# Attachment 6 – Submissions Report

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2 October 2020

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Attn: The General Manager

**DA2019.359 Merimbula Airport Upgrade - Runway Extension**

Please find attached the Submission Report for the Merimbula Airport Upgrade - Runway Extension development application. Correspondence

Yours sincerely

[redacted]

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# SUBMISSIONS REPORT

## Merimbula Airport Upgrade – Runway Extension

October 2020

**Project Number: 18-143**

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# DOCUMENT VERIFICATION

| | |
|---|---|
| Project Title: | Merimbula Airport Upgrade – Runway Extension |
| Project Number: | 18-143 |
| Project File Name: | \\10.0.11.1\Active\Projects\2018\BVSC\Merimbula Airport EIS 18-143\Report\Submissions Report |

| Revision | Date | Prepared by | Reviewed by | Approved by |
|---|---|---|---|---|
| Final v1.1 | 02/10/2020 | J Duck | Brooke Marshall | Brooke Marshall |
| | | | | |

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# 1. INTRODUCTION

## 1.1. OVERVIEW

NGH Pty Ltd (NGH) prepared the Environmental Impact Statement for the Merimbula Airport Upgrade – Runway Extension (NGH 2019; henceforth, 'the EIS') on behalf of Bega Valley Shire Council ('the proponent' or 'BVSC'). The EIS was prepared in accordance with Part 4 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) to support a development application (DA) for Regionally Significant Development. The structure and content of the EIS was intended to address the Secretary's Environmental Assessment Requirements (SEARs), provided by the Department of Planning and Environment (DPE) on 16 February 2018. The EIS was lodged with Council with the Development Application for the runway extension and public and agency submissions were invited. The public exhibition period was from 20 November 2019 to 20 January 2020.

This report is being prepared to respond to all feedback received during the exhibition period and thereafter, from Bega Valley Shire Council (the assessor), as well as public and agency submissions in relation to the proposal.

## 1.2. PURPOSE OF THIS REPORT

NGH has prepared this Submissions Report (SR) on behalf of Bega Valley Shire Council ('the proponent' or 'BVSC') to respond to all requests for information sent by Council's assessment team in accordance with clause 54 of the *Environmental Planning and Assessment Regulation 2000*.

The purpose of the SR is to:

- Clarify the proposal and describe any changes to the proposal, including any required assessments or revised environmental safeguards.
- Consider and respond to the matters raised in the two public submissions received for the proposal.
- Address agency comments, specifically from:
    - NSW Department of Planning, Industry and Environment (DPIE) – Planning (on behalf of Council assessment team)
    - NSW DPIE – Biodiversity and Conservation Division
    - NSW Department of Premier and Cabinet (DPC)
    - NSW Department of Industries (DPI) – Fisheries
    - NSW Environment Protection Authority (EPA)
    - Transport for NSW (TfNSW)

The consultation process has been ongoing. As such, responses to all requests are presented in this document for completeness.

## 1.3. HOW TO NAVIGATE THIS DOCUMENT

As this report provides extensive supporting information, a structural overview is provided below:

Table 1-1 Report structure

| Section | Heading | Content |
|---|---|---|
| **1** | **Introduction** | Overview, report scope and structure. |
| **2** | **The proposal** | • As exhibited in the EIS, its key impacts and benefits.<br>• Changes now proposed, since the EIS exhibition period.<br>• Clarifications; this Section is provided in response to several recurrent misconceptions regarding the proposal and its likely impacts and related projects. |
| **3** | **Key areas of additional investigation** | A summary of new investigations, informing the proposal. This includes design and assessment work that has been undertaken since the EIS exhibition period. Where relevant these studies are appended to this report. |
| **4** | **Expanded strategic justification** | An expanded strategic justification for the proposal. This has been provided in response to agency comments and sets out a more comprehensive consideration of:<br>• Governmental and other supporting studies, with reference to airport upgrades.<br>• Alternatives to the proposal and selection of the preferred option.<br>• Socio-economic benefits of the proposal. |
| **5** | **DCP assessment** | A systematic analysis of the Bega Valley Development Control Plan 2013 (DCP) and its relevance to the proposal. |
| **6** | **EIS Exhibition summary** | • Additional consultation undertaken in preparing this Submissions Report.<br>• A summary of the submissions received during the public exhibition period. |
| **7** | **Response to submissions** | • Responses to public submissions.<br>• Responses to agency submissions. |
| **8** | **Updated proposal commitments** | Taking into account the additional information and analysis above, this Section updates the environmental safeguards and commitments which would accompany the project, if approved. |
| **9** | **Conclusion** | A concise summary of this document. |
| **10** | **References** | A list of all references relied upon in the preparation of this document. |

| Section | Heading | Content |
|---|---|---|
| | **Supporting appendices** | Additional information referred to and supporting this SR:<br>A. Development plans, showing additional detail than was presented in the EIS.<br>B. Justification of engineering solutions.<br>C. Bega Valley Shire Air Transport Discussion Paper (Garret Barry, 2011).<br>D. PFAS (Per- and Polyfluoroalkyl Substances) Location Map – Avoidance areas.<br>E. Haulage Route Map.<br>F. Oyster Lease within Airport Land Map.<br>G. Surface Water Assessment Addendum.<br>H. Preliminary Water Quality Monitoring and Water Quality Management Plan (WQMP).<br>I. Updated Biodiversity Development Assessment Report (BDAR).<br>J. Updated Aboriginal Cultural Heritage Assessment (ACHA) report.<br>K. Acid Sulfate Soils Management Plan.<br>L. Traffic Count Data.<br>M. Letter of support from TfNSW<br>N. Traffic Impact Assessment<br>O. Aircraft Noise Assessment (Airborne – Operational)<br>P. Offset Strategy |

# 2. THE PROPOSAL: MERIMBULA AIRPORT RUNWAY EXTENSION

## 2.1. THE PROPOSAL AS EXHIBITED (NOTIFIED)

### 2.1.1. The proponent

The proponent for this proposal is the Bega Valley Shire Council (BVSC), the owner of Merimbula Airport, and from 1 April 2019, the aerodrome certificate holder. As the owner and aerodrome certificate holder, BVSC have full operational responsibility for the maintenance and development of the airport, including compliance with all aviation related legislation.

### 2.1.2. Related projects

In 2013, a Master Plan for the airport was prepared (Merimbula Airport Master Plan 2033; Rehbein Airport Consulting, 2013). The design of the Merimbula Airport Runway Extension (the proposal, presented in the EIS and updated in this SR) is generally consistent with the runway design presented in the 2033 Master Plan.

Additional to the need to extend the existing runway, the Masterplan identified other aviation infrastructure including the passenger terminal building and apron upgrade and development potential within the three development precincts:

- Precinct 1: General Aviation Precinct;
- Precinct 2: Commercial Precinct; and
- Precinct 3: Visitor Information and Cultural Centre.

These infrastructure works are not part of the proposal. Separate assessments, approvals and permits are being sought for these works.

One possible connection between the runway extension project and broader precinct works is that areas to be used as temporary construction impact areas (ie for stockpiling) for these larger works may, once approved and permitted, be available for use for other projects, including the runway extension project.

### 2.1.3. The subject land

The proposal forms part of the Merimbula Airport located on the north west side of Arthur Kaine Drive, within the town of Merimbula, NSW. The airport land is identified as Lot 100 DP 1201186 within the Bega Valley Shire Council LGA. The airport is located approximately 1.2km south of Merimbula town centre. The land is zoned SP2 Infrastructure - Air Transport Facility (Bega Valley Environmental Plan 2013, Part 2).

Merimbula Airport contains two runways (depending on the direction of use), Runway 21 (for aircraft heading south (i.e. at 215 degrees), and Runway 03 (for aircraft heading north (at 35 degrees).

The Merimbula Airport site (Lot 100) is 105.41ha in size, primarily trapezoidal in shape, encompassing 2.95km in a north east to south west direction and between 240m and 515m in a north west to south east direction. The lot has an elevation ranging from 0m AHD on Merimbula Lake to 4m along the north eastern boundary, however the lot is in the majority very flat with the runway at an elevation of approximately 2.4m AHD.

## 2.1.4. Key components of the proposal

The Merimbula Airport Master Plan 2033 identified the need to extend the existing runway to accommodate a greater range of airline aircraft in order to both preserve existing service levels and allow for future changes and ensure compliance with relevant runway specifications.

> *The proposed runway upgrade 'starter extensions' are a non-conventional airstrip model that utilises performance-based provisions in current and impending aviation legislation but does not further increase the need for vegetation management in the surrounding area…and has a smaller footprint at the southern (more environmentally sensitive) end of the runway than a conventional runway model* (Kleinfelder, 2017).

The extension at both ends (starter extensions) provides aircraft with the additional runway length required for take-off acceleration. The OLS does not require any modification with the 'starter extension' runway model.

The proposal would be undertaken in two stages as follows:

**Runway Extension Project EIS (Stage 1)**

Stage 1 proposes the construction of a 120m long runway 'starter extension' at each end of the existing runway pavement (northern and southern ends of the existing runway) and retains the existing point of take-off and landing.

The key elements of the Project EIS footprint (Stage 1) include:

- Total impact area of approximately 34,000 $m^2$ (20,300$m^2$ south and 13,700 $m^2$ north).
- Extension of the sealed pavement surface to the south by 90 m (4,400 $m^2$), or 45 m beyond the existing runway disturbance area (120 m from the end of runway marking).
- The OLS remains unchanged.

This stage of the project is required as soon as possible. It is required in order to match the increase in terminal capacity created with the first extension of the terminal opened in December 2019. Also, in July 2020 the only passenger airline currently using the airport (Regional Express) announced its intention to introduce larger aircraft on intra and interstate services.

**Runway Extension Ultimate EIS footprint (Stage 2)**

Stage 2 would be completed as demand arises. This stage proposes an additional 80m extension to both the northern and southern ends of the runway and retains the existing point of take-off and landing, consistent with Stage 1.

This stage of the project may be as close as 10 or far away as 25 years, as it is dependent upon demand.

**Staging**

Although the proposal is identified as two stages, the approval sought is not for a staged development, nor is it a concept development as defined under the EP&A Act. Assessment of all impacts has been undertaken for the both the Project EIS and Ultimate EIS footprint runway extension works (referred to as Stage 1 and 2, respectively). The EIS and this SR have both consistently identified measures for avoidance and minimisation through design measures and commitments to implementing safeguards and mitigation measures. Where not possible to avoid or minimise impacts sufficiently, offset strategies are in development to set aside and improve environments for future generations, in accordance with relevant legislation.

The detailed design for construction is sufficient to enable the full assessment of both stages by relevant agencies and to enable terms of approval to be developed for both stages, including requirements for relevant permits (such as Fisheries Management Act Permits, Section 138 Roads Act Permits, an Aboriginal Heritage Impact Permit) that would cover both the Project EIS footprint and Ultimate EIS footprint runway extension works identified.

The assessment of both Stage 1 and 2 impacts provides certainty regarding the long term planning required for this project and appropriately assesses the cumulative impacts of the combined works. Where appropriate, the project commits to update relevant plans; such as where improved site knowledge may improve environmental or design performance, given that Stage 2 may not proceed for several years.


Figure 2-1 Location of the proposal

### 2.1.5. Proposal - generally as described in the EIS

The proposal remains generally as described within the EIS. It remains entirely within Lot 100, DP 1201186; owned by the BVSC. It entails two stages:

- Stage 1 (the Project EIS footprint) involves construction of a 120m long runway 'starter extension' at each end of the existing runway pavement; Runway 03 and Runway 21.
- Stage 2 works (Ultimate EIS footprint) would incorporate and additional 80m of runway 'starter extension' at each end of the completed Stage 1 runway.

The proposal is both to construct and utilise runway 'starter extensions' for Runway 03 (southern end) and Runway 21 (northern end).

### 2.1.6. Justification

As described in the EIS, the extension of the runway is a recommendation of the formally adopted 2033 Master Plan for the airport (Rehbein Airport Consulting, 2013), although in a modified form from the original concept designs due to additional research providing alternatives to design allowing for greater avoidance of the wetland in the south (refer to further detail about this departure in the supporting letter from Rehbein Airport Consulting in Appendix B). The Masterplan identified the need to extend the existing runways to accommodate a greater range of airline aircraft. This is required in order to:

- Preserve existing service levels.
- Allow for future growth and changes.
- Comply with relevant runway specifications.

The extensions will enable the continuation of commuter services to Merimbula, as smaller airline passenger aircraft are being replaced by larger passenger aircraft, including jet aircraft, in Australia and as the currently utilised passenger aircraft is decommissioned in the near future as it reaches the end of its operational life. It will allow other passenger airlines to consider providing a service through Merimbula, providing greater access to air travel to the local community. In order to continue existing services as these aircraft are retired, runway extensions are required.

On 29 June 2020 the purpose of the proposal was validated when the existing airline operator announced the intention to start replacing its existing fleet (Saab34s, 30-34 seat capacity) with 40-50 and 72 seat aircraft (ATR42 and 72). The introduction of 70 seat aircraft (including the ATR72 and particularly the Dash8Q400) will require the additional runway length proposed in Stage 1.

The ability for larger craft to use the airport will also allow for future growth, which is anticipated. The design of the extensions has been undertaken in close consultation with the Commonwealth Aviation Safety Authority (CASA) to ensure that it meets runway specifications including:

- Obstacle Limitation Surfaces (OLS) – starter extensions have been utilised in the design with the result that they have no impact on current OLS.
- Compliance with both the outgoing and the replacement Manual of Standards Part 139 (the primary runway compliance legislation) including the configuration of runway by-pass and end nodes.
- The extent and gradient of the airstrip surrounding the pavement portion.
- The positioning of runway lighting and markings.

Refer to Section 4 of this SR for an additional detailed strategic justification for the runway upgrades.

### 2.1.7. Key impacts

The key construction impacts for the proposal, as detailed in the EIS, relate to the excavation and placement of fill in and near the sensitive Merimbula Lake. They include:

- Managing and monitoring water quality during construction, considering that construction is adjacent and within the Merimbula Lake, important for recreation, aquaculture, tourism and biodiversity.
- Managing excavation of Acid Sulfate Soils (ASS), in a sensitive location, as above.
- Offsetting terrestrial and aquatic biodiversity impacts, in accordance with the Biodiversity Conservation and Fisheries Management Acts.
- Salvage of Aboriginal cultural artefacts within the impact areas in consultation with Representative Aboriginal Parties (RAPs).

The key operational impacts for the proposal relate to the fact that larger aircraft, utilising longer runways, will be able to take off and land closer to receivers. This includes:

- Minor predicted noise exceedances for the Stage 2 northern runway only, modelling a worst case scenario aircraft.
- Minor cumulative visual impact due to the extended length of the hardstand areas and diminished softer visual features (vegetation and water views).

The additional fill required to build up the extensions also has a minor impact on tidal inundation areas and flow velocity around the southern runway extension.

All other impacts were assessed as minor and highly manageable.

## 2.2. PROPOSAL CHANGES SINCE EIS EXHIBITION

In response to consultation, consideration of submissions and as design has progressed, some changes have been made to the proposal since the EIS public exhibition period. The changes affect both the impact areas and the impact types that were assumed in the EIS. None are considered substantive; the proposal remains generally as described in the EIS.

Where required, these are assessed in this Submissions Report. The following table is a summary of the changes that have occurred to the proposal description since the EIS was publicly exhibited, the reasons for each change and implications for the impact assessment, where relevant. These are detailed fully in Sections 2.2.1 to 2.2.4.

Table 2-1 Summary of changes to the proposal

| Change | Justification | Key issues for impact assessment |
|---|---|---|
| **Temporary construction impact areas are now refined/clarified.** | The proposition in the EIS was to use areas of previous disturbance for temporary stockpiles and site access during construction.<br>Further investigation has determined that for Stage 1, the temporary stockpile areas can be minimised through the use of direct placement, and therefore, no new temporary construction areas are | All temporary impact areas required for use are now detailed in Section 2.2.1 and mapped in Figure 2-2.<br>The existing values and impact assessments for works in the runway extension footprint areas |

| Change | Justification | Key issues for impact assessment |
|---|---|---|
| | proposed. All works will be confined to the Project EIS footprint. Refer to the revised construction methodology/works order provided at section 2.2.1 below).<br><br>As Stage 2 will be undertaken at a future date, it is possible that additional temporary construction areas (that have been assessed for use in related projects by this time) may also be available for use – subject to them having been assessed and all necessary approvals obtained. | are included in:<br>• The updated ACHA<br>• The updated BDAR[1]<br>• The surface water addendum<br>• Management plans<br>Provided as appendices in this SR. |
| **Refined runway extension design:**<br><br>**Increased certainty, less overall impact area required.** | Since the exhibition of the EIS, further design work has progressed iteratively with involvement from CASA, engineers, hydrologists and ecologists. This has provided more certainty around feasible construction techniques and their relationship to direct and indirect impacts.<br><br>The result is a reduced 'Project EIS footprint' (Stage 1) for the southern end. | The updated Project EIS and Ultimate EIS footprint (Stage 1 and Stage 2) impact areas are now detailed in Section 2.2.1 and mapped in Figure 2-2.<br><br>The revised impact assessments are included in:<br>• The updated BDAR<br>• The updated ACHA<br>Provided in Appendix I and J. |
| **Culvert increase proposed to counter minor reduction in tidal flow:**<br><br>**southern end (additional single 300mm culvert).** | While minor and considered negligible, the modelled 7% reduction in tidal flow around the southern runway extension presented in the EIS (as a result of the Ultimate EIS footprint works) was of concern to some oyster lease stakeholders. As water quality is paramount to the health of their product and industry, any reduction in flow was of concern.<br><br>A small expansion to an existing culvert at the southern end of the proposal is now included in the scope, to be constructed as part of Stage 1 (Project | The construction and operational impact areas resulting from the expanded culvert are now detailed in Section 2.2.3 (construction) and (operation) and the location mapped in Figure 2-2 and in the surface water assessment addendum provided in full at Appendix G.<br><br>The existing values and impact assessments for works in these areas are included in:<br>• The updated BDAR |

[1] Note: with regard to temporary stock pile areas, the BDAR assesses additional areas that have now been withdrawn from the proposal. The assessment concluded no offset requirement is generated for these highly modified areas hence, while they are retained in the BDAR for completeness they have no bearing on the approval, mitigation or offset requirements.

| Change | Justification | Key issues for impact assessment |
|---|---|---|
| | EIS footprint) works. This achieves a minor (1%) increase in tidal flow at stage 1 (Project EIS footprint) and 2% change with the Ultimate EIS footprint but is a positive increase in flow rather than the reduction that would occur without the culvert. This increase is more acceptable to stakeholders as agreed verbally during consultation and in correspondence following the additional consultation (refer to Section 6.2.1 for details). This increase in flow has also been considered in the updated BDAR refer to Appendix I. | • The updated ACHA<br>Provided in Appendix I and J. |

More detail regarding the changes set out in the table is provided in the sections below.

### 2.2.1. Temporary construction impact areas clarified

#### Stockpiling and laydown

While the EIS assumed that existing disturbed areas could be used for temporary impacts such as construction stockpiling, parking and access, it has now been confirmed that all impacts will be confined to the Project/Ultimate EIS footprints as mapped in Figure 2-2.

Consequently, no additional clearing or use of previously undisturbed land would be required for the stockpiling, laydown, parking, site office areas. These activities will not affect:

- Environmentally sensitive areas (or be accessed through any). No go zones will be established to protect environmentally sensitive (biodiversity and heritage) areas that occur adjacent to the Project/Ultimate footprints, i.e. areas that have not been offset or subject to an Aboriginal Heritage Impact Permit.
- Water quality or soil erosion; erosion and sediment controls would be installed to redirect clean water around the Project/Ultimate footprints (and proposed culvert works).
- Public utilities: no adjustments to existing services or utilities are required.

One possible connection between the runway extension project and broader precinct works is that areas to be used as temporary construction impact areas (ie for stockpiling) for these larger works may, once approved and permitted, be available for use for other projects, including the runway extension project.

In addition, clarifications around the proposed site management and material use have been updated as listed below.

#### Materials Management and Storage

As outlined in Table 2-3 below, it is assumed that all construction earthworks and pavement materials would be imported and placed directly. Stockpiling may occur at Council's existing stockpile site on

(part) Lots 100 and 101 DP 1201186. If this site is used, the cumulative areas of the material footprints would not all be required at once and the contractor would need to evaluate based on construction timings, the maximum stockpile footprint required in accordance with the construction program critical path.

Additional temporary construction impact areas for stockpiling areas and similar activities may be identified and used during the course of the project where they have been assessed and approved for such use (see 2.1.2 Related Projects).

## Construction activities

The construction approach for the Proposal is set out below, however work will continue through to the construction period to identify minimisation of impacts. The Construction Environmental Management Plan (CEMP) prepared by the construction Contractor would guide the construction activities. This would ensure that the detailed works plan is developed and implemented in accordance with the processes and procedures outlined in the EIS and this SR and are undertaken in the specified works area.

The construction activities would occur in the following order for both stages:

Northern Extension

A. Installation of temporary erosion, sediment and water quality controls in accordance with the Water Quality Monitoring and Water Quality Management Plan.
B. Installation of temporary fencing.
C. Strip grass and topsoil.
D. Excavation if required to achieve required levels, including compliance with the Acid Sulfate Soils Management Plan
E. Removal areas of existing pavement seal
F. Earthworks for new pavement/fill batter
G. Installation of lighting.
H. Preparation of existing surface.
I. Placement of gravel pavement.
J. Seal pavement.
K. Pavement markings
L. Landscaping and revegetation of disturbed areas.
M. Decommissioning of temporary fencing and erosion and sedimentation controls.

Southern Extension

A. Installation of temporary erosion, sediment and water quality controls including diversion of drainage channels around the development footprint, placement of rock bags and silt curtains, and dewatering in the second stage (if required), in accordance with the Water Quality Monitoring and Water Quality Management Plan.
B. Installation of temporary fencing.
C. Stripping of vegetation including compliance with the Acid Sulfate Soils Management Plan
D. Removal areas of existing pavement seal
E. Earthworks for new pavement/fill batter
F. Drainage layer installation

G. Installation of lighting.
H. Preparation of existing surface.
I. Placement of gravel pavement.
J. Seal pavement.
K. Pavement markings
L. Landscaping and revegetation of disturbed areas.
M. Decommissioning of temporary fencing and erosion and sedimentation controls.

Scheduled timing would be as follows for Stage 1:

Northern Extension

- Preliminaries – Weeks 7 & 8
- Earthworks – Weeks 9 to 11
- Gravel Pavement – Weeks 16 & 17
- Surface Pavement – Weeks 20 & 21
- Lighting and Line Marking – Weeks 22 to 24

Southern Extension

- Earthworks to completion of platform Weeks 1 to 6
- Platform settlement period – one to six months (during which time the site will be left stable with controls in place and monitoring under the management of the WC
- Earthworks – Weeks 12 to 14
- Drainage Layer - Weeks 15 to17
- Gravel Pavement – Weeks 18 & 19
- Surface Pavement – Weeks 21 & 22
- Lighting– Weeks 23 & 25
- Decommissioning - Weeks 26 & 27

For Stage 1, the Proposal would require partial runway closure over a total 27 week period excluding the additional platform settlement period. During the additional platform settlement period, works would not be occurring, although environmental monitoring and management mechanisms would continue. Construction is anticipated to be undertaken over a period of 27 weeks (with a break period for the platform settlement) although if both ends of the runway can be worked on concurrently, the construction timeline could be reduced.

Stage 2 timing would be similar to Stage 1, with potential for a shorter time requirement as the Stage 2 runway starter extensions addition will be two thirds of the length of the Stage 1 runway starter extensions.

## Site preparation and earthworks

Refer to prior sections of this report for details around the civil and drainage works site preparation and earthworks.

The total area to be cleared at each end is approximately 35,000m2 (3.5Ha). The main difference between the work methodology for the lake and wetland areas compared to land areas is that the wetland area would always be wet with a higher water level that needs to be considered in design/construction/operation. Also, the pollution risks of using finer materials would be greater in the wetland areas. Therefore, the higher water level would be accommodated for with a drainage layer installation that would consist of shot rock to provide both the required bearing capacity and permeability to allow water to flow in and out as required. This drainage layer would be wrapped in geofabric to ensure that the permeable integrity of the layer is not compromised in future years.

The Acid Sulfate Soils Management Plan includes the processes and procedures required for the excavated surfaces and the excavated material in the range of acid sulfate soils identified in the wetland and land areas and will be implemented accordingly.

Water quality monitoring in accordance with the Water Quality Monitoring and Water Quality Management Plan will be implemented prior to construction commencing in order to establish baseline data.

## Materials and resources

Key resourcing requirements for the Proposal would include machinery and equipment (listed in Table 2-2 below), earth, aggregate and rock fill, bitumous spray, landscaping materials and water (refer to Table 2-3 below).

## Machinery and equipment

Table 2-2 Estimated machinery and equipment required for construction of the Proposal

| Plant Description | Estimated Number of Items |
|---|---|
| **Crane** | 1 |
| **Drum roller** | 4 |
| **Padfoot roller** | 4 |
| **Wheeled loader** | 3 |
| **Dump truck** | 6 |
| **30t Excavator** | 10 |
| **Grader** | 6 |
| **Chain trencher** | 4 |
| **Water truck** | 4 |
| **Telehandler** | 4 |

| Plant Description | Estimated Number of Items |
|---|---|
| **Forklift** | 4 |

## Materials

Proposed resource materials for construction are listed in Table 2-3 below. These figures are estimated and would be confirmed during the detail design phase of the Proposal.

Table 2-3 Estimated material resources for the construction of the Proposal

| Resource | Estimated quantity |
|---|---|
| • **Topsoil (existing on site - stripped, stockpiled and reinstated – assume 4m stockpile height – area 875m2 required)** | 3,500m3 |
| • **General fill in runway strip and batters - (imported and placed directly)** | 21,000m3 |
| • **Select fill in earthworks embankment below runway pavement (imported and placed directly)** | 50,000m3 |
| • **"Clean" Crushed rock pavement material - runway base pavement both Northern and Southern extensions imported and placed directly** | 5400$m^3$ |
| ○ **Sizes** | Nominal 20mm |
| ○ **Sources** | Basalt |
| • **"Clean" Shot Rock material – drainage layer - Southern extensions to be imported and placed directly** | 5500m3 |
| ○ **Sizes** | 110mm < dia < 400mm |
| ○ **Sources** | Basalt |
| • **"Clean" Aggregate 20mm @ 85 m2/m3 imported and placed directly** | 100$m^3$ |
| • **Hot sprayed bituminous seal - 1.5l/m2** | 100,000 litres |
| • **Water during construction** | Use of water from existing holding ponds – for dust suppression etc. |

## Site office

The site office will be in either a Council owned building on the southern side of the existing terminal or existing demountable buildings on the northern side of the terminal (refer to Figure 2-2).

## Construction access

Section 4.5.4 'Transport and access' of the EIS identified that construction access would utilise existing access off Arthur Kaine Drive, for truck and equipment access during construction. This access has been confirmed for the runway extensions as mapped in Figure 2-2 below.

All access would be via carefully managed via the main entry to the airport in accordance with the proposed Construction Traffic Management and Haulage Management Plans that will be prepared for the works in consultation with Councils traffic engineers.

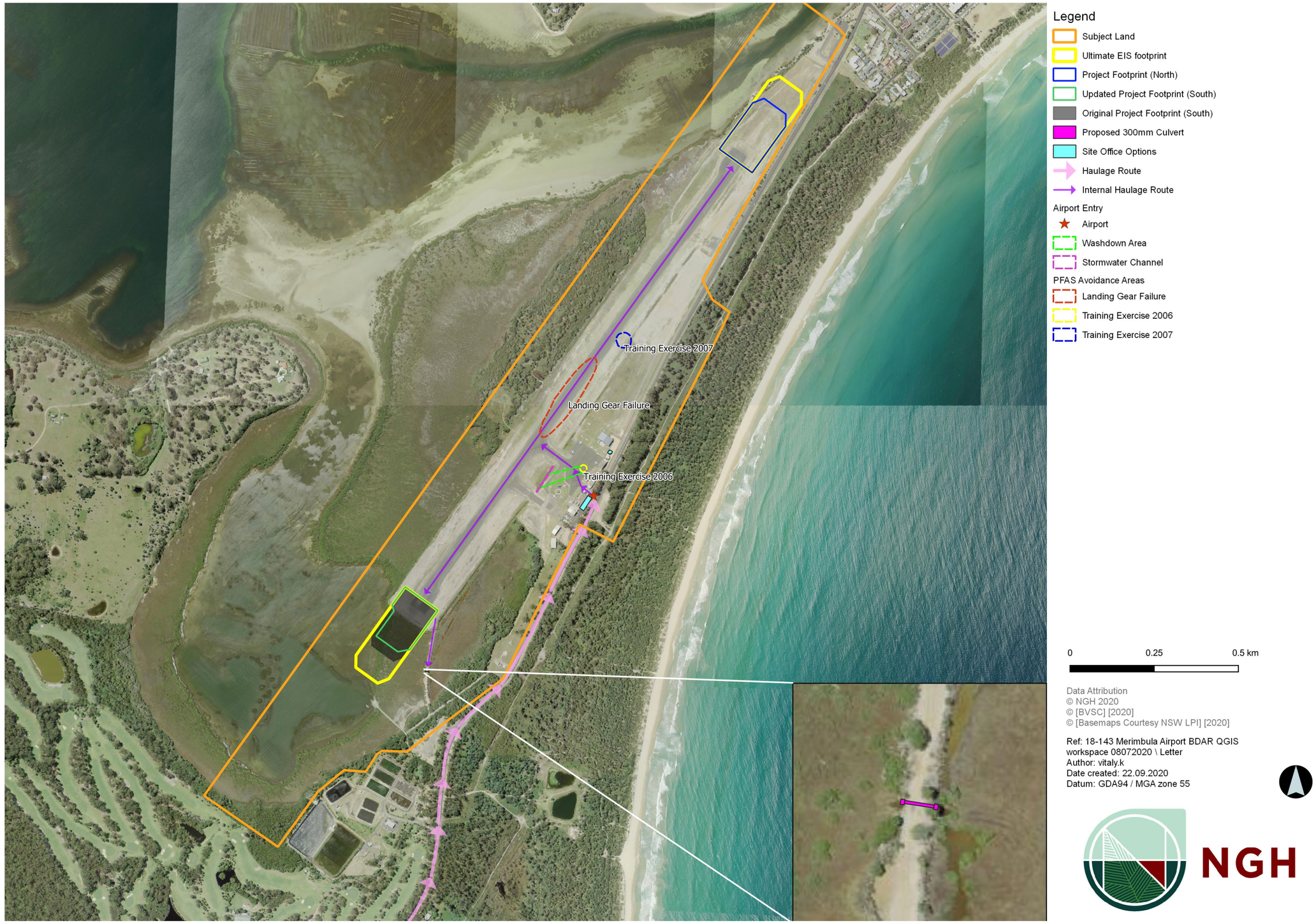



Figure 2-2 Updated impact areas now proposed.

