



February 27, 2008

Mr Paul Slape Chairman
Victoria Grants Commission
GPO Box 2392V
MELBOURNE, VIC. 3001

Dear Mr Slape,

WELLINGTON SHIRE COUNCIL SUBMISSION TO THE VICTORIA GRANTS COMMISSION

The Wellington Shire Council would like to take this opportunity to make a submission to the Victoria Grants Commission.

We would like to comment on a number of issues which are of importance to us which we would like the Commission to consider.

Particularly, Council would like the Victoria Grants Commission to consider the specific issues created by the emergencies suffered by Wellington in the last 12 months and a number of issues we are reiterating from previous submissions.

Emergency Management over the last 12 months

Wellington Shire and its community has had a very trying time over the last 12 months or so and has suffered a number of emergencies.

Bushfires

In December 2006 and January 2007 we suffered extensive bushfires with 41% of the Shire being burnt, this equates to an area in excess of 4,500 square kilometres. Our Municipal Emergency Co-ordination Centre (MECC) was active for nearly two months.

Mudslide

In February 2007 a severe mudslide occurred in the township of Licola, following a severe thunderstorm when slopes denuded of cover by the recent bushfire shed enormous amounts of rocks, trees and sediment. The thunderstorm caused the mudslide to move through the town crushing buildings and destroying infrastructure. Landslides and slips were also caused which damaged the Licola-Jamieson Road and caused its closure. The road is expected to open shortly, some 12 months after being damaged.

Storm/Flood – June/July 2007

In late June and early July 2007 the Shire suffered severe flooding, predominantly in the Macalister River valley and the Gippsland Lakes with very significant damage to infrastructure, including the loss of many bridges and the emergency evacuation of residents from Newry township by helicopter.

Civic Centre

Port of Sale

70 Foster Street (PO Box 506)
Sale Victoria 3850
Telephone 1300 366 244
Facsimile 03 5142 3499
Email
enquiries@wellington.vic.gov.au
Web
www.wellington.vic.gov.au

Service Centres

Maffra

Telephone 03 5147 1211
Facsimile 03 5147 3360

Yarram

Telephone 03 5182 5100
Facsimile 03 5182 6264

The flood levels and flow rates in the Macalister River were the highest ever recorded, runoff being accelerated and increased by the lack of ground cover in the catchment due to the summer bushfires. Large amounts of flotsam and jetsam were also deposited for the same reason.

Storm/Flood – November 2007

In November of 2007 another significant flood was experienced with flows again exceeding major flood levels in the Macalister River. Damage was still significant but not of the same order as the earlier flood.

General

The various emergencies experienced last year have had an enormous impact on the Shire, including our need to co-ordinate and provide emergency works and services, assess and repair infrastructure (sometimes the same infrastructure at least twice, i.e. as a result of bushfire and flood(s)), co-ordinate recovery efforts for our community (some individuals were affected by more than one disaster) and delayed and disrupted our planned programmes.

So that the Commission can better understand the impacts the Shire has suffered, a copy of separate Economic Impact Assessments prepared by Buchan Consulting for the Bushfires and the June/July flood are attached for your information.

Additionally, Council believes that with Climate Change we will be required to be more attuned to planning and managing natural disasters and will need to divert more resources to this. It also believes that events are likely to become more frequent and severe. We are also resourcing the emergency response and recovery functions to higher levels on the assumption that our involvement in emergencies will become more frequent and meaningful in both the short and medium term.

Request

In the circumstances, Council would appreciate consideration by the Victoria Grants Commission of an increase in importance of the Environmental Risk Cost Adjustor or a modification to the methodology which would recognise the increased costs experienced by Councils in Bushfire and flood prone areas. It is suggested that vulnerable areas could be identified from wildfire or flood overlay information contained in planning schemes or held by the Country Fire Authority or Catchment Management Authorities respectively.

Council sees its current and future role in emergency management being more substantial and costly and seeks recognition in the funding formula to assist with funding of this role.

Reiteration and/or update of previously raised matters

General Purpose Grants

Cost adjustors

In accordance with our submission of 2006 Council would again like you to consider that Wellington's dispersion factor should be higher. The Population Analysis by National Economics shows that Wellington has in the order of between 30 and 50 separate communities, each with its own demographics, growth characteristics and needs.

An example to support this concern is the Loch Sport community, Wellington's fastest growing township with only minimal social infrastructure and a high level of community demand for greater services.

Request

Council would like the Commission to recognise the significant funding and servicing challenge that this represents for Council.

Local Roads Grants**Cost Adjustors**Climate

As submitted previously Council is still of the opinion that recognition should be given for irrigation areas, as this has the same adverse effect as rainfall, particularly on the sealed road network. The Maffra Irrigation District includes some 344km of Council's sealed road network. This represents approximately 25% of Wellington Shire Council's total sealed road network. There is also a high water table in this area.

Due to the flat and low lying nature of the irrigation district and its proximity to the Macalister River it is worth noting that parts of the road network have been inundated with floodwaters twice last year which is causing further damage, which we think exacerbates the effect of moisture on road networks in irrigation areas and requires inclusion in the Grants Commission Climate formula.

Materials (Availability)

As in our 2006 submission Council notes the sourcing of road making material is continuing to be more difficult and this causes particular disadvantage to those Shires that have an extensive network of gravel roads. Freight costs in moving material to the required locations is a significant factor.

Request

Council requests that the Victoria Grants Commission note the issues of Climate and Materials (Availability) and requests that the grant methodology be modified accordingly.

Other mattersForm of Victoria Grants Commission Annual Return

The current Victoria Grants Commission Annual Return is presented for completion to Councils in a unique format. Council is aware that the Department of Planning and Community Development (DPCD) also collects information from Councils but in a different format.

It is suggested that the Victoria Grants Commission and the DPCD harmonise their data collection format – potential benefits of this approach include savings in terms of resources and time, together with an opportunity for the information to be collected once and shared by the two agencies. We see benefits for all the parties, including Councils, in this approach.

Request

That the Victoria Grants Commission standardise its data collection format (including timing) with that of the DPCD.

Inappropriate Subdivisions and Coastal Development

“Seachange” and population changes continue apace in Wellington. In an effort to deal with Wellington's particular issues and following a Strategic Planning Study, Council has

adopted a new Coastal Strategy (September 2005). It is expected that the Strategy will advance development in parts of our 90 Mile Beach area of the Inappropriate Subdivisions.

The Strategy, whilst aiming to provide a solid basis for development, will require a significant investment in infrastructure. We will also need to provide for ongoing maintenance.

Land in the area has increased in value over the last few years, which has increased pressure for development. However, there are major impediments to development due to the structuring of lots. Most lots are small and must be "restructured" with 3 or 4 other lots to be of appropriate size under planning legislation. The complexity and cost of this task is restricting development.

As a result of the lot size, many lots cannot be built upon – this situation is causing frustration for our community and reducing Council's revenues.

Council's Coastal Strategy provides for the concentration of development in particular nodes, this will assist with the economic provision of infrastructure and services. Unfortunately even the areas identified for nodal development have very limited infrastructure, mostly lacking in sealed roads. Reticulated water and sewerage are not provided.

Council would like assistance from the Commission in funding statutory planning, land restructuring exercises, infrastructure construction and service provision.

Many of the 11,700 properties in the inappropriate subdivisions are owned by non residents who are not counted in our population statistics – see separate comment on vacancy rates.

We believe we need additional grant funds to facilitate planning and land restructuring exercises, and to develop and maintain infrastructure and services in the area covered by the Coastal Strategy in particular. In accordance with our strategy and in addition to day to day administration costs of some \$300,000 p.a., Council has been spending in the vicinity of \$150,000 p.a. each year for the last 2 years and expects to spend approximately \$300,000 dollars this year. We expect to spend around \$200,000 annually for the next couple of years and work with the State Government to resolve the issues. Additionally Council carries approximately \$2 million in bad debts related to properties in the Inappropriate Subdivisions.

In December 2007 the Minister for Planning announced a temporary 18 month moratorium on development in the Inappropriate Subdivisions. While the moratorium is in force Council will be seeking permanent changes to the Wellington Planning Scheme to prevent future development in the Inappropriate Subdivisions.

It is anticipated that a key consequence of the moratorium and permanent changes to the Wellington Planning Scheme will be the provision of certainty which will encourage and accelerate development in the "nodes" and will put pressure on Council to supply infrastructure.

Request

That the Victoria Grants Commission note Council's comments, especially the progress being made in terms of statutory planning and the likely pressure this will put on Council to fund infrastructure development.

Vacancy Rates

In accordance with our 2006 submission on this matter prepared by Ian Pawsey, we would like the Commission to again consider extending the new principle of Vacancy Rate beyond the Governance expenditure category to the categories of Recreation and Culture, Traffic and Street Management, Other Infrastructure Services and Business and Economic Services.

Request

That the Victoria Grants Commission consider extending the principle of Vacancy Rate beyond the Governance Expenditure category to the categories of Recreation and Culture, Traffic and Street Management, Other Infrastructure Services and Business and Economic Services.

Overall Summary

The Wellington Shire Council would like the Victoria Grants Commission to consider our submissions on our emergency management issues and the updates provided on previously submitted matters and take them into account when allocating grants under the 2008/2009 Victoria Grants Commission grants programme to Local Government in Victoria.

We are willing to speak to our submission or provide further details if required. Should you require further information, please contact Mr Jim Wilson, Director Corporate Services on telephone 5142 3353

Yours sincerely

A handwritten signature in black ink, appearing to read 'L. Webb', written in a cursive style.

Lyndon Webb
Chief Executive Officer

Final: March 21 2007

Wellington Shire Council

Economic Impact Assessment Great Divide South & Coopers Creek Bushfires

March 2007

Buchan

Business Strategy | Communication | Public Policy

Executive Summary

Key Issues

The impacts of the bushfires on Wellington Shire are significant.

- Total asset damage of \$74 million was incurred across the Shire:
- Major impact is on forestry in the Shire with losses of \$56 million.
- Agriculture assets of \$12 million were lost.
- Public asset losses of \$3.3 million (National Parks and Shire infrastructure).

The impacts on the tourism sector are substantial:

- Visitor numbers to High Country areas were 90% down on normal levels during summer, with a slow recovery expected over 2007.
- Full recovery for tourism may take up to 2 years.
- The fall in direct tourist related expenditure could be up to \$18 million over 2007 and \$7 million in 2008.
- This fall in visitor numbers and expenditure could threaten up to 100 jobs in 2007 and 40 jobs in 2008.

The Report

This report provides an assessment of the economic impact on Wellington Shire of the Great Divide South & Coopers Creek Bushfires.

The impacts of the bushfires that are measured in this report are of two types: losses in private and public assets and infrastructure due to fire damage; and falls in visitor numbers to the alpine park areas and the impacts on expenditure and employment in the Shire. In doing this analysis we have costed asset losses at replacement value and have modelled the alpine visitor market and its impacts.

Asset Losses

Our estimates show that **approximately \$74 million of assets** in the Shire have been lost. Most of these losses are in forest timbers (\$55.9 million) and agriculture (\$11.9 million and mainly fences and pastures). Damage to public assets was estimated at \$3.3 million and to private buildings \$2.4 million.

- Forestry - VicForests estimates that approximately 3,000 hectares of harvestable ash in Wellington was destroyed and this is valued at around \$55 million.
- Agriculture – some agriculture infrastructure was damaged and this included fencing (\$9.6 million - 1029kms of fencing), pastures (\$824,000), out buildings (\$480,000). Other losses included livestock (\$554,000) and fodder and crops (\$451,000).
- There was damage to public assets including roads and national park tracks and visitor facilities and a school camp. In total these were estimated at \$3.3 million.
- Damage to private homes was limited to a total 15 properties (9 main residences and 6 holiday homes) with an estimated replacement cost of \$2.6 million.

Sector	Asset lost	Description	Cost (\$)
Forestry			
	Nursery buildings	1 building	\$100,000
	Nursery seedlings	Radiata Pine, Eucalypts seedling	\$550,000
	Nursery equipment	2 tractors , seedling stool beds	\$290,000
	State Forests and private forests - Wellington	Ash timber reserves; State Forests only	\$54,994,500
Total Forestry			\$55,934,500
Agriculture			
	Fencing	1029 km bordering and internal	\$9,664,500
	Pastures	6345 ha	\$824,850
	Livestock	1163 head	\$553,745
	Buildings (excluding places of residence)	14 woolsheds and other smaller agricultural buildings	\$480,000
	Grains, fodder and horticulture	Hay, grain and mixed horticulture	\$451,035
Total Agriculture			\$11,974,130
Public Assets			
Parks	Amenities	Toilet blocks and barbeques	\$109,000 ¹
	Signage	Directional	\$25,000
	Track infrastructure (interim estimates)		\$150,000
Education	School camp	Alpine school camp	\$650,000
Wellington Shire	Communications infrastructure	UHF base station	\$50,000
	Road infrastructure	Council managed roads	\$2,400,000
Total Public Assets			\$3,384,000
Private Assets			
Houses	Principal residences	9 homes	\$1,710,000
	Second home/holiday residences	6 homes	\$900,000
Total Private Assets			\$2,610,000
Total Assets			\$73,902,630

¹ These are Parks Victoria preliminary estimates of damage in the Alpine National Park. Given the vast area of tracks and size of National Parks within Wellington Shire, a comprehensive audit is unlikely to be completed until late 2007.

Tourism Sector Impacts

A key sector that has been impacted by the bushfires has been alpine park related tourism. The fires occurred during the summer peak season for tourism, with continuing effects in terms of reduced visitor numbers still being experienced. The general expectations of the tourist related businesses is that 2007 will be a bad year overall, and that a full recovery will not be achieved during 2008.

The impact of the fires has been felt in the towns adjacent to the national parks and more broadly in other areas of Wellington Shire due to reduced numbers of visitors and expenditure. Of all of the sectors affected, the tourism sector is made up primarily of small operators and other suppliers, who are feeling the immediate and dramatic effects of a lost summer season (around 10% of normal turnover for most businesses), and the prospect of a poor 2007. The outlook for 2008 also indicates that visitor numbers are likely to be below normal levels. The current experience has been overlayed on the impact of drought on local spending, and a more general slowdown in regional tourism.

- Our analysis shows the visitor patterns for the Shire, with total visitors estimated at 763,000 per year, and high country visits account for a total of 165,000 visitors each year (22% of visitors) and the lakes and coast account for 234,000 visitors (31%).
- Total tourism expenditure in the Shire is estimated at \$113 million per year, with overnight visitors accounting for \$69 million in spending and day visitors accounting for \$43 million.
- There are a total of 729 tourism related direct jobs in Wellington Shire, with high country tourism accounting for 155 or 21% of these jobs.

The major impacts on the bushfires are on that part of the tourist sector in Wellington which services visitors to the high country and alpine national parks.

- Our discussions with tourism operators in the region indicate that visitors to the lakes and beach have increased (other than a slight fall in the middle of the bushfires) due to an increase in boating on the lakes, because of the impact of the drought on boating on inland lakes and rivers.
- High country and national parks tourism has been impacted by the bushfires, by damage to these areas and the ongoing closure of major areas of the national parks. The need to repair tracks and amenities may delay the opening of some areas until late in 2007.
- Total spending by visitors to the alpine park areas is estimated at around \$25 million per year in a normal year. While this is total spending in the Shire, much of this expenditure is in those towns adjacent to the high country and alpine parks.

The level of spending in summer was around 10% of normal activity and is likely to build to 30% in autumn and winter. It will be 2008 before levels start to recover substantially, though this will require significant marketing activity to rebuild the market.

- Over Year 1 (December 06-November 07), tourism visitor numbers and expenditure could be as low as 30% of a normal year. This represents a fall of almost \$18 million in spending over the year.
- Our estimates for Year 2 (December 07 - November 08) based on our discussions with operators, have expenditure at around 70% of normal levels.² This is around \$7 million down on normal levels.
- In total visitor spending over the two years could be down by a total of \$25 million.

² This pattern of recovery accords with the experience of the Grampians

- The impact of this downturn can threaten a significant number of the 155 direct jobs associated with high country tourism – up to 100 of these jobs in 2007 and over 40 jobs in 2008.

Our industry consultations show that most businesses have held their core employees (by reducing casuals) and many of the smaller businesses are owner operated.

Future employment will depend on the pattern of recovery and the time taken to get back to more normal visitor levels for each of these businesses. The specialist tourism operators and the accommodation sector are those that are most under pressure because their livelihood depends on having access to the parks.

Recovery

The period of recovery will depend on a number of factors including the extent to which private losses are insured, and the timing of asset replacement and related construction activity.

- In the case of forestry, recovery of damaged timber has already commenced, however in the longer term the fire has eliminated harvestable timber stock which will have future impacts on the sector.
- In agriculture the fire damage has come on top of drought impacts on farmers.
- In tourism, the expectation is that recovery will take at least two years and that activity may not return to the previous levels. Tourism related businesses in the affected areas will remain vulnerable over this period and a major marketing effort will be needed.
- The need to replace assets will provide a boost to local construction businesses over the next 12 to 18 months.

This recovery will be occurring at a time where agriculture and horticulture have been affected by the drought and in the case of the tourism sector, the disruption will be an addition to the overall slowdown in regional tourism that has occurred over the last few years.

