

Point Fullarton subdivision - Supplementary submission to Council

by

Gippsland Environment Group

The shire states that “individuals, businesses and government must work together to meet the challenges of climate change. The best place to start is in your own street, in your own community”¹.

The Gippsland Environment Group seeks to work collaboratively and in good faith with local residents, land owners and managers, and the shire; to meet the challenges of climate change and biodiversity loss associated with the proposed Fullarton subdivision. We applaud the council's policy (in accordance with the purposes of the planning scheme)² to support responses to climate change:

“The Council Plan recognises that East Gippsland Shire is vulnerable to coastal hazards, inundation, fire and extreme natural events and climate change has potential to increase our vulnerability. Council is committed to assisting communities to adapt to future conditions in a planned way. [Council] have undertaken Victorian Adaptation and Sustainability Partnership projects by partnering with the state government to increase resilience and reduce risk from climate change.”³

The Gippsland Environment Group presents this supplementary submission to council as an acknowledgement that the highly contentious 10 Fullarton Drive Paynesville (3442022P) subdivision proposal doesn't meet the criteria of the East Gippsland Planning Scheme on certain points.⁴

Zoning History

In 1982 (the year the land of the proposed development was zoned General Residential) climate science was still in its infancy and climate change had barely entered into public discourse. The Shire could not have anticipated its significance at the time and it's highly unlikely it was considered in planning decisions. The planning framework,

¹ <https://www.eastgippsland.vic.gov.au/environment-and-waste/climate-change>

² *East Gippsland Planning Scheme*, S01 10/06/2022 Purposes of this planning scheme; p.3

³ <https://www.eastgippsland.vic.gov.au/environment-and-waste/climate-change>

⁴ *East Gippsland Planning Scheme*, S71.02-3 03/02/2022 VC199 Integrated decision making; p.1076

including new and revised legislation, VCAT rulings, planning scheme updates and scientific knowledge has advanced considerably since the early eighties. Today the planning scheme and relevant policy and legislative documents instruct planners to plan for sustainable coastal development, respond to climate change and protect significant landscapes and environmental values. Most recently, the Marine & Coastal Act, Policy and Strategies, directs planners to take a long-term view in assessing development proposals in coastal settlements and sensitive environmental landscapes, such as Point Fullarton. This applies equally to the low-lying farming zoned foreshore land located within the Eagle Point Settlement Boundary, which is likely to be lost to sea level rise by 2100, making the farmland inside the Paynesville Settlement Boundary the new foreshore area.⁵

We discuss three important factors that affect the development that are new:

1. The Latham's Snipe
2. Buffer size
3. Marine & Coastal (MAC) Act, Policy and Strategy

1. The Latham's Snipe

In 1982, it was not known that Latham's Snipe, a migratory bird flying between Australia and Japan, had made the development area their home.

Latham's Snipe is listed as *Vulnerable in Victoria and Near-Threatened Nationally*, and *afforded legal protection under the EPBC Act in Australia*.

We will present evidence that shows there is a significant number of these birds living and roosting in the proposed development area, and thus the development would remove the majority of the area they now occupy.

For all these reasons, the proposed subdivision plan cannot purport to guarantee beyond reasonable doubt that it will prevent irreversible or severe harm to the site's biodiversity, the Latham's Snipe, the neighbouring Ramsar wetlands due to coastal squeeze from climate change, and therefore, in turn the local community itself.

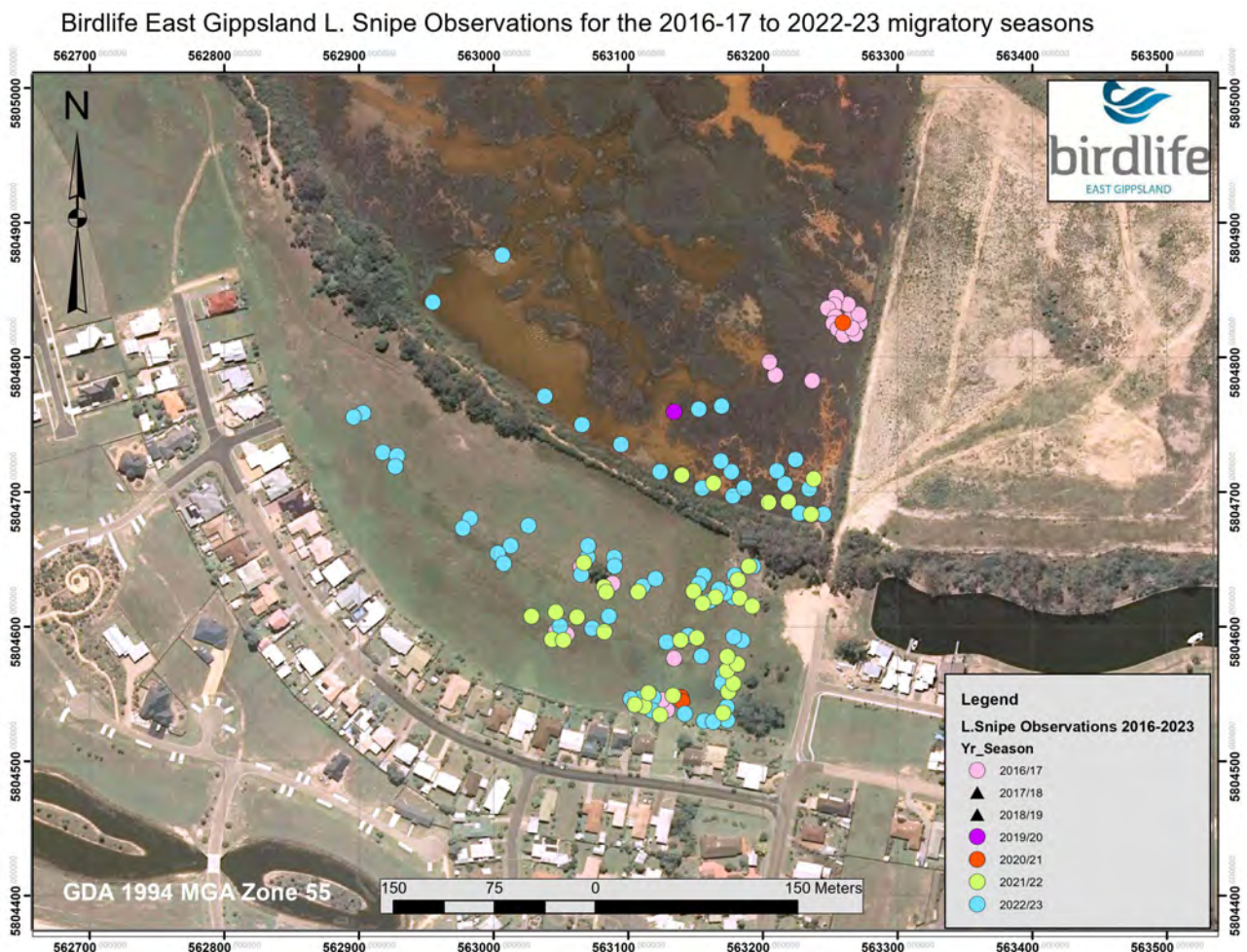
⁵ East Gippsland Planning Scheme, *Paynesville Framework Plan*, p.29

