REFERRAL OF A PROJECT FOR A DECISION ON THE NEED FOR ASSESSMENT UNDER THE *ENVIRONMENT EFFECTS ACT 1978*

REFERRAL FORM

The *Environment Effects Act 1978* provides that where proposed works may have a significant effect on the environment, either a proponent or a decision-maker may refer these works (or project) to the Minister for Planning for advice as to whether an Environment Effects Statement (EES) is required.

This Referral Form is designed to assist in the provision of relevant information in accordance with the *Ministerial Guidelines for assessment of environmental effects under the Environment Effects Act 1978* (Seventh Edition, 2006). Where a decision-maker is referring a project, they should complete a Referral Form to the best of their ability, recognising that further information may need to be obtained from the proponent.

It will generally be useful for a proponent to discuss the preparation of a Referral with the Department of Transport, Planning and Local Infrastructure (DTPLI) before submitting the Referral.

If a proponent believes that effective measures to address environmental risks are available, sufficient information could be provided in the Referral to substantiate this view. In contrast, if a proponent considers that further detailed environmental studies will be needed as part of project investigations, a more general description of potential effects and possible mitigation measures in the Referral may suffice.

In completing a Referral Form, the following should occur:

- Mark relevant boxes by changing the font colour of the 'cross' to black and provide additional information and explanation where requested.
- As a minimum, a brief response should be provided for each item in the Referral Form, with a more detailed response provided where the item is of particular relevance.
 Cross-references to sections or pages in supporting documents should also be provided. Information need only be provided once in the Referral Form, although relevant cross-referencing should be included.
- Responses should honestly reflect the potential for adverse environmental effects. A
 Referral will only be accepted for processing once DTPLI is satisfied that it has been
 completed appropriately.
- Potentially significant effects should be described in sufficient detail for a reasonable conclusion to be drawn on whether the project could pose a significant risk to environmental assets. Responses should include:
- a brief description of potential changes or risks to environmental assets resulting from the project;
- available information on the likelihood and significance of such changes;
- the sources and accuracy of this information, and associated uncertainties.
- Any attachments, maps and supporting reports should be provided in a secure folder with the Referral Form.
- A CD or DVD copy of all documents will be needed, especially if the size of electronic documents may cause email difficulties. Individual documents should not exceed 2MB.

- A completed form would normally be between 15 and 30 pages in length. Responses should not be constrained by the size of the text boxes provided. Text boxes should be extended to allow for an appropriate level of detail.
- The form should be completed in MS Word and not handwritten.

The party referring a project should submit a covering letter to the Minister for Planning together with a completed Referral Form, attaching supporting reports and other information that may be relevant. This should be sent to:

<u>Postal address</u> <u>Couriers</u>

Minister for Planning

GPO Box 2392

MELBOURNE VIC 3001

Minister for Planning

Level 7, 1 Spring Street

MELBOURNE VIC 3001

In addition to the submission of the hardcopy to the Minister, separate submission of an electronic copy of the Referral via email to ees.referrals@dtpli.vic.gov.au is encouraged. This will assist the timely processing of a referral.

PART 1 PROPONENT DETAILS, PROJECT DESCRIPTION & LOCATION

1. Information on proponent and person making Referral

Name of Proponent:	Greater Bendigo City Council
Authorised person for proponent:	Stan Liacos
Position:	Director – City Futures
Postal address:	PO Box 733, Bendigo Vic 3552
Email address:	s.liacos@bendigo.vic.gov.au
Phone number:	03 5434 6446
Facsimile number:	03 5464 6473
Person who prepared Referral:	Phil Hansen
Position:	Bendigo Airport Manager
Organisation:	City of Greater Bendigo
Postal address:	PO Box 733, Bendigo Vic 3552
Email address:	p.hansen@bendigo.vic.gov.au
Phone number:	03 5434 6078
Facsimile number:	03 5434 6473
Available industry &	00 0404 0470
environmental expertise:	In House Expertise:
(areas of 'in-house' expertise & consultancy firms engaged for	Jodi Cant, Adrian Doye, Robyn Major – City of Greater Bendigo Sustainable Environments Unit Phil Hansen – Major Projects Unit
project)	External Expertise
	BIOSIS
	BIOSIS undertook the initial due diligence reporting for the
	project relating to the Aboriginal Heritage Act (2006). This
	resulted in Bendigo Airport deciding to undertake a full voluntary Standard Cultural Heritage Management Plan.
	Standard Cultural Flentage Management Flant.
	Centrum Town Planning
	Centrum were engaged to draft the new planning scheme
	provisions and amendment documents as well as the Planning Permit Application Report.
	Atlas Ecology
	Initial investigative study to estimate the effects of runway
	development on local ecology, based on Option 1 runway
	location (70 metres east of current proposal).
	Garry and Belinda Cheers
	Garry and Belinda Cheers were engaged to review the
	documentation supplied by Atlas Ecology (due to time lapses
	and regulatory changes). Cheers also provided a specific analysis on the existence of the Golden Sun Moth, vegetation
	offset requirements and a habitat hectare study for the project.
	Aurecon Aviation
	Aurecon Aviation were contracted to undertake the key engineering design work for the airside proposal. This included
	full design documentation for the fencing, lighting, pavement
	surfaces and substrates (runway, taxiway and apron areas), cut
	and fill, method of works plan and drainage infrastructure.
	Aurecon Traffic
	Aurecon Traffic division prepared a Traffic Impact Assessment
	which assessed the project (at full development) against the
	existing road network and associated traffic conditions.
	Airports Plus
	Airports Plus are an aviation industry consulting service engaged
	to write the Bendigo Airport Master Plan and infrastructure
	/feature surveying.

Tomkinson Group

Tomkinson Group provided the project with engineering services relating to the proposed Business Park, including the layout, services infrastructure and design documentation.

Airport Surveys

Airport Surveys provided the measurements and mapping of the Obstacle Limitations Surfaces.

Kneebush Planning

Kneebush Planning are an aviation specialist urban planning consultancy who designed and developed the Australian Noise Exposure Forecast based on the proposed location of the new runway and design aircraft used to model it.

GTS

GTS were engaged to undertake geotechnical surveys and analysis.