Contents

Executive Summary	1
Contents	5
1 Introduction.....	6
2 The Review	7
2.1 Objectives	7
2.2 Methodology	7
2.2.1 Overview	7
2.2.2 S1 Research on Bushfire Impacts	9
2.2.3 Consultations.....	9
3 Impacts of the Bushfires.....	10
3.1 Overall Asset Losses	10
3.2 Forestry Sector	12
3.2.1 Gippsland Region.....	12
3.2.2 Wellington Shire	13
3.3 Agriculture Sector	14
3.3.1 Affected Properties.....	14
3.3.2 Infrastructure Damage.....	15
3.3.3 Livestock Losses	16
3.3.4 Fodder and Grain	17
3.4 Public Assets	17
3.5 Private Assets	18
3.6 Costs to Wellington Shire.....	18
4 Tourism Impacts.....	19
4.1 Overview.....	19
4.2 Tourism in Wellington Shire	19
4.2.1 Visitor Patterns.....	19
4.2.2 Tourism Spending and Jobs.....	21
4.3 High Country Tourism	21
4.3.1 Assessing High Country Tourism	21
4.3.2 Value of High Country Tourism	22
4.3.3 High Country Tourism Jobs	23
4.4 Impacts of Bushfires on Tourism Activity	23
4.4.1 Expenditure Levels	23
4.4.2 Tourism Jobs.....	27
5 Concluding Comments	28
Appendix A References	29
Appendix B Methodology - Asset Estimates	30
Forestry	30
Agriculture.....	30
Private and Public Assets	31
Tourism	31
Appendix C Consultations.....	32

1 Introduction

This report provides an assessment of the economic impact on Wellington Shire of the Great Divide South & Coopers Creek Bushfires.

The impacts of the bushfires that are measured in this report are of two types: losses in private and public assets and infrastructure due to fire damage; and falls in visitor numbers to the alpine park areas and the impacts on expenditure and employment in the Shire. In this analysis we have costed asset losses at replacement value and have modelled the alpine visitor market and its impacts on the Shire.³

The analysis is based on: consultations with government agencies, Council officers and businesses in the region; information obtained from these organisations; analysis of asset losses and the modelling of the impact of tourism in the Shire.

The report highlights several key issues. The costs of the bushfires to Wellington Shire are significant, with damage to forestry and a decline in tourism being the major sectors affected.

The period of recovery will depend on a number of factors including the extent to which private losses are insured, and the timing of asset replacement and related construction activity. In the case of forestry, recovery of damaged timber has already commenced, however in the longer term the fire has eliminated harvestable timber stock which will have future impacts on the sector. In tourism, the expectation is that recovery will take at least two years and activity may not return to the previous levels.

This recovery will be occurring at a time where agriculture and horticulture has been affected by the drought and in the case of the tourism sector, the disruption will overlay on recent falls in regional tourism.

The report is structured as follows:

- Chapter 2 outlines the objectives of the review and the methodology used.
- Chapter 3 analyses the asset losses and the impacts on agriculture and forestry.
- Chapter 4 examines the impacts on the tourism sector.
- Chapter 5 comments on the overall impacts and the recovery phase.

³ The estimates were prepared on the basis of information available up to March 5 2007.

2 The Review

2.1 Objectives

This study is aimed at providing an accurate assessment of the full economic impacts of the fires on Wellington Shire and covers:⁴

- A physical and financial summary of the extent of economic loss in the farming, small business and tourism sectors.
- An analysis of the loss of income to businesses not directly burnt but impacted by extensive long term road closures or as supplier of goods and services (particularly the tourism sector).
- Indicative costings to make good fire damaged assets (public and private).

2.2 Methodology

2.2.1 Overview

Our approach has involved both quantification of the direct effects and estimation of the overall impacts on the Shire, comprising both direct and indirect effects. This has been based on a combination of consultations, data collection, modeling and estimation.

The project was split into three segments which are summarised in the attached diagram: Segment 1 Research on Bushfire Impacts, Segment 2 Economic Impact Assessment and Segment 3 Reports.

⁴ Consultants' Brief – Wellington Shire Council , January 2007 P1

S1 Research on Bushfire Impacts

S1.1: Review of Information/Reports

- Assets damaged
- Details of bushfire
- Industry information - key sectors

S1.2: Consultations - Government

- Wellington Shire
- DPI
- DSE
- CFA
- Other
- Telephone discussions

S1.3: Consultations - Business

- Sectors:**
- Forestry
 - Farming
 - Tourism
 - Retail
 - Services
- Information**
- Impacts of fire on business activity (sales, income, employment)
 - Outlook - current, medium term, long term
- Tasks**
- Development of business list/checklist
 - Conduct interviews (telephone)

Method:

- Review of reports and information - Council and government
- Discussions with Council staff (telephone)
- Discussions with government agencies (telephone)
- Businesses list and set up interviews
- Develop business checklist
- Business interviews (telephone)

S2 Economic Impact Assessment

S2.1: Asset Damage

- Listing of assets affected
- Estimation of costs (replacement/make good)
- Impacts on activity of damage

S2.2: Economic Impact Analysis

- Analysis of consultations data
- Modelling of impacts
- Estimation of regional economic impacts: industry, locations, Shire

Method:

- Analysis of information
- Modelling of impacts and estimation of regional economic impacts
- Preparation of report content

S3 Reports

S3.1: Draft Reports

- Assets listing and costing
- Economic Impact Report

S3.2: Review of Drafts

- Discussion/comments on Draft Reports

S3.2: Final Reports

- Assets listing and costing
- Economic Impact Report

2.2.2 S1 Research on Bushfire Impacts

Information was collected on both assets damaged and on the effects of the bushfire on businesses in key sectors.

Industry Coverage

The industries covered in the analysis included forestry, farming and tourism (particularly on impacts on activity for tourist operators, accommodation, hospitality and retail and other services - affected directly and indirectly).

2.2.3 Consultations

In total detailed interviews were conducted with over 50 organisations.

- Government - these government consultations focused on current information on the bushfires and asset damage and impacts and any estimates of costs. The consultations included: Wellington Council, DPI, DSE, Parks Victoria, Regional Development Victoria and Vic Forests. Extensive industry discussions were held in relation to forestry impacts.
- Business - these consultations covered forestry, timber processing, farming, tourism, hospitality, retailers, associations (Victorian Association of Forest Industries, Australian Deer Association). Discussions focused on the impact of the fires on current operations and the outlook over the remainder of 2007 and into 2008.

3 Impacts of the Bushfires

3.1 Overall Asset Losses

Information obtained from the consultations and from desk research was used to compile a list of assets that were lost as a result of the bushfires. To measure the value of these losses replacement cost was used. This is based on the assumption that the replacement/repairs result in the asset having the same life and production potential as it originally had.⁵

The following summary table of assets damaged in the Wellington bushfires has been developed through a review of existent information, through consultations with key stakeholders such as the Department of Primary Industries; the Department of Sustainability and the Environment, Parks Victoria, Wellington Shire Council and through interviews with businesses.

Our estimates show that approximately **\$74 million** of economic assets have been lost. With most of these losses being in forest timbers (\$55.9 million) and agriculture (\$11.9 million and mainly fences and pastures). Damage to private buildings was estimated at \$2.4 million.

- Forestry: our research shows that the largest impact in terms of assets losses is timber reserves. An estimated \$55 million of mountain ash resources, plantation nursery and mixed forest assets were lost. In the long-term this may require a reconsideration of future harvest, haulage and processing, because of the substantial losses of timber in adjacent Shires, which is processed in Wellington Shire.
- Agriculture: the number of farms impacted by the bushfire is significant with 162 incurring fence, out buildings, pasture damage or livestock losses. The extent of the damage that had been assessed up to early March 2007 is estimated at \$11.9 million. This is particularly acute for farmers as they must rebuild in a time of a major agricultural contraction in output due to the severe drought.⁶
- Public assets: public assets lost or damaged included: roads; national park tracks, buildings and amenities; and the Traralgon Secondary College Alpine Camp.
- Private assets: relative to other bushfires the loss of private assets was limited and included a total of 15 houses.

⁵ This method is in line with approaches adopted by the Bureau of Transport Economics in their report *Economic Costs of Natural Disasters in Australia*. P 60 As they point out a replacement cost estimate may overstate the value of the loss, as not all damaged assets will be repaired because some owners would believe that the cost of the repairs exceeds the value of the gains from the repairs. This will be the case particularly when looking at quantifying small agricultural storage buildings or fencing, however this factor will not be significant in Wellington.

⁶ Department of Primary Industries; Various sources were consulted by Buchan in this process. As of March 5, 280 farms in the Great Divide Complex South DPI region have had assessments finalised.

Table 1. Estimated Asset Losses – Wellington Shire December 2006/2007 Bushfires

Sector	Asset lost	Description	Cost (\$)
Forestry			
	Nursery buildings	1 building	\$100,000 ⁷
	Nursery seedlings	Radiata Pine, Eucalypts seedling	\$550,000 ²
	Nursery equipment	2 tractors , seedling stool beds	\$290,000 ²
	State Forests and private forests - Wellington	Ash timber reserves; State Forests only	\$54,994,500
Total Forestry			\$55,934,500
Agriculture			
	Fencing	1029 km bordering and internal	\$9,664,500 ⁸
	Pastures	6345 ha	\$824,850 ⁹
	Livestock	1163 head	\$553,745 ¹⁰
	Buildings (excluding places of residence)	14 woolsheds and other smaller agricultural buildings	\$480,000 ¹¹
	Grains, fodder and horticulture	Hay, grain and mixed horticulture	\$451,035
Total Agriculture			\$11,974,130
Public Assets			
Parks	Amenities	Toilet blocks and barbeques	\$109,000 ¹²
	Signage	Directional	\$25,000 ⁷
	Track infrastructure (interim estimates)		\$150,000 ⁷
Education	School camp	Alpine school camp	\$650,000 ¹³
Wellington Shire	Communications infrastructure	UHF base station	\$50,000 ¹⁴
	Road infrastructure	Council managed roads	\$2,400,000 ⁹
Total Public Assets			\$3,384,000
Private Assets			
Houses	Principal residences	9 houses	\$1,710,000 ¹⁵
	Second home/holiday residences	6 houses	\$900,000 ¹⁶
Total Private Assets			\$2,610,000
Total Assets			\$73,902,630

Source: Buchan estimates of cost, details on methods in Appendix A

The following sections analyse each of the sectors in detail.

⁷ Hancock Plantation estimates

⁸ DPI assessments of total fencing losses and Buchan estimates of replacement costs. Bordering fences (\$10.50 per metre), internal fences (\$8 per metre)

⁹ DPI assessments of total pasture losses and Buchan estimates of pasture recovery according to agriculturalists

¹⁰ DPI assessments of total stock losses and Buchan estimates of based on public commercial data for various livestock

¹¹ Wellington Shire Council assessments and Buchan estimates of replacements costs for 14 larger sheds (\$10,000 per construction) and 136 other buildings (\$2,500 per construction)

¹² These are Parks Victoria preliminary estimates of damage in the Alpine National Park. Given the vast area of tracks and size of National Parks within Wellington Shire, a comprehensive audit is unlikely to be completed until late 2007.

¹³ Traralgon Secondary College estimates of assessed damage

¹⁴ Wellington Shire Council assessments and estimates. Barkly Bridge replacement cost of \$600,000 factored into estimates

¹⁵ Wellington Shire Council assessments and Buchan estimates of replacements costs for homes (\$190,000 per home including site clean up estimated at \$10,000). The data was validated both with local builders and cross-referenced with the BTE report (the *Economic Costs of Natural Disasters in Australia*). This report bases its figures on estimates of a 140 square metre brick veneer house at \$160,000, based on a building cost of \$1,000 per square metre, plus \$20,000 for a separate garage, other structures, and heating or cooling systems.

¹⁶ Wellington Shire Council assessments and Buchan estimates of replacements costs for homes (\$150,000 per home including site clean up of \$10,000)

3.2 Forestry Sector

3.2.1 Gippsland Region

Forest products is a major industry sector in the broader Gippsland Region.

Recent reports on the socio-economic impact of forestry in the Gippsland Region¹⁷ indicate that of the entire 4.6 million ha of land in the region, 533,000 ha is harvestable forest with most of the wood production yielded from 405,000 ha of harvestable public native forest (ie. State Forests) and 88,200 ha in plantations.¹⁸

The direct gross value of output in the sector for the Gippsland Region in 2003/2004 was estimated at \$1,207 million per annum. The Latrobe LGA contains most of the large mills and has the Australian Paper Mill at Maryvale, and accounts for 72% of the total value of regional output in forest products. Wellington Shire generates 15% of regional output and East Gippsland 10%.¹⁹

Public native forest is an integral part of the local economies in the Gippsland Region due to the large areas of native alpine and mountain ash and due also to the strategic presence of ITC Timber at Heyfield (in Wellington Shire). This plant is Australia's largest single processing hardwood plant and is capable of processing 160,000 m³ of hardwood log equivalents per year.²⁰

Our impact assessment of forestry in the Shire has focussed on the significant losses to native hardwoods that have occurred across State Forests.

To assess the impacts on regional forest resources we undertook detailed consultations with VicForests, Victorian Association of Forestry Industries, DSE, Park Victoria, Hancocks and ITC Timber.

There are a number of elements in assessing losses. Our consultations suggest that the total scale of the forest area burnt is similar to losses in the February 2003 bushfires, in which 1.067 million hectares of native forest was burnt across the North East, Tambo, East Gippsland and Dargo areas. According to VicForests the December 2006 fire was slightly larger in scale (1.089 million hectares).²¹

Significant tracts of State Forest were lost in the 2006 bushfires. Official maps comparing harvested coupes and bushfire damage show large areas of State Forest within Wellington Shire - west of Seaton and Cowarr Weir and north of Licola and Glencairn. VicForests has yet to complete its detailed audit of the area to fully assess losses.²²

As of January 18 2007, high level estimates by VicForests suggest that as much as 3 million m³ or approximately 2.15 million tonnes could have been lost across the Gippsland Region. Further consultations with the agency has suggested that from this as much as 14,100 hectares of ash forests was allocated forests to be harvested from the timber release plans.

¹⁷ *The Timber Industry in Gippsland- A Socio-Economic Assessment*, Gippsland Private Forestry Inc. and Department of Primary Industries; September 2005 Gippsland region in this report is regarded as comprising the ten LGA areas of Yarra Ranges, Mornington Peninsula, Cardinia, Casey, Bass Coast, Baw Baw, Latrobe, Wellington and East Gippsland. The region includes the for Forest management areas of Dandenong, Central Gippsland, Tambo and East Gippsland

¹⁸ *The Timber Industry in Gippsland- A Socio-Economic Assessment*, Gippsland Private Forestry Inc. and Department of Primary Industries; P10, September 2005 The remainder is native forests on private land that is harvested.

¹⁹ *The Timber Industry in Gippsland- A Socio-Economic Assessment*, Gippsland Private Forestry Inc. and Department of Primary Industries; P11 September 2005.

²⁰ ITC Timber company sources

²¹ *Wildfire Notice*, VicForests January 18 2007

²² Buchan consultations with VicForests, DSE and other stakeholders.

In valuing the losses in Gippsland, we have taken prices from industry sources that indicate that hardwood ash commands mill gate prices of \$110 per m³ for KDD appearance grade (used in furniture, stairs etc) to \$55 per m³ for pulp.²³

This values the timber losses in the broader Gippsland Region at **\$258 million**.

Table 2. 2006 Bushfire Net Harvestable Area Timber Losses - Gippsland Region

Gippsland Region	
Area Affected	14,100 hectares
Average yield	250m ³ per hectare (2/3 pulp grade and 1/3 KDD grade)
Price	\$18,331.50 per hectare of ash (Approx. \$73.4 per m ³)
Total Value	\$258.47 million

Source: Buchan estimates based on information from VicForests

3.2.2 Wellington Shire

Wellington Shire has significant levels of both softwood and hardwood plantations and harvestable native forest timber. The Shire contains two-thirds of Gippsland's softwood plantations.²⁴

Our consultations with the leading plantation operator in Wellington Shire (Hancock) indicate that their softwood plantations in the Shire were not affected. However major damage was done to a Hancock Victorian Plantation nursery located in Wellington, and the company also had softwood plantation losses in the adjacent Latrobe LGA.

In estimating the value of timber losses in Wellington Shire we have taken account of a number of factors.

- Within the Shire, forest in the Connors Plain area (within the vicinity of Licola-Jamieson Road) was damaged and this was a prime stand for harvest.
- Coupes or stands within Wellington Shire yield approximately 250 m³ per hectare. On average two thirds of timber from each hectare in the Shire area is harvested for pulp with the remaining harvested for high-grade timber. The value of timber lost has been estimated on this basis and using the same average prices used for the Gippsland Region (ie. mill gate prices of \$110 per m³ for KDD appearance grade (used in furniture, stairs etc) to \$55 per m³ for pulp).

The estimation of the forestry sector losses needs to take account of a number of factors.

- VicForests has not completed its physical audit of forestry losses. The areas of State Forests that were affected fall across several LGAs areas and forestry management zones. A full measure of the timber contained in harvestable areas of State Forest within Wellington Shire will be better established once salvage has progressed.
- Extensive timber salvage operations have been underway in Wellington Shire as of early January.

Currently salvage operations are progressing at a rapid pace to avoid timber degradation, particularly from the significant coupes in the area north of Licola. Wellington Shire estimates that harvest and haulage will see approximately 125,000 tonnes harvested from this area over the

²³ For Gippsland it is assumed that on average two thirds of timber from each hectare in the region is harvested for pulp with the remaining harvested for high-grade timber.

²⁴ *The Timber Industry in Gippsland- A Socio-Economic Assessment*, Gippsland Private Forestry Inc. and Department of Primary Industries; P19, September 2005. The report states that the high proportion of softwood plantations in Wellington Shire is a reflection of past availability of marginal farmland at affordable prices and leasehold land suitable for plantation development within economic haul of the Maryvale pulpmill

next 12 months, up from 25,000 tonnes. Daily extraction from this area according to VicForests is as much as 40 log truck loads per day.