We believe three areas require action before any development could proceed: The Latham’s Snipe, adequate buffers and compliance with the new Marine & Coastal Act’s policies and strategies in relation to climate change adaptation.

<i>East Gippsland Planning Scheme - Relevant clauses</i>	
12.01-15 14/07/2022 VC213	<ul style="list-style-type: none"> fails to identify and protect an important area of biodiversity, including key habitat for the vulnerable Latham’s Snipe

Figure 1 below shows the surveys of Latham’s Snipe populations from 2016 to the current day. As stated above, the existence and monitoring of Latham’s Snipe was not taken into account in 1982 when the land was first zoned residential. Note the seasons with no Snipe were drought years.

Figure 1: Birdlife East Gippsland Snipe Observations 2016-17 to 2022-23 seasons.



As shown in the BirdLife East Gippsland Snipe Survey map above, much of the eastern part of the proposed subdivision site has supported a nationally important population of Latham's Snipe for a number of years, and a considerable portion of this will be modified or lost to new development infrastructure. Anthropogenic disturbance (light, noise and physical encroachment) will likely further degrade any remaining snipe habitat. We endorse the expert opinions of Dr Birgita Hansen (Leader of the National Latham's Snipe Project Group) attached to the Birdlife East Gippsland submission to Council; who has publicly stated that the proposed Fullarton development is likely to impact on the snipe population through loss of suitable habitat, compromising the site's suitability for Latham's Snipe and other shorebirds, and advised both council and the proponent that an **EPBC assessment is warranted**.

Dr Hansen in her supporting letter to council (p.85), noted:

- a) Latham's Snipe use the Point Fullarton wetlands and adjacent fields throughout their nonbreeding season in Australia (mid-spring to early autumn)
- b) Point Fullarton wetlands and adjacent fields is one of only eight snipe sites in the region to support nationally significant numbers of Latham's Snipe (i.e., more than 18 birds)
- c) Development of residential housing on and adjacent to this area is likely to impact on the snipe population through loss of suitable wetland habitat for daytime roosting birds, and disturbance to roosting and feeding birds from human activities

According to the *EPBC Act Policy Statement 3.21—Industry guidelines for avoiding, assessing and mitigating impacts on EPBC Act listed migratory shorebird species*, **residential development can be a significant threat to migratory shorebirds, primarily from the loss and degradation of foraging and roosting habitat, and through interference during important lifecycle stages of migratory birds.**⁶ Because migratory shorebirds mostly feed on intertidal mudflats, they require safe roosting areas to rest during high tide periods or when weather conditions prohibit occupancy of more commonly used habitats. ⁷

The high energy demands on migratory shorebirds resulting from their migratory lifecycle means that resting is critical when not breeding. Generally, migratory shorebirds prefer roosting areas in open habitat on slightly elevated ground so they can

watch for potential predators.⁸ The proposed development site's sloping grasslands provide ideal roosting areas for Latham's Snipe during the day, prior to foraging in the adjacent Ramsar wetlands at night. In addition to the loss of snipe habitat, the lower portions of the housing estate, particularly the design and location of the housing lots, the proposed new road from Burden Place and sediment basin will effectively inhibit the migration of the Ramsar wetlands to higher ground as sea levels rise, resulting in loss of both migratory bird roosting habitat and foraging Ramsar wetlands.

The Latham's Snipe is an incredibly shy and wary bird, that according to experts, is highly susceptible to disturbance.

Disturbance is greatest where increasing human population and development pressure may have an impact on important habitat. Migratory shorebirds are most susceptible to disturbance during daytime roosting and foraging periods.

Not protecting and conserving an environmentally sensitive area is damaging particularly for species such as Latham's Snipe; changing the ecological character of a shorebird area can lead to deterioration of the quantity and quality of food and other resources available to support migratory shorebirds (Sutherland et al. 2012 and references therein).

Research suggests that disturbance has a high energetic cost to shorebirds and may compromise their capacity to build sufficient energy reserves to undertake migration (GossCustard et al. 2006; Weston et al. 2012).

The notion that migratory shorebirds can continue indefinitely to move to other habitats as their normal feeding, staging or roosting areas become unusable is erroneous. As areas become unsuitable to support migratory shorebirds, remaining habitat will attract more birds, in turn creating overcrowding, competition for food and depletion of food resources, and increased risk of disease transmission.

The Department of Climate Change, Energy the Environment and Water state on their website provide a Species Profile for Latham's Snipe and state that:

“The current major threat to Latham's Snipe outside of Australia appears to be the modification and loss of habitat. This has been caused by the drainage, clearance and modification of wetlands for residential, agricultural and industrial development (Frith et al. 1977; Naarding 1981, 1983, 1985; Weston 1998). The species is also potentially threatened by predators such as foxes and mink (Naarding 1985; Weston

1998), and is said to be sensitive to disturbance caused by humans and grazing cattle (Naarding 1983).

Latham's Snipe is listed as:

IUCN (International Union for Conservation of Nature): Listed as Near Threatened - Global Status: IUCN Red list of Threatened Species 2022.

The **IUCN Red List of Threatened Species™** is *the world's most comprehensive information source on the global extinction risk status of animal, fungus and plant species.*

NGO: Listed as Vulnerable (The Action Plan for Australian Birds 2020).

