

Statement of Commitments

**Emirates Luxury Resort
Wolgan Valley, Lithgow**

April 2006

Prior to the commencement of building work, the proponent will obtain separate approval for the design of all proposed buildings, landscape and drainage works, roads and structures. In addition, the proponent commits to prepare and implement the following management plans in association with the project.

Contamination Remediation Plan

This plan will fully investigate and document contamination within the Areas of Environmental Concern (AEC) associated with previous agricultural use of the site identified in the Geotechnical Investigation report prepared by Douglas Partners and submitted with the Concept Plan.

Objective

- *To ensure that all land contamination resulting from previous agricultural use of the site is remediated in accordance with standard EPA requirements.*

The plan will be prepared, implemented and audited in accordance with:

- State Environmental Planning Policy 55 - Remediation of Land
- Managing Land Contamination: Planning Guidelines (prepared by Planning NSW and EPA).

Archaeological Investigation

This plan will:

- Continue consultation with the Aboriginal community.
- Reconcile the current building siting plan with the location of identified Aboriginal objects and the findings of the predictive model, in consultation with the project architect. The aim is to minimise the impact of the building siting plan on identified or potential Aboriginal objects.
- Test excavation of locations where the current building siting plan conflicts with identified or potential archaeological deposit, where it is not practical to alter the building siting plan.
- Once the extent, integrity, spatial distribution and nature of the subsurface archaeology is identified (through test excavation and survey) the following management strategies will be implemented.
 - *Conserve* - sites of high scientific and cultural significance will be conserved by avoiding the placement of building works over these features and ensuring their ongoing protection.
 - *Salvage* - sites of moderate to good scientific or cultural significance will be conserved where possible. If preservation of sites is not possible due to design inflexibility, the sites will be salvaged to ensure that a proper record is obtained.
 - *Destroy* - sites of low scientific or cultural significance will not be retained in inconsistent with the revised building siting plan.
- Comprehensive reporting regarding the archaeological work undertaken in accordance with existing guidelines, including interpretation models and conservation and management plans.

Objectives

- Comprehensive consultation with the Aboriginal community in determining the property's archaeological significance.

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- Full investigation of the Aboriginal archaeological potential and cultural value of the site.
- Wherever practicable, to retain Aboriginal archaeological objects in situ.
- To ensure that the detailed siting and design of all proposed buildings and works minimise the disturbance of Aboriginal archaeological objects.
- To ensure that any Aboriginal archaeological relics that are proposed to be disturbed, destroyed or removed are appropriately documented and/or transferred to the custody of their traditional owners.
- To incorporate a plan for the interpretation of Aboriginal values for the site within the proposed resort.
- To generate and implement a conservation and management plan for Aboriginal objects.

The plan will be prepared in accordance with:

- NPWS Guidelines
- DEH Guidelines
- Wollemi National Park Plan of Management
- Consultation with local aboriginal communities

The proponent recognises that the siting and layout of individual roads, buildings and structures indicated on the Building Siting Plan at page 30 of the Concept Plan may need to be refined or altered following full archaeological investigations.

Conservation Management Plan – Non Aboriginal Heritage

The Conservation Management Plan (CMP) will fully document the history and heritage significance of the site and identify all significant structures, vegetation and relics thereon. It will categorise and rank the relative significance of all identified elements, identify the impact of the project on that significance and provide strategies for the ongoing management of each element, and the heritage significance of the site generally.

The proponent recognises that the siting and layout of individual roads, buildings and structures indicated on the Building Siting Plan at page 30 of the Concept Plan may need to be refined or altered to reflect the final CMP. The proponent also acknowledges the use of 'Wallerawang' by James Walker from 1824, and the site's use as 'Wolgan Outstation' from the 1830s onward, and the grant of 1839.

Objectives

- *To fully research and document the history of the site*
- *To identify and document the heritage values of the site*
- *To conserve elements of heritage significance, including, but not limited to the wattle and daub hut, the slab house and significant associated outbuildings, the slab house landscape curtilage, a remnant of the pastoral landscape in the vicinity of the slab house/valley floor, significant fencing, significant views and any archaeological relics identified on the site.*
- *To interpret the cultural heritage of the site within the resort.*
- *To identify and implement strategies for the ongoing management of the heritage values of the site in conjunction with the operation of the resort.*

This plan will:

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- Reconcile the current building siting plan with a predictive archaeological model, in consultation with the project architect.
- Include detailed physical archaeological surveys of the footprint of all works proposed in the revised building siting plan.
- Include Management Strategies to determine when identified relics or places will be:
 - CONSERVED - by avoiding the placement of building works over these features and ensuring their ongoing protection.
 - SALVAGED - relics will be salvaged and preserved if preservation of sites is not feasible or warranted.
 - DESTROYED - if relics or sites are of low scientific or cultural significance.
- Include strategies for the ongoing management and interpretation of the archaeological values of the site.

