DRAFT

CHINAMAN CREEK

LANDCARE PLAN

A community plan produced by the Muckleford Catchment Landcare Group & Connecting Country

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Acknowledgments

This plan is the result of work done by members of the Muckleford Catchment Landcare Group. As well as instigating the plan, group members have sought and received feedback from the wider community and contributed text.

All photographs, except those that are credited otherwise, have been provided by Frank Forster.

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1. Chinaman Creek from 30,000 feet

If you were to look down on Chinaman Creek from an aeroplane, you would be able to see that it is part of something much bigger than itself. You would see that it begins near Ravenswood at the foothills of Porcupine Ridge and then flows south towards Castlemaine; turning west, it then flows into the Muckleford Valley. From there the water collected by its catchment flows south again, becoming part of the Loddon River at Newstead. And once in the Loddon it takes the natural course of all water on this side of the Great Divide – it heads north to the Murray. After a journey of over 2,000km km and a visit to Kerang, Mildura and Renmark, it empties into the Coorong Wetlands of South Australia and the Southern Ocean.

The land which forms the Chinaman Creek catchment is also part of something bigger – the Box-Ironbark Forests of Victoria. These forests once covered a huge area of Victoria: from near Stawell in the west, to Chiltern in the East, they ran in a long band across the northern slopes of the Great Divide. Before European settlement these forests covered an area of roughly three million hectares. Today, less than 17% of the original forests remain, and what is left is mostly in poor condition. Fortunately, our natural history has not been wiped out completely, and with good management there are plenty of opportunities to protect and restore our forests while continuing to utilise the land for our own purposes. In many cases, what's good for the forest is good for the farm too.

Waterways like Chinaman Creek are as important to our native plants and animals as they are to farmers. That's because the low-lying, floodplain soils are often the most fertile, and these areas are most likely to

retain drinking water in the drier months of the year. Not only can floodplain areas support more livestock, they can also support more marsupials, birds and other native fauna. For this reason, creekline environments are often the most endangered, and most important to protect.

The Muckleford Catchment Landcare group has identified the Chinaman Creek Valley as an area which deserves attention- not because it is in the worst condition, but because it maintains many natural values that are worth preserving. It is also a potential pathway of connectivity between isolated patches of native vegetation that surround the Valley. Connecting isolated patches of bush with vegetation that can be used by native animals to move around the landscape is crucial to their long-term survival.

The amount of public land in the Creek's catchment is quite small and exists in isolated patches. If we were to rely only on public land to support our native plants and animals, many more of them would be at serious risk of extinction. Because of this, there is a need for private landholders to help conserve our natural history by protecting remnant vegetation on their properties and managing to reduce the threat of weeds, pest animals, soil loss and other processes that are degrading the landscape.

This plan will document how the local community values Chinaman Creek and its surrounding catchment. It identifies what threats there are to the health of water and land in the Valley and what opportunities are available to help the community respond to these threats.

Landholders are not just property owners, they are also custodians of a beautiful and important landscape that has been managed and enjoyed by people for many thousands of years.

2. The Muckleford Catchment Landcare Group

The Muckleford Catchment Landcare Group was established in 1992. Since then it has successfully carried out a number of projects in the Muckleford area, including:

- 8 Km of 'riparian protection zones' which have been revegetated and fenced to exclude stock.
- 250 ha of Trust for Nature and Land for Wildlife stewardship agreements established.
- 40 ha of private farm forestry woodlots established for sawlog and firewood production.
- 10 km of native vegetation corridors established.
- Erosion control along Muckleford Creek and Bassett Creek and on vulnerable areas in South Muckleford.
- 10 ha of remnant native vegetation fenced.
- Directing seeding an area of 40ha.
- 16 water table and salinity monitoring bores established throughout the groups area.
- Extensive pest plant and animal control on Muckleford Creek, Bassett Creek and Chinaman Creek.
- Roadside enhancement plantings on Creasy's Road.
- Partnership project with Parks Vic to establish nest boxes in the Walmer South Conservation Reserve.
- 20 ha biodiversity planting on previously cleared but uneconomic farmland.

These projects have helped landholders in the area to tackle invasive weeds and pest animals, stabilise erosion, protect stock, provide habitat for native animals and enhance the natural beauty of the area.

