

Cradle Mountain Visitor Experience Master Plan

FINAL 1.0

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Overview

Purpose

The purpose of this document is to present a master planned vision for the Cradle Mountain visitor experience.

The Vision

This Cradle Mountain Visitor Experience Master Plan seeks to deliver a 'precinct revitalisation' at Cradle Mountain. The aim of this plan is to present a clear, strategic master plan, directing public infrastructure investment by State and Federal Governments, as well as opportunities for private commercial involvement.

Outcomes

This Master Plan holds the following outcomes for Cradle Mountain:

- sustainable tourism solutions
- increased visitation
- increased visitor nights
- increased visitor expenditure
- increased private investment within the Master Plan footprint
- strengthened visitation in low and shoulder seasons.

While the functional aspects of this Master Plan are recognised as key success factors, the plan has explored beyond the visitor services paradigm to realise Cradle Mountain's full potential in driving maximum economic impact.

Project Inputs

The following inputs have been applied to this Master Plan:

- PWS briefings
- Cradle Mountain Stakeholders Workshop
- Master Plan Steering Committee meetings and feedback
- Existing plans
 - Cradle Valley Tourism Development Plan (2003) – CCA / PWS / Kentish Council
 - Cradle Valley Strategic Interpretation Strategy 2004 - 2008
 - World Heritage Wilderness Village Development Planning Study – Demand Analysis, 2006
 - Cradle Mountain Innovative Transport Study (2007) – Kentish Council
 - Cradle Mountain Shuttle Bus Service Analysis (2013) – DIER
 - Option on Disability Access for Bus Service at Cradle Mountain (2013) – Michael Small Consulting
 - Dove Lake Road, Cradle Mountain Large Bus Assessment (2013) – JMG Engineers
 - Cradle Mountain Shuttle Bus Choice Model (2013) – Instinct and Reason
 - Cradle Mountain Shuttle Bus Services Analysis with Revised Options (2014) – DIER
 - Cradle Shuttle Service – Effectiveness of Service Delivery (2014) – PWS
 - Reimagining the Visitor Experience of Tasmania’s Wilderness World Heritage Area (2014) – TICT, CCA, PWS

Team

The following team delivered respective skills and experience to the project:

- Project Manager: David Inches, Inspired by Marketing
- Tourism specialist: Simon Currant, SC&A
- Design and planning: Peter Walker, Cumulus Studio
- Demand testing: Dan Blair, BDA Marketing
- Planning and infrastructure assessment: Ross Mannering, Pitt and Sherry.

Executive Summary

The impact of Cradle Mountain visitation to the north west economy is significant. With Cradle Mountain down 25% for interstate trips over the past 5 years, the need for change has been identified in the 2014 PWS released *Reimagining the Visitor Experience of Tasmania's Wilderness World Heritage* report. This identified that to grow visitation and expenditure; Cradle Mountain needed to reimagine its visitor experience to deliver world-class visitor experiences while at the same time managing the impacts of visitors to the TWWHA.

Seven experience elements have been explored through this Master Plan development journey:

Primary Focus:

1. Cradle Mountain arrival, Visitor Centre and services
2. Transport between the Visitor Centre precinct and Dove Lake precinct
3. The Dove Lake visitor experience.

Supporting Focus:

1. Leary's Corner
2. Ranger Station
3. Interpretation Centre
4. Waldheim

The following elements were tested for market demand with interstate and intrastate markets:

- World Heritage Wilderness Village including: Visitor Centre with Interpretation; Tour Desk; Events Space; New Cradle Feast Experience; Café and Restaurant; Retail. While not tested the Master Plan has also allowed land allocations for future private sector development

- Four transport options from the Village to Dove Lake: low level cable car, cycle on the existing road, walking the existing boardwalk and improved shuttle bus services
- Dove Lake: new Visitor Shelter and amenities; Shelters (pods) around Dove Lake Walk.

Demand Forecasting (by BDA Marketing)

The following findings were identified through the BDA study.

Intrastate	Interstate and Inbound
<p>A strong positive response to the redevelopment concept</p> <ul style="list-style-type: none"> • Most respondents are more likely to visit as a result of the redevelopment and there was an increase in intention from Cradle Mountain today <ul style="list-style-type: none"> ○ An increased intended length of stay was also evident • The redevelopment was generally perceived to add unique, highly appealing experiences and greater comfort to the destination, while providing benefits to Tasmania • The Cable Car was the stand out element of the concept particularly in terms of driving new 	<p>Very strong response to the redevelopment concept</p> <ul style="list-style-type: none"> • Intention lifted substantially from Cradle Mountain today, and intended trips were longer • The redevelopment was perceived to enhance the core experience & engagement with the environment.. • while opening the destination to a wider pool of potential visitors and also providing past visitors with a reason to return • All elements of redevelopment were well received but Cable Car was the standout • Cable Car had clearly highest level of raw appeal and intended engagement <ul style="list-style-type: none"> ○ Highly appealing to a majority and the most preferred element for 65% (next was 7%) and > 80% would engage ○ Provides the ability to observe the stunning natural

<p>demand to the region</p> <ul style="list-style-type: none"> • Dove Lake developments also appealed strongly <ul style="list-style-type: none"> ○ The visitor centre, lounge and café and events where also positively received <p>The redevelopment would likely drive strong advocacy from locals</p> <ul style="list-style-type: none"> • 85% of those interested are very likely or certain to recommend to interstate visitors <p>The redevelopment is projected to provide incremental intrastate demand for the region</p> <ul style="list-style-type: none"> • The redevelopment tested is estimated to provide 18k visitors, 24k nights and up to \$7.5m in incremental demand over and above the trend outlook <ul style="list-style-type: none"> ○ This represents a 20% increase in nights and 38% increase in expenditure in the region ○ 4k of the incremental visitors were replacing an 	<p>environment in a comfortable, low impact way, added benefit of good value</p> <ul style="list-style-type: none"> • Dove Lake shelter and pods were next most appealing, a peaceful means of enjoying the area • Other elements also contribute to the attraction of the redevelopment <p>Significant incremental demand was evident from the redevelopment</p> <ul style="list-style-type: none"> • The redevelopment tested is estimated to provide 41k visitors, 79k nights and up to \$22m in incremental demand over and above the trend outlook <ul style="list-style-type: none"> ○ This represents a ~30% increase in nights and > 40% increase in expenditure in the region • For 79% of those intending to visit, the redevelopment had some influence on the decision travel to Tasmania, 16% (7k) would be unlikely to travel to Tas if the redevelopment did not go ahead • Conversion of day visitors to overnight would provide additional demand <ul style="list-style-type: none"> ○ Incremental demand has been applied equally to current levels of day and overnight visitation ○ Any conversion of current day
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interstate or overseas trip	visitors into overnight visitors would provide additional nights and expenditure into the region
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Incremental Demand Summary (by BDA Marketing)

The redevelopment testing forecasts an additional:

- 58,600 visitors
- 102,100 nights
- \$29.2m in incremental expenditure.

Forecast incremental demand resulting from Cradle Mountain Redevelopment (at YT Dec 2018)

	Additional Trips to CM	Additional Nights in CM	Additional expenditure in CM (scenario 1)	Additional expenditure in CM (scenario 2)
Total visitors	58.6k	102.1k	\$23.6m	\$29.2m
Overnight intrastate visitors	5.4k	22.9k	\$4.2m	\$5.3m
Day intrastate visitors	12.5k	n/a	\$1.4m	\$2.2m
Overnight interstate & inbound visitors	27.2k	79.2k	\$16.6m	\$19.7m
Day Interstate & inbound visitors	13.5k	n/a	\$1.3m	\$2.0m

Execution Imperatives (by BDA Marketing)

Incremental demand requires a new, highly appealing and world class experience.