The CMP will be prepared in accordance with Department of Environment and Conservation and NSW Heritage Office guidelines including the NSW Heritage Manual.

Ecological Management

The following Environmental Management Plans (EMPs) will be prepared for separate approval and implementation as integral components of the project:

- Ecological Rehabilitation and Management Plan, including management strategies for the creek lines, vegetation and native fauna and their habitats, including specific considerations for threatened fauna species;
- Weed Management Plan; and
- Feral Fauna Management Plan;

Other EMPs that will be implemented to mitigate potential impacts upon the natural environment include:

- Bushfire Hazard/Control Management Plan.
- Erosion and Sedimentation Control Plan; and
- Wastewater Management Plan;
- Solid Waste Management Plan; and
- Hydrological Management Plan.

▪ Ecological Rehabilitation Management Plan (ERMP)

An Ecological Rehabilitation Management Plan (ERMP) will be prepared to address revegetation within the Nature Conservation Precinct, watercourse stabilisation and revegetation within the Riparian Corridor Precinct, vegetation management within the Pasture/Parkland Precinct and the management of native fauna and specific habitat features and resources for relevant species.

The ERMP will be prepared with consideration of:

- NSW Fisheries (1999) Policy and Guidelines – Aquatic Habitat Management and Fish Conservation
- NSW Fisheries - Fish Passage Requirements for Waterway Crossings (Fairfull & Witheridge, 2003)

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- Plans of Management for the Gardens of Stone National Park and the Greater Blue Mountains World Heritage Area
- DIPNR guidelines regarding:
 - Watercourse and Riparian Area Planning, Assessment and Design (V4 Draft)
 - Watercourse & Riparian Zone Rehabilitation Requirements
 - How to prepare a Vegetation Management Plan
 - Design and Construction of Paths and Cycleways along Watercourses and Riparian Areas (V2)
 - How to Collect Native Plant Seed Responsibly (V1)
- management actions contained in Final and Draft Recovery Plans for threatened fauna species prepared under the TSC Act (e.g. Yellow-bellied Glider; Large Forest Owls); and
- any relevant management guidelines for native wildlife prepared by DEC.

Revegetation

The ERMP will provide details of specific measures and protocols for the protection and rehabilitation of retained native vegetation within the Nature Conservation Precinct, including:

- weed removal and control protocols;
- details of appropriate plant species and planting densities to be utilised and the extent of vegetation types to be created;
- measures to reduce potential impacts of grazing herbivores (native and exotic) on regenerating vegetation; and
- a monitoring program with performance criteria and measures for restitution of damage or supplementary plantings, if necessary.

Rehabilitation and revegetation of gully erosion that exists on some lower slopes, and most especially along the mid-southern boundary of the site, will be particularly addressed.

Rehabilitation of Creek lines and Riparian and Aquatic Habitats

The main watercourses within the study area are both currently experiencing substantial erosion as a result of cattle grazing, clearing of vegetation and flooding events. In particular, sections of the banks of the Wolgan River, at the northern end of the valley have undermined banks and trees with exposed root systems. Proposed management of the creek lines within the Riparian Corridor Precinct includes terracing within Carnes Creek to stabilise the creek banks and re-establishment of riparian vegetation to a minimum width of 40 metres from the top of the bank on either side of watercourses to provide habitat resources and wildlife corridors through the site. Measures will be implemented to ensure that woody debris removed or disturbed during creek stabilisation activities is replaced to maintain habitat for aquatic fauna. Only low impact, passive recreational access will be permitted in these areas to limit disturbance to ecological communities and native fauna.

Farm dams, which are currently degraded by cattle access and resulting grazing and trampling, are to be retained and rehabilitated under the Landscape Strategy. Rehabilitation will include the removal of stock and the planting of wetland vegetation and will aim to provide supplementary habitat for waterbirds and other aquatic and terrestrial fauna on the study site.

Vegetation Management (Pasture/Parkland Precinct)

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Vegetation management within the Pasture Precinct will involve the maintenance of the existing rural pasture landscape supplemented through planting of clumps of native trees, including known food trees, to provide additional habitat for native fauna known to utilise habitat in this area. The pasture landscape will be maintained for native fauna species that currently utilise these areas, including the threatened Diamond Firetail and macropods but will require careful active management to sustain reduced fuel loads following the removal of grazing livestock.

Management Measures for Native Fauna

The ERMP will identify native fauna species and habitat values of significance on the site and provide management strategies to be implemented to protect and enhance these values as appropriate.

