

21.05 ENVIRONMENTAL RISKS

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This Clause provides local content to support Clause 13 (Environmental Risks) of the State Planning Policy Framework.

21.05-1 Climate change

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The Victorian Government's Report on *Climate Change Science and Greenhouse Gas Emissions in Victoria (March 2012)*, projects that Victoria will experience more days over 35°C, higher annual mean temperatures, reduced average rainfall and stream flows, fewer and heavier rainfall days and other effects. Whilst most of its effects are projected to be negative, climate change could also present opportunities, particularly in the agriculture and alternative energy sectors.

Responding to climate change is a complex task that affects, and is affected by, nearly all aspects of the planning system in some way. The policy context for climate change operates at all levels of government and is continually changing. The expectations of the Mount Alexander community in relation to responding to climate change are high. More work is needed to develop appropriate local responses that are effective and consistent with broader scale initiatives for addressing climate change.

Key issues

- Acknowledging that agriculture could be significantly affected by a changing climate.
- Recognising that climate change is likely to exacerbate flooding and bushfire risks.
- Recognising that climate change has the potential to adversely affect transport, drainage and energy systems, biodiversity, food supplies and tourism.
- Acknowledging that Council has limited ability to directly address many environmental outcomes and must work with others to achieve environmental objectives.

Objective 1

To increase the Shire's resilience to the adverse effects of climate change.

Strategies

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| Strategy 1.1 | Discourage land use and development in areas outside of town boundaries that is likely to be significantly affected by the detrimental effects of climate change. |
| Strategy 1.2 | Discourage the development of dams that are not essential to the conduct of agricultural or horticultural enterprises. |
| Strategy 1.3 | Encourage developments that maximise the capture and re-use of water from buildings. |

Implementation

The strategies in relation to environmental risk will be implemented through the planning scheme by:

Further strategic work

- Updating the Mount Alexander Environment Strategy and Action Plan.

Reference documents

- Mount Alexander Shire Council State of the Environment Report, 2010
- Mount Alexander Shire Council Environment Strategy and Action Plan, 2011-2014

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Floodplains

Floodplains exist around the Loddon River and major watercourses in the Shire including Muckleford Creek, Forest Creek and Barkers Creek. The township of Newstead has historically been vulnerable to flooding from the Loddon River and is currently protected by levee banks. The Planning Scheme recognises a number of areas that are subject to inundation in the 1 in 100 year flood event.

Significant flood events occurred in the Shire in 2011 and 2012. Following these events, the Victorian Floods Review (2012) identified the need to build greater resilience for infrastructure and settlements in the context of flood risk. Land use planning is considered to be the most effective means of reducing flood risks.

The North Central Catchment Management Authority is in the process of preparing the *Castlemaine, Campbells Creek and Chewton Flood Management Plan* to identify areas in these towns that subject to flooding and potential mitigation options.

Key issues

- Recognising that a number of areas in the Shire that are susceptible to flooding are not identified by overlay provisions in the planning scheme.
- Recognising that, although many floodplains have been modified significantly from their natural state, they contain native vegetation that provides important habitat links for flora and fauna.

Objective 1

To identify and manage land that is subject to flooding.

Strategies

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| Strategy 1.1 | Engage with the North Central Catchment Management Authority to update flood mapping for Newstead, Baringhup and Muckleford Creek and apply flood mapping to Bells Swamp. |
| Strategy 1.2 | Assist the relevant Catchment Management Authority in preparing any planning scheme amendments to update flood overlays. |
| Strategy 1.3 | Implement adopted flood and drainage studies and support land use and development initiatives for flood mitigation works. |

Objective 2

To protect life, property and infrastructure from the risk of flooding.

Strategies

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| Strategy 2.1 | Discourage intensive forms of development or inappropriate uses in areas subject to the Land Subject to Inundation Overlay, unless risks can be adequately managed in consultation with the relevant Catchment Management Authority. |
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- Strategy 2.2 Ensure that strategic plans for new urban development identify land that is subject to inundation and locate open space or other suitable uses in these areas.

