

6 Ordinary Business

6.1 Town Planning Reports

6.1.1 Cardinia Planning Scheme Amendment C278card - New Environmentally Sustainable Development (ESD) Local Policy (Clause 22.11) and associated changes to the Municipal Strategic Statement (MSS)

Responsible GM: Lili Rosic
Author: Lorna Lablache

Recommendation(s)

That Council:

1. Resolve to seek the authorisation of the Minister for Planning under Section 8A(2) of the *Planning and Environment Act 1987* to prepare Amendment C278card to the Cardinia Planning Scheme to:
 - Insert a new Clause 22.11 (Environmentally Sustainable Development) into the Local Planning Policy Framework of the Cardinia Planning Scheme.
 - Amend clauses in the Municipal Strategic Statement (MSS) to reflect the introduction of Clause 22.11 (Environmentally Sustainable Development) generally in accordance with Attachments 1 to 5.
2. Authorise Council officers to make minor changes to the amendment as required, that do not change the overall intent of the amendment.
3. Subject to receiving the authorisation of the Minister for Planning, gives notice of Amendment C278card under section 19 of the *Planning and Environment Act 1987*.

Attachments

1. Environmentally Sustainable Development (ESD) Background Document [6.1.1.1 - 116 pages]
2. Cardinia C278 Card Explanatory Report Authorisation [6.1.1.2 - 8 pages]
3. Cardinia C278 Card Clause 22.11 ESD New Clause Authorisation [6.1.1.3 - 3 pages]
4. Cardinia C278 Card Clause 21 Combined Tracked Changes Authorisation [6.1.1.4 - 62 pages]
5. Cardinia C278 Card Instruction Sheet Authorisation [6.1.1.5 - 2 pages]

Executive Summary

Amendment C278card proposes to introduce an Environmentally Sustainable Development (ESD) Local Planning Policy into the Cardinia Planning Scheme. The policy will ensure specified developments achieve best practice in environmental sustainability from design stage through to construction and operation. It is also proposed to make changes to the Municipal Strategic Statement (MSS) to support the new local policy.

The proposed Local ESD Policy will apply to new residential and non-residential developments within predetermined thresholds and strengthens Council's position to consider principles of environmentally sustainable development through the statutory planning process. The policy does not trigger additional planning permits and will only apply in instances where a planning permit is already required elsewhere under the Cardinia planning scheme. The policy does not apply to single dwellings, outbuildings or subdivision.

Background

Council has a duty of care in exercising its functions to manage foreseeable risks and this is embedded in legislation such as the *Planning and Environment Act (1987)*, the *Climate Change Act (2017)* and section 9(2) of the *Local Government Act (2020)*.

On 16 September 2019, Council supported a Declaration of a climate emergency. Council has committed to prioritising policy and actions that will provide for both mitigation and adaptation in response to accelerating global warming and climate change.

In addition to this, 'tackling climate change and its impact on our environment, economy and people' is identified as one of our most significant challenges and opportunities in the *Council Plan 2021-25 and Community Vision 2040 (June 2021)*.

Council Plan 2021-2025 also identifies that the development of an Environmentally Sustainable Design (ESD) Policy is a Council priority (Year 1 2021 -22) and it requires that the ESD Policy be incorporated in the Cardinia Planning Scheme (Year 2 2022 - 23).

A series of Council adopted documents, all of which have been informed by community consultation envision a sustainable built environment in Cardinia. This also includes specific local policy clauses, incorporated documents and reference documents within the Cardinia Planning Scheme that also direct planning applications to consider and address ESD principles.

In 2021 Cardinia Shire Council became a member of the Council Alliance for a Sustainable Built Environment (CASBE). CASBE is an alliance of councils committed to enabling change to bring about healthy, resilient and liveable urban places. The South East Council's Climate Change Alliance (SECCCA) also supports CASBE's advocacy for environmentally sustainable design.

As a member of CASBE, Council proposes to follow the lead of 24 other Councils by implementing an ESD local policy utilising the CASBE Sustainable Design Assessment in the Planning Process (SDAPP) Framework. The SDAPP framework provides a streamlined and consistent methodology for requesting, receiving and assessing built environment sustainability outcomes through the planning process.

The ESD philosophy is 'meeting the needs of the present without compromising the ability of future generations to meet their own needs.'

Why should we amend the planning scheme?

When sustainable building practices are required at the local Council planning level, not only does it improve cost effectiveness in terms of the planning and building process (through the early integration of sustainability principles), but it also tackles larger economic issues such as climate change and the security of water and energy supplies. The benefits to our municipality will be far reaching not only in terms of economic or environmental benefits, but also regarding health and well-being.

The overarching objective of this amendment is that new developments achieve best practice ESD outcomes from the design phase through to construction and operation. Overtime, early intervention to ensure best practice in development across our municipality will help our community to be more resilient to the future effects of climate change such as flooding, drought and extreme heat.

Twenty-four other Victorian Councils have implemented an ESD local policy into their Planning Scheme utilising the Sustainable Design Assessment in the Planning Process (SDAPP) Framework developed by CASBE (Council Alliance for a Sustainable Built Environment).

What is the Sustainable Design Assessment in the Planning Process (SDAPP) Framework?

The SDAPP Framework comprises policy objectives, planning application requirements (the scale of a project will ultimately influence the level of information and the types of sustainability initiatives that must accompany an application) and best practice standards (which outline the minimum expectations to meet the policy objectives). The SDAPP Framework, also enables each local government to determine the threshold (the 'planning triggers') that is relevant to their local development profile.

Only applications for residential and non-residential developments that meet specific size thresholds will be required to meet the objectives of the policy. Cardinia's proposed ESD policy does not apply for applications for single dwellings, outbuildings or subdivision permits.

The ESD Policy requires applications to be accompanied by appropriate supporting information, dependant on the proposed scale of development, A Sustainable Design Assessment (SDA) is required for medium-scale developments, while a Sustainability Management Plan (SMP) is required for larger-scale developments.

Cardinia local context - planning permit thresholds

In developing the policy and determining the appropriate planning triggers, a number of factors were considered, including:

- Cardinia's current development profile
- potential environmental benefits
- internal staff capacity and
- the need to remain consistent with ESD policies that have already been introduced by other Councils.

A detailed discussion on these matters, along with corresponding data, is included in the *Environmental Sustainable Development (ESD) Local Policy for Cardinia Shire Council, Background Report, 20 March 2023* (Background Report) which is provided as Attachment 1. This information has informed the drafting of the Cardinia Shire local ESD policy.

The Background Report also provides the:

- strategic justification for a Local ESD Planning Policy and draws on outcomes of targeted consultation of key Council policy and strategies that focus on actions to adopt and implement a local ESD planning policy
- background and context regarding: CASBE, ESD local policy, the SDAPP Framework and previous Advisory Committee and planning panels decisions
- assessment of the likely impact of the policy / threshold on Council, including resource implications for the Shire (based on an analysis of planning permit application data for the financial years of 2019 – 2020 (Year 1) and 2020 – 2021 (Year 2)).

Table 1: Proposed SDAPP Framework thresholds for Cardinia Planning Scheme (extract from the Background Report Attachment A).

Residential		Non-residential	
SDA	SMP	SDA	SMP
2 - 9 dwellings, or A building used for accommodation other than dwellings with a gross floor area between 100 square metres to 999 square metres.	10 or more dwellings, or A building used for accommodation other than dwellings with a gross floor area of more than or equal to 1000 square metres.	A building with a gross floor area between 300 square metres to 999 square metres (excluding outbuildings), or An extension to an existing non-residential building creating between 300 square metres to 999 square metres of additional gross floor area (excluding outbuildings)..	A building with a gross floor area of more than or equal to 1000 square metres (excluding outbuildings), or An extension to an existing non-residential building creating more than or equal to 1000 square metres of additional gross floor area (excluding outbuildings).
No. of applications*: 45	No. of applications*: 9	No. of applications*: 23	No. of applications*: 44
* = the average of the type of planning applications received over 2019 – 2020 and 2020 – 2021 (FY)			

Planning Scheme Amendment C278card

Amendment C278card proposes to introduce a Local Planning Policy into the Cardinia Planning Scheme to ensure that development achieves best practice in environmental sustainability, for development to achieve best practice in environmental sustainability from its design stage through to construction and operation.

Specifically, the proposed Amendment will:

- Introduce a new Clause 22.11 Environmentally Sustainable Development (ESD) into the Local Planning Policy Framework of the Cardinia Planning Scheme.
- Make minor changes to the Municipal Strategic Statement.

The amendment applies to all land in the Shire of Cardinia, where a planning permit is required for the development in accordance with the thresholds in the proposed local policy.

The full suite of the amendment documentation is provided Attachment 2 to Attachment 5.

Policy Implications

A series of Council adopted documents, all of which have been informed by community consultation envision a sustainable built environment in Cardinia.

Council Plan 2021–25 and Community Vision 2040

Council's Vision 2021 – 25 is identified as 'the unique identity of our urban, hills and rural areas is strengthened. We meet the challenges we face together as a community. How we respond balances the needs of our people, businesses, our productive land and natural environments'. The Council Plan identifies that tackling climate change and its impact on our environment, economy, and people as one of our most significant challenges and opportunities.

Strategic Direction 3 – Thriving environments, requires the development of an Environmentally Sustainable Design Policy has been identified in Year 1 (2021-22) and the incorporation of the Environmentally Sustainable Design Policy into the planning scheme has been identified in Year 2 (2022-23).

Clause 21 Municipal Strategic Statement (MSS)

The strategic vision for the municipality is '*Cardinia Shire will be developed in a planned manner to enable present and future generations to live healthy and productive lives and to enjoy the richness of the diverse and distinctive characteristics of the Shire.*'

The proposed amendment responds to the vision, objectives and strategies of several sections throughout the MSS. Clause 21.02-8 Resource conservation identifies that the community needs to respond to climate change through strategies to reduce greenhouse gas emissions and the implementation of adaptation strategies to reduce vulnerability to projected future impacts of climate change. Three key areas for reducing the impact on the environment within the municipality are air, water and general waste.

Cardinia Shire Council Liveability Plan 2017-29 (Reviewed November 2021)

The Liveability Plan identifies that the natural environment, and managing the adverse impacts of climate change, is regarded as an underlying determinant of healthy and liveable neighbourhoods. All liveability domains are impacted by the adverse effect of climate change, which often exacerbates underlying community vulnerability. impacted by the adverse effect of climate change, which often exacerbates underlying community vulnerability.

Sustainable Environment Policy 2018-2028 (SEP) (June 2018)

(SEP) sets the direction for Council to create a more environmentally sustainable community and is the roadmap for the future direction of Council's environmental and sustainability strategies, plans and activities. The amendment supports SEPs position that the interactions between environmental issues of biodiversity, climate change, waste and water impact, and are impacted by all facets of Council plans, policies and actions.

- Other strategies and plans that were also reviewed include:
- Aspirational Energy Transition Plan 2014-24 (October 2014)
- Climate Change Adaptation Strategy 2022 – 33 (August 2022) .
- Enhanced Standard – Sustainable Buildings 2020-26 (April 2020)

Relevance to Council Plan

2.1 We support the creation of liveable spaces and places

2.1.3 Plan for housing diversity that meets community need, is affordable and delivers environmental sustainability, safety and healthy living outcomes.

3.1 We value our natural assets and support our biodiversity to thrive

3.1.1 Partner with community, business and industry to take action on, and adapt to, climate change.

3.1.3 Work with community to improve and manage our natural assets, biodiversity and cultural heritage.

4.1 We support our productive land and employment land to grow local industries

4.1.2 Plan for sustainable employment precincts to entice new industries to the region and support new business.

5.1 We practise responsible leadership

5.1.1 Build trust through meaningful community engagement and transparent decision-making.

Climate Emergency Consideration

The development of a local ESD Policy and the incorporation of the ESD Policy into the Cardinia Planning Scheme will assist Council in responding to and addressing its legislative, state policy and local policy responsibility regarding climate change.

The ESD policy is a planning tool that will help strengthen the resilience and safety of communities by adopting a best practice environmentally sustainable development to help prepare for and respond to the impacts of climate change.

Consultation/Communication

The Background Report has been prepared in collaboration with several teams across Council.

A series of Council adopted documents, across several departments, all of which have been informed by community consultation envision a sustainable built environment in Cardinia. This also includes specific local policy clauses, incorporated documents and reference documents within the Cardinia Planning Scheme that also direct planning applications to consider and address ESD principles.

Once authorisation has been received from the Minister for Planning, the Amendment C278card documents will be exhibited to the public for a period one month. Exhibition will include a notice in the Government Gazette, Pakenham Gazette, and letters will be sent to the relevant authorities and adjoining Councils.

Individual letters will not be sent to residents as this would have required a letter to be sent to every owner and occupier within the Shire and would have been a significant cost and resource burden to Council. It is also important to note, that the Minister for Planning has stated that 'there is now a broad degree of community acceptance of the need for ESD considerations, and the nature of those considerations, as well as acceptance of the benefits which flow from ESD design and construction techniques' ('Reasons for decision to exercise power of Intervention' (dated 8 October 2018) for GC110).

Financial and Resource Implications

Incorporating an ESD policy into the planning scheme does not trigger any additional planning permits and only applies to planning applications already required under other parts of the scheme. However, the proposed ESD policy will place additional workload regarding the assessment of planning applications. As part of Council 2023-2024 budget process, resourcing for an ESD Officer will be considered.

- Resourcing and any additional costs associated with the planning scheme amendment process are provided for by the current and proposed Planning Strategy budget.

Conclusion

There are currently 24 Victorian Councils that have already gone through the process of incorporating a local ESD planning policy into the planning scheme, with 3 other Victorian Councils with active planning scheme amendments. On this basis, it is considered that the Victorian development community are aware of the policy.

A series of Council adopted documents, all of which have been informed by community consultation envision a sustainable built environment in Cardinia. This also includes specific

local policy clauses, incorporated documents and reference documents within the Cardinia Planning Scheme that also direct planning applications to consider and address ESD principles.

In addition to this, 'tackling climate change and its impact on our environment, economy and people' is identified as one of our most significant challenges and opportunities in the *Council Plan 2021-25 and Community Vision 2040*. The Council plan identifies the development of an Environmentally Sustainable Design Policy (ESD Policy) as a Council priority (Year 1 2021 -22) and it requires that the ESD Policy be incorporated in the Cardinia Planning Scheme (Year 2 2022 - 23).

It is recommended that Council submit an application to the Minister for Planning seeking authorisation to prepare and exhibit Amendment C278card generally in accordance with the attachments to this report.



Environmental Sustainable Development (ESD) Local Policy for Cardinia Shire Council

Background Report

20 March 2023

Document Control	
Report Title	Environmental Sustainable Development (ESD)(Draft), Background Report, October 2022(Councillor Briefing 21 November 2022) Environmental Sustainable Development (ESD) Local Policy for Cardinia Shire Council, Background Report, 20 March 2023
SharePoint Folder	Planning / Environmentally Sustainable Design Policy (ESD)
Business Unit	Planning Strategy and Urban Design
Project Lead	Lorna Lablache

Version	Date	Stage Details	Document Title [Subject (Stage) Month YYYY]	DocID / SharePoint link
1.0	21/11/22	Draft for Councillor Briefing	Environmentally Sustainable Development (ESD) Background Document DRAFT October 2022	Environmentally Sustainable Development (ESD) Background Document DRAFT Oct 2022_CB 21 Nov 22.pdf
2.0		Strategic Justification for Planning Scheme Amendment Authorisation & Exhibition Gazetted	Environmental Sustainable Development (ESD) Local Policy for Cardinia Shire Council Background Report, 20 March 2023	

Prepared by: Cardinia Shire Council

Published

© Cardinia Shire Council
(ABN: 32 210 906 807)

20 Siding Avenue, Officer Victoria 3809
PO Box 7, Pakenham Victoria 3810
(DX81006)

Phone: 1300 787 624
Email: mail@cardinia.vic.gov.au
Web: www.cardinia.vic.gov.au

Acknowledgement of Country

Cardinia Shire Council recognises and values the Boonwurrung¹, Bunurong and Wurundjeri tribes as the original inhabitants of the land that makes up Cardinia Shire.

Cardinia Shire's name is derived from the Boonwurrung or Wadawurrung word 'Kar-din-yarr', meaning 'look to the rising sun' or 'close to the sunrise'. Council's logo, which includes a motif of the rising sun, reflects this meaning.

Cardinia Shire Council acknowledges the right of Aboriginal, and indeed all Australians, to live according to their values and customs, subject to the law.

Council is committed to developing and strengthening relationships through reconciliation. Council supports the reconciliation process, which promotes mutual respect and understanding of the Aboriginal peoples and of all ethnic groups and their history and culture in our community.

[Delete this document control from final document]

Auto-Document Control - For use while collaborating and/or drafting document

[Right-click on field to update]

Author: Lorna Lablache
Last saved by: Lorna Lablache
Created date: Mon 22/08/2022 18:56
Last saved date: Thu 09/02/2023 16:00
Revision Number: 01

¹ There are a number of acknowledged spellings for Boonwurrung and these include Bunurong, Boonoorong, Boonwerung, Bunurorung, Bunwurrung, and Bururong. Cardinia Shire Council uses the spelling proposed by N'arweet Carolyn Briggs.

Table of Contents

A.	STRATEGIC JUSTIFICATION	1
1.	What is Environmentally Sustainable Development (ESD)?	1
2.	Introduction	1
2.1.	Purpose of this Background Report.....	3
2.2.	Implementation Plan.....	3
2.3.	Climate Change Act 2017 (Vic)	4
2.4.	Local Government Act 2020 (Vic)	4
2.5.	Planning and Environment Act 1987 (Vic)	4
3.	State Policy	5
3.1.	Plan Melbourne 2017 – 2050 (DELWP)	5
3.2.	Environmentally sustainable development of buildings and subdivisions - a roadmap for Victoria's planning system (DELWP)	7
4.	Victorian Planning Policy Framework (VPPs)	8
4.1.	Urban Design Guidelines for Victoria (DELWP)	10
4.2.	Clause 11 Settlement.....	10
4.3.	Clause 12 Environmental and Landscape Values	10
4.4.	Clause 13 Environmental Risks and Amenity	11
4.5.	Clause 14 Natural Resource Management.....	11
4.6.	Clause 15 Built Environment and Heritage.....	11
4.7.	Clause 16 Housing.....	12
4.8.	Clause 18 Transport	12
4.9.	Clause 19 Infrastructure.....	13
5.	Local Planning Policy Framework	14
	Clause 21 Municipal Strategic Statement.....	14
5.1.	Clause 21.01 Cardinia Shire Key Issues and Strategic Vision.....	14
5.2.	Clause 21.02 Environment.....	14
5.3.	Clause 21.03 Settlement and Housing	16
5.4.	Clause 21.04 Economic Development	17
5.5.	Clause 21.05 Infrastructure.....	17
5.6.	Clause 21.06 Particular Uses and Development.....	17
5.7.	Clause 21.07 Local Areas – Hills Region	18
5.8.	Clause 21.08 Local Areas – Western Port Region.....	18
6.	Zones and Overlays	19
6.1.	Clause 37.02 Comprehensive Development Zone	19
6.2.	Clause 37.07 Urban Growth Zone	19
6.3.	Clause 37.08 Activity Centre Zone.....	20
6.4.	Clause 43.02 Design and Development Overlay	20
7.	Precinct Structure Plans	21
7.1.	Cardinia Road Precinct Structure Plan (September 2008).....	21

Environmental Sustainable Development (ESD) Local Policy - Background Report **20 March 2023**

7.2.	Cardinia Road Employment Precinct Structure Plan (including the Cardinia Road Employment Precinct Native Vegetation Precinct Plan) (September 2010).....	21
7.3.	Officer Precinct Structure Plan - September 2011 (Amended November 2019).....	22
7.4.	Pakenham East Precinct Structure Plan (July 2020).....	23
8.	Township Strategies	24
8.1.	Bunyip Township Strategy (September 2009)	24
8.2.	Cockatoo Township Strategy (March 2008).....	25
8.3.	Emerald District Strategy (June 2009)	25
8.4.	Garfield Township Strategy (August 2002)	26
8.5.	Gembrook Township Strategy (June 2011).....	26
8.6.	Koo Wee Rup Township Strategy (October 2015)	27
8.7.	Lang Lang Township Strategy (July 2009).....	28
8.8.	Upper Beaconsfield Township Strategy (July 2009)	28
9.	Other Planning Documents	29
9.1.	Beaconsfield Structure Plan (December 2013).....	29
9.2.	Cardinia Western Port Green Wedge Management Plan (May 2017).....	30
9.3.	Pakenham Major Activity Centre Structure Plan (February 2021).....	30
10.	Cardinia Shire Council Strategies, Plans and Policies.....	31
10.1.	Sustainable Development Goals at Cardinia Shire Council	31
10.2.	Council Plan 2021-25 and Community Vision 2040 (June 2021)	31
10.3.	Cardinia Shire Council Liveability Plan 2017-29 (Reviewed November 2021)	33
10.4.	Sustainable Environment Policy 2018-2028 (June 2018)	36
10.5.	Aspirational Energy Transition Plan 2014-24 (October 2014)	37
10.6.	Climate Change Adaptation Strategy 2022 - 33 (August 2022)	38
10.7.	Integrated Water Management Plan 2015-25 (December 2015)	39
10.8.	Waste and Resource Recovery Strategy 2017 -26 (December 2017).....	40
10.9.	Biodiversity Conservation Strategy 2019 -29 (June 2019).....	40
10.10.	Council Enhanced Standard - Sustainable Buildings 2020-26 (April 2020).....	41
10.11.	Crime Prevention Through Environmental Design (CPTED) Policy (June 2022)	42
B.	IMPLEMENTATION TOOLS	43
11.	Council Alliance for a Sustainable Built Environment (CASBE).....	43
12.	Local ESD Planning Policy	43
12.1.	Sustainable Design Assessment in the Planning Process (SDAPP) Framework	44
	12.1.1. Sustainable Design Fact Sheets (CASBE).....	45
12.2.	ESD Assessment Tools	47
13.	Other Local ESD Policies	48
13.1.	Neighbouring Councils.....	50
13.2.	Local ESD Policy Planning Scheme Amendments	51
13.3.	Elevating ESD Targets Planning Policy Amendment	57
C.	THRESHOLDS.....	58
14.	Sustainable Design Assessment (SDA) and Sustainability Management Plan (SMP)	58

Environmental Sustainable Development (ESD) Local Policy - Background Report **20 March 2023**

14.1.	Thresholds for SDA and SMP (other Planning Schemes)	59
15.	Cardinia Local Context	63
15.1.	Methodology used for the assessment of planning applications	63
15.2.	Estimated planning applications per annum for Residential and Non-residential developments (proposed thresholds).....	64
15.2.1.	Residential.....	67
15.2.2.	Non-residential.....	69
15.2.3.	Non-residential Outbuildings.....	70
15.2.4.	Other	71
15.3.	Proposed SDAPP Framework thresholds for Cardinia Planning Scheme	71
15.4.	Implementation Plan.....	73
15.4.1.	Resources.....	73
15.4.2.	SDAPP Planning Application Process.....	75
15.4.3.	Staff Training	75
15.4.4.	Planning Scheme Amendment.....	75
16.	Conclusion	76
D.	APPENDICES	77
	Appendix A – 16 September 2019 Council supported a Declaration of a climate emergency.....	78
	Appendix B – Council’s with a local ESD Policy	79
	Appendix C: CSC submission to DELWP – Environmentally sustainable development of buildings and subdivisions – A roadmap for Victoria’s planning system.....	81
	Appendix D: Summary of changes to the VPPs via VC216	84
	Appendix E: ESD section of Cardinia Road Employment Precinct Structure Plan (September 2010)	86
	Appendix F: Sustainability Statement - Officer Precinct Structure Plan (September 2011, Amended November 2019).....	87
	Appendix G: CREP Environmentally Sustainable Design Planning and Design Guidelines	88
	Appendix H: Environmentally Sustainable Design Planning and Design Guidelines (Officer Precinct Structure Plan - September 2011 (Amended November 2019) (Table 19).....	89
	Appendix I: Sustainable design (Gembrook Township Strategy (June 2011) Extract).....	91
	Appendix J - 2021 Liveability Plan Survey – Extreme Weather Reponses.....	92
	Appendix K: Comparison of local policies (4 pages)	94
	Appendix L: Elevating ESD Targets Planning Policy Amendment	98
	Appendix M - Growth Council's with an ESD Local Policy.....	101
	Appendix N – Planning Schemes that exclude outbuildings from both Residential and Non-residential SDA and SMP requirements.....	102
17.	Abbreviations / Glossary	104
18.	References.....	108

Tables

Table 1: Clause 21.07 Local Areas - Hills Region Summary.....	18
Table 2: Clause 21.08 Local Areas - Western Port Region Summary.....	18
Table 3: Integrated Water Management Plan Aspirations Summary.....	39
Table 4: Sustainable Design Assessment (SDA) and Sustainability Management Plan (SMP) used in SDAPP Assessments	45
Table 5: Summary of ESD Planning Scheme Amendments.....	51
Table 6: Summary of Residential SDA requirements (for dwellings)	59
Table 7: Summary of Residential SDA requirements (for developments other than dwellings)	60
Table 8: Summary of Residential SMP requirements (for dwellings or for developments other than dwellings)	61
Table 9: Summary of Non-residential SDA and SMP requirements.....	62
Table 10: Categories used to assess planning applications for 2019 – 2020 and 2020 – 2021 (FY) (Proposed Thresholds).	66
Table 11: Estimated planning applications per annum for Residential and Non-residential developments (Proposed thresholds).....	71
Table 12: Estimated time for an ESD Officer to assess a SDA and a SMP.....	74
Table 13: Estimated annual time for referrals to an ESD Officer.....	74

Figures

Figure 1: United Nations Sustainable Development Goals.....	31
Figure 2: Strategic Direction 3 - Thriving environments.....	33
Figure 3: Cardinia Shire's Liveability Plan 207-29 Framework	34
Figure 4: Sustainable Environment Policy Framework.....	36
Figure 5: What do the ESD Tools Cover?	48
Figure 6: Council's with a Local ESD Policy.....	56
Figure 7: Type of planning permit applications (per category)	67
Figure 8: 'Residential' planning permit applications (per category).....	67
Figure 9: 'Non-residential' planning permit applications (per category)	69
Figure 10: Estimated number of applications that would require a SDA or a SMP (Proposed triggers and thresholds).....	72

A. STRATEGIC JUSTIFICATION

1. What is Environmentally Sustainable Development (ESD)?

Australia's National Strategy for Ecologically Sustainable Development (Australian Government, 1992) defines Ecologically Sustainable Development (ESD) as 'using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased.'²

The ESD philosophy is 'meeting the needs of the present without compromising the ability of future generations to meet their own needs.'³

2. Introduction

Council has a duty of care in exercising its functions to manage foreseeable risks and this is embedded in legislation such as the *Planning and Environment Act* (Victorian Government, 1987), the *Climate Change Act* (Victorian Government, 2017) and section 9(2) of the *Local Government Act* (Victorian Government, 2020).

On 16 September 2019 Council supported a Declaration of a climate emergency. Council has committed to prioritising policy and actions that will provide for both mitigation and adaptation in response to accelerating global warming and climate change. The Council Meeting minutes are attached as Appendix A.

In addition to this, 'tackling climate change and its impact on our environment, economy and people' is identified as one of our most significant challenges and opportunities in the *Council Plan 2021-25 and Community Vision 2040* (Cardinia Shire Council, June 2021). As identified in the Council plan the development of an Environmentally Sustainable Design Policy (ESD Policy) is a Council priority and it requires that the ESD Policy be incorporated in the Cardinia Planning Scheme.

A series of Council adopted documents, all of which have been informed by community consultation envision a sustainable built environment in Cardinia. This also includes specific local policy clauses, incorporated documents and reference documents within the Cardinia Planning Scheme that also direct planning applications to consider and address ESD principles.

When sustainable building practices are required at the local Council planning level, not only does it improve cost effectiveness in terms of the planning and building process (through the early integration of sustainability principles), but it also tackles larger economic issues such as climate change and the security of water and energy supplies. The benefits to our municipality will be far reaching not only in terms of economic or environmental benefits, but also regarding health and well-being.

The overarching objective is that new developments achieve best practice ESD outcomes from the design phase through to construction and operation. Overtime, early intervention to ensure best practice in development across our municipality will help our community to be more resilient to the future effects of climate change such as flooding, drought and extreme heat.

The gazettal of VC216 (State Government Planning Scheme Amendment) not only strengthens consideration of water management, cooling and greening, air and noise pollution and recycling and resource recovery in the Victorian Planning system but includes the addition of the consideration of climate change into the purpose of Victoria Planning Provisions and all planning schemes.

² <https://www.casbe.org.au/who-we-are/why-build-sustainably/>

³ Report of the World Commission on Environment and Development: *Our Common Future* (Brundtland Report), United Nations (1987)

Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

There are clear economic, social and environmental benefits to be gained through improved ESD outcomes in planning. The development of a local ESD Policy and the incorporation of the ESD Policy into the Cardinia Planning Scheme will assist Council in responding to and addressing its legislative, state policy and local policy responsibility.

How will we do it?

In 2021 Cardinia Shire Council became a member of the Council Alliance for a Sustainable Built Environment (CASBE). CASBE is an alliance of councils committed to enabling change to bring about healthy, resilient and liveable urban places.

The purpose of CASBE is to lead and facilitate transition to sustainable and regenerative urban environments through collaborative local government led action.⁴

As a member of SECCCA (South East Council's Climate Change Alliance, the shared vision of the nine Councils⁵ is for 'communities of the south east of Melbourne to be thriving, living a zero emissions lifestyle, and resilient to the changing climate.' SECCCA also supports CASBE's advocacy for environmentally sustainable design.⁶

As a member of Council Alliance for a Sustainable Built Environment (CASBE), Council will follow the lead of 24 other Councils by implementing an ESD local policy (incorporated into the Planning Scheme) and the Sustainable Design Assessment in the Planning Process (SDAPP) Framework. Appendix B provides a list of the 24 Council's with a local ESD policy in their Planning Scheme⁷. The Environmentally Efficient Design Local Policies Advisory Committee and past planning panels have concluded that ESD local policies are appropriate until the state introduces a comprehensive state-wide approach to sustainability in planning. This is discussed in further detail in Section B of this report.

Implementing the SDAPP Framework early in the design phase is the best time to maximise opportunities for good orientation and other initiatives that create liveable, comfortable, efficient buildings.

The SDAPP framework provides a streamlined and consistent methodology for requesting, receiving and assessing built environment sustainability outcomes through the planning process.

It is important to note that incorporating an ESD policy into the planning scheme does not trigger any additional planning permits and only applies to planning applications already required under other parts of the scheme.

⁴ <https://www.casbe.org.au/who-we-are/our-purpose/>

⁵ SECCCA participating Councils = Bass Coast, Bayside, Cardinia, Casey, Greater Dandenong, Mornington Peninsula, Kingston, Port Phillip and Frankston.

⁶ SECCCA Strategic Plan 2021 – 2024, pg 9

⁷ Bass Coast, Casey & Cardinia are the only SECCCA members without a local ESD Policy in their Planning Schemes.

2.1. Purpose of this Background Report

This Background Report comprises three sections: (A) Strategic Justification, (B) Implementation Tools and (C) Thresholds.

- A) Strategic Justification
 - Provide a sound strategic justification for a Local Planning Policy on Environmentally Sustainable Development (ESD) in Cardinia Shire Council.
 - Draws on outcomes of targeted consultation of key Council policy and strategies that focus on actions to adopt and implement a local ESD planning policy.
- B) Implementation Tools
 - Provide background and context regarding: CASBE, ESD local policy (incorporated into the Planning Scheme) and the Sustainable Design Assessment in the Planning Process (SDAPP) Framework.
 - Information will also be provided about the Environmentally Efficient Design Local Policies Advisory Committee and past planning panels to local ESD policies.
 - Include an assessment of the planning thresholds approved in other planning schemes.
- C) Thresholds
 - Determine the likely impact of the policy / threshold on the Cardinia Shire Council, including resource implications for the Shire.

2.2. Implementation Plan

An implementation plan will be prepared for internal purposes to facilitate and manage the application of the Environmental Sustainable Development (ESD) Policy which is to form part of the Cardinia Shire Planning Scheme (via a planning scheme amendment).

The implementation plan will:

- Identify the internal and external stakeholders affected by the ESD policy.
- Document processes to implement the ESD policy, ranging from staff training, creation of Fact Sheets, webpage content, standard conditions, etc.
- Assess the impact of the implementation of the ESD Policy on current processes and job roles across the organisation, including the associated resources and costs.
- Provide a timeline and action plan to assist in providing a stress-free smooth transition from current practices to the implementation of the ESD Policy.

2.3. Climate Change Act 2017 (Vic)

The *Climate Change Act* (Victorian Government, 2017) sets the legislative foundation to manage climate change risks, maximise the opportunities that arise from decisive action and drive the transition to a climate resilient community and economy with net zero emissions by 2050.

The Act includes policy objectives and guiding principles as well as processes or programs for the state of Victoria. Mitigation and adaptation measures are also considered in the objectives and principles. For example, the Act establishes a long-term emissions reduction target of net zero by 2050 and introduces a new set of policy objectives and an updated set of guiding principles to embed climate change in government decision making.

2.4. Local Government Act 2020 (Vic)

The *Local Government Act* (Victorian Government, 2020) came into effect in Victoria on 24 March 2020. The Act strengthened the mandate for considerations of climate change risk in Council's decision-making processes.

Several overarching governance principles (Clause 9(2)) create obligations for Councils in the context of climate change, for example:

- Councils are required to promote the economic, social and environmental sustainability of the municipal district, including mitigation and planning for climate change risks.
- Councils are required to give priority to achieving the best outcomes for the municipal community, including future generations.
- Regional, state, and national plans and policies are to be considered during Council's strategic planning.

There is a clear expectation that decision-making is to be supported by robust and transparent practices, and that the long-term adverse consequences of climate change for future generations are incorporated into council planning, decisions and actions.

2.5. Planning and Environment Act 1987 (Vic)

Although there are no express references to ESD (or climate change) in the *Planning and Environment Act* (Victorian Government, 1987), the objectives of planning legislation generally address the principles of ESD.

Specifically, section 4(1) ((a) (b) (d) and (g) respectfully) provide the following objectives:

- to provide for the fair, orderly, economic and sustainable use, and development of land;
- to provide for the protection of natural and man-made resources and the maintenance of ecological processes and genetic diversity;
- to conserve and enhance those buildings, areas or other places which are of scientific, aesthetic, architectural or historical interest, or otherwise of special cultural value and
- to balance the present and future interests of all Victorians.

3. State Policy

3.1. Plan Melbourne 2017 – 2050 (DELWP)

Plan Melbourne 2017 – 2050 (Department of Environment, Land, Water and Planning, 2017) is Victoria's metropolitan planning strategy guided by nine principles.

Principle 4 - Environmental resilience and sustainability. Protecting Melbourne's biodiversity and natural assets is essential for remaining a productive and healthy city. There is an urgent need for Melbourne to adapt to climate change and make the transition to a low carbon city.⁸

To support the principles seven outcomes have been set, together with the policy directions. Outcome 6, which is 'Melbourne is a sustainable and resilient city' is applicable and an important consideration in the development of a local ESD policy. Key directions in Outcome 6 are as follows:

- Direction 6.1 - Transition to a low-carbon city to enable Victoria to achieve its target of net zero greenhouse gas emissions by 2050.
 - Policy 6.1.1 - Improve energy, water and waste performance of buildings through environmentally sustainable development and energy efficiency upgrades.
 - Policy 6.1.2 - Facilitate the uptake of renewable energy technologies.
- Direction 6.2 - Reduce the likelihood and consequences of natural hazard events and adapt to climate change.
 - Policy 6.2.1 - Mitigate exposure to natural hazards and adapt to the impacts of climate change.
 - Policy 6.2.2 - Require climate change risks to be considered in infrastructure planning.
- Direction 6.3 - Integrate urban development and water cycle management to support a resilient and liveable city.
 - Policy 6.3.1 - Reduce pressure on water supplies by making the best use of all water sources.
 - Policy 6.3.2 - Improve alignment between urban water management and planning by adopting an integrated water management approach.
 - Policy 6.3.3 - Protect water, drainage and sewerage assets.
- Direction 6.4 - Make Melbourne cooler and greener.
 - Policy 6.4.1 - Support a cooler Melbourne by greening urban areas, buildings, transport corridors and open spaces to create an urban forest.
 - Policy 6.4.2 - Strengthen the integrated metropolitan open space network.

⁸D ELWP, *Plan Melbourne 2017 – 2050* (2017) pg 10

Environmental Sustainable Development (ESD) Local Policy - Background Report **20 March 2023**

- Direction 6.5 - Protect and restore natural habitats.
 - Policy 6.5.1 - Create a network of green spaces that support biodiversity conservation and opportunities to connect with nature.
 - Policy 6.5.2 - Protect and enhance the health of urban waterways.
 - Policy 6.5.3 - Protect the coastlines and waters of Port Phillip Bay and Western Port.
- Direction 6.6 - Improve air quality and reduce the impact of excessive noise.
 - Policy 6.6.1 - Reduce air pollution emissions and minimise exposure to air pollution and excessive noise.
- Direction 6.7 - Reduce waste and improve waste management and resource recovery.
 - Policy 6.7.1 - Improve the economic recovery of waste and reduce reliance on landfill.
 - Policy 6.7.2 - Improve waste and resource recovery systems to meet the logistical challenges of medium- and higher-density developments.
 - Policy 6.7.3 - Protect waste management and resource recovery facilities from urban encroachment and assess opportunities for new waste facilities.

Plan Melbourne (Department of Environment, Land, Water and Planning, 2017) is supported by the *Plan Melbourne Five Year Implementation Plan 2017-2022* (Department of Environment, Land, Water and Planning, 2019) which focuses on the delivery of actions of *Plan Melbourne*.

Action 80, Review the Victorian planning and building systems to support environmentally sustainable development outcomes for new buildings to consider their energy, water and waste management performance is identified as a short-term action (by the end of 2018 (0–2 years)).

The *Plan Melbourne 2017 – 2050, 2020 Report on Progress* (Department of Environment, Land, Water and Planning, 2021) identifies that:

The ‘Environmentally sustainable development of buildings and subdivisions: A roadmap for Victoria’s planning system document’ was released in early 2021 and outlines the government’s agenda for supporting Environmentally Sustainable Development through Victoria’s planning system. Work is currently underway to review planning standards on energy efficiency, air and noise pollution exposure, waste and resource recovery, and measures to ameliorate the impacts of urban heat extremes.⁹

⁹ DELWP, *Plan Melbourne 2017 – 2050, 2020 Report on Progress (2021)*, pg 54

3.2. Environmentally sustainable development of buildings and subdivisions - a roadmap for Victoria's planning system (DELWP)

The *Environmentally sustainable development of buildings and subdivisions - a roadmap for Victoria's planning system* (Department of Environment, Land, Water and Planning, July 2020) outlines a program to introduce new environmentally sustainable development (ESD) planning policies and standards.

Key areas of reform are proposed to apply to residential, commercial and industrial developments across all planning schemes in Victoria:

- Make it easier to recycle.
- Cool new developments and our urban environment.
- Facilitate active and sustainable transport choices.
- Reduce exposure to air and noise pollution.
- Improve building energy efficiency and support the transition to a low emission future.
- Enhance the role of planning in stormwater management and efficient water usage.
- Strengthen and extend ESD considerations for commercial and industrial developments.

The roadmap acknowledges that

Local policies on ESD will remain important as they help councils to implement state policy in a way that is relevant to that council area. Local policies can express the local objectives of a municipality and help provide direction where locally specific policy guidance on a particular matter is needed.¹⁰

Development of an integrated planning system approach to ESD will follow a two-stage process.

- The first stage proposes to update the PPF to include ESD as a specific principle in the purpose of the VPPs and update references to existing ESD related policies where relevant to the planning system. The focus of these changes is on lot and precinct scale developments. This has been facilitated through Amendment VC216.
- The second stage proposes to provide more detailed changes that will have more direct implications for planning permit assessments and decision making. These changes will support implementation of ESD objectives as they relate to the location, design and development of new proposals at the lot and subdivision scale.

In Council's response to DELWP's consultation paper (Department of Environment, Land, Water and Planning, July 2020), Council supported a state-wide approach to setting minimum ESD planning policies (stage 1) and minimum ESD standards (stage 2) for buildings and subdivisions. However, it was submitted that the proposed planning provisions needed to be further strengthened. A copy of Council's submission is provided as Appendix C.

¹⁰ DELWP, *Environmentally sustainable development of buildings and subdivisions - a roadmap for Victoria's planning system* (2020) pg 13

4. Victorian Planning Policy Framework (VPPs)

The Victorian Planning Provisions (VPPs) are the standard provisions that form the framework for all of Victoria's planning schemes.

The new Planning Policy Framework (PPF) was introduced into the Victoria Planning Provisions (VPP) through the gazettal of amendment VC148 on 31 July 2018. Amendment VC148 simplifies the VPP structure by introducing a 3-tier integrated policy structure, new and updated policy themes as well as the integration of regional policy.

Several planning schemes across Victoria have been translated into the new PPF via a planning scheme. Council is currently working with DELWP on the translation of the Cardinia Planning Scheme into the new PPF format. At this point in time, an estimated timeline for gazettal is still to be confirmed.

It is important to note that Amendment VC216 made changes to the PPF in the VPPs and all planning schemes to support environmentally sustainable development (ESD). This amendment came in effect on the 10 June 2022 and is discussed in further detail in Section 5 of this Background Report.

Other Victoria Planning Provisions amendments (V and VC) worth noting are as follows:

- VC220 (Gazetted 30 May 2022) - supports the efficient delivery of neighbourhood batteries into the electricity distribution network by amending clause 73.03 Land use terms of the Victoria Planning Provisions (VPP) and all planning schemes.
- VC174 (Gazetted 20 December 2021, updated 6 April 2022) - implements the revised Better Apartment Design Standards, which delivers improved external amenity and design outcomes for all apartment developments.
- VC204 (Gazetted 9 December 2021) - modifies Clause 18 of the VPPs to implement changes to State planning policy for transport and makes associated changes.
- VC203 (Gazetted 1 July 2021, updated 16 September 2021) - implements the new environment protection framework in the VPPs and all planning schemes.
- VC206 (Gazetted 3 August 2021, updated 16 September 2021) - implements requirements of the Environment Protection Act 2017 for the regulation of wind turbine noise from a wind energy facility.
- VC195 (Gazetted 11 March 2021, updated 18 November 2021) - changes the VPPs and all planning schemes by modifying the particular provision at clause 52.32 (Wind energy facilities) to streamline the application process for minor changes to approved wind energy facilities, clarify consent requirements and simplify review and panel exemptions.
- VC169 (Gazetted 9 October 2020, updated 3 February 2021) - changes the PPF to help direct balanced outcomes for housing growth and built form, while also clarifying and consolidating housing policy.
- VC154 (Gazetted 26 October 2018, updated 21 April 2020) - implementation of the integrated water management reforms.
- VC161 (Gazetted 17 September 2019) - introduces new requirements for solar energy facilities.

Environmental Sustainable Development (ESD) Local Policy - Background Report **20 March 2023**

- **VC216 (Gazetted 10 June 2022)** - implements stage one of the *Environmentally sustainable development of buildings and subdivision: A roadmap for Victoria's Planning System* (Department of Environment, Land, Water and Planning, July 2020), which outlines a program to introduce new ESD planning policies, standards and PPF changes.
 - Amendment VC216 makes changes to the Planning Policy Framework (PPF) in the Victoria Planning Provisions (VPP) in all planning schemes to support Environmentally Sustainable Development (ESD) and was gazetted on the 10 June 2022.
 - The amendment was approved by the Minister for Planning under the provisions of section 20(4) of the P&E Act.
 - The amendment implements:
 - *Plan Melbourne 2017-2050* (Department of Environment, Land, Water and Planning, 2017) Action 80 'Review of planning and building systems to support environmentally sustainable development outcomes' and aspects of Action 89, 91, 94, 96, 97 and 101 relating to water management, cooling and greening, air and noise pollution, and recycling and resource recovery.
 - Part of stage one of the *Environmentally sustainable development of buildings and subdivisions - A roadmap for Victoria's planning system* (Department of Environment, Land, Water and Planning, July 2020), which outlines a program to introduce new ESD planning policies, standards and PPF changes.
 - Amendment VC216 changes the PPF to improve and strengthen how it addresses ESD and:
 - Embeds ESD more comprehensively in the PPF (Clause 11 (Settlement), Clause 12 (Environmental and landscape values), Clause 13.05-1S (Noise abatement), Clause 13.06-1S (Air quality management), Clause 15 (Built environment and heritage) and Clause 19 (Infrastructure).
 - Adds consideration of ESD within relevant planning policy themes (in key areas such as climate change, energy, water and waste).
 - Includes consideration of climate change into the purpose of Victoria Planning Provisions and all planning schemes.
 - A summary of changes to the VPPs via VC216 is provided in Appendix D.
- **VC221 (Gazetted 4 August 2022)** amends clauses that require developments to be connected to reticulated gas and amending the referral requirements (new connections to a reticulated gas service are optional). The amendment is in line with *Victoria's Climate Change Strategy* (Department of Environment, Land, Water and Planning, 2021) and *Gas Substitution Roadmap 2022*.

4.1. Urban Design Guidelines for Victoria (DELWP)

The *Urban Design Guidelines for Victoria* (Department of Environment, Land, Water and Planning, 2017) are policy guidelines within the State Planning Policy Framework of the Victoria Planning Provisions. The guidelines must be considered when assessing the design and built form of new development where relevant (Clause 15.01-1S Urban design).

Urban design informs the design of infrastructure and buildings in as far as they affect the function and amenity of the public realm.¹¹

Key principles include:

- To ensure pedestrian priority streets maximise the convenience and safety of walking and cycling modes (Objective 2.2.1). This includes measures such as allocating a greater portion of street space to pedestrians and cyclists.
- To maximise the environmental performance of car parking lots (Objective 2.8.5). This includes outcomes such as providing shade to parking spaces and pedestrian paths as well as water harvesting and other on-site water re-use and treatment systems.
- To ensure buildings in activity centres provide equitable access to daylight and sunlight (Objective 5.1.3). This includes elements such as locating and arranging the building to allow daylight and winter sun access to key public spaces and key pedestrian street spaces as well as protecting daylight and sunlight access to the private and communal open space of adjacent dwellings.
- To achieve sustainable buildings in activity centres (Objective 5.1.8). This includes elements such as the collect and use stormwater and recycled water for landscape irrigation, toilet flushing and cleaning as well as providing for efficient storage, separation and removal of waste and recycled materials from buildings.

4.2. Clause 11 Settlement

Planning is to recognise the need for, and as far as practicable contribute towards a high standard of environmental sustainability, urban design, amenity as well as climate change adaptation and mitigation.

11.01-1S Settlement Strategies include the delivery of network of high-quality integrated settlements that have a strong identity and sense of place, are prosperous and are sustainable by contributing to net zero greenhouse gas emissions through renewable energy infrastructure and energy efficient urban layout and urban design.

11.03-1S Activity Centre Strategies include improving access by walking, cycling and public transport to services and facilities and to improve the social, economic and environmental performance and amenity of activity centres.

4.3. Clause 12 Environmental and Landscape Values

Planning should help to protect the health of ecological systems and the biodiversity they support (including ecosystems, habitats, species and genetic diversity) and conserve areas with identified environmental and landscape values.

¹¹ DELWP, *Urban Design Guidelines for Victoria* (2017) pg 5

4.4. Clause 13 Environmental Risks and Amenity

Planning should strengthen the resilience and safety of communities by adopting a best practice environmental management and risk management approach as well as prepare for and respond to the impacts of climate change.

13.01-1S Natural hazards and climate change strategies include responding to the risks associated with climate change in planning and management decision making processes.

4.5. Clause 14 Natural Resource Management

Planning is to assist in the conservation and wise use of natural resources including energy, water, land, stone and minerals to support both environmental quality and sustainable development.

14.02-1S Catchment planning and management objective is to assist the protection and restoration of catchments, waterways, estuaries, bays, water bodies, groundwater, and the marine environment; and 14.02-2S Water quality seeks to protect water quality.

4.6. Clause 15 Built Environment and Heritage

Planning should promote development that is environmentally sustainable and minimise detrimental impacts on the built and natural environment.

Specifically, Planning should facilitate development that:

- Is adapted and resilient to climate related hazards.
- Supports the transition to net zero greenhouse gas emissions.
- Minimises waste generation and supports resource recovery.
- Conserves potable water.
- Supports the use of, and access to, low emission forms of transport.
- Protects and enhances natural values.
- Minimises off-site detrimental impacts on people and the environment.