In early 2012, the group identified the Chinaman Creek Valley as an area that might benefit from a special project to help land owners in the Valley to carry out on-ground works that aim to improve the health of its soils, waterways, roadsides and remnant vegetation. It was chosen because the Chinaman Creek Valley contains high quality remnant of natural vegetation which would benefit greatly from work such as weed control, pest animal control and fencing. With help from Connecting Country, the Landcare Group surveyed landholders in the Valley to find out what they valued about the Valley and what sort of challenges they were facing in terms of land management. The results of this survey and a meeting held during June 2012 have informed this plan.

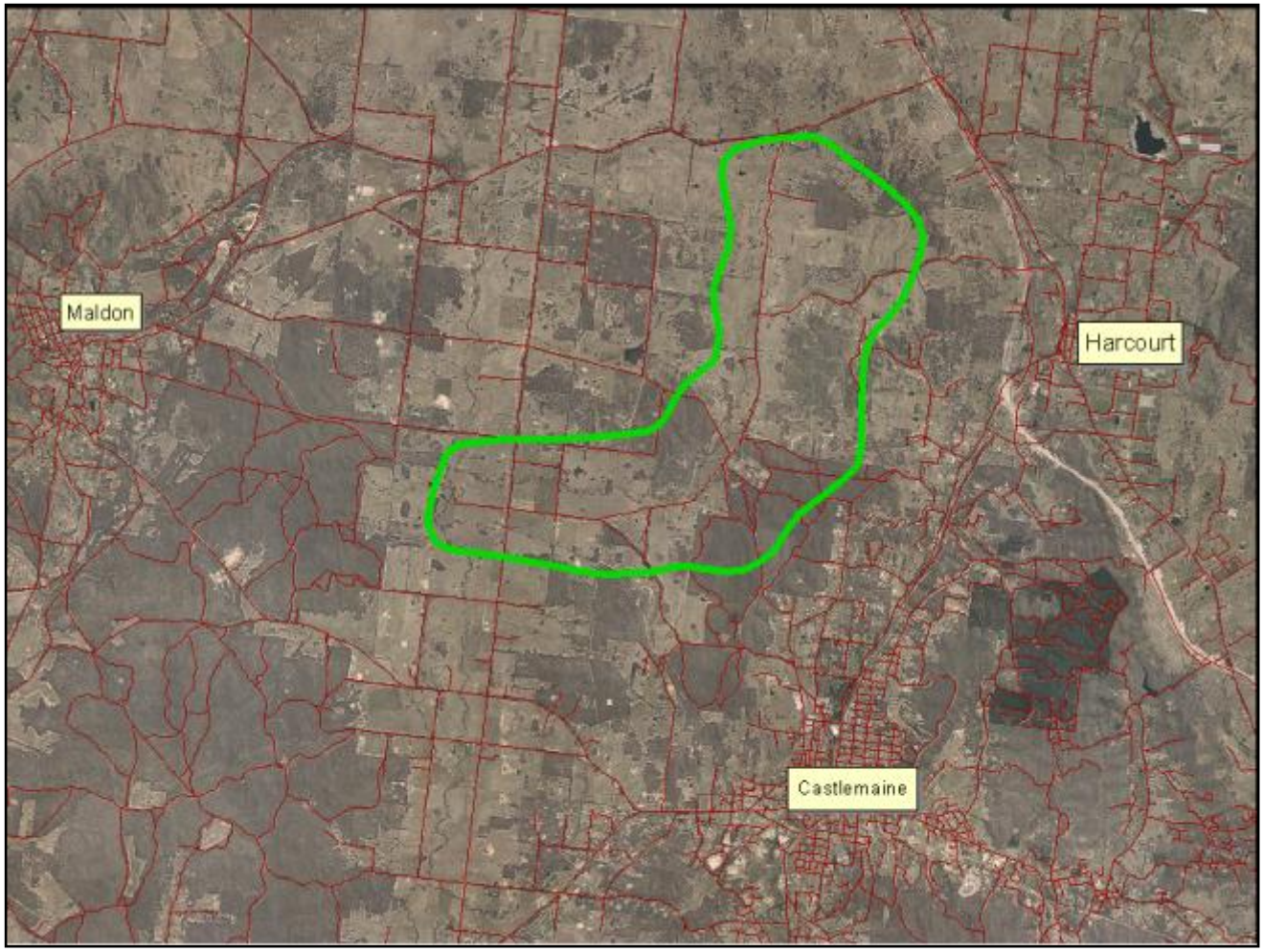
The Chinaman Creek Landcare Plan aims to summarise what landholders in the Chinaman Creek Valley would like to achieve on their properties and in the Chinaman Creek catchment as a whole. It also aims to help landholders in the Valley address concerns they have for the Valley by recording what they value, what the threats are to these values, and how these threats might be addressed - with support from the Muckleford Catchment Landcare Group and nearby landholders facing the same challenges.