The Cable Car is the core element of the Cradle Mountain concept and is central to incremental demand:

- Up to 85% of interstate/inbound incremental demand is at risk if the Cable Car is not part of the redevelopment
- Similarly, up to 83% of intrastate incremental demand is at risk if the Cable Car is passed over

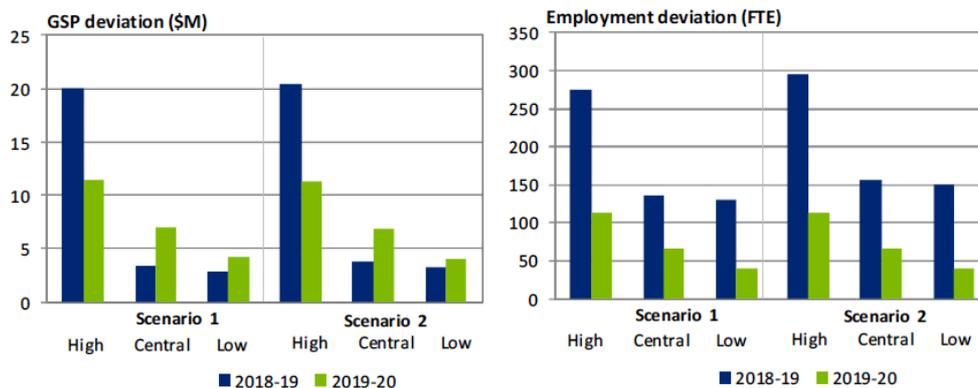
Other elements must support this experience by delivering on key factors:

- Enabling visitors to engage more enjoyably with a highly appealing natural environment
- Providing comfort and accessibility for all to widen the potential audience
- Delivering a rewarding experience with minimal impact on the pristine environment.

Economic Impact (by Deloitte)

The additional GSP and employment associated with each of the development scenarios is given in Chart i over two years: (i) 2018-19 during the height of construction; and (ii) 2019-20 as the Development becomes fully operational.

Chart i: GSP and employment deviation in select years under all scenarios



Source: Deloitte Access Economics (2016)

In 2018-19, GSP is approximately \$3 million (0.01%) higher under Scenarios 1 and 2 (central and low specifications). 135 full-time equivalent (FTE) jobs are created under Scenario 1, and 156 FTE jobs in Scenario 2, with the difference driven by the higher investment levels for the Cable Car under Scenario 2. When the hotel development is included in the high specification, GSP is higher by \$20 million (0.07%) compared to the baseline scenario.

Once the Cable Car becomes operational in 2019-20, GSP is expected to be approximately \$7 million higher under the central specification under scenarios 1 and 2. Over the same period, 67 FTE new jobs are supported compared to the baseline scenario.

The GSP increase ranges from \$4 million in the low specification where visitors fully displace their additional nights to Cradle Mountain from elsewhere in Tasmania, to \$12 million in the high specification, where no displacement occurs, and some intrastate visitors are expected to replace interstate trips as a result of the development. The FTE jobs created range from 40 to 113 FTE jobs.

CAPEX (by Cumulus Studio and Doppelmayre)

- Capital estimates by Cumulus Studio for buildings and infrastructure total \$41,480,010
- Cable Car investment supplied by Doppelmayre at \$53,050,000 (lower end estimate as advised by Doppelmayre)
- Additional allowances for adequate power supply should also be considered and necessary and explored post this project.

Land Use Planning, Environmental, Traffic and Services (by Pitt & Sherry)

Pitt & Sherry has undertaken a high level desktop review of the Master Plan to identify whether there are any 'show stopping' constraints to implementation of the Master Plan with respect to land use planning, environmental impacts and approvals, traffic management arrangements and servicing.

The desktop review has not identified any 'show stopping' constraints. However, due to the high level nature of the review, should further development of the Master Plan be pursued it is recommended that further detailed investigations be undertaken as well as consultation with key stakeholders such as Kentish Council and public utility owners.

The Need for Change

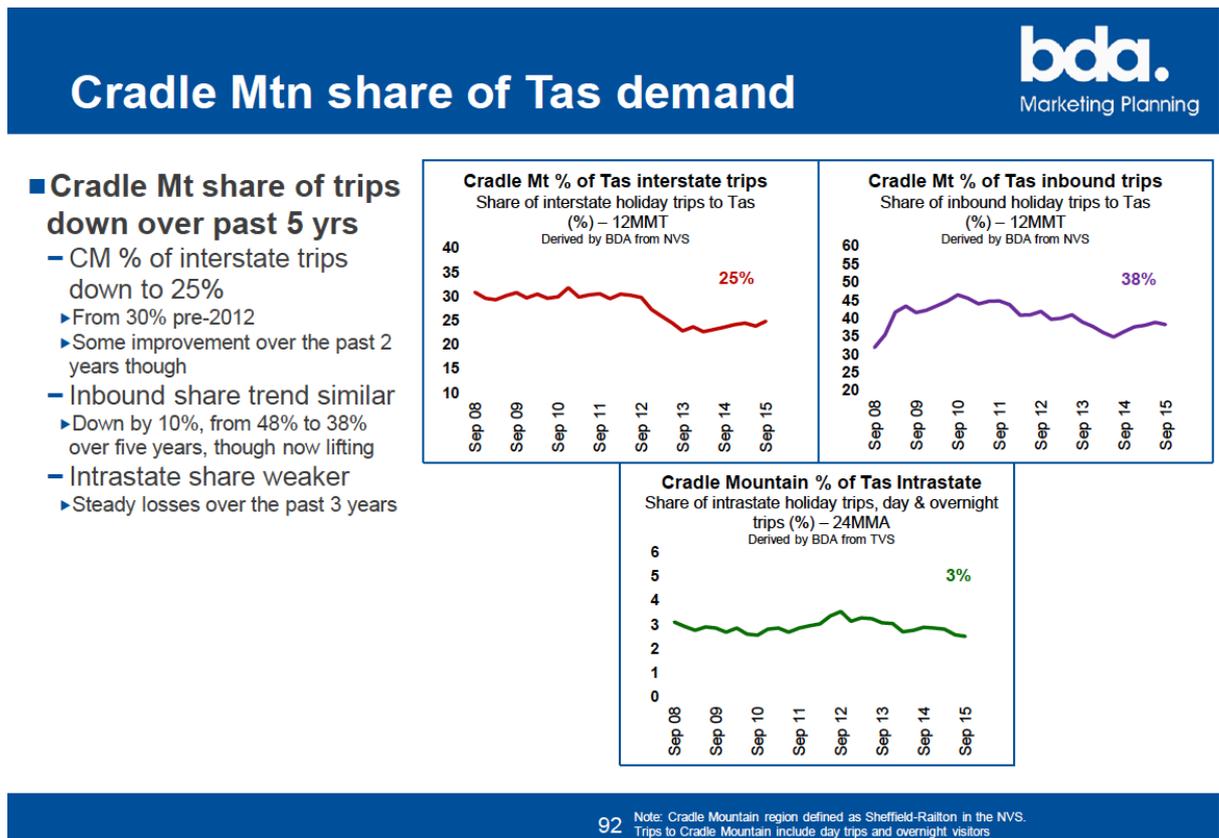
Cradle Mountain, within the Tasmanian Wilderness World Heritage Area and Cradle Mountain Lake St Clair National Park, is one of the State's premier wilderness destinations and attracted approximately 190,000 visitors in 2014/15.

The need for change was identified in the 2014 PWS released *Reimagining the Visitor Experience of Tasmania's Wilderness World Heritage* report. This identified that to grow visitation and expenditure, Cradle Mountain needed to reimagine its visitor experience to deliver world class visitor experiences while at the same time managing the impacts of visitors to the TWWHA. These elements included:

- Creating a quality sense of arrival into the wilderness and Cradle Mountain.
- A world-class visitor experience for Cradle Mountain, the TWWHA and its values.
- Amenities and services appropriate to the areas outstanding universal value that are sufficient for the expected visitor numbers.
- New experiences to engage visitors with one of the nation's most important natural assets.
- Improved management of visitor impacts in the Visitor Services Zone.
- Improved visitor safety from the Service Zone to Dove Lake.
- Correcting the impact of private vehicles at Dove Lake, which is at odds with the nature and values of the TWWHA.
- Attracting private sector investment.