Most of the 14,100 hectares of harvestable ash reserves damaged by the fire in the Gippsland region was in the Latrobe LGA. Discussions with VicForests indicate that harvestable forest (predominantly mountain ash) destroyed in Wellington Shire was 3000 hectares.

VicForests estimate that approximately **3,000 hectares** of harvestable ash was damaged and this is valued at an estimated **\$55 million**. There are also likely to be some private farm plantation timbers lost, however these have not been confirmed.²⁵

Table 3. 2006 Bushfire Net Harvestable Area Timber Losses - Wellington Shire

Wellington Shire	
Area Affected	3000 hectares
Average yield	250m ³ per hectare (2/3 pulp grade and 1/3 KDD grade)
Price	\$18,331.50 per hectare of ash (Approx. \$73.4 per m ³)
Total Value	\$54.99 million

Source: Buchan estimates based on information from VicForests

While some of this timber may be recoverable through the salvage operations, there is the issue of future stocks of trees that can take between 40+ years of growing prior to harvesting. Timber processing will increase over the next 18 months as damaged logs are recovered and processed as part of clearing operations. However in the longer term, there are major issues in terms of future stock that will be available to replace the timber lost in the harvestable coupes in the state forest in the broader region. In effect the estimate of \$55 million is the present value of those losses in Wellington Shire.

3.3 Agriculture Sector

3.3.1 Affected Properties

The Department of Primary Industries has been actively assessing damage to agriculture in the region and as at early March 2007 it had finalised assessments of 280 farms in Wellington Shire that were affected by the fire. The following table shows the affected properties and their size.²⁶

Table 4. Bushfire Affected Properties - Wellington Shire

Description	Number
No. of farms assessed	280
Approx. areas of all farms (hectares)	23,937
Total damaged area (hectares)	13,105
Commercially viable farms	60
Farms with stock losses	24

Source: Department of Primary Industries

²⁵ Various agriculture holdings lost harvestable timber reserves including one very large property which lost 500 hectares of mixed species. Overall 750 hectares of timber could have been lost which could be worth as much as \$16.9 million.

²⁶ Department of Primary Industries, Bushfire damage database, March 2007

3.3.2 Infrastructure Damage

Significant agriculture infrastructure was damaged and included fencing (\$9.6 million), pastures (\$824,000) and out buildings (\$480,000).

The following table provides estimates (based on replacement or restoration costs) of these losses. These estimates take into account costs for external and internal fencing and pasture rehabilitation. Damaged fencing (1029kms) is the major cost at \$9.7 million.²⁷

Table 5. Infrastructure Losses on Affected Properties - Wellington Shire

Asset	Farms Affected	Value
Fencing		
Crown boundary fencing lost - 134km	33	\$1,407,000
Boundary fencing lost - 439km	162	\$4,609,500
Internal fencing lost - 456km	102	\$3,648,000
Total Fencing		\$9,664,500
Pasture		
6345 hectares of pasture	N/A	\$824,850 ²⁸
Total Pasture		\$824,850
Outbuildings		
Woolsheds -14	N/A	\$140,000 ²⁹
Other buildings (sheds etc) -136	N/A	\$340,000
Total Buildings		\$480,000
Total		\$10,969,350

Source: Buchan estimates

²⁷ Our estimates for fencing allow for the mountainous nature of farms (which require a greater number of poles) and have been cross-checked with contractors and farmers. External border fencing suitable for Wellington farms affected would comprise treated pine posts; 5/6 barbs, hinge-joints and with an electrified or "hotwire" (necessary for warding off feral animals) on an uneven gradient. The cost would be approximately \$10.50 a metre on cleared lines. Internal border fencing comprising treated pine posts; 5/6 barbs on uneven gradient would be approximately \$8 a metre (on cleared lines)

²⁸ Recovery figures per hectare of \$130 are from Wellington based agriculture producers affected by bushfires pasture losses. Prices would be for contour ripping and safeguarding against erosion through reducing speed of water run-off and pasture rebuilding/sowing. Figure quoted on total hectares from DPI.

²⁹ Wellington Shire Council assessments and Buchan estimates of replacements costs for 14 larger sheds (10K per construction) and 136 other buildings (\$2.5K per construction)

3.3.3 Livestock Losses

Stock losses were limited relative to previous bushfires in other areas.³⁰ The Department of Primary Industries has collated livestock losses. The major losses were beef livestock and the dairy sector did not lose any stock.³¹ The following table contains estimates of livestock losses identified in the consultations.

Table 6. Livestock Losses on Affected Properties-Wellington Shire

Stock	Farms Affected	Value
Beef - 787	12	\$547,000 ³²
Sheep -35	2	\$3,340 ³³
Goats -27	3	\$2,160 ³⁴
Poultry - 122	5	\$1,245 ³⁵
Other stock - 192	6	N/A
Total		\$553,745

Source: Buchan estimates based on DPI information

Another loss is deer stock in the national parks and these have not been estimated. The parks in Wellington Shire are popular destinations site for Sambar deer hunters. Our consultations with the association suggested that many of the 11,000 plus licensed deer hunters have hunted in the areas affected by fire.³⁶

³⁰ DSE estimates over 63,000 sheep were lost in the Grampians bushfires in 2005/06.

³¹ However important supply routes were affected by road closures during the fires, we have not been able to assess any losses in production from this.

³² Utilised Eastern Young Cattle Indicator as of March 1 at 330.75c/kg. This is a weighted average of 24 young cattle types from 26 prime saleyards in Victoria, Queensland and NSW. Live weight average of 210 for our estimates was taken as per indications in rural media such as Stock & Land

³³ Sheep cost estimates undertaken utilising national trade lamb indicator average of 341¢/kg for the week ending 02/03/07. Assumed that stock was primarily for lambing hence 28 kilogram weight was assumed for calculations as per indications in rural media such as Stock & Land

³⁴ Prices quoted from Australian mohair association. Prices of \$80 was average sales price for a yearling goat

³⁵ Prices from the Australian Chicken Meat Federation. Average weight at processing of 2.55 kg assumed

³⁶ Australian Deer Association and Park Victoria web information. The Victorian chapter of the ADA with 11,100 licensed deer hunters in the state. The Alpine National Park, Gippsland Lakes Coastal Park and Mitchell River in the wider Wellington Shire area are all open from February till December for deer hunting

3.3.4 Fodder and Grain

Other major losses incurred were of feed, grains and other horticulture crops. These included baled hay and a mature crop of ginseng at Licola. Other horticulture losses were predominantly feed quality grains. The following table provides estimates of these losses.

Table 7. Grains, Fodder and Horticulture Losses -Wellington Shire

Crops	Value
Fodder	
Hay - small bale equivalents -7869	\$118,035 ³⁷
Feed Crops (lucerne, feed barley) -174 hectares	\$93,000 ³⁸
Horticulture	
Horticulture (walnuts)- 237 hectares	\$150,000 ³⁹
Premium ginseng - 2 hectares	\$90,000 ⁴⁰
Total	\$451,035

Source: Buchan estimates based on DPI information

3.4 Public Assets

There was damage to public assets including roads, national parks tracks, visitor facilities and a school camp. The following table estimates the value of these losses. In the case of national park assets a full audit of damage is yet to be completed.

Table 8. Public Assets Affected-Wellington Shire

Asset Owner	Asset	Value
Victorian Government		
Parks Victoria	Toilet blocks and barbeques	\$109,000 ⁴¹
Parks Victoria	Directional signage	\$25,000
Parks Victoria	Bridge and road infrastructure	\$150,000
Council		
Wellington Shire	UHF base station	\$50,000 ⁴²
Wellington Shire	Council managed roads and Barkly Bridge	\$2,400,000
Other		
Traralgon Secondary College	Alpine school camp	\$650,000 ⁴³
Total		\$3,384,000

Source: Buchan estimates based on owner information

³⁷ Utilised average price \$15 as raised by DPI consultation

³⁸ Predominantly lucerne or other feed barley [\$245 a tonne (futures price) at Victorian average yield of 2.2 tonnes/ha] as Wellington Shire is not renowned as a cash crop growing district.

³⁹ Predominantly second income walnut orchards - no major commercial operations damaged. A commercial orchard can get 4 tonne a hectare according to the Australian Walnut Association, hobby farmers likely to get around 2.5 tonnes a hectare. Farm-gate prices are around \$4-\$5 a kilo annual production Australia wide probably 350 tonnes (Australian Walnut Association) - hence estimate of a maximum of 20 tonnes lost is plausible.

⁴⁰ Utilised premium, organic wild ginseng at \$500Kg. Consultations with farmer and ginseng association confirmed these prices

⁴¹ These are Parks Victoria preliminary estimates of damage in the Alpine National Park. Given the vast area of tracks and size of National Parks within Wellington Shire, a comprehensive audit is unlikely to be completed until late 2007.

⁴² Wellington Shire Council assessments and estimates

⁴³ Traralgon Secondary College estimates of assessed damage

3.5 Private Assets

Losses of homes were limited and the table below provides estimates of private property damage. The costing is based on the construction costs of replacement houses and site clean up, and does not include estimated replacement of furniture and fittings.

Table 9. House Affected -Wellington Shire

Property type	Value
Main Residences - 9	\$1,710,000 ⁴⁴
Holiday Houses - 6	\$900,000 ⁴⁵
Total	\$2,610,000

Source: Buchan estimates

3.6 Costs to Wellington Shire

In addition to the costs of assets, Wellington Shire has been active in coordinating recovery and assistance to affected residents. The following table estimates the costs to Council of bushfire related support (based on hours of work), which at the beginning of March 2007 totalled \$315,500.

Table 10. Operational Costs - Wellington Shire

Expense	Hours (Council Employees)	Cost
MECC Relief and Recovery Centre Expenses	1800	\$75,500
Asset Make Safe - Repair/Assessment	500	\$30,000
Estimated productivity lost (hours diverted from other activities)	3600	\$160,000
Other Costs (Catering, power, communications, supplies etc)		\$50,000
Total		\$315,500⁴⁶

Source: Council information and Buchan estimates

⁴⁴ Wellington Shire Council assessments and Buchan estimates of replacements costs for homes (\$190,000 per home including site clean up of \$10,000.) The data was validated both with local builders and cross-referenced with the BTE report (the *Economic Costs of Natural Disasters in Australia*). This report bases its figures on estimates of a 140 square metre brick veneer house at \$160 000, based on a building cost of \$1000 per square metre, plus \$20 000 for a separate garage, other structures, and heating or cooling systems.

⁴⁵ Wellington Shire Council assessments and Buchan estimates of replacements costs for homes (\$150,000 per home including site clean up of \$10,000)

⁴⁶ Buchan estimates based on Council estimates of hours worked on bushfire related activities up to March 1 2007.

4 Tourism Impacts

4.1 Overview

A key sector that has been impacted by the bushfires has been alpine park related tourism. The fires occurred during the summer peak season for tourism, with lasting effects in terms of reduced visitor numbers still being experienced. The general expectations of the tourist related businesses is that 2007 will be a bad year overall and that full recovery will not be achieved during 2008.

The impact of the fires was particularly felt in the towns adjacent to the national parks and more broadly in other areas of Wellington Shire due to reduced numbers of visitors and expenditure.

The analysis in this chapter is based on several sources of information: consultations with a sample of tourist related businesses in the affected areas; discussions with Tourism Wellington and Council staff; consultations with local associations; and analysis of tourism in the Shire and a modelling of the impacts.

Of all of the sectors affected, the tourism sector is made up of small operators and other suppliers, who are feeling the immediate and dramatic effects of a lost summer season (achieving only 10% of normal turnover in most businesses), and the prospect of a poor 2007. The outlook for 2008 also indicates that visitor numbers are likely to be below normal levels.

The current experience has been overlaid on the impact of drought on local spending and a slowing in the growth in regional tourism.

4.2 Tourism in Wellington Shire

4.2.1 Visitor Patterns

To assess the impacts of the fires on tourist related activities, it is important to understand the nature of tourism in the Shire and the broad destinations of visitors. In particular there is a need to know the numbers and profile of visitors to the areas affected by the fires - national parks and high country.

Discussions with tourist operators in the lakes area and businesses in Sale, indicate that other than the main period of the fires in December 2006, visitor numbers have not been greatly affected. Indeed lakes visitors have been boosted as boating enthusiasts do not have access to a number of inland lakes due to drought.

Our analysis shows the visitor patterns for the Shire, with total visitors estimated at 763,000 per year. Based on this analysis, we estimate that high country visits account for a total of 165,000 visitors each year (22% of visitors) and the lakes and coast account for 234,000 visitors (31%). A major category of visitors are day visitors to Sale for shopping and business purposes and these are estimated at 364,000 per annum or 47% of visitors.

Table 11. Visitor Estimates – Wellington Shire

Estimates of Visitors Wellington Shire			
	Over Nights	Day Visitors	Total Visitors
Location			(Annual)
Sale	64000	300000	364000
Lakes/Sea	150000	84000	234000
High Country	65000	100000	165000
Total	279000	484000	763000

Source: Buchan estimates of visitors derived from Wellington Tourism Strategy 2006-2011, Nexus Consulting 2006 Data is for 2004

It is also important to understand the seasonal timing of visits to the region. While this data is not available for Wellington Shire, we have assumed that visit timing is similar to that for the Gippsland Region. It shows that summer accounts for 31% of visits, autumn for 29%, spring for 27% and only 13% of visits are during winter.

This broad pattern was confirmed in our discussions with tourist operators. Operators in Licola, Dargo and in the camping areas such as Wonnangatta and Waterford bordering the Alpine National Park rely on high season revenues for their annual revenues and to manage their business cash-flows through the winter.

Table 12. Timing of Visits Wellington Shire

Timing of Visits	% of Visitors
Summer	31
Autumn	29
Winter	13
Spring	27
	100

Source: Gippsland Regional Tourism Development Plan 2004-2007 P 16.
<Data is for the total Gippsland Region>

4.2.2 Tourism Spending and Jobs

Data is also available to estimate the total expenditure by visitors in the region, and this is a measure of the value of tourism to the region.⁴⁷ It shows that: tourism expenditure in the Shire is \$113 million per year, with overnight visitors account for \$69 million in spending and day visitors accounting for \$43 million in spending.

Table 13. Estimated Tourist Expenditure –Wellington Shire

Wellington Shire	Number of Visitors	Expenditure per visitor	Total Annual Expenditure
Overnight Visitors (average 3.4 day stay)	279,000	\$248	\$69,247,800
Day Visitors	484,000	\$90	\$43,560,000
Total	763,000		\$112,807,800

Source: Buchan estimates of visitors derived from Wellington Tourism Strategy 2006-2011, Nexus Consulting 2006 Data is for 2004.

Our analysis shows that there are a total of 729 direct tourism related jobs in Wellington Shire, of these high country related jobs account for 155 or 21% of tourism related jobs in the region.⁴⁸ In addition there are another 146 indirect jobs generated by tourism.

Table 14. Estimate of Tourism Related Jobs in Wellington Shire

Wellington Shire				
Source of Jobs	Tourism Related Jobs - Direct	Share of Tourism Related Jobs	Tourism Related Jobs - Indirect	Total Tourism Related Jobs (Direct + Indirect)
Sale and other areas	281	38.5	56	337
Lakes/Sea	293	40.2	59	352
High Country	155	21.2	31	186
Total Wellington Shire	729	100	146	875

Source: Buchan estimates, numbers may not total due to rounding

4.3 High Country Tourism

4.3.1 Assessing High Country Tourism

The major impacts on the bushfires are on that part of the tourist sector in Wellington which services visitors to the high country and alpine national parks.

High country and national parks tourism has been impacted by the bushfires and by damage to these areas and the ongoing closure of major areas of the national parks. The need to repair tracks and amenities may delay the opening of some areas until later in 2007.

There have been limited impacts on coastal and lake visitor numbers.

Recovery by businesses providing accommodation, supplies and hospitality services in the towns of Licola, Dargo and Heyfield will see their economic recovery hampered by the prolonged

⁴⁷ Overnight visitors spend an estimated \$73 per day and stay for an average of 3.4 days (\$248 total), See *Wellington Tourism Strategy 2006-2011*, Nexus Consulting 2006

⁴⁸ Analysis from the Tourism Survey - *TTF Australia Victorian Tourism Employment Atlas 2005*, shows that there were 828 tourism jobs in Wellington Shire in 2002-03 P18

closure of the national parks as key periods such as Cup Weekend, late-autumn hunting season and September holiday traffic will be lost.

To estimate the impacts of the bushfires on tourism we undertook a number of areas of investigation and analysis, and this included:

- Consultations with a sample of businesses involved in high country related tourism. A total of 15 were interviewed. These businesses covered: tour operators, accommodation, hotels, cafes, and retail in and around Dargo, Licola, Glencairn and in areas such as Heyfield and Cowarr Weir, which are important stopover sites to the alpine areas.
- These consultations identified the effects of the bushfires on activity in these businesses and their expectations about the period of recovery.
- Estimation of the total expenditure in the Shire on high country/national parks related tourism and the impacts of the bushfires on this expenditure over 2007 and 2008.
- Estimated the total number of jobs in the Shire that are related to high country/national parks tourism and the number of jobs that are impacted by the bushfires.