3. The Project Area

Where is the project area?

The area identified in this plan as 'Chinaman Creek Valley' is based on the catchment area (also called 'watershed') of Chinaman Creek, a tributary of the Muckleford Creek and part of the Loddon River Catchment. The Valley extends from Porcupine Ridge (Fogartys Gap Road) at its head, down to where Chinaman Creek meets Muckleford Creek in the Muckleford Valley. The creek is flanked to the East and West by hills which create a distinct catchment for Chinaman Creek (see **Map 1**)

Map 1. Chinaman Creek Valley Project



Approximate boundary of the Chinaman Creek Valley catchment area

4. Why have a Chinaman Creek Landcare Plan?

i. To help get funding for on-ground works

Communities which can demonstrate that they have a clear idea of what they want to do, why they want to do it, and what the benefit is to the environment and the public will have a better chance of receiving assistance from government and philanthropic grants. Having a plan such as this is increasingly becoming a requirement for funding applications - especially larger ones.

It is becoming important to demonstrate that local projects are aligned with broader land management strategies. These may include strategies produced by local government, the North Central Catchment Management Authority (North Central CMA), the Victorian Government, local environmental networks and even the Federal Government. This is to ensure that on-ground works are targeted and achieve outcomes at a landscape scale. This plan will look at the Chinaman Creek Valley in a bigger context. It will link the concerns of the community with broader government strategies that deal with these concerns. By documenting these links, local community groups like Muckleford Catchment Landcare Group, and also individual Landholders, can more easily apply for funding to carry out on-ground works.

ii. To share the load

Land management challenges in the Chinaman Creek Valley are often common to many properties. Blackberry, for example, is a found almost everywhere. Addressing these challenges as a group is far more effective than doing so individually. This is because knowledge and skills can be passed around, partnerships attract funding more easily, and work can be coordinated at a larger scale – which all combine to have an effect beyond individual property boundaries.

iii. A Catchment Focus

The health of any creek is only as good as the land that forms its catchment and supplies it with water. In the Chinaman Creek Valley, many individual property owners are responsible for managing the catchment. To really effectively tackle threats to the Creek's health (such as those identified in the survey), coordinated action needs to be taken across the catchment. Having a community plan is a way to 'put everybody on the same page', and involve as many landholders as possible in initiatives to reduce the spread of noxious weeds, pest animals, erosion, or other threats to the health of the Valley.

iv. To recognise and record community concerns

Producing this plan is a rare opportunity to record what the community thinks about the place where they live and what concerns they have for its future.

5. History of the Chinaman Creek Valley

A Brief Human History of the Chinaman Creek Valley

Compiled from text written by Bambi Lees & Paul Hampton

Indigenous People

Aboriginal peoples have lived in the part of Australia now known as Victoria for more than a thousand generations, since time immemorial. The Jaara people's stories of Country date back to the creation of these lands, long before the appearance of western societies. The country has been shaped and moulded by the traditional way of life and nurtured by traditional lore, kinship, language and spirituality.

Dja Dja Wurrung Country is a cultural landscape that is not just tangible objects; imprinted in it are dreaming stories, lore, totemic relationships, ceremonies and martinga kulinga murrup (ancestral spirits) within the country, which give it life and significant value. The values the Jaara hold for their country are shaped from the belief systems that all things have a murrup (spirit)—katjin (water), birds, plants, animals, rocks and mountains.

The arrival of Europeans in Victoria marked a rupture in the spiritual, environmental, political and economic order of Aboriginal nations. As a result of colonisation came the removal of Jaara from their ancestral lands, which imposed grave threats on their traditional culture and stern restriction on cultural survival. Well before the gold rush period, the Dja Dja Wurrung people had been mortally damaged by viruses brought in by the first settlers. Many were re-located to a protectorate at Franklinford where they acquired family names that are still carried by local descendants today.

Despite their weakened numbers, many Dja Dja Wurrung people took the opportunities offered by the rush for gold to work on stations, where their contributions were 'of most serious moment to the settler'. Some became miners in their own right and some guided mining parties to new fields.

Today, descendants of the Jaara people proudly survive and continue their culture, customs and abide by Bunjil's lore where it does not conflict with the Common Law.

