



One&Only Wolgan Valley

Modification of Concept Plan and Project Application
(Helicopter trips and other changes)

Emirates One&Only Wolgan Valley Australia

August 2017

Project No. 2017.034



*As part of the **pitt&sherry** Group*





One&Only Wolgan Valley

Modification of Concept Plan and Project Application (Helicopter trips and other changes)

Prepared for:

Emirates One&Only Wolgan Valley Australia

Prepared by:

Pitt & Sherry/KMH Environmental

Level 1

81 Hunter Street

Newcastle NSW 2300

Phone: (02) 4910 3600

Fax: (02) 8008 1600

Document Control Log

Revision No.	Amendment	Date	Prepared By	Checked By	Approved By
A-C	Drafts for internal review	Various	E. Larson	A. Bishop	A. Bishop
D	Draft for client review	21 July 2017	E. Larson	A. Bishop	A. Bishop
0	Final Draft	4 August 2017	E. Larson	A. Bishop	A. Bishop
1	Amended per DPE	29 August 2017	E. Larson	A. Bishop	A. Bishop
2	Amended per DPE	7 September 2017	E. Larson	A. Bishop	A. Bishop
3	Amended per DPE	14 September 2017	E. Larson	A. Bishop	A. Bishop

© pitt&sherry 2017

The information contained in this document produced by pitt&sherry is solely for the use of the Client identified on the cover sheet for the purpose for which it has been prepared and pitt&sherry undertakes no duty to or accepts any responsibility to any third party who may rely upon this document.

All rights reserved. No section or element of this document may be removed from this document, reproduced, electronically stored or transmitted in any form without the written permission of pitt&sherry.



TABLE OF CONTENTS

Glossary and Abbreviations.....	i
Executive Summary	ii
1. Introduction	3
2. Overview of the Approved Project	6
3. Description of the Proposed Changes.....	9
4. Community and Agency Consultation.....	17
5. Environmental Impact Assessment	20
6. Approvals Consistency Review.....	36
7. Conclusion.....	38
Certification.....	39
References	40

FIGURES

Figure 1	Regional Context
Figure 2	Locations of proposed modifications
Figure 3	Sensitive receivers in Wolgan Valley
Figure 4	Existing helipad and flight paths
Figure 5	Proposed helipad and flight paths
Figure 6	Photograph of the proposed helipad site, looking south
Figure 7	Proposed helipad location (Google Earth view)

TABLES

Table 1	Summary of Existing Approvals
Table 2	Summary of Additional Project Aspects for assessment
Table 3	Holiday and tourism periods for peak demand
Table 4	Summary of Consultation Undertaken
Table 5	Primary issues raised at the stakeholder meeting



Table 6	Primary issues raised in other consultation
Table 7	Predicted helicopter noise levels
Table 8	Landscape Precincts Applicable to Modification
Table 9	Risk Ranking Matrix (DPI 2011)
Table 10	Probability Levels (DPI, 2011)
Table 11	Measure of Consequence Levels
Table 12	Land Use Conflicts Risk Evaluation
Table 13	Summary Assessment Against Environmental Aspects
Table 14	Proposed Changes to Approval Conditions

APPENDICES

Appendix A Secretary's Environmental Assessment Requirements (SEARS)
Appendix B Noise Assessment
Appendix C Photographic Log of Proposed Helipad Location
Appendix D Helipad Location CAAP-92-2(2) Compliance Overview
Appendix E Consultation Documentation
Appendix F Aboriginal Heritage Items

Glossary and Abbreviations

CASA	Civil Aviation Safety Authority
EEC	Endangered ecological communities
EIS	Environmental impact statement
EPA	NSW Environment Protection Authority
EP&A Act	NSW <i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	NSW <i>Environmental Planning and Assessment Regulation 2000</i>
EPBC Act	Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>
FNA	Fly Neighbourly Advice
L _{Amax}	The maximum noise level over a sample period is the maximum level, measured on fast response, during the sample period.
L _{AE}	Noise level over a sample period, measured on fast response, where the energy is normalised to 1 second.
L _{Aeq}	The equivalent continuous sound level (L _{Aeq}) is the energy average of the varying noise over a sample period.
LEP	Local Environmental Plan
LGA	Local Government Area
NPW Act	National Parks and Wildlife Act 1974
OEH	NSW Office of Environment and Heritage
POEO Act	NSW <i>Protection of Environment Operations Act 1997</i>
SEARS	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy. A type of planning instrument made under Part 3 of the EP&A Act.
TEC	Threatened ecological community
TSC Act	NSW <i>Threatened Species Conservation Act 1995</i>

Executive Summary

The Emirates One&Only Wolgan Valley (resort) is proposing a number of changes to the existing operations. These changes are summarised as follows:

- Move the helicopter landing pad from its existing location near Wolgan Road to a new location internal to the property and farther away from local residences. The existing helicopter landing pad would be retained for emergency purposes only.
- Increase the number of allowed helicopter trips from the existing 4 trips (8 helicopter movements) per week to a maximum of 18 trips per week excepting peak demand holiday and tourism periods. The maximum number of trips during peak demand periods would be thirty-six (36) trips per week. Annual peak demand holiday and tourism periods would include the following:
 - Christmas, New Years and summer school holidays including the 20th December through 30th January (6 weeks);
 - Spring and winter quarterly school holidays including two 2 week periods (4 weeks);
 - Easter break and school holiday period including one week either side of Easter Saturday (2 weeks);
 - Bathurst car races including the week after the October long weekend for the V8 races and the week of the GT3 race in February (2 weeks); and
 - Any week there is a significant tourism event in NSW that provides a substantial economic benefit to NSW and Lithgow region.
- The addition of six bee hives for local production of honey to be used in the resort and as guest interaction with the culinary team.

The Emirates One&Only Wolgan Valley resort was approved under Part 3A of the EP&A Act which has since been repealed. As such, the proposed modification is subject to assessment in accordance with the transitional part 3a provisions included in Schedule 6A of the Act. Under Schedule 6A, a development approved under Part 3A may continue to be modified in accordance with the provisions of S75W of the Act.

The proposed modifications are consistent with the objectives of the Act as follows and would not significantly increase the environmental impacts of the total development:

- The relocated Helipad is farther away from residents, will be located in an existing disturbed area and would not require the removal of any trees or native vegetation;
- The relocated Helipad has been considered in consultation with CASA and will be in compliance with CASA guidelines;
- A professional noise consultant has assessed the potential noise impacts from the proposed relocation of the helipad and the increased weekly helicopter trips and determined them to be acceptable and compliant with relevant noise guidelines; and
- The change is unlikely to result in any adverse impacts on significant flora and fauna and ecological communities located in the broader site and adjoining National Parks and Greater Blue Mountain World Heritage Area.

1. Introduction

1.1. Background

The Concept Plan Approval for the Development of a Luxury Resort at Wolgan Valley (now trading as Emirates One&Only Wolgan Valley) was approved by John Hatzistergos MLC, Acting Minister of Planning on 12th May 2006. A Modification to Concept Plan Approval and Project Approval was approved by Frank Sartor MP, Minister for Planning on 13 April 2007. The construction of the resort commenced in 2008, with the resort opening to the public in October 2009.

Emirates One&Only Wolgan Valley Australia is located approximately 190 km or 3 hour's drive north-west of Sydney airport and CBD, within the Lithgow Local Government Area. It lies within a valley to the western escarpment of the Blue Mountains plateau, within the Greater Blue Mountains World Heritage Area.

The site is located on the Wolgan Road, 35 kilometres north of Lithgow, and approximately 8 kilometres south of Newnes. It forms part of the Wolgan Valley, which is approximate 13,750 ha in size and up to 28 km long and 6 km wide, extending from Newnes in the north-east to Wolgan Gap in the south-west (refer **Figure 1**). The site sits between Gardens of Stone National Park to the north and south and Wollemi National Park to the east; both part of The Greater Blue Mountains World Heritage area. Wolgan State Forest is located further to the west and Newnes State Forest further to the south. Glow Worm Tunnel, Newnes Industrial Ruins, Deep Pass, Blackfellows Hand Rock and Baal Bone Gap are located within the vicinity of the site.

1.2. Purpose of the Report

The Emirates One&Only Wolgan Valley resort is proposing a number of changes to the existing operations. These proposed modifications and need for the changes are summarised as follows:

- Move the helicopter landing pad from its existing location near Wolgan Road to a new location internal to the property and farther away from local residences. The existing helicopter landing pad would be retained for emergency purposes only.
- Increase the number of allowed helicopter trips from the existing 4 trips (8 helicopter movements) per week to a maximum of 18 trips per week excepting peak demand holiday and tourism periods. The maximum number of trips during peak demand periods would be thirty-six (36) trips per week. Annual peak demand holiday and tourism periods would include the following:
 - Christmas, New Years and summer school holidays including the 20th December through 30th January (6 weeks);
 - Spring and winter quarterly school holidays including two 2 week periods (4 weeks);
 - Easter break and school holiday period including one week either side of Easter Saturday (2 weeks);
 - Bathurst car races including the week after the October long weekend for the V8 races and the week of the GT3 race in February (2 weeks); and
 - Any week there is a significant tourism event in NSW that provides a substantial economic benefit to NSW and Lithgow region.
- The addition of six bee hives for local production of honey to be used in the resort and as guest interaction with the culinary team.

Emirates One&Only Wolgan Valley requested Secretary's Environmental Assessment Requirements (SEARS) on 3 March 2017 for the preparation of an Environmental Assessment for a proposed S75W Modification Application to the Concept Plan and Project Approval for the Emirates Luxury Resort Wolgan Valley.

Under Schedule 6a of the Environmental Planning and Assessment Act 1979 (EP&A Act), the Secretary of the Department may continue to issue environmental assessment requirements for modifications to an approved Part 3A development in accordance with S75w(3) of the Act.

This report is the environmental assessment that supports the modification request. There are two aspects to the modification approval being sought in this report, including:

- Modification of the approved Concept Plan approval; and
- Modification of the Project Approval for the approved Concept Plan.

Modification of the approved Concept Plan approval is sought pursuant to 75W of the Environmental Planning and Assessment Act, 1979, which states:

(1) In this section:

Minister's approval means an approval to carry out a project under this Part, and includes an approval of a concept plan.

Modification of approval means changing the terms of a Minister's approval, including:

- (a) revoking or varying a condition of the approval or imposing an additional condition of the approval, and
 - (b) changing the terms of any determination made by the Minister under Division 3 in connection with the approval.
- (2) The proponent may request the Minister to modify the Minister's approval for a project.

The Minister's approval for a modification is not required if the project as modified will be consistent with the existing approval under this Part.

- (3) The request for the Minister's approval is to be lodged with the Director-General. The Director-General may notify the proponent of environmental assessment requirements with respect to the proposed modification that the proponent must comply with before the matter will be considered by the Minister.
- (4) The Minister may modify the approval (with or without conditions) or disapprove of the modification.
- (5) The proponent of a project to which section 75K applies who is dissatisfied with the determination of a request under this section with respect to the project (or with the failure of the Minister to determine the request within 40 days after it is made) may, within the time prescribed by the regulations, appeal to the Court. The Court may determine any such appeal.
- (6) Subsection (5) does not apply to a request to modify:
 - (a) an approval granted by or as directed by the Court on appeal, or
 - (b) a determination made by the Minister under Division 3 in connection with the approval of a concept plan.
- (7) This section does not limit the circumstances in which the Minister may modify a determination made by the Minister under Division 3 in connection with the approval of a concept plan.