Implementation

The strategies in relation to floodplains will be implemented through the planning scheme by:

Application of zones and overlays

- Applying the Urban Floodway Zone, Floodway Overlay and Land Subject to Inundation Overlay in accordance with relevant planning practice notes and the advice of the relevant catchment management authority

Further strategic work

- Implementing the *Castlemaine, Campbells Creek and Chewton Flood Management Plan*
- Updating flooding provisions for Newstead, Baringhup and Muckleford Creek and apply flood mapping to Bells Swamp.

Reference documents

- North Central Regional Catchment Management Strategy 2013-2019

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Soil degradation

Soil contamination

The Shire's gold mining and industrial heritage has left a legacy of contaminated soils in some parts of the Shire, although most areas that are potentially contaminated have not been formally identified or assessed. Many of the sites that are likely to be contaminated from former gold mining activities are now located on public land. Sites that are potentially contaminated will be progressively identified and managed as infill development occurs.

Erosion

The intensive gold mining of the 19th century also significantly resulted in clearing and soil disturbance around waterways, creek flats and hilltops, making these areas more susceptible to erosion. Many of the Shire's rural areas are characterised by steep land, which is often cleared and therefore susceptible to erosion. Much of this land is unsuitable for further development or should only be developed in accordance with strict conditions that reflect the environmental sensitivity of the land. The *Rural Land Study (2014)* contains more detailed information about the location and extent of erosion issues in the Shire.

Salinity

Parts of the Shire are affected by salinity, which reflects the poor condition of the Loddon and Campaspe water catchments. Salinity is a recognised issue in the catchment of the Cairn Curran Reservoir. The salinity has been caused by vegetation clearing that has caused water tables to rise bringing waterlogging and high salt concentrations. Salinity can be reduced by revegetation with deep-rooted perennial species and protecting and re-establishing native vegetation. Areas that are subject to salinity have not yet been formally identified in the planning scheme. The *Rural Land Study (2014)* contains more detailed information about the location and extent of salinity related issues in the Shire.

Key issues

- Rehabilitating degraded land, including former mining and industrial sites.
- Recognising that the loss of topsoil and salinity significantly affect agricultural productivity and biodiversity.

Objective 1

To ensure that potentially contaminated land is properly assessed and remediated if it could be used for a sensitive use.

Strategy

Strategy 1.1 Require site assessments and environmental audits for land that is potentially contaminated in accordance with relevant planning practice notes.

Objective 2

To reduce the risk of erosion in urban and rural areas.

Strategy

Strategy 2.1 Discourage development under the Erosion Management Overlay unless the policy guidelines of this clause are met.

Objective 3

To minimise the impact of salinity and rising water tables on the environment, buildings and other infrastructure.

Strategies

Strategy 3.1 Encourage the revegetation of areas that contribute to salinity with deep rooted perennial species and indigenous vegetation.

Strategy 3.2 Minimise the drainage of saline and nutrient rich water from irrigated and urban areas.

Implementation

The strategies in relation to soil degradation will be implemented through the planning scheme by:

Application of zones and overlays

- Applying the Environmental Audit Overlay to potentially contaminated land in accordance with the relevant planning practice notes.
- Applying the Erosion Management Overlay to land with slopes of greater than 20 percent or that are subject to erosion.
- Applying the Salinity Management Overlay to areas that are subject to salinity.

Further strategic work

- Engaging with the Department of Environment, Land, Water and Planning to confirm the type of information that is available for erosion and salinity management in the Shire and its accuracy.
- Developing policies or other provisions and agreements to assist decision making under the Erosion Management Overlay and Salinity Management Overlay.

Reference documents

- North Central Second Generation Dryland Salinity Management Plan
- North Central Regional Catchment Management Strategy 2013-2019
- Mount Alexander Shire Council State of the Environment Report, 2010
- Mount Alexander Shire Council Environment Strategy and Action Plan, 2011-2014
- Mount Alexander Shire Council Rural Land Study, 2014

21.05-4 Noise and air

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Most of the Shire's industrial areas either abut, or are located close to residential areas. There is potential for this to cause conflict between industry and sensitive uses. This requires ongoing management through the planning process.

Objective 1

To ensure that noise and air emissions do not affect the amenity of sensitive uses.