Aboriginal scar tree in the Mount Alexander Shire. Photo: Friends of Mount Alexander Diggings

Squatters

In 1836, Major Thomas Mitchell led an exploration party north towards the Murray, passing across the Muckleford Valley and through Exploration Pass. Mitchell's extravagant descriptions of 'Australia Felix' soon triggered a wave of overlanding pastoralists who snapped up the best of the land that the colony had to offer. Chinaman Creek was initially part of the Mt Alexander Run of Dr William Barker, the homestead for which was located at what is now Harcourt. The western boundary of the Mount Alexander Run was delineated by a series of blazed trees running north to south from Mt Gaspard along the western ridges of the Chinaman Creek Valley south to Bassett Creek. The Muckleford valley was initially a run in itself – the Muckleford Run – but it was later incorporated into the Bryant family's Cairn Curran Run. To the south lay Edward Campbell's Strathloddon Run and to the north, the Ravenswood Run.

Subdivision

The discovery of sensationally rich gold deposits and the ensuing rush to the Mount Alexander goldfields quickly led to a demand for small farming blocks in the district. In the early 1850s, a long straight road was surveyed up the centre of the Muckleford valley and several hundred blocks of varying size were sold at auction. Initial access to Chinaman Creek valley was along a road from the Muckleford Valley. This original road now forms sections of the Castlemaine-Muckleford Road, Creasey's Road and Woodbrook Road to the northern end of the valley.

The discovery of the grave of a lone Chinese man near the junction of the Muckleford and Chinaman Creeks led to the naming of Chinaman Creek and the small, narrow valley was also surveyed and auctioned.

Vignerons

In its early farming days, Chinaman Creek valley was a notable wine growing area with several substantial vineyards established by a triumvirate of Swiss and German businessmen.

Otto Jung, from Mainz in Germany, purchased four blocks along the creek. At his favoured site near the junction of the Woodbrook and Creasey's Road he described a place with a creek running through a site 'well-suited to agriculture', with 'a never-failing water supply, not subject to flooding' and a soil of 'red clay and slate'. He created the Chinaman Creek Vineyard, built a stone cottage with three underground cellars, planted 20,000 vines, 18,000 fruit trees and tobacco plants. His wines won awards in Melbourne, Paris and London. Today, the ruins of his house are still visible from the road.

Frederick Hirschi, from Switzerland, initially purchased 37 acres in the valley but later sold them to Ehrenfried Schroeder and went on to establish his principal vineyard on Barkers Creek in the vicinity of what is now Merrifield Road at North Castlemaine.

Ehrenfried Schroeder, from Stralsund in Prussia, established the Imperial Vineyard in 1863 near the corner of Woodbrook and White Gum Roads. He planted 15,000 vines in ground that he trenched to 3 ft. His vineyard was also designed to be a 'pleasure garden' where Castlemaine residents could make day excursions for picnics and his wines also won an impressive number of prizes in Australia and Europe.

On the upper slopes much of the timber was removed at this time to feed mining, industrial and domestic needs in Castlemaine.

Pastoralists

At the same time as central Europeans were bringing their culture based on wine to the valley, the more traditional Anglo farming pursuits were also making inroads, particularly on the upper slopes. In fact, the vineyards make up only a small but fascinating part of the history of the valley and pastoralism was destined to gather up most of the land in both the Muckleford and Chinaman Creek valleys over time. The Castlemaine Woollen Mill purchased a large acreage on the north-western slopes and ran sheep to supply their looms.

In 1899 Ehrenfried Schroeder was run over on the corner of Collins and Elizabeth Street in Melbourne, while on an excursion with the Pioneers and Old Residents Association, and later died in hospital. Shortly before his death he had sold his vineyard to local pastoralist Henry Walters.

Otto Jung attempted to auction his vineyard in 1876, but failed. He handed over the business to close friends and neighbours, the Laver family, who he had supported and mentored for some time. The property was sold to Henry Walters in 1908.

Both properties are still farmed by Henry's descendants, Alan and Mervyn Walters.

Photo: Bronwyn Silver

Box-Ironbark Forests – A Brief Natural History of the Chinaman Creek Valley

Chinaman Creek Valley is well and truly Box-Ironbark Country.