Due to this status Latham's Snipe is listed as Vulnerable in Victoria and Near-Threatened Nationally, and afforded legal protection under the EPBC Act. We also note how habitat destruction and disturbance from coastal development and infrastructure is the most significant threat currently affecting protected migratory shorebirds of the area, like Latham's Snipe, Common Greenshank, and the Grey Plover. According to the plan's risk prioritisation matrix, ***coastal development poses a very high risk to migratory shorebirds, and immediate mitigation action is required.***

In addition, we note the developer's proposal (page 39) states that:

“The proposed design response involves a multi-lot subdivision that creates **a new road to front the proposed reserve** and extends an existing road to create a bank of residential lots to the west that front the reserve. The development of a road that fronts the reserve will provide for security and casual surveillance of the reserve and **allows for public participation of the reserve.** (Italics & bold added)

To have both a road cutting across the Latham's Snipe habitat with road noise and moving objects and a proposed reserve that allows for **public participation** definitely constitutes major disturbance to this species, as well as of course, major building works that could last years.

2. Buffers

When considering appropriate **buffer widths** for the Latham's Snipe habitat and wetlands we refer to a Biosis report of 1993 cited in the (VCAT Decision 2170 - White Ash v Frankston City Council 2004) on the role of buffers in the south-east wetlands

considered the nature of wetland buffers, using a criterion relying on distance from the edge of the wetland to human or disturbing activities. The report contains these implications for buffer design:

- Buffer widths less than 60 metres in areas subject to disturbance will reduce the effective available area of wetland habitat for most species.
- Buffer widths less than 90-100 metres in areas subject to disturbance will reduce the effective available wetland habitat for ducks.
- ***Buffer widths up to 150 metres may be required to buffer against more extreme disturbances or as buffers for more sensitive species not observed by their study.***
- An effective buffer also acts as a wildlife corridor through the area. It provides habitat for breeding and shelter. It facilitates the movement of fauna as well as reducing disturbance to wildlife on and near the wetland.

In further support to the buffer widths above is in the comprehensive report, 'The Coast Is Unclear' by Chris Smyth for the Victorian National Parks Association 2014 in which was called for:

“100 metre buffersapplied to private land to provide greater protection for coastal and hinterland ecological vegetation classes and their restoration along waterways, surrounding estuaries and abutting coastal crown land or the high-water mark.”

Latham's Snipe Buffer

The identification of the endangered and sensitive species Latham's Snipe triggers the Biosis recommendation of a buffer from their location of up to **150 metres**. According to the 1993 Biosis report, we believe this should therefore trigger the requirement of up to 150 metres buffer from the Latham Snipe's habitat location.

Referring again to Figure 1, we note that many of the snipe are in the wetlands and also on the upper grassed area. To understand this spread we note from the State-wide

Integrated Flora and Fauna Teams (SWIFFT), a network for knowledge, sharing and information exchange that supports conservation and management of threatened species, biodiversity and the natural environment across Victoria that:

“... during the day snipe prefer to roost in grass and weeds in close proximity to water and at night they disperse to feed in nearby wet paddocks, ditches and other open flooded areas. The distance they move nightly to feed is unknown; however, shorebirds tend to roost in close proximity to their feeding habitats in order to reduce the amount of energy used in nightly transit. The distance between snipe roosting and optimal feeding habitats is likely to be minimal in order to reduce flight times and so, conserve energy.” Latham’s Snipe (swifft.net.au)

Thus, on the map in Figure 1, birds would roost in the grass and weeds close to the water, then move to higher land above at night and for their nightly feed. Thus, the numbers on the dry land would be increased significantly at night.

We therefore suggest the proponent make an EPBC referral to ensure absolute safety and best practise is followed for the Latham’s Snipe.

3. Marine & Coastal (MAC) Act, Policy and Strategy - Tackling Climate-change and Coastal Squeeze on Wetlands

The most relevant objectives for the MAC Act in relation to planning and management of the marine and coastal environment at Point Fullarton are⁶;

1. to protect and enhance the marine and coastal environment, especially Ramsar-listed wetlands.
2. to promote the resilience of marine and coastal ecosystems, communities and assets to climate change
3. to respect natural processes in planning for and managing current and future risks to people and assets from coastal hazards and climate change
4. to acknowledge traditional owner groups' knowledge, rights and aspirations for land and sea country.

A strong case can be made the current Fullarton subdivision proposal doesn't adequately achieve the first three objectives of the MAC Act (Sec. 7) listed above. We explain this further below:

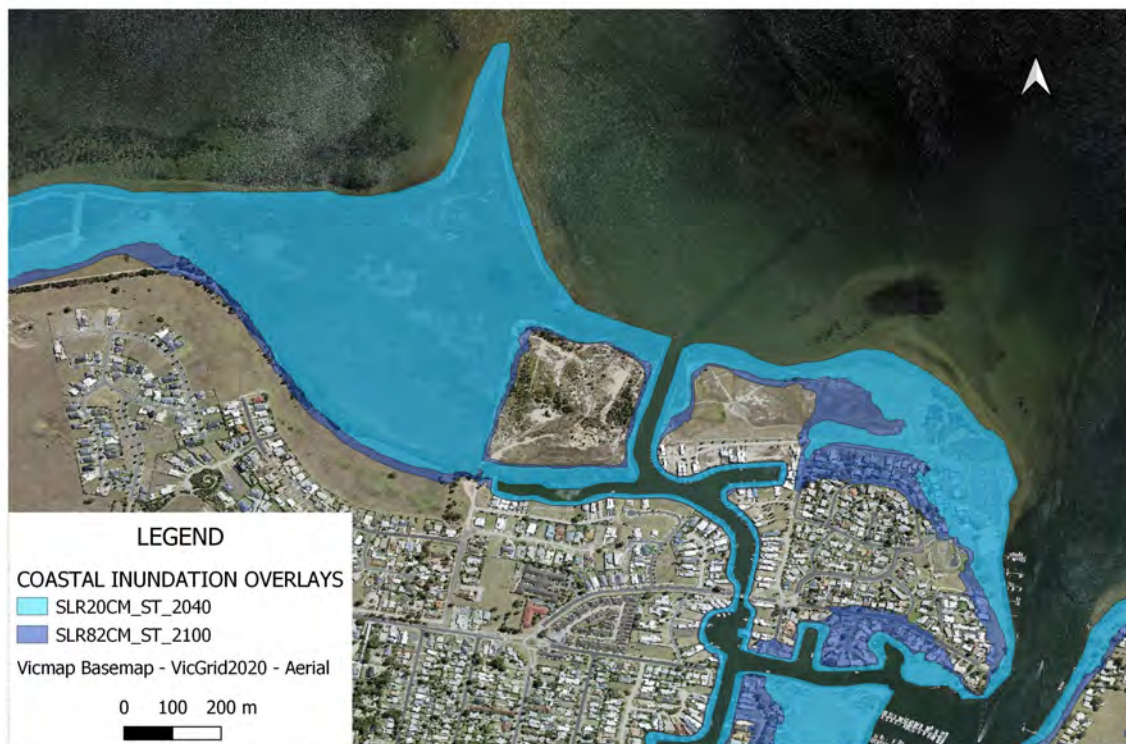
⁶ <https://www.marineandcoastalcouncil.vic.gov.au/current-projects/marine-and-coast-policy-and-strategy/objectives-of-the-marine-and-coastal-act-section-7>