### 2.2.2. Refined runway extension design

Since the exhibition of the EIS, further design work has progressed iteratively with involvement from agencies and specialists. This has provided more certainty around feasible construction techniques and their relationship to direct and indirect impacts.

The key events impacting the design occurred as follows:

1. In February 2020, CASA clarified their interpretation of the Manual of Standards Part 139 as it applies to proposed starter extensions under the review of Manual of Standards Part 139 promulgated in August 2019. CASA has identified that starter extensions will be subject to taxiway configuration requirements rather than runway configuration requirements. The impact on the proposal is that the required strip width (specifically the grassed area on the sides and at the end of the paved strip) is now narrower than anticipated in the EIS.
2. In April – May 2020, more detailed development of the construction methodology was undertaken for the 'Project EIS footprint' (Stage 1) involving engineering, hydrological and ecological specialists, to bring forward certainty around water quality management options and resulting impact areas (temporary and permanent).

The construction methodology now presented, whilst still open to suggestions of improvement during a competitive tender process, includes the construction of a geofabric lined rock wall, placed (not excavated) on the ground at low tide, to retain all disturbance and manage the release of water back into the estuary. The wall will be tied to the permanent runway extensions such that, while constructed to manage construction impacts, it will be retained permanently, reducing the potential for additional impacts beyond this boundary. A floating boom will be anchored to this wall during construction as a risk management strategy however, no indirect impacts are anticipated on the outer side of the wall. Concept designs are provided in Appendix A and Appendix H.

The permanent impact footprints now shown on Figure 2-2 can be said to reflect a feasible construction method that allows all environmental controls necessary to manage all construction impacts on vegetation, soil and water quality to be contained within this boundary. As such, no indirect water quality, vegetation or soil impacts are anticipated outside of this boundary.

The additional design work focused only on the Project EIS footprint (Stage 1) and resulted in a reduction of 0.59 ha, in the area required for the southern extension only. There are no changes to extents for the following areas; they remain as shown in the EIS:

- Project EIS footprint (Stage 1 – northern extension)
- Ultimate EIS footprint (Stage 2 – both the northern and southern extensions)

Analysis also indicates that these outer footprints will allow for the same strategy to be employed for the Ultimate EIS footprint (Stage 2), with the possible addition of a coffer dam if required. Further, it is acknowledged that Stage 2 is a long term proposal (likely to be in excess of 10 years) and therefore, a superior strategy may be proposed, that meets these same requirements; to contain all construction impacts on vegetation, soil and water quality allowing for a future reduction in the area for Stage 2.

### 2.2.3. Culvert increase

## Operational impacts

**Ultimate EIS Footprint (Stage 2)**

While minor and considered negligible, the modelled 7% reduction in flow (for the Ultimate EIS footprint) around the southern runway extension presented in the EIS was of concern to some oyster lease holders. As water quality is paramount to the health of their product and industry, any reduction in flow was of concern.

Greater consideration was therefore applied to the direct hydrological impacts of the tidal flow, its volume and velocity, at the southern end of the proposal. The flow in this area was reduced initially by the installation of a built up haulage road in the 1950's for the original runway construction (as seen in figure 8-4 of the EIS). The road currently has 2 culverts beneath the haulage road (not proposed to be used for any part of the proposal).

To account for a minor reduction in modelled in tidal exchange due to the creation of the southern extension (7% *reduction* in tidal exchange), a small expansion to the existing culvert in the existing haulage road (which acts as a barrier to flow) was modelled. The objective was to offset the impact on flow caused by the proposal, not address impacts of past projects, and to ensure that any change in flow due to the proposal, was not adverse to water quality and local oyster operations.

Hydrological modelling, presented in the Addendum to Surface Water Assessment (SWA), shows that with the addition of one 300mm diameter culvert, as close to a net zero effect can be achieved. A 2% increase in tidal exchange is the overall result for the Ultimate EIS footprint. This will result in an increased inundation area of up to approximately 1000m2. This would occur between 5-10 times per year during king tide events. Under lesser volumetric exchanges, the impact is not discernible. The 2% increase is not anticipated to lead to any changes in salinity, water depth or resulting vegetation composition, given the infrequency of the peak increase and its small area. As the 2% increase is a king tide event, the newly inundated area is inundated infrequently and at shallow depth, which is unlikely to promote a vegetation change from saltmarsh to mangroves, and if anything will promote additional saltmarsh over these spaces. It is unlikely that there will be significant spread of mangroves from existing extents where inundation is deeper, as the inundation frequency will remain and depth will only change very slightly (1-2cm). Any small spread in mangrove in these more frequently inundated areas is likely to be offset by spread of saltmarsh at the tidal inundation edges. Therefore impacts on saltmarsh habitat are negligible. Refer to modelling provided in the SWA addendum at Appendix G.

**Project EIS footprint (Stage 1)**

The culvert will be installed as part of Stage 1 works, as such additional modelling was run to determine the change at this stage as well as for the Ultimate EIS footprint impact as described above. The modelling found that the additional culvert increases volume accumulation by 1% above the existing condition and improves exchange. Without the culvert at stage 1 this would result in a 5% *reduction* in tidal exchange. This again was seen to be a negative effect for oyster lease holders and it was determined that the 300mm culvert should be installed at Stage 1.

The SWA addendum concluded:

> *Adjustment of the terrain used in the previous hydraulic model (based on ground truthed data) generates modelling results for shallow tidal inundation/extents that more accurately reflect anecdotal information from adjacent oyster farmers and existing vegetation habitats.*
>
> *This modelling indicates that runway extension has a small impact on tidal exchange, Stage 1 increases accumulated flow to the area east of the access road by restricting outflow. This is offset by an additional culvert. Stage 2 limits flows into the area east of the access road, reducing accumulated volumes by about 7%. The impact is pronounced in the smaller tide events that flow through the culverts.*
>
> *Providing an additional 300mm diameter culvert at the existing southern culvert will offset the hydraulic impact of the runway extension and slightly increase tidal exchange for these larger tide events by about 1% for stage 1 and 2% for stage 2. The inundated area to the east of the southern access road will increase slightly (1270sqm for Stage 1, and 1190sqm for stage 2) as will associated inundation depth (1-2cm). It is expected that this will result in a slight increase in saltmarsh habitat over this new area which will experience more frequent inundation from king tides.*

As such operational indirect impacts due to hydrological impacts are considered minor but are addressed as required in the ecological investigations that accompany this application (the updated BDAR, Appendix I), including a commitment to monitor the results to confirm the assumptions of the modelling.

The increase in flow, while minor, is considered a beneficial impact for water quality, aquatic habitat and oyster leases in the area.

### Construction impacts

Figure 2-2 shows an area of disturbance, either side of the old southern haul road measuring approximately 1m from the toe of the embankment, and 1.5m wide to allow for machinery bucket movement for headwall excavation and placement - or rock placement if no headwall, with a 1.5m strip through the existing road. On a smaller scale to the runway, the disturbance areas provide for silt curtains (or other suitable sediment controls) to be placed as a risk management strategy with no indirect impacts anticipated on the outer side of the curtains. Sediment controls would also be applied to the old southern haul road.

Note: the old southern haul road is proposed to be used only for the construction of the proposed 300mm culvert and not for any other purpose.

### 2.2.4. Impact summary

Based on the additional design work undertaken since the exhibition of the EIS, this Submissions Report now:

- Identifies all areas where impacts are required, including construction and operational impacts.
- Accounts, within the defined footprints, for all environmental controls which will manage indirect impacts. As such no additional buffer is required in the context of water, soil or vegetation impacts.

The additional impact areas and types are now included in the relevant supporting environmental assessments:

- The updated BDAR
- The updated ACHA

Provided in Appendix I and J.

## 2.3. CLARIFICATIONS

Given the complexity of the activities undertaken and proposed at the Merimbula Airport, to clarify what the proposal *is not*, additional detail is provided in this section, including related projects being undertaken and assessed separately. Additionally, in review of the submissions received from government agencies in response to the EIS, it became clear that there were several recurrent misconceptions regarding the proposal, its likely impacts and relationship to other projects. This Section provides more clarity around the proposal and the appropriate assessment of its impacts.

### 2.3.1. Relationship between the proposal and other airport activities

Additional to the need to extend the existing runways, the Merimbula Airport Master Plan 2033 (Rehbein Airport Consulting, 2013) identified the need to upgrade other aviation infrastructure including the passenger terminal building and apron upgrade and development potential within the three development precincts:

- Precinct 1: General Aviation Precinct;
- Precinct 2: Commercial Precinct; and
- Precinct 3: Visitor Information and Cultural Centre.

The runway extension proposal presented in the EIS and detailed further in this Submissions Report is not related to Precinct works 1-3 above, as set out in the Masterplan. Specifically, it is does not include:

- Any other activities described in the Masterplan, with the exception of the runway extensions.
- The development of any other airside (aviation) infrastructure works, such as changes to the aprons or taxiways.
- Landside works such as extensions to the airport terminal or carparks.

### 2.3.2. Relationship to existing passenger services and their timing

Merimbula Airport is a regional airport that has been utilised by passenger airlines since it opened in 1957. There are no restrictions on its operating hours. With the successful implementation of the proposal:

- No impacts on the timing of passenger services is expected:
    - Although it is dependent on the airlines and the patronage, access to the long-established early morning departure to Sydney and end of day return from Sydney (enabling single day business and medical trips) would not be expected to change.
    - The market demand continues to make overnight regional airline movements extremely unlikely (unprecedent on domestic Australian routes).
- No impacts on the timing or number of Air ambulance, Defence and general aviation movements is anticipated.

Hence, changes to the flight time envelope would not be a result of this proposal and this impact is not assessed as part of the EIS or this Submissions Report.

### 2.3.3. Relationship to total number of flights

Increased demand for flights in future is expected but is not tied to this proposal specifically. If this proposal is not accepted, then growth in passenger numbers can only be addressed through an increase in the number of flights of the existing 34 seat and smaller aircraft.

The number of flights per days at the Merimbula airport is dictated by the following inter-related factors:

1. Demand for flights.
2. Commercial operators' response to demand and the resulting price point.
3. Runway configuration, including the length of the runway, which impacts the size of craft, and therefore passenger numbers and costs.
4. Landside infrastructure, including terminal and parking capacity, which caps the number of passengers that can be accepted at any point (see Figure 2-3).

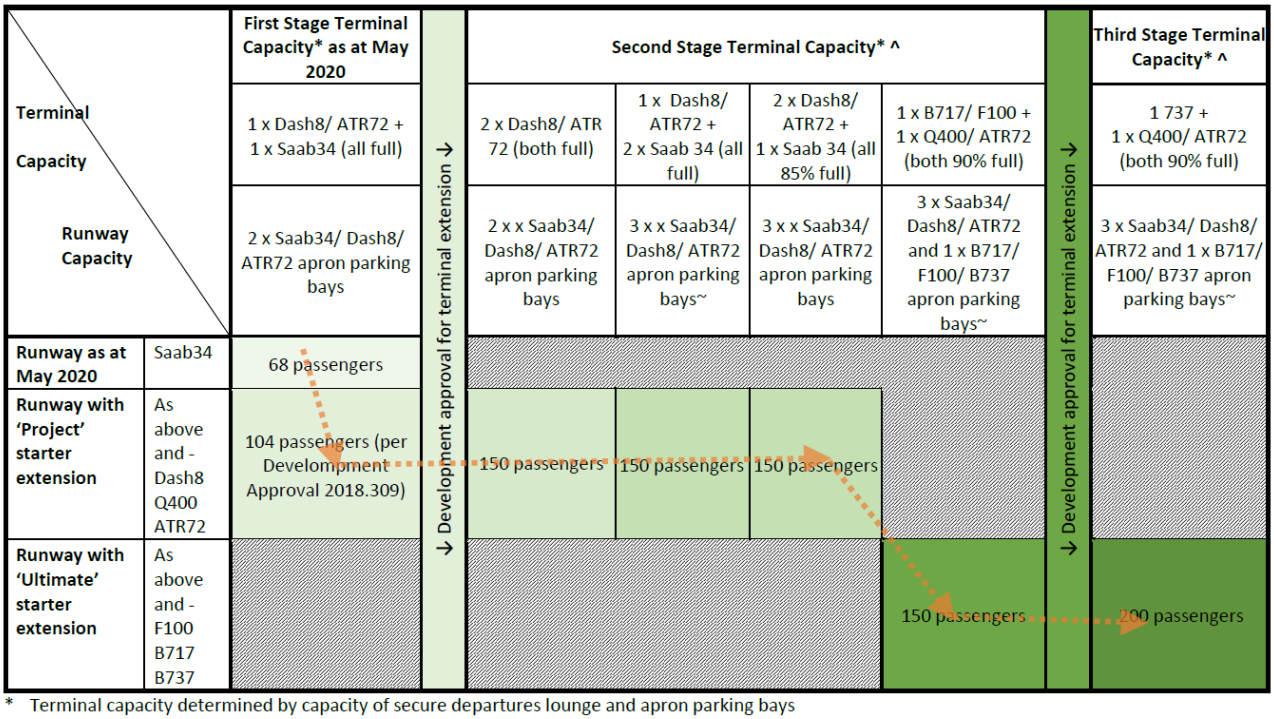
Considering points 1 and 2, for the proposal to generate additional flight numbers, increased demand for flights must first occur. Currently, no more frequent flights are anticipated as there is no increased demand for flights. The proposal is not specifically a response to demand for additional flights. The proposal does however identify one of the responses to increasing passenger numbers in future; that being to utilise larger aircraft. Also, it is reiterated that the proposal is required to expand the airport's ability to receive larger passenger aircraft as the currently utilised passenger aircraft is decommissioned in the for future as it reaches the end of its operational life (per the announcement by Regional Express on 29 June 2020). It will allow other passenger airlines to consider providing a service through Merimbula, providing greater access to air travel to the local community. Increased demand for flights in future is expected but is not tied to this proposal specifically.

Point 3 and 4 set predictable caps on passenger numbers and are therefore more appropriately linked to the assessment of additional flights. While the caps are clear, due to the uncertainties of Points 1 and 2 (demand for flights and operators' response) the likely timing of when these caps will be reached is not known. While the extended runways will allow a larger plane to take off and land, it does not follow that the proposal will generate a greater frequency of flights. (Without the stater extensions, increases in passenger movements can only be met by increased flights). To meet existing demand for passenger flights, the larger planes accommodated would be more likely to reduce in number. To meet predicted increases in demand over time, the number is considered likely to increase. However, landside infrastructure is the limiting factor, determining the extent and timing of each increase, and is more closely connected to this outcome.

As shown by Figure 2-3, separate assessment and approval processes are being pursued for the terminal upgrades and runway extensions. The relationship between these activities and passenger numbers can be explained as follows:

- The existing runway configuration caps the number of passengers able to utilise the airport in any inbound (or outbound) flight, to 68 passengers. This is the current limit, determined by the Saab34; *the only passenger carrier that can currently utilise the existing runway configuration.*
- After the completion of the proposed Stage 1 (the Project EIS footprint), a maximum increase to 104 passengers will result. The cap of 104 at this point becomes the result of the existing terminal capacity (increased to this level by the extension completed in 2019). Hence, the Stage 1 (the Project EIS footprint) proposal equates to an increase of 36 passengers per flight. Any further increase requires the second and third stage increases in terminal capacity delivered by further extensions of the terminal, which will be subject to separate assessment and approval processes.

**Merimbula Airport – Projected Maximum Passengers Inbound (or Outbound), Aligned With Typical Infrastructure Staging**




* Terminal capacity determined by capacity of secure departures lounge and apron parking bays
Terminal capacity requirement is determined by airlines' operational practice
^ Terminal extension could occur across a number of staging options. The three stages shown in this table are viewed as being typical
~ The fourth apron parking bay is required due to the height and wing span of the larger aircraft (B717, F100 and B737) rather than the number of aircraft

Figure 2-3 Projected maximum passengers inbound (or outbound), aligned with typical infrastructure staging

The Stage 1 (the Project EIS footprint) proposal therefore equates to a maximum increase of 36 passengers per flight (total of 104) approved as part of the terminal development as constructed (approved DA

2018.309). For the Merimbula airport, any further increase in passenger numbers (and therefore flight numbers) is more directly linked to terminal capacity (see Figure 2-3):

- First stage (existing) terminal capacity has been assessed for up to 104 passengers.
- Second stage terminal capacity will be assessed for up to 150 passengers.
- Third stage terminal capacity will be assessed for up to 200 passengers.

In summary:

1. Additional passenger numbers beyond the existing terminal capacity will not result from this proposal, therefore there is no requirement to increase parking at the site with the runway extensions. Additional passenger numbers will be a factor of demand and price points determined by commercial operators and increases beyond the capacity of the existing terminal approval will trigger separate approval for the required terminal upgrades.
2. An increase in flights will occur without the acceptance of this proposal. It is not a result of this proposal and additional flights are not assessed as part of the EIS or this Submissions Report.

### 2.3.4. Other clarifications

In review of the submissions received from agencies, there were several recurrent misconceptions regarding the proposal and its likely impacts. These are summarised here to provide more clarity around what the proposal is not.

Table 2-4 Misconceptions regarding impacts of the proposal

| Misconception | Comment | Reference in updated impact assessment |
|---|---|---|
| **That the development is a concept or staged development under the EP&A Act.** | Although the proposal is identified as stages, the approval sought is not for a staged development, nor is it a concept development as defined under the EP&A Act. It is considered that assessment of all impacts has been undertaken for the both the Project EIS footprint and Ultimate EIS footprint runway extension works. It is considered that the studies and information presented in the EIS and as updated, expanded upon, clarified and superseded by this SR and that the detailed design for construction has sufficiently progressed and is sufficient to enable the full assessment by relevant agencies and enable terms of approval to be developed for both stages, including requirements for relevant permits (such as Fisheries Management Act Permits, Section 138 Roads Act Permits, an Aboriginal Heritage Impact Permit) that would cover both the Project EIS footprint and Ultimate EIS footprint runway extension works identified. The assessment of both Stage 1 and 2 impacts provides project certainty regarding long term planning required for this project and appropriately assesses the cumulative impacts of the combined works. | This was raised by DPIE and generally by other agencies. |
| **That the runway extension would require a change to the Obstacle Limitation Surfaces (OLS)** | No alteration to the OLS is required by the proposal. The runways have been developed in their current location partly in consideration of this requiring no additional vegetation clearing, beyond the existing OLS vegetation maintenance area. As such, outside of the construction clearing impacts assessed, which would be permanent, no additional clearing is relevant to the proposal. | This was raised by BCD.<br>It is clarified in the updated BDAR as well as in the response table; refer to Section 7.2.2 of this SR. |
| **That there would be changes to flight paths due to the proposed runway extension.** | Flight paths will not change due to the proposal. The position of the runway thresholds will not change. The thresholds are identified by the set of white stripes at either end of the runway. The stripes/ threshold will not be relocated by this | This was raised by Council.<br>It is clarified in the justification in Section 4 of this SR and also in the response table Councils |

| Misconception | Comment | Reference in updated impact assessment |
|---|---|---|
| | proposal. Aircraft will begin their landing at the threshold and complete their take off at the threshold. The additional paved area created for the extensions (north and south) will be used for *the commencement of the take off only*. Hence, as the plane becomes airborne at the end of the runway, it retains the same separation distances with regard to surrounding features as the existing situation. The same applies to aircraft approaching the runway for landing. The difference to the current runway is the use of the extended area for the beginning of the take off run only. | issues in Section 7.2.8 of this SR. |
| **Haul road removal, adjacent to the southern runway, not proposed** | It is understood that this idea was discussed by agencies onsite during a site inspection. The barrier was created in the 1950s and tidal flow into this area has subsequently been restricted by the size of culverts beneath the haul road. The road's removal may have benefits, but it is not proposed nor assessed as part of the proposal.<br>Note the addition of one 300mm diameter culvert is now proposed to offset minor impacts of the southern extension, as explained in Section 2.2.3. | This was raised by BCD.<br>It is clarified in the updated BDAR as well as in the response table; refer to Section 7.2.2 and 7.2.5 of this SR. |
| **Existing maintenance operations** | During environmental investigations, a gap was identified by the heritage consultants; there is no AHIP in place to cover the existing maintenance operations in the airport. This is not related to the proposal, but the heritage team suggested in the ACHAR that the same AHIP being sought for the proposal could include the current operations to expediently address this gap. This has created confusion over what the proposal is and was raised by BCD in their review, noting correctly that maintenance impacts had not been assessed as part of the proposal. The suggestion to seek one AHIP to cover the proposal and maintenance activities outside of the development area has therefore been withdrawn to remove confusion. | This was raised by BCD in their review noting correctly, that maintenance impacts had not been assessed.<br>It is clarified in the updated ACHA in Appendix J as well as in the response table; Refer to Section 7.2.3 of this SR. |
| **That the runway extensions could be further moved north or south, or that a new location for the airport** | An alternate location of the runway extensions, for example moving them further north, or use of an alternative airport location, are options that have been considered and are not feasible as discussed in the Merimbula Airport Master Plan 2033 | This was raised by the public.<br>It is clarified in the response table; public submissions |

| Misconception | Comment | Reference in updated impact assessment |
|---|---|---|
| **may be feasible.** | (Rehbein Airport Consulting, 2013) and the Bega Valley Shire Air Transport Discussion Paper (Garret Barry, 2011). Refer to further discussion and justification of the proposal location in Section 4.2 of this SR and the Garret Barry report at Appendix C. | responses and specifically in Sections 4.2.3 and Appendix B of this SR. |
| **No substantive impact on wildlife collision risks** | For the Merimbula airport, collision risk, particularly for shore birds foraging near to the flight path, can be summarised as a combination of:<br>• Proximity to the risk,<br>• Attractiveness (such as the presence or roosting or foraging habitat),<br>• Surface area available to collide with, and<br>• Frequency of flights.<br>The runway extension project will remove a limited area of terrestrial and aquatic habitat (2.48ha from BDAR) which might otherwise attract birds and other wildlife. The surrounding environment will continue to be managed under the existing adaptive wildlife management plan (Local Environmental Solutions, 2020)(Refer to the updated BDAR found at Appendix I).<br>The runway extension does have the potential to bring larger planes closer to shorebird habitats however, as above, the flight paths, heights as well as landing positions will not change from the current situation. The additional paved area created for the starter extensions (north and south) will be used for *the commencement of the take off only*. Hence, as the plane becomes airborne at speed, at the end of the runway, it retains the same separation distances with regard to surrounding features as the existing situation. The same applies to aircraft approaching the runway for landing. The difference to the current runway is the use of the extended area for the beginning of the take off only. So the increased risk relates only to stationary or slow moving craft which will be in closer proximity to adjacent habitats.<br>A larger plane may present a larger surface area with potential to collide with wildlife, in the air or on the ground. Equally, on an individual level, it may be more observable, louder and therefore more | This was raised by BCD.<br>It is clarified in the updated BDAR as well as in the response table; refer to Section 7.2.2 of this SR. |

| Misconception | Comment | Reference in updated impact assessment |
|---|---|---|
| | avoidable to wildlife. This is not considered likely to represent a substantive increase in risk.<br><br>As set out in Section 2.3.3 above, an increase in the number of flights overall is not a requirement or consequence of the proposal. Increased flight numbers are more relevant to terminal infrastructure and will be assessed as part of that project and it is noted that without the larger planes (that the runway extensions would cater for) passenger increases would need to be serviced by more frequent flights of the existing aircraft. | |

# 3. KEY AREAS OF ADDITIONAL INVESTIGATION INFORMING THIS RESPONSE

## 3.1. ADDITIONAL STUDIES

Specific additional investigations were undertaken as part of this SR, in response to the feedback received as part of EIS stakeholder reviews. The outcomes of these studies have been used in three ways:

- To inform the changes to the proposal:
    - Detailed design work regarding works methods in and near waterways.
    - Hydrological modelling of tidal exchange in relation to the southern starter extension and adjacent culverts.
- To assess the changes to the proposal:
    - Ecological investigation of collision risks and inundation impacts.
    - Ecological and heritage investigation of temporary construction impacts.
- To respond to specific issues raised in more detail:
    - Preliminary Water Quality Monitoring and Water Quality Management Plan development.
    - Acid sulfate soil management plan development.
    - Offset strategy, to address the requirements of the BC and FM Acts.

Table 3-1 summarises the additional areas of investigation and incorporation of their specific outcomes.

Table 3-1 Key areas of additional investigation

| | Study | Objective | Outcome |
|---|---|---|---|
| **1** | Additional engineering design work | Provide a more detailed works method to allow more certainty around direct and indirect impacts of the proposal. | Revised works method in discussion with hydrologists and ecologists provided greater certainty around direct and indirect impacts of the works footprint whilst retaining the potential for contractors to identify even better solutions during the tender process. |
| **2** | Additional hydrological modelling to counter minor impact of the southern extension | While minor and considered negligible, the 7% reduction in flow around the southern runway extension was of concern to some oyster lease holders. Any reduction in flow was of concern. The expansion of the culvert in the haul road was modelled and resulted in a still minor but positive impact on flow, which was more acceptable (2% increase). | Revised levels provided greater certainty around tidal movement.<br>Opportunity to revise model to allow consideration of revised tidal movements and potential changes to flow into saltmarsh area. |
| **3** | Updated BDAR | To further characterise development footprint based on clarification of areas of | Updated assessment, reflecting design changes and clarification of temporary |

| | Study | Objective | Outcome |
|---|---|---|---|
| | | temporary construction and additional culvert to the southern haul road.<br>Provide additional justification of direct impact and indirect impact | construction impact areas. More certainty regarding potential for SAII impacts on Beach Stone Curlew.<br>Updated offset obligations, reflecting design changes and inclusion of temporary construction impact areas. |
| **4** | Updated ACHA | To further characterise development footprint based on clarification of areas of temporary construction and additional culvert to the southern haul road. | Updated assessment, reflecting design changes and inclusion of temporary construction impact areas. |
| **5** | Water quality management plan | To further investigate means to manage water quality impacts to adjacent areas during construction | A clear set of management protocols with performance criteria that can be used by contractors to appropriately control water quality risks of the proposal.<br>Improved certainty over the management of ASS. |
| **6** | Acid sulfate soils MP | To further investigate means to manage ASS onsite during construction | A clear set of management protocols with performance criteria that can be used by contractors to appropriately control ASS risks of the proposal.<br>Improved certainty over the management of ASS. |
| **7** | Offset Strategy | To further investigate means to address both the BC and FM Acts and maximise the use of a physical offset site where active management may have broader benefits for local hydrology, water quality and habitat provision in the local area | Calculation of offsets under the BC and FM Acts, evaluation of offset options under these acts, identification of a study area from which the offset site would be delineate, outline of threats and opportunities for management and a clear pathway forward to securing the site and managing it based on appropriate investigations. |

These documents are provided in the Appendices:

- Appendix A Development plans
- Appendix B Justification of engineering solutions
- Appendix G Surface Water Assessment Addendum
- Appendix H Preliminary Water Quality Monitoring and Water Quality Management Plan (WQMP)
- Appendix I Updated BDAR
- Appendix J Updated ACHA
- Appendix K Acid Sulfate Soils Management Plan

- Appendix P Offset Strategy.

## 3.2. KEY CONCLUSIONS

The key conclusions of the three assessment documents, the Surface Water Assessment Addendum, updated BDAR and updated ACHA are set out below.