'Box-Ironbark' is the name given to the forests which once covered a large area of Victoria's Northern Slopes. The name is confusing because many areas of Box-Ironbark Forest don't actually have Ironbark trees or Box-type trees growing in them. What distinctly separates them from other types of forests in Victoria (and Australia) is their location and climate. They exist between the Great Dividing Range and the flat Northern plains, growing in a long band from near Stawell in the West, to Chiltern in the East. These forests look different to the wetter forests to the South and East of the Great Divide, and the drier, flatter forests to the North. They also have their own distinct composition of plant and animal species – different from any other forests in Australia.

While factors such as soil type and local topography do influence the *character* of Box-Ironbark forests, their broad distribution is generally a product of elevation and rainfall: Box-Ironbark forests generally occur between elevations of 150 – 350 metres above sea-level, and they receive around 400 – 700 mm of rainfall annually. As a general rule, they occur on poor, shallow soils derived from very ancient sedimentary rocks.

Despite poor soils and relatively low rainfall, their position in the broader landscape - wedged between two larger climatic zones - makes Box-Ironbark country particularly diverse. A total of 287 species of native wildlife (mammals, birds, reptiles and frogs) have been recorded in Box-Ironbark Forest ecosystems, as well as over 1,000 species of plants an unknown number of invertebrates which probably number in the thousands. These forests, and the plants and animals that live in them, are our own, and our only, natural heritage.

A Valuable Resource

The importance of the Box-Ironbark Forests to European settlement in the Mount Alexander Shire has been immense. Initially, graziers took advantage of the naturally open, grassy woodlands occurring in the lower parts of the landscape to run stock. Although they undertook clearing, it wasn't until gold was discovered in the early 1850s that large-scale utilization of the forests really began. Since then, the forests have been harvested many times over for fuel, mining, industrial purposes and agriculture. The remaining forest is still used today for firewood and timber production, bee-keeping, stock shelter and recreation.

Forests in decline

The use of these forests has come at a cost. Since European settlement, 83% of the Box-Ironbark

Forests have been cleared. The remaining stands are generally of poor quality with very few large trees, lots of multi-stemmed trunks (coppice regrowth) and little understory development. In reality, there are almost no areas of Box-Ironbark forest left that haven't been cleared or degraded.

Our native plants and animals have been hit hard by the changes. Some have become extinct in our region - for example the Rufous Bettong and Eastern Quoll. There are now over 350 endangered species found in the Box-Ironbark forests, and many are found in our shire; the Swift Parrot, Brush-tailed Phascogale and Red Spider-Orchid, are some examples.

Original Vegetation

The vegetation of the Chinaman Creek Valley prior to European arrival probably consisted of open woodlands with a grassy, herb-rich understory along the creek and its floodplain, bordered by more heavily forested slopes on the surrounding hills. These forests would have looked quite different to what we see today; the trees would have been much larger and they would have been much more widely spaced. This structure would have allowed for much greater understory development and a diverse range of grasses, shrubs, herds, orchids and lilies would have been found beneath the canopy.

The lower slopes and valleys of the Box-Ironbark Forests are the most productive part of the landscape, supporting the greatest mass of plants and animals. Waterways, even intermittent ones, are particularly important habitat areas for many animals in summer time, and especially as a refuge during times of drought.

Habitat Fragmentation

A big part of the pressure on native wildlife is habitat fragmentation. The forest has been broken into isolated patches without links to each other. Many of our native animals need large areas of connected forest to forage and complete their lifecycle. That is why managing native vegetation on private land is so important. Isolated patches of forest on public land reserves will not be enough for many species to survive because they cannot move between them without connecting areas of native vegetation.

6. Community Survey Results

During May of 2012, a survey was sent out to residents of the Chinaman Creek Valley asking, amongst other things, what they valued about their area and what concerns they have regarding land management. The full results of the survey are given in Appendix A.

The results of the survey showed that landholders in the area value the creek and surrounding landscape for many reasons, including its scenic value, its productive agricultural land, its history and its native plants and animals. It also recorded a number of threats to the area including noxious weeds, pest animals, erosion and poor soil health.

Weeds, especially Blackberry and Spiny Rush, were clearly the biggest threat identified by the survey and weed control was identified as a desired action for most respondents.

Some of the survey results are given below. The full results are given in Appendix A of this document. A total of 12 residents completed survey.