15.01-2S Building design objective is to achieve building design and siting outcomes that contribute positively to the local context, enhance the public realm and support environmentally sustainable development.

Several strategies relate to ESD elements, such as:

- Improve the energy performance of buildings through siting and design measures that encourage:
 - Passive design responses that minimise the need for heating, cooling and lighting.
 - On-site renewable energy generation and storage technology.
 - Use of low embodied energy materials.
- Ensure the layout and design of development supports resource recovery, including separation, storage and collection of waste, mixed recycling, glass, organics and e-waste.
- Encourage use of recycled and reusable materials in building construction and undertake adaptive reuse of buildings, where practical.

Environmental Sustainable Development (ESD) Local Policy - Background Report **20 March 2023**

- Encourage water efficiency and the use of rainwater, stormwater and recycled water.
- Minimise stormwater discharge through site layout and landscaping measures that support on-site infiltration and stormwater reuse.

15.01-3S Subdivision design objective is to ensure the design of subdivisions achieves attractive, safe, accessible, diverse and sustainable neighbourhoods.

Strategies relate to ESD elements, include:

- Creating an urban structure that:
 - Responds to climate related hazards.
 - Incorporates integrated water management, including sustainable irrigation of open space.
 - Minimises peak demand on the electricity network.
 - Supports energy efficiency and solar energy generation through urban layout and lot orientation.
 - Supports waste minimisation and increased resource recovery.
- Providing utilities and services that support the uptake of renewable energy technologies, such as microgrids and energy storage systems, including batteries.

4.7. Clause 16 Housing

Planning should provide for housing diversity, ensure the efficient provision of supporting infrastructure and should include the provision of land for affordable housing.

16.01-2S Housing affordability strategy includes promoting good housing and urban design to minimise negative environmental impacts and keep costs down for residents and the wider community.

4.8. Clause 18 Transport

Planning should ensure a safe, integrated and sustainable transport system that provides access to social and economic opportunities to support individual and community wellbeing and also actively contributes to environmental sustainability.

18.01-3S Sustainable and safe transport objective is to facilitate an environmentally sustainable transport system that is safe and supports health and wellbeing.

Strategies that plan and develop the transport system to:

- Maximise the efficient use of resources including infrastructure, land, services and energy.
- Prepare for and adapt to climate change impacts.
- Prioritise the use of sustainable personal transport.
- Protect, conserve and improve the natural environment by supporting forms of transport, energy use and transport technologies that have the least environmental impact.

Environmental Sustainable Development (ESD) Local Policy - Background Report **20 March 2023**

- Avoid, minimise and offset harm to the environment by:
 - Protecting biodiversity.
 - Reducing transport-related greenhouse gas emissions.

18.02-1S Walking objective is to facilitate an efficient and safe walking network and increase the proportion of trips made by walking and 18.02-2S Cycling seeks to facilitate an efficient and safe bicycle network and increase the proportion of trips made by cycling.

18.02-3S Public transport objective is to facilitate an efficient and safe public transport network and increase the proportion of trips made by public transport. A strategy is to plan and develop public transport to enable people to not have to rely on cars for personal transport.

18.02-4S Road ESD related strategy include integrating new and emerging technologies into road design, including the increasing connectivity and automation of vehicles and design of public car parks to incorporate electric charging facilities to support the use of low-emission vehicles.

4.9. Clause 19 Infrastructure

Infrastructure planning should avoid, minimise and offset environmental impacts, and incorporate resilience to natural hazards, including future climate change risks.

19.01-1S Energy supply ESD related strategies include:

- Support the development of energy generation, storage, transmission, and distribution infrastructure to transition to a low-carbon economy.
- Ensure energy generation, storage, transmission and distribution infrastructure and projects are resilient to the impacts of climate change.

19.01-2S Renewable energy objective is to support the provision and use of renewable energy in a manner that ensures appropriate siting and design considerations are met.

Strategies include:

- Facilitate renewable energy development in appropriate locations.
- Protect renewable energy infrastructure against competing and incompatible uses.
- Set aside suitable land for future renewable energy infrastructure.
- Consider the economic, social and environmental benefits to the broader community of renewable energy generation while also considering the need to minimise the effects of a proposal on the local community and environment.
- Support wind energy facilities in locations with consistently strong winds over the year.

19.03-2S Infrastructure design and provision objective is to provide timely, efficient and cost-effective development infrastructure that meets the needs of the community.

19.02-3S Integrated water management objective is to sustainably manage water supply and demand, water resources, wastewater, drainage and stormwater through an integrated water management approach.

Environmental Sustainable Development (ESD) Local Policy - Background Report **20 March 2023**

ESD related strategies include plan and coordinate integrated water management, bringing together stormwater, wastewater, drainage, water supply, water treatment and re-use, to:

- Take into account the catchment context.
- Protect downstream environments, waterways and bays.
- Manage and use potable water efficiently.
- Reduce pressure on Victoria's drinking water supplies.
- Minimise drainage, water or wastewater infrastructure and operational costs.
- Minimise flood risks.
- Provide urban environments that are more resilient to the effects of climate change.

5. Local Planning Policy Framework

Clause 21 Municipal Strategic Statement

5.1. Clause 21.01 Cardinia Shire Key Issues and Strategic Vision

The key issues facing Cardinia are focused around five strategic themes: Environment, Settlement and Housing, Economic Development, Infrastructure and Particular use and development.

The strategic vision for the municipality (as outlined in CI 21.01-4) is:

Cardinia Shire will be developed in a planned manner to enable present and future generations to live healthy and productive lives and to enjoy the richness of the diverse and distinctive characteristics of the Shire.

5.2. Clause 21.02 Environment

There are several ESD related issues that are addressed in this clause:

- 21.02-1 Catchment and coastal management objectives are to:
 - To protect and improve the environmental health and social and economic values of water resources and ensure their efficient management.
 - To effectively manage development to mitigate impacts on the operation and health of waterway systems.
 - To minimise the impact of shallow groundwater conditions and salinity on the built and natural environment, including both native vegetation and agricultural land, and to ensure that development does not contribute to increasing the risk or extent of salinity.
 - To recognise areas within the municipality that are liable to flooding and inundation and to minimise potential risk to life, property and the environment.
 - Encourage the use of measures to manage and treat stormwater quality in both urban and rural areas including wetlands, litter and pollution traps, retarding basins and revegetation along waterways.
 - Maximise the potential to utilise recycled wastewater for agricultural, urban and other purposes

Environmental Sustainable Development (ESD) Local Policy - Background Report **20 March 2023**

- Require best practice water sensitive urban design and improvements in drainage in all new developments.
- 21.02-2 Landscape objective is to recognise and protect the diverse landscape and areas of significant landscape value. Key issues include:
 - Protecting significant landscapes, including the protection of the specific features of each landscape.
 - Recognising that the landscape is an important element in the sustainable development of tourism in the municipality.
 - Recognising the pressures to develop land in locations of high scenic value.
- 21.02-3 Biodiversity objectives are to:
 - To achieve no net loss in the quantity and quality of native vegetation in the municipality.
 - To maintain and enhance the diversity of indigenous habitats and species.
 - To reduce the spread and extent of pest plants and animals.

Several strategies are listed; the following are highlighted:

- Ensure that the siting of buildings and works avoids and minimises the removal or fragmentation of native vegetation, especially in areas of biodiversity significance, and where appropriate, building envelopes should be approved as part of subdivision plans to minimise the removal of vegetation.
- Protect and enhance biodiversity within natural waterways and man-made drains and dams through subdivision design, development design and appropriate management.
- Protect and enhance the habitat of threatened flora and fauna species, including the growling grass frog and southern brown bandicoot.
- 21.02-4 Bushfire management identifies several key issues, including recognising that climate change will increase the risk from bushfires.
- 21.02-8 Resource conservation identifies that the community needs to respond to climate change through strategies to reduce greenhouse gas emissions and the implementation of adaptation strategies to reduce vulnerability to projected future impacts of climate change. Three key areas for reducing the impact on the environment within the municipality are air, water and general waste.

The objective of this clause is to develop and promote more environmentally sustainable ways of living and working, including greenhouse gas emission reductions.

Strategies identified to achieve this include:

Reduction of greenhouse gas emissions

- Encourage developments that are based around public transport and alternative forms of transport including walking and cycling.
- Promote sustainable communities through appropriate urban design that encourages alternate forms of transport to reduce energy consumption.

Environmental Sustainable Development (ESD) Local Policy - Background Report **20 March 2023**

Reduction in water consumption

- Ensure water sensitive urban design principles for all developments and subdivisions including the use of the third pipe recycled water systems and the use of water tanks where appropriate.
- Encourage the use of recycled or alternative water in the construction of roads in all subdivision and in other works and ongoing maintenance activities, where this water is available.

Design and construction

- Encourage the use of environmentally sustainable construction materials and techniques.
- Encourage development that incorporates sustainable building design including design that promotes the health and wellbeing of occupants.
- Encourage the inclusion of, or provision for, sustainable technology in the design of new buildings.
- Provide and preserve landscaping that enhances amenity and maintains ecosystems.

Importantly, the development of local sustainable buildings guidelines is listed as further strategic work.

5.3. Clause 21.03 Settlement and Housing

- 21.03-1 Housing objective is to encourage a diversity in housing to meet the needs of existing and future residents.
- 21.03-2 Urban Established Area - Beaconsfield and Pakenham and 21.03-3 Urban Growth Area objective is to create a functional, attractive, safe and sustainable urban environment for the existing and future community. Several key principles for development are listed in both sections, including to increase environmental sustainability.
- 21.03-4 Rural townships objectives are as follows:
 - To provide for the sustainable development of townships in the municipality having regard to environmental and servicing constraints.
 - To maintain and enhance the distinct character and environmental qualities of each of the townships.

Strategies include providing sewage treatment and stormwater management systems to minimise the impact of existing township development on the environment.

- 21.03-5 Rural residential and rural living development objective is to ensure development reflects a high quality of design and does not result in environmental degradation.

5.4. Clause 21.04 Economic Development

- This clause acknowledges that *Plan Melbourne 2050* (Department of Environment, Land, Water and Planning, 2017) identifies the employment corridor (south of the Princes Freeway (Pakenham Bypass) in Pakenham and Officer South) as the 'Officer-Pakenham State-significant Industrial Precinct' that will be a major provider of employment and business opportunities for residents of Cardinia Shire and Melbourne's south-east region.
- A key issue of this clause is 'recognising the need for innovation, diversification and resilience within the local economy to improve and develop employment opportunities and a strong employment base within the municipality to meet the demands of the growing population.'

5.5. Clause 21.05 Infrastructure

- This objective of this clause is to ensure the timely provision of physical and social infrastructure in order to foster economic development, ensure the well-being of the community and protect the environment.
- 21.05-2 Freeways, declared arterial roads objective is to provide for an efficient, safe and attractive arterial road network and to ensure effective integration of land use, transport and environmental outcomes.
- 21.05-4 Public transport overview acknowledges that:
 - The sparse nature of settlement in the municipality affects the viability of providing public transport to all residents, and there is a need to look at innovative and cost-effective means to maximise public transport services in the Cardinia Shire.
 - The limited public transport services that are currently available is an issue of concern raised consistently by the community.
- 21.05-5 Pedestrian and bicycle network overview is to provide infrastructure to facilitate alternative transport options such as walking and cycling is important in developing environmentally, socially and economically sustainable communities.

5.6. Clause 21.06 Particular Uses and Development

- 21.06-1 Urban Design acknowledges that the long-term benefits of good design are a more attractive, functional and sustainable built environment. Enhancing the design and built form of existing industrial areas is identified as a key issue.

5.7. Clause 21.07 Local Areas – Hills Region

This section of the scheme is summarised in the Table 1.

Table 1: Clause 21.07 Local Areas - Hills Region Summary

Clause	Local area Implementation – Any proposed use or development within the township is generally consistent with ...	Incorporated document
21.07-1 Gembrook	<i>Gembrook Township Strategy</i> (Cardinia Shire Council, June 2011), <i>Gembrook Framework Plan</i> and the <i>Central Precincts Plan</i> .	<i>Gembrook Township Strategy</i> (Cardinia Shire Council, June 2011)
21.07-2 Cockatoo	<i>Cockatoo Township Strategy</i> (Cardinia Shire Council, March 2008) and <i>Cockatoo Framework Plan</i> .	<i>Cockatoo Township Strategy</i> (Cardinia Shire Council, March 2008)
21.07-3 Emerald, Avonsleigh & Clematis	<i>Emerald District Strategy</i> (Cardinia Shire Council, June 2009) and <i>Emerald District Framework Plan</i> .	<i>Emerald District Strategy</i> (Cardinia Shire Council, June 2009)
21.07-4 Upper Beaconsfield	<i>Upper Beaconsfield Township Strategy</i> (Cardinia Shire Council, July 2009) and the <i>Upper Beaconsfield Framework Plan</i> .	<i>Upper Beaconsfield Township Strategy</i> (Cardinia Shire Council, July 2009)

5.8. Clause 21.08 Local Areas – Western Port Region

This section of the scheme is summarised in the Table 2.

Table 2: Clause 21.08 Local Areas - Western Port Region Summary

Clause	Local area Implementation – Any proposed use or development within the township is generally consistent with ...	Incorporated document
21.08-1 Lang Lang	<i>Lang Lang Township Strategy</i> (Cardinia Shire Council, July 2009) and the <i>Lang Lang Framework Plan</i> .	<i>Lang Lang Township Strategy</i> (Cardinia Shire Council, July 2009)
21.08-2 Bunyip	<i>Bunyip Township Strategy</i> (Cardinia Shire Council, September 2009) and the <i>Bunyip Framework Plan</i> .	<i>Bunyip Township Strategy</i> (Cardinia Shire Council, September 2009)
21.08-3 Koo Wee Rup	<i>Koo Wee Rup Township Strategy</i> (Cardinia Shire Council, October 2015) and the <i>Koo Wee Rup Framework Plan</i> .	Reference documents only.

6. Zones and Overlays

6.1. Clause 37.02 Comprehensive Development Zone

- Schedule 2 to Clause 37.02 (CDZ2) applies to the Former Pakenham Racecourse Comprehensive Development Plan (February 2010). Clause 4.0 Building and works, Application Requirements states that application must be accompanied by (as appropriate) 'An Environmentally Sustainable Development report identifying the environmental and energy efficient features to be included in the development, demonstrating best practice principles'.
- Schedule 3 to Clause 37.02 (CDZ2) applies to the Racecourse Road, Pakenham Comprehensive Development Plan (October 2010). Clause 7.0 decision guidelines, states that before deciding on an application to develop land, the responsible authority must consider (as appropriate), whether the application optimises opportunities for energy efficient and water sensitive urban design..

6.2. Clause 37.07 Urban Growth Zone

- Schedule 1 of Clause 37.07 (UGZ1) applies to the *Cardinia Road Precinct Structure Plan* (Cardinia Shire Council, September 2008). Clause 3.0 Application requirements, Urban Design Framework (UDF), states that the UDF must 'set out guidelines to improvement environmental sustainability including integrated water management and energy conservation'. There are no Applied zone provisions in this schedule.
- Schedule 2 of Clause 37.07 (UGZ2) applies to the *Cardinia Road Employment Precinct Structure Plan* (Cardinia Shire Council, September 2010) (CREP). Clause 3.3 Buildings and works for employment land states that an application to use or subdivide land, or to construct a building or construct and carry out works must be accompanied by a 'Sustainability Statement that demonstrates how the development meets the sustainability objectives and planning and design guidelines. The sustainability statement must be in accordance with the PSP (refer section 4.7.5)'. The ESD section of CREP is provided in Appendix E. There are no Applied zone provisions in this schedule.
- Schedule 3 of Clause 37.07 (UGZ3) applies to the *Officer Precinct Structure Plan* (Victorian Planning Authority, September 2011, Amended November 2019) (OPSP) – Residential Area and Schedule 4 of Clause 37.07 (UGZ4) applies to the *Officer Precinct Structure Plan* (Victorian Planning Authority, September 2011, Amended November 2019) (OPSP) – Officer Town Centre (C232card gazetted 6 March 2020).

In both schedules Clause 3.0 Application requirements, Sustainability statement requirements states that 'an application for subdivision of 60 or more lots, or to construct a building in the areas shown as Peripheral Commercial or Core Business must be accompanied by a Sustainability Statement as set out in the incorporated Officer Precinct Structure Plan'. The OPSP content regarding the Sustainability Statement is provided in Appendix F.

Environmental Sustainable Development (ESD) Local Policy - Background Report **20 March 2023**

- Schedule 5 of Clause 37.07 (UGZ5) applies to the *Pakenham East Precinct Structure Plan* (Victorian Planning Authority, July 2020) (PEPSP) (C234card gazetted on 21 January 2021). Clause 3.0 Application requirements, specific to ESD are as follows:
 - Environmental sustainable design statement. An application for the development of land must be accompanied by a sustainable design assessment report prepared by a suitably qualified professional that demonstrates how the development will achieve best practice sustainable design, using the Built Environment Sustainability Scorecard (BESS) or other comparable sustainable design tool to demonstrate best practise environmental design for the development.
 - Local Town Centre. An application to use, subdivide land, construct a building or construct or carry out works for a Local Town Centre must also include environmental sustainability initiatives including integrated water management and energy conservation.

6.3. Clause 37.08 Activity Centre Zone

- Schedule 1 to Clause 37.08 (ACZ1) applies to the Pakenham Major Activity Centre (C228card gazetted 30 September 2021).
 Clause 2.0 Land use and development objectives to be achieved, built form and environment includes 'ensure all development within the activity centre provides high quality innovative design consistent with the principles of environmentally sustainable design reducing climate change impacts.'

Clause 4.4 Design and development, specific to ESD are as follows:

- Building height guidelines states that buildings and works which exceed a height of 14 metres should be environmentally sustainable.
- Environmentally Sustainable Design (ESD) guidelines state that developments should incorporate best practice environmentally sustainable design (ESD), including water sensitive urban design (WSUD), thermal performance, energy efficiency, stormwater management, facilitating active transport and materials.

Clause 6.0 Application requirements include an Environmentally Sustainable Design Report which outlines the ESD initiatives included within the proposal and address the ESD provisions in sub-section 4.4 of this Schedule.

Clause 8.0 Decision guidelines, Design and built form includes whether the proposed development:

- Creates a strong visual interest by providing building types based on innovative and current day architecture, urban design and environmentally sustainable development principles.
- Provides elements of Environmentally Sustainable Design.

6.4. Clause 43.02 Design and Development Overlay

- Schedule 9 to Clause 43.02 (DD09) applies to the Koo Wee Rup Town Centre (C240card gazetted 24 February 2022). Clause 1.0 Design objectives include 'to encourage environmentally sustainable design'.

7. Precinct Structure Plans

7.1. Cardinia Road Precinct Structure Plan (September 2008)

The vision of the *Cardinia Road Precinct Structure Plan* (Cardinia Shire Council, September 2008) (CRPSP) includes a statement to 'create well designed development that embraces sustainable urban development practices such as treed roads and streets, well designed higher density housing and activity centres and provision of recycled water to each home and business'.

Objectives various sections¹² within the PSP include:

- To provide lot sizes and housing types that are responsive to the character of the natural and built environment in the area and respond to principles of environmental sustainability (Housing and Lot Size Diversity).
- To provide a sustainable transport network that reduces dependence of car use and encourages walking and cycling within neighbourhoods (Transport).
- To integrate use of all water resources including rainwater, reused water, recycled water and stormwater (Physical Services).
- To provide recycled water to be used for purposes such as toilet flushing and garden watering on individual residential properties and the watering of public open space in order to reduce the level of consumption of potable water (Physical Services).
- To ensure that if lots are not able to be serviced by a reticulated recycled water supply system, new dwellings and / or commercial buildings be provided with a rainwater tanks purposes such as toilet flushing and garden watering (Physical Services).
- To ensure that Water Sensitive Urban Design treatment measures (e.g.: wetlands) are provided in both the main and local drainage network (Physical Services).

7.2. Cardinia Road Employment Precinct Structure Plan (including the Cardinia Road Employment Precinct Native Vegetation Precinct Plan) (September 2010)

The vision of the *Cardinia Road Employment Precinct Structure Plan* (Cardinia Shire Council, September 2010) (including the *Cardinia Road Employment Precinct Native Vegetation Precinct Plan* (Cardinia Shire Council, September 2010)) (CREP) includes a statement that the precinct will reflect principles of environmental sustainability.

The 'achieve best-practice environmentally sustainable development' section includes discussion around energy and water efficient design and water sensitive urban design (WSUD).

Objectives of 'utilities, energy and sustainability' include to achieve best practice environmentally sustainable development in the planning and development of the Precinct; and promote environmentally sustainable design as a key attractor for investment in the Precinct.¹³

¹² CSC, *Cardinia Road Precinct Structure Plan (September 2008)* pg 24, 35 & 73

¹³ CSC, *Cardinia Road Employment Precinct Structure Plan (September 2010)* pg 102

Environmental Sustainable Development (ESD) Local Policy - Background Report **20 March 2023**

The following recycled and tank water supply planning and design guidelines¹⁴ must be met:

- A third pipe system for recycled water is to be provided in residential areas to be developed in consultation with South East Water.
- Rainwater tanks and systems are to be installed in accordance with the requirements of the Department of Human Services.
- Water tanks and other water sensitive urban design initiatives are to be integrated into developments and car parking areas of all non-residential areas.

Another significant ESD requirement within CREP is that all planning permit applications to subdivide land, construct a building or to construct and carry out works must be accompanied by a Sustainability Statement that demonstrates how the development meets the sustainability objectives and planning and design guidelines¹⁵ (outlined in CREP) including:

- A site analysis plan that highlights the physical attributes of the site, including solar access, prevailing winds, topography, soil conditions, vegetation and visual links
- Details of all performance standards relating to the planning and design guidelines, met by the development including the assumptions forming the basis of any calculations
- Details of environmentally sustainable design strategies, initiatives and features integrated into the development
- Plans indicating the location of environmentally sustainable design features as appropriate
- A Construction Waste Management Plan which details the facilities and methods to be adopted to minimise construction waste and enhance opportunities for recycling
- Management protocols for systems requiring ongoing maintenance and management.

CREP includes Environmentally Sustainable Design Planning and Design Guidelines, which is provided as Appendix G.

7.3. Officer Precinct Structure Plan - September 2011 (Amended November 2019)

The vision of the *Officer Precinct Structure Plan* (Victorian Planning Authority, September 2011, Amended November 2019) (OPSP) includes a statement that ‘the Precinct will embrace sustainable urban development practices such as maintaining and restoring native vegetation, providing treed road sides and landscape trails, incorporating water sensitive urban design solutions as well as the provision of recycled water to each home and business’¹⁶. The future urban structure section includes discussion around climate change, increasing environmental sustainability and energy efficiency.

Objectives within the OPSP include the ‘provision of lot sizes and housing types that are responsive to the principles of Environmentally Sustainable Design’¹⁷ (Housing) and ‘achieve best practice Environmentally Sustainable Development in the planning and development of the Precinct’¹⁸ (Utilities, Energy & Sustainability). The Environmentally Sustainable Design Planning and Design Guidelines is provided in Appendix H.

¹⁴ CSC, *Cardinia Road Employment Precinct Structure Plan (September 2010)* pg 102

¹⁵ CSC, *Cardinia Road Employment Precinct Structure Plan (September 2010)* pg 106

¹⁶ VPA, *Officer Precinct Structure Plan – September 2011 (Am Nov 2019)* pg 24

¹⁷ VPA, *Officer Precinct Structure Plan – September 2011 (Am Nov 2019)* pg 40

¹⁸ VPA, *Officer Precinct Structure Plan – September 2011 (Am Nov 2019)* pg 135

7.4. Pakenham East Precinct Structure Plan (July 2020)

Throughout the *Pakenham East Precinct Structure Plan* (Victorian Planning Authority, July 2020) (PEPSP), there are objectives (must implement outcome) and guidelines (discretion exercised) regarding ESD. There are no standalone ESD requirements (must be adhered to) in the PEPSP.

Examples of objectives¹⁹ and guidelines²⁰ (within various sections of the PSP) are as follows:

- Objective 1 Ensure subdivision design, developments and public spaces are functional, safe, aesthetically pleasing and incorporate environmentally sustainable design.
- Objective 25 Prepare for the impacts of climate change by encouraging resilient, environmentally sustainable design and development across the Precinct.
- Objective 27 Facilitate the use of renewable energy including the installation of localised systems.
- Objective 28 Deliver an integrated and resilient water management system that reduces reliance on reticulated potable water, increases the re-use of alternative water through stormwater harvesting, minimises flood risk, ensures the environmental health of waterways and bays, protects public health, delivers affordable essential water services and contributes towards a sustainable and green urban environment.
- Guideline (Housing) 23 Environmentally Sustainable Development principles should be explored and encouraged in all development, such as the inclusion of, but not limited to: material re-use and recycling, use of materials with reduced embodied energy, electrical self-generation, car charge schemes, smart grids and battery storage, use of tools such as Built Environment Sustainability Scorecard (BESS).
- Guideline (Integrated water management, utilities, energy and Sustainability) 60 Development should include integrated water management initiatives to diversify water supply, reduce reliance on potable water and increase the utilisation of storm and wastewater, contributing to a sustainable and green urban environment where practicable.
- Guideline (Energy and sustainability) 71 Development should facilitate the reduction of environmental impacts and resource use through: Public realm design and connectivity, Facilitation of alternative energy generation systems, and Access to public and integrated active transport networks.
- Principal 10 of The Local Town Centre (LTC) and Local Convenience Centre (LCC) Design Principles identifies Principal 10 is to 'Promote localisation, sustainability and adaptability'²¹. The local town centre and local convenience centre should be designed to be sympathetic to its natural surrounds by:
 - Investigating the use of energy efficient design and construction methods for all buildings
 - Implementing Water Sensitive Urban Design principles such as integrated stormwater retention and reuse (toilet flushing and landscape irrigation)
 - Promoting safe and direct accessibility and mobility within and to and from the LTC and LCC
 - Including options for shade and shelter through a combination of landscape and built form treatments

¹⁹ VPA, *Pakenham East Precinct Structure Plan (July 2020)* pg 1-2

²⁰ VPA, *Pakenham East Precinct Structure Plan (July 2020)* pg 17, 37 & 43

²¹ VPA, *Pakenham East Precinct Structure Plan (July 2020)* pg 57

Environmental Sustainable Development (ESD) Local Policy - Background Report **20 March 2023**

- Ensuring buildings are naturally ventilated to reduce the reliance on plant equipment for heating and cooling
- Promoting passive solar orientation in the configuration and distribution of built form and public spaces
- Grouping waste collection points to maximise opportunities for recycling and reuse
- Investigating other opportunities for the built form to reduce greenhouse gas emissions associated with the occupation and the ongoing use of buildings
- Encourage building design which can be adapted to accommodate a variety of uses over time
- Ensure the LTC has capacity for growth and change to enable adaption and the intensification of uses as the community grows.

8. Township Strategies

8.1. Bunyip Township Strategy (September 2009)

The strategic framework of the *Bunyip Township Strategy* (Cardinia Shire Council, September 2009) (BTS) sets out the general pattern of the use, development and subdivision of land in the township.

There are no specific comments regarding ESD, however an objective of the BTS is to provide or upgrade utility services to improve the health, amenity, access to facilities and environment of the township.

Objectives (O), actions (A) and policy statements (P) relating to the principles of ESD include:

- Progressively implement drainage measures along roads that controls stormwater, improves water quality and controls erosion/sediment²² (P).
- Improve opportunities for passive recreation including by continuing to develop a network of trails and ensure the protection and re-establishment of habitat for native flora and fauna²³ (O).
- Enhance and improve the water quality of watercourses, creeks and open drains²⁴ (O).
- Provide advice and encouragement to residents and businesses about the installation of water tanks and availability in the Shire²⁵(A).

²² CSC, *Bunyip Township Strategy* (September 2009) pg 40

²³ CSC, *Bunyip Township Strategy* (September 2009) pg 43

²⁴ CSC, *Bunyip Township Strategy* (September 2009) pg 48

²⁵ CSC, *Bunyip Township Strategy* (September 2009) pg 49

8.2. Cockatoo Township Strategy (March 2008)

The *Cockatoo Township Strategy* (Cardinia Shire Council, March 2008) (CTS) includes a style guide for the residential areas (which identifies the key preferred character outcomes for the residential areas in Cockatoo), includes the following energy efficiency elements²⁶:

- Environmental sustainability of dwellings will be maximised through onsite stormwater/roof water collection, solar orientation and wind control ventilation.
- Main living spaces will be orientated to the north for solar access.
- Deciduous trees on northern side will provide solar access in winter and shade in winter.
- Windows to the north will be maximised with sufficient overhang to control summer sun and allow winter light penetration..

8.3. Emerald District Strategy (June 2009)

A strategy within the *Emerald District Strategy* (Cardinia Shire Council, June 2009) (EDS) vision is to facilitate the incorporation of environmental sustainability principles in developments.²⁷

Neighbourhood context guidelines in the EDS includes sustainable design that is to incorporate ESD and site planning to attain at least a 6-star energy rating²⁸. This may include:

- Minimising fossil fuel energy use.
- Maximising use of natural ventilation.
- Larger wall openings/windows on the northern side where solar access is available.
- Minimise glazing or provide shading devices to east and west facades to reduce heat loss and gain.
- Use double-glazing on all windows and glazed doors to improve energy efficiency and help attenuate noise.
- Use of environmentally friendly insulation products.
- Using local and recycled materials, energy efficient and sustainable materials.
- Consideration of Water Sensitive Urban Design initiatives such as swale trenches/bio retention cells.

The environmental issues raised during consultation were augmented by a strong 'sustainability' theme which expressed a desire for community-wide improvements in energy and water use, application of sustainable building methods, water and air quality, and protection of native flora and fauna. Some expressed a concern about increased bushfire risk due to climate change.²⁹

²⁶ CSC, *Cockatoo Township Strategy (March 2008)* pg 64

²⁷ CSC, *Emerald District Strategy (June 2009)* pg 8

²⁸ CSC, *Emerald District Strategy (June 2009)* pg 21

²⁹ CSC, *Emerald District Strategy (June 2009)* pg 58

Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

The EDS acknowledges that the requirements of ESD and WSUD may see the introduction of new architectural forms in Emerald (i.e., solar panels, roof vents, rainwater tanks, shading devices). However, it is expected that these can be successfully integrated within the existing character and environment of Emerald.³⁰

8.4. Garfield Township Strategy (August 2002)

The strategic framework of the *Garfield Township Strategy* (Cardinia Shire Council, August 2002) (GTS) sets out the general pattern of the use, development and subdivision of land in the township.

There are no specific comments regarding ESD, however an objective of the GTS is to protect and enhance the natural environment.

Objectives (O) and actions (A) relating to the principles of ESD include:

- Ensure that new residential development is environmental, economically and socially sustainable³¹(O).
- Promote street and lot layout that maximises potential solar orientation of residential dwellings³²(O).
- Encourage and facilitate the provision of physical infrastructure to support the future growth of the township in an environmentally sensitive manner³³.
- Ensure that urban development is designed to protect and enhance the natural environment³⁴.
- Increase the water quality of Ti Tree Creek and the water flowing into Bunyip through the provision of wetlands and sediment control measures³⁵ (A).

8.5. Gembrook Township Strategy (June 2011)

ESD is highly regarded in the *Gembrook Township Strategy* (Cardinia Shire Council, June 2011) (GTS), and is discussed in the Strategic Objectives of the Vision, in the context of residential development (Desired future character guidelines, Themes - Sustainable design and policy), physical infrastructure (Objective), environment (Environmental sustainability and Objective), town centre design (Sustainable design).

Key statements within the document are as follows:

- Promote Gembrook as a sustainable town by encouraging environmentally sustainable principles in developments³⁶ (Objective within several sections).
- The residents of Gembrook can promote sustainable development through energy and water efficiency, reducing the adverse effect of building materials on the environment and recycling wherever possible³⁷ (Themes – Sustainable design) (see Appendix I).

³⁰ CSC, *Emerald District Strategy (June 2009)* pg 71

³¹ CSC, *Garfield Township Strategy (August 2002)* pg 18

³² CSC, *Garfield Township Strategy (August 2002)* pg 19

³³ CSC, *Garfield Township Strategy (August 2002)* pg 39

³⁴ CSC, *Garfield Township Strategy (August 2002)* pg 41

³⁵ CSC, *Garfield Township Strategy (August 2002)* pg 42

³⁶ CSC, *Gembrook Township Strategy (June 2011)* pg 12

³⁷ CSC, *Gembrook Township Strategy (June 2011)* pg 20

Environmental Sustainable Development (ESD) Local Policy - Background Report **20 March 2023**

- There is a strong push amongst many locals for the adoption of sustainable living practices as is seen in the “Promoting Sustainable Living” theme adopted by the monthly Gembrook market. Concern has been raised over how peak oil and climate change are going to impact small communities like Gembrook and therefore the importance of adopting sustainable living practices³⁸ (Environment).
- There is a strong desire in the community for Gembrook to be known as a sustainable community³⁹ (Environmental sustainability).

8.6. Koo Wee Rup Township Strategy (October 2015)

Objectives (O) and policy (P) within the *Koo Wee Rup Township Strategy* (Cardinia Shire Council, October 2015) (KWR TS) include:

- Protect and improve the natural environment and waterways around and within the township⁴⁰ (O).
- Encourage pedestrian and bicycle usage to reduce car dependency for short trips within the township⁴¹ (O).
- Provide or upgrade utility services to improve the health, environment and amenity of residents and to minimise environmental impacts⁴² (O).
- Support water conservation measures (including water tanks) in all new dwellings to reduce water use and stormwater runoff; and integrate stormwater treatment into the landscape, protect water quality of water entering Western Port and reduce the overall cost of drainage infrastructure⁴³ (A).

The environment objectives⁴⁴ are to:

- protect existing remnant indigenous vegetation, given its environmental significance
- identify and protect places of environmental value
- plan for and manage the potential impacts of climate change.

Medium to long term actions⁴⁵ of the KWR TS include:

- Encourage residential, commercial and industrial developments to utilise recycled water from grey water systems, water tanks or sustainable water sources;
- Encourage future residential, commercial and industrial developments to utilise sustainable building practices.

³⁸ CSC, *Gembrook Township Strategy (June 2011)* pg 63

³⁹ CSC, *Gembrook Township Strategy (June 2011)* pg 70

⁴⁰ CSC, *Koo Wee Rup Township Strategy (October 2015)* pg 12

⁴¹ CSC, *Koo Wee Rup Township Strategy (October 2015)* pg 49

⁴² CSC, *Koo Wee Rup Township Strategy (October 2015)* pg 54

⁴³ CSC, *Koo Wee Rup Township Strategy (October 2015)* pg 54

⁴⁴ CSC, *Koo Wee Rup Township Strategy (October 2015)* pg 62

⁴⁵ CSC, *Koo Wee Rup Township Strategy (October 2015)* pg 80

8.7. Lang Lang Township Strategy (July 2009)

The *Lang Lang Township Strategy* (Cardinia Shire Council, July 2009) (LLTS) acknowledges that ‘the various physical effects of climate change will require mitigation efforts and adaption to the effects of climate change. Climate change is complex, and it will create threats, challenges and opportunities for the community of Lang Lang⁴⁶.

The need to mitigate and adapt to climate change is identified as an objective and a policy is to ensure that land use and development fosters sustainable principles that assist in reducing greenhouse emissions.⁴⁷

Climate change and ESD principles are also discussed in the Urban Design section of the LLTS. The objectives of the Precinct design guidelines include encouraging environmentally responsive design.

Regarding ESD/WSUD initiatives⁴⁸, the LLTS states that developments shall:

- Function well when subjected to prevailing winds, seasonal variations in temperature and rainfall.
- Be designed to minimise fossil fuel energy use.
- Maximise use of natural ventilation, daylight penetration and use of solar energy.
- Use local and recycled materials, energy efficient, water saving and sustainable materials.
- Implement Water Sensitive Urban Design initiatives, considering the systems such as swale trenches / bio retention cells, retention basins, sediment traps and interceptor systems.

8.8. Upper Beaconsfield Township Strategy (July 2009)

Like the LLTS, the *Upper Beaconsfield Township Strategy* (Cardinia Shire Council, July 2009) (UBTS):

- Acknowledges the various physical effects of climate change will require mitigation efforts and adaption to the effects of climate change. Climate change is complex, and it will create threats, challenges and opportunities for the community of Upper Beaconsfield.⁴⁹
- Identifies the need to mitigate and adapt to climate change is identified as an objective and a policy is to ensure that land use and development fosters sustainable principles that assist in reducing greenhouse emissions.⁵⁰

Regarding precinct character guidelines, the UBTS includes ESD guidelines such as encourage a range of building materials, including local and recycled materials and that development incorporate environmentally sustainable design and site planning to attain a minimum 5-star energy rating.⁵¹

⁴⁶ CSC, *Lang Lang Township Strategy (July 2009)* pg 46

⁴⁷ CSC, *Lang Lang Township Strategy (July 2009)* pg 48

⁴⁸ CSC, *Lang Lang Township Strategy (July 2009)* pg 54

⁴⁹ CSC, *Upper Beaconsfield Township Strategy (July 2009)* pg 56

⁵⁰ CSC, *Upper Beaconsfield Township Strategy (July 2009)* pg 58

⁵¹ CSC, *Upper Beaconsfield Township Strategy (July 2009)* pg 17

Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

Specific ESD requirements for land located outside of the township boundary⁵² include:

- Incorporate environmental sustainable design and site planning to attain a minimum 5-star energy rating. This may include minimising fossil fuel energy use, maximising use of natural ventilation, larger wall openings/windows on the northern side where solar access is available.
- Minimise glazing or provide shading devices to east and west facades to reduce heat loss and gain.
- Use double glazing on all windows and glazed doors to improve energy efficiency and help attenuate noise.
- Use of environmentally friendly insulation products.
- Using local and recycled materials, energy efficient and sustainable materials.
- Consideration of water sensitive urban design initiatives such as swale, trenches/bio retention cells.

9. Other Planning Documents

9.1. Beaconsfield Structure Plan (December 2013)

The *Beaconsfield Structure Plan* (Cardinia Shire Council, December 2013) (BSP) states that all new residential development in Beaconsfield should incorporate ESD principles, including good solar orientation, water sensitive design, energy efficiency principles and other sustainable design features⁵³.

Other objectives (O) and strategies (S) in the BSP include:

- Make walking and cycling an attractive and convenient option for residents to move between local destinations and enjoy their town⁵⁴ (O).
- Protect and enhance the environmental and landscape values of the area⁵⁵ (O).
- Provide permeable surfaces to paved areas and implement water sensitive urban design (WSUD) principles to landscaping to minimise water usage and reduce pollutant run-off. This is particularly important given the proximity of Cardinia Creek⁵⁶ (S).

⁵² CSC, *Upper Beaconsfield Township Strategy* (July 2009) pg 24

⁵³ CSC, *Beaconsfield Structure Plan* (December 2021) pg 14

⁵⁴ CSC, *Beaconsfield Structure Plan* (December 2021) pg 19

⁵⁵ CSC, *Beaconsfield Structure Plan* (December 2021) pg 20

⁵⁶ CSC, *Beaconsfield Structure Plan* (December 2021) pg 29

9.2. Cardinia Western Port Green Wedge Management Plan (May 2017)

The *Cardinia Western Port Green Wedge Management Plan* (Cardinia Shire Council, May 2017) (GWMP) acknowledges that climate change will have a significant impact on the agriculture, environmental biodiversity, and eco systems of the Cardinia Western Port Green Wedge⁵⁷.

The GWMP states that assets developed in the green wedge should be done so with consideration of climate change impacts. Areas of flood risk and sea level rise should be avoided for development and new buildings should be well designed and protected from extreme heat which will increase with climate change.

It is noted that the climate change objective is to recognise, understand and prepare for the projected impacts of climate change and rising sea levels on the Cardinia Western Port Green Wedge. A strategy to address this objective is to develop policies to manage and adapt to the potential impacts of climate change on the Cardinia Western Port Green Wedge⁵⁸.

9.3. Pakenham Major Activity Centre Structure Plan (February 2021)

The *Pakenham Major Activity Centre Structure Plan* (Cardinia Shire Council, February 2021) (PMAC SP) acknowledges that it is essential that the activity centre reduce its environmental footprint through clever and sensitive building design, and by encouraging environmentally responsible development⁵⁹.

The PMAC SP sustainability objective is to ensure all development within the activity centre provides high quality innovative design in a manner that is consistent with and promotes the principles of environmentally sustainable design reducing the impacts of climate change.

Strategies to deliver this objective⁶⁰ are as follows:

- Ensure developments apply ESD principles including solar orientation.
- Incorporate WSUD in their design and construction.
- Encourage developments to consider sustainable transport as part of their design.
- Encourage built form to be oriented to the north to maximise energy efficiency.
- Provide appropriate canopy tree planting to minimise the heat island effect created by large surfaces such as bitumen, concrete, and paving.
- Development should provide for integrated stormwater management solutions that minimise flooding and achieves WSUD.
- Encourage applications to investigate and apply ways to capture stormwater and use it for the irrigation of landscaping in the activity centre.

⁵⁷ CSC, *Cardinia Western Port Green Wedge Management Plan (May 2017)* pg 49

⁵⁸ CSC, *Cardinia Western Port Green Wedge Management Plan (May 2017)* pg 50

⁵⁹ CSC, *Pakenham Major Activity Centre Structure Plan (February 2021)* pg 30

⁶⁰ CSC, *Pakenham Major Activity Centre Structure Plan (February 2021)* pg 30

10. Cardinia Shire Council Strategies, Plans and Policies

10.1. Sustainable Development Goals at Cardinia Shire Council

At the United Nations Sustainable Development Summit in 2015, world leaders adopted the 2030 Agenda for Sustainable Development, a set of 17 Sustainable Development Goals (SDGs) to end poverty, fight inequality and injustice, and tackle climate change by 2030.



Figure 1: United Nations Sustainable Development Goals⁶¹

Council endeavours to align its strategies, plans and policies with the Sustainable Development Goals.

As noted in Council's *Sustainable Environment Policy (2018-2028)* (Cardinia Shire Council, June 2018), which is discussed in section 11 of this report, by relating the Sustainable Development Goals to local environmental concerns, we can see how they do not sit in isolation of all of the other actions and plans of Council.

10.2. Council Plan 2021-25 and Community Vision 2040 (June 2021)

The *Council Plan 2021-25 and Community Vision 2040* (Cardinia Shire Council, June 2021) is Council's key strategic document and incorporates the long-term Community Vision 2040. Feedback and input from the community (which included extensive community engagement activities, undertaken in accordance with the relevant provisions of the *Local Government Act* (Victorian Government, 2020) and Council's *Community Engagement Policy 2021-24* (Cardinia Shire Council, February 2021) has guided the development of the Council Plan and Community Vision; identifying issues, opportunities and strategies for a shared future for Cardinia Shire.

Council's Vision 2021 – 25 is identified as:

*The unique identity of our urban, hills and rural areas is strengthened. We meet the challenges we face together as a community. How we respond balances the needs of our people, businesses, our productive land and natural environments.*⁶²

⁶¹ CSC, *Cardinia Shire's Liveability Plan 2017-209 (Reviewed November 2021)* pg 24

⁶² CSC, *Council Plan 2021-25 and Community Vision 2040 (June 2021)* pg 3

Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

The Council Plan identifies that tackling climate change and its impact on our environment, economy, and people as one of our most significant challenges and opportunities.

Climate change is one of the greatest challenges of our time. We already see its effects. There are more warm spells, frequent and intense downpours and longer fire seasons. It's impacting our biodiversity, water supplies, energy demand, and our health (particularly that of our more vulnerable community members). As outlined in our Sustainable Environment Policy 2018–28, we recognise that every action our community and Council takes influences our environment. We want to make that influence as positive as possible. How we adapt and mitigate climate change impacts will require a holistic approach, from how we drive sustainable development to how we grow our local industries.⁶³

The Council Plan is structured around 5 strategic objectives that underpin the overarching strategic direction: (1) Strong communities, (2) Liveable places, (3) Thriving environments, (4) Prosperous economies and (5) Responsible leadership. Under each strategic objective is a series of strategies, initiatives and indicators which articulate Council's commitment to creating a sustainable built environment that embeds sustainability goals across a range of Council activities.

For example, a strategy within Strategic Direction 2 – Liveable places is to 'Plan for housing diversity that meets community need, is affordable and delivers environmental sustainability, safety and healthy living outcomes'. This is reflective through an initiative to 'Work with the Victorian Government and relevant stakeholders to encourage sustainable supply of social and affordable housing across the shire.

More specifically, Strategic Direction 3 - Thriving environments⁶⁴ states the following:

Priority:

We value our natural assets and support our biodiversity to thrive We place a high value on our natural assets and biodiversity. We take action to help our natural assets and biodiversity thrive and build their resilience to climate change and natural hazards. We enhance green spaces and habitat links, support our communities to live sustainably, and champion sustainable development and waste management practices.

Strategies:

- *Partner with community, business and industry to take action on, and adapt to, climate change.*
- *Actively move towards zero waste through increasing waste recovery and reuse.*
- *Work with community to improve and manage our natural assets, biodiversity and cultural heritage.*
- *Plan and advocate for better water cycle planning and management to reduce environmental impacts.*
- *Facilitate community stewardship to build preparedness for natural threats.*

Community feedback identified six important elements: (1) improving waste management, (2) preserving natural assets (3) caring for our country, (4) recognising climate change effects, (5) being sustainable and (6) protecting community, farms, industry, landscapes and biodiversity.

⁶³ CSC, Council Plan 2021–25 and Community Vision 2040 (June 2021) pg 24

⁶⁴ CSC, Council Plan 2021–25 and Community Vision 2040 (June 2021) pg 37

Environmental Sustainable Development (ESD) Local Policy - Background Report **20 March 2023**

As identified in Figure 2: Strategic Direction 3 – Thriving environments, the development of an Environmentally Sustainable Design Policy has been identified in Year 1 (2021-22) and the incorporation of the Environmentally Sustainable Design Policy into the planning scheme has been identified in Year 2 (2022-23).⁶⁵

Initiatives

	2021-22	2022-23	2023-24	2024-25
Develop the next five-year action plan for the <i>Waste and Resource Recovery Strategy</i>	●			
Implement the five-year action plan for the <i>Waste and Resource Recovery Strategy</i>		●	●	●
Implement initiatives in the Aspirational Energy Strategy	●	●	●	●
Implement initiatives in the <i>Integrated Water Management Plan</i>	●	●	●	●
Implement initiatives in the <i>Biodiversity Conservation Strategy</i>	●	●	●	●
→ Develop an <i>Environmentally Sustainable Design Policy</i>	●			
→ Incorporate the <i>Environmentally Sustainable Design Policy</i> into the planning scheme		●		
Provide the community with tools to assist in the management of natural threats and emergencies	●	●		

Figure 2: Strategic Direction 3 - Thriving environments⁶⁶

10.3. Cardinia Shire Council Liveability Plan 2017-29 (Reviewed November 2021)

Cardinia Shire’s Liveability Plan 2017–29 (Cardinia Shire Council, reviewed November 2021) provides a framework for public health planning within the Shire and aligns with the *Cardinia Shire Community Vision 2040 and Council Plan 2021–25* (Cardinia Shire Council, June 2021). The Liveability Plan Review was informed by community feedback and through various forms of community engagement.

Climate change was considered within the Liveability Plan review in line with Council’s requirements under the *Climate Change Act* (Victorian Government, 2017). The *Victorian Public Health and Wellbeing Plan 2019-23* (Department of Health and Human Services, August 2019) also identifies ‘Tackling Climate Change and its Impacts on Health’ as a key focus area.

The Liveability Plan identifies that the natural environment, and managing the adverse impacts of climate change, is regarded as an underlying determinant of healthy and liveable neighbourhoods. All liveability domains are impacted by the adverse effect of climate change, which often exacerbates underlying community vulnerability.⁶⁷

⁶⁵ CSC, *Council Plan 2021–25 and Community Vision 2040 (June 2021)* pg 38

⁶⁶ CSC, *Council Plan 2021-25 and Community Vision 2040 (June 2021)* pg 38

⁶⁷ CSC, *Cardinia Shire’s Liveability Plan 2017–29 (Reviewed November 2021)* pg 7

Environmental Sustainable Development (ESD) Local Policy - Background Report **20 March 2023**

The strategic framework for the Liveability Plan includes 7 health and social outcome areas and 7 liveability strategic indicators. Council’s commitment to creating a sustainable built environment is embedded in the 24 objectives and 84 strategies. The Liveability Plan Framework, identifies that tackling climate change and its impact on health is considered in everything we do, see Figure 3.