2. Project - brief outline

Project title: Bendigo Airport Redevelopment Project

Project location: (describe location with AMG coordinates and attach A4/A3 map(s) showing project site or investigation area, as well as its regional and local context)

The Bendigo Airport Redevelopment Project is located on the existing aerodrome site, 4 kilometres to the east of Bendigo CBD at 35 Victa Road, Bendigo East. (AGM x:261,505 y:593,0751). See Map 1 – Appendix A.

The airport site is approximately 156 hectares is size comprising several parcels of land including freehold and Crown Land. The project will have effect on a further 20 hectares of Crown Land to the north of the project site. Strategically, the site is located adjacent to Bendigo's largest industrial estate and borders Crown Land bush reserves. Nearby residential areas are zoned Low Density and unlikely to increase in density under the current planning scheme.

Short project description (few sentences):

The Bendigo Airport proposed redevelopment broadly comprises:

- 1. A proposed new runway 1,600 metres long and 30 metres wide parallel to existing runway 17/35;
- 2. A major utility infrastructure upgrade for the currently poorly serviced and underutilised Airport Business Park, which includes gas, telecommunications, water, electricity and sewer upgrades. The hatched area to the north includes further drainage infrastructure considered as part of this proposal. Car parking facilities will be located adjacent to the terminal building.

The redevelopment project is a key strategic priority identified in the Loddon Mallee Strategic Regional Plan (Southern Region) alongside the Bendigo Airport's Strategic and Masterplan. This has led to a \$5 million funding commitment from the Victorian Government to build a new runway and associated infrastructure as identified above.

The purpose of the development project is to upgrade Bendigo Airport to a regional status in consistent with its surrounding thriving urban centre. More specifically, the aviation infrastructure is deteriorating in terms of structural integrity restricting to aircraft to under 5,700kg.

Existing service infrastructure including power and sewerage are at full capacity, creating a block to further economic growth of Bendigo Airport. With minimal investment since its establishment in the 1970s, Greater Bendigo is now faced with an airport that requires significant investment to maintain a proper aviation function and to develop its economic and social potential. The lack of infrastructure and poor runway condition is a concern for the ongoing viability of operations that exist (including emergency services, flight training, charter operations and aircraft maintenance) and continues to inhibit opportunities for new business establishment and the expansion of existing businesses. Bendigo Airport is also the identified Emergency Services Regional Hub as an operational base for Air Ambulance, Department of Environment and Primary Industries and CFA. There are concerns about the current condition of the runway, taxiway and apron areas used by Emergency Services.

3. Project description

Aim/objectives of the project (what is its purpose / intended to achieve?):

The purpose of the development project is to upgrade Bendigo Airport to a regional status consistent with its surrounding thriving urban centre. More specifically, the aviation infrastructure is deteriorating in terms of structural integrity restricting aircraft to under 5,700kg.

Existing service infrastructure including power and sewerage are at full capacity, creating a block to further economic growth of Bendigo Airport. With minimal investment since its establishment in the 1970s, Greater Bendigo is now faced with an airport that requires significant investment to maintain a proper aviation function and to develop its economic and social potential. The lack of infrastructure and poor runway condition is a concern for the ongoing viability of operations that exist (including emergency services, flight training, charter operations and aircraft maintenance) and continues to inhibit opportunities for new business establishment and the expansion of existing businesses. Bendigo Airport is also the identified Emergency Services Regional Hub as an operational base for Air Ambulance, Department of Environment and Primary Industries and CFA. There are concerns about the current condition of the runway, taxiway and apron areas used by Emergency Services.

Background/rationale of project (describe the context / basis for the proposal, eg. for siting):

There have been no infrastructure improvements at Bendigo Airport for 40 years. Council determined to investigate the redevelopment in 2007, following alternate siting study (2002) and adopted the Bendigo Airport Strategic Plan and Master Plan in 2007 and 2009, with technical design commencing in 2011. Council resolved to keep operations at current site and investigate new runway options. Four alignments were investigated. The current proposal is best balance between aviation function, environmental impacts and economic viability.

The decision to develop a new runway in a new location was based on extensive analysis of existing infrastructure conditions and the viability/constraints of upgrading and extending the existing runway. Geotechnical analysis suggests that to upgrade the existing runway would require complete removal of all existing substrate materials as well as new surface treatments. Whilst this is feasible, it is no more economically viable than a new runway, particularly as there is no reasonable alternative operation facility to maintain current aviation activities on the site during construction. This would prove a major impost to the existing operations of many businesses and critically, Emergency Services.

Main components of the project (nature, siting & approx. dimensions; attach A4/A3 plan(s) of site layout if available):

Construction of 1,600x30 metre runway, apron and taxiways, installation of services infrastructure for Business Park.

Runway Design

The new runway design is based on the identified need for a larger, higher capacity runway to cater for the most predominantly used regional aircraft to meet Bendigo's needs into the future. The runway is to be 1,600 metres long (running north/south) and 30 metres wide. It is designed to carry up to 22,000 kilograms Maximum Take-off Weight (MTOW) and is comparable with operations at regional aerodromes across Australia, such as Wagga Wagga, Dubbo, Mildura, Tamworth and Albury. The new north-south runway is to be located 93 metres to the east of the existing runway, as measured from the centerline. The new runway will have an overall runway strip width of 150 metres (excluding clearance areas).

The new taxi-lanes will link the existing and proposed new hangars with the taxi way. Three taxi-lanes currently exist. These will be extended and upgraded. In addition, three new taxilanes are proposed, with the potential for a seventh in the area to the north of the hangar precinct (refer to the engineering layout plans). The apron areas shown will accommodate several larger aircraft and provide parking and movement areas between hangar precincts within the Business Park and airside areas, and taxiways linking the new runway.

The construction of the runway will require a substantial cut into the elevated land to the east of the existing runway and the removal of native vegetation. In total, it is estimated that 172,000 cubic metres of earth will need to be excavated to allow for the new runway. The clearance areas will be finished with a 75mm layer of topsoil and hydromulch. Some areas at the northern end of the runway will need to be filled to create a level surface for the runway. These areas will utilise fill from the areas that are cut. Typical cut and fill cross sections are shown in the Pavement Plan in Attachment 10.

Other proposed works associated with the new runway and taxiways include:

- Demolition of existing drainage infrastructure;
- New sub-surface stormwater drainage associated with the new runway and taxiways
- Runway and taxi way lighting (3 stage medium intensity PAL system);
- · Basic apron flood lighting and line marking;
- Infrastructure to the Business Park, including:
 - Provision of electricity, water, gas, telecommunications and sewerage services;
 - · Access Roads and drainage.

