvals

All relevant licenses, permits, notifications and approvals needed for the Parkes Bypass Project and when they need to be obtained are listed in the Parkes Bypass REF (2019). There are no changes to the list of requirements. The proposed works will occur within the current Environment Protection License (EPL) premises boundary.

## Conclusion

All relevant safeguards identified in the Parkes Bypass REF (July 2019) and Parkes Bypass Addendum REF (March 2021) would be applied to this work. One Additional safeguard has been identified as set out in this memo.



Division 5.1 of the Environmental Planning and Assessment Act 1979 (EP&A Act) applies to the proposed modification. The proposed modification has been reviewed in the context of the Parkes Bypass REF, determined addendums and endorsed consistency reviews and considered against the requirements of sections 5.5 and 5.7 of the EP&A Act.

In considering the proposed modification this assessment has examined and taken into account to the fullest extent possible, all matters affecting or likely to affect the environment by reason of that activity as addressed in this memo, and associated information. This assessment is considered to be in accordance with the factors specified in section 171 of the Environmental Planning and Assessment Regulation 2021.

The Parkes Bypass Project including the proposed modification described in this memo will have some environmental impacts which can be ameliorated satisfactorily. Having regard to the safeguards and management measures proposed, it is considered that the expected environmental impacts are unlikely to be significant and an environmental impact statement is not required under Division 5.2 of the EP&A Act.

The assessment has considered the potential impacts of the activity on the biodiversity values listed under the Biodiversity Conservation Act 2016 and the Fisheries Management Act 1994.

The Parkes Bypass Project including the proposed modification described in this memo will not significantly affect biodiversity values listed under the Biodiversity Conservation Act 2016. Therefore, the concurrence of the Coordinator General of the Environment and Heritage Group of Department of Planning and Environment and a species impact statement or a Biodiversity Development Assessment Report (BDAR) is not required.

In addition to the above, the assessment considered the effect of the activity on:

- Conservation agreements under the *National Parks and Wildlife Act 1974*.
- Plans of management under the *National Parks and Wildlife Act 1974*.
- Biodiversity stewardship sites under the *Biodiversity Conservation Act 2016*.
- Wilderness areas under the *Wilderness Act 1987*.

The assessment has also addressed the potential impacts of the activity on matters of national environmental significance and any impacts on the environment of Commonwealth land and concluded that there will be no significant impacts. Therefore, there is no need for a referral to be made to the Australian Government Department of Agriculture, Water and the Environment for a decision by the Australian Minister for the Environment on whether assessment and approval is required under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) or for application of the EPBC Act strategic assessment for Transport activities assessed under Part 5 of the EPBC Act.

This memo is considered to be of adequate quality and meets all relevant requirements.

The proposed modification has been characterised in the context of the Parkes Bypass Project and is considered to be consistent with that project's objectives and key features. While the proposed modification would increase the overall environmental impacts of the determined project, it is substantially the same as the activity described and assessed in the determined REF and does not constitute an entirely new activity.

## Certification

This memo provides a true and fair description of the scope and potential impacts of the proposal to modify the Parkes Bypass Project and the proposed Natural Occurring Asbestos Encapsulations Cell beneath the proposed Noise Mound.

Prepared by:

Project Manager

Reviewed by:

Senior Environment and Sustainability Officer

## Recommendation

It is recommended that the proposal to modify the Parkes Bypass Project with the additional NOA encapsulations cell beneath the current design Noise Mound as described in this memo proceed subject to the implementation of all safeguards and management measures identified in this memo and in the Parke Bypass REF and determined Addendum REFs and compliance with all other relevant statutory approvals, licences, permits and authorisations. Consideration of this proposed modification has examined and taken into account, to the fullest extent possible, all matters likely to affect the environment by reason of the activity and established that the activity is not likely to significantly affect the environment. The memo has concluded that there will be no significant impacts on matters of national environmental significance or the environment of Commonwealth land.

Recommended by:

Transport Senior Manager Environment and Sustainability

Transport Senior Project Manager

## Determination

Determined by:

Regional Director West

Date:

## Appendices

Appendix A – Section 171 EP&A Regulation checklist

Appendix B - Complete list of safeguards

Appendix C – Site Clearing Plan – NOA Cells beneath proposed Noise Mound

Appendix D - Site Photos

Appendix E – Environmental Sensitive Area Markup or Map

Appendix F - Updated AHIMS searches

# Appendix A: Environmental Planning and Assessment Regulation 2021 checklist

The following factors, listed in section 171(2) of the Environmental Planning and Assessment Regulation 2021, have been considered to assess the likely impacts of the proposal on the natural and built environment. This consideration is required to comply with sections 5.5 and 5.7 of the EP&A Act.