3.1 Inadequate protection of the Fullarton coastal environment, particularly its Ramsar wetlands and Migratory Bird Habitat.

According to a Gippsland Coastal Board study, Point Fullarton's geology is comprised of low-lying, highly erodible coastal dune sediments that are particularly vulnerable to sea level rise, coastal inundation and erosion.⁷ Almost the entire extent of Point Fullarton's highly erodible mud flats will be inundated by the 20cm sea level rise projected by 2040, as evidenced in the map below.

Point Fullarton Coastal Inundation Map

Showing impacts of 20cm Sea Level Rise (2040) and 82cm Sea Level Rise (2100) incl. Storm & Tidal Surge



Source: DELWP Victorian Coastal LIDAR Modelling 2012

This relatively modest sea level rise, will amplify the threat of coastal inundation and erosion of the foreshore environment. The combination the wetland's highly erodible soils with more frequent and intense extreme weather events, is likely to result in the rapid erosion or *foreshore recession* of the existing coastal and foreshore environment. By 2040, the future foreshore area will have crossed the Eagle Point - Paynesville walking track, replacing the Fullarton peninsula with a new concave bay shoreline.

⁷ Gippsland Coastal Board (2008) *Climate Change, Sea Level Rise and Coastal Subsidence along the Gippsland Coast: Final Report, Phase 2 of the Gippsland Climate Change Study*

As sea level rise accelerates the loss of public foreshore areas, tidal wetlands like Fullarton's will become increasingly threatened by coastal squeeze. Barriers such as swales and retention dams that reduce tidal flows, and impermeable surfaces such as roads and housing, prevent wetland migration to adjacent uplands. As vegetation succumbs to submergence by rising sea levels on the seaward edge of a wetland, those wetlands prevented from inland migration will decrease in area, if not disappear completely. Coastal areas are unstable landforms, meaning, for example, the position of a wetland may change dramatically due to vegetation loss in a storm or drought or a rise in sea level. Coastal squeeze is often due to direct loss through the building of hard built structures that effectively 'fix' the coastline. Such structures may be unintentionally 'fixing' the shoreline, like coastal roads and housing developments, others are built to protect land and/or infrastructure from erosion and/or flooding.

The Ramsar wetlands will be squeezed in between rising sea levels and the lower parts of the housing estate, reducing the extent of wetlands to a fraction of their existing area. To enable coastal wetlands to survive these changes the coastline needs to be able to 'move' so species and habitats can also move inland during severe erosion events.⁸ Maintaining wetland networks and corridors will help wetland-dependent plants and animals to adapt by moving to new areas in response to changing climatic conditions, and avoid being impacted by coastal squeeze. In line with the M&C Act, policy and strategies, it is imperative that planners protect and enhance the overall extent and condition of wetland habitats and species diversity distributions across public and private land in the marine and coastal environment as part of their strategic response to climate change and coastal squeeze.

Similarly, one of the guiding principles of the M&C Act is *Integrated Coastal Zone Management* (Sec. 8).⁹ Planning and management for the marine and coastal environment should be co-ordinated and integrated, across the marine and coastal environment and associated catchments. This principle seeks the integration of the water cycle (including as it relates to estuaries, coastal waters, and waterways), with industry sectors and users of the marine and coastal environment, across all land tenures where this affects the marine and coastal environment. The current storm water treatment proposal fails to adequately integrate planning and management of Fullarton's

⁸ *Draft East Gippsland Regional Catchment Strategy 2021-2027, Climate Change; p.93*

⁹<https://www.marineandcoastalcouncil.vic.gov.au/current-projects/marine-and-coast-policy-and-strategy/guiding-principles-of-the-marine-and-coastal-act>