Cradle Under Performing

The impact of Cradle Mountain visitation to the north west economy is significant. The following table shows that while growing in visitor numbers, Cradle Mountain share of the visitor market is declining, down 25% for interstate trips over the past 5 years.



Signature Experience

To attract new and repeat visitors, staying longer and spending more at Cradle Mountain, this Master Plan has introduced a new way of experiencing Tasmania’s wilderness: a future-proofed, sustainable and compelling transportation experience between the World Heritage Wilderness Village and Dove Lake - a low level cable car. This Alternative transport option was first raised through the 2007 Innovative Transport Study and flagged by participants at the Cradle Mountain Stakeholder Workshop.

The development of such a standout visitor experience platform will require public and private sector partnerships. To empower this essential aspect, BDA Marketing was engaged to test a range of concepts within the Service Zone, en route to Dove Lake and at the Dove Lake precinct, to determine customer appeal, appropriateness to place, likelihood to attract new and repeat visitors, extended stay and additional spend. This study delivers a quantified view of potential demand to support the business cases for public and private sector investment (see Demand Forecasting).

This new transport experience has been identified as the critical thread that connects a seamless, immersive, inspiring visitor experience to Cradle Mountain.

Cradle Mountain Today

Located within the Tasmanian Wilderness World Heritage Area, the Cradle Mountain-Lake St Clair National Park offers visitors a wide choice of incomparable wilderness experiences, with bushwalks in landscapes ranging from open eucalypt forest to cool temperate rainforests, mountain ascents—such as to the summit of Cradle Mountain—and lakeside walks, including the six-kilometre Dove Lake circuit.

The Overland Track—a world-famous, six-day walk through the mountains, alpine meadows, glacial landscapes and temperate rainforests of the TWWHA—begins at Cradle Mountain and extends 65 kilometres to Lake St Clair, at the southern end of the park.

Climate

As an alpine environment, the weather can be unpredictable. Weather can change rapidly in all seasons, and visitors need to be equipped for a range of conditions—from hot and dry to sudden summer snowfalls. The region averages 210 rainfall days each year, with heavy snowfalls during the winter months and average daytime temperatures of 18°C in summer and 6°C in winter.

While it is recognised that the climate at Cradle Mountain is part of the region's unique character, it also presents challenges for general customer comfort, transportation and the overall Dove Lake/Cradle Mountain experience.

Visitor Arrival Experience

The existing infrastructure and services have evolved with limited budgets and resources over many years. While PWS have delivered a friendly and professional welcome, the visitor arrival and servicing experience at Cradle Mountain is insufficient for a site of such significance and must be improved through this project.

Accommodation

Cradle Mountain offers a range of accommodation options, from camping to huts, budget rooms and five-star luxury lodges and hotels. Accommodation is located within two-to-five minutes of the Cradle Mountain Visitor Centre, outside the boundary of the national park and Dove Lake precinct. Exceptions to this include the Waldheim cabins, operated by the Tasmanian Parks and Wildlife Service, and public and private bushwalker cabins located along the Overland Track. The location of accommodation options at Cradle Mountain means that visitors to the area must self-drive, take shuttle services, join private tours or walk in to the park on the Cradle Valley Boardwalk to access the national park itself.

While days are filled with outdoor activity, evenings are more limited in choice of experience. A typical night at Cradle Mountain may involve dinner at your accommodation and a local nocturnal wildlife walk.

Existing Transportation

Three methods of transport exist between the Visitor Centre and Dove Lake:

- shuttle bus
- private vehicle (limited to 50 vehicles at any one time)
- walk.

The current shuttle service has been operating since an initial trial in 2004 and uses up to 14, 22-seat buses in peak summer periods, servicing 66% of Park visitors. In

2008, a boom gate was installed to limit vehicle numbers to Dove Lake and ease congestion on Cradle Valley Road. Recent studies by PWS and consultants identified seven critical issues around the existing transport:

- **Impact:** congestion on the road from the park entrance to Dove Lake
- **Disability access:** the public transport system into the park must be 80% compliant with disability legislation by 31 December 2017. The 22 seat buses currently being used are unable to meet the required transport standards required by this legislation
- **Cost:** delivering the complimentary shuttle service costs PWS \$1.6 million annually.
- **Safety:** the narrow and winding road is at times dangerous as shuttle buses and cars maneuver around corners with poor visibility and pass on narrow pavement sections.
- **Customer experience:** shuttle wait times are not acceptable during summer peaks, particularly when unexpected spikes occur in demand.
- **Contracting:** the contract with the incumbent operator, McDermott Coaches, expires in October 2017. Arrangements for a new contract must commence soon and needs to consider the potential changes in future transport options.
- **Road suitability:** a move to medium-sized buses will require some road modifications.

Delivering short and long-term transport solutions is considered to be a key success factor for this Master Plan.

Dove Lake

The visitor experience at Dove Lake is severely lacking, with dated toilets and an inadequate shelter facing away from the Cradle Mountain view. Improving the visitor experience at Dove Lake is a key success factor.

Master Plan Concepts

Introduction

Four experience elements have been explored through this Master Plan development journey:

Primary Focus:

4. Cradle Mountain arrival environment, Visitor Centre and services
5. Transport and transfers between the Visitor Centre and Dove Lake precinct
6. The Dove Lake visitor experience.

Supporting Focus:

5. Leary's Corner
6. Ranger Station
7. Interpretation Centre
8. Waldheim

World Heritage Wilderness Village, Cradle Mountain

The visitor arrival experience is to be both re-located and re-imagined. A completely new construction, it will be re-located south of the current centre, at the end of the existing runway site (outside the national park boundary) to embrace stunning Cradle Mountain and wilderness views.

This reimagined World Heritage Wilderness Village would offer an alpine village feel and construction, acting as a visitor and community gathering space. This single and simple collection of thoughtfully designed buildings will be crafted from materials that create and communicate a strong connection to the landscape. The Village will provide a true sense of arrival for visitors, through its positioning in the landscape and entry sequence. The Village will welcome new visitors to the Park, and create anticipation for the next stage of their journey in this extraordinary place.

The considered choice of construction materials will create a feeling of permanence and ‘rightness’ for the building within its location, as if it had been sculpted from the rock beneath it or woven in place from the surrounding trees.

The Village concept has been selected as the preferred development model, designed to grow with visitation and in partnership with private investors. The Master Plan has allocated Stage One and future development land parcels to accommodate the growing needs of the destination and private operations (see Master Plan Drawings).



Image: Research Precedent for Market Testing—Furnas Monitorization & Investigation Centre by Afaconsult (with Cradle superimposed in the background)

The Village main building will offer:

- Park information and ticketing, retail, Cradle Mountain and WHA interpretation experiences
- Private business will be invited to operate the lounge bar and café
- Cable Car transit centre
- Events and gathering spaces.

Other buildings and spaces within the Village will offer:

- Tour and experience sales and operations
- Shuttle bus transfers (short term need)
- Events and gathering spaces
- Fuel for public and operator purchase
- Parking for 250 vehicles and 400 overflow.

Lounge Bar

The lounge bar, complete with roaring fire, will create the social hub of the new Village and provide a welcoming place for visitors and the local community to socialise, connect and relax. This will provide an opportunity for Park staff, visitors and locals to interact in an informal and natural way, providing an authentic opportunity for connection and for visitors to have a deeper experience of Cradle Mountain and the community of people who live and work here. A cantilevered viewing deck (extending over the forest) will embrace panoramic views of the surrounding landscape and could also be used for outdoor dining, relaxing and events.



Image: Research Precedent for Market Testing – Chalet C7 by Nicolás del Río + Max Núñez (with Cradle superimposed in the background)

Café

A contemporary café, coffee and snacks area will provide a space to relax and dine, overlooking the majestic Cradle Mountain peaks in the distance. Spacious, cathedral-like interior spaces and dramatic, floor-to-ceiling glass panels will frame clear views of the surrounding landscape and Cradle Mountain, and create a compelling sense of the scale and context of the surrounding wilderness. Visitors will feel connected to the landscape, and simultaneously sheltered and protected from the elements as they dine in a relaxed and friendly atmosphere.



