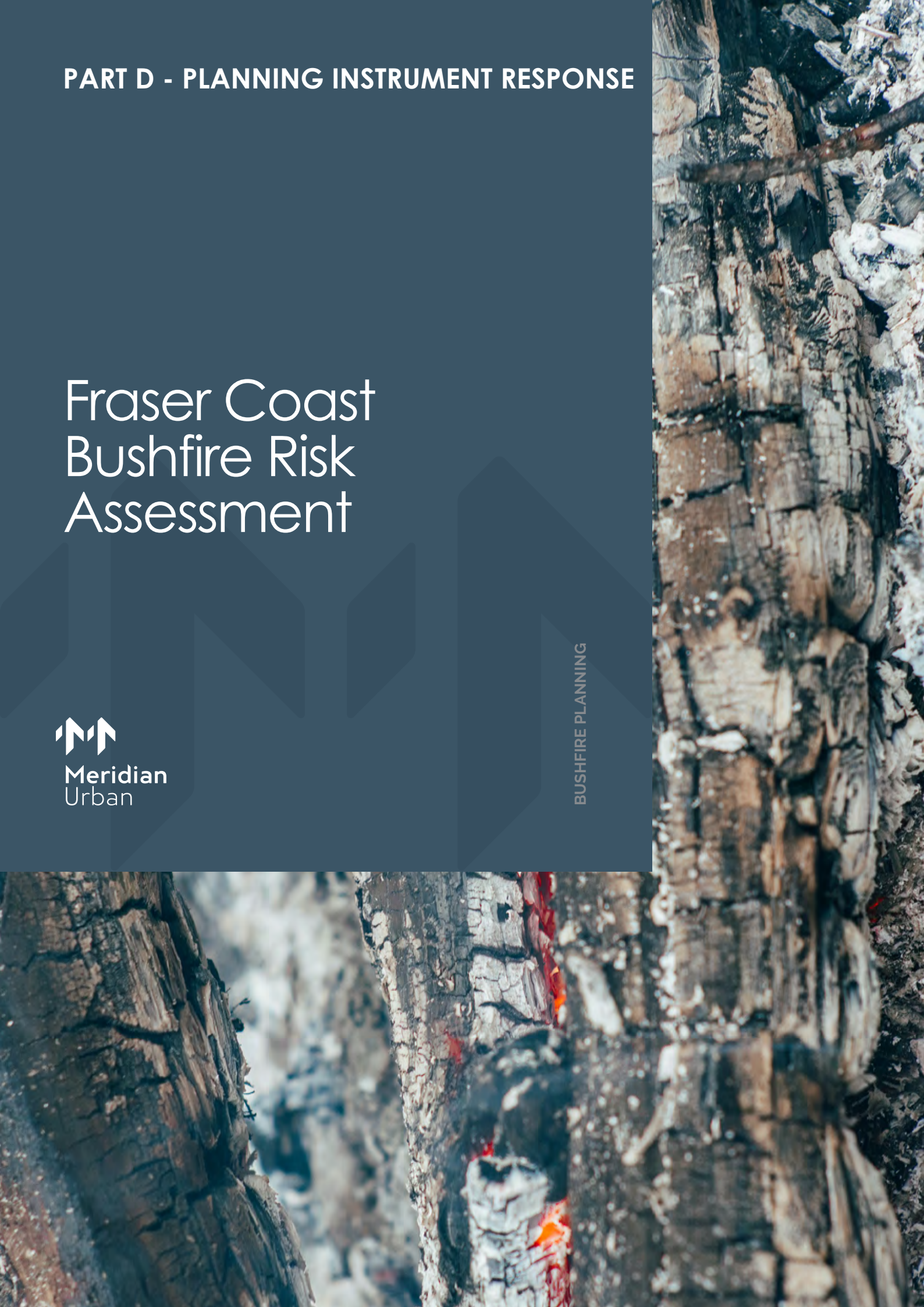
PART D - PLANNING INSTRUMENT RESPONSE

Fraser Coast Bushfire Risk Assessment

BUSHFIRE PLANNING

Meridian Urban



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Member Planning Institute of Australia
Member Fire Protection Association of Australia
Member International Association of Wildland Fire
Member Natural Hazard Mitigation Association (USA)
Member Association of Fire Ecology

BPAD Bushfire Planning & Design Accredited Practitioner Level 3

Acknowledgement of Country

We acknowledge the Traditional Owners and custodians of the Fraser Coast region which extends through the traditional lands and waters of the Butchulla (Badtiala) and Kabi Kabi (Gubbi Gubbi) people.

We pay respect to Elders past, present and future.

We recognise and honour their ancient cultures, and their connection to land, sea and community. We recognise First Nations continued dedication to the management of healthy Country.

DISCLAIMER

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Fraser Coast Regional Council

Part D – Planning Instrument Response

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1 Introduction

Meridian Urban was engaged by Fraser Coast Regional Council (Council) to deliver the Bushfire Risk Assessment Project as part of the review of the Fraser Coast Planning Scheme.

1.1 Project overview

The Bushfire Risk Assessment Project incorporated four (4) parts, as illustrated and described further below.



Figure 1 - Overarching project phases

The four parts of the project are:

- **establish** the context of the Fraser Coast region to understand the policy and regulatory environment, the physical environment, weather and climatic trends and event history (Part A - completed).
- **review and assess** the nature of the bushfire risk in land use planning terms (Part B - completed)
- **translate** the bushfire risk assessment recommendations (from Part B report) into risk-informed local land use policy positions, informed by Council's risk appetite and its policy platform for other socio-economic objectives (Part C - completed)
- **prepare** planning instrument response (draft planning scheme components) consistent with Queensland's statutory planning framework that builds bushfire resilience over time **(Part D - this report).**

1.2 Purpose

The purpose of this report is to provide drafting content to inform the planning scheme review. It leverages the policy framework established in the Part C report and translates it into drafting amendments to the planning scheme.

This is achieved having regard to the legislative and regulatory frameworks which guide plan-making, and which satisfies the State interest requirements of the State Planning Policy, July 2017 (SPP) for natural hazards, risk and resilience.

2 Methodology

This report has incorporated the requirements and considerations of relevant legislative, regulatory and statutory instruments and non-statutory guidance materials specifically relating to how bushfire hazard, risk and resilience is embedded within the revised planning scheme.

The following instruments and materials have been considered as part of the preparation of this report:

- *Planning Act 2016*
    - *Planning Regulation 2017*
- State Planning Policy 2017
    - Integrating State Interests in a Planning Scheme: Guidance for local governments
    - Integrating Building Work in Planning Schemes: Guidance for local governments
    - Bushfire Resilient Communities technical reference guideline
    - Natural hazards, risk and resilience state interest – Bushfire: Example planning scheme assessment benchmarks
- Wide Bay Burnett Regional Plan (2011) and Draft Wide Bay Burnett Regional Plan 2022
- Minister's Guidelines and Rules
- Drafting a planning scheme: Guidance for local governments
- AS3959-2018 – Construction of building in bushfire prone areas / National Association of Steel Framed Housing (NASH) Standard for Steel Framed Construction in Bushfire Areas.

3 Bushfire Risk Assessment and Land Use Planning Recommendations

Table 1 on the following page outlines the land use planning recommendations identified by the risk assessment (Part B of this project) and the subsequent planning policy pathways and planning directions (Part C of this project).

The table identifies how each recommendation is addressed by the proposed amendments to the planning scheme in the following section of this report and provides brief commentary on how each recommendation has been considered, as well as matters that may require further attention from Council.

Table 1 - Summary of risk assessment recommendations to inform the revised planning scheme preparation

ID	Risk assessment recommendation	Addressed	Considerations
01	Almost one quarter of the existing residential dwelling stock is exposed to potential bushfire hazard, which can reasonably imply one quarter of the region's population. Exposure is likely to grow into the future on a cumulative basis, based on existing use rights, as well as the existing and proposed settlement strategy for the region. The existing planning scheme does not currently include the potential impact buffer as part of the designated bushfire prone area for building works purposes. This has likely exacerbated exposure and potential vulnerability of the existing built form given that new development would not have been constructed having regard to the hazard.	✓	a. Recommended changes to Part 1 of the planning scheme to include the potential impact buffer as part of the designated bushfire prone area.
02	The existing Planning Scheme does not designate land within the Potential impact buffer as part of the designated bushfire prone area for the Building Code of Australia and Queensland Development Code which may have resulted in a proportion of residential development which is subject to bushfire hazard not having triggered assessment against or compliance with AS3959.	✓	See a. above
03	Lands zoned for or capable of accommodating future growth are exposed to potential bushfire hazard, particularly the Rural residential and Emerging communities zones.	**In part**	b. Implementation of Bushfire Resilient Precincts, which limit further subdivsion in particular Rural residential areas. c. Growth in the emerging community zones will be addressed through a full assessment against the whole planning scheme. Rezoning of the potentially exposed Emerging community zoned land is not within the scope of this project, at the instruction of Council. Notwithstanding, it is recommended that a zoning analysis with consideration to bushfire hazard and risk should be undertaken as a

ID	Risk assessment recommendation	Addressed	Considerations
			priority once revised BPA mapping for the region is available for integration into the scheme.
04	Risk from grassfire (including on rural lands and agricultural cropping lands), and short, sharp interface fire events.	✓	d. Grassfire is not a relevant planning matter under the SPP, however it is a relevant risk in Council's argiculatural production areas. Hazrad / fuel load management and other disaster management activities are relevant in response.
05	Policy tensions between bushfire hazard protection, as a factor of growth and development, and environmental values have and are likely to continue to generate conflict at the urban bushland interface.	In part	e. Additional provisions have been recommended in the Bushfire hazard overlay code to recognise the importance of environmentally signfiicant areas and the clearing of vegetation, soley for bushfire protection purposes, has been discouraged. This is also reflected within the strategic outcomes of the planning scheme. f. Council may have further consideration to the overarching policy position of the planning scheme regarding the protection of environmental values and managing bushfire hazard areas.
06	High portions of parts of the region's employment generating zoned land are exposed to potential bushfire hazard including both High impact industry, Medium impact industry, Waterfront and marine industry and District centre zones.	✓	g. The table of assessment for the Bushfire hazard overlay now triggers its assessment for a wider range of land uses than is currently the case, without necessarily changing the category of assessment. This ensure relevant assessment benchmarks are applied to these land uses.
07	A high portion of rural zoned land is exposed to potential bushfire hazard across the region.	In part	h. The table of assessment for the Bushfire hazard overlay now triggers its assessment for a wider range of land uses than is currently the case,

ID	Risk assessment recommendation	Addressed	Considerations
			without necessarily changing the category of assessment. This ensures relevant assessment benchmarks are applied to these land uses. At the instruction of Council the category of assessment for the majority of land uses that are currently Accepted development, which includes a number of rural uses in the rural zone, have not been elevated and do not require any assessment against the Bushfire hazard overlay code.
08	Portions of the recreation and open space network are exposed to potential bushfire hazard across the region.	✓	i. The table of assessment for the Bushfire hazard overlay now triggers its assessment for a wider range of land uses than is currently the case, without necessarily changing the level of assessment. This ensures relevant assessment benchmarks are applied to these land uses.
09	Some vulnerable facilities are identified as being subject to potential bushfire hazard.	**In part**	j. New defined activity groups of Vulnerable use, Essential community infrastructure and critical community infrastructure have been recommended. These land uses have also been elevated to Code assessment and require a full assessment against the revised Bushfire hazard overlay code. k. The ability to address the exposure and risk to existing facilities is limited, as the consideration of the suitability of existing zones was outside the scope of the project. As noted in c. above, in this regard a zoning analysis is strongly recommended.

ID	Risk assessment recommendation	Addressed	Considerations
10	A moderate portion of essential community infrastructure is exposed to potential bushfire hazard particularly across the electricity, water and sewerage networks.	In part	l. See j. and k. above
11	Parts of the evacuation network may be compromised in a fire event and may impact the ability to evacuate in certain locations, under certain conditions, especially along highways and the rural arterial roads. The evacuation network risks are amplified by the number of coastal communities serviced by single road access, and exposed the landscape-scale fire runs.	In part	m. The pressure on the evacuation network is addressed to some extent by the inclusion of the Bushfire Resilient Precincts, as discussed in b. above. n. Additional provisions have been included in both the Bushfire hazard overlay code and Reconfiguring a Lot Code regarding the provision of evacuation routes and access. o. Other assessment benchmarks are also now incorporated, supplemented by content contained within the Planning Scheme Policy, which articulate the expectation for evacuation considerations.
12	Hazard exposure may change in certain locations over time to higher hazard classes, and increased fire weather as a result of climate change.	On going	p. The Part C report recommended Council continue to work with the State government as part of ongoing updates and amendment processes supporting the State-wide bushfire prone areas mapping and to adopt the revised mapping in the amended planning scheme at the earliest possible opportunity. q. As an outcome of the recommended zoning analysis (see c. above), Council may consider place based planning pathways that address the increase in hazard exposure as a result of climate change.

4 Planning Scheme Drafting Instructions

As identified in Part C, the following components of the current local planning instrument (being the planning scheme and supporting planning scheme policies) require recommended amendments to incorporate the outcomes of Part B and Part C of this Bushfire Risk Assessment:

- **Part 1 - About the planning scheme**
- **Part 2 - State planning provisions**
- **Part 3 - Strategic Framework**
- **Part 4 - Table of assessment**
- **Part 6 - Zones**
- **Part 7 - Local plans**
- **Part 8 - Overlays**
- **Part 9 - Development codes**
- **Schedule 1 - Definitions**
- **Schedule 2 - Mapping**
- **Schedule 6 - Planning scheme policies**

The recommended amendments are set out in full in Error! Reference source not found. **Appendix A** and discussed briefly below.

4.1 Part 1 - About the planning scheme

4.1.1 Building works

As recommended in the Part C report, it is necessary to amend Part 1, Section 1.6 of the planning scheme to specifically state the potential impact buffer forms part of the bushfire prone area. This will ensure building work in the potential impact buffer appropriately considers bushfire provisions for the purposes of the Building Code of Australia.

Further, consistent reference to the bushfire hazard overlay map categories (very high potential bushfire intensity area, high potential bushfire intensity area, medium potential bushfire intensity area and potential impact buffer area) needs to be aligned throughout the scheme, including in Section 1.6.

The recommended changes to Part 1 of the planning scheme are set out in **Appendix A1.**

4.2 Part 2 - State planning provisions

4.2.1 State planning policy

It is necessary for the planning scheme to appropriately state which version of the State Planning Policy is reflected in the planning scheme to provide clarity for development assessment.

The recommended changes to Part 2 of the planning scheme are set out in **Appendix A1.**

It is understood Council is liaising directly with QFES in relation to reference within the planning scheme to the State-wide BPA mapping.

4.3 Part 3 - Strategic framework

In the Part C report, various recommended changes were proposed to the Strategic Framework as it appears in the existing planning scheme. It is of note that Council has begun the separate process of re-drafting the Strategic Framework. Further, Meridian Urban has previously been working with Council, through the flood and coastal planning project, to further refine that new Strategic Framework to appropriately incorporate all hazard provisions, as well as flood and coastal specific provisions.

To ensure consistency, bushfire specific amendments have been made to the Part C - Strategic framework previously provided in the flood and coastal planning work. This is included in **Appendix A2**.

The recommended changes to the Strategic framework are intended to:

- adopt and align with the flood and coastal planning recommendations previously delivered by Meridian Urban which are supplemented to ensure bushfire is captured appropriately alongside other hazards;
- recognise the influence of bushland ecosystems in determining settlement patterns.
- include narratives in support of the new Bushfire Resilient Precincts;
- acknowledge bushfire hazard in existing coastal towns and villages;
- recognise exposure to bushfire as a key planning consideration;
- address policy tensions between bushfire and biodiversity outcomes through a position on separating and ensuring development is set back from environmental values;
- Section 3.1 Preliminary 3(e) of the Strategic framework recommends a new Strategic Framework map SFM-005 Natural hazards, climate change and resilience. Bushfire Resilient Precincts should be included as part of this mapping.

4.4 Part 5 - Table of assessment

Part 5 of the planning scheme includes the table of assessment. The tables of assessment can:

- **categorise development** as: prohibited (only if the Planning Regulation allows); assessable; or accepted development.
- **prescribe the category of assessment** as: accepted; accepted, subject to requirements; code; or impact assessment.
- **set out the assessment benchmarks** that assessable development must be assessed against.

As set out in the Part C report, the planning scheme table of assessment must be consistent with the Planning Regulation.

It is not within the scope of this particular project to recommend changes to the table of assessment for the zones or local plans. However, it is noted below that further analysis of the suitability of existing zones in the context of bushfire hazard and risk should be undertaken once revised BPA mapping is available to be integrated within the planning scheme.

4.4.1 Bushfire hazard overlay table of assessment

The recommended changes to the Table of Assessment for the Bushfire Hazard Overlay align with the requirements of the Planning Regulation and have consideration to the guidance material of the SPP, whilst also taking into consideration the scope which adopts a focus of strengthened alignment with the SPP, whilst a zoning analysis can be completed as part of later

growth management activities and on the basis of revised State-wide BPA mapping when available.

Table 2 provides an overview of the recommended changes to the Bushfire hazard overlay table of assessment from the current planning scheme. The full suite of changes are included in **Appendix A3.**

In summary, the recommended changes are intended to:

- **Provide clarity** on the category of assessment for uses that cannot comply with the accepted development provisions. These uses now clearly are stated as Code assessment.
- **Allocate an appropriate category of assessment** to particular vulnerable land uses and land uses that provide an essential or critical role. In doing so, consideration has been given to:
    - the suitability of land uses in the hazard area;
    - the function of the use, particularly during or after a bushfire event;
    - whether aspects of the use are impacted by bushfire hazard;
    - whether arrest or mitigation response to bushfire is needed.

  Consequently, Vulnerable uses, Essential community infrastructure and Critical community infrastructure land uses have been assigned Code Assessment. These uses are separately defined in recommended new Defined activity Groups in Schedule 1 - Definitions. This is with the exception of a local utility (administrative definition), which has been nominated as 'no change' at the request of Council, where for the reticulation or conveyance of water. This allows for some local utilities, which are typically accepted development across the majority of zones in the current planning scheme, to continue to be accepted development. This has been limited to local utilities for the reticulation and conveyance of water as this type of infrastructure is considered to be at low risk of damage from bushfire given the majority of the infrastructure is underground.

  It is important to note that in some circumstances Vulnerable uses, Essential community infrastructure and Critical community infrastructure may not be acceptable in the bushfire prone area. Ideally, they should be made impact assessment and discouraged through the corresponding provisions of the Bushfire hazard overlay code and Strategic framework. However, whilst the bushfire risk assessment determined the hazard mapping to be sufficiently reliable for the purposes of the risk assessment, the current hazard mapping is coarse in nature and is in the process of revision by the State government. Once this version is available, a zoning analysis should be undertaken which likewise is likely to require a further revision to the categories of assessment. In this regard, the SPP advises that:

  > *'Overlays should be compatible with and not operate either individually or cumulatively to prevent or restrict land from being used for the purpose for which it has been zoned'.*

  Planning must consider, in the context bushfire, if land is affected to the point where it cannot meet the Natural Hazard risk and resilience policy statement. The zone allocated should reflect the land use capacity of that land. In this way there is no misunderstanding about how the land can be used. Therefore, in the interim these uses have been allocated as Code assessment through the overlay, but it is strongly recommended that a zoning analysis is undertaken across the local government area to determine whether the zoning for these type of uses is appropriate in the bushfire prone areas.

- **Analysed the category of assessment for uses that are otherwise Accepted development**.

  Consideration was given to the full scope of uses that are currently Accepted development and therefore do not require assessment against the Bushfire hazard overlay code. Many of the uses are within existing buildings in established urban areas, and therefore their exposure to bushfire hazard areas would likely be low. However, there were also a number of uses that may be subject to exposure to bushfire hazard areas and may not be suitable as accepted development. This may be due to their vulnerable and/or hard to evacuate users, ability to operate before, during or after a bushfire event, tendency to be in remote locations, and various other factors. Such uses include:

  - Any use in the Community facilities zone if specified in, or ancillary to, the applicable Community facilities zone annotation either located on Council owned or controlled land or located within an existing building. This is an extensive number of land uses right across the Fraser Coast region.
  - Home based business where involving a home based child care service.
  - Some rural activities (Animal Husbandry, Cropping), that are economic generating activities for the region and that may include activities or facilities that are vulnerable to bushfire (i.e. large scale packing sheds)

  At this stage these uses have been retained as Accepted development, in line with Council's expectations. However, as per the recommendations above, a zoning analysis should be undertaken by Council which will ultimately inform whether there are particular locations where these uses should not be accepted development, but rather should be elevated to assessable development and should require assessment against the Bushfire hazard overlay code.

- **The assessment benchmarks for accepted development subject to requirements** expanded. This includes additional provisions relating to siting and layout and variation to the requirements for on-site water supply solely for fire-fighting purposes. The details of these additional provisions are discussed further in relation to the changes to the Bushfire hazard overlay code.

- **No change** for all other uses. For uses that are accepted subject to requirements, specific consideration has been given to the requirements of the Bushfire hazard overlay code, to avoid these uses unintentionally being elevation to Code assessment. This specifically applies to Rural activities.

  It is important to note that in some circumstances these other uses may not be acceptable in the bushfire prone area. Ideally, they should be made assessable development and require assessment against the Bushfire hazard overlay code. However, as noted with the Vulnerable uses and accepted development above, whilst the bushfire risk assessment determined the hazard mapping to be sufficiently reliable for the purposes of the risk assessment, the current hazard mapping is not considered adequate at this stage for increasing the level of assessment to Code for some of these uses across the region.

  Therefore, in the interim these uses have been allocated as No change through the overlay, but it is strongly recommended that a zoning analysis is undertaken across the local government area to determine whether the zoning is appropriate for all these uses in the bushfire prone areas.

4.4.2 Reconfiguring a lot table of assessment

Two additions have been made to the category of assessment in the Reconfiguring a lot table of assessment:

- **Bushfire Resilient Precincts:** Where creating one or more additional lots with an area of less than 2ha (with limited exceptions) the category of assessment has been increased to **impact assessment.**
- **Township Zone:** Where creating one or more additional lots with an area of less than 3,000sqm (with limited exceptions) the category of assessment has been increased to **impact assessment**.

It is understood that Council intends to reduce the minimum lot size in the Rural Residential Zone from 2ha to 1ha. There are specific locations (rural residential areas of Bauple Estate, Glenwood and Pacific Haven - referred to as the Bushfire Resilient Precincts) where the exposure to bushfire hazard and risk is such that an intensification of development is not considered appropriate. Impact assessment is nominated to discourage this type of intensification in the Bushfire Resilient Precincts and to ensure development of that nature is subject to an assessment against the whole scheme. This will include assessment against the additional recommended provisions of the Strategic Framework discussed earlier in this report which include provisions relating to the Bushfire Resilient Precincts.