4.3.2 Value of High Country Tourism

The following provides estimates for total tourism expenditure in Wellington Shire for the overnight (65,000) and day visitors (100,000) to the high country. It shows that:

- Total spending by visitors is estimated at around **\$25 million per year** in a normal year. While this is total spending in the Shire, much of this expenditure is in the areas adjacent to the high country and alpine parks.
- Major categories of areas of spending are fuel, accommodation, groceries and drinks, other shopping, takeaway and restaurants, and organised tours.
- Summer, Autumn and Spring periods are most important and account for 87% of expenditure.
- Discussions with tourism operators and other businesses indicate that many earn up to 75% of their revenue in the period from November to April (Cup day to Easter).
- Uncertainty about fire-affected national parks not being open till after Cup Day has created further duress for the High Country operators that we consulted as this extended weekend marks the start to their most profitable season.

Table 15. High Country Tourism Expenditure by Category (Normal Year) - Wellington Shire

Expenditure Category	Summer (31%)	Autumn (29%)	Winter(13%)	Spring(27%)	Total Annual
Organised tours	\$750,185	\$701,786	\$314,594	\$653,387	\$2,419,950
Car hire	\$100,025	\$93,571	\$41,946	\$87,118	\$322,660
Fuel	\$1,366,775	\$1,278,596	\$573,164	\$1,190,417	\$4,408,950
Vehicle maintenance/repairs	\$100,025	\$93,571	\$41,946	\$87,118	\$322,660
Accommodation	\$1,250,308	\$1,169,643	\$524,323	\$1,088,978	\$4,033,250
Takeaways and restaurant meals	\$880,186	\$823,400	\$369,110	\$766,614	\$2,839,310
Groceries for self-catering	\$1,067,621	\$998,743	\$447,712	\$929,864	\$3,443,940
Alcohol & drinks	\$389,562	\$364,429	\$163,365	\$339,296	\$1,256,650
Shopping, (include gifts etc)	\$1,064,949	\$996,243	\$446,592	\$927,536	\$3,435,320
Entertainment, museums, movies	\$211,625	\$197,971	\$88,746	\$184,318	\$682,660
Gambling	\$77,912	\$72,886	\$32,673	\$67,859	\$251,330
Other products	\$289,537	\$270,857	\$121,419	\$252,177	\$933,990
Other expenditure	\$242,522	\$226,876	\$101,703	\$211,229	\$782,330
Total	\$7,791,230	\$7,288,570	\$3,267,290	\$6,785,910	\$25,133,000

Source: Buchan estimates

4.3.3 High Country Tourism Jobs

The following are estimates of the jobs in Wellington Shire in high country related tourism (both day visitors and overnight visitors). It indicates that an estimated 155 jobs are generated in the Shire by this visitor spending.

These jobs are focused in: accommodation (30), restaurants and takeaways (28), tour operations (24), and retail - including fuel (11), supermarkets (9) and other retail (26). Most of these jobs are in small business and include both owner/operators and employees.

Table 16. High Country Tourism Expenditure by Category (Normal Year) - Wellington Shire

Activity	Jobs
Tours	24.2
Car hire	1.6
Fuel	11.0
Vehicle maintenance/repairs	3.2
Accommodation	30.2
Takeaways and restaurant meals	28.4
Groceries for self-catering	8.6
Alcohol & drinks	3.1
Shopping, gifts, other	25.8
Entertainment, museums, movies	5.1
Gambling	0.6
Other products	7.0
Other expenditure	5.9
Total	154.8

Source: Buchan estimates

4.4 Impacts of Bushfires on Tourism Activity

4.4.1 Expenditure Levels

Our discussions with tourist operators indicate that there was a major decline in visitor numbers and expenditure in the summer period, with most of those contacted indicating that turnover in the summer period (December 06 - February 07) was around 10% of their normal levels.

Even the large presence of fire fighters and volunteers in areas such as Dargo in December did not sufficiently mitigate the major losses that were incurred across the 3 month period.

The expectation is that 2007 will be a poor year with some pick up in activity in 2008. This was the pattern of recovery experienced in the Grampians.⁴⁹ The following table shows the likely recovery of the market over 2007 and 2008.

⁴⁹ Discussions with Horsham Rural City Council tourism officials confirmed this trend

Table 17. Pattern of Recovery (% of normal spending) High Country Tourism- Wellington Shire

Year	Summer %	Autumn %	Winter %	Spring %
Year 1 2007 (Dec 06-Nov 07)	10	30	30	50
Year 2 2008 (Dec 07-Nov08)	65	65	70	85

Source: Buchan estimates

The level of spending in Summer was around 10% of normal activity and is likely to build to 30% in Autumn and Winter. It will be 2008 before levels start to recover substantially, though this will require significant marketing activity to rebuild the market.

- Over Year 1 (December 06-November 07), tourism visitor numbers and expenditure could be as low as 30% of a normal year. This represents a **fall of almost \$18 million** in spending over the year.
- Our estimates for Year 2 (December 07 November 08) based on our discussions with operators, have expenditure at around 70% of normal levels.⁵⁰ This is **around \$7 million down** on normal levels.
- In total visitor spending over the two years could be down by a **total of up to \$25 million**.

The following table shows estimates of tourist related expenditure for high country tourism over the two years. It shows that:

- On a season by season basis - there is a substantial fall, with most operators seeing all of 2007 as a "write off".
- This lost tourism expenditure is due to the fall off in numbers is not recoverable for these businesses.
- There will be a need to rebuild the market over the next two years at least, if these tourism related businesses are to get back on track.

⁵⁰ This pattern of recovery accords with the experience of the Grampians

Table 18. Estimated Expenditure - High Country Tourism- Wellington Shire

Impact Analysis Bushfire	Normal Year	Year 1	Year 2
High Country Related Tourism	Expend	Total	Total
	Summer/ Spring	Summer/ Spring 2007	Summer/ Spring 2008
Tours	\$2,419,950	\$706,625	\$1,719,374
Car hire	\$322,660	\$94,217	\$229,250
Fuel	\$4,408,950	\$1,287,413	\$3,132,559
Vehicle maintenance/repairs	\$322,660	\$94,217	\$229,250
Accommodation (can include food)	\$4,033,250	\$1,177,709	\$2,865,624
Takeaways and restaurant meals	\$2,839,310	\$829,079	\$2,017,330
Groceries for self-catering	\$3,443,940	\$1,005,630	\$2,446,919
Alcohol, drinks (not already reported)	\$1,256,650	\$366,942	\$892,850
Shopping, gifts, other	\$3,435,320	\$1,003,113	\$2,440,795
Entertainment, museums, movies	\$682,660	\$199,337	\$485,030
Gambling	\$251,330	\$73,388	\$178,570
Other products	\$933,990	\$272,725	\$663,600
Other expenditure	\$782,330	\$228,440	\$555,845
Total	\$25,133,000	\$7,338,836	\$17,856,997

Source: Buchan estimates

The following shows projected expenditure by season over 2007 and 2008, by areas of expenditure.

Table 19. Impacts of Bushfires on Tourism Expenditure (High Country Related) -Wellington Shire 2007 and 2008

Impact Analysis Bushfire										
Expenditure Levels	Year 1					Year 2				
High Country Related	Summer 06/07	Autumn 07	Winter 07	Spring 07	Total	Summer 07/08	Autumn 08	Winter 08	Spring 08	Total
Estimates of Current Expenditure (% of normal)	10	30	30	50	summer-spring 2007	65	65	70	85	summer-spring 2008
Tours	\$75,018	\$210,536	\$94,378	\$326,693	\$706,625	\$487,620	\$456,161	\$220,215	\$555,379	\$1,719,374
Car hire	\$10,002	\$28,071	\$12,584	\$43,559	\$94,217	\$65,016	\$60,821	\$29,362	\$74,050	\$229,250
Fuel	\$136,677	\$383,579	\$171,949	\$595,208	\$1,287,413	\$888,403	\$831,087	\$401,214	\$1,011,854	\$3,132,559
Vehicle maintenance/repairs	\$10,002	\$28,071	\$12,584	\$43,559	\$94,217	\$65,016	\$60,821	\$29,362	\$74,050	\$229,250
Accommodation (can include food)	\$125,031	\$350,893	\$157,297	\$544,489	\$1,177,709	\$812,700	\$760,268	\$367,026	\$925,631	\$2,865,624
Takeaways and restaurant meals	\$88,019	\$247,020	\$110,733	\$383,307	\$829,079	\$572,121	\$535,210	\$258,377	\$651,622	\$2,017,330
Groceries for self-catering	\$106,762	\$299,623	\$134,314	\$464,932	\$1,005,630	\$693,954	\$649,183	\$313,399	\$790,384	\$2,446,919
Alcohol, drinks (not already reported)	\$38,956	\$109,329	\$49,009	\$169,648	\$366,942	\$253,215	\$236,879	\$114,355	\$288,401	\$892,850
Shopping, gifts, other	\$106,495	\$298,873	\$133,977	\$463,768	\$1,003,113	\$692,217	\$647,558	\$312,614	\$788,406	\$2,440,795
Entertainment, museums, movies	\$21,162	\$59,391	\$26,624	\$92,159	\$199,337	\$137,556	\$128,681	\$62,122	\$156,670	\$485,030
Gambling	\$7,791	\$21,866	\$9,802	\$33,930	\$73,388	\$50,643	\$47,376	\$22,871	\$57,680	\$178,570
Other products	\$28,954	\$81,257	\$36,426	\$126,089	\$272,725	\$188,199	\$176,057	\$84,993	\$214,351	\$663,600
Other expenditure	\$24,252	\$68,063	\$30,511	\$105,615	\$228,440	\$157,639	\$147,469	\$71,192	\$179,545	\$555,845
Total	\$779,123	\$2,186,571	\$980,187	\$3,392,955	\$7,338,836	\$5,064,300	\$4,737,571	\$2,287,103	\$5,768,024	\$17,856,997
Normal Expenditure	\$7,791,230	\$7,288,570	\$3,267,290	\$6,785,910	\$25,133,000	\$7,791,230	\$7,288,570	\$3,267,290	\$6,785,910	\$25,133,000
Difference	-7,012,107	-5,101,999	-2,287,103	-3,392,955	-17,794,164	-2,726,930	-2,550,999	-980,187	-1,017,886	-7,276,003

Source: Buchan estimates

4.4.2 Tourism Jobs

There are an estimated 729 direct tourism related jobs in Wellington Shire.⁵¹ In addition, there are an estimated 146 indirect jobs generated by this activity.

Our analysis shows that of total direct jobs, 155 or 21% of tourism jobs are associated with high country tourism.

While we have estimated the alpine tourism related jobs at 155, there are another 31 indirect jobs (based on an employment multiplier of 1.2) that are generated in other sectors in Wellington as a result of the spending of persons employed in tourism related activities. This includes retail, business services, and personal services.

The impacts of the bushfires could affect over 100 of these direct jobs in 2007 and over 40 direct jobs in 2008.

Our industry consultations have revealed that most businesses have held their core employees (by reducing casuals) and many businesses are small and owner operated. Future employment will depend on the pattern of recovery and the time taken to get back to more normal visitor levels.

The specialist tourism operators and accommodation providers are those that are most at risk and under pressure, because their livelihood depends on having access to the parks. Lack of access to the parks has meant that many of the specialist operators that we consulted have looked at alternative employment in the interim. This may become more permanent if park access is delayed for extended periods of time.

Some of the other businesses (e.g. retailers) have access to a local market as well as the visitor market.

Table 20. Impacts of Bushfires on Tourism Jobs (Directly Employed High Country Related) - Wellington Shire 2007 & 2008

Activity	Estimated Jobs Normal Operations	Year 1 Jobs (2007) Based on reduced expenditure	Year 2 Jobs (2007) Based on reduced expenditure
Tours	24.2	7.1	17.2
Car hire	1.6	0.5	1.1
Fuel	11.0	3.2	7.8
Vehicle maintenance/repairs	3.2	0.9	2.3
Accommodation	30.2	8.8	21.5
Takeaways and restaurant meals	28.4	8.3	20.2
Groceries for self-catering	8.6	2.5	6.1
Alcohol, drinks	3.1	0.9	2.2
Shopping, gifts, other	25.8	7.5	18.3
Entertainment, museums, movies	5.1	1.5	3.6
Gambling	0.6	0.2	0.4
Other	7.0	2.0	5.0
Other Expenses	5.9	1.7	4.2
Total Direct Jobs	154.8	45.2	110.0
Total Indirect Jobs	30.9	9.0	22.0
Total Direct + Indirect Jobs	185.8	54.2	132.0

Source: Buchan estimates

⁵¹ These estimates are based on an analysis of the labour cost share of expenditure and the assumption that average wages in the sector are \$40,000 per year.

5 Concluding Comments

The analysis shows that the impacts on Wellington Shire are substantial. Recovery in the region will depend on:

- The extent to which lost assets are insured and are rebuilt.
- Rebuilding will provide some increased activity for builders, fencers, road contractors, and agribusiness contractors in the region. If all assets were replaced construction activities would be substantial over the next 12-18 months.
- The pattern of recovery in alpine park visitors will be dependent on the timing of opening of the parks and the rebuilding of facilities. This will also require a substantial marketing campaign to attract visitors.
- In the case of agribusiness, recovery will be dependent on the ending of the drought.
- Timber processing will have an increased throughput as damaged logs are recovered and processed as part of clearing operations. In the longer term, there are issues in terms of future stock that will be available to replace the timber lost in the harvestable coupes in the State Forest areas.

Appendix A References

- Economic Costs of Natural Disasters*, Bureau of Transport Economics, 2001
- Gippsland Market Profile*, Tourism Victoria, Year ending June 2006
- Socio-economics of the Forest & Forest Products Industry in Victoria*, Cameron Consulting, November 2005
- The Timber Industry in Gippsland: A Socio-economic Assessment*, Gippsland Private Forestry Inc. September 2005
- Victorian Tourism Employment Atlas 2005*, TTF Australia
- Victoria's Campaign Regions*, Tourism Victoria, 2006
- Victoria's High Country*, Tourism Victoria, 2005
- Wellington Shire Council, Presentation to Cabinet*, 22 January 2007
- Wellington Shire Council, Submission to Cabinet*, 22 January 2007
- Wellington Tourism Strategy 2006-2011*, Nexus Consulting 2006
- Wildfire Notices*, VicForests, January 2007

Appendix B Methodology - Asset Estimates

Forestry

A number of elements have been utilised in the measurement of the impacts on forestry. These are listed below along with their use in the estimation process.

Measure	Details
\$18,331.50 a hectare of ash (Approx. \$73.4 a m ³)	<ul style="list-style-type: none"> All prices quoted for timber volume in mill gate prices According to our consultations with a number of stakeholders mill gate prices vary from \$110m³ to approximately \$55m³ for pulp. From Wellington Shire ash stands in VicForests areas, 2/3 of each hectare gets processed for pulp while one third goes to high-grade logs
250m ³ per Ha yield for merchantable ash forests	<ul style="list-style-type: none"> VicForests - which governs harvest and haulage from State Forests in Victoria – uses this figure to assess standing volume in Wellington Shire
Gippsland Region = 14,100 hectares	<ul style="list-style-type: none"> VicForests estimates of Ash species lost from allocated harvest area across Gippsland.
Wellington Shire = 3,000 Hectares	<ul style="list-style-type: none"> VicForests estimates of Ash species lost from allocated harvest area in Wellington Shire. This equates to 21% of damaged timber lost from State Forest across Gippsland

Hence when estimating standing volume lost across Wellington from allocated harvestable coupes the calculation is: 3,000Ha of ash damaged x 250m³ per hectare @ \$18,331.50 per hectare = \$55 million.

Agriculture

The impacts reported are the replacement costs for agricultural assets destroyed in the fires. The table below shows how our estimates were attained for agriculture assets:

Measure	Details
\$10.50m for external border fencing	<ul style="list-style-type: none"> Our estimates for fencing allow for the uneven gradient of affected farms (which require a greater number of poles) and have been cross-checked with contractors and farmers. Fencing would have treated pine posts; 5/6 barbs, hinge-joints and with an electrified or "hotwire" (necessary for warding off feral animals)
\$8m for internal fencing	<ul style="list-style-type: none"> Internal border fencing comprising treated pine posts; 5/6 barbs on uneven gradient
\$130 Ha for pasture recovery	<ul style="list-style-type: none"> From local farmers affected by bushfires pasture losses. Prices would be for contour ripping and safeguarding against erosion through reducing speed of water run-off and pasture rebuilding/sowing
Livestock	<ul style="list-style-type: none"> Beef cattle estimates - Utilised Eastern Young Cattle Indicator as of March 1 at 330.75c/kg. This is a weighted average of 24 young cattle types from 26 prime saleyards in Victoria, Queensland and NSW. Weight average of 210kg for our estimates was taken as per indicators in rural media such as Stock & Land Sheep cost estimates undertaken utilising national trade lamb indicator average of 341¢/kg for the week ending 02/03/07. Assumed that stock was primarily for lambing hence 28 kg weight was assumed for calculations as per indicators in rural media such as Stock & Land Poultry estimates from Australian Chicken Meat Federation. Average weight at processing of 2.55 kg assumed. Goat costs quoted from Australian mohair association. Prices of \$80 was average sales price for a yearling goat
Fodder, grain and horticulture	<ul style="list-style-type: none"> Hay estimates utilised average price of \$15 for small bale quoting DPI consultation Grain estimates based on lucerne or other feed quality barley which is valued at \$245 a tonne (futures price). Victorian average yield of 2.2 tonnes/ha used as base number Horticulture estimates includes \$90,000 of premium ginseng lost which was valued at \$500kg. Consultations with farmer and ginseng association confirmed these prices Other horticulture losses were non-commercial walnut orchards. A commercial orchard can get 4 tonne a hectare according to the Australian Walnut Association, hobby farmers likely to get around 2.5 tonnes a hectare. Farm-gate prices are around \$4-\$5 a kilo - hence maximum of 20 tonnes lost assumed.