### 3.2.1. Surface Water Assessment Addendum

The changes made in the Surface Water Assessment Addendum can be summarised as follows:

- Adjustment of the terrain used in the previous hydraulic model (based on ground truthed data) generates modelling results for shallow tidal inundation/extents that more accurately reflect anecdotal information from adjacent oyster farmers and existing vegetation habitats.
- This modelling indicates that runway extension has a small impact on tidal exchange, reducing accumulated flow volumes in the area to the east of the southern access road by about 7%. The impact is pronounced in the smaller tide events that flow through the culverts.
- Providing an additional 300mm diameter culvert at the existing southern culvert will offset the hydraulic impact of the runway extension and slightly increase tidal exchange for these larger tide events by about 2%. The inundated area to the east of the southern access road will increase slightly (1000sqm) as will associated inundation depth (1-2cm). It is expected that this will result in a slight increase in saltmarsh habitat over this new area which will experience more frequent inundation from king tides.

### 3.2.2. Biodiversity: BDAR update

The changes made in the updated BDAR can be summarised as follows:

- Revised works method in discussion with hydrologists and ecologists provided greater certainty around direct and indirect impacts of the works footprint. This resulted in an impact area reduction of 0.59 ha in the Stage one – Project EIS development footprint reducing impact on PCT 920 '*Mangrove Forests in estuaries of the Sydney Basin Bioregion and South East Corner Bioregion'* and PCT 1126 '*Saltmarsh in estuaries of the Sydney Basin Bioregion and South East Corner Bioregion.*

Regarding the offset liability of the project, for the Ultimate EIS footprint (Stage 2) proposal:

  - The clearing of 8.52 ha of PCT 659 '*Bangalay - Old-man Banksia open forest on coastal sands, Sydney Basin Bioregion and South East Corner Bioregion'* generated 2 ecosystem credits. Note: a small area of this PCT met the definition of the NSW TEC *Bangalay Sand Forest of the Sydney Basin and South East Corner bioregion*. No Commonwealth listed TECs will be impacted.
  - The clearing of 2.02 ha of PCT 920 '*Mangrove Forests in estuaries of the Sydney Basin Bioregion and South East Corner Bioregion'* generated 63 ecosystem credits.
  - The clearing of 0.05 ha of PCT 1126 '*Saltmarsh in estuaries of the Sydney Basin Bioregion and South East Corner Bioregion'* generated 2 ecosystem credits.
  - The remaining 0.9 ha of the development footprint consisted of aquatic areas and asphalt both of which were not assessed under the BAM.
  - Most fauna candidate species identified in the calculator were excluded from further assessment due to inappropriate habitat. The Orange-bellied Parrot was surveyed onsite within appropriate habitat where no individuals were found and was also excluded from

further assessment. All other species were assumed to exist onsite. The result was that Beach Stone-curlew generated 95 (reduced from 105) species credits. The Pied and Sooty Oystercatcher generated 126 (reduced from 138) species credits (63 credits each) and the Southern Brown Bandicoot and Long-nosed Potoroo generated 4 species credits (2 credits each).

It is anticipated that the Project EIS footprint (Stage 1) will be constructed well in advance of the residual area of the Ultimate EIS footprint (Stage 2). As such, considering only the offset liability for Stage 1 (Project EIS):

- The clearing of 7.64 ha of PCT 659 '*Bangalay - Old-man Banksia open forest on coastal sands, Sydney Basin Bioregion and South East Corner Bioregion'* did not generate ecosystem credits because the patch of bangalay scrub was excluded from the development footprint leaving only the highly degraded grassland for assessment.
- The clearing of 0.95 ha of PCT 920 '*Mangrove Forests in estuaries of the Sydney Basin Bioregion and South East Corner Bioregion'* generated 28 ecosystem credits.
- The clearing of 0.02 ha of PCT 1126 '*Saltmarsh in estuaries of the Sydney Basin Bioregion and South East Corner Bioregion'* generated 1 ecosystem credit.
- The remaining 0.31 ha of the development footprint consisted of asphalt and was not assessed under the BAM.
- Under the reduced development footprint, the Beach Stone-curlew generated 43 species credits (reduced from 95). The Pied and Sooty Oystercatcher each generated 29 credits each (reduced from 63) and the Southern Brown Bandicoot and Long-nosed Potoroo no longer generated species credits due to the small patch of bangalay scrub being excluded from the development footprint.

### 3.2.3. Aboriginal heritage: ACHA update

The changes made in the updated ACHA can be summarised as follows:

- Consideration of additional impact area including updated mapping.
- Updates to consideration of landscape context (including the modified dune).
- Consideration of the Kuskie 1995 report.
- Updates to the consideration of the potential for the presence of subsurface deposits.
- Updated recommendations.

# 4. STRATEGIC JUSTIFICATION

This Section is to address the direct request from DPIE (referenced in Section 7.2.1 of this SR) to provide supplementary information to support the strategic justification for the runway extensions in the EIS. This and Section 2.1.6 of this SR also provides extra clarity and context for the proposed runway design:

The following Section sets out the strategic justification for:

- Improved airport infrastructure at Merimbula, citing government, sector and other supporting studies (Sections 4.1).
- Specifically, the need for:
    - Siting the upgrade at the existing Merimbula airport rather than an alternative location,
    - Increasing the runway length,
    - Use of starter extensions (Section 4.2).

The proposal will have an ongoing positive impact on the socio-economic development of the region. As set out in Section 4.3, it will specifically address:

1. Regional disadvantage
2. Health and emergency services
3. Educational opportunities and sector growth

## 4.1. IMPROVED AIRPORT INFRASTRUCTURE

### 4.1.1. Whole of Government Support

The need for increased infrastructure at Merimbula airport is recognised across all three levels of government. The Commonwealth Government has provided funding to support the terminal extension (completed December 2019) in order to ensure that passenger screening is available when the runway extension project is completed.

The NSW Government has funded a fire service upgrade (completed 2018) and is providing $4.4m for this runway extension project.

Bega Valley Shire Council is the owner, aerodrome certificate holder and operator of the airport, having to cross subsidise the airport.

The plethora of reports and studies into the region, its economy and its infrastructure consistently identify that failure to evolve the region's infrastructure will exacerbate growing socio-economic problems. On the other hand, evolving the infrastructure will not only prevent this decline but will also release significant latent economic potential currently impeded by poor, unreliable and uncompetitive access to the area.

#### NSW Government Department of Planning and Environment's South East and Tablelands Regional Plan 2036 (SETRP)

In the Minister's Foreword, the NSW Government Department of Planning and Environment's South East and Tablelands Regional Plan 2036:

> *The South East and Tablelands Regional Plan 2036 is our blueprint for the next two decades - reflecting community and stakeholder aspirations and opportunities for balanced growth, while protecting the region's amazing natural environment. The Plan aims to leverage the region's*

> *significant infrastructure assets. The Port of Eden, Canberra Airport, strategic transport links, and access to other global gateways such as the ports of Melbourne, Port Kembla and Botany and Western Sydney Airport will drive a prosperous economic future. The region's landscapes underpin innovative opportunities in tourism, renewable energy, aquaculture and agriculture. International flights into Canberra and cruise ships into Eden will bring more visitors to enjoy authentic natural and cultural experiences and food and wine trails …*
>
> *… The special connection to the ACT requires a close relationship with the ACT Government to seamlessly manage cross-border servicing, infrastructure provision, transport, freight networks and housing. The ACT and NSW Memorandum of Understanding formalises ongoing collaboration between the two governments to deliver outcomes for the broader Canberra region.*

In the Introduction[2], the SETRP identifies:

> *The South East and Tablelands Regional Plan 2036 is the product of extensive consultation with councils, stakeholders and the wider community, following the release and exhibition of a draft Plan in 2016. The feedback from this consultation has been integral to this final Plan.*

The SETRP Vision[3] identifies:

> *The South East and Tablelands is part of a borderless region with Canberra as the Metropolitan City at its heart. Canberra Airport is the catalyst for diverse growth opportunities for farmers and agricultural producers, who supply markets across Asia. People from across the region access the jobs and services in the nation's capital. The integrated relationship between the ACT and the South East and Tablelands as a unified 'Canberra region' offers a stronger, growing economy within Australia's most geographically diverse natural environment …*
>
> *… Tourism and agricultural exports are expanding through the region's strategic location and connections to global markets and metropolitan centres in Canberra, Western Sydney and the Illawarra. Canberra Airport is exporting the region's produce to Asia and welcoming international tourists …*
>
> *… To achieve this vision, the NSW Government has committed to collaborating with the ACT to leverage opportunities from the borderless 'Canberra region'*

In its assessment of regional context[4], the SETRP identifies that a connected and borderless Canberra region is a key component in the success of the South East and Tablelands:

> *Accessing global markets to drive regional economic development*
>
> *Canberra Airport's international passenger and freight terminal is a tourism and export gateway, specifically in terms of movements from Singapore and New Zealand. Singapore provides access to the fast-growing Asian markets, particularly China …*
>
> *… 20% of South East and Tablelands workers commute to the ACT …*
>
> *… Canberra Airport will give producers access to growing Asian markets through various trade agreements. The region's high quality, niche, clean and green produce will underpin future growth. For example, live oysters from the South Coast are exported to Asia within 30 hours of harvest. Collaborative approaches and industry cooperatives will allow smaller producers to access larger export markets.*

In Goal 1, A Connected and Prosperous Economy[5], the SETRP includes tourism and freight and logistics in the seven priority growth sectors, identifying that:

[2] Page 4
[3] Pages 8 - 9
[4] Pages 12 - 13
[5] Page 15

> *Access to global gateways at the Port of Eden and Canberra Airport are providing greater exposure to national and international tourism and export markets …*
>
> *… Considerable demand from middle-class Asian markets, combined with the ability to transport produce from Canberra Airport to Singapore and beyond to 11 Chinese cities, can be a game changer for agricultural exports …*
>
> *… The planning system needs to respond to the specific needs of these sectors to generate economic growth.*

SETRP Goal 1, Direction 1, Leverage access to the global gateway of Canberra Airport[6] identifies:

> *Canberra Airport will drive economic growth in the region. It is expected to generate over 21,000 jobs by 2030 and contribute $2.42 billion per year to the regional economy ...*
>
> *… Some freight routes across the ACT border are inefficient, and this will intensify as the South East and Tablelands grows. Improving the ability to move freight across the ACT border will better enable agricultural producers to access export markets through the airport …*
>
> *… Networking Canberra Airport's international operations into the region's other airports, including those in Moruya and Merimbula, will increase exposure to other markets. Existing Master plans aim to develop transport, tourism and commercial precincts around these regional airports ...*
>
> *… Action 1.3 Plan for compatible and complementary economic development opportunities around the region's airports, including in Moruya and Merimbula.*

Merimbula Airport's ability to service a greater diversity of aircraft types both on the runway and via the terminal is a prerequisite to the delivery of growth Goal 1, Direction 5, Action 5.4 of the SETRP[7]:

> *Action 5.4: Promote opportunities to better connect agricultural industry to export markets.*

SETRP's Bega Local Government Narrative[8] identifies:

> *The expansion of the Port of Eden, Merimbula Airport upgrade and the opening of the South East Regional Hospital are vital to the local economy.*

## NSW Government Department of Planning and Environment's South East and Tablelands Regional Planning Monitoring Report 2019 (SETRPMR)

The SETRPMR identifies in the 'Highlights' Section that:[9]

> *Regional Airport Infrastructure: In 2019, the NSW Government and Eurobodalla Shire Council jointly funded a major upgrade to Moruya Airport. The NSW Government has also secured funding to upgrade the Merimbula Airport runway.*

This funding is a $4.4m RESTART funding grant provided for the runway extension.

## Regional Development Australia's Far South Coast's Strategic Regional Plan 2013-2018 (SRP)

The SRP[10] executive summary[11] identifies five key goals and priorities within its vision:

[6] Page 16
[7] Page 21
[8] Page 59
[9] Page 4
[10] The SRP covers three local government areas – Shoalhaven City, Eurobodalla Shire and Bega Valley Shire
[11] Page 8

*1. Broaden our economic base*

*2. Build infrastructure capacity*

*3. Preserve and nurture our natural environment*

*4. Improve our quality of life*

*5. Engage our community*

*These goals and priorities have been developed with extensive community consultation and authoritative input from the RDA Far South Coast Committee. The Plan includes direction and priorities from existing Federal, State and Local Government strategies and planning documents and takes into account the comments of local business people, health and education providers, women, young people and students, Indigenous Australians, our agricultural community, professional people, the disadvantaged and the disengaged. It recognises geographic and demographic issues within the community and aims to include all groups. The RDA Far South Coast Committee recognises Government priorities within the region and understands the concerns and aspirations of its local communities.*

*The major focus of the Plan, and its updates, is a long term vision for the Region that aims to provide infrastructure led economic development and job creation, the integration of high speed broadband into the region, improved transport and sustainable and affordable clean energy all the while increasing regional competitiveness through innovation; education and training; attractive and affordable lifestyle, including access to first class health, education and aged care facilities whilst continuing to retain and care for our unique, natural environment.*

The SRP identifies[12] the Merimbula airport upgrade as a project 'identified by the FDA FSC committee to achieve those immediate priorities'.

The SRP identifies, the building of infrastructure capacity as one of five priorities for the region[13]. It identifies that increasing Merimbula Airport capability is consistent with longer term assessments[14]:

> *There is the potential to increase visitation from the international market by providing more regular and competitive direct air access to Merimbula. This would require an extensive consultative process including environmental, economic and social impact assessments to be undertaken to investigate the possible expansion of the airport to service 737 and other mid- sized jets. Also required is an effective case for increased services. … This would be enhanced by a significant investment in the form of a runway extension (up to 1800m), apron development, and new terminal development and associated works totalling approximately $20M (Tourism Australia, 2010).*

Since the Tourism Australia assessment was undertaken, progression of planning for the regional and specifically for the airport has been consistent with its findings, namely the need to increase capability. The consultative processes have occurred through a diversity of reports (many identified in this document) not least the 'NSW Government Department of Planning and Environment's South East and Tablelands Regional Plan 2036', the 'Merimbula Airport Master Plan', and the environmental impact statement required for the runway extension development application.

The runway extension environmental impact statement is the culmination of comprehensive environment assessments. The development approval and the associated environmental impact statement for the runway starter extensions includes facilitating use by Boeing 737 aircraft in the longer term.

Extensive economic and social impact assessments are also referenced in this document.

[12] Page 9
[13] Commencing on page 23
[14] Commencing on page 29

## 'Working Towards Our Future' Bega Valley Shire Community Strategic Plan 2040 (BVSCSP)

Of the nine major opportunities identified in the BVSCS, five either focus on the airport or are facilitated by its infrastructure support[15]:

…
- *The expansion of infrastructure in the Port of Eden*
- *Merimbula Airport and links to Canberra Airport*
- *Regional hospital and university campuses*
- *The expansion of existing agriculture and aquaculture industries and opportunities for new emerging industries including small producers*
- *Coastline, marine and adventure based tourism opportunities.*

Major challenges are often driven by poor accessibility to higher level and urban based services and/or reflect the broad region of coverage and/or identify the essential need for economic growth and would be ameliorated by a more robust passenger airline service:[16]

- *Distances to services, government centres, training, work and major cities*
- *Lack of public transport*

…
- *Our large geographic area and dispersed population resulting in high costs and service and infrastructure duplication*

…
- *Our ageing population and the need for medical and other specialised services to meet their needs*
- *Economic growth and diversification, and lack of employment opportunities …*

Goal 3: Our economy is prosperous, diverse and supported by innovative and creative businesses identifies[17]:

> *Through our community engagement we learnt that:*
>
> *In the future we would like our economy to grow and diversify. We have identified economic opportunities in our Shire surrounding the development and utilisation of the Port of Eden, Merimbula Airport, and Regional highway linkages. Other areas for growth and diversification include farming and food production, supporting small businesses, developing eco/adventure tourism and tourism infrastructure, attracting new businesses and industries, and encouraging innovative ideas and creative businesses …*

In Goal 3, Strategy 6 identifies[18]:

> *Collaborate with relevant parties to develop and enhance the economic opportunities provided by the development of the Port of Eden, Merimbula Airport, East West freight corridor, and tourism services and facilities.*

In Goal 9, Strategy 22 identifies[19]:

> *Collaborate with relevant parties to grow the passenger numbers through Merimbula Airport.*
>
> *Progress Measures:*

[15] Page 11
[16] Page 11
[17] Page 29
[18] Page 29
[19] Page 47

- *Community Indicators*
    - *Passengers through Merimbula Airport*

## Regional NSW Services and Infrastructure Plan (TNSW RNSWSIP)

The RNSWSIP, identifies 'Upgrades to regional airports[20] within its Tourism and Transport Plan to support visitors to regional NSW. It also identifies that:

> *As well as the specific air transport legislated functions, the NSW Government has an ongoing role to work collaboratively with the owners, regulators and operators to ensure a level of transport and essential service amenity is delivered in regional communities and that economic growth and potential in regional NSW are supported consistent with our vision for the State*[21] *…*
>
> *… Regional air services play an essential foundation role in the economic development of regional cities, centres and towns. In recognition, the NSW Government has committed $70 million to a regional airports upgrade program through 27 projects at 22 regional airports that will boost regional airport capacity and safety and increase their ability to attract visitors to regional NSW. The projects include passenger terminal upgrades, improved lighting to support airport expansion, and expanding runways or aircraft parking to accommodate larger planes.*

## Transport for NSW's Southern Regional Transport Plan March 201422 (TNSWSRTP)

The TNSWSRTP identifies the importance of air travel for regional communities[23]:

> *Regional flight slots at Sydney Airport determine the convenience of air travel for regional communities accessing Sydney by air. We will support the maintenance of the 20 percent of flight slots allocated to regional NSW services and will seek a greater allocation in the peak periods.*

The addition of the Western Sydney airport will increase the availability of flight slots in Sydney.

The TNSWSRTP also identifies the importance of passenger airline activity to the viability of regional airports, including their capacity to service other (some essential) air services:[24]

> *Having passenger services at regional airports also strengthens the viability of these airports and allows them to service some freight and general aviation including urgent medical deliveries and some freight access.*

## South Coast Regional Strategy 2006 – 2031 (NSWPSCRS)

The NSWPSCRS identifies[25]:

> *Regionally significant employment lands and infrastructure within the South Coast include the Albatross naval Base, Merimbula and Moruya airports, Port of Eden, Batemans Bay Marina and Ulladulla Harbour and includes the Princes and Kings highways and the rail corridor to Bomaderry …*
>
> *… Local environmental plans will protect and add to employment lands in existing economic centres, including major regional centres and major towns, and identify and protect all regionally significant employment lands including, Albatross Naval Base, Merimbula and Moruya airports, Port of Eden, the multipurpose wharf at Eden, Batemans Bay Marina and Ulladulla Harbour.*

[20] Page 19
[21] Page 51
[22] The plan's time of reference is 2014 to 2034
[23] Page 23
[24] Page 23
[25] Page 26

## South Coast NSW Destination Management Plan 2013 – 202026 (SCNSWDM)

The SCNSWDM identifies[27]:

> *The airport infrastructure within the Region supports access (particularly for business, conference and VFR traffic), recreational training and flying, and adventure-based tourism. Moruya and the Sapphire Coast Airports[28] are used for RPT services as well as recreational flying and air charters and tours. The infrastructure at both airports needs to be upgraded to handle larger planes and increased passenger numbers.*

Section 10.3 Air Access & Aviation-based Tourism identifies:

> *Moruya and the Sapphire Coast Airports are used for RPT services as well as recreational flying and air charters and tours. The infrastructure at both airports needs to be upgraded to handle larger planes and increased passenger numbers.*

Of the five regional priorities for airports and air services identified in the SCNSWDM, two involve Merimbula Airport:[29]

> *Investment in the runway and terminal facilities at Moruya and Sapphire Coast (Merimbula Airports), with the capacity of the Sapphire Coast airport increased to inter-city commuter turbo prop standard.*
>
> *Retention / expansion of RPT services at Moruya and Sapphire Coast Airports and the re-introduction of RPT services to the Illawarra Airport.*

## Australia's Coastal Wilderness Destination Management Plan30 (ACWDM)

The ACWDM identifies the importance of Merimbula Airport to the economy. It also identifies the need to ensure that airport infrastructure improvements align with airlines business case needs:

> *Merimbula, Bega, & Pambula: The only regional airport, Merimbula represents a critical link in the future development of the destination. The communities of Bega, Pambula and Merimbula offer a range of accommodation and visitor services including tours and attractions, however few, if any of these products are currently active in the international market. Further development of air access, attractions, activities and dining options will be vital to attracting and delivering the promise to international 'Experience Seekers'.* [31]
>
> *PRIORITY PROJECTS – TOURS & TRANSPORT: Support for an Environmental, Social and Economic Impact Assessment of the proposed expansion of the Merimbula Airport including extension of the runway, apron development, new terminal development and associated works. This would need to be supported by the development of a tailored business case to attract suitable new airlines to Merimbula Airport.* [32]
>
> *Merimbula Airport is the only airport that supports commercial flights directly into Australia's Coastal Wilderness. Actions Include:*
>
> - *Support for an Environmental, Economic and Social Impact Assessment for the expansion of the Merimbula Airport including extension of the runway, apron development, new terminal development and associated works;*

[26] Prepared by Jenny Rand & Associates and South Coast Regional Tourism Organisation
[27] Page 49
[28] Merimbula Airport is at times and in some places referred to as Sapphire coast Airport – reflecting the broad area it services
[29] Page 49
[30] Funded by Tourism Australia
[31] Page 13
[32] Page 24

- *Develop a tailored business case to attract suitable new airlines to Merimbula Airport; and*
- *Continue to work in partnership with the community to maintain support for the airport and its growth.*[33]

## 4.2. CONSIDERATION OF ALTERNATIVES AND PREFERRED OPTION

Key aspects of the proposal are:

- The location of the upgraded infrastructure
- How the infrastructure will be upgraded to meet the specific regional requirements.

These decision points are detailed below, confirming:

1. Merimbula Airport is the only feasible location for the upgrades
2. The key infrastructure requirement is runway length.
3. Starter extensions are the most appropriate solution to increasing runway length in this sensitive environment.

### 4.2.1. Merimbula Airport as the only feasible location

#### Regional airport development

Merimbula airport is one of two aircraft landing and take off facilities in the Bega Valley, the other being at Frog's Hollow, three kilometres south of Bega. The Frog's Hollow airstrip opened in 1937 after locations in Jellat Jellat, at the Bega Racecourse Farm and in numerous locations in Wallagoot and Tathra had been considered. Services had commenced at Frog's Hollow in 1937, but were discontinued in 1950 in preference for the airstrip at Moruya.

In January 1947, Halfway Hill was identified as the preferred site for what is now known as Merimbula Airport. It's more southerly location than the Frog's Hollow airstrip was preferred by potential users from the southern part of the region. In 1949, the Department of Aviation announced that Halfway Hill would become the location of the major district aerodrome, although construction was not completed for a number of years and the first[34] aircraft arrived in May 1959.[35]

#### Criteria for aerodrome location selection

As confirmed by Rehbein Airport Consulting (see letter from Rehbein Airport Consulting on behalf of Lambert & Rehbein (SEQ) Pty Ltd dated 3 July 2020 provided at Appendix B), Aerodrome location selection is dominated by requirements for safe operation (defined by the aviation legislation in place at the time of selection and thereafter), which in turn are a function of topography. Safe gradients for approach surfaces and take-off/climb surfaces, along with flat, cleared runway strips and graduated airspaces that are protected from penetration for up to 8km around the runway and up to 15km from either end of the runway. This is a driver for the propensity of airports east of the Great Dividing Range, including Merimbula Airport, to be located as far east as possible, close to the coast.).

[33] Page 65
[34] It is possible that a local trainee pilot may have unofficially claimed this honour.
[35] Material regarding the history of the Frog's Hollow and Merimbula sites is sourced from Swinbourne H, and Morris O, 'People of the Lake Stories of Merimbula', Merimbula – Imlay Historical Society, 2012

In the Bega Valley, the impact of these constraints is exemplified not only by the distance between the Merimbula Airport and the mountain range to the west, but also the alignment of the 03/21 runway such that traffic to the south aligns with the lowest point in the range of hills to the south and traffic to the north is ultimately directed towards the sea. Further a 12/30 cross wind runway originally included in the site's planning has never been constructed and, Merimbula Lake impacts aside, would not be viable due to the confluence of surrounding topography and current legislated requirements for safe gradients for approach and take/off climb surfaces

In the 'Bega Valley Shire Air Transport Discussion Paper' prepared by Garret Barry consultancy in 2011, possible alternative locations for Merimbula Airport were examined and all were rejected on the basis of surrounding topography. Given that the legislated requirements for protected airspace for new runways has increased since the site of the current Merimbula Airport was selected, it is not anomalous that the discussion paper concluded that it was not possible to identify a suitable alternative location in the Bega Valley for an airport.

Further, since the Barry report referred to above was written, new legislation has been promulgated with increased runway strip width and clear air space requirements.

Finally, Merimbula Airport has grand-parented exemptions to some of the changes to legislated provisions for runways that have occurred over time. Were this not the case, the cleared air strip would have to be wider and the requirements for the protected airspace around the runway would be greater. These updated provisions would apply to any new aerodrome and runway rendering alternative locations eliminated from consideration in the past even less compliant with current requirements.

Council has not been able to identify through its own examinations, nor has it been presented with, an alternative location for Merimbula Airport that meets the legislated standards. In addition, Council has not been able to identify through its own examinations, nor has it been presented with, an alternative location for Merimbula Airport that is consistent with safe and cost efficient operations in Australia.

### 4.2.2. Increased Runway Length

## Determination of Requisite Runway Length

Master Plan

The rationale for the runway length is identified in the Master plan, which identifies that the runway length is driven by the projected aircraft being able to operate in a manner that is safe and cost efficient. The Master plan identifies, not the minimum conditions (eg runway length, climb gradients, approach gradients, operating temperatures) for landing and take off of the identified passenger aircraft, but rather the safe and cost efficient conditions for landing and take of the identified passenger aircraft.

The Master plan identified a starter extension that would deliver an 1800m total take-off run available from the north, but only a 1720m take-off run available from the south driven by the requirement to address the environmental constraints in the south if a further 80m were included. The drawback was that in northerly winds take-offs would be restricted to aircraft able to work with a 1720m take off run available, making the airport less viable. Consequently, a decision was taken subsequently to address the environmental constraints in the south via an environmental impact statement, utilising a staged approach (120m at both ends and later 80m at both ends) in order to achieve airport infrastructure that will meet the local economy's needs as and when they expand. Consultation with the community was undertaken during the environmental impact statement process and after lodgement for the development approval.

The expert consultancy advising Council has confirmed that the rationale and conclusions in the Master plan remain current and that the inclusion of a starter extension of 200m length at the southern end will ensure a runway of consistent take off run available regardless of wind conditions and thereby deliver more certainty to airlines (refer to Rehbein Airport Consulting letter provided at Appendix B)

With the Merimbula route having to compete for airlines' limited land slots at Sydney airport, the provision of an operationally safe and efficient runway length is also part of the essential business case identified in Australia's Coastal Wilderness Destination Management Plan and identified in the Strategic Justification for Increased Airport Infrastructure (above), namely:

> *This would need to be supported by the development of a tailored business case to attract suitable new airlines to Merimbula Airport.* [36]

KPMG Report

The decision to deliver 1800m of take off run available in both direction is supported by KMPG's report into air freight export products in Regional NSW. The report identified both the aviation operational requirements:[37]

> *Performance parameters of aircraft vary, even between models of the same aircraft series. The required runway length for take-off will be calculated according to several criteria including aircraft type, the engines fitted, take-off weight, ambient temperature and relative humidity, elevation of the airport, presence of wind, gradient of runway and whether the runway is wet or dry. Australia has adopted the International Civil Aviation Organisation (ICAO) methodology of using a code system, known as the Aerodrome Reference Code, to specify the standards for individual aerodrome facilities which are suitable for use by planes within a range of performances and sizes …*
>
> ***… The runway length must be adequate to meet the operational requirements of planes approved to operate there. When environmental variations occur, the payload weight may need to be reduced for safe take-off.***

## Currency of airline aircraft type identified in the Master Plan

There is a slow rate of change in the aircraft types used for routine airline passenger travel. New models for use by passenger airlines are introduced into Australian operations infrequently and have significant lead times before they are incorporated into the Australian market (generally firstly becoming more frequently accepted in the US market).

Further, over time, and particularly since the collapse of Ansett Airlines, there has been a tendency to consolidate the range of aircraft makes and models used by passenger airlines as this leads to greater cost efficiency across key operational expenses such as maintenance and training.

The master plan identifies the need for Merimbula Airport to cater for aircraft operated by Virgin Airlines (operatingATR 72 – 70 seat turbo propeller aircraft) and QANTASLink (operating Dash8 Q400 - 70 seat turbo propeller aircraft). The need to cater for these airlines and their aircraft was premised on them being the realistic options for alternatives to the existing provider, Regional Express (operating Saab34 – 30 seat turbo propeller aircraft). It is this need that has triggered the extension of the terminal (opened in December 2019) and the runway starter extensions.

The proponent has also identified that production of the Saab34 ended in 1997, making it essential to ensure Merimbula Airport can cater for a replacement aircraft. On 29 June 2020, Regional Express released a follow up media statement to its announcement to the ASX on 13 May 2020. Regional Express announced that it has entered into a project with ATR to replace the Saab34 fleet with ATR42 and ATR72 aircraft. This announcement has added to the imperative of ensuring that Merimbula Airport is able to cater for the range of aircraft identified in the master plan.