Management will focus on reducing and controlling existing and novel impacts and threatening processes on site and in particular improving some aspects of threatened species habitat. Management strategies will be prepared in accordance with prescribed management actions contained in relevant Final and Draft Recovery Plans for threatened fauna species prepared under the TSC Act (e.g. Yellow-bellied Glider; Large Forest Owls) and management guidelines for native wildlife prepared by DEC.

Native fauna species of particular relevance for consideration in this regard include the following species known to utilise habitats within the proposed Riparian and Access Corridors and Development Precincts:

- Common Wombat
- Brown Treecreeper
- Speckled Warbler
- Diamond Firetail
- Eastern Bentwing-bat

Also of relevance are those threatened species known to occur in areas of adjoining habitat, including the:

- Glossy Black-cockatoo
- Gang-gang Cockatoo
- Yellow-bellied Glider
- Powerful and Sooty Owls

The ERMP will include consideration of the following fauna management issues and strategies:

- planting of food trees for native species known to occur on site and on surrounding lands. Food trees of relevance for threatened species in particular will be identified to supplement existing foraging resources for these species;
- selection of known hollow-forming trees (e.g. Boxes) for replanting to provide an ongoing nesting/roosting resource for hollow-dependent native fauna;
- measures to protect native fauna and their habitats, in particular to reduce potential impacts on the Common Wombat, in riparian areas along Carnes Creek during proposed creek stabilisation and revegetation works and during resort operations;
- careful consideration of the potential adverse impacts of removing grazing on threatened species habitats (i.e. grazing, provided timing and levels are appropriate, can actually promote a desirable understorey for ground-feeding species such as the Brown Treecreeper species) and appropriate management measures (e.g.. periodic burns of appropriate

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intensity) to maintain suitable habitat for this species (and other ground-feeding birds) in the absence of grazing;

- careful consideration of appropriate fuel management/hazard reduction burning (including frequency, intensity and patterns) within the identified site Precincts to minimise potential negative impacts on native fauna, relevant habitat features and overall biodiversity of the ecological communities;
- placement of logs and trunks of native trees removed for construction purposes in existing and regenerating vegetated areas to improve existing modified habitats. In particular, trees containing hollows or abundant decorticated bark should be used for this purpose. Such features would provide supplementary foraging substrates for ground-feeding threatened birds (such as the Brown Treecreeper) and potential den sites for the Spotted-tailed Quoll and its prey;
- consideration of the location and types of fences erected within and around the site and the need to maintain habitat connectivity for native fauna;
- the potential provision of nest boxes and bat roost boxes to supplement habitat for hollow-dependent species on the study site;
- measures for the removal or control of feral animals and weeds with reference to the proposed Feral Animal and Weed Plans of Management;
- the implementation of monitoring programs to determine the success or otherwise of management strategies, including surveys to ascertain:
 - the persistence or otherwise of fauna habitat features of relevance for native species on site;
 - the persistence or otherwise of native fauna species and specific threatened species in suitable habitats on site;
 - the reintroduction of additional fauna species on site;
 - the use and success of fauna nest boxes if provided;
 - the persistence or otherwise of feral animals and weeds; and
 - the success of revegetation and rehabilitation activities.

▪ Weed Management Plan

The species listed as noxious in the Lithgow LGA under the Noxious Weeds Act (see table below) will be managed in accordance with the measures prescribed under the Act.

A Weed Management Plan will be prepared to assist in the removal and/or control of weed species on the site and to reduce the potential for their spread into adjoining habitats within the GBMWA. Protocols will be implemented to prevent the spread of weeds within the study area as a result of activities associated with the construction phase of the development.

Weed management will involve:

- the destruction of weed material removed from construction areas;
- minimising areas disturbed during construction;
- washing down vehicles and equipment between construction areas in particular following clearing activities in weed infested areas;
- the use of shredded native plant material removed from the site as a mulch and groundcover on disturbed soil surfaces to reduce the potential for weed establishment; and
- seeding of exposed soil stockpiles with a nursery crop to reduce the potential for weed infestation.



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The weed management plan will also include strategies and protocols for the:

- removal and control of weeds in proposed vegetation rehabilitation areas; and
- review of non-endemic species to be used in replanting in landscaped areas to ensure they are not invasive.

The Weed Management Plan will also incorporate a monitoring program that includes performance criteria and measures for the identification and remediation of problem areas, if necessary.

The weed Management Plan will be prepared in consultation with NSW Agriculture, and with DEC and landowners of other neighbouring properties, to ensure a collaborative approach that is likely to result in more effective long-term reductions in local and regional weed populations.

Weed class and prescribed management action (NSW NW Act) for noxious weed species recorded in the study area.