Cardinia Shire’s Liveability Plan 2017–29 Framework

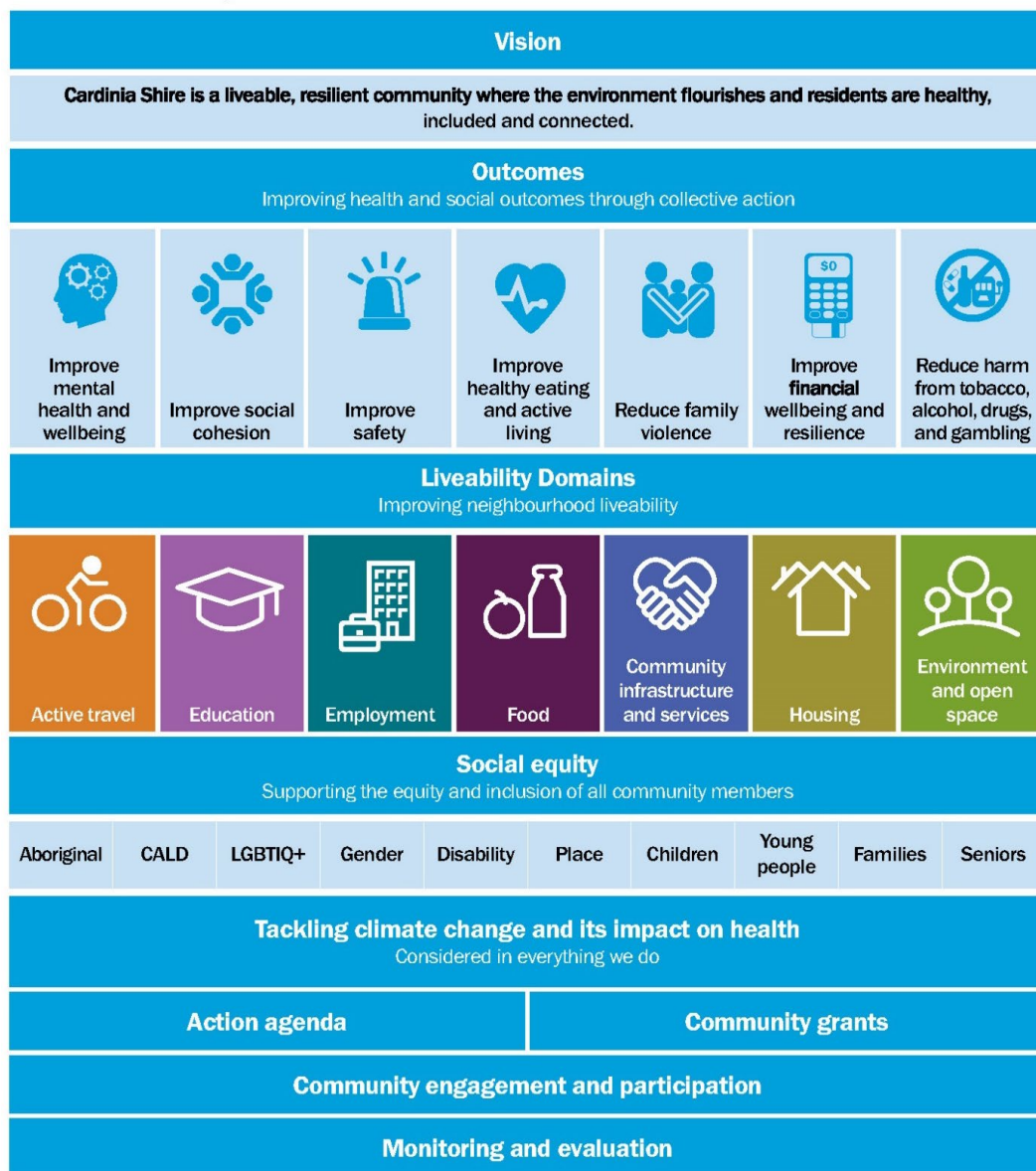


Figure 3: Cardinia Shire's Liveability Plan 2017-29 Framework⁶⁸

⁶⁸ CSC, Cardinia Shire’s Liveability Plan 2017–29 (Reviewed November 2021) pg 8

Environmental Sustainable Development (ESD) Local Policy - Background Report **20 March 2023**

Long-term outcomes⁶⁹, which includes a focus on climate change and ESD:

- Outcome 1 - Improve mental health and wellbeing acknowledges that increasing the resilience of communities to adverse climate impacts and increasing the ability to cope and adjust to future climate hazards, as well as the associated shocks and stressors of these events, is essential to managing the impacts of climate change on health.

A strategy to address this is to generate and support conversations about climate change with the community, especially with children and youth, including proactive action that can be taken to address climate change and its impacts on health.

- Outcome 2 - Improve social cohesion identifies that cohesive communities are more resilient in the face of climate change and able to respond more rapidly during emergencies.
- Outcome 3 - Improve safety states that protecting people requires reducing community exposure and sensitivity to hazards, including the adverse impacts of climate change.
- More specifically, Outcome 6 - Improve financial wellbeing and resilience identifies that from a climate change adaptation perspective, financial wellbeing and resilience begins by improving the financial security at a household level.

Objectives within Outcome 6 include: decrease the costs of living in growth areas related to liveability and increase environmentally sustainable living practices. Consistent with the Council Plan and Council Vision, the development of an Environmentally Sustainable Design (ESD) policy is listed as a strategy.

Liveability Plan Survey

Council conducts a Liveability Plan Survey every three years to capture data that is used to inform the Liveability Plan review and other key strategies and services across Council. The 2021 Liveability Survey was conducted in November - December 2021. The survey was an online and paper proportional random sample of 772 households across the municipality.

The survey included a question regarding extreme weather⁷⁰. The extreme weather questions help Council understand the preparedness of our community for the impacts of climate change, and what Council can do to help.

The results indicate that the community perceives the main opportunities for Council to address extreme weather occur through:

- Community support – especially for vulnerable community members, including advising the community when extreme weather is on the way.
- Management of open space – by planting trees, vegetation maintenance, planting natives and more green spaces.
- Strategic Planning – Requiring new developments to have green spaces and meet best practice sustainability (such as energy and water efficiency, indoor environmental quality, stormwater management, sustainable transport, waste management and urban ecology).

⁶⁹ CSC, *Cardinia Shire's Liveability Plan 2017–29 (Reviewed November 2021)* pg 9 - 21

⁷⁰ CSC, *Liveability Plan Survey - Extreme Weather Snapshot (Nov-Dec 2021)*

Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

The ‘How Council can help prepare?’ question generated responses that easily relate to elements that would be addressed in an Environmental Sustainable Development (ESD) policy, such as: encourage new developments to have best practice environmental sustainability, plant more trees to reduce heat island effect, require buildings to use better building materials and encourage permeable driveways (see Appendix J).

10.4. Sustainable Environment Policy 2018-2028 (June 2018)

The *Sustainable Environment Policy 2018-2028* (Cardinia Shire Council, June 2018) (SEP) sets the direction for Council to create a more environmentally sustainable community and is the roadmap for the future direction of Council’s environmental and sustainability strategies, plans and activities.

There is a shift of focus from stand-alone environmental policies to create a more inclusive, economically successful, and environmentally sustainable community. The environmental issues of biodiversity, climate change, waste and water sit under the SEP, followed by the strategies that support the environmental issue.

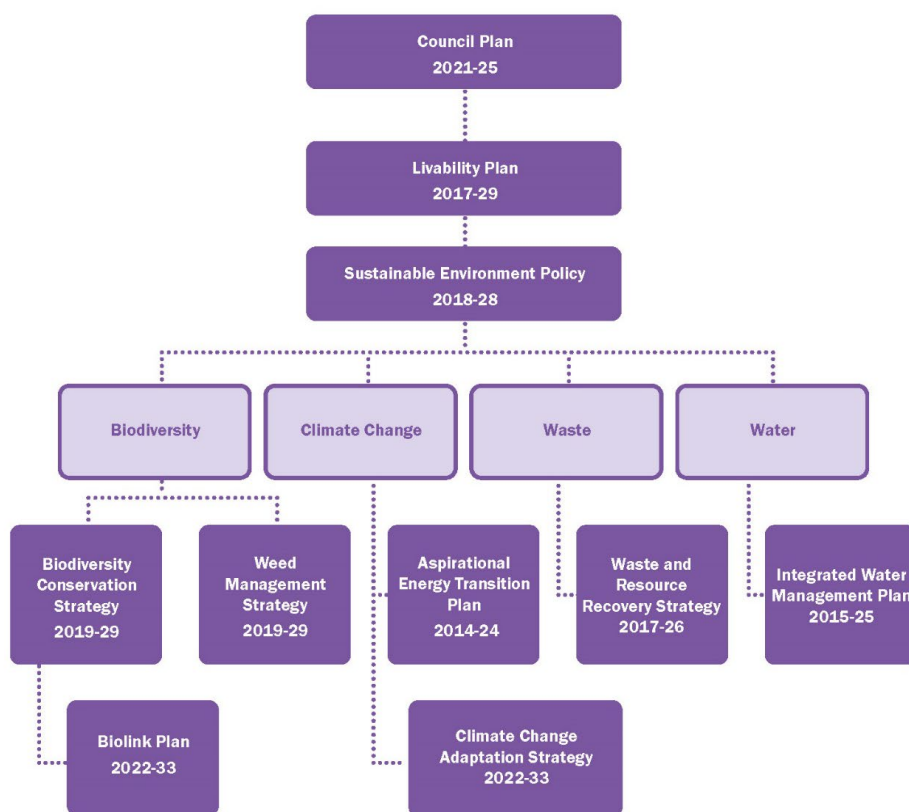


Figure 4: Sustainable Environment Policy Framework⁷¹

⁷¹ CSC, *Climate Change Adaption Strategy 2022–33* (August 2022) pg 15

Environmental Sustainable Development (ESD) Local Policy - Background Report **20 March 2023**

The SEP:

- Describes how the interactions between environmental issues of biodiversity, climate change, waste and water impact, and are impacted by, all facets of Council plans, policies and actions.
- Addresses the Sustainable Development Goals (SDGs) (discussed in Section B) and how the SDGs relate to the daily work of Council. Examples of Cardinia policies and activities (as at June 2018) that support the SDGs are listed in this policy.

10.5. Aspirational Energy Transition Plan 2014–24 (October 2014)

The *Aspirational Energy Transition Plan 2014-24* (Cardinia Shire Council, October 2014) (AETP) investigates the dual challenges of climate change and energy security and sets aspirational targets of achieving zero net emissions for its operations and a 36 per cent reduction in community emissions on a per capita basis by 2024.

Some major actions⁷² include the following:

- Environmental upgrades of Council facilities and improving energy efficiency of decorative street lighting throughout the Shire.
- Installing solar electricity systems for Council facilities and purchasing grid-supplied renewable energy.
- Initiatives to support solar electricity systems and energy efficiency for the community.

Improving energy efficiency and promoting fuel switching, are key measures in the AETP that lead towards limiting the impacts of climate change and improving energy security for the wider community.

This policy includes a review of Council's Sustainable Development and Greenhouse Reduction Strategy (Cardinia Shire Council, 2006) which identified that Council had achieved significant progress on achieving the actions within the Strategy⁷³. The AETP documents Council's Emissions Action Plan which proposes emission reduction actions/targets for Council to implement over the next 10 years.

By 2024 Council's aspirational target is to be certified carbon neutral under the Australian Government's National Carbon Offset Standard (NCOS) or similar standard. NCOS provides a process for official carbon neutral certification.⁷⁴

Information is provided about the Sustainable Design Assessment in the Planning Process (SDAPP) (which is discussed in Section B).

The policy states that "Cardinia will follow this process closely and either apply for a local planning policy amendment to formalise SDAPP in the Shire, or follow a revised state planning framework that allows for it"⁷⁵ and:

- Once a policy framework is established to support SDAPP, Council will employ a Sustainable Design Officer and commence the SDAPP process (2015–16).
- The policy cannot commence without the employment of an appropriately trained and skilled officer to deliver it.

⁷² CSC, *Aspirational Energy Transition Plan 2014-24 (October 2014)* pg 5

⁷³ CSC, *Aspirational Energy Transition Plan 2014-24 (Oct 2014)* pg 13

⁷⁴ CSC, *Aspirational Energy Transition Plan 2014-24 (Oct 2014)* pg 32

⁷⁵ CSC, *Aspirational Energy Transition Plan 2014-24 (Oct 2014)* pg 43

Environmental Sustainable Development (ESD) Local Policy - Background Report **20 March 2023**

- Council will set an appropriate threshold for sustainable design assessment requirements that are within its capacity.
- It is anticipated that SDAPP is capable of reducing Cardinia's CO₂e emissions by at least 22,000 tonnes per annum.

Council's position regarding SDAPP was reflected in the action plans of this policy.

10.6. Climate Change Adaptation Strategy 2022 – 33 (August 2022)

The *Climate Change Adaptation Strategy 2022 – 33* (Cardinia Shire Council, August 2022) (CCAS) outlines how Cardinia Shire Council will work towards increasing the climate resilience and adaptive capacity across the shire.

The four overarching themes of this strategy include:

- Plan for and manage the risks of climate change and the associated extreme weather events.
- Seek opportunities for partnerships and collaboration with stakeholders and the community that support climate change adaptation.
- Use the natural environment to build our adaptive capacity.
- Encourage future proofing design – foster places capable of adapting to change and responding to current and future risks.

The CCAS and the linked 10-year Action Plan focusses on addressing the most urgent climate change risks to council's business continuity and the Cardinia Shire community.⁷⁶

The objectives for the strategy⁷⁷ are to support the community and Council to become more resilient to the localised impacts of climate change by addressing the identified priority risks over the next 10 years.

- Objective 1: Communicating the key local impacts of climate change and how this will affect the economic, social, and environmental sustainability.
- Objective 2: Mainstreaming climate risk considerations and adaptation actions in the Council policies, programs, and service delivery.
- Objective 3: Identifying action pathways for Council, the community, businesses, environmental groups, private landowners and other stakeholders to increase the adaptive capacity and foster timely opportunities to strengthen climate change resilience across the shire.

The CCAS acknowledges that a local ESD Policy (for Cardinia Shire) and the incorporation of the ESD policy into the planning scheme will increase the standard and performance requirements for new buildings in the Shire, and subsequently:

- raise the capability of a building to withstand harsher future weather conditions, deliver health benefits, slashes energy bills, as well as making homes and offices more comfortable
- ensure an improved level of internal thermal comfort for occupants, reduced operational costs and the increased uptake of renewable energy through the integration of solar photovoltaic and battery technology

⁷⁶ CSC, *Climate Change Adaption Strategy 2022–33 (Aug 2022)* pg 4

⁷⁷ CSC, *Climate Change Adaption Strategy 2022–33 (Aug 2022)* pg 5

Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

- increase the capability of buildings to provide adequate protection for inhabitants from the physical impacts of climate change.

The climate change impacts and risks (CCIR) assessment used to determine how projected climate change would impact the community as well as Council's assets, and service delivery identified that:

Cardinia Shire can expect increasingly hotter and drier conditions, less frequent but more intense storm and rainfall events as well as a decreased average rainfall with more severe, prolonged drought conditions.⁷⁸

The CCIR assessment identified a total of 51 discrete risks linked to climate change across Cardinia Shire. Of these 51 risks, 7 risks have been identified as a priority for immediate action in the next 10-years. A costed 10-year action plan has been developed, with adaptation actions or initiatives to treat each of the 7 highly rated risks (2030 risk rating).

The Action Plan includes the provision of a new and ongoing role (2023-24 onwards) for a Climate Resilience Officer role.

10.7. Integrated Water Management Plan 2015–25 (December 2015)

The *Integrated Water Management Plan 2015-25* (Cardinia Shire Council, December 2015) (IWMP) is a framework that guides Council towards a more sustainable approach to water management establishing aspirations, targets and actions for each aspect of the water cycle: stormwater, potable water, alternative water sources, groundwater, wastewater and waterways.

The IWMP reframes Council's approach to water management within the context of a water cycle that considers the role, benefits, issues and relationships between each element of the water cycle.

Table 3: Integrated Water Management Plan Aspirations Summary

Water element	Aspirations
Stormwater quantity, quality and water sensitive urban design (WSUD)	To achieve best practice in the adoption and implementation of WSUD
Potable water consumption	Use water efficiently within Council buildings, recreational facilities and open spaces
Alternative water sources	To identify and facilitate the development of feasible alternative water supply schemes
Groundwater	Influence the overall water cycle to preserve groundwater resources
Wastewater	To reduce the impact of wastewater on the shire's waterways
Waterways	To create 'green pathways' i.e., open space networks linking waterways, open spaces and the community to Westernport Bay

⁷⁸ CSC, *Climate Change Adaption Strategy 2022–33* (Aug 2022) pg 16

Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

Some of the targets⁷⁹ include:

Council:

- To build the capacity within Council to implement and maintain WSUD assets to achieve BPEM targets for new developments.
- To stabilise its potable water consumption at 1.5% of shire per capita water consumption.

Community:

- To educate and inform the community on the benefits of WSUD assets in their local area and where possible, engage them in the creation of small scale WSUD initiatives.
- To support Victorian Government and water authority programs to reduce residential water consumption.

10.8. Waste and Resource Recovery Strategy 2017 -26 (December 2017)

The *Waste and Resource Recovery Strategy 2017 -26* (Cardinia Shire Council, December 2017) (WRRS) is a roadmap for the future direction and actions of Council's waste and resource recovery services, waste-related education, policy and advocacy activities.

In expanding the term 'waste' to 'waste and resource recovery', Council is intending to consider not just how to dispose of collected material, but the modern and more sustainable approach of reuse, recycling and recovery of energy or other resources from what was once considered 'waste'⁸⁰.

The policy outlines a variety of actions to reduce waste, with specific attention given to the appropriate consideration of waste provision in developments including increased higher density development, infill development and supporting the local community to be responsible and accountable for their waste generation and disposal practices.

Vision:

Waste and resource recovery services will be appropriate, provide value for money, and produce improved environmental benefits and amenity for our community. Council will collaborate with others in the region to advocate for and facilitate improved services and outcomes for our diverse and distinctive shire⁸¹.

10.9. Biodiversity Conservation Strategy 2019 -29 (June 2019)

The *Biodiversity Conservation Strategy 2019 -29* (Cardinia Shire Council, June 2019) (BCS) provides a strategic and planned approach to sustainably manage Cardinia Shire's natural environment so that it is resilient, healthy and valued by the community. The strategy identifies goals and objectives to address threats to our natural environment and meet our legislative obligations to protect native flora and fauna.

Vision:

Cardinia Shire's natural environment is protected, valued and enhanced in partnership with the community to improve our quality of life.⁸²

⁷⁹ CSC, *Aspirational Energy Transition Plan 2014-24 (Oct 2014)* pg 59

⁸⁰ CSC, *Waste and resource recovery strategy 2017-26 (Dec 2017)* pg 3

⁸¹ CSC, *Waste and Resource Recovery Strategy 2017-26 (Dec 2017)* pg 9

⁸² CSC, *Biodiversity Conservation Strategy 2019-29 (June 2019)* pg 6

Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

The BCS reaffirms that climate change is predicted to be one of the greatest long-term threats to biodiversity and the uncertainty it brings will need to be considered in all biodiversity conservation decisions.

Four key priorities⁸³ are:

- Enhancing our understanding of the likely responses of biodiversity to climate change and readjusting management programs where necessary.
- Protecting a range of habitats and ecosystems.
- Increasing opportunities for species to move across the landscape by working with partners and the community to protect habitat and create the necessary connections across landscapes.
- Assessing adaptation options and supporting the resilience of climate-threatened ecosystems and species.

10.10. Council Enhanced Standard – Sustainable Buildings 2020–26 (April 2020)

The *Enhanced Standard – Sustainable Buildings 2020-26* (Cardinia Shire Council, April 2020) (ESSB) provides additional detail required to ensure the continued achievement of the objectives of Council policies such as the *Sustainable Environment Policy 2018-28* (Cardinia Shire Council, June 2018), the *Aspirational Energy Transition Plan 2014-24* (Cardinia Shire Council, October 2014) and the *Integrated Water Management Plan 2015-25* (Cardinia Shire Council, October 2014).

The policy reaffirms Council's commitment as an ESD advocate and ensures that Council will meet its ESD aspirations for the buildings it owns and manages, which will have flow on effects by reducing costs and reducing environmental impacts while improving the health and wellbeing of the community.

The enhanced standard outlines roles and responsibilities in relation to three key areas, including:

- Environmentally Sustainable Design of Council's new buildings and major refurbishments.
- Environmental upgrades of Council's existing buildings.
- Sustainable operation of Council's existing buildings.

ESD assessment tools for new buildings and major refurbishments include:

- Green Star (Green Building Council of Australia) – For example, Council will achieve a minimum 4-star design (Best Practice) for any building that is over 1000m² and of high use, 5-star design (Australian Excellence) for any building that is over 3000m² and of high use. This is consistent with the 5-star rating that was achieved for the Council's civic centre in Officer that was constructed in 2014.
- South East Council's Climate Change Alliance (SECCCA) ESD Matrix for Council buildings. The matrix (which was initially created by Cardinia Shire) takes specific characteristics about a planned building and develops tailored ESD requirements.

The ESSB acknowledges that Council intends to join CASBE and subscribe to BESS. Once this has been achieved, all new Council buildings will need to also complete a BESS assessment and exceed a pass result.⁸⁴

⁸³ CSC, *Biodiversity Conservation Strategy 2019-29* (June 2019) pg 15

⁸⁴ CSC, *Council Enhanced Standard – Sustainable buildings 2020–26* (April 2020) pg 7

Environmental Sustainable Development (ESD) Local Policy - Background Report **20 March 2023**

Importantly, the ESSB provides an assessment of upfront costs of sustainable design requirements to ensure these are factored into future budget allocations. For example, around 6% to 9% should be allocated to the cost of an Intermediate Built Form up to 1500 m² (e.g., Large Pavilions, Children's Services, Maternal Child Health, Youth Centres) to accommodate ESD design and construction costs.⁸⁵

10.11. Crime Prevention Through Environmental Design (CPTED) Policy (June 2022)

The *Crime Prevention Through Environmental Design Policy* (Cardinia Shire Council, June 2022) (CPTED Policy) applies to Cardinia shire employees and officials, and any other persons undertaking planning, design, capital works or maintenance on behalf of Council.

CPTED is the process for analysing and assessing crime and security risks to guide development, urban design, site management and the use of the built environment in order to prevent and reduce crime and the fear of crime, and to promote and improve public health, quality of life and sustainability⁸⁶.

The responsibility of this policy sits across all departments within Council and can be applied to everyday activities for significant community benefit.

CPTED is based on the following principles:

- Surveillance
- Access control
- Target hardening
- Territorial reinforcement
- Management & Maintenance

CPTED principles must be balanced against other design objectives, which includes Council policies such as the *Enhanced Standard – Sustainable Buildings 2020-26* (Cardinia Shire Council, April 2020), the *Sustainable Environment Policy 2018-28* (Cardinia Shire Council, June 2018) and the series of other documents discussed in this Background Report.

Some elements discussed in the CPTED policy that align with the ESD principles include:

- Lighting. The use of motion sensors where appropriate to switch lighting on or off as well low energy consumption lights, fittings, and switches to lower reliance on maintenance procedures.
- Barriers and fencing. If noise is a concern along a building's frontage, installing double-glazing is preferred rather than a solid fence.
- Landscaping. Consider the screening of blank walls with wall hugging vegetation (vertical gardens or green screens) and avoid vegetation that intrudes on the effectiveness of lighting.
- Movement network. Permeable street networks encourage people to walk; consequentially activating these pedestrian spaces, while attractive and well-maintained pedestrian spaces promote perceptions of safety. Creating continuous and direct pedestrian and bike paths ensures connection to our wider travel networks such as bus terminals and train stations.

⁸⁵ CSC, *Council Enhanced Standard – Sustainable buildings 2020-26* (April 2020) pg 9

⁸⁶ CSC, *Crime Prevention Through Environmental Design Policy* (June 2022) pg 10

B. IMPLEMENTATION TOOLS

11. Council Alliance for a Sustainable Built Environment (CASBE)

The Council Alliance for a Sustainable Built Environment (CASBE) was formed in 2009 to lead and represent a group of Councils seeking planning policy reform to improve sustainability outcomes in the built environment. The purpose of CASBE is to 'lead and facilitate transition to sustainable and regenerative urban environments through collaborative local government led action'⁸⁷.

In 2021 Council became a member of the Council Alliance for a Sustainable Built Environment (CASBE). At its inception, CASBE membership was nine Council and the current membership of CASBE (as of August 2022) is 41, which a mix of both metropolitan, growth area as well as rural and regional councils.

This report focusses on the work of CASBE councils in relation to the local Environmentally Sustainable Development (ESD) Planning Policies inserted into planning schemes implemented through the Sustainable Design Assessment in the Planning Process (SDAPP) Framework.

12. Local ESD Planning Policy

The CASBE developed Local ESD Planning Policy (ESD Policy) template includes the Sustainable Design Assessment in the Planning Process (SDAPP) Framework. This framework provides a streamlined and consistent methodology for requesting, receiving and assessing built environment sustainability outcomes through the planning process.

The ESD Policy represent a flexible and efficient method of addressing sustainability issues, however it is important to note that the requirements of the ESD policies vary across the 24 Victorian Councils, based on the size of the development in question. This is discussed in further detail in Section C of this report.

ESD Policy Objectives⁸⁸

- The overarching objective is that development should achieve best practice in environmentally sustainable development from the design stage through to construction and operation.
- In the context of this policy best practice ESD is defined as a combination of commercially proven techniques, methodologies and systems, appropriate to the scale of development and site-specific opportunities and constraints, which are demonstrated and locally available and have already led to optimum ESD outcomes. Best practice in the built environment encompasses the full life of the build.
- It is a policy to encourage innovative technology, design and processes in all development, which positively influence the sustainability of buildings.

Twenty-four Victorian Councils have already gone through the process of incorporating the local planning policy template into the planning scheme, with 3 other Victorian Councils with active planning scheme amendments. On this basis it is considered that the Victorian development community are aware of the policy.

⁸⁷ <https://www.casbe.org.au/who-we-are/our-purpose/>

⁸⁸ CASBE, ESD Policy, Information Sheet, Version 2 April 2019

12.1. Sustainable Design Assessment in the Planning Process (SDAPP) Framework

The SDAPP Framework:⁸⁹

- Recognises the role of local governments as a statutory authority for planning matters.
- Provides a framework for consideration of sustainable design elements of planning applications.
- Offers a consistent method for identifying opportunities for improved environmental building performance.
- Ensures that sustainability is considered at the very early design phase. This is the best time to maximise opportunities for good orientation and other initiatives that create liveable, comfortable, efficient buildings.

The SDAPP Framework comprises:

- Policy objectives – as articulated in local ESD Planning Policies and more broadly in the Victorian Planning Policy Framework.
- Best Practice Standards – which outline the minimum expectations to meet the policy objectives (articulated in the Sustainable Design Fact Sheets and BESS)
- SDAPP supporting documents and tools including the Sustainable Design Fact Sheets and the Built Environment Sustainability Scorecard (BESS).

Thresholds

The SDAPP framework includes detail regarding application requirements. The scale of a project will ultimately influence the level of information and the types of sustainability initiatives that must accompany an application.

Across the 24 local ESD planning policies which currently exist in Victorian Planning Schemes, there are a variety of thresholds for the level of development which these policies apply to. As part of the strategic assessment of the amendment, each local government determines thresholds relevant to their local development profile.

To ensure consistency, the thresholds (for the different sized projects) across all local policies are categorised into two assessment methodologies; Sustainable Design Assessment (SDA) and Sustainability Management Plan (SMP). There is a level of consistency in the tools that may be used to assess how the proposed development addresses the objectives of the ESD policy.

⁸⁹ <https://www.casbe.org.au/what-we-do/sustainability-in-planning/>

Table 4: Sustainable Design Assessment (SDA) and Sustainability Management Plan (SMP) used in SDAPP Assessments⁹⁰

Sustainable Design Assessment (SDA)	Sustainability Management Plan (SMP)
Is a simple report for (small to) medium scale developments.	A detailed report for larger scale developments, allowing greater opportunity for increased environmental benefits.
BESS Assessment provides the majority of content required and may be prepared by applicants.	Demonstrates that a holistic ESD review has been undertaken during a project's early design stage.
Demonstrates how the proposed development responds to the sustainable design criteria.	Sets ESD performance targets and provides evidence how targets will be met.
Ensures all ESD initiatives are clearly annotated on architectural drawings/plans.	Usually requires engagement of ESD/Sustainability Consultant.

12.1.1. Sustainable Design Fact Sheets (CASBE)

[The Sustainable Design Fact Sheets](#)⁹¹ (which cover 10 key sustainable building categories) are a series of information sheets aimed at the development industry. Each sheet includes the Best Practice standards for each Sustainable Building Category, and suggested design strategies to meet the particular standard. The suite of Fact Sheets (June 2022) and summarised as follows:

Introduction to the SDAPP Framework – explains what this means for applicants and what resources and assistance are available.

- **1.0 Indoor Environment Quality** - recommends ways to improve indoor environment qualities through informed building design and product and materials choices.
 - **1.1 Daylight** - highlights the importance of internal daylight and how to make the right design decisions to optimise daylight performance.
 - **1.2 Natural Ventilation** – outlines the importance of natural ventilation and how to make the right design decisions to optimise opportunities for natural ventilation.
- **2.0 Energy Efficiency** - explains how energy efficient design and specification principles can be incorporated into a building project and the benefits that can be shared not be individuals and all Victorians.
 - **2.1 External Shading** - explains the different types of sun shading and the impact it will have on the indoor environment quality and energy demand of a building.
 - **2.2 Building Envelope Performance** - explains why it is so important to understand these attributes and how they influence a building's architectural appearance, environmental performance and occupancy amenity.
 - **2.3 Zero Carbon Development** – explains what is zero carbon development and how do I make my project zero carbon?

⁹⁰ CASBE, SDAPP Information Sheet, Version 2. April 2019

⁹¹ <https://www.casbe.org.au/what-we-do/sustainability-in-planning/>

Environmental Sustainable Development (ESD) Local Policy - Background Report **20 March 2023**

- **3.0 Water Efficiency** - explains what you can do to conserve water resources by using it more efficiently and in certain circumstances substituting drinking water with other sources of recycled water such as rainwater.
- **4.0 Stormwater Management** - assists in making informed decisions about Stormwater Management practices to minimise negative impacts on the environment.
- **4.1 Site Permeability** - permeable design solutions to help prevent stormwater run-off, which in turn has capacity implications for drainage infrastructure and the water quality of Melbourne's rivers, creeks and ultimately Port Phillip Bay.
- **5.0 Building Materials** – assists in making informed decisions about the materials of a project to help minimise their impact on the environment.
- **6.0 Transport** - outlines ways in which our reliance on cars can be reduced and how alternative forms of transport should be incorporated into the building design.
 - **6.1 Electric Vehicles** - outlines ways in which electrical vehicle infrastructure should be incorporated into your building design.
- **7.0 Waste Management** - explains how simple design decisions can influence the amount of construction waste being produced and operational waste streams being separated.
- **8.0 Urban Ecology** - explain ways to improve our urban ecosystem through the incorporation of vegetation through landscaping for both new and existing developments.
 - **8.1 Green Roof Wall Facade** - provides information about green roofs, walls and facades that can be designed to cool a building, help reduce stormwater runoff, increase biodiversity and provide more greenery.
- **9.0 Innovation** - aims to explore the notion of innovation with respect to the design of both our residential and commercial buildings.
 - **9.1 Melbourne Climate** - examines Melbourne's climate and the impact it has on the design and construction of residential and commercial buildings.
- **10.0 Construction & Building Management** - assists in making informed decisions about Construction and Building Management to help minimise building's impact on the environment.
- **ESD Tools** - What are ESD Tools? Why use them? Which tool for SDAPP? (see section below).

The Fact Sheets are a series of information sheets aimed at developers and the general community on how to design and build more sustainably.

A summary of the Fact Sheets is provided in Appendix X⁹². The summary includes the Sustainable Building Category, Information within each fact sheet, the listed Mandatory Requirements, Council's Best Practice Standards / Council's Design Advice.

As a member of CASBE, Council can brand and use these Fact Sheets free of charge, subject to signing the licensing agreement. The Fact Sheet templates for the SDAPP Framework are provided in the Implementation Plan.

⁹² Information is at December 2022 (the version is specified). The Fact Sheets are updated by CASBE from time to time.

12.2. ESD Assessment Tools

The Built Environment Sustainability Scorecard (BESS) is the recommended sustainability assessment tool under the SDAPP Framework. BESS is a subscribed on-line platform, developed by CASBE (with the support of the Victorian Government) and is owned by the Municipal Association of Victoria (MAV). Council is a subscribed member of BESS.

As Council is a subscribed member, all applicants within the Shire of Cardinia have free access to this online assessment tool.

While the BESS is the recommended tool for the SDAPP Framework, other 'best practice' design rating tools include:

- Sustainable Tools for Environmental Performance Strategy (STEPS) and Sustainable Design Scorecard (SDS) - these two tools have been recently integrated into BESS.
- Green Star - provides benchmarks and scores a development in terms of a particular star rating: 4 Star Green Star 'Australian Best Practice', 5 Star Green Star 'Australian Excellence' or 6 Star Green Star 'World Leadership'. This tool is adopted and endorsed by CASBE.
- NatHERS (Nationwide House Energy Rating Scheme) tools including Firstrate, Accurate and Building Energy Ratings Scheme (BERS) - provides a framework that allows various computer software tools to rate the potential energy efficiency of Australian homes.
- NABERS (National Australian Built Environment Rating Scheme) - rates a building on the basis of its measured operational impacts on the environment and can be used to inform projects during the design phase in order to establish benchmarks and likely outcomes.
- Stormwater Treatment Objective Relative Measure (STORM) - measures elements of a development that affect or treat stormwater, is a simple interface and considered to be perfect for smaller developments of 10 dwellings or less.
- Model for Urban Stormwater Improvement Conceptualisation (MUSIC) - models stormwater treatment elements and designed to simulate more complex urban stormwater systems.

The 'best practice' categories that are measured in each of the ESD tools is summarised in the Figure 6.

Environmental Sustainable Development (ESD) Local Policy - Background Report **20 March 2023**

	Indoor Environmental Quality	Energy	Water	Stormwater	Materials	Transport	Waste	Ecology	Innovation	Management	Emissions
NatHERS		✓									
NABERS	✓	✓	✓				✓				
BESS	✓	✓	✓	✓		✓	✓	✓	✓	✓	
STORM				✓							
MUSIC				✓							
Green Star	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓

Figure 5: What do the ESD Tools Cover?⁹³

13. Other Local ESD Policies

Several Victorian local governments have addressed sustainable design assessment through the Local Planning Policy Framework (LPPF). A range of policy thresholds have been adopted by different municipalities and several policies have been extensively tested through Panel Hearings and have been supported.

On 19 November 2015, six Victorian Councils had their local ESD planning policies gazetted. The amendments are as follows:

Banyule City Council - Planning Scheme Amendment C73bany (#1)

Moreland (Merri-bek)⁹⁴ City Council - Planning Scheme Amendment C71more (Merri-bek Planning Scheme) (#2)

City of Port Phillip - Planning Scheme Amendment C97port (#3)

City of Stonnington – Planning Scheme Amendment C177ston (#4)

City of Whitehorse - Planning Scheme Amendment C130whit (#5)

City of Yarra - Planning Scheme Amendment C133yarr (#6)

A joint Planning Panel and Advisory Committee was established for the consideration of submission to the amendments. The Environmentally Efficient Design Advisory Committee (the Committee) was appointed by the Minister for Planning on 15 June 2013 with the purpose of providing “advice to the Minister for Planning on the applicability and suitability of including environmental sustainability requirements in planning schemes generally” as proposed in the six policies.

⁹³ CASBE, SDAPP Sustainable Design Assessment in the Planning Process, 10 Key Sustainable Building Categories, ESD Tools, Building design for a sustainable future, June 2022

⁹⁴ Moreland City Council become Merri-bek City Council on 26 September 2022 (the name was officially approved and published in the Government Gazette).

Environmental Sustainable Development (ESD) Local Policy - Background Report **20 March 2023**

Some of the key findings of the Committee include:

- There is a strong legislative and policy framework that supports the need for sustainable development, and which recognises that both planning and building have a significant role to play in achieving it.⁹⁵
- The role of planning in achieving sustainability is limited by the fact that it can only influence development that requires a planning permit.⁹⁶
- There are clear positive economic, social and environmental benefits to be gained through improved sustainable development outcomes in planning.⁹⁷

Following on from the gazettal of the six planning scheme amendments, several other councils had a local ESD planning policy gazetted (some of which were a 'GC' amendment, which is an amendment to more than one planning scheme), including:

- City of Monash - Planning Scheme Amendment C113mona (gazetted 29 September 2016) (#7)
- City of Darebin and Manningham City - Planning Scheme Amendment GC42 (gazetted 31 August 2017) (#8 & #9)
- Knox City - Planning Scheme Amendment C150knox (gazetted 14 December 2017) (#10)
- Brimbank City Council, City of Greater Bendigo, City of Greater Dandenong, Hobsons Bay City Council, City of Kingston, City of Whittlesea, City of Wyndham – Planning Scheme Amendment GC110 (gazetted 18 October 2018) (#11 to #17)
- City of Greater Geelong – Planning Scheme Amendment C388ggee (gazetted 17 October 2019) (#18)
- City of Moonee Valley – Planning Scheme Amendment C193moon (gazetted 19 June 2020) (#19)
- City of Hume – Planning Scheme Amendment C251hume (gazetted 11 November 2021) (#20)
- Hepburn Shire Council – Planning Scheme Amendment C80hepb (gazetted 10 Feb 2022) (#21)
- Maroondah City Council – Planning Scheme Amendment C137maro (gazetted 7 April 2022) (#22)
- Frankston City Council – Planning Scheme Amendment C138fran (gazetted 26 May 2022) (#23)
- Shire of Yarra Ranges (Planning Scheme Amendment C148yran gazetted 1 December 2022) (#24)

ESD local policy planning scheme amendment as pending for:

- Shire of Mornington Peninsula (Planning Scheme Amendment C232morn)
- Bayside Council (Planning Scheme Amendment C187bays)
- Casey Council (Planning Scheme Amendment C284case)⁹⁸

⁹⁵ PPV, *Environmentally Efficient Design Local Policies, Advisory Committee and Panel Report, 7 April 2014 pg 30*

⁹⁶ PPV, *Environmentally Efficient Design Local Policies, Advisory Committee and Panel Report, 7 April 2014 pg 51*

⁹⁷ PPV, *Environmentally Efficient Design Local Policies, Advisory Committee and Panel Report, 7 April 2014 pg 68*

⁹⁸ In November 2022, the City of Casey submitted Planning Scheme Amendment C284case to DELWP for Authorisation to prepare and exhibit. The amendment includes updates to the planning scheme to reflect recently adopted Council strategies, which includes the introduction of a local ESD Policy.

13.1. Neighbouring Councils

Cardinia Shire Council is surrounded by the metropolitan councils of the Shire of Yarra Ranges and the City of Casey to the north and east, and the Regional Gippsland councils of the Shire of Baw Baw, South Gippsland Shire and Bass Coast Shire.

As outline in Section 13. Other Local ESD Policies, an ESD local policy has recently been gazetted in the Yarra Ranges Planning Scheme and a planning scheme amendment to include an ESD local policy in the Casey Planning Scheme is pending.

Baw Baw Shire

At this stage, there is no direct action for Baw Baw Council to pursue and ESD local policy.

In September 2022, Baw Baw Shire Council adopted the *Environmental Sustainability Strategy 2022-2030* (Baw Baw Shire Council, September 2022) which outlines four goals:

- To reduce energy use and emissions.
- To create sustainable and resilient communities.
- To protect the natural environment.
- To shift towards a more circular economy.

Each goal includes strategic initiatives which are the key deliverables that will guide Council to achieve each goal. A strategic initiative (2022-2026) for 'create sustainable and resilient communities' is to 'Investigate the feasibility of a Sustainable Subdivisions Framework for Baw Baw Shire and look to trial its implementation'.

Baw Baw Council are currently investigating net zero carbon, ESD for land development and built form as well as trialling ESD information in the development of a township structure plan. This investigative work may may lead to the development of a local ESD policy for the Baw Baw Planning Scheme.

Bass Coast and South Gippsland Shire

Bass Coast and South Gippsland Shire currently do not have any Council actions to pursue a local ESD policy into their Planning Scheme, nor is it listed in its 'further strategic work'.

13.2. Local ESD Policy Planning Scheme Amendments

The *Planning and Environment Act 1987 (Vic)* (The Act) governs the planning scheme amendment process. Under the provisions of the Act, a planning authority must give notice that it has prepared an amendment unless it has been exempted from this requirement.

Regarding the ESD local policy planning scheme amendments, some amendments have been publicly exhibited through the standard planning scheme amendment process, while others have not. The amendments not exhibited, have been granted approval by the Minister for Planning under the provisions of Section 20(4) of the Act.

A Summary of ESD Planning Scheme (PS) Amendments, including the processing of the applications and outcomes is provided in Table 5: Summary of ESD Planning Scheme Amendments.

Table 5: Summary of ESD Planning Scheme Amendments

Amendment	Amendment Details	Gazetted
C073 Banyule, C071 Moreland (Merri-bek), C97 Port Phillip, C177 Stonnington, C130 Whitehorse & C133 Yarra	<p>New LPP CI 22.xx⁹⁹ for ESD and amend the MSS to address new clause.</p> <p>Exhibited as separate amendments (early 2013).</p> <p>A joint Advisory Committee and Planning Panel was appointed by the Minister for Planning on the 15 June 2013. The Advisory Committee and Panel Report, Environmentally Efficient Design Local Policies was completed on the 7 April 2014.</p> <p>The Environmentally Efficient Design Advisory Committee (EEDAC) considered that in principle, a State-wide approach is the best way to facilitate this increased focus on sustainability. In the interim the Committee is supporting the six Amendments.¹⁰⁰</p>	19/11/2015
C113 Monash	<p>Amendment included Gaming, Licensed Premises and Environmentally Sustainable Design Policies.</p> <p>Exhibited - 10 October - 21 November 2014</p> <p>The Panel stated that although this issue attracted the most submissions, the overall number was low. The Panel notes the objections of the HIA and Mr Sale to the Amendment. The issues they have raised were considered comprehensively in the EEDAC report, and having reviewed the submissions, there is nothing new in them that would suggest a diversion from the key findings of that report.¹⁰¹</p>	29/09/2016
GC42 Darebin & Manningham	<p>New LPP CI 22.12 for ESD and amend the MSS to address new clause.</p> <p>Exhibited - 11 Feb - 16 Mar 2016</p> <p>Submissions - 8 in support, 1 provided commentary, 1 recommended change and 1 objected. The objecting submission was from the Housing Industry Association (HIA).</p> <p>The Panel stated that the submission from the HIA was an in-principle objection which sought to reiterate many of the concerns raised by the Association during the EEDAC process. These issues were extensively considered by the EEDAC. The HIA did not raise any new issues and it did not present any new evidence to the Panel.¹⁰²</p>	31/08/2017

⁹⁹ Clauses vary for each planning scheme

¹⁰⁰ PPV, *Environmentally Efficient Design Local Policies, Advisory Committee and Panel Report, 7 April 2014* pg viii

¹⁰¹ PPV, *Monash Planning Scheme Amendment C113, Panel Report, 22 May 2015* pg 21

¹⁰² *Darebin and Manningham Planning Schemes Amendment GC42, Panel Report, 16 June 2016* pg 4

Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

Amendment	Amendment Details	Gazetted
GC72 Monash, Moreland (Merri-bek), Port Phillip, Whitehorse & Yarra	<p>Extends the expiry date to the Environmentally Sustainable Development (ESD) Local Planning Policy until 30 June 2019.</p> <p>No exhibition - Minister exercised power under S20(4) of the P&E Act.</p>	31/08/2017
C150 Knox	<p>Seeks to implement the findings of the Knox Planning Scheme Review 2015, which includes a new LPP CI 22.04 for ESD and amend the MSS to address new clause.</p> <p>Exhibited - 8 August - 19 September 2016</p> <p>Regarding ESD, a submitter sought to apply sustainable design features into all dwellings.</p> <p>The Panel concluded that only a relatively small proportion of single dwellings require a planning permit therefore the policy would have limited influence. There was insufficient information provided to the Panel to understand the potential impact of changing the policy beyond what was exhibited.¹⁰³</p>	14/12/2017
C201 Greater Dandenong¹⁰⁴	<p>New LPP CI 22.06 for ESD and amend the MSS to address new clause.</p> <p>Exhibited - 15 Feb - 9 Mar 2018</p> <p>The main change requested by submissions was to decrease the thresholds - that the policy should apply to residential development of at least three dwellings (87 per cent), or all residential development (12 per cent), or all development types (1 per cent).¹⁰⁵</p> <p>The Panel determined that reducing the threshold levels to three dwellings appropriate and is a reasonable response to the issues raised in the majority of submissions to the Amendment. The Panel also accepted the findings of the EEDAC and the other Panels that thresholds can be set by Councils to suitably address their unique context.¹⁰⁶</p>	18/10/2018
GC110 Brimbank, Greater Bendigo, Hobsons Bay, Kingston, Whittlesea & Wyndham*	<p>New LPP CI 22.xx¹⁰⁷ for ESD and amend the MSS to address new clause.</p> <p>No exhibition - Minister exercised power under S20(4) of the P&E Act. The Minister stated that¹⁰⁸:</p> <ul style="list-style-type: none"> The Amendment introduces seven ESD local planning policies which have a substantially similar form and content to those approved in 10 planning schemes, including the Banyule, Moreland (Merri-bek), Port Phillip, Stonnington, Whitehorse, Yarra, Monash, Darebin, Manningham and Knox planning schemes. These amendments were publicly exhibited and subject to either a combined planning Advisory Committee and Panel process or Panel process. The core issues which would potentially be raised through submissions for this Amendment are likely to be the same as those previously considered. The Environmentally Efficient Design Local Policies Advisory Committee (EEDAC) and past planning panels have ultimately concluded that the introduction of local ESD policies is appropriate until the state introduces a comprehensive state-wide 	18/10/2018

¹⁰³ PPV, Knox Planning Scheme Amendment C150, Panel Report, 4 April 2017 pg 19

¹⁰⁴ C201gdan was approved as part of GC110

¹⁰⁵ PPV, Greater Dandenong Planning Scheme Amendment C201, Panel Report, 18 September 2018 pg 2

¹⁰⁶ PPV, Greater Dandenong Planning Scheme Amendment C201, Panel Report, 18 September 2018 pg 12

¹⁰⁷ Clauses vary for each planning scheme

¹⁰⁸ Minister for Planning, Reasons for Decision to Exercise Power of Intervention, Under Section 20(4) of the P&E Act (1987) Brimbank, Greater Bendigo, Greater Dandenong, Hobsons Bay, Kingston, Whittlesea and Wyndham Planning Scheme Amendment GC110, 8 October 2018 Paragraph 23

Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

Amendment	Amendment Details	Gazetted
	<p>approach to sustainability in planning. This was reiterated in the recommendations of the recent planning panel which considered Greater Dandenong C201 and received strong support in submissions received. This is indicating of a growing consensus in support of the implementation of the kind of ESD policies contained in this Amendment.</p> <ul style="list-style-type: none"> The Amendment includes local ESD policies which have a form and content consistent with that supported by each of the seven councils. Given the support of the respective responsible authorities / planning authorities, it is unlikely that compliance with the usual notice process would result in any substantive change or improvement to the Amendment. The inclusion of local policies through the Amendment will facilitate the more immediate delivery of ESD outcomes in the seven municipalities compared to if each council amendment were to proceed through the planning scheme amendment process without any form of exemption from the notice requirements under the Planning and Environment Act 1987. Given the number of developments, and the overall scale of likely developments, likely to proceed during that timeframe, it is far preferable that these ESD policies take effect within the relevant planning schemes at this stage, rather than allowing that extent of development to proceed in the absence of such policies. 	
GC131 Banyule, Kingston, Manningham, Moreland (Merri-bek), Stonnington & Wyndham	<p>Removing the expiry date of 30 June 2019 to give effect to the policies until there is a comparable provision in the Victoria Planning Provisions.</p> <p>No exhibition - Minister exercised power under S20(4) of the P&E Act.</p>	27/05/2019
GC132 Brimbank, Darebin, Greater Bendigo, Greater Dandenong, Hobsons Bay, Knox, Monash, Port Phillip, Whitehorse & Yarra	<p>Amend expiry clause of local ESD policies to be consistent across planning schemes.</p> <p>No exhibition - Minister exercised power under S20(4) of the P&E Act.</p>	27/06/2019
C388 Greater Geelong	<p>New LPP CI 22.71 for ESD and amend the MSS to address new clause.</p> <p>Exhibited - 15 November - 17 December 2018. A Panel Hearing was not required.</p>	17/10/2019
C132 Kingston	<p>Reforms to the Victoria Planning Provisions introduced by Amendment VC148.</p> <p>Exhibited - 2 Mar - 6 April 2017. A Panel Hearing was not required.</p>	31/10/2019
C191 Kingston	<p>Insert omitted content in Clause 22.13 (Environmentally Sustainable Development).</p> <p>No exhibition - Minister exercised power under S20(4) of the P&E Act.</p>	4/06/2020

Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

Amendment	Amendment Details	Gazetted
C193 Moonee Valley	Reforms to the Victoria Planning Provisions introduced by Amendment VC148, which includes ESD local planning policy at Clause 15.02-1L of the PPF. Exhibited - 28 Mar - 3 May 2019. CASBE & MAV submission. The Panel supported changes to Clause 15.02-1L, as agreed between Council, CASBE and the MAV relating to 'sustainable design' assessment tools are appropriate and should be included in the Amendment. ¹⁰⁹	19/06/2020
C250 Whittlesea	Reforms to the Victoria Planning Provisions introduced by Amendment VC148. No exhibition - Minister exercised power under S20(4) of the P&E Act	18/12/2020
C200 Moreland (Merri-bek)	Reforms to the Victoria Planning Provisions introduced by Amendment VC148. No exhibition - Minister exercised power under S20(4) of the P&E Act.	14/01/2021
C251 Hume	New LPP CI 22.21 for ESD and amend the MSS to address new clause. Exhibited - 16 Feb - 22 Mar 2021. A Panel Hearing was not required.	11/11/2021
C38 Hepburn	Reforms to the Victoria Planning Provisions introduced by Amendment VC148 and implement the Hepburn Planning Scheme Review, Feb 2020. New ESD local planning policy at Clause 15.01-2L. Exhibited - 11 July - 28 August 2020. The Panel report did not include any discussion regarding the ESD new clause. ¹¹⁰	10/02/2022
C258 Wyndham	Amend expiry clause of local ESD policies to be consistent across planning schemes. No exhibition - Minister exercised power under S20(4) of the P&E Act	10/02/2022
C131 Hobsons Bay	Reforms to the Victoria Planning Provisions introduced by Amendment VC148. Exhibited - 11 November - 23 December 2020. CASBE submission. The Panel supported the submission and recommended that at Clause 15.02-1L (Environmentally sustainable development) reword the clause to reflect the preferred CASBE and DELWP. ¹¹¹	24/02/2022
C256 Greater Bendigo	Reforms to the Victoria Planning Provisions introduced by Amendment VC148. Exhibited - 10 November - 18 December 2020. A Panel Hearing was not required.	11/03/2022
C137 Maroondah	New LPP CI 22.15 for ESD and amend the MSS to address new clause. Exhibited - 21 January - 22 Feb 2021. A Panel Hearing was not required.	7/04/2022
C138 Frankston	New LPP CI 15.01-2L-01 for ESD and amend the MPS to address new clause. Exhibited 8 Feb - 22 Mar 2021. A Panel Hearing was not required.	26/05/2022

¹⁰⁹ PPV, Moonee Valley Planning Scheme Amendment C193moon, Panel Report, 30 July 2019 pg 10¹¹⁰ PPV, Hepburn Planning Scheme Amendment C80hepb, Panel Report, 17 February 2021¹¹¹ PPV, Hobsons Bay Planning Scheme Amendment C131hbay, Panel Report, 9 August 2021 pg 31

Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

Amendment	Amendment Details	Gazetted
C417 Greater Geelong	Reforms to the Victoria Planning Provisions introduced by Amendment VC148. No exhibition - Minister exercised power under S20(4) of the P&E Act.	7/07/2022
C232 Mornington Peninsula	New 15.02-1L for ESD and amend the MPS to address new clause. Exhibition - 18 Mar - 20 May 2022 The Panel Report ¹¹² recommended that the amendment be adopted (subject to changes related to clause numbers and some text).	Pending
C148 Yarra Ranges	Comprehensive revision of the planning scheme. It updates the planning scheme to reflect recently adopted Council strategies and to respond to emerging planning issues. Exhibited – 11 August – 6 October 2016 CASBE submission. The Panel supported the changes to the exhibited ESD policy to achieve greater consistency with policies in other planning schemes. ¹¹³ Submitted to DELWP 15 May 2019.	1/12/2022
C187 Bayside	New 15.01-2L-02 for ESD and amend the MPS to address new clause. Exhibition – 7 July – 4 August 2022 Panel hearing – Panel report due date 6 January 2023 Planning authority decision – Pending / Department assessment - Pending	Pending
C284 Casey	In November 2022, the City of Casey submitted Planning Scheme Amendment C284case to DELWP for Authorisation to prepare and exhibit. The amendment includes updates to the planning scheme to reflect recently adopted Council strategies, which includes the introduction of a local ESD Policy. Authorisation pending.	Pending
'Italics' = SECCCA participating Council: Bayside, Cardinia, Casey, Greater Dandenong, Mornington Peninsula, Kingston, Port Phillip and Frankston. Bass Coast. Bass Coast, Casey and Cardinia are the only SECCCA members without a local ESD Policy in their Planning Schemes.		