1.3. Requirements of the SEARS

In accordance with section 75F(3) of the EP&A Act, the Secretary's Environmental Assessment requirements (SEARs) for the proposed modification were issued by the Department of Environment and Planning on 13 April 2017 and are included in **Appendix A**. The modification request application is to be accompanied by an Environmental Assessment (EA) that addresses the SEARs, which have been prepared in consultation with Lithgow City Council and relevant agencies.

This EA addresses the SEARs and matters raised through agency and community consultation.

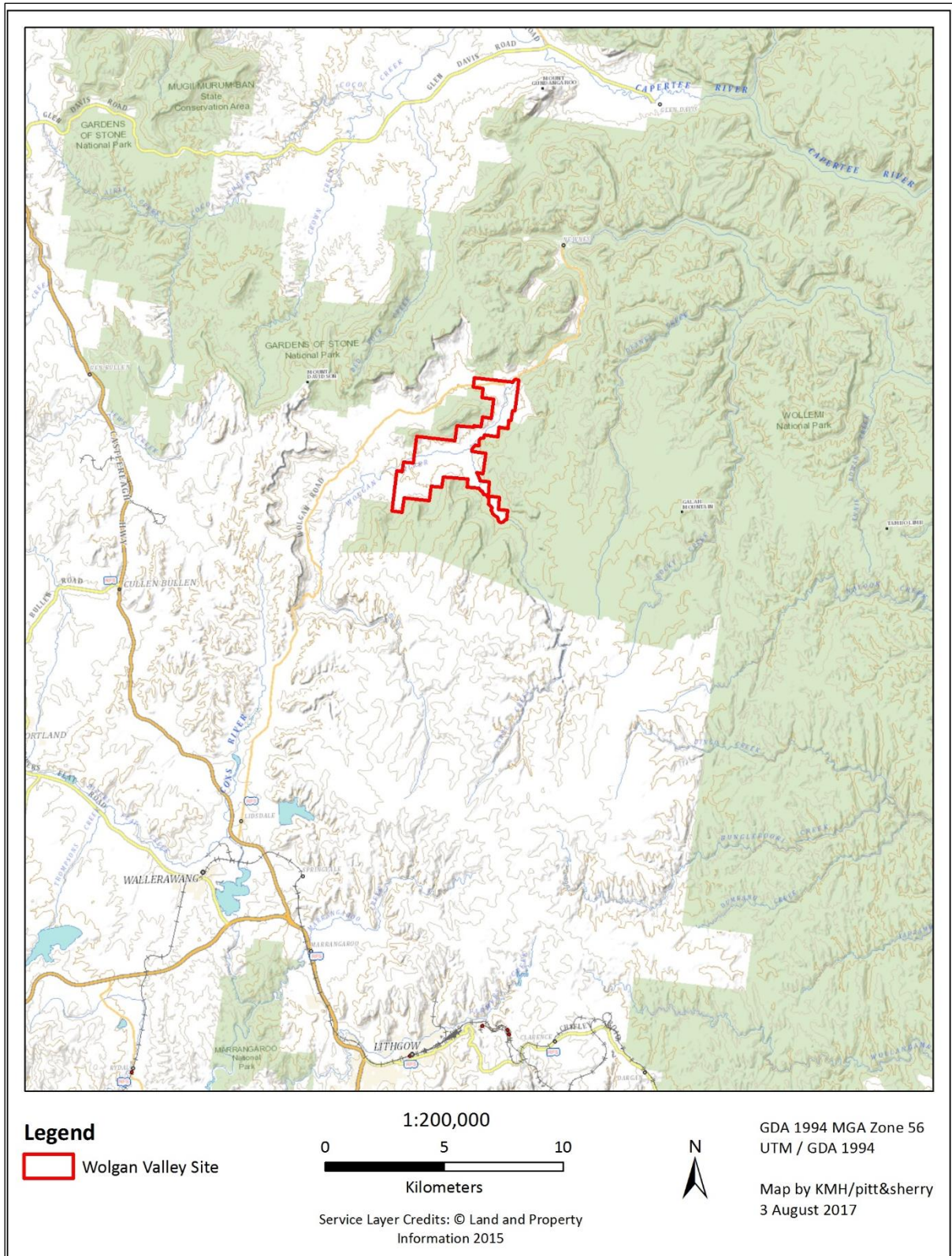


Figure 1 Regional Context

2. Overview of the Approved Project

2.1. Site Description

The resort is located on an approximately 7,000 acre reserve (**Figure 1**), bordered by the Gardens of Stone National Park and the Wollemi National Park, approximately 45 km to the North West of Lithgow.

The resort consists of the following buildings:

- Main homestead housing 2 restaurants, kitchens, meeting rooms and administration offices
- 36 x 1 Bedroom Guest villa with individual swimming pool
- 3 x 2 Bedroom Guest villa with individual swimming pool
- 1 x 3 Bedroom Guest villa with individual swimming pool
- Spa with 6 treatment rooms
- Pool house containing steam room, sauna, plunge pool, amenities and guest gym
- 5 staff apartment buildings consisting of 16 apartments and shared amenities per building
- 3 management apartment buildings consisting of 2 individual self-contained apartments each.
- 1 2-bedroom manager's apartment.
- 1 administration building consisting of staff gym, administration office and warehouse building.
- 1 staff amenities building consisting of storeroom, staff kitchen, staff dining and staff lounge.
- Maintenance building consisting of water treatment plant, various workshops, administration office and amenities.
- Various structures related to a waste water treatment plant.
- Stables building consisting of horse boxes, administration, storage, guest lounge and amenities.
- A guest arrival gatehouse.
- Various farm related structures.
- Two heritage buildings constructed in the 1830's and restored as part of the concept approval in 2009.

The site is legally described as:

- Lots 4, 5, 10, 11, 18, 19, 26, 43, 46, 10A, 11B, 12B, 12C, 6A, 7A, 8A, 8B, 9A, and 9B in DP 751666
- Lots 13-17, 4, 5, and 26 in DP 751624
- Lots 1-3 in DP 751634
- Lot 1 in DP 726429
- Additional leasehold land forming part of the Wollemi National Park adjoining the site.

2.2. Existing Approvals

Existing approvals applicable to the Proposal are summarised in **Table 1**.

Table 1 Summary of Existing Approvals

Approval Date	Approval	Approval Details
12 May 2006	05-0079 Concept Plan Approval for the construction and use of a tourist resort and associated infrastructure.	Approval is granted for the: (a) construction and use of a tourist resort and ancillary facilities on the site in general accordance with the: <ul style="list-style-type: none">• design objectives and principles in section 7.1 of the concept plan; and• indicative layout of the buildings and infrastructure in the concept plan (see Appendix A); (b) implementation of the landscape strategy for the 5 landscape precincts in the concept plan (see Appendix B); (c) conservation of the existing slab house and wattle daub house (including the curtilage); and (d) demolition of the 1957 homestead, subject to the limitations in condition 6.
13 April 2007	06_0310 Project Approval for the construction and use of a tourist resort and associated infrastructure.	Subject to the changes in condition 3, the Proponent shall carry out the project generally in accordance with the: (a) EA; (b) architectural drawings A100-104, A201-205, A210, A211, A300, A301, A310, A401, A402, A410, A411, A500, A510, A550, A560, A601, A610, A651, A660, A700, A710, A800, A810, A811, A900, A905, A910, A911, A915 and A916 (see Appendix 3); (c) feral proof fence details LSK 05544-117 – LSK 05544-120 (see Appendix 4); (d) dam location C18 (see Appendix 5); (e) civil road Network drawings C00-C12, C18-C22, C50-C52, C54, C56-C58, C70-C72, C80 and C81 (see Appendix 6); (f) external lighting plan 18438-SYD-E-04 and 18438-SYD-E-05 (see Appendix 7); (g) infrastructure plans, including Water Strategy Network, Stormwater Network, Waste Water Management System, Pool Water Treatment Services P001-P011, Hydraulic Infrastructure HI001, HI100-105, HI200-208, Fire Sprinkler Services F100-103, Hydraulic Services H001, H100-113, H115-117, H500 and H200-209 (see Appendix 8); (h) conceptual layout of the energy supply network plan 18438-SYD-E-02, E-03, E-07, E-08, E-10, E-11, E-12, E-13, E-16, E-17, E-22, E-25, E-26, E-29 and E-30 (see Appendix 9); (i) electrical reticulation plans H316 E1-E9 (Appendix 10); (j) landscape management plan for the development precinct, including LSK 05544-100, 101, 125, 05544-LV01, LV11, L02 and L03 (see EA);

Approval Date	Approval	Approval Details
		<p>(k) conservation management plan (see EA);</p> <p>(l) statement of commitments (see Appendix 12); and</p> <p>(m) conditions of this approval.</p>
13 April 2007	<p>05-0079-MOD 1</p> <p>Concept Plan Approval for the construction and use of a tourist resort and associated infrastructure.</p>	<p>Approval is granted for the:</p> <p>(a) demolition of the 1957 homestead;</p> <p>(b) construction and use of a tourist resort and associated infrastructure on the site in general accordance with the:</p> <ul style="list-style-type: none"> design objectives and principles in section 7.1 of the concept plan; and conceptual layout of the buildings and infrastructure in the concept plan (see Appendix 1); <p>(c) conservation of the existing slab house and wattle daub house (including the curtilage);</p> <p>(d) implementation of the landscape strategy for the 5 landscape precincts in the concept plan (see Appendix 3); and</p> <p>(e) provision of an electricity transmission line to the site (see Appendix 4).</p>
1 June 2007	<p>EPBC 2006/2567</p> <p>Commonwealth of Australia EPBC Act 1999</p> <p>Decision to Approve the Taking of an Action</p>	To construction and operate the Wolgan Valley Resort, Wolgan Valley NSW.
10 October 2007	<p>06_0310 MOD 1</p> <p>Project Approval Modification for the construction and use of a tourist resort and associated infrastructure.</p>	<p>Delete conditions 2(l) and 2(m) in schedule 2 and replace with:</p> <p>(l) statement of commitments (see Appendix 12);</p> <p>(m) Modification Application 06__0310 MOD1 and supporting letter titled Emirates Luxury Resort — Wolgan Valley, with updated architectural drawings A102 M. A700 G and A710 G, dated 13.09.2007; and</p> <p>(n) conditions of this approval.</p>

3. Description of the Proposed Changes

3.1. Proposed Modifications

The proposed 75W modification seeks to improve the following areas of the resort:

- Move the helicopter landing pad from its existing location near Wolgan Road to a new location internal to the property and farther away from local residences. The existing helicopter landing pad would be retained for emergency purposes only.
- Increase the number of allowed helicopter trips from the existing 4 trips (8 helicopter movements) per week to a maximum of 18 trips per week excepting peak demand holiday and tourism periods. The maximum number of trips during peak demand periods would be thirty-six (36) trips per week. Annual peak demand holiday and tourism periods would include the following:
 - Christmas, New Years and summer school holidays including the 20th December through 30th January (6 weeks);
 - Spring and winter quarterly school holidays including two 2 week periods (4 weeks);
 - Easter break and school holiday period including one week either side of Easter Saturday (2 weeks);
 - Bathurst car races including the week after the October long weekend for the V8 races and the week of the GT3 race in February (2 weeks); and
 - Any week there is a significant tourism event in NSW that provides a substantial economic benefit to NSW and Lithgow region.
- The addition of six bee hives for local production of honey to be used in the resort and as guest interaction with the culinary team.