The addition of the Bushfire Resilient Precincts cannot occur through the Bushfire hazard overlay table of assessment as that would involve a change to the Bushfire hazard overlay mapping (to include the Bushfire Resilient Precincts). It is our understanding that such a change to mapping is not supported by Council at this time. Further such a chance could create conflicts with State wide bushfire prone area mapping. Therefore, the change has been made through the Reconfiguring a Lot table of assessment and relevant provisions included in the Reconfiguring a Lot Code.

Further, for the Great Sandy Strait communities, which it is understood are intended to be converted to Township Zone, it is recommended that subdivision less than 3,000sqm is made impact assessable development. This is on the basis these communities are also subject to very high bushfire risk and intensification of development through subdivision is not considered appropriate.

Table 2 - Overview of Recommended Changes to Categories of Assessment

Land Use / Development Type	Description of Change	Reason for Change
Material Change of Use		
Vulnerable use, Essential community infrastructure and Critical infrastructure	The current Bushfire hazard overlay table of assessment states either No change for these uses or does not regulate these uses. These uses are now all Code assessment in the overlay.	To ensure these uses are subject to an appropriate assessment category given their characteristics (such as hard to evacuate and vulnerable occupants and/or the essential or critical service they provide) and to ensure the Bushfire hazard overlay code is an applicable assessment benchmark for these uses. This does not affect the current level of assessment as determined by the relevant zone for the majority of land uses (which are already either Code or Impact Assessment). The change will affect only those uses that are Accepted or Accepted subject to requirements in their respective zone or local plan. This is particularly relevant to these uses in the Community facilities zone and Utility installation, however given the vulnerabilities and risk to these uses, it is considered necessary to elevate these uses to Code Assessment.
Home based business, involving a home based child care service	The current Bushfire hazard overlay table of assessment does not apply to this use, as it is Accepted development in many instance. The use is now: - Accepted development subject to requirements; - Code assessment; or - No change	This change is required to ensure that this land use, which includes vulnerable occupants, is subject to an appropriate category of assessment and subject to assessment against the Bushfire hazard overlay code.
For all other uses	The current Bushfire hazard overlay table of assessment states either No change for these uses or does not regulate these uses. This remains unchanged.	As per the instructions of Council, the status quo remains for all other uses and more specifically particular regard has been had to reducing the number of uses subject to assessment against the Accepted development requirements or elevation to Code Assessment. However, as noted above this table, a zoning analysis should be undertaken to establish whether some of these uses are suitable in the zone in the context of the bushfire hazard and risk.

Land Use / Development Type	Description of Change	Reason for Change
Reconfiguring a Lot		
Reconfiguring a lot	The current Bushfire hazard overlay states No change for Reconfiguring a lot. This remains unchanged. However, it is relevant to note that a change to the category of assessment for Reconfiguring a lot in the Bushfire Resilient Precincts has been included in the Reconfiguring a Lot Table of Assessment. Further, a minimum lot size is recommended in the proposed new Township Zone.	The change (via the Reconfiguring a Lot table of assessment) increases the category of assessment for reconfiguring a lot in specific locations (identified as Bushfire Resilient Precincts) to impact assessment if creating lots with an area of 2ha or less (with some exceptions for utilities and services). It is understood that Council intends to reduce the minimum lot size in the Rural Residential Zone from 2ha to 1ha. There are specific locations where the exposure to bushfire hazard and risk is such that an intensification is not considered appropriate. This change however cannot occur through the Bushfire hazard overlay table of assessment as that would involve a change to the Bushfire hazard overlay mapping (to include the Bushfire Resilient Precincts). It is our understanding that such a change to mapping is not supported by Council at this time. Therefore, the change has been made through the Reconfiguring a Lot table of assessment and code. Further, for the Great Sandy Strait communities it is recommended (through the Reconfiguring a Lot Table of assessment) that subdivision less than 3,000sqm is made impact assessable development. This is on the basis these communities are subject to very high bushfire risk and intensification is not considered appropriate.
Building Work		
Involving a Dwelling house or Dual occupancy	The current Bushfire hazard overlay table of assessment states No change to the category of assessment for Building work for a Dwelling house or Dual Occupancy. However, the Bushfire hazard overlay code is identified as an applicable Code. Building work for Dwelling Houses and Dual Occupancy is Accepted development subject to requirements in a number of	No change, just clarification to ensure the table of assessment is not misinterpreted.

Land Use / Development Type	Description of Change	Reason for Change
	zones (particularly the Residential Zones). Where compliance with the Bushfire hazard overlay code is not achieved, then both uses could be elevated to Code Assessment. The revised table of assessment does not change this. It just clearly states the category of assessment has the potential to be elevated to Code.	

4.5 Part 6 - Zones

Various drafting options for the Zone Codes were identified in the Part C report, based on the current planning scheme. It is our understanding Council has begun drafting revised Zone Codes. With regard to bushfire provisions, it is recommended in drafting those new Codes that Council has particular regard to:

- Avoidance of duplication of assessment benchmarks that are otherwise included in the Bushfire Hazard Overlay Code.
- Where hazards are referenced, ensure all relevant hazards including bushfire are included.
- Ensure avoidance of risk is reinforced in the first instance.

Further to the above, it is considered necessary that the Rural Residential Zone Code and Township Zone Code include bushfire provisions to reflect the recommended changes provided throughout this report. Those recommended provisions, as set out in **Appendix A4**, include:

- **Rural Residential Zone:**
  - a new overall outcome relating to Bushfire Resilient Precinct.
  - exclusion of the Bushfire Resilient Precincts from the revised minimum lot sizes in the Rural residential Zone (i.e. maintain the minimum lot size of 2ha).
- **Township Code Zone:**
  - ensure the new Coastal Township Zone Precinct captures the identified Great Sandy Strait communities of Maaroom, Boonooroo, Tuan, Poona and Tinnanbar. These areas are subject to high bushfire risk and intensification of land uses should be discouraged.
  - if a minimum lot size is included in the Coastal Township Zone Precinct (similar to the current draft Rural township zone precinct overall outcomes), ensure it is a minimum of 3,000sqm (consistent with the proposed minimum lot size in the Reconfiguring a Lot Code). Any further intensification beyond this should not be supported.

4.6 Part 7 - Local plans

For the majority of this project, it was our understanding that Council intended on removing or significantly modifying the majority, if not all, of the existing Local Plans from the planning scheme. Further, Council has advised from the outcomes of the Part C report that placed based responses to risk are not supported at this time. As such, no changes to the Local Plans were proposed as part of this project.

Towards the end of the project, Council revised its position regarding the Local Plans and advised that two Local Plans (Eli Waters / Dundowran Local Area Plan Code and St Helens Local Area Plan Code) were to be retained / updated. The retention of these two Local Area Plan Codes is acknowledged and based on the recommendations of the Bushfire Risk Assessment we generally support Council's proposed assessment benchmarks (as per our recommended amendments) relating to bushfire risk and impacts as set out following:

St Helens Local Area Plan Code:

Bushfire risk and impacts	
PO Development and bushfire risk source: (a) avoids intolerable risk; (b) minimises the exposure and vulnerability of people at risk from bushfires; (c) achieves an appropriate level of resilience and safety during a bushfire event; (d) provides buffers between the bushfire prone areas and the proposed Low density and mixed density residential areas east of the Maryborough Rifle Range to mitigate bushfire risk; and (e) provides buffers between proposed residential areas and ecological restoration that is undertaken within the environmental and drainage purposes areas to mitigate bushfire risk.	**AO** No acceptable outcome provided.

Eli Waters / Dundowran Area Local Plan Code:

Bushfire risk and impacts	
PO Development and bushfire risk source: (a) avoids intolerable risk; (b) minimises the exposure and vulnerability of people at risk from bushfires; (c) achieves an appropriate level of resilience and safety during a bushfire event; and (d) provides buffers between the proposed residential areas and adjacent proposed environmental and drainage purposes areas to mitigate bushfire risk.	**AO** No acceptable outcome provided.

4.7 Part 8 - Overlays

4.7.1 Bushfire hazard overlay code

Various recommended changes to the Bushfire hazard overlay code were identified in Part C of this Bushfire Risk Assessment. Those changes have been incorporated into the revised overlay code included in **Appendix A5.** In summary the changes are:

Purpose and Overall Outcomes:

- Emphasis on avoidance of intolerable risk in the first instance.
- Inclusion of provisions relating to exposure to bushfire hazard in mapped Bushfire Resilient Precincts.

- Increasing the protection of ecological values from clearing for bushfire protection purposes.
- Provisions relating to emergency response and recovery and self-evacuation.
- Recognising the role of rehabilitation, revegetation and landscaping in increasing the risk from bushfire.
- Specific provisions for Vulnerable uses, Essential community infrastructure and Critical community infrastructure in bushfire prone area.
- Provisions regarding the manufacture and/or storage of hazardous materials.
- Recognition (via non-statutory notation) that alternative assessment pathways may exists for assessment benchmarks where mapping is found to not reflect current circumstances or conditions.

Assessment benchmarks for accepted development subject to requirements (ADSR):

- The assessment benchmarks for accepted development subject to requirements of the Code have been expanded to include additional provisions relating to:
    - Siting and Layout:
        - Reliance on an approved bushfire management plan
        - Avoidance of bushfire prone areas
        - Requirement for asset protection zones to achieve adequate separation from the hazard.
        - Protection of areas of environmental significance. Council has nominated a trigger of a site area of larger than1ha for these requirements.
    - Access, evacuation routes and support for emergency services:
        - Proximity to a road frontage
        - Emergency service vehicle access and manoeuvring.
    - Water supply:
        - Increase in static water supply requirements for fire-fighting purposes and requirement for reticulated water supply for some uses.
        - Additional parameters for the design, location and access to water supply.

      It is noted that recommended provisions which state that swimming pools, farm ponds and dams are not considered a reliable source of static water supply have not been included in the Bushfire hazard overlay code or the supporting Bushfire planning scheme policy, at the request of Council. This is not however in line with current State practices and recommendations. Further, the location of the static water supply within 10m of the building has also not been included at the request of Council.
- In conjunction with the changes to the Table of assessment for the Bushfire hazard overlay, the ADSR provisions now apply to land uses other than just a Dwelling house and Dual Occupancy. However, specific consideration has been given to ensuring the category of assessment for some land uses are not inappropriately elevated due to ADSR provisions that are not suited to the type of use or location.

Assessment benchmarks for assessable development:

- Expanded siting and layout provisions.

- Expanding access, evacuation routes and support for emergency services provisions.
- Variation to the water supply requirements.
- Additional provisions relating to Vulnerable uses, Essential community infrastructure and Critical community infrastructure.
- Addition of infrastructure design provisions to increase resilience.
- Inclusion of provisions regarding rehabilitation and revegetation.
- Additional reconfiguring a lot provisions including design and layout, access, resilience and access and evacuation.

Further to the above, it is of note that Table 8.2.5.3.1 is applicable to Accepted development subject to requirements (Acceptable Outcomes only) and Assessable development (both Acceptable Outcomes and Performance Outcomes). This approach has been applied in response to comments provided by Council on the current operation of the planning scheme and to align with other existing Codes within the planning scheme. As a result, for assessable development, some of the assessment benchmarks may be duplicated. Whilst the duplication isn't extensive, in finalising the Code Council may wish to remove the duplicated provisions.

In response to the initial comments from Council, the following comments are provided with regard to specific provisions of the Code:

Table 8.2.3.4.1 - Assessment benchmarks for Accepted Development subject to requirements and Assessable Development

- AO1.1 allows for development in accordance with an approved building envelope for bushfire management purposes and a bushfire management plan to proceed without further assessment against the assessment benchmarks for accepted development subject to requirements. This is intended to streamline subsequent material change of use applications and avoid duplication of bushfire management plans and Council assessment processes. This is also consistent with the proposed Reconfiguring a Lot Code Council has provided, which includes provisions requiring building envelopes on sites subject to overlay constraints.
- AO1.3 provides that development, with the exception of vulnerable uses, essential community infrastructure and critical community infrastructure, is sited such that an asset protection zone provides a distance that achieves a radiant heat flux level of 29kW/m² or less between the outermost projection of the building and the bushfire hazard. The asset protection zone must be within the limits of the lot boundaries.

  The need for an asset project zone is separate to the consideration of separation provided at the building permit stage. At building permit stage, these is no minimum or maximum requirement placed on separation. Rather, it is a binary calculation of bushfire attack level classification based on the distance from hazard. It does not require or otherwise provide a minimum level of separation.

  The State's example assessment benchmarks document makes clear the State's policy position on a maximum radiant heat exposure threshold of 29kW/m2 for local planning instruments. The purpose of this is to ensure the role of land use planning in bushfire risk reduction seeks to limit extreme exposure by virtue of building too close to hazardous bushland. The building provisions do not require or achieve this.

  - In instances where development cannot comply, a limited code assessment is subsequently required so that other planning measures can be considered and applied, thereby mitigating the potential for adverse exposure outcomes as required by the corresponding Performance Outcome.

Table 8.2.3.4.2 - Assessment benchmarks for Assessable Development

- PO1 The supporting Note for PO1 allows an applicant to undertake a site-level verification of the location and nature of hazardous vegetation as a means to demonstrate compliance with the Siting and Layout provisions (the same note has also been included in PO1 for Table 8.2.3.4.1).
    - The added non-statutory note within the 'purpose' section of the code reflects potential circumstances where physical conditions may have changed since the mapping was last updated.
    - Council may also consider noting on its website, on an appropriate webpage (e.g. on a page dedicated to building in bushfire prone areas, etc.), that where these circumstances are potentially apparent, customers can contact Council to discuss. Subject to Council offer determination, an exemption certificate under the Planning Act 2017 may provide a pathway to address such issues (for both Accepted, subject to requirements and Assessable development).
- AO15.1 includes perimeter road design provisions which may vary from other parts of the planning scheme. Council will need to ensure these provisions are appropriately reflected throughout the scheme (for example in the Planning Scheme Policy for development works).

4.8 Part 9 - Development codes

4.8.1 Reconfiguring a Lot Code

Some additions to the Reconfiguring a Lot Code have been recommended in **Appendix A6.** These provisions are consistent with the Bushfire hazard overlay code and relate evacuation routes and access where in the Bushfire Prone area and limiting intensification within Bushfire Resilient Precincts.

4.9 Schedule 1 - Definitions

During the preparation of the other sections of the planning scheme, the need for a number of additional definitions have been identified. These additional definitions (included in **Appendix A7)** include new Defined activity groups (utilising existing Use definitions) and new Administrative terms and definitions.

The definitions have been devised based the Integrated State Interests in a Planning Scheme, November 2012 and where possible have been made consistent with the flood and coastal planning work already undertaken by Meridian Urban.

4.9.1 Defined activity groups

Additional defined activity groups (in Schedule 1, Section SC1.2 - Defined activity groups) are considered necessary to assist with the interpretation of the amended planning scheme (see **Appendix A7)**.

A description and the rationale for these activity groups has previously been provided in the flood and coastal planning work and equally applies to bushfire hazard. These uses are:

- **Vulnerable uses:**
    - Involves people who require assistance in times of natural hazards and/or are difficult to evacuate due to numbers, conditions and options to shelter.
    - The proposed Vulnerable uses definition adopts the definition set out in the example State Code, May 2021, with some variations.

- Those variations are the exclusion of Nature-based tourism, Relocatable home park, Resort complex and Tourist park. Whilst these uses are vulnerable uses from a bushfire perspective, they have been excluded to align the definition with the flood and coastal planning project (to avoid multiple definitions within the planning scheme, given such uses are already prescribed for flood and coastal). These uses still trigger assessment against the code, which is not guaranteed under the current planning scheme (i.e. where the uses are Accepted development or Accepted subject to requirements the current overlay table of assessment makes no change and does not trigger the Bushfire hazard overlay code / or does not contain relevant provisions in the overlay code).

- **Essentially Community Infrastructure:**
  - Involves essential services to support the community and a required to operate during and immediately after a natural hazard event.
  - The proposed Essentially Community Infrastructure definition is a variation of the Community Infrastructure for Essential Services definition set out in the example State Code, May 2021.
  - The variations are the exclusion of Educational Establishment (which is captured as a Vulnerable use) and addition of the Community Use. A Community use has been included to align the definition with the flood and coastal planning project (to avoid multiple definitions within the planning scheme, given these have already been prescribed by the flood and coastal risk assessments) and to recognise the vulnerability of these uses to bushfire risk and hazard. It also recognises that these uses are typically places people attend before, during and after a bushfire event for information and support.
  - As stated in the flood and coastal project, this defined activity group could be extended to include other essential uses. Of particular relevant to bushfire is a Place of Worship, which provide a support service to the community, particularly after natural hazard events.

- **Critical Community Infrastructure:**
  - Facilities, including many public assets, that are critical in recovery and are also often complex and expensive to fix.
  - This defined activity group is not included in the example State Code, however is considered necessary as the facilities are critical to bushfire recovery.
  - It is considered necessary that the land uses included in the Critical Community Infrastructure defined activity group are captured, even if those land uses are currently accepted development in the current planning scheme (such as Utility Installation - with the exception of locality utility as discussed earlier in this report). These assets are considered critical to settlement function and the cost and burden to Council if placed in proximity to bushfire hazard areas and subject to increased risk of damage from an event should be considered.

4.9.2 Administrative terms and definitions

A number of additional administrative terms and definitions (in Schedule 1, Section SC1.4 - Administrative terms and definitions) are considered necessary to assist with the interpretation of the amended planning scheme. The administrative terms and definitions have been derived from Integrating State Interests in a Planning Scheme, November 2021 and are included in **Appendix A7**.

A separate / broader definition for some of these uses (i.e. hazardous activities / hazardous materials / hazardous chemicals) has been prescribed by the flood and coastal risk projects

for inclusion within the planning scheme. These definitions are also derived from the SPP, however are in part specific to flood hazard. Therefore, it is relevant to note separate definitions are required in the context of bushfire hazard.

4.10 Schedule 2 - Mapping

There are no changes proposed to the mapping at this stage, however when updated State mapping becomes available it is highly recommended it is adopted by Council at the earliest possible time.

4.11 Schedule 6 - Planning Scheme Policy

A new stand-alone Bushfire Planning Scheme Policy has been prepared and is included in full in **Appendix A8.** The SPP provides guidance on how to comply with and interpret the assessment benchmarks and prepare a bushfire hazard assessment to satisfy the code. It includes the following bushfire protection measures:

- Evacuation.
- Perimeter roads, fire trails and access.
- Asset protection zones.
- Vulnerable uses, essential community infrastructure and critical community infrastructre.
- Landscaping.
- Revegetation and rehabilitation.
- Water supply.
- Bushfire resilient building guidelines.

5 Precinct-scale planning pathways

Part C of the Bushfire Risk Assessment identified precinct-scale planning pathways across eight precincts within the Local Government Area. It was recommended that place-based responses to risk are considered in the revised planning scheme in accordance with the precinct-scale planning pathways.

It is understood that this content will become relevant when a future zoning-based analysis is undertaken. As such, the place-placed responses remain advisory only at this stage, with the exception of the Bushfire Resilient Precincts which have been incorporated into the Bushfire hazard overlay code, Reconfiguration of a Lot Code and the Tables of assessment.

6 State Planning Scheme Requirements for Bushfire

The Part C report provided an overview of the regulatory context and supporting material to which this planning instrument response must have regard, including the State Planning Policy, the *Planning Act 2016* and *Planning Regulation 2017,* the Minister's Guidelines and Rules, the Regional Plan and the Building Act requirements.

Two key guiding documents are called upon by the regulatory context that relates to bushfire:

- *Integrated state interests in a planning scheme - Guidance for local governments,* November 2021, Version 1.2 (the SPP guideline).
- Bushfire resilient communities: Technical reference guide for the State Planning Policy State interest 'Natural Hazards, Risk and Resilience - Bushfire.

6.1 The SPP guideline for local governments

The Queensland Government has prepared the *Integrating state interests in a planning scheme – Guidance for local governments, November 2021 – VS 1.2* (the SPP guideline) to assist local government in the interpretation, integration and advancement of the State interests articulated in the State planning instruments when making or amending their planning scheme.

The SPP guideline:

- is not statutory in its effect and does not constitute mandatory steps or mandatory scope of considerations;
- does not contain new policy;
- illustrates the scope and nature of planning scheme provisions that may contribute to integrating each State interest based on the matters relevant to their local situation and the nature of the planning scheme amendment proposed; and
- will assist State agencies in assessing whether a planning scheme amendment has effectively integrated the State interest and advanced the State interests of the relevant regional plan (to the extent applicable).

The SPP guideline sets out drafting considerations related to bushfire for the State interest – natural hazards, risk and resilience. The drafting considerations are set out in full **Table 3** and a compliance assessment against the recommendations of this report are provided therein.

In summary:

- revised strategic outcomes that address natural hazard, risk and resilience which incorporate the consideration of bushfire;
    - this includes specific regard to the Bushfire Resilient Precincts recommended for selected rural residential communities to arrest future risk;
    - seeks to balance competing policy tensions between bushfire and biodiversity by recognising the need to set back development from corridors and bushland in the first instance;
- allocation of zones has not formed a component of the examination of this risk assessment. A zoning analysis is required when new State-wide BPA mapping is released. This may form part of a later scheme amendment and is likely to include changes to the levels of assessment for the Bushfire hazard overlay;

- categories for assessment are refined. The approach acknowledges that amendments to levels of assessment in line with hazard categories may inappropriately add unnecessary regulatory controls given the coarseness of mapping as it currently stands. A zoning analysis and subsequent revision of the amended categories of assessment will be required when new State-wide BPA mapping is available to be integrated into the planning scheme;
    - Notwithstanding the above, the revised categories of assessment ensures assessment of the Bushfire hazard overlay code is made applicable to more types of development than is the case under the current planning scheme;
- Revised assessment benchmarks are prepared for the Bushfire hazard overlay code which utilise the State's example assessment benchmarks as a base, balanced with the policy outcomes sought by the existing code and supplemented with specific risk observations identified by this assessment, adopting a risk responsive approach to statutory controls;
    - Additional benchmarks are provided for the Reconfiguration of a lot code which apply to vehicle access for evacuation, as well as minimum lot size for the Bushfire Resilient Precincts to limit future potential densification in exposed rural residential areas of the region.
- Alignment with the direction of the flood and coastal policy approach for the region provides a calibrated approach across and through the scheme.