Image: Research Precedent for Market Testing—Museum of Contemporary Art by Sam Marshal Architect (with Cradle superimposed in the background)

Events Courtyard

The Village will feature a central courtyard and several events spaces. This space will be flexible and multi-functional, with an impressive, central open fire creating a focal point for a range of community gatherings and events. The courtyard will be a place for visitors and locals—a space for connection and celebration where the character and nature of Cradle Mountain and its community can be expressed and experienced. The courtyard will host everything from plays and performances to storytelling and singing, special events, concerts or a simple gathering of new friends, strumming a guitar by the fire over a glass of mulled wine and a shared plate of tasty Tasmanian delicacies.



Image: Research Precedent for Market Testing — Furnas Monitorization & Investigation Centre by Afaconsult (with Cradle superimposed in the background)

Tours and Experiences

Initial building allocations have been provided to cater for the needs of approximately 15 tour and experience operators. Space and building allocations include the capacity for ticket sales and operational requirements such as storage and customer briefing spaces. Land has also been allocated for future development, ensuring the master plan covers future growth opportunity.

Transport | World Heritage Wilderness Village to Dove Lake

Existing transport options between the Visitor Centre and Dove Lake include shuttle bus, walking the Cradle Valley Boardwalk and restricted private vehicle access.

The primary transport option for Cradle Mountain has been recommended based on inputs from PWS and local operators and benefits supported the BDA Market Assessment Study. This study shows the power of a cable car to elevate Cradle Mountain to the next level of visitation, attracting 102,100 additional room nights per annum to Cradle Mountain (see Demand Forecasting).

While a cable car is the 'end game' solution, PWS face short-term transport issues as identified in the existing transport assessment. The following short and long-term transport directions are recommended:

Shuttle

An improvement of the existing shuttle service is recommended to facilitate short-term needs:

- Tender for a coach operator to deliver medium-sized buses (35-50 seat), ideally with a reduced carbon footprint, disability access (mandatory) and improved interpretation. (Existing studies show this will require road improvements)
- Close private vehicle access within bus operating hours, but continue to offer boom gate-managed access outside shuttle hours.
- Connect the Visitor Centre and existing walking track to Dove Lake.

The Master Plan provides appropriate infrastructure to service the new shuttles at the Visitor Centre and Dove Lake (refer Master Plan Drawings).

Shuttle operator contracting should allow for the future cable car replacement service.

Cable Car

The recommended transport option is a low-level cable car, departing from within the Village Visitor Centre and arriving semi-underground at Dove Lake.

The low-level cable car would offer a highly visual and interpretive journey through the national park, towards Dove Lake and Cradle Mountain. It will:

- Attract an additional 58,600 visitors and 102,100 nights through a new hero experience (BDA Demand Study)
- Remove reliance on a fossil fuel transport system (shuttle / bus, private vehicle)
- Improve customer experience and sense of arrival to Dove Lake and Cradle Mountain
- Provide an all-year, all-weather service, with winter snow views a highlight to drive off-season visitation
- Enable new photography perspectives, driving a wave of social media content for Cradle Mountain and Tasmania
- Improve visitor accessibility and comfort



- Provide interpretation on route
- Create minimal noise impact, with near-silent operation
- Minimise visual impact through low-level height operation
- Future-proof the transport to cope with forecast increases in visitor numbers
- Remove risks associated with cars and bus services sharing the current road
- Free up the existing road for cycling
- Include 'carry cars' to transport private and commercial gear, such as bikes and kayaks
- Include a stop at Ronny Creek for Overland Track walkers and Waldheim.

Demand forecasting completed by BDA Marketing shows the power of a cable car to stimulate new visitation to the Mountain. Securing a cable car operation at Cradle Mountain is identified as the single largest success factor for this Master Plan.

The consultants on this Master Plan bring no specialised experience in cable cars and recommended to the project team a separate investigation occur outside the scope of this project. The only inputs contained within this Master Plan are CAPEX estimates from Doppelmayre (see CAPEX).

Dove Lake

Dove Lake is the arrival destination for exploration of Cradle Mountain, and is the starting point of the popular Dove Lake Circuit Walk—a six-kilometre loop track and one of Tasmania's 60 Great Short Walks.

Dove Lake Arrival

To address the changeable weather conditions of the region, a covered transit centre will be incorporated into short-term shuttle operations and the future cable car development. Cable Car staff will greet visitors on arrival and offer information and resources to equip them for a safe and well-prepared experience of the national park.

Dove Lake Shelter

While the cable car terminal will bustle with activity, the viewing shelter is intended to be a respectful contemplative space.

The transit centre and shelter are separated by an enclosed cave-like passage, at the end of which is a vertical large viewing window to which visitors are drawn. By playing with contrasting light and dark, the atmosphere of the space is elevated out of the ordinary to one that is meditative and reverent.

The highly contrasting light of the viewing window at the end of the passage only reveals the view on closer proximity, by which time the passage opens to the main panoramic Dove Lake and Cradle Mountain viewing space. Park rangers may be on hand to talk about the park and advise on walks and conditions.

Dove Lake Shelter Siting

It is proposed that the viewing shelter at Dove Lake be sited directly adjacent to the existing carpark. This location allows the construction of the viewing shelter to be staged independently of the cable car terminal. This will also enable continued use of the existing carpark until it can be rehabilitated.

The new shelter will nestle into the side of the hill so that the roof of the structure will blend with the rehabilitated carpark. Using the contours of the land the cable car terminal can be located with level access to the shelter, but be more visually discrete from the lake.

The shelter and cable car terminal are located so that they tie into existing tracks and pathways encouraging visitors to explore the rest of the lake and surrounding park.



Dove Lake Shelter Materials

A simple material palette is proposed for the shelter. The main structure should feel solid and grounded, as if carved from the site. The proposal is shown made of off-form concrete however compacted earth or stone would be appropriate.

The front frameless viewing window is proposed to be mirrored glass to reflect the surrounding landscape blurring the edges between the building and site. Testing will need to be undertaken in the final design to ensure solar reflection is minimised however this will be assisted by the south facing orientation.

Dove Lake Walking Pods

The six-kilometre, two-hour Dove Lake Circuit walk passes through a range of vegetation and landscapes. While it is designed as an accessible walk for visitors of varied ability, Dove Lake is susceptible to varying weather conditions. There are currently no shelters in position along this walk for visitors to rest or take time to sit and absorb the view.

There is potential to create a small number of low impact pods or shelters, to be located around Dove Lake. The pods will offer walkers opportunities to take a short break during their walk, shelter from the elements if necessary and take a moment to sit, soak up the view and contemplate the wilderness environment. Park rangers may be on hand to talk about the park and advise on walks and conditions.



Development of a new cantilever viewing platform on the southern side of Glacier Rock is also recommended to improve safety and experience for visitors at this landmark.

Private Vehicles

The removal of private vehicle access to Dove Lake is recommended within shuttle/cable car operational hours. Retain the current maximum allowance on the Dove Lake Road and car park as 50 vehicles outside of shuttle/cable car hours.

While access to a small number of approved commercial operators may still be required during the day, removing private vehicle access would address issues of visitor safety and road congestion, and further protect the TWWHA from pollution and degradation caused by vehicle traffic.

This would also enable:

- repurposing of Dove Lake road for cycling
- redevelopment of a smaller car park for service vehicle / emergency access
- regeneration of previously paved spaces
- reducing the visual impact of the car park and thereby improving the experience for visitors on arrival and during walks in the national park.

See Cumulus Master Plan drawings for comments on Leary's Corner, Ranger Station, Interpretation Centre and Waldheim.

Master Plan Drawings

Refer Cumulus Studio drawings titled "Cumulus Drawings 230216FINAL.pdf"

Cradle Mountain Master Plan

Authors

Prepared by Cumulus Studio with input from the following:

Inspired by Marketing and Simon Curran & Associates - Tourism Strategy

Playstreet - Landscape Architects
Pit & Sherry - Planning Environmental & Traffic Review

Consultation

The Master Plan is the result of consultation with the following major stakeholders:

- Parks & Wildlife
- Tourism Industry Council Tas
- Cradle Coast Authority
- Kentish Council, and
- Cradle Mountain Tourism Industry

Road layout, car-parking requirements, and functional brief for the new Visitor Centre have been based on the 2011 Master Plan and Development Application.