The proposed runway redevelopment and Business Park project features essential drainage infrastructure designed to direct stormwater away from the runway surface and through a series of open, unlined drains (OUDs) roughly through the centre of the property running south to north.

It is proposed that car parking facilities will be located adjacent to the terminal building.

Ancillary components of the project (eg. upgraded access roads, new high-pressure gas pipeline; off-site resource processing):

- Re-routing of Heinz Street to facilitate the northern portion of the runway extension
- Re-routing existing Coliban channel to facilitate clearance areas to the south of the runway extension.

Key construction activities: Earthworks associated with construction of new runway and associated infrastructure through cut and fill:

- New security fencing, lighting and associated drainage. The existing fencing is close to the end of
 its' useful life and will be replaced to provide appropriate airport boundary security and wildlife
 exclusion. New security fencing will be constructed across the existing Heinz Street road reserve
 and to the north of the runway extension on 149 and 199 Heinz Street. The fencing plan is attached
 at Appendix C.
- Roads and drainage in new Business Park. Internal access road to be constructed to provide access to individual lots within the Business Park and associated curbing to provide drainage.
- Vegetation clearance. Topsoil stripping and storage. Vegetation is to be cleared to allow required clearance areas at the northern and eastern verges of the new runway strip. This is discussed in detail in Section 2. Topsoil will be stripped within the extent of the excavation (new runway strip 1,600x150m) and stored onsite for landscaping purposes.
- Power supply and other services delivery. Power, gas, water, telecommunications and sewerage
 infrastructure is to be established onsite (Business Park) as present services are at capacity.
 Construction will involve trenching alongside the access roads in the Business Park, with access
 pits to each proposed subdivision lot.
- Establishment of site offices and works depot. A site works depot is to be established on the lot known as 149 Heinz Street to provide access to the construction site via Heinz Street and to ensure ongoing aviation operations.
- Road construction. Heinz Street will be re-routed as per plan at Appendix D.

Key operational activities: Key operational activities following construction phase include:

Aviation activities

Aviation activities are currently constrained by poor infrastructure and capacity. The new runway, taxiway and apron areas will facilitate an increase in aviation capacity by allowing larger, heavier aircraft to operate. This includes increasing the main runway length from 1,135 meters to 1,600 meters, as well as increase the width from 18 metres to 30 metres. Depending on subsequent commercial operations based at Bendigo Airport, security arrangements may also change, requiring secure areas to be established. General Aviation would be largely unaffected by the redevelopment.

Business Park operations

Key decommissioning activities (if applicable): N/A

The existing main runway will be resealed to become an operational taxiway and will be decommissioned as a runway.

Is the project an element or stage in a larger project?

X No Yes If yes, please describe: The overall project strategy for delivery of all stages and components; the concept design for the overall project; and the intended scheduling of the design and development of project stages).

The project constitutes Stages 2 and 3 of the upgrade works at the airport. Stage 1 being under construction providing 3x new taxilanes and road access to 25 new hangar sites.

Is the project related to any other past, current or mooted proposals in the region? X No Yes If yes, please identify related proposals.

4. Project alternatives

Brief description of key alternatives considered to date (eg. locational, scale or design alternatives. If relevant, attach A4/A3 plans): provide plans

The Bendigo Airport Masterplan has considered several alternatives in developing the current plans, specifically in relation to the preferred location and alignment of the new runway, including:

- Redeveloping and extending the existing runway and apron areas;
- Extending the runway to the south of the present site;
- Locating a new runway 200 metres to the east of the present alignment;
- Locating the runway 93 metres to the east of the present runway (this proposal) and utilising the existing runway as a taxiway;
- Alternate land sites.

All options have been considered and tested on merits of operational and statutory requirements, environmental effects, interruption to essential aviation activities and economic viability. Council and DEPI consider the current proposal to be the right balance between these considerations.

An alternative site at Woodvale to the west of Bendigo was investigated in 2002. The investigation showed a new airport being constructed would cost around \$45 million. Council passed a resolution to redevelop the airport on the current site.

The Bendigo Airport Masterplan was developed in 2007 and the Bendigo Airport Strategic Plan was developed in 2010. Both were endorsed by Council.

Four possible locations were investigated on the current site, all as parallel runways to the existing runway. The need to remove native vegetation was the overriding environmental consideration in the analysis of options. Option 3 was chosen and endorsed by Council and is the subject of this referral. Option 1 required the greatest encroachment into the Bendigo Regional Park as the greatest loss of native vegetation. Options 2 and 4 required less removal of native vegetation than Option 3, however disruption to existing airport operations would be greater ie. closure of the airport for the duration of construction (12-18 months).

Option 3 substantially reduces the impact on native vegetation when compared with Option1. The majority of vegetation to be removed or trimmed in the preferred option is within the existing airport boundary (Crown Land reserved for airport purposes). Some vegetation will need to be removed or trimmed to allow for the development of additional infrastructure and the runway, however this will be offset in accordance with the requirements of the State Planning Policy Framework and has received DEPI endorsement. This is discussed further in the attached Planning Report and the Ecological Assessment reports.

It is considered that Option 3 is the most viable option going forward to approvals and is the basis on which the proposed Planning Scheme Amendment (C175) is drafted.

Brief description of key alternatives to be further investigated (if known): N/A

5. Proposed exclusions

Statement of reasons for the proposed exclusion of any ancillary activities or further project stages from the scope of the project for assessment:

Provision of taxilane and access to General Aviation hangar areas and associated drainage infrastructure (currently underway). This project component has been initiated to facilitate economic development at the airport. The project comprises 3x new taxilanes, 3x gravelled access roads, a temporary road and establishment of 25 new leasable hangar sites.

6. Project implementation

Implementing organisation (ultimately responsible for project, ie. not contractor): City of Greater Bendigo

Implementation timeframe: 2-4 years

Proposed staging (if applicable): 3 stages. Stage 1 General Aviation precinct improvements (excluded from the referral), Stage 2, Runway Development, Stage 3, Business Park infrastructure upgrades.

7. Description of proposed site or area of investigation

Has a preferred site for the project been selected?

No **X** Yes If no, please describe area for investigation. If yes, please describe the preferred site in the next items (if practicable).