Strategies

- Strategy 1.1 Ensure that new or expanding industrial uses in industrial areas that abut residential zoned land employ appropriate noise and air emission management techniques, or other strategies to reduce amenity impacts on sensitive uses.
- Strategy 1.2 Ensure that animal keeping and racing dog training is sited and designed to protect the amenity of residential areas.

Implementation

The strategies in relation to noise and air will be implemented through the planning scheme by:

Policy guidelines

- Applying Council's local policy Clause 22.06 (Animal Keeping and Greyhound Training) when considering applications for animal keeping or greyhound training.

Further strategic work

- Investigating the application of the Environmental Significance Overlay to the Castlemaine Water Reclamation Plant.

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The Shire faces significant urban bushfire hazard risks at the fringes of all of its main townships, namely Castlemaine, Maldon, Newstead and Harcourt. There are also areas of high bushfire risk in smaller settlements such as Chewton, Fryerstown and Taradale and the rural areas of the Shire.

The Shire's main town, Castlemaine, is surrounded by bushfire hazards. The greatest risks are to the north, west, south and south east. There is some vacant land that is zoned for residential development close to these areas.

The risk of bushfires to life and property is affected by a wide range of factors, including topography, access arrangements and the conservation significance of the vegetation. At a regional level, the Shire has a relatively high level of exposure to bushfire risks associated with heritage, assets and settlements.

The implications of bushfire risk for the future planning of the Shire will emerge over time as planning work is undertaken to assess bushfire risk, defensible space requirements, vegetation management regimes and other responses. The former Department of Planning and Community Development prepared a *Regional Bushfire Planning Assessment, 2012*. The findings of this work have been incorporated into the Framework Plans in Clause 21.12 and serve as a starting point for more detailed strategic investigations into bushfire risk.

Key issues

- Recognising that significant areas of the Shire are subject to moderate or high levels of bushfire risk.
- Recognising that bushfires are unpredictable and that all bushfire hazards must be considered in planning decisions, including areas outside the Bushfire Management Overlay.
- Balancing the need to retain native vegetation for its biodiversity values with the need to create areas of defensible space around new dwellings.
- Recognising that many areas that have potential for urban expansion in Castlemaine and other townships are close to vegetated land that represents a high fire hazard.
- Managing bushfire risks on small sites that have limited potential to accommodate defensible space around new dwellings.

Objective 1

To establish a sound planning framework to respond to bushfire risk.

Strategies

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| Strategy 1.1 | Ensure that detailed consideration has been given to bushfire risk prior to the rezoning of land. |
| Strategy 1.2 | Use development plans, incorporated plans and schedules to the Bushfire Management Overlay to manage development in areas of high bushfire risk. |

Objective 2

To minimise the risk of bushfire to life and property.

Strategies

- Strategy 2.1 Direct urban development to the lowest risk locations and avoid development in areas of extreme risk during the preparation of strategic land use or settlement strategies.
- Strategy 2.2 Specify setback conditions, building envelopes and other controls to ensure that fire risk is minimised when subdivisions are assessed, based on the advice of the Country Fire Authority.
- Strategy 2.3 Discourage developments that do not respond appropriately to bushfire risk, having regard to the advice of the Country Fire Authority.

Implementation

The strategies in relation to bushfire will be implemented through the planning scheme by:

Policy guidelines

When deciding on applications for use and development that may be affected by bushfire, implement the Defendable Space for Townships, Settlements and Population Clusters, 2014, as appropriate.

Application of zones and overlays

- Applying the Bushfire Management Overlay to areas of high bushfire hazard risk.
- Using development plan overlays, incorporated plan overlays and schedules to the Bushfire Management Overlay to manage development in areas of bushfire risk.

Further strategic work

- Developing schedules to the Bushfire Management Overlay to minimise referral requirements.
- Investigating bushfire related issues on vacant residential land at the urban-forest interface to guide updates to the Castlemaine Residential Strategy.
- Investigating bushfire related issues at a strategic level through updates to the Urban Living Study.

Reference documents

- Loddon Mallee Region - Regional Bushfire Planning Assessment, 2012
- Mount Alexander Shire Municipal Fire Management Plan, 2012-2014