Locations of the proposed modification are summarised in **Table 2** and shown in **Figure 2**.

Table 2 Summary of Additional Project Aspects for assessment

Item	Aspect for review	Change from EIS	Justification for change
1	Relocation of the helipad	Relocation of the helipad currently located adjacent to Wolgan Road on the west side of the Wolgan River (Figure 2) to a site located interior to the property and closer to the existing guesthouses. The current helipad would be kept, but used only for emergency services (e.g. RFS) if required. No excavation, construction or vegetation removal is proposed or required for the new helipad location.	The new helipad location would be farther away from neighbours with Donkey Mountain acting as a visual and noise barrier. Enhanced noise and visual barriers between the helipad and the local community (neighbours) which would allow for an increase in weekly helicopter trips to and from the resort whilst maintaining the existing tranquillity of the Wolgan Valley for the community. Helipad located closer to guest accommodation.
2	Increase in helicopter movements	Increase the number of allowed helicopter trips from the existing 4 trips (8 helicopter movements) per week to a maximum of 18 trips per week excepting peak demand holiday and tourism periods. The maximum number of trips during peak demand periods would be thirty-six (36) trips per week. Annual peak demand	Visitor demand from both regional Australian metropolitan areas and from international markets has been steadily increasing, particularly during peak holiday periods (e.g. Bathurst races, Christmas, New Years, etc). There has also been a corresponding increase in visitor demand for access to and from the resort by helicopter directly from Sydney. A noise assessment undertaken for the Proposal concluded that 50 helicopter

Item	Aspect for review	Change from EIS	Justification for change
		<p>holiday and tourism periods would include the following:</p> <ul style="list-style-type: none"> • Christmas, New Years and summer school holidays including the 20th December through 30th January; • Quarterly school holidays including three (3) two (2) week periods; • Easter break including one week either side of Easter Saturday (2 weeks total); • Bathurst car races including the week after the October long weekend for the V8 races and the week of the GT3 race in February; and • Any week there is a significant tourism event in NSW that provides a substantial economic benefit to NSW and Lithgow region. 	<p>trips per week to and from the proposed new helicopter landing pad location would be well below the established noise management levels (see Section 5.1). Therefore a maximum of 36 helicopter trips in any one week during peak visitor periods would be able to accommodate the increased customer demand whilst maintaining noise levels below the established noise management levels.</p>
3	Installation of bee hives	Up to six bee hives would be located near the Wolgan Homestead to produce honey for the resort.	Provide improved culinary experience for guests with the addition of bee-keeping activities and site-made honey.

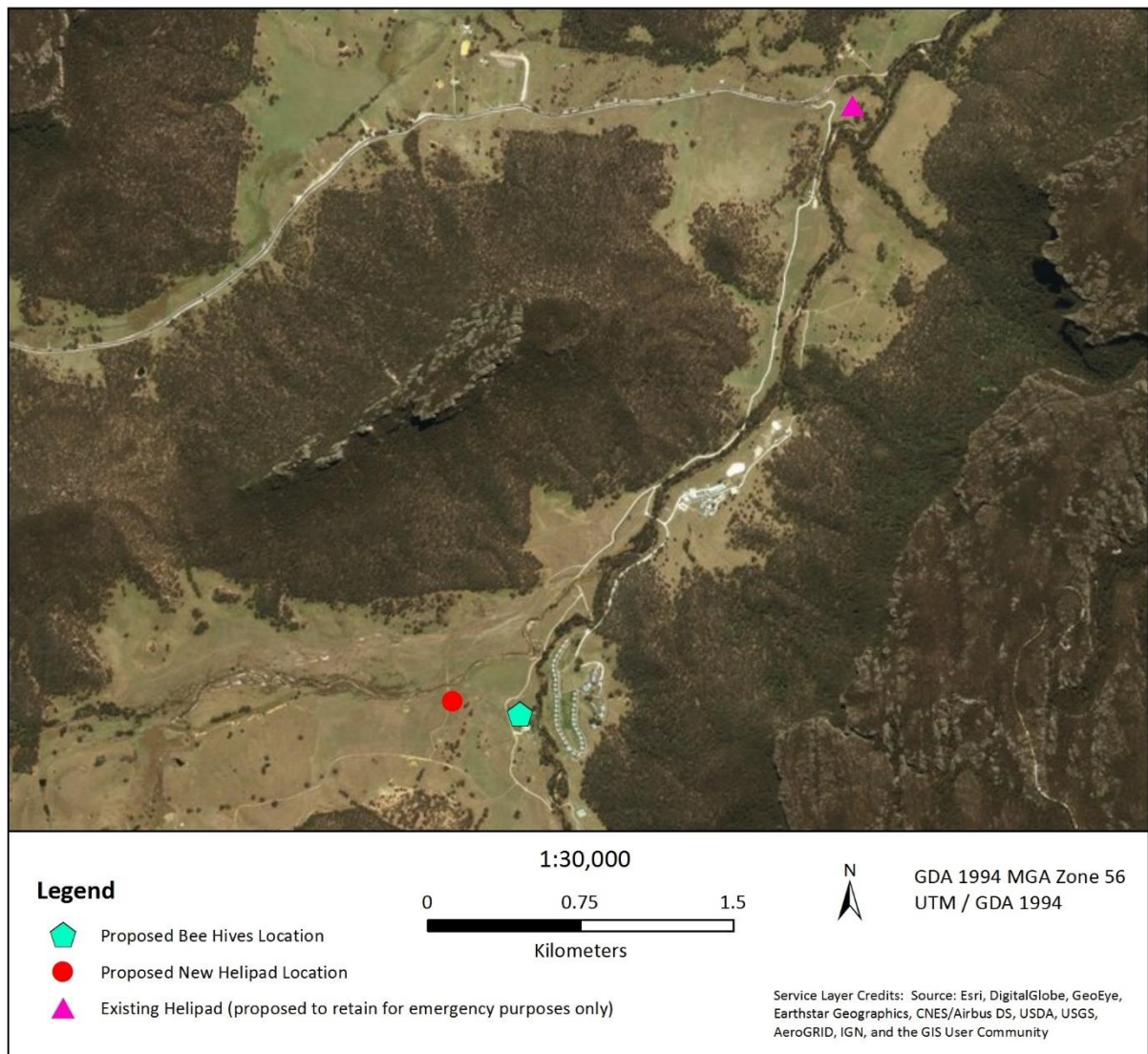


Figure 2 **Locations of proposed modifications**

3.2. Helipad Location, Helicopter Trips and Flight Paths

When Wolgan Valley resort was first established, demand for access to the resort was primarily via automobile through the Blue Mountains. Guest access by helicopter was uncommon. An increasing number of international and domestic customers, however, now prefer the ease and benefit of rapid helicopter transport to and from the site. Demand is particularly high during peak holiday periods (eg Christmas / New Year and school holidays) and significant tourist events such as the Bathurst races. Demand has been increasing by 28% per year since 2014, particularly over these peak periods, and the resort has been turning away potential guests and conference groups at times.

As demand for helicopter transport continues to increase, the resort has proposed moving the helipad internal to the resort to eliminate potential noise impacts to neighbours and to accommodate an increase in the weekly number of flights. The resort continues to be strongly opposed to the peaceful tranquillity of the valley being disrupted by regular helicopter flights, and therefore has had a professional noise consultant assess the potential noise impacts from the proposed relocation of the helipad and increased weekly helicopter trips. The noise study concluded that the requested increase in weekly flights would be acceptable and compliant with relevant noise guidelines, and that the relocated helipad would significantly reduce noise impacts on neighbours compared to the current helipad location.

The existing and proposed helipad locations within the Wolgan Valley relative to nearby potentially sensitive receivers (i.e. neighbours/residences) are shown in **Figure 3**. The existing helipad is less than 200m away from residence R2, and within 2km of R1, R3 and R4.

The proposed helipad location is closer and more accessible to the resort buildings whilst farther from residences R1 – R4. The new helipad location would be afforded topographic shielding from the escarpment (Donkey Mountain), and residences to the west are mostly shielded by the escarpment and greater than 4km away.

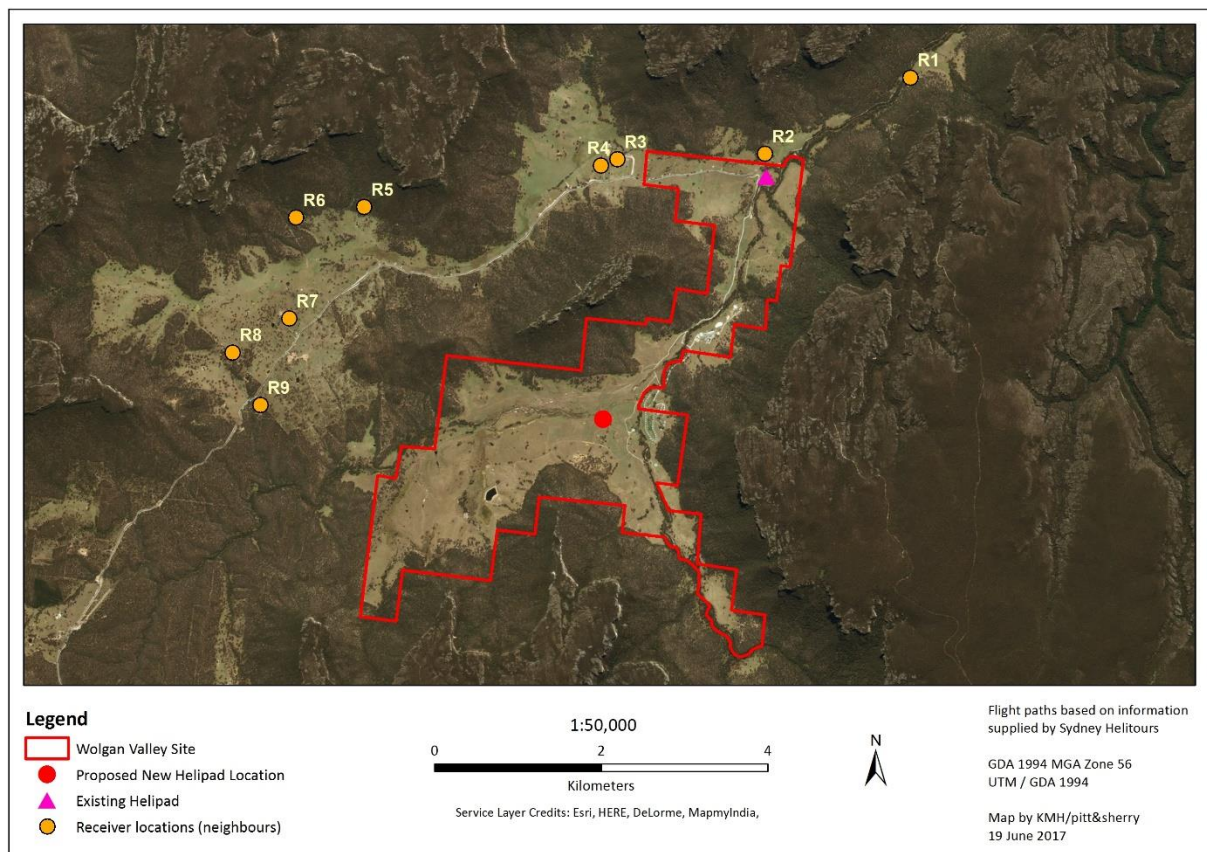


Figure 3 Sensitive receivers in Wolgan Valley

Helicopter arrivals and departures via the existing helipad are shown in **Figure 4**. Helicopter take-offs and landings under the existing approvals occur from easterly and westerly directions. These flight paths are directly over Wolgan Road and near to receivers R1 – R4. The flights enter the Wolgan Valley from a generally easterly direction over the Blue Mountains.