Reports from the Department of Primary Industries was utilised to understand the extent of damage across the Shire. There was no evidence from our consultations of farmers abandoning properties as a result of the fires.

Private and Public Assets

The following describes our estimates of private and public assets:

Assets	Details
Primary residence	<ul style="list-style-type: none"> Buchan estimates of replacements costs for homes (180,000 per home plus \$10,000 recovery/clearance costs). Quotes cross-referenced with local builders. Also cross-referenced with the BTE report (the <i>Economic Costs of Natural Disasters in Australia</i>). This report takes the depreciated value as 75 per cent of the new building price and allows \$60,000 for contents, giving a total indicative value of \$180,000 for the economic loss of a destroyed house.
Holiday house	<ul style="list-style-type: none"> Buchan estimates of replacements costs for homes (\$150,000 per construction, which would have less area and would include property clearance)
Wellington Shire Assets	<ul style="list-style-type: none"> Wellington Shire estimates used and referenced, cross-checked in consultations
Parks Victoria Assets	<ul style="list-style-type: none"> Parks Victoria figures used and cross-checked in consultations
Other Assets	<ul style="list-style-type: none"> Traralgon Secondary College estimates of assessed damage

Tourism

The following describes the modelling of tourism activity:

Tourism Impacts	Details	Value
Tourist Expenditure	<ul style="list-style-type: none"> Overnight visitors (average 3.4 day stay) Day visitor 	<ul style="list-style-type: none"> \$248 expenditure per visitor (\$73 per day) \$90 per visitor
Visitor numbers	<ul style="list-style-type: none"> Based on Council estimates for 2004 and Buchan current estimates 	<ul style="list-style-type: none"> Buchan estimates of visitors derived from Wellington Tourism Strategy 2006-2011, Nexus Consulting 2006 Data is for 2004.

Appendix C Consultations

Sector	Number of Consultations
Government	
Department of Primary Industries	2
Department of Sustainability & Environment	1
Gippsland Tourism	1
Tourism Victoria	1
Parks Victoria	2
Regional Development Victoria	2
VicForests	3
Wellington Shire	4
Forestry	
Gippsland Private Forestry Inc	1
Hancock Victorian Plantations	1
ITC Timber	1
Victorian Association of Forestry Industries	1
Primary, Agriculture & Building	
Building Contractors	2
Fencing Contractors	3
Murray Goulburn Trading	1
Primrose Gap	1
Regional Associations, Regional Bodies & Local Institutions	
Australian Deer Association	1
Gippsland Area Consultative Committee	2
Heyfield & District Traders Association/Wallaby Rise	1
Maffra Chamber of Commerce and Industry	1
Ninety Mile Beach Tourism & Development Group	1
Rosedale Chamber of Commerce & Industry	1
Traralgon Secondary College	1
Retail and Business Services	
Elders Yarram Real Estate	1
Gary Powers Real Estate	1
Mirvac Shopping Centre - Sale	1
Timberline General Store	1
Tourism Related Businesses	
Coonawarra Trail Rides	1
Cricket Club Hotel	1
Dargo High Country Tourism	2
Dargo Hotel	1
Dargo River Inn	1
Dargo Valley Winery B&B	1
Glencairn Mountain Hideaway	1
Licola General Store & Caravan Park	1
Montana Camping Grounds	1
Mountain Top Experience	1
Overland Gold Adventures	1
Snowy Range Horse Back Tours	1
Stratfield Caravan Park	1
Tarra Bulga Guest House	1
Tarra Valley Tourist Park	1
Wonnagatta Caravan Park	1
Total Consultations	56

Wellington Shire Council

Economic Impact Assessment
June 2007 Floods

September 2007

Buchan

Business Strategy | Communication | Public Policy

Executive Summary

Key Issues

The impacts of the floods in Wellington Shire are significant:

- Total damage of approximately \$35.2 million was incurred across the Shire.
- Major impacts on agriculture in the Shire with estimated losses of \$18.8 million.
- Agricultural production facing an estimated \$6.8 million of losses.
- Agriculture infrastructure incurred losses of approximately \$11.9 million.
- Public asset losses of \$7.9 million of Shire infrastructure (roads and bridges).

The impacts on the tourism sector are substantial:

- Visitor numbers to the high country areas were an estimated 90% down on normal levels during the winter school holiday break, with a slow recovery expected over the remainder of 2007/2008.
- Full recovery for tourism may take up to 12 months.
- The fall in tourist related expenditure in the flood affected areas could be up to \$6.3 million in the Lakes and Coastal areas over the next 6 months, while expenditure falls in the high country areas could be \$28 million over the next 24 months.
- This fall in visitor numbers and related expenditure could threaten up to 130 jobs in tourism in the high country area (or 83% of the 155 people employed).

The Report

This report provides an assessment of the economic impact on Wellington Shire of the June 2007 floods.

The impacts of the floods that are measured in this report include: impacts on agriculture (crop losses and assets damaged); losses in public assets and infrastructure due to flood damage; and falls in visitor numbers to the high country and coastal areas and the related impacts on expenditure and employment in the Shire. In preparing this analysis we have costed asset losses at replacement value and have modelled the Shire visitor market and the impacts of a fall in visitor numbers on expenditure and employment.¹

This report also assesses the economic losses to private individuals (residence and property). This is based on information from consultations with Wellington Shire, Department of Primary Industries and others in the community. These losses include destroyed homes, major structural damage to businesses (which included significant damage to a number of caravan parks) and the costs that have been incurred by the Shire to rectify septic tank damage and to provide waste removal services to ratepayers.

There are difficulties in compiling a detailed assessment of the full extent of losses to private property (furniture, fittings and household appliances), so estimates in the report are indicative. Detailed information is being compiled by the Insurance Council of Australia. Our contact with the ICA indicates that a full audit will not be available until late September and they are reluctant to release any interim figures.

Flood Losses

Our estimates show that approximately \$35.2 million of assets in the Shire have been lost. Most of these losses are in destroyed agriculture infrastructure (fencing, irrigation equipment and buildings - \$12.1 million) and in harvest losses, livestock and fodder (approximately \$6.8 million). Damage to Wellington Shire assets are also significant and are estimated at \$7.9 million.

- Agriculture – The major impact was on infrastructure and these losses were estimated at \$12.1 million. Together with harvest, livestock and fodder losses total agriculture losses were approximately \$19 million.
- Public assets - There was damage to public assets including roads, bridges and other Wellington Council assets which in total are estimated at \$7.9 million. These estimates do not include an audit of State Government public assets damaged in the LGA which are also significant. The State Government has allocated \$20 million for VicRoads to rebuild its road infrastructure.²
- Identified structural damage to properties was substantial and included 7 homes that were destroyed (main residences), 33 homes that incurred severe damage and another 115 residences that incurred serious damage. Damage to residences, businesses, particularly to caravan and tourist parks and camps are approximately \$8.5 million.

¹ Both high country tourism and lakes and coastal tourism were modelled.

² "Over \$60 million for flood recovery packages for Gippsland", Minister for Regional and Rural Development, July 10, 2007.

Sector	Losses	Description	Cost (\$)
Forestry			
	State Forests – Wellington Shire	Ash timber reserves (State Forests - Licola). Value of timber harvest	\$11,700,000³
Agriculture/ Other			
Production losses			
	Pasture/harvest production lost	Fodder and pasture replenishment	\$4,418,480 ⁴
	Livestock	Sheep, cattle and other animals	\$396,234 ⁵
	Fodder	Lucerne, hay, grain	\$1,945,525 ⁶
Total production losses			\$6,760,239
Total infrastructure losses		Predominantly fencing and pump and irrigation equipment	\$12,081,000 ⁷
Total Agriculture			\$18,841,639
Public Assets			
	Roads repairs	Wellington Shire assets	\$4,510,000
	Emergency response	Wellington Shire assets	\$1,221,000
	Bridges	Wellington Shire assets	\$1,190,000
	Parks and leisure sites	Wellington Shire assets	\$891,000
	Sundry works	Wellington Shire emergency work	\$100,000
Total Public Assets			\$7,912,000⁸
Private Assets			
Houses	Principal residences	7 homes	\$1,925,000
	Residences with significant damage (internal/external)	42 homes	\$1,176,000
	Residences with damage (external water/silt removal and clean-up costs)	194 homes	\$582,000
Caravan parks	Damage to vans and site infrastructure and furniture		\$1,565,000
Non profit sector	Damage to property and camp infrastructure		\$2,650,000
Business	Damage to interiors (excludes loss to stock and takings)		\$570,000
Total Private Assets			\$8,468,000⁹
Total Losses (excludes Forestry)			\$35,221,239

³ It is important to note that this figure comprises the value of timber that is on-hold and not being harvested given restricted access. This timber is not necessarily damaged or lost. Operation could resume as normal should key roads be opened. Currently the Licola-Jamieson Road is closed and trucks have to use slower alternative routes.

⁴ Agribusiness assessments of harvest and production losses assessed by Wellington Shire based on market value.

⁵ Range of averaged Victorian indicator prices utilised for cattle, sheep based on Meat and Livestock Inc pricing data as of July 24, 2007.

⁶ Buchan calculations elaborated from DPI and Wheat Board figures for average tonne and small bale prices.

⁷ Buchan assessment of infrastructure damaged by floods (and other water damage) utilising DPI figures. Most of this will be in fencing replacement.

⁸ Based on Wellington Shire Council data collected by the Flood Recovery Centre.

⁹ Based in both Wellington Shire data and on consultations with affected businesses and organisations.

Tourism Sector Impacts

Tourism is a key sector in Wellington and it has also been impacted by the floods. The floods occurred just before the winter school holiday season, leading to cancellations of holidays, which affected overnight and day visitor numbers. This season is important not only for tourism that would visit coastal and high country areas, but also for tourists travelling through to ski resorts. This drive-through to Alpine areas, which had a good season, was lost, as were day visitors and coastal travellers along the Princes Highway during the period of the floods.

The high country tourist numbers decline during the winter season. However tourist operators in these areas are experiencing the impact of flood damage on already bushfire scarred alpine areas. This has resulted in a further reduction in visitor numbers to areas such as Licola and other towns in the Alpine National Park. The general expectations of the tourist related businesses in the high country are that the remainder of calendar 2007 will be substantially down overall.¹⁰

The tourism sector comprises mainly small operators and other service suppliers, who are feeling the immediate effects of lost revenue. There are some differences between high country and lakes and coastal operators. In the case of the high country recovery is dependent on replacement of damaged assets and infrastructure. Lakes and coastal operators expect the market to return to normal in the 2007/2008 summer season.

Tourist activity has a significant impact on the local economy.

- Our analysis shows the visitor patterns for the Shire, with total visitors estimated at 763,000 per year.
- Total tourism related expenditure in the Shire is estimated at \$112 million per year, with overnight visitors accounting for approximately \$69 million in spending and day visitors accounting for \$43 million.¹¹
- There are an estimated 734 tourism related jobs in Wellington Shire.
- Industry consultations indicate that the level of spending in winter was around 10% of normal activity in the high country areas and 33% on the lakes and coastal area; and
- Overall 2007 tourism expenditure will decrease by \$20.5 in the high country and by approximately \$6.5 million in the coastal areas.

Many of the high country based businesses have had no income in the periods since the bushfires. The winter period is a period of lower employment generally as it is the off season. However some operators face damage repairs in a period of reduced off-season revenues.

Future employment will depend on the pattern of recovery and the time taken to get back to more normal visitor levels for each of these businesses. The specialist tourism operators and the accommodation sector are those that are most under pressure.

Recovery Period

The period of recovery will depend on a number of factors including the extent to which current tourism and retail losses are corrected by positive spring and summer seasons, and the timing of asset replacement and related construction activity in the region.

- In agriculture the flood damage has come on top of the drought impacts on farmers. The floods have exacerbated feed problems and shortages which are being offset by bringing in feed from Western Australia.
- The need to restore pastures will provide a boost to local agricultural supplies businesses over the next 6 -12 months.
- In the tourism sector, the expectation is that recovery will take at least 12 months before it returns to normal levels. Tourism related businesses in the high country have had a

¹⁰ This has set back the recovery of the bushfires.

¹¹ This includes the full spectrum of tourist expenditure on accommodation, retail and services.

negative year over 2006-2007, while coastal tourism saw some increased marine and leisure craft activity (as other waterways around the state were drought affected).

The major recovery issue is to the high country, with significant works needed to replace damaged assets and damaged visitor areas. Operators in this sector are expecting a slow period of recovery. In contrast the lakes and coastal operators expect that visitor numbers will return to more normal levels of activity by the summer '07/'08 season.

In the case of agriculture, the restoration of pastures, horticultural land and feed availability for both beef cattle and dairy herds and infrastructure recovery has commenced.

In general terms, this recovery will be occurring at a time where agriculture has been affected by the drought and the bushfires and in the case of the tourism sector, the disruption caused by both will overlay on recent declines in regional tourism numbers.

Contents

Executive Summary	2
Contents	7
1 Introduction.....	8
2 The Review	9
2.1 Objectives	9
2.2 Methodology	9
3 Impacts of the Floods	10
3.1 Regional Context	10
3.2 Overall Losses	12
3.3 Agriculture Sector	14
3.3.1 Affected Properties.....	14
3.3.2 Agriculture Infrastructure Damage.....	14
3.3.3 Crop Losses	15
3.3.4 Livestock Losses	15
3.4 Forestry.....	15
3.5 Public Assets	16
3.6 Private Assets	17
4 Tourism Sector Impacts.....	18
4.1 Overview.....	18
4.2 Tourism in Wellington Shire	18
4.2.1 Visitor Patterns	18
4.2.2 Tourism Spending	19
4.3 High Country Tourism	19
4.3.1 Assessing High Country Tourism	19
4.3.2 Value of Wellington High Country Tourism.....	20
4.4 Impacts of Floods on High Country Tourism Activity.....	21
4.4.1 Expenditure Levels.....	21
4.4.2 Tourism Jobs in the High Country	23
4.5 Coastal and Lakes Tourism	24
4.5.1 Assessing Coastal and Lakes Tourism	24
4.5.2 Value of Wellington Coastal Tourism	24
4.6 Impacts of Floods on Coastal/Lakes Tourism Activity.....	25
4.6.1 Expenditure Levels.....	25
4.6.2 Tourism Jobs in the Coastal/Lakes Area	26
5 Concluding Comments	28
Appendix A References	29
Appendix B Methodology - Asset Estimates	30
5.1 Agriculture.....	30
5.2 Private and Public Assets	30
5.3 Tourism.....	31
Disclaimer	32

1 Introduction

This report provides an assessment of the economic impact on the Wellington Shire of the June 2007 floods. In this period rainfall up to 300 mm was recorded in areas in the high country causing significant damage in towns such as Licola, while a number of other towns in the Shire were also affected by flood waters.

The impacts of the floods that are measured in this report are of several types: losses in public assets, losses in the agricultural sector (crops and infrastructure) and impacts on the tourism sector and on related retail activity.¹² The report also provides some estimates of damages to private residences using data compiled by the Shire's Flood Recovery Centre. This data is not complete and overall insurance claims for flood damage to residences in the Shire are likely to be higher when they are all processed. The most accurate source for private property damage will be the Insurance Council of Australia, which compiles data on private losses incurred by households. The ICA is still in the process of obtaining information from individual insurers and is not releasing any interim information on losses.¹³

The analysis is based on: consultations with government agencies, Wellington Council officers and businesses in the region; the use of information on flood damage compiled by these organisations; an analysis of asset losses, and Buchan Consulting modelling of the impacts on tourism in the Shire.

The report highlights several key issues. The costs of the floods to Wellington Shire are significant, with damage to public and private assets, agriculture and a decline in tourism being the major areas of impact.

The report's structure is as follows:

- Chapter 2 outlines the objectives of the review and the methodology used.
- Chapter 3 analyses the asset losses and the impacts on agriculture and other industries.
- Chapter 4 examines the impacts on the tourism sector.
- Chapter 5 comments on the overall impacts and the recovery phase.

¹² The estimates in the report were prepared on the basis of information available up to July 28, 2007.

¹³ Some release of data by the ICA is expected to be released at the end of September 2007.

2 The Review

2.1 Objectives

The objectives of the study were to:

- measure value of assets lost or affected by the floods;
- assess the likely replacement costs of assets; and
- assess the impacts on key sectors including agriculture and tourism.

2.2 Methodology

The study has involved both quantification of the direct effects of the floods and some estimation of the overall impacts on the Shire. This assessment has been based on a combination of consultations, data collection, modelling and estimation.

The project was split into three segments: Segment 1 Research on Flood Impacts, Segment 2 Economic Impact Assessment and Segment 3 Preparation of Impact Report.

The industry sectors covered in the analysis included agriculture, forestry, tourism (includes impacts on activity for tourist operators in accommodation and hospitality; and in related retail and other services).

Consultations were undertaken with the key organisations and individuals who were assessing asset damage and other impacts. These consultations included: Wellington Shire Council, Department of Primary Industries, VicForests (to assess what if any damage had been done to the forestry sector in the Shire) and a sample of tourism operators. Additional industry information was also obtained from estimates and sector audits that had been undertaken by Council in the period immediately following the floods. This Shire information was also important in assessing damages to private residences and public assets.

3 Impacts of the Floods

3.1 Regional Context

The impact of floods needs to be considered against the backdrop of the regional economy. Several of the key sectors of agriculture, forestry and alpine and coastal tourism have been impacted by the floods.