What do you value about living in the Chinaman Creek Catchment?	**Positive responses (out of 12)**
Scenery	11
Nature (plants/wildlife)	9
Local History	8
Farming	7

What are you concerned about?	**Positive response (out of 12)**
Weeds	10
Pests	8
Creek bank destabilisation	6
Soil erosion	6
Flooding	5
Soil Health	4

What would help you achieve your property goals?	Positive response (out of 12)
Weed control	10
Fox/cat control	8
Fencing	3
Planting/shelterbelts	3

7. The 'Asset & Threat' Approach

This plan will use an 'asset-based approach' to land management planning. This means that it first looks at what the assets are in a given area (for example remnant vegetation, endangered species, productive pastures, clean water, scenery), and then at the threats to those assets (for example noxious weeds, pest animals, erosion). It basically means asking why you want to do something, before you do it.

Funding bodies need to see a clear, logical reason for doing work on the ground. The asset-based approach is used by government agencies to help them decide where resources should be allocated. By framing issues in this way, the Chinaman Creek Valley community is 'talking the same language' as potential funders. This makes it clear why the community would like to undertake the management actions that it would like to.

This approach can also help the community to decide where to focus its efforts - ideally on environmental assets with the most significant values (ecological, social, cultural and economic), that are under the greatest threat and with a high likelihood of success.

The tables below list some threats to four of the most important assets of the Chinaman Creek Valley, as identified by the community survey. The tables also include some possible management actions to reduce these threats.

SCENERY

Photo: Geoff Park

The scenery of the Valley is clearly valued by residents. All survey respondents except one listed 'scenery' as value of the area.

Although the term 'scenery' does not indicate a specific feature of the Valley, it is obviously a visually appealing landscape to residents in its current state. It may indicate that they enjoy the mixture of pastoral land and native vegetation. The Valley has not been subject to intense urban development and has maintained its rural, agricultural aspect with some large areas of native vegetation also being a feature.

Threats

Specific threats to the scenic value of the Valley were not recorded, however they may include:

Residential development

• The Valley is very close to the rapidly growing town of Castlemaine. Rising land values may become increasingly prohibitive to commercial agriculture in the valley. Larger landholders may choose to decrease their farming activities and subdivide their properties for development in the future.

Actions

• Remain vigilant against over-development of the valley and develop the capacity to respond to excessive development as a community.

Noxious weeds

• Weeds such as Blackberry, Gorse and Spiny Rush can take over large areas of land if control measures aren't taken. Such infestations are generally regarded as unsightly in a landscape like Chinaman Creek Valley and would no doubt detract from the scenic value.

Actions

• Develop projects and apply for grants to assist landholders with noxious weed control.
• Encourage community-led action on weed control to set an example and encourage other landholders to be involved.

NATURE (PLANTS & WILDLIFE)

Photo: Geoff Park

The natural parts of the landscape were highly valued by residents. This may include areas of regenerating native forests, specific trees or plants found in the Valley and the animals that live there.

Map 1 shows that there are some large patches of native vegetation regenerating on the Valleys hills.

Threats

Noxious weeds

• Noxious weeds compete with native vegetation & in some cases completely dominate it. Weeds species identified by residents as being of concern are: Blackberry, Spiny Rush, Gorse, St John's Wort, Nightshade, Cape Broom.

Actions

• Undertake weed control, including follow-up control and revegetation of affected sites.

Pest Animals

• Feral cats & foxes prey on native birds and marsupials.

• Rabbits destabilise soil causing erosion & compete with native animals for habitat and resources.

Actions

• undertake community rabbit and fox eradication programs.

Loss of habitat

• Clearing of native vegetation

• Paddock tree loss.

Actions

• Educational events that highlight the importance of remnant native vegetation to local wildlife.

• Fencing-off of remnant native vegetation areas to allow regeneration.

• Re-establishment of native vegetation in suitable locations.

Removal of fallen timber

• Illegal firewood collection from roadsides and public forests removes an important habitat and food source for native animals.

• 'Cleaning up' around the trees on rural property is a common practice that removes important habitat.

Actions

• Foster an understanding of the importance of fallen timber and report illegal roadside collection activity.

LOCAL HISTORY

Photo: Friends of Mount Alexander diggings

The Chinaman Creek Valley has its own unique history which was highly valued by residents in the survey.

The valley contains some historical relics in the form of old buildings and a 19th century 'pleasure garden' along the creek.

Threats

Lack of community involvement

• Preservation of the valley's history requires a community that is interested in its past and in recording it in some form. With many new people moving to the area, now might be an important time to make the Valleys history more widely known.

Development

• The physical history of the valley may be threatened by development in the future.

Actions

The Muckleford Landcare Group is one of the few community organisations active in the area and its members have a strong interest in the local history. The group might be a good organisation to collate local history for the community and ensure that it is recorded and passed on to new residents.