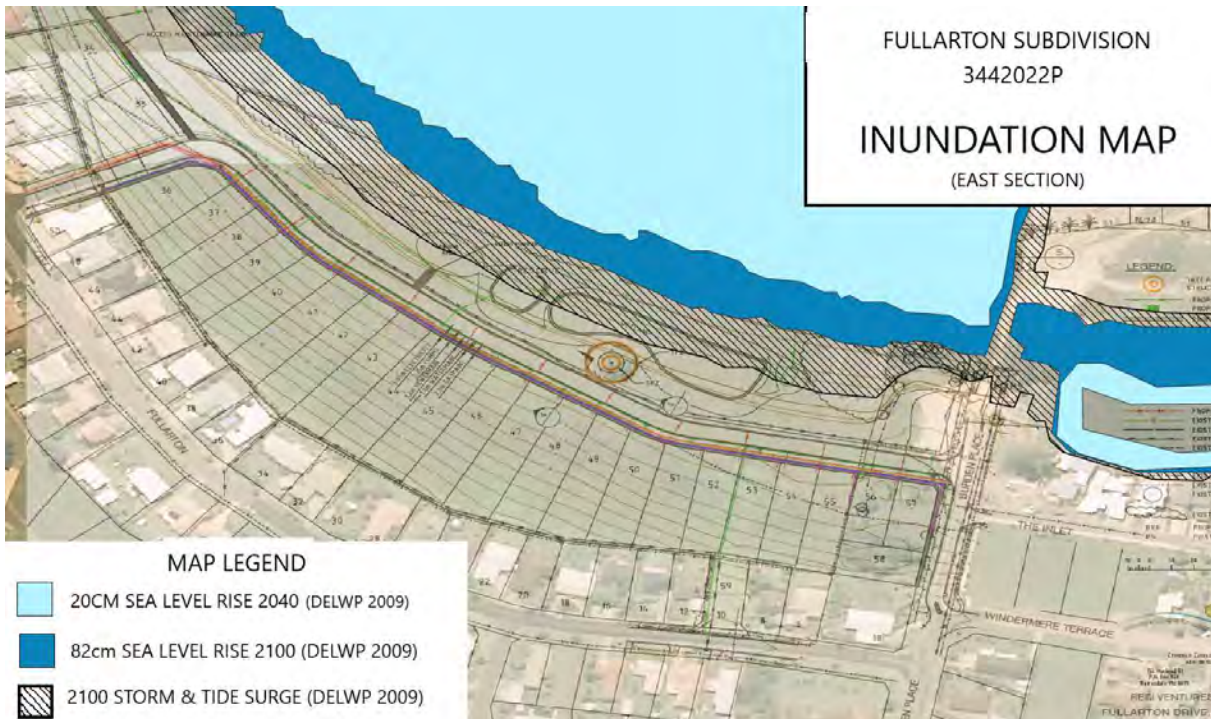
wetlands' and vulnerable migratory species like Latham's Snipe across land tenures. The proposed subdivision's stormwater infrastructure for instance, will be partially submerged by projected sea level rise and storm surges by 2100, greatly impacting its capacity to treat runoff. Moreover, attempting to treat untreated runoff by building a constructed wetland and associated infrastructure in low lying areas that are a) vital to wetland migration and b) compromises nationally significant Latham Snipe habitat, is clearly NOT an example of Integrated Coastal Zone Planning and Management.

Another significant guiding principle of the M&C Act is adopting “*Ecosystem-based Management* (Sec. 9). The maintenance and, where appropriate, restoration of marine and coastal ecosystem structure and function is fundamental to the current and future use and enjoyment of Fullarton's coastal environment, its resources, and the ecosystem services provided. An ecosystem-based approach should underpin Victoria's marine and coastal planning and management system, incorporating a) avoiding detrimental cumulative or incremental ecosystem impacts and b) working with natural processes to build ecosystem resilience to climate change impacts. As it stands, the current subdivision proposal will create detrimental cumulative ecosystem impacts and does not support natural processes that build ecosystem resilience to climate change impacts.

3.2 Failure to promote the resilience of marine and coastal ecosystems, communities and assets to climate change

Regrettably, in this instance, the location of the proposed subdivision stormwater infrastructure will act as a physical barrier to the retreat or migration of the wetlands to higher ground, effectively squeezing the Ramsar wetlands into an ever-narrower strip of low-lying land, prone to erosion and regular and more intense flooding.

Figure 2: DELWP predicted sea level rise impacts on Fullarton sub-division



Moreover, the proposed constructed “wetlands” serve to treat stormwater that is not saline or brackish, thereby will by necessity, utilise freshwater-dependent wetland species to effectively treat the polluted stormwater runoff. Freshwater wetland plants are highly sensitive to saline and brackish water spray and flooding. As shown by the DELWP climate change mapping above, the constructed treatment ponds are likely to be subject to coastal inundation of saline to brackish waters during extreme weather and tidal events. Intermittent saline inundation is highly likely to kill freshwater adapted wetland species, rendering the stormwater infrastructure ineffective at treating runoff. Without a viable wetland ecosystem, the bio remediation of polluted runoff will fail, resulting in elevated levels of polluted stormwater entering the Ramsar wetlands over time.

If planners were to apply the *precautionary principle*, as has been applied in numerous VCAT cases and is a guiding principle of the Marine & Coastal Act 2018, they may consider that increases in the severity and frequency of storm events coupled with rising sea levels and tidal extremes, create a reasonably foreseeable risk of inundation of the proposed stormwater infrastructure which is unacceptable. Though the second VCAT review recognised the appropriateness of similar stormwater management and drainage designs, the tribunal did not fully consider the impact of saline ingress on the

constructed wetland habitat, only the “impacts from the scouring of water and sediment” on the Ramsar wetlands themselves.¹⁰ It is therefore likely that the initial water quality improvements associated with the proposed storm water treatment infrastructure will not be sustainable in response to climate-change.

The coastal squeeze of the wetlands will also squeeze the public foreshore into an increasingly narrow strip of unflooded land, that by 2100, will reach within meters of the proposed road and housing lots themselves. This will lead to the effective loss and privatisation of the much-loved public foreshore area, and place future residents at the mercy of ever greater natural hazard risks.

3.3 Failure to respect natural processes in planning for and managing current and future risks to people and assets from coastal hazards and climate change

In accordance with Victorian Marine and Coastal Act (2018), the Marine & Coastal Policy (2020) sets out best practice guidelines for managing coastal hazard risk and tackling coastal squeeze, known as the Adaptation Pathway Approach. It primarily stipulates non-intervention and avoiding development within or in close proximity to coastal habitats, followed by nature-based methods of interventions that aim to create or restore coastal habitats. Nature-based methods, also referred to as ‘nature-based coastal defence’ or a ‘living shoreline’, is the creation or restoration of coastal habitats for hazard risk reduction. This includes the rehabilitation of existing degraded habitats, restoration of those historically present, or the creation of new habitats in ecologically suitable areas. The creation of new wetlands at Point Fullarton will be critical, as its’ coastal wetland habitat of highly erodible mud flats will be lost as sea levels rise, and the foreshore recedes inland. Much of the proposed development site would be ideally suited for ensuring the Ramsar wetlands have a chance to adapt to climate change and continue to provide valuable habitats for hazard risk reduction and enhancing biodiversity values well into the next century.

Coastal wetlands like Point Fullarton reserve and low-lying parts of the proposed development site are particularly at risk from climate change and coastal squeeze.