The site of the current Bendigo Airport is the preferred site for redevelopment.

General description of preferred site, (including aspects such as topography/landform, soil types/degradation, drainage/ waterways, native/exotic vegetation cover, physical features, built structures, road frontages; attach ground-level photographs of site, as well as A4/A3 aerial/satellite image(s) and/or map(s) of site & surrounds, showing project footprint):

The 160 hectare Bendigo Airport site is bounded by Victa Road to the south, residential areas to the west and Regional Park to the east and north. The East Bendigo Industrial area is immediately to the south. The airport currently has a 1,135 metre long asphalt paved runway (18 metres wide), associated lighting, markers, taxiways and apron areas, and a 780 metre partly sealed runway on the airside. The non-airside land comprises a terminal building, several small business that have direct taxiway access and a number of private and commercial hangars with all sites leased from the City of Greater Bendigo.

A main access road connects the private and commercial areas to Victa Road. The site is serviced by power, water and telecommunications. There are no gas or reticulated sewerage services connected. The current power supply to the airport is at full capacity, with some tenants and businesses using stand-alone generators to provide essential power needs.

The proposed runway redevelopment and Business Park project features essential drainage infrastructure designed to direct stormwater away from the runway surface and through a series of open, unlined drains (OUDs) roughly through the centre of the property running south to north. It is proposed that car parking facilities will be located adjacent to the terminal building.

has an Australian Height Datum level of 210 metres. The site drains slowly from south to north facilitated by open unlined drains located parallel to the runway. The site collects stormwater from the adjacent industrial estate to the south via a retarding basin. Stormwater exits the site at the north west corner before flowing into Back Creek to the north of Heinz Street. The retarding basin is the only waterbody on the site. Several small dams and similar waterbodies exist on low density residential land to the west and north west of the Bendigo Airport.

The airport site contains a number of areas of native vegetation, largely Box-Ironbark forest, which are generally located at the perimeter of the site. The largest areas are located on the eastern side of the site with smaller areas located on the western boundary and at the interface with Bendigo Regional Park to the north of Heinz Street. The northern section of the airport entrance road is also vegetated. See Appendix A, Map1.

The main construction activities will occur 93 meters to the east of the existing runway, the apron area to the west of the runway, and the business park between the main access road and the airport terminal area.

Site area (if known): 160 (hectares)

Route length (for linear infrastructure) 1.6 (km) and width 30 (m) (main runway)

Current land use and development:

Operational CASA registered aerodrome. Improvements include terminal building, 34 private and commercial buildings, fencing, access roads, runway, taxiways, apron and lighting.

The airport currently has a 1,135 meter long asphalt paved runway (18 meters wide), associated lighting, markers, taxiways and apron areas, and a 780 meter partly sealed runway on the airside. The non-airside land comprises a terminal building, several small businesses that have direct taxiway access and a number of private and commercial hangars. Refer Appendix E. All sites are managed by the City of Greater Bendigo.

The main access road connects the private and commercial areas to Victa Road. The site is serviced by power, water and telecommunications. There are no gas or reticulated sewerage services connected to the site. The current power supply to the airport is at full capacity, with some tenants and businesses using stand-alone generators to provide essential power needs.

The area to the south of the Business Park (See Appendix A, shown as hatched on Map 2) is used as a retarding basin, collecting stormwater flows from the East Bendigo Industrial Estate.

Description of local setting (eg. adjoining land uses, road access, infrastructure, proximity to residences & urban centres):

The site is located at the edge of the Bendigo urban area approximately 4 kilometres to the north east of the Bendigo CBD. The site is surrounded by a range of uses, predominantly low density residential to the west, industrial to the south, and rural living and conservation to the north east. Appendix B illustrates the local context.

The East Bendigo industrial precinct as identified in Clause 21.07 of the MSS covers an area of approximately 328 hectares. The land is zoned Industrial 1 (IN1Z) and Industrial 3 (IN3Z). It is the largest industrial precinct in Greater Bendigo and contains major industries such as Motherson Elastomers, Keech Castings and Bendigo Brick.

Bendigo Regional Park surrounds most of Bendigo. It is characterised by Box- Ironbark Forest EVC vegetation and supports populations of threatened flora and fauna species. It provides recreational opportunities for a range of activities and is managed by Parks Victoria.

The land to the west of the Airport has been substantially developed for low density residential development. Most of the lots are between 4,000m2 (0.4 hectares) and 20,000m2 (2 hectares). Many are used for horse keeping. A number of the lots near the Airport have been used for poultry production. There are 8 residential properties directly adjoin the airport site.

Victa Road is a local road that links the Wellsford Industrial Estate to the east of the Airport with Rohs Road to the west of the Airport. It provides an important east-west link through the East Bendigo industrial precinct.

It is expected that increased activity will occur in this precinct as available industrial land is developed. Heinz Street a local road that links rural living and low density residential development adjacent to the Airport with the Midland Highway to the west. It is sealed to the west of the subject site and is gravelled for its remaining length to the east. Seven rural residential properties are located along Heinz Street east of the airport.

Planning context (eg. strategic planning, zoning & overlays, management plans):

The Bendigo Airport is located within the City of Greater Bendigo municipal boundary and is administered under the Greater Bendigo Planning Scheme.

The present site has the following Planning controls:

Zone: Special Use (schedule 7).

Applies to all land on the Airport Reserve and Business Park. The zone requires planning approval for all buildings and works.

Overlays: Development Plan (schedule 19)

Used to control built form within the airport reserve and business park areas.

Design and Development (schedule 1)

Applies to land outside the airport reserve to reflect height restrictions measured by OLS.

Airport Environs (schedule 2)

Applies to land outside the airport reserve to reflect noise models measured by ANEF.

Wildfire Management

Applies to the newly acquired land to the north of Heinz Street.

Land Subject to Inundation

Applies to land immediately around the airport entry road and relates to drainage line to the west of the airport.

Local government area(s): City of Greater Bendigo

8. Existing environment

Overview of key environmental assets/sensitivities in project area and vicinity (cf. general description of project site/study area under section 7):

The key assets and sensitivities within the vicinity of the Project area are:

Native forest and woodland. The majority of the forested areas are within the Airport Reserve, although some clearing is required in the adjacent Bendigo Regional Park reserve.