Common Name	Scientific Name	Weed Class & Prescribed Management Action
Serrated Tussock	<i>Nassella trichotoma</i>	W3: Must be prevented from spreading and its numbers and distribution reduced.
African Love Grass	<i>Eragrostis curvula</i>	W3: Must be prevented from spreading and its numbers and distribution reduced.
Blackberry	<i>Rubus fruticosus</i>	W3: Must be prevented from spreading and its numbers and distribution reduced.
Nodding Thistle	<i>Carduus nutans</i>	W3: Must be prevented from spreading and its numbers and distribution reduced.
Scotch Thistle	<i>Onopordum sp.</i>	W3: Must be prevented from spreading and its numbers and distribution reduced.
Sweet Briar	<i>Rosa rubiginosa</i>	W3: Must be prevented from spreading and its numbers and distribution reduced.
Wild Radish	<i>Raphanus raphanistrum</i>	W3: Must be prevented from spreading and its numbers and distribution reduced.
Willow	<i>Salix fragilis</i>	W4g: Must not be sold, propagated or knowingly distributed.
Willow	<i>Salix babylonica</i>	W4g: Must not be sold, propagated or knowingly distributed

The Weed Management Plan will be prepared in accordance with:

- the NSW Noxious Weeds Act and prescriptions for management of relevant species on site;

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- weed management guidelines prepared by NSW Agriculture;
- DEC regional Pest management Strategies;
- existing weed management plans for adjoining National Parks;
- management guidelines for weed species attributed Key Threatening Process status under the TSC Act (e.g. exotic perennial grasses);
- weed management guidelines for specific species listed in Recovery Plans for threatened species prepared under the TSC Act; and
- regulations and controls for pesticide use pursuant to the NSW Pesticides Act 1999.

▪ Feral Fauna Management Plan

A Feral Animal Species Management Plan is to be prepared for the control and management of feral animals that currently occur on site to reduce current adverse impacts on the site and the potential for adverse impacts on the values of the adjoining GBMWA. Specific issues that will be addresses include:

- grazing by introduced herbivores (such as rabbits and goats) and resultant effects on the structure and composition of plant communities;
- the spread of weeds (such as Sweet Briar and Blackberry) via the droppings of introduced species, such as Foxes;
- habitat degradation through the digging and burrowing of rabbits and wild pigs; and
- adverse impacts on the native fauna assemblage, including in particular smaller terrestrial fauna and nesting/roosting arboreal and ground-nesting species, as a result of predation by wild dogs, foxes and feral cats, and through competition for prey species.

As is the case with weeds, proposed management measures are unlikely to be particularly effective unless conducted over the long term and in collaboration with surrounding landholders. As such, preparation of the Feral Animal Management Plan will be undertaken in consultation with NSW Agriculture and the Rural Lands Protection Board, and with DEC and landowners of other neighbouring properties, to ensure a collaborative approach that is likely to result in more effective long-term reductions in local and regional feral animal populations.

The Feral Animal Management Plan will be prepared in accordance with:

- feral animal management policy and guidelines prepared by NSW Agriculture, the NSW Pest Animal Council and the National Feral Animal Control Programme;
- control guidelines for pest species (e.g. rabbit, feral pigs, wild dogs) declared under the Rural Lands Protection Act 1998, issued by the Rural Lands Protection Board;
- management guidelines outlined in Threat Abatement Plans for feral animal species attributed Key Threatening Process Status under the TSC Act and the EPBC Act (e.g. the Red Fox);
- management guidelines for specific feral animal species listed in Final or Draft Recovery Plans (prepared under the TSC Act) for threatened fauna species of relevance to the site;
- DEC regional Pest Management Strategies and feral animal management plans for adjoining National Parks; and
- regulations and controls for pesticide use pursuant to the NSW Pesticides Act 1999.

▪ Precinct Specific Mitigation Measures

Specific mitigation measures to be implemented within each Precinct are outlined below.

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Precinct 1 – Development Precinct

Measures to be implemented include:

- fencing of vegetation which is to be retained in close proximity to development areas, prior to clearing or construction activities, to avoid damage from uncontrolled or accidental access;
- care to avoid mechanical damage to retained trees, and to protect against the compaction of soil or stockpiling around trees;
- instruction of contractors regarding limits of vegetation clearing; and
- the parking of vehicles and machinery and the location of stockpile sites in existing cleared areas and not within 50m of a waterway.