¹⁰ Lake Park Holdings Pty Ltd v East Gippsland SC [2014] VCAT 1449 (21 November 2014); p.31

Coastal wetlands, such as mangroves, saltmarshes, and seagrass beds act like shock absorbers. They reduce the intensity of waves and storm surges, shielding the coastline from flooding, property damage and loss of life. Waves and storm surges lose energy as they enter these areas, resulting in reduced damage to coastal settlements. The roots of wetland plants also stabilise shorelines and reduce erosion. Losing these natural defences to coastal inundation and sea level rises can be risky and costly, especially for future generations.

The lower portions of the housing estate, particularly the design and location of the roading and stormwater management infrastructure will inhibit the effective migration of the Ramsar wetlands to higher ground as sea levels rise, resulting in coastal squeeze and the permanent loss of protective wetland habitat. Without an unimpaired wetland migration pathway, Fullarton's wetlands will be lost to sea level rise, erosion and inundation, resulting in the loss of these natural defences, at great environmental cost to the ecological character of the Ramsar wetlands site and heighten the cost and risks to coastal settlements from ongoing climate change events. Existing DELWP data shows the proposed subdivision will be at risk of losing most if not all of the protective wetlands by 2100, making the proposed settlement highly vulnerable to climate change impacts by the end of the current century and well into the next.

Given the Marine & Coastal Act 2018, the East Gippsland planning scheme and related policy documents instruct planners to plan for sustainable coastal development, taking such a long-term view is necessary if we expect coastal settlements to continue to exist beyond 2100. Importantly, the M&C Act directs planners to make '*evidence-based decisions*'; whereby marine and coastal planning and management decisions are based on best available and relevant environmental, social and economic understanding, recognising that information will often be limited. BirdLife East Gippsland's survey data represents the best available evidence on the vulnerable Latham's Snipe. Though now out-dated (and they actually under-estimate climate-change impacts), the DWELP sea level rise, storm/ tidal, and coastal erosion hazard mapping clearly outlines the significant risks involved and need for a proportionate and risk-based planning response. Until the Shire has developed a detailed regional **Coastal Hazard Adaptation and Resilience Plan (CHARP)** in accordance with the M&C Act, Policies and Strategies, it's imperative the council reject the current sub-division proposal, or at the very least, request significant modifications to the submitted plans.

Proposal for this land

We now provide a proposal for the development along this area using data from the Birdland Latham's Snipe survey data, suggestions for buffer widths from a report by Biosis and using data from the Marine & Coastal (MAC) Act, Policy and Strategy.

Alternatively, using the Birdlife Lathan Snipe survey data, and the topographic contour lines as our guide for wetland migration pathways, we have proposed a new area for the development site providing a wider reserve along the length of the Ramsar site; removal of all the house lots where the snipe roost (plus a buffer), and relocation of the constructed wetlands to higher ground as a minimum.

Proposal

1. The proponent makes an EPBC referral to ensure absolute safety and best practise is followed for the Latham's Snipe.
2. We use the Biosis report (1993) mentioned above as the standard which stated:

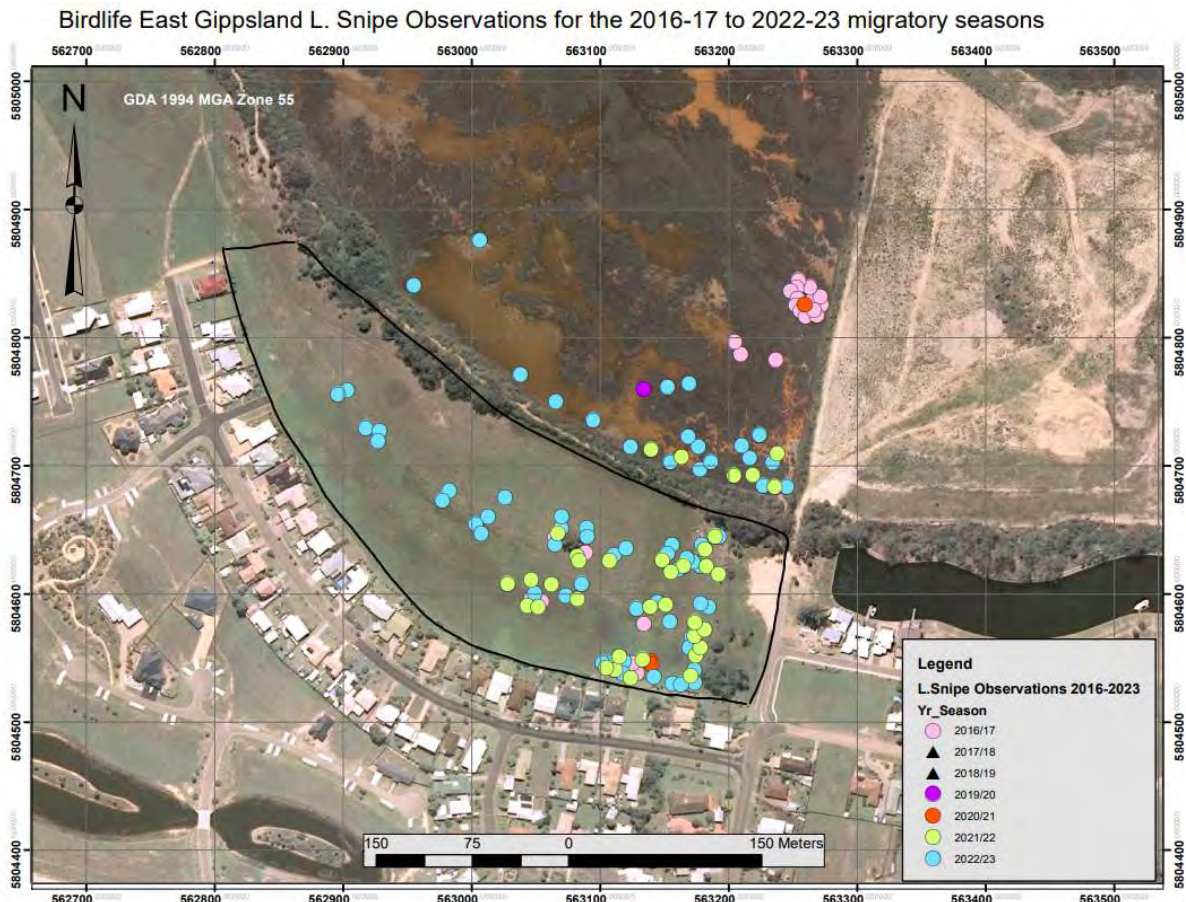
“Buffer widths up to 150 metres may be required to buffer against more extreme disturbances or as buffers for more sensitive species not observed by their study.”