A total of 24 ESD local policy planning scheme amendments have been approved and a further three are pending. See Figure 6: Council's with a Local ESD Policy.

¹¹² PPV, Mornington Peninsula Planning Scheme Amendment C232morn, Local Environmentally Sustainable Development Policy, Panel Report, 6 December 2022 pg 7

¹¹³ PPV, Yarra Ranges Planning Scheme Amendment C148 and Upper Yarra Valley and Dandenong Ranges Regional Strategy Plan Amendment 122, Panel Report, 16 October 2018 pg 16

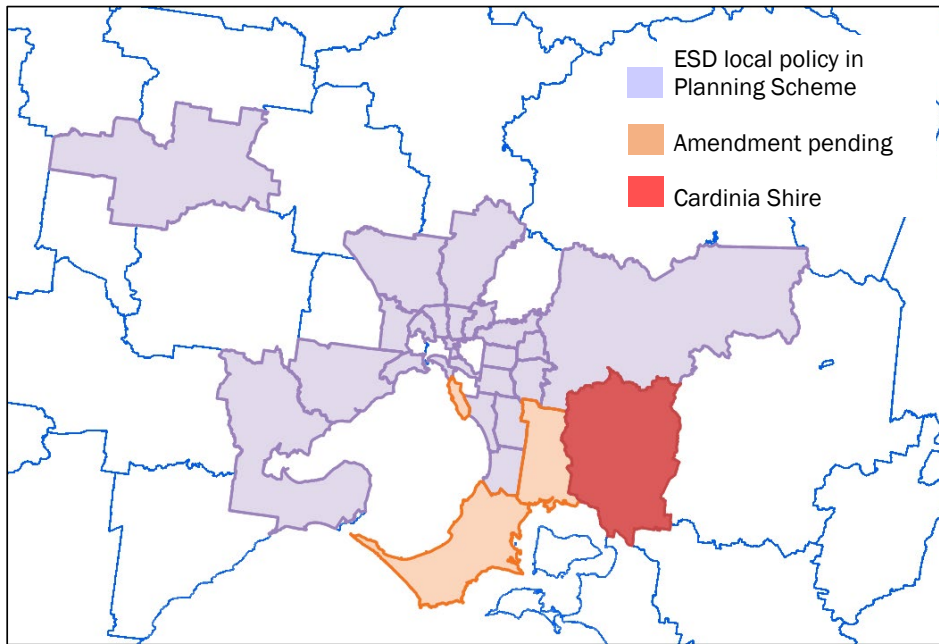


Figure 6: Council's with a Local ESD Policy¹¹⁴

There is a degree of consistency in the various local policies that have been gazetted since 2015. A comparison has been provided in Appendix K.

As outlined in the Minister’s ‘Reasons for decision to exercise power of Intervention’ (dated 8 October 2018) for GC110, there is now a broad degree of community acceptance of the need for ESD considerations, and the nature of those considerations, as well as acceptance of the benefits which flow from ESD design and construction techniques’.

Furthermore, the Environmentally Efficient Design Local Policies Advisory Committee and past planning panels have ultimately concluded that ESD local policies are appropriate until the state introduces a comprehensive state-wide approach to sustainability in planning.

As outlined in Section 8 and 10 of this report, several Council adopted documents have been informed or form part of the strategic justification for this project. These documents have involved extensive community consultation and engagement and envision a sustainable built environment in Cardinia. An ESD local planning policy responds to this vision.

¹¹⁴ As of August 2022

13.3. Elevating ESD Targets Planning Policy Amendment

Twenty-four CASBE member councils from across Victoria (supported by CASBE and MAV), have joined forces to push for more sustainable design within planning requirements.

A significant amount of work has been completed to develop an evidence base for this change, whereby councils collaborated on a research project that involved a technical feasibility and viability analyses, a cost benefit analyses and a peer and legal review of the revised ESD policy objectives and standards.

On 21 July 2022, 24 councils lodged a planning scheme amendment with the State Government, seeking to introduce planning policy that elevates sustainability requirements for new buildings and encourages a move towards net zero carbon development. Of the 24 councils, 7 do not have a current local ESD policy in their planning scheme.

The goal of the project is to better protect the natural environment, reduce resource and energy consumption, and support the health and wellbeing of future occupants.

Under the proposed changes, new developments would:

- Produce net zero carbon emissions.
- Reduce household bills by making buildings more energy efficient.
- Provide a healthier and more comfortable environment for building occupants.
- Better manage water quality, use and collection.
- Protect and enhance greening and biodiversity.
- Be more resilient to changing climate impacts.

Appendix L provides further information about the Elevated ESD Targets planning policy amendment.

C. THRESHOLDS

Among the 24 ESD local policy planning scheme amendments that have been approved (and a further three that are pending¹¹⁵), there are a variety of thresholds for the level of development which these policies apply to. The SDAPP Framework, enables each local government to determine the threshold that is relevant to their local development profile.

The planning schemes with an ESD local policy predominately allocate a 'Medium' and 'Large' Residential and Non-residential threshold.

On review of the 24 Planning Schemes with a local ESD policy:

- 'Medium' developments generally require a Sustainable Design Assessment (SDA).
- 'Large' developments generally require a Sustainability Management Plan (SMP).

A snapshot of each of the thresholds is provided in Appendix M.

Growth area councils with a local ESD policy include Hume City Council, City of Whittlesea and Wyndham City Council (see Appendix M). Regarding Cardinia's neighbouring councils, Yarra Ranges Shire Council has a local ESD policy in their Planning Scheme, and a local ESD policy is proposed for the Casey Planning Scheme. As outlined in Section 13.1 of this report, Baw Baw, Bass Coast and South Gippsland Shire Councils do not have a local ESD policy, nor is it within their current workplan.

14. Sustainable Design Assessment (SDA) and Sustainability Management Plan (SMP)

There is a noteworthy difference between a SDA and a SMP.

A SDA is a simple report for (small to) medium scale developments and the BESS Assessment tool provides the majority of content required.

A SMP is a detailed report for larger scale developments and usually requires engagement of ESD/Sustainability Consultant.

A SMP must:

- Provide a detailed assessment of the development and identify relevant sustainability targets or performance standards.
- Identify achievable environmental performance outcomes.
- Demonstrate that the proposed building has the design potential to achieve the relevant environmental performance outcomes, having regard to the site's opportunities and constraints.
- Document how the performance outcomes will be achieved, including identification of the different areas of responsibility, and provide a schedule for implementation, ongoing management, maintenance and monitoring. It should also identify how the design elements, technologies and operational practices that comprise the SMP can be maintained over time.

¹¹⁵ As the preparation of this draft report October 2022

Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

The Sustainable Design Assessment in the Planning Process (SDAPP) Practice Note template prepared by CASBE provides a framework to ensure Councils apply a consistent approach in the processing of sustainable design assessment for development applications¹¹⁶.

The thresholds for a Sustainable Design Assessment (SDA) or Sustainability Management Plan (SMP), and the definition of small and large scale, is set by individual councils based on the local development context.

14.1. Thresholds for SDA and SMP (other Planning Schemes)

This section of the report analyses 24 Planning Schemes in relation to the thresholds that require either a SDA or a SMP.

Residential

Regarding 'Residential' development, the local policy content of both the SDA and the SMP provides two thresholds, (1) a dwelling number or (2) a gross floor area threshold for a building used for accommodation other than dwellings. There is a greater variation in the defined gross floor area across the 24 Planning Schemes, when compared to the number of dwellings category.

Table 6: Summary of Residential SDA requirements (for dwellings)

Residential Number of dwellings	Number of Planning Schemes
1 - 9 dwellings	1
2 - 9 dwellings	*12
3 - 9 dwellings	11
Total	24
* + pending amendments	

¹¹⁶ CASBE, SDAPP Planning Practice Note, Version 8, September 2019

Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023
Table 7: Summary of Residential SDA requirements (for developments other than dwellings)

Development other than dwelling Gross Floor Area	Number of Planning Schemes
No requirement	2
50 sqm to 1000 sqm	5
50 sqm to 2000 sqm	1
100 sqm to 999 or 1000 sqm	*6
100 sqm to 1500 sqm	1
250 sqm to 1000 sqm	*0
500 sqm to 1000 sqm	5
500 sqm to 1999 sqm	1
1000 sqm to 2499 sqm	3
Total	24
* + pending amendments	

Key findings:

- The SDA 'number of dwellings' threshold within the 24 Planning Schemes with an ESD local policy is predominately either '2 – 9 dwellings' (12 Planning Schemes) or '3 – 9 dwellings' (11 Planning Schemes), with the exception being Hepburn which is '1 – 9 dwellings'.
- Whittlesea, Hume and Wyndham local ESD policy a threshold of '2 – 9 dwellings', while Yarra Ranges local policy has the '3 -9 dwellings'. Casey's proposed local ESD policy includes the '2 – 9 dwellings' threshold.
- Unlike the 'Residential' number of dwellings, the 'Residential' gross floor area threshold for 'SDA' requirement varies quite significantly, with 8 categories across the 24 Planning Schemes.
- The most common category is '100 sqm – 999 or 1000 sqm' which is within 6 planning schemes, 5 planning schemes have the '50 sqm – 1000 sqm' and '500 sqm – 999 or 1000 sqm' threshold.
- Both the Whittlesea and Hume local ESD policy threshold is '100 sqm – 1000 sqm' (and this threshold is also proposed in the Casey local ESD policy). The Wyndham local ESD policy threshold is '500 sqm - 1999 sqm'. Both Hepburn and Yarra Ranges local ESD policies do not have a threshold identified for this category.

 Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

Table 8: Summary of Residential SMP requirements (for dwellings or for developments other than dwellings)

Residential Number of dwellings	Number of Planning Schemes	Development other than dwelling Gross Floor Area	Number of Planning Schemes
10 or more dwellings.	24	More than 999 or 1000 sqm	*16
		More than 1500 sqm	1
		More than 2000 sq m	2
		More than 2499 sqm	3
		A value over \$2 million	1
		No additional requirements regarding gross floor area.	1
Total	24	Total	24
* + pending amendments			

Key findings:

- All the Planning Schemes with a local ESD policy have a '10 or more dwelling' threshold for residential developments that require a SMP.
- Unlike the 'Residential SDA' threshold, the variation across the 24 Planning Schemes for a 'Residential SMP' is not as significant, with 16 Planning Schemes specifying a threshold of 'more than 999 sqm or 1000 sqm'.
- It is noted that the Hepburn local ESD policy allocates a monetary value and not a gross floor area allocation.
- Both the Whittlesea and Hume local ESD policy threshold is 'more than 999 sqm or 1000 sqm' (and this threshold is also proposed in the Casey local policy). The Wyndham local ESD policy threshold is 'more than 2000 sqm', while the Yarra Ranges local policy does not have a threshold identified for this category.

Non-residential

Regarding 'Non-residential' development, the local policy content of both the SDA and the SMP provides two thresholds. The thresholds relate to a gross floor area category for development of a non-residential building. There is a greater variation in the defined gross floor area across the 24 Planning Schemes, for the SDA requirement than the SMP requirement. Some Planning Schemes also have an exclusion of outbuildings.

Table 9: Summary of Non-residential SDA and SMP requirements

Non-residential SDA		Non-residential SMP	
Development of a non-residential building Gross Floor Area	Number of Planning Schemes	Development of a non-residential building Gross Floor Area	Number of Planning Schemes
50 sqm - 1000 sqm	1	more than 1000 sqm or 1000 sqm or more	*16
50 sqm - 2000 sqm	1	1500 sqm or more	1
100 sqm - 300 sqm	*0	more than 2000 sqm	3
100 sqm - 999 or 1000 sqm	*6	more than 2499 sqm	2
100 sqm - 10000 sqm	1	more than 10000 sqm	1
300 sqm - 1000 sqm	*3	No requirement	1
300 sqm - 1500 sqm	1		
500 sqm - 999 or 1000 sqm	6		
500 sqm - 1999 or 2000 sqm	2		
1000 sqm - 2499 sqm	2		
More than 500 sqm (Industrial 1 Zone - cost of up to \$1 million / In Commercial 1 Zone - cost of up to \$0.5 million)	1		
Total	24	Total	24
* + pending amendments			

Key findings:

- There are 11 different gross floor area threshold categories for the 'Non-residential SDA' requirements across the 24 Planning Schemes.
- The most common is the '100 sqm – 999 or 1000 sqm' and the '500 sqm – 999 or 1000 sqm' threshold category, with each category within 6 planning schemes. Both the Hume and Whittlesea local ESD policy 'Non-residential SDA' threshold is '300 sqm – 1000 sqm' (and this threshold is also proposed in the Casey local policy). The Yarra Ranges local ESD policy threshold is within the '500 sqm – 1000 sqm' category while Wyndham local ESD policy threshold is '500 sqm to 1999 sqm'.
- Similar to the 'Residential SMP', the variation across the 4 Planning Schemes for a 'Non-residential SMP' is not as significant (when compared to the SDAs).
- There are 6 categories, and 16 (of the 24) planning schemes have gross floor area threshold category that is 'more than 1000 sqm or 1000 sqm or more'.
- The Yarra Ranges, Hume and Whittlesea local ESD policy for the 'Non-residential SMP' threshold category is 'more than 1000 sqm or 1000 sqm or more' category (and this threshold is also proposed in the Casey local policy). The Wyndham local ESD policy threshold category is 'more than 2000 sqm'.

Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

- It is noted that the Hepburn local ESD policy has no requirement for a SMP.

Mixed Use

The local ESD policies within planning schemes require mixed use developments be assessed against the applicable threshold category for the residential and non-residential components of the development.

Exclusion of outbuilding extensions

Of the 24 Planning Schemes with an ESD local policy, 10 have exclusions within the ESD requirements for outbuilding extensions. This provision is also included in the proposed local ESD policy for Bayside, Casey and Mornington Peninsula Councils. The threshold details are provided in Appendix N.

15. Cardinia Local Context

The planning permit application data for the financial years of 2019 – 2020 (Year 1) and 2020 – 2021 (Year 2) was analysed to understand the nature of applications received, in relation to the development types and threshold categories.

As outlined in Section B of this report, the SDAPP framework allows each Council to adapt the SDAPP framework to reflect the type of applications received.

The planning schemes with an ESD local policy predominately allocate a 'Medium' and 'Large' Residential and Non-residential threshold.

On review of the 24 Planning Schemes with a local ESD policy:

- 'Medium' developments generally require a Sustainable Design Assessment (SDA).
- 'Large' developments generally require a Sustainability Management Plan (SMP).

As outlined in Table 4: Sustainable Design Assessment (SDA) and Sustainability Management Plan (SMP) the expectations for a SMP are greater than a SDA. A BESS Assessment provides the majority of content required for a SDA and may be prepared by applicants. However, a BESS report alone will not satisfy the requirements for a SMP. Preparation of a SMP will generally require the engagement of a sustainability consultant.

15.1. Methodology used for the assessment of planning applications

The planning permit application data was divided into 4 categories;

- Residential
- Non-residential Development
- Non-residential Outbuildings
- Other

The 'Non-residential Outbuildings' has been included as a separate category due to the high volume of applications that fall into this category. This separate category ensures that the data assessed is based on a true representation of the applications that would have fallen within the non-residential building threshold. This is particularly important as some local ESD policies within planning schemes have excluded outbuilding extensions from the SDA and/or SMP threshold category (as outlined in Appendix N). For this assessment, a 'Non-residential Outbuilding' is defined as a building used for agricultural/farming purposes that is not associated with a dwelling.

Environmental Sustainable Development (ESD) Local Policy - Background Report **20 March 2023**

The 'Other' category includes sub-categories to ensure that a true reflection of the type of planning applications received by Council.

Planning applications for both 'small' residential and 'small' non-residential development have also formed part of this assessment. While local ESD policies do not require 'small' development application for residential and non-residential developments require a SDA or a SMP, a provision in all Planning Schemes (via Amendment VC216) requires that all new developments (which require planning permits), need to demonstrate consideration of ESD principles, both in terms of demonstrating that the ESD principles have been considered and how these principles have been considered.

15.2. Estimated planning applications per annum for Residential and Non-residential developments (proposed thresholds)

An analysis of Planning Permit data over the financial years of 2019 -2020 and 2020 -2021 helps to provide an indication of the possible volume of applications that would require a SDA or a SMP based on particular threshold.

A breakdown of the type of applications within each of the categories is provided in Table 9: Categories used to assess planning applications for the financial years of 2019 – 2020 and 2020 – 2021 (proposed thresholds).

Based on the similar development context and the desirability for a consistent approach (as much as possible with other growth Councils and our neighbouring Councils), the following thresholds were used in the analysis of the planning applications:

- The local ESD policy for other growth councils, particularly Whittlesea and Hume
- The local ESD policy of Yarra Ranges Council (our neighbouring Council)
- The proposed local ESD policy of City of Casey (both a growth council as well as our neighbouring council).

The rationale for Cardinia's proposed local ESD policy is also based on associated resourcing implications.

Proposed Residential thresholds

The 'Medium' and 'Large' Residential thresholds used to assess Cardinia's planning permit applications were based on the following:

- **Residential – Medium (SDA)**
 - **2 – 9 dwellings**

This threshold is in 12 Planning Schemes which includes the 3 growth Councils (Hume, Whittlesea and Wyndham) as well as Yarra Ranges. This threshold is also in the Casey proposed local ESD policy.
 - **100 square metres to 999 square metres (for a building used for accommodation other than dwellings)**

This threshold is in 6 Planning Schemes which includes 2 of the 3 growth Councils (Whittlesea and Hume) and is also proposed in the Casey proposed local ESD policy.

Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

- **Residential – Large (SMP)**

- **10 or more dwellings**

- All 24 Planning Schemes have a '10 or more dwelling' threshold for residential developments.

- **More than or equal to 1000 square metres (for a building used for accommodation other than dwellings)**

- This threshold is in 16 Planning Schemes which includes 2 of the 3 growth Councils (Whittlesea and Hume) and is also proposed in the Casey proposed local ESD policy.

Non-residential thresholds

The 'Medium' and 'Large' Non-residential thresholds used as a benchmark to assess Cardinia's planning permit applications was based on the following:

- **Non-residential – Medium (SDA)**

- **300 square metres to 999 square metres**

- This threshold is in 3 Planning Schemes which includes 2 of the 3 growth Councils (Hume and Whittlesea). This threshold is also in the Casey proposed local ESD policy.

- **Non-residential – Large (SMP)**

- **More than or equal to 1000 square metres**

- The threshold is in 16 Planning Schemes is for a gross floor area 'more than 1000 square metres' which includes 2 of the 3 growth Councils (Hume and Whittlesea) as well as Yarra Ranges. This threshold is also in the Casey proposed local ESD policy.

Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

Table 10: Categories used to assess planning applications for 2019 – 2020 and 2020 – 2021 (FY) (Proposed Thresholds).

	2019 – 2020	2020 – 2021	Average
Residential			
'Small' Residential - Single Dwellings	183	229	206
'Medium' Residential - 2 - 9 dwellings or a building used for accommodation other than dwellings with a gross floor area between 100 square metres to 999 square metres. [SDA]	43	46	45
'Large' Residential - 10 or more dwellings or a building used for accommodation other than dwellings with a gross floor area of more than or equal to 1000 square metres. [SMP]	14	3	9
Total Residential	240	278	259
Non-residential Development			
'Small' Non-residential development – A building with a gross floor area of less than or equal to 299 square metres or an extension to an existing Non-residential development creating an additional gross floor area of less than or equal to 299 square metres (excluding outbuildings).	32	23	28
'Medium' Non-residential development – A building with a gross floor area between 300 square metres to 999 square metres or an extension to an existing Non-residential building creating between 300 square metres to 999 square metres of additional gross floor area (excluding outbuildings). [SDA]	20	26	23
'Large' Non-residential development – A building with a gross floor area of more than or equal to 1000 square metres or an extension to an existing Non-residential building creating more than or equal to 1000 square metres of additional gross floor area (excluding outbuildings). [SMP]	39	48	44
Total Non-residential Development	91	97	94
Non-Residential Outbuildings			
'Medium' Non-residential outbuilding – An outbuilding with a gross floor area between 300 square metres to 999 square metres or an extension to an existing non-residential outbuilding creating between 300 square metres to 999 square metres of additional gross floor area.	25	19	22
'Large' Non-residential outbuilding – An outbuilding with a gross floor area of more than or equal to 1000 square metres or an extension to an existing Non-residential outbuilding creating more than or equal to 1000 square metres of additional gross floor area.	7	9	8
Total Non-residential Outbuildings	32	28	30
Other			
Outbuildings/sheds/extensions with a gross floor area of less than or equal to 299 square metres.	148	168	158
Use permits, signage, tree removal and other applications that do not fall within any other category..	98	108	103
Subdivision, removal of easements and related applications.	100	110	105
Total Other	346	386	366

Environmental Sustainable Development (ESD) Local Policy - Background Report **20 March 2023**

In total 709 applications were received in 2019 – 2020 and 789 in 2020 -2021. For this report, the data used in the assessment is based on the average number of applications, within each category and sub-category across the 2-year period.

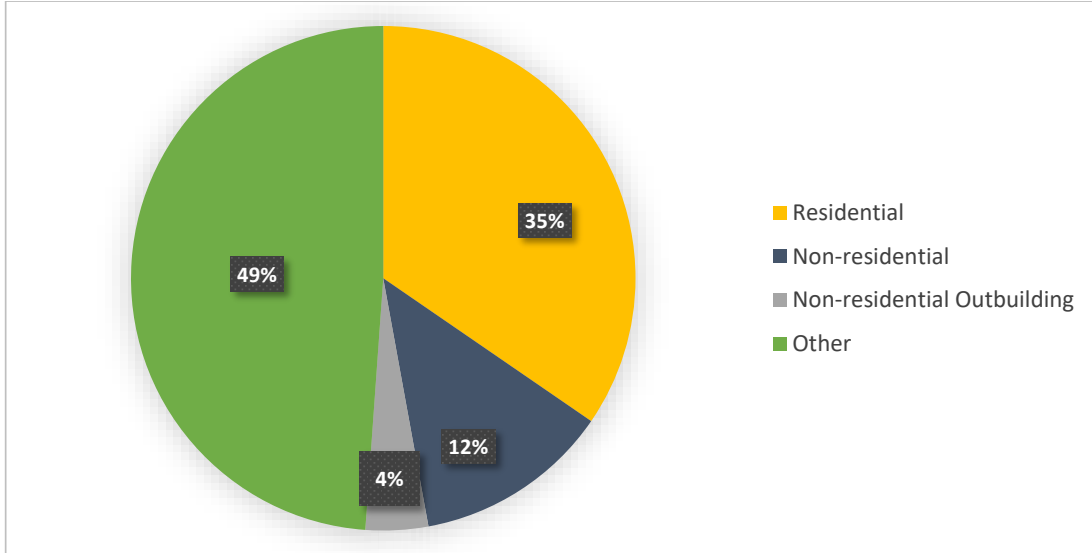


Figure 7: Type of Planning Applications (average for the FY 2019-2020 & 2020-2021)

15.2.1. Residential

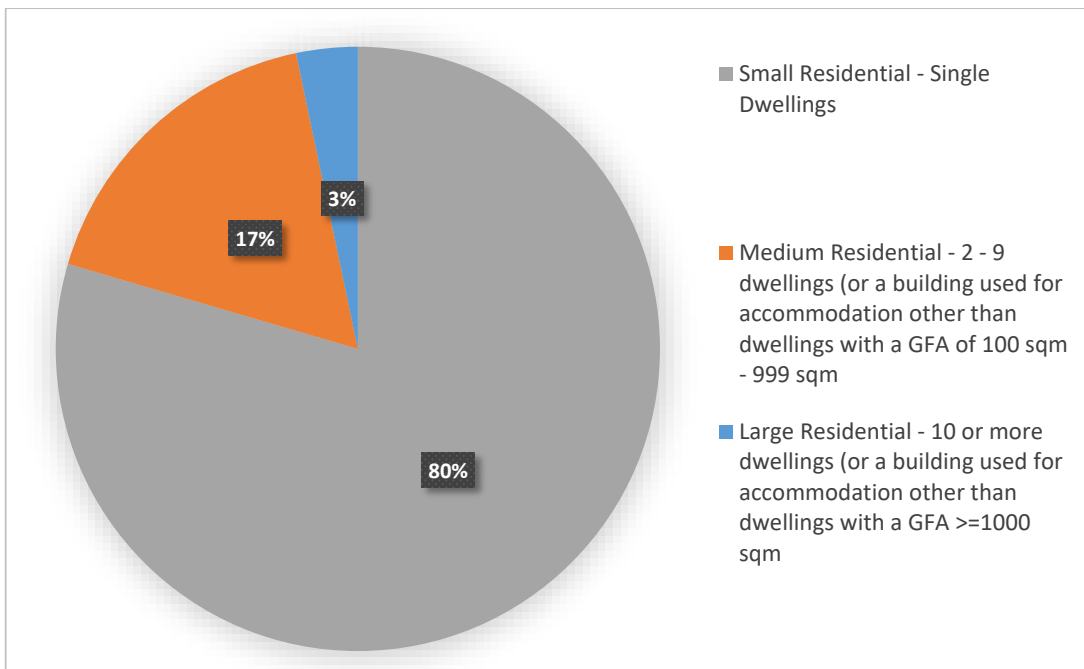


Figure 8: 'Residential' Planning Applications (average for the FY 2019-2020 & 2020-2021)

Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

Key findings (Residential):

- As shown in Figure 7: Type of planning permit applications (per category), 35% of applications fall within the 'Residential' category.
- Of the 'Residential' category, most applications (80%) fall within the 'Small' category ('single dwellings'). Consistent with 22 of the 24 planning schemes with a local ESD policy, Council does not propose to include 'single dwellings' in the SDAPP framework
- The remaining balance of 'Residential' applications are predominately made up of 'Medium' Residential development.
- For data collection mixed use applications were allocated to the category which reflected the majority 'use' of what the site. For example, where the 'Non-residential' gross floor area exceeds the 'Residential' gross floor area, the combined figures were allocated to 'Non-residential' results.
- The assessment of planning applications revealed that 'Large Residential' applications predominately formed part of mixed-use applications that included a larger 'Non-residential' component. Both 'Large' Residential and Non-residential uses require a SMP, so the demand on Council resources is still reflected.
- Table 9: Categories used to assess planning applications for 2019 – 2020 and 2020 – 2021 (FY) identifies that only 3 applications for 'Large' Residential were received in 2020 – 2021. It is noted that this number relates to stand alone residential applications.

Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

As outlined in Table 9: Categories used to assess planning applications for 2019 – 2020 and 2020 – 2021 (FY) (Proposed Thresholds), based on the average of the type of planning applications received over a 2-year period:

- 45 applications per year would fall within the ‘Medium’ Residential category and require a SDA.
- 9 applications per year would fall within the ‘Large’ Residential category and require a SMP.

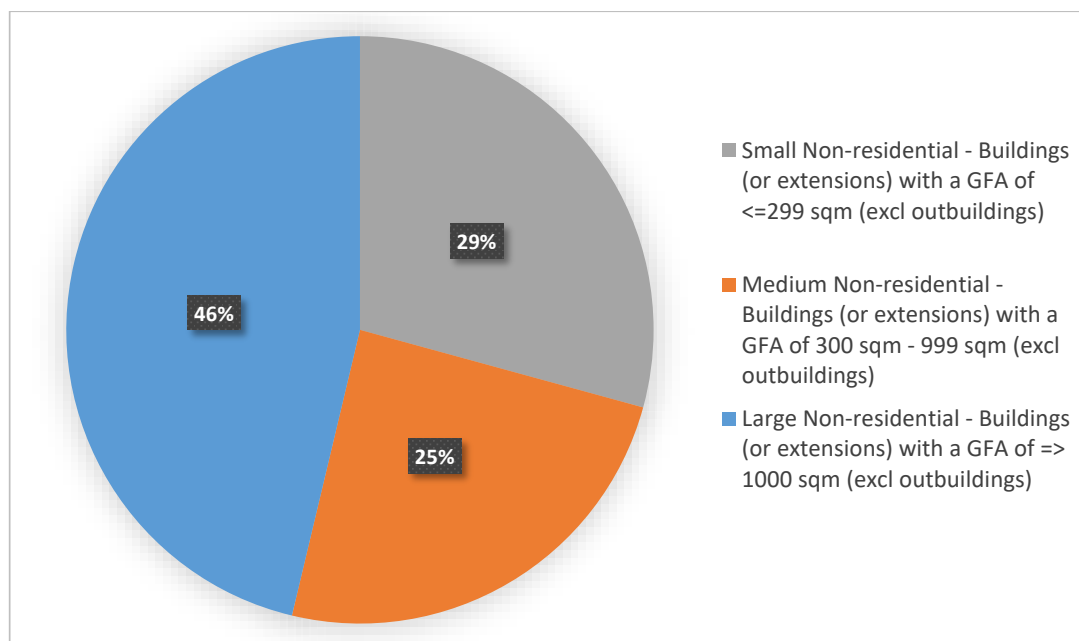
15.2.2. Non-residential

Figure 9: 'Non-residential' Planning Applications (average for the FY 2019-2020 & 2020-2021)

Key findings

- The total number of ‘Non-residential’ applications were similar across the 2-year period, 91 in 2019 – 2020 and 97 in 2020 – 2021.
- Of the 12% of applications that fall within the ‘Non-residential’ category, 29% of the applications were ‘Small’ Non-residential applications and based on the proposed local ESD policy for Cardinia, would not require an assessment under the SDAPP framework.
- Close to half of the ‘Non-residential’ planning applications would require a SMP. This would be significantly higher if outbuildings were not excluded from this threshold (as discussed in the following section of this report).

As outlined in Table 9: Categories used to assess planning applications for 2019 – 2020 and 2020 – 2021 (FY) (Proposed Thresholds), based on the average of the type of planning applications received over a 2-year period:

- 23 applications per year would fall within the ‘Medium’ Non-residential category and require a SDA.
- 44 applications per year would fall within the ‘Large’ Non-residential category and require a SMP.

15.2.3. Non-residential Outbuildings

On review of the data collected on Council's planning permit applications across the 2-year period, 11% of applications fell within the 'Non-residential Outbuilding' category¹¹⁷. If this data was not segregated into a separate category, the distribution of type of applications would be 23% for 'Non-residential' (35% for 'Residential' and 42% for 'Other').

As outlined in Table 9: Categories used to assess planning applications for 2019 – 2020 and 2020 – 2021 (FY) (Proposed Thresholds), the majority of 'Non-residential Outbuildings' applications (90%) fall within the 'Medium' category.

The 'Medium' and 'Large' Non-residential Outbuildings thresholds used as a benchmark to assess Cardinia's planning permit applications was based on the following:

- 10 Planning Schemes have provisions to exclude outbuildings extensions from ESD requirements (with a further 3 Planning Schemes with pending ESD amendments).
- 8 Planning Schemes exclude outbuilding extensions within a particular threshold from the requirement of a Non-residential SDA and the Non-residential SMP (Frankston, Hepburn, Hobsons Bay, Hume, Moonee Valley, Whittlesea, Wyndham and Yarra Ranges) with a further 3 Planning Schemes with pending ESD amendments.

It is important to note that on review of the planning permit applications for Non-residential Outbuildings across the 2-year period, nearly all of the applications related to new developments rather than extensions. Therefore, for the purpose of this assessment the numbers allocated in Table 9: Categories used to assess planning applications for 2019 – 2020 and 2020 – 2021 (FY) provides a good representation of applications received within each category.

Based on the proposed thresholds, the average of the type of planning applications for 'Non-residential Outbuildings' received over a 2-year period:

- 22 applications per year would fall within the 'Medium' Non-residential Outbuilding category and require a SDA.
- 8 applications per year would fall within the 'Large' Non-residential Outbuilding category and require a SMP.

When we combine the 'Non-residential' with the 'Non-residential Outbuilding' the average planning applications received over a 2-year period:

- 'Medium' planning applications requiring a SDA would nearly double from 23 to 45.
- 'Large' planning applications requiring a SMP would increase marginally from 44 to 52, however SMPs are time intensive when compared to SDAs.

Excluding Non-residential Outbuildings from the SDAPP Framework

The local ESD policy proposed by Cardinia excludes outbuildings from both the SDA and SMP Non-residential thresholds. The requirement of a SDA or an SMP for a 'Non-residential Outbuilding' application is considered to be excessive, given the extent of time of human presence and/or interaction in the use associated with these types of buildings.

¹¹⁷ 'Non-residential outbuilding' is a building used for agricultural/farming purposes that is not associated with a dwelling.

15.2.4. Other

On review of the average numbers of planning applications across the 2-year period (and the proposed thresholds), a considerable proportion of applications fall within the 'Other' category (49%) which means that they would not form part of the SDAPP framework sought by Council in the ESD policy.

15.3. Proposed SDAPP Framework thresholds for Cardinia Planning Scheme

Table 11: Estimated planning applications per annum for Residential and Non-residential developments (Proposed thresholds)

Residential		Non-residential	
SDA	SMP	SDA	SMP
2 - 9 dwellings, or A building used for accommodation other than dwellings with a gross floor area between 100 square metres to 999 square metres.	10 or more dwellings, or A building used for accommodation other than dwellings with a gross floor area of more than or equal to 1000 square metres.	A building with a gross floor area between 300 square metres to 999 square metres (excluding outbuildings), or An extension to an existing non-residential building creating between 300 square metres to 999 square metres of additional gross floor area (excluding outbuildings)..	A building with a gross floor area of more than or equal to 1000 square metres (excluding outbuildings), or An extension to an existing non-residential building creating more than or equal to 1000 square metres of additional gross floor area (excluding outbuildings).
Number of applications: 45	Number of applications: 9	Number of applications: 23	Number of applications: 44

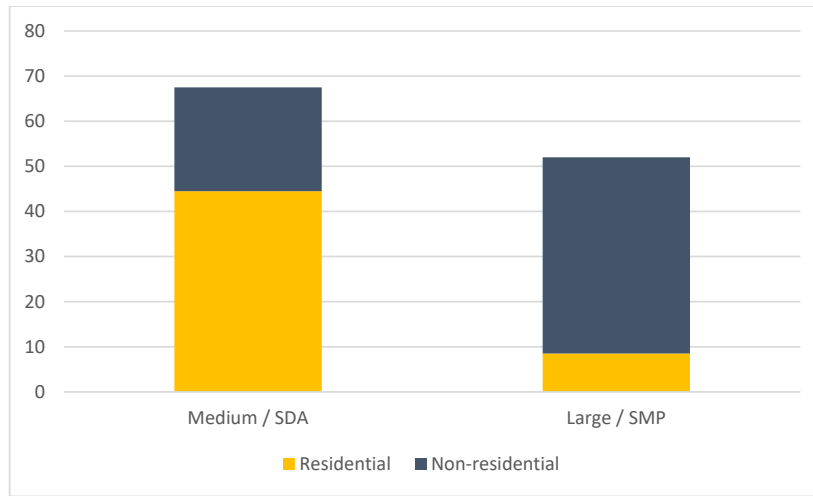


Figure 10: Residential vs Non-residential Planning Applications that would require a SDA or a SMP (based on the Cardinia proposed local policy and the average for the FY 2019-2020 & 2020-2021)

As outlined in the chart in Figure 10: Residential vs Non-residential Planning Applications that would require a SDA or a SMP (based on the Cardinia proposed local policy and the average for the FY 2019-2020 & 2020-2021), the majority of planning applications that would require an ESD assessment would be in the form of an SDA for residential applications. The large majority of SMPs would be in relation to Non-residential applications.

15.4. Implementation Plan

As outlined in Section 2.2 an Implementation Plan will be prepared to ensure a smooth transition from current practices to the implementation of the ESD Policy.

The Implementation Plan will be informed by the following preliminary assessments:

15.4.1. Resources

Need for an ESD Officer – for planning application assessments

The majority of Council's with a local ESD planning policy have an ESD Officer in some capacity, whether it be a full-time position, or a shared resource with other Councils.

While training of planning staff in ESD principles and assessing planning applications against ESD planning provisions should occur to build internal knowledge and skill set, it is recommended that a dedicated ESD officer position be created at Cardinia Shire Council.

As outlined in the Frankston City Council ESD Policy Investigation Report:

A dedicated staffing resource responsible for assessing ESD in planning applications has a range of benefits. These include the provision of expert ESD advice to planning applicants throughout the process, as well as support to planners for smaller ESD matters. A dedicated ESD officer will also increase the efficiency in processing applications and will result in a consistent response from Council to applicants regarding ESD planning requirements. This will increase the ability to achieve meaningful ESD outcomes and ensure applicants are provided with a clear approach to ESD in their developments.¹¹⁸

The Hobsons Bay City Council Environmentally Sustainable Development (ESD) Policy Background Report, documented that an ESD role would undertake a number of tasks including:

Before an application – establish internal processes, provide training and develop 'how to' guides for Statutory Planning staff, develop a suite of fact sheets and educational materials to support developers and the community

During referral process – complete referrals, provide ongoing advice and support to Statutory Planning team and applicants

After planning approval – monitor practices within the sector to ensure currency of Council's approach, give consideration to development and implementation of a compliance monitoring program.¹¹⁹

The following estimates of the time required to assess ESD requirements of planning applications were considered by other Councils.

¹¹⁸ Sustainable Development Consultants, Frankston City Council, Environmentally Sustainable Development (ESD) Policy Investigation, Background Information Findings, September 2019 pg 23

¹¹⁹ Hobsons Bay City Council, Environmentally Sustainable Development (ESD) Background Report, June 2018 pg 38

Environmental Sustainable Development (ESD) Local Policy - Background Report **20 March 2023**

Table 12: Estimated time for an ESD Officer to assess a SDA and a SMP

	Sustainable Development Assessment (SDA) Hours per application	Sustainable Management Plan (SMP) Hours per application
Maroondah City Council ¹²⁰ . Referral time only & excludes time for meetings. Assumed statutory planners would take a lead role for ESD assessment on smaller development proposals.	3 hours	8 hours
Mornington Peninsula Shire ¹²¹ Frankston City Council ¹²²	4 hours	12 hours
City of Whittlesea ¹²³	2 – 3 hours	4 – 5 hours

Based on the information in Table 11: Estimated time for an ESD Officer to assess a SDA and a SMP, it is considered appropriate to use the benchmark identified by Maroondah City Council as an ESD Officer has been employed at the Council since January 2019 (in a part-time capacity 0.4 EFT) and it is also the mid-point of the four council's listed.

Assuming that an application for a 'Medium' Residential and Non-residential development would require a SDA and a 'Large' Residential and Non-residential development would require a SMP, the estimated annual time for referrals to an ESD Officer, would be as follows:

Table 13: Estimated annual time for referrals to an ESD Officer

SDAPP Category		Estimated number of applications per year*	ESD Officer requirement per year (hours) (3 hours per SDA) (8 hours per SMP)
'Medium' Residential Development	SDA	45	134
'Large' Residential Development	SMP	9	68
'Medium' Non-residential Development	SDA	23	69
'Large' Non-residential Development	SMP	44	348
Total		120	619
*Table 11: Estimated planning applications per annum for Residential and Non-residential developments (Proposed thresholds)			

Based on a 48-week working year (7.6 hour day, 5 days a week) the estimated resourcing requirement to assess planning applications with an ESD submission would be 0.40 EFT. Resourcing for an ESD Officer will form part of Council's budget process.

¹²⁰ Maroondah City Council, Background Report, Environmentally Sustainable Development (ESD) Policy, June 2020 pg 22

¹²¹ Sustainable Development Consultants, Mornington Peninsula Shire, Environmentally Sustainable Development (ESD) Policy Project, Issues and Options Paper, September 2019 pg 23

¹²² Sustainable Development Consultants, Frankston City Council, Environmentally Sustainable Development (ESD) Policy Investigation, Background Information Findings, September 2019 pg 23

¹²³ City of Whittlesea, Rationale Report, Environmentally Sustainable Development (ESD) Clause 22 Local Planning Policy Proposed Planning Scheme Amendment, January 2018 pg 14

15.4.2. SDAPP Planning Application Process

The CASBE SDAPP Practice Note (SDAPP PN) outlines key points in the process and provides text templates to assist Councils in drafting further information requests and permit conditions based on different scenarios.

As a CASBE Council, Council will benefit from the learnings of other Councils in terms of developing web information that not only helps with understanding the SDAPP process, but also include links and examples and act as a 'one stop shop' for all ESD related matters.

This will be addressed in the Implementation Plan.

15.4.3. Staff Training

A roll out training program will be outlined in the Implementation Plan. As a member of CASBE and BESS subscriber, free online training modules are available to all staff within our organisation. Training modules cover a range of topics including sustainable design, the SDAPP Framework and how to use BESS. In addition to this, CASBE enables peer to peer support through cross council collaboration.

15.4.4. Planning Scheme Amendment

As identified in Figure 2: Strategic Direction 3 – Thriving environments, the incorporation of the Environmentally Sustainable Design Policy into the planning scheme has been identified in Year 2 (2022-23).

Council will seek Ministerial Authorisation to prepare and exhibit a planning scheme amendment to insert a new clause in the Cardinia Planning Scheme for a local ESD policy in early 2023.

As outlined in this report:

- The Environmentally Efficient Design Local Policies Advisory Committee and past planning panels have ultimately concluded that ESD local policies are appropriate until the state introduces a comprehensive state-wide approach to sustainability in planning.
- Several Council adopted documents have been informed or form part of the strategic justification for this project. These documents have involved extensive community consultation and engagement and envision a sustainable built environment in Cardinia. An ESD local planning policy responds to this vision.
- In the Minister's 'Reasons for decision to exercise power of Intervention' (dated 8 October 2018) for GC110, there is now a broad degree of community acceptance of the need for ESD considerations, and the nature of those considerations, as well as acceptance of the benefits which flow from ESD design and construction techniques'.

16. Conclusion

Council has a duty of care in exercising its functions to manage foreseeable risks and this is embedded in legislation such as the *Planning and Environment Act (1987)*, the *Climate Change Act (2017)* and section 9(2) of the *Local Government Act (2020)*.

On 16 September 2019 Council supported a Declaration of a climate emergency. Council has committed to prioritising policy and actions that will provide for both mitigation and adaptation in response to accelerating global warming and climate change.

In addition to this, 'tackling climate change and its impact on our environment, economy and people' is identified as one of our most significant challenges and opportunities in the *Council Plan 2021-25 and Community Vision 2040* (Cardinia Shire Council, June 2021). As identified in the Council plan the development of an Environmentally Sustainable Design Policy (ESD Policy) is a Council priority (Year 1 2021 -22) and it requires that the ESD Policy be incorporated in the Cardinia Planning Scheme (Year 2 2022 - 23).

A series of Council adopted documents, all of which have been informed by community consultation envision a sustainable built environment in Cardinia. This also includes specific local policy clauses, incorporated documents and reference documents within the Cardinia Planning Scheme that also direct planning applications to consider and address ESD principles.

The gazettal of VC216 (State Government Planning Scheme Amendment) not only strengthens consideration of water management, cooling and greening, air and noise pollution and recycling and resource recovery in the Victorian Planning system but includes the addition of the consideration of climate change into the purpose of Victoria Planning Provisions and all planning schemes.

There are currently 24 Victorian Councils have already gone through the process of incorporating a local ESD planning policy into the planning scheme, with 3 other Victorian Councils with active planning scheme amendments. On this basis it is considered that the Victorian development community are aware of the policy.

The development of a local ESD Policy and the incorporation of the ESD Policy into the Cardinia Planning Scheme will assist Council in responding to and addressing it's legislative, state policy and local policy responsibility.