Table 3 - SPP 2017 guideline bushfire considerations for drafting planning scheme provisions checklist

State interest policy	Considerations	Recommendations for amended planning scheme
Establish strategic outcomes that align with the state interest and inform provisions through the balance of the planning scheme The strategic outcomes provide the planning scheme intent for delivering the state interest. The level of detail contained in the strategic outcomes will be informed by the local government context.		
1 & 4	Do strategic outcomes acknowledge the presence of bushfire prone areas in the planning scheme area and recognise and acknowledge the potential risk to human life and property and the environment of bushfire in the local government area?	**Satisfied** Revised strategic outcomes that address natural hazard, risk and resilience which incorporate the consideration of bushfire. This includes specific regard to the Bushfire Resilient Precincts recommended for selected rural residential communities to arrest future risk. Further, the revised provisions seek to balance competing policy tensions between bushfire and biodiversity by recognising the need to set back development from corridors and bushland in the first instance.
4 & 5	Do strategic outcomes promote a risk-responsive settlement pattern that minimises and does not worsen the impacts of bushfire on existing and new development, through in the first instance, avoiding the hazard as the highest priority and otherwise mitigating the risk through neighbourhood layout and management measures? Including: Avoids allocating growth or more intense forms of development and inappropriate development in bushfire hazard areas? Where appropriate development may occur in bushfire areas, mitigates risks associated with that development to an acceptable or tolerable level, to protect the safety of people, property and the environment? Ensuring the risk does not worsen over time, for example through the rehabilitation and ongoing management of vegetation which may contribute to the risk?	**Further work required** Any analysis of the allocation of zones has not formed a component of the examination of this risk assessment. A zoning analysis is required when new State-wide BPA mapping is released. This may form part of a later scheme amendment and is likely to include changes to the category of assessment for the Bushfire hazard overlay.
5 & 6	To reduce community exposure to and vulnerability to bushfire impact and enhance community resilience, do strategic outcomes specifically discourage development in the bushfire prone area where this may: Place additional burdens on disaster management capacity, the community and government? Risk disruption to the effective functioning of essential community infrastructure or vulnerable uses during and immediately after a hazard event? Identify the use terms that constitute community infrastructure for essential services in the local context and the function this infrastructure serves during or immediately after a bushfire event. This could include educational establishment, emergency services and hospital, for example. Do strategic outcomes also recognise that location of community infrastructure and vulnerable uses within a bushfire prone area may be justifiable where there is an overriding need in the public interest for the new or expanded service the development provides and there is no suitable alternative location?	**Satisfied** The planning instrument considers impost of emergency services at all levels, including via policy and strategic planning intent, as well as statutory elements. Infrastructure is an aspect of particular focus across all levels of the instrument, stemming from key observations drawn from the risk assessment.
5	To avoid risks to public safety and the environment from the location of hazardous materials and the release of these materials, do strategic outcomes specifically discourage development in the bushfire prone area where involving the manufacture or storage of materials that may exacerbate the risks from bushfire when located within bushfire prone areas?	**Satisfied** Settlement policy via strategic outcomes addressing this issue is linked with statutory code overall outcomes to avoid such uses in bushfire prone areas, supported by appropriate assessment benchmarks where opportunity to mitigate exists. These provisions will only apply where chemical and material thresholds for specific uses are exceeded. This has some variation to the hazardous materials content applied in consideration of flood hazard as these are hazard specific definitions.
Prepare state interest specific mapping Mapping helps users understand and interpret where and how state interest policies apply in the local government area. Note – Where content is to be identified on a map, consider where this is best located within the planning scheme (such as the strategic framework or an overlay or local plan map). Note – The SPP identifies the mapping that a planning scheme must appropriately integrate – this is discussed in the 'Mapping' section below.		
1	Does planning scheme mapping identify the location of and (where appropriate) refine bushfire prone areas in the planning scheme area? These are mapped in the SPP IMS. Note – The SPP identifies when layers may be locally refined.	Satisfied The State government is underway with amendments to the State-wide bushfire prone areas mapping. The risk assessment process tested the reliability of the State-wide Bushfire Prone Areas mapping across the Fraser Coast LGA. Some issues of accuracy were identified, as well as currency. This was not deemed so significant as to limit the

State interest policy	Considerations	Recommendations for amended planning scheme
		conduct of a bushfire risk assessment, using the State-wide BPA as an input, or to inform how bushfire hazard, risk and resilience is integrated into the amended Fraser Coast planning scheme. Council is recommended to continue discussions with QFES in relation to the State-wide bushfire prone area mapping. It is noted Council's preference to adopt the State-wide mapping for the purposes of its new Bushfire Hazard Overlay Map, as part of a revised Fraser Coast planning scheme.
Articulate outcomes for areas by allocating zones and locally specific provisions (such as overlays and local plans) Land should be able to be used for the purpose it is zoned. In allocating a zone to land, or in applying locally specific provisions (such as a zone precinct, overlay or local plan), the following is addressed.		
4	When updating a settlement pattern or changing a land use intent: Does the choice of zone/locally specific provisions avoid allocating land for new urban development in areas of unacceptable bushfire hazard and discourage expansion and intensification of inappropriate urban settlement in existing areas of bushfire hazard? For example: Identify new urban areas for expansion or intensification in new or existing areas with acceptable or tolerable bushfire risks and safe evacuation routes. In areas of bushfire hazard, ideally zone land for uses which typically result in low levels of population and economic investment.	Further work required An analysis of the allocation of zones has not formed a component of the examination of this risk assessment. A zoning analysis is required when new State-wide BPA mapping is released. This may form part of a later scheme amendment and is likely to include changes to the levels of assessment for the Bushfire hazard overlay.
4, 5 & 6	Where land is included in a bushfire prone area: Does the choice of zone/locally specific provisions consider the uses envisaged by each zone and whether the risks associated with bushfire can be mitigated to acceptable or tolerable levels for those uses? The zone and/or locally specific mapping intent may then be adjusted to reflect recent changes to the bushfire hazard area due to approved clearing and provide guidance on the compatibility of different uses, considering: The consequences of and community tolerance to loss of a community service during and immediately after a bushfire hazard event. Whether the use will place additional burden on government disaster management operations or on recovery capacity. For example, intents should avoid the following vulnerable uses from establishing in bushfire hazard areas. Uses catering to vulnerable persons requiring unique evacuation requirements (such as hospitals, education establishments, child care facilities, residential care facilities and retirement facilities, and high security correctional centres). Uses where the nature of the structure is vulnerable to bushfire attack because of the dwelling design (such as relocatable home park and tourist park). Tourism and non-permanent residential uses, where occupants are less familiar with their surroundings (such as nature-based tourism, resort complex, rooming accommodation, short-term accommodation and tourist park). Expansion of existing vulnerable uses in these areas, unless evacuation solutions and resilient design can be achieved – refer assessment benchmarks below. Community infrastructure that will perform an important role and be required to function during and immediately after a bushfire hazard event. Note – Other uses may need to perform a role during or after a bushfire event. For example, showgrounds and sports facilities can perform an active role in bushfire response and recovery, serving as emergency services response staging points and emergency evacuation centres). These uses may be acceptable where sited and designed to enable this functionality. To avoid risks to public safety and the environment from the location of hazardous materials and the release of these materials, hazardous industries and uses that involve the storage of significant amounts of hazardous material.	Further work required The Part B - Risk Assessment report identifies and recommends provisions to avoid or, where avoidance may not be achieved, mitigate inappropriate land uses in bushfire prone areas. The Part C – Policy Options report identifies where and how settlement policy can be implemented across the LGA, both in terms of locally-specific responses that align with risk, as well as uniform regulatory approach delivered by the revised planning scheme. Specific settlement pattern recommendations apply to each precinct examined. These recommendations incorporate considerations of loss and tolerance of community services, impost on emergency services and recovery, evacuation, vulnerable uses and sensitive land uses. An analysis of zoning allocation is strongly recommended when revised BPA mapping becomes available.
Set categories of development and categories of assessment The categories of development and categories of assessment support the achievement of the spatial outcomes (zones, overlays, local plans).		

State interest policy	Considerations	Recommendations for amended planning scheme
5	Do the categories of development and categories of assessment reflect the level of risk identified through the risk assessment and vulnerability of the use? A lower level of risk should translate into a lower category of assessment. The category of development and assessment may vary throughout Queensland depending on the level of tolerability (as determined by the local government based on the local context) and the information available to make an assessment. Are the following vulnerable uses assessable when locating or expanding within the bushfire prone area – childcare centre, community care centre, detention facility, educational establishment, hospital, nature-based tourism, relocatable home park, residential care facility, resort complex, retirement facility short-term accommodation and tourist park? This will enable assessment benchmarks to apply so that impacts can be fully considered.	Satisfied A new category of assessment table has been prepared. The Planning Regulation 2017 prohibits the ability for planning instruments to identify a material change of use for a dwelling house in a residential zone subject to a bushfire hazard overlay on premises less than 2,000m2 as assessable development. The table of assessment for the Bushfire Hazard Overlay reflect this. The most significant change in relation to the table of assessment is the application of the assessment benchmarks of the overlay code to more land uses than is currently triggered. Until a zoning analysis can be conducted on the basis of revised BPA mapping, there is a risk of potential inadvertent over-regulation of some land uses. In the interim, vulnerable uses, essential community infrastructure and critical community infrastructre now trigger code assessment, acknowledging that many of these are already code assessable but the bushfire assessment benchmarks now apply. The category of assessment should be re-examined following a suitable zoning analysis on the basis of revised BPA mapping. Through the Reconfiguring a Lot table of assessment, new Bushfire Resilient Precincts have been implemented, to discourage intensification in some existing rural residential area.
5 & 6	Do the categories of development and categories of assessment reflect the function of the use? Are the following community infrastructure uses providing essential services assessable when locating or expanding within the bushfire prone area – educational establishment, emergency services and hospital? Are other uses that, because of their location and context, may need to perform a role during or after a bushfire event, also assessable? For example, indoor sport and recreation and outdoor sport and recreation? This will enable assessment benchmarks to apply so that impacts can be fully considered.	
5	Are aspects of development that may impact on, or be impacted by, bushfire hazard assessable? Including: Reconfiguring a lot where creating additional lots within the bushfire prone area. Material changes of use (where involving new premises or a substantive increase in development footprint) in the bushfire prone area for: industry or commercial purposes residential uses – multiple dwellings, non-resident workforce accommodation, rooming accommodation and rural workers' accommodation. This will enable assessment benchmarks to apply so that impacts can be fully considered.	
5	Where for development involving the storage or manufacture of significant amounts of hazardous material in a bushfire prone area: Is development assessable where involving: Hazardous chemicals that are present at the levels or in the quantities that would constitute the use being a hazardous chemical facility? Hazardous materials that are present in the quantities identified in the Work Health and Safety Regulation, schedule 15? This will enable assessment benchmarks to apply so that impacts can be fully considered.	
Prepare assessment benchmarks that deliver the outcomes Assessment benchmarks measure the extent to which a development achieves the intended outcome, in this case, the intent of the state interest policy. In preparing assessment benchmarks, address the following: Note – Refer to the Natural hazards, risk and resilience - Bushfire state interest - Example planning scheme assessment benchmarks document for example assessment benchmarks that a local government may choose to adopt or otherwise adapt when making or amending a planning scheme.		
4 & 5	Where land is included in a bushfire prone area: Does structure planning consider: The location of the new road network, open spaces, and revegetation and rehabilitation areas, so that the remainder of the development area can be planned to minimise exposure to the bushfire hazard? Whether sites within the potential impact buffer are separated from areas with a medium, high or very high potential bushfire intensity by a road or by spaces where vegetation is highly managed in perpetuity?	Not applicable This risk assessment does not relate to a structure planning process.
4 & 5	Where land is included in a bushfire prone area: Do assessment benchmarks contain siting, design and transport infrastructure requirements that: The neighbourhood layout separates development from hazardous vegetation and new subdivision design minimises the interface with hazardous vegetation within the bushfire prone areas? The neighbourhood layout facilitates connections to safe evacuation routes, including alternative safe access and evacuation routes should access in one direction be blocked in the event of a bushfire, that provide easy and safe	Satisfied The State's example bushfire hazard overlay code is used as the foundation for assessment benchmark development. Restructure for the example code is required to enhance streamlining and reduce length of code. Local refinement has been required in the context of:

State interest policy	Considerations	Recommendations for amended planning scheme
	movement away from any encroaching bushfire for both occupants and emergency services? Are the proposed evacuation routes of the same or lower potential bushfire intensity? Landscape design and management does not increase the level of bushfire risk or mechanisms of bushfire attack by avoiding or minimising opportunities for ignition of landscaping features. Note – In addition, local government may seek to alert their community to the Bushfire Resilient Building Guidance for Queensland Homes non-statutory guidance document that contains considerations for improving the bushfire resilience of homes.	Alignment with policy directions established in Part C of this risk assessment. Incorporate Council's policy preferences regarding evacuation and certain land use considerations, strengthening the position of the local instrument. Consideration of vulnerable use, essential community infrastructure and critical community infrastructure definitions. Incorporate notes to link assessment benchmarks with non-statutory consideration of the Bushfire Resilient Building Guidance for Queensland Homes document. Introduce a new Bushfire Resilient Precinct approach to limit changes to the minimum lot size in certain parts of the Rural residential zone with links between the Reconfiguration of a Lot Code and the Bushfire hazard overlay code Ensure alignment and calibration across the scheme provisions to link settlement policy desire, articulated by the Strategic Outcomes and the Code overall outcomes to ensure desired outcomes are achieved via appropriate assessment benchmarks.
5	Where land is included in a bushfire prone area: Do assessment benchmarks consider the effect of development on emergency response capabilities and maintain opportunities for emergency access and operational space for firefighters before the arrival of a bushfire? For example, contain provisions for: Safe access and egress routes within and from each lot. Identification of a separation area (asset protection zones) between development and hazardous vegetation via subdivision layout and, for large lots, the identification of development footprint plans. Fire trail and working areas to facilitate fuel load management[21]. Opportunities to establish control lines from which to conduct hazard reduction or back-burning operations. Easy access for emergency services to a safe working area close to dwellings and water supply to suppress fires. Water supply in both reticulated and non-reticulated areas.	
5	Where land is included in a bushfire prone area: Do assessment benchmarks manage the growth of vegetation that may increase risk of bushfire hazard above acceptable or tolerable levels? For example, include provisions for bushfire management plans for maintenance of any asset protection zones, including through vegetation and landscape management to ensure the fuel load can be practically maintained at or below an acceptable level.	Satisfied The State's example benchmarks provide the foundation for locally refined assessment benchmarks which relate to landscaping, revegetation and rehabilitation.
5	Where land is included in a bushfire prone area: Do assessment benchmarks consider that landscape design may create additional bushfire prone areas or exacerbate the impacts of a bushfire? For example, include provisions describing acceptable protective landscape treatments within any asset protection zones.	Satisfied The State's example benchmarks provide the foundation for locally refined assessment benchmarks which relate to landscaping, revegetation and rehabilitation. Additional content is included within the Planning scheme policy.
5 & 6	Where for development in a bushfire prone area involving vulnerable uses or essential community infrastructure that must continue operating during or after a bushfire event: If community infrastructure or vulnerable uses may be justified (where there is an overriding need in the public interest for the new or expanded service and there is no suitable alternative location), do assessment benchmarks mitigate the risk to an acceptable or tolerable level, including requiring the proposal to demonstrate that site planning can appropriately mitigate the risk and that community infrastructure can function effectively during and immediately after a bushfire event?	Satisfied The planning instrument considers impost of emergency services at all levels, including via policy and strategic planning intent, as well as statutory elements. Infrastructure is an aspect of particular focus across all levels of the instrument, stemming from key observations drawn from the risk assessment.
5	Where for development involving the storage of significant amounts of hazardous material in a bushfire hazard area: Do assessment benchmarks include requirements for the siting of facilities involving the manufacture or storage of hazardous materials, that will mitigate risks and impacts during and after a bushfire event to an acceptable or tolerable level?	Satisfied The State's example benchmarks provide the foundation for locally refined assessment benchmarks which relate to the manufacture or storage of hazardous materials.
5	Where planning scheme provisions designate areas for revegetation and rehabilitation: Do assessment benchmarks consider whether that revegetation / rehabilitation may result in an expansion of a bushfire prone area or increase in bushfire intensity levels? For example, include requirements for the location, dimensions and configuration of revegetation and rehabilitation areas to ensure they do not: Comprise a higher bushfire intensity level in the future if assessed in accordance with the methodology used to generate the SPP IMS mapping. Increase the exposure or severity of the hazard in a manner that creates an unacceptable level of risk.	Satisfied The State's example benchmarks provide the foundation for locally refined assessment benchmarks which relate to revegetation and rehabilitation.

State interest policy	Considerations	Recommendations for amended planning scheme
	Note – Where relating to the possible expansion of a bushfire prone area (rather than the increase in bushfire intensity levels) these provisions will not be triggered by the bushfire mapping or be located within say a bushfire overlay code as they will be a consideration in areas that are currently not bushfire prone. Rather the provisions will sit with the provisions that required the revegetation or rehabilitation, such as a waterway or biodiversity code.	

6.2 Bushfire Resilient Communities policies

The Bushfire Resilient Communities: Technical reference guide for the State Planning Policy State Interest 'Natural Hazards, Risk and Resilience – Bushfire' (Bushfire Resilient Communities policies) is also applicable to plan making. Compliance is summarised below.

In summary:

- A reliability assessment of the 2014 BPA mapping has been undertaken, which also had regard to 2017 data but acknowledging 2014 version is the current version for this area of the State. The reliability assessment found the mapping was satisfactory and capable of informing a region-wide risk assessment;
    - Despite the above, a zoning analysis has not been undertaken based on the 2014 BPA mapping, and this is strongly recommended to be completed when revised State-wide BPA mapping is available for integration into the planning scheme. This will also likely involve amendments to the categories of assessment table for the Bushfire hazard overlay code;
- A focus on tolerable risk is incorporated, both as part of the risk assessment process but also defined by revised strategic outcome content embedded within the strategic framework;
    - Likewise, for ensuring burden on emergency services capacity and capability does not incrementally increase over time, policy positions are now embedded within the strategic outcomes as well as a new Bushfire hazard overlay code;
- Particular attention of vulnerable uses, essential community infrastructure and critical infrastructure is integrated within assessment benchmarks, which provide clear performance outcomes. Amendments to the category of assessment table require assessment against the Bushfire hazard overlay code, which is more extensive than was previously the case, however, assessment categories are not necessarily increased noting that code compliance should be capable, at least at this stage, to address these uses appropriately. A zoning assessment based on revised mapping should revisit this when available;
- Assessment benchmarks are calibrated to address rehabilitation and revegetation, interlinking with the Biodiversity code.

APPENDICES

Meridian Urban

Appendix A - Draft Planning Scheme Provisions

Appendix A1 - About the Planning Scheme and State Planning Provisions

Note: where additional / revised provisions are recommended within the existing scheme, these are shown in red. Existing text that remains unchanged may be indicated by '…' . If a whole new section / Code is recommended (i.e. the Bushfire hazard overlay table of assessment and code) these are set out in full in standard text.

PART 1 - ABOUT THE PLANNING SCHEME

…

Table 1.6.1 – Building assessment provisions

Building assessment matter addressed in the planning scheme	Relevant section of the planning scheme
…	
Bushfire hazard	
Designation of part of the planning scheme area as a designated bushfire prone area for the BCA and the QDC.	**Schedule 2 Bushfire hazard overlay maps ~~(medium hazard, high hazard or very high hazard bushfire areas)~~ (medium potential bushfire intensity area, high potential bushfire intensity area, very high potential bushfire intensity area, potential impact buffer area)**

…

PART 2 - STATE PLANNING PROVISIONS

2.1 - State planning policy

The Minister has identified that ~~a~~ the State Planning Policy (July 2017) is reflected in the planning scheme in the following ways:

Appendix A2 - Strategic Framework Provisions

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Part 3 Strategic framework

3.9 Preliminary

(1) The strategic framework sets the policy direction for the planning scheme and forms the basis for ensuring appropriate development occurs within the planning scheme area for the life of the planning scheme.

(2) For the purpose of outlining the policy direction for the planning scheme, the strategic framework is structured in the following way:-

(a) the strategic intent;

(b) there are six (6) themes that work together to outline the complete policy direction which include:-

(i) settlement pattern;
(ii) economic resources and development;
(iii) community wellbeing;
(iv) infrastructure and services;
(v) access and mobility; ~~and~~
(vi) natural environment and landscape character; and
~~(vi)~~(vii) natural hazards, climate change and ~~,~~resilience.

(c) the strategic outcomes sought for development in the planning scheme area for each theme;

(d) the elements that refine and further describe the strategic outcomes; and

(e) the specific outcomes sought for each or a number of elements.

(3) The strategic framework themes are spatially represented on the following strategic framework maps included in this part:-

(a) **Strategic Framework Map 1 (SFM-001)** and **1a (SFM-001a) (Settlement pattern)**;

(b) **Strategic Framework Map 2 (SFM-002)** and **2a (SFM-002a) (Economic resources and development)**;

(c) **Strategic Framework Map 3 (SFM-003)** and **3a (SFM-003a) (Transport and infrastructure)**; and

(d) **Strategic Framework Map 4 (SFM-004) (Natural environment and landscape character)**.

(e) **Strategic Framework Map 5 (SFM-005) (Natural hazards, climate change and resilience)**.

(4) Although each theme has its own section, the strategic framework is read in its entirety as the policy direction for the planning scheme.

3.10 Strategic intent

3.2.1 Introduction

Fraser Coast Regional Council ('the Fraser Coast') is situated on the Queensland coast approximately 250 kilometres north of Brisbane.

It covers an area of 7,125 square kilometres and forms the central-eastern part of the larger Wide Bay Burnett Region. It is adjoined by Bundaberg Regional Council in the north, Gympie Regional Council in the south and North Burnett Regional Council in the west.

It was formed in March 2008 from an amalgamation of the City of Hervey Bay, City of Maryborough and the Shires of Tiaro (in part) and Woocoo. As at June 2012, the Fraser Coast had an estimated resident population of 100,000 people, making it the 13th largest local government area in Queensland (by population).

Council's and the community's vision for the Fraser Coast is that "*In 2031, the Fraser Coast will be a diverse, strong and well governed region of vibrant places connected as a whole by our community spirit, respect for our natural environment and our innovative and diverse economy*."

To achieve this vision, Council is working to support the economy, value the environment, strengthen communities, foster resilience to natural hazards and provide targeted investments in employment, infrastructure, community development and lifestyle.

One of the key tools to assist Council and the community to achieve its vision is the Fraser Coast Regional Council Planning Scheme. The planning scheme provides a framework for sustainable growth management and land use planning.

The planning scheme defines the physical extent of development and creates a strong relationship between the pattern of settlement and the provision of lifestyle opportunities, employment, economic development, changes to and protection of the environment, affordable living and infrastructure.

The strategic intent provides a descriptive statement of the planning aspirations for the Fraser Coast to 2031 and provides a policy platform for the other components of the planning scheme.

The strategic intent has been developed to complement the vision and goals of the Fraser Coast Regional Council Corporate Plan and builds upon the vision, values and key themes described in the Fraser Coast Community Plan.

3.2.2 The Fraser Coast towards 2031

The Strategic intent provides a detailed vision for the Fraser Coast towards 2031.