Clearly the Latham's Snipe is a sensitive species as already described and thus requires the **150-metre buffer**.

Using the **Marine & Coastal (MAC) Act, Policy and Strategy** DELWP climate change mapping shows by 2100 the area will be significantly changed, the coast will need to move up the slope. (Figure 2).

Referring to Figure 3 below, the area within the black line, would be unsuitable for development as it is required to protect their habitat and protect the wetland. This includes the standard of the 150 metres buffer from housing development and the predicted level of 2100 storm and tide surge from the DELWP climate change mapping data.

Figure 3. Protection of the Latham's Snipe Habitat with 150 metre Buffer



3. The proposed new road from Burden Place would clearly be inappropriate as it would proceed straight through the Latham's Snipe current habitat, and also cuts right through the area where they move between the water to roost and the land where they feed at night. It is also inappropriate in terms of coastal squeeze and the climate change data presented.
4. The **proposed sediment basin or constructed wetland** would need to be relocated as this is also in the immediate area of the Latham's Snipe habitat and again prevents wetland migration as sea levels rise.
5. Molly Rd development would not be required as the buffer between the wetlands and the houses there is currently in some places as small as 15 metres. As suggested at least 90 to 100 metres is best practice according to the Biosis report.
6. With regards to the wetland buffer the Biosis report states:

“Buffer widths less than 60 metres in areas subject to disturbance will reduce the effective available area of wetland habitat for most species.

Buffer widths less than 90-100 metres in areas subject to disturbance will reduce the effective available wetland habitat for ducks.”

Therefore, we suggest a minimum of 90 - 100 metres from the wetland.

7. The proposed new development would proceed by extending Fullarton Rd, and be built starting behind the houses on Eagle Bay Terrace. The houses would again not be built lower than 90-100 metres from the existing wetland.

Conclusion

Council can play a vital role in determining the survival of the Latham's Snipe; and climate change effects on the wetlands and future residents through forward looking, climate change adaptation strategies that ensure the wetlands have room to migrate to higher ground as sea levels rise. The M&C Act's principle of '*adaptive management*' (Sec. 14) encourages decision-makers to learn from the outcomes of operational programs and, in light of that, change policies and practices. The incredibly outdated Paynesville Structure Plan needs to reflect climate science and biodiversity survey results. A pro-active response to protect Fullarton's highly vulnerable and valuable coastal and foreshore environment would be to provide setback distances (or buffer zones) further away from the land subject to coastal inundation, which is currently encumbered by roading and stormwater infrastructure. We encourage shire planners to apply the precautionary principle, given that sea level rise and more extreme weather conditions resulting from climate change, along with the highly erodible geology of the site, present reasonably foreseeable risk of inundation of the foreshore wetlands and modifications to the development plans are required.

APPENDIX A:

Relevant clauses of the East Gippsland Planning Scheme

<i>East Gippsland Planning Scheme - Relevant clauses</i>	
<i>12.05-1L 25/11/2022 C162egip</i>	<ul style="list-style-type: none"> • fails to adequately protect and enhance sites of significance (Gippsland Lakes Ramsar site) for their ecological, biophysical, geomorphological values
<i>12.05-2S 31/07/2018 VC148</i>	<ul style="list-style-type: none"> • fails to ensure significant landscape areas such as the bays and coastlines are protected
<i>12.05-2S 31/07/2018 VC148</i>	<ul style="list-style-type: none"> • inadequately recognises the natural landscape for its aesthetic value and as a fully functioning system
<i>12.05-2S 31/07/2018 VC148</i>	<ul style="list-style-type: none"> • fails to improve the landscape qualities, open space linkages and environmental performance in significant landscapes and open spaces, including green wedges, conservation areas and non-urban areas
<i>12.05-2S 31/07/2018 VC148</i>	<ul style="list-style-type: none"> • inadequately recognises the natural landscape for its aesthetic value and as a fully functioning system
<i>15.01-5S 09/10/2020 VC169</i>	<ul style="list-style-type: none"> • the proposed development does not respond to its context and reinforces a sense of place and the valued features and characteristics of the local environment and place by respecting the underlying natural landscape character and significant vegetation.
<i>12.02-1S 06/09/2021 VC171).</i>	<ul style="list-style-type: none"> • does not maintain the natural drainage patterns, water quality and biodiversity in and adjacent to coastal estuaries, wetlands and waterways.
<i>12.02-1S 06/09/2021 VC171</i>	<ul style="list-style-type: none"> • does not avoid disturbance of coastal acid sulfate soils
<i>12.03-1R 31/07/2018 VC148</i>	<ul style="list-style-type: none"> • does not minimise the impact of urban growth on high value water body assets such as the Gippsland Lakes
<i>12.01-1S 14/07/2022 VC213</i>	<ul style="list-style-type: none"> • fails to identify and protect an important area of biodiversity, including key habitat for the endangered Latham's Snipe

<p>12.02-1S 06/09/2021 VC171</p>	<ul style="list-style-type: none"> • fails to protect coastal and foreshore environments • According to a Gippsland Coastal Board study, Point Fullarton's geology is comprised of low-lying, highly erodible coastal dune sediments that are particularly vulnerable to sea level rise, coastal inundation and erosion.¹¹ Almost the entire extent of Point Fullarton's foreshore wetlands will be inundated by the 20cm sea level rise projected by 2040.
<p>(13 01/07/2021 VC20</p>	<ul style="list-style-type: none"> • increases our vulnerability to the effects of climate-change The proposed development increases vulnerability of future generations to climate change impacts, most notably; coastal hazards, inundation and erosion, extreme natural events, and sea level rise, by providing an inadequate adaptation buffer zone for the Ramsar wetlands. The Ramsar buffer zone is necessary for the coastal wetlands to adapt to future conditions in a planned way. Without room to move upland away from rising sea levels, coastal habitats will be eventually lost to climate change, greatly impacting biodiversity and their hazard risk reduction values for generations to come.
<p>13 01/07/2021 VC20</p>	<ul style="list-style-type: none"> • lack of effective controls to prevent or mitigate significant climate change and biodiversity impacts
<p>12.03-1S 16/12/2022 VC201</p>	<ul style="list-style-type: none"> • does not adequately address the impacts of use and development on drought and flooding events at a catchment and site scale to protect the health and natural function of waterway systems and their surrounding landscape and environment (Ramsar wetlands).
<p>12.03-1S 16/12/2022 VC201</p>	<ul style="list-style-type: none"> • does not conserve waterway systems and the landscapes and environmental values surrounding them by protecting ecological values, indigenous vegetation, terrestrial and aquatic habitats and encouraging