FARMING

The majority of land in the Chinaman Creek Valley is still used for productive purposes, especially sheep grazing.

Residents valued farming in the valley highly.

Threats

Declining Soil Health & Soil Erosion

• Declining soil health has been identified as a problem by some farmers in the valley. This results in reduced livestock carrying capacity and associated financial losses.

• Removal of vegetation from across the landscape has caused considerable soil erosion problems in many places, including on farms.

Actions

• Ensure that farmers in the valley have access to the latest information and government assistance that is available to help them maintain the productivity and health of their soils.

Agricultural Weeds

• Farms in the valley are impacted by a number of weed species. Weeds listed as being of concern to residents. **Blackberry, Spiny Rush, Gorse, St John's Wort, Nightshade, Cape Broom. Blackberry and Spiny Rush** were clearly of most concern to those surveyed and 'weeds' were the generally of great concern.

Actions

• Undertake weed control projects, including follow-up control and possibly revegetation of affected areas at some sites.

Pest Animals

• Rabbits destabilise soil causing erosion & compete with native animals for habitat and resources.

• Foxes prey on livestock.

Actions

• Undertake community rabbit & fox eradication programs.

Residential Development

• Like 'scenery', farming is threatened by the areas proximity to Castlemaine and the associated increases in land value and potential for residential development.

Actions

• There is little that can be done about the geographical location of the Valley and the circumstances that have led to the growth of Castlemaine. Remaining vigilant against over-development of the valley and developing the capacity to respond to excessive development as a community are still possible though.

10. Project Ideas

Following the above survey, a meeting was organised for Landholders who were interested in contributing further to the plan. The meeting identified some specific assets in the Valley and the threats to them. They are listed below:

Location	Asset	Threat	Desired Action
69 Creasys Road	• Old Trees • Wildlife • Farming	• Weeds – Blackberry's • Soil erosion and creek washouts	•Fencing off of naturally regenerating Red Gum.
894 Lewis Road	•Regenerating woodland – trees and understory	•Coppiced trees are too thick	•Ecological thinning
Cr Lewis Road and Woodbrook Road	• Vista • Trees • History • Isolation	• Blackberry infestation	•[weed spraying with follow-up and planting]
533 White Gum Road	• Tributary running along White Gum Road	• [Weeds]	•[weed spraying with follow-up and planting]
483 White Gum Road	• Scenery • Native plants and wildlife	• Blackberries • Rabbits • Neglect	• Eradication of weeds and pests

There are a number of funding sources available that may be able to assist landholders financially and provide guidance and useful information.

Habitat Linkages

When thinking about potential project areas and what the outcomes may be, it is worth considering how these areas fit in to the wider landscape.

There are many patches of native vegetation in and around the Chinaman Creek Valley, including:

• Castlemaine State Forest (East of Creek) - contains threatened flora and fauna records; currently designated as 'hardwood production'.

• Creasys Road remnant - listed as a catchment asset by the North Central CMA.

• Muckleford Bushland Reserve - South of the creek, managed by Parks Victoria

• Maldon Historic Reserve (Muckleford Forest) - western side of Muckleford Creek.

• Walmer Bushland Reserve(s) and Nature Conservation Area - a series of small reserves scattered to the North of the Valley.

Projects that can help to link these areas of natural vegetation will be especially important.

Appendix 1 - Community Survey Results

Surveys Returned	12
Question	**Positive Responses**
Do you have direct access to Chinaman Creek from your property?	
	Yes 5
Are you a member of Muckleford Catchment Landcare group?	
	Yes 1
What do you value about living in the Chinaman Creek Catchment?	
	Scenery 11
	Nature (plants/wildlife) 9
	Local history 8
	Farming 7
	Community 1
Does Chinaman Creek provide you with stock watering?	
	Yes 4
Are you interested in undertaking or getting information on the following items?	
	Pest and weed control 12
	Wildlife corridors 5
	Multi-purpose plantings 4
	Perennial pastures 2
	Stock forage shrubs 2
Are the following a concern to you?	