Helicopter arrivals and departures via the proposed helipad are shown in **Figure 5**. Helicopter take-offs and landings would occur from a generally southerly direction, passing over Carne Creek and the Blue Mountains to access the resort.

The proposed helipad location and change in flight paths would significantly reduce noise at the residences to the north due to increased distance (greater than 3km) and the topographic shielding provided by Donkey Mountain. The complete noise assessment undertaken by Wilkinson Murray (June 2017) for the proposed helicopter operations is provided in **Appendix B**.

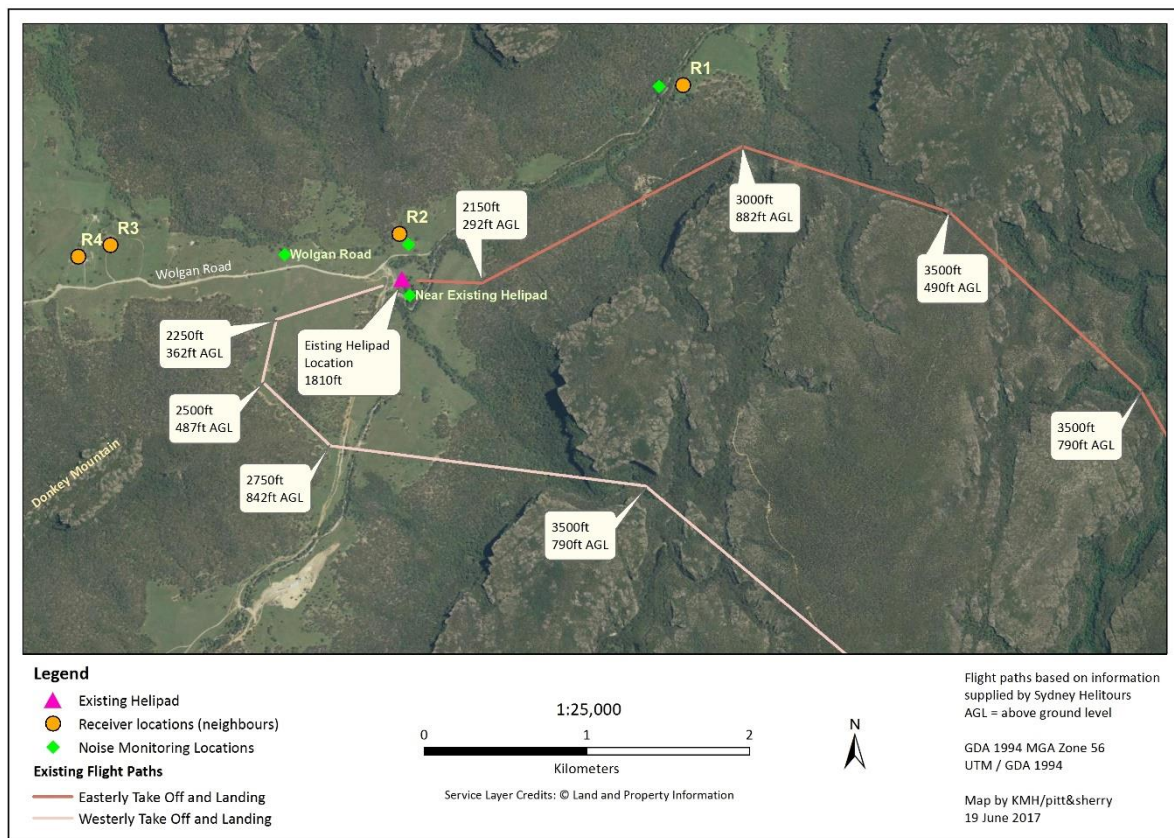


Figure 4 Existing helipad and flight paths

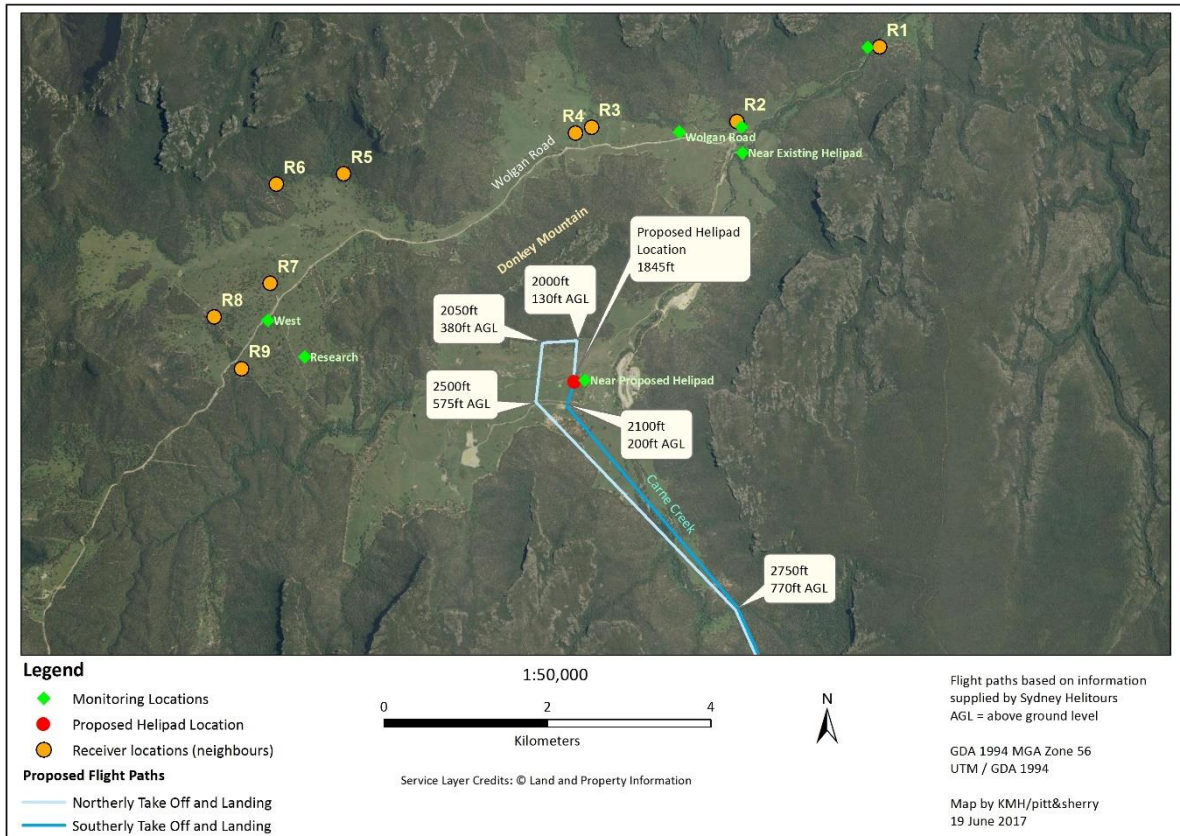


Figure 5 Proposed helipad and flight paths

The proposed helipad would be located in the managed pasture precinct on the property, within an area consisting of existing agricultural grasses, and a minimum of 50m from the banks of the Wolgan River (see **Figure 6**). The area is clear of nearby trees, and an existing dirt track provides access to the proposed site. The coordinates of the proposed helipad location are 237995.33 m E and 6317074.38 m S (UTM Zone 56H).



Figure 6 Photograph of the proposed helipad site, looking south



Figure 7 Proposed helipad location (Google Earth view)

No excavation, vegetation clearing, modification to the existing access track, or additional access tracks are proposed. Maintenance will consist of mowing and possibly marking the area with a circle of white paint, if required by the Civil Aviation Safety Authority (CASA). A detailed photographic log of the proposed helipad site is provided in **Appendix C**. Global Airspace Solutions provided a CAAP-92-2(2) Compliance Overview (**Appendix D**) that confirms compliance of the proposed helipad against CASA guidelines for helicopter landing sites.

The Proposal would increase the maximum number of helicopter trips from up to four (4) trips per week to a maximum of eighteen (18) trips per week excepting peak demand holiday and tourism periods. The maximum number of trips during peak demand periods (see **Table 3**) would be thirty-six (36) trips per week. An average of 18 trips per week would equal nine-hundred and sixty (960) trips per year. While peak periods may see up to 36 helicopter trips per week, it is unlikely that 960 trips per year would be exceeded as most weeks during the year are low-demand and would not use the full 18 trip per week maximum.

Holiday and tourism periods included in peak demand periods for the resort are shown in **Table 3**.

Table 3 Holiday and tourism periods for peak demand

Event(s)	Typical periods	Estimated number of weeks
Christmas, New Years and summer school holidays	20th December through 30th January	6 weeks
Easter / Autumn school holiday break	One week either side of Easter Saturday	2 weeks
Quarterly school holidays (spring and winter)	Two additional two (2) week periods	4 weeks

Event(s)	Typical periods	Estimated number of weeks
Bathurst car races	Week after the October long weekend (V8 races) and a week in February (GT3 races)	2 weeks
Significant tourism events in NSW that provide a substantial economic benefit to NSW and the Lithgow region.	Varies	Varies

While the noise assessment concluded that 50 helicopter trips per week to and from the proposed new helicopter landing pad location would still be well below the established noise management levels (see Section 5.1), a maximum of 36 trips during peak tourism and holiday periods would accommodate the increased demand for access to the resort via helicopter.

Helicopters would continue to operate in the area of the resort or Greater Blue Mountains World Heritage Area from half an hour after sunrise to half an hour prior to sunset, as required by Annexure 1 (4) of the EPBC Approval dated 1 June 2007 (EPBC 2006/2567).

The proposed flight paths are unlikely to have any effects on aerial spraying as there are no known aerial spray paths within the Wolgan Valley. Aerial spraying was apparently discontinued decades ago.

3.3. Bee Hives

Up to six bee hives would be located near the Wolgan Homestead within the heritage precinct, across the Wolgan River from the resort guest accommodation buildings. The hives would be placed in the Managed Pasture Landscape Precinct, as defined in the Landscape Plan and the Operational Environmental Management Plan (2009). The bees would be kept for local production of honey, enhanced culinary and cultural experience of the guests and for use in food and meals offered at the resort. The location is shown on **Figure 2**.

4. Community and Agency Consultation

4.1. Consultation Summary

A summary and timeline of consultation undertaken to date is provided in **Table 4**. Documentation of consultation is provided in **Appendix E**.