¹¹ Gippsland Coastal Board (2008) *Climate Change, Sea Level Rise and Coastal Subsidence along the Gippsland Coast: Final Report, Phase 2 of the Gippsland Climate Change Study*

	biodiversity
11.03-4S 06/09/2021 VC171	<ul style="list-style-type: none"> • does not adequately limit development in identified coastal hazard areas, shorelines of estuaries, wetlands and low-lying coastal areas, or where coastal processes may be detrimentally impacted
12.03-1S 16/12/2022 VC201	<ul style="list-style-type: none"> • fails to sensitively design and site development to maintain and enhance the waterway system and the surrounding landscape setting, environmental assets, and ecological and hydrological systems, particularly in response to climate change.
13 01/07/2021 VC20	<ul style="list-style-type: none"> • fails to protect geomorphology, bank stability and flood management capacity to strengthen the environmental value and health of waterway systems by: • fails to ensure development and risk mitigation does not detrimentally interfere with important natural processes) • inadequately protects and enhances coastal wetlands identified under the Ramsar Convention, particularly in response to climate change. (12.02-1L 25/11/2022 C162egip)
12.02-1S 06/09/2021 VC171	<ul style="list-style-type: none"> • diminishes the future ecological values of the ecosystems in the marine and coastal environment
12.05-1L 25/11/2022 C162egip	<ul style="list-style-type: none"> • fails to design development in significant landscape areas like the Gippsland Lakes, that is sympathetic to the character of the area and preserves its aesthetic values, especially in response to climate change
SCHEDULE 14 TO CLAUSE 43.02 DESIGN AND DEVELOPMENT OVERLAY, DDO14)	<ul style="list-style-type: none"> • the proposed layout does not provide for the protection of wetland areas (. The lower portions of the housing estate, particularly the design and location of the housing lots, roading and stormwater management infrastructure, will effectively inhibit the migration of the Ramsar wetlands to higher ground as sea levels rise, resulting in coastal squeeze and loss of

	wetland habitat.
13 01/07/2021 VC20	<ul style="list-style-type: none"> • Fails to adequately prepare for and respond to the impacts of climate change • The proposed subdivision's stormwater infrastructure for instance will be partially submerged by projected sea level rise and storm surges by 2100, greatly impacting its capacity to treat runoff.
12.05-1S 31/07/2018 VC148	<ul style="list-style-type: none"> • does not protect and conserve environmentally sensitive areas
12.02-1S 06/09/2021 VC171	<ul style="list-style-type: none"> • fails to protect and enhance the overall extent and condition of native habitats and species diversity distributions across public and private land in the marine and coastal environment
12.03-1L 25/11/2022 C162egip	<ul style="list-style-type: none"> • fails to direct development away from major wetlands
15.01-3S 10/06/2022 VC216)	<ul style="list-style-type: none"> • doesn't protect and enhance habitat for native flora and fauna
12.01-1S 14/07/2022 VC213	<ul style="list-style-type: none"> • does not strategically plan for the protection and conservation of an important area of Victoria's biodiversity
12.01-1S 14/07/2022 VC213	<ul style="list-style-type: none"> • does not take into account the impacts of land use and development on Victoria's biodiversity, including consideration of: cumulative impacts, fragmentation of habitat, the spread of pest plants, animals and pathogens into natural ecosystems
12.01-1S 14/07/2022 VC213	<ul style="list-style-type: none"> • does not support land use and development that contributes to protecting and enhancing habitat for indigenous plants and animals in urban areas
15.01-3S 10/06/2022 VC216	<ul style="list-style-type: none"> • design fails to achieve the objective of being an attractive, safe, accessible, diverse and sustainable neighbourhood • The proposed subdivision will not be a sustainable neighbourhood nor be safe from coastal hazards, inundation, erosion and sea level rises expected in the coming century. The anticipated loss of the protective wetlands due to coastal squeeze, will only serve to

	heighten the coastal hazard risks and costs to the neighbourhood.
(5.01-3S 10/06/2022 VC216	<ul style="list-style-type: none"> • will create an urban structure that does not adequately respond to climate related hazards
13 01/07/2021 VC20	<ul style="list-style-type: none"> • doesn't strengthen the resilience and safety of communities by adopting a best practice environmental management and risk management approach • fails to identify, prevent and minimise the risk of harm to the environment, human health, and amenity through land use and development incompatibility.
15.01-3S 10/06/2022 VC216	<ul style="list-style-type: none"> • fails to protect and enhance habitat for native flora and fauna, and providing opportunities for people to experience nature in urban areas • The proposed subdivision will endanger nationally important Latham's snipe habitat, and fails to protect wetland habitat from coastal squeeze and other deleterious effects of climate change.
11.03-4L-01 25/11/2022 C162egip	<ul style="list-style-type: none"> • adversely affects landscape and environmental values and fails to incorporate sufficient measures to protect those values
12.05-1L 25/11/2022 C162egip	<ul style="list-style-type: none"> • <i>does not protect and enhance landscapes, important vistas and visual and environmental qualities of coastal, lake foreshore and river-frontage areas, townships, recreation activity centres through responsive siting and design</i>
12.05-1L 25/11/2022 C162egip	<ul style="list-style-type: none"> • fails to design development in significant landscape areas like the Gippsland Lakes, that is sympathetic to the character of the area and preserves its aesthetic values, especially in response to climate change
12.05-2S 31/07/2018 VC148	<ul style="list-style-type: none"> • <i>doesn't ensure development does not detract from the natural qualities of significant landscape areas</i>