[36] Page 24

[37] KPMG, 'International air freight connectivity, Pre-feasibility study, a preliminary assessment of perishable agricultural air freight export products in Regional NSW', November 2019, Section 4.1 Airport infrastructure requirements, pp43-44

Rehbein Airport Consulting have confirmed the currency of the projected airline aircraft types (refer to letter provided at Appendix B)

## Airline confirmation

There is little record of passenger airlines providing undertakings to deliver post construction services during runway planning or airport master planning stages anywhere in Australia. Owners master plan for airports by identifying the design and operating environments that have proven acceptable to passenger airlines elsewhere in Australia for similar projected passenger markets, and then examining the manner in which such an environment can be provided at their own airport. This often requires the assistance of expert advice, and such a process and such advice were the basis on which the Merimbula Airport Master plan was formed. The currency of the Master plan is confirmed by the consultant (refer to Rehbein Airport Consulting letter provided at Appendix B)

## 4.2.3. The use of starter extensions

The following material is identified in the Master plan, and remains valid (refer to Rehbein Airport Consulting letter provided at Appendix B)

## Starter extension verses conventional extension

For a conventional extension, the beginning of the runway (which is the end of the runway for aircraft moving from the opposite direction) moves to the same new (extended) location of the end of the runway. In a starter extension, only the location for the beginning of the runway for take-offs changes. Everything else, eg the end of the runway for aircraft moving from the opposite direction, and the starting point for the surrounding protected airspace, stays in the same location.

The key features of the starter extension are:

- The finish of the runway for take off purposes remains in its current location. (The portion of runway surface used for aircraft taking off in the opposite direction – the starter extension - extends beyond this point). Consequently, the beginning of the sloped protected air surface for aircraft taking off remains in its current location.
- Aircraft using the starter extension are always on the ground and so there is also no additional need to protect the air space above that area.
- The beginning and end of the runway used for landing in both directions does not change.
- The extent of graded surface around the starter extension pavement area is less than for a conventional extension (again this is due to aircraft being on the ground and moving slowly when in the starter extension area).

## Consideration of conventional extension

Northern end

A conventional extension at the northern end is not feasible as it would change the location of the protected airspace. Both the beginning of the runway for aircraft landing from the north and the end of the runway for aircraft taking off from the south would be further north. This would cause a northward shift in the protected airspace and is not feasible. The existing protected airspace already has some penetrations that have to be managed through risk mitigation practices. A conventional extension would add roads and houses on the northern side of Merimbula Lake to those penetrations and would not be accepted as safe practice.

The Master plan states the following:

*Obstacle Limitation Surfaces*

*The location of the existing take-off surface of the Obstacle Limitation Surfaces (OLS) for Runway 03 and the associated inner edge of the take-off surface is controlled by the proximity of the perimeter fence on the east side of the aerodrome and by the development to the northeast of the aerodrome, both of which currently penetrate the OLS take-off surface.*

*It might be feasible to realign the fence to permit the inner edge to move north but that would result in a steeper climb gradient being required to clear the buildings and potentially other obstacles further out under the take-off surface. For instance, the climb gradient required at present to clear the Water View Apartments to the northeast is approximately 3.18%. If it was possible to move the inner edge 200m to match a runway extension, the climb gradient required to clear the Water View Apartments would be approximately 6.49% which could not be achieved by most aircraft. Aircraft would have to plan to use a much lesser length of runway which would negate the benefit of increasing the available length. Even a smaller change in location of the inner edge would create difficulties because of the proximity of the perimeter fence and Arthur Kaine Drive.*

*The result is that the landing threshold for Runway 21 and the end of the take-off run available for Runway 03 would have to remain at the location of the existing threshold.*

Southern end

A conventional extension at the southern end is marginally feasible. The southward movement of the protected airspace would require additional vegetation removal to prevent trees penetrating the airspace. If this were not achieved, then the conventional extension and would either trigger a significant redirection of a part of the flight path to avoid the increase in the existing penetration 6km to the south of the airport, or a steeper approach and take off/climb gradients than is consistent with aviation legislation. It would also require greater works in the environmentally sensitive portion of the site, including Merimbula Lake, as the extent of graded surface surrounding a conventional runway pavement is greater for a conventional extension than for a starter extension.

## Adding 80m of the southern starter extension to the Northern end

Reducing the southern starter extension by 80m to 120m and adding that 80m to the northern end is not feasible.

The resulting extra starting distance for aircraft beginning their take off in the south would still only be 120m because the runway end at the northern end (end of the take off run available) would remain where it is. As identified in ‘Northern End’ above if the end of the runway for aircraft taking off from the south is moved 80m northwards, then the protected airspace shifts northwards as well, and that is not feasible at the northern end (see ‘Northern End’ above).

## Adding a conventional extension to the Southern End and a starter extension to the Northern end

From a protected airspace and air operations perspective this option may be feasible, however the environmental impacts on the southern end (see ‘Southern End’) would be greater.

## 4.3. SOCIO-ECONOMIC BENEFITS OF THE PROPOSAL

The proposal will have an ongoing positive impact on the socio-economic development of the region. As set out below, it will specifically address:

1. Regional disadvantage
2. Health and emergency services
3. Educational opportunities and sector growth

### 4.3.1. Impact on regional disadvantage

The SEIFA Index for 2016 shows that the Bega Valley LGA had a SEIFA score of 951 for Relative Socio-economic advantage and disadvantage, placing it in the 5th decile.

The area has higher than State average disadvantage in education outcomes and health factors and has significant social issues impacting families and children. Disadvantage in the region is exacerbated by limited accessibility to a range of services and employment, and limits to the accessibility of safe transport options.

Council has engaged independent reviews regarding the impacts and prospects of Merimbula Airport. All findings concur and present facts and evidence that demonstrate an underuse and the potential for significant increased use of Merimbula Airport, with associated social benefits for not only the Bega Valley but also for the surrounding region.

The SRP identifies[38]:

> *Further, if the region is to grow economically and socially in line with government policies and programs (Regional Relocation Grants, etc.) then an extensive infrastructure works program will need to be identified, funded and implemented as soon as possible. Without such a strategic program to cater for and attract human capital, the region is in danger of becoming a social, cultural and economic backwater. The region is currently at a cross roads with higher than average rates of unemployment, domestic violence, drug and alcohol abuse and multi-generational reliance on welfare. These factors, plus increasing numbers of retirees moving to the region do not augur well for a socially, culturally and economically prosperous and diverse region capable of attracting and retaining the skills and people this region desperately needs.*

This project will address disadvantage by providing construction and ongoing employment, supporting education and training in the area and improving air services resulting in economic growth and improved service accessibility (eg more visiting medical and educational specialists to access the area to consult locally). It will increase socio-economic outputs flowing through to increased employment, greater exposure to a more diverse visitor base, increased ability to access services either through inbound (by visiting providers) or outbound (by the local population) travel and increased travel safety by providing more affordable and accessible air transport options and options to road travel.

### 4.3.2. Health services

The SES report (page 12) identifies[39]:

> The Airport is a crucial piece of social infrastructure, which has direct and tangible impacts on health, education and professional services provided in Bega Valley Shire. Bega District Hospital

[38] Page 25
[39] Page 13

> reported that Airport and the RPT flights are *"absolutely essential … and the connection is absolutely vital to the development and maintenance of a high quality health services in the Shire".* The majority of the doctors who staff both of the Emergency Departments fly in and out from all over the country, and the Hospital regularly flies in general practitioner locums to look after inpatients at Moruya, as well as surgeons and anaesthetists. Many of the specialists who visit from Canberra may drive or arrive on chartered flights. RPT flights are used by local people to attend appointments with specialists or clinics and hospital staff also use the RPT service regularly to attend meetings and training in Sydney.

Since that report was written, the South East Regional Hospital has been commissioned. It provides a larger scope of services and generates an even greater reliance on fly in fly out practitioners.

The SES report also noted that:

> The airport is also a crucial part of the district's emergency services infrastructure as it is used to fly patients on fixed wing air ambulance, as a base for Southcare, and the Rural Fire Service relies on the Merimbula airport facilities to fight fires in the region.

A robust passenger airline sector is essential to the viability of the airport and its ability to cater for non-passenger airline activity.

### 4.3.3. Education

School based VET education with aligned part time employment in local industry is becoming a hallmark of the growth in diversity of education options in the Bega Valley. Growth in the industries aligned with the VET education options will support high school retention and training rates and the flow through to post school employment. Tourism and hospitality are particular examples and the airport extension will support these industries.

Across the school year, students travel out of the area for sporting, academic and general personal development activities. Unlike their urban and less remote counterparts, travel by road often accounts for an additional two days away from school in addition to attendance at the activity. This creates an unhelpful trade-off between in class room and out of class room school activity, placing these students at a comparative disadvantage. Some students fly to and from these events. More accessible flights with more competitive pricing will extend the range of transport options for these students. Similarly, guest visitors to schools and the Bega outreach campus of the University of Wollongong are more likely to visit the area if the cost of air travel is reduced and the availability is increased.

# 5. ASSESSMENT AGAINST BEGA VALLEY DCP 2013

The Bega Valley Development Control Plan 2013 (DCP) applies to the subject land on which the proposal would be developed. The provisions of Sections 5 and 6 of the DCP relevant to the proposed Runway Extension (construction and operation) are discussed in Table 5-1.

The development is considered to be consistent with the requirements of the DCP specifically relating to:

- Aboriginal Heritage
- Social and economic impacts
- Sustainable design principles
- Potential hazards
- Off-street car parking
- Traffic management, and
- Soil and stormwater management.

Table 5-1 Relevant DCP Provisions

| Relevant DCP section | Discussion or where addressed in the EIS or this SR |
|---|---|
| **Section 5 – General Development** | |
| **5.1 Aboriginal Heritage** | Refer to Section 7.3 of the EIS and the updated ACHA report (Appendix J of this SR) for Aboriginal cultural heritage assessment. |
| **5.2 Non Aboriginal Heritage**<br>5.2.3 Requirements for development within the vicinity of heritage items<br>Objective<br>Ensure that development in the vicinity of a heritage item does not have an adverse impact on the significance of the listed place. | There are no heritage items directly adjacent to the airport land. Refer to Section 8.6 of the EIS for discussion. |
| **5.3 Access and Mobility** | The runway extensions have no impact on the physical access to the airport terminal building or areas required to be accessed by the public. |
| **5.4 Social and Economic impacts**<br>5.4.1 Social and Economic Impact Assessment<br>• Applies to any development proposal deemed by Council to have likely significant social or | • Refer to Section 2 of the EIS for the objectives of the development and Section 2.3 and 4 of this SR for the strategic justification.<br>• The analysis of feasible alternatives to the carrying out of the development, including the consequences of not carrying out the development is addressed in Section 3 of the EIS and Section 2.3 and 4 of this SR. |

| Relevant DCP section | Discussion or where addressed in the EIS or this SR |
|---|---|
| economic impacts.<br>• A statement of the social and economic impacts of the development, known as a socio-economic impact assessment, will be provided. | • The likely impacts of the development, their nature and extent for the development are discussed in detail in the EIS and supporting studies and in the additional detail and analysis included with this SR.<br>• The EIS included a community consultation strategy and included evaluation of the social and economic impacts by;<br>o Scoping: identify issues and affected groups<br>o Profiling: data collection, historic trends, assessing current social and economic context<br>• The EIS has further analysed potential impacts of the development and included:<br>o Predicting: identify possible future impacts<br>o Assessing: analyse the impacts<br>• Section 6 of the EIS included consultation with the community and other local agencies to determine the acceptable limits of impacts associated with the development. Additional consultation post lodgement of the EIS, to work with key stakeholders towards detailed design for the extensions have been summarised in Section 6.2 of this SR.<br>• Justification of the carrying out of the development with respect to social and economic considerations is included in the EIS and further justification is provided in Section 2.3 and 4 of this SR.<br>• Refer to the following sections of the EIS for the assessment of potential socio-economic impacts including, but not limited to:<br>o Visual at Section 7.5<br>o Noise at Section 7.4<br>o Aboriginal Heritage at Section 7.3<br>o Land use compatibility at Section 7.6<br>Appropriate mitigation measures are considered to have been recommended to address the potential socio-economic impacts and on-going consultation/engagement with the public and relevant agencies has provided additional opportunities to provide greater detail. |
| **5.5 Sustainable Design Principles** | Sustainable Design Principles are addressed in Section 5.3.4 of the EIS. |
| **5.6 Tree and Vegetation Preservation**<br>5.6.1 Vegetation clearing | This Section of the DCP does not apply to the SP2 zone.<br>However, it is important to note that clearing and preservation of native vegetation is addressed in the updated BDAR provided at Appendix I of this SR. |

| Relevant DCP section | Discussion or where addressed in the EIS or this SR |
|---|---|
| **5.8 Planning for hazards**<br>5.8.2 Coastal hazards<br>5.8.3 Contaminated Land<br>Objective<br>Safeguard and improve the quality of public and environmental health by ensuring that any land contamination issues are resolved early in the planning process.<br>Application<br>This Section applies to any development in the Shire where a previous use has resulted in potential land contamination issues.<br>5.8.3.1 Requirements<br>• Development will only be approved on land where Council has made an assessment of any land contamination that may have resulted from a previous use.<br>• Where contamination is identified, remediation will be undertaken in accordance with the Managing Land Contamination Planning Guidelines, SEPP55 – Remediation of Land and the Contaminated Land Management Act 1997 and a Verification Report provided to Council.<br>5.8.4 Bushfire Prone Land<br>5.8.5 Climate Change | 5.8.2 – Coastal hazards are addressed in Section 7.7 of the EIS.<br><br>5.8.3.1 – Contaminated Land is addressed in the EIS, specifically the potential for contamination due to use of PFAS, which concluded:<br>*The processes have identified the presence of PFAS in sediment in two locations (Nos 2 and 4) of the five locations sampled, and in water in one location (no 4) of the five locations sampled at and adjacent to Merimbula Airport.*<br>*For the sediment samples, the levels were below the guidance values for human health for public open space and industrial/commercial land uses.*<br>*For the water sample, the level was below the health-based guidance values for use for drinking water and recreational water, with the dam water not being used for either purpose. The level is also below the aquatic ecosystems freshwater and marine water guideline values for slightly to moderately disturbed systems and highly disturbed systems* (BVSC 2018).<br>Proximity to Construction – Clear PFAS Tests:<br>o Importantly, two locations of importance to the starter extension construction areas – the stormwater channel discharge point in the south and the closest point to the airport in the lake where access could be achieved both returned zero registration on the tests.<br>PFAS Identified Away from Construction Locations:<br>o Neither of the locations where a level above the range applicable to the standard 28-compound PFAS analysis were identified in sediments (the eastern dam and the area adjacent to the apron wash down area) or water (the eastern dam) are within the north or south starter extension area of construction.<br>Proximity to Haulage Roads and Stockpiles:<br>o Stockpiles and haulage roads will not encroach on the eastern dam and the area adjacent to the apron wash down areas.<br>Construction Water Source:<br>o Water for construction purposes will not be drawn from the eastern dam. It will be sourced either from the Merimbula water supply or the western dam.<br>In addition to the information in the EIS, EPA's Managing Land Contamination Planning Guidelines SEPP 55–Remediation of Land have been considered. Table 1 lists airports as an activity that may cause contamination. The use of the land is not changing and in accordance with the guidelines the land is considered suitable for the proposed development.<br>In addition to the commentary on PFAS, and as discussed in Section 8.3.3 of the EIS, spills and leaks and general particulate matter from machinery, fuel trucks and aircraft and impacts from |

<table>
<tr><th>Relevant DCP section</th><th>Discussion or where addressed in the EIS or this SR</th></tr>
<tr><td></td><td>have the potential to impact soils at the airport. There are considered to be no other potential land contamination impacts. Safeguards to prevent land contamination is addressed in the mitigation measures listed Section 8.3.4 of the EIS.<br><br>5.8.4 – Bush fire hazards are addressed in Section 8.4 of the EIS.<br><br>5.8.5 – Not applicable – this Section relates to housing. Climate Change is addressed in the Surface Water assessment summarised in section 7.7 of the EIS.</td></tr>
<tr><td>5.9 Off-street car and bicycle parking<br><br>5.9.1 General requirements<br><br>5.9.3 Calculating the required number of car parking spaces</td><td>No specific parking requirements for airports are listed within the DCP. Parking for the site has been calculated for the airport based on the capacity for the airport terminal, refer to Section 2.3.3 and Figure 2-3 for limitations on terminal passenger capacity. Although the runway will add to the airports capacity to increase passengers this is not the factor in determining the capabilities of the airport and maximum number of passengers. Key factors in determining the number of parking spaces required are linked to the terminal building capacity.<br><br>The existing parking at the site provides for Stage 1. This parking was approved as part of the (recently completed) Terminal building (DA 2018.309), parking was calculated as follows:<br><br>There are currently 168 car parking spaces on site as detailed in the table below:<br><br>
<table>
<tr><th>Description</th><th>Number</th><th>Total</th></tr>
<tr><td>Formal Spaces<br>• Formal spaces (includes meeting requirements of DA92.1303 – 41 spaces - and DA2015.70 as well as those for general use – 37 spaces)<br>• Formal spaces (in specific locations as required by DA2008.0212/2009.0479, DA2015.256 andDA2004/0852)<br>• Long stay (privately operated paid parking)</td><td><br>74<br><br>17<br><br>38</td><td>129</td></tr>
<tr><td>Informal Spaces<br>Located at the southern end<br>Located at the northern end</td><td><br>17<br>22</td><td>39</td></tr>
<tr><td>Total Spaces</td><td></td><td>168</td></tr>
</table>
<br>Parking Needs Assessment<br><br>Currently, there are two aircraft parking bays on the apron that is serviced by the terminal. Whilst there has been some fluctuation in aircraft size parking in these bays and being serviced through the</td></tr>
</table>

| Relevant DCP section | Discussion or where addressed in the EIS or this SR |
|---|---|
| | terminal since 1997, there has been no significant change until this proposal.<br><br>Currently the apron parking bays are configured to accommodate aircraft up to the size of the Saab34 operated by Regional Express on the routes to Merimbula and Sydney. With a maximum of 34 seats to each aircraft and allow for 100% occupancy in both directions, the maximum number of passengers moving through the airport in an overlapping period of time (ie both apron parking bays in use) is 134 passengers under the current configuration.<br><br>The terminal upgrade is predicated upon one of those bays being occupied by a Dash8-A400 or ATR72 aircraft (used by QANTASLink and Virgin Airlines respectively), and the other bay being occupied by a Saab 34 aircraft. This is reflected in:<br><br>• the sizing of the sterile area in the terminal<br>• the design of upgrade works to the asphalt strength for the apron, and<br>• the parking configuration on the apron.<br><br>There is also no business case in evidence on NSW regional aircraft routes that identifies both QANTASLink and Virgin Airlines operating on a route offering the passenger numbers in evidence on the Merimbula routes. That is, overlapping arriving/departing aircraft may involve a 70 seat aircraft and a Saab34, but not two 70 seat aircraft.<br><br>Consequently, the maximum passenger flow due to both apron parking bays being in use will be 208 passengers, an increase of 72 passengers. This is a 53% increase. A 53% increase in the 41 spaces deemed adequate in DA9613.033 is 22 spaces (rounded up). Currently, a single accessible space is required within the 41 spaces. It is proposed that this be increased to a total of two spaces. In addition, three staff will be needed for passenger screening activity. In summary, an additional 25 spaces are proposed, bringing the total spaces required for the terminal to 66, including two accessible parking spaces.<br><br>This would increase the number of places required on Lot 100 DP 1201186 via development approvals to 85 parking spaces, which is within the 168 places available. |

| Maximum Flights[40]/ Passengers overlapping | No of spaces |
|---|---|
| **Current operations**<br>Maximum two flights | Required under all existing development approvals<br>• 70 car parking spaces including – |

[40] Determined by the number of parking bays on the apron which was two at the time of the last development approval and remains two under this proposal, with the area of one to be increased to accommodate the larger 70 seat aircraft

| Relevant DCP section | Discussion or where addressed in the EIS or this SR | |
|---|---|---|
| | generating maximum 68 inbound and 68 outbound | • 41 under development approval for existing terminal (marked on stamped plan, not included in conditions)<br>• zero accessible spaces<br>Zero bicycle parking spaces.<br>**Current operations – terminal spaces only: Carpark Spaces**<br>Since the DA 9613.033 was approved, additional carpark spaces have been developed on site and 37 of the spaces identified in that DA have been regulated to be two hour spaces, and the other four have been relocated on site (see earlier discussion). Consequently, the 41 spaces required in the 1997/98 DA are (in practical use) spread across the two hour use and the unlimited time use areas).<br>The area originally identified for the 41 spaces in DA9613.033 includes the required one accessible space.<br>Zero bicycle Spaces |
| | **Proposed**<br>Maximum two flights generating maximum 104 inbound and 104 outbound (53% increase on current operations) | Proposed for terminal – 66 total<br>• 38 in area of the 41 spaces identified in DA961.033 – including two compliant accessible spaces<br>• 3 relocated spaces (relocated from the area of the 41 identified in DA9613.033 due to loss of one general space in that area when an additional compliant accessible space is added and four relocated due to impact of regulation)<br>• 22 additional spaces (53% increase on which equates to increase in overlapping passenger numbers)<br>• 3 additional spaces for staff required to operate security screening<br>Additional on site parking – 102 total<br>• 19 under development approvals other than the terminal<br>• 38 long stay/paid parking spaces – not required by development approvals<br>• 6 other formal general use spaces – not required by development approvals<br>• 39 informal – not required by development approvals<br>168 total proposed parking for terminal and |

| Relevant DCP section | Discussion or where addressed in the EIS or this SR |
|---|---|
| | <table><tr><td></td><td>additional on site parking<br>Zero bicycle spaces</td></tr></table><br>In addition to the above, the parking numbers are supported by the proposed apron numbers described in the Master Plan:<br>• The four apron parking bays described in the Master Plan are needed to cater for different aircraft rather than four aircraft being on the ground at once. In particular the fourth apron parking bay is only added once Stage 2 of the runway extension is added to the runway to permit the largest estimated aircraft (a 737). The three apron parking bays that will be provided up until then will be utilised by 70 seat and 34 seat aircraft, with the apron bays configured for those aircraft.<br>• <u>Three apron parking bays</u><br>o Whilst the first stage of the runway starter extensions are in place (120m at both ends), up to three apron parking bays will be available (two initially with a third to be added, subject to separate approval).<br>o Based on other airports, it is reasonable to assume that up to two airlines will provide RPT services.<br>o Despite Merimbula pairing with more than one destination (Sydney, Melbourne and possibly Canberra) an airline will schedule flights so that it has one aircraft parked on the apron at a time because their check in and grounds handling staff levels will be structured for this level of activity.<br>o Where a second airline is providing a service on the same route, there is a reasonable level of probability that its aircraft from the same pairing will be parked on the apron at the same time.<br>o Three parking bays will be appropriate as they will service both the 34 seat aircraft and the 70 seat aircraft and will allow flexibility of parking spaces and departure gates based on which two airlines have aircraft parked on the apron.<br>o The above triggers the following criteria: 2 full Q400/ATR72 loads equating to 150 passengers - maximum<br>o It is also the equivalent of the following criteria for three airlines: 2 x Q400ATR72 + 1 x Saab @ 80%, (with 75%-80% being a more realistic occupancy generally, and particularly in the case of three airlines)<br>• <u>Four apron parking bays</u><br>o Another parking bay configuration (bringing the total to four apron parking bays) would be required for larger (100 seat and 150 seat seat) aircraft, which will also require the second stage of the starter extensions (a |

| Relevant DCP section | Discussion or where addressed in the EIS or this SR |
|---|---|
| | further 80m at both ends).<br>○ However, the introduction of the larger 100 seat aircraft will reduce the number of flights by the smaller 34 seat and 70 seat aircraft.<br>○ The introduction of the even larger 150 seat aircraft will reduce the number of flights by the smaller 34 seat and 70 seat aircraft even further, and would replace the 100 seat aircraft (with the fourth apron parking bay only able to accommodate one of these aircraft at a time).<br>○ Airlines will continue to schedule flights so that they have one aircraft parked on the apron at a time because their check in and grounds handling staff levels will continue to need sequential rather than parallel scheduling.<br>○ Where there are two aircraft parked on the apron, they will be from different companies<br>○ Where a second airline is providing a service on the same route, there will continue to be a reasonable level of probability that its aircraft from the same pairing will be parked on the apron at the same time.<br>○ The above triggers the following criteria: 1 x B717/F100 + 1 x Q400 @ 75%.<br>○ It is also the equivalent of the following criteria for the largest planned aircraft for the airport - 1 X B737 @ 85%<br>The above has been assessed by Lambert and Rehbein (Airport consultants) and is considered to align with the Master Plan for the airport. Therefore, it is appropriate to assess the parking based on the operational need of the development and the above analysis. The existing development has an excess of parking spaces provided near the airport terminal building, sufficient for operation of the Stage 1 runway extension) but not sufficient numbers to trigger construction of Stage 2 of the runway (further upgrades to the airport terminal building as noted in Figure 2-3 would be required before Stage 2 runway extension and operation could occur, with those further upgrades of the airport terminal building triggering an approval process that will consider parking). |
| **Section 6 – Engineering Requirements** | |
| **6.1 Roads and Easements**<br>**6.1.1 General Requirements** | No road works are proposed. The proposed development has considered impacts to the road network, refer to Section 8.1 of the EIS. A haulage map for the development is provided at Appendix E of this SR. Also refer to comments provided by TfNSW about the proposed haulage route at Appendix M. |
| **6.2 Parking and Driveways**<br>**6.2.1 General Requirements** | N/A – no roadworks or changes to car park access are proposed. |

| Relevant DCP section | Discussion or where addressed in the EIS or this SR |
|---|---|
| **6.3 Soil and Stormwater management**<br>**6.3.1 General Requirements** | Refer to the surface water assessment provided with the EIS for the assessment of the water cycle and water and soil management recommendations. Further commentary and additional recommendations for management are provided in the preliminary WQMP provided at Appendix H and SWA Addendum provided at Appendix G of this SR. |
| **6.4 Utility Services**<br>**6.4.1 General Requirements** | N/A – No changes to utilities are proposed or required with the runway extension. |

# 6. EIS EXHIBITION SUMMARY

## 6.1. SUBMISSIONS SUMMARY

The Merimbula Airport Upgrade EIS was placed on public exhibition for a period of nine weeks from 20 November 2019 to 20 January 2020 and was available online at https://begavalley.nsw.gov.au.

Hard copies were available at the following locations:

- Local Libraries
- BVSC customer service centre (Bega)

During the exhibition period, BVSC planning assessment team received agency referral comments from 4 government agencies, and submissions from 1 special interest group (letter and general feedback during post exhibition consultation from oyster lease holders) and 1 member of the public. The public submissions included an objection, constructive feedback and general comments and requests for specific information as the project progresses. The submissions are summarised below.

Table 6-1 Submissions received

| Category | Type of submission | Number received |
|---|---|---|
| **Public submissions (special interest groups)** | Objection / clarification or information request / general support | 1 |
| **Public submissions (member of the public)** | Objection | 1 |
| **Government agency referral comments**<br>**1. DPIE – Planning (assessment comments)**<br>**2. DPIE – Biodiversity Conservation Division (BDAR, ACHA and flooding)**<br>**3. Department of Primary Industries - Fisheries**<br>**4. NSW Environment Protection Authority**<br>**5. Transport for NSW** | Clarifications and information requests | 5 |

The issues raised in each response received are provided in full below in Sections 7.1 (public submissions), and Section 7.2 (agency submissions).

## 6.2. ADDITIONAL CONSULTATION

To better understand the submissions received, the following additional consultation was carried out.

### 6.2.1. Oyster lease holders

Oyster lease holders were identified early in the assessment process as the key public stakeholder group of importance to this proposal. As committed to in the EIS, further consultation was carried out with the two

oyster lease holders located within airport land. The additional consultation was held as discussed below in Table 6-2.