D. APPENDICES

Appendix A – 16 September 2019 Council supported a Declaration of a climate emergency

GENERAL COUNCIL MEETING - 16 SEPTEMBER 2019



16 NOTICE OF MOTION NO. - 1048 CR SCHILLING

That Council resolves to:

- Note that the Municipal Association of Victoria State Council (May 2019) and the Australian Local Government Association National General Assembly (June 2019) have both declared a climate emergency;
- Declare a climate emergency, in response to the overwhelming climate science which indicates rising global temperatures are putting our local economy, people, species, and ecosystems at risk.
- Give priority to policy and actions that will provide for both mitigation and adaptation in response to accelerating global warming and climate change.
- Ensure climate change adaptation and mitigation are emphasised as a key priority in the 2021-2025 council plan.
- Investigate the financial viability of divestment within council financing, with the aim to move away from financial institutions, which fund the fossil fuel industry.
- Fund a climate change action plan in the 2020-2021 budget cycle, with a focus on climate change adaptation and mitigation.
- Investigate the cost effectiveness in purchasing "green energy".
- Acknowledge the work Cardinia Shire Council has already done in the move to a zero carbon operational target, with a planned 36% reduction in community emissions.

Appendix B – Council’s with a local ESD Policy

Council	Year local ESD policy came into operation
1. Banyule	2015
2. Moreland (Merri-bek)	2015
3. Port Phillip (SECCCA)	2015
4. Stonnington	2015
5. Whitehorse	2015
6. Yarra	2015
7. Monash	2016
8. Darebin	2017
9. Knox	2017
10. Manningham	2017
11. Brimbank	2018
12. Greater Bendigo	2018
13. Greater Dandenong (SECCCA)	2018
14. Hobsons Bay	2018
15. Kingston (SECCCA)	2018
16. Whittlesea	2018
17. Wyndham	2018
18. Greater Geelong	2019
19. Moonee Valley	2020
20. Hume	2021
21. Frankston (SECCCA)	2022
22. Hepburn	2022
23. Maroondah	2022

Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

24. Yarra Ranges	2022
Council	Pending – current status
25. Bayside (SECCCA)	Exhibited July-Aug 2022, Panel appointed, decision pending
26. Mornington Peninsula (SECCCA)	Exhibited Mar-May 2022, Panel appointed, decision pending
27. Casey (SECCCA)	Awaiting authorisation from the Minister to exhibit the amendment.

Appendix C: CSC submission to DELWP – Environmentally sustainable development of buildings and subdivisions – A roadmap for Victoria’s planning system (Cardinia Shire Council, 2021)



Introduction

This is the Cardinia Shire Council’s submission to DELWP’s consultation paper ‘Environmentally sustainable development of buildings and subdivisions - A roadmap for Victoria’s planning system, January 2021’.

In 2014 Council adopted its ‘Aspirational Energy Transition Plan 2014-24’, which outlines an intention to prepare and implement a local ESD planning policy and assessment framework like the CASBE model that many other Councils have already implemented. However, resourcing issues have constrained efforts to progress the implementation of these planning provisions and work on the draft ESD planning provisions has been paused. While not formally adopted by Council, this submission has been prepared by Council’s Planning Strategy Team in consultation with the various officers who have been working for some time towards implementing local ESD planning provisions.

Council welcomes a state-wide approach to setting minimum ESD planning policies (stage 1) and minimum ESD standards (stage 2) for buildings and subdivisions. It is submitted however that the proposed planning provisions need to be further strengthened.

Feedback

It is submitted that the proposed planning provisions be further strengthened to:

- be consistent with the state government’s target of zero net emissions by 2050 as set out in the Climate Change Act 2017, and COAG’s trajectory for zero energy (and carbon ready) buildings; and,
- provide a more comprehensive approach that aligns with, or builds upon, the significant advances made by CASBE and its member councils in the preparation and implementation of ESD planning provisions.

To assist in achieving this we provide the following feedback.

Zero-emissions

All ESD planning provisions should refer to ‘zero emissions’ technologies and outcomes rather than ‘low emissions’ as proposed in ‘Clause 18.02-1S Sustainable personal transport’ and ‘Clause 19.01-1S Energy supply’.

Cardinia Shire Council
20 Siding Avenue, Officer
ABN: 32 210 906 807

PO Box 7
Pakenham 3810
(DX 81006)

Phone: 1300 787 624
Email: mail@cardinia.vic.gov.au



INVESTORS
IN PEOPLE | Gold

1

www.cardinia.vic.gov.au

Environmental Sustainable Development (ESD) Local Policy - Background Report **20 March 2023**

Cardinia Shire Council submission to 'Environmentally sustainable development of buildings and subdivisions - A roadmap for Victoria's planning system'

Fossil fuel (natural gas)

The proposed provisions should specifically address the need to avoid the direct use of fossil fuel (natural gas). As the electricity grid continues to increase the provision of renewable energy, it is critical that new natural gas connections are avoided to enable zero net emissions and zero energy (and carbon) ready buildings to be achieved.

Under Clause 15 Built environment and heritage, the proposed new section 'Environmentally Sustainable Development' should include two additional points as follows:

- *Planning must support development that is environmentally sustainable and*
 - *is zero energy (and carbon) ready.*
 - *does not directly use fossil fuel (natural gas).*

Under 'Clause 15.01-3S Subdivision design' the proposed changes should include an additional point as follows:

- *In the development of new residential areas and in the redevelopment of existing areas, subdivision should be designed to create liveable and sustainable communities by:*
 - *avoiding the provision of reticulated fossil fuel in the form of natural gas.*

Electric vehicle infrastructure

Infrastructure for electric vehicles should be required rather than encouraged. The proposed changes under 'Clause 18.02.1S - Sustainable personal transport' should be amended as follows:

- *Ensure building and subdivision layout and design responses:*
 - *include infrastructure for low emissions vehicles including electric vehicles.*

This should be required for all residential development as it will be challenging to retrofit this infrastructure into multi-unit residential developments so requiring its provision through the planning process will eliminate a barrier to the uptake of this technology.

National Construction Code (NCC)

Councils may desire development that exceeds the minimum standards in the National Construction Code.

The proposed changes under 'Clause 15.01-2S Building design' should be amended as follows:

- *Improve the energy performance of buildings through siting and design measures that support:*
 - *Cost effective compliance with, or exceedance of, energy performance standards in the National Construction Code.*

Environmental Sustainable Development (ESD) Local Policy - Background Report **20 March 2023**

Cardinia Shire Council submission to 'Environmentally sustainable development of buildings and subdivisions - A roadmap for Victoria's planning system'

Compliance

To address the risk of non-compliance of the constructed development with the sustainability design elements approved as part of the planning process, the proposed changes under 'Clause 15.01-2S Building design' should include a requirement as follows:

- Ensure the constructed built form is consistent with the sustainability design commitments made during the planning approvals process by carrying out an ESD inspection of the development prior to the issue of an Occupancy Certificate or Final Certificate.

Resourcing assessment tools and officers

Successfully achieving the desired ESD policy objectives will rely on councils' capacity to resource access to the assessment tools, and officers to carry out the assessments. This will be a significant issue for many councils. As part of the implementation of the proposed Particular Provisions under stage 2 of the roadmap, DELWP should establish an independent assessment panel at no cost to Councils (similar to the panel proposed under the green wedge reforms to assess viability and legitimacy of proposed farming ventures).

This submission is made on behalf of Cardinia Shire Council by:

Teresa Hazendonk

Senior Strategic Planner

T.hazendonk@cardinia.vic.gov.au

Appendix D: Summary of changes to the VPPs via VC216

Clause	Key terms and issues
01 (Purposes of this planning scheme)	Add climate change as a new purpose of the planning scheme.
11 (Settlement)	Include amended biodiversity objectives, add consideration of waste and recycling and replace specific reference to energy efficiency with broader reference to climate change mitigation and adaptation.
11.01-1S (Settlement)	Include strategies that contribute to net zero emission outcomes, integrate water resource management and support metropolitan and regional climate change strategies.
11.02-2S (Structure planning)	Update the objective, include strategies relating to climate hazards, reference to the 17 UN Sustainable Development Goals, renewable energy generation, natural and cultural significance, active and sustainable transport, and integrated water management when undertaking structure plans or precinct structure plans and add a policy guideline.
12 (Environmental and landscape values)	Update national biodiversity strategy, Australia's Strategy for Nature 2019-2030 (Commonwealth of Australia, 2019)
12.01-1S (Protection of biodiversity)	Update the objective, include a new strategy focussed on enhancing biodiversity in urban areas and add a policy guidance document.
13.01-1S (Natural hazards and climate change)	Add consideration of climate change and health and include new policy guidelines and a policy document.
13.05-1S from (Noise abatement) to (Noise management)	Include a new strategy on minimising noise impact and add policy documents on key design responses to avoid noise exposure impacts.
13.06-1S (Air quality management)	Include strategies aimed at minimising exposure of sensitive uses to air pollution and add a policy document.
15 (Built environment and heritage)	Include planning policy to achieve ESD for buildings and subdivisions.
15.01-2S (Building design)	Include ESD at the building scale in the objective, new and amended strategies relating to energy performance, waste and recycling, water management, cooling and greening, and a new policy document.
15.01-3S (Subdivision design)	Update the objective and strategies, including a new strategy that supports biodiversity in urban areas, minimising air and noise pollution exposure near the transport system, urban structure responses to support ESD outcomes.
15.02 (Sustainable development) and 15.02-1S (Energy and resource efficiency)	Remove and re-locate content to relevant clauses.

Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

Clause	Key terms and issues
19 (Infrastructure)	Include planning policy relating to minimising environmental impacts and increasing resilience to climate change risks.
19.01-1S (Energy supply)	Introduce a strategy supporting resilience of energy infrastructure to impacts from climate change, modify strategies to better align with Victorian energy policy, support investment in energy supply infrastructure and include policy documents.

Appendix E: ESD section of Cardinia Road Employment Precinct Structure Plan (September 2010)

4.7.4 Energy Statement

Overall, the future urban structure of the Precinct and the planning and design guidelines to deliver the Vision, encourages minimisation of non-renewable and non-sustainable energy by:

- providing employment opportunities that meet the needs and skills of the local workforce to reduce out-commuting and travel distanced by fostering greater self containment in Casey-Cardinia;
- encouraging alternative modes of transport particularly for journey-to-work trips, by providing walking, cycling and bus links to, from and within the Precinct, including linking key destinations, open space, employment and residential areas;
- encouraging bus usage by intensifying development of housing, core retail and office development within close proximity of proposed public transport routes;
- providing a road network that enables efficient transport movements, with a hierarchical system of streets including direct arterial roads, a permeable network of lower order streets, cycle and walking paths;
- providing an integrated path system connecting roads with the linear open space network;
- promoting development of a grid-based road network to enable subdivision layouts to incorporate passive solar orientation, reducing energy use and carbon dioxide emissions particularly for residential areas; and
- encouraging innovative development design, with a requirement for non-residential buildings to demonstrate energy and water efficiency at the time of planning permit application.

4.7.5 Sustainability Statement Requirements

All planning permit applications to subdivide land, construct a building or to construct and carry out works must be accompanied by a Sustainability Statement that demonstrates how the development meets the sustainability objectives and planning and design guidelines (outlined in Sections 4.7.1 to 4.7.3) including:

- a site analysis plan that highlights the physical attributes of the site, including solar access, prevailing winds, topography, soil conditions, vegetation and visual links;
- details of all performance standards relating to the planning and design guidelines, met by the development including the assumptions forming the basis of any calculations;
- details of environmentally sustainable design strategies, initiatives and features integrated into the development;
- plans indicating the location of environmentally sustainable design features as appropriate;
- a Construction Waste Management Plan which details the facilities and methods to be adopted to minimise construction waste and enhance opportunities for recycling; and
- management protocols for systems requiring ongoing maintenance and management.

If in the opinion of the responsible authority this requirement is not relevant to the evaluation of an application, it may waive or reduce the requirement.

Appendix F: Sustainability Statement - Officer Precinct Structure Plan (September 2011, Amended November 2019)

4.7.5 Sustainability Statement Requirements

A Sustainability Statement should demonstrate how the development meets the sustainability objectives and planning and design guidelines including:

- a site analysis plan that highlights the physical attributes of the site, including solar access, prevailing winds, topography, soil conditions, vegetation and visual links;
- details of environmentally sustainable design strategies, initiatives and features integrated into the development;
- details of all performance standards relating to the planning and design guidelines, met by the development including the assumptions forming the basis of any calculations;
- response to any Environmentally Sustainable Design policy adopted by Council, including any evaluation criteria;
- plans indicating the location of environmentally sustainable design features as appropriate;
- a Construction Waste Management Plan which details the facilities and methods to be adopted to minimise construction waste and enhance opportunities for recycling; and
- management protocols for systems requiring ongoing maintenance and management.

Appendix G: CREP Environmentally Sustainable Design Planning and Design Guidelines

Environmentally Sustainable Design

Planning and design guidelines for environmentally sustainable design and development are outlined in Table 15.

Table 15: Environmentally Sustainable Design Planning and Design Guidelines

Element	Planning and Design Guidelines that must be met	Planning and design guidelines that should be met
Energy and Greenhouse		<ul style="list-style-type: none"> Buildings are to be designed to minimise lifecycle energy consumption and greenhouse emissions. Buildings are to be designed to maximise and monitor energy efficiency. The installation of renewable energy systems and use of natural gas is encouraged.
Water Management	<ul style="list-style-type: none"> Efficient use of potable water supplies is to be demonstrated. Third pipe recycled water supply is to be provided throughout the residential area. 	<ul style="list-style-type: none"> New development is to incorporate water sensitive urban design practices. Alternative water sources to potable mains supply are encouraged in all developments. Reuse and recycling of water is encouraged. The integrated stormwater treatment systems are to be provided and landscapes should be designed to significantly minimise the demand for irrigation water from potable sources and to improve the quality of stormwater runoff.
Internal Environmental Quality	<ul style="list-style-type: none"> Buildings are to be designed to maximise the quality of indoor environmental quality for all occupants. Adequate daylight to all occupied spaces is required. External views for occupants are to be maximised. 	<ul style="list-style-type: none"> Building design, choice of materials, and ventilation is to combine to minimise the concentration of volatile organic compounds from paints, adhesives and sealants, office equipment, carpets and furniture during building occupation.
Materials	<ul style="list-style-type: none"> The quantity of materials required to construct a building is to be minimised, along with the materials required to adapt a building to new uses. Natural ventilation of internal spaces is encouraged. 	<ul style="list-style-type: none"> Buildings are to be constructed of durable materials (with low lifecycle environmental impact) that maximise the longevity and utilisation of a development, with minimal maintenance.
Waste Minimisation	<ul style="list-style-type: none"> All new buildings are to be designed and constructed to minimise waste to landfill. Facilities to enable recycling of materials are to be provided during occupation of the building. 	<ul style="list-style-type: none"> Re-use or recycling of the building components at the end of the life of the building is to be considered. Construction waste materials are to be re-used and recycled wherever possible.
Transport	<ul style="list-style-type: none"> All new developments are to be designed to reduce car travel, by encouraging vehicle pooling and sharing, the use of public transport and the pedestrian and cycle network. Bicycle parking is to be provided at the Activity Centre and in new buildings in the Commercial area, Service Business and Industrial areas, High Density Residential areas and Kaduna Park. Showering and changing facilities are to be provided in association with bicycle parking. 	<ul style="list-style-type: none"> Within new developments, car parking spaces are to be nominated for the exclusive use of share/pool cars.
Landscaping	<ul style="list-style-type: none"> All new developments are to be landscaped incorporating the "Australian Landscape" theme. Landscaped areas are to be designed to minimise potable water use. 	<ul style="list-style-type: none"> Landscaping is to be incorporated into the design of buildings and structures, maximising shade and providing "green" facades and roof gardens. Permeable paving and footpath treatments are encouraged. Impervious paving surfaces are to be avoided.

Appendix H: Environmentally Sustainable Design Planning and Design Guidelines (Officer Precinct Structure Plan - September 2011 (Amended November 2019) (Table 19)

Table 19: Environmentally Sustainable Design Planning and Design Guidelines	Planning and design guidelines that should be met	Planning and design guidelines that must be met
Energy and Greenhouse Element	<ul style="list-style-type: none"> Street lighting should be solar-powered and incorporate light sensors to control on/off cycles. Commercial buildings are to be designed to: <ul style="list-style-type: none"> minimise lifecycle energy consumption and greenhouse emissions; and maximise and monitor energy efficiency and demonstrate Australian Best Practice in GreenStar ratings. Installation of renewable energy systems on individual sites and use of natural gas is encouraged. Where tri-generation or other alternative energy source is available, connection should be provided. 	<ul style="list-style-type: none"> Energy efficient street lighting is to be provided, as approved by SP AusNet and Council.
Integrated Water Management	<ul style="list-style-type: none"> Encouraged the following in both subdivision design and building construction: <ul style="list-style-type: none"> use of alternative water sources to potable mains supply. reuse and recycling of water. use of integrated stormwater treatment systems Artificial lakes, ponds, fountains etc are to utilise a recycled water source to ensure ongoing sustainability and efficient operation and maintenance. 	<ul style="list-style-type: none"> Provide for efficient use of potable water supplies. Landscaping of private open space is to be designed to significantly minimise the demand for irrigation water from potable sources and to improve the quality of stormwater runoff. Incorporate Water Sensitive Urban Design techniques into the subdivision (refer Water Sensitive Urban Design planning and design guidelines in Table 14).
Materials	<ul style="list-style-type: none"> Use of concrete as a road pavement is encouraged to reduce radiant heat. Buildings are to be constructed of durable materials (with low lifecycle environmental impact) that maximise the longevity and utilisation of a development, with minimal maintenance. Materials choice is to minimise embodied energy and consider whole-of-life impacts, including mining, manufacturing, transport, construction/fitting, maintenance and disposal. 	<ul style="list-style-type: none"> Facilities to enable recycling of materials are to be provided during occupation of the building. The overall design of buildings is to provide an effective waste management and recycling system for all dwellings, tenancies and premises as part of the development.
Waste Minimisation	<ul style="list-style-type: none"> Re-use or recycling of the building components at the end of the life of the building is to be considered. Construction waste materials are to be re-used and recycled wherever possible. 	<ul style="list-style-type: none"> Preparation of Green Travel Plans is encouraged for businesses employing over 20 people. Bicycle parking is to be provided as part of: <ul style="list-style-type: none"> activity centre subdivisions; construction of new commercial buildings; or schools; unless it has already been provided to the satisfaction of the responsible authority. Showering and changing facilities are to be provided in association with bicycle parking.
Landscaping	<ul style="list-style-type: none"> All new developments are to be landscaped incorporating the "Australian Landscape" theme. Landscaping is to be incorporated into the design of buildings and structures, maximising shade and providing "green" facades and roof gardens. Permeable paving and footpath treatments are encouraged. Impervious paving surfaces are to be avoided. 	<ul style="list-style-type: none"> Landscaped areas are to be designed to minimise potable water use. Trees are to maximise shade for protection of assets from solar radiation and reduce the urban heat island effect.

Element	Planning and Design Guidelines that must be met	Planning and design guidelines that should be met
Transport	<ul style="list-style-type: none"> • Landscaped areas are to be designed to minimise potable water use. • Trees are to maximise shade for protection of assets from solar radiation and reduce the urban heat island effect. 	<ul style="list-style-type: none"> • Within new non-residential developments, car parking spaces are to be nominated for the exclusive use of for share/pool cars. • Preparation of Green Travel Plans is encouraged for businesses employing over 20 people. • Bicycle parking is to be provided as part of: <ul style="list-style-type: none"> - activity centre subdivisions; - construction of new commercial buildings; or - schools; unless it has already been provided to the satisfaction of the responsible authority. • Showering and changing facilities are to be provided in association with bicycle parking. • All new developments are to be landscaped incorporating the "Australian Landscape" theme. • Landscaping is to be incorporated into the design of buildings and structures, maximising shade and providing "green" facades and roof gardens. • Permeable paving and footpath treatments are encouraged. • Impervious paving surfaces are to be avoided.

Appendix I: Sustainable design (Gembrook Township Strategy (June 2011) Extract)

Sustainable design

The residents of Gembrook can promote sustainable development through energy and water efficiency, reducing the adverse effect of building materials on the environment and recycling wherever possible. Energy efficiency can be achieved in the design of new dwellings or the retrofitting of existing dwellings through:

- Incorporating passive solar design principles to maximise day-lighting and passive heating opportunities
- Designing the layout and external openings in all new dwellings to allow cross ventilation and provide low and high level openings to provide for vertical ventilation
- Using double glazing where appropriate
- Using external shading devices for openings on the north, east and west facades
- Maximise the opportunities provided for natural light and sunlight into buildings particularly in winter months.
- Providing appropriate shading for windows
- Using light wells and skylights for rooms without external walls
- Using light coloured external and internal finishes to reflect available light

Materials and appliances have a significant impact on energy usage, new developments should:

- Use building materials with high thermal mass to store heat during winter
- Use appropriate insulation materials to conserve energy use
- Select appliances with high energy efficiency star ratings
- Use recycled material or materials that have a low embodied energy
- Install solar photo voltaic cells
- Optimise opportunities to use renewable energy sources and incorporate renewable energy technologies wherever possible

Integrating landscape design can contribute to sustainable outcomes. For example:

- Use deciduous plants to shade windows from summer sun
- Use materials that do not leach chemicals into the ground

To achieve water efficiency:

- Incorporate Water Sensitive Urban Design elements to prevent storm water run off
- Install rain water tanks for rain water harvesting
- Install a grey-water re-use system
- Install AAA dual flush toilets and AAA rated showers and taps
- Use native plants in the garden
- Maximise the use of permeable surfaces in all outdoor spaces

To reduce the adverse impact of building materials on the environment:

- Select dimensions to suit standard material sizes to reduce wastage during construction
- Select materials that require minimal finishes and maintenance.
- Prefer recycled and environmentally benign materials

For waste minimisation:

- Maximise building longevity through creation of flexible and readily adaptable designs
- Provide facilities to assist waste separation into reusable, recyclable, compostable and landfill components
- Incorporate organic and water-based site waste disposal systems into landscaping design.

Appendix J - 2021 Liveability Plan Survey – Extreme Weather Responses

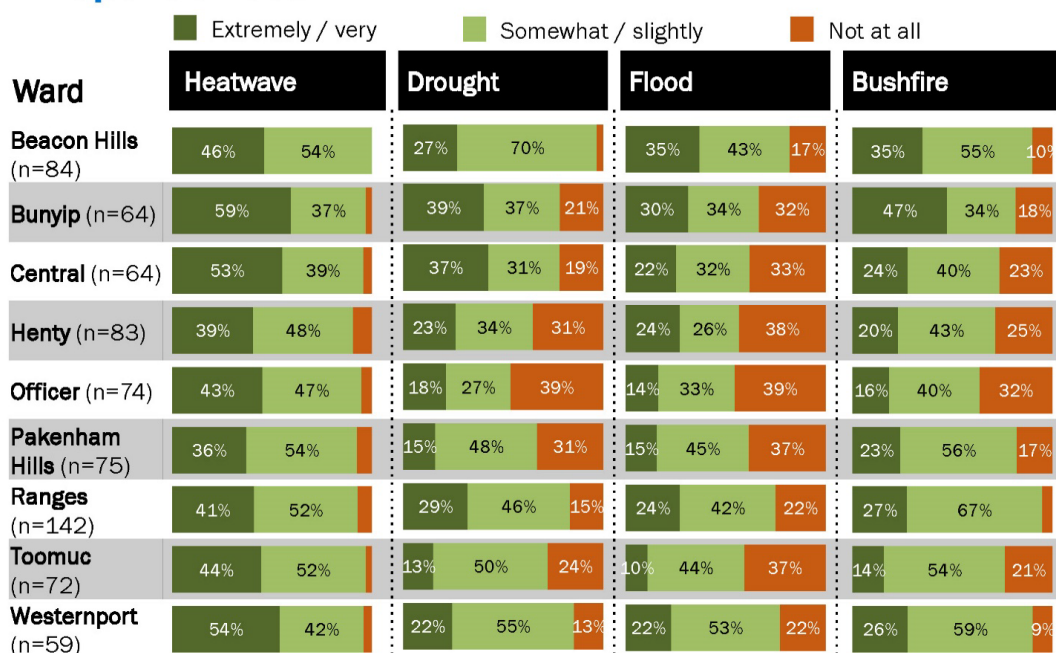
Extreme Weather

The extreme weather questions help us understand the preparedness of our community for the impacts of climate change, and what Council can do to help.

2021 Liveability Survey

Proportional random sample of households across the municipality.
Surveys completed on paper or online.
Conducted in Nov-Dec 2021.
Weighted by ward, age and gender. n=772

Preparedness



Preparedness for extreme weather is generally higher in wards with higher levels of risk. Younger people are less commonly prepared.

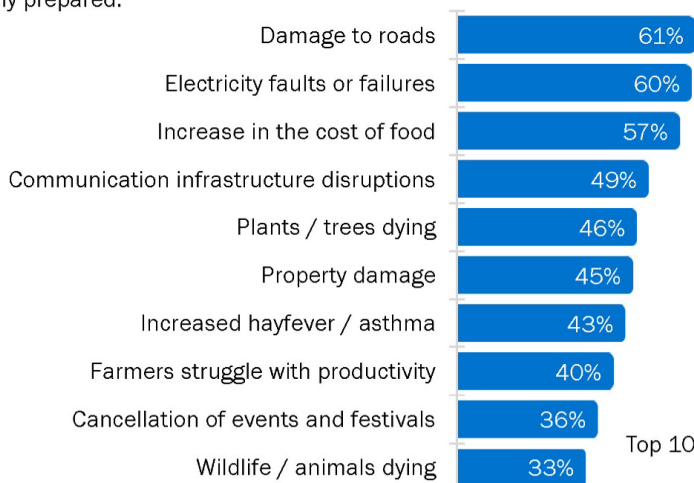
Impacts

Only 5% think extreme weather will have no impacts (currently or in the next 5 years).

The main perceived impacts are related to public infrastructure.

63% selected a human-health related item, including 25% who said mental health.

Those in Ranges ward more commonly cited road and property damage, and electricity failures.

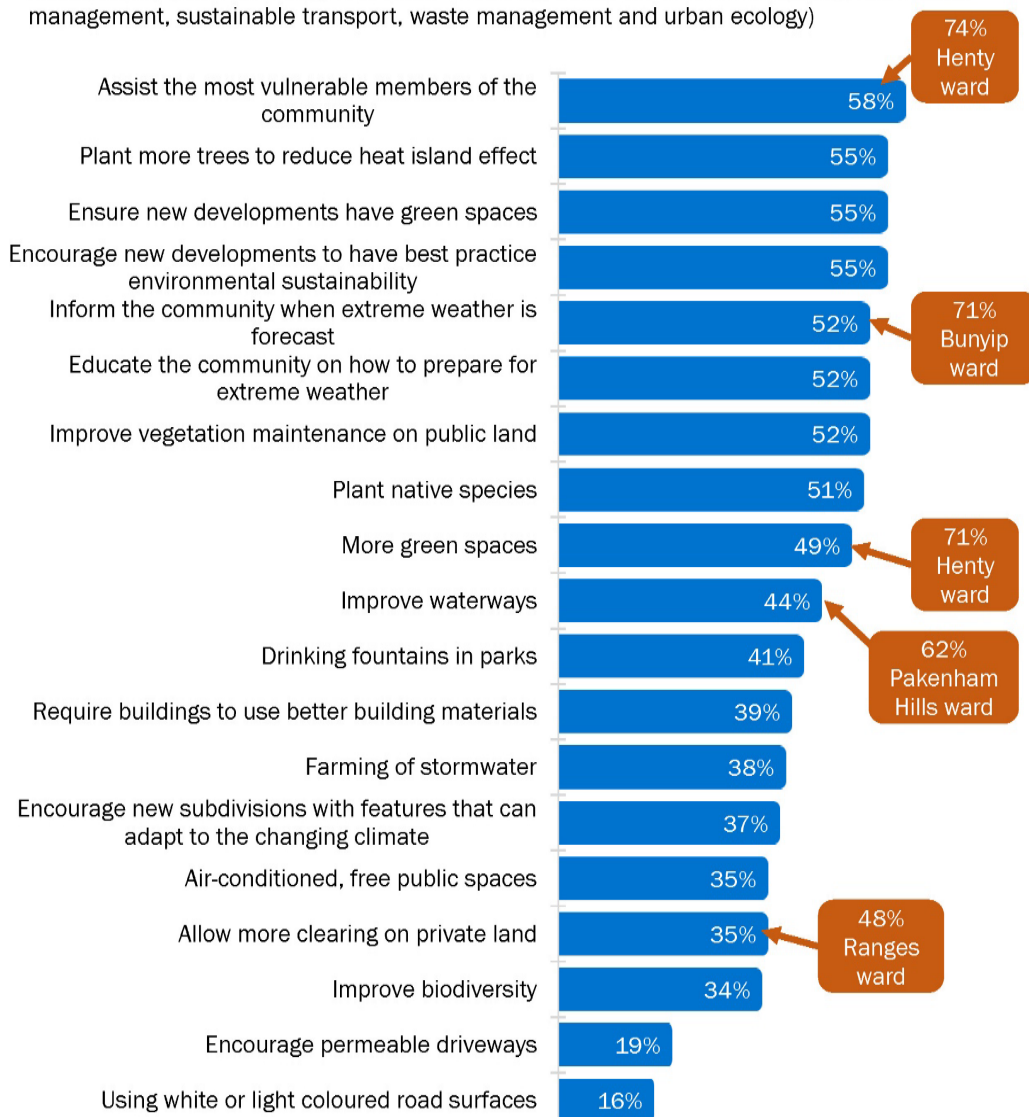


How Council can help prepare

Only 2% said Council should do nothing.

The community perceives the main opportunities for Council to address extreme weather occur through:

1. **Community support** – especially for vulnerable community members, including advising the community when extreme weather is on the way.
2. **Management of open space** – by planting trees, vegetation maintenance, planting natives and more green spaces.
3. **Strategic Planning** – Requiring new developments to have green spaces and meet best practice sustainability (such as energy and water efficiency, indoor environmental quality, stormwater management, sustainable transport, waste management and urban ecology)



Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

Non Residential Trigger - Type of Development Sustainable Design Assessment (SDA)	Planning Scheme																												
	Banyule	Bayside	Brimbank	Casey	Darebin	Frankston	Greater Bendigo	Greater Dandenong	Greater Geelong	Hepburn	Hobsons Bay	Hume	Kingston	Knox	Manningham	Maroondah	Monash	Moonee Valley	Moreland	Mornington Peninsula	Port Phillip	Stonnington	Whitehorse	Whittlesea	Wyndham	Yarra	Yarra Ranges		
Development of a non-residential building with a gross floor area between:																													
50 sqm - 1000 sqm																													
50 sqm - 2000 sqm																													
100 sqm - 300 sqm																													
100 sqm - 999 or 1000 sqm																													
100 sqm - 10000 sqm																													
300 sqm - 1000 sqm																													
300 sqm - 1500 sqm																													
500 sqm - 999 or 1000 sqm																													
500 sqm - 1999 or 2000 sqm																													
1000 sqm - 2499 sqm																													
More than 500 sqm (Industrial 1 Zone - cost of up to \$1 million / In Commercial 1 Zone - cost of up to \$0.5 million)																													

Excludes extension to outbuildings
Amendment Pending

Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

Non Residential Trigger - Type of Development (Sustainability Management Plan (SMP))	Planning Scheme																											
	Banyule	Boyside	Brimbank	Casey	Darbin	Frankston	Greater Bendigo	Greater Dandenong	Greater Geelong	Hepburn	Hobsons Bay	Hume	Kingston	Knox	Manningham	Marondah	Monash	Moonee Valley	Moreland	Mentha Peninsula	Port Phillip	Stonington	Whitehorse	Whitsea	Wyndham	Yarra	Yarra Ranges	
Development of a non-residential building with a gross floor area: more than 1000 sqm or 1000 sqm or more.	●	●		●	●	●	●				●	●			●	●	●				●	●	●	●	●	●	●	●
1500 sqm or more			●					●																				
more than 2000 sqm													●															
more than 2499 sqm																												
more than 10000 sqm																												
No Requirement for a SMP																												

● Excludes extension to outbuildings
 ◻ Amendment Pending

Appendix L: Elevating ESD Targets Planning Policy Amendment

Let's go for zero!

Elevating sustainability requirements for buildings

Twenty-four councils are collaborating on an innovative planning project to ensure sustainable development for our communities

On 21 July 2022 twenty-four councils submitted a Planning Scheme Amendment (PSA) to the Department of Environment, Land, Water and Planning (DELWP). The PSA seeks to change the planning requirements for those councils to ensure new developments are designed to be climate resilient and sustainable. The councils are all Council Alliance for a Sustainable Built Environment (CASBE) member councils with the project supported by the Municipal Association of Victoria (MAV).

Who are the Municipal Association of Victoria (MAV)?
The MAV is a membership association and the legislated peak body for local government in Victoria.

Who are the Council Alliance for a Sustainable Built Environment?
CASBE is an independent alliance of councils in Victoria, operating under the auspices of the MAV. We're here to make a difference to the sustainability of our built environment, through the Victorian planning process.

What is this project?
The project aims to build on the existing local Environmentally Sustainable Development (ESD) Policies held by numerous Victorian Councils and deliver revised and elevated ESD targets for new development, including targets for zero carbon development.

Why have councils joined this project?
In 2017, CASBE member councils committed to the strategic goal of raising ESD targets in planning. Given the lifespan of a building, it is critical to start elevating ESD targets to ensure our buildings are climate resilient and liveable - now and for the future. Many councils have higher and more immediate zero carbon goals for their communities than the established state targets, hence the need to introduce stronger ESD requirements.

Shouldn't the State Government do this?
The Victorian Government are committed to improving the environmental performance and resilience of buildings in response to urban growth and a changing climate through their ESD Roadmap.

What about other councils not involved in this project?
If this PSA is successful, in the future, the goal is that other councils will be able to choose to have this planning requirement apply to their municipality as well.

What happens next?
The participating Councils lodged an application with the State Government to seek authorisation to proceed with the planning scheme amendment on 21 July 2022. After authorisation, the amendment will go on exhibition. The exhibition process will allow the for the community to review and provide feedback ('submissions') on the Draft proposal.



Project partners

- Ballarat City Council
- Banyule City Council
- Bayside City Council
- Boroondara City Council
- Darebin City Council
- Frankston City Council
- Glen Eira City Council
- Greater Bendigo City Council
- Greater Dandenong City Council
- Greater Geelong City Council
- Hobsons Bay City Council
- Knox City Council
- Maribyrnong City Council
- Mitchell Shire Council
- Moonee Valley City Council
- Moreland City Council
- Mornington Peninsula Shire Council
- Port Phillip City Council
- Stonnington City Council
- Strathbogie Shire Council
- Warrambool City Council
- Whitehorse City Council
- Whittlesea City Council
- Yarra City Council




Environmental Sustainable Development (ESD) Local Policy - Background Report

20 March 2023



Elevating Environmentally Sustainable Design (ESD) Targets Planning Project – Summary Sheet

As a regulatory planning project, the following definitions indicate the level of weight in the planning scheme:

Objectives: an objective in planning terminology describes the desired outcome to be achieved in the completed development.

Standards: a standard contains requirements to meet the objective. A standard should normally be met but is not mandatory. Council has some discretion as to whether the development meets the objectives and which standards should or could apply.

What are the objectives	What are the proposed standards that will deliver the objectives
<p>Operational Energy New development that achieves zero carbon emissions</p>	<ul style="list-style-type: none"> • Proper orientation to ensure passive heating / cooling and ventilation • Thermal performance improvements • Better glazing and shading • More energy efficient systems • Support for electrification (shifting from gas connections) • Solar PV on buildings • Offsite offsets for renewable energy
<p>Embodied Carbon New development that considers the lifecycle impacts of resource use and supports lower carbon emissions</p>	<ul style="list-style-type: none"> • Lifecycle consideration of materials including embodied carbon and environmental impact • More material reuse and recyclable content • Construction practices that facilitate recycling materials
<p>Sustainable Transport New development that supports and encourages zero and low emissions transport</p>	<ul style="list-style-type: none"> • Support for zero emission transport by accommodating low emission and zero carbon vehicles • More provision for electric vehicle (EV) charging infrastructure provision and future proofing for EV • Bicycle parking facilities and supporting infrastructure and space for additional bike parking and facilities
<p>Integrated Water Management New development to minimise potable water use and runoff</p>	<ul style="list-style-type: none"> • Potable water demand reduction targets and stormwater runoff reduction methods • Climate considerations on water resources
<p>Green Infrastructure Protect landscape values and biodiversity / ecosystems / support well being</p>	<ul style="list-style-type: none"> • Protecting existing landscape values by retaining vegetation • Increase vegetation and canopy cover targets • Improve amenity and connection to natural landscapes • Opportunities to be explored for on-site food production
<p>Climate resilience New development to reduce impacts of climate hazards and natural disasters</p>	<ul style="list-style-type: none"> • Identifying climate related hazards and impacts • Urban heat island effect minimisation through light roofs and managing hardscaped surfaces
<p>Indoor environmental quality New development to achieve a safe and healthy indoor environment</p>	<ul style="list-style-type: none"> • Thermal comfort and safety improvements • Clean and fresh air including natural ventilation methods to reduce indoor air pollutants and ensure low toxicity • Natural light and daylighting achieved
<p>Waste and resource recovery New development to facilitate sustainable waste management and recovery</p>	<ul style="list-style-type: none"> • Waste and recycling infrastructure included to manage waste and any storage opportunities for reuse (where appropriate) • Bin location, collection, signage, ventilation and bin washing considerations and requirements met

3345

Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

SDAPP Framework Local Policy	Elevated Targets	SECCCA
Banyule City Council (November 2015)		
<i>Bayside City Council (Pending)</i>		
Brimbank City Council (October 2018)		
<i>Casey City Council (Pending)</i>		
Darebin City Council (August 2017).		
Frankston City Council (May 2022)		
Greater Bendigo City Council (October 2018)		
Greater Dandenong City Council (18 October 2018)		
Greater Geelong City Council (October 2019)		
Hepburn Shire Council (February 2022)		
Hobsons Bay City Council (October 2018)		
Hume City Council (November 2021)		
Kingston City Council (October 2018)		
Knox City Council (December 2017)		
Manningham City Council (August 2017).		
Maroondah City Council (April 2022)		
Monash City Council (September 2016)		
Moonee Valley City Council (June 2020)		
Moreland (Merri-bek) City Council (November 2015)		
<i>Mornington Peninsula Shire Council (Pending)</i>		
Port Phillip City Council (November 2015)		
Stonnington City Council (November 2015)		
Whitehorse City Council (November 2015)		
Whittlesea City Council (October 2018)		
Wyndham City Council (October 2018)		
Yarra City Council (November 2015)		
Yarra Ranges Shire Council (December 2022).		
	Ballarat City Council	
	Boroondara City Council	
	Glen Eira City Council	
	Maribyrnong City Council	
	Mitchell Shire Council	
	Strathbogie Shire Council	
	Warrnambool City Council	
		Bass Coast Shire Council

Appendix M - Growth Council's with an ESD Local Policy

Council	Residential		Non-residential	
	SDA	SMP	SDA	SMP
Hume (Gazetted November 2021)	2-9 dwellings. A building used for accommodation other than dwellings with a gross floor area between 100 square metres and 1000 square metres.	10 or more dwellings. A building used for accommodation other than dwellings with a gross floor area of more than 1000 square metres	A non-residential building with a gross floor area of 300 square metres to 1000 square metres. An extension to an existing non-residential building creating between 300 square metres to 1000 square metres of additional gross floor area (excluding outbuildings).	A non-residential building with a gross floor area of more than 1000 square metres. An extension to an existing non-residential building creating more than 1000 square metres of additional gross floor area (excluding outbuildings).
Whittlesea (Gazetted October 2018 / VC148 reforms December 2020)	2 - 9 dwellings. A building for accommodation other than dwellings with a gross floor area between 100 square metres and 1000 square metres.	10 or more dwellings. A building for accommodation other than dwellings with a gross floor area of more than 1000 square metres.	A non-residential building with a gross floor area of 300 square metres to 1000 square metres. An extension to an existing non-residential building creating between 300 square metres to 1000 square metres of additional gross floor area (excluding outbuildings).	A non-residential building with a gross floor area of more than 1000 square metres. An extension to an existing non-residential building creating more than 1000 square metres of additional gross floor area (excluding outbuildings).
Wyndham (Gazetted October 2018 / VC148 reforms January 2022)	2 - 9 dwellings. A building used for accommodation other than dwellings with a gross floor area between 500 and 1999 square metres.	10 or more dwellings. A building used for accommodation other than dwellings with a gross floor area of more than 2000 square metres.	A non-residential building with a gross floor area of 500 to 1999 square metres. An extension to an existing non-residential building creating between 500 to 1999 square metres of additional gross floor area (excluding outbuildings).	A non-residential building with a gross floor area of more than 2000 square metres. An extension to an existing non-residential building creating more than 2000 square metres of additional gross floor area (excluding outbuildings).

Appendix N – Planning Schemes that exclude outbuildings from both Residential and Non-residential SDA and SMP requirements

Planning Scheme	Res - SDA	Res - SDA	Non-res - SDA	Non-res - SMP
Banyule	x	x	x	x
Brimbank	x	x	x	x
Darebin	x	x	x	x
Frankston (SECCCA)	x	x	✓	✓
Greater Bendigo	x	x	x	x
Greater Dandenong (SECCCA)	x	x	x	x
Greater Geelong	x	x	x	x
Hepburn	x	x	✓	x
Hobsons Bay	x	x	✓	✓
Hume	x	x	✓	✓
Kingston (SECCCA)	x	x	x	x
Knox	x	x	✓	✓
Manningham	x	x	✓	✓
Maroondah	x	x	x	x
Monash	x	x	x	x
Moonee Valley	x	x	✓	✓
Moreland (Merri-bek)	x	x	x	x
Port Phillip (SECCCA)	x	x	x	x
Stonnington	x	x	x	x

Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

Planning Scheme	Res - SDA	Res - SDA	Non-res - SDA	Non-res - SMP
Whitehorse	x	x	x	x
Whittlesea	x	x	✓	✓
Wyndham	x	x	✓	✓
Yarra	x	x	x	x
Yarra Ranges	x	x	✓	✓
Amendments pending	Res - SDA	Res - SDA	Non-res - SDA	Non-res - SMP
Bayside (SECCCA)	✓	✓	✓	✓
Casey (SECCCA)	x	x	✓	✓
Mornington Peninsula (SECCCA)	x	x	✓	✓

17. Abbreviations / Glossary

Am 'C'	Planning Scheme Amendment. Makes changes to one planning scheme only.
Am 'GC'	Planning Scheme Amendment. Makes changes to more than one planning scheme.
Am 'VC'	Planning Scheme Amendment. Makes changes to the VPP and one or more planning schemes.
BADS	Better Apartments Design Standards
BESS	Built Environment Sustainable Scorecard
Biodiversity	The variety of all life forms, the different plants, animals and microorganisms, the genes they contain and the ecosystems of which they form a part.
Carbon footprint	A measure of the greenhouse gases emitted into the atmosphere as a result of the activities of an individual, company, city or country.
CASBE	Council Alliance for a Sustainable Built Environment
Climate change	A long-term change of the earth's temperature and weather patterns, generally attributed directly or indirectly to human activities such as fossil fuel combustion and vegetation clearing and burning.
Climate change adaptation	Actions that prevent or minimise the impacts of climate change.
Climate change mitigation	Actions that prevent or reduce emissions of greenhouse gases that contribute to climate change
CSC	Cardinia Shire Council
DELWP	Department of Environment, Land, Water and Planning
EEDAC	Environmental Efficiency Design Advisory Committee
ESD	Environmentally Sustainable Development
Green economy	An economy in which economic growth and the health of our natural resources sustain each other, and market, business and government better reflect the value of nature
Green Star	Green Star Green Star building environmental rating system administered by the Green

Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

Greenhouse gas emissions	Atmospheric gas that absorbs and emits infrared or heat radiation, giving rise to the greenhouse effect. Typical greenhouse gases include carbon dioxide, methane, nitrous oxide and refrigerants
GTP Green Travel Plan	GTP Green Travel Plan
HIA	Housing Industry Association
Integrated water management	An approach to planning that brings together all facets of the water cycle including sewage management, water supply, stormwater management and water treatment, ensuring environmental, economic and social benefits
LPPF	Local Planning Policy Framework
MAV	MAV Municipal Association of Victoria
Metropolitan Melbourne	The 31 municipalities that make up metropolitan Melbourne, plus part of Mitchell Shire within the urban growth boundary
MSS	Municipal Strategic Statement
NABERS	National Australian Built Environment Rating System. A performance-based rating system for existing buildings. NABERS now incorporates the Australian Building Greenhouse Rating (ABGR), which has been re-named NABERS Energy for Offices.
NatHERS	National House Energy Rating Scheme A framework allowing various computer software tools to rate the potential energy efficiency of Australian homes.
Natural hazard	A natural event that has potential to cause harm to people, property or the environment, including climate change, bushfire, flooding and sea level rise
NCC	National Construction Code
NCC	National Construction Code A performance-based code incorporating the Building Code of Australia (BCA) Volume One and Two; and the Plumbing Code of Australia (PCA) - defining how buildings, building elements, and plumbing and drainage systems must perform to achieve mandatory Performance Requirements.
Open space	Includes land reserved for natural landscape, parklands, recreation and active sports, as well as waterways and bays.

Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

Precinct structure plans	Detailed master plans for future growth corridor developments, informed by growth corridor plans. The plans identify alignments of transport routes, town centres, open space networks, densities of residential areas, and areas for industry and employment
Public realm	The public realm comprises spaces and places that are open and freely accessible to everyone, regardless of their economic or social conditions. These spaces can include streets, laneways and roads, parks, public plazas, waterways and foreshores.
Renewable energy	Energy that comes from resources which are naturally replenished on a human timescale such as sunlight, wind, rain, tides, waves, and geothermal heat.
Resilience	The capacity of individuals, communities, institutions, businesses, systems and infrastructure to survive, adapt and grow, no matter what chronic stresses or shocks they encounter.
Resource recovery	Extraction of useful material or energy from a waste stream
SDA	Sustainable Design Assessment A report/statement summarising how a small to medium-sized development addresses key sustainable design criteria.
SDAPP	Sustainable Design Assessment in the Planning Process A framework for the consistent inclusion of key environmental performance considerations into the planning permit approvals process in order to achieve more sustainable outcomes for the long-term benefit of the wider community.
SMP	Sustainability Management Plan
SPPF	State Planning Policy Framework
STORM	Melbourne Water's online stormwater pollution tool, used to assess whether best practice water quality objectives have been achieved. See https://storm.melbournewater.com.au/
Urban forest	All of the trees and other vegetation in a city as well as the soil and water that supports it.
Urban greening	Growing plants wherever possible in cities to contribute to urban vegetation coverage and providing a connection to nature.
Urban heat-island effect	When the built environment absorbs, traps, and in some cases directly emits heat, causing urban areas to be significantly warmer than surrounding non-urban areas.

Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

Urban water cycle	The cycle of water through urban environments. Distinguished from the natural urban water cycle by the transfer of water through built infrastructure and the high run-off rates generated by impervious surfaces
WSUD	Water Sensitive Urban Design Integrating the urban water cycle into urban design to minimise environmental damage and improve recreational and aesthetic outcomes.
Indoor air quality (IAQ)	Includes the introduction and distribution of adequate ventilation air, control of airborne contaminants and maintenance of acceptable temperature and relative humidity. (Property Council of Australia, Sustainable Development Guide, 2001).
Indoor environment quality (IEQ)	This factor describes the cumulative effects of indoor air quality, lighting and thermal conditions. Poor IEQ is responsible for health problems in the work place. (Melbourne Docklands ESD Guide, Oct 2002).
Renewable Energy	Renewable energy is obtained from sources that can be sustained indefinitely. Examples of renewable energy systems include photovoltaic solar collection, solar thermal turbine generation and wind power. (Melbourne Docklands ESD Guide, Oct 2002).
Triple Bottom Line	Measures the economic, social and environmental sustainability of a project. A sustainable development aims for synergy rather than compromise between these factors.