Settlement pattern - well managed growth ~~driven by~~ driving sustainable lifestyle opportunities

The Fraser Coast is a vibrant and diverse region. The natural landscapes and built form of the Fraser Coast reflect both the unique identity of the region and the diversity of places within it. The settlement pattern is influenced by a framework of rural landscapes and unique natural areas, ~~waterways~~the Mary River and floodplain, coastal and bushland ecosystems, beaches and foreshores. The Fraser Coast settlement pattern provides for long term transition away from intolerable risk to our vibrant region and community wellbeing from expected natural hazards and climate change.

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The Fraser Coast settlement pattern provides for the planned expansion of urban areas in a configuration which supports a clearly defined hierarchy of centres that is matched to community need, ability to expand economically, protection of natural assets and considering land use constraints.

Population growth is supported by the provision of residential, commercial and industrial development, government and community services. The roles of Hervey Bay and Maryborough as the ***principal regional activity centres*** for the Fraser Coast will be strengthened through the provision of supporting infrastructure and facilities to service the region.

Different in character, Maryborough and Hervey Bay sustain and complement one another and contribute to a more diverse regional economy. Regional scale business, community and employment activities will be concentrated within these regional cities. These locations will also accommodate the most diverse and intensive areas of housing.

Significant employment opportunities are provided in Maryborough, focused around industry and manufacturing, aviation and marine industries, retail and government services. Hervey Bay supports further growth in tertiary education, aviation, tourism, health, retail and service related industries.

The majority of growth will occur within the Maryborough and Hervey Bay urban areas. Infill and mixed use redevelopment will be concentrated within and surrounding the two central business districts, whilst the heritage buildings and architecture in Maryborough and the mixed use tourist nodes along the Hervey Bay foreshore in Pialba, Torquay, Scarness and Urangan will be maintained.

The Pialba, Torquay, Scarness and Urangan nodes, designated as tourism activity centres in the Strategic Framework Map 1 (SFM-001) and 1a (SFM-001a) and represented as precincts within the high density residential zone, will be vibrant places exhibiting attractive landscaping and buildings that respond to the sub-tropical climate with public- spaces that encourage community interaction.

Medium density development is focused around the central business districts of Maryborough and Hervey Bay and in proximity to high density residential zoned land on the coast in Hervey Bay. Lower density growth will be accommodated through infill development and designated urban expansion areas.

The Wide Bay Burnett Regional Plan identified development areas at Nikenbah~~, Granville~~ and St Helens. Other urban expansion areas have been identified as key growth areas through the Sustainable Growth Strategy. Expansion into these areas will occur in line with local plans developed by Council. These plans respond to constraints, align urban growth with the efficient and cost-effective delivery of infrastructure, provide for services and employment in conjunction with residential development and support affordable living to create communities that offer safe, pleasant and sustainable living environments. No further growth areas are planned prior to extensive land use capability and suitability studies informing future settlement pattern options.

Howard and Tiaro are rural towns of importance that exhibit a strong sense of place and historical character. ~~Burrum Heads and River Heads are coastal urban settlements that provide for tourism and recreational activities associated with their coastal setting and enjoy high levels of access to employment and facilities in Hervey Bay.~~ Each of these places will experience modest growth and include a district level centre that plays an important role in servicing surrounding settlements and communities, whilst recognising that higher order services are provided by Maryborough and Hervey Bay.

Burrum Heads and River Heads are coastal urban settlements that provide for tourism and recreational activities associated with their coastal setting and enjoy high levels of access to employment and facilities in Hervey Bay. River Heads growth is limited to infill development

and Burrum Heads growth is limited to identified expansion areas due to its vulnerability to coastal and other hazards and where a long term transition plan is in place.

The rural townships of Brooweena, Glenwood and Bauple provide for existing rural residential living with commercial and community facilities at a local or neighbourhood scale.

There is extensive rural residential development within the Fraser Coast, including Pacific Haven, Oakhurst, Sunshine Acres and Forest View. These areas provide a particular lifestyle opportunity which is valued in the Fraser Coast. Future opportunities for rural residential development will be consolidated and contained within the Rural residential zone, with the exception of Bushfire Resilient Precincts, in recognition of the difficulty in providing services to these areas, the potential for encroachment on rural production and agricultural land, known ~~biophysical~~ risk from natural hazards~~constraints~~, remoteness from higher order centres and the need to protect character and amenity values.

In recognition of the differing character of rural residential settlements and their attributes, varying minimum lot sizes have been identified on the zone maps (with the exception of Bushfire Resilient Precincts) where precincts identify the applicable minimum lot size for each rural residential locality.

Bushfire Resilient Precincts are located at Pacific Haven, Bauple Estate and Glenwood. These are established rural residential settlements where further growth through subdivision is not intended due to the very high bushfire risk, limited safe and efficient access to evacuation routes, and remoteness to necessary infrastructure for fire fighting purposes. Bushfire Resilient Precincts, including varying minimum lot sizes, have been identified in the Reconfiguring a Lot Code.

Coastal towns and villages, including Toogoom, Poona, Tuan, Tinnanbar, Maaroom and Boonooroo, contain a mix of permanent residences and holiday homes, as well as small-scale commercial and tourism offerings. The size of these communities and their identified role has been intentionally managed to protect their individual character, natural values and intimate sense of place. These communities have a long term transition plan which ~~This approach also~~ recognises their vulnerability to coastal hazards, the predicted impacts of climate change and the limited availability of social infrastructure. Other hazards such as bushfire are also relevant considerations for these communities. Whilst local industries, including retail, tourism and community services will be provided for, the majority of specialist and skilled employment for residents in these localities is to be provided in Maryborough and Hervey Bay.

Economic resources and development - a strong and growing regional economy

The Fraser Coast economy is built on its traditional industries including tourism (with attractions such as Fraser Island, the Great Sandy Strait, recreational fishing, whale watching and historic buildings), rural enterprises, commercial fishing, manufacturing, engineering and light industries, construction, retirement services and government services.

These sectors will be strengthened and supported and added to by other sectors and industries such as aviation-related uses at the Hervey Bay Airport Business and Industry Park, marine-related uses that capitalise on the Mary River, and ready access to the Great Sandy Strait and the existing harbours at Maryborough and Hervey Bay.

Other industries will be attracted to the Fraser Coast, including hospitality, cultural and sporting events, major conferences, clean and green businesses, film production, emerging rural industries, aquaculture, tertiary education and life-long learning focusing on Hervey Bay's Knowledge, Community and Culture Hub. The hub is intended to be a centre of educational excellence anchored by the University of Southern Queensland, TAFE, library and Discovery Centre and complemented and supported by the medical hub and teaching hospitals in Urraween.

By 2031, a more diverse and resilient economic base will provide employment and career opportunities for residents across the Fraser Coast.

Planning and development decisions will value natural economic resources, including agricultural land, extractive resources and environmental assets in recognition of the role that these play in the viability of many of the region's industries. The maintenance of natural features is of particular importance to the ongoing growth of Hervey Bay's tourism industry, which is internationally recognised for its eco-adventure offerings.

Retail and commercial development is seen as a major generator of employment and accordingly a significant component of a strong and vibrant regional economy. A hierarchy of activity centres has been developed to guide the expansion of this sector throughout the region.

Pialba is classified as a ***principal activity centre*** and is the focus for the highest order and intensity of centre activities in Hervey Bay and the site for a major department store. An important generator of activity in Pialba will be the establishment of commercial/government offices. Commercial/office development will contribute and reinforce the role and function of the principal activity centre as one (1) of two (2) hearts of the region.

Enriched by contemporary sub-tropical architecture, an enhanced mobility corridor, increased densities and businesses that have been attracted to the area, Pialba will be a place where many people choose to live, work and play.

The Maryborough Central Business District (CBD) is also classified as a ***principal activity centre*** and is the highest order centre in Maryborough. Like Pialba, it is intended to attract investment and provide regional employment opportunities, with vibrant streets and improved visual and physical linkages to the Mary River and riverfront parkland. A high level of amenity will encourage the development of permanent and short term residential accommodation, whilst maintaining the significant heritage places for which the city is famed.

Urban district centres are to be located at Eli Waters, Torquay (Denmans Camp Road), Doolong Flats, Urangan (Boat Harbour Drive/Elizabeth Street) and Nikenbah, with ***rural and coastal district centres*** at Tiaro, Howard, Burrum Heads and River Heads. Other shopping and community facilities are to be provided at identified ***local centres*** and ***neighbourhood centres***.

Sufficient and appropriately located, serviced industrial zoned land has been provided to support manufacturing and industry growth. This is particularly evident in Maryborough, which is the region's hub for manufacturing and large footprint industry, supported by its accessibility to other markets and regional infrastructure, including the Bruce Highway, the North Coast Rail Line connecting Brisbane to Cairns, air transport services, gas supply mains and an established electricity substation. Significant industrial areas include the marine industry precinct at Granville and the Maryborough West, Moonaboola and Canterwood Industrial Estates, which cater to a diverse range of industries and businesses. These industrial areas will be protected from encroachment by incompatible land uses.

Community wellbeing - strong communities, access to services and well managed heritage assets

The Fraser Coast benefits from the character and identity of its individual communities and the sense of place that they create. Settings range from the city of Hervey Bay to the traditional heritage streetscapes of Maryborough to the rich farmlands of Tiaro, from old mining villages to coastal towns and villages set along the shoreline of the Great Sandy Strait to rural townships and settlements, including the mountain-dominated Bauple.

Whilst made up of unique and well established communities defined by their settings, places in the Fraser Coast share the characteristics of strength, health, vibrancy, resilience, safety and inclusiveness.

Services and facilities are provided so that access can be maximised to cultural, education and health facilities, in addition to appropriate, affordable housing and community support

when and where it is needed. All communities have the opportunity to access green areas and corridors throughout the urban environment, with key recreational and open space facilities located at Hervey Bay and Maryborough.

Cultural identity is bolstered by the conservation and protection of natural and cultural heritage. This heritage includes the rich Butchulla indigenous culture, as well as post settlement cultural heritage, which will be identified and appropriately maintained.

The high quality of life and the cohesive nature of communities attract people of all stages of life to move, remain or return to the Fraser Coast.

Infrastructure and services, access and mobility - efficient and affordable infrastructure and better ways to move around

Planning for infrastructure is important in connecting and servicing places within the Fraser Coast. Development, through the pattern of land use, settlement pattern structure and design of communities, encourages the provision and use of active and public transport modes.

Residents will continue to benefit from road, airport, and rail infrastructure that provides passenger connections to other regions and freight services that support the Fraser Coast economy.

Water cycle management is emphasised to ensure the health, safety and wellbeing of the Fraser Coast community.

Council will work with infrastructure providers to ensure that the region is well serviced by electricity infrastructure and where possible support and promote more efficient energy use practices.

World class telecommunications and information technology infrastructure will be targeted to increase the level of connectedness of the region and underpin access to the opportunities provided by the global economy.

Infrastructure corridors to service the growth of the region will be reserved and protected and managed strategically in a whole of life context, considering climate change and vulnerability to natural hazards. New development must consider infrastructure sustainability. ~~.~~

The development sequence for urban development on the Fraser Coast will have regard to the timely, efficient and cost effective provision of infrastructure.

Natural Environment - healthy, valued natural assets

The natural environment is highly valued by the Fraser Coast community, both for its biodiversity values and its contribution to the overall image and landscape character of the Fraser Coast. The region has significant natural assets, including the World Heritage listed Fraser Island and the internationally recognised Ramsar wetlands of the Great Sandy Strait.

The Fraser Coast national parks and reserves are recognised for their scenic, scientific and cultural heritage values. These features are supported by other areas of ecological significance that contribute to a predominance of ‘green’ in the region. Natural environment considerations influence the shape, form and structure of development in the cities, towns and townships that comprise the Fraser Coast.

The major river systems including the Mary, Susan, Cherwell and Burrum Rivers, and the network of streams and associated floodplains, make a significant contribution to the region’s image, landscape character and the natural environment, as well as continuing to provide habitat for endangered species such as the Lungfish and Mary River Turtle.

Coastal foreshores will be managed in a manner that provides for areas of ecological significance, scenic qualities and supports recreational and economic opportunities that attract residents and visitors alike.

Natural Hazards, Climate Change and Resilience

Living close to the environment brings with it a need to understand how the environment may change over time, through natural processes and climate change. It also brings with it risks from natural hazards and challenges to maintain the lifestyle we enjoy, while building our awareness and resilience to this change. Planning now will shape the safe, resilient and sustainable future of the Fraser Coast vision, and support the ongoing vibrancy of the region.

The planning scheme identifies risk from flooding hazards which arise principally through settlement on the Mary River floodplain and risk from storm tides or permanent inundation from sea~~l~~ level rise along our foreshores and beach settlements. Exposure to bushfire is also key planning consideration. This planning scheme shapes future development to keep the community safe through avoiding areas of intolerable risk in the first instance and applying a long-term transition plan for coastal communities and various mitigation methods for areas of tolerable risk to ensure all development proceeds with acceptable risk levels.

The planning scheme is responsive to climate change recognising the need to maintain natural corridors and processes and respect increasing urban heat, intensifying storms, more frequent flooding and fire events among other discrete changes.

Our settlement pattern and infrastructure are planned and maintained in consideration of known future conditions. Development and new infrastructure can proceed in areas where risks are acceptable or can be mitigated to an acceptable level. To mitigate risk, new and infill development will consider compounding effects to surrounding community to ensure a long term sustainable outcome for communities and critical infrastructure.

3.11 Settlement pattern theme

3.3.1 Strategic outcomes

(a) The pattern of settlement reinforces and protects the planned role and function of the centres hierarchy within the Fraser Coast.

(b) Urban areas are compact with clearly defined boundaries that encourage strong neighbourhoods and provide attractive places for residents to enjoy whilst optimising the efficient delivery and use of infrastructure and services.

(c) Urban development is predominantly focused in the major regional population centres of Maryborough and Hervey Bay.

(d) Rural residential development is contained within identified rural residential areas.

(e) The Fraser Coast is developed in a sustainable manner by incorporating urban design principles that create a positive and balanced context for people to engage with places and with others.

(f) Adequate buffers are provided between incompatible land uses to protect resources, existing uses and the amenity of residents.

(g) Urban areas support a settlement pattern that is cognisant of climate change and proceeds in areas where growth will be suitable into the future and where infrastructure can be provided economically in a whole of life context.

(h) The settlement pattern supports long term transition away from permanent changes to the coastal landform.

(i) Development avoids area~~h)~~s of intolerable risk or where avoidance is not reasonably possible mitigates the ~~adverse impacts~~risk of natural hazards (including flood, bushfire, landslide and coastal processes) ~~in a manner so as to protect people, property, economic activity and the environment.~~to an acceptable level.

(j) Development maintains natural corridors, essential drainage paths with sufficient capacity for future upstream development. This is balanced with potential bushfire hazard.

~~(g)~~(k) Mitigation methods and alterations to the landscape demonstrate improved outcomes for the community.

3.3.2 Elements and specific outcomes

3.3.2.1 Element 1 Compact and consolidated urban form
The physical form and structure of development within urban areas results in the creation of communities that have a compact urban form and walkable neighbourhoods, enjoy a variety of transportation options, incorporate natural landscapes and promotes diversity of housing whilst respecting the character of the diverse places within the Fraser Coast.
Specific outcomes
(a) Urban development occurs on land within an urban area as identified on **Strategic Framework Map 1 (SFM-001) and 1a (SFM-001a) (Settlement pattern)** so as to:- (i) achieve a compact and consolidated urban form; (ii) optimise the efficient delivery and use of infrastructure and services; (iii) ~~minimise~~ avoids intolerable ~~exposure~~ risk from ~~to physical and environmental constraints and~~ natural hazards;

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3.3.2.1 Element 1 Compact and consolidated urban form
(iv) minimise the impact of lands supporting environmental, rural production and landscape values; and (v) enhance and preserve the discrete identities of individual cities, towns and villages of the Fraser Coast. ~~(v)~~(vi) maintains and enhances green corridors for environmental and drainage purposes, balanced against potential for bushfire hazard. (b) Urban development contributes to the form and structure of areas to achieve the following:- (i) an effective and efficient transport network that supports access, mobility and connectedness; (ii) increased use of public and active transport modes; (iii) a diverse range of suitably located housing options that provide for affordable living[1]; (iv) sustainable housing outcomes that promote energy efficiency, are climatically responsive to the sub-tropical living conditions of the Fraser Coast and, where possible, are readily adaptable to changing occupant needs over time~~; and~~ (v) a diversity of housing product that respond to the lifestyle, market and socio-economic demands of a diverse community; and ~~.~~ (vi) a safe and resilient community which does not burden emergency management ~~(v)~~(vii) ~~infrastructure~~capacity and capabilities that is sustainable and economic in a whole of life context. (c) Infill development:- (i) is compatible with and sympathetic to the amenity and character of its setting; Note—whilst the character of most established residential areas is intended to be maintained, development within the ***Tourism Activity Centres*** at Pialba, Scarness, Torquay and Urangan and the Pialba ***Principal Activity Centre*** is envisaged to contribute towards a higher density residential and vibrant, mixed use environment. Development in the Maryborough ***Principal Activity Centre*** is envisaged to maintain and respect the historic buildings and streetscapes that contribute to its local identity. (ii) includes higher density residential development comprising multi-unit (tourist and permanent) residential uses, aged care and student accommodation in well-serviced locations in Hervey Bay and Maryborough, with good access to public and active transport, commercial development, social services and facilities; (iii) provides for adequate privacy and personal safety, is reasonably accessible to social infrastructure and does not contribute to social disadvantage~~; and~~ (iv) is connected to adequate infrastructure and services; and. ~~(iv)~~(v) avoids areas of intolerable risk from natural hazards or where avoidance is not reasonably possibly, mitigating ~~mitigates~~ to an acceptable level. (d) Development occurs in an orderly and efficient manner that provides for the logical and cost-effective extension of infrastructure networks to service new development.

3.3.2.2 Element 2 Urban expansion areas and future urban areas
A significant proportion of future urban growth within the Fraser Coast is accommodated within identified urban expansion areas. These areas represent sustainable development opportunities and align infrastructure delivery with land use planning.
Specific outcomes
(a) Urban expansion occurs within the identified urban expansion areas of Doolong Flats/Ghost Hill, Eli Waters/Dundowran, Kawungan North East, Nikenbah, St Helens, Granville, north of Boys Avenue at Maryborough, Burrum Heads and Howard ~~–~~as identified on **Strategic Framework Map 1 (SFM-001) and 1a (SFM-001a) (Settlement pattern)**. Note—the overlay mapping in **Schedule 2 (Mapping)** identifies that these urban expansion areas are subject to various mapped overlays. The relative weight to be given to these mapped overlays in the development assessment process needs to take into account the following:- (a) these urban expansion areas are intended to accommodate a significant proportion of the projected growth needs of the Fraser Coast to 2031; (b) where applicable, the outcomes of local area planning that has been undertaken by the Council; and

[1] Editor's note—In this context, the term affordable living not only refers to the affordability of the housing product itself (e.g. in terms of the initial purchase price or ongoing rent) but also takes into account the recurrent costs of living (e.g. travel costs) associated with occupying that particular housing product.

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(c) site-specific assessment and ground truthing of environmental and other physical constraints that has been undertaken by development proponents.

Doolong Flats/Ghost Hill urban expansion area

(b) The Doolong Flats/Ghost Hill urban expansion area is developed predominantly for residential purposes, incorporating a mix of densities and housing forms in interconnected neighbourhoods, while community and commercial facilities are provided to support the local community.

(c) An open space network is provided that is sympathetic to local environmental values, maintains connected green corridors for drainage and creates opportunities for active transport, recreation and increased visual amenity. The Ghost Hill ridgeline includes a series of lookout paths that provide visual relief and offer views over Hervey Bay. Development is sensitively located to have regard to visual amenity of the Ghost Hill ridgeline.

Eli Waters/Dundowran urban expansion area

(d) The Eli Waters/Dundowran urban expansion area is progressively developed as a residential community which recognises and appropriately responds to the physical and environmental constraints that have been identified. It comprises a series of separate, but interconnected residential development nodes that provide ~~safe and~~ pleasant living environments.

(e) A range of densities and housing forms are catered for. The residential neighbourhood in the north-western section of the structure plan area, adjacent to the coast, incorporates a mix of permanent residential and tourist accommodation. A network of retail centres with associated community and sports facilities are appropriately located to service the main residential development nodes.

(f) An area south of Pialba-Burrum Heads Road is subject to further investigation for future urban development.

~~*Granville urban expansion area*~~

~~(g) The Granville urban expansion area is developed for an attractive and functional harbour with residential, retail, tourism, marine industry and open space uses that complement the harbour.~~

~~(h) The balance area on the southern side of Walkers Point Road is subject to further investigation for future urban development.~~

Kawungan North East urban expansion area

~~(i)~~(g) The Kawungan North East urban expansion area is developed for a range of land uses including large format retail showrooms to complement the adjoining Pialba Principal Activity Centre, residential purposes including a mix of densities and housing forms, and mixed use and commercial activities.

Nikenbah urban expansion area

~~(j)~~(h) The Nikenbah urban expansion area is developed for a range of residential densities to accommodate the topographical features of the area, in particular on the southern side of the Ghost Hill ridgeline.

~~(k)~~(i) Commercial and Industrial activities are also identified to support the residential activities and surrounding rural activities to the west and south of the urban expansion area.

North of Boys Avenue urban expansion area

~~(l)~~(j) The urban expansion area north of Boys Avenue is developed for residential purposes and to meet short to medium term growth demands.

St Helens urban expansion area

~~(m)~~(k) The St Helens urban expansion area is developed for residential, rural residential, employment and industry activities, that serves as the northern extension of Maryborough's urban area.

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3.3.2.2 Element 2	Urban expansion areas and future urban areas

~~(n)~~(l) A local activity centre provides for the convenience retail needs of residents and employees in the area. Employment and industry activities build upon the existing industrial estate on Phillip Court.

3.3.2.3 Element 3	Rural residential areas

Rural residential development will continue to be recognised as a lifestyle choice for residents in the Fraser Coast, with further development being located in identified Rural Residential areas.

Specific outcomes

(a) Rural residential development is contained within allocated rural residential areas as identified on **Strategic Framework Map 1 (SFM-001) and 1a (SFM-001a)(Settlement pattern)** and in further detail on the zoning maps.

(b) Development in identified rural residential areas is characterised by very low density housing providing residents with an acreage lifestyle choice and high level of amenity.

(c) Development in rural residential areas supports and is responsive to the prevailing character of its surrounds. The individual character of different rural residential areas is maintained through the application of the minimum lot sizes specified for precincts under the Rural residential zone.

(d) Existing levels of service are maintained in established rural residential areas and a relatively limited range of infrastructure and services are provided for new rural residential development, with services such as water supply and sewerage predominantly provided on-site.

(e) Residents of rural residential areas continue to rely upon the cities and towns to access employment opportunities, shopping facilities, community facilities and services, and other infrastructure.

(f) Development in identified Bushfire Resilient Precincts maintains a limited density of population, having regard to potential for intolerable future risk as a result of bushfire exposure.