Table 4 Summary of Consultation Undertaken

Date(s)	Format	Aspects
May 2017	SEARS issued	The Department of Planning and Environment received feedback from government agencies and organisation as part of their solicitation for the SEARS.
June 2017	Letter Invitation issued by the resort to stakeholders	Letter outlined the modification proposal, and invitation to attend an information/stakeholder meeting. Letter was issued to approximately 30+ community stakeholders and government agency representatives (that provided SEARS inclusions).
29 June 2017	Stakeholder meeting held and facilitated by the resort	Attended by seventeen (17) community stakeholders, and three (3) representatives from One&Only Resort.
June/July 2017	Emails received by One&Only Resort	One&Only Resort received several inquiries/comments from stakeholders who attended the stakeholder meeting, or who did not attend and wished to provide feedback.
May/June 2017	Phone call discussions	KMH / Pitt&Sherry called various government agencies to discuss relevant environmental aspects of the Proposal.

4.2. Community Stakeholder Invitation and Meeting

In June 2017 the resort issued a notification letter to approximately 35 local residents/landholders and community stakeholders to summarise the proposed changes to the resort operations. The letter also served as an invitation to residents and stakeholders to provide feedback on the Proposal and attend a meeting organised and facilitated by staff from the resort. The meeting was held on 29 June 2017 at the resort and was attended by seventeen (17) community stakeholders, and three (3) representatives from the resort. A copy of the invitation letter and meeting minutes are provided in **Appendix E**.

The community meeting included a power point presentation summarising the Proposal. An explanation of the proposed flight paths and definitions of flights (trips) versus movements were provided by a representative from Sydney Heli Tours, which has an exclusivity agreement sanctioned by the Australian Competition & Consumer Commission (ACCC) to operate for the resort.

The notification letter was also issued to the following agencies:

- Lithgow City Council;
- Office of Environment and Heritage;
- NSW National Parks and Wildlife Service;
- Advisory Committee of the Greater Blue Mountains World Heritage Area;
- NSW Heritage Council;
- NSW Rural Fire Service;

- Civil Aviation Safety Authority; and
- NSW Environment Protection Authority.

The primary issues raised at the stakeholder meeting including relevant responses by the resort are summarised in **Table 5**.

Table 5 Primary issues raised at the stakeholder meeting

Summary of Primary Issues Raised at Stakeholder Meeting	Resort Response
Helicopters flying too low over properties causes noise annoyance.	Sydney Heli Tours adheres to the NPWS “Fly Neighbourly” advice and abides by the existing approved and designated flight paths (that the resort is now seeking to modify). The proposed flight paths are expected to significantly reduce noise annoyance.
At times big helicopters fly over properties, causing noise and frightening livestock. These could be other operators, private flights or government.	Encouraged landholders to inform the resort if other helicopter operators approach them for landing permission. If private helicopter owners wish to land at the resort, they are provided with a detailed Standard Operating Procedures (SOP) detailing requirements. These count toward total helicopter trips.
Deviation of flight paths from flights originating elsewhere (e.g. Lithgow) may affect noise levels.	Standard flight paths are used, and deviation in approved flight path occurs once above the 2000ft AGL “Fly Neighbourly” guideline minimum is reached.
Want to see specific details outlined in Conditions of Consent regarding directions, in & out, minimum heights etc.	Paths will be stipulated in the modification consent proposal and recommended to be included in conditions.
No comments from stakeholders regarding proposed addition of bee hives.	n/a

4.3. Other Stakeholder Communications

Additional consultation in the form of email and phone correspondence has been undertaken on an ad-hoc basis to solicit information and feedback from various private and agency stakeholders. Primary issues raised and discussed are listed in **Table 6** including responses where applicable by the resort.

Table 6 Primary issues raised in other consultation

Date(s)	Format	Summary of Issues	Response Summary (if applicable)
21 June 2017	Email to One&Only Resort from Resident	<ul style="list-style-type: none"> Concerns over new helicopter flight paths and approach. 	<ul style="list-style-type: none"> Resort provided proposed helipad location, flight paths and approaches.
26 June 2017	Email to One&Only Resort from NPWS	<ul style="list-style-type: none"> Negative effects on NP users in the wilderness areas. Need a bee hives exclusion on NP lease land. Retention of helipad for emergencies is supported by the NPWS. 	<ul style="list-style-type: none"> Operators for the resort will adhere to the NPWS “Fly Neighbourly” advice and abide by approved and designated flight paths. Inclusion of bee hive exclusion in mitigation measures.

Date(s)	Format	Summary of Issues	Response Summary (if applicable)
26 June 2017	Email to One&Only Resort from Resident	<ul style="list-style-type: none"> During Bathurst races flights to and from resort travelled directly over house at a low level causing disturbance. 	<ul style="list-style-type: none"> During the races, that helicopter operator acted without resort consent & landed on private property nearby.
27 June 2017	Email to One&Only Resort from Resident	<ul style="list-style-type: none"> Query of the number, type, hours, flight paths, helipad locations, and control of increased helicopter movements Increased noise and vibration affecting existing land uses and values 	<ul style="list-style-type: none"> Provided information related to helicopter types, hours, paths, helipad locations etc. Flights are recorded by the heli company, the resort and can be tracked by the Department of Planning and Environment by the aircrafts electronic signal and logged flight path. Acoustic tests have been undertaken Reiterated commitment to Fly Neighbourly Advice
5 July 2017	Email to One&Only Resort from Resident	<ul style="list-style-type: none"> Recent helicopter flights directly over property and use of helipad on Wolgan Road disturbing guests and livestock. 	<ul style="list-style-type: none"> Current route over the property and the helipad is the approved route, which the resort is seeking to change. Proposed helipad and flight paths will significantly reduce impacts
June 2017	Phone calls by KMH/pitt&sherry to: <ul style="list-style-type: none"> Lithgow Council OEH NWS NPWS 	<ul style="list-style-type: none"> No new issues outside of SEARS 	<ul style="list-style-type: none"> Explanation of proposal details

5. Environmental Impact Assessment

This section addresses the primary environmental issues considered potentially impacted by the proposed modification. These include noise and vibration, biodiversity (flora and fauna) and non-indigenous heritage. The primary environmental issues, additional non-key environmental issues, and any relevant proposed mitigation measures are summarised in **Table 13** in Section 5.6.

5.1. Noise and Vibration

5.1.1. Noise Assessment Approach

The existing and proposed operation of helicopters has the potential to cause annoyance to landowners and agricultural stock. There are nine (9) potentially affected receivers within the Wolgan Valley as indicated in **Figure 3**.

Wilkinson Murray was commissioned by the resort to undertake a noise assessment in June 2017. Noise monitoring occurred at seven (7) locations using attended and/or unattended noise loggers, and using “normally loaded” helicopters. The noise assessment summarises the noise measurements of an EC120 helicopter performing standard approach and take-off manoeuvres to both the existing and proposed helipads, and assumes a typical busy time accounting for 5 helicopter trips per day (including 5 landings and 5 take-offs). The full noise assessment is provided in **Appendix B**.

The resort currently has consent to operate four (4) helicopter trips per week (four arrivals and four departures). This consent was granted without a specific aircraft noise assessment, but was deemed reasonable at the time. The flights are currently limited to between half an hour after sunrise to half an hour before sunset (EPBC 2006/2567). This condition regarding arrival and departure times will not change.

The location of the existing helipad, and current approved flight paths with altitude, are illustrated in **Figure 4**. The current approved flight paths include easterly and westerly take-offs and landings, with primary paths over the Greater Blue Mountains World Heritage Area to the south-east.

The proposed helipad location and flight paths with altitude are illustrated in **Figure 5**. The proposed flight paths would include northerly and southerly take-offs and landings, with primary paths over the Greater Blue Mountains World Heritage Area to the south-east.

Based on parameters discussed in detail in the noise assessment, the following noise limits for residential receivers were nominated:

- Take-off and Landing: $L_{Aeq,24hr}$ 40dBA
 L_{Amax} 45dBA (10.00pm to 7.00am)
- Overflight: $L_{Aeq,24hr}$ 45dBA

5.1.2. Noise Assessment Results

Use of the existing helipad with a hypothetical 5 trips per day would result in exceedances of the nominated criteria at four residences, and would also significantly exceed the nominated sleep disturbance screening criterion.

During the measurements for the proposed helipad location, only the unattended noise logger location near the helipad picked up helicopter noise. The Wolgan Road noise logger did not measure any helicopter noise. At each of the other two attended locations helicopter noise was barely audible only once, but not measurable. The maximum noise levels from the helicopter was observed to be below 35dBA on both occasions.

While the noise assessment concluded that 50 helicopter trips per week to and from the proposed new helicopter landing pad location would still be well below the established noise management levels (see Section 5.1.1), a maximum of 36 trips in any one week would accommodate the increased demand for access to the resort via helicopter during peak periods (see **Table 3**).

The predicted $L_{Aeq,24hr}$ and L_{Amax} noise levels for both the existing and proposed helipads are provided in **Table 7**. As there is no construction proposed for the helipad, a construction noise impact assessment is not required.

Table 7 Predicted helicopter noise levels

Receiver	Existing			Proposed	
	$L_{Aeq,24hr}$ (Hel)	Range L_{Amax} (Approach)	Range L_{Amax} (Take-off)	$L_{Aeq,24hr}$ (Hel)	L_{Amax}
R2	50	78-83	74-84	<30	<40
R1	45	40-79	47-68	<30	<40
R3/R4	42	49-78	43-67	<30	<40
R7	<30	-	-	<30	<40 barely audible
Overflight 1,000ft	35	70	70	35	70

The use of a new helipad closer to the resort buildings and further from the residences and change in flight path would significantly reduce noise at the residences to the north due to increased distance and the topographic shielding provided by the escarpment (Donkey Mountain). Residences to the west are also mostly shielded by the escarpment and are greater than 4km from the proposed helipad.

5.1.3. NPWS Fly Neighbourly Advice

The Fly Neighbourly Advice (FNA) is a voluntary code of practice established between aircraft operators and communities or authorities that have an interest in reducing the disturbance caused by aircraft within a particular area. FNAs were introduced in Australia in 1994 as a tool to reduce the effects of aviation on environmentally sensitive areas within uncontrolled airspace. The development of an FNA is facilitated by the Office of Airspace Regulation (OAR).

Sydney Heli Tours (the primary operator for the resort) abides by the FNA during operations when flying over the Greater Blue Mountains World Heritage Area and over Wolgan Valley. The FNA guidelines can be found in the En Route Supplement Australia (Gen – SP - Special Procedures) and include the following key information in Section 12 (FN 2 Blue Mountains National Park – FNA):

- Pilots undertaking sightseeing flights should obtain details of the areas to be avoided and the preferred scenic routes in the Katoomba area from the Park Manager;
- Except when operating on preferred scenic routes, pilots are requested to maintain a minimum altitude of 2000FT above the surface of the park (the surface being defined as the highest point of terrain, and any object on it, within a radius of 600M of a point vertically below the aircraft), unless operation at this altitude would jeopardise the safe conduct of the flight.
- This altitude recognises the special terrain/weather conditions and the overlying airspace arrangements of this area.

Sydney Heli Tours previously contacted the Park Manager by phone to notify them of operations for the resort and seek feedback. One & Only Resort contacted the Park Manager via email in June 2017. The Park Manager reiterated that their main concern was for park users in the wilderness areas, and that they request/reiterate that the Fly Neighbourly Advice is followed.

5.1.4. Future Helicopter Operations

It is possible that other helicopters may use the facility in the future. Sydney Heli Tours may invest in a Eurocopter EC135 (twin engine) version of the EC120 used and measured for the noise assessment. The EC135 is likely to be up to 3dBA noisier for a combination of arrival and departures, based on a review of the European Authority in Aviation Safety (EASA) certification data for the two helicopters.