Nearby residences. Noise sensitivity is paramount in the nearby residential areas, with most of the residential areas zoned Rural Residential or Low Density Residential (restricted minimum subdivision area). Proposed planning overlays (AEO1 and AEO2) require noise attenuation measures (EPA Guidelines) for all new residential development. Noise modelling undertaken in 2011 which forms the evidence base of the AEO overlays shows a reduction in the total area of the overlay from its' current position.

9. Land availability and control

Is the proposal on, or partly on, Crown land?

No XYes If yes, please provide details. The Bendigo Airport is partly located on Reserved Crown land. Vegetation impacts on land within the Reserve and on adjoining Crown Land.

Current land tenure (provide plan, if practicable):

The subject site is known as the Bendigo Airport and comprises several parcels of land. The area of the airport associated with 'airside' activities (runways, taxiways, apron, clearances) is Crown Land with City of Greater Bendigo as Committee of management. The balance of the land, including the hangar areas is freehold land owned by the City of Greater Bendigo(CoGB). CoGB recently purchased the additional titles of land to the north of Heinz Street to facilitate the extra runway length and required clearances. The land is currently zones Rural Residential. The Planning Scheme Amendment (C175) proposes to rezone the land to Special Use (7) to be consistent with the rest of the airport and allow the development and use.

Intended land tenure (tenure over or access to project land):No change

Other interests in affected land (eg. easements, native title claims): Coliban Water have vested Crown Reserve (water channel) through the Airport Reserve which will be re-routed pending further agreement relating to design parameters.

10. Required approvals

State and Commonwealth approvals required for project components (if known):

Planning and Environment Act.

Amendment to introduce a new Schedule 1 to the Airport Environs Overlay (AEO1) and apply Schedule 2 to the Airport Environs Overlay to additional properties identified in the Australian Noise Exposure Forecast (ANEF, 2011) for the Bendigo Airport. Remove Schedule 2 to the Airport Environs Overlay (AEO2) from some properties to which it currently applies.

Flora and Fauna Guarantee Act.

Consent will be required to remove Dwarf Cassinia and Whirrakee Wattle. No application has been made at this time.

• Crown Lands (Reserves) Act.

Consent will be required under Section 17B for works (vegetation removal) in Bendigo Regional Park.

Environment Protection and Biodiversity Act.

Referral was made for the removal of threatened species. Determination was made that no further action is required.

Aboriginal Heritage Act.

Cultural Heritage Management Plan was developed and approved.

Civil Aviation and Safety Regulations.

Approval from CASA will be required to ensure new airside infrastructure complies.

Have any applications for approval been lodged?

No XYes If yes, please provide details. Planning Permit application and Planning Scheme Amendment has been lodged for Ministerial Authorisation under Section 96a of the Planning and Environment Act 1987.

Approval agency consultation (agencies with whom the proposal has been discussed):

DEPI,CFA, DPCD, NCCMA, Parks Victoria

Other agencies consulted: Civil Aviation Safety Authority

PART 2 POTENTIAL ENVIRONMENTAL EFFECTS

11. Potentially significant environmental effects

Overview of potentially significant environmental effects (identify key potential effects and comment on their significance and likelihood, as well as key uncertainties):

The most significant environmental effects relate to biodiversity values.

Native vegetation is to be removed to ensure safe and clear flight paths adjoining the proposed new runway in compliance with the approval by Airservices Australia of Bendigo Airport Obstacle Limitations Surface Plan. This will occur on the existing airport reserve, existing airport road reserve along the western boundary, and part of the Bendigo Regional Park. Three EVCs exist in the development area, all of which will be affected by the development.

This vegetation provides habitat for threatened flora and fauna including Whirrakee Wattle and Dwarf Cassinia, a limited number of which may be subject to direct or indirect (construction related disturbance) effects.

Three reports complete the assessment for vegetation relevant to this referral:

Atlas Ecology (2010), 'Final Report: Flora and Fauna Assessment – Bendigo Aerodrome and Surrounds'. Cheers, G & B, (2011, updated October 24, 2013). 'Ecological Assessment of Vegetation that will be affected by the Bendigo Airport upgrade'.

Cheers, G & B, (2011).' Assessment of Vegetation At the Bendigo Airport For the presence of Golden Sun Moth (Synemon plana).

12. Native vegetation, flora and fauna

Native vegetation

Is any native vegetation likely to be cleared or otherwise affected by the project?

NYD

No X Yes If yes, answer the following questions and attach details.

Vegetation is required to be removed completely within the 0-10 meter zone of the new runway and partially removed (overstorey only) in the 10-20 metre zone around the runway in accordance with the Obstacle Limitations Surface (OLS) to allow safe clearance aty the end and sides of the runway.

Other vegetation clearance is associated with providing infrastructure to the Business Park (roads, utility services).

What investigation of native vegetation in the project area has been done? (briefly describe)

Atlas Ecology (2010), 'Final Report: Flora and Fauna Assessment – Bendigo Aerodrome and Surrounds'. (Attachment 1)

Cheers, G & B, (2011, updated October 24, 2013). 'Ecological Assessment of Vegetation that will be affected by the Bendigo Airport upgrade'. (Attachment 2)

Cheers, G & B, (2011).' Assessment of Vegetation At the Bendigo Airport For the presence of Golden Sun Moth (Synemon plana). (Attachment 3)

What is the maximum area of native vegetation that may need to be cleared?

NYD Estimated area: 36.7(hectares)

How much of this clearing would be authorised under a Forest Management Plan or Fire Protection Plan?

XN/A approx. percent (if applicable)

Which Ecological Vegetation Classes may be affected? (if not authorised as above)
NYD X Preliminary/detailed assessment completed. If assessed, please list.

The following EVCs may be affected by the proposal. These are due to clearance requirements for the proposed new runway.

• Box Ironbark (EVC 61) High CS 13.8 hectares

Medium CS 17.3 hectares

Low CS 0.4 hectares

Heathy Woodland (EVC 48)
 Medium CS 4.2 hectares

Low Rises Grassy Woodland (EVC 175)
 High CS 1.7 hectares

Medium CS 0.5 hectares

Have potential vegetation offsets been identified as yet?

NYD X Yes If yes, please briefly describe.

Offsets have been identified using methodology outlined in Cheers (updated October 24, 2013, Attachment 2) and referred to DEPI for comment and planning permit conditions.

Other information/comments? (eg. accuracy of information)

Please refer to full reports attached.