Significant habitat trees (e.g.. mature nectar-producing species and large hollow-bearing specimens) will be retained and incorporated into the development design where possible. Such trees will be marked and protected from disturbance. Hollow-bearing trees within the proposed development footprint or in immediately adjacent areas that are to be removed during construction activities will be flagged for identification and carefully felled during clearing activities to minimise the potential for injury to fauna that may be occupying the tree and to preserve the tree intact. Portions of hollow-bearing trees removed from the construction area will be retained and either placed in adjacent bushland as hollow logs, or tied into large trees in adjacent woodland to provide shelter and nest sites for arboreal mammals, reptiles and birds. Large logs and woody debris will also be removed from the proposed disturbance areas during clearing and placed in adjacent retained vegetation to maintain resources for native fauna.

Landscaping works within the Development Precincts will involve:

- use of locally sourced native plant species representative of the existing vegetation types within the study area in landscaped areas and for rehabilitation of disturbed retained vegetation;
- selection of known food trees to provide supplementary foraging habitat for threatened fauna species known to occur in the study area and locality, including *Allocasuarina* spp. for the Glossy Black-Cockatoo and a variety of Eucalypts of relevance for the Koala and in particular winter-flowering species for nectar-feeding birds, possums and gliders;
- the collection of native seeds within the study area (or immediate vicinity) by a qualified bush regenerator prior to clearing for use in landscaping and the revegetation of disturbed areas;
- use of collected seeds in direct seeding or propagation of tube stock for planting;
- the use of shredded native plant material removed from construction areas as a mulch and groundcover on disturbed areas. This approach will reduce sediment discharge, limit weed invasion, and retain seed stock for the regeneration of local native species; and
- topsoil from vegetated areas within development areas should be removed and stockpiled for application to proposed landscaped areas, thus retaining the natural seed bank from the site and assisting in the regeneration of local plant species;

Plant Species Utilised in Landscaping and Rehabilitation) will include:

- use of naturally occurring species of local provenance to maintain the genetic integrity of the existing vegetation;
- careful selection of ornamental species for landscaped areas to prevent hybridisation with existing native species (in particular *Banksias* and *Grevilleas*) on surrounding lands. Only species (rather than cultivars) or sterile hybrids should be used;
- avoidance of potentially invasive plant species in landscaping and revegetation areas; and

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- measures to minimise alterations to existing moisture regimes and nutrient levels to avoid modification to ecological processes.

Precinct 2 – Riparian Corridor Precinct

Wolgan River and Carnes Creek will be rehabilitated involving creek stabilisation measures to control erosion and the re-establishment of riparian vegetation to a minimum of 50m on either side of each creek bank to provide supplementary habitat and to create linked wildlife corridors through the site. Only low impact, passive recreational access will be permitted in the riparian corridor to reduce potential adverse impacts on native fauna and their habitats.

The ERMP will contain specific protocols to reduce the likelihood of adverse impacts on aquatic fauna and their habitats within the creek lines during stabilisation works, including protocols for the retention of woody debris within channel beds, control of sediment, and protection of existing riparian vegetation and fauna habitats etc.

Disturbed areas surrounding bridge construction sites will be revegetated to ensure bank stabilisation, enhance connectivity and wildlife corridors and provide supplementary habitat for native fauna.

The Bushfire Management Plan will incorporate strategies and protocols for the careful management of fuel loads within revegetated riparian corridors to reduce fire hazard but also to avoid negative impacts on biodiversity and the natural ecosystem.

Precinct 3 – Access Corridor Precinct

The clearing of native vegetation within the Access Corridor Precinct for the construction of the proposed access and service roads will be limited by the careful alignment of the roads through existing cleared areas as far as possible. The establishment of a landscaped median between the roads where they run parallel and close to one another will provide supplementary habitat for native fauna and may assist in facilitating fauna road crossings for gliding arboreal mammals.

Fuel management activities within APZs will not involve the wholesale removal of vegetation and the level of fuel management activities required, involving selective removal of some canopy trees and the maintenance of understorey vegetation, will be determined so as not to substantially alter these areas. The APZs will continue to provide resources for native fauna in particular those threatened bird species that are known to utilise the ecotone areas between the open grassland and vegetated lower slopes.

Specific mitigation measures will be implemented to ensure that adjoining retained vegetation will be protected from indirect impacts associated with the roads construction and operational phases (e.g., physical damage, sediment run-off, weed infestations).

The potential for fauna road mortality will be reduced through the enforcement of speed limits and the erection of fauna crossing warning signs at appropriate locations. Such speed management features will be implemented in particular where vegetation extends up to the road verges.

Precinct 4 – Managed Pasture Precinct

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The pasture landscape with its existing remnant scattered trees will be supplemented with clumps of new tree plantings throughout the Precinct. Only locally sourced native plant species representative of the existing vegetation types on the site will be used and plant species will be specifically selected to provide supplementary foraging habitat for threatened fauna, including in particular winter-flowering species for nectar-feeding birds.