Population growth in Wellington Shire has been slow with population increasing to 40,079 persons (a 2% increase)¹⁴. Faster growth has been recorded in the East Gippsland Shire.

Table 1. Population in Wellington Shire: 1996 - 2006

Area	1996	2001	2006	Increase 2001-2006	Growth rate 2001 to 2006
Sale	13,366	12,793	13,043	250	2%
Rest of Shire	26,451	26,495	27,036	541	2%
Wellington Shire	39,817	39,288	40,079	791	2%
East Gippsland Shire	37,793	38,028	40,037	2009	5%
Victoria	4,373,520	4,644,950	4,932,422	287,472	6%

Sources: 1996-2001 data from Wellington Shire Statistical Profile Report - Prepared by Gippsland Research & Information Service utilising ABS data. 2006 data from ABS Census data.

The following table shows the structure of employment in the Shire. In total there were 15,719 jobs.¹⁵ The major categories were Good Producing industries (5,332 or 34% of Shire jobs including 16% in agriculture, forestry and fishing) and In Person Service Industries (4,371 or 28% of Shire jobs).

Two of the major sectors in the region are agriculture and tourism:

- Broad acre farming of livestock (dairy, beef cattle and sheep) is significant in the area. Areas around Maffra, Newry, Stratford and in the high country were affected by both infrastructure and production losses.
- In terms of employment, agriculture and food producing jobs account for a total of 2,700 jobs in the area.¹⁶
- Tourism in the Shire comprises both high country and coastal/lakes tourism and also visits to Sale as the service/retail centre. In total, 763,000 overnight and day tourists visited the Shire in 2006.¹⁷ Park closures due to bushfire recovery had reduced tourism into the high country areas. Significant flood damage has seriously affected their recovery and summer season.
- An analysis of tourism data indicates an estimated 165,000 visits are to the high country areas and 234,000 visits are to coastal/lakes areas such as Loch Sport.

¹⁴ ABS Census Data 2001 and 2006.

¹⁵ 2001 ABS Census Working Population data. 2006 Working Population data is not being released until December 2007.

¹⁶ Based on Census 2001 Working Population data. Buchan has grouped agriculture, commercial fishing and food, beverage and tobacco manufacturing together to illustrate employment levels, which equated to 2,689 jobs.

¹⁷ Buchan Consulting. Based on Wellington Shire tourism data.

Table 2. Jobs by Industry – Wellington Shire 2001

Industry	No. of Jobs	%
Goods Producing		
Agriculture, Forestry and Fishing	2,576	16%
Mining	235	1%
Manufacturing	1,248	8%
Electricity, Gas and Water Supply	289	2%
Construction	984	6%
Total Goods Producing	5,332	34%
Goods Related		
Wholesale Trade	517	3%
Retail Trade	2,413	15%
Transport and Storage	509	3%
Total Goods Related	3,439	22%
Government & Defence based		
Total Government Administration and Defence	868	6%
Business & Knowledge based		
Communication Services	146	1%
Finance and Insurance	248	2%
Property and Business Services	964	6%
Total Business & Knowledge based	1,358	9%
In Person Service Industries		
Accommodation, Cafes and Restaurants	698	4%
Education	1,216	8%
Health and Community Services	1,559	10%
Cultural and Recreational Services	252	2%
Personal and Other Services	646	4%
Total In Person Service Industries	4,371	28%
Non-classifiable economic units	81	1%
Not stated	270	2%
Total All Jobs	15,719	

Sources: Buchan elaboration of ABS Census Working Population data

3.2 Overall Losses

Information obtained from the Wellington Shire and from other agencies was combined with research to compile a list of assets that were damaged or severely impacted as a result of the floods. To measure the value of these losses, replacement value was used. This is based on the assumption that the replacement or repairs result in the asset having the same life and production potential as it originally had.¹⁸

The following summary table shows public and private assets damaged in the Wellington floods and provides estimates of production losses to agriculture and forestry. These estimates have been developed through analysis of information collected by Council and other agencies and through discussions with Department of Primary Industries and through interviews with selected businesses and organisations.

Our estimates show that approximately \$35.2 million of economic losses have been incurred. The losses were concentrated in agriculture (\$18.8 million) and public assets (\$7.9 million and roads and bridges).

These losses comprise:

- Agriculture: asset losses of \$18.8 million and estimated crop/production losses of \$6.7 million.
- Approximately 100 farms report stock losses and over 110 farms were identified by DPI as having urgent assistance needs.¹⁹
- Forestry. Since the floods there have been major access issues to harvestable coupes in the forests. The value of timber from major salvage operations being placed on hold are estimated at \$11.7 million.²⁰
- Public assets: This covers damage to roads and bridges, and damage to other sites. Damage is estimated at \$7.9 million, taking into account only Council owned assets. State Government asset losses, including roads and bridges, are not included in these estimates. These are significant and include replacing Cheynes Bridge (\$6.2 million) and repairs to Licola Road (\$6.7 million).
- Damage to private property, which includes homes, businesses and assets owned by non-profit or educational organisations, was estimated at approximately \$8.5 million. This list is not exhaustive as it does not include all damage to private houses. The Insurance Council of Australia is likely to publish estimates of Gippsland flood damage in late September and is not releasing any interim estimates.

¹⁸ This method is in line with approaches adopted by the Bureau of Transport Economics in their report *Economic Costs of Natural Disasters in Australia* P60. As they point out a replacement cost estimate may overstate the value of the loss, as not all damaged assets will be repaired because some owners would believe that the cost of the repairs exceeds the value of the gains from the repairs. This will be the case particularly when looking at quantifying small agricultural storage buildings or fencing.

¹⁹ Department of Primary Industries; various sources were consulted by Buchan in this process.

²⁰ VicForests sources were consulted by Buchan in this process. Forestry prices are for m³ of both high grade ash and pulp log and were priced at \$110 and \$50 m³ respectively.

Table 3. Estimated Losses – Wellington June 2007 Floods

Sector	Losses	Description	Cost (\$)
Forestry			
	State Forests – Wellington Shire	Ash timber reserves (State Forests - Licola). Value of timber harvest	\$11,700,000²¹
Agriculture/ Other			
Production losses			
	Pasture/harvest production lost	Fodder and pasture replenishment	\$4,418,480 ²²
	Livestock	Sheep, cattle and other animals	\$396,234 ²³
	Fodder	Lucerne, hay, grain	\$1,945,525 ²⁴
Total production losses			\$6,760,239
Total infrastructure losses		Predominantly fencing and pump and irrigation equipment	\$12,081,000 ²⁵
Total Agriculture			\$18,841,639
Public Assets			
	Roads repairs	Wellington Shire assets	\$4,510,000
	Emergency response	Wellington Shire assets	\$1,221,000
	Bridges	Wellington Shire assets	\$1,190,000
	Parks and leisure sites	Wellington Shire assets	\$891,000
	Sundry works	Wellington Shire emergency work	\$100,000
Total Public Assets			\$7,912,000²⁶
Private Assets			
Houses	Principal residences	7 homes	\$1,925,000
	Residences with significant damage (internal/external)	42 homes	\$1,176,000
	Residences with damage (external water/silt removal and clean-up costs)	194 homes	\$582,000
Caravan parks	Damage to vans and site infrastructure and furniture		\$1,565,000
Non profit sector	Damage to property and camp infrastructure		\$2,650,000
Business	Damage to interiors (excludes loss to stock and takings)		\$570,000
Total Private Assets			\$8,468,000²⁷
Total Losses			\$35,221,239

Source: Buchan Consulting estimates of cost, details on methods in Appendix B. This table doesn't include private losses due to damage to private dwellings, fixtures and furniture. Contact with the Insurance Council of Australia indicates that a full audit will not be available until late September and the Council is reluctant to release any interim figures.

The following sections analyse each of the sectors in detail.

²¹ It is important to note that this figure comprises the value of timber that is on-hold and not being harvested given restricted access. This timber is not necessarily damaged or lost. Operation could resume as normal should key roads be opened. Currently main arteries such as the Licola-Jamieson Road are closed and trucks have to use alternative, slower routes.

²² Agribusiness assessments of harvest and production losses assessed by the Wellington Shire based on market value.

²³ Range of averaged Victorian indicator prices utilised for cattle, sheep based on Meat and Livestock Inc pricing data as of July 24, 2007.

²⁴ Buchan calculations elaborated from DPI, and Wheat Board figures for average tonne and small bale prices.

²⁵ Buchan assessment of infrastructure damaged by floods (and other water damage) utilising DPI figures. The large majority of damage will be in fencing replacement.

²⁶ Based on Wellington Shire Council data collected by the Flood Recovery Centre.

²⁷ Based on both Wellington Shire data and on consultations with affected businesses and organisations.

3.3 Agriculture Sector

3.3.1 Affected Properties

The Department of Primary Industries conducted extensive field assessments across Wellington Shire and adjacent local government areas following the floods. As at July 24 2007, DPI had finalised assessments of 996 farms in Wellington Shire potentially affected by the floods. The following table shows the affected properties and their total size. It shows that damaged areas accounted for 26% of the farm areas assessed.

While the destruction caused by the floods is significant the rains have been drought-breaking and dairy farmers in the Macalister Irrigation District (MID) and near the Thomson and Macalister Rivers and Rainbow Creek will start with 100 per cent of their water right. They will also be able to access spill entitlement from Lake Glenmaggie from the start of the season.²⁸

Table 4. Flood Affected Properties – Wellington Shire

Description	Number
No. of farms assessed	996
Approx. areas of all farms (hectares)	95,691
Total damaged area (hectares)	24,850 (26% of farm area assessed)
Commercially viable farms	447
Farms with stock losses	103
Farms with urgent needs for assistance	114

Source: Data supplied by Victorian Department of Primary Industries

3.3.2 Agriculture Infrastructure Damage

Significant agriculture infrastructure was damaged and included costs to fencing (\$11.9 million), and pastures (\$3.8 million). The following table provides estimates (based on replacement or restoration costs) of these losses. These estimates take into account costs for both external and internal fencing and the value of pasture rehabilitation.

Table 5. Infrastructure Losses on Affected Agriculture Properties – Wellington Shire (Estimates)

Asset	Amount	Farms Affected	Value
Fencing			
Crown Boundary fencing lost	180 km	101 farms	\$1,800,000
Boundary fencing lost	431 km	277 farms	\$3,663,500
Internal fencing lost	927 km	195 farms	\$6,489,000
<i>Total fencing</i>	1538 km		\$11,952,500
Equipment (pumps, tractors etc)			\$128,500
Pasture			
Severe damage to pastures with major recovery works required		13,591 (Ha) pasture lost	\$3,805,480 ²⁹
Other Equipment/Infrastructure ³⁰			
4 woolsheds/outbuildings lost			\$24,000
55 other buildings lost			\$104,500
Total Infrastructure Losses			\$15,886,480

Source: Buchan Consulting estimates based on data supplied by the Victorian Department of Primary Industries and Wellington Shire Council

²⁸ "Sale dairy farmers to have good start to season", ABC News Gippsland, August 14, 2007.

²⁹ Recovery figures are significant as pastures are extensive and vital to the dairy and grazing sectors. Prices are based on excavation, ripping and levelling, which a contractor will charge at approximately \$130 a hectare. Seeding to sow grass can cost up to \$150 per hectare. So price is based on worst case scenario of \$280 per hectare.

³⁰ Based on DPI data collated in late July.

3.3.3 Crop Losses

The following table provides estimates of main crop losses due to the floods. Unlike in adjacent LGA's, horticulture losses (according to DPI and Shire sources) were not significant. The losses are predominantly for fodder for the key sectors of dairy and beef production. There are short-term concerns about the availability of fodder for livestock and a significant proportion is being brought from Western Australia.

Table 6. Crop Losses – Wellington Shire

Loss	Loss	Detail	Value
Small bale equivalents	76402	Based on DPI costs	\$1,146,030 ³¹
Hay tonnes	1901	Based on current district prices	\$750,895 ³²
Grain tonnes	200	Predominantly lucerne, feed barley	\$49,000 ³³
Total Crop Estimates			\$1,945,925

Source: Buchan Consulting based on DPI data

3.3.4 Livestock Losses

Livestock losses of almost 1,718 head were experienced by a total of 78 farms. The following table provides estimates (based on replacement costs at averaged Victorian farm-gate prices) of these losses which totalled \$260,000. The loss to farm income due to a drop in milk production and due to extraordinary veterinary costs to maintain animal health is not shown in the estimates below. Discussions with primary producers suggest that this is also considerable.³⁴

Table 7. Livestock Losses on Affected Properties – Wellington Shire

Livestock	No. loss	Farms Affected	Value
Beef Cattle	404	47	\$285,910 ³⁵
Sheep	1261	24	\$105,924 ³⁶
Other stock	53	7	\$4,400 ³⁷
Total livestock estimates	1718	78	\$396,234

Source: Buchan Consulting estimates

3.4 Forestry

Forestry is an important sector in Wellington Shire. The floods and the torrential rains have indirectly impacted on forestry as harvest and cartage from major coupes around Licola were affected by road closures.

From our consultations with the forestry industry, it was revealed that principal cartage routes (in particular the Licola-Jamieson road) have been closed since the flood period. This has affected the capacity to harvest and haul lumber.

VicForests have estimated a number of scenarios affecting harvesting that will impact on forestry services. Based on estimated time of closure of the Licola-Jamieson Rd they have been able to assess the yield that will be in jeopardy.³⁸

³¹ Costed at DPI price of \$15 for a small bale. Price would fluctuate somewhat particularly in times of shortages.

³² Costed at \$395 a tonne, which is the district price quoted by leading suppliers in our consultations. Hay price quoted current prices for product ex-Western Australia.

³³ Lucerne or other feed barley [\$245 a tonne (futures price) at Victorian average yield of 2.2 tonnes/ha].

³⁴ Murray Goulburn Co-Op officers have suggested that milk production was declining in this period as farmers were preparing animals for calving. Considerable expenses have been brought on them for extraordinary veterinary costs to cure feet ailments. They also suggested that compared to infrastructure losses these losses are negligible.

³⁵ Beef cost estimates undertaken utilising Victorian beef indicator average of 337 c/kg as of 24/07/07 with some rounding. Live-weight greater than 200kg (so average of 210 kilograms assumed for this calculation). Data from Meat and Livestock Australia Ltd and Farm Online.

³⁶ Sheep cost estimates undertaken utilising Victorian lamb indicator average of 300¢/kg as of 24/07/07 with some rounding. Assumed that stock was primarily for lambing hence 28 kilogram weight was assumed for calculations. Data from Meat and Livestock Australia LTD and Farm Online.

³⁷ Utilised average sales price of \$80 according to Mohair association web site for goats, horses \$1000.

The following table shows estimates of timber (ash) yield that will be affected by lack of access to harvest coupes, which were being worked as part of salvage operations following the bushfires.

Table 8. Forestry losses – Wellington Shire

	Scenario 1 (Best Case) Licola Jamieson Rd closed for all of July and August '07	Scenario 2 (Worse Case) Licola Jamieson Rd open only 1/1/08
Sawlog Production (m ³)	45,000	65,000
Value	\$4.95 million	\$7.15 million
Pulpwood Production (m ³)	135,000	195,000
Value	\$6.75 million	\$9.75 million
Total Production (m ³)	180,000	260,000
Loads per day	45	65
Number of Harvest Crews	6.5	9
Total Forestry Impacts	\$11.7 million	\$16.9 million

Source: VicForests

The total impacts do not represent a long-term loss of revenue, as extra harvesting and haulage can be undertaken in warmer months, and some work is being carried out, at a less efficient rate as contractors use secondary routes. However, it does impact the recovery schedule of bushfire-damaged timber as this needs to be harvested and hauled in a 12 month period or they degrade beyond being able to be used as the more valued saw logs.³⁹

3.5 Public Assets

There was significant damage to public assets including roads, bridges and other Council managed or owned sites. The latter included amenity blocks, playground equipment and other outdoor furnishings. The total value of losses and damage was estimated at \$7.9 million.

Table 9. Public Assets Affected- Wellington Shire (Estimates)

Asset Owner	Asset	Estimated Value
Wellington Shire		
Roads repairs	Works required for long-term viability – Council roads	\$4,510,000
Emergency response	Works required as an emergency for access and safety reasons	\$1,221,000
Bridges	3 bridges (Lanigan, Wombat, Harkin) with major damage	\$1,190,000
Public amenities		\$455,000
Heritage and recreational amenities		\$436,600
Waste removal		\$100,000
Total Public Assets Estimates		\$7,912,600⁴⁰

Source: Wellington Shire Council estimates. Road damage does not include VicRoads damage which will be significant as it will comprise extensive bridges such as Cheney's bridge.

The Wellington Council also incurred costs in response to residents and in the recovery period after the floods. The table below shows the majority of these costs.

³⁸ Consultations with VicForests. The agency manages State forests assets in the Shire and sets targets and engages local contractors. The area being harvested is ash.

³⁹ Increased resources for the winter season were being devised by VicForests as part of its plans of extensive recovery of timber harvest and haulage after the summer bushfires.

⁴⁰ Estimates shown here are by the Shire Council and could be revised at a later stage when tenders are called for replacement works and repairs.