18. References

- Australian Government. (1992). *National Strategy for Ecologically Sustainable Development*.
- Baw Baw Shire Council. (September 2022). *Environmental Sustainability Strategy 2022 - 2030*.
- Baw Baw Shire Council. (September 2022). *Environmental Sustainable Strategy 2022 - 2030*.
- Cardinia Shire Council. (2006). *Sustainable Development and Greenhouse Reduction Strategy*.
- Cardinia Shire Council. (2021). *Submission to DELWP, Environmentally sustainable development of buildings and subdivisions - A roadmap for Victoria's planning system*.
- Cardinia Shire Council. (April 2020). *Council Enhanced Standard, Sustainable Buildings 2020 - 26*.
- Cardinia Shire Council. (August 2002). *Garfield Township Strategy*.
- Cardinia Shire Council. (August 2022). *Climate Change Adaptation Strategy 2022 - 33*.
- Cardinia Shire Council. (December 2013). *Beaconsfield Structure Plan*.
- Cardinia Shire Council. (December 2015). *Integrated Water Management Plan 2015 - 25*.
- Cardinia Shire Council. (December 2017). *Waste and Resource Recovery Strategy 2017 - 26*.
- Cardinia Shire Council. (February 2021). *Community Engagement Policy 2021 - 24*.
- Cardinia Shire Council. (February 2021). *Pakenham Major Activity Centre Structure Plan*.
- Cardinia Shire Council. (July 2009). *Lang Lang Township Strategy*.
- Cardinia Shire Council. (July 2009). *Upper Beaconsfield Township Strategy*.
- Cardinia Shire Council. (June 2009). *Emerald District Strategy*.
- Cardinia Shire Council. (June 2011). *Gembrook Township Strategy*.
- Cardinia Shire Council. (June 2018). *Sustainable Environment Policy 2018 - 2028*.
- Cardinia Shire Council. (June 2019). *Biodiversity Conservation Strategy 2019 - 29*.
- Cardinia Shire Council. (June 2021). *Council Plan 2021 - 25 and Community Vision 2040*.
- Cardinia Shire Council. (June 2022). *Crime Prevention Through Environmental Design Policy*.
- Cardinia Shire Council. (June 2022). *Crime Prevention Through Environmental Design Policy*.
- Cardinia Shire Council. (March 2008). *Cockatoo Township Strategy*.
- Cardinia Shire Council. (May 2017). *Cardinia Western Port Green Wedge Management Plan*.
- Cardinia Shire Council. (October 2014). *Aspirational Energy Transition Plan 2014 - 24*.
- Cardinia Shire Council. (October 2015). *Koo Wee Rup Township Strategy*.
- Cardinia Shire Council. (October 2015). *Koo Wee Rup Township Strategy*.
- Cardinia Shire Council. (reviewed November 2021). *Cardinia Shire's Liveability Plan 2017 - 29*.

Environmental Sustainable Development (ESD) Local Policy - Background Report 20 March 2023

- Cardinia Shire Council. (September 2008). *Cardinia Road Precinct Structure Plan*.
- Cardinia Shire Council. (September 2009). *Bunyip Township Strategy*.
- Cardinia Shire Council. (September 2009). *Bunyip Township Strategy*.
- Cardinia Shire Council. (September 2010). *Cardinia Road Employment Precinct Structure Plan*.
- Cardinia Shire Council. (September 2010). *Cardinia Road Employment Precinct, Native Vegetation Precinct Plan*.
- Commission, B. (1987). *Our Common Future*.
- Department of Environment, Land, Water and Planning. (2017). *Plan Melbourne 2017 - 2050*.
- Department of Environment, Land, Water and Planning. (2017). *Plan Melbourne 2017 - 2050*.
- Department of Environment, Land, Water and Planning. (2017). *Urban Design Guidelines for Victoria*.
- Department of Environment, Land, Water and Planning. (2019). *Plan Melbourne 2017 - 2050 Implementation Plan*.
- Department of Environment, Land, Water and Planning. (2021). *Plan Melbourne 2017 - 2020, 2020 Report of Progress*.
- Department of Environment, Land, Water and Planning. (2021). *Victoria's Climate Change Strategy*.
- Department of Environment, Land, Water and Planning. (July 2020). *Environmentally sustainable development of buildings and subdivisions - A roadmap for Victoria's planning system*.
- Department of Health and Human Services. (August 2019). *Victorian Public Health and Wellbeing Plan 2019 - 2023*.
- Macroplan. (February 2010). *Former Pakenham Racecourse Comprehensive Development Plan*.
- Victorian Government. (1987). *Planning and Environment Act*.
- Victorian Government. (2017). *Climate Change Act*.
- Victorian Government. (2020). *Local Government Act*.
- Victorian Planning Authority. (July 2020). *Pakenham East Precinct Structure Plan*.
- Victorian Planning Authority. (September 2011, Amended November 2019). *Officer Precinct Structure Plan*.

Planning and Environment Act 1987

CARDINIA PLANNING SCHEME

AMENDMENT C278card

EXPLANATORY REPORT

Who is the planning authority?

This amendment has been prepared by Cardinia Shire Council which is the planning authority for this amendment.

The amendment has been made at the request of Cardinia Shire Council.

Land affected by the amendment

The amendment applies to all land in the Shire of Cardinia, where a planning permit is required for the development in accordance with the thresholds in the proposed local policy.

What the amendment does

The amendment introduces a new Environmentally Sustainable Development (ESD) Local Planning Policy, for development to achieve best practice in environmental sustainability from its design stage through to construction and operation. This change is supported by refinements to the Municipal Strategic Statement (MSS).

The ESD policy provides statutory weight to what is currently a voluntary approach in the planning process, by requiring those developments which require a planning permit to achieve best practice environmental objectives.

The amendment brings Cardinia Shire Council into alignment with 24 other councils who have an equivalent local policy.

The amendment:

- Amends the following clauses in the Municipal Strategic Statement (MSS) to reflect the introduction of Clause 22.11 Environmentally Sustainable Development:
 - Clause 21.01 Cardinia Shire Key Issues and Strategic Vision (21.01-3 Key issues 'Settlement and housing' and 'Particular use and development')
 - Clause 21.02 Environment (21.02-1 Catchment and coastal management, 21.02-2 Landscape, 21.02-3 Biodiversity and 21.02-8 Resource conservation)
 - Clause 21.03 Settlement (21.03-1 Housing, 21.03-2 Urban Established Area - Beaconsfield and Pakenham, 21.03-3 Urban Growth Area, 21.03-4 Rural townships and 21.03-5 Rural residential and rural living development)
 - Clause 21.04 Economic Development (21.04-2 Agriculture, 21.04-3 Activity centres, 21.04-4 Industry and 21.04-5 Tourism)
 - Clause 21.05 Infrastructure (21.05-1 Infrastructure provision, 21.05-3 Local roads, 21.05-4 Public transport, 21.05-5 Pedestrian and bicycle network and 21.05-6 Community services and facilities)
 - Clause 21.06 Particular Uses and Development (21.06-1 Urban Design)
- Introduces a new Clause 22.11 Environmentally Sustainable Development (ESD) into the Local Planning Policy Framework of the Cardinia Planning Scheme.

The proposed local policy provides objectives and strategies relating to the following ESD principles:

- Energy Performance
- Integrated Water Management

OFFICIAL

- Indoor Environment Quality
- Transport
- Waste Management
- Urban Ecology

The local policy also sets out application requirements. Depending on the scale of development, an applicant needs to demonstrate how the relevant policy objectives will be achieved, by completing either a Sustainable Design Assessment (SDA) or a Sustainability Management Plan (SMP).

Strategic assessment of the amendment

Why is the amendment required?

The amendment is required to strengthen Council's ability to consider environmentally sustainable design measures in the Local Planning Policy Framework and to ensure that development achieves best practice in environmental sustainability, from the design stage through to construction and operation.

There is currently limited ability under the Cardinia Planning Scheme to require a planning permit application to consider and implement ESD principles. This is considered a significant gap in the decision-making ability of Council and is having negative effects on the liveability of the Shire of Cardinia.

The proposed local policy:

- Provides clear objectives and application requirements for planning permit applications.
- Ensures best practice ESD initiatives are considered at the time of planning approval for new developments, to maximise integrated design outcomes and minimise costs for retrofitting and poor design.

The *Council Plan 2021–25 and Community Vision 2040 (Cardinia Shire Council, June 2021)* is Council's key strategic document and incorporates the long-term Community Vision 2040. Council's Vision 2021 – 25 is identified as:

The unique identity of our urban, hills and rural areas is strengthened. We meet the challenges we face together as a community. How we respond balances the needs of our people, businesses, our productive land and natural environments.

The Council Plan is structured around 5 strategic objectives that underpin the overarching strategic direction: (1) Strong communities, (2) Liveable places, (3) Thriving environments, (4) Prosperous economies and (5) Responsible leadership. Strategic Direction 3 – Thriving environments, includes the development of an ESD policy in Year 1 (2021-22) and the incorporation of the ESD policy into the planning scheme in Year 2 (2022-23).

How does the amendment implement the objectives of planning in Victoria?

The amendment implements the following objectives of planning set out in section 4(1) of the *Planning and Environment Act 1987 (the Act)*:

- to provide for the fair, orderly, economic and suitable use, and development of the land.
- to provide for the protection of natural and manmade resources and the maintenance of ecological processes and genetic diversity
- to ensure a pleasant, efficient and safe working, living and recreational environment for all Victorians and visitors to Victoria
- to facilitate development in accordance with the objectives set out in paragraphs (a), (b), (c), (d) and (e) and;
- to balance the present and future interests of all Victorians.

The amendment implements the above objectives by providing clear strategic direction and minimum standards for future land development in Cardinia Shire.

OFFICIAL

How does the amendment address any environmental, social and economic effects?

The introduction of the ESD local policy will implement sustainable design principles in the planning process, resulting in improved sustainable development outcomes.

Achievement of ESD outcomes is likely to result in significant economic, social and environmental benefits. The Advisory Committee and Panel Report on Environmentally Efficient Design Local Policies (April 2014) identified clear benefits including:

- resilience to a warming climate with amenity and health benefits;
- higher thermal performance of buildings leading to reduced energy consumption, lower peak demand and better consumer outcomes;
- reduced water consumption; and
- at a broader planning level, better designed suburbs and urban environments with improved social, environmental and economic outcomes.

The amendment is expected to have a positive effect by:

Environmental effects

Requiring new buildings and additions to achieve greater levels of energy and water efficiency, indoor environmental quality, sustainable transport, waste management and urban ecology will have environmental benefits for building users and the community.

Economic effects

Maximising sustainable design at the planning stage and minimising the costs associated with retrofit and poor design will provide cost savings on utilities for the community.

Social effects

Facilitating sustainable built form which is more affordable over the life of the building for commercial and residential occupiers, will reduce ongoing servicing costs, thus having a positive net community benefit.

Does the amendment address relevant bushfire risk?

The amendment does not impact on any considerations of bushfire risk.

Does the amendment comply with the requirements of any Minister's Direction applicable to the amendment?

The amendment is consistent with the Ministerial Direction on the *Form and Content of Planning Schemes* under section 7(5) of the Act and meets the requirements of Ministerial Direction No 11 for the Strategic Assessment of Amendments.

The amendment is consistent with the Ministerial Direction on the Form and Content of Planning Schemes under section 7(5) of the Act and meets the requirements of Ministerial Direction No 11 for the Strategic Assessment of Amendments.

The amendment is consistent with Ministerial Direction 9 for the Metropolitan Strategy. The Metropolitan Strategy (*Plan Melbourne: Metropolitan Planning Strategy 2017 – 2050*) includes a number of Outcomes, Objectives and Directions which have implications for the proposed amendment.

Relevant outcomes and objectives include:

Outcome 5: Melbourne is a city of inclusive, vibrant and healthy neighbourhoods

- Direction 5.2: Create neighbourhoods that support safe communities and healthy lifestyles.

Outcome 6: Melbourne is a sustainable and resilient city

- Direction 6.1 - Transition to a low-carbon city to enable Victoria to achieve its target of net zero greenhouse gas emissions by 2050.
- Direction 6.2 - Reduce the likelihood and consequences of natural hazard events and adapt to climate change.

OFFICIAL

- Direction 6.3 - Integrate urban development and water cycle management to support a resilient and liveable city.
- Direction 6.4 - Make Melbourne cooler and greener.
- Direction 6.5 - Protect and restore natural habitats.
- Direction 6.6 - Improve air quality and reduce the impact of excessive noise.
- Direction 6.7 - Reduce waste and improve waste management and resource recovery.

Plan Melbourne (Department of Environment, Land, Water and Planning, 2017) is supported by the *Plan Melbourne Five Year Implementation Plan 2017-2022* (Department of Environment, Land, Water and Planning, 2019) which focuses on the delivery of actions of *Plan Melbourne*.

Action 80, Review the Victorian planning and building systems to support environmentally sustainable development outcomes for new buildings to consider their energy, water and waste management performance is identified as a short-term action (by the end of 2018 (0–2 years)).

The *Plan Melbourne 2017 – 2050, 2020 Report on Progress* (Department of Environment, Land, Water and Planning, 2021) identifies that:

The ‘Environmentally sustainable development of buildings and subdivisions: A roadmap for Victoria’s planning system document’ was released in early 2021 and outlines the government’s agenda for supporting Environmentally Sustainable Development through Victoria’s planning system. Work is currently underway to review planning standards on energy efficiency, air and noise pollution exposure, waste and resource recovery, and measures to ameliorate the impacts of urban heat extremes.

The amendment will help to achieve the above-mentioned outcomes of Plan Melbourne.

How does the amendment support or implement the Planning Policy Framework and any adopted State policy?

The amendment is consistent with and supports the following elements of the Planning Policy Framework:

Clause 11 Settlement

Planning is to recognise the need for, and as far as practicable contribute towards:

- Health, wellbeing and safety.
- Adaptation in response to changing technology
- Economic viability.
- A high standard of urban design and amenity.
- Energy efficiency.
- Prevention of pollution to land, water and air.
- Protection of environmentally sensitive areas and natural resources.
- Land use and transport integration.

Planning is to facilitate sustainable development that takes full advantage of existing settlement patterns and investment in transport, utility, social, community and commercial infrastructure and services.

Clause 13 Environmental Risks and Amenity

Planning should aim to avoid or minimise natural and human-made environmental degradation.

Planning should identify and manage the potential for the environment and environmental changes to impact on the economic, environmental or social wellbeing of society.

Planning should prepare for and respond to the impacts of climate change.

- 13.01-1S (Natural hazards and climate change): It is an objective to minimise the impacts of natural hazards and adapt to the impacts of climate change through risk-based planning.

Clause 14 Natural Resource Management

OFFICIAL

Planning is to assist in the conservation and wise use of natural resources including energy, water, land, stone and minerals to support both environmental quality and sustainable development.

- 14.02-2S (Water quality) as the amendment seeks to protect water quality.
- 14.02-3S (Water conservation) as the amendment seeks to ensure that water resources are managed in a sustainable way

Clause 15 Built Environment and Heritage

Planning is to recognise the role of urban design, building design, heritage and energy and resource efficiency in delivering liveable and sustainable cities, towns and neighbourhoods.

Planning must support the establishment and maintenance of communities by delivering functional, accessible, safe and diverse physical and social environments, through the appropriate location of use and development and through high quality buildings and urban design.

Planning should promote development that is environmentally sustainable and should minimise detrimental impacts on the built and natural environment.

- 15.02-1S (Energy and resource efficiency): It is an objective to encourage land use and development that is energy and resource efficient, supports a cooler environment and minimises greenhouse gas emissions. Strategies to achieve this include improving the energy, water and waste performance of buildings and subdivisions through environmentally sustainable development; promoting the consolidation of urban development and integration of land use and transport; improving the efficiency in energy use through greater use of renewable energy technologies and other energy efficiency upgrades and; supporting low energy forms of transport such as walking and cycling.

Clause 16 Housing

Planning should ensure the long-term sustainability of new housing, including access to services, walkability to activity centres, public transport, schools and open space.

- 16.01-3S (Housing Diversity): It is a strategy of this policy to encourage the development of well-designed medium-density housing that improves energy efficiency of housing.

Clause 18 Transport

Planning should ensure an integrated and sustainable transport system that provides access to social and economic opportunities, facilitates economic prosperity, contributes to environmental sustainability, coordinates reliable movements of people and goods, and is safe.

- 18.01-1S (Land use and transport planning): It is an objective to create a safe and sustainable transport system by integrating land use and transport. It is a strategy to require integrated transport plans to be prepared for all new major residential, commercial and industrial developments.

Clause 19 Infrastructure

- 19.01-2S (Renewable energy): It is an objective to promote the provision of renewable energy in a manner that ensures appropriate siting and design considerations are met.
- 19.03-5S (Waste and resource recovery): It is an objective to reduce waste and maximise resource recovery to reduce reliance on landfills and minimise environmental, community amenity and public health impacts. It is a strategy to achieve this to encourage development that facilitates sustainable waste and resource recovery.

How does the amendment support or implement the Local Planning Policy Framework, and specifically the Municipal Strategic Statement?

Council supports and encourages land use planning and development, design and construction using ESD principles. This commitment is embodied several clauses in Council's Clause 21 Municipal Strategic Statement (MSS).

The strategic vision for the municipality (as outlined in Clause 21.01-4 Strategic vision) is:

Cardinia Shire will be developed in a planned manner to enable present and future generations to live healthy and productive lives and to enjoy the richness of the diverse and distinctive characteristics of the Shire.

OFFICIAL

The proposed amendment responds to the vision, objectives and strategies in the LPPF as follows:

- An objective of Clause 21.02-1 Catchment and coastal management include 'To protect and improve the environmental health and social and economic values of water resources and ensure their efficient management'. Other objectives refer to the management and treatment of stormwater as well as utilising recycled waste water.
- Clause 21.03-2 Urban Established Area - Beaconsfield and Pakenham and 21.03-3 Urban Growth Area objective is to create a functional, attractive, safe and sustainable urban environment for the existing and future community. Several key principles for development are listed in both sections, including to increase environmental sustainability.
- Clause 21.03-4 Rural townships includes an objective to provide for the sustainable development of townships in the municipality having regard to environmental and servicing constraints.
- Clause 21.04 Economic Development identifies that the 'Officer-Pakenham State-significant Industrial Precinct' that will be a major provider of employment and business opportunities for residents of Cardinia Shire and Melbourne's south-east region. A key issue of this clause is 'recognising the need for innovation, diversification and resilience within the local economy to improve and develop employment opportunities and a strong employment base within the municipality to meet the demands of the growing population'.
- Clause 21.05-4 Public transport acknowledges the sparse nature of settlement in the municipality affects the viability of providing public transport to all residents, and there is a need to look at innovative and cost-effective means to maximise public transport services in the Cardinia Shire.
- Clause 21.05-5 Pedestrian and bicycle network identifies that alternative transport options such as walking and cycling are important in developing environmentally, socially and economically sustainable communities.
- Clause 21.06-1 Urban Design recognises that the long-term benefits of good design are a more attractive, functional and sustainable built environment. Enhancing the design and built form of existing industrial areas is identified as a key issue.
- Clause 21.02-8 Resource conservation identifies that the community needs to respond to climate change through strategies to reduce greenhouse gas emissions and the implementation of adaptation strategies to reduce vulnerability to projected future impacts of climate change. Three key areas for reducing the impact on the environment within the municipality are air, water and general waste.

The objective of this clause is to develop and promote more environmentally sustainable ways of living and working, including greenhouse gas emission reductions.

Strategies identified to achieve this include the reduction of greenhouse gas emissions, reduction in water consumption and encouraging development to incorporate sustainable building design including design that promotes the health and wellbeing of occupants.

This clause also identifies the 'development of local sustainable buildings guidelines' as further strategic work.

The Amendment does not change the objectives or strategies in the current MSS provision. It merely introduces a number of new provisions to establish a clear link between the MSS and the new policy.

Does the amendment make proper use of the Victoria Planning Provisions?

The amendment has been prepared in accordance with *Planning Practice Note 8 - Writing a Local Planning Policy* and *Planning Practice Note 46 - Strategic Assessment Guidelines*.

In particular, the Amendment makes proper use of the Victoria Planning Provisions as:

- the Municipal Strategic Statement includes broad strategic support for the local planning policy position; and
- local planning policies are appropriate tools to guide decision making in relation to a specific discretion.

How does the amendment address the views of any relevant agency?

OFFICIAL

The amendment leverages off support agencies have previously given to similar ESD local policies. Relevant agencies will also have an opportunity to provide their views on this amendment as part of the Amendment's statutory exhibition.

Does the amendment address relevant requirements of the Transport Integration Act 2010?

The amendment will not have a significant impact on the transport system, as defined in the Transport Integration Act 2010, as it would not in itself result in any increase in demand on the transport system.

Resource and administrative costs

• **What impact will the new planning provisions have on the resource and administrative costs of the responsible authority?**

It is anticipated that the amendment will not have a significant impact on the resources and administrative costs of the responsible authority, given that:

- the amendment will not result in an increased number of planning permit applications;
- the policy will provide a transparent and consistent framework for decision making, reducing resources currently required to negotiate planning outcomes.

However, the amendment will require additional staff resourcing to assess the planning permit applications that trigger an assessment against the new policy. Resourcing for an ESD Officer will form part of Council's budget process. The new position will be responsible for the provision of expert ESD advice to planning applicants throughout the process, as well as supporting planners with ESD related matters.

Where you may inspect this amendment

The amendment is available for public inspection, free of charge, during office hours at the following places:

Cardinia Shire Council
20 Siding Avenue
Officer 3809

The amendment can be inspected free of charge at:

- Cardinia Shire Council website at <https://www.cardinia.vic.gov.au/> and/or
- Department of Transport and Planning website at www.planning.vic.gov.au/public-inspection or by contacting 1800 789 386 to arrange a time to view the amendment documentation.

Submissions

Any person who may be affected by the amendment may make a submission to the planning authority. Submissions about the amendment must be received by 5pm **Day & Date TBC**.

Electronic submissions are preferable and should be sent to mail@cardinia.vic.gov.au (please include Amendment C278card in the e-mail title).

Or mailed to:

Cardinia Shire Council
Planning Strategy and Urban Design
Amendment C278card
PO Box 7
PAKENHAM VIC 3810

OFFICIAL

Panel hearing dates

In accordance with clause 4(2) of Ministerial Direction No.15 the following panel hearing dates have been set for this amendment:

- Directions hearing: To commence in the week of **Day & Date TBC**
- Panel hearing: To commence in the week of **Day & Date TBC**.

OFFICIAL

CARDINIA PLANNING SCHEME

22.11
 -/-/---
 Proposed C278card

ENVIRONMENTALLY SUSTAINABLE DEVELOPMENT

22.11-1
 -/-/---
 Proposed C278card

Policy Application

This policy applies to residential and non-residential development, excluding subdivision, in accordance with the thresholds detailed in this policy.

22.11-2
 -/-/---
 Proposed C278card

Objective

To achieve best practice in environmentally sustainable development from the design stage through to construction and operation.

Strategies

Achieve Best Practice environmentally sustainable development that:

- Is relevant to the type and scale of the development.
- Responds to site opportunities and constraints.
- Utilises a combination of locally available techniques, methodologies, and systems that have been demonstrated to achieve optimum ESD outcomes; and
- Encompass the full life of the build.

Energy performance

Reduce both energy use and energy peak demand through design measures such as:

- Building orientation.
- Shading to glazed surfaces.
- Optimising glazing to exposed surfaces.
- Inclusion of or space allocation for renewable technologies.

Integrated water management

Reduce total operating potable water use through appropriate design measures such as water efficient fixtures, appliances, equipment, irrigation and landscaping.

Encourage the appropriate use of alternative water sources (including greywater, rainwater, and stormwater).

Incorporate best practice water sensitive urban design to improve the quality of stormwater runoff and reduce impacts on water systems and water bodies.

Indoor environment quality

Achieve a healthy indoor environment quality, including thermal comfort and access to fresh air and daylight, prioritising passive design over mechanical heating, ventilation, cooling and lighting.

Reduce indoor air pollutants by encouraging use of low-toxicity materials.

Minimise noise levels and noise transfer within and between buildings and associated external areas.

Transport

Design development to promote the use of walking, cycling and public transport, in that order; and minimise car dependency.

Promote the use of low emissions vehicle technologies and supporting infrastructure.

Waste management

Promote waste avoidance, reuse and recycling during the design, construction and operation stages of development.

CARDINIA PLANNING SCHEME

Encourage use of durable and reusable of building materials.

Ensure sufficient space is allocated for future change in waste management needs, including (where possible) composting and green waste facilities.

Urban ecology

Protect and enhance biodiversity by incorporating natural habitats and planting indigenous vegetation.

Reduce urban heat island effects through building design, landscape design, water sensitive urban design and the retention and provision of canopy and significant trees.

Encourage the provision of space for productive gardens, particularly in larger residential developments.

22.11-3

Proposed C278card

Policy guidelines

Consider as relevant the following:

Residential

A Sustainable Design Assessment (including an assessment using BESS, STORM or other methods) for:

- 2 - 9 dwellings, or
- A building used for accommodation other than dwellings with a gross floor area between 100 sqm and 999 sqm.

A Sustainability Management Plan (including an assessment using BESS/Green star, STORM/MUSIC or other methods) and a Green Travel Plan for:

- 10 or more dwellings, or
- A building used for accommodation other than dwellings with a gross floor area equal to or more than 1000 sqm.

Non-residential

A Sustainable Design Assessment (including an assessment using BESS and STORM/MUSIC or other methods) for:

- A non-residential building with a gross floor area of 300 sqm to 999 sqm (excluding outbuildings), or
- An extension to an existing non-residential building creating between 300 sqm to 999 sqm of additional gross floor area (excluding outbuildings).

A Sustainability Management Plan (including an assessment using BESS/Green star, STORM/MUSIC or other methods) and a Green Travel Plan for:

- A non-residential building with a gross floor area equal to or more than 1000 sqm (excluding outbuildings).
- An extension to an existing non-residential building equal to or creating more than 1000 sqm of additional gross floor area (excluding outbuildings).

Mixed use

Applicable assessments for the residential and non-residential components of the development.

Consider as relevant the following tools to support a Sustainable Design Assessment or Sustainability Management Plan:

- *Sustainable Design Assessment in the Planning Process (IMAP, 2015)*
- *Built Environment Sustainability Scorecard 'BESS' (Council Alliance for a Sustainable Built Environment 'CASBE')*
- *Green Star (Green Building Council of Australia)*

CARDINIA PLANNING SCHEME

- *Model for Urban Stormwater Improvement Conceptualisation 'MUSIC' (Melbourne Water)*
- *Nationwide House Energy Rating Scheme 'NatHERS' (Department of Climate Change and Energy Efficiency)*
- *Stormwater Treatment Objective - Relative Measure 'STORM' (Melbourne Water)*
- *Urban Stormwater Best Practice Environmental Management Guidelines (Victorian Stormwater Committee, 1999)*
- *Waste Management and Recycling in Multi-Unit Developments - Better Practice Guide (Sustainability Victoria, 2018).*

In determining an application, the responsible authority will consider as appropriate: Whether an ESD plan or framework has previously been approved by the responsible authority

22.11-4

Proposed C278card

Commencement

This policy does not apply to applications received by the responsible authority before the approved gazettal date of this clause.

22.11-5

Proposed C278card

Expiry

This policy will expire when it is superseded by a equivalent provision of the Victoria Planning Provisions.

CARDINIA PLANNING SCHEME

21.0128/03/2018
VC145**CARDINIA SHIRE KEY ISSUES AND STRATEGIC VISION****21.01-1**20/11/2020
C250card**Snapshot of Cardinia Shire**

The Cardinia Shire is located on the south east fringe of Melbourne and is one of eight 'interface Councils' which form the perimeter of metropolitan Melbourne, providing a transition between urban and rural areas. The municipality has an area of approximately 1,280 square kilometres, comprising a variety of landforms and landscapes.

The northern part of the Cardinia Shire is set in the foothills of the Dandenong Ranges, and includes the Bunyip State Park and the Cardinia Reservoir. The red volcanic soils around Gembrook have been historically significant for potato production. The area is located within two water catchments being the Yarra Valley and Westernport catchments.

The Koo Wee Rup swamp and Western Port form the significant features of the southern part of the Cardinia Shire, and includes high quality agricultural land of State significance. The land is generally flat alluvial plains which have been substantially cleared of vegetation. The exception to this is the Heath Hill area, which is recognised as being of landscape significance by the National Trust.

The Princes Highway and the Princes Freeway corridor runs east-west through the centre of the Cardinia Shire and provides a demarcation between the hills in the northern part of the municipality and the alluvial plains to the south. The corridor is a key road and rail link between Melbourne, the Latrobe Valley and Gippsland. The South Gippsland Highway is a key link to South Gippsland and a tourist route to Phillip Island.

The majority of the Cardinia Shire's population is located within the urban areas of Beaconsfield, Officer and Pakenham. These areas are within the Casey-Cardinia South-east Growth Corridor, and will accommodate the majority of future residential and commercial growth. The remainder of the population is located within Cardinia's townships and rural residential areas.

The population within the Cardinia growth area is expected to grow 82% from a current population of around 109,000 people (2018) to approximately 198,000 people in 2041.

The future Officer-Pakenham Industrial Precinct, located south of the Princes Freeway, has been identified by *Plan Melbourne 2050* as a State-significant Industrial Precinct. When developed, this 2,500 hectare employment corridor will be a major provider of employment and business opportunities for Melbourne's south-east region.

21.01-220/11/2020
C250card**Key influences**

The key influences in relation to the municipality are:

- Urban growth including urban pressures on the rural hinterland and management of green wedge areas.
- The quality and character of existing rural townships.
- Infrastructure to meet the needs of the existing and future community.
- Environmentally significant areas.
- Areas of significant landscape value.
- The protection and sustainable use of agricultural land.
- The local economy including employment opportunities.

21.01-320/11/2020
C250card**Key issues**

The key issues facing Cardinia are focused around five strategic themes:

Environment

CARDINIA PLANNING SCHEME

- The protection of environmentally significant areas including the northern hills and the Western Port coast.
- The protection and management of biodiversity.
- The protection of the Koo Wee Rup swamp area, which contains important groundwater reserves and horticultural soils in the Western Port basin.
- The maintenance and enhancement of existing significant landscapes.
- The protection of life and property in terms of flooding and bushfire.
- The protection and enhancement of areas and places of heritage significance.
- The reduction in greenhouse gas emissions and potable water usage.
- The provision of a range of open space functions to meet community needs, encourage an active lifestyle and protect the environment.

Settlement and housing

- The management of urban growth including urban pressures on the rural hinterland and the Western Port Green Wedge.
- ~~New residential and non-residential development within the Urban Established Areas, Urban Growth Area and rural townships consider and incorporate best practice environmentally sustainable design measures from the design stage through to the construction and operation of the new development. The sustainable development of the Urban Established Areas, Urban Growth Area, and rural townships.~~
- The provision of appropriate rural residential and rural living development.
- The integration of health into planning communities to allow people to choose to be active in an environment that is convenient, safe and pleasant.

Economic development

- The development of the State-significant Pakenham-Officer Industrial Precinct as a major provider of employment for south-east Melbourne.
- The development of a balanced local economy and local employment opportunities for residents.
- The need to support and strengthen existing businesses.
- The attraction of new business, particularly to the State-significant Officer-Pakenham Industrial Precinct south of the Princes Freeway.
- The protection and sustainable use of agricultural and particularly land with soil that is of a high quality within the Western Port Green Wedge.
- The role of tourism within the wider business community.

Infrastructure

- The provision of infrastructure to meet the needs of the existing and future community.

Particular use and development

- ~~Encouraging the consideration and incorporation of best practice environmentally sustainable design measures to facilitate~~ an attractive, functional and environmentally sustainable built form in existing and future development.
- The restructure of inappropriate subdivisions.
- The integration of community safety with new and existing use and development.
- The location and characteristics of gaming venues.
- Encouraging the investigation of potential locations for a third airport in Melbourne's southeast.

CARDINIA PLANNING SCHEME

- Ensuring any redevelopment of golf courses has net community benefit and does not adversely impact upon the environment.

21.01-420/11/2020
C250card**Strategic vision**

Cardinia Shire Council's corporate plan *Creating the Future, Cardinia Council Plan 2018 - 2023* describes the following vision for the municipality:

"Cardinia Shire will be developed in a planned manner to enable present and future generations to live healthy and productive lives and to enjoy the richness of the diverse and distinctive characteristics of the Shire"

Council is committed to fostering the sustained wellbeing of the community and environment in the Cardinia Shire. In doing this, it seeks to balance the competing needs of the environment, economic development and the community by

- Developing a strong economic base.
- Recognising and protecting the diverse and significant environmental and cultural heritage values in the municipality.
- Providing opportunities to create and maintain a cohesive, safe and robust community.
- Providing a cohesive, safe and environmentally sustainable built environment for people to live, work and visit.
- Enhancing the experience of people who live, work and visit the municipality.

21.01-520/11/2020
C250card**Strategic framework plan**

The Cardinia Shire Strategic Framework Plan (Figure 1) sets out the general pattern for land use and development to respond to the key influences and issues to achieve the strategic vision for the municipality.

The purpose of the framework plan is to provide an overview of land use in the Cardinia Shire and to identify locations where specific land use outcomes will be supported and promoted.

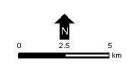
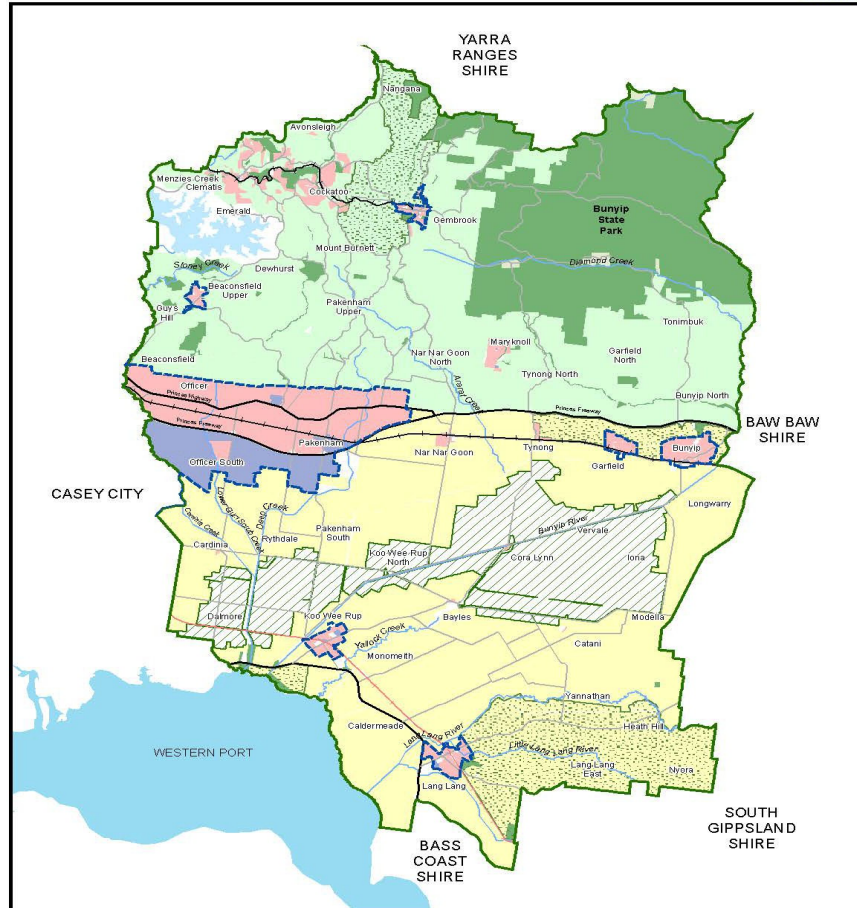
The major strategic directions identified in the Cardinia Shire Strategic Framework Plan include:

- Identification of major landscape features within the Cardinia Shire, including:
 - Western Port.
 - Cardinia Reservoir.
 - Bunyip State Park.
 - Dandenong Ranges Foothills.
- Locations of areas primarily used for general agriculture.
- Locations of areas identified as having high quality soils for agriculture and horticulture.
- Locations of areas identified as having environmental and landscape significance.
- Locations of rural townships and the urban growth area.
- Existing major transport links.
- Natural and man-made drainage.

Figure 1: Cardinia Shire strategic framework plan

CARDINIA PLANNING SCHEME

Cardinia Shire Strategic Framework Plan



Printed: 24-Oct-18 Data Source: State & Local Government © CARDINIA SHIRE COUNCIL

CARDINIA PLANNING SCHEME

21.02
20/11/2020
C250card

ENVIRONMENT

21.02-1
20/11/2020
C250card

Catchment and coastal management**Overview**

The majority of the Cardinia Shire is contained in the Western Port catchment, which is a Ramsar wetland, with a small section in the northern part of the municipality being within the Yarra catchment. The *Port Phillip & Western Port Regional Catchment Strategy* (www.ppwrcs.vic.gov.au) describes the catchment assets and how they are interrelated. It indicates what needs to be done to manage and use the assets in a sustainable and integrated way, and outlines goals and priorities for the future.

Key issues

- Recognising that a catchment is an integrated environmental system, and that development and actions undertaken in one part of the catchment have an effect on other parts of the catchment.
- Retaining and re-establishing native vegetation along waterways to minimise erosion and sediment.
- Managing stormwater and effluent in both urban and rural areas.
- Recognising that areas within the municipality have a shallow groundwater table, which increases the potential for salinity and its impacts on infrastructure and the environment.
- Controlling the amount of water entering the groundwater table in recharge areas in order to manage salinity.
- Recognising that climate change will increase the risk from flooding.
- [Encouraging best practice environmental sustainability development principles.](#)

Objective 1

To protect and improve the environmental health and social and economic values of water resources and ensure their efficient management.

Strategies

- Encourage the retention and, where appropriate, the re-establishment of native vegetation to minimise erosion and sediment entering waterways, reduce salinity and protect areas of landscape and biodiversity value.
- Encourage the protection of waterway environs including the fencing off of waterways and the re-establishment of riparian vegetation, especially in rural areas degraded by the impact of stock.
- Encourage the maintenance and upgrade of levee banks in the Koo Wee Rup Flood Protection District, particularly along the Bunyip Main Drain.
- Protect groundwater resources in the Western Port Basin.
- Protect Western Port and the associated significant estuarine, intertidal and immediate marine habitat of Western Port and promote sustainable outcomes.
- Minimise erosion and the entry of sediment into waterways associated with earthworks.

Objective 2

To effectively manage development to mitigate impacts on the operation and health of waterway systems.

Strategies

- Encourage the use of measures to manage and treat stormwater quality in both urban and rural areas including wetlands, litter and pollution traps, retarding basins and revegetation along waterways.

CARDINIA PLANNING SCHEME

- Provide for the retention and treatment of domestic wastewater on-site in accordance with the *State Environment Protection Policy (Waters,)* October 2018, where reticulated sewerage is not available.
- Maximise the potential to utilise recycled wastewater for agricultural, urban and other purposes.
- Require best practice water sensitive urban design and improvements in drainage in all new developments.
- Ensure residential and non- residential development considers and incorporates best practice environmentally sustainable design measures from the design stage through to the construction and operation of the new development.

Objective 3

To minimise the impact of shallow groundwater conditions and salinity on the built and natural environment, including both native vegetation and agricultural land, and to ensure that development does not contribute to increasing the risk or extent of salinity.

Strategies

- Ensure any development in an identified shallow ground water or potential salinity risk area is subject to a risk assessment which identifies appropriate mitigation measures.
- Discourage development that will be at risk from salinity or that will potentially increase the risk or extent of impacts from salinity.

Objective 4

To recognise areas within the municipality that are liable to flooding and inundation and to minimise potential risk to life, property and the environment.

Strategies

- Minimise development on land liable to flooding and inundation, and where development is permitted, ensure that the siting of buildings and works takes into account the potential depth of flooding, the route of major floodways, and the impact on the operation of the waterway system.

Implementation**Further strategic work**

- Identify land that is at risk from land-slip and investigate the application of an appropriate environmental overlay.
- Identify land that is at risk from salinity and investigate the application of an appropriate environmental overlay.

Reference documents

Land Capability Study of the Cardinia Shire, 1997

Salinity - Land Capability Study 2004 (Cardinia Shire)

Planning Decision Support Framework for Salinity, 2005 (Cardinia Shire)

Domestic Wastewater Management Plan, 2007 (Cardinia Shire)

Cardinia Shire Integrated Water Management Plan 2015-2025, September 2015

Cardinia Shire Waste and Resource Recovery Strategy 2017-2026, December 2017

Cardinia Shire Sustainable Environment Policy 2018-2028, June 2018

Yarra Valley Future Water: Water Plan 2013/14 to 2017/18, October 2012

South East Water: 2013-2018 Water Plan

CARDINIA PLANNING SCHEME

Port Phillip & Western Port Regional Catchment Strategy - www.ppwrcs.vic.gov.au.

Summary of the Regional Catchment Strategy for the Port Phillip & Western Port region, August 2015

State Environment Protection Policy (Waters), October 2018

21.02-2
21/01/2021
C234card

Landscape

Overview

The diverse landscapes within the Cardinia Shire are one of the municipality's strongest attributes. Five areas within the Cardinia Shire have been recognised as significant landscapes by the National Trust. These are the Western Port Coast, Heath Hill, Cockatoo Creek, Puffing Billy Corridor and Menzies Creek Valley.

Key issues

- Protecting significant landscapes, including the protection of the specific features of each landscape.
- Recognising that the landscape is an important element in the sustainable development of tourism in the municipality.
- Acknowledging that ridgelines are particularly vulnerable to inappropriate development.
- Recognising the pressures to develop land in locations of high scenic value.

Objective

To recognise and protect the diverse landscape and areas of significant landscape value.

Strategies

Landscape values

- Protect significant landscapes recognised by the National Trust including the Western Port Coast, Heath Hill, Cockatoo Creek and Menzies Creek Valley from development that is inconsistent with the landscape values and built form of the surrounds.
- Protect the scenic corridor of the Puffing Billy Tourist Railway from extensive native vegetation removal and development that is inconsistent with the landscape values of the existing corridor.
- Recognise the value of the landscape to the community and as a competitive strength for the sustained development of tourism in the municipality.
- Ensure that development in the urban growth area does not intrude or adversely impact on the landscape values of the area north of the Princes Highway and maintains significant vistas.
- Recognise the landscape values associated with rural land including areas south of the Princes Highway.
- Recognise the contribution of drains and bridges to the character of the rural landscape.
- Protect exotic vegetation if it is of heritage, cultural or economic value, or contributes to the character of an area.
- Minimise the fragmentation of land and removal of vegetation in areas of high landscape value.
- Ensure the design and landscaping of new developments include landscaping techniques that assist in heat control and protect and enhance biodiversity.

Design and built form

- Require the use of building materials and colours which are in context with the surrounding environment in areas of landscape significance and in rural residential and rural living areas.
- Ensure the sensitive siting of buildings and other structures having regard to the protection of prominent ridgelines, significant views and areas of remnant vegetation.

CARDINIA PLANNING SCHEME

- [Ensure residential and non- residential development considers and incorporates best practice environmentally sustainable design measures from the design stage through to the construction and operation of the new development.](#)

Implementation**Application of zones and overlays**

- Applying a Significant Landscape Overlay to protect the significant landscapes of the Koo Wee Rup Swamp area recognised by the National Trust and progressively over other identified significant landscapes and ridgelines.
- Applying an Environmental Significance Overlay over the northern hills area and other sites of significance to protect landscape and environmental values.
- Applying a Vegetation Protection Overlay to hills areas where vegetation is a significant factor in the landscape character.

Further strategic work

- Identify significant landscapes of the Koo Wee Rup Swamp area other than those recognised by the National Trust.
- Development of a policy for replacement planting ratios for the removal of vegetation in an Environmental Significance Overlay, Significant Landscape Overlay and Vegetation Protection Overlay.
- Prepare local policies to address the siting and design of horticultural structures, and the siting and design of large sheds in rural areas, and investigate whether a single policy can address both issues.
- Undertake a cultural landscape assessment of the Cardinia Western Port Green Wedge to consider the cultural landscape significance of the former Dalmore and Koo Wee Rup swamp environs and the Western Port coastline, including consideration of Indigenous history, the drainage of the swamp, former railway lines and the Soldier Settlement period.

Reference documents

Cardinia Shire Sustainable Environment Policy 2018-2028, June 2018

Puffing Billy Corridor Landscape Evaluation Study (1992)

Guidelines for Slope Management in Subdivisions (December 2017)

21.02-3
20/11/2020
C250card

Biodiversity**Overview**

Cardinia Shire contains a diverse environment with a wide range of native flora and fauna habitats. The municipality is known to contain State and Nationally significant rare and threatened species including the Southern Brown Bandicoot, Growling Grass Frog, Swamp Skink, Masked Owl, Helmeted Honeyeater, Powerful Owl, Emerald Star Bush, Matted Flax-Lily and indigenous grasslands, dwarf galaxias and Australian grayling.

The decline and fragmentation of habitats resulting in the loss of biodiversity is a key issue. Over 75% of the native vegetation in Cardinia Shire has been cleared leaving those areas of remnant vegetation of particular significance and value in terms of maintaining biodiversity within the Municipality.

Cardinia Shire forms part of the UNESCO Mornington Peninsula and Westernport Biosphere Reserve, protection of this biosphere relies on good environmental management of the catchment of which Cardinia shire is a key part.

Key issues

- Recognising that native vegetation provides habitat for key fauna species and provides for diverse flora species throughout the municipality.
- Maintaining biodiversity especially in areas of significance.

CARDINIA PLANNING SCHEME

- Maintaining and re-establishing wildlife corridor
- Recognising that soil erosion occurs on steep land where there are dispersible soils and in areas prone to landslips as a result of native vegetation removal.
- Controlling the spread and extent of pest plants and animal within the municipality.

Objective 1

To achieve no net loss in the quantity and quality of native vegetation in the municipality.

Strategies

Encourage the retention and re-establishment of native vegetation to protect areas of habitat and landscape value, minimise erosion, reduce sediment entering waterways and Western Port, reduce the potential for flooding on the Koo Wee Rup Swamp, and to reduce the potential for salinity.

- Protect areas of significant remnant vegetation (particularly endangered and vulnerable Ecological Vegetation Classes) as shown on the mapped Ecological Vegetation Classes provided by the Department of Environment, Land, Water and Planning.
- Ensure that the siting of buildings and works avoids and minimises the removal or fragmentation of native vegetation, especially in areas of biodiversity significance, and where appropriate, building envelopes should be approved as part of subdivision plans to minimise the removal of vegetation.
- Ensure the design and landscaping of new developments include landscaping techniques that assist in heat control and protect and enhance biodiversity.
- Require the replanting of indigenous vegetation where earthworks have been undertaken, particularly on steeply sloping land, on land subject to erosion, or in close proximity to a watercourse to manage and reduce sediment generation

Objective 2

To maintain and enhance the diversity of indigenous habitats and species.

Strategies**Areas of biodiversity significance**

- Avoid the fragmentation of land in areas of biodiversity significance and create new habitat corridors/biolinks.
- Encourage or, if appropriate, require landowners to undertake steps to conserve and enhance sites of biodiversity significance through a Conservation Covenant, or agreements under Section 173 of the Planning and Environment Act 1987.
- Protect and enhance biodiversity within natural waterways and man-made drains and dams through subdivision design, development design and appropriate management.
- Protect and enhance the environmental and landscape values of the land including habitat of botanical and zoological significance.
- Ensure the identification, protection and linking of important biodiversity areas within the growth area through Precinct Structure Plans including the provision of Native Vegetation Precinct Plans and Biodiversity Management Plans where required.

Threatened species

- Protect and enhance the habitat of threatened flora and fauna species, including the growling grass frog and southern brown bandicoot.

CARDINIA PLANNING SCHEME

Objective 3

To reduce the spread and extent of pest plants and animals.

Strategies

- Encourage land management practices which control and remove noxious and environmental weeds.

Implementation**Application of zones and overlays**

- Applying a Rural Conservation Zone or a Public Conservation and Resource Zone in areas of high biodiversity value.

Further strategic work

- Developing Native Vegetation Precinct Structure Plans and Biodiversity Management Plans in the Urban Growth Area.
- Identifying and mapping areas of endangered flora and fauna such as Growling Grass Frog and Southern Brown Bandicoot for inclusion in the Environmental Significance Overlay or Vegetation Protection Overlay.

Reference documents

Pest Plant Management Strategy 2012-2017

*Targeted Survey and Conservation Management Plan for the Growling Grass Frog *Litoria reniformis*: Pakenham Urban Growth Corridor, Ecology Partners, 2006*

Southern Brown Bandicoot Strategic Management Plan for the former Koo Wee Rup Swamp Area, Ecology Australia, 2009

CARDINIA PLANNING SCHEME

21.02-4
20/11/2020
C250card

Bushfire management**Overview**

Areas within the Cardinia Shire, particularly north of the Princes Highway, are prone to bushfires due to the topography and vegetation cover. During the Ash Wednesday fires of 1983, there was a significant loss of life and property in the Upper Beaconsfield and Cockatoo areas.

Bushfire risk is the product of a number of factors including fuel levels, slope, climatic conditions, population and the degree of preparation of individual property owners to cope with a fire. Other factors such as the accessibility of land to fire fighting vehicles and the availability of water will affect the risk levels for individual properties.