Cable Car Route and functional requirements are indicative only and subject to further consultation with potential operators

Status

Revision A

Date

22 February 2016



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Dove Lake

Cradle Mountain Master Plan
Master Plan Concept | February 2016 | Revision A
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Demand Forecasting

The following summary of demand forecasting has been drawn from the BDA Report “Cradle Mountain Demand Potential Assessment, February 2016”.

For full report see file titled “BDA Cradle Demand Potential Assessment 160216FINAL.pdf”

Background

- Cradle Mountain is a primary gateway to the Tasmanian Wilderness World Heritage Area
- It has been identified that the region would benefit from ‘precinct revitalisation’, hence the development a Cradle Mountain Revitalisation Master Plan has been proposed
- BDA was commissioned to undertake a consumer demand assessment to provide input to the Master Plan, in the form of a Cradle Mountain Demand Potential Assessment for interstate and intrastate markets.

Primary objectives

- To provide consumer feedback in relation to the Cradle Mountain Master Plan concept
- To provide estimates of potential incremental demand for the region resulting from the redevelopment
- To provide execution imperatives for the Cradle Mountain Master Plan.

Fieldwork

- Interstate
 - BDA conducted the research via an online survey with 644 interstate residents, all who were considering visiting Tasmania for a holiday in the next 2 years

- International demand is assumed to convert in line with the tested interstate market
- Respondents were exposed to stimulus of the Cradle Mountain experience today, then the Cradle Mountain Master Plan concept
- Responses and intended behaviour measured for each element of the concept.
- Intrastate
 - BDA conducted the research via an online survey with 211 intrastate residents
 - Respondents were exposed to stimulus of the Cradle Mountain experience today, then the Cradle Mountain Master Plan concept
 - Responses and intended behaviour measured for each element of the concept.

Today's Appeals and Barriers

Visitors who are intending to visit Cradle Mountain within the next two years are drawn by the following experience aspects:

Intrastate	Interstate
<ul style="list-style-type: none"> • positive past experiences inspire many to return • enjoy the wilderness and mountain scenery • a peaceful escape • desire to show CM to friends / relatives 	<ul style="list-style-type: none"> • unique, remote wilderness where you can relax • experiencing nature through walks and other activities • positive recommendations/past experience.

Among those unlikely to visit Cradle Mountain, the following barriers were shared:

Intrastate	Interstate
<ul style="list-style-type: none"> • over ½ of those not intending to visit Cradle Mountain prefer other places • a high proportion (over 40%) have already been and don't want to return • a further 21% are interested, just not at the moment • cost and lack of interest stop others from planning a visit • other' reasons include the expense and having no one to travel with 	<ul style="list-style-type: none"> • other destinations more appealing (49%) • been before, would rather go somewhere new (19%) • outdoor activities unappealing for some • current experience not suitable for all.

Opportunity

The opportunity for the Cradle Mountain Master Plan is to create experiences that still connect with the desires and values of the existing customer, but also remove some of the barriers for those who currently find Cradle unappealing.

The following experience elements were tested with potential visitors to Cradle Mountain:

- new World Heritage Wilderness Village and experience concepts (see Master Plan Concepts)
- cable car, shuttle and cycle transportation between the World Heritage Wilderness Village and Dove Lake
- new viewing shelter at Dove Lake
- shelter pods around the Dove Lake walk.

Appeal Explored

The following explored the appeal and influence of various experience elements:

Intrastate	Interstate
<p>Valley cable car clearly the most appealing element:</p> <ul style="list-style-type: none"> 57% ranking it as the <u>most appealing</u> aspect of the Cradle Mountain redevelopment Dove Lake Viewing Shelter ranked a distant second, at 9% 75% of visitors would use the cable car over other transport options <p>No clear loser:</p> <ul style="list-style-type: none"> All experience elements had high appeal, with events having the lowest appeal, at 41%. <p>Strong impact on those who have been before and new visitors:</p> <ul style="list-style-type: none"> New demand increased response from 71% to 72% ‘very likely’ or ‘certain’ to visit Cradle in the next two years. Increased nights from 2.6 to 2.7 nights. Repeat demand increased response from 48% to 61% ‘very likely’ or ‘certain’ to visit Cradle in the next two years. Increased nights from 2.3 to 2.6 nights. 	<p>Valley cable car clearly the most appealing element:</p> <ul style="list-style-type: none"> 65% ranking it as the <u>most appealing</u> aspect of the Cradle Mountain redevelopment Pod shelters ranked a distant second, at 7% 86% of visitors would use the cable car over other transport options <p>No clear loser:</p> <ul style="list-style-type: none"> All experience elements had high appeal, with events having the lowest appeal, at 69%. <p>Strong impact on those who have been before and new visitors:</p> <ul style="list-style-type: none"> New demand increased response from 45% to 53% ‘very likely’ or ‘certain’ to visit Cradle in the next two years. Increased nights from 2.8 to 3.4 nights. Repeat demand increased response from 49% to 59% ‘very likely’ or ‘certain’ to visit Cradle in the next two years. Increased nights from 3.1 to 3.6 nights.

The Cable Car Factor

Intrastate	Interstate
<p>New demand driven predominantly by Cable Car</p> <ul style="list-style-type: none"> Replacing the Cable Car with a shuttle bus risks 83% of incremental demand with only 17% now 'very likely' or 'certain' to visit 	<p>New demand driven predominantly by Cable Car</p> <ul style="list-style-type: none"> Replacing the Cable Car with a shuttle bus risks 86% of incremental demand with only 14% now 'very likely' or 'certain' to visit

Forecast Visitation Demand Summary

Interstate and Overseas Demand Forecast

Forecast incremental demand resulting from Cradle Mountain Redevelopment (at YT Dec 2018)

	Additional Trips to CM	Additional Nights in CM	Additional expenditure in CM (scenario 1)	Additional expenditure in CM (scenario 2)
Total visitors	40.7k	79.2k	\$18.0m	\$21.7m
Overnight visitors	27.7k	79.2k	\$16.6m	\$19.7m
Day visitors	13.5k	n/a	\$1.3m	\$2.0m

Intrastate Demand Forecast

Forecast incremental demand resulting from Cradle Mountain Redevelopment (at YT Dec 2018)

	Additional Trips to CM	Additional Nights in CM	Additional expenditure in CM (scenario 1)	Additional expenditure in CM (scenario 2)
Total visitors	17.8k	22.9k	\$5.6m	\$7.5m
Overnight visitors	5.4k	22.9k	\$4.2m	\$5.3m
Day visitors	12.5k	n/a	\$1.4m	\$2.2m

Incremental Demand Summary

Forecast incremental demand resulting from Cradle Mountain Redevelopment (at YT Dec 2018)

	Additional Trips to CM	Additional Nights in CM	Additional expenditure in CM (scenario 1)	Additional expenditure in CM (scenario 2)
Total visitors	58.6k	102.1k	\$23.6m	\$29.2m
Overnight intrastate visitors	5.4k	22.9k	\$4.2m	\$5.3m
Day intrastate visitors	12.5k	n/a	\$1.4m	\$2.2m
Overnight interstate & inbound visitors	27.2k	79.2k	\$16.6m	\$19.7m
Day Interstate & inbound visitors	13.5k	n/a	\$1.3m	\$2.0m

Key Findings

The following table presents key findings from the BDA Report.