Environmental factor	Impact
<p><b>(a) Any environmental impact on a community?</b></p> <p>The proposed work may cause minor short-term environmental impacts on the community due to increased traffic associated with trucks transporting material on public roads.</p> <p>The works would have no environmental impact on a community in the long-term and road users would benefit from safer travelling conditions.</p>	Short term negative, long term neutral
<p><b>(b) Any transformation of a locality?</b></p> <p>The proposed work will result in short term negative impacts whilst construction is ongoing.</p> <p>The long-term impacts would be neutral as the proposed areas will be rehabilitate in accordance with the landscaping plan.</p>	Short term negative, long term neutral
<p><b>(c) Any environmental impact on the ecosystems of a locality?</b></p> <p>The proposal would minor potential environmental impacts on the ecosystems of a locality known as Miscellaneous ecosystems (Pasture Grassland) as per the Review of Environmental Factors (July 2019).</p> <p>However, the potential impacts would be minimised with the implementation of the landscaping for the noise mound.</p>	Minor negative
<p><b>(d) Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality?</b></p> <p>The proposal would have minor temporary aesthetic impacts during construction. In the long term the proposal would not reduce the aesthetic, recreational, scientific or other environmental quality or value of the locality, as works would generally, be contained with the existing road corridor.</p>	Minor short-term negative, long term neutral
<p><b>(e) Any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generation</b></p> <p>The proposal would not have an effect on a locality, place or building of significance or other special value for present or future generations.</p>	Nil
<p><b>(f) Any impact on habitat of any protected animals (within the meaning of the Biodiversity Conservation Act 2016)?</b></p> <p>The proposal would not have any impact on the habitat of any protected animals due to the limited scope of works for the proposed activities and the implementation of the safeguards given in attachment B of this addendum memo.</p>	Nil
<p><b>(g) Any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air?</b></p>	Nil

	The proposal would not endanger any species of animal, plant, or other form of life, whether living on land, in water or in the air due to the limited scope of works for the proposed activities and the implementation of the safeguards given in attachment B of this addendum memo.	
<b>(h)</b>	<b>Any long-term effects on the environment?</b>  The proposal would have positive long-term effects on the environment due to sustainable management of Naturally Occurring Asbestos. There are no anticipated negative long-term effects on the environment from the works due to the limited scope of these works and the implementation of the safeguards given in attachment B of this addendum memo.	Nil
<b>(i)</b>	<b>Any degradation of the quality of the environment?</b>  The proposal would potentially degrade the quality of the environment in the short-term, however the potential impacts would be minimised with the implementation of the safeguards given in attachment B of this addendum memo.	Minor short-term impacts, neutral long-term impacts
<b>(j)</b>	<b>Any risk to the safety of the environment?</b>  The proposal would have minimal risk to the safety of the environment due to the scope of works activities covered in this addendum memo, and the potential impacts would be minimised with the implementation of the safeguards given in attachment B of this addendum memo.	Nil
<b>(k)</b>	<b>Any reduction in the range of beneficial uses of the environment?</b>  The proposal would restrict the future use of the land in areas where NOA is encapsulated. These risks would be managed with the implementation of the safeguards given in attachment B of this addendum memo	Minor long-term impacts
<b>(l)</b>	<b>Any pollution of the environment?</b>  The proposal would include remediation of naturally occurring asbestos soils and movement to approved encapsulation cells.	Overall positive Impacts
<b>(m)</b>	<b>Any environmental problems associated with the disposal of waste?</b>  The waste generated during the proposal would be contained and removed for disposal to approved recycling facilities or to licensed landfill in accordance with the safeguards in attachment B of this addendum memo. No environmental problems are anticipated for the disposal of waste. NOA waste material will be encapsulated in approved cells in accordance with an approved management plan.	Nil
<b>(n)</b>	<b>Any increased demands on resources, natural or otherwise which are, or are likely to become, in short supply?</b>  The proposal would not significantly increase demands on resources, which are, or are likely to become, in short supply. Relatively small amounts of materials would be required for the proposed work. The safeguards listed in attachment B of this addendum memo would be implemented to minimise any impacts.	Nil
<b>(o)</b>	<b>Any cumulative environmental effect with other existing or likely future activities?</b>  The proposal has the potential to have cumulative environmental effects with other existing or likely future activities, however the effects would be minimal due to the limited scope of works for the activities covered in this addendum memo, and the potential impacts on the environment would be minimised with the implementation of the safeguards given in attachment B of this addendum memo.	Nil

<b>(p)</b>	<p><b>Any impact on coastal processes and coastal hazards, including those under projected climate change conditions?</b></p> <p>The proposal would not have an impact on coastal processes or hazards.</p>	Nil
<b>(q)</b>	<p><b>Any impact on applicable local strategic planning statements, regional strategic plans or district strategic plans made under the Act, Division 3.1?</b></p> <p>The proposed modification is in line with objective 1 and 20 of the Central West and Orana Regional Plan 2041:</p> <ul style="list-style-type: none"> <li>• Objective 1: Deliver the Parkes Special Activation Precinct and share its benefits across the region</li> <li>• Objective 20: Protect and leverage the existing and future road, rail and air transport networks and infrastructure</li> </ul>	Positive
<b>(r)</b>	<p><b>Any impact on other relevant environmental factors?</b></p> <p>In considering the potential impacts of this proposal all relevant environmental factors have been considered, refer to impact assessment section of this addendum memo.</p>	Nil

## Appendix B: Complete List of safeguards



# Appendix C: Site Clearing Plan – NOA Cells beneath proposed Noise Mound

# Appendix D: Site Photos

# Appendix E: Environmental Sensitive Area Mark Up

# Appendix F: Updated AHIMS Searches