The recommended noise limits would still be complied with based on the EC135 replacing the EC120 for the same number of helicopter trips per year. Similarly, up to an estimated 5% of total operations could involve guests flying their own helicopter (or another helicopter operator) using a different helicopter type. As the percentage of total movements is low, the differences in $L_{Aeq,24hr}$ noise levels is likely to be less than 1dB, in which case compliance would still be achieved assuming all operations use the nominated (proposed) flight paths.

5.2. Biodiversity

5.2.1. Existing Conditions

This section summarises the results of the Flora and Fauna Impact Assessment prepared by AMBS (AMBS 2005) for the Emirates Luxury Resort, Wolgan Valley. The proposed modifications are located within two precincts (Development Precinct and the Managed Pasture Precinct) as defined in the Landscape Management Plan developed by Context (Context 2006). Both precincts are intensively managed for the activities listed in **Table 8**. These uses and objectives and have remained consistent since the approval and development of the resort.

Table 8 Landscape Precincts Applicable to Modification

Precinct	Aspect for review
Development	<ul style="list-style-type: none"> • Bushfire management zone • Maintenance of views to the surrounding valleys and escarpment • Native and exotic plantings and landscape maintenance
Managed Pasture	<ul style="list-style-type: none"> • Encouragement of native animal grazing • Removal of cattle • Bushfire protection and fuel reduction / burning • Weed control • Sapling removal / slashing and maintenance of views • Native tree and riparian plantings

5.2.1.1. Flora

A biodiversity survey was carried out by AMBS (AMBS 2005) over the original study area of the resort property including the Wolgan Valley and surrounding slopes (study area). Flora field surveys were conducted from 3 – 5 August 2005. The detailed surveys concentrated in the proposed Development and Access Corridor Precincts, along watercourses and in associated swamps, and in vegetation on the fringing lower slopes.

Specific searches were also undertaken for plant species of conservation significance using the random meander technique. The species for which searches were undertaken were determined with reference to the ATLAS database and included species previously recorded within a 10km radius of the study site.

Forty-three introduced plant species were recorded in the AMBS study area, including eight plant species listed as noxious weeds in the Lithgow Local Government Area under the NSW Noxious Weeds Act, 1993. Five vegetation types were identified on the study area, none of which were recorded in the areas of the Proposal.

Most of the recorded native plant species are associated with the woodland on the lower slopes fringing the original study site and along the Wolgan River and Carnes Creek.

Most of the valley floor in the Managed Pasture Precinct has been cleared of native vegetation. The proposed helipad location is located on open pasture with exotic agricultural plant species and a history of stock grazing. The area more recently serves as grazing land for native fauna species (kangaroos, wallabies, etc) since stock has been excluded from the area. **Figure 6** and **Appendix C** show current photographs taken in June 2017 of the proposed helipad site.

5.2.1.2. Fauna

Fauna field surveys were conducted by AMBS between the 1 – 5 August 2005 throughout the study area and on adjoining lands. The survey methods included techniques to detect the presence of different fauna groups and to target specific threatened species. Emphasis was placed on the identification of habitats and resource availability for threatened fauna species known to occur in the locality.

The habitat assessment included the following types of fauna surveys:

- General fauna surveys
- Diurnal bird observations and call identification
- Nocturnal birds call playback and call identification
- Mammal and nocturnal birds spotlight surveys
- Predatory mammals sand plot baiting
- Microbat Anabat II ultrasonic call recording w spotlighting
- Microbat harp trapping

A total of 132 vertebrate fauna species, comprising 32 mammals (including 9 introduced species and 11 microchiropteran bats), 96 birds (including 2 introduced species), one reptile and three frogs were recorded on the study site during the original field investigations. Of these, nine species are listed as threatened species on the schedules of the TSC Act (two mammals and seven birds).

The sparse and open nature of the grassland at the location and land surrounding the proposed helipad location favours common generalist fauna species which are capable of utilising open ground for foraging and common disturbance-tolerant species which are ubiquitous in modified habitats.

The cleared grassland areas lack the structural and floristic diversity to provide specific shelter, foraging and breeding resources for many native mammal species and for many bird, reptile and amphibian species.

5.2.1.3. Threatened Species and Endangered Ecological Communities

None of the vegetation types recorded in the original biodiversity report are listed as endangered ecological communities (EEC) under the TSC Act or as threatened ecological communities (TEC) listed under the EPBC Act. The native vegetation types present are extensively distributed in the locality and region and are well represented in the surrounding National Parks.

No threatened plant species listed under the TSC Act or EPBC Act or rare or threatened Australian plant species listed by Briggs & Leigh (1996) were recorded in the study area during the original targeted threatened plant surveys carried out in August 2005.

Nine threatened vertebrate fauna species listed under the Schedules of the NSW Threatened Species Conservation Act, 1995 (TSC Act), comprising one arboreal mammal, one microchiropteran bat and

seven bird species were recorded in the study area or in adjoining habitats during the fauna investigations. No threatened fauna species listed under the EPBC Act were recorded.

The ATLAS database search identified an additional twenty-two threatened fauna species comprising ten (10) birds, three (3) mammals, one (1) reptile, and eight (8) bats which may potentially occur in the study area.

An assessment of impact undertaken per Section 5A of the EP&A Act concluded the approved resort development was unlikely to impose “a significant effect” on these threatened fauna species or habitats of relevance.

5.2.2. Assessment of Proposed Changes

5.2.2.1. Proposed helipad

Cattle and horses have been excluded from all foothills and escarpment vegetation, so it is likely that additional native plant species could colonize the Pasture Precinct area over time, particularly along the edges near the sloped surrounding woodlands. The area proposed for the helipad is dominated by grazed agricultural species, and no excavation or disturbance is proposed for the new helipad location. No additional access tracks or any new structures are proposed.

The area continues to be grazed by native fauna species and will continue to be intensively managed by the resort for the objectives listed in **Table 8**. It is unlikely than any additional impacts over and above those assessed in the original EIS would occur due to the Proposal.

5.2.2.2. Helicopter trips

The Eastern Bentwing-bat is likely to forage widely throughout the surrounding landscape, including in woodland vegetation, open grassland areas and woodland/grassland ecotone habitats throughout the study site. The study site does not support preferred roosting habitat in the form of caves but such features are likely to occur on the surrounding escarpment.

It is possible that additional threatened fauna species previously recorded within the locality (within 10km) could also occur on the study site at least on occasion. Most of these species would be reliant on forest and woodland habitat for shelter and refuge, but may at times use the open grassland habitats of the study site for foraging purposes.

Helicopter access to the site will continue to be restricted to daylight hours. The proposed flight paths would be compliant with the FNA for the Blue Mountains National Park with helicopters following guidelines to maintain a minimum 2000ft altitude in flight when safe and weather conditions allow, and would not traverse extensive areas of habitat at low altitudes within the surrounding national parks before sunrise or after sunset.

As such, the proposed helicopter access is unlikely to result in a significant source of noise or disturbance to native fauna in nearby habitats.

5.2.2.3. Beekeeping

Competition from feral honey bees, *Apis mellifera* L., is listed as a key threatening process in Schedule 3 of the Threatened Species Conservation Act 1995. Feral honeybees occur in colonies, usually centered on tree hollows, independently of managed hives that are maintained by beekeepers (Paton 1996). Feral honeybees may impact on indigenous fauna species in two broad ways, firstly via competition for tree hollows, and secondly via competition for floral resources. Managed honeybees are not the subject of this determination. However, it is worth noting that hives that are unmanaged or improperly managed may swarm and could become feral.

Beekeeping is governed in NSW by the Apiaries Act 1985. There is no limit on the number of permanent hives allowed in rural areas. By law, there is a requirement for any one keeping honey bees (*Apis*

mellifera) in New South Wales to be registered as a beekeeper with the NSW Department of Primary Industries (DPI).

The Australian Honey Bee Industry Council (AHBIC) has developed a national Biosecurity Code of Practice (the Code). And the Biosecurity Manual for Beekeepers Version 1.1 January 2016 contains best practices for caring for and managing hives to reduce the risk of exotic and established pests affecting honey bees.

Following the appropriate guidelines in establishing and maintaining bee hives, it is considered unlikely that keeping up to six (6) honey bee hives at the resort would result in significant impacts to native flora and fauna.

5.3. Heritage Values

5.3.1. Aboriginal Heritage

In May 2006, AMBS undertook an Aboriginal Heritage Study for the resort. The study identified 12 archaeological sites, 11 stone artefact scatters within the study area and one rock-art site (just inside the National Park). Three potential archaeological deposits (PAD) were also identified. PADs are locations where low levels of disturbance and high archaeological significance are found in the same area indicating that sites are highly likely to occur.

The proposed helipad would be located outside of the PAD areas and any other archaeological site. No excavation, structures or other ground disturbance is proposed to the helipad location. A figure showing location of Aboriginal heritage items and PADs in relation to the proposed helipad location is provided in **Appendix F**.

The other proposed works are located in previously disturbed building footprints and also would not require ground disturbance. It is therefore unlikely that the proposed modification would impact identified Aboriginal sites or PADs, and it is highly unlikely that previously unidentified objects would be impacted.

5.3.2. Bee Hives

The bee hives would be located within the heritage precinct near to the Homestead Complex. There are no proposed modifications to the existing heritage buildings, excavation or additional buildings.

The addition of up to six bee hives is considered consistent with the historical agricultural and rural uses of the property and would not detract from the pastoral nature of the landscape. Bee hives would be excluded from any NSW National Park lands leased by Emirates.

The mitigation measures outlined in the EIS and the measures and policies outlined in the Wolgan Valley Homestead Complex Conservation Management Plan are appropriate to manage potential non-indigenous impacts.

5.4. Land Use Conflict Risk Assessment

This section provides an assessment of the potential conflicts between existing land uses in the Wolgan Valley and the proposed modification activities. The Land Use Conflict Risk Assessment (LUCRA) Guide developed by the NSW Department of Primary Industries was used as a guide (DPI 2011).

The Wolgan Valley comprises a mixture of rural residential living, livestock production, outdoor recreation and resort land uses. **Section 3** and **Section 4** provide a description of the Proposal and primary community and stakeholder concerns.

A risk ranking matrix, (**Table 9**) is used to rank the identified potential land use conflicts. The risk ranking matrix assesses the environmental, public health and amenity impacts according to the:

- probability of occurrence, and
- consequence of the impact.

Table 9 Risk Ranking Matrix (DPI 2011)

PROBABILITY	A	B	C	D	E
Consequence					
1	25	24	22	19	15
2	23	21	18	14	10
3	20	17	13	9	6
4	16	12	8	5	3
5	11	7	4	2	1

The risk ranking matrix yields a risk ranking from 25 to 1. It covers each combination of five levels of 'probability' that are provided a letter (A to E) as defined in **Table 10**, and the five levels of 'consequence' that are provided a number (1 to 5) as defined in **Table 11**. The combination of the two (probability and consequence) is used to identify the risk ranking of each impact.

For example, an activity with a 'probability' of D and a 'consequence' of 3 yields a risk rank of 9. A rank of 25 is the highest magnitude of risk; a highly likely, very serious event. A rank of 1 represents the lowest magnitude or risk an almost impossible, very low consequence event.