Intrastate	Interstate and Inbound
<p>A strong positive response to the redevelopment concept</p> <ul style="list-style-type: none"> • Most respondents are more likely to visit as a result of the redevelopment and there was an increase in intention from Cradle Mountain today <ul style="list-style-type: none"> ○ An increased intended length of stay was also evident • The redevelopment was generally perceived to add unique, highly appealing experiences and greater comfort to the destination, while providing benefits to Tasmania • The Cable Car was the stand out element of the concept particularly in terms of driving new demand to the region • Dove Lake developments also appealed strongly <ul style="list-style-type: none"> ○ The visitor centre, 	<p>Very strong response to the redevelopment concept</p> <ul style="list-style-type: none"> • Intention lifted substantially from Cradle Mountain today, and intended trips were longer • The redevelopment was perceived to enhance the core experience & engagement with the environment.. • while opening the destination to a wider pool of potential visitors and also providing past visitors with a reason to return • All elements of redevelopment were well received but Cable Car was the standout • Cable Car had clearly highest level of raw appeal and intended engagement <ul style="list-style-type: none"> ○ Highly appealing to a majority and the most preferred element for 65% (next was 7%) and > 80% would engage ○ Provides the ability to observe the stunning natural environment in a comfortable, low impact way, added benefit of good value • Dove Lake shelter and pods were next

<p>lounge and café and events where also positively received</p> <p>The redevelopment would likely drive strong advocacy from locals</p> <ul style="list-style-type: none"> • 85% of those interested are very likely or certain to recommend to interstate visitors <p>The redevelopment is projected to provide incremental intrastate demand for the region</p> <ul style="list-style-type: none"> • The redevelopment tested is estimated to provide 18k visitors, 24k nights and up to \$7.5m in incremental demand over and above the trend outlook <ul style="list-style-type: none"> ○ This represents a 20% increase in nights and 38% increase in expenditure in the region ○ 4k of the incremental visitors were replacing an interstate or overseas trip 	<p>most appealing, a peaceful means of enjoying the area</p> <ul style="list-style-type: none"> • Other elements also contribute to the attraction of the redevelopment <p>Significant incremental demand was evident from the redevelopment</p> <ul style="list-style-type: none"> • The redevelopment tested is estimated to provide 41k visitors, 79k nights and up to \$22m in incremental demand over and above the trend outlook <ul style="list-style-type: none"> ○ This represents a ~30% increase in nights and > 40% increase in expenditure in the region • For 79% of those intending to visit, the redevelopment had some influence on the decision travel to Tasmania, 16% (7k) would be unlikely to travel to Tas if the redevelopment did not go ahead • Conversion of day visitors to overnight would provide additional demand <ul style="list-style-type: none"> ○ Incremental demand has been applied equally to current levels of day and overnight visitation ○ Any conversion of current day visitors into overnight visitors would provide additional nights and expenditure into the region
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Accommodation Requirements

Indicative implications for accommodation requirements from the BDA Report.

While specific supply requirements were not in the scope of this study, indicative implications of 79k additional interstate/international and 23k intrastate visitor nights can be assessed

Accommodation requirements for interstate and international

- At 1.8 visitors per room 79k visitor nights provides 44k room nights per year or ~120 per day
- To meet this demand an additional 160 rooms would be required (at 75% occupancy)
 - Assuming: no impact on current accommodation and that all additional nights require roomed accommodation

Accommodation requirements for intrastate

- At 1.8 visitors per room 23k visitor nights provides 13k room nights per year or ~35 per day
- To meet this demand an additional 46 rooms would be required (at 75% occupancy)
 - Assuming: no impact on current accommodation and that all additional nights require roomed accommodation

As a result of the Cradle Mountain redevelopment, a total estimate of 206 rooms would be required to meet the additional demand.

Execution Imperatives

The following execution imperatives have been drawn from the BDA Report.

Incremental demand requires new, highly appealing and world class experiences.

The Cable Car is the core element of the Cradle Mountain concept and is central to incremental demand:

- Up to 85% of interstate/inbound incremental demand is at risk if the Cable Car is not part of the redevelopment
- Similarly, up to 83% of intrastate incremental demand is at risk if the Cable Car is passed over
- The delivery of the experience must also live up to the expectation of potential visitors.

Other elements must support this experience by delivering on key factors:

- Enabling visitors to engage more enjoyably with a highly appealing natural environment
- Providing comfort and accessibility for all to widen the potential audience
- Delivering a rewarding experience with minimal impact on the pristine environment.

Awareness of experiences is also required to deliver incremental demand:

- Those interested in the region need to know of the experiences and their core consumer benefits
- Positive word of mouth via experience delivery is vital, content & digital asset development is key.

Economic Impact

The following economic impact summary has been drawn from the Deloitte Report titled “Economic impact of the Cradle Mountain Visitor Experience Development, February 2016”.

For the full report see file “Deloitte Cradle Economic Impact Report 160216 FINAL.pdf”.

The economic impact of the development is expected to materialise through three channels:

- increased capital expenditure associated with the construction of the Cradle Mountain developments (which is expected to be positively associated with the impact);
- increased tourism expenditure in Tasmania as a result of the development attracting additional visitors and stimulating higher visitor yields (which is expected to be positively associated with the impact); and
- increased Tasmanian taxation to account for State Government funding of the Cable Car and Village developments (which is expected to be negatively associated with the impact).

Given the directional differences in the channels of influence and likely interactions with the rest of the State economy, Deloitte Access Economics has captured the overall effects of the Development on economic activity, or gross state product (GSP), through the Deloitte Access Economics – Regional General Equilibrium Model (DAE-RGEM). Models like DAE-RGEM are the preferred analytical tools for exercises of this nature and account for both the flow-on impacts to related up- and down-stream sectors and the resource constraints that characterise the economy.

Scenarios and Specifications

As is not uncommon during the planning stage, there are a number of uncertainties in relation to the Development’s capital expenditure and funding and its impacts on additional tourism at the State level. For instance, while BDA Marketing has

surveyed the impact of the development on visitor intentions to Cradle Mountain, it does not investigate how additional nights in Cradle Mountain might affect overall stay in the rest of Tasmania. If visitors are spending fewer nights in the rest of Tasmania in order to spend more nights in Cradle Mountain, the additional tourism expenditure to Tasmania may be lower than the additional expenditure to Cradle Mountain.

To account for some of the likely differences and uncertainties that characterise the Development, two funding scenarios have been analysed. The scenarios differ with respect to the amount of capital expenditure and degree of public funding required for the Cable Car construction.

- Under Scenario 1, the Cable Car is expected to cost \$60 million and will be 100% funded by public funds, with equal contribution from Federal and State Governments.
- Under Scenario 2, the Cable Car is expected to cost \$70 million and will be 80% funded by public funds, with the remaining 20% to be privately-funded.

The capital expenditure on the village is expected to be equal and funded fully by the public sector in both scenarios. The scenarios also do not differ in the amount of visitation that is attracted to the Cradle Mountain region.

For each of the two funding scenarios, the modelling also includes three specifications on the degree of additional activity that is likely to occur at the Tasmania level as a result of the Development. These specifications have been used to highlight uncertainty over key parameters – including the additional nights likely to occur in Tasmania – as well as to explicitly analyse components that are conventionally excluded from economic assessments of developments – adjacent developments and retained expenditure from intrastate visitors.

- In the high attribution specification, it is expected that a \$62 million, 206 room, privately funded hotel will be built to support additional visitation to Cradle Mountain. It has also been assumed that there is no displacement of nights from the rest of Tasmania, with each additional night in Cradle

Mountain translating to an additional night for Tasmania (100% additional nights). Further, the additional expenditure of interstate and international visitors, and retained expenditure of intrastate visitors have been included.

- in the central attribution specification, the hotel development has been excluded given the uncertainty around its construction and whether it can be counted as a part of the Development. Similarly, the retained expenditure of intrastate visitors, who travel within Tasmania instead of interstate, has been excluded. It has also been assumed that the international and interstate additional visitation to Cradle Mountain will displace 50% of those nights from the rest of Tasmania (i.e. each additional night in Cradle Mountain translates to 0.5 additional nights for Tasmania, and 0.5 nights fewer for the rest of Tasmania)
- in the low attribution specification, the hotel development, and the retained expenditure of intrastate visitors have been excluded. All additional nights to Cradle Mountain come at the expense of visitor nights in the rest of Tasmania and there are no net additional nights in Tasmania.

The capital expenditure and tourism expenditure profiles of the six modelled scenarios are summarised in Table i.