Table 6-2 Additional consultation summary

| Meeting | Summary of comments and follow up consultation/action /result |
|---|---|
| 1st meeting: Monday 9/09/2019<br>The meeting was to provide the oyster lease holders an opportunity to ask questions and discuss concerns with the surface water assessment and how this would be addressed as the proposal moves forward after initial comments were received as summarised: | The project was discussed, particularly concerns about:<br>• The reduction of oyster lease area and impacts on business<br>• The modelling of tidal movements and depth of water over the access into golf lake for the leaseholders<br>• Biodiversity and removal of vegetation<br>• Past issues of construction around the lake and the need to avoid impacts to water quality.<br>• Not using fill that would affect the oyster leases i.e. Yellow Pinch type soils that are acidic or high in Aluminium<br>An additional meeting was agreed to be held and would discuss additional tidal modelling and proposed methodology for water quality monitoring. |
| 2nd meeting: 25/02/2020<br>The meeting was to provide the oyster lease holders an opportunity to see the results of the modelling and to discuss the proposed Preliminary Water Quality Monitoring and Water Quality Management Plan being developed by South-east engineering and environmental in conjunction with advice and requirements of the NSW Environment Protection Authority. | It was verbally agreed that:<br>• Based on the updated surveying and modelling shown a positive impact on flow into and out of the saltmarsh was more acceptable to stakeholders for potential benefits for oyster farming.<br>• The proposed water quality testing appeared acceptable.<br>The oyster lease holders would receive a copy of the presentation to consider the information discussed and provide additional feedback. |

Post the meeting of 25/02/2020 feedback was provided by one of the oyster lease holders and included the following:

- *The amended documents more accurately reflect the actual hydrological conditions we have observed over the years in "Golf Lake" although I note that the incorrect assertion that the Lake is very shallow has not been corrected. In this regard there is a considerable area of the Lake that is between 1- 2 metres deep at low tide providing significant habitat for a range of aquatic species.*
- *We are fully in favour of constructing double culverts under the Southern access road to the airstrip thereby improving inundation by some 14% rather than losing some 7% of inundation when the extension is constructed. Such a move will, in some small way, restore saltmarsh habitat destroyed when the airport was first constructed*
- *We are concerned at the 0% target preferred by Council to maintain the status quo when we will be losing significant habitat when the airport extension filling is undertaken- surely an increase of 14% in this habitat accomplished by such a simply action would at least compensate in part for the habitat*

*loss occasioned by the filling of saltmarsh, mangrove and Lake when and if the airport is extended to its maximum proposed.*

- *We would also take this opportunity to reiterate the need for impermeable barriers such as sheet piling or similar to be deployed around the boundaries of the proposed extension to contain the silt that will inevitably be generated during the extension. Furthermore we urge that very strict controls be placed on the sourcing of any fill imported to the site to ensure it has no deleterious effect on the water quality of Merimbula Lake - either during construction and into the future as the lake is such a valuable asset to the community and in particular to the oyster industry that has been subject to many difficulties due to poor land management in different areas of the State.*

BVSC Responded to the letter with the following:

*The design refinement will create a final impact on flows that will be close to a zero nett impact with any deviation being towards a positive nett impact, not least due to the significant cost of offsets that are created by flows in excess of a zero or negligible nett impact.*

*The comments regarding the depth of the Lake have been noted and the engineering team will assess whether the language should be altered.*

*With regard to the protection of the lake during construction and into the future, as discussed at the presentation Council agrees with the importance of these measures and has commissioned additional engineering support to ensure that appropriate measures are identified and included in the contract for construction. They include a water quality management plan and a water quality monitoring plan, which will be provided to the requisite government authorities during the remainder of the environmental impact statement process. As that work progresses, and as flagged at the presentation, Council will provide a briefing to representatives of your company.*

It is noted that the final modelling shows a 2% increase in tidal flow to the saltmarsh, a positive impact on flow into and out of the saltmarsh was more acceptable to stakeholders for potential benefits for oyster farming.

Further discussion on the method to work towards management of all water quality impacts is provided in:

- Appendix G – Surface Water Assessment Addendum
- Appendix H – Preliminary Water Quality Monitoring and Water Quality Management Plan.

The specific responses to the public submissions are provided in Section 7.

### 6.2.2. Government agencies

| Agency | Follow up consultation/action /result |
|---|---|
| BCD – Biodiversity | A draft copy of the response to submissions and detailed clarification around the proposal impacts was provided to BCD by email on 2 July 2020 and a meeting was requested to discuss the key points prior to finalisation of the updated BDAR.<br>A meeting was held on 20 July 2020 to discuss the overlapping offset issues between the Biodiversity Conservation and Fisheries Management Acts.<br>A draft copy of the offset strategy was provided to BCD on 7 August 2020. |
| DPI Fisheries | A meeting was held on 20 July 2020 to discuss the overlapping offset issues between the Biodiversity Conservation and Fisheries Management Acts.<br>A draft copy of the offset strategy was provided to DPI Fisheries on 7 August 2020. |

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| DPC – Heritage | A draft copy of the response to submissions was provided and a meeting held to discuss the key points on 11 August 2020 prior to submission.<br>Additional discussions were held between DPC and NGH archaeologists. DPC noted the proposed consultation with the RAP's for the updated ACHA would be acceptable. The consultation period has commenced, allowing for 28 days from the 16 September 2020. Results of the consultation will be incorporated in the final updated ACHA. |
| Airservices Australia (AA) | The proponent contacted AA seeking to inform AA of the scope of the planned changes to the Merimbula Airport runways, and obtain confirmation of any AA requirements.<br><br>AA responded on the 7 April 2020 as follows:<br>*If the thresholds are not moving there will be no amendment to the Airservices DAP procedures required. As there will be no change to Airservices DAP procedures, our Environmental and Noise team will not conduct an assessment.* |
| Transport for NSW | The proponent has consulted with Transport for NSW (TfNSW) on the issue of operational and construction traffic. With regard to the operational traffic, TfNSW have been provided with the Figure 2.3 and the narrative identifying the pre-requisite of terminal expansion in order for traffic growth to occur. TfNSW has confirmed that increased traffic impacts will be assessed via the approvals required for the future extension of the terminal (refer to Appendix M).<br><br>With regard to construction traffic, TfNSW's points for assessment is have been addressed (see report at Appendix N). The report addresses the haulage route and the construction traffic site access. The report concluded that the construction traffic will have little to no impact on the main intersection in Pambula. It also assessed the use by the construction traffic to be within the site entrance intersection's capacity. |
| EPA | Consultation with the EPA has been ongoing (for the purposes of preparing the WQMP) and was undertaken by Southeast Engineering and Environment as part of the hydrology assessment. The EPA was also the contact agency for the development of the PFAS investigation prior to the development of the EIS. The results of that investigation are included in the EIS and expanded up on this Submissions Report. |

# 7. RESPONSE TO SUBMISSIONS

The submissions received have been divided into the following:

- Individual community members objections and comments about the proposal, Section 7.1.
- Government agency referral comments, Section 7.2.

## 7.1. PUBLIC SUBMISSIONS

Matters raised in the public submissions have been restated and are addressed below. This Response to Submissions report includes information to support the clarifications (discussed in Section 2.2 of this SR and not duplicated in this section) to the development description including commentary regarding the proposed safeguards and mitigation measures.

### 7.1.1. General public

| Issue | Response |
|---|---|
| 1. **The runway proposal will destroy SEPP 14 coastal wetlands. 1.46Ha of mangrove forest is proposed to be removed. The mangroves are the life of Merimbula Lake. 70 percent of juvenile fish live amongst the mangroves. The mangroves stabilise the shoreline and stop pollutants running into the lake. A delicate eco system.** | It is acknowledged that the proposal will impact mangrove habitat. SEPP 14 has now been replaced by the Coastal Management SEPP, which similarly requires an EIS format assessment (with its increased rigour and transparency to the public) for impacts of this type. This assessment has been undertaken and underpins the mitigation strategies proposed for the project.<br><br>Since the exhibition of the EIS, further design work has been able to reduce the development footprint anticipated in the EIS by 0.59 ha and to provide more certainty around the management of impacts in the wetlands. Refer to the updated BDAR, Appendix I.<br><br>All impacts, temporary and permanent, will be offset, in accordance with the Fisheries Management and Biodiversity Conservation Act. For impacts that cannot be avoided, this mechanism ensures an overall 'no net loss' by requiring management of much larger in perpetuity offsets than the areas being impacted. Commitment to such offsets is part of the proposal. |
| 2. **The Lake is our asset for future tourism.** | It is acknowledged that Merimbula Lake is an asset of paramount important to future tourism. Protection of the lake as an asset for tourism amongst other uses forms part of the mitigation measures of this project specifically to maintain water quality and minimise biodiversity and visual impacts. Although parts of the Lake are proposed to form part of the extended runway (as per above), one of the purposes of the project is to provide services to assist growth of tourism in the area. Growth of tourism is important to Council.<br><br>Safeguards and mitigations to protect Merimbula Lake have been included in the EIS and additional management plans are provided with this submissions report. Specifically, these include water quality, acid sulphate soil management and offsetting commitments. |

| Issue | Response |
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| 3. **Bangalay sand forest is a Threatened Ecological Community (TEC) and is also threatened by this proposal.** | It is acknowledged that vegetation of conservation significance, including the Bangalay sand forest TEC will be removed for the project; up to 3.9 ha for the Stage 2 impacts, generating 2 credits for in perpetuity offsets. As stated in the BDAR, onsite this occurs in a degraded scrub form, rather than forest.<br>As above, all impacts, temporary and permanent, will be offset, in accordance with the Fisheries Management and Biodiversity Conservation Acts. Commitment to such offsets is part of the proposal. |
| 4. **The reduced habitat for threatened birds will affect populations of Beach Stone Curlew, Sooty Oystercatcher and Pied Oystercatcher** | It is acknowledged that the proposal will impact shore bird habitat, both directly and indirectly. These impacts are set out in the attached BDAR, Appendix I.<br>As above, all impacts, temporary and permanent, will be offset, in accordance with the Fisheries Management and Biodiversity Conservation Acts. Commitment to such offsets is part of the proposal.<br>An assessment of whether the activities would result in a serious and irreversible impact to Beach Stone Curlew was undertaken. The conclusion to the assessment was that there is unlikely to be a serious and irreversible impact because:<br>• No records or evidence could be found of breeding individuals within Bega Valley LGA,<br>• Evidence suggests that existing records of Beach Stone Curlews are most likely of birds flying south or north that temporarily stop to rest or forage and<br>• The quantity of suitable foraging habitat (Mangroves and Saltmarsh) lost as a result of runway extensions is insignificant (<0.1%). |
| 5. **The reduced area of lake effecting aquatic biodiversity.** | The proposal will impact 2.48 ha of marine vegetation, reducing habitat available for aquatic biodiversity.<br>Further design work has been able to reduce the development footprint anticipated in the EIS by 0.59 ha and to provide more certainty around the management of impacts in the wetlands. Refer to the updated BDAR at Appendix I.<br>As above, all impacts, temporary and permanent, will be offset, in accordance with the Fisheries Management and Biodiversity Conservation Acts. Commitment to such offsets is part of the proposal. |
| 6. **Construction activities will disturb acid sulfate soils and leachate will control aquatic creatures. Lake water quality during construction will also be affected.** | An Acid Sulfate Soils Management Plan (ASSMP) has been developed specifically for the project. The ASSMP is attached to as an appendix to this submissions report providing improved certainty around the management of ASS. A preliminary Water Quality Monitoring and Water Quality Management Plan (WQMP) has been developed in accordance with EPA requirements to maintain water quality of the lake and specifically to protect the |

| Issue | Response |
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| | oyster industry present within the Lake. The WQMP is attached as an appendix to this SR and provides a clear set of management protocols with performance criteria that can be used by contractors to appropriately control water quality risks of the proposal. |
| 7. **The runway does not need to be extended to accommodate jets. Aircraft such as the Bombardier Q400 (which seats 72 people) is designed to use runways of 1,354m, much less than Merimbula's existing length.** | As set out in Section 4.2.2, the required runway length is driven by the projected aircraft being able to operate in a manner that is safe and cost efficient. The Master plan identifies, not the minimum conditions (eg runway length, climb gradients, approach gradients, operating temperatures) for landing and take off of the identified passenger aircraft, but rather the *safe and cost efficient* conditions for landing and take of the identified passenger aircraft.<br>The proposal has been developed to minimise the costs and environmental impacts required to achieve this end. The design has been undertaken in close consultation with CASA to ensure that it meets runways specifications including:<br>• Obstacle Limitation Surfaces (OLS) – starter extensions have been utilised in the design with the result that they have no impact on current OLS.<br>• Compliance with both the outgoing and the replacement Manual of Standards Part 139 (the primary runway compliance legislation) including -The configuration of runway by-pass and end nodes.<br>• The extent and gradient of the airstrip surrounding the pavement portion.<br>• The positioning of runway lighting and markings.<br>Additional commentary is provided in Appendix B. |
| 8. **Merimbula and surrounding human population continue to grow and to have a larger runway and more aircraft will impact on the quality of life for all residents due to noise and more pollution from aviation fuel/exhaust discharge due to overhead flight paths.** | The concern regarding changes in noise levels are noted. The findings of the on-ground aircraft noise assessment (RAPT 2019) are summarised in Section 8.4 of the EIS and state that for operation the results of the modelling indicate daytime operational noise goals would be met at the nearest sensitive receivers with the exception of the north to south take off for the Boeing 737.<br>There are also no changes to flightpaths. Further comparison of the ANEC assessment undertaken for the master plan has been included in this SR, refer to the assessment completed by Rehbein Airport Consulting provided at Appendix O. The assessment reviewed the:<br>• The Australian Noise Exposure Forecast/Australian Noise Exposure Concept (ANEF/ANEC) system;<br>• Number-above (N-above) contours.<br>The basis of these metrics is described in National Airports Safeguarding Framework Guideline A: *Measures for Managing Impacts of Aircraft Noise*. The assessment concluded that:<br>*…the aircraft noise assessment within the Master Plan remain relevant for the strategic planning of land uses around Merimbula Airport. While the runway extension (additional 80m starter extension to the south) will facilitate* |

| Issue | Response |
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| | *the operations of larger aircraft, an analysis of likely fleet types, forecast passenger demand and service frequency indicates this will have no material impact on the key aircraft noise measures of ANEC, N70 and N60.*<br><br>*In particular:*<br>• There is a small change to the extents of the ANEC, which is not material in terms of land use impacts; and<br>• No increase to the extents of the N60 and N70 contours.<br><br>*Future growth beyond the ANEC 203X scenario is well beyond that envisaged in the current Merimbula Airport Master Plan, and accordingly would be identified, modelled and assessed as part of a future master plan update.*<br><br>Further summary and consideration of this comparison is provided in the response table in section 7.2.8 of this SR.<br><br>As identified in Section 8.2 of the EIS emissions from aircraft is controlled by self-regulated legislation and is not controlled by Council. Aircraft must comply with *Air Navigation (Aircraft Engine Emissions) Regulations 1995* regardless of size, purpose or ownership. Responsibility for regulatory compliance rests with the aircraft operator/owner to ensure their aircraft meets the Regulations (ASA 2019).<br><br>As explained in Section 2.3.3, additional numbers will be a factor of demand and price points determined by commercial operators. An increase in flights is not a result of this proposal and additional flights are not assessed as part of this proposal.<br><br>Increased flight numbers will be the only option to address increased passengers if no changes were made to the runway. Some increase in flight numbers is expected for the project, however, BVSC's research has shown that based on airports that have a similar runway length, the project is expected to see a rise in flight numbers and then possible decline due to larger planes having greater passenger capacity to provide for the increase in RPT passengers resulting in a reduction of the overall number of flights required. |
| 9. **Alternative sites such as Frogs Hollow, Bega should be further investigated. The Garret Barry 2011 report is flawed. It only considered sites for runways greater than 1,800m for which the report concluded there are none. The Garret Barry 2011 report should have explored shorter runway length options in detail.** | Alternative sites have been investigated and ruled out as detailed in the Garret Barry (2011) report. While all investigations have their limitations, BVSC disagree that the Garret Barry 2011 report is flawed. The report is based on sound reasoning for a runway length that would provide for safe and cost efficient conditions for landing and take of the identified passenger aircraft.<br><br>As described by the Garret Barry (2011) report, Frogs Hollow cannot provide for a runway length that would provide for safe and cost efficient conditions for landing and take of the identified passenger aircraft and is therefore has not been addressed further as a possible site in the EIS.<br><br>Further, the Lambert & Rehbein letter (Appendix B) confirms that |

| Issue | Response |
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| | changes to the aviation legislation have made the cleared airspace requirements even more stringent since the writing of the Barry report. |
| 10. **An airport at Frogs Hollow would be central to Bega Valley and would compliment BVSC's vision of Bega as a regional town. And this site is NOT SUBJECT to rising sea levels. Over time the inundation of the Merimbula runway would become more frequent as sea level rises. The EIS fails to consider how the runway and infrastructure would adapt to gradual change of rising sea levels and inundation.** | The concern regarding climate change and impacts to the site is noted. Refer to comment above for findings about Frogs Hollow.<br>The surface water report included with the EIS has reviewed recent and relevant studies and key guidance documents, and examined and modelled the risk of climate change for the proposed works and notes that:<br>*Council would need to determine how the runway and associated infrastructure would adapt to this gradual change.*<br>This has been noted as an additional mitigation measure in Section 8 of this SR. |
| 11. **Climate change has not been thoroughly examined by the EIS. The airport runway is 2.0m to 2.2m above sea level or AHD. And the airport terminal and the business park are not much higher. It is a risk to be extending a runway and utilising land for intense development which will be subject to rising sea levels, king tides and 1% AEP flood events peaks of 1.78m AHD. An alternative site will have to be found in the next couple of decades so why not investigate in detail now? The EIS fails to investigate other sites, other than a reference to the Garret Barry 2011 report.** | The concern regarding climate change and impacts to the site is noted.<br>BVSC, however, disagree that Climate change has not been thoroughly examined by the EIS. The surface water report has also reviewed recent and relevant studies and key guidance documents. The report examined and modelled the risk of climate change for the proposed works.<br>BVSC disagree that an alternative site will need to be found in the next "couple" of decades. This is based on existing studies and sea level rise modelling for the site and surrounds and findings of the report that state:<br>*As the frequency of inundation will increase, airport owners and operators should be aware that some time beyond 2050 incremental raising of the runway surface is likely to be necessary.*<br>It does not state that the need to find an alternate location would be required.<br>BVSC also have no reason not to reference the Garret Barry 2011 report and no reason to question the findings of the report. |
| 12. **There is no evidence contained in the EIS that airfares will be cheaper. In fact airfares will increase. The world has passed "peak oil". Oil prices will go up. And to date there are no hybrid aircraft on the** | Without the starter extensions, Merimbula Airport cannot attract the necessary diversity of airlines to ensure an effective competitive market. 'Merimbula Airport Demand, Route Profitability and Airport Charges assessment undertaken by Webber Quantitative Consulting' identified[41]:<br>*The aspiration demand estimates are well in excess of* |

| Issue | Response |
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| **market.** | *current levels of passenger supply to Merimbula airport. This would suggest that the current, monopoly air provider on the route, Regional Express Airlines (Rex), is likely to be enjoying high average airfares and profitability. Rex airfares on Merimbula routes are also likely to be elevated because it is a monopoly air provider on these routes. Statistical modelling of Rex internet fares across its entire direct service network indicates that the airlines adds 10% to 12% to its offered airfare classes Rex net, Rex Saver and Rex Bus when it is the only carrier on a route compared to if there were two carriers competing on the route.*<br><br>The world oil price will impact on air fare costs, and then the impact of the monopoly adds a further cost. |
| 13. **What happened to user pays? A levy of $5 for 52,000 passenger movements (2011) equates to $260,000. Loan funding for airport improvements should be paid for by airport users and NOT ratepayers.** | It is not uncommon for regional airports to receiving funding grants from State and Federal governments. The starter extensions have attracted a $4.4m from the NSW government relieving the impost on ratepayers. Passenger airlines, freight aircraft operators and all other aircraft owners using the airport are charged a fee that is used to fund the airport's operation and its maintenance requirements with residual funds also being available to airport infrastructure projects. |
| 14. **The EIS states "passenger numbers have gradually fallen since 2007, however the decline has lost momentum since 2011. Passenger traffic is subsequently expected to increase following growth of the airport infrastructure and capabilities". To think that a longer runway will generate growth in passenger numbers is flawed logic. Airlines make money by having planes full with passengers. They will fly planes empty. Merimbula needs more people flying for the airlines to put on more flights. It is the people/passenger demand that generates the need for more flights or larger aircraft NOT longer runways. The DA logic appears to be if you extend the runway, then passenger numbers will increase, and we will get jets and cheaper air fares!** | In addition to the information provided in the EIS, Section 4 of this SR provides further explanation and additional justification for the runway extension.<br><br>This statement provided in the EIS *"Passenger traffic is subsequently expected to increase following growth of the airport infrastructure and capabilities"* is based on the future works identified in the Master plan as a whole and is not limited to the runway extension.<br><br>The triggers to growth are the addition of infrastructure such as terminal capacity, runway capacity and apron parking. This logic under pins the formally adopted Master plan for Merimbula Airport.<br><br>Economy of scale (larger aircraft) leading to cheaper cost is demonstrated in most commercial activity.<br><br>Whilst it is true to say that more passengers trigger larger aircraft, the information in this SR also confirms that larger aircraft trigger more passengers. |

| Issue | Response |
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| 15. **Jet aircraft are effective over long hauls. This means that it will not be economical to land at Moruya. A jet must fly direct to Sydney from Merimbula. With passenger numbers falling and with the Moruya passengers removed then how will jets be economical? And with jets there will only be one flight in and out of Merimbula. And based on current passenger numbers you would be lucky to get one daily flight. A huge reduction in service.** | This SR confirms (as does the Rehbein Airport Consulting letter provided at Appendix B) that the second stage of the starter extensions would be more suited to larger (jet) aircraft servicing longer travel routes.<br>The first stage of the starter extensions (120m) are better suited to turbo prop aircraft, which, as the comment identifies are more likely to be used on the existing routes.<br>The complex interdependency of triggers of growth are identified in Section 4.1. |
| 16. **And with the use of jet aircraft comes a jet blast barrier (an eye sore) at the Merimbula end of the runway. This has not been considered in the EIS.** | There is sufficient clearance between the end of the starter extensions and the property boundary to preclude the requirement for jet blast barriers. |
| 17. **Traffic and parking needs to be fully examined if there is an increase in passenger numbers. The existing carpark is full. The business park also generates traffic and parking. A traffic study should be undertaken for possible increased patronage of the airport site.** | A parking study has been completed for the Terminal building and shows that the project complies with the DCP (refer to Section 5 of this SR for commentary). No additional parking is required for the runway extension, future parking needs for Stage 2 will be addressed as part of future upgrades for the airport terminal building. |
| 18. **Who uses the current airline service? If passenger numbers are 80/20 business/visitor then increasing passenger numbers by targeting backpackers and Victorians will not work. Backpackers tour Oz in Combies not via aircraft and Victorians tow caravans, boats and trailers and are represented by retirees (grey nomads with money and time), families (not much time or money but lots of kids with toys), DINKs (lots of money but they want to bring toys too).** | In addition to the information provided in the EIS, Section 0 of this SR provides further explanation and additional justification for the runway extension. The proposal identifies existing users, potential out of area users and potential users from the local area.<br>There is an interdependency of triggers of passenger growth. In particular: The 'Merimbula Airport Extension, Economic Impacts, Final Report' provided by Dr Kim Houghton, Strategic Economic Solutions, 2014 (the SES report)[42] identifies:<br>*The passenger mix at Merimbula Airport is currently estimated at 80% business travellers and 20% leisure passengers (Airport Master Plan 2013), and the fare pricing structure reflects the focus on business passengers. With the total number of passengers per annum around 50,000, there are likely to be some 10,000 leisure passengers each year. Bega Valley Shire itself has annual visitation of some 400,000 domestic* |

[42] Page 11

| Issue | Response |
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| | *overnight visitors, and some 22,000 international visitors (Destination NSW LGA Profile Bega Valley) … There are currently very few domestic leisure air passengers. The North Coast Region and the Northern Rivers Tropical Region of NSW each have much larger numbers of visitors, and about 4-5% of their total domestic overnight visitors arrive by air (TRA 2014).*<br><br>*If Merimbula airport were to reach this benchmark it would correspond to some 16,000 domestic leisure visitor arrivals per annum – around one-third of the current total passenger traffic. While this would be a big increase, a key factor is the link between Melbourne and the district.* |

### 7.1.2. Oyster lease holders

| Issue | Response |
|---|---|
| ***Concerns of current EIS and the information this presents***<br>**The current EIS provided contains inaccuracies that therefor present an incorrect perspective of the possible effects the extension may have on oyster farming in Merimbula Lake. These issues have been raised previously to Council by Aquaculture Enterprises Pty Ltd, and SCWO would like second these concerns which include:**<br>• **(pg 84) "The bed of the lake was very shallow (<.5m) and the substrate consisted of fine sediment". This claim is incorrect, with significantly greater depths found within golf lake depending on tidal conditions (1.8m – 2m). These deeper waters are a significant aquatic habitat, and understanding of the true depth is required to accurately assess the impact reclamation may have.**<br>• **(pg 89) Figure 7-9. The figure identifies leases as per the DPI Oyster Industry Sustainable Aquaculture Strategy Areas showing the Section of Golf Lake leases as falling outside the "Priority area" This classification is a result of the Commonwealth acquiring the area for the airport, therefore removing the leases from DPI control. The Golf Lake leases as just as productive as those classified as priority.**<br>• **(pg 90) "The proposal is unlikely to** | The SWA Addendum has been prepared and an included an adjustment of the terrain used in the previous hydraulic model (based on ground truthed data) generates modelling results for shallow tidal inundation/extents that more accurately reflect anecdotal information from adjacent oyster farmers and existing vegetation habitats.<br><br>This modelling indicates that runway extension has a small impact on tidal exchange, reducing accumulated flow volumes in the area to the east of the southern access road by about 7%. The impact is pronounced in the smaller tide events that flow through the culverts.<br><br>Providing an additional 300mm diameter culvert at the existing southern culvert will offset the hydraulic impact of the runway extension and slightly increase tidal exchange for these larger tide events by about 2%. The inundated area to the east of the southern access road will increase slightly (1000sqm) as will associated inundation depth (1-2cm). It is expected that this will result in a slight increase in saltmarsh habitat over this new area which will experience more frequent inundation from king tides.<br><br>The aquatic ecology assessment provided in the EIS included field survey and assessment for the broader development footprint which has now been refined and has been reduced at the southern end, where |

| Issue | Response |
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| **cause indirect harm….. If harm occurred, it would be of short term and… or until tidal movements transport sediment away from vegetation" This claim does not acknowledge the tidal nature of golf lake where tidal flow is slow with a filing up without the movement observed in the main lake.**<br>• **(pg 91) "Tidal range and frequency of inundation where the southern extension footprint…is variable with existing tidal flows into the saltmarsh habitat occurring infrequently at 2 – 3 times per year. This claim is false. Staff of Aquaculture Enterprises P/L had previously met with Council staff and consulting hydrographer to raise awareness of this incorrect claim. The lake is impacted at least 3 – 4 days each month. Council staff and consulting hydrographer were shown the extent of the monthly inundation during an onsite visit prior to the publication of the EIS.** | tidal effects are of more concern. The updated hydrological modelling of the additional culvert, now proposed to counter the previous minor reduction in tidal flow, shows that tidal exchange will now be improved (2% increase; refer summary of this study Section 3.2.1 and full report Appendix G). Water quality management and contaminated soil management plans have also been progressed to provide certainty regarding the management of impacts. The aquatic assessment therefore represents a worst case impact and impacts have been found to be manageable and acceptable, with regard to aquatic habitat. All impacts, temporary and permanent, will be offset, in accordance with the Fisheries Management and Biodiversity Conservation Act. For impacts that cannot be avoided, this mechanism ensures an overall 'no net loss' by requiring management of much larger in perpetuity offsets than the areas being impacted. Commitment to such offsets is part of the proposal.<br><br>The net loss of oyster lease area is being managed between BVSC and the affected oyster lease holders. The total area of loss of lease for the southern Project EIS footprint (Stage 1) has been reduced with the implementation of measures that address construction and management of water quality for Merimbula Lake, with the total loss for stage 1 equal to 0.00658 hectares (ha). Analysis also indicates that these outer footprints will allow for the same strategy to be employed for the Ultimate EIS footprint (Stage 2), with the possible addition of a coffer dam if required. Further, it is acknowledged that Stage 2 is a long term proposal (likely to be in excess of 10 years) and therefore, a superior strategy may be proposed, that meets these same requirements; to contain all construction impacts on vegetation, soil and water quality and further reduction of loss of leased area. |
| ***Concerns during construction phase and operational phase***<br>• **SCWO would like to highlight the importance of ensuring that the construction phase will not contaminate the lake with acid sulfate soil or yellow pinch soil which is high in aluminum and a concern to shellfish and other organisms in the lake. It is vital that appropriate measures are in place to address this significant risk.**<br>• **SCWO hold concerns regarding flow dynamics and how siltation will be** | BVSC notes the concerns about potential contamination of the Lake due to the runway extensions.<br><br>Avoiding and minimising the risk of contamination are key goals of the project and as such relevant management plans proposed as pre-construction mitigation measures have been brought forward as follows:<br><br>• An Acid Sulfate Soils Management Plan (ASSMP) has been prepared and is provided |

| Issue | Response |
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| **altered due to the new development, it is recommended that further /ongoing studies be included to enable monitoring.**<br>• **SCWO would like to ensure that vegetation be treated in a such a way as to not create a situation where anaerobic breakdown by bacteria is creating low dissolved oxygen levels** | at Appendix K.<br>• A Preliminary Water Quality Monitoring and Water Quality Management Plan (WQMP) has been prepared and is provided at Appendix H. Refer also to the addendum to the surface water assessment, provided at Appendix G for construction management and mitigation measures.<br>No dumping of cleared vegetation in the wetland or in close proximity such that its breakdown may influence water quality will be allowed. Refer to relevant safeguards are included in the ASSMP, WQMP and updated BDAR provided in the Appendices to this SR. |
| ***Opportunities during construction and operational phase***<br>• **Mangroves should be planted around the periphery of the new development for stability.**<br>• **If the proposed extension were to impact on the carparking (northern end of runway), it is suggested that Council use the opportunity to review current carparking issues within this location. Alternate options including exclusive space for commercial operators, a roundabout to improve safety on entering / exiting carparking, potential expansion of parking spaces on the opposite side of the road.** | Additional design work has been completed to ensure the works can be undertaken in a way that;<br>• Minimises the works footprint<br>• Provides certainty regarding containment of impacts<br>• Provides a long term stable platform.<br>Refer to updated design in Appendix A.<br>It is important in the development of the airport that increased collision risks are not introduced. Using tall vegetation such as mangroves for stabilisation would have water quality benefits but would introduce additional roosting habitat that may increase collision risks. For this reason, additional planting is not part of the proposal.<br>It is not a part of the proposal for the extension to impact on car parking at the northern end of the runway. |

## 7.2. AGENCY COMMENTS

Agency referral comments have been listed in verbatim and are addressed below. This SR includes information to support the clarifications to the development description (as listed in Section 2.2 and 2.3 of this SR) including commentary regarding the proposed safeguards and mitigation measures.