Table 10. Wellington Shire: Operational Expenses (Estimates) – (Post-flood)

Expenses	Description	Estimated Value
Wellington Shire		
294 septic tank repairs	\$300 per tank	\$88,200
200 bin lifts	Approx. \$500	\$100,000
22 Water tank flushes/recoveries	Approx. 50	\$1,100
Municipal Emergency Coordination Centre	2 weeks	\$18,700
Relief Centres	2 x 3 days each	\$8,000
Recovery Centre	1 month	\$10,000
2 Community recovery personnel	12/18 months	\$160,000
Expenses/costs	(E.g. Car usage and costs)	\$65,000
Local labour contracting		\$200,000
Total Operational Expenses		\$651,000

Source: Wellington Shire Council estimates

3.6 Private Assets

Available data on private asset losses is based on the initial audit of damages to private properties (to both home exteriors and interiors such as flooring, fittings, furnishings and appliances). While more extensive assessment is being carried out by individual insurers, and is to be aggregated by the Insurance Council of Australia, the data below is an indication of the significant private asset damage that was recorded by Council sources.

These assessments take into account residences that received serious damage and were recorded by the Wellington Shire Flood Recovery Centre. The Centre's survey assessed damages incurred to primary and holiday residences, capital damage to retail businesses (particularly caravan parks), and capital damage to not-for-profit organisations. Data was also collected from the owners of the school camps that were impacted by flood damage.

Estimates were based on existing information on replacement prices for house and contents and the associated costs, as well as research on local prices for fittings, furnishings, electrical services and excavation and landscaping costs (see Appendix B for further costs details). The table below shows this damage.

Table 11. Wellington Shire: Private Asset Damage (Estimates)

	Description	Estimated Value
Wellington Shire		
7 homes	Principal residences	\$1,925,000 ⁴¹
42 homes	Residences with significant damage (internal/external)	\$1,176,000 ⁴²
194 homes	Residences with significant damage (external)	\$582,000
Caravan parks	Includes destroyed and damaged vans, other buildings (recreation and amenities) and electrical infrastructure	\$1,565,000
Not-for-profit sector	Peninsula Grammar and Lion's Village camps	\$2,650,000
Business	Structural damage to properties (excludes stock and takings)	\$570,000
Total Private Asset Estimates		\$8,468,000

Source: Wellington Council and individual consultations

⁴¹ Costs based using Bureau of Transport Economics in their report *Economic Costs of Natural Disasters in Australia* P. 60.

⁴² Utilised a median price of \$47,000 to allocate estimates to homes with interior and exterior damage. For detailed notes on how estimates are derived see Appendix B.

4 Tourism Sector Impacts

4.1 Overview

A key sector that has been impacted by the floods has been tourism. The floods occurred at the beginning of the winter school holiday break, with effects in terms of reduced visitor numbers being experienced. The general expectation communicated by tourist related businesses is that 2007 will be a poor year overall. High country tourism is the worst affected and they will not begin recovery until 2008 as the national parks remain closed and infrastructure is being rebuilt.

The impact of the floods was felt in tourist areas across the entire Shire, with the most severe damage occurring in the high country. The analysis in this chapter is based on several sources of information: data from Council, discussions with Council staff, consultations with local tourism operators, and an analysis of tourism in the Shire and modelling of the sector.

The tourism sector is mainly made up of small operators and other service businesses, who are experiencing the immediate effects of a lost winter break (achieving as low as 10% of normal turnover in many businesses). The retail sector is also affected by reduced visitors. A number of high country tourist operators report no revenue due to poor river quality through all of autumn and the impacts of floods forcing closures in winter. The outlook for 2008 will see a return to normal for coastal areas. High country tourism operators are expecting a slow recovery in 2008.

The current flood experience has been overlayed on the impacts of drought on local spending and a general trend of decline in regional tourism numbers.

4.2 Tourism in Wellington Shire

4.2.1 Visitor Patterns

To assess the impacts of the floods on tourist related activities, it is important to understand the nature of tourism in the Shire and the destinations of visitors. The Shire has an estimated 763,000 visitors each year.

It is also important to understand the seasonal timing of visits to the region. While this data is not available exclusively for Wellington Shire, we have assumed that visit patterns are similar to that for the broader Gippsland Region. It shows that summer accounts for 31% of visits, autumn for 29%, spring for 27% and only 13% of visits are during winter.

Table 12. Timing of Visits to Wellington Shire

Timing of Visits	% of Visitors
Summer	31
Autumn	29
Winter	13
Spring	27
	100

Source: Gippsland Regional Tourism Development Plan 2004-2007 P16.

Our analysis is based upon visitor patterns for the Shire, with total visitors estimated at 763,000 per year. Based on this analysis, we estimate that high country visits account for a total of 165,000 visitors each year (22% of visitors) and the lakes and coast account for 234,000 visitors (31%). A major category of visitors are day visitors to Sale and to businesses in towns around Princes Highway for shopping and business purposes and these are estimated at 364,000 per annum or 47% of visitors.

Table 13. Visitor Estimates – Wellington Shire

Estimates of Visitors Wellington Shire			
	Over Nights	Day Visitors	Total Visitors
Location			(Annual)
Sale	64,000	300,000	364,000
Lakes/Sea	150,000	84,000	234,000
High Country	65,000	100,000	165,000
Total	279,000	484,000	763,000

Source: Buchan estimates of visitors derived from Wellington Tourism Strategy 2006-2011, Nexus Consulting 2006 Data is for 2004

Discussions with tourist operators in the lakes and coastal areas of Loch Sport and around Sale indicate that visitor numbers were affected for a one month period after the floods. The flood period coincided with the winter slowdown in coastal tourism.

Visitor patterns to the high country have been the most severely affected. The effects of the December bushfires to water quality and the closure of the Alpine National Park have strongly impacted business for these operators.

4.2.2 Tourism Spending

Data was utilised to estimate the total expenditure by visitors in the local government area, and this is used to measure the value of tourism to the region.⁴³ It shows that: tourism expenditure in the Shire is \$113 million per year, with overnight visitors accounting for \$69 million in spending and day visitors accounting for \$43 million in spending.

Table 14. Estimated Tourist Expenditure – Wellington Shire

Wellington Shire	Number of Visitors	Expenditure per visitor	Total Annual Expenditure
Overnight Visitors (average 3.4 day stay)	279,000	\$248	\$69,247,800
Day Visitors	484,000	\$90	\$43,560,000
Total	763,000		\$112,807,800

Source: Buchan estimates of visitors derived from Wellington Tourism Strategy 2006-2011, Nexus Consulting 2006. Data is for 2004.

4.3 High Country Tourism

4.3.1 Assessing High Country Tourism

The most severe impacts of the floods for tourism in Wellington were experienced in the high country. To estimate the impacts of the floods on high country tourism we analysed: tourism-related expenditure in the Shire and the impacts of the floods on this expenditure over 2007 and 2008; the total number of jobs in the Shire that are related to tourism and the number of jobs (in the high country area) that are potentially impacted by the floods. We also accounted for the impacts of the December bushfires and adjusted previous data on tourism expenditure.⁴⁴

The ongoing closure of major areas of the National Parks were affecting high country tourist visits before the flood. In particular, poor quality water due to excess silt from bushfires was a major issue to operators in the important autumn season.

⁴³ Overnight visitors spend an estimated \$73 per day and stay for an average of 3.4 days (\$248 total), See *Wellington Tourism Strategy 2006-2011*, Nexus Consulting 2006.

⁴⁴ Wellington Shire Council, *Economic Impact Assessment Great Divide South and Coppers Creek Bushfires*, March 2007, Buchan Consulting.

As a result of the floods, the towns of Licola and Heyfield have had their bushfire recovery efforts severely affected; have incurred falls in business due to closures of the national parks; and have experienced limited road access. The speed at which Parks Victoria open the National Parks and in which VicRoads provides full road access to key areas will largely control the recovery of high country tourism. Subsequently key periods such as September holidays and the Cup Weekend are at risk.

To estimate the impacts of the floods on tourism we undertook a number of areas of investigation and analysis, and this included:

- Discussions to identify the effects of the floods on activity on businesses and their expectations about the period of recovery.
- Estimation of the total expenditure in the Shire on high country/national parks related tourism and the impacts of the bushfires on this expenditure over 2007 and 2008.
- Analysis of the total number of jobs in the Shire that are related to high country/national parks tourism and the number of jobs that are impacted by the floods which have occurred on top of the bushfires.

4.3.2 Value of Wellington High Country Tourism

The following provides estimates for total tourism expenditure in the high country (this includes related retail and services expenditure) in the Shire for overnight (65,000) and day visitors (100,000). It shows that:

- Total spending by visitors is estimated at around \$25 million per year in a normal year.
- Major categories of spending include accommodation, fuel, groceries, drinks and tours.
- Discussions with tourism operators and other related businesses indicate that both winter and spring will be affected by the floods and this will undermine recovery from reduced autumn and summer activity caused by the earlier bushfires.

Table 15. Tourism Expenditure by Expenditure Category in the High Country (Normal Year) – Total Wellington Shire

Expenditure Category	Summer (31%)	Autumn (29%)	Winter(13%)	Spring(27%)	Total Annual
Tours	\$750,185	\$701,786	\$314,594	\$653,387	\$2,419,950
Car hire	\$100,025	\$93,571	\$41,946	\$87,118	\$322,660
Fuel	\$1,366,775	\$1,278,596	\$573,164	\$1,190,417	\$4,408,950
Vehicle maintenance/repairs	\$100,025	\$93,571	\$41,946	\$87,118	\$322,660
Accommodation	\$1,250,308	\$1,169,643	\$524,323	\$1,088,978	\$4,033,250
Takeaways and restaurant meals	\$880,186	\$823,400	\$369,110	\$766,614	\$2,839,310
Groceries for self-catering	\$1,067,621	\$998,743	\$447,712	\$929,864	\$3,443,940
Alcohol & drinks	\$389,562	\$364,429	\$163,365	\$339,296	\$1,256,650
Shopping, (include gifts etc)	\$1,064,949	\$996,243	\$446,592	\$927,536	\$3,435,320
Entertainment, museums, movies	\$211,625	\$197,971	\$88,746	\$184,318	\$682,660
Gambling	\$77,912	\$72,886	\$32,673	\$67,859	\$251,330
Other products	\$289,537	\$270,857	\$121,419	\$252,177	\$933,990
Other expenditure	\$242,522	\$226,876	\$101,703	\$211,229	\$782,330
Total	\$7,791,230	\$7,288,570	\$3,267,290	\$6,785,910	\$25,133,000

Source: Buchan Consulting estimates

4.4 Impacts of Floods on High Country Tourism Activity

4.4.1 Expenditure Levels

Our discussions with tourist operators indicate that there has been a significant decline in visitor numbers and expenditure in the current winter period. Most of those contacted indicated that turnover was in worse cases at zero, with a number being severely affected and yet to return to operation.⁴⁵

Businesses providing accommodation, hospitality services and retail in the towns of Licola and Heyfield and areas bordering the national parks will see their recovery jeopardised by closure of the national parks and by damage to infrastructure.

Discussions with operators in the high country indicate the level of activity in winter was around 10% of normal activity and this is expected to return closer to this normal level only in spring 2008 (85%). The upcoming summer and autumn seasons will require substantial expenditure to repair flood damaged environments. Recovery to normal levels will also require significant marketing activity to rebuild the market and the high country brand. The following table shows the likely pattern recovery of the market over 2007 and 2008.

Table 16. Pattern of Recovery for High Country (% of normal spending) – Post Flood and Bushfires Wellington Shire

Season (2007-2008)	% of normal spending
Summer	10
Autumn	20
Winter	10
Spring	30

Source: Buchan Consulting estimates

The level of impact for the high country area that was most directly affected by the floods can be estimated as follows:

⁴⁵ Operators in Licola and in many of the caravan parks neighbouring the Thomson River have yet to return to business and have completely written off all business till September.

- Over winter (June - August '07), tourism visitor numbers and expenditure was estimated at 10% of normal activity. This represents a fall of around \$3 million in total spending in the high country for the period.
- Our estimates for spring (September - November '07) high country tourism have expenditure at around 30% of normal levels. This is around \$4.7 million down on normal levels.
- Given the impact of flood and fires on visitor spending in the high country, 2007 tourism expenditure for the calendar year will be down by a total of up to \$20.5 million.
- These losses due to the fall in visitor numbers is not recoverable for the businesses affected and a 6-month process of intense rebuild of the environment and infrastructure is required to get the high country sub-sector back on track.⁴⁶

Table 17. Tourism Expenditure by Category (Flood/Fire Affected High Country Area - 2007)

Impact Analysis Floods	Summer (90% of activity lost)	Autumn (80% of activity lost)	Winter (90% of activity lost)	Spring (70% of activity lost)	Total
Package tours	\$75,018	\$140,357	\$31,459	\$196,016	\$442,851
Car hire	\$10,002	\$18,714	\$4,195	\$26,135	\$59,047
Fuel	\$136,677	\$255,719	\$57,316	\$357,125	\$806,838
Vehicle maintenance/repairs	\$10,002	\$18,714	\$4,195	\$26,135	\$59,047
Accommodation	\$125,031	\$233,929	\$52,432	\$326,693	\$738,085
Takeaways and restaurant meals	\$88,019	\$164,680	\$36,911	\$229,984	\$519,594
Groceries for self-catering	\$106,762	\$199,749	\$44,771	\$278,959	\$630,241
Alcohol, drinks	\$38,956	\$72,886	\$16,336	\$101,789	\$229,967
Shopping, gifts, souvenirs	\$106,495	\$199,249	\$44,659	\$278,261	\$628,664
Entertainment, museums, movies	\$21,162	\$39,594	\$8,875	\$55,295	\$124,927
Gambling	\$7,791	\$14,577	\$3,267	\$20,358	\$45,993
Other	\$28,954	\$54,171	\$12,142	\$75,653	\$170,920
Other Expenses	\$24,252	\$45,375	\$10,170	\$63,369	\$143,166
Total	\$779,123	\$1,457,714	\$326,729	\$2,035,773	\$4,599,339
Difference (Normal vs. Flood-affected year)	\$7.0 million	\$5.8 million	\$2.9 million	\$4.7 million	\$20.5 million

Source: Buchan Consulting estimates. Note: Summer was impacted by bushfires.

Recovery in 2008 will continue to be affected by the impacts of floods and fires. A prolonged closure of the Alpine National Park and the lengthy periods required for the rebuild of key sites such as the Peninsula Grammar Camp and Lion Club Camp will affect return to normal business levels for operators.

Estimates for 2008 show that only a partial recovery can be expected in the high country areas affected by floods:

- Over summer 2008 (December 07 - February 08), tourism visitor numbers and expenditure could be at 50% of normal activity. This represents a fall of around \$3 million in total spending in the high country for the period.
- Our estimates for autumn (March 08 – May 08) high country tourism based on our analysis, have expenditure at around 65% of normal levels. This is around \$4.7 million down on normal levels.
- Spring 2008 will see recovery return close to normal but still down to 85% of normal activity as important infrastructure will not yet be completed.

⁴⁶ Riverbank, roads and access point recovery and rebuild to and within the Alpine National Park is being budget for by the State Government and special road works are already underway. The Cheynes Bridge was reopened on the August 10 by VicRoads and a Licola recovery and development plan was established on August 28.

Table 18. Tourism Expenditure by Category (Flood/Fire Affected High Country Area - 2008)

Impact Analysis Floods	Summer (50% of activity lost)	Autumn (35% of activity lost)	Winter (30% of activity lost)	Spring (15% of activity lost)	Total
Package tours	\$375,092	\$456,161	\$220,215	\$555,379	\$1,606,847
Car hire	\$50,012	\$60,821	\$29,362	\$74,050	\$214,246
Fuel	\$683,387	\$831,087	\$401,214	\$1,011,854	\$2,927,543
Vehicle maintenance/repairs	\$50,012	\$60,821	\$29,362	\$74,050	\$214,246
Accommodation	\$625,154	\$760,268	\$367,026	\$925,631	\$2,678,078
Takeaways and restaurant meals	\$440,093	\$535,210	\$258,377	\$651,622	\$1,885,302
Groceries for self-catering	\$533,811	\$649,183	\$313,399	\$790,384	\$2,286,776
Alcohol, drinks	\$194,781	\$236,879	\$114,355	\$288,401	\$834,416
Shopping, gifts, souvenirs	\$532,475	\$647,558	\$312,614	\$788,406	\$2,281,052
Entertainment, museums, movies	\$105,812	\$128,681	\$62,122	\$156,670	\$453,286
Gambling	\$38,956	\$47,376	\$22,871	\$57,680	\$166,883
Other	\$144,768	\$176,057	\$84,993	\$214,351	\$620,169
Other Expenses	\$121,261	\$147,469	\$71,192	\$179,545	\$519,467
Total	\$3,895,615	\$4,737,571	\$2,287,103	\$5,768,024	\$16,688,312
Difference (Normal vs. Flood-affected year)	3.9 million	2.5 million	980k	1.0 million	8.4 million

Source: Buchan Consulting estimates

4.4.2 Tourism Jobs in the High Country

Our analysis shows that there are a total of 734 direct tourism related jobs in Wellington Shire, of these high country related jobs account for 155 or 21% of tourism related jobs in the region.⁴⁷ In addition there are another 146 indirect jobs generated by tourism.

Table 19. Estimate of Tourism Related Jobs in Wellington Shire

Wellington Shire				
Source of Jobs	Tourism Related Jobs - Direct	Share of Tourism Related Jobs	Tourism Related Jobs - Indirect	Total Tourism Related Jobs (Direct + Indirect)
Sale and other areas	281	38.3	56	337
Lakes/Sea	298	40.5	59	352
High Country	155	21.1	31	186
Total Wellington Shire	734	100	146	880

Source: Buchan Estimates, numbers may not total due to rounding

We estimate that 155 (or 21%) of these jobs are in the high country areas affected by both floods and fires.