The Bushfire Management Plan will incorporate strategies and protocols for the careful management of fuel loads within this Precinct to reduce fire hazard following the removal of grazing but also to avoid negative impacts on biodiversity and the natural ecosystem.

Precinct 5 – Nature Conservation Precinct

The Bushfire Management Plan will incorporate strategies for ecologically sustainable strategic fuel management, including carefully planned hazard reduction burning of the Nature Conservation Precinct to reduce the potential risks of high intensity and frequency fire on the existing ecology and to reduce the potential threat of fire escaping onto adjoining lands. The appropriate timing and intensity of periodic burns will be determined and implemented to maintain suitable open grassy woodland/grassland ecotones for threatened ground-feeding species (such as the Brown Treecreeper) following the removal of grazing. Fire access trails will be aligned along existing tracks or through cleared areas (as far as possible) to minimise the requirement for clearing of native vegetation.

Only low impact, passive recreational/wildlife education access will be permitted in the Nature Conservation Precinct to reduce potential adverse impacts on native fauna and their habitats.

Key features of the proposed Landscape Strategy will include:

- the proposed rehabilitation and revegetation of some currently highly modified foothill areas to restore natural ecological processes and provide supplementary habitat for native fauna;
- the maintenance and rehabilitation of wetland habitats along the Wolgan River, involving the removal of grazing and weed control, and their connection with riparian/wildlife corridors through the site; and
- the preparation and implementation of specific environmental management plans for the management of native fauna and their habitats, including in particular threatened species known to occur on site, for the control of introduced flora and fauna, and the management of Bushfire.

▪ **Additional Investigations**

The following investigations will be undertaken to enable a more detailed assessment of potential impacts on native fauna at specific sites and to determine appropriate impact mitigation and environmental management measures to reduce the potential for adverse impacts on these species and specific habitats and resources of relevance:

- Dedicated field investigations to gain a better understanding of the Common Wombat population on site (abundance and distribution) and its use of specific areas of the site. Of particular interest will be the Carnes Creek Riparian Corridor, Access Corridor and Development Precincts where creek stabilisation and rehabilitation activities and proposed infrastructure and operations have the potential to impact on known burrows and foraging habitat for this species. Consultation with recognised Common Wombat experts and DEC

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wildlife management officers should also be undertaken so that best practice impact mitigation and environmental management measures can be implemented to reduce the potential for adverse impacts on this species and to encourage it's continued presence in the area.

- Follow-up surveys targeting threatened species known to occur on site to estimate likely population sizes, distribution and habitat use on the site and immediately adjoining lands. Data collected will supplement existing data and be used to assist in the preparation of specific management strategies for these species and their habitats and to provide more comprehensive baseline data for potential future monitoring programs.
- Where appropriate, additional surveys will be undertaken during warmer months to determine the presence or otherwise of threatened species that would have been difficult to detect (even if present on site) given the timing of the surveys in August. For example, the Blue Mountains Water Skink is best detected during warm sunny conditions from September to March and adults of the Giant Dragonfly only emerge from larval burrows from October to November. However, it should be noted, that the sedge land habitats on site are considered to provide only marginal habitat for these species. Given the proposed retention of such habitats within the Nature Conservation Precinct these species are unlikely to be adversely affected by the proposed development even if they do occur.

Soil and Water Management Plan

A detailed Soil and Water Management Plan will be developed prior to the commencement of construction activities to control sediment and pollutant discharge from construction areas into adjoining vegetation and creek lines. Measures for the ongoing control and treatment of run-off from development areas to minimise adverse habitat impacts of discharges containing sediment, chemical pollutants and weed propagules will include:

- the collection and direction of stormwater run-off from potentially contaminated sites to sedimentation ponds. In particular, run-off should be directed away from retained native vegetation;
- the stabilisation of exposed soil surfaces (e.g.. through sterile grass seeding, erosion control meshing, or mulching using vegetative material removed from the study area);
- the use of erosion and sediment control measures to collect sediment and to reduce flow velocities; and
- regular monitoring and maintenance of all erosion and sediment control structures throughout the construction and operational phases of the development to ensure their effective function.

Bush Fire Hazard Management

This plan will involve a range of measures to protect life, property and vegetation on the site and within the adjoining GBMWA from Bushfire. It will detail the conceptual bushfire management strategies outlined in the Bushfire Management Report (Australian Bushfire Protection Planning) submitted with the Concept Plan. It will include protocols and strategies to ensure unplanned fires on the site are contained and suppressed as quickly as possible, including:

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- management of bushfire fuels within each of the identified Precincts in accordance with ecological best practice;
- establishment of perimeter fire breaks and fire access trails;
- provision of fire fighting resources on site, including a fully equipped Fire Station, helicopter support facilities and a specific water supply for fire fighting operations; and
- the appropriate training of staff and establishment of an emergency management protocol in close consultation with local emergency services.