3.3.2.4 Element 4	Hierarchy of centres

The Fraser Coast region is characterised by a range of vibrant and diverse coastal and rural towns and villages which are serviced by the two major regional population centres of Hervey Bay and Maryborough. There is a hierarchy of centres established within the Fraser Coast, with services and facilities provided at a scale commensurate with the role and function of each centre.

Specific outcomes

(a) Development is consistent with and supports the hierarchy of centres for the Fraser Coast identified conceptually on **Strategic Framework Map 1 (SFM-001) and 1a (SFM-001a) (Settlement pattern)** and **Strategic Framework Map 2 (SFM-002) and 2a (SFM-002a) (Economic resources and development)** and described below:-

(i) ***Principal Activity Centres*** are located at Maryborough (CBD) and Pialba in Hervey Bay. They:-

(A) contain the largest and most diverse concentration of urban activities;
(B) have high population densities; and
(C) are the key regional focus for employment and development including, government administration, cultural, entertainment, health, education and public and active transport facilities;

(ii) ***District (Rural and Coastal) Centres*** are located at Burrum Heads, River Heads, Tiaro and Howard. They:-

(A) contain a concentration of businesses and employment uses that primarily service local residents, tourism or primary production industries; and
(B) may also contain limited retail, government services, entertainment, residential and community facilities;

(iii) ***District (Urban) Centres*** are located at Eli Waters (Boat Harbour Drive), Doolong Flats (Rasmussen's Road), Torquay (Denmans Camp Road) and Urangan (Boat Harbour Drive and Elizabeth Street). They:-

(A) serve catchments of district significance within the coastal urban area; and

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3.3.2.4 Element 4 Hierarchy of centres
(B) accommodate concentrations of employment, business, services, commercial and retail services; (iv) ***Local Centres*** provide for convenience and personal service shopping needs for a surrounding residential neighbourhood and typically provide local shopping, local employment, takeaway food premises and personal and community services; (v) ***Specialist Activity Centres*** are located adjacent to the Hervey Bay Airport and at the Urangan Boat Harbour. They:- (A) provide a wide range of retail, commercial, and entertainment facilities for visitors and convenience services for residents of the immediate surrounding area; (B) contain tourist accommodation, mixed use development, cafes and restaurants , with medium/high density housing also located at the Urangan Boat Harbour; (C) provide opportunities for industrial uses; and (D) function as major transport hubs. (vi) ***Tourism Activity Centres*** are located on the Esplanade at Pialba, Scarness, Torquay and Urangan. They:- (A) provide a wide range of retail, commercial, and entertainment facilities for visitors and convenience services for residents of the immediate surrounding area; and (B) contain tourist accommodation, mixed use development, medium/high density living, cafes and restaurants. (vii) Development that proposes centre activities outside of an activity centre or a higher order or larger scale usage than intended for a particular activity centre is avoided.

3.3.2.5 Element 5 Sustainable built form and urban design
The design of buildings and urban spaces responds to the sub-tropical climate of the Fraser Coast and addresses key sustainability issues including energy and water efficiency. Locally responsive built form and urban design enhances the image of the Fraser Coast as an attractive and interesting place in which to live, visit and conduct business.
Specific outcomes
(a) Development:- (i) supports the creation of complete and vibrant communities based on contemporary planning and neighbourhood design principles, including providing for places that:- (A) enhance the local economy, environment and community; (B) are connected physically and socially; (C) are inclusive and offer a diverse range of experiences; (D) are sustainable, enduring and resilient; (E) are welcoming and safe; and (F) consider custodianship and maintenance over time; (ii) reflects the preferred local character for places as expressed in zone codes, local plan codes and planning scheme policies; (iii) incorporates sub-tropical and quality architectural design[2]; (iv) is responsive to local climatic and environmental conditions into the future including residual and legacy risk from natural hazards such as flood, coastal hazards, bushfire and heatwave; (v) includes energy efficiency measures and incorporates renewable energy sources; (vi) minimises the use of water by incorporating water conservation and water reuse measures where practical; (vii) maximises opportunities for walking, cycling and supporting the viability of a quality public transport system; (viii) provides access and facilities for the community; (ix) creates quality spaces and places for community interaction; and (x) ~~avoids or mitigates the impacts of natural hazards such as flood, coastal processes, bushfire and landslide~~.

[2] Editor's note—the publication 'Sub-tropical design in South East Queensland – a handbook for planners and developers' provides some guidance about sub-tropical design.

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3.3.2.5 Element 5 Sustainable built form and urban design
(b) Residential environments:- (i) are characterised by a strong sense of community and a distinct identity that is influenced by elements such as landscape setting, the pattern of subdivision and the type and age of housing; (ii) have a mix of contemporary, innovative and traditional architectural styles so that each city, town, village and community maintains and enhances its distinct character and identity; and (iii) as far as practicable, protect and integrate the natural environment and landscape into communities. (c) New housing is designed to integrate with existing housing and community facilities, to ensure it contributes to cohesive neighbourhoods. (d) The unique built form of existing character areas in the Fraser Coast is valued and enhanced. (e) New development does not detract from the heritage and urban design values contained in key character areas. Building and landscape form in identified locations is retained and enhanced.

3.3.2.6 Element 6 Incompatible land uses
Appropriate buffering and separation between incompatible land uses is provided to avoid or minimise land use conflicts and to protect the health, wellbeing, amenity and safety of the community.
Specific outcomes
(a) The interface between land uses is effectively managed to:- (i) protect sensitive uses from incompatible land uses; and (ii) maintain the long term viability of existing land uses from encroachment by incompatible uses. (b) New land uses which are incompatible with existing sensitive uses are located and managed to protect the health, wellbeing, amenity and safety of the community from the potential adverse impacts of air, noise and odour emissions and hazardous materials. (c) Adequate buffers and separation distances are established and maintained between urban development, , agricultural land class A and B and other incompatible land uses. (d) Adequate buffers are provided between rural land and land owned and operated by the Department of Defence to protect defence operations and ensure public safety. (e) Major infrastructure is protected from urban encroachment and other incompatible land uses to ensure its continued operation and viability.

3.3.2.7 Element 7 Natural hazards
Given the diversity of physical and environmental settings within the Fraser Coast, the region is vulnerable to the potentially adverse impacts of a range of natural hazards including flood, bushfire, landslide and coastal hazards including any impact of climate change. The settlement pattern will actively plan for long term transition away from areas of permanent changes to coastal landforms. Development will avoid areas of intolerable risk and mitigate the risk to an acceptable level. Development must consider the ongoing viability of infrastructure for known risks. Development must not increase the burden on emergency services. ~~will be appropriately located and designed in order to minimise the risks associated with these hazards.~~
Specific outcomes
(a) The risk from natural hazards~~potential adverse impacts~~ to people, property, infrastructure, economic activity and the environment from natural hazards are minimised by ensuring that development:- (i) avoids areas ~~subject to (stream or coastal) flooding~~ of intolerable risk or where avoidance is not reasonably possible ~~otherwise~~ mitigates ~~against, is resilient to, and does not materially worsen flooding~~to an acceptable level; (ii) transitions away from intolerable risk of sea level rise and open coast erosion resulting in permanent change to landforms. (i) vulnerable people, uses and essential community infrastructure are not at risk; (ii) mitigation methods do not cause adverse effects to surrounding properties or a future cost burden for community;

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3.3.2.7 Element 7 Natural hazards
(iii) does not increase the ~~responsibilities~~burden on~~f~~ emergency management capacity and capabilities during an event, considering evacuation circumstances; ~~(i)~~(iv) can be serviced considering the risk to infrastructure from all natural hazards and future changes; ~~(ii) avoids confirmed medium or high bushfire hazard areas or otherwise incorporates fire breaks and other bushfire management measures to mitigate the risk of bushfire; and~~ ~~(iii)~~(v) ~~avoids or manages the risk of landslide on steep land and/or confirmed landslide hazard areas~~. ~~(b) Development in the coastal zone is planned, located, designed, constructed and operated to mitigate the social, financial and environmental costs arising from the impacts of coastal hazards.~~ ~~(c)~~ ~~In assessing the potential adverse impacts of natural and coastal hazards, the predicted effects of climate change are taken into account where appropriate~~.

3.3.3 Relevant strategic framework maps

Strategic Framework Map 1 (SFM-001) and 1a (SFM-001a) (Settlement pattern) conceptually identify elements of the strategic framework as relevant to the settlement pattern theme, including:-

(a) land use categories including urban area, urban expansion areas and future urban areas, rural residential areas, rural areas, major sport and recreation open space areas and protected areas;

(b) major elements of the Fraser Coast hierarchy of centres; and

(c) major transport elements.

Note—the natural hazards element is not identified on the Strategic framework maps, but is reflected through measures in other parts of the planning scheme, including in **Part 8 (Overlays).**

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3.12 Economic resources and development theme

3.4.1 Strategic outcomes

(a) Employment growth and economic development on the Fraser Coast will be enhanced through the development of diverse and strong businesses and industries based upon both traditional and emerging sectors.

(b) A strong and robust economy is promoted by identifying and maintaining an integrated network of well-designed, vibrant, connected and accessible activity centres with differing but complementary roles and functions to service the needs of the community and support employment growth.

(c) A range of well-located and designed industrial areas are provided to accommodate a broad range of industry uses that meet the needs of the community in terms of employment and economic growth, including large footprint manufacturing at Canterwood and Maryborough North, the marine-based industry precinct at Granville, the existing harbour at Hervey Bay, the city reach precinct in Maryborough, and aviation-related uses adjacent to Hervey Bay Airport and the Maryborough Airport. General industry is provided in Hervey Bay and Maryborough as well as rural locations. Opportunities for future industrial expansion exist in development areas at Nikenbah and St Helens.

(d) The Fraser Coast maintains a strong tourism sector that capitalises upon, but respects, its unique World Heritage listed and other natural and cultural heritage assets and offers visitors a range of attractions, experiences, facilities and accommodation.

(e) The region's rural areas are managed to maximise their contribution to the local economy, rural industries, regional environmental quality and the regional landscape.

(f) Extractive resources of State, regional or local significance and associated separation areas and transport routes are identified and protected from incompatible development that may prevent or otherwise severely constrain current or future extraction when the need for the resource arises.

(g) Business and industry opportunities that support or service the mining industry are encouraged.

(h) Fish habitats and fisheries resources are managed to help maintain biodiversity values and support industry sectors that rely upon these resources.

(i) The Fraser Coast's natural resources (biological, energy, soil, land, atmospheric (air and noise and water) are managed in a manner that ensures their long term sustainability as a valuable life-supporting and economic resource for future generations.

3.4.2 Elements and specific outcomes

3.4.2.1 Element 1 Diverse business and industry
Diverse business and industry development will help strengthen the economy of the Fraser Coast and provide a wider range of employment opportunities for residents.
Specific outcomes
(a) Development on the Fraser Coast supports and promotes the continued growth of diverse and strong business and industry sectors, including forestry, rural enterprises and production, extractive industries, manufacturing and industry, tourism, health and education-related uses, aviation-related uses, marine-based industry, construction and government-related services.
(b) Creative and innovative industries, particularly those based on science and technology, health, education and training are established on the Fraser Coast.

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3.4.2.1 Element 1 Diverse business and industry

(c) Development provides for the expansion, improvement and establishment of a range of quality education and training facilities, including supporting residential components, particularly in Maryborough and Hervey Bay, so as to promote lifelong learning and betterment and support self-sufficiency of the region.

(d) Home based businesses which contribute to the Fraser Coast economy are supported where residential amenity and environmental values are preserved.

3.4.2.2 Element 2 Well defined, vibrant and successful centres

Well-defined, vibrant and successful activity centres are essential to a robust and strong economy. The hierarchy of centres for the Fraser Coast identifies the preferred role and function of the various activity centres. The hierarchy of centres expands upon the network of regional activity centres identified in the Wide Bay Burnett Regional Plan.

Specific outcomes

(a) To reflect and support the preferred pattern of settlement, development is consistent with the hierarchy of centres as shown on the **Strategic Framework Map 1 (SFM-001) and 1a (SFM-001a) (Settlement pattern)** and **Strategic Framework Map 2 (SFM-002) and 2a (SFM-002a) (Economic resources and development)**

(b) Major land uses contributing to employment, education and services in the Fraser Coast are located in an activity centre commensurate with the role and function of the activity centre as defined by the hierarchy of centres.

(c) Development that proposes centre activities outside of an activity centre or proposes a higher order or larger scale use than intended for a particular activity centre is avoided.

(d) The principal activity centres and associated areas of Hervey Bay and Maryborough have clear and complementary roles to accommodate specific types of facilities and services and draw upon their broader urban context and location within the region, as follows:-

(i) Hervey Bay is known for its natural features, which underpin a thriving tourism industry. The Urangan Boat Harbour supports both tourism and marine industries. The Knowledge, Community and Culture hub, anchored by the University of Southern Queensland Fraser Coast Campus, is established in Pialba and a focus on education is further reinforced by the development of the medical precinct and teaching hospitals in Urraween. The role of Pialba as the focus for the highest order and intensity of centre activities in Hervey Bay is reinforced and strengthened; and

(ii) Maryborough is the region's hub for manufacturing and large footprint industry supported by its proximity to major infrastructure including the Bruce Highway and the North Coast Rail Line. Marine-related industry is established at the Fraser Coast Marine Industrial Precinct along the Mary River in Granville. Aviation-related industry is established at Maryborough Airport. New regional level State government facilities serving the Wide Bay Burnett are located in Maryborough or Hervey Bay.

(e) Development in activity centres supports and contributes to a vibrant and walkable urban environment serving as a community focal point that enhances a sense of place having regard to built form and is suited to its scale and community setting.

(f) Activity centres incorporate layouts and building design that focuses on and gives priority to people, public main streets, squares, parks and community facilities. Development is designed to maximise opportunities for public transport usage, walking and cycling.

(g) Department stores and discount department stores are established within the principal centre zone of the principal activity centres of Pialba and Maryborough.

(h) 'Corner store' type facilities are established in appropriate locations throughout the Fraser Coast to service the basic convenience needs of local residents.

3.4.2.3 Element 3 Industrial areas

Sufficient industrial land needs to be allocated to support economic development and employment growth on the Fraser Coast. Industrial areas have been identified to complement activity centres by providing opportunities primarily for manufacturing and industry-related activities that are not suitable

3.4.2.3 Element 3 Industrial areas
to be located in centres. It is also important to ensure that the viability and ongoing use of industrial areas are protected by avoiding encroachment of incompatible uses**.**
Specific outcomes
(a) An adequate supply of physically suitable, well-located and serviceable industrial land is protected to support employment opportunities and economic development of the Fraser Coast, as identified conceptually on **Strategic Framework Map 2 (SFM-002) and 2a (SFM-002a) (Economic resources and development)**. (b) Regionally significant industrial development, including large footprint and higher impact industrial uses, is primarily directed to the north west of Maryborough and Canterwood to capitalise on proximity to major freight routes (Bruce Highway and North Coast Rail Line) and accessibility for employees. (c) New marine-related industry is established in the identified Fraser Coast Marine Industrial Precinct on the Mary River, so as to consolidate and expand boat building and associated industries and services. Existing marine-related industry will continue to operate in Granville, along the city reach of the Mary River and at Hervey Bay (Urangan Boat Harbour) to complement activity within the Fraser Coast Marine Industrial Precinct. (d) Industrial development which provides for a range of services is supported at Howard and Tiaro. (e) Opportunities for employment generation are maximised in existing industrial areas, by ensuring that development makes the most efficient use of available industrial land. (f) The Nikenbah urban expansion area provides opportunities for the development of low impact industry and complementary business activities around the Nikenbah Waste Transfer Station. The St Helens urban expansion area also provides for an industry and employment area to accommodate lower impact industry activities and supporting business activities. (g) Industrial areas are well-designed and serviced and include a range of lot sizes and adaptable building configurations to accommodate a range of industry uses that promote economic diversity and a greater variety of employment opportunities, as well as meeting the changing economic needs of the community. (h) Development in industrial areas is limited to predominantly industrial uses and other uses that are compatible with and provide a desirable support activity to industrial uses. (i) To minimise or avoid land use conflicts, development for residential or other sensitive land uses is appropriately buffered and separated from industrial areas.

3.4.2.4 Element 4 Tourism
The Fraser Coast is a popular tourist destination for both domestic and overseas visitors, largely based on iconic assets such as the World Heritage listed Fraser Island, the Great Sandy Strait, Hervey Bay beaches, the Mary River, Maryborough and its historic buildings, the rural hinterland and migrating whales. It is important to ensure development which supports the growth of the tourism sector is accommodated whilst at the same time ensuring that the natural and cultural features that make the Fraser Coast such an attractive tourist destination are protected and where possible enhanced.
Specific outcomes
(a) A diverse range of tourism activities contributing to the economic growth of the Fraser Coast are supported in a manner that capitalises on, and at the same time protects, the natural and heritage assets and key character and lifestyle attributes of the Fraser Coast. (b) Established tourist-servicing nodes, including those focused along the Hervey Bay esplanade at Pialba, Scarness, Torquay and Urangan, are consolidated and provide for a range of well-designed and high quality visitor accommodation, tourist services and public spaces to meet the various needs and budgets of tourists and visitors to the Fraser Coast. (c) In environmentally sensitive areas and high scenic amenity areas, nature-based and eco-friendly tourist infrastructure and facilities are established where they demonstrate integration with the natural and cultural values of the site and its context and setting. (d) Visitor accommodation and tourist attractions and facilities are located in areas that contribute to the wide range of tourism experiences on offer throughout the region including urban, coastal and hinterland locations.

3.4.2.4 Element 4 Tourism	
(e)	Nature-based and eco-based tourist activities are sensitively located and carried out to ensure the natural values that underpin the regional tourism product are sustained.
(f)	Rural and agri-tourism experiences build upon the 'clean and green' identity of the region and do not prejudice the ongoing productive use of rural land.

3.4.2.5 Element 5 Rural resources	
The long-term sustainability of the Fraser Coast's rural economy relies upon the protection of productive rural land from alienation, fragmentation and encroachment by incompatible development. It is also recognised that the protection of rural lands assists in maintaining the regional landscape and scenic amenity values of the Fraser Coast.	
Specific outcomes	
(a)	Rural areas are retained predominantly for rural production, natural habitat and landscape protection purposes.
(b)	Development ensures that agricultural land classification (ACA) Class A and Class B land and important agricultural areas (IAA's) identified conceptually on **Strategic Framework Map 2 (SFM-002) and 2a (SFM-002a) (Economic resources and development)** is protected and remains available for productive and sustainable agricultural and rural pursuits, unless:- (i) there is an overriding need in terms of public benefit; and (ii) there is no alternative site suitable for the particular purpose.
(c)	Development protects ACA Class A and Class B in a manner that preserves the land for ongoing productive use in accordance with the applicable State planning policy.
(d)	To help maintain the productive capacity of existing and potential future rural activities and avoid or minimise land use conflicts, effective separation distances and buffers are established and maintained between incompatible or sensitive land uses and ACA Class A and Class B land , or areas of intensive rural activity.
~~(d)~~(e)	Development in the Mary River f~~F~~loodplain p~~P~~recinct enables rural activities to proceed but avoids intensification of built form, activities and land uses which place people and property at intolerable risk.
~~(e)~~(f)	Further subdivision or fragmentation of rural lands, including but not limited to ACA Class A and Class B land, , is minimised to maintain viable farm sizes and to support the ability of landowners to continue rural pursuits. Rural businesses, industries and tourist uses are established where such uses value-add to rural production and resources and contribute to the diversification of the rural economy of the Fraser Coast.
~~(f)~~(g)	Forestry resources are utilised in an efficient and sustainable manner and are protected from incompatible development which may compromise the future use of these resources and their contribution to the Fraser Coast economy.

3.4.2.6 Element 6 Natural resources	
Extractive resources provide materials for construction activity and support economic development of the Fraser Coast. It is important to identify and protect extractive resource areas, associated separation areas and transport routes from incompatible development to ensure the effective long-term access to these resources. Fish habitats, particularly in the coastal and near coastal areas of the Fraser Coast, are under increasing pressure from coastal urban development and the desire of residents and visitors to access the coast for recreational and leisure pursuits. The protection of fisheries resources is important to the Fraser Coast economy and for maintaining biodiversity values. It is recognised that the region's natural resources are finite. They will be carefully managed to ensure the long-term health and wellbeing of communities and the natural environment. The communities of the Fraser Coast currently enjoy a high quality and low pollution living environment. To ensure the sustainability of the Fraser Coast residents' quality of life in the longer-term, clean air, water and soil will be maintained and potentially harmful emissions to the atmosphere (including odour, particulates and noise) minimised.	
Specific outcomes	
(a)	Development ensures that extractive resource areas (including associated transport routes) and fish habitat areas identified conceptually on **Strategic Framework Map 2 (SFM-002) and 2a**

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3.4.2.6 Element 6 Natural resources
(SFM-002a) (Economic resources and development) remain available (as relevant to the resource type) for their effective or sustainable long-term use. (b) Extractive resource/processing areas, adjoining separation areas and associated transport routes (including a transport route's separation area) are protected from incompatible development that may compromise existing or potential future extractive industry operations. (c) Natural fish passages along waterways are maintained. (d) Marine, estuarine and freshwater habitats are protected, managed and enhanced to sustain fish stock levels and maximise fisheries production from wild sources and support tourism and recreation based activity through suitable land management practices and protection of water quality. (e) Development:- (i) incorporates sustainable natural resources (biological, energy, soil, land, atmospheric (air and noise) and water) management practices; (ii) avoids or minimises the disturbance of acid sulfate soils. Where disturbance cannot be avoided, works are appropriately managed to ensure that there is no adverse impact on the natural and built environment, infrastructure and community health; and (iii) prevents an increase in soil salinity and, where located within a salinity affected area, is located, designed and constructed in a manner to mitigate the impacts of salinity upon the development. (f) Development ensures sensitive land uses are protected from environmental harm or environmental nuisance and that development has an appropriate buffer to existing noise and odour generating uses or activities.

3.4.3 Relevant strategic framework maps

Strategic Framework Map 2 (SFM-002) and 2a (SFM-002a) (Economic resources and development) conceptually identify elements of the strategic framework as relevant to the economic resources and development theme, including:-

(a) the Fraser Coast hierarchy of centres;

(b) major industrial areas;

(c) other employment or economic development activity areas, including major health, correctional, education and training facilities;

(d) agricultural land;

(e) forestry areas;

(f) state extractive resource areas and associated transport routes

(f)(g) the Mary River Ffloodplain precinct; and

(g)(h) fish habitat areas.

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3.13 Community wellbeing theme

3.5.1 Strategic outcomes

(a) The quality of life and wellbeing of residents of the Fraser Coast is enhanced through the provision of healthy and safe environments and well-designed neighbourhoods that promote active living, healthy lifestyles and accessibility to community services and facilities.

(b) Fraser Coast residents are accommodated in a diverse range of housing which is affordable and appropriate to their needs and income levels at all stages of their lives.