### 7.2.1. DPIE - Planning

| Issue | Response |
|---|---|
| **Strategic Justification/ Options Analysis** | Council's Merimbula Airport Strategic Justification response provided above in Section 4.2 of this SR |

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| • **Section 3.8 Project Justification of the EIS does not sufficiently justify the project as being the preferred option, and does not refer to any strategic planning documents.**<br>• **Further, the Merimbula Airport Master Plan 2033 proposes an extension of the airport runway 120 m to the south and 200 m to the north. Additional justification should be provided to support the requested 200 m extension to the south, noting it is not consistent with the Master Plan.**<br>• **The Bega Valley Shire Air Transport Discussion Paper (Garret Barry, 2011) should be provided.** | provides an extensive list of references to reports which include strategic justification, and specifically addresses the inconsistency with the Master plan and reasons for the proposed runway extension.<br>The *Bega Valley Shire Air Transport Discussion Paper* (Garret Barry, 2011) is provided at Appendix C. |
| **The EIS needs to reference recent strategic planning documents including the South East and Tablelands Regional Plan 2036 and the Bega Valley Shire Community Strategic Plan 2040.** | Strategic documents relevant to the proposed runway extension have been addressed in provided above in Section 4 of this SR, including the South East and Tablelands Regional Plan 2036 and the Bega Valley Shire Community Strategic Plan 2040. |
| **Please address any other draft strategic documents which support the expansion project** | Council's Merimbula Airport Strategic Justification response provided above in Section 4 of this SR provides an extensive list of references to reports which include strategic justification for the runway extensions. |
| **The following aspects of the project need to be clarified and supported by clear site layout plans/drawings (where required):**<br>• **Location of construction access to the site.**<br>• **Location of construction compounds.**<br>• **Internal construction haulage routes (i.e. will the historical haulage route at the southern end of the site be used during construction?).**<br>• **Construction haulage routes (within regional/local road network).**<br>• **Extent of batters required for runway extension, particularly in the reclaimed area to the south.**<br>• **Any adjustments to existing car parking provisions and site access resulting from the construction of the proposal.**<br>• **What are the current operational hours of the airport? Will this change in the** | Section 4.5.4 of the EIS identifies that construction access would utilise existing access of Arthur Kaine Drive for truck and equipment access during construction.<br>The access point, haulage route, and site offices that would be used are now shown on Figure 2-2 and as described in sections 2.2.1 of this SR. The historical haulage route at the southern end of the runway would not be used for construction, the only access along this road would be for the construction of the proposed culvert within the southern access road as described in Section 2.2.3 of this SR.<br>The haulage route to the airport have been identified on the map provided at Appendix E of this SR and shown on Figure 2-2.<br>The extent of batters required for runway extension have been clarified with additional drawings. Further investigations into detailed design have confirmed the development footprint (Project and Ultimate) are inclusive of all environmental controls including sediment and erosion and water quality. Refer to the description of development in Section 2.2.2 and plans |

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| **future with more flights?**<br><br>**The above aspects need to be considered as part of the assessment and included within the project impact area, albeit in the short-term (for construction compounds and haulage routes).** | at Appendix A of this SR.<br><br>No additional permanent onsite parking is considered to be required as part of the operation of the runway extensions, refer to commentary against the provisions of the DCP in Section 5 of this SR.<br><br>The proposal does not include a change to the airport's existing hours of operation, which are 24 hours per day.<br><br>The project area has been clarified and updated to include all temporary and permanent construction areas. |
| **Construction activities (Section 4.3.1 of the EIS)**<br><br>**The EIS discusses excavation of existing pavement as part of construction. Please confirm whether this excavation of pavement is entirely within the identified construction footprint in Figures 1-3 and 1-4.** | Refer to the clarification of the description of the development in Section 2 of this SR.<br><br>Excavation of the existing pavement would be limited to the runway within the Project EIS footprint. Any other excavation of the existing pavement does not form part of the proposed development and would be subject to separate assessment.<br><br>Further investigations into detailed design have confirmed that the development footprint is inclusive of all environmental controls including erosion and sediment and water quality controls. |
| **Construction access**<br><br>**The EIS states that "the proposal would utilise existing access off Arthur Kaine Drive for truck and equipment access during construction." Is this the same access that airport patrons use to access the site? If so, the Applicant must provide an assessment of the safety and traffic implications associated with this.** | The access point that would be used is now shown on Figure 2-2 and as described in sections 2.2.1 of this SR.<br><br>BVSC has considered the safety and operation of the haulage route and consulted with TfNSW, who raised no objection.<br><br>The main entry has been used for other airport operations permitting heavy vehicles to the site and aligns directly with access to airside operations allowing straight access with no turning required in the areas of the public carpark that the vehicles would travel through (as shown below). |

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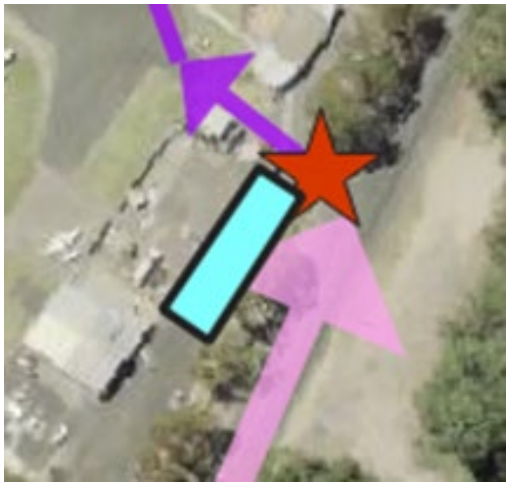
| |  <br>(Adapted from Figure 2-2) – direct access for construction vehicles to airside aprons from Arthur Kaine Drive.<br><br>Access to the works areas within the site would be via the main entry, through the existing vehicle access gate, via the aprons and along runway, using existing formed paths.<br><br>A detailed traffic management plan would be prepared prior to construction and would be included in the CEMP for the development as per the updated traffic mitigation measures listed in section 8 of this report. The traffic management plan would be implemented during construction to manage the access point and direct traffic safely and efficiently through and past the site. |
| **Development Control**<br><br>**The assessment needs to provide consider the relevant requirements of the Bega Valley Development Control Plan 2013.** | The assessment against the DCP is provide in Section 5 of this SR. The provisions of Sections 5 and 6 of the DCP relevant to the proposed Runway Extension (construction and operation) are discussed in Table 5-1.<br><br>The development is considered to be consistent with the requirements of the DCP specifically relating to:<br>• Aboriginal Heritage<br>• Social and economic impacts<br>• Sustainable design principles<br>• Potential hazards<br>• Off-street car parking<br>• Traffic management, and<br>• Soil and stormwater management. |
| **Transport and Access (Section 5.4.4) of the EIS**<br><br>**Are the traffic movements provided in Table 4-4** | The stages (1 and 2) would not be constructed concurrently. |

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| **indicative of vehicle movements for Stage 1? How would this movements differ if both stages of the project are constructed concurrently?** | Yes, Table 4-4 of the EIS is indicative of vehicle movements for stage 1 (both northern and southern Project EIS footprints over an estimated 18 week construction period).<br>However, as described in this SR, the construction method and timing of stage 1 is also representative of the works required for stage 2 albeit a shorter length of extension and therefore the number of vehicle movements for stage 2 would be slightly less than or the same as stage 1. |
| **Traffic, Transport and Safety (Chapter 8.1.2 of the EIS and Appendix G – Traffic Report)**<br>**Please distinguish between maximum vehicle counts for heavy and light vehicles, as provided in Table 8-1.** | The breakdown for heavy and light vehicles was not included in the Traffic Report for the terminal building provided in Appendix G of the EIS. Traffic count data used in the Traffic Report has been re-examined by Council and heavy vehicles (Class 3-12) as defined by Austroads accounted for:<br>• 1.4km Sth of Merimbula Airport – 6.5%<br>• 100m Nth of Dunns Lane – 7.6%<br>Class 13 vehicles accounted for 0.1%.<br>Refer to Appendix K for the copies of the traffic count data and Austroads classification guide. |
| **Traffic, Transport and Safety (Chapter 8.1.2 of the EIS and Appendix G – Traffic Report)**<br>**The assessment needs to consider the following in relation to car parking at the site:**<br>• **Existing parking capacity at the site including timed, untimed and accessible car parking spaces**<br>• **Of the above, what the existing parking allocation is for other businesses at the site (either as required by other Development Applications, or as per ongoing/historic arrangements**<br>• **Future parking requirements, and an assessment of the adequacy of these future car parking arrangements taking into account Council's DCP.**<br>**Please provide a carpark layout plan.** | Refer to the consideration of parking requirements in the assessment against the DCP provided in Section 5 of this SR.<br>As also described in section 2.3.3, Stage 1 (the Project EIS footprint) proposal equates to a maximum increase of 36 passengers per flight (total of 104) approved as part of the terminal development as constructed (approved DA 2018.309). For the Merimbula airport, any further increase in passenger numbers (and therefore flight numbers) is directly linked to terminal capacity (see Figure 2-3):<br>• First stage (existing) terminal capacity has been assessed for up to 104 passengers.<br>• Second stage terminal capacity will be assessed for up to 150 passengers.<br>• Third stage terminal capacity will be assessed for up to 200 passengers.<br>In summary additional passenger numbers beyond the existing terminal capacity will not result from this proposal, therefore there is no requirement to increase parking at the site with the runway extensions. Additional passenger numbers will be a factor of demand and price points determined by commercial |

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| | operators and increases beyond the capacity of the existing terminal approval will trigger separate approval for the required terminal upgrades.<br><br>There is no required change to the existing car parking, as such a car parking plan has not been provided. |
| **Traffic, Transport and Safety (Chapter 8.1.2 of the EIS and Appendix G – Traffic Report)**<br><br>**The assessment should consider future transport needs with increased patronage to the site e.g. private car use, coaches etc., and the associated impacts on vehicular access/traffic volumes.** | The Merimbula Airport Master Plan 2033 (Rehbein Airport Consulting, 2013) considers future transport needs with increased patronage to the site and is linked directly to terminal developments as per Figure 2-3. Future updates to parking, access etc would require separate approval and is not included in this application.<br><br>Refer also to:<br><br>• The clarifications regarding parking requirements in the assessment against the DCP provided in Section 5 of this SR.<br><br>• Triggers for increased parking requirements are linked to requirements for required future terminal upgrades in Figure 2-3. Therefore, increased traffic volumes created by future terminal capacity and parking upgrades are directly linked to traffic volumes and not the runway extensions.<br><br>BVSC has consulted with TfNSW and the feedback received notes that:<br>• Terminal capacity will continue to limit the passenger numbers as per DA2018.309 until a further DA is submitted for a further extension in the next stage of the master plan.<br>• Provided Council is satisfied with the traffic generation as a result of the proposed runway extension TfNSW will not object to the development application. |
| **Traffic, Transport and Safety (Chapter 8.1.2 of the EIS and Appendix G – Traffic Report)**<br><br>**The assessment should consider impacts of the project on the wider road network resulting from construction vehicles and future increases in traffic volumes due to increased patronage.** | Traffic from construction will be managed in accordance with a Council endorsed Traffic Management Plan as proposed in updated mitigation measures in section 8 of this SR. A haulage route plan is provided at Appendix E to show the haulage routes that would be used for the runway extension construction as well as being shown on Figure 2-2.<br><br>The master plan for the airport considered impacts of the entire airport development on the wider road network resulting from future increases in traffic volumes linked to all the works proposed in the master plan.<br><br>The potential for impacts of construction along the proposed haulage route has been undertaken by BVSC (in consultation with TfNSW, specifically with |

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| | reference to the haulage route).<br><br>The review by BVSC is provided at Appendix N.<br><br>BVSC has consulted with TfNSW and the feedback received notes that:<br>• TfNSW has completed an assessment of the development, based on the information provided and focussing on the impact to the state road network. For this development, the key state road is Princes Highway.<br>• Provided Council is satisfied with the traffic generation as a result of the proposed runway extension TfNSW will not object to the development application. |
| **Traffic, Transport and Safety (Chapter 8.1.2 of the EIS and Appendix G – Traffic Report)**<br><br>**It is unclear what the construction/operational traffic impacts would be if both stages of the extension were constructed concurrently.** | Stage 1 and Stage 2 are not proposed to be constructed concurrently.<br><br>Stage 2 would follow Stage 1 at a time yet to be determined and is linked to passenger number growth, as shown in Figure 2-3 and described in 2.3.3. Therefore, there are no operational traffic impacts with this development as operational traffic impacts have already been approved as part of the terminal development application DA 2018.309. |
| **Land Contamination (Section 8.3.3 of the EIS)**<br><br>**The assessment should specify the potential land contamination impacts that are not groundwater related. S8.3.3 refers to water contamination more than land contamination and frequently links to the water quality assessment chapter.** | In addition to the information provided in Section 8.3.3 of the EIS, refer also to 5.1.1 of the EIS for SEPP 55 comments and as follow:<br><br>***Potential impacts***<br><br>**Construction**<br><br>Potential impacts of land contamination associated with construction are:<br>• Disturbance of potential or unexpected contaminated soils.<br>• Diesel fuel and oil would be stored on-site during construction for the refuelling of machinery and is a potential soil contaminant.<br>• There is potential for spills during refuelling with a low risk of hydrocarbon leaks and general particulate matter from operating machinery.<br>• PFAS substances have been found during site sampling. Disturbance of the identified areas could result in adverse impacts to surrounding environments from the mobilisation of these substances. These areas are not located within the Proposal development footprint and would be avoided (i.e. no earthworks/ground disturbance is proposed in these areas).<br>• Acid sulfate soils are present on the site and |

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| | will be disturbed during construction.<br>Mitigation measures to avoid impacts associated with impacts of potentially contaminated soil have been updated.<br>Refer to section 8 of this SR for all updated mitigation measures.<br><br>**Operation**<br>Potential impacts of land contamination associated with operation are:<br>• Spills and leaks from and general particulate matter from operation of vehicles, maintenance machinery and aircraft have the potential to contaminate land surrounding the runway.<br>• There are no impacts with the operation phase to areas where PFAS substances have been detected. These areas would be managed in accordance with the requirements of the EPA. |
| **Land contamination**<br>**Please provide a map showing areas of known PFAS and PFOS contamination. Confirmation is required that these areas would not be part of the disturbance area (including internal haulage routes, construction compounds etc), unless appropriate mitigation and management measures are identified.** | Refer to the map provided at Appendix D of this SR. The avoidance areas identified on the following map are:<br>• Training exercise 2006<br>• Training exercise 2007<br>• Landing gear failure area<br>Also refer to Figure 2-2. These avoidance areas would not be affected by any groundworks associated with this project. |
| **Hazards (Section 8.5.2 of the EIS)**<br>**There is minimal detailing on the potential impacts that a crash/hazard would have on local development and population in nearby areas as a result of the extension.** | The Australian Government Civil Aviation Safety Authority (CASA) are to avoid crash/hazard from occurring and minimise impacts regulates Australian aviation safety. CASA legislate and regulate the application of the manual of standards (MoS) for the aerodrome and oversee aerodrome safety. The aim is to avoid crash/hazard from occurring and minimise impacts and promote safety.<br>A crash at the airport or on surrounding land could result in minor impacts or be catastrophic. The management of the airport in accordance with CASA standards include the requirement for an aerodrome manual containing an Airport Emergency Plan.<br>Merimbula Airport holds an Airport Emergency Plan as part of CASA requirements (MoS Part 139 Section 10.7).<br>The Airport Emergency Plan includes procedures for |

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| | coordinating the responses of assisting agencies.<br><br>The Airport Emergency Plan is reviewed on an annual basis and emergency exercises are conducted every two years. The Airport Emergency Committee meets quarterly at each LEMC where all agencies are represented. The Airport Emergency Plan is audited also throughout the year as part of annual technical inspection and there is also regular auditing completed through CASA.<br><br>If there is any significant change to the aerodrome this will activate a review of the Airport Emergency Plan.<br><br>For any spill containment the key agency will be Fire and Rescue NSW as per Section 8.1 and 8.2 of the Airport Emergency Plan. Fire and Rescue NSW will be tasked to contain the spill and to provide a safe area for the recovery stage. |
| **Land Use (Section 7.6.3 of the EIS)**<br><br>**The assessment should consider the impacts of the reduction in oyster leased land within the airport site and how potential water quality impacts and tidal changes (due to the reclamation) would impact on the aquaculture industry.** | The EIS did not presume what the impacts of a reduction in oyster leased land would be other than specific consideration should be given to the impacts on water quality acknowledging the importance for oyster lessees when preparing Soil and Water Management Plans and Acid Sulfate Management Plan to ensure that the proposed works would not reduce the suitability of the adjacent oyster aquaculture areas for their intended purpose.<br><br>On-going consultation has occurred with the oyster lease holders located within Golf lake, and that would be directly impacted by the proposal to better understand the risks and implications. The proposal (unmitigated) could result in potential impacts such as:<br>• Loss of income<br>• Inability to sell products due to water pollution<br>• Impacts to oyster growth and production<br><br>Council is the lessor of the areas used for oyster farming in Golf Lake. Council also acknowledges there will be a reduction in potential lease area and has been in discussion with the oyster lease holders to understand operations within the leased area and to work together to minimise and avoid impacts where possible including impacts of water quality and tidal changes (due to the reclamation). A WQMP has been prepared and is included at Appendix H of this SR. Additional surveys and tidal modelling has been undertaken and is detailed in the SWA addendum provided at Appendix G of this SR. The aim has been to achieve a zero or negligible impact on tidal movements to minimise impacts on the oyster industry and balance impacts to the wetland and native vegetation surrounding the works area.<br><br>Detailed development of the runway plans has |

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| | revealed that the area of direct impacts can be further reduced minimising the impacts on oyster lease holders that are currently located within Councils land. The reduction of leased area has been recalculated for the Project EIS footprint (Stage 1 - southern extension). The area of reduction of the lease (refer to the map provided at Appendix F) for the revised southern Project EIS footprint is calculated as 0.00658 hectares (ha) reduced down from the original area of 0.102ha. Analysis also indicates that these outer footprints will allow for the same strategy to be employed for the Ultimate EIS footprint (Stage 2), with the possible addition of a coffer dam if required. Further, it is acknowledged that Stage 2 is a long term proposal (likely to be in excess of 10 years) and therefore, a superior strategy may be proposed, that meets these same requirements; to contain all construction impacts on vegetation, soil and water quality and further reduction of loss of leased area. |
| **Acid Sulfate Soils**<br><br>**An Acid Sulfate Soils Management Plan (ASSMP) is required in accordance with clause 6.1(3) of the Bega Valley Local Environmental Plan 2013. The ASSMP should detail how the Applicant will deal with ASS. The ASSMP is required prior to determination.**<br><br>**It is unclear how ASS and PASS would be managed. Further detail is required including, but not limited to, proposed treatment methods, disposal, estimation of ASS to be excavated etc.** | An Acid Sulfate Soils Management Plan (ASSMP) has been prepared and is included at Appendix K of this SR.<br><br>Section 6 of the ASSMP details management measures for ASS and includes 26 mitigation measures and management principles, outlining requirements for training, Stripping and excavation, water quality, air quality, Treatment and validation of ASS, stockpiling treated and untreated ASS, disposal of ASS and monitoring and inspections. |
| **Soil and Water Quality**<br><br>**It is unclear how discharges to Merimbula lake will be avoided. Greater detail required on stormwater management practices. If discharges are required, how will the relevant ANZECC water quality triggers values be met?** | A Preliminary Water Quality Monitoring and Water Quality Management Plan (WQMP) has been prepared in response to the concerns raised by the EPA. The WQMP is provided at Appendix H of this SR.<br><br>The WQMP states that the targets for discharge from the site will be such that receiving environment water quality immediately adjacent to the site disturbance footprint will not exceed either monitored existing conditions (pre-construction), or the NSW Water Quality Objectives or the NSW Oyster Industry Sustainable Aquaculture Strategy water quality objectives for the receiving waters. The report applies best practice in relation to pollution load reduction for urban development (Minimum of 85% TSS, 65% TP and 45% TN load reduction), achieving 96%, 78% and 67% respectively.<br><br>Other relevant measures are also provided in the ASSMP included at Appendix K of this SR. |

### 7.2.2. DPIE - BCD (Biodiversity Conservation Division) comments on the BDAR

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| **Study area to be expanded to consider potential indirect and prescribed impacts.**<br>**A revised study area that encompasses all potential indirect and prescribed impacts would be required to comply with Biodiversity Assessment Method (BAM) (S9). This should include consideration of any impacts associated with increased frequency and size of flights over any important habitat such as shorebird habitat any airport management activities required or likely to occur between the direct impacts of expanded runway, increased obstacle surface limitation, fill batter edges and the remaining habitats to be undisturbed.** | Regarding direct impacts on habitat, as set out in Section 2.2, some changes have occurred to the project since the EIS exhibition. One of the key changes is the refined design of the starter extensions, developed iteratively with involvement from agencies and specialists. This has provided more certainty around feasible construction techniques and their relationship to direct and indirect impacts. The permanent impact footprints now shown on Figure 2-2 can now be said to reflect a feasible construction method that allows all environmental controls necessary to manage all construction impacts on vegetation, soil and water quality to be contained within this boundary. As such, no indirect water quality, vegetation or soil impacts are anticipated outside of this boundary.<br>It is noted that these refined designs have been able to reduce the southern Project EIS footprint by 0.59 ha, compared to that shown in the EIS. This has now been updated in the BDAR and its offset calculations.<br>The BDAR also now stipulates and assesses those areas required for temporary construction impacts. While the EIS assumed that existing disturbed areas could be used for temporary impacts such as construction stockpiling, parking and access, these areas have now been clarified and confirmed to be contained with the Project/Ultimate EIS footprint as shown in Figure 2-2 and included where required in the updated BDAR.<br>Regarding operational impacts, as clarified in Section 2.3, Table 3-1, changes to collision risks are considered to be minimal, in that:<br>• Flight number and frequency are not a direct result from the proposal; further detailed in Section 2.3.3.<br>• No changes to flight paths or heights will result from the proposal. Therefore no changes to the OLS are required (this is a benefit of the starter extension design; as set out in Sections 2.1.4 to 2.1.6).<br>• The starter extensions are relevant only to the commencement of takeoff and are therefore relevant to stationary or slow moving aircraft only at commencement of takeoff.<br>• The runway extensions will remove a limited area of terrestrial and aquatic habitat which might otherwise attract birds and other wildlife. This area |

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| | and the surrounding environment will continue to be managed under the existing adaptive wildlife management plan (Merimbula Airport Wildlife Management Plan).<br>• No change to maintenance operations is required under this proposal.<br>• The proposal would allow a larger aircraft to use the facility and a larger aircraft may present a larger surface area with potential to collide with wildlife, in the air or on the ground. Equally, on an individual level, it may be more observable, louder and therefore more avoidable to wildlife. This is not considered likely to represent a substantive increase in risk.<br>These matters have now been updated in the BDAR and considered in the impact assessment, specifically for shorebirds and shore bird habitat (Section 7 and 9 of BDAR).<br>These clarifications were provided to BCD in advance of the updated BDAR in order to:<br>• Explain impact assumptions above / confirm as acceptable.<br>• Confirm reporting of BDAR will remain for Ultimate (worst case) with Project only included for staging purposes.<br>• Confirm approach for defining development site / assessing indirect impacts (assuming this could result in a separate Calculation report).<br>Additionally, consultation was undertaken to confirm if our proposed offset approach is acceptable to BCD and Fisheries. |
| **Avoidance**<br>**Avoid (BAM S8) is of key importance to prescribed impacts. Avoidance and minimisation of impacts must be reconsidered and applied where possible after revision of the study area (above).** | As above, the refined design of the starter extensions, developed iteratively with involvement from agencies and specialists has been able to reduce the impact footprint while providing more certainty around feasible construction techniques and their relationship to direct and indirect impacts. The permanent impact footprints now shown on Figure 2-2 can be said to reflect a reduced impact area that allows all environmental controls necessary to manage all construction impacts on vegetation, soil and water quality to be contained within this boundary. |
| **Uncertain indirect/prescribed impacts associated with the proposal (BAM S9)**<br>**Confirmation of the buffer required to** | As above,<br>• The refined proposal reflects a reduced impact |

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| **mitigate ongoing indirect impacts to threatened species habitats and saltmarsh/mangroves. Including impacts that may be associated with altered hydrology, surface runoff, sedimentation from the filling of land and ongoing maintenance of any edge or buffer to habitats. This should be reflected in the BAM calculator as an altered VI score for affected vegetation zones and justified in the BDAR.**<br>**Bird strikes as a result of increased size and frequency with details of species /locations to be considered in relation to any predicted increase in impact.**<br>**Adaptive management for the potential impacts associated with the above should be included in a conservation management plan that provides a minimum of the following: baseline data on vegetation condition, and schedule of works including prioritised actions, responsibilities, timeframes and monitoring and report requirements. The requirements for the CMP should be included in the BDAR.** | area that allows all environmental controls necessary to manage all construction impacts on vegetation, soil and water quality to be contained within this boundary.<br>• No substantive changes to operational wildlife risks are anticipated.<br>A wildlife management plan that is updated annually is in place for the Merimbula Airport (Local Environmental Solutions 2020) and would apply to this proposal, pending approval.<br>An additional set of monitoring requirements (Chapter 8.3 of BDAR) has been added to reflect the BCD's request to ensure that any impacts of this proposal are monitored. The updated proposal commitments now includes:<br>• Establish BAM monitoring plots inside adjoining saltmarsh habitat to detect any changes over time.<br>• Establish a control monitoring site to detect environmental changes which are not related to runway extensions.<br>• Monitor surface water for impacts, like increased turbidity, nitrogen, phosphorus and acid sulfate levels.<br>• Update Wildlife Hazard Management Plan every two years to address any new impacts with wildlife. |
| **Serious and Irreversible Impact assessment**<br>**The assessment for the Beach Stone-curlew is incomplete. BCD are unable to locate the complete assessment for the impacts to this species and its breeding habitat. More information should be provided.** | This SAII assessment has now been completed in the updated BDAR. Key conclusions were that there is unlikely to be a serious and irreversible impact because:<br>• No records or evidence could be found of breeding individuals within Bega Valley LGA.<br>• Evidence suggests that existing records of Beach Stone Curlews are most likely of birds flying south or north that temporarily stop to rest or forage.<br>• The quantity of suitable foraging habitat (Mangroves and Saltmarsh) lost as a result of runway extensions is insignificant (<0.1%). |
| **Offsets under the Biodiversity Conservation** | The BDAR presented in the EIS clarified the overlapping |

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| **Act**<br>**We note that there are inconsistencies with the offsets required. Currently there are offset requirements under both the Fisheries Management Act (FM Act) and the Biodiversity Conservation Act (BC Act). Specific details on the offsetting of the mangrove and saltmarsh communities need to be clarified.** | offset requirements of the FM and BC Acts and proposed a practical solution to this:<br>• As no significant impacts to Commonwealth entities are anticipated, no referral or Commonwealth offsets are proposed (under the EPBC Act).<br>• However, under NSW legislation, offsets are generated by the project from the clearing of terrestrial vegetation (under the BC Act) and impacts on key fish habitat (under the FM Act; summarised in the EIS under Section 7.2 and detailed in Appendix H of the EIS). In the case of mangroves and saltmarsh vegetation, both acts require offsets and stipulate different mechanisms to achieve them.<br>• Large areas of similar vegetation and key fish habitat are owned by Council adjacent to the impact areas and it is the preference of the proponent that physical offsets be established in these areas. Where these are insufficient, secondary sites and monetary payments would be considered, in accordance with the schemes endorsed under the BC and FM Act.<br>• Due to the overlapping offset requirements, in order than the impact is not offset twice, the proponent proposed the following offset strategy:<br><u>BC Act:</u><br>o All entities covered by the BC Act would be offset via the Biodiversity Offset Scheme. This would equate to a physical offset site(s) being assessed as providing sufficient credits for the following entities (Ultimate EIS option):<br>▪ 2 ecosystem credits for PCT 659 (Bangalay scrub)<br>▪ 2 ecosystem credits for PCT 1126 (Saltmarsh) and<br>▪ 63 ecosystem credits for PCT 920 (Mangrove)<br>▪ Confirmation whether any physical offsets chosen may form suitable habitat for Beach Stone Curlew, Sooty Oystercatcher & Pied Oystercatcher and Southern Brown Bandicoot (through targeted survey program)<br>o The site(s) would be secured and |