Priority is given to those activities listed as high risk. This will help rank multiple effects and provide a priority list when developing management strategies. The objective is to identify and define controls that lower the risk ranking score to 10 or below.

Table 10 Probability Levels (DPI, 2011)

Level	Descriptor	Description
A	Almost certain	Common or repeating occurrence
B	Likely	Known to occur, or 'it has happened'
C	Possible	Could occur, or 'I've heard of it happening'
D	Unlikely	Could occur in some circumstances, but not likely to occur
E	Rare	Practically impossible

Table 11 Measure of Consequence Levels

Consequence Level	Description
Level 1 – Severe	<ul style="list-style-type: none"> Severe and/or permanent damage to the environment Irreversible Severe impact on the community Neighbours are in prolonged dispute and legal action involved
Level 2 – Major	<ul style="list-style-type: none"> Serious and/or long-term impact to the environment

Consequence Level	Description
	<ul style="list-style-type: none"> Long-term management implications Serious impact on the community Neighbours are in serious dispute
Level 3 – Moderate	<ul style="list-style-type: none"> Moderate and/or medium-term impact to the environment and community Some ongoing management implications Neighbour disputes occur
Level 4 – Minor	<ul style="list-style-type: none"> Minor and/or short-term impact to the environment and community Can be effectively managed as part of normal operations Infrequent disputes between neighbours
Level 5 – Negligible	<ul style="list-style-type: none"> Very minor impact to the environment and community Can be effectively managed as part of normal operations Neighbour disputes unlikely

5.4.1. Risk Identification and Risk Ranking

A risk evaluation has been undertaken and is summarised in **Table 12**. The evaluation provides the proposed activities, an initial risk ranking and a revised risk ranking once mitigation controls are established.

A complete summary of all the proposed mitigation measures related to the Proposal are provided in **Table 13**. The proposed flight paths and helipad locations are shown in **Figure 5**, **Figure 6** and **Figure 7**.

5.4.2. Conclusion

The key potential conflicts stemming from the Proposal are noise and disturbance from increasing helicopter trips to the resort. Implementing the proposed flight paths and new helipad location would increase the distances to residences and private properties in the Wolgan Valley. Implementing the proposed modifications along with the mitigation measures in **Table 12** and **Table 13** would reduce and minimise land-use conflicts to acceptable levels.

5.5. Cumulative Impacts

The Proposal has the potential to contribute to cumulative environmental effects with other existing or likely future activities, however the effects would be minimal due to the limited scope of work for the activities covered in this environmental assessment, and the potential impacts on the community and environment would be minimised with the implementation of the mitigation measures provided in **Table 13** given in **Section 5** in this REF.

Table 12 Land Use Conflicts Risk Evaluation

Activities	Identified Potential Conflict	Initial Ranking			Management Measure(s) / Control(s)	Revised Ranking		
		Conseq.	Prob.	Risk Ranking		Conseq.	Prob.	Risk Ranking
Increase the number of allowed helicopter trips from the existing 4 trips (8 helicopter movements) per week to a maximum of 18 trips per week excepting peak demand holiday and tourism periods. The maximum number of trips during peak demand periods would be thirty-six (36) trips per week.	Noise and vibration disturbance to local residences and livestock affecting natural and cultural amenities.	3	B	17	<ul style="list-style-type: none"> Relocate helipad farther away from Wolgan Road and residences, using Donkey Mtn. as a barrier. Establish new flight paths farther away from Wolgan Road and residences. Adhere to the NPWS Fly Neighbourly advice and abide by the revised designated flight paths to the relocated helipad. 18 trips per week excepting peak demand holiday and tourism periods. The maximum number of trips during peak demand periods (see Table 3) would be thirty-six (36) trips per week. 	3	D	9
	Disturbance to natural amenities of recreational users in the national parks.	3	B	17	<ul style="list-style-type: none"> Adhere to the NPWS Fly Neighbourly advice. Adhere to the revised designated flight paths to the relocated helipad. 	3	D	9
	Disturbance and/or harm to native fauna (e.g. birds and bats).	3	B	17	<ul style="list-style-type: none"> Adhere to the EPBC condition allowing helicopter flights only between ½ hour after sunrise and ½ before sunset. Adhere to the NPWS Fly Neighbourly advice. 	3	D	9
	Breaching of approval conditions.	3	B	17	<ul style="list-style-type: none"> Adhere to no more than 18 trips per week excepting peak demand holiday and tourism periods. The maximum number of trips during peak demand periods (see Table 3) would be thirty-six (36) trips per week. 	3	D	9

Activities	Identified Potential Conflict	Initial Ranking			Management Measure(s) / Control(s)	Revised Ranking		
		Conseq.	Prob.	Risk Ranking		Conseq.	Prob.	Risk Ranking
					<ul style="list-style-type: none"> Maintain accurate records of helicopter flights to and from the resort, and regularly review the logged flight paths. 			
Relocate helipad closer to the resort buildings, farther away from residences and behind Donkey Mtn.	No conflicts identified. This activity creates beneficial conflict-reducing outcomes.	3	D	9	<ul style="list-style-type: none"> Helipad location to comply with CAAP-92(2) CASA guidelines. Maintain a minimum 50m distance to Wolgan River. Establish helipad location in the managed pasture precinct. No excavation or ground disturbance required. 	3	D	9
Implement revised flight paths to the relocated helipad farther away from residences.	No conflicts identified. This activity creates beneficial conflict-reducing outcomes.	3	D	9	<ul style="list-style-type: none"> Flight paths are compliant with CAAP-92(2) CASA guidelines. Adhere to the NPWS Fly Neighbourly advice and abide by the designated flight paths. 	3	D	9
Installation of bee hives	Escape of hives into the environment and displacement of native fauna.	3	C	13	<ul style="list-style-type: none"> Follow best practice guidelines and code of practice established by the Australian Honey Bee Industry Council (AHBIC). Bee hives would be excluded from any NSW National Park lands leased by Emirates. 	3	D	9

5.6. Summary Environmental Impact Assessment

A range of environmental factors are considered in **Table 13** below to determine if the proposed design changes and construction methodologies for the proposed modification would result in any additional impacts than those assessed in the original EIS. These factors, along with any additional recommended mitigation measures beyond those identified in the EIS and the approved management plans are summarised in **Table 13**.

Table 13 Summary Assessment Against Environmental Aspects

Environmental Aspect	Nature and extent of impact	Mitigation Measures
Project Area	The additional project aspects for assessment identified in Table 2 do not present any change to the approved Project Area footprint or area of disturbance. All works would be retained within the Project Area identified and assessed in the approved EIS.	No additional mitigation measures are required.
Flood and Hydrology	There is no further development footprint, excavation or filling in the proposed modification. It is therefore concluded that the proposed modifications will not result in additional flooding or hydrological impacts outside those assessed in the approved EIS.	The mitigation measures outlined in the EIS are appropriate to manage potential flood and hydrology impacts. No additional mitigation measures are required.
Ecology	The proposed project changes outlined in Table 2 will not result in any additional impact outside the assessed and approved project area. No additional areas of native vegetation are would be disturbed. It is therefore deemed that these changes will not result in an additional ecological impact outside those assessed in the project EIS.	In addition to those outlined below, the mitigation measures outlined in the EIS are appropriate to manage potential ecological impacts. One&Only Wolgan Valley shall register as a beekeeper in accordance with the Apiaries Act 1985 using the Government Licensing Service (GLS) and renew registration every 2 years while keeping bees (<i>Apis mellifera</i>). Follow best practice guidelines and code of practice established by the Australian Honey Bee Industry Council (AHBIC). Bee hives would be excluded from any NSW National Park lands leased by Emirates.

Environmental Aspect	Nature and extent of impact	Mitigation Measures
Noise and Vibration	The resort seeks to increase the number of allowed helicopter trips from the existing 4 trips (8 helicopter movements) per week to a maximum of 18 trips per week excepting peak demand holiday and tourism periods. The maximum number of trips during peak demand periods would be thirty-six (36) trips per week. Annual peak demand holiday and tourism periods would include those listed in Table 3 .	A new helipad located farther away from local residences and closer to the primary resort buildings as provided in Figure 5 would be established. New flight paths would be established to the proposed helipad location as illustrated in Figure 5 . These new proposed flight paths are would increase the distance of neighbouring properties and residences to flight paths.
Traffic & Transport	The additional project aspects for assessment identified in Table 2 do not present any additional road traffic and transport risks outside those already identified and assessed in the EIS. Helicopter traffic is addressed in the noise impact assessment.	The mitigation measures outlined in the EIS are appropriate to manage potential traffic and transport impacts. No additional mitigation measures are required.
Contamination / Hazards and Risks	No fuel or other hazardous materials storage is proposed in the modification. As such, a preliminary risk screening would not be required. The additional project aspects for assessment identified in Table 2 do not present any additional contamination risks outside those already identified and assessed in the EIS.	The mitigation measures outlined in the EIS are appropriate to manage potential contamination impacts. No additional mitigation measures are required.
Soil & Water Management	No excavation, filling or new soil disturbance is proposed in any floodplain or on the resort grounds for this proposed modification. Therefore, there is no need for additional construction erosion controls and no other soil and water monitoring would be required. The additional project aspects for assessment identified in Table 2 do not present any additional soil and water risks outside those already identified and assessed in the EIS.	The mitigation measures outlined in the EIS are appropriate to manage potential soil and water impacts. No additional mitigation measures are required.
Air Quality	The additional helicopter trips proposed would nominally increase the consumption of helicopter fuel and related generation of fuel combustion byproducts.	The mitigation measures outlined in the EIS are appropriate to manage potential air quality impacts. No additional mitigation measures are required.

Environmental Aspect	Nature and extent of impact	Mitigation Measures
	The additional project aspects for assessment identified in Table 2 do not present any additional air quality impacts outside those already identified and assessed in the EIS.	
Indigenous Heritage	<p>There is no additional development footprint, excavation or filling proposed in the modification. No existing identified Aboriginal sites or PADs would be impacted and it is highly unlikely that previously unidentified objects would be impacted. A figure showing location of heritage items and PADs in relation to the proposed helipad location is provided in Appendix F.</p> <p>The additional project aspects for assessment identified in Table 2 do not present any additional indigenous heritage impacts outside those already identified and assessed in the EIS.</p>	<p>The mitigation measures outlined in the EIS are appropriate to manage potential indigenous heritage impacts.</p> <p>No additional mitigation measures are required.</p>
Non-Indigenous Heritage	<p>The bee hives would be located within the heritage precinct near to the Homestead Complex.</p> <p>There are no proposed modifications to the existing heritage buildings, no additional excavation or additional buildings proposed. The addition of up to six bee hives is considered consistent with and would not detract from the historical agricultural and rural / pastoral use of the property.</p> <p>The additional project aspects for assessment identified in Table 2 do not present any additional non-indigenous heritage impacts outside those already identified and assessed in the EIS.</p>	<p>The mitigation measures outlined in the EIS and the measures and policies outlined in the Wolgan Valley Homestead Complex Conservation Management Plan are appropriate to manage potential non-indigenous impacts.</p> <p>No additional mitigation measures are required.</p>
Socioeconomic / Community	The additional project aspects for assessment identified in Table 2 do not present any additional socioeconomic or community impacts outside those already identified and assessed in the EIS.	<p>The mitigation measures outlined in the EIS are appropriate to manage potential socioeconomic and community impacts.</p> <p>No additional mitigation measures are required.</p>