(c) A range of community facilities and infrastructure is provided, particularly in the cities and towns, to promote inclusiveness, safety and active living.

(d) The Fraser Coast contains strong, active and healthy communities that have access to parks and the opportunity to play sport in a diverse range of facilities and locations.

(e) Buildings, places and areas of Indigenous and non-Indigenous cultural heritage and character significance are identified and protected from adverse impacts of development.[3]

(f) The planning and design of new neighbourhoods incorporates crime prevention techniques and emphasises community safety.

3.5.2 Elements and specific outcomes

3.5.2.1 Element 1 Healthy and strong communities

The quality of life and community wellbeing of residents of the Fraser Coast will be enhanced through appropriately located and designed neighbourhoods and community activity areas. Healthy and strong communities are promoted through the provision of active transport and open space networks and by providing inclusive, safe and comfortable environments for residents within which to live, work and play.

Specific outcomes

(a) Development on the Fraser Coast supports healthy lifestyles and strong communities by maximising accessibility to:-

(i) pedestrian, cycle and recreational trail networks;
(ii) sport and recreation, community and social facilities and services; and
(iii) education and employment opportunities.

(b) Development provides for and contributes to the provision of pedestrian, cycle and recreational trail networks to service and link residential development, employment areas, centres, public transport nodes, community facilities and sport and recreational facilities internally within cities, towns, villages and communities and externally to the wider open space and regional trail networks of the Fraser Coast.

(c) Development in business and employment areas contributes to infrastructure and facilities that support pedestrian and cycle options and usage including end-of-trip facilities at significant places of employment and other trip generators.

(d) The planning and design of new residential neighbourhoods (and development generally) provides for community integration and inclusiveness by providing places that encourage people to congregate and encourage community interaction.

(e) Residential development and housing, community facilities and development in centres and employment areas are designed to promote social interaction and enhance a sense of community safety by incorporating Crime Prevention Through Environmental Design (CPTED) principles.

[3] Editor's note—under the *Cultural Heritage Act 2003* (Qld) reasonable and practical measures must be taken to protect Aboriginal Cultural Heritage.

3.5.2.1 Element 1	Healthy and strong communities
(f)	The safe, comfortable and convenient use of outdoor spaces and places is maximised through the use of awnings and other sun-shading and weather protection measures.

3.5.2.2 Element 2	Housing affordability and diversity
To meet community needs of people at all stages of their life and in various economic circumstances, a diverse range of housing types will be provided on the Fraser Coast.	
Specific outcomes	
(a)	Development increases the overall supply of affordable housing. Affordable housing in the form of multi-unit development is encouraged in locations close to public transport, employment, business centres and community and social facilities.
(b)	Residential development on the Fraser Coast, particularly in urban expansion areas and in areas where infill development is envisaged, incorporates:-
	(i) a mix of lot sizes and a diverse range of housing types, sizes and forms such that there is housing choice for all residents as they move through their lifecycle; (ii) affordable housing that is well designed and effectively integrated within local communities; (iii) appropriate, accessible and adaptable housing for all residents, including aged persons, students and persons with disabilities; and (iv) a wide range of contemporary, innovative and traditional architectural styles to allow each of the Fraser Coast's cities, towns and villages to reinforce a distinct character and identity.

3.5.2.3 Element 3	Social infrastructure, community facilities and services
Social infrastructure, community facilities and services are fundamental building blocks to creating complete communities. Human and civic assets provided on the Fraser Coast will create the social and economic legacy for current and future generations and will promote a higher degree of self-reliance for the region.	
Specific outcomes	
(a)	Development provides and/or contributes to the provision of community facilities and/or land for community facilities that meets the needs of the community and is consistent with the planned community facilities infrastructure network in Council's Local Government infrastructure plan and any applicable infrastructure agreement.
(b)	A diverse range of community services and facilities that support the physical, safety, cultural and social needs of the Fraser Coast community are provided.
(c)	Major social infrastructure, community facilities and services within the Fraser Coast are directed to the major regional population centres of Maryborough and Hervey Bay so as to reinforce the roles of these cities, provide a focus for facilities and services, reduce transport demands and provide better local access to facilities and services.
(d)	Social infrastructure, community facilities and services are provided in the district (rural and costal) centres *of* Howard, Burrum Heads and Tiaro to support their role as secondary service centres with the necessary infrastructure to service local communities and immediately surrounding rural and rural residential areas.
(e)	Community facility infrastructure:-
	(i) is appropriately located to create community hubs which provide a focal point for community activity and interaction; (ii) provides for the co-location of complimentary services where appropriate; (iii) maximises access and connectivity to public transport and active transport networks when available; (iv) is successfully integrated with other community facilities, recreational uses, residential areas and centres in the urban fabric; and (v) is designed and has a character that is attractive, addresses and enhances the public realm, is safe and user friendly and is appropriate to the locality.

3.5.2.4 Element 4 Open space and recreation
The provision of suitably located and designed open space and recreation areas is fundamental to building complete communities and will help to ensure that the Fraser Coast is maintained as a highly attractive area in which to live, work, play and visit.
Specific outcomes
(a) Development provides and/or contributes to the provision of land and embellishments for public open space that meets the needs of the community and usable on-site open space and communal areas that promote activity and community interaction. (b) Parks, open space and recreation facilities are appropriately located and designed to:- (i) provide for a diverse range of open space values, functions, experiences and settings; (ii) provide the opportunity to access green areas and green corridors throughout the urban environment; (iii) maximise integration with the broader open space network, recreational trail networks, community facilities, centres and residential areas to provide high levels of accessibility, proximity and connectivity for users; (iv) meet the needs of the community; and (v) maximise opportunities for co-location of complementary activities and facilities. (c) Major recreational and open space facilities are located at Maryborough and Hervey Bay. (d) Development in urban expansion areas and infill areas contributes to establishing, maintaining and protecting green corridors of open space within cities, towns and villages to provide connectivity with the natural environment and landscape of the broader open space network of the Fraser Coast. (e) Public park infrastructure and associated recreational and sporting facilities are designed to:- (i) recognise and incorporate the values and attributes of open space and ecologically important areas; (ii) maintain and protect the amenity of surrounding areas and land uses; (iii) be safe for public use and maximise outdoor comfort for users; and (iv) minimise opportunities for crime. ~~(iv)~~(v) ~~be constructed with~~ mitigate~~acceptable~~ risks from natural hazards to an acceptable level. (f) The open space, sport and recreation resources of the Fraser Coast are protected from encroachment by incompatible land uses and other adverse impacts of development.

3.5.2.5 Element 5 Cultural heritage and character significance
The Fraser Coast has a rich history as a place of Indigenous occupation with the region containing many known and potential traditional owner cultural heritage sites. The Fraser Coast and Maryborough in particular, is also known for its post-settlement history and cultural significance comprising of historic buildings, places, precincts and streetscapes which contribute to the character of the region. The Fraser Coast community values its unique cultural heritage and historic character significance. It is therefore important that those places and areas of cultural heritage significance are identified and afforded protection to provide a sense of identity for present and future generations.
Specific outcomes
(a) The Fraser Coast's indigenous and non-indigenous cultural heritage is recognised and protected. Development which adversely impacts on places of cultural heritage significance is not supported, unless there is no prudent or feasible alternative. (b) Development is sensitive in its design response and the manner in which it relates to and addresses places of cultural heritage significance. (c) The distinctive historic character formed by clusters of buildings and streetscapes within cities, towns, villages and communities of the Fraser Coast is maintained and enhanced. (d) The adaptive re-use of a heritage place is encouraged where the use is sympathetic to the cultural heritage values of the place. In some cases this may involve uses that are not ordinarily considered compatible in the zone provided that these uses have no or only minimal off-site impacts.

3.5.3 Relevant strategic framework maps

Strategic Framework Map 1 (SMF-001) and 1a (SFM-001a) (Settlement pattern) conceptually identify elements of the strategic framework as relevant to the community wellbeing theme, including major sport and recreation open space areas.

3.14 Infrastructure and services theme

3.6.1 Strategic outcomes

(a) The Fraser Coast is serviced by efficient and reliable essential infrastructure networks that promote community wellbeing and economic development.

(b) Coordinated planning and delivery of infrastructure and services facilitates growth that reflects the pattern of settlement, provides for the efficient and best utilisation of public resources, efficiently meets community's needs, preserves corridors and sites for essential infrastructure services and minimises impacts on the environment.

(c) Expected levels of service and associated infrastructure continue to be provided to the settlement pattern in consideration of risk from natural hazards and climate change.

(d) Infrastructure is planned for whole of life considering known risk from natural hazards and climate change and does not become a financial burden to Council in the future.

~~(b)~~(e) Critical infrastructure is located and designed to maintain the required level of functionality during and immediately after a natural hazard event.

~~(c)~~(f) Water infrastructure, including water supply, sewerage and stormwater, is provided and managed on a total water cycle basis to maximise the efficient use of water resources and maintain the health and wellbeing of the community and the environment.

~~(d)~~(g) Efficient and reliable energy and telecommunication infrastructure meets the needs of the community. The use of renewable energy sources and supplies is promoted.

~~(e)~~(h) Waste management and recycling maximises the efficient reuse of finite materials, limits waste to long term disposal and minimises impacts to the environment.

~~(f)~~(i) Emergency services are provided to respond to natural hazards and unplanned events and to support the community's safety.

3.6.2 Elements and specific outcomes

3.6.2.1 Element 1 Coordinated planning and delivery
It is important that the planning and delivery of infrastructure aligns with the long term settlement pattern ~~pattern of settlement~~ for the Fraser Coast, meets the needs of the community and is provided in a logical, timely, efficient and sustainable manner. In addition, major infrastructure corridors and sites should be identified and afforded protection to maintain the operation and efficiency of existing and planned networks. New infrastructure can operate considering known risks from natural hazards and climate change.
Specific outcomes
(a) As far as practicable, infrastructure provision in urban expansion areas and in infill/redevelopment areas is provided ahead of, or in parallel with, new development. (b) Development occurs in an orderly manner and logical sequence so as to:- (i) maximise the use and capacity of existing infrastructure; and (ii) maximise the efficiency of new infrastructure provision. (c) Strategic sites and corridors for existing and proposed infrastructure services, including those elements identified conceptually on **Strategic Framework Map 3 (SFM-003) and 3a (SFM-003a) (Transport and infrastructure)**, are protected and secured to support the long-term essential infrastructure needs of the Fraser Coast community. (d) Development contributes to a fair and equitable share of the cost of providing infrastructure and infrastructure is economic in a whole of life ~~,~~context.

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3.6.2.1 Element 1	Coordinated planning and delivery

(e) Infrastructure networks, corridors, services and facilities are:-

(i) planned and used as efficiently as possible and co-located wherever practicable;
(ii) designed to accommodate changes in use and densities over time in urban expansion areas and infill/redevelopment areas;
(iii) protected from urban encroachment and other incompatible land uses to ensure their continued operation and viability;
(iv) designed to have regard to the landscape character and scenic amenity of the Fraser Coast and sense of place of the locality;
(v) designed to incorporate significant landscaping where appropriate;
(vi) located and designed to promote sound urban design outcomes, integrate with the landscape, protect environmental values and ecological processes; and
(vii) designed to be resilient in the event of natural disaster and continue to operate considering long term risk and climate change.

(f) The development and supply of renewable energy at the regional, local and individual scale is enabled.

3.6.2.2 Element 2	Water cycle management

The planning and delivery of water, wastewater and stormwater services across the Fraser Coast should be viewed as an integrated water cycle management system. Such an approach offers the opportunity to reuse and recycle to maximise the availability of water as a precious and finite resource. Development needs to incorporate effective water cycle management to ensure the health, safety and wellbeing of the Fraser Coast community and the environment.

Specific outcomes

(a) Water Supply Catchment Areas within the Fraser Coast Region are protected and managed to ensure the quantity and quality of raw water supply meets the current and future demand of the Fraser Coast.

(b) The water resources of the Fraser Coast are utilised in an efficient and sustainable manner and are protected for future use, including through realising opportunities to reuse and recycle stormwater and treated wastewater.

(c) Development in the urban area is connected to the reticulated water supply and sewerage systems, where available.

(d) Development in rural residential and rural areas has an on-site potable water supply (where connection to the reticulated water supply system is not available) and on-site effluent treatment and disposal systems that protect human health, amenity and the natural environment.

(e) Stormwater and wastewater is treated and managed in a manner that maintains the quality of receiving waters. This includes water sensitive urban design (WSUD) principles being effectively integrated into the layout and design of development to provide for the collection, treatment and conveyance of stormwater.

3.6.2.3 Element 3	Energy and telecommunication infrastructure

The region is well serviced by essential energy infrastructure. Energy use occurs in a more sustainable manner, through development maximising opportunities to incorporate energy efficiency alternatives reducing dependency on energy from non-renewable sources. Access to efficient, modern and high quality telecommunications and information technology infrastructure helps connect the dispersed communities of the Fraser Coast and provides access for the region to State, National and Global economies.

Specific outcomes

(a) The Fraser Coast is serviced by energy and telecommunication infrastructure that:-

(i) utilises the latest standards in technology;
(ii) meets the needs of the community; and
(iii) minimises environmental impacts.

(b) Development in urban expansion areas provides land for infrastructure, including land for sub-stations and transmission lines, required to service or traverse the area.

(c) Renewable energy projects are encouraged where they do not cause significant environmental, social or amenity impacts.

3.6.2.3 Element 3	Energy and telecommunication infrastructure
(d)	Energy and telecommunication infrastructure is:- (i) located and designed to ensure its safe operation; (ii) integrated in a manner which does not unduly impact on the landscape qualities of the area; and (iii) co-located wherever possible.
(e)	Demand for centralised energy generation and infrastructure is minimised through development incorporating energy efficiency design principles and maximising the use of renewable and sustainable energy supplies and sources.
(f)	The provision of high speed internet and telecommunications is facilitated.

3.6.2.4 Element 4	Waste management and recycling
The projected population growth of the Fraser Coast will generate an increased volume of waste and increased pressure to upgrade or provide new waste management and recycling services and facilities. Minimising the production of waste and maximising opportunities for reuse and recycling will help to alleviate these pressures and enhance the overall sustainability outcomes of the Fraser Coast.	
Specific outcomes	
(a)	Development incorporates measures to reduce waste generation and to maximise reuse and recycling of materials during the construction and operational stages of development.
(b)	To protect the function and long term expansion opportunities of landfill and waste transfer station facilities, including those shown conceptually on **Strategic Framework Map 3 (SFM-003) and 3a (SFM-003a) (Transport and infrastructure)**, appropriate separation distances and buffers are provided and maintained to avoid encroachment from incompatible land uses and activities.

3.6.2.5 Element 5	Emergency services
The provision of adequate emergency services and infrastructure is necessary to support the planned growth of the Fraser Coast and promote community safety and wellbeing.	
Specific outcomes	
(a)	Emergency response facilities and services are provided to meet the needs of the community.
(b)	Development assists to provide emergency response facilities and services in appropriate locations.
(c)	The location and design of new development ~~minimises the potential~~does not place additional demand ~~for~~ on emergency services while also providing for the timely and efficient operation of emergency services, including during and after natural hazard events.

3.6.3 Relevant strategic framework maps

Strategic Framework Map 3 (SFM-003) and 3a (SFM-003a) (Transport and infrastructure) conceptually identify elements of the strategic framework as relevant to the infrastructure and services theme, including:-

(a) major water supply infrastructure;

(b) major sewerage and effluent reuse infrastructure;

(c) major energy infrastructure; and

(d) major waste management infrastructure sites.

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3.15 Access and mobility theme

3.7.1 Strategic outcomes

(a) All cities, towns, townships and communities and major employment and activity centres of the Fraser Coast will be connected by a safe and efficient integrated transport system that maximises opportunities for public transport and active transport modes.

(b) Viable public transport options are available for the use of residents and visitors to the Fraser Coast.

(c) Residents of the Fraser Coast and visitors to the region have access to a safe, connected walk and cycle network to encourage an active lifestyle, reduce dependency on private vehicles and meet accessibility needs.

(d) The further development of the Maryborough and Hervey Bay airports, the rail network and marine transport opportunities is encouraged to support efficient freight movement within and from the Fraser Coast and promote economic growth.

(e) The safety and operational efficiency of Hervey Bay and Maryborough airports, any future regional airport and other aviation facilities located within the Fraser Coast is protected.

3.7.2 Elements and specific outcomes

3.7.2.1 Element 1 Integrated transport system

The provision of an efficient and well-integrated transport system to service the Fraser Coast is essential to community well-being and economic prosperity. The provision of an integrated transport system promotes more sustainable transport modes, including public transport and active transport.

Specific outcomes

(a) Development is consistent with and contributes to the establishment of the preferred settlement pattern for the Fraser Coast through an integrated transport network and hierarchy which supports the long term transport needs of the Fraser Coast and provides a wide range of viable transport options for communities to enable the efficient, safe and convenient movement of people, goods and services.

(b) Development supports and connects to the preferred road network and transport hierarchy which is identified conceptually on **Strategic Framework Map 3 (SFM-003) and 3a (SFM-003a) (Transport and infrastructure)** and in more detail on the (**2031 Strategic Transport Network figures**) in the Transport and parking code, to facilitate safe and efficient road travel, including public transport, within the Fraser Coast and beyond.

(c) The operational integrity, safety, efficiency and potential for future upgrading of major transport infrastructure and facilities including roads, airports, rail and harbours is maintained.

(d) Enhanced transport connections and services are provided between Maryborough and Hervey Bay in recognition of their role as the major regional population centres for the Fraser Coast.

(e) Residential areas incorporate traditional neighbourhood design principles, including flexible and legible street patterns (such as a grid or modified grid patterns) and a clear road hierarchy which maximises opportunities for all modes of transport, rather than just the private motor vehicle.

(f) Development of urban expansion areas and infill/redevelopment areas provides appropriate transport infrastructure.

(g) Transport networks, corridors and infrastructure are:-

(i) protected from encroachment by incompatible land uses and development which may compromise their continued operation and viability;
(ii) designed to minimise adverse impacts on existing and planned communities;

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3.7.2.1 Element 1 Integrated transport system
(iii) designed so as to make a positive contribution to the landscape and sense of place for the locality; (iv) located and designed to provide continuity of wildlife movement and ecological processes. (h) Traffic-generating development within the Fraser Coast is provided with sufficient on-site car parking to meet the needs of the particular development taking account of what can practicably be achieved having regard to the location, size and other characteristics of the site.

3.7.2.2 Element 2 Public transport
The provision of an efficient and reliable public transport system on the Fraser Coast will help to reduce dependency on the private motor vehicle and ease pressure to upgrade road networks to cater for increased traffic volumes over time.
Specific outcomes
(a) Development and the pattern of settlement supports the provision of connected, legible, safe and convenient public transport networks that provide for the efficient movement of passengers. (b) The viability of existing and planned public transport corridors within the Fraser Coast is protected. (c) Development provides legible local road connections and supporting collector streets that are sufficiently wide for buses to connect local areas by public transport and which accommodate safe bus stopping situations. (d) Development supports and contributes to a high level of integration with existing and planned public transport networks, particularly in infill areas and urban expansion areas in Maryborough and Hervey Bay. (e) Appropriately located and designed higher density residential development is established in Maryborough and Hervey Bay to promote and support the provision of public transport services within these cities. (f) Employment areas and community infrastructure are connected to existing public transport networks or have the ability to be connected to future planned public transport networks. (g) Public transport facilities and infrastructure are designed and located to meet the needs of the community, including accessibility for elderly and less mobile users and incorporate crime prevention through environmental design (CPTED) principles.

3.7.2.3 Element 3 Walking and cycling
In recognition of substantial health, social and environmental benefits, it is important to support and encourage active transport (walking and cycling) use on the Fraser Coast. With its relatively flat topography, favourable climate and scenic amenity values, the Fraser Coast is an ideal place to walk and cycle.
Specific outcomes
(a) Development supports and contributes to the provision of a safe, convenient, connected and legible walk and cycle network, including on-road and off-road routes, in cities, towns and centres, and between centres where appropriate. (b) The walk and cycle network is integrated with other travel modes, particularly public transport, to enhance linkages with activity centres, employment areas and community facilities. (c) To maximise opportunities for walking and cycling:- (i) urban areas and residential neighbourhoods are designed to incorporate permeable and legible street networks with appropriate lighting and casual surveillance to facilitate safe and convenient use by pedestrians and cyclists; (ii) end-of-trip facilities are provided for the comfort and convenience of active transport users in those developments that are likely to attract or generate a significant volume of trips by pedestrians and cyclists; and (iii) other facilities to enhance comfort and convenience to active transport users are provided, including weather protection and shelters along active frontages in activity centres.

3.7.2.4 Element 4 Freight movement
The efficient and effective movement of freight is essential to sustaining economic activity and development within the Fraser Coast. The identification and protection of strategic elements of the freight movement network will help to ensure the ongoing ability to support and promote the local economy.
Specific outcomes
(a) The efficient provision and operation of existing and future road, rail, air and marine freight movement networks to support the economic development of the Fraser Coast is supported and encouraged. (b) Development in the vicinity of the major freight movement routes identified conceptually on **Strategic Framework Map 3 (SFM-003) and 3a (SFM-003a) (Transport and infrastructure)**, protects the ongoing operational safety and efficiency of these routes and mitigates any reverse amenity impacts.

3.7.2.5 Element 5 Air transport
The ongoing operation of the Hervey Bay and Maryborough airports is protected in recognition of the important role that they play in connecting the Fraser Coast to other regions both in terms of passenger and freight movement as well as their general aviation functions.
Specific outcomes
(a) The continued operation, improvement and expansion of the Hervey Bay and Maryborough airports as passenger and freight transport and general aviation facilities servicing the Fraser Coast region is supported. (b) The Fraser Coast Airports Master Plan 2011-2031 provides the basis for the development of aviation facilities and infrastructure, co-ordination of aviation and non-aviation land use planning and management of the Hervey Bay and Maryborough Airports. (c) The safety and operational efficiency of the Hervey Bay and Maryborough airports and associated aviation facilities is maintained. (d) Subject to a site identification and suitability assessment, any potential future regional airport site is protected from incompatible development.

3.7.3 Relevant strategic framework maps

Strategic Framework Map 3 (SFM-003) and 3a (SFM-003a) (Transport and infrastructure) conceptually identify elements of the strategic framework as relevant to the access and mobility theme, including:-

(a) major elements of the road transport hierarchy;

(b) major elements of the rail, air and marine transport system; and

(c) public transport stations (Maryborough and Hervey Bay only).

3.16 Natural environment and landscape character theme

3.8.1 Strategic outcomes

(a) Natural areas of national and international significance such as Fraser Island and the Great Sandy Strait (which together form part of the Great Sandy Biosphere) are highly valued for their biodiversity values as well as for their contribution to the overall image and landscape character of the region.

(b) Vegetation, biodiversity values and areas of significance are identified and protected to maintain biodiversity and contribute to the image and character of the Fraser Coast, unless it is demonstrated to be in the community interest that they not be protected.