Objectives

- *To minimise bushfire hazard to human life, flora and fauna and property, both on and off the site.*
- *To implement a range of site planning principles and management practices, and to install a range a bushfire fighting devices to optimise the safety of the resort, its staff and its guests.*

The Bush Fire Hazard Management Plan will be prepared in accordance with:

- Planning for Bushfire Protection, Rural Fire Service, 2001.
- Wollemi National Park Plan of Management.

The plan will include a program of regular fuel load and APZ inspections at key times for fuel load accumulation, fuel load reduction and peak bushfire threat. In particular, it will consider:

- strategies for the maintenance of fuel loads in open grassland/pasture areas (e.g.. within the Managed Pasture Precinct and Nature Conservation Precinct) following the proposed removal of grazing. In addition to increased grass biomass, tree species will quickly establish where trees and shrubs are currently sparse. These naturally revegetating areas will eventually have increased fuel loads, with increased fire hazard ratings;
- careful management of fuel loads within revegetated riparian corridors to reduce fire hazard but also avoid negative impacts on biodiversity and the natural ecosystem;
- appropriate timing and intensity of periodic burns to maintain suitable open grassy woodland/grassland ecotones for threatened ground-feeding species (such as the Brown Treecreeper) following the removal of grazing; and
- ecologically sustainable strategic fuel management, including carefully planned hazard reduction burning, of the Nature Conservation Precinct to reduce the potential risks of high intensity and frequency fire on the flora and fauna asset and to reduce the potential threat of escape of fire onto adjoining lands (ABPP, 2005).

Emergency Response Plan (Flooding and Bushfire)

This plan will detail plans of training and emergency response measures to protect human safety in the event of flood, bushfire or other natural emergencies.

Objective

- *To minimise threats to human safety during natural emergencies, particularly bushfire and flood events.*

The Emergency Response Plan will be prepared in accordance with:

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- Bushfire Management Report accompanying the Concept Plan prepared by Australian Bushfire Protection Planning.
- Planning for Bushfire Protection 2001
- Floodplain Management Manual: the Management of Flood Liable Land (January 2001, NSW Govt).

Water Management Plan

The plan will detail measures to be implemented to minimise the effect of water sourcing, use and disposal upon natural systems.

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- *To minimise impacts on the existing water cycle, in terms of both surface and ground water quality and flow rates/levels.*
- *To minimise water consumption and disposal.*
- *To optimise the use of rainwater harvested within the resort for potable water supply.*
- *To optimise the re-use of treated effluent within the resort for grey water supply.*
- *To minimise the use of electricity and chemicals in the treatment of effluent.*
- *To ensure that any disposal of effluent is within the long term cumulative carrying capacity of the receiving environment (both water courses and soils) in terms of water volume and contaminants, including nutrients.*
- *To ensure that a reliable supply of water is available to the site, for both ongoing resort use and occasional rapid refilling of the stored on-site fire fighting supply.*
- *To minimise the erosion and transport of sediment into waterways.*
- *To minimise the release of pollutants (e.g. stored fuel, litter, untreated sewage etc.) into natural systems.*

The Water Management Plan will be prepared in accordance with:

- NSQMS Use of Reclaimed Water Guidelines (2000)
- NSW Health Interim Guidance for Greywater and Sewage Recycling in Multi unit Dwellings and Commercial Premises (2004)
- NSW EPA Guidelines for Land Irrigation of Effluent (2004)
- EIS Guideline on Irrigation of Sewage Effluent and EIS Guideline on Sewerage Systems (Department of Urban Affairs and Planning, September 1996)
- AS 6400 (2005) –Water Efficient Products – Rating and Labelling
- NSW Health (2004), Australian Rainfall and Runoff
- Commonwealth Government Enhealth Guideline (2004)
- Assessment, Classification and Management of Liquid and Non-liquid Waste (DEC)
- Lithgow Council stormwater guidelines

The plan will document baseline conditions and involve ongoing regular monitoring and management of impacts in relation to stream and ground water flows and water quality. The plan will also address

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the ongoing management and monitoring of specific water issues, such as the harvesting of rainwater, management of overland flows, ongoing potable and non-potable demand/supply management, wastewater treatment, effluent quality/quantity/disposal, and soil/water quality in the effluent irrigation area and both upstream and downstream of the resort and (and irrigation area).

Energy and Water Conservation Plan

This plan will detail design measures, devices and practices implemented to minimise demand for water and energy consumption.