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| | managed in perpetuity for biodiversity improvement, via the NSW Biodiversity Conservation Trust. On establishment, a Total Fund Deposit is calculated for the offset site and paid by the proponent to the Trust, to ensure funds would be made available each year for management activities, stipulated by a site specific offset management plan. If the offset site credit profile shows a shortfall in required credits, the difference would be paid out by purchasing the remaining credits from the Credit Register (a credit market, established under the BC Act).<br><u>FM Act:</u><br>o The following entities generate offsets under the FM Act:<br>▪ Mangroves<br>▪ Saltmarsh<br>▪ Seagrass<br>o As offsets for Mangroves and Saltmarsh would be secured and managed in perpetuity for biodiversity improvement, via the NSW Biodiversity Conservation Trust, it is proposed to only offset in accordance with the FM mechanism for:<br>▪ 0.30 ha seagrass (2:1 offset ratio)<br>▪ 0.10 ha seagrass within a mapped Coastal Wetland (10:1 offset ratio)<br>o This would equate to a physical offset site(s) being assessed as providing sufficient area. If the offset site shows a shortfall in required offsets, the difference would be paid out by purchasing the remaining credits from DPI Fisheries, in accordance with the FM Act. Payment of any offset funds would be deposited into the Fish Conservation Trust Fund established under the FM Act and quarantined for use for site based offsets and/or supplementary measures where site-based offsets are not fully achievable in the catchment area.<br>In consultation with BCD and DPI Fisheries during the original assessment and as part of this Submissions Report, this has been restated. Following discussions additional detail has been added to the offset strategy and |

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| | has been provided to BCD and Fisheries for comment. |
| **Data still required for our assessment:**<br>• **Veg zones must be included in the calculator (BOAMS)**<br>• **Shapefiles yet to be provided** | Shapefiles for the original EIS/BDAR have been provided. NGH provided the files by email to Mark Fowler (cc'd to Jenny Symons) on 6/12/2019.<br>Further updates to mapping have been provided with the revisions to the BDAR as described above and a new set of shapefiles has now been provided to BCD (25 August 2020). |

### 7.2.3. DPC (formerly DPIE BCD) - comments on the ACHA report

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| • **A map clearly indicating the development footprint and entire land that will be subject to the future AHIP application must be provided.**<br>• **Any Aboriginal objects that will be subject to harm (including harm from ongoing maintenance activities, remediation works, revegetation or similar) should be included in this AHIP application area.**<br>• **Advice provided during the site inspection on 20 February 2020 is that an existing haul road/ access track to the south of the runway may be upgraded or removed in the future.**<br>• **Additional areas within the Airport precinct may also be used for temporary compound sites or stockpiling of materials. The Department requires these areas to be mapped and assessed so they can be considered as part of this current development application.** | The maps have been updated in the ACHA provided at Appendix J.<br>The only works to the haul road are related to the construction of a 300mm culvert as described in section 2.2.3 and the surface water addendum provided at Appendix G of this SR.<br>Clarification of stockpiling areas for the runway extension and culvert has been addressed in section 2.2.1 of this SR. |
| • **Aboriginal objects were located along an existing haul road/ access track to the south of the runway and in the area proposed for the southern runway extension. These objects must be considered and included in the Aboriginal cultural heritage assessment if they will be harmed by the proposed works.**<br>• **The Department is preparing Aboriginal** | Subsequent to the field survey undertaken for this assessment, BVSC met on site with various agency representatives including archaeologist Jackie Taylor from BCD (now known as Heritage NSW). While discussing the project details with BVSC, Ms Taylor located two artefact scatters at the southern end of the runway. One of these, Merimbula Airport Runway (AHIMS # 62-6-0814) is situated outside the proposal area. The second, Merimbula Airport access track (AHIMS # 62-6-0813) is within the proposed extension area. This latter site consists of |

| Issue | Response |
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| **site recording forms for input into the Aboriginal Heritage Information Management System (AHIMS) and can provide a copy of this information to the consultant and council on request.** | two artefacts, sitting on the surface of imported fill at the southern end of the runway within the Reclaimed Land area and therefore are not considered in situ.<br>Refer to full details in the ACHA at Appendix J. |
| • **The Department requires clarification of the activities and areas that will be impacted by the current development.**<br>• **Archaeological survey must have been conducted over the entire area proposed for an AHIP and we recommend survey and assessment be undertaken for all areas proposed for impact to avoid potential delays in the future. The report already recommends that areas proposed for additional ground disturbance works should be subject to survey.**<br>• **Based on the close proximity of 4 Aboriginal burials within a 1km radius of the Airport there is a high potential for Aboriginal burials to occur within the development area. The Department requires additional information about how the potential for burials will be managed. We advise that additional research is needed to determine how much of the ground surface was removed during levelling of the airport to estimate depth at which ground disturbance could encounter burials.**<br>• **Further consideration should be given to the undertaking of a subsurface testing program to assist in determining the level of disturbance across the Airport site. If subsurface testing is warranted, then the results of the testing program will be required for the Department to consider issuing GTAs.** | Clarification of activities can be found in this SR, specifically refer to sections 2.1, 2.2 and 2.3 for information.<br>Information on the archaeological surveys for the site is included in the ACHA.<br>NGH disagree that the potential for burials is high and have investigated other avenues of information to attempt to clarify the level of disturbance of the area in question in relation to the potential for subsurface deposits and burials. The updated ACHA assesses all areas of impact and includes discussion about the potential for the presence of subsurface deposits and has considered the dune formation, geotech studies of the site as well as the Kuskie 1995 report. The potential for burial is addressed in the recommendations and included in an Unexpected Finds Protocol attached to the ACHA report.<br>The potential for the presence of subsurface deposits within the two extents of the project area were considered carefully. The updated ACHA states that:<br>• There is no subsurface potential within the proposed southern runway extension.<br>• NGH does not believe that subsurface testing is warranted in the current investigation area of the northern runway extension. The Kuskie (1995) investigations in more intact dune deposits found no subsurface material and the lack of clear A horizon deposits in the runway extension area would suggest that testing would not be archaeologically justified. |
| • **The report recommends that additional consultation with Eden Local Aboriginal Land Council is undertaken regarding the request for monitoring of all initial ground disturbance works. The Department advises that this should occur at an early stage of the project.**<br>• **Please note that a finalised ACHAR that addresses all AHIP requirements including proposed impacts and proposed AHIP area must go through the** | NGH have updated the ACHA and have contacted the RAPs and the process will be continuous.<br>A simplified AHIP is proposed, further work by Council will be required separate to the EIS. The AHIP for the EIS will cover the proposed temporary and permanent disturbance areas. |

| Issue | Response |
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| **consultation process.**<br>• **As the project is at the development application stage, it is recommended that regular consultation occurs (no gaps of six months or longer) with the Registered Aboriginal Parties so ensure that consultation remains continuous.**<br>• **Copies of all consultation correspondence must be forwarded to the Department as part of the AHIP application process.** | |
| • **Additional reports must be included in the literature review Section of the ACHAR. These reports should include subsurface testing results in the region as well as a summary of any regionally significant sites. Additional reports should include but not be limited to the following:**<br>○ **Egloff, B. 1988 Merimbula Effluent Disposal Works Archaeological Investigations. Report to DPWS.**<br>○ **ERM Australia 2005 Merimbula Aboriginal Archaeological Assessment. A report for the Bega Valley Sewerage Program (Merimbula Sewerage Scheme Augmentation).**<br>○ **Kuskie, P. 1995 An archaeological assessment of land adjacent to Merimbula Airport, Far South Coast, New South Wales. A report to Bega Valley Shire Council.** | The background contextual section for the report examined a large number of previous assessments. NGH noted the Egloff 1988 report and summarised the ERM 2005 report (which found no sites and identified their survey area as having low potential). The Kuskie 1995 report was not listed in AHIMs and NGH were therefore unaware of its presence. DPC has now provided a copy that has been reviewed in the updated ACHA. |
| • **Advice provided during the site inspection on 20 February 2020 is that additional areas around the Airport may be impacted as a result of the proposed runway extension. The Department recommends these areas be mapped and assessed as part of this current development application. Activities that may also harm Aboriginal objects such as ongoing maintenance, remediation works, revegetation or similar should also be considered and assessed.**<br>• **An updated ACHAR must be submitted that assesses all areas proposed for impact.** | Additional areas of impact for the runway extension were unknown to NGH at time of survey and writing. The ACHA report therefore had assessed the development as known at the time. The ACHA has been updated with additional information about the construction methods and footprint<br>Additional areas of impact have been assessed on their merits. |

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| • **All other sections of the ACHAR must be revised and updated, where relevant, following clarification of the proposed development activity and impacts to Aboriginal objects along with the results of any additional research, survey, investigations and Aboriginal consultation.** | The updated ACHA is provided at Appendix J. |

### 7.2.4. DPIE - BCD comments on flooding issues

| Issue | Response |
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| **Floodplain risk management**<br>• **BVSC is currently undertaking the Merimbula Lake and Back Lake Floodplain Risk Management Study & Plan (FRMS&P). It is recommended that BVSC determine the matter consistent with its Merimbula Lake and Back Lake FRMS&P by incorporating the proposal in the options assessment.**<br>**Coastal processes**<br>• **The Surface Water Report (Appendix F) notes that the extension of the southern runway (particularly Stage 2 works) is considered likely to impede tidal flow into the areas east of the extension and into the saltmarsh area north-east of the southern access path. It is recommended that, as noted in the Surface Water Report, further investigations are undertaken into the impacts of the proposed southern extension works to tidal flows and if necessary, recommendations are incorporated into the proposal design.**<br>• **We also recommend that a more extensive long-term (5-10 year) monitoring program be established to determine (and ameliorate) if there are impacts to the saltmarsh area as a result of changed hydrology and altered tidal flows. The monitoring program currently included in the Aquatic Ecology Assessment report is only for 12 months following construction.**<br>• **We note that a Coastal Management** | Floodplain risk management<br>• BVSC (the proponent) note BCD's comments regarding the Floodplain risk management study and recommendation for BVSC (the assessor) to determine the matter consistent with its Merimbula Lake and Back Lake FRMS&P by incorporating the proposal in the options assessment.<br>Coastal processes<br>Further studies have been completed due to anecdotal information provided by the oyster lease holders. The studies have involved collecting additional survey data, re-running the tidal model and considering the potential for impacts of changes to tidal flows into the saltmarsh area north-east of the old southern haulage road. Further information on the additional studies and findings can be found in:<br>• The surface water addendum report at Appendix G of this SR<br>• The updated BDAR provided at Appendix I of this SR<br>• Response to fisheries comments below<br>• Section 6.2 of this SR (additional consultation).<br>BVSC (the proponent) acknowledges the recommendation for the more extensive long-term (5-10 year) monitoring program be established to determine (and ameliorate) if there are impacts to the saltmarsh area as a result of changed hydrology and altered tidal flows. This is addressed in the updated BDAR provided at Appendix I of this SR and updated mitigation measures at section 8.<br>The BVSC coastal management program (CMP) has |

| Issue | Response |
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| **Program (CMP) is currently being developed by BVSC and includes the Merimbula airport area. The proposal should be consistent with actions proposed in the CMP.** | been considered and the proponent would ensure the proposal would be consistent with actions of the future CMP. |

### 7.2.5. NSW DPI Fisheries

Comments received in response to the EIS follow.

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| **It is noted that the proposed development seeks approval for the ultimate development footprint, with construction of stage 1 being planned for construction following approval and stage 2 being conducted 'as demand arises'. DPI Fisheries questions what specific triggers will be applied to trigger the construction of stage 2 and whether there will be any opportunity to provide further comment or amendment to approval conditions should it become evident that additional measures are required to construct stage 2? The application of a trigger for the development of stage two would be relevant to justify the construction of stage 2, and justify the associated 80m long extension into the coastal wetland (including additional harm of mangrove, saltmarsh and seagrass habitat).** | The offsets and management plans required for Stage 1 would be prepared only for this stage and would require DPI input (biodiversity management, biodiversity offsets, water quality management).<br>As the timing and need for Stage 2 is at this point uncertain, while we seek approval for it now to make the assessment and approval more efficient and take into account relevant cumulative issues, the relevant management plans would be prepared separately for this stage which would be the key input sought from DPI at that time in relation to Stage 2. |
| **A description of how the area of direct impact within seagrass, mangrove and saltmarsh habitat has been minimised through design considerations.** | As set out in Section 2.2, some changes have occurred to the project since the EIS exhibition. One of the key changes is the refined design of the starter extensions, developed iteratively with involvement from agencies and specialists. This has provided more certainty around feasible construction techniques and their relationship to direct and indirect impacts. The refined proposal, shown on Figure 2-2, reflects a reduced impact area that allows all environmental controls necessary to manage all construction impacts on vegetation, soil and water quality to be contained within this boundary.<br>The design can be seen to maximise the use of low value terrestrial vegetation, extending into seagrass, mangrove and saltmarsh, only where this is insufficient for the runway requirements. Detailed works method is yet to be detailed but Water Quality |

| Issue | Response |
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| | Management Planning is progressing concurrent with the assessment and approval process so that it can guide management planning, post approval. At this stage a precautionary treatment has been applied to assess impacts by providing a broad buffer (10 m min to 12 m max) on the likely footprint, to account for areas required to construct and management impacts of the works (all located within the Project EIS and Ultimate EIS footprints proposed). |
| **Cross sectional plans for the proposal including the width and height of the reclamation and slope, dimension and proposed treatment of the batters to the runway extension.** | Additional plans have been prepared and provided to BVSC for NSW Fisheries. The plans are also attached at Appendix A of this SR. |
| **Clarification as to whether the runway batters fall within the overall runway footprint shown on the aerial view plans or not, and whether any further area of seagrass, mangrove and saltmarsh habitat will be directly harmed from these batters. If so, then overall areas of direct damage to these habitats will need to be amended and assessed.** | As above, all direct impacts and a buffer to allow for environmental controls during construction is already included in the assessment footprint. |
| **Consideration of the potential for sedimentation and erosion impacts from increased flood (and perhaps tidal) velocities and heights around the reclaimed embankment. Information on any proposed measures to mitigate such impacts.** | Initial assessment stated 'to the east of the southern access road, tidal flow movement is controlled by two existing culverts, as these culverts will be retained, the frequency of tidal flows into this area will be maintained'.<br><br>Information was included in the EIS about the potential for sediment and erosion impacts from increased flood and tidal velocities and heights around the reclaimed embankment. While negligible based on the information available, key stakeholders remain concerned, and as such further investigation of tidal flow and required measures for management of flow, and water quality management and monitoring has been prepared. Refer to the reports provided at Appendix G and Appendix H of this SR. The refined proposal, shown on Figure 2-2, reflects a reduced impact area that allows all environmental controls necessary to manage all construction impacts on vegetation, soil and water quality to be contained within this boundary. |
| **As assessment of how the proposed reclamation from the ultimate runway extension will influence tidal flows into the wetland east of the southern runway extension (including the area upstream of the southern access road) and the potential for this to impact upon the mangroves and** | As above, the assessment of southern extension and tidal flow has been undertaken and the SWA addendum is provided at Appendix G of this SR. |

| Issue | Response |
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| **saltmarsh in this area. Section 5.5 of Appendix F states that there is potential high environmental risk from reduced tidal movements into intertidal area to the east of the stage 2 extension and recommends further investigations into tidal impacts of stage 1 and 2. The potential for these impacts has not been quantified to date and is required as part of the development application process, so that the overall indirect ongoing impacts to marine vegetation from this development can be clearly ascertained and minimised / mitigated where possible.**<br><br>**DPI Fisheries is quite concerned about this potential impact as the area between the tip of the ultimate runway footprint and the southern oyster/road is significantly narrowed and this may influence the amount of tidal movement into these eastern wetlands.** | |
| **The seagrass, mangroves and saltmarsh to be harmed from this proposal fall under the definition of marine vegetation under the FM Act. Under s.205 of the FM Act a permit is therefore required to harm marine vegetation for these works to proceed. Appropriate offsets in accordance with DPI Fisheries policy and guidelines (stated above) will be required as part of these works. These offsets are focussed on maintaining aquatic habitat and associated production values. DPI Fisheries understands how the approach taken towards the offsetting could be reached in this instance. However, s.1.4 of the Biodiversity Conservation Act needs to be considered in terms of its application terrestrial animals and plants and not fish and marine vegetation. DPI Fisheries looks forward to meeting with Council and DPIE Biodiversity and Conservation Branch in early January to look at this issue from a practical perspective and ascertain offsets that will be in accordance with the values of both the FM Act and the BC Act. Any required subsequent changes to the biodiversity assessment will be determined following this meeting.** | Noted. An offset strategy was included with the EIS, NGH and BVSC will continue discussions with BCD and Fisheries to resolve the offset strategy.<br><br>We note that in a combined agencies and proponent meeting on 20 July, agencies advised that this is a matter that require policy guidance. We look forward to updated advice from the agencies on how overlapping offset requirements can be rationalised for this project. Offset planning is proceeding concurrent with the assessment process to ensure offset options (including their cost) remain feasible for the project and so this is an important element. |
| **Consideration of construction of the following alternative footprint to Stage 1 of the runway extension:**<br><br>• **Shifting the Stage 1 extension northwards so that it extends to the 'ultimate runway footprint' on the northern side of the runway and reduces the area of wetland reclamation associated with Stage 1 of the extension.** | The runway (take-off and landing points) and associated extensions are unable to shift north. The alternative feasible option considered in the early concept stages was a longer extension to the south, this option was considered to have too great an impact on the wetland and would also require a change to the OLS and was evaluated as unsuitable. The starter extension model as the only other feasible option was found to have less impact on the |

| Issue | Response |
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| **This staging will reduce the amount of wetland harmed from the Stage 1 extension, and provide additional fishery productivity values, for the unknown period of time to when stage 2 is/may be constructed.**<br><br>**Note: prior to issuing any permit to harm marine vegetation, DPI Fisheries seeks to avoid or minimise the harm of marine vegetation in the first instance.** | wetland and would meet the required runway length was therefore considered to be the most suitable option.<br><br>Refer to proposal clarifications provided in Table 2-4 in this SR. Refer also to Section 2.2.2 of this SR that discusses the refined runway extension design proposed in the south. |
| **Provide detail on the area of mangrove, saltmarsh, and seagrass habitats to be harmed under the construction of each stage of this proposal. This is required for permitting and offsetting purposes under the Fisheries Management Act, as separate dredging and reclamation and harm of marine vegetation permits are likely to be required for each stage of this proposal.** | While a reduction in impacts is now achieved for Project EIS (Stage 1), the Ultimate EIS footprint (Stage 2) which includes all impact areas remains the same for seagrass and mangrove impacts, however as discussed in Section 2.2.2 of this report the Ultimate EIS footprint (Stage 2) may also be reduced as a superior design strategy may be proposed to contain all construction impacts on vegetation, soil and water quality allowing for a future reduction in the area for Ultimate EIS footprint (Stage 2).<br><br>The following offsets are required or may be required for unavoidable impacts to key fish habitat:<br><br>• It is anticipated that the Project EIS footprint (Stage 1) will be constructed well in advance of the residual area of the Ultimate EIS footprint (Stage 2). As such, considering only the offset liability for Stage 1 (Project EIS) (reduced based on updated design strategies):<br>  ○ 0 ha seagrass (Type 1 KFH)<br>  ○ 0 ha of saltmarsh (Type 1 KFH)<br>  ○ 0.95 ha of mangroves (Type 2 KFH).<br><br>Offsets are proposed in accordance with the offset strategy provided in Appendix P of this report.<br><br>• Regarding the offset liability of the project, for the Ultimate EIS footprint (Stage 2) proposal:<br>  ○ 0.37 ha (3,688 $m^2$) seagrass (Type 1 KFH); and<br>  ○ 0.03 ha of saltmarsh (Type 1 KFH)<br>  ○ 0.62 ha of mangroves (Type 2 KFH).<br><br>Offsets are proposed in accordance with the offset strategy provided in Appendix P of this report. |

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| **As stated previously this proposal triggers a requirement for offsets for the loss of marine vegetation, in accordance with NSW DPIs Policy and Guidelines for Aquatic Habitat Conservation and Management (2013). Further clarification on the offsets required and being proposed by Council under the FM Act and the Biodiversity Conservation Act is required.** | The EIS proposed to meet offset obligations of both the FM and BC Acts.<br>A meeting was held on 20 July 2020 to discuss the offset requirements under the Biodiversity Conservation Act and the Fisheries Management Act with BCD and DPI. Key issues for the agencies were included in the draft Offset Strategy, provided to the agencies for comment on 17 August 2020. The Offset Strategy was finalised addressing DPI comments on 28 September. Refer Appendix P. No comments have been received from BCD.<br>Offset planning is proceeding to ensure offset options (including their cost) remain feasible for the project. |

Comments received in response to the draft Offset Strategy, provided on 4 August 2020, follow. The finalised Offset Strategy is appended, Appendix P, reflecting this input.

| Issue (paraphrased) | Response |
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| **$113.50/m2 is the compensatory payment for areas that cannot be offset by onground works.** | Noted. Council's preference is to satisfy the offset requirement through onground offsets. |
| **P 13 Bullet point 1: The statement made under this bullet point is not accurate. DPI Fisheries offset strategy is focussed towards rehabilitation of impacts to marine vegetation in the first instance, either within the catchment area of the development or more broadly (say within a Local Government Area).** | Noted and updated verbatim from DPI's correspondence, in Section 6.4 of the Offset Strategy, Appendix P. |
| **Important to note the marine vegetation in the proposed offset area is currently protected as it is in public ownership (i.e. the land is Council owned) and is within a Coastal Management SEPP Wetland area.** | Noted and updated in Section 6.2 of the Offset Strategy, Appendix P. NGH have also added that this area is subject to activities and threats that could be addressed through an offset plan. |
| **While The Strategy identifies some of the management issues in the broad offset investigation area for this proposal, as outlined by DPI Fisheries at the meeting on 20 July 2020, the most significant impact to marine vegetation within this area is the southern access road causeway. This road:**<br>• **smothers an area of wetland (approx. 0.25ha) that would otherwise be vegetated with mangroves or saltmarsh.** | Noted.<br>The haul road already exists, and is not an impact of the project.<br>This haul road removal may also generate water quality risks in its removal and operational effect.<br>This would be investigated as part of the offset plan and would involve further agency input. The plan commits to investigate its removal with specialists to ensure that the risks and impacts of removal are |

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| • **restricts tidal movement to the wetland north of the road,**<br>• **This could be subsequently impacting on the marine vegetation distribution and health in this area and its resilience to sea level rise.**<br>**Restriction of tidal movement is a key threat to intertidal species such as mangroves and saltmarsh.** | warranted. |
| **To ensure management of the broad offset investigation area in a way that satisfies DPI Fisheries offset policy, the proponent will need to centre an offset proposal that will address the key threats and direct risks to marine vegetation at that site.**<br>**The Strategy does not seem to achieve any rehabilitation of marine vegetation as required for the Fisheries offsets. …The marine vegetation in this intertidal area is well protected under both the FM Act and Coastal Wetland SEPP, it is generally in good condition and is not in need of any rehabilitation. DPI Fisheries is concerned that at this stage The Strategy does not provide certainty to DPI Fisheries that on-ground habitat offsets under the FM Act will be achieved within the investigated site.** | NGH disagree that the FM Act and Coastal Wetland SEPP provide protection to the proposed offset areas. These instruments set out prescriptive assessment and offset requirements, should impacts be proposed in these areas. As part of an in perpetuity offset, subject to management, monitoring and water quality improvement works, marine vegetation within and adjacent to the offset areas would be improved and offered a higher degree of protection than is currently provided. Refer to improvement works in Table 4 of the Offset Strategy, Appendix P, including removal of oyster leases and monitoring golf course and sewage treatment works impacts. |
| **DPI Fisheries recommends the proponent consider further investigations into the potential for these works to occur and whether other legislative or operational considerations would prevent or limit the scope of these works. In particular**<br>• **Cultural heritage considerations such as whether the road contains Aboriginal artefacts and, if so, with any removal of the road how could this matter be managed for a culturally respectful outcome?**<br>• **The potential for mangrove encroachment into the wetland upstream of the road and whether this is likely to have implications, from an airport operation perspective?** | NGH are considering the cultural heritage impacts of removing the road currently as part of broader airport precinct planning.<br>Hydrological advice to date suggests that mangroves will replace saltmarsh in an increased tidal flow situation. The extent and timeline however is not known precisely but expected to be minimal. OLS management would need to take precedence in terms of management priorities. The area in question sits primarily within the transition surface of the OLS and as such is subject to a much higher (height) constraint than the runway ends. Consequently, there is low likelihood of the intersection of mangrove growth with the protected surface. NGH are aware that OLS management occurs in other offset sites adjacent to south coast airports (Moruya). |
| **Removal of the southern access road causeway would trigger designated development under the Coastal Management SEPP, and this should be noted in The Strategy.** | Noted, however under Clause 10 of this SEPP 'Development, other than for the purpose of Environmental Protection works is declared to be Designated Development', NGH would seek clarification to determine that works, should they take place, be considered 'Environmental protection works'. Where this was the case works would not be |

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| | classified as Designated Development. |
| **Considering removal of the causeway would be considered a suitable DPI Fisheries offset required for the runway extension, it would be more efficient for this offsetting activity to be included as part of a single development application for the runway extension proposal.** | NGH reiterates that the haul road and its current impacts and any impacts due to its removal are not part of the current proposal. The additional investigation and assessment requirements of removing the haul road cannot be included in the proposal without unacceptable delays to important airport upgrade works. Several other projects are proposed for the broader airport precinct and consideration of extending investigations to the haul road is already occurring (currently for heritage) to assist future decision making. |
| **If embedding the offset approval works into the subject development application is not possible, relevant details about the subject offset will need to be investigated prior to the issuance of a permit under the FM Act for the runway extension works, or preferably prior to determining the development application. DPI Fisheries really needs some certainty at these stages, as to whether a suitable on-ground Fisheries offsets can be achieved.** | NGH propose to provide this detail within an Offset Plan, with is committed to be submitted as part of seeking a permit under the FM Act for the runway extension works. This is now stipulated in Section 7.1 of the Offset Strategy, Appendix P. Works cannot commence in advance of this permit.<br>The option of the compensatory payment provides ultimate certainty of compliance with offset requirements. |

### 7.2.6. NSW EPA

| Issue | Response |
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| **Regulatory role (s3.1.5)**<br>**Comments about EPA's regulatory role.** | It is understood that the EPA has a regulatory role in this project. |
| **Surface Water Management**<br>**The EPA note that the surface water assessment states (SEE, 2019, 5.6.2) that: "Given the extents of disturbance, duration of exposure, and highly sensitive nature of receiving waters a 'no site discharge' approach is recommended. This will mean that runoff from the construction area will need to be contained on site, and only discharged if water quality objectives within receiving waters will be met." and agree with that assertion. The EPA also note that "A detailed soil and water management plan will be required as part of the construction design…" (SEE, 2019, 5.6.1)**<br>**Due to the environmentally sensitive location of the project and the high conservation value of the receiving waters, the EPA considers that the** | A Preliminary Water Quality Monitoring and Water Quality Management Plan (WQMP) has been prepared in response to the concerns raised by the EPA. The WQMP is provided at Appendix H of this SR.<br>The WQMP states that the targets for discharge from the site will be such that receiving environment water quality immediately adjacent to the site disturbance footprint will not exceed either monitored existing conditions (pre-construction), or the NSW Water Quality Objectives or the NSW Oyster Industry Sustainable Aquaculture Strategy water quality objectives for the receiving waters.<br>Water quality management during construction has been detailed in Section 6 of the WQMP and includes sediment and erosion control for both the north and south runway extension (including |

| Issue | Response |
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| **proposal should clearly demonstrate how a discharge to Merimbula Lake will be avoided through high level stormwater management practices including reuse of dirty water.**<br><br>**The EPA's corporate policy is that water pollution be avoided in the first instance. When this is not possible, the NSW Water Quality Objectives (the "NSW WQOs") and the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC and ARMCANZ, 2000) ("the ANZECC Guidelines") are used to assess potential pollution impacts of a discharge. It is the responsibility of the proponent undertaking the works or activity to undertake an assessment to consider the potential impact on receiving waters if a discharge to waters is proposed.** | terrestrial and tidal areas).<br><br>Relevant measures are also provided in the ASSMP included at Appendix K of this SR. |
| **Discharges to the environment must meet the NSW Water Quality Objectives**<br><br>**If a discharge point is proposed the sediment basin size and discharge criteria for water pollutants that will be discharged must be developed in consideration of the NSW WQOs and ANZECC Guidelines.**<br><br>• **Council develop a water quality monitoring and management plan.**<br><br>**Derive a correlation between nephelometric turbidity units and total suspended solids using either onsite calibration or laboratory based calibration using sediment collected from the proposed work areas and outline how turbidity measurements in the field will be used to track performance on the construction project against the identified trigger levels and implement management actions and procedures.** | A Preliminary Water Quality Monitoring and Water Quality Management Plan (WQMP) has been prepared in response to the concerns raised by the EPA. The WQMP is provided at Appendix H of this SR.<br><br>The WQMP states that the targets for discharge from the site will be such that receiving environment water quality immediately adjacent to the site disturbance footprint will not exceed either monitored existing conditions (pre-construction), or the NSW Water Quality Objectives or the NSW Oyster Industry Sustainable Aquaculture Strategy water quality objectives for the receiving waters.<br><br>The WQMP also concludes:<br><br>• When dewatering occurs, pH should be checked and dewatering bags used to ensure that discharge has been filtered to remove suspended solids through turbidity measurement.<br>• Water quality and visual monitoring should be undertaken as outlined in this plan to check that water quality objectives are being met within the site.<br><br>Relevant measures are also provided in the ASSMP included at Appendix K of this SR. |