Table i: Summary of scenarios and specifications

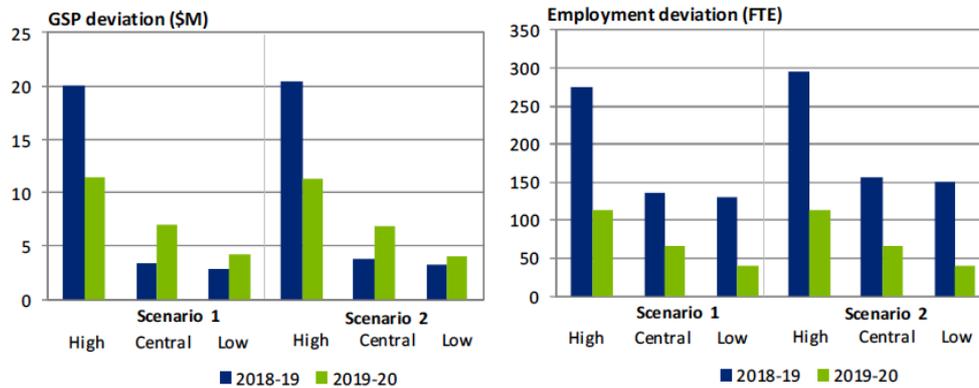
Funding scenario	Scenario 1			Scenario 2		
	High	Central	Low	High	Central	Low
<i>Specification</i>						
Capital expenditure (\$M)	163	101	101	173	111	111
<i>Cable Car</i>	60	60	60	70	70	70
<i>Other developments</i>	41	41	41	41	41	41
<i>Hotel</i>	62	NA	NA	62	NA	NA
Gov't funding for Cable Car	100%	100%	100%	80%	80%	80%
Additional nights in Tasmania (%)	100%	50%	0%	100%	50%	0%
Tourism expenditure (2020 - \$M)	29	18	11	29	18	11
<i>Interstate</i>	20	15	10	20	15	10
<i>International</i>	3	3	2	3	3	2
<i>Intrastate</i>	5	NA	NA	5	NA	NA

Source: Deloitte Access Economics (2016)

Results

The additional GSP and employment associated with each of the development scenarios is given in Chart i over two years: (i) 2018-19 during the height of construction; and (ii) 2019-20 as the Development becomes fully operational.

Chart i: GSP and employment deviation in select years under all scenarios



Source: Deloitte Access Economics (2016)

In 2018-19, GSP is approximately \$3 million (0.01%) higher under Scenarios 1 and 2 (central and low specifications). 135 full-time equivalent (FTE) jobs are created under Scenario 1, and 156 FTE jobs in Scenario 2, with the difference driven by the higher investment levels for the Cable Car under Scenario 2. When the hotel development is included in the high specification, GSP is higher by \$20 million (0.07%) compared to the baseline scenario.

Once the Cable Car becomes operational in 2019-20, GSP is expected to be approximately \$7 million higher under the central specification under scenarios 1 and 2. Over the same period, 67 FTE new jobs are supported compared to the baseline scenario.

The GSP increase ranges from \$4 million in the low specification where visitors fully displace their additional nights to Cradle Mountain from elsewhere in Tasmania, to \$12 million in the high specification, where no displacement occurs, and some intrastate visitors are expected to replace interstate trips as a result of the development. The FTE jobs created range from 40 to 113 FTE jobs.

Conclusions

As a result of the proposed development and the estimated additional investment and tourism expenditure in Tasmania, there is expected to be overall positive GSP and employment impacts over the forecast period.

However, measurable economic impacts are just one suite of metrics in considering the merits of development projects. There are also a variety of potential social, cultural and environment impacts that have not been quantified – and in many cases cannot be reliably measured – including the costs of the additional resources required to generate the economic activity, and the potential impacts on the natural environment. A final determination regarding the project should take these factors into account.

CAPEX

Buildings and Infrastructure CAPEX

The following CAPEX estimate has been supplied by Cumulus Studio and can be viewed in file titled "CradleMt_MP capex_rev2 full FINAL.pdf".

Cradle MP Cost Estimate - Full Masterplan

5/2/2016

AREA	m2	\$/m2	\$	total \$
Demolition				\$202,500.00 +GST
Buildings	650	\$150.00	\$97,500.00	
Road	1400	\$75.00	\$105,000.00	
Visitor Centre				\$15,120,000.00 +GST
Ground Floor Enclosed 01	670	\$5,500.00	\$3,685,000.00	
Ground Floor Enclosed 02	620	\$5,500.00	\$3,410,000.00	
Ground Floor External (Undercover)	300	\$1,750.00	\$525,000.00	
First Floor Enclosed	1500	\$5,000.00	\$7,500,000.00	
Cradle Hub				\$8,742,500.00 +GST
Performance Stage	200	\$2,000.00	\$400,000.00	
Buildings 01 (Base Building)	730	\$2,250.00	\$1,642,500.00	
Buildings 02 (Base Building)	900	\$2,250.00	\$2,025,000.00	
Buildings 03 (Base Building)	500	\$2,250.00	\$1,125,000.00	
Buildings 04 (Base Building)	640	\$2,250.00	\$1,440,000.00	
Parks & Wildlife Offices / Facilities	480	\$3,500.00	\$1,680,000.00	
Future Village / P&W			-	
New Path to Pencil Pines	1800	\$100.00	\$180,000.00	
Substation			\$250,000.00	
Ronny Creek				\$350,000.00 +GST
Ronny Creek Terminal	100	\$3,500.00	\$350,000.00	

Dove Lake Shelter				\$2,245,000.00 +GST
Dove Lake Shelter	330	\$3,500.00	\$1,155,000.00	
Dove Lake Toilets	80	\$4,000.00	\$320,000.00	
Dove Lake Waste Water			\$75,000.00	
Dove Lake Terminal	170	\$3,500.00	\$595,000.00	
Dove Lake Landscaping			\$100,000.00	
Dove Lake Power Supply			TBC	
Dove Lake Walk				\$787,500.00 +GST
Glacier Rock Lookout	75	\$4,500.00	\$337,500.00	
Pod Shelters (3 x 50m2)	150	\$3,000.00	\$450,000.00	
Landscaping				\$6,833,500.00 +GST
Entry Forecourt	4100	\$350.00	\$1,435,000.00	
Village Event Space	1580	\$200.00	\$316,000.00	
Village Landscaping	1500	\$250.00	\$375,000.00	
Paths	1400	\$100.00	\$140,000.00	
Main Roads	5000	\$150.00	\$750,000.00	
Service Road	2300	\$100.00	\$230,000.00	
Carpark 1 (300cp)	7750	\$150.00	\$1,162,500.00	
Carpark 2 (150cp)	4000	\$100.00	\$400,000.00	
Carpark Landscaping	500	\$350.00	\$175,000.00	
Overflow Carpark (150cp)	4000	\$50.00	\$200,000.00	
Revegetation - Village	6000	\$250.00	\$1,500,000.00	
Revegetation - Dove Lake	3000	\$50.00	\$150,000.00	
INDICATIVE CONSTRUCTION BUDGET				\$34,281,000.00 +GST
Plus				
Contingency	10%	\$34,281,000.00	\$3,428,100.00	
Consultancy Fees	10%	\$37,709,100.00	\$3,770,910.00	
Statutory Fees & Charges			-	
INDICATIVE BUDGET				\$41,480,010.00 +GST

Cable Car CAPEX

The following Cable Car CAPEX estimate of \$53,050,000 has been supplied by Doppelmayre <http://www.doppelmayr.com>. These are considered to be lower estimates based on advice from Doppelmayre CEO.

Originals can be viewed at files titled “Cable Car BUDGET QUOTATION 30062016A.pdf” and “Cable Car BUDGET QUOTATION 30062016B.pdf”.