Flora and fauna

What investigations of flora and fauna in the project area have been done?

(provide overview here and attach details of method and results of any surveys for the project & describe their accuracy)

Atlas Ecology (2010), 'Final Report: Flora and Fauna Assessment – Bendigo Aerodrome and Surrounds'. (Attachment 1)

Cheers, G & B, (2011, updated October 24, 2013). 'Ecological Assessment of Vegetation that will be affected by the Bendigo Airport upgrade'. (Attachment 2)

Cheers, G & B, (2011).' Assessment of Vegetation At the Bendigo Airport For the presence of Golden Sun Moth (Synemon plana). (Attachment 3)

Have any threatened or migratory species or listed communities been recorded from the local area?

NYD x No Yes If yes, please:

- List species/communities recorded in recent surveys and/or past observations.
- Indicate which of these have been recorded from the project site or nearby.

Fauna:

The Atlas Ecology assessment found 44 species on the site, comprising eight mammals (four native, four introduced), 32 native birds, one native reptile, and three native frogs (**Attachment 1**). It also found that the study site provides suitable habitat for three nationally significant species, Regent Honeyeater, Swift Parrot and Golden Sun Moth, many state significant species and members of the *Flora and Fauna Guarantee Act 1988 (FFG Act)* listed Victorian Temperate Woodland Bird Community (Atlas Ecology, 2010). No species listed as threatened under the FFG Act were recorded.

The Cheers report (**Attachment 2**), generally agreed with the findings of the Atlas Ecology report in relation to fauna, however, concluded different findings in relation to the habitat of the Golden Sun Moth. These findings were confirmed in a separate report titled 'Assessment of Vegetation At the Bendigo Airport For the presence of Golden Sun Moth (Synemon plana)' (**Attachment 3**), which found that the habitat at the Airport is unlikely to be suitable for the Golden Sun Moth. for a number of reasons (Cheers, 2011).

Flora:

This report found that a total of 112 flora species were recorded at the study site, including 77 indigenous species (Atlas Ecology, 2010). Of these species, two are ecological significance (Whirrakee Wattle (Acacia williamsonii) and Dwarf Cassinia (Cassinia diminuta). A further 32 were considered to be of regional significance (Atlas Ecology, 2010). The 2010 flora report was subsequently updated by Cheers (2011, revised 2013).

If known, what threatening processes affecting these species or communities may be exacerbated by the project? (eg. loss or fragmentation of habitats) Please describe

briefly.

Six threatening processes were identified at the study site (Atlas, 2010, Attachment 1).

- 1. Habitat fragmentation as a threatening process for fauna in Victoria.
- 2. Invasion of native vegetation by 'environmental weeds'
- 3. Loss of course woody debris from Victorian native forest and woodlands.
- 4. Loss of hollow-bearing trees from Victorian native forests
- 5. Threats to native flora and Fauna arising from the use by the feral honeybee (*Apis mellifera*) of nesting hollows and floral resources.
- 6. Use of Phytophthora-infected gravel in construction of roads, bridges and reservoirs.

Are any threatened or migratory species, other species of conservation significance or listed communities potentially affected by the project?

NYD x No Yes If yes, please:

- List these species/communities:
- Indicate which species or communities could be subject to a major or extensive impact (including the
 loss of a genetically important population of a species listed or nominated for listing) Comment on
 likelihood of effects and associated uncertainties, if practicable.

It is not known if any threatened or migratory species, other species of conservation significance or listed communities will be potentially affected by this project. Threatening processes will be dealt with via the Flora and Fauna Guarantee Act approval process.

Is mitigation of potential effects on indigenous flora and fauna proposed?

NYD No **x** Yes If yes, please briefly describe.

An Environmental Management Plan and Vegetation Management Plan will be developed as part of the permit process to demonstrate and implement mitigation of potential effects on indigenous flora and fauna.

Other information/comments? (eg. accuracy of information)

13. Water environments

Will the project require significant volumes of fresh water (eg. > 1 Gl/yr)?

NYD X No Yes If yes, indicate approximate volume and likely source.

Will the project discharge waste water or runoff to water environments?

NYD X No Yes If yes, specify types of discharges and which environments. The airport site has a catchment od approximately 20 square kilometres. The proposed water infrastructure (detention ponds and open unlined drains) is designed to mitigate the flow rate of stormwater through the airport site.

The retention basin at the north end of the property collects a catchment of 8 square kilometres (approx.), largely comprised of woodland and forest and will overflow into Back Creek.

The head retention basin captures offsite stormwater from the 12 square kilometre (approx.) industrial estate to the south of Victa Road, filter suspended solids and sediment.

Engineered drainage will be constructed to collect stormwater runoff from all hard impermeable surface throughout the airport, including runways, taxiways and apron areas, as well as the proposed Business Park.

Are any waterways, wetlands, estuaries or marine environments likely to be affected?

NYD **X** No Yes If yes, specify which water environments, answer the following questions and attach any relevant details.

Are any of these water environments likely to support threatened or migratory species?

NYD X No Yes If yes, specify which water environments.

Are any potentially affected wetlands listed under the Ramsar Convention or in 'A Directory of Important Wetlands in Australia'?

NYD X No Yes If yes, please specify.

Could the project affect streamflows?

NYD X No Yes If yes, briefly describe implications for streamflows.

It is not considered that streamflows will be affected by the proposed works. The designed drainage infrastructure will mitigate rapid cross-land flow through retention basins and open unlined drains.

Could regional groundwater resources be affected by the project?

NYD X No Yes If yes, describe in what way.

It is not considered that groundwater will be affected by the proposed works. See Geotechnical Report (Attachment 4). The works will involve shallow excavation to allow appropriate substrate for the new runway, drainage infrastructure, roads, utility provision and sealing works.

Could environmental values (beneficial uses) of water environments be affected?

NYD **X** No Yes If yes, identify waterways/water bodies and beneficial uses (as recognised by State Environment Protection Policies)

Could aquatic, estuarine or marine ecosystems be affected by the project?

NYD X No Yes If yes, describe in what way.

Is there a potential for extensive or major effects on the health or biodiversity of aquatic, estuarine or marine ecosystems over the long-term?

X No Yes If yes, please describe. Comment on likelihood of effects and associated uncertainties, if practicable.

Is mitigation of potential effects on water environments proposed?

NYD X No Yes If yes, please briefly describe.