Key issues

- Recognising that climate change will increase the risk from bushfires.
- Prioritising human life over all other policy considerations.
- Directing new development to low risk locations.
- Where new development is permitted in high risk areas, safe access is provided.
- Ensuring that any further strategic work has regard to the significant bushfire risk faced by many parts of the Shire, including the development of township strategies and structure plans.
- Ensuring that any development in bushfire risk areas can implement bushfire protection without unacceptable biodiversity impacts.

Objective

To recognise that areas in the municipality are prone to bushfire and to minimise the potential risk to life, property and the environment.

Strategies**Subdivision**

- Ensure that the siting and design of subdivisions has fully considered the impact of existing slope, aspect and vegetation in terms of risks of bushfire, particularly with regard to the location of building envelopes.

Siting and design

- Ensure that the siting and design of houses and other accommodation in high risk bushfire areas minimises the potential risk of loss of life or property from wildfire, particularly in terms of the existing slope, aspect and vegetation.
- Ensure all development has appropriately designed access for emergency vehicles.
- Ensure development provides adequate access to water.
- Encourage the use of roads as a buffer between housing and bushland.

CARDINIA PLANNING SCHEME

Fuel reduction

- Encourage the use of controlled burning to reduce ground fuel levels and to help maintain healthy and diverse forests and woodlands consistent with the Ecological Vegetation Class (EVC).
- Support the implementation of the *Cardinia Municipal Fire Prevention Plan, 2016* and *Cardinia Municipal Wildfire Preparedness Plan 2005*.

Reference documents

Cardinia Municipal Fire Prevention Plan, 2016

Cardinia Municipal Wildfire Preparedness Plan, 2005

21.02-5
20/11/2020
C250card

Open space**Overview**

Cardinia Shire has a significant amount of regional open space, including Aura Vale Lake Park at Cardinia Reservoir, Gembrook Regional Park, Bunyip State Park, and Emerald Lake Park. In addition, regional parklands are proposed along the Cardinia Creek for the protection of the environmental values of the corridor and the provision of a regional passive recreation resource in recognition of the projected population growth in the Casey-Cardinia Growth Area.

There are also other significant waterways and streams throughout the Municipality that provide passive open space linkages. The *Pedestrian and Bicycle Strategy, August 2017* identifies primary, secondary and township path and trails network providing and improving access to key community and recreation facilities.

Key issues

- Providing open space to produce an attractive urban environment with a clear sense of place and identity and building a cohesive community.
- Providing active, passive and environmental open space, including varied play spaces, within the Urban Established Areas, Urban Growth Area, and townships to meet the needs of current and future communities and to protect environmental values.
- Developing open space linkages.
- Providing off road tracks and trails for walking and cycling.
- Developing and maintaining appropriate infrastructure for recreational horse riding.
- Providing for greater connectivity and amenity that encourages physical activity (including walking and cycling) throughout the Shire.

CARDINIA PLANNING SCHEME

Objective 1

- To ensure that land is provided and developed for a range of open space functions to meet community needs for active and passive open space (including linkages) and for the protection of the environment.

Strategies**Open space contributions**

- Ensure adequate active and passive open space is provided for communities and ensure that this is not constrained by environmental, drainage or other constraints.
- A minimum public open space contribution of 8% of the land to be subdivided must be provided as part of the subdivision of land for urban residential purposes.
- An 8% public open space contribution shall comprise land unencumbered by other constraints (eg: land required by Melbourne Water for drainage purposes, land within service easements) to allow its full use for recreation purposes.
- Any encumbered public open space should be provided in addition to the 8% public open space contribution for recreation purposes.

Location and design

- Balance the recreational, environmental and bushfire management objectives of open space reserves.
- Recognise the importance of open space in contributing to an attractive urban environment with a clear sense of place and identity.
- Co-locate community and recreational facilities and encourage joint management of these facilities.
- Provide play spaces within open space in accordance with *Cardinia Shire Play Space Strategy, 2014*.
- Discourage the fragmentation of open space within new developments and subdivisions.
- Ensure that the design of open space is functional having regard to its intended use, minimises maintenance and ensures community and personal safety.
- Support the ongoing development of recreation reserves in the rural townships in the municipality as an important focus of recreational activities for the community.
- Support the progressive development of the Cardinia Creek Regional Parklands as a regional passive recreation resource and for the protection of the creek environs as outlined in the *Cardinia Creek Parklands Future Direction Plan, 2002*.
- Recognise open space of high environmental value (e.g. Chambers Reserve, Mt Cannibal, and creek reserves) and ensure that the management of such open space protects and enhances the environmental values of the land.
- Develop open space corridors along major waterways which can be used for passive open space to improve water quality and act as wildlife corridors.
- Develop and maintain a network of off-road pedestrian, bicycle and equestrian trails within the municipality.

Objective 2

To provide open space which allows people to choose to be active in an environment that is convenient safe and pleasant.

CARDINIA PLANNING SCHEME

Strategies

- Ensure the location of open space is planned to allow residents to maximise opportunities to undertake physical activity.
- Ensure that open space is well connected to encourage physical activity.

Implementation**Application of zones and overlays**

- Applying the Infrastructure Contributions Overlay (ICO), or Development Contributions Plan Overlay (DCPO), as appropriate, in areas within the Urban Growth Area and the Urban Established Area, to fund the acquisition and development of district open space and linear open space along major waterways.

Further strategic work

- Develop a policy for the provisions of open space in commercial and industrial areas for inclusion in the schedule to Clause 53.01 seeking a contribution rate of 2%.
- Finalise the draft Developer Landscape Guidelines and implement appropriate planning policy.

Reference documents

Equestrian Strategy (2014)

Cardinia Creek Parkland Future Direction Plan, Parks Victoria, 2002

Recreation Open Space Strategy 2000

Cardinia Growth Corridor Sports Strategy (2005)

Any listed at Clause 11.04 (Open space) of the State Planning Policy Framework

Healthy by Design (January 2017)

21.02-6
20/01/2023
C270card

Post-contact heritage**Overview**

The rich and diverse cultural heritage of Cardinia Shire illustrates the historic use, development and occupation of the land. This history is demonstrated by a wide range of heritage places that include buildings and structures, monuments, trees, landscapes and archaeological sites. These places give Cardinia a sense of historic continuity as well as demonstrating the economic, social and political circumstances of the time.

Key issues

- Protecting recognised sites and precincts of heritage significance with State, Regional and Local Significance.
- Defining the extent of heritage places to be included in a Heritage Overlay.
- Recognising and protecting significant trees.

Objective

To provide for the protection and appropriate management of sites of heritage significance.

CARDINIA PLANNING SCHEME

Strategies

- Protect sites of State, regional and local heritage significance.
- Promote the conservation of sites of local heritage interest.
- Encourage and support the reuse of existing heritage places for appropriate land uses, including, where appropriate, prohibited uses if that use will assist in the preservation of the heritage site
- Give consideration to the heritage context of sites which adjoin sites of heritage significance.
- Recognise the significance of heritage buildings and sites in contributing to the character of townships within the municipality.
- Recognise and protect the cultural significance of war memorials and avenues of honour in the municipality.
- Recognise and protect the cultural significance of the Western Port Green Wedge, particularly the significance of the former Dalmore and Koo Wee Rup swamp environs and the Western Port coastline.

Implementation**Further strategic work**

- Investigate development and implementation of a Heritage Policy to assist with assessment of proposals for heritage properties and adjoining properties that addresses a range of issues including subdivision, demolition, redevelopment and urban design.

Reference documents

- Cardinia Shire (North) Heritage Study – Volume 1 Heritage Program (1996)*
- Cardinia Shire (North) Heritage Study – Volume 2 Environmental History (1996)*
- Cardinia Shire (North) Heritage Study – Volume 3 Heritage Places (1996)*
- Cardinia Shire (Emerald & Cranbourne Districts) Heritage Study – Volume 1 Environmental History (1998)*
- Cardinia Shire (Emerald & Cranbourne Districts) Heritage Study – Volume 2 Heritage Places (1998)*
- Cardinia Local Heritage Study Review – Volume 1: Executive Summary (May 2013) (Sept 2015)*
- Cardinia Local Heritage Study Review – Volume 2: Key Findings & Recommendations (May 2013) (Sept 2015)*
- Cardinia Local Heritage Study Review – Volume 3: Heritage Place and Precinct Citations - Revised September 2017*
- The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Heritage Significance (2013)*
- Old Emerald Bakehouse – 1 Kilvington Drive (rear), Emerald (December 2012)*
- Cardinia Shire Council Significant Tree Study (May 2009)*
- Significant Trees - Statement of Significance (John Patrick Landscape Architects, October 2022)*

21.02-7
20/11/2020
C250card

Aboriginal cultural heritage**Overview**

The Cardinia Shire Council acknowledges that the municipality contains Aboriginal heritage sites and places of cultural significance, some of which have been identified and formally recorded but many which have not. All Aboriginal heritage sites, whether formally registered or not, are protected under

CARDINIA PLANNING SCHEME

the *Aboriginal Heritage Act 2006*. Aboriginal heritage sites and places are highly valued by traditional and contemporary Aboriginal groups and should also be valued by the broader Australian community. The Cardinia Shire Council seeks to promote best heritage practices by ensuring heritage sites and places are preserved for current and future generations.

Key issue

- Identifying and protecting sites of significant Aboriginal heritage.

Objective

To provide for the protection and management of significant Aboriginal heritage sites, material culture, and places of historical and spiritual significance to relevant contemporary Aboriginal people.

Strategies**Consultation**

- Work in partnership with Registered Aboriginal Party/s and any other relevant stakeholders to manage and protect indigenous cultural heritage values
- Develop a process of consultation with Registered Aboriginal Party/s which will allow them to have input into development decisions at a strategic planning level.

Conservation sites

- Use public open space or linked corridors of public open space, within and between development areas, where possible, to conserve Aboriginal heritage sites, taking into account and balancing other community and environmental needs.

Reference documents

Shire of Cardinia Urban Growth Corridor Aboriginal Heritage Study (2004)

21.02-8
20/11/2020
C250card

Resource conservation

Conserving, reducing and effectively managing the resources we use are essential to achieving ecological sustainable development. The use of fossil fuels, particularly in electricity generation and transport has been the major source of greenhouse gas emissions resulting in climate change. The community needs to respond to climate change through strategies to reduce greenhouse gas emissions and the implementation of adaptation strategies to reduce vulnerability to projected future impacts of climate change. Three key areas for reducing the impact on the environment within the municipality are air, water and general waste.

Key issues

- Minimising greenhouse gas emissions and developing greenhouse adaptation strategies.
- Reducing water consumption and improving water quality.
- Reducing waste generation and minimising waste going to land fill.
- Recognising the need to reduce and divert food waste from landfill and reuse water to grow food.
- Encouraging best practice environmentally sustainable development principles.

Objective

To develop and promote more environmentally sustainable ways of living and working, including greenhouse gas emission reductions.

Strategies

CARDINIA PLANNING SCHEME

General

- Support the implementation of key regional activities identified through Western Port Greenhouse Alliance to reduce greenhouse gas emissions.

Reduction of greenhouse gas emissions

- Encourage developments that are based around public transport and alternative forms of transport including walking and cycling.
- Promote environmentally sustainable communities through appropriate urban design that encourages alternate forms of transport to reduce energy consumption.

Reduction in water consumption

- Ensure water sensitive urban design principles for all developments and subdivisions including the use of the third pipe recycled water systems and the use of water tanks where appropriate.
- Encourage the use of recycled or alternative water in the construction of roads in all subdivision and in other works and ongoing maintenance activities, where this water is available.

Design and construction

- Encourage the use of environmentally sustainable construction materials and techniques.
- Encourage development that incorporates sustainable building design including design that promotes the health and well being of occupants.
- Encourage the inclusion of, or provision for, sustainable technology in the design of new buildings.
- Provide and preserve landscaping that enhances amenity and maintains ecosystems.
- Ensure residential and non-residential development considers and incorporates best practice environmentally sustainable design measures from the design stage through to the construction and operation of the new development.

~~Implementation~~**~~Further strategic work~~**

- ~~The development of local sustainable buildings guidelines.~~

Reference documents

Sustainable Development and Greenhouse Reduction Strategy – Cardinia Local Action Plan 2006

Sustainable Water Use Plan (2006)

Cardinia Shire Council Stormwater Management Plan (2002)

CARDINIA PLANNING SCHEME

21.03
20/11/2020
C250card

SETTLEMENT AND HOUSING

21.03-1
20/11/2020
C250card

Housing

Overview

Housing within the Cardinia Shire is currently dominated by detached dwellings in both urban and rural areas. The urban area includes the Urban Established Area and the Urban Growth Area, while the rural area comprises Townships and rural-residential development..

The urban area in the Cardinia Shire will continue to attract predominantly young families into the foreseeable future. However, as the housing market progressively matures and the needs of households change there will be increasing demand for more diverse forms of housing.

Key issues

- Providing for a diversity of housing types and densities, including increased housing density around activity centres.
- Balancing diversity of housing choices in rural townships while ensuring consistency with the character of the township.
- Recognising the need for affordability and availability of housing choice for different income levels in both the rental and purchaser markets.
- Recognising the demand for specialist design housing including housing for the aged, people with a disability or mobility issues.
- Identifying the demand for social and community housing.
- ~~Providing opportunity for development of 'Affordable Housing'.~~
- [Encouraging best practice environmentally sustainable development principles.](#)

Objective 1

To encourage a diversity in housing to meet the needs of existing and future residents.

Strategies

- Ensure that future housing growth is effectively managed to maintain and enhance the qualities of the municipality.
- Encourage a range of lot sizes and housing types in new developments that satisfy the needs and aspirations of the community.
- Encourage an increase in densities that has a high standard of urban design, timely provision of infrastructure and is consistent with the existing and/or preferred neighbourhood character.
- Encourage medium density housing to be located within or at the interface of activity centres and overlooking local and linear open space.
- Ensure residential development and subdivisions are designed to be responsive to existing urban character.
- ~~Ensure that new development is located within a safe, attractive and well planned environment that allows residents to maximise opportunities to undertake physical activity.~~
- [Ensure new residential development incorporates best practice environmentally sustainable design principles that enhance occupant comfort and environmental performance.](#)

Objective 2

To encourage the provision of housing to cater for groups within the community with specific housing requirements.

CARDINIA PLANNING SCHEME

Strategies

- Encourage the development of a diverse, flexible, adaptable range of housing types and tenures.
- Encourage the establishment of social and community housing in townships and areas within the urban growth boundary with good access to public transport and services.
- Encourage and facilitate the development of ‘Affordable Housing’ as set out in the *Planning and Environment Act 1987*, in townships and within the urban growth boundary with good access to public transport and services.
- Encourage the development of appropriately located and designed accommodation for the aged including options for ageing in place.
- Encourage development that supports adaptive housing, in appropriate locations.

Implementation

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

Use of policy and exercise of discretion

- When assessing new developments and residential subdivisions use the Healthy by Design (January 2017) checklist, as appropriate.

Application of zones and overlays

- Applying the Comprehensive Development Zone to substantial development sites with a mix of uses.
- Applying the Low Density Residential Zone to land located within the urban growth boundary, and within townships where bushfire exposure is not higher than 12.5 kw/sqm and development can be adequately serviced.

Further strategic work

- Progressively rezoning land for residential purposes in accordance with township strategies.
- Reviewing the application of the Comprehensive Development Zone and rezoning to standard zones when development is complete.
- Further develop the draft Childcare Centre Policy as a local policy to also include all non-residential uses in residential areas.

Reference documents

Casey-Cardinia Growth Area Framework Plan, 2006

Southern Regional Housing Statement, Southern Regional Housing Working Group, April 2006

Housing Strategy 2013 – 2018, Strategic Action Plan, December 2013

Healthy by Design, January 2017, (Cardinia Shire)

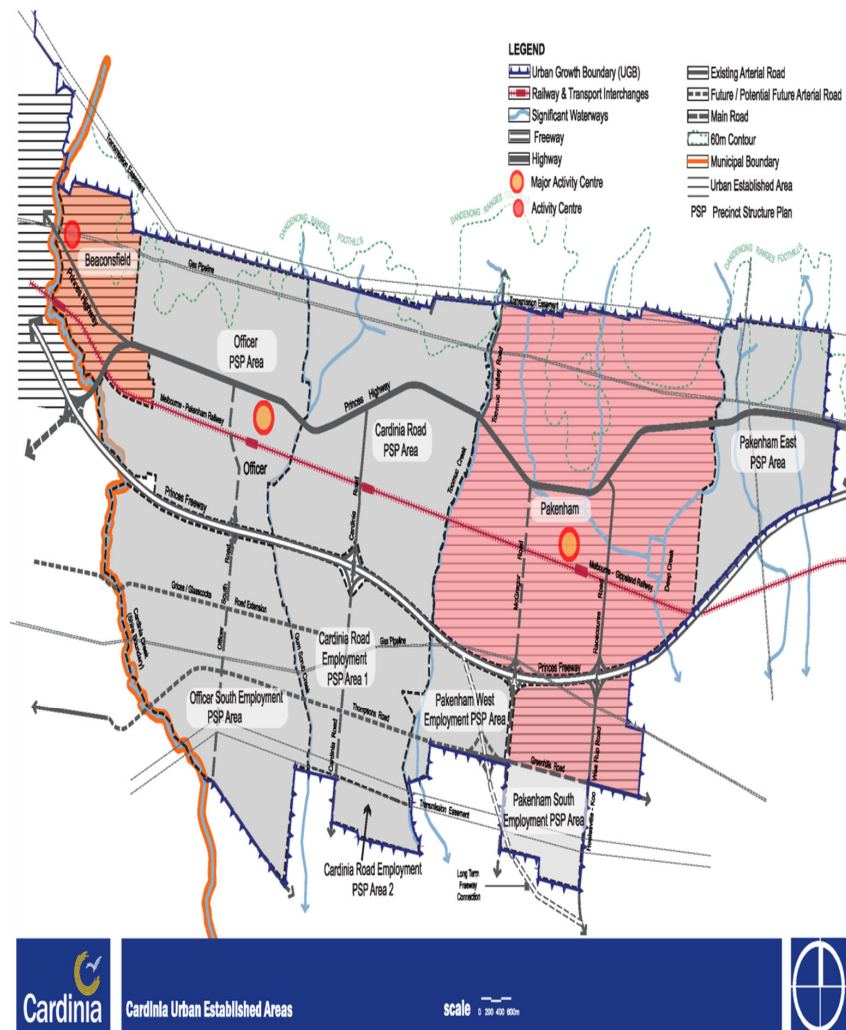
21.03-2
13/05/2022
C257card

Urban Established Area - Beaconsfield and Pakenham

Part of the Cardinia Shire, between Beaconsfield and Pakenham East, is located within the Casey-Cardinia Growth Area for metropolitan Melbourne, and has been recognised as part of a metropolitan growth corridor since 1971.

The Cardinia Shire urban area is divided into ten precincts. The Beaconsfield and Pakenham precincts represent the Urban Established Area of the Shire, as shown in Figure 1.

CARDINIA PLANNING SCHEME



Key issues

Key elements of the Urban Established Area includes:

- Land for residential purposes in Beaconsfield, and generally north of the Princes Freeway in Pakenham.
- Land for employment purposes in Beaconsfield Activity Centre, and in Pakenham Major Activity Centre land north of Greenhills Road.
- A Major Activity Centre at Pakenham.
- A Large Neighbourhood Activity Centre at Beaconsfield.
- Open space corridors along Toomuc Creek and Deep Creek.
- An arterial road network including the Princes Freeway (Pakenham Bypass), Princes Highway,

CARDINIA PLANNING SCHEME

Beaconsfield-Emerald Road, McGregor Road, Greenhills Road, Healesville-Koo Wee Rup Road, and Racecourse Road.

- A principal public transport network comprising railway stations at Beaconsfield and Pakenham along the Gippsland Railway Line, and a regional bus route along the Princes Highway to the Pakenham Major Activity Centre.

Key principles for development include:

- To coordinate the appropriate staging and development of land.
- To ensure greater diversity of housing types and size.
- To increase 'Affordable Housing' for very low, low and moderate income households.
- To attract commercial investment and create diverse employment opportunities.
- To create vibrant well serviced activity centres.
- To provide sustainable transport networks.
- To ensure that urban areas are well serviced by utility infrastructure.
- To deliver accessible community facilities and infrastructure.
- To deliver arts and cultural facilities.
- To create multi use, linked open space networks.
- To increase environmental sustainability.
- ~~To ensure residential and non-residential development to achieve best practice environmentally sustainable outcomes.~~
- To achieve good urban design outcomes with a strong urban character.
- To ensure the development of new infrastructure supports and encourages an active lifestyle.

Objective

To create a functional, attractive, safe and sustainable urban environment for the existing and future community of the Urban Established Area.

Strategies

- Provide for the development in the Urban Established Area in accordance with approved Development Plans, Structure Plans, Urban Design Frameworks, and Incorporated Provisions.
- ~~Ensure residential and non-residential development considers and incorporates best practice environmentally sustainable design measures from the design stage through to the construction and operation of the new development.~~
- Provide for Infrastructure Contributions or Development Contributions, as appropriate, to fund physical and community infrastructure associated with urban development.
- Protect areas of future urban development from inappropriate subdivision and development that limits the future orderly and efficient development of the land for urban purposes.
- Provide a distinct character and identity for urban areas through retention of existing vegetation, respect for topography, appropriate streetscaping and provision of adequate open space.

Implementation

The strategies in relation to the Urban Established Areas will be implemented through the planning scheme by:

Use of policy and exercise of discretion

- When deciding on applications for use and development within the Urban Established Areas, considering, as appropriate:

CARDINIA PLANNING SCHEME

- *Healthy by Design checklist, January 2017.*

Application of zones and overlays

- Applying the Comprehensive Development Zone to substantial redevelopment sites with a mix of uses.
- Applying the Development Contributions Plan Overlay (DCPO), as appropriate, to areas with approved Infrastructure Contributions Plans or Development Contributions Plans to facilitate timely provision of infrastructure.

Further strategic work

- Implement the actions identified in the Pakenham Major Activity Centre Structure Plan, 15 February 2021.
- Investigate a policy or development plan to appropriately manage subdivision, infrastructure provision, and development within Ryan Road area in Pakenham.

Reference documents

Casey-Cardinia Growth Area Framework Plan, 2006

Housing Strategy 2013 – 2018, Strategic Action Plan, December 2013

Healthy by Design, January 2017 (Cardinia Shire)

Beaconsfield Structure Plan, December 2013

Pakenham Township Development Contributions Plan, September 1997 (Amended June 2017)

Pakenham Major Activity Centre Structure Plan, 15 February 2021

Pakenham Major Activity Centre Urban Design Framework, 15 February 2021

Former Pakenham Racecourse Comprehensive Development Plan, February 2010

Arts and Cultural Facilities Feasibility Study, June 2015 (Cardinia Shire)

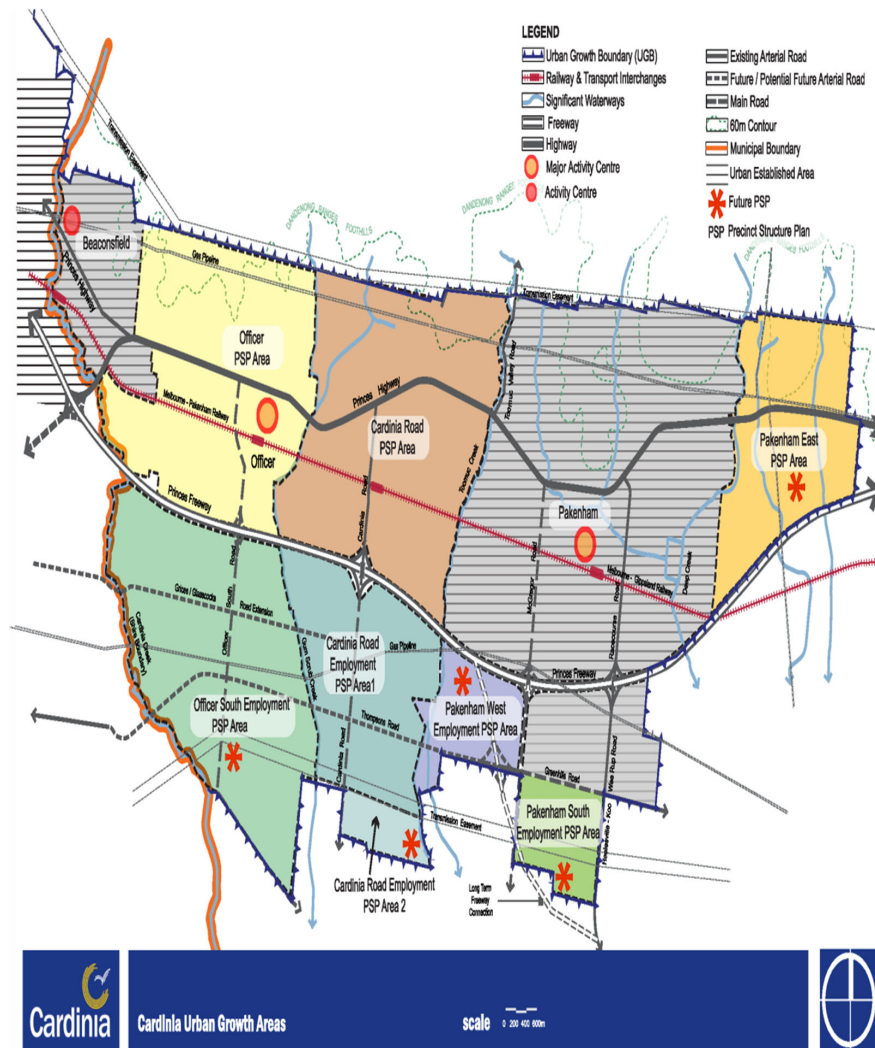
CARDINIA PLANNING SCHEME

21.03-3
30/09/2021
C228card

Urban Growth Area

Overview

Within the Cardinia urban area, there are eight precincts that make up the Urban Growth Area of the Shire as shown in Figure 2.



CARDINIA PLANNING SCHEME

Key issues

Key elements of the Casey-Cardinia Growth Area Framework Plan, 2006 in relation to the Cardinia Urban Growth Area include:

- An urban growth boundary generally defined by the electricity transmission line easement to the north, Mount Ararat North Road and Mount Ararat South Road to the east, and generally the electricity transmission line easement and Koo Wee Rup Flood Protection District to the south.
- Land for urban residential purposes north of the Princes Freeway (Pakenham Bypass).
- A major employment corridor (Pakenham-Officer State-significant Industrial Precinct) of approximately 2,500 hectares south of the Princes Freeway (Pakenham Bypass).
- A Major Activity Centre at Officer.
- Large Neighbourhood Activity Centres at Lakeside Boulevard and Lakeside Square.
- Open space corridors along Cardinia Creek, Gum Scrub Creek, Toomuc Creek and Deep Creek, including regional parklands associated with Cardinia Creek.
- An arterial road network including the Pakenham Bypass (Princes Freeway), Princes Highway, Thompson Road to Greenhills Road connection, Beaconsfield Emerald Road, O'Sheas Road connection, Officer South Road, Cardinia Road, Pakenham Road, McGregor Road and Koo Wee Rup Road.
- A principal public transport network comprising railway stations at Beaconsfield, Officer, Cardinia Road and Pakenham along the Gippsland Railway Line, and a regional bus route along the Princes Highway to the Pakenham Major Activity Centre.

Key principles for the development of precincts include:

- To coordinate the appropriate staging and development of land.
- To ensure greater housing choice, diversity and affordability.
- To increase 'Affordable Housing' for very low, low and moderate income households.
- To attract commercial investment and create diverse employment opportunities.
- To create vibrant well serviced activity centres.
- To provide sustainable transport networks.
- To ensure that urban areas are well serviced by utility infrastructure.
- To deliver accessible community facilities and infrastructure.
- To deliver arts and cultural facilities.
- To create multi use, linked open space networks.
- To increase environmental sustainability.
- **To ensure residential and non-residential development to achieve best practice environmentally sustainable outcomes.**
- To achieve good urban design outcomes with a strong urban character.
- To ensure the development of new infrastructure supports and encourages an active lifestyle.

CARDINIA PLANNING SCHEME

Objectives

To create a functional, attractive, safe and sustainable urban environment for the existing and future community of the Urban Growth Area.

To provide for development of Precinct Structure Plans in accordance with the South East Growth Corridor Plan.

Strategies

- Provide for the staging of development in the Urban Growth Area in accordance with the following table:

Location	Staging
Cardinia Road Precinct Structure Plan	Short to medium term
Officer Precinct Structure Plan	Short to medium term
Pakenham East Precinct Structure Plan	Medium term
Pakenham South Employment Precinct Structure Plan	Short to medium term
Pakenham West Employment Precinct Structure Plan	Long term
Cardinia Road Employment Precinct Structure Plan Area 1	Short to medium term
Officer South Employment Precinct Structure Plan	Medium to long term
Cardinia Road Employment Precinct Structure Plan Area 2	Review the option of potential development in this area in the long term

CARDINIA PLANNING SCHEME

(Base year 2018: short term – 0 to 5 years, medium term – 5 to 15 years, long term - 15 years +)

- Provide for development in the Urban Growth Area in accordance with approved Precinct Structure Plans.
- Provide for infrastructure contributions or development contributions, as appropriate, to fund physical and community infrastructure associated with urban development.
- Protect areas of future urban development from inappropriate subdivision and development that limits the future orderly and efficient development of the land for urban purposes.
- Provide a distinct character and identity for urban areas through retention of existing vegetation, respect for topography, appropriate streetscaping and provision of adequate open space.
- Ensure residential and non-residential development considers and incorporates best practice environmentally sustainable design measures from the design stage through to the construction and operation of the new development.

Application of zones and overlays

- Applying the Infrastructure Contributions Overlay (ICO), or Development Contributions Plan Overlay (DCPO), as appropriate, to areas with approved Infrastructure Contributions Plans or Development Contributions Plans to facilitate timely provision of infrastructure.
- Applying the Comprehensive Development Zone to substantial redevelopment sites with a mix of uses.

Further strategic work

- Progressively prepare detailed Precinct Structure Plans, Activity Centre Structure Plans and Infrastructure Contribution Plans for precincts within the Urban Growth Area.

Reference documents

Casey-Cardinia Growth Area Framework Plan, 2006

Cardinia Road Precinct Structure Plan, September 2008

Cardinia Road Precinct Development Contributions Plan, September 2008 (Revision 1.4 2017)

Cardinia Road Employment Precinct Structure Plan, September 2010

Officer Precinct Structure Plan, September 2011

Officer Development Contributions Plan, 2011 (Amended June 2017)

CARDINIA PLANNING SCHEME

Pakenham West Comprehensive Development Plan, 1 September 2005

Housing Strategy 2013-2018 Strategic Action Plan December 2013

Arts and Cultural Facilities Feasibility Study, 2015

21.03-4
20/11/2020
C250card

Rural townships

The Cardinia Shire covers an area of 1,280 square kilometres with the pattern of settlement primarily focused in the Urban Established Area, Urban Growth Area and townships ranging from large rural townships to rural localities as shown in the table below.

Large rural townships	Small rural townships	Rural localities
Emerald	Avonsleigh	Tynong North
Gembrook	Clematis	Tonimbuk
Cockatoo	Bayles	Pakenham South
Upper Beaconsfield	Cardinia	Pakenham Upper
Garfield	Maryknoll	Iona
Bunyip	Tynong	Cora Lynn
Koo Wee Rup		Catani
Lang Lang		Heath Hill
Nar Nar Goon		Caldermeade
		Monomeith
		Dewhurst
		Modella
		Yannathan
		Guys Hill
		Nangana

Key issues

- Retaining and enhancing the existing rural township character.
- Setting clear limits for development for the townships.
- Acknowledging that the capacity for growth varies depending on the environmental and infrastructure capacities of each of the towns.
- Designing with regard to the surrounding unique characteristics of the townships.
- ~~To deliver arts and cultural facilities.~~
- ~~Encouraging best practice environmentally sustainable development principles.~~

Objective 1

To provide for the sustainable development of townships in the municipality having regard to environmental and servicing constraints.

Strategies

CARDINIA PLANNING SCHEME

- Provide sewage treatment and stormwater management systems to minimise the impact of existing township development on the environment, and to enable development to occur in townships in accordance with strategy plans.

Objective 2

To maintain and enhance the distinct character and environmental qualities of each of the townships.

Strategies

- Ensure that the siting and design of new buildings and works complement the rural character of the township, and does not dominate the landscape or surrounding built form character.
- Maintain the current diverse range of lot sizes in the hills towns as an intrinsic part of their character.
- Protect the natural environment and character of the area, particularly areas of remnant vegetation in the hills townships.
- Maintain and promote the overall historic character within each township.
- Encourage new development to include works that enhance the environment including the protection of waterways and remnant vegetation, weed control and revegetation.
- Ensure residential and non-residential development considers and incorporates best practice environmentally sustainable design measures from the design stage through to the construction and operation of the new development.

Objective 3

To create sustainable and functional townships that support a range of commercial, retail, community and recreational facilities and services.

Strategies

- Limit residential development, including rural residential subdivision, in the hills towns (Emerald, Gembrook, Cockatoo, Upper Beaconsfield, Clematis, Avonsleigh, and Maryknoll) unless provided for by the township strategies or the development results in significant environmental or community benefits.
- Recognise Emerald in the northern part of the municipality and Koo Wee Rup in the southern part of the municipality as a focus for higher order commercial and community facilities and services.

Implementation**Use of policy and exercise of discretion**

- When assessing new developments and residential subdivisions use the *Healthy by Design checklist, January 2017*, as appropriate.

Application of zones and overlays

- Applying the Restructure Overlay to facilitate the restructuring of old and inappropriate subdivisions within rural townships.

Further strategic work

- Preparing a Design and Development Overlay to apply to land included in a Neighbourhood Residential Zone in Koo Wee Rup, Lang Lang and other townships.
- Preparing a Design and Development Overlay to apply to land included in a General Residential Zone in Garfield and Bunyip.
- In consultation with the local community, prepare a policy statement for all small rural townships that will establish a basis for future strategic planning decisions in each township.

CARDINIA PLANNING SCHEME

- Preparing Township Strategies for large rural townships where one has not yet been prepared.
- Progressively undertake reviews of each Township Strategy.
- Investigate the sustainable development of towns within the green wedge, with a priority to investigate Nar Nar Goon, Tynong, Garfield and Bunyip.

Reference documents

Cardinia Township Character Assessment – Garfield, Bunyip, Koo Wee Rup and Lang Lang, November 2006

Bunyip Township Strategy, September 2009.

Cockatoo Township Strategy, March 2008.

Emerald District Strategy, June 2009.

Garfield Township Strategy, August 2002.

Koo Wee Rup Township Strategy, October 2015.

Lang Lang Township Strategy, July 2009.

Upper Beaconsfield Township Strategy, July 2009.

Healthy by Design, January 2017 (Cardinia Shire)

Arts and Cultural Facilities Feasibility Study. 2015 (Cardinia Shire)

21.03-5
20/11/2020
C250card

Rural residential and rural living development**Overview**

Rural residential development is defined as the development of single dwellings on lots of between 0.4 hectare and 2.0 hectares. Rural living is defined as residential development on lots between 2 hectares and 16 hectares. The *Land Capability Study of the Cardinia Shire, 1997* undertaken for the Cardinia Shire Council recognises that the indiscriminate development of land for small lot rural and rural residential purposes may result in extensive land and water degradation, loss of high quality agricultural land and unnecessarily high development and maintenance costs.

Key issues

- Integrating rural residential and rural living development with an urban area or township.
- ~~Recognising that rural residential and rural living development impacts on the environmental characteristics and constraints of the area.~~
- ~~Encouraging best practice environmentally sustainable development principles.~~
- Recognising the impact of rural residential and rural living development encroaching on agricultural land.

Objective 1

To recognise the demand for rural residential and rural living development, and to provide for this development where it is closely integrated with an existing township or urban area.

Strategies

- Ensure that rural residential and rural living development is appropriately located to minimise its impact on surrounding agricultural land.
- Encourage rural residential development within existing urban areas and townships.

Objective 2

CARDINIA PLANNING SCHEME

To ensure development reflects a high quality of design and does not result in environmental degradation.

Strategies

- Ensure subdivisions and developments are designed to take into account the constraints of the area and limit detrimental impacts to the surrounding environment.
- Ensure residential and non- residential development considers and incorporates best practice environmentally sustainable design measures from the design stage through to the construction and operation of the new development.
- Ensure that rural residential and rural living development on land affected by environmental hazards and constraints is undertaken in a manner which prevents environmental degradation and minimises any risk from hazards.
- Ensure that any proposal for rural residential and rural living development is assessed in relation to its ability to contain all wastewater within the site.
- Ensure that proposed development will not increase and will adequately control pest plants and pest animals on site.

Implementation**Further work**

- Rezoning Rural Living Zones within the Urban Growth Boundary to a residential zone.

Reference documents

Land Capability Study of the Cardinia Shire, 1997
PPN37 – Rural Residential Development, June 2015

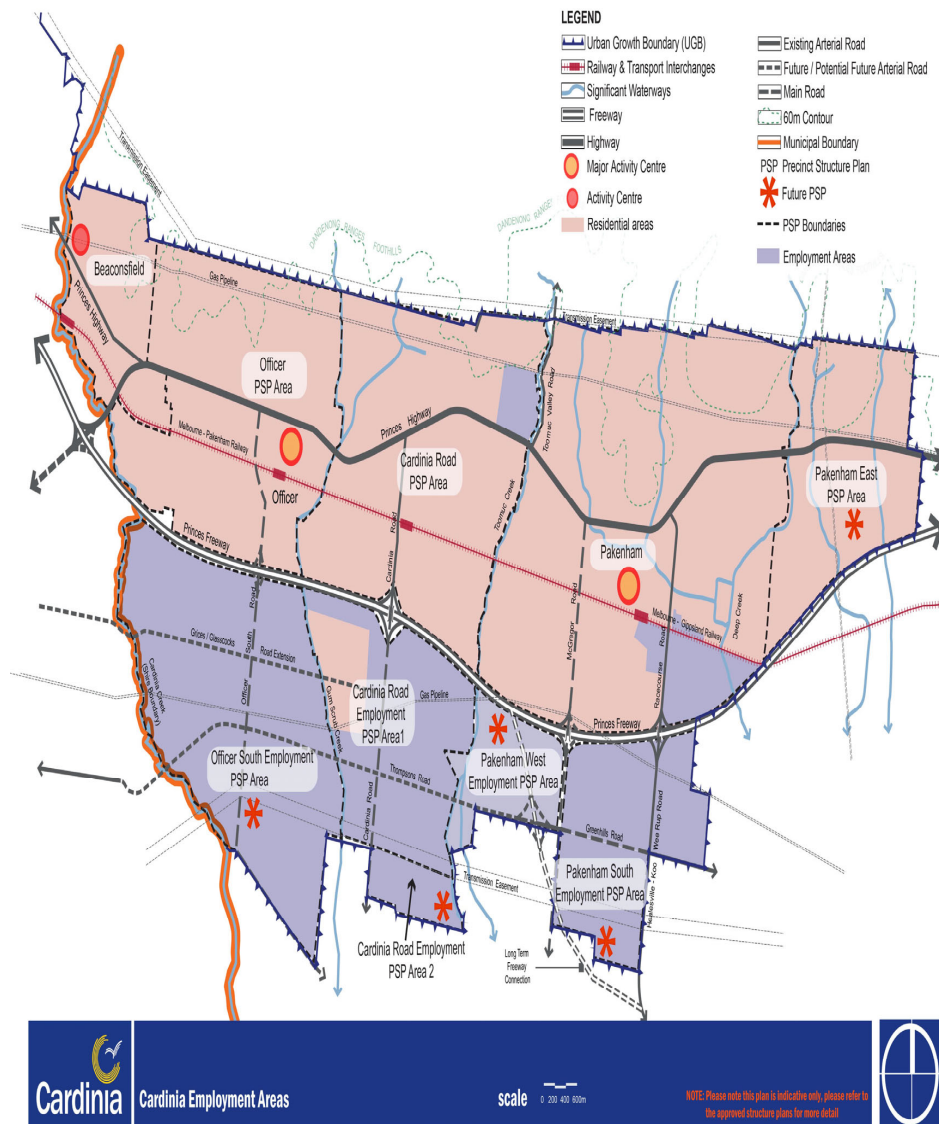
CARDINIA PLANNING SCHEME

21.04 **ECONOMIC DEVELOPMENT**
20/11/2020
C250card**21.04-1** **Employment**
30/09/2021
C228card**Overview**

Economic development is critical to the overall well-being of the municipality, both in terms of providing employment opportunities for residents and in attracting commercial investment. The *Casey-Cardinia Growth Area Framework Plan, 2006* identifies a large employment corridor of approximately 2,500 hectares to the south of the Princes Freeway (Pakenham Bypass) in Pakenham and Officer South as well as activity centres to assist in providing opportunities for local employment for the growing resident population in the area. *Plan Melbourne 2050* further identifies the employment corridor as the 'Officer-Pakenham State-significant Industrial Precinct' that will be a major provider of employment and business opportunities for residents of Cardinia Shire and Melbourne's south-east region.

Employment land within Cardinia Shire's urban area is shown in Figure 1.

CARDINIA PLANNING SCHEME



Key issues

- Recognising the need for innovation, diversification and resilience within the local economy to improve and develop employment opportunities and a strong employment base within the municipality to meet the demands of the growing population.
- Recognising the importance of emerging technology and new types of employment into the future.
- Supporting the development and enhancement of economically sustainable businesses within the municipality including within rural townships.
- Staging and timing of the release of land for employment and providing for high quality urban design to encourage investment.
- Providing infrastructure to service future employment land.
- Improving access to employment areas by residents.

CARDINIA PLANNING SCHEME

- Acknowledging the high level of commuting by residents for employment to areas outside the municipality.
- Improving provision and access to higher education and skills development for residents.
- Providing additional east-west linkages to connect employment precinct with Melbourne's south-east.

Objective

To develop diverse local employment opportunities to meet the needs of a growing residential population.

Strategies**Employment opportunities**

- Assist in meeting local and regional employment needs in terms of the supply, type, quality and availability of employment land by facilitating appropriate development.
- Encourage development that provides a diverse mix of employment opportunities including for 'new economy' workers and people with business, professional and management skills.
- Encourage development that provides sufficient local jobs to meet the needs of the existing and future community.
- Retain and develop businesses in rural townships to ensure access to a range of commercial services is available to local residents and to provide for local employment.
- Provide the opportunity for people to work from home where the activity undertaken does not adversely impact on the amenity of the local area.

Infrastructure

- Provide appropriate and timely infrastructure including water, sewerage, drainage, and roads to support the development of employment land.
- Ensure a timely and adequate supply of serviceable land for business and industrial activities both within urban growth area and rural townships.
- Recognise the significant industrial and employment activity areas in Dandenong, Monash and Kingston as opportunities for employment and work with government agencies to improve transport access and connections to these major employment areas.
- Improve the telecommunication capacity within the municipality through broadband and fibre optic infrastructure.

Skills and education

- Advocate for access to education and training, especially for young people.
- Support the establishment of tertiary and vocational facilities with links to the local economy.

Reference documents

Casey-Cardinia Growth Area Framework Plan, 2006

South East Growth Corridor Plan, Growth Areas Authority, 2012

Regional Economic Strategy for Melbourne's South East 2009-2030, January 2009

Cardinia Shire Council, Creating the Future, Council Plan 2018 - 2023

Cardinia Shire's Liveability Plan 2017-29, September 2017

CARDINIA PLANNING SCHEME

Casey Cardinia Region Economic Development Strategy 2016-17

Cardinia Employment Lands: Stage 1 Assessment Macroplan Australia Pty Ltd, 2007

Pakenham Major Activity Centre Structure Plan, 15 February 2021

Pakenham Major Activity Centre Urban Design Framework, 15 February 2021

21.04-2
20/11/2020
C250card

Agriculture

Overview

The annual gross value of agricultural production from the Port Phillip and Western Port Region is estimated at around \$1 billion which is 15 per cent of Victoria's annual gross value of agricultural production. The average gross value of agricultural production per hectare from the Port Phillip and Western Port Region's farms is the highest of any catchment management region in Victoria and is around four times greater than the State average. The general distribution of land capability for agriculture in Cardinia Shire is shown in Figure 2.

The Koo Wee Rup Swamp area contains a peaty clay soil which is recognised as being of high quality agricultural land of State significance. This area now produces 90% of Australia's asparagus crop and approximately 50% of this production is exported annually (Casey-Cardinia Agricultural Audit).

The Gembrook area in the northern part of the municipality has also been a significant producer of potatoes historically. This area has been affected by dieldrin contamination and the Potato Cyst Nematode (PCN) which places restrictions on cattle grazing and potato distribution. The Gembrook Rural Review addressed this issue and has identified a number of actions to maintain agriculture as a viable activity in the area.

Key issues

- Maintaining and protecting high value of agricultural land within the municipality.
- Protecting productive agricultural land from incompatible uses and inappropriate development and subdivision, including non-soil based farming on lands with high soil quality.
- Accessing sustainable water supplies for agricultural activities.
- Implementing the four key areas for action towards achieving the longer-term outcomes desired for Gembrook including; attracting new industries, companies and lifestyle investors to the area; assisting potato growers to make decisions about their future; enhancing environmental and landscape values; and building local support.
- Recognising the impact of intensive farming on surrounding uses.
- Developing Green Wedge Management Plans to fulfil statutory, strategic, environmental, economic and social requirements.
- ~~Encouraging best practice environmentally sustainable development principles.~~

Objective

To maintain agriculture as a strong and sustainable economic activity within the municipality.

Strategies

Sustainability of agricultural land

- Protect agricultural land, particularly areas of high quality soils, from the intrusion of urban uses, inappropriate development and fragmentation which would lead to a reduction in agricultural viability, the erosion of the right of farmers to farm land, and ultimately the loss of land from agricultural production.
- Discourage boundary realignments that create the opportunity for fragmentation of agricultural land and the creation of a concentration of residential uses outside the urban growth boundary and

CARDINIA PLANNING SCHEME

township boundaries.

- Discourage non-rural uses such as primary and secondary schools, and places of worship from locating on land zoned green wedge and encourage these types of uses to locate within existing townships and within the green wedge land that adjoins the UGB, subject to strategic justification.
- Recognise the importance of access to locally grown food for Cardinia Shire's residents.
- Recognise the growing demand for food, both domestically and internationally, and capitalise on opportunities to export fresh produce and processed food products.
- Encourage the establishment of value added industries to process local agricultural produce.
- Ensure the use or development, including subdivision, of agricultural land takes into consideration land capability.
- Encourage the establishment of economically and environmentally sustainable farming practices.
- Encourage sustainable water supply to agricultural areas including the use of recycled water.

Agricultural use

- Discourage non-soil based uses (eg: poultry farms) being located on soils which are of high agricultural quality and, recognising the economic importance of such uses, encourage their location on land with a lesser soil quality.
- Encourage the establishment of alternative and innovative agricultural activities such as herb farming or small nurseries, particularly in areas where fragmented lot sizes limit opportunities for broadacre agricultural activities.

Access

- Ensure efficient transport access to agricultural areas by heavy vehicles with particular attention to road system improvements and the structural capacity of bridges.

Amenity

- Ensure that any agricultural development proposal is appropriately located in terms of buffer distances of surrounding uses.
- Provide for the establishment of intensive agricultural activities (eg: poultry farms and green houses) in a location and manner which minimises the impact on nearby residents and the environment.
- Encourage responsible land management to minimise environmental degradation by pest plants and animals.

Implementation**Further strategic work**

- Reviewing the planning framework for Gembrook to facilitate potential investment in more intensive agricultural enterprises.
- Reviewing the appropriateness of the Rural Conservation Zone within the municipality particularly land south of South Gippsland Highway.
- Preparing Green Wedge Management plans for the Northern Ranges Green Wedge and the Southern Ranges Green Wedge in conjunction with the relevant councils and government departments.
- Develop a local policy that addresses uses in the Green Wedge Zones that are required to be in conjunction with Agriculture, Natural systems, Outdoor recreation facility, Rural industry or Winery, and sets out parameters of how these uses are to be established.
- Prepare a local policy to provide guidance on boundary realignments in green wedge areas, which

CARDINIA PLANNING SCHEME

also includes policy to ensure new dwellings are associated with an agricultural or horticultural use and not for a rural residential property or hobby farm.