BUDGET QUOTATION - CRADLE MOUNTAIN – TASMANIA TECHNICAL DATA, PRICES

Installation/Resort:	Cradle Mountain, Tasmania, Australia
Project no:	Budget Quotation 30062016/A

TECHNICAL DATA:		CSA Z98, AS 4722
SECTION I	Information Centre - Village Centre - Snake Hill	
System		Monocable Gondola
Type		8-MGD
Inclined length	m	4550.00
Vertical rise	m	30.00
Hourly capacity	P/h	600
Rope speed	m/sec	5.0
Max wind operation	km/hr	60
Carrier spacing	m	180.0
Carriers required	pcs	54
Trip time approx.	min	17.00
Location of drive machinery		Information Centre
Location of hydraulic tensioning unit		Snake Hill
DC prime mover output (cont.)	kW	350
Parking arrangements for carriers		Information Centre
Number of towers (approx.)	pcs	32

The lift is designed for 100% uphill and 100% downhill transportation

BUDGET PRICE ESTIMATE: ± 20%

- O/S Equipment	EUR	12,500,000.00
@exch. rate A\$1.00 = €0.63	A\$	19,850,000.00)
- Local supply and installation	A\$	9,000,000.00
- Total	A\$	28,850,000.00

**BUDGET QUOTATION - CRADLE MOUNTAIN – TASMANIA
TECHNICAL DATA, PRICES**

Installation/Resort: Cradle Mountain, Tasmania, Australia
Project no: Quotation 30062016/B

TECHNICAL DATA:		CSA Z98, AS 4722
SECTION II	Snake Hill – Ronny Creek – Dove Lake	
System		Monocable Gondola
Type		8-MGD
Inclined length	m	3700.00
Vertical rise	m	90.00
Hourly capacity	P/h	600
Rope speed	m/sec	5.0
Max wind operation	km/hr	60
Carrier spacing	m	180.0
Carriers required	pcs	44
Trip time approx.	min	14.00
Location of drive machinery		Snake Hill
Location of hydraulic tensioning unit		Dove Lake
DC prime mover output (cont.)	kW	300
Parking arrangements for carriers		Dove Lake
Number of towers (approx.)	pcs	26

The lift is designed for 100% uphill and 100% downhill transportation

BUDGET PRICE ESTIMATE: ± 20%

- O/S Equipment	EUR	10,200,000.00
@exch. rate A\$1.00 = €0.63	A\$	16,200,000.00
- Local supply and installation	A\$	8,000,000.00
- Total	A\$	24,200,000.00

Land Use Planning, Environmental, Traffic and Services Review

Pitt & Sherry has undertaken a high level desktop review of the Master Plan to identify whether there are any 'show stopping' constraints to implementation of the Master Plan with respect to land use planning, environmental impacts and approvals, traffic management arrangements and servicing.

The full report can be viewed at file "Pitt and Sherry Assessment FINAL.pdf".

The desktop review has not identified any 'show stopping' constraints. However, due to the high level nature of the review, should further development of the Master Plan be pursued it is recommended that further detailed investigations be undertaken as well as consultation with key stakeholders such as Kentish Council and public utility owners.

The findings of the assessment are summarised as follows:

Land Use Planning

The Kentish Council Interim Planning Scheme (2013) applies to the development. The Scheme includes a landslip area overlay. Review of the Master Plan indicates that the new visitor information centre and the Dove Lake shelter are clear of the landslip area overlay. However the alignment of the cable car will cross multiple areas identified as having landslip potential and will therefore require a further detailed assessment.

The Cradle Gateway Special Area Plan within the Scheme which includes the Sustainable Tourism Precinct and the Visitor Services Precinct apply to the development. Some of the proposed development is located outside of the nodes defined in the Visitor Services Precinct. Consultation with Kentish Council and

potentially the Tasmanian Planning Commission would be required to confirm whether development outside of the nodes can be accommodated.

The use definitions in the Scheme which would most likely apply to the development include:

- Food Services for the cafe component
- Hotel Industry for the bar/hotel component
- Tourist Operation for the visitor centre/visitor facility/attraction component.

Food Services is a discretionary use within the Kentish Interim Planning Scheme. Hotel Industry is a prohibited use; however the operation of a bar within the visitor centre may be able to be argued to be an ancillary use. Tourist Operation is permitted as long as it is complementary to the environmental management purpose of land in the zone and based on a 'building, area or place of regulated scientific, aesthetic, architectural or historic interest or otherwise of special cultural value'. Consultation with Kentish Council would be required with respect to the definition they would apply to the restaurant/bar/lounge component of the visitor information centre.

The proposal works towards enhancing the visitor experience of the world heritage area. It also fulfils a number of requirements of the Scheme by utilising a site that is already degraded, thus minimising the impact of the proposal on the natural environment.

Environment

Environmental approvals from all levels of government are likely to be required for the development. The Local Government approval requirements will be dealt with through the requirements of the Kentish Interim Planning Scheme (2013) as discussed above.

The Parks & Wildlife section of the Department of Primary Industries, Parks, Water and Environment (DPIPWE) will coordinate the approval process in accordance with

the requirements of the Tasmanian World Heritage Area Plan in consultation with the Commonwealth Government. Approval by the Commonwealth is managed through the provisions of the Environment Protection and Biodiversity Conservation Act 1999 (EPBCA). A Referral is likely to be required to be submitted to the Commonwealth, in accordance with the EPBC Act, for environmental assessment and approval due to the potential to significantly impact matters of national environmental significance.

It should be noted that the TWHAMP is currently under review with a draft Management Plan released for public comment in early 2015. There is currently no information on when or if the new Management Plan will be formalised and hence at the time of writing the 1999 Plan is still current.

A number of specific environmental studies will be required for PWS and the Commonwealth to assess the potential environmental risks of the proposed development. These include:

- Flora and fauna habitat assessment
- Aquatic habitat assessment
- Historic heritage assessment
- Aboriginal heritage assessment
- Geoconservation assessment
- Visual amenity assessment.

The minimal footprint of the proposed development combined with the components of the Master Plan that involve enhancement of previously disturbed areas minimises potential environmental impacts associated with the development. Detailed environmental studies will be required to confirm any residual impacts and further opportunities for refinement of the Master Plan to deliver optimal environmental outcomes.

Traffic

Review of the Master Plan with respect to traffic arrangements has not identified any major constraints.

The provision of the cable car is considered an appropriate measure due to the inability of Cradle Mountain Tourist Road between Pencil Pines and Dove Lake to be able to accommodate a significant increase in traffic growth without significant widening and realignment work being undertaken.

In conjunction with installation of the viewing shelter and cable car terminal at Dove Lake, provisions for service and emergency vehicle and bicycle parking should be incorporated along with a designated area to enable service and emergency vehicles to turn around.

To inform further development of the layout for the visitor and information centre turning path analysis should be undertaken to ensure that appropriate space for the maneuvering of buses and services vehicles is provided. A parking and traffic survey should also be undertaken and the results considered in conjunction with projected tourist growth to inform refinement of the design and in particular the junctions at either end of the 200 space car park. A Traffic Impact Assessment will need to be prepared for the proposed development to accompany a development application to Kentish Council.

Services

No major constraints to implementation of the Master Plan with respect to services have been identified. However, the following matters should be considered:

- Digital communications in the Cradle Mountain area are only currently available via Telstra's Next G Network and is known to have reliability issues. Parks and Wildlife Service have recently purchased a 'guaranteed data package' from Telstra. The improvement in reliability through purchase of the package has not yet been assessed as installation of the system is not yet

complete. Once the improvement in reliability has been determined, the system's adequacy for the proposed development should be reassessed.

- Stormwater run-off will need to be treated using gross pollutant traps and other water sensitive design features to minimise any impacts on surrounding water courses
- The need for vehicular access to the cable car for construction and maintenance purposes as well as emergency access.
- Water tanks will be required to service the toilet and kiosk facilities at the Dove Lake shelter.
- Recent dry weather has highlighted the need for the use of intelligent water use including water recycling and the need to augment the existing Parks and Wildlife Service water supply scheme.

A detailed assessment of the electricity supply required to service the cable car is recommended to confirm the suitability of the existing infrastructure. However, it is anticipated that the existing infrastructure should have sufficient capacity.

Thank you,

A handwritten signature in blue ink, appearing to read 'David Inches', enclosed in a light grey rectangular box.

David Inches

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