Our industry consultations reveal that an initial loss of jobs in high country tourism businesses has occurred as casuals and part-time staff and non-core business areas have been reduced due by these natural disasters. Many businesses are also small and owner operated. Future employment will depend on the pattern of recovery and the time taken to get back to more normal visitor levels.

⁴⁷ Analysis from the Tourism Survey - TTF Australia Victorian Tourism Employment Atlas 2005, shows that there were 828 tourism jobs in Wellington Shire in 2002-03 P18.

Table 20. Impacts of Floods on Tourism Jobs – High Country 2007/2008

Activity	Estimated Jobs Normal Operations	Year 1 Jobs (2007) Based on reduced expenditure	Year 2 Jobs (2008) Based on reduced expenditure	Jobs Affected (Difference)	
				2007	2008
Tours	24.2	4.4	16.1	20.5	3.7
Car hire	1.6	0.3	1.1	1.4	0.2
Fuel	11.0	2.0	7.3	9.3	1.7
Vehicle maintenance/repairs	3.2	0.6	2.1	2.7	0.5
Accommodation	30.2	5.5	20.1	25.6	4.6
Takeaways and restaurant meals	28.4	5.2	18.9	24.0	4.3
Groceries for self-catering	8.6	1.6	5.7	7.3	1.3
Alcohol, drinks	3.1	0.6	2.1	2.7	0.5
Shopping, (gifts, souvenirs)	25.8	4.7	17.1	21.8	3.9
Entertainment, museums, movies	5.1	0.9	3.4	4.3	0.8
Gambling	0.6	0.1	0.4	0.5	0.1
Other	7.0	1.3	4.7	5.9	1.1
Other Expenses	5.9	1.1	3.9	5.0	0.9
Total	154.8	28.3	102.8	131.2	23.7

Source: Buchan Consulting estimates

4.5 Coastal and Lakes Tourism

4.5.1 Assessing Coastal and Lakes Tourism

The impacts of the floods on tourism in the coast and lakes areas of Wellington Shire were also assessed. To estimate the impacts of the floods on coastal tourism we analysed: tourism-related expenditure in the Shire and the impacts of the floods on this expenditure over 2007; and the many impacts on employment levels.

As the floods coincided with the winter school holiday period, flood damage and road closures impacted on operators in Loch Sport, Seaspray and in other areas of the Shire. In the main they reported cancellations to business and leisure visits and some infrastructure damage. While damage has occurred to important tourism and community infrastructure such as viewing platforms at 90 Mile beach and the boardwalk at Sale Common wetlands, medium to long-term damage has been avoided to coastal tourism and is expected to return to normal levels by the summer season.

4.5.2 Value of Wellington Coastal Tourism

The following provides estimates for total tourism expenditure in the coastal and Wellington lakes area (this includes related retail and services expenditure) for overnight (84,000) and day visitors (150,000). It shows that:

- Total spending by visitors is estimated at around \$44.7 million per year in a normal year.
- Major categories of areas of spending include accommodation, fuel, and retail.
- Discussions with tourism operators and other related businesses indicate that winter trading was affected by the floods and by some negative media coverage which could undermine recovery in spring.

Table 21. Tourism Expenditure by Expenditure Category in the Wellington Shire Coast/Lakes (Normal Year) – Total Wellington Shire

Expenditure Category	Summer (31%)	Autumn (29%)	Winter (13%)	Spring (27%)	Total Annual
Tours	\$507,408	\$474,672	\$212,784	\$441,936	\$1,636,800
Car hire	\$311,364	\$291,276	\$130,572	\$271,188	\$1,004,400
Fuel	\$1,821,052	\$1,703,564	\$763,667	\$1,586,077	\$5,874,360
Vehicle maintenance/repairs	\$80,724	\$75,516	\$33,852	\$70,308	\$260,400
Accommodation	\$3,805,560	\$3,560,040	\$1,595,880	\$3,314,520	\$12,276,000
Takeaways and restaurant meals	\$2,163,552	\$2,023,968	\$907,296	\$1,884,384	\$6,979,200
Groceries for self-catering	\$774,876	\$724,884	\$324,948	\$674,892	\$2,499,600
Alcohol & drinks	\$751,440	\$702,960	\$315,120	\$654,480	\$2,424,000
Shopping, (include gifts etc)	\$2,029,632	\$1,898,688	\$851,136	\$1,767,744	\$6,547,200
Entertainment, museums, movies	\$439,704	\$411,336	\$184,392	\$382,968	\$1,418,400
Gambling	\$196,416	\$183,744	\$82,368	\$171,072	\$633,600
Other products	\$543,864	\$508,776	\$228,072	\$473,688	\$1,754,400
Other expenditure	\$450,008	\$420,976	\$188,713	\$391,943	\$1,451,640
Total	\$13,875,600	\$12,980,400	\$5,818,800	\$12,085,200	\$44,760,000

Source: Buchan Consulting estimates

4.6 Impacts of Floods on Coastal/Lakes Tourism Activity

4.6.1 Expenditure Levels

Our discussions with tourist operators indicate that there was an overall decline in visitor numbers and expenditure in the winter period. Most of those contacted indicated that turnover was low for this period but that they are fully operational and are now returning to more normal business.⁴⁸

Businesses providing accommodation, hospitality services and retail in the towns of Loch Sport, Seaspray and Sale will see their business return to normal by spring and may even see a rise in short-term business as many road repair crews and other contractors continue the ongoing flood and fire recovery work around the Shire.

Our analysis indicates that the level of activity in winter was around one third (33%) of normal activity and this is expected to return closer to current levels in spring (80%) as in summer.

Table 22. Pattern of Recovery for Coastal/Lakes Tourism (% of normal spending) – Post Flood Wellington Shire

Season (2007)	% of normal activity
Summer	100
Autumn	100
Winter	33
Spring	80

Source: Buchan Consulting estimates

The level of impact for the coastal/lakes area that was most directly affected by the floods can be estimated as follows:

- Over winter (June - August '07), tourism visitor numbers and expenditure were estimated at 33% of normal winter activity. This represents a fall of around \$3.9 million in total spending in the coastal area for the period.
- Our estimates for spring (September - November '07) coastal/lakes tourism based on our analysis will see expenditure return to approximately 80% of normal levels. This is around \$2.5 million down on normal expenditure levels.

⁴⁸ Operators in caravan parks and accommodation in Loch Sport were impacted by access, water and media reports that stated all of Gippsland was under water. The period was a slower period of trading but long-term damage will not affect business.

Table 23. Tourism Expenditure by Category (Flood/ Affected Coastal and Lakes Area - 2007)

Impact Analysis Floods	Summer (Normal)	Autumn (Normal)	Winter (66% of activity lost)	Spring (20% of activity lost)	Total
Tours	\$507,408	\$474,672	\$70,219	\$353,549	\$1,405,848
Car hire	\$311,364	\$291,276	\$43,089	\$216,950	\$862,679
Fuel	\$1,821,052	\$1,703,564	\$252,010	\$1,268,862	\$5,045,488
Vehicle maintenance/repairs	\$80,724	\$75,516	\$11,171	\$56,246	\$223,658
Accommodation	\$3,805,560	\$3,560,040	\$526,640	\$2,651,616	\$10,543,856
Takeaways and restaurant meals	\$2,163,552	\$2,023,968	\$299,408	\$1,507,507	\$5,994,435
Groceries for self-catering	\$774,876	\$724,884	\$107,233	\$539,914	\$2,146,906
Alcohol & drinks	\$751,440	\$702,960	\$103,990	\$523,584	\$2,081,974
Shopping, (include gifts etc)	\$2,029,632	\$1,898,688	\$280,875	\$1,414,195	\$5,623,390
Entertainment, museums, movies	\$439,704	\$411,336	\$60,849	\$306,374	\$1,218,264
Gambling	\$196,416	\$183,744	\$27,181	\$136,858	\$544,199
Other products	\$543,864	\$508,776	\$75,264	\$378,950	\$1,506,854
Other expenditure	\$450,008	\$420,976	\$62,275	\$313,554	\$1,246,814
Total	\$13,875,600	\$12,980,400	\$1,920,204	\$9,668,160	\$38,444,364
Difference (Normal vs. Flood-affected year)	-	-	\$3.9 million	\$2.4 million	\$6.3 million

Source: Buchan Consulting estimates

4.6.2 Tourism Jobs in the Coastal/Lakes Area

Our analysis shows that there are a total of 734 direct tourism related jobs in Wellington Shire, of these coastal/lakes related jobs account for 298 or 40% of tourism jobs in the region.⁴⁹

Table 24. Estimate of Tourism Related Jobs in Wellington Shire

Wellington Shire				
Area	Tourism Related Jobs - Direct	Share of Tourism Related Jobs	Tourism Related Jobs - Indirect	Total Tourism Related Jobs (Direct + Indirect)
Sale and other areas	281	38.3	56	337
Lakes/Sea	298	40.5	59	352
High Country	155	21.1	31	186
Total Wellington Shire	734	100	146	880

Source: Buchan Estimates, numbers may not total due to rounding

Our industry consultations reveal that a loss of jobs in the coastal/lakes area due to business being affected by floods has generally not occurred. Many businesses are owner operated and were in a period of reduced winter trading and would not have had a great number of casuals on staff. The risks to jobs will depend on the pattern of recovery and the time taken to get back to more normal visitor levels.

⁴⁹ Analysis from the Tourism Survey - *TTF Australia Victorian Tourism Employment Atlas 2005*, shows that there were 828 tourism jobs in Wellington Shire in 2002-03 P18.

Table 25. Impacts of Floods on Tourism Jobs – Coastal / Lakes Area 2007/2008

Activity	Estimated Jobs Normal Operations	Jobs (2007) Based on reduced expenditure	Jobs Affected
Tours	16.4	14.1	2.3
Car hire	5.0	4.3	0.7
Fuel	14.7	12.6	2.1
Vehicle maintenance/repairs	2.6	2.2	0.4
Accommodation	92.1	79.1	13.0
Takeaways and restaurant meals	69.8	59.9	9.8
Groceries for self-catering	6.2	5.4	0.9
Alcohol, drinks	6.1	5.2	0.9
Shopping, (gifts, souvenirs)	49.1	42.2	6.9
Entertainment, museums, movies	10.6	9.1	1.5
Gambling	1.6	1.4	0.2
Other	13.2	11.3	1.9
Other Expenses	10.9	9.4	1.5
Total	298.2	256.1	42.1

Source: Buchan Consulting estimates, numbers may not total due to rounding

5 Concluding Comments

The analysis shows that the impacts of the floods on Wellington Shire are substantial with some major tourism impacts. Recovery in the region will depend on:

- Agriculture harvests returning to normal levels. The rains will have supplied broad-acre dry land and irrigation farming with much need water supplies for spring and summer production. Strong commodity prices and a return to production levels prior to the emergency will potentially see many commercial farms rebound strongly from the floods.
- The speed at which agriculture infrastructure is rebuilt. Any rebuild will provide increased activity for builders, fencers, road contractors, and agribusiness contractors in the region. If all assets were replaced, construction activities would be substantial over the next 12 months.
- The recovery of tourism to the high country. Tourism recovery in the high country will be dependent on major expenditure by all levels of government in the severely impacted areas of Licola and surrounding areas to restore infrastructure.
- Enhancement of coastal and lakes areas both through upgrading and recovery of leisure craft infrastructures and investment in marketing activities to attract marine enthusiasts back to the area.
- Public assets – road and bridge repairs will boost the level of construction activities in the region. Major government investment is already underway.
- Private assets – building and construction activity and retail will be boosted by repairs and replacements once private insurance claims are settled.

Appendix A References

Department of Primary Industries, Wellington Floods Incident Action Plans, July 2007

Eastern Victoria, Australia Food Processing Prospectus Wellington & Wellington Shire Councils and Invest Victoria, 2006

Economic Costs of Natural Disasters, Bureau of Transport Economics, 2001

Economic Impact Assessment Great Divide South and Coppers Creek Bushfires, Buchan Consulting

Gippsland Market Profile, Tourism Victoria, Year ending June 2006

Victorian Tourism Employment Atlas 2005, TTF Australia

Victoria's Campaign Regions, Tourism Victoria, 2006

Appendix B Methodology - Asset Estimates

5.1 Agriculture

The impacts reported are the replacement costs for agricultural assets destroyed in the fires. The table below shows how our estimates were attained for agriculture assets:

Measure	Details
\$10m for external border fencing	<ul style="list-style-type: none"> Our estimates for fencing allow for an even treated pine posts; 5/6 barbs, hinge-joints and electric wire
\$8.5m for internal fencing	<ul style="list-style-type: none"> Internal border fencing comprising treated pine posts; 5/6 barbs on uneven gradient
Pasture recovery	<ul style="list-style-type: none"> Data from Wellington Shire report for local farmers affected by floods pasture losses. Prices would be for contour ripping and safeguarding against erosion through reducing speed of water run-off and pasture rebuilding/sowing. Usual prices area at \$130/ha, plus seed for pasture which adds another \$180/ha
Livestock	<ul style="list-style-type: none"> Beef cattle estimates - Beef cost estimates undertaken utilising Victorian beef indicator average of 337 c/kg as of 24/07/07 with some rounding. Weight average of 210kg for our estimates was taken as per indicators in rural media such as Stock & Land, Meat & Livestock Australia Ltd and Farm Online. Sheep cost estimates undertaken utilising Victorian lamb indicator average of 300¢/kg as of 24/07/07 with some rounding. Assumed that stock was primarily for lambing hence 28 kilogram weight was assumed for calculations from Meat and Livestock Australia Ltd and Farm Online Goat costs quoted from Australian mohair association. Prices of \$80 was average sales price for a yearling goat / Horses \$1000 each
Fodder, grain and horticulture	<ul style="list-style-type: none"> Hay estimates utilised average price of \$15 for small bale quoting DPI consultation Grain estimates based on lucerne or other feed quality barley which is valued at \$245 a tonne (futures price). Victorian average yield of 2.2 tonnes/ha used as base number Hay estimates were based on consultations with leading suppliers in the LGA. Current prices are at \$395 a tonne/ex-Western Australia

Reports from the Department of Primary Industries was utilised to understand the extent of damage across the Shire. There was no evidence from our consultations of farmers abandoning properties as a result of the floods.

5.2 Private and Public Assets

The following describes our estimates of private and public assets:

Assets	Details
Primary residence	<ul style="list-style-type: none"> Buchan estimates of replacements costs for homes (\$275,000 per home inclusive of recovery/clearance costs). Quotes cross-referenced with local builders. Also cross-referenced with the BTE report (the <i>Economic Costs of Natural Disasters in Australia</i>). This report takes the depreciated value as 75 per cent of the new building price and allows \$60,000 for contents, giving a total indicative value of \$180,000 for the economic loss of a destroyed house.
Buchan estimates of internal damage based on Wellington Shire Recovery Centre - residences audited with Level 1 (serious damages)	<ul style="list-style-type: none"> Floors: \$3,600 - Based on 80m² of flooring to be replaced in a standard size home (235m²). Price of \$45m² for carpeting which includes underlay, removal of all carpet and new carpet. Price verified with leading carpet companies in Gippsland. Average home size based on ABS data - 80 m² assumed as a median point for greater and lessor size areas to be replaced. Dining & Lounge: \$3,400 - Based on discussion with leading furniture retailers in Sale who assumed average price for their customers. Fridge: \$1,000 - Based on discussion with leading electrical and furnishing retailers in Sale who assumed average price for their customers. TV \$1,500 Based on discussion with leading electrical and

	<p>furnishing retailers in Sale who assumed average price for their customers.</p> <ul style="list-style-type: none"> • Other Electricals: \$500: Based on discussion with leading electrical and furnishing retailers in Sale who assumed average price for their customers. • Kitchen : \$10,000 - Based on discussion with leading carpenter/joiners in Sale who assumed average price for their customers • Electrical \$2,000 Based on discussion with leading Wellington Shire electrical contractor. Costs would include switches, circuits, insulation checking and approval. A house that has switchboard flooding would be looking at a greater bill - closer to \$6000
Buchan estimates of external damage based on Wellington Shire Recovery Centre - residences audited with Level 1 (serious damages)	<ul style="list-style-type: none"> • Excavation work: \$2,000 - Based on discussion with leading Wellington Shire contractor. Costs would include 2 machines, 2 operators for a day's work. • Sundry Labour \$1,000 - Cartage charges for tipper for silt. • Residential fence damage not included
Wellington Shire Assets	<ul style="list-style-type: none"> • Wellington Shire estimates used and referenced, cross-checked in consultations

5.3 Tourism

The following describes the modelling of tourism activity:

Tourism Impacts	Details	Value
Tourist Expenditure	<ul style="list-style-type: none"> • Overnight visitors (average 3.4 day stay) • Day visitor 	<ul style="list-style-type: none"> • \$248 expenditure per visitor (\$73 per day) • \$90 per visitor
Visitor numbers	<ul style="list-style-type: none"> • Based on Council estimates for 2004 and Buchan current estimates 	<ul style="list-style-type: none"> • Buchan estimates of visitors derived from Gippsland Market Profile and other Wellington Shire sources

Disclaimer

This report is for the use only of the party to whom it is addressed and for the specific purposes to which it refers. We disclaim any responsibility to any third party acting upon or using the whole or part of the report and its contents.

This report (including appendices) is based on estimates, assumptions and information sourced and referenced by Buchan Consulting. These estimates, assumptions and projections are provided as a basis for the reader's interpretation and analysis. In the case of projections, they are not presented as results that will actually be achieved.

The report has been prepared on the basis of information available at the time of writing. While all possible care has been taken by the authors in preparing the report, no responsibility can be undertaken for errors or inaccuracies that may be in the data used.