(c) Where an overriding community need is demonstrated for development which will adversely impact on environmental values, those adverse impacts are minimised as far as practicable and, where appropriate, suitable offsets are provided.

(d) The form of development and pattern of settlement of the Fraser Coast has regard to biodiversity values and minimises impacts on ecosystems, habitats, vegetation and corridor connectivity.

(e) The image, landscape character and scenic amenity values of the Fraser Coast are recognised, including elements and features which contribute to views to and from areas of high scenic amenity.

(f) The physical condition, ecological health, environmental and scenic values, and water quality of the region's groundwater, wetlands and waterways is maintained or enhanced where practicable.

~~(g) Risks to people, property and the environment from the predicted impacts of climate change are avoided or minimised as far as practicable.~~

~~(h)~~(g) Wherever practicable, degraded areas are enhanced and rehabilitated to improve ecological processes, ecosystem functionality and connectivity.

3.8.2 Elements and specific outcomes

3.8.2.1 Element 1 Protection of Important habitat and biodiversity
The Fraser Coast is internationally recognised for its unique environmental values. The area contains important habitat and biodiversity values at an international, national, state and local level, including coastal dune systems, wetlands and remnant vegetation. Protection of these ecologically important areas is vital in order to maintain biodiversity values within the region, including near-threatened species such as the koala, humpback whale and migratory birds.
Specific outcomes
(a) Development minimises adverse impacts on ecologically important areas including those areas identified conceptually on **Strategic Framework Map 4 (SFM-004)** (**Natural environment and landscape character)**, which includes areas containing Matters of State Environmental Significance (MSES). (b) Development is not located in an ecologically important area as mapped on the Biodiversity Overlay, unless:- (i) on the balance of social, economic and environmental considerations, it is demonstrated that the development is in the interests of the community[4]; and

[4] In determining whether development has satisfied this test, Council will consider such matters as:-
(a) whether alternative options are available;
(b) the size, type and condition of the ecologically important area affected;
(c) the extent to which the ecologically important area has hydrological, biodiversity, landscape or character values;
(d) any requirements for the provision of an offset under a State or local planning policy; and
(e) whether the development proposed is reasonably anticipated by and consistent with the planning scheme.

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3.8.2.1 Element 1 Protection of Important habitat and biodiversity
(ii) any adverse impacts on the ecologically important area incurred are minimised and, where appropriate to the circumstances, compensated by an offset in accordance with applicable State or local planning policy. (c) Development supports and or contributes to a network of ecological corridors throughout the Fraser Coast where connection and wildlife movement internally within cities, towns, villages and communities can be satisfactorily achieved and an ecological benefit can be demonstrated. (d) Where practicable and appropriate, having regard to the scale and nature of development, degraded areas within strategically important areas of connectivity (between ecologically important areas) identified conceptually as Strategic rehabilitation corridors on **Strategic Framework Map 4 (SFM-004)** (**Natural environment and landscape character)** are rehabilitated to positively contribute to the habitat and biodiversity values of the Fraser Coast. (e) Buffers or other suitable protective measures are incorporated in development, and development in bushfire prone areas is separated from hazard, to minimise edge effect and impacts on remnant vegetation, waterways, wetlands and corridors. (f) Rivers, waterways and wetlands are predominantly maintained in their natural state with development not adversely impacting on their ecological function and water quality.

3.8.2.2 Element 2 Scenic amenity and landscape character
The significant role that scenic amenity and landscape character plays in defining the unique character and identity of the Fraser Coast, including its individual communities, is recognised.
Specific outcomes
(a) Development does not adversely impact upon the landscape character elements identified conceptually on **Strategic Framework Map 4 (SFM-004) (Natural environment and landscape character)** which includes strategic views, scenic corridors and routes, and other significant landscape areas and features. (b) The following areas and features are recognised for their high scenic amenity value and are protected through the general exclusion of development or sensitive development that incorporates built form elements that are designed to minimise disruption to the landscape:- (i) Fraser Island and the Great Sandy Strait; (ii) coastal foreshore areas and streams; (iii) rural peaks and ridgelines particularly those visible from the main transport routes and strategic view points; (iv) Mary River and its tributaries including riparian areas; (v) undeveloped parts of the Ghost Hill ridgeline; (vi) other features, attributes and values of landscape character and scenic amenity that contribution to regional image, including:- (A) significant views, viewpoints and scenic corridors; (B) areas of visually significant vegetation; and (C) agricultural land class A and B and other rural lands. (c) Inter-urban breaks between Maryborough and Hervey Bay, Hervey Bay and River Heads and Hervey Bay and Toogoom are maintained and preserved so as to provide a clearly defined edge between urban areas and green space, rural living and rural areas. (d) Intra-urban breaks within cities and towns are established, maintained and where practicable enhanced to create distinct neighbourhoods. These areas are integrated with ecologically important areas and form part of the publicly owned urban open space network. (e) Development which relies upon the Fraser Coast's lifestyle and economic development opportunities preserves the significant outdoor recreation values and the diverse landscape, scenic amenity and natural resources available in rural areas of the Fraser Coast. (f) Development maintains or enhances public access to landscape character areas, scenic amenity areas and significant viewpoints.

3.8.2.3 Element 3 Coastal environment
In addition to Fraser Island, the Fraser Coast mainland takes in an extensive area of coastline extending from Burrum Heads in the north to the inlet of Tin Can Bay in the south. This coastal

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environment, with its associated beaches, dunes, foreshores, estuaries, rivers and coastal streams strongly influences the character, lifestyle and environment of the Fraser Coast.

Specific outcomes

(a) Development is planned, located, designed, constructed and operated to avoid as far as practicable, or otherwise mitigate, any adverse impacts on coastal resources, processes and values.

(b) Development maintains the natural integrity of coastal processes unless carried out in accordance with Council's Shoreline Erosion Management Plan.

(c) Works for canals, dry land marinas, artificial waterways or marine infrastructure avoid areas where they will cause adverse impact on coastal resources or processes. Where such works are undertaken adverse impacts on coastal resources or processes are minimised and mitigated, such that:
- (i) water quality is not degraded
- (ii) the extent of coastal ecosystems and associated flora and fauna habitat is maintained
- (iii) effects of construction are managed and need for ongoing dredging for maintenance purposes is minimised
- (iv) adverse changes to tidal flows, sediment transport processes, or tidal prism volume of natural waterways are avoided.

(d) Marina developments facilitate the installation, maintenance and availability of reception facilities for ship-sourced pollutants to prevent marine pollution.

(e) Reclamation of land under tidal water (including in relation to land adjoining tidal water) only occurs to support specific development activities which require access to tidal waters for operation, including:
- (i) coastal-dependent development, public marine development or community infrastructure, where there is no feasible alternative
- (ii) strategic ports, priority ports, boat harbors or strategic airports and aviation facilities in accordance with a statutory land use plan, or statutory master plan.

(f) Reclamation of land under tidal water may also occur where required to support the development of coastal protection works or work necessary to protect coastal resources or coastal processes.

3.8.2.4 Element 4 Surface water, groundwater, waterways and wetlands

The waterways and wetlands of the Fraser Coast provide habitats for many fauna species and an important recreational, scenic amenity and water supply resource. To protect these values, regard must be given to surface water and groundwater quality and environmental flows.

Specific outcomes

(a) Development:-

- (i) maintains ground and surface water quality and characteristics;
- (ii) incorporates appropriate buffers to waterways and wetland areas;
- (iii) incorporates sustainable integrated catchment and land management practices and safeguards to mitigate the impacts from increased sediment, nutrient runoff and changed run off and flow characteristics; and
- (iv) does not diminish groundwater recharge areas.

(b) The region's groundwater, waterways and wetlands are protected or enhanced in a manner that ensures their long-term environmental values and sustainability. This includes ensuring that development in or adjacent to wetlands of high ecological significance is planned, designed and constructed to prevent the loss and degradation of the wetlands and their environmental values, consistent with State Planning Policy.

3.8.2.5 ~~Element 5 Climate change~~
~~Climate change has the potential to impact on the natural and built environment and these changes should be reflected in the management of development.~~
~~**Specific outcomes**~~
~~(a) Development is suitably located, designed and constructed to take appropriate account of the potential impacts of climate change.~~ ~~(b)~~(a) ~~Infrastructure networks, corridors and services are designed, located and operated to minimise the potential adverse impacts of climate change on the infrastructure itself and on communities.~~

3.8.3 Relevant strategic framework maps

Strategic Framework Map 4 (SFM-004) (Natural environment and landscape character) conceptually identifies elements of the strategic framework as relevant to the natural environment and landscape character theme, including:-

(a) Vegetation (Matters of State Environmental Significance);

(b) Koala Habitat Areas;

(c) Fish Habitat Areas;

(d) Ramsar wetlands;

(e) high ecological value (HEV) waters;

(f) regional ecological corridors;

(g) protected areas[5];

(h) strategic views;

(i) scenic corridors and routes; and

(j) the Ghost Hill ridgeline.

[5] Protected areas include land that is owned or controlled by the State government for conservation purposes such as National Parks and Conservation Parks and land owned or controlled by Council and used or intended to be used for conservation purposes.

3.17 Natural ~~H~~hazards, c~~C~~limate c~~C~~hange and r~~R~~esilience theme

3.17.1 Strategic outcomes

(a) Areas at intolerable risk of natural hazards ~~identified in the planning scheme~~ are avoided, and where avoidance is not reasonably possible mitigated to an acceptable level of risk. ~~in the first instance for all development.~~

~~Where development cannot avoid intolerable risk, urban development does not occur.~~

(b) Existing development in areas of intolerable risk that cannot be mitigated to an acceptable level is not intensified and has a long term transition plan away from risk.

(c) New urban areas must mitigate risk to demonstrate development can proceed with an acceptable risk level. Residual areas with intolerable risk may remain undeveloped.

(d) Infill development should proceed on the part of a site that has the lowest level of risk, reducing the risk level to acceptable, which may involve specific built form or site based mitigation methods.

(e) Development does not place burden on emergency services or disaster management capability and capacity.

(f) Development ensures that access to a public road remains safe and trafficable for vehicles, pedestrian movements and emergency services and ~~ensures~~ that adequate evacuation routes ~~and emergency service access~~ are available in a natural hazard event.

(g) Critical infrastructure is designed and constructed to ensure it remains functional during and immediately after a natural hazard event and can operate in a whole of life context considering risks from all natural hazards and climate change.

(h) Vulnerable ~~land~~ uses, vulnerable people and Essential community Infrastructure are located ~~outside areas of intolerable and tolerable risk and~~ ~~proceed~~only occurs in ~~areas of acceptable~~low risk areas and development does not result in:

(i) an intolerable level of risk to people and property from the natural hazard;
(ii) the isolation of people;
(iii) undue disruption to site operations and recovery time during and immediately after an event; and
(iv) undue burden on disaster management responses and recovery capacity.~~.~~

(i) The manufacture and storage of hazardous chemicals, hazardous materials or dangerous goods is avoided and storage is above the defined event for that natural hazard where one is identified.

(j) Development is designed and constructed to be resilient to natural hazards and in consideration of climate change.

(k) The natural characteristics and protective function of the land (including for floodplain function and conveyance), existing green corridors and drainage pathways are maintained or enhanced.

~~(a)~~(l) Access to the coastal foreshore for public benefit is maintained.

~~(b)~~(m) Development considers other hazards not mapped such as heatwave.

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3.17.2 Elements and specific outcomes

3.17.2.1 Element 1 Understanding and Avoiding Risk
Living close to the environment brings with it a need to understand how the environment may change over time, through natural processes and climate change. It also brings with it risks from natural hazards and challenges to maintain the lifestyle we enjoy, while also needing to build~~ing~~ our awareness and resilience to this change. The most effective way to manage risk from natural hazards is to avoid in the first instance. Developing areas of risk may bring consequences for community in the future. Where development does proceed because avoidance is unreasonable, it should do so understanding the risk and mitigate to~~at~~ an acceptable level of risk. Existing communities which face intolerable risks and permanent changes to landforms through coastal hazards have an active long term transition plan in place.
Specific outcomes
(a) Development avoids risk from natural hazards by locating significant investment areas outside natural hazard risk **Strategic Framework Map 5 (SFM-005) (Natural Hazards, Resilience and Climate Change)**. (b) Where risks from natural hazards is intolerable and cannot be mitigated, development does not occur. ~~from any natural hazard, development is avoided.~~ (c) . (d) Development should proceed on the part of a site that has the lowest level of risk, reducing the risk level to acceptable, which may involve specific built form or site based mitigation methods. Development may no longer be suitable on existing sites in consideration of climate change and new risk understanding where risk cannot be mitigated to an acceptable level. (e) Development for urban purposes does not occur ~~on~~ within the Erosion Prone area on land in the Coastal Management District. (f) Development in Hervey Bay proceeds only with an intensity that enables site-based structural mitigation. (g) Development on the Mary River floodplain precinct is limited to agricultural or other compatible uses with limited built form and investment. (h) Development within Bushfire Resilient Precincts is limited to avoid increased population and property exposure. ~~Development may only proceed on a part of a lot with tolerable and acceptable risk levels which may involve site based mitigation methods. Development may no longer be suitable on existing sites in consideration of climate change and new risk understanding.~~ (i) Development for~~of~~ vulnerable uses, vulnerable people or essential community infrastructure only occurs in low risk areas and the development does not result in: i. ~~is avoided~~ an intolerable level of risk to people and property from the natural hazard; ii. undue disruption to site operations and recovery time during and immediately after an event; iii. undue burden on disaster management responses and recovery capacity; (j) Critical infrastructure is designed to operate ~~through~~during and immediately after an event and future known events in consideration of known future conditions to 2100. (k) The manufacture and storage of hazardous chemicals, hazardous materials or dangerous goods is avoided and storage is above the defined event for that natural hazard where one is identified. (l) The natural characteristics and protective functions of the land are protected and enhanced, and sufficient supporting land, buffers, green corridors and redundancy provided and expanded where ever possible in development design to incorporate expected changes from climate change to 2100.

3.17.2.2 Element 2 Long term transition
Planning now will shape the safe, resilient and sustainable future Fraser Coast seeks, and support the ongoing vibrancy of our region. Our settlement pattern and infrastructure are planned and maintained in consideration of known future impacts. Communities transition away from permanent landform changes. Development and new infrastructure can proceed in areas where risks are acceptable or can be mitigated to an acceptable level.
Specific outcomes

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(a) Development proceeds only in growth areas where risk from all natural hazards is ~~understood~~mitigated to an acceptable level.

(b) The settlement pattern takes into consideration the long term viability, resilience and sustainability of localities including all supporting land uses for a prosperous and liveable future, and the ability to be serviced over the long-term.

(c) Intolerable risk to coastal hazards and permanent landform change from sea level rise and open coast erosion is addressed through an active long term plan to transition communities away from risk, firstly to Township zone which will in the future be constrained land. See Figure XX below.

(d) Development and investment in the long term, proceeds and is consolidated in areas of least risk.

(e) Development does not create further isolated communities and burden to emergency management.

3.17.2.3 Element 3 Mitigation methods

Development~~The planning scheme~~ is responsive to climate change recognising the need to maintain natural corridors and processes and respect increasing urban heat, intensifying storms, coastal hazards, more frequent flooding and fire events among other discrete changes. ~~The scheme~~Development ~~enables~~integrates mitigation methods to achieve acceptable risk levels ~~form~~from ~~f~~natural hazards.

Specific outcomes

(a) Development sites which are dependent on a cut and fill methodology to achieve mitigation, must demonstrate no worsening situation upstream or on surrounding properties.

(b) Development sites which are dependent upon a built form response to achieve mitigation to acceptable levels must ensure the built form can withstand the relevant hazard and site alterations do not present issues for surrounding properties.

(c) Development must maintain and enhance the natural characteristics and protective function of the land, and all existing buffers and green corridors. Development in Bushfire Prone Area must be separated from adjacent hazard without adverse impact on environmental values.

(d) Development must not place additional burden on emergency services and disaster management capability and capacity.

(e) Development ensures that access to a public road remains safe and trafficable for vehicles, pedestrian movements and emergency services, and ensures that adequate evacuation routes and emergency service access are available in a natural hazard event.

3.17.2.4 Element 4 Coastal environment

In addition to Fraser Island, the Fraser Coast mainland takes in an extensive area of coastline extending from Burrum Heads in the north to the inlet of Tin Can Bay in the south. The coastal environment shapes our identity and locals interact with the coast in many ways. This coastal environment is subject to significant risk from coastal hazards of storm tide inundation and permanent sea level rise.

Specific outcomes

(a) Development or urban purposes does not occur on sites within the Erosion Prone Area on land in the Coastal Management District.

(b) Existing localities in areas of intolerable risk are not intensified unless mitigation to an acceptable level is demonstrated.

(c) Greenfield development on land in the Erosion Prone Area or Coastal Management District surrenders the full extent of the Erosion Prone Area for coastal buffer and public purposes.

(d) Permanent loss of foreshore is considered as part of the settlement pattern.

(e) Access to the coastal foreshore for public benefit is maintained.

Part 3

Long term Transition

An active long term transition strategy is planned for the coastal communities which are at intolerable risk from storm tide inundation, permanent coastal hazards of open coast erosion, also known as storm bite and permanent inundation from sea level rise. These hazards cannot be reasonably mitigated, and our settlement pattern cannot adapt to the permanent loss of land. These areas are also subject to high bushfire risk. Therefore, the strategic intent is to begin to transition away from areas of significant permanent change.

These areas include the sea-facing streets of Burrum Heads and part of Toogoom which are exposed to intolerable risk for both open coast erosion and sea level rise; and the Great Sandy Straits communities of Maroom, Boonooroo, Tuan, Poona and Tinnanbar. Many allotments in these communities are now in the Township Zone. The purpose of the township zone is described in the Planning Regulation 2017 and is to provide for—

(a) small to medium urban areas in a rural or coastal area; and

(b) a variety of uses and activities to service local residents, including, for example, business, community, education, industrial, open space, recreation, residential or retail uses or activities; and

(c) *tourist attractions and short-term accommodation, if appropriate for the area*.

The purpose of the long term transition policy is:

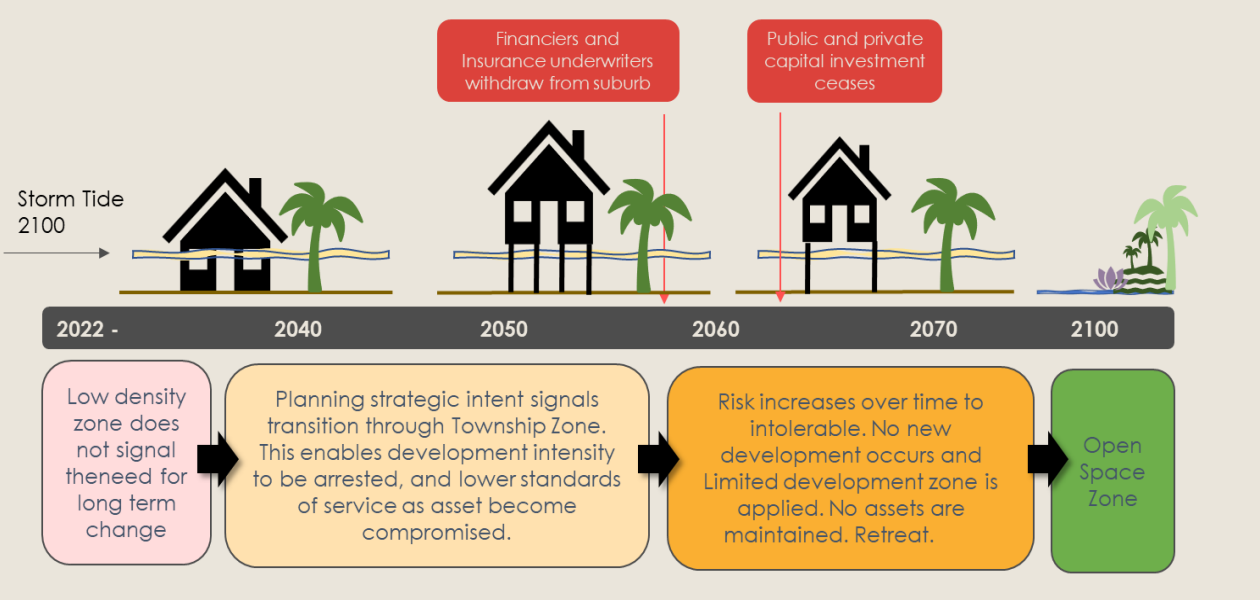
(a) to ensure that the community is aware and can make risk-informed decisions

(b) to ensure Council can make risk-informed decision on assets and infrastructure; and

(c) to enable a planning-led long term risk reduction

Figure XX illustrates the function of the transition policy over time. Under the previous planning scheme, the land was in the Low Density Residential Zone which is provided with a high standard of public services. Over the medium term depending on the timing and severity of weather events and landform changes, the physical effects of sea water intrusion will begin to be evident. Entities involved in ffinancing ial for properties and support and insurersance may also will discontinue services in areas at high risk over this time period.

The Township zone will enable standards of service to be reviewed in the medium term and take a risk-based approach to asset management. Towards the end of the medium term, public and private investment in the area will slowly decline and this will be a trigger point for the next step in planning regulation. In the longer-term, the intolerable risk faced by coastal allotments will require application of the Limited development zone. Over time the area will revert to natural systems.


Financiers and Insurance underwriters withdraw from suburb
Public and private capital investment ceases
Storm Tide 2100
2022 -
2040
2050
2060
2070
2100
Low density zone does not signal theneed for long term change
Planning strategic intent signals transition through Township Zone. This enables development intensity to be arrested, and lower standards of service as asset become compromised.
Risk increases over time to intolerable. No new development occurs and Limited development zone is applied. No assets are maintained. Retreat.
Open Space Zone

Appendix A3 - Table of Assessment

PART 5 - TABLE OF ASSESSMENT

Table 5.10.1 - Assessment benchmarks for overlays
Bushfire hazard overlay

Development[10]	Categories of development and assessment	Assessment benchmarks for assessable development and requirements for accepted developments
Bushfire hazard overlay Note - The Bushfire Prone Area includes the areas of Medium potential bushfire intensity; High potential bushfire intensity; Very high potential bushfire intensity; and the Potential impact buffer.		
Material change of use if:- a. within the Bushfire Prone Area as identified on a Bushfire hazard overlay map[1]; and b. for a: i. vulnerable use; or ii. essential community infrastructure. iii. critical community infrastructure	**No change** If a local utility for: a. the reticulation or conveyance of water; and b. ancillary maintenance and storage depots and other facilities for the operation of (a).	Not applicable
	Code assessment if the material change of use is accepted development or accepted subject to requirements in another table of assessment.	
	No change if not otherwise specified above.	Bushfire hazard overlay code
Material change of use if: a. within the Bushfire Prone Area as identified on a Bushfire hazard overlay map; and b. all other uses.	**No change** If not otherwise specified above.	Bushfire hazard overlay code
Building work not including minor building work associated with a material change of use if: c. within a Bushfire Prone area as identified on a Bushfire hazard overlay map; and d. involving a Dwelling house or Dual occupancy.	**Accepted development subject to requirements** if the building work is made accepted subject to requirements in another table of assessment.	Bushfire hazard overlay code
	Code assessment, if: a. the building work is made accepted development or accepted subject to requirements in another table of assessment; and	Bushfire hazard overlay code

[1] Editor's note – where the development is located entirely outside the curtilage of the bushfire prone area overlay, the levels of assessment do not apply.