### 7.2.7. Transport for NSW

| Issue | Response |
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| **TfNSW (formerly RMS) has concerns with the traffic assessment undertaken as it only considers the access treatment at the existing access to Merimbula Airport from Arthur Kaine Drive. TfNSW believes the traffic report needs to consider how the runway extension and future traffic generation will impact the wider road network, specifically the future performance of the roundabout at the intersection of Toallo Street and Princes Highway. An updated traffic report is required demonstrating the following:**<br>• **The Traffic Report dated 14th March 2018 suggests a 53% increase in traffic generation as a result of larger aircrafts utilising the runway extension, this needs to be justified.**<br>• **The type of vehicles using the routes to and from the airport, the likely distribution of these movements (i.e. which direction they are coming from/going to) and the expected duration of the operation (and associated traffic movements).** | Information about the transport route and Councils future upgrades generally and clarification about the link between the terminal upgrades and control of passenger numbers has been provided to TfNSW as part of the required consultation with agencies.<br>TfNSW has completed an assessment of the development, based on the information provided and focussing on the impact to the state road network. For this development, the key state road is Princes Highway. TfNSW notes the following:<br>- The development proposes to utilise the existing access to Arthur Kaine Drive (local road).<br>- The development proposes to increase the runway.<br>- Email correspondence dated 9th July 2020 from Bega Council states DA.2019.309 in relation to the terminal extension addressed the 53% increase in passengers that will flow through the existing terminal once the runway is extended. Terminal capacity will continue to limit the passenger numbers as per DA20178.309 until a further DA is submitted for a further extension in the next stage of the master plan.<br>TfNSW stated that provided Council is satisfied TfNSW will not object to the development application. TfNSW feedback is provided in Appendix M. |

### 7.2.8. BVSC Assessment Team

| Issue | Response |
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| **Application scope**<br>• **Whether or not the Applicant is seeking approval to operate the runway extension.**<br>• **Should you be seeking consent to operate the airport extension with more frequent and/or larger planes – an assessment of worst-case scenario impacts should be undertaken.** | The application is seeking approval for construction and operation of the runway extensions. Refer to detailed discussion about what the development is, and is not, in section 2 of this SR. Impacts of the proposed development are assessed in the EIS and as required additional information and clarification is provided in this SR.<br>This application is not for:<br>• a Master plan for the entire site,<br>• airside (ie aviation infrastructure) works other than those temporary construction works described in this SR (ie it does not include changes to the apron or taxiways)<br>• landside works such as<br>- extensions to the airport terminal, |

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| • **In particular, the noise impact assessment does not consider ANEF or N70 contours, nor does it model combinations of worst case flight scenarios.** | - carparks<br>In each of the above cases, the extent of the required development and related environmental assessments and approvals will be identified if and when the timing, funding and scope of each element is identified.<br>Section 7 of the formally adopted Merimbula Airport Master Plan 2033 (authored by Rehbein Airport Consulting in 2013) includes consideration of the noise impacts of the runway configuration identified in that plan. It provides ANEF, N60 and N70 contours derived from the application of the Integrated Noise Model. It identifies the main areas to be affected by noise events above 60 Db(A) and 70 Db(A).<br>Based on the extent of the 2033 ANEC contours developed in the adopted Airport Master Plan, Council did not proceed to a determination that zoning restrictions associated with the airport were required and so did not progress to the endorsement of the ANEF (which requires submission to Air Services Australia for technical endorsement of the modelling) and incorporation into the LEP.<br>In September 2020, Lambert & Rehbein have repeated the assessment, this time based on a total 200m starter extension (an additional 80m to that included in the adopted master plan). The report is included as Appendix O. Consistent with the assessment of noise within the adopted master plan and with practice across regional airports, the analysis is premised on the most realistic configuration of aircraft that would deliver the highest projected range of passenger numbers identified in the adopted master plan. The 'worst case' is based on a high estimate of passenger numbers rather than continual use of the runway (which is not realistic).<br>The process included the assessment of aircraft that would use the runway, the impact of updated advice from CASA as to how aircraft would use the starter extensions and the mix of aircraft that would deliver the passenger numbers identified in the master plan up until 2033 and immediately beyond (ie overlapping with the next master plan). The mix of aircraft is consistent with the mix identified elsewhere in this report (Figure 2-3) where passenger flows and traffic impacts are discussed.<br>As the ANEF/ANEC inputs include aircraft types, destinations and the average daily number of events for each combination of those three criteria, it can be used to compare two sets of operations, in this case:<br>• The number of aircraft movements required to carry a given number of passengers, with an expected mix of smaller aircraft types applicable to the 120m starter extensions (the scenario within the 2013 master plan); and<br>• The number of aircraft movements required to move the same number of passengers (with a small annual increase in total passengers) using a mix of larger aircraft types which would be enabled by the additional 80m of runway length.<br>The conclusions from the assessment are that compared to the adopted master plan the ANEC 20 contour for the ultimate extension extends very slightly further along the extended runway centreline, however is narrower in width along the runway length. This reflects the change in aircraft types (removal of the smaller Saab340 and replacement with aircraft which have a different noise profile) as well as the reduction in passenger flight numbers |

due to the inclusion of larger aircraft types.

It also reflects the worst case way in which aircraft will use the starter extensions by modelling general aviation aircraft commencing their take-off roll from the existing runway ends, rather than using the starter extension length, as these aircraft will not require the additional length. This is consistent with how CASA has indicated the runway information will be published to pilots.

In terms of the N60 and 70b contours, the change to a reduced number of aircraft movements as a result of the use of larger passenger aircraft types, does not increase the extent of areas affected. In some areas, the extents of these contours are actually reduced.

The report concludes that the aircraft noise assessment within the Master Plan remains relevant for the strategic planning of land uses around Merimbula Airport. While the runway Ultimate EIS extension will facilitate the operations of larger aircraft, an analysis of likely fleet types, forecast passenger demand and service frequency indicates this will have no material impact on the key aircraft noise measures of ANEC, N70 and N60. In particular:

- There is a small change to the extents of the ANEC, which is not material in terms of land use impacts; and
- No increase to the extents of the N60 and N70 contours.

Future growth beyond the assessed scenario is well beyond that envisaged in the current Merimbula Airport Master Plan, and accordingly would be identified, modelled and assessed as part of a future master plan update.

Finally, it is noted that the National Airports Safeguarding Framework Guideline A: Guidance to State and Local Government Planners Ensuring Compatible Development identifies that:

> *One important piece of information frequently sought by members of the public when looking to purchase a house is often the location of the flight paths.* (Page 7, National Airports Safeguarding Framework Guideline A: Guidance to State and Local Government Planners Ensuring Compatible Development, Attachment, Supplementary Aircraft Noise Metrics)

Achieving an extension to the runway without a change in flight path or threshold location is a particularly worthy element of the proposal.

# 8. UPDATED MITIGATION MEASURES

In response to the information requests and submissions received, this SR proposes changes to the safeguards and mitigation measures detailed in the EIS. Table 8-1 provides the list of new and updated safeguards and mitigation measures. New text is shown as ***bold italicised text***.

Table 8-1 Revised safeguards and mitigation measures

| No. | Safeguards and mitigation measures | Timing |
|---|---|---|
| | **BIODIVERSITY** | |
| **TBIO2** | A Vegetation Management Plan would be prepared to include:<br>• Best practice removal and disposal of vegetation and topsoil containing weeds declared under the Biosecurity Act 2015 during and after construction (ie African Lovegrass).<br>• Reporting any occurrences of pathogens such as Myrtle Rust and Phytophthora.<br>• Appropriate landscape plantings in line with Wildlife Hazard Management Plan<br>• Photo points and vegetation integrity plots conducted in saltmarsh before and 5-10 years after construction ***(this would form part of the recommended Biodiversity Conservation Management Plan to monitor any changes to adjoining Saltmarsh habitat for the south runway that would ).***<br>• Reduce quality of grassland habitat/grass cutting.<br>• Reduce roosting/nesting habitat<br>• Preventative access fencing maintained.<br>• Remove artificial temporary ponds or open water bodies.<br>• Develop landscape guidelines.<br>• Use harassment methods to deter wildlife from occupying the airport grounds.<br>• Monitoring of wildlife issues onsite***, including, updating of the Wildlife Hazard Management Plan every two years to address any new impacts with wildlife.***<br>• ***Establish a control monitoring site to detect environmental changes which are not related to runway extensions.***<br>• ***Monitor surface water for impacts, like increased turbidity, nitrogen, phosphorus and acid sulfate levels.*** | ***Pre-construction,*** Construction and Operation |
| | **AQUATIC BIODIVERSITY** | |
| ***ABIO2*** | An application would be made for two Part 7 permits under the FM Act and the proposal would operate under those conditions:<br>1. Harm Marine Vegetation permit for the removal of 2.48 ha of marine vegetation (seagrass, saltmarsh and mangroves)<br>2. Dredging and/or Reclamation permit for the | Pre-construction<br>Construction<br>Operation (as required) |

| No. | Safeguards and mitigation measures | Timing |
|---|---|---|
| | placement of fill within the lake to construct the southern runway extension<br>Develop appropriate compensatory measures based on the required 2:1 offset ratio for the seagrass directly impacted on by the proposal | |
| ***ABIO2A*** | ***An Offset Plan would be developed in consultation with BCD and DPI Fisheries, in accordance with the Offset Strategy, and submitted prior to construction. The retirement of offset obligations would be undertaken within 2 years of construction commencement, to allow time for targeted surveys, further hydrological investigation and stakeholder consultation to maximise the use of physical offsets and inform their appropriate management.*** | ***Pre-construction*** |
| **ABIO5** | Written notice would be given for the removal of ***no more than*** 0.56 ha of oyster leases currently under the Merimbula Airport jurisdiction. | Pre-construction |
| **ABIO11** | Monitoring of saltmarsh habitat for changes ***(and amelioration)*** due to altered hydrology and tidal inundation would occur post construction.<br>Monitoring techniques would include:<br>Photo points and vegetation integrity plots conducted in saltmarsh before and ***5-10*** year***s*** after construction. | Post-construction |
| | **ABORIGINAL CULTURAL HERITAGE** | |
| **AH1** | An Aboriginal Heritage Impact Permit (AHIP) would be applied for to allow impact to ***Merimbula Airport Shell with Artefacts 1, Merimbula Airport Shell with Artefacts 4 and Merimbula Airport Runway.*** | Prior to construction |
| **AH4** | The collection and relocation of the surface artefacts would be undertaken by an archaeologist with representatives of the registered Aboriginal parties and be consistent with Requirement 26 of the Code of practice for Archaeological Investigation of Aboriginal Objects in New South Wales. The salvage of Aboriginal objects would only occur following the approval of an Aboriginal Heritage Impact Permit (AHIP). ***Until salvage has occurred a minimum 5 m buffer must be observed around all stone artefact and midden deposit sites.*** | Prior to construction |
| **AH7** | In the unlikely event that human remains are discovered during the construction, all work would cease in the immediate vicinity. The ***NSW Department of Premier and Cabinet (DPC),*** the local police and the registered Aboriginal parties ***(Eden LALC)*** would be notified. Further assessment would be undertaken to determine if the remains were Aboriginal or non-Aboriginal. | Construction |
| **AH8** | Further archaeological assessment would be required if the proposal activity extends beyond the area assessed in this report. This would include consultation with the registered Aboriginal parties and may include further field survey. | Construction |
| ***AH9*** | ***An unexpected finds procedure (Appendix C of the ACHA) is to be followed during the proposed development and consequent ongoing maintenance of the proposal area.*** | ***Construction and Operation*** |
| ***AH10*** | ***A minimum 5 m buffer should be observed around all sites that*** | ***Construction and Operation*** |

| No. | Safeguards and mitigation measures | Timing |
|---|---|---|
| | ***are being avoided by the proposed development.*** | |
| | **COASTAL PROCESSES AND SOIL AND WATER QUALITY** | |
| ***WQ1A*** | ***Council would need to determine how the runway and associated infrastructure would adapt to the gradual changes to inundation levels over time.*** | ***Pre-construction*** |
| | **CONTAMINATION** | |
| **CT8** | Prior to construction a contamination management plan (as part of the CEMP) would be prepared and would ***include, but not be limited to:***<br>• ***Management measures listed in CT1 to CT7.***<br>• ***Management measures related to control of movement of soil (in and out of the site) in accordance with EPA guidelines.***<br>• ***Avoidance areas*** where PFAS/***PFOS*** is known to occur. The PFAS/***PFOS avoidance areas*** would be marked on all relevant site management plans and ***no groundworks works would occur within these areas***.<br>• ***An unexpected finds protocol.*** If unexpected contamination is detected, relevant management measures would be implemented, including stop work measures where relevant, to enable remediation and/or avoidance during construction activities.<br>• ***The Acid Sulfate Soil Management Plan (latest version).*** | CEMP |
| | **TRAFFIC** | |
| **TR1** | A Haulage ***Management*** Plan with input from Council's traffic engineers ***to form part of the Construction Traffic Management Plan (based on the proposed haulage route map and Traffic Impact Statement)*** would be developed as part of the CEMP, including but not limited to:<br>• ***Findings from Council's*** assessment of road routes to minimise impacts on transport infrastructure.<br>• Scheduling of deliveries of significant quantities of resources to minimise safety risks (on other local traffic).<br>• Consideration of cumulative traffic loads due to other local developments and seasonal traffic pressures.<br>• Traffic controls (signage and speed restrictions etc.). | Pre-Construction/ CEMP |
| **TR2** | ***P***rior to construction, undertake a Road Dilapidation Report of the proposed haulage route to the extent specified by Council. This report would:<br>• ***Include a copy of the approved haulage route map***<br>• Assess the current condition of the road(s).<br>• Describe mechanisms to restore any damage that may result due to traffic and transport related to the construction of the Proposal.<br>Be submitted to the relevant road authority for review prior to the commencement of haulage. | Pre-Construction/ CEMP |
| **TR3** | A ***Construction*** Traffic Management Plan would be developed as part | Pre-Construction |

| No. | Safeguards and mitigation measures | Timing |
|---|---|---|
| | of the CEMP in consultation with the Bega Valley Shire Council. The plan would include, but not be limited to:<br>○ ***A copy of the approved haulage route map***.<br>○ Identify specific road hazards associated with the area including not limited to fog, wet weather, frost and wildlife.<br>○ Pedestrian ***and vehicle*** management - Site access ***(airside)*** is to be restricted to authorised personnel only and existing employees on site. ***Public vehicle and pedestrian access*** to the ***airport parking, terminal building and along the shared pathway*** is to be maintained at all times ***where safe to do so and when the airport is in operation***. Within the public areas ***(landside)*** pedestrian travel paths are to be maintained to key areas such as ***the terminal*** building entrances and be free from trip hazards.<br>○ Scheduling of deliveries.<br>○ ***Access arrangements for onsite businesses (for the public and employees) to avoid disruption to their operation.***<br>○ Community consultation regarding traffic impacts for nearby residents and school bus operators.<br>○ Traffic control plans (speed limits, signage, etc.).<br>○ Procedure to monitor traffic impacts and adapt controls (where required) to reduce the impacts.<br>Providing a contact phone number to enable any issues or concerns to be rapidly identified and addressed through appropriate procedures. | /CEMP |
| | **COMPATIBILITY WITH EXISTING LAND USE** | |
| ***LU3*** | ***The oyster lease holders within the golf lake area of Merimbula Lake will be kept informed of the proposed commencement, progress of works and proposed water quality management measures with contact to be maintained throughout the project by the Airport Projects Manager to maintain opportunity for concerns to be immediately addressed.*** | ***Pre-Construction, During Construction, Post construction (limited to monitoring phase).*** |
| | **ACID SULFATE SOILS** | |
| **S1** | The Acid Sulfate Soils Management Plan ***(latest version) prepared in accordance with the Acid Sulfate Soils Manual would be included as part of the CEMP and implemented during construction.*** | CEMP/ Construction |
| ***S3*** | ***Where practicable, the Project will be staged so that the area disturbed at any one time is restricted.***<br>***It is recommended that earthworks are in ~6 m strips to minimise the area of disturbance at any one time. The area of disturbance will not exceed the maximum daily treatment limits of plant and equipment.*** | ***Pre-construction, construction*** |
| ***S4*** | ***All relevant site-based construction personnel and contractors will be made aware of the risk of encountering ASS/PASS and their personal obligations to report excavated ASS or PASS material to their supervisor. Training will provide instruction on the requirements of the ASSMP.*** | ***Pre-construction, construction*** |

| No. | Safeguards and mitigation measures | Timing |
|---|---|---|
| ***S5*** | ***Topsoil will be stripped and stockpiled separately to ASS material. Topsoil will be stockpiled in a bunded area with a sump for water quality monitoring in accordance with the water quality management plan.***<br>***Topsoil will be validated by a suitably qualified consultant. Validation sampling will use field testing (pHF and pHFOX) in accordance with the ASS Manual.***<br>***If validation sampling determines topsoil is ASS material it will be treated accordingly.*** | ***Construction*** |
| ***S6*** | ***Material excavated from below the natural ground surface (other than topsoil) and above the water table will be assumed to be AASS (unless proven otherwise by a suitably qualified consultant).***<br>***Material excavated from below the water table will be assumed to be PASS (unless proven otherwise by a suitably qualified consultant).*** | ***Pre-construction, construction*** |
| ***S7*** | ***Excavations below the natural ground surface and above the water table will include a sump for the collection of stormwater and ingress of groundwater.***<br>***A guard layer of agricultural lime will be placed evenly on the floor and sides of excavations (if above the water table) at a rate of 10 kg/m$^2$.***<br>***Excavation below the water table do not require a guard layer as water prevents oxidation of PASS.*** | ***Pre-construction, construction*** |
| ***S8*** | ***Dewatering of excavations below the water table will be carried out in accordance with the water quality management plan.*** | ***Pre-construction, construction*** |
| ***S9*** | ***Stockpiles of treated and untreated ASS will be covered and bunded. Any runoff from stockpiles of treated or untreated ASS material will be diverted into a sump.*** | ***Construction*** |
| ***S10*** | ***Any water trapped in excavations or sumps will be monitored for pH weekly and immediately following rain. If the pH is less than 5.5:***<br>• ***Water quality samples will be collected and dispatched to a NATA accredited laboratory for pH, total acidity, total and dissolved heavy metals including aluminium and iron.***<br>• ***The water will be treated to a pH of 6.5 – 8.5 (refer to Table 7.1 of the ASS Manual for rates)***<br>***The results of the water quality sampling will be used to determine if the trapped water is suitable for dewatering offsite (in accordance with the water quality management plan) or disposal as liquid waste.*** | ***Construction*** |
| ***S11*** | ***If dust is observed air quality mitigation measures will be implemented in accordance with the Construction Environmental Management Plan including but not limited to:***<br>• ***Wetting down stockpiles with a sprinkler or hose***<br>• ***Covering stockpiles with fabric or liner*** | ***Construction*** |

| No. | Safeguards and mitigation measures | Timing |
|---|---|---|
| | • ***Applying dust control polymers.*** | |
| ***S12*** | ***Treatment of ASS material shall be done with fine agricultural lime (neutraliser) and in accordance with the Project liming rate described in section 5.5 of this ASSMP.***<br>***The procured lime is to have a neutralising Value (NV) of >95% with a particle size <800 microns, this will be confirmed with the supplier before sourcing the lime.*** | ***Construction*** |
| ***S13*** | ***Excavated ASS will be spread out in an earth bunded treatment pad in a thin layer (<0.3 m) over a guard layer of agricultural lime (10 kg/m$^2$) or impervious liner. The ASS material will be allowed to air dry with some mechanically breaking up of clods as drying proceeds. When the ASS material is sufficiently dry, lime will be applied and thoroughly mixed and compacted to slow down oxidation.***<br>***Lime will be applied in accordance with the project liming rate (refer to section 5.2).***<br>***Treated ASS will be stockpiled waiting validation.*** | ***Construction*** |
| ***S14*** | ***Following treatment of ASS material with agricultural lime, validation soil testing will be conducted by a suitably qualified consultant. Validation sampling will be undertaken using field testing ($pH_F$ and $pH_{FOX}$) and in accordance with the ASS Manual.***<br>***The accuracy of the field testing program will be 'calibrated' by sending 25 per cent of samples to a laboratory for confirmatory analysis (SPOCAS or CRS).***<br>***The consultant will provide laboratory analysis and a report/email confirmation of the validation results before any material is reused or disposed of offsite. If required, unsuccessfully validated ASS Material will be retreated.***<br>***The following performance criteria should be met to confirm effective neutralisation of soils:***<br>• ***The neutralising capacity of the treated soil must exceed the existing plus potential acidity of the soil, (e.g. $pH_{FOX}$ must be >5)***<br>• ***The neutralising material has been thoroughly mixed with the soil***<br>• ***Soil pH must be in the range 6.0 to 8.5; and***<br>• ***Excess neutralising agent must remain within the soil until all acid generation reactions are complete and the soil has no further capacity to generate acidity*** | ***Construction*** |
| ***S15*** | ***A stockpile of agricultural lime will be stored at the site compound. The volume stored needs to be enough to treat the largest volume of soil exposed at any one time. The stockpile will be covered with an impermeable liner.*** | ***Construction*** |
| ***S16*** | ***Treated and validated ASS will be:***<br>• ***Reused onsite and buried at least 0.5 metres from the finished surface level or below the water table.*** | ***Construction*** |

| No. | Safeguards and mitigation measures | Timing |
|---|---|---|
| | • ***Disposed of in accordance with the mitigation measures described in this table under disposal of ASS.***<br>***Untreated PASS can be disposed of without treatment subject to the mitigation measures described below in disposal of ASS.*** | |
| ***S17*** | ***An ASS tracking register will be used to track the excavation location, date and volume as well as liming rate (kg/m3), treatment location, date, validation results and reinstatement location or offsite disposal.*** | ***Construction*** |
| ***S18*** | ***The suitably qualified validation consultant will prepare a validation report describing the results of validation sampling and analysis and final location of excavated ASS material.*** | ***Construction*** |
| ***S19*** | ***Treated ASS will be stockpiled at the site compound in a covered skip bin or bunded area with a sump to minimise acidic runoff.***<br>***Stockpiles will be placed on an impervious liner or a layer of lime.*** | ***Construction*** |
| ***S20*** | ***Stockpiling of untreated ASS will be minimised and will not exceed 18 hours in duration.***<br>***Stockpiling of untreated ASS will not occur if any rain is forecast.*** | ***Construction*** |
| ***S21*** | ***Stockpiles of untreated ASS will be placed in a skip bin or in a bunded area on an impervious liner or a guard layer of lime (10 kg/m$^2$).*** | ***Construction*** |
| ***S22*** | ***AASS must be treated by the generator of the waste before they can be considered for disposal. Treatment should be in accordance with the neutralising techniques outlined in the ASS Manual and the mitigation measures described above for treatment of ASS.***<br>***Following neutralisation, the generator of the waste must chemically assess the soil in accordance with Step 5 of Part 1 of the NSW EPA Waste Classification Guidelines. This will determine whether there are any other contaminants that may affect how the waste is classified for disposal.***<br>***Once classified, the waste must be taken to a landfill licensed to accept that class of waste.***<br>***Prior arrangements should be made with the occupier of the landfill to ensure that it is licensed to accept the waste. The landfill should be informed that the AASS has been treated in accordance with the neutralising techniques outlined in the ASS Manual and that the waste has also been classified in accordance with Part 1 of the Waste Classification Guidelines.*** | ***Construction*** |
| ***S23*** | ***If disposing of untreated PASS, it must be kept wet at all times during excavation and subsequent handling, transport and storage, until they can be disposed of safely. They must be received at the proposed disposal point within 16 hours of being dug up.*** | ***Construction*** |
| ***S24*** | ***PASS may be disposed of offsite in water below the permanent water table, provided:*** | ***Construction*** |

| No. | Safeguards and mitigation measures | Timing |
|---|---|---|
| | • ***It is prearranged with the landfill***<br>• ***An environmental consultant is engaged to supervise the excavation and loading of PASS***<br>• ***The pH of the PASS is greater than pH 6.0 when leaving the site***<br>• ***The pH of the PASS is greater than pH 5.5 when arriving at the landfill***<br>• ***they meet the definition of 'virgin excavated natural material' (VENM) under the Protection of the Environment Operations Act 1997, even though they contain sulfidic ores or soils.***<br>***The receiving landfill must be licensed by the EPA to dispose of PASS below the water table.***<br>***Where PASS cannot be classified as VENM or a suitable underwater disposal site at a landfill is not available, the soil must be treated in accordance with the neutralising techniques in the ASS Manual. After treatment the soil should be chemically assessed in accordance with Step 5 in Part 1 of the NSW EPA Waste Classification Guidelines.*** | |
| ***S25*** | ***The ESR will undertake a weekly site inspection for visual indicators of ASS and acidic runoff in the receiving environment.*** | ***Construction*** |
| | ***HAZARDS*** | |
| **HM1** | Continue to implement the Aerodrome Manual Part 2 Section 02 Merimbula Airport Emergency Plan. ***The plan would be updated in accordance with CASA's requirements and would address the extended runway.*** | Construction and Operation |
| | ***WILDLIFE* HAZARDS** (replaces HM2-HM6) | |
| ***WHM1*** | Continue to implement the Merimbula Airport Wildlife Hazard Management Plan 2017 ***(latest version)*** (refer also to TBIO1). ***Monitoring of bird strikes would be continued (post any runway extensions) to assess any changes in bird strikes which may lead to further development of strategies to prevent birds strikes into the future.*** | Construction and Operation |
| ***WHM2*** | Carry out daily checks for litter (especially food and drink waste). Any waste collected would not to be left airside. Meal breaks would be taken landside so scavenging by wildlife airside is not encouraged. Induction of construction workers would include information on bird strikes and importance of not encouraging scavenging by wildlife. | Construction |
| ***WHM3*** | Maintain efficient drainage during construction to avoid unnecessary ponding of water. | Construction |
| ***WHM4*** | Disturbance of vegetation would be limited to the 'Ultimate EIS footprint' ***and culvert works.*** | Pre-construction<br>Construction |
| ***WHM5*** | Monitor material/construction storage areas for perching/roosting/Etc. Materials /construction areas to be modified to discourage roosting if | Construction |

| No. | Safeguards and mitigation measures | Timing |
|---|---|---|
| | this is found to occur. | |

# 9. CONCLUSION

NGH prepared the Environmental Impact Statement for the Merimbula Airport Upgrade – Runway Extension on behalf of Bega Valley Shire Council. The EIS was prepared in accordance with Part 4 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) to support a development application (DA) for Regionally Significant Development. The EIS was lodged with Council with the Development Application and public and agency submissions were invited during the exhibition period of 20 November 2019 to 20 January 2020.

Although the proposal is identified as two stages, the approval sought is not for a staged development, nor is it a concept development as defined under the EP&A Act. The assessment of both Stage 1 and 2 impacts provides project certainty regarding the long term planning required for this project and appropriately assesses the cumulative impacts of the combined works.

This report clarifies the proposal and describes specific changes to the proposal, since public exhibition. Supporting updated assessments are appended as required. The key changes have been to:

- Refine the design and works method required to construct the runway starter extensions. This reduced the works footprint to a minor degree. The biodiversity and heritage assessments were updated to reflect the change.
- Include an additional 300mm diameter culvert under the existing haul track adjacent to the southern runway starter extension. This will Increase the tidal exchange to a minor degree in this area. The biodiversity assessment was updated to reflect the change which has increased the inundation areas adjacent to the proposal.

This report:

- Summarises additional investigations that have informed the proposal and this response to submissions:
    - Additional engineering design work to ensure certainty around direct and indirect impacts of the proposal.
    - Additional hydrological modelling to counter minor impact on tidal exchange at the southern extension (Surface Water Assessment (SWA) Addendum).
    - Updated BDAR, October 2020.
    - Updated ACHA report, September 2020.
    - Preliminary water quality monitoring and water quality management plan, July 2020.
    - Acid sulfate soils (ASS) management plan, September 2020.
    - Offset Strategy, September 2020.
- Provides a more comprehensive strategic justification for the proposal, as requested by DPIE and to address the public submission.
- Addresses all relevant DCP matters, as requested by DPIE.
- Provides a response to each matter raised in the public exhibition process, including public and agency submissions.

Key issues raised in the submissions were the need to clarify the development and all temporary and permanent impact areas (direct and indirect), concerns with the SWA and modelling results, the need to address water quality and soil impacts (management, monitoring and ASS/PASS), clarification of the

strategic need for the runway extensions and technical justification for the runway design, concerns about biodiversity impacts, clarification of traffic and parking considerations.

Key changes to the mitigation strategies were:

- Updates to address the reduction in the southern Project EIS footprint.
- Updates to address the additional culvert, including impact on tidal exchange at the southern extension, and monitoring of the saltmarsh located to the south east of the southern runway extension.
- Clarifications around the contamination management plan inclusions in the Construction Environmental Management Plan and inclusion of measures from the ASSMP.
- Provisions to ensure relevant management plans are prepared and implemented.

This report is underpinned by extensive additional consultation and investigations providing a high degree of certainty around its conclusions. Where uncertainty exists, a precautionary approach has been adopted and adaptive management mechanisms committed to.

On balance:

- This is considered the best location and design of the runway extension to meet the requirements set out in the Master plan, specifications required by CASA and to minimise adverse environmental impacts.
- The runway extensions are in the public benefit; they ensure that growth of the region can continue while protecting the key recreational and industry asset that is Merimbula Lake.
- The environmental impacts would be thoroughly mitigated through a rigorous set of management plans in addition to in perpetuity offsets for impacts that cannot be avoided.

# 10. REFERENCES

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