Objectives

- *To minimise water consumption.*
- *To minimise energy consumption, during construction, materials selection and ongoing operation.*
- *To minimise the production of 'greenhouse' gas emissions.*

Construction Management Plan

A plan of construction measures and practices implemented to minimise potential construction impacts such as erosion and sediment transfer, construction traffic, noise generation, damage to heritage and landscape features and worker safety.

Objectives

- *To minimise erosion, and the transport of sediments into waterways.*
- *To minimise traffic and noise impacts of construction vehicles.*
- *To minimise noise generation.*
- *To minimise the generation of dust and other air pollutants.*
- *To ensure that a safe environment is provided for all construction workers.*
- *To minimise construction impacts upon surrounding residents and the natural environment.*
- *To minimise impacts of construction works upon heritage buildings and works, significant trees and cultural plantings and archaeological sites and relics.*

The plan will be prepared with reference to:

- Managing Urban Stormwater: Soils and Construction 2004
- Environmental Criteria for Road Traffic Noise (EPA, 1999)
- RTA's Guide to Traffic Generating Developments
- Workcover Guidelines
- All guidelines to the Occupational Health and Safety Act, 2000.
- The Archaeological Investigation and Conservation Management Plan detailed in this Statement of Commitments.

The plan will include a formal process for receiving, actioning and recording complaints and other input from the owners/users of surrounding properties.

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Wolgan Road Upgrade Plan

The proponent will make an equitable contribution towards upgrade works on Wolgan Road in relation to damage caused by construction traffic and increased maintenance work attributable to additional traffic generated by the development. The proponent will make an equitable contribution to the implementation of measures to address the existing safety deficiencies of the road.

Objectives

- *To mitigate existing safety hazards.*
- *To retain the rustic, rural character.*
- *To ensure that additional traffic generated by the development does not degrade the physical condition of the road.*

Road safety improvements will be designed in accordance with:

- AUSTROADS Road Safety Audit
- RTA's Policy for Signposting of Resorts and Tourist Facilities.
- Wollemi National Park Plan of Management.

Operational Management Plan

A plan that details the operational management of the resort.

Objectives

- *To optimise benefits to the local economy and community*
- *To minimise adverse impacts upon the local community, economy and natural environment.*

Vehicular Access and deliveries/servicing

Objectives

- *To minimise vehicle trips into Wolgan Valley.*
- *To limit the type and size of vehicles accessing the site*
- *To minimise road kill of native fauna.*
- *To ensure that drivers accessing the site are trained and familiar with the road conditions and habits of local fauna.*

Off-site supply depot and guest reception

An off-site facility outside Wolgan Valley (probably within Lithgow) will be established. All goods delivery vehicles and guests will be required to deliver/check in to this facility. No guests or goods delivery vehicles will be permitted to drive into the resort. Guests and goods will be transferred to the resort by trained resort staff.

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Objectives

- To provide a facility where various deliveries of goods bound for the site can be stored and consolidated into a reduced number of co-ordinated trips.
- To provide a facility for guests driving to the resort to leave their vehicle, prior to being transferred to the site by trained resort staff.

Helicopter movements

Not more than four helicopter movements will occur in any week, other than during bushfire or other emergency events. No recreational flights over surrounding areas will occur and the site will not be used as a 'heliport'.

Objective

- To minimise noise impacts upon guests, surrounding residents and the Greater Blue Mountains World Heritage Area

Employee numbers, rostering and accommodation

Objectives

- To create opportunities for the employment of local residents.
- To minimise staff trips to and from the site.

Staff Induction

Objectives

- To ensure all staff appreciate and are sensitive to the very special natural and cultural values and sensitivities of Wolgan Valley, and the sustainability initiatives of the resort.
- To ensure all staff understand, and sufficient staff are suitably qualified to implement the range of management plans adopted for the resort, particularly the emergency response plans.
- To ensure that all staff driving in and out of Wolgan Valley are familiar with the road, its safety hazards and the habits of local wildlife.
- To include personnel on staff with experience and intimate understanding of the local ecology and aboriginal and non-aboriginal history of Wolgan Valley

Local Sourcing of Materials, Produce and Services

Objectives

- To preferentially source produce and services from within the locality and the Lithgow region

Waste Management

Objectives

- To minimise the generation of waste.
- To minimise wastes entering the natural environment.
- To optimise the on-site recycling or reuse of wastes.
- To ensure that all solid waste leaving the site is separated by recyclability.
- To optimise the on-site composting and disposal of green waste.

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Waste Management strategies will be prepared in accordance with:

- Regional Waste Boards in NSW's Waste Planning Guide for Development Applications – Planning for Less Waste
- EPA Environmental Guidelines - Composting and Related Facilities (2003).
- Wollemi National Park Plan of Management