	Weeds	10
	Pests	8
	Creek bank destabilisation	6
	Soil erosion	6
	Flooding	5
	Soil health	4
	Water quality	3
	Other	
	Bird habitat	1
What would help you achieve your property goals?		
	Weed control	10
	Fox/cat control	8
	Fencing	3
	Planting/shelterbelts	3
	Stock crossings	1
	Off-point stock watering	1
	Other	
	Rabbits / hares	2
If weeds are an issue (including roadsides), which ones?		
	Blackberry	12
	Spiny Rush	6
	Gorse	2
	St John's Wort	2
	Cape Broom	1
	Other	
	Nightshade	1

Appendix 2 – Links to Broader Strategies

The objectives of individual landholders and the community can be linked to broader strategies that will support local on-ground actions. These can be found at all level of government. The following references are for plans and strategies that may apply directly to projects in the Chinaman Creek Valley. Some relevant excerpts are given.

It is worth noting that the Chinaman Creek Valley area is identified as priority asset in two broader contexts – the draft North Central Regional Catchment Strategy 2012 -2018 and the Connecting Country Biodiversity Blueprint.

Document Title	Author	Level of Planning	Relevant Section
Mount Alexander Shire Environment Strategy 2011-2014 Click here to access.	Mount Alexander Shire Council	Local Government Area	**2.3.1 Land & Biodiversity Table (Pg. 12)** **Objective**: *Increase vegetation cover on public and private land* **Indicators**: *- Area revegetated or re-habilitated per year.* *- Number of people participating in Landcare and other land-restoration groups* **Objective**: *Partner to ensure effective protection of areas of biodiversity significance and landscape amenity* **Indicators**: *- Area of land managed for conservation* *- Area of native vegetation in the Shire* *- Population count of key local threatened species* *- Stream condition* *- Weed species and weed area coverage*
Mount Alexander Shire Council Roadside	Mount Alexander Shire Council	Local Government Area	**Section 2 - Natural Values of Roadsides**

Document Title	Author	Level of Planning	Relevant Section
Conservation Management Plan 2012 – 2017 Click here to access.			**2.3 Managing threats to roadside conservation (Pg. 5)** *To ensure the preservation and enhancement of landscape connectivity on roadsides, Council will:* *- Support projects that aim to protect and/or enhance indigenous vegetation on unused road reserves.* *- Support projects that aim to enhance existing native vegetation rather than revegetating bare ground.* *• Prioritise projects that support areas where natural regeneration of indigenous species has occurred.*
Connecting Country Biodiversity Blueprint Click here to access.	Connecting Country	Mount Alexander Region	**Map 5: Conservation Significance (Pg. 20)** The Chinaman Creek Valley contains areas identified as having High and Very High conservation significance within the Mount Alexander Shire. **Map 10: Project Ideas – West (Pg. 30)** "*E) Muckleford Roadsides – Local-scale roadside revegetation and associated medium significance remnant enhancement and protection to improve connectivity between large forest blocks (Muckleford Forest to Walmer and Castlemaine).*" **Guidelines for Considering Projects** **Principles for Restoring Landscape Resilience (Pg. 36)** *6. Promote continuity of vegetation along environmental gradients (e.g. rainfall, geographic, altitudinal, topographic). Connectivity at this scale is important to allow movement in response to changes in resource availability over time, natural catastrophes and climate change.*
Draft 2012-2018 North Central Regional Catchment Strategy Click here to access.	North Central CMA	North Central Catchment (Region)	**Regional Catchment Asset Priorities Map (Pg. 3)** Chinaman Creek Valley falls entirely within the 'Muckleford' habitat asset priority area. **1.3 North Central RCS Vision (Pg. 4)** *Protecting and enhancing the region's highest value ecological assets through targeted*

Document Title	Author	Level of Planning	Relevant Section
			investment and community involvement
North Central Invasive Plants and Animals Strategy 2010-2015 Click here to access.	North Central CMA	North Central Catchment (Region)	**Appendix 7: Weeds of National Significance in North Central Victoria (Pg. 45)** **Blackberry (Pg. 45)** *Management Actions:* *- Prioritise areas for control of core infestations based on protection of identified assets, especially around agriculture and biodiversity values. Provision of mapping and surveillance projects.* *- Coordinate activities with Victorian Blackberry Taskforce* **Gorse (Pg. 46)** *Management Actions:* *- Gorse is present in this region (the south is a core infestation area), though some areas (e.g. to the north) are likely to be outlier populations that are high priority for eradication or control.* *- Coordination with the Victorian Gorse Taskforce activities* **Chilean Needle Grass (Pg. 46)** *Management Actions:* *-Mapping and surveillance are key activities required to verify this classification and to assess the need for a northern containment line.* *- Establish containment lines around northern boundary of the core infestation, followed by strategic control of Chilean Needle-grass and asset protection (environmental and agricultural).*