There are no natural water bodies of streams within the project site. Stormwater management is via detention, sediment control and engineered drainage. There are no natural water values that will be affected by the proposed works.

Other information/comments? (eg. accuracy of information)

14. Landscape and soils

Landscape

Has a preliminary landscape assessment been prepared?

X No Yes If yes, please attach.

Is the project to be located either within or near an area that is:

 Subject to a Landscape Significance Overlay or Environmental Significance Overlay?

NYD X No Yes If yes, provide plan showing footprint relative to overlay.

 Identified as of regional or State significance in a reputable study of landscape values?

NYD X No Yes If yes, please specify.

Within or adjoining land reserved under the National Parks Act 1975?
 NYD No X Yes If yes, please specify.

The adjoining land affected by the proposal (Bendigo Regional Park) is reserved under the Crown Land (reserves) Act. Box-Ironbark is listed under the Box-Ironbark & Woodlands Investigation (ECC, 2001).

 Within or adjoining other public land used for conservation or recreational purposes?

NYD No X Yes If yes, please specify.

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The project adjoins Bendigo Regional Park. Some areas of the Park are within the Obstacle Limitations Surfaces Plan which needs to be cleared and trimmed for safe aviation clearances. The Park is used by recreation walkers. The adjoining section of Bendigo Regional Park is 23.3 square kilometres. The clearance area is approximately 0.35 square kilometres in area.

Is any clearing vegetation or alteration of landforms likely to affect landscape values?

NYD X No Yes If yes, please briefly describe.

Existing vg Regional Park are unlikely to be affected by the proposed project (including vegetation clearance). Most walking trails through the Park are in heavily vegetated areas and views to the airport are not apparent. Some sections of cleared vegetation closest to the runway (north end) may be visible from the proosed new route of Heinz Street.

Is there a potential for effects on landscape values of regional or State importance? NYD X No Yes Please briefly explain response.

Is mitigation of potential landscape effects proposed?

NYD x No Yes If yes, please briefly describe.

Other information/comments? (eg. accuracy of information)

Note: A preliminary landscape assessment is a specific requirement for a referral of a wind energy facility. This should provide a description of:

- The landscape character of the site and surrounding areas including landform, vegetation types and coverage, water features, any other notable features and current land use;
- The location of nearby dwellings, townships, recreation areas, major roads, above-ground utilities, tourist routes and walking tracks;
- Views to the site and to the proposed location of wind turbines from key vantage points (including views showing existing nearby dwellings and views from major roads, walking tracks and tourist routes) sufficient to give a sense of the overall site in its setting.

Soils

Is there a potential for effects on land stability, acid sulphate soils or highly erodible soils?

NYD X No Yes If yes, please briefly describe.

The project does not present a potential for land stability effects. Please refer to Geotechnical report (Attachment 4). The runway design (cut and fill, substrate and surface treatment) reflect this. Testing for acid sulphate soils have not been undertaken but are unlikely due to the soil type, landform, and elevation of the project site.

Are there geotechnical hazards that may either affect the project or be affected by it?

NYD X No Yes If yes, please briefly describe.

No geotechnical hazards were identified in the Geotechnical report or the subsequent detailed engineering design.

Other information/comments? (eg. accuracy of information)

15. Social environments

Is the project likely to generate significant volumes of road traffic, during construction or operation?

NYD **X** No Yes If yes, provide estimate of traffic volume(s) if practicable.

Traffic generation is not considered to be significant during construction or operation. Please refer to Traffic Impact Assessment (Attachment 5).

Is there a potential for significant effects on the amenity of residents, due to emissions of dust or odours or changes in visual, noise or traffic conditions?

NYD No **X** Yes If yes, briefly describe the nature of the changes in amenity conditions and the possible areas affected.

The Airport has an interface with residential land to the west. In this area, the Airport is separated from a number of residential properties by a strip of land that has a width of approximately 60 metres and comprises (from east to west):

- The Airport entrance road;
- Reserved Crown Land;
- Crown Land associated with the Spring Gully Water Supply channel.

These areas currently provide an important physical and visual buffer between the Airport and the private land This land will be largely unchanged by the proposal, although the vegetation on the northern part of the Airport entrance road will be removed to facilitate the continuation of the entrance road and provide access to new hangars.

The clearance works will reduce the role of the government road in providing a visual buffer at this interface, however the two strips of Crown Land are well vegetated and will continue to provide a visual buffer to the low density residential land. It is noted that there are four dwellings located on the east side of Dixons Road and McDowalls Road within 100 metres of the proposed clearing works.

Earthworks associated with the proposal may have the potential to reduce the amenity of dwellings in the surrounding area during the construction phase, if not correctly managed. Issues relating to the construction process, including the management of construction vehicles, dust control and temporary works areas will be managed under a Construction Management Plan, proposed as a condition of the planning permit being sought. A method of works plan outlining the staging of the construction is supplied with the amendment documentation.

Is there a potential for exposure of a human community to health or safety hazards, due to emissions to air or water or noise or chemical hazards or associated transport?

NYD X No Yes If yes, briefly describe the hazards and possible implications.

The Australian Noise Exposure Forecast for the Bendigo Airport (ANEF, Bendigo Airport, 2012, Kneebush Planning 2012) (**Attachment 6**) outlines the likely noise changes resulting from operation of the new runway.

Land to be affected by AEO1 is mainly freehold land within the Bendigo Airport boundaries and Crown Land. 6 Low Density Residential Zone properties to the west of the airport land will have AEO1 applied. These are currently developed and will not require any changes or have adverse effects under the current zone or newly applied overlay. One property to the south of the airport will have AEO1 applied; this is zoned Public Conservation and Resource Zone and will not be adversely affected. Public land to the north of the airport will also have AEO1 applied. Three Rural Living Zone properties to the north of Heinz Street will have AEO1 applied. These are owned by City of Greater Bendigo and are to be rezoned Special Use Zone 7 as part of this amendment to facilitate the runway.

AEO2 will be applied to publically owned land currently zoned Public Conservation and Resource Zone to the north, west and south of Bendigo Airport. Sixteen Low Density Residential zoned properties to the west of the airport and one Rural Living Zone property to the east of the airport will have AEO2 applied. These properties are currently developed. It is not expected that these properties will be further developed for sensitive (residential use) due to the zoning and other overlays that apply. Any further residential development would require a planning permit and be subject to conditions noise attenuation measures. Nine Industrial 1 zoned properties to the south of the airport will have AEO2 applied.