Environmental Aspect	Nature and extent of impact	Mitigation Measures
Public Amenity	<p>Increase the number of allowed helicopter trips from the existing 4 trips (8 helicopter movements) per week to a maximum of 18 trips per week excepting peak demand holiday and tourism periods. The maximum number of trips during peak demand periods would be thirty-six (36) trips per week. Annual peak demand holiday and tourism periods would include those listed in Table 3.</p> <p>These additional trips would have the potential to infringe on the privacy of residents by increasing the number of trips per week and helicopters flying over neighbouring properties.</p>	<p>A new helipad located farther away from local residences and closer to the primary resort buildings as provided in Figure 5 would be established.</p> <p>New flight paths would be established to the proposed helipad location as illustrated in Figure 5. These new proposed flight paths are would increase the distance of neighbouring properties and residences to flight paths.</p>
Groundwater	<p>No excavation is proposed and groundwater will not be intercepted. No hazardous materials are proposed to be stored.</p> <p>The additional project aspects for assessment identified in Table 2 do not present any additional groundwater impacts outside those already identified and assessed in the EIS.</p>	<p>The mitigation measures outlined in the EIS are appropriate to manage potential groundwater impacts.</p> <p>No additional mitigation measures are required.</p>
Water Quality	<p>There is no additional development footprint, excavation or filling proposed in the modification.</p> <p>The additional project aspects for assessment identified in Table 2 do not present any additional water quality impacts outside those already identified and assessed in the EIS.</p>	<p>The mitigation measures outlined in the EIS are appropriate to manage potential water quality impacts.</p> <p>No additional mitigation measures are required.</p>
Land Use Planning	<p>The additional project aspects for assessment identified in Table 2 do not present any additional land use planning issues outside those already identified and assessed in the EIS, including those for the Lithgow Local Environmental Plan 2014, relevant Acts, SEPPs and REPs.</p>	<p>The mitigation measures outlined in the EIS are appropriate to manage potential land use planning impacts.</p> <p>No additional mitigation measures are required.</p>
Civil Aviation Safety	<p>Establishing the proposed helipad and flight paths without consideration of recognised government and industry aviation</p>	<p>The new helipad location and flight paths would be established and operated in accordance with the appraisal against the Civil Aviation Safety Authority's Guidelines for</p>

Environmental Aspect	Nature and extent of impact	Mitigation Measures
	<p>standards have the potential to compromise public safety and the safety of resort operators and customers.</p> <p>The proposed helipad site and flight paths have been appraised against the Civil Aviation Safety Authority's Guidelines for the establishment and operation of onshore Helicopter Landing Sites (Appendix D).</p> <p>No fuel and chemical storage systems would be installed to support the operations of the proposed helipad.</p> <p>The additional project aspects for assessment identified in Table 2 do not present any additional civil aviation safety impacts outside those already identified and assessed in the EIS.</p>	<p>the establishment and operation of onshore Helicopter Landing Sites (Appendix D).</p>
Visual	<p>There is no additional building developments or structures outside of the existing footprint proposed in the modification. The proposed helipad location would provide greater distance and a landform barrier (Donkey Mtn) between the helipad flight paths and local residences/Wolgan Road.</p> <p>The additional project aspects for assessment identified in Table 1 do not present any additional visual issues outside those already identified and assessed in the EIS.</p>	<p>The mitigation measures outlined in the EIS are appropriate to manage potential visual impacts.</p> <p>No additional mitigation measures are required.</p>
Bushfire Management	<p>The additional project aspects for assessment identified in Table 2 do not present any additional water quality impacts outside those already identified and assessed in the EIS.</p>	<p>The mitigation measures outlined in the EIS are appropriate to manage potential bushfire impacts.</p> <p>No additional mitigation measures are required.</p>
Waste Management	<p>The proposal would generate a small quantity of mixed general construction wastes (less than 1 tonne) including plastic wrap, timber, pallets and polystyrene that would be recycled or, if necessary disposed at a licenced waste disposal facility, consistent with the</p>	<p>The mitigation measures outlined in the EIS are appropriate to manage potential bushfire impacts.</p> <p>No additional mitigation measures are required.</p>

Environmental Aspect	Nature and extent of impact	Mitigation Measures
	<p>aims, objectives and guidelines in the NSW Waste Avoidance and Resource Recovery Strategy 2014-21.</p> <p>The additional project aspects for assessment identified in Table 2 do not present any additional water quality impacts outside those already identified and assessed in the EIS.</p>	
Energy Demand and Greenhouse Gas	<p>The additional project aspects for assessment identified in Table 2 do not present any additional energy demands and greenhouse gas impacts outside those already identified and assessed in the EIS.</p>	<p>The mitigation measures outlined in the EIS are appropriate to manage potential energy demand and greenhouse gas impacts.</p> <p>No additional mitigation measures are required.</p>

6. Approvals Consistency Review

This Environmental Assessment considers compliance of the proposed modifications with the Project and Concept Plan approvals. One&Only Wolgan Valley would ensure that any development associated with this modification is carried out generally in accordance with the identified approvals in **Table 1**, with the exception of the proposed changes listed in **Table 14**.

One&Only Wolgan Valley would also ensure that the proposed changes identified in **Table 2** will be undertaken within the assessed and approved project boundaries, and in accordance with the approved management plans.

Table 14 Proposed Changes to Approval Conditions

Approval	No.	Approved Details	Proposed modification
Project (06_0310)	6	The Proponent shall ensure that the project does not generate more than 4 helicopter trips a week (ie 8 helicopter movements).	The Proponent shall ensure that the project does not generate more than 18 trips per week excepting peak demand holiday and tourism periods. During peak demand periods the Proponent shall ensure that the project does not generate more than thirty-six (36) trips per week. Annual peak demand holiday and tourism periods include those listed in Table 3 .
			Helicopter access to and from the resort helipad would be consistent with relevant Fly Neighbourly Advice for the Greater Blue Mountains World Heritage Area and proceed following the approved flight paths as identified in this modification application.
			Local property owners would be notified a minimum of one week in advance of any helicopter trips engaged by the resort for uses other than customer access, such as marketing and survey, where flight paths are outside of those approved unless for emergency purposes. The Proponent shall ensure that these trips are no more than 5 trips (10 movements) per year and count toward the weekly trip limit specified in Condition 6 of this Approval.
			The existing helipad located near Wolgan Road on the west side of

Approval	No.	Approved Details	Proposed modification
			the Wolgan River at the entrance road to the resort would be maintained and used for emergency purposes only.
Concept Plan (05_0079)	Schedule 2 Definitions	Helipad location is currently located near Wolgan Valley Road near the entrance to the resort and on the west side of the Wolgan River.	Relocation of the helipad to a site closer to the resort buildings and farther away from residences, and change in associated helicopter flight paths. Include an additional reference to this environmental assessment in the definition of Concept Plan under Schedule 2.
EPBC 2006/2567	4	The person undertaking the action may only allow helicopters to operate in the area of the resort or the Greater Blue Mountains World Heritage Area (GBMWhA), from half an hour after sunrise to half an hour prior to sunset.	No modifications will be requested to this approval decision.

7. Conclusion

It is considered that the potential impacts associated with the Proposal and detailed in this environmental assessment are consistent with the approved project EIS and all relevant Conditions of Approval as identified in **Table 1** excepting those listed in **Table 14**.

Notwithstanding these modifications, the Proposal remains substantially the same as that described in Section 2 of this environmental assessment, and for which the Concept Plan and Project Approvals were granted by the Minister. The Proposal does not substantially alter the underlying characterisation of the approved project and concept plan, or the manner in which it will impact upon the community and environment.

While the proposed layout of the resort has been changed, the general location, scale and intensity of the development on the site would remain the same.

The Minister may reasonably form the opinion that the project as modified satisfies the relevant provisions of the Environmental Planning and Assessment Act 1979, and therefore recommend that the Concept Plan and Project Approval be modified, and project approval granted, subject to appropriate conditions as recommended in **Table 14**.

The Proponent shall ensure that any development associated with this approval is carried out generally in accordance with the existing approvals as listed in **Table 1**.

Certification

I certify that to the best of my knowledge, this Environmental Assessment Report:

- Examines and takes into account to the fullest extent possible all matters affecting or likely to affect the environment as a result of activities associated with the proposed project;
- Examines the consistency of the proposed activity/modification with the Approved Concept Plan and Approved Project; and
- Is accurate in all material respects and does not omit any material information.

Erik Larson



15 September 2017

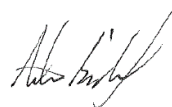
Environmental Consultant

Signature

Date

I have reviewed and examined the report and accept the documented findings on behalf of pitt&sherry / KMH Environmental Pty Ltd.

Adam Bishop



15 September 2017

Principal Consultant

Signature

Date

References

Australian Museum Business Services (AMBS) 2005, Flora and Fauna Impact Assessment Emirates Luxury Resort, Wolgan Valley.

Australian Museum Business Services (AMBS) 2006, Wolgan Valley Aboriginal Heritage Study Stage II Survey.

Civil Aviation Advisory Publication (CASA) 2014, CAAP 92-2(2) Guidelines for the establishment and operation of onshore Helicopter Landing Sites.

Context 2006, Landscape Management Plan Emirates Luxury Resort, Wolgan Valley.

Department of Primary Industries (DPI) 2011, Land Use Conflict Risk Assessment Guide Factsheet.



Appendix A

Secretary's Environmental Assessment Requirements (SEARS)



Appendix B

Noise Assessment



Appendix C

Photographic Log of Proposed Helipad Location



*As part of the **pitt&sherry** Group*





Appendix D

Helipad Location CAAP-92-2(2) Compliance Overview



*As part of the **pitt&sherry** Group*





Appendix E

Consultation Documentation



*As part of the **pitt&sherry** Group*





Appendix F

Aboriginal Heritage Items



*As part of the **pitt&sherry** Group*



Contact us:

E: info@kmh.com.au

W: www.kmh.com.au

]



*As part of the **pitt&sherry** Group*



Brisbane

Level 2, 276 Edward Street, Brisbane QLD 4000
T: (07) 3221 0080

Canberra

LGF, Ethos House, 28-36 Ainslie Place, Canberra City ACT 2601
PO Box 122, Civic Square ACT 2608
T: (02) 6274 0100

Devonport

Level 1, 35 Oldaker Street, Devonport TAS 7310
PO Box 836, Devonport TAS 7310
T: (03) 6424 1641

Hobart

199 Macquarie Street, Hobart TAS 7001
GPO Box 94, Hobart TAS 7001
T: (03) 6210 1400

Launceston

Level 4, 113 Cimitiere Street, Launceston TAS 7250
PO Box 1409, Launceston TAS 7250
T: (03) 6323 1900

Melbourne

Level 1, HWT Tower, 40 City Road Southbank VIC 3006
PO Box 259, South Melbourne VIC 3205
T: (03) 9682 5290

Newcastle

Level 1, 81 Hunter St, Newcastle NSW 2300
T: 02 4910 3600

Sydney

Suite 902, Level 9, North Tower,
1-5 Railway St, Chatswood NSW 2067
PO Box 5487, West Chatswood NSW 1515
T: 02 9468 9300



As part of the **pitt&sherry** *Group*





*As part of the **pitt&sherry** Group*