Reference documents

Cardinia Shire Council, Creating the Future, Council Plan 2018 - 2023

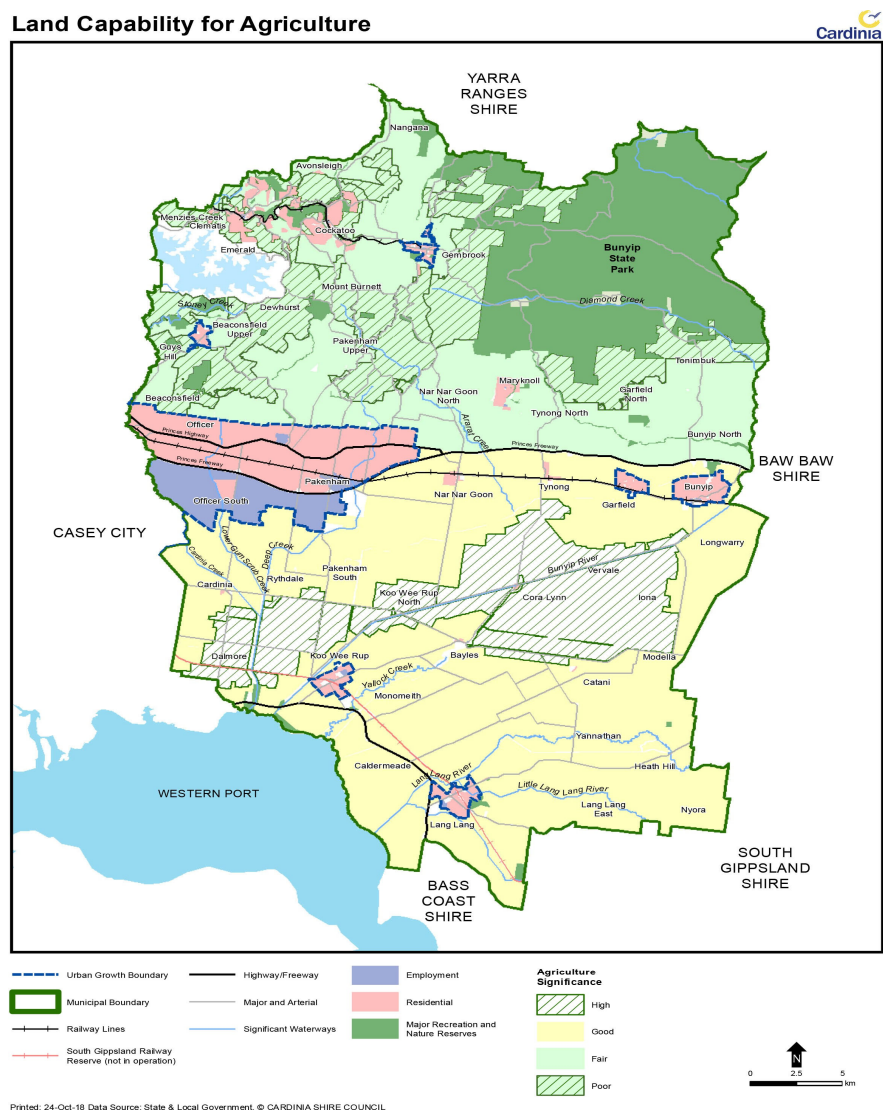
Cardinia Shire's Liveability Plan 2017-29, September 2017

Land Capability Study for the Shire of Cardinia, 1997

Cardinia Western Port Green Wedge Management Plan, May 2017

Casey and Cardinia Regional Agricultural Audit and Action Framework, 2004

Gembrook Rural Review – Action Plan, 2004



CARDINIA PLANNING SCHEME

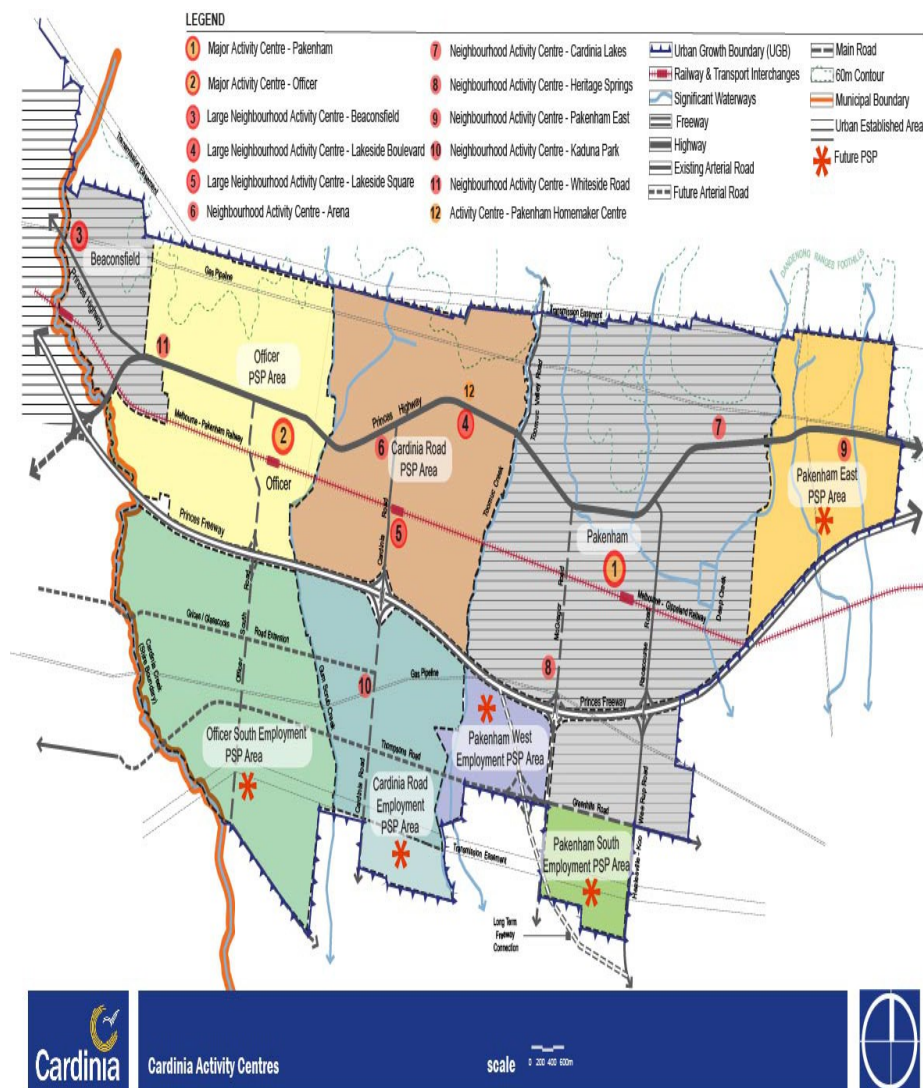
21.04-3
13/05/2022
C257card

Activity centres

Overview

Activity centres provide a range of retail, commercial, entertainment and community services activities integrated with housing in a location which is highly accessible by road, public transport, foot and bicycle. Activity Centres are a focus for community activity and interaction in a location with a strong sense of place and urban character.

Officer and Pakenham are designated Major Activity Centres, and Beaconsfield, Lakeside Boulevard and Lakeside Square are designated as a large Neighbourhood Activity Centre within the urban growth boundary. Emerald in the north and Koo Wee Rup in the south of the municipality are larger township activity centres and there are smaller centres dispersed throughout the municipality.



CARDINIA PLANNING SCHEME

Key issues

- Facilitating the creation and expansion of activity centres proportionate with population growth within the municipality.
- Recognising and developing the existing and future retail hierarchy of activity centres in the urban area.
- Facilitating development of retail, commercial, community, residential and entertainment activities within activity centres, to meet the needs of the existing and future community.
- Recognising the need for innovation, diversification and resilience to improve and develop employment opportunities and a strong employment base within the municipality.
- Recognising the importance of emerging technology and new types of employment into the future.
- Ensuring appropriate links between activity centres and surrounding residential communities.
- Controlling the orderly expansion and management of the Pakenham Activity Centre.
- Managing the establishment of bulky goods retailing precincts.
- Developing and implementing urban design frameworks to facilitate high quality development within activity centres.
- Encouraging best practice environmentally sustainable development principles.

Objective

To establish a network of activity centres in the growth area creating opportunities for a range of activities including retail, commercial, community, residential and entertainment to meet the needs of the community.

Strategies**Activity centres**

- Develop structure plans for urban precincts and activity centres within the growth area with a focus on retail, commercial, community, entertainment and residential activities.
- Encourage higher order retail at Pakenham and Officer Major Activity Centres supported by high quality pedestrian access, public transport and urban design.

Design and location

- Encourage development that enhances and complements the identity of the activity centres and facilitates improved urban design outcomes.
- Optimise the provision of adequate, integrated, accessible and functional car parking as an integral part of activity centres.
- Encourage main street development as the standard form of retail development in activity centres.
- Encourage two story development along main streets of activity centres
- Ensure residential and non-residential development considers and incorporates best practice environmentally sustainable design measures from the design stage through to the construction and operation of the new development.

Bulky goods

- Facilitate the future establishment of associated commercial activities such as bulky goods retailing within the Pakenham Homemaker Precinct and facilitate its effective integration within the Lakeside activity centre.

CARDINIA PLANNING SCHEME

Implementation**Application of zones and overlays**

- Applying Development Plan Overlays to areas of development to ensure appropriate development and design principles are employed.

Further strategic work

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

Use of policy and exercise of discretion

- When deciding on applications for use or development within activity centres, considering, as appropriate:
 - Precinct Structure Plan.
 - Activity Centre Structure Plan
 - Urban Design Framework or urban design guideline.
 - Township Strategy.
- When developing Precinct Structure Plans, Activity Centre Structure Plans and Township Strategies, considering the role and function of activity centres.

Application of zones and overlays

- Applying a Commercial 1 Zone to encourage the intensive development of business centres for retailing and other complementary commercial, entertainment and community uses.
- Applying a Commercial 1 Zone to encourage the development of offices and associated commercial uses.
- Applying a Commercial 2 Zone to encourage the development of a mix of bulky goods retailing and manufacturing industry and their associated business services.
- Applying a Mixed Use Zone to designate activity centres with a mixed use function and community activity clusters.
- Applying Development Plan Overlays to areas of development to ensure appropriate development and design principles are employed.

CARDINIA PLANNING SCHEME

Future strategic work

- Developing car parking precinct plans and a local schedule for car parking provision in activity centres.
- Preparing Precinct Structure Plans for the urban growth area and Activity Centre Structure Plans or Urban Design Frameworks for existing and future activity centres.
- Investigating the possibility of establishing activity centres in the employment precincts to the south of Pakenham and Officer to provide employment related services and facilities.

Reference documents

Casey-Cardinia Growth Area Framework Plan, 2006

South East Growth Corridor Plan, Growth Areas Authority, 2012

Cardinia Shire Council, Creating the Future, Council Plan 2018 - 2023

Cardinia Shire's Liveability Plan 2017-29, September 2017

Beaconsfield Structure Plan, December 2013

Beaconsfield Structure Plan Background Paper, December 2013

Woods Street (North) Urban Design Guidelines, May 2013

Cardinia Urban Growth Area – Retail Review, March 2007

Pakenham Major Activity Centre Structure Plan, 15 February 2021

Pakenham Major Activity Centre Urban Design Framework, 15 February 2021

Pakenham Homemaker Precinct Urban Design Framework, 2004

Pakenham Rail Station Urban Design Framework, 2005

Cockatoo Town Centre Urban Design Framework, 2004 (revised 2007)

CARDINIA PLANNING SCHEME

21.04-4
30/09/2021
C228card

Industry**Overview**

The main industrial area within the municipality is established within Pakenham with smaller industrial precincts also located in Emerald, Maryknoll, Beaconsfield, Officer, Bunyip, Koo Wee Rup and Lang Lang. A number of existing industries add value to the process of agricultural production.

In the Casey-Cardinia Growth Area, 2,500 additional hectares have been set aside for employment uses, including industry and commerce. South East Industrial Business Park (located at the intersection of Bald Hill Road and Koo Wee Rup Road, Pakenham), will provide 167 hectares of industrial land to support more jobs to be created near Pakenham.

Key issues

- Enhancing the appearance and functionality of existing industrial areas and the design of future industrial development to create an attractive, functional and safe business environment.
- Providing for investment and development both for local businesses and larger industries.
- Facilitating the development of the Pakenham and Cardinia Road Employment Precincts.
- Facilitating linkages between industry and agricultural uses particularly in terms of transport networks.
- Locating future industry to ensure appropriate access from the transportation network.
- Recognising that future industry development will be increasingly linked to a range of knowledge-based services.
- Recognising the need for innovation, diversification and resilience to improve and develop employment opportunities and a strong employment base within the municipality.
- ~~Recognising the importance of emerging technology and new types of employment into the future.~~
- [Encouraging best practice environmentally sustainable development principles.](#)

Objective

To develop manufacturing and service industries that provide services to local residents and businesses, support local employment and reflect a high standard of urban design.

Strategies**Subdivision**

- Encourage a range of lot sizes to meet the needs of different users, including the encouragement of larger lots for major developments on main or arterial roads.

Use

- Provide for limited retailing (restricted retail and trade supplies) in industrial areas along arterial

CARDINIA PLANNING SCHEME

roads provided the retailing activities do not conflict with nearby activity centres.

- Provide for office and research and development in association with industrial activities in appropriate locations.
- Encourage the establishment of industries which add value to local agricultural produce.
- Consider the establishment of rural industries in green wedges if they are directly related, or contribute, to agricultural production.
- Encourage the establishment of service industries in townships to meet the needs of local residents and to provide for local employment.

Design

- Encourage a high standard of building design that contributes to the overall streetscape character to create an attractive working environment.
- Ensure developments provide a functional layout in terms of access, carparking and loading.
- ~~Ensure that development adjacent to arterial roads provides active frontages to the road network.~~
- Ensure that development considers and incorporates best practice environmentally sustainable design measures from the design stage through to the construction and operation of the new development.

Infrastructure

- Ensure appropriate vehicle, bicycle and pedestrian access and parking is provided within industrial developments.
- Ensure appropriate services are provided for industrial development.

Implementation**Future strategic work**

- Considering a local policy on Design Guidelines for Industrial Development or the application of a Design and Development Overlay to ensure appropriate development of existing and future industrial land, including the industrial land on Bald Hill Road and around Purton Road.
- Preparing structure plans for both the Pakenham West Employment Precinct and the Pakenham South Employment Precinct.
- Review the application of all industrial zones to identify land that is appropriate to rezone to the Commercial 2 Zone, Commercial 3 Zone, or Industrial 3 Zone to provide a buffer between heavy industrial areas and other areas, and allow for leisure and recreation uses to be located in these areas.
- Considering the application of a Commercial 2 Zone along some arterial roads where there is industrial development.

Reference documents

Casey-Cardinia Growth Area Framework Plan, 2006

South East Growth Corridor Plan, Growth Areas Authority, 2012

Regional Economic Strategy for Melbourne's South East, 2009-2030, January 2009

Cardinia Shire Council, Creating the Future, Council Plan 2018 - 2023

Cardinia Shire's Liveability Plan 2017-29, September 2017

Cardinia Employment Lands: Stage 1 Assessment Macropplan Australia Pty Ltd, March 2007

Design Guidelines for Industrial Development, 2000

CARDINIA PLANNING SCHEME

20/11/2020
C250card**Overview**

Tourism is defined as a multi-faceted industry which combines diverse activities including travel, leisure, recreation, entertainment, hospitality, business and conferences, and is supported by activities in a range of sectors including visitor attractions, visitor accommodation, retailing, transport and other services. Although Cardinia is not generally considered a tourist destination, the municipality offers opportunities for visitors to experience the area's boutique farm produce, arts and crafts, cultural and historic locations, and the natural environment.

Key issues

- Acknowledging that tourism is an important economic activity in the municipality.
- Recognising that Puffing Billy Tourist Railway is an asset of cultural, historic and economic significance and is a major attractor of tourists to the municipality.
- Recognising that Pakenham Racecourse at Tynong is a major horse racing and training facility that provides significant employment and economic benefits, both directly and indirectly, as a major attractor of visitors from adjoining regions.
- Recognising that Gumbuya World is a significant recreation facility that attracts increasing numbers of tourists from the region and provides positive economic benefits, including local employment.
- Recognising that the natural environment of Cardinia Shire is an asset that attracts visitors to the municipality.
- Protecting and enhancing the scenic and environmental values of the landscape in Cardinia, including the rural outlook from key tourist routes.
- Minimising the adverse impacts of development on the landscape and environment through appropriate scale and design.
- Linking with neighbouring tourism regions especially Yarra Ranges, South Gippsland and West Gippsland.
- Undertake a balanced approach between supporting new and growing businesses and protecting the Green Wedge environment and rural assets upon which the business is based.

~~• Encouraging best practice environmentally sustainable development principles.~~

Objective

To provide support for the maintenance and development of tourism related activities.

Strategies**Assets**

- Support further growth of the Puffing Billy Tourist Railway and associated facilities as a tourist attraction of State significance.
- Ensure that the visual corridor along the Puffing Billy Tourist Railway is protected from inappropriate development.
- Support further growth of Gumbuya World as a tourist attraction of regional significance.
- Support the Pakenham Racecourse and associated facilities as a tourist attraction of regional significance.
- Support and facilitate the development of Cultural Precincts for arts and cultural facilities aligned to Activity Centres and other community infrastructure in major townships and population areas.
- Promote the natural environment of Cardinia Shire while ensuring environmentally significant areas are respected and preserved.
- Protect areas of high scenic value and landscape quality, especially the rural outlook from key tourist routes.

CARDINIA PLANNING SCHEME

- Ensure that development considers and incorporates best practice environmentally sustainable design measures from the design stage through to the construction and operation of the new development
- Support better linkages with both Dandenong Ranges and Gippsland tourism regions by establishing local tourism infrastructure and facilities to complement major regional attractions.

Activities

- Encourage the establishment of tourism activities in rural townships within the municipality through the establishment of activities including accommodation, restaurants, cafes, galleries, markets, and through undertaking streetscape improvements and upgrading public amenities.
- Develop Gembrook township as a major tourism destination based on a heritage theme and the scenic qualities of the area.
- Support the development of tourist accommodation within the municipality which does not adversely impact on the environment or affect the amenity of local residents.
- Ensure that tourism development is of a scale and design that is compatible with the locality and minimises adverse impacts on the environment.
- Recognise the importance of and opportunities for links between tourism and agriculture (eg: wineries, host farms and rural displays).
- Facilitate the development of complimentary facilities at golf courses including accommodation, conferencing and dining facilities where appropriate.
- Facilitate the development of recreational facilities and events that attract people into the municipality.

Implementation**Application of zones and overlays**

- Including the Puffing Billy Railway land in a Public Use Zone to allow the operation of the railway as provided for under the Emerald Tourist Railway Act.
- Applying the Special Use Zone Schedule 2 (Recreation and Tourism) to areas to preserve and enhance the establishment of tourism and recreation facilities.
- Applying a Vegetation Protection Overlay, Significant Landscape Overlay and Environmental Significance Overlay to protect significant landscapes and areas of landscape quality generally.

Reference Documents

Casey Cardinia Visitation Strategy 2017-2020

Cardinia Shire Tourism Strategy, May 2013

21.04-6
20/11/2020
C250card

Extractive industry**Overview**

In Cardinia Shire, there are areas identified as extractive industry interest areas, which significantly overlap with areas of high environmental and landscape values. These areas contain significant stone resources, being hard rock which is extracted primarily from the hills north of the Princes Highway, and sand resources in the Lang Lang area.

Key issues

- Protecting resources from development that may impact on the extraction of these resources.
- Acknowledging the potential amenity impacts of extractive industry operations including noise, dust, transport and blast vibration.
- Recognising that Lang Lang - Grantville area is expected to become the major source of concrete

CARDINIA PLANNING SCHEME

sand for the Melbourne supply area over the next 10 to 20 years as resources in the Heatherton - Dingley area are exhausted.

- Providing for the extraction of resources and rehabilitation of sites in a manner which minimises the impact on the environmental, economic and social values of the area.
- Providing for the rehabilitation of sites consistent with the expected end use/s of the site including detail of the proposed rehabilitation works.
- Appreciating the transport requirements of extractive industry operations.

Objective

To recognise and protect significant sand and stone resources in the municipality and allow the extraction of these resources if it can be demonstrated that the extraction operation will not adversely impact on the environment or community.

Strategies

Protection of resources

- Protect sand and stone resources and existing extractive industry operations from inappropriate development which may impact on their viability.
- Support potential future extractive industry, particularly in the northern area of the Western Port Green Wedge.

Amenity impacts

- Ensure that developments mitigate potential impacts of extractive industry on surface water, ground water, biodiversity (Flora and Fauna), visual landscape, transport infrastructure, residents amenity (i.e. noise dust, transport blast vibration) and cultural heritage (notably Aboriginal Heritage).
- Ensure the provision of appropriate buffer distances from surrounding sensitive uses to ensure minimal conflict of uses and amenity impacts.

Rehabilitation

- Ensure that rehabilitation details (including progressive requirements) are included as an integral part of the extractive industry approval.
- Ensure that the proposed end use is compatible with adjacent land-use and development.

Transport

- Designate transport routes between extractive industry sites and the arterial road network, and require contributions towards the upgrading and maintenance of transport routes from extractive industry sites.

Implementation

Further strategic work

- Completing the planning and design of the Lang Lang Bypass for sand truck traffic.
- Preparing a strategy for the Lang Lang region to outline the preferred adaptive re-use of land once sand extraction has been completed.

Reference documents

Regional Sand Extraction Strategy, Lang Lang to Grantville, 1996

Sustainable Environment Policy 2018-2028, June 2018

CARDINIA PLANNING SCHEME

CARDINIA PLANNING SCHEME

21.05 INFRASTRUCTURE

20/11/2020
C250card

21.05-1 Infrastructure provision

20/11/2020
C250card

Overview

The provision of an adequate level of physical and social infrastructure is one of the major issues facing the Cardinia Shire over the coming decades. The timely provision of infrastructure is necessary to foster economic development, ensure the well being of the community and protect the environment.

Key issues

- Recognising the infrastructure demands of an interface Council with significant urban growth and substantial rural areas and townships.
- Providing for funding mechanisms to ensure the provision of infrastructure in developing areas.
- Coordinating infrastructure provision.
- Encouraging best practice environmentally sustainable development principles.

Objective

To ensure the timely provision of physical and social infrastructure in order to foster economic development, ensure the well being of the community and protect the environment.

Strategies

Funding

- Provide for the payment of infrastructure contributions and development contributions, as appropriate, to fund physical and community infrastructure associated with urban development.
- Provide for the sale of surplus Council owned land to assist in funding the provision of infrastructure.
- Work in partnership with the Federal and State Governments to identify priorities, and secure funding for capital works projects.

Provision

- Provide appropriate and timely infrastructure services including water, sewerage, drainage and roads.
- Ensure infrastructure services and development incorporate best practice environmentally sustainable design.
- Encourage the development of both pedestrian and bicycle links throughout the municipality.
- Encourage links between different forms of public transport, activity centres and surrounding residential areas.
- Provide for the establishment of high capacity telecommunications infrastructure (eg fibre optic cables) particularly in existing and future employment lands.

Implementation

Application of zones and overlays

- Applying a Infrastructure Contributions Overlay (ICO), or Development Plan Overlay (DCPO), as appropriate, to the Urban Established Area precincts to require the provision of infrastructure as part of new developments or redevelopments.
- Including surplus Council owned land in an appropriate zone to facilitate its sale and development.

CARDINIA PLANNING SCHEME

Further strategic work

- Amending Schedule 1 to the Development Contributions Plan Overlay to apply the *Pakenham Township Development Contributions Plan, September 1997 (Amended June 2017)* to the Pakenham township .

21.05-2
20/11/2020
C250card

Freeways, declared arterial roads**Overview**

Freeways and Declared Arterial Roads are managed by VicRoads under the *Road Management Act 2004* . One of Council's key objectives as part of its Corporate Plan is to ensure a quality road network. Freeways and declared arterial roads perform an important function in the movement of people and freight, including tourist traffic. It is therefore critical that through land use and transport planning, Council seeks to maximise the efficiency, safety and visual outlook of these roads

Key issues

- Providing for access and associated intersection works to declared arterial roads.
- Providing for the upgrade and construction of future declared arterial roads, including Koo Wee Rup Road and the Koo Wee Rup and Lang Lang bypasses.
- Designating and managing future declared arterial roads (eg McGregor Road).
- Provide east-west connections within the southern parts of the urban growth area.
- Widening, upgrading and realigning existing roads.
- Concentrating commercial activities along arterial roads to within strategic nodes.

Objective

To provide for an efficient, safe and attractive arterial road network and to ensure effective integration of land use, transport and environmental outcomes.

Strategies**Road upgrades**

- Provide for the upgrading of the interchange with the Princes Highway at Beaconsfield to provide access for Beaconsfield residents to the Princes Freeway.
- Provide for the future upgrading of the Koo Wee Rup Road to provide a high standard arterial road connection between Pakenham and South Gippsland Highway.
- Seek the construction of the Koo Wee Rup bypass as a priority.
- Provide for the timely future upgrading of interchanges with the Pakenham bypass to meet increasing traffic demands at Beaconsfield, Officer South Road, Cardinia Road and McGregor Road.
- Facilitate the development of the Lang Lang bypass.
- Provide for the extension at Thompsons Road from Cranbourne through to Koo Wee Rup Road.
- Provide for the extension of Grices Road from Berwick South to Cardinia Road to a standard capable of consideration as an arterial road.
- Encourage the upgrade of existing substandard declared arterial roads through pavement widening, rehabilitation and realignment.

Development

- Ensure the location and design of any access has regard to the efficient and safe movement of traffic

CARDINIA PLANNING SCHEME

along the road.

- Ensure the integrated planning of future declared arterial roads as shown in the *Casey-Cardinia Growth Area Framework Plan 2006* (or as amended).
- Avoid ribbon commercial development along arterial roads, and limit main road oriented commercial activities to strategic nodes preferably within township and urban areas.
- Ensure that access to new developments conform with Vic Roads Access Management Policy.

Implementation

Application of zones and overlays

- Applying a Road Zone (Category 1) to declared freeway or arterial roads.
- Including land required for road improvements such as widening and realignments in a Public Acquisition Overlay.

21.05-3
20/11/2020
C250card

Local roads

Overview

Council is responsible for the care and maintenance of the local road network within the municipality, which includes about 1,300 km of local roads of which approximately 900 km are unsealed. Future development in the Urban Growth Area will increase the demand for local roads infrastructure. There is also the existing need to provide adequate roads and streets in the townships and the upgrading of the existing local road network to support economic development and maintain environmental values.

Key issues

- Providing an appropriate hierarchy for local roads.
- Prioritising local road upgrades, taking into consideration strategic importance, maintenance cost, vehicle counts, safety rating, cost to seal, truck volume and bus route.
- Managing the impacts of new development on the existing local road network.
- Identifying bridges with a limited structural capacity, particularly timber bridges in the Koo Wee Rup swamp area.
- Completing the Lang Lang bypass to keep the heavy vehicles associated with the sand extraction industry out of the Town Centre.
- Designating and managing future arterial roads.
- Encouraging best practice environmentally sustainable development principles.

Objective 1

To provide an efficient, safe and attractive local road network and minimise potential adverse impacts from traffic on the amenity of adjoining residents

Strategies

- Progressively update local roads to a sealed standard.
- Facilitate the development of the Lang Lang Bypass.
- Ensure access to new development is not allowed from an unused or unconstructed road unless no other option is available for access to land via the existing road network.
- Ensure unused roads not reasonably required for existing or future access are closed and either retained as reserves or consolidated with adjoining land.

CARDINIA PLANNING SCHEME

Objective 2

To manage the impact of the use, development and subdivision of land on the local road network.

Strategies

- Ensure that consideration of an application for the use, development or subdivision of land takes into account the classification of the road under the road hierarchy, the existing design, service and alignment of the road, and the likely effects it may have on future services and condition of the road.
- Ensure that development that will significantly increase the amount of traffic or heavy vehicles using the local road network be located where access is available from a declared arterial road, local arterial road or collector road.
- Ensure that the subdivision of land to create residential or rural residential lots not be allowed unless access to lots is via a sealed road.
- [Facilitate the integration of sustainable transport including walking, cycling and public transport.](#)

Implementation**Application of zones and overlays**

- Applying the Road Zone Category 2 to local arterial roads.
- Including land required for road improvements such as widening and realignments in a Public Acquisition Overlay.
- Progressively applying the infrastructure Contributions Overlay (ICO), as appropriate, to the Urban Growth Area precincts as new Infrastructure Contributions Plans are developed.

Reference documents

Pakenham Township Development Contributions Plan, September 1997 (Amended June 2017)

Cardinia Shire Council Road Safety Strategy 2016-2025

Cardinia Local Road Strategy, 2004

Cardinia Shire Council Road Management Plan, 2004

Development of a Road Classification, Geometric Design and Maintenance Standards for Sealed and Unsealed Roads in Cardinia Shire ARRB Transport Research Ltd, 2002

21.05-4
20/11/2020
C250card

Public transport**Overview**

The sparse nature of settlement in the municipality affects the viability of providing public transport to all residents, and there is a need to look at innovative and cost effective means to maximise public transport services in the Cardinia Shire. The limited public transport services that are currently available is an issue of concern raised consistently by the community.

Development in the growth area should be undertaken in a manner which encourages the provision and use of public transport services.

Key issues

- Providing for new railway stations and upgrades of existing railway stations.
- Establishing an appropriate bus network within the entire municipality.
- Recognising the need for a more accessible and comprehensively managed community transport system that links to the Principal Public Transport Network within the growth area.
- [Encouraging best practice environmentally sustainable development principles.](#)

CARDINIA PLANNING SCHEME

Objective

To maximise the opportunity for public transport services to be provided in a coordinated manner to meet the needs of existing and future residents.

Strategies**Design and integration**

- Provide for development in the urban growth area which encourages the effective and efficient provision of public transport services.
- Develop a best practice design that provides for development of the local road network with a coordinated approach to public and sustainable transport.
- ~~Facilitate the integration of sustainable transport including walking, cycling and public transport.~~
- Ensure streets are designed to accommodate bus routes for public transport and community transport vehicles, particularly in terms of road width and associated infrastructure.
- Facilitate better integration and coordination between public and community transport services.
- Encourage improved services and integration between bus and rail services within the municipality.

Railway stations

- Support the upgrading of both the Pakenham and Officer railway stations as a key element of these major activity centres.

Bus routes

- Facilitate north-south bus route links from rural townships to Pakenham.

Implementation**Application of zones and overlays**

- Applying the Public Acquisition Overlay to any land required for future public transport and associated use.

Further strategic work

- Including adequate provisions for public and community transport services and facilities when developing planning provisions and policy.

21.05-5
20/11/2020
C250card

Pedestrian and bicycle network**Overview**

Providing infrastructure to facilitate alternative transport options such as walking and cycling is important in developing environmentally, socially and economically sustainable communities. Walking and cycling are important recreational pursuits, and are also becoming increasingly popular ways of travelling to places of work, education and retail activity. Pedestrian and cycling paths are important in order to create communities that support active lifestyles.

Key issues

- Connecting pedestrian and bicycle networks with key destinations to promote alternative transport options.
- Providing pedestrian and bicycle trails for recreational and sporting activities.

CARDINIA PLANNING SCHEME

- Providing for the safety of pedestrian and cyclists when using paths.
- Recognising the Great Southern Rail Trail as a significant regional project across the four municipalities of Bass Coast Shire, Cardinia Shire, City of Casey, and South Gippsland Shire.
- Encouraging best practice environmentally sustainable development principles.

Objective

To develop well-located, safe and interconnected pedestrian and bicycle networks within the municipality.

Strategies**Connectivity**

- Provide for safe and efficient pedestrian and bicycle movements to connect railway stations, bus stops, activity centres and major community facilities within the Urban Growth Area and in rural townships.
- Ensure connectivity between new and existing development including pedestrian and bicycle paths.
- Provide a continuous and safe off-road shared path along the Princes Highway between Beaconsfield and Pakenham.
- Provide a walking and cycling network that is inclusive of people with mobility difficulties.
- Support and provide for the establishment of the Great Southern Rail Trail.
- Provide for a link to the Great Southern Rail Trail from the Pakenham Railway line.

Design and safety

- Ensure that new development does not compromise existing and future pedestrian and bicycle networks.
- Facilitate appropriate crossing points at areas with high traffic.
- Ensure that the access and design of off street parking addresses pedestrian and bicycle movement.
- Encourage passive surveillance over pedestrian and bicycle paths through appropriate siting and design.
- Provide DDA compliant paths, ramps and rest areas on appropriate trails.
- Facilitate the integration of sustainable transport including walking, cycling and public transport.

Implementation

The strategies in relation to pedestrian and bicycle networks will be implemented through the planning scheme by:

- Use of policy and exercise of **discretion**

When deciding on applications for new subdivision and other development, consider, as appropriate:

- *Pedestrian and Bicycle Strategy, August 2017.*
- *Pedestrian and Bicycle Strategy Actions Report, 2003.*
- *Healthy by Design, January 2017* , checklist (Cardinia Shire).

Reference documents

Cardinia Shire Pedestrian and Bicycle Strategy Actions Report, 2003.

Cardinia Shire Pedestrian and Bicycle Strategy, August 2017

Healthy by Design, January 2017 (Cardinia Shire)

CARDINIA PLANNING SCHEME

Safer Design Guidelines for Victoria, 2005

21.05-6
20/11/2020
C250card

Community services and facilities

Overview

The population in the Cardinia Shire is primarily focused on the activity centres and townships, with a growing emphasis on the urban growth corridor. It is important that all residents in the Cardinia Shire have a reasonable level of access to a range of services and facilities, and that these services and facilities are provided in response to community needs. The provision of local recreational and community facilities also assists in bringing people together, and developing a cohesive community.

Key issues

- Acknowledging the diversity of age groups within the Cardinia Shire and the importance of providing services to meet the needs of particular age groups such as children, youth and the aged.
- Recognising that providing accommodation for aged people in townships is important particularly where the unavailability of such accommodation would lead to people being forced to leave a community with which they have a strong association.
- Providing adequate community services and facilities in rural townships.
- Improving access to tertiary education facilities by public transport services to the city and more locally to facilities such as Federation University and Chisholm TAFE at Berwick.
- Establishing higher education facilities in the growth corridor.
- Encouraging best practice environmentally sustainable development principles.

Objective

To provide residents with a reasonable level of access to a range of community services and facilities and to ensure that these services and facilities are provided in response to community needs.

Strategies

Infrastructure

- Encourage the integration of public transport linkages to improve access to higher education facilities outside of the municipality.
- Ensure new community services and facilities incorporate best practice environmentally sustainable design measures from the design stage through to the construction and operation of the new development.

Location

- Establish community facilities in the most accessible location for local residents having regard to their service catchment.
- Co-locate community and recreational facilities and encourage joint management of these facilities.
- Facilitate the establishment of commercial activities (eg: medical practitioners) community based organisations (eg: churches) and early years services (ie childcare) which serve the needs of the community in activity centres and in residential areas where they can be provided in a manner which minimises any impacts on the amenity of the area.
- Provide for accessible community hubs in new residential developments comprising, where appropriate, a primary school, community centre, open space and local commercial facilities (convenience shop, medical centre, etc).
- Provide the opportunity in townships for the development of accommodation for aged people including retirement villages, special accommodation houses and nursing homes.
- Support the establishment of a higher education facility within Pakenham.

CARDINIA PLANNING SCHEME

Implementation

Application of zones and overlays

- Applying the Public Use Zone to existing and proposed publicly owned community facility sites to facilitate their development.

Reference documents

Planning for Community Infrastructure in Growth Areas, April 2008

CARDINIA PLANNING SCHEME

CARDINIA PLANNING SCHEME

21.06 PARTICULAR USES AND DEVELOPMENT20/11/2020
C250card**21.06-1 Urban Design**22/10/2021
C264card**Overview**

The long term benefits of good design are a more attractive, functional and sustainable built environment. Good design is based on the principle of being site responsive, designing to take into account the character and constraints of a site and wider area.

Key issues

- Implementing Precinct Structure Plans, Activity Centre Structure Plans and Urban Design Frameworks in current and future activity centres including Beaconsfield, Pakenham, Pakenham Homemaker Precinct, Cardinia Lakes, Lakeside Boulevard and Lakeside Square and the future Officer Town Centre.
- Providing for advertising signs that are in context with the scale of development, the surrounding environment and with the surrounding signage patterns.
- Enhancing the design and built form of existing industrial areas.
- Recognising design issues in the rural townships including the need to protect and enhance the character and appearance of the town centres and associated sites of cultural and heritage significance.
- Encouraging best practice environmentally sustainable development principles.

Objective 1

To promote a high standard of design which creates a strong character and identity for the area, provides for a functional built environment, and promotes community and personal safety.

Strategies

- Ensure that all development takes into account the character and constraints of the site and wider area.
- Ensure development contributes to the character, identity and sense of place of the area, particularly in newly developing areas.
- Ensure new development is designed to address public spaces and enhance the public realm.
- Maintain and improve the appearance and function of industrial precincts by ensuring high quality urban design including site layout, streetscape, building design and landscaping.
- Ensure that landscaping areas within development are adequately maintained to enhance the appearance of the area.
- Ensure that development considers and incorporates best practice environmentally sustainable design measures from the design stage through to the construction and operation of the new development.

Objective 2

To ensure advertising signs are consistent with the surrounds whilst ensuring that businesses have adequate opportunities to identify their business.

Strategies

- Provide for the reasonable and equitable identification of businesses and facilities through advertising signs which are in context with the scale of development and surrounding environment.
- Avoid the proliferation of signs causing visual clutter and signs which do not relate to services or facilities on the land on which they are displayed.

CARDINIA PLANNING SCHEME

- Encourage signs that are integrated with architectural features and compliment the style and character of the host building, abutting buildings and the overall landscape or streetscape.
- Ensure signage has an integrated and co-ordinated sign package in terms of colour, graphic content and placement.
- Ensure that signs for individual businesses in joint occupancy buildings are of a uniform size, shape and presentation.

Implementation**Further strategic work**

- Introducing appropriate mechanisms to implement the urban design principles outlined in the Urban Design Frameworks, Township Strategies, Precinct Structure Plans and Activity Centre Structure Plans including appropriate zones and/or overlay, for example the Significant Landscape Overlay and Design and Development Overlay.
- Develop a local policy to address subdivision applications that create a battle-axe layout.

CARDINIA PLANNING SCHEME

21.06-2
20/11/2020
C250card

Community safety**Overview**

Cardinia Shire Council is committed to maintaining and improving community safety within the municipality, and recognises the role that well designed and maintained urban environments play in achieving this goal. The *Cardinia Safer Communities Strategy 2017* addresses community safety and crime prevention through a strategic, planned, whole-of-government approach, and addresses issues such as ‘young people’s issues’, a safe environment, alcohol and drugs, vulnerable groups, supporting families and community education. The plan also acknowledges the need to integrate community safety and emergency management.

Key issues

- Acknowledging the increased incidence of graffiti in the municipality.
- Recognising the role of design in increasing safety and the perception of safety of residents.
- Implementing and integrating the *Cardinia Safer Communities Strategy, 2017* into all aspects of development within the municipality.
- Implementing preventative and management plans including the *Municipal Fire Prevention Plan Cardinia Shire Council 2010-2013, November 2010*, and the *Cardinia Shire Municipal Emergency Management Plan, 2015*.

Objective 1

To improve community safety and the perception of safety in the municipality.

Strategies

- Encourage development that is consistent with safer design principles, including:
 - Maximising visibility and surveillance of the public environment.
 - Providing safe movement through good connections and access.
 - Maximising activity in public places.
 - Clearly defining private and public space.
 - Enabling appropriate management of public space to ensure that it is attractive and well used.
- Ensure safe access routes for pedestrian and cyclists in the development of residential, commercial and industrial developments.

CARDINIA PLANNING SCHEME

Objective 2

To minimise the incidence and negative impact of graffiti on the community.

Strategies

- Minimise the construction of blank walls and long fences facing onto public spaces where graffiti may occur.
- Reduce the risk of graffiti through the appropriate use of landscaping, lighting materials and graffiti resistant materials.

Reference documents

Cardinia Safer Communities Strategy, 2017

Municipal Fire Prevention Plan Cardinia Shire Council 2010-2013, November 2010

Cardinia Shire Municipal Emergency Management Plan, 2015

21.06-3
20/11/2020
C250card

Subdivision restructure**Overview**

Areas in the municipality were subdivided into urban size lots prior to the introduction of planning controls, and often in the late 1800s or early 1900s. These areas often had no services available, were on topography not suited to urban development and are in areas which were heavily vegetated. The development of housing on these lots at the density of the original subdivision is not sustainable economically, socially or environmentally, and in particular would lead to significant environmental degradation. Subdivision restructure has occurred in a number of areas in the municipality through the use of tenement controls and restructure schemes.

Key issues

- Acknowledging inappropriate subdivisions, particularly in urban lots in the Cockatoo and Emerald areas and the agricultural land in the Koo Wee Rup Flood Protection District, which includes areas of high agricultural quality.
- Assisting land owners to consolidate land.

Objective

To provide for the restructuring of inappropriate subdivisions.

Strategies

- Support the restructure of inappropriate subdivisions which, if fully developed at the original subdivision density, would result in significant environmental degradation and substantial infrastructure costs.
- Support the restructure of subdivisions in agricultural areas in the Koo Wee Rup Flood Protection District to reduce the impact of old and inappropriate subdivisions on the agricultural viability of the area.
- Provide assistance to owners to consolidate land which is required to be consolidated under provisions requiring the restructure of existing subdivisions.
- Consolidate buyback land into conservation reserves where appropriate.

Implementation

CARDINIA PLANNING SCHEME

Further strategic work

- Removal of the Restructure Overlay where the restructuring of lots has been completed.

21.06-4
20/11/2020
C250card

Gaming

Cardinia Shire Council is committed to minimising the negative impacts of gaming on the community by ensuring that gaming machines are only located within venues that are appropriately located and have appropriate venue characteristics.

Key issues

- Avoiding problem gambling and convenience gambling.
- Locating gaming machines away from communities vulnerable to problem gambling.
- Achieving social and economic benefits in the location and re-location of gaming machines.
- Avoiding establishment of gaming machines in the growth area ahead of sufficient population growth.
- Recognising the need to protect the rural townships in the municipality from the negative impacts of gaming.

Objective

To minimise the risk of problem gambling and convenience gambling through the appropriate location of gaming machines and appropriate characteristics of gaming venues.

Strategies

- Provide the community with access to gaming venues and machines but not in convenient locations.
- Ensure the location of gaming machines does not promote problem gambling or convenience gambling.
- Ensure the location of gaming machines achieves positive environmental, social and economic outcomes.
- Encourage the redistribution of electronic gaming machines from areas of high vulnerability to areas of low vulnerability.
- Encourage the location of gaming machines:
 - In locations where there is a choice of community centres, neighbourhood houses, clubs or hotels without gambling activities.
 - In venues that offer social and recreational opportunities other than gambling.
 - In venues that implement management and operational practices that promote responsible gaming.
- Discourage the location of gaming machines:
 - In convenient locations that would be attractive to persons who are tempted and susceptible to impulsive and opportunistic gambling.
 - Within vulnerable or disadvantaged areas that are more at risk of problem gambling.
 - In areas with high levels of pedestrian traffic, to minimise convenience gambling.
 - In a rural township where there is no alternative club or hotel without gaming machines.

Reference documents

Cardinia Shire Gaming Policy Review (December 2015), 10 Consulting Group Pty Ltd

CARDINIA PLANNING SCHEME

21.06-5
20/11/2020
C250card

Airport**Overview**

Plan Melbourne 2017-2050: Metropolitan Planning Strategy (Department of Environment, Land Water and Planning, 2017) identifies the need to protect options for a future airport to serve the long-term needs of southeast Melbourne and Gippsland through an appropriate planning framework.

With continuous major population growth, Cardinia Shire and surrounding areas would benefit from the improved tourism and trade connections from the development of a new airport. The employment benefit to the region would also be significant.

Council sees its primary role is working in partnership with government to:

- Develop strategy to ensure an airport is achievable in Melbourne's southeast.
- Ensure that adequate consideration is given to the environmental, social and economic impacts of the land use for an unencumbered airport located in Melbourne's southeast.

Key Issues

- The southeast catchment of Melbourne serves one third of Victoria's population including residents of Gippsland.
- The southeast corridor of Melbourne is well served by good road connections and the potential of future road access.
- Difficulties associated with accessing Melbourne Airport from the east and southeast of Melbourne.
- The potential for an airport in the southeast growth corridor to be an important driver for significant job creation.
- The need to preserve long-term options for a new general aviation airport southeast of Metropolitan Melbourne.
- Ensure urban development does not infringe on the preferred site's buffer zone or flight paths.
- Council has identified potential locations for an airport between Koo Wee Rup and Lang Lang.
- Provide sufficient freight and passenger landside access to the new airport.

Objective

- To identify and protect an appropriate site for a new general aviation airport in Melbourne's southeast region including associated industrial and commercial land.

Strategies

- Ensure that environmental, social and economic impacts of the new general aviation airport are considered.
- Protect the flight paths and noise contours for the preferred site from incompatible urban development and land use.
- Protect an alignment to connect the rail line at Clyde to the preferred site.

Implementation

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

Application of zones and overlays

- Applying appropriate zones and overlays to protect the preferred site for use as a general aviation airport including planning protection for flight paths and noise contours in the proposed airport

CARDINIA PLANNING SCHEME

environs.

- Applying appropriate overlays to protect an alignment between the preferred site and the rail line at Clyde.

Further strategic work

- By 2021 the Department of Environment, Land, Water and Planning in partnership with the Department of Economic Development, Jobs, Transport and Resources and local government finalise a preferred site for a possible future airport should demand warrant this beyond 2030.

Reference documents

Plan Melbourne 2017-2050: Metropolitan Planning Strategy

Cardinia Shire Council 3rd Airport for Melbourne's Southeast Policy, July 2015 (updated March 2017)

*Planning and Environment Act 1987***CARDINIA PLANNING SCHEME****AMENDMENT C278card****INSTRUCTION SHEET**

The planning authority for this amendment is the Cardinia Shire Council.

The Cardinia Planning Scheme is amended as follows:

Planning Scheme Ordinance

The Planning Scheme Ordinance is amended as follows:

1. In **Local Planning Policy Framework** – replace Clause 21.01-3 with a new Clause 21.01-3 in the form of the attached document.
2. In **Local Planning Policy Framework** – replace Clause 21.01-4 with a new Clause 21.01-4 in the form of the attached document.
3. In **Local Planning Policy Framework** – replace Clause 21.02-1 with a new Clause 21.02-1 in the form of the attached document.
4. In **Local Planning Policy Framework** – replace Clause 21.02-2 with a new Clause 21.02-2 in the form of the attached document.
5. In **Local Planning Policy Framework** – replace Clause 21.02-3 with a new Clause 21.02-3 in the form of the attached document.
6. In **Local Planning Policy Framework** – replace Clause 21.02-8 with a new Clause 21.02-8 in the form of the attached document.
7. In **Local Planning Policy Framework** – replace Clause 21.03-1 with a new Clause 21.03-1 in the form of the attached document.
8. In **Local Planning Policy Framework** – replace Clause 21.03-2 with a new Clause 21.03-2 in the form of the attached document.
9. In **Local Planning Policy Framework** – replace Clause 21.03-3 with a new Clause 21.03-3 in the form of the attached document.
10. In **Local Planning Policy Framework** – replace Clause 21.03-4 with a new Clause 21.03-4 in the form of the attached document.
11. In **Local Planning Policy Framework** – replace Clause 21.03-5 with a new Clause 21.03-5 in the form of the attached document.
12. In **Local Planning Policy Framework** – replace Clause 21.04-2 with a new Clause 21.04-2 in the form of the attached document.
13. In **Local Planning Policy Framework** – replace Clause 21.04-3 with a new Clause 21.04-3 in the form of the attached document.

14. In **Local Planning Policy Framework** – replace Clause 21.04-4 with a new Clause 21.04-4 in the form of the attached document.
15. In **Local Planning Policy Framework** – replace Clause 21.04-5 with a new Clause 21.04-5 in the form of the attached document.
16. In **Local Planning Policy Framework** – replace Clause 21.05-1 with a new Clause 21.05-1 in the form of the attached document.
17. In **Local Planning Policy Framework** – replace Clause 21.05-3 with a new Clause 21.05-3 in the form of the attached document.
18. In **Local Planning Policy Framework** – replace Clause 21.05-4 with a new Clause 21.05-4 in the form of the attached document.
19. In **Local Planning Policy Framework** – replace Clause 21.05-5 with a new Clause 21.05-5 in the form of the attached document.
20. In **Local Planning Policy Framework** – replace Clause 21.05-6 with a new Clause 21.05-6 in the form of the attached document.
21. In **Local Planning Policy Framework** – replace Clause 21.06-1 with a new Clause 21.06-1 in the form of the attached document.
22. In **Local Planning Policy Framework** – insert a new Clause 22.11 in the form of the attached document.

End of document