The change to land affected by the AEO2 Overlay is largely currently developed or is public land and unlikely to see additional sensitive uses under current zoning. The changes to AEO2 include a contraction of the area and number of properties to which it applies.

Refer to attached Planning Report for details of properties affected by changes to Planning Scheme Overlays (Attachment 7).

Is there a potential for displacement of residences or severance of residential access to community resources due to the proposed development?

NYD X No Yes If yes, briefly describe potential effects.

Are non-residential land use activities likely to be displaced as a result of the project?

NYD X No Yes If yes, briefly describe the likely effects.

There are no new land acquisitions, easements or road boundary changes required for this proposal.

Do any expected changes in non-residential land use activities have a potential to cause adverse effects on local residents/communities, social groups or industries?

NYD X No Yes If yes, briefly describe the potential effects.

Is mitigation of potential social effects proposed?

NYD X No Yes If yes, please briefly describe.

Social effects of the proposal related to aircraft noise is regulated through Environment Protection Agency and is directly addressed through the provision of relevant Planning Scheme Overlays (AEO1 and AEO2). Any new residential development is required to employ noise mitigation controls.

Other information/comments? (eg. accuracy of information)

Cultural heritage

Have relevant Indigenous organisations been consulted on the occurrence of Aboriginal cultural heritage within the project area?

No If no, list any organisations that it is proposed to consult.

X Yes If yes, list the organisations so far consulted.

Dja Dja Wurrung Aboriginal Corporation

What investigations of cultural heritage in the project area have been done?

(attach details of method and results of any surveys for the project & describe their accuracy) Voluntary Cultural Heritage Management Plan was undertaken and approved by the local RAP. See Attachment 8)

Is any Aboriginal cultural heritage known from the project area?

NYD X No Yes If yes, briefly describe:

Any sites listed on the AAV Site Register

Sites or areas of sensitivity recorded in recent surveys from the project site or nearby Sites or areas of sensitivity identified by representatives of Indigenous organisations

The attached Cultural Heritage Management Plan (Attachment 8) shows no evidence of Aboriginal cultural heritage in the project area.

Are there any cultural heritage places listed on the Heritage Register or the Archaeological Inventory under the *Heritage Act 1995* within the project area?

NYD X No Yes If yes, please list.

Is mitigation of potential cultural heritage effects proposed?

NYD No X Yes If yes, please briefly describe.

Recommendations as per CHMP.

Other information/comments? (eg. accuracy of information)

16. Energy, wastes & greenhouse gas emissions

What are the main sources of energy that the project facility would consume/generate?

X Electricity network. If possible, estimate power requirement/560 kw

Natural gas network. If possible, estimate gas requirement/output

Generated on-site. If possible, estimate power capacity/output

Other. Please describe.

Please add any relevant additional information.

What are the main forms of waste that would be generated by the project facility?

Wastewater. Describe briefly.

Solid chemical wastes. Describe briefly.

X Excavated material. Describe briefly.

It is estimated 233,000 cubic metres of earth is to be moved in the construction of the runway. The design has been careful to minimise waste and the need to export material from the construction site. The location of the runway indicates a near neutral balance of cut and fill. Every effort will be made to reuse the excess spoil on site.

Other. Describe briefly.

Please provide relevant further information, including proposed management of wastes.

Management of waste material is described in Attachment 9 (technical specifications).

What level of greenhouse gas emissions is expected to result directly from operation of the project facility?

X Less than 50,000 tonnes of CO_2 equivalent per annum (estimated at 625 tonnes p/a) Between 50,000 and 100,000 tonnes of CO_2 equivalent per annum Between 100,000 and 200,000 tonnes of CO_2 equivalent per annum More than 200,000 tonnes of CO_2 equivalent per annum

Please add any relevant additional information, including any identified mitigation options.

17. Other environmental issues

Are there any other environmental issues arising from the proposed project?

X No Yes If yes, briefly describe.

18. Environmental management

What measures are currently proposed to avoid, minimise or manage the main potential adverse environmental effects? (if not already described above)

× Siting: Please describe briefly

✗ Design: Please describe briefly

x Environmental management: Please describe briefly.

An Environmental Management Plan and Vegetation Management Plan will be developed to manage the effects of the project on native vegetation.

X Other: Please describe briefly

Add any relevant additional information.

19. Other activities

Are there any other activities in the vicinity of the proposed project that have a

potential for cumulative effects?

NYD X No Yes If yes, briefly describe.

20. Investigation program

Study program

Have any environmental studies not referred to above been conducted for the project?

No X Yes If yes, please list here and attach if relevant.

- Australian Noise Exposure Forecast;
- · Obstacle Limitations Surfaces Survey;
- · Traffic Impact Assessment; and
- Economic Impact Assessment.

Has a program for future environmental studies been developed?

X No Yes If yes, briefly describe.

Consultation program

Has a consultation program conducted to date for the project?

No **X** Yes If yes, outline the consultation activities and the stakeholder groups or organisations consulted.

Consultation Plan developed to be co-ordinated with Planning Scheme Amendment C175. Previous consultation has taken place from 2007 (Strategic Plan) through to present. Bendigo Airport Advisory Committee has been in place since 2009, regular leaseholders meetings also take place. Consultation has also taken place with DPCD/DLPTI, DSE/DEPI, CFA and other Emergency Service providers and nearby residents via media releases and direct communication. Further communication will take place during various stages of the Planning Scheme Amendment process, including media releases, statutory public notices, government gazettal and direct notice to neighbouring property owners and occupiers. Local community groups with a direct interest in environmental issues will be involved in further discussions as the project progresses.

Has a program for future consultation been developed?

NYD No X Yes If yes, briefly describe.

Future consultation will involve website updates, project updates, direct communication with nearby residents, advisory committee meetings, media releases and statutory requirements through the Planning Scheme Amendment process (C175).

Authorised person for proponent: I. DIRECTIME - Gry FUTINES. contained in this form is, to my knowledge, tr	(full name), .(position), confirm that the information ue and not misleading.
Signature	
Date .	4/3/2014
Person who prepared this referral:	(full name)

Acting Airport Manager, Bendigo Airport......(position), confirm that the information contained in this form is, to my knowledge, true and not misleading.

Signature All

Date 4/3/14