Development[10]	Categories of development and assessment	Assessment benchmarks for assessable development and requirements for accepted developments
	b. not complying with the assessment benchmarks for accepted development subject to requirements of the Bushfire hazard overlay code.	

[10] Note - where development is not identified in this column of the table as being subject to a particular overlay, then that overlay is not applicable to the development.

Table 5.7.1 - Reconfiguring a lot

Use[0]	Categories of development and assessment	Assessment benchmarks for assessable development and requirements for accepted developments
All zones	**Code assessment** If not otherwise specified in this table as being subject to impact assessment	• Applicable local plan code • Applicable zone code • Reconfiguring a lot code • Transport and parking code
Emerging community zone	**Impact assessment** If creating one or more additional lots in the Emergency community zone, unless the subdivision is for the purposes of accommodating any of the following:- a. emergency services; b. water cycle management infrastructure; c. a telecommunications facility; or d. electricity infrastructure	The planning scheme
Limited development (constrained land) zone	**Impact assessment** If creating one or more additional lots in the Limited development (constrained land) zone, unless the subdivision is for	The planning scheme

Use[0]	Categories of development and assessment	Assessment benchmarks for assessable development and requirements for accepted developments
	the purposes of accommodating any of the following:- a. emergency services; b. water cycle management infrastructure; c. a telecommunications facility; or d. electricity infrastructure	
If in a Bushfire Prone Area in a Bushfire Resilient Precinct[1]	**Impact Assessment** If creating one or more additional lots with an area of less than 2ha, unless the subdivision is for the purposes of accommodating any of the following: - a. emergency services; or b. water cycle management infrastructure; or c. a telecommunications facility; or d. electricity infrastructure.	The planning scheme
Township zone	**Impact Assessment** If creating one or more additional lots with an area of less than 3,000sqm, unless the subdivision is for the purposes of accommodating any of the following: - a. emergency services; or b. water cycle management infrastructure; or c. a telecommunications facility; or d. electricity infrastructure.	The planning scheme

[1] The Bushfire Resilient Precincts are show in Figure X of 9.4.3 Reconfiguring a lot code.

Appendix A4 - Zone provisions

PART 6 - ZONES

Rural Residential Zone Code

(x) development does not increase the level of bushfire hazard exposure to people or property in mapped Bushfire Resilient Precincts

(x) development avoids the adverse impacts of natural hazards, including flood, bushfire, landslide, and coastal hazards, in a manner to protect people and property.

Township Zone Code

Note - ensure the identified Great Sandy Strait communities are included in the Township Zone, Coastal Township Zone Precinct. The recommended provisions of the proposed Township Zone (version provided 23.01.23), specifically the Coastal township zone precinct are supported. If provisions regarding minimum lot size are included, ensure they are not less than 3,000sqm.

Appendix A5 - Bushfire hazard overlay code

PART 8 - Overlays

8.2.5 Bushfire Hazard Overlay code

8.2.5.1 Application

This code applies to accepted development subject to requirements and assessable development: -

(1) within the bushfire prone area as identified on the bushfire hazard overlay maps within Schedule 2 (mapping), and which is comprised of:

a. very high potential bushfire intensity area
b. high potential bushfire intensity area
c. medium potential bushfire intensity area
d. potential impact buffer area; and

(2) where the Bushfire Hazard Overlay Code is identified in the 'Assessment benchmarks for assessable development and requirements for accepted development' column in Table 5.10.1 – Assessment benchmarks for overlays.

Notes:

1. *The bushfire hazard area defined by this planning scheme (very high, high and medium potential bushfire intensity area, and the potential impact buffer) by the Bushfire Hazard Overlay Map, is declared as designated bushfire hazard area pursuant to section 7 of the Building Regulation 2021. Building work in a designated bushfire prone area must meet the mandatory provisions in the Building Code of Australia and AS3959–2018: Construction of buildings in bushfire prone areas.*
2. *It is recognised there may be circumstances where flexibility in the application of the assessment benchmarks to development applications in mapped bushfire prone areas may be appropriate, for example where mapping does not reflect the most up to date situation(i.e. areas have been cleared as part of earlier approvals, unless the site remains within 100 metres of potential bushfire hazard).*

8.2.5.2 Purpose and overall outcomes

(1) The purpose of the Bushfire hazard overlay code is to ensure that the risk to life, property and the environment as a result of bushfire is either avoided in the first instance, or where risk cannot be avoided, is mitigated to an acceptable or tolerable level.

(2) The purpose of the code will be achieved through the following overall outcomes:

(a) development avoids intolerable risk as a result of bushfire;

(b) development is sited and located to minimise the exposure and vulnerability of people and property at risk from bushfires;

(c) development does not increase the level of bushfire hazard exposure to people or property in mapped bushfire resilient precincts;

(d) development avoids environmental impacts including the removal of existing vegetation exclusively for bushfire protection purposes, where within the Areas of Environmental significance overlay. development contributes to effective and efficient emergency response and recovery capabilities, ensuring that safe self-evacuation from bushfire events can be facilitated;

(e) rehabilitation, revegetation and landscaping does not increase the risk from bushfire to people or property;

(f) development does not, directly or cumulatively, cause or increase adverse impacts on other properties or land from bushfire;

(g) development only establishes or intensifies vulnerable uses, essential community infrastructure and critical community infrastructure within the bushfire prone area where no other option exists to provide the necessary level of service, there is no suitable alternative location and development can appropriately mitigate the risk from bushfire; and

(h) development avoids or mitigates the risk of bushfire to public safety and the environment from the manufacture and / or storage of hazardous materials in the medium, high and very high potential bushfire intensity area.

8.2.5.3 Assessment benchmarks

Table 8.2.5.3.1 – Assessment benchmarks for Accepted Development subject to requirements and Assessable development

Performance outcomes		Acceptable outcomes	
Siting and layout			
PO1	Site layout: (a) avoids areas of the highest potential bushfire intensity. (b) achieves an acceptable or tolerable risk to people and property. (c) provides adequate buffers between hazardous vegetation and development.	AO1.1	Development is in accordance with an approved Building lot envelope for bushfire management purposes and a bushfire management plan referenced within an approval for reconfiguring a lot. Note: where compliance with AO1.1 is achieved, no further assessment against this code is required for accepted development subject to requirements. OR
		AO1.2	Development: (a) is not located in the bushfire prone area as identified on the Bushfire hazard overlay map; Note - To achieve compliance with AO1.2(a), an applicant may seek to undertake a site-level verification of the location and nature of hazardous vegetation and resulting potential bushfire intensity levels, for example where changes in foliage have occurred (e.g. as a consequence of adjoining permanent

Performance outcomes		Acceptable outcomes	
			urban development) or where an applicant seeks to verify the regional ecosystem map inputs. This verification should form part of a bushfire hazard assessment in accordance with the methodology in the QFES Bushfire Resilient Communities document. The outcomes of this assessment can demonstrate the development is not located in a Bushfire Prone Area. OR (b) Where avoidance of bushfire prone areas is not possible, development is located in lowest potential bushfire area category on the site. Note - to achieve compliance with AO1.2(b), where a site contains medium potential bushfire intensity area and high intensity bushfire area, the development must located in the lowest category area, being the medium potential bushfire intensity area.
		AO1.3	Development, with the exception of vulnerable uses, essential community infrastructure and critical community infrastructure, is sited such that an asset protection zone provides a distance that achieves a radiant heat flux level of 29kW/m² or less between the outermost projection of the building and the bushfire hazard. The asset protection zone must be within the limits of the lot boundaries. Note: Refer to the Bushfire Planning Scheme Policy for details on how to calculate the radiant heat flux level. Note: Approval may be required under the Planning Regulation 2017 or other legislation, for the clearing of vegetation for the development and associated APZ.
Avoidance and minimisation of environmental impacts			
PO2	The siting, design and construction of development on a site larger than 1 hectare and located in the Significant waterways, Significant vegetation and Significant fauna habitat as shown on the Areas of environmental significance overlay:	AO2.1	Development on a site larger than 1 hectare locates an asset protection zone and driveways: • outside of the Significant waterways, Significant vegetation and Significant fauna habitat as shown on the Areas of

Performance outcomes		Acceptable outcomes	
	• provides effective separation from sources of bushfire risk; • maximises the protection of vegetation in areas of high biodiversity value. Note—A bushfire management plan prepared in accordance with the Bushfire planning scheme policy can assist in demonstrating compliance with this performance outcome.		environmental significance overlay; or • within areas that do not require vegetation clearing.
Access, evacuation routes and support for emergency services			
PO3	Development: (a) has access which, having regard to bushfire hazard, is safe for vehicles and emergency services; (b) establishes evacuation areas and procedures, to achieve an acceptable or tolerable risk to people; (c) does not worsen evacuation capability of other premises; and (d) does not result in significant additional burden on emergency services personnel.	AO3.1	Development is: (a) located within 60m of the road frontage, except where for Rural activities; and (b) provided with a minimum 4m wide access driveway to the road frontage with a gradient that does not exceed 12.5 per cent; and (c) allows a medium rigid vehicle (15 tonne fire appliance) safe and clear access including: (i) vertical clearance of 4.5m, including to powerlines; and (ii) horizontal clearance of 5m;
Water supply for fire-fighting purposes			
PO4	Development is: (a) located within a reticulated water supply area; or (b) where reticulated water supply is not available, includes a dedicated static water supply that is appropriately located and available solely for fire-fighting purposes and can be accessed by fire-fighting vehicles.	AO4.1	Development is provided with: (a) a reticulated water supply that complies with the standards specified in the Planning scheme policy for development works; or (b) a static water supply that: (i) is for the sole purpose of fire-fighting; and (ii) is not less than the volumes outlined in Table 8.2.5.3.3; and (iii) is below ground or made of / shielded by non-combustible materials; and (iv) includes a 50mm male camlock fitting that allows access by firefighters; and (v) allows a medium rigid vehicle (15 tonne fire

Performance outcomes		Acceptable outcomes	
			appliance) safe and clear access within 6m of the tank. Note: The requirement to provide static water supply in this AO is in addition to the requirements for potable water supply / storage in other parts of this Planning Scheme.

Table 8.2.5.3.2 – Assessment benchmarks for Assessable Development

Performance outcomes		Acceptable outcomes	
Material change of use			
Siting and layout			
PO1	Site layout: (a) avoids areas of the highest potential bushfire intensity. (b) achieves an acceptable or tolerable risk to people and property. (c) provides adequate buffers between hazardous vegetation and development. Note: The preparation of a bushfire management plan undertaken in accordance with the methodology in the QFES Bushfire Resilient Communities document and the Bushfire Planning Scheme Policy may assist in demonstrating compliance with this performance outcome. Note: An applicant may seek to undertake a site-level verification of the location and nature of hazardous vegetation and resulting potential bushfire intensity levels, for example where changes in foliage have occurred (e.g. as a consequence of adjoining permanent urban development) or where an applicant seeks to verify the regional ecosystem map inputs. This verification should form part of a bushfire hazard assessment in accordance with the methodology in the QFES Bushfire Resilient Communities document. The outcomes of this assessment can demonstrate how an alternate solution to the acceptable outcome can deliver an acceptable or tolerable level of risk.	AO1.2	Development siting and layout: (a) does not occur on ridgelines, saddles, crests and slopes exceeding 15 per cent; and (b) is not within the medium, high and very high potential bushfire intensity area. (c) incorporates fencing, including side returns, and retaining walls that are constructed of fire resistant materials.
PO2	Asset protection zones are designed and managed to ensure they do not increase the potential for bushfire hazard. Note - The preparation of a landscape management plan undertaken in accordance with the methodology in the	AO2.1	Landscaping treatments within any asset protection zone: (a) comprise only low threat vegetation with discontinuous fuel structure and maximum potential fuel load not

Performance outcomes		Acceptable outcomes	
	QFES Bushfire resilient communities document and Bushfire Planning Scheme Policy may assist in demonstrating compliance with this outcome.		exceeding 8 tonnes per hectare; and (b) does not create additional bushfire hazard. Note: The selection of low threat vegetation and landscaping within an asset protection zone should be informed by an experienced bushfire consultant, with guidance provided by Bushfire Planning Scheme Policy.
Access, evacuation routes and support for emergency services			
PO3	Development: (a) has access which, having regard to bushfire hazard, is safe for vehicles and emergency services; (b) establishes evacuation areas and procedures, to achieve an acceptable or tolerable risk to people; (c) does not worsen evacuation capability of other premises; and (d) does not result in significant additional burden on emergency services personnel. Note: Preparation of a bushfire management plan is to be undertaken in accordance with both the QFES Bushfire Resilient Communities document and Bushfire Planning Scheme Policy.	AO3.1	Development is: (a) located within 60m of the road frontage; and (b) provided with a minimum 4m wide access driveway to the road frontage with a gradient that does not exceed 12.5 per cent; and (i) allows a medium rigid vehicle (15 tonne fire appliance) safe and clear access including: (ii) vertical clearance of 4.5m, including to powerlines; and (c) horizontal clearance of 5m.
Water supply and utilities			
PO4	Development and service utilities enhances resilience to bushfire.	AO4.1	Development involving on-site gas supply or storage, regardless of use type or scale, provides safe storage. This includes avoiding the use of plastic gas fittings, locating gas storage on that side of the building furthest from potential bushfire hazard, or radiant heat shields constructed of non-flammable materials, where gas storage and supplies cannot be sited outside the bushfire prone area.
PO5	Development is: (a) located within a reticulated water supply area; or (b) where reticulated water supply is not available, includes a dedicated static water supply	AO5.1 AO5.2	The development is serviced by reticulated water supply of a pressure that satisfies utility provider requirements.

Performance outcomes		Acceptable outcomes	
	that is appropriately located and available solely for fire-fighting purposes and can be accessed by fire-fighting vehicles.		Where development is not provided with reticulated water supply that complies with AO5.1, it provides a static water supply (tank/s) that: (a) is for the sole purpose of firefighting; and (b) is not less than the volumes outlined in Table 8.2.5.3.3; and (c) is below ground or made of / shielded by non-combustible materials; and (d) includes a 50mm male camlock tank fitting that allows access by firefighters; and (e) allows a medium rigid vehicle (15 tonne fire appliance) safe and clear access within 6m of the tank.
PO6	Supporting infrastructure is resilient to bushfire through: (a) adequate separation from potentially hazardous vegetation; (b) siting to achieve an acceptable or tolerable risk from bushfire; (c) design to withstand damage from bushfire; and (d) the ability to function before, during and after an event.	AO6.1	Infrastructure such as water supply, electricity, gas, and telecommunications are located underground within the site with the exception of above ground components required for operation.
Vulnerable uses and community infrastructure			
PO7	Vulnerable uses are only established or intensified within a bushfire prone area if: (a) there is an overriding need in the public interest for the new or expanded service the development provides; and (b) no other options exist to provide the necessary level of service and there are no other suitable alternative locations within the required catchment; and (c) site planning can appropriately mitigate the risk such that exposure to a radiant heat flux level of less than 10kW/m² is achieved, measured at the outermost projection of the building or structure.	AO7.1	No acceptable outcome provided.

Performance outcomes		Acceptable outcomes	
	Note: The preparation of a bushfire management plan in accordance with the methodology in the QFES Bushfire Resilient Communities document and Bushfire Planning Scheme Policy may assist in demonstrating compliance with this performance outcome.		
PO8	Essential community infrastructure and Critical community infrastructure are only established within a bushfire prone area if: (a) there is an overriding need in the public interest for the new or expanded service the development provides; (b) no other options exist to provide the necessary level of service and there are no other suitable alternative locations; (c) the infrastructure can function effectively during and immediately after a bushfire event; and (d) site planning can appropriately mitigate the risk such that exposure to a radiant heat flux level of less than 10kW/m² is achieved, measured at the outermost projection of the building or structure, or alternative mitigation measures can reduce risk to a tolerable level. Note: The preparation of a bushfire management plan in accordance with the methodology in the QFES Bushfire Resilient Communities document and Bushfire Planning Scheme Policy may assist in demonstrating compliance with this performance outcome.	AO8.1	No acceptable outcome provided.
PO9	Development avoids or mitigates the risks to public safety and the environment from uses involving the manufacture or storage of Hazardous materials in the context of bushfire hazard or combustible materials to an acceptable or tolerable bushfire risk level. Note: The preparation of a bushfire management plan in accordance with the methodology in the QFES Bushfire Resilient Communities document and Bushfire Planning Scheme Policy may assist in demonstrating compliance with this performance outcome.	AO9.1	No acceptable outcome provided.

Performance outcomes		Acceptable outcomes	
	Editor's note: In addition to the requirements of this code the Work Health and Safety Act 2011 and associated Regulation and Guidelines, the Environmental Protection Act 1994 and the relevant building assessment provisions under the Building Act 1975 contain requirements for the manufacture and storage of hazardous substances. Information is provided by Business Queensland on the requirements for storing and transporting hazardous chemicals, available at: www.business.qld.gov.au/runningbusiness/protecting-business/risk-management/hazardouschemicals/storing-transporting.		
Environmental matters and where planning provisions or conditions of approval require revegetation or rehabilitation			
PO10	Revegetation or ecological restoration areas are designed and managed to ensure they do not result in an unacceptable level of risk or an increase in bushfire intensity level. Note: The undertaking of a bushfire hazard assessment in accordance with the methodology in the QFES Bushfire Resilient Communities document may assist in demonstrating compliance with this outcome.	AO10.1	Required revegetation or rehabilitation is: (a) located outside of any asset protection zone; and (b) does not increase the potential radiant heat exposure to existing surrounding development. Note: The preparation of a landscape management plan undertaken in accordance with the methodology in the QFES Bushfire Resilient Communities document may assist in demonstrating compliance with measure (b).
Reconfiguring a lot			
General requirements			
P11	Development: (a) enables future buildings to be located away from slopes, ridgelines, crests and saddles, or other land forms that expose people or property to an intolerable risk to life or property; (b) provides adequate separation from potentially hazardous vegetation; (c) is designed to allow safe self-evacuation of the site by future occupants and users; and (d) facilitates emergency access and operational space for emergency services under critical event conditions. Note: An applicant may seek to undertake a site-level verification of the location and	A11.1 A11.2	Reconfigured lots: (a) does not occur on ridgelines, saddles and crests or where slopes exceed 15 per cent; and (b) does not involve rear (hatchet) lots. Allotments or building envelopes are separated from bushfire hazard via an asset protection zone by a distance that achieves a radiant heat flux level of 29 kW/m² or less: (a) at all building envelope plan boundaries for allotments greater than 2,000m²; or (b) at all allotment boundaries for allotments of 2,000m² or less.

Performance outcomes		Acceptable outcomes	
	nature of hazardous vegetation and resulting potential bushfire intensity levels, for example where changes in foliage have occurred (e.g. as a consequence of adjoining permanent urban development) or where an applicant seeks to verify the regional ecosystem map inputs. This verification should form part of a bushfire hazard assessment in accordance with the methodology in the QFES Bushfire Resilient Communities document and the Bushfire Planning Scheme Policy. The outcomes of this assessment can demonstrate how an alternate solution to the acceptable outcome can deliver an acceptable or tolerable level of risk.		Note: A bushfire hazard assessment and bushfire management plan prepared in accordance with the QFES Bushfire Resilient Communities document and Bushfire Planning Scheme Policy can demonstrate compliance with A10.2. Note: For staged developments, temporary separation areas may be absorbed as part of subsequent stages. Note: Existing cleared areas external to the site may only be used in calculating necessary separation where tenure ensures that the land will remain cleared of hazardous vegetation (for example the land is a road, watercourse or highly managed park in public ownership).
Access, evacuation routes and support for emergency services			
PO12	The reconfigured lot layout is designed to minimise the length of the development perimeter and number of lots exposed to hazardous vegetation. Note: For example, avoid finger-like subdivision patterns or substantive vegetated corridors between lots.	AO12.1	No acceptable outcome provided.
PO13	The reconfigured lot layout provides for adequate access and egress and safe evacuation routes, to achieve an acceptable or tolerable risk to people.	AO13.1	The reconfigured lot layout: (a) does not result in the potential for bottle-neck points in the movement network within the development (for example, avoids hourglass patterns that are constrained by pinch points in the road network); (b) ensures the road network has sufficient capacity for the evacuating population; and (c) does not result in cul-de-sacs and no-through roads.
		AO13.2	The reconfigured lot layout ensures evacuation routes direct persons away from rather than towards or through areas with a greater potential bushfire intensity.

Performance outcomes		Acceptable outcomes	
PO14	Development provides public roads that: (a) are accessible for fire-fighting vehicles and provide operational space for firefighting, maintenance works and hazard reduction activities; (b) facilitate emergency access; (c) provide access and connections to reticulated water supply (where available) and fire hydrants; and (d) separates created lots from bushfire prone areas and limit the number of properties adjoining bushfire prone areas.	AO14.1	A perimeter road is provided that separates development from hazardous vegetation that: (a) has a two-lane carriageway within a road reserve with a minimum width of 20m; and (b) forms connections with the broader road network with intervals of no more than 250m; and (c) enables access to reticulated water supply for firefighting by locating hydrants outside of parking areas; and (d) does not include design elements that may impede access for firefighting and maintenance for firefighting purposes (for example traffic calming involving chicanes); and (e) provides appropriate access for fire-fighting vehicles; and (f) has a maximum gradient of 12.5 per cent. Note - perimeter roads are permitted to form part of the asset protection zone. Refer to Bushfire Planning Scheme Policy (item 24) for further details.
Water supply and utilities			
PO15	In areas where an adequate reticulated water supply is not provided, the reconfigured lot layout: (a) provides lots of a size and dimension capable of accommodating a static water supply on site; and (b) provides for access and working areas that are accessible by the type of fire-fighting vehicles servicing the area to facilitate emergency access and operational space for firefighting, maintenance works and hazard reduction activities.	AO15.1	Where the reconfigured lot layout is not serviced by an adequate reticulated water supply it provides: (a) a fire trail or working area (which may form part of an asset protection zone) designed and constructed in accordance with the design parameters in Bushfire Planning Scheme Policy that separates the residential lot or building envelope plan from adjacent bushfire hazard; or (b) a perimeter road designed and constructed in accordance with AO15.1; and (c) provides space for a static water supply on each lot and safe and clear access for a medium rigid vehicle (15

Performance outcomes		Acceptable outcomes	
			tonne fire appliance) to manoeuvre.
PO16	Supporting infrastructure is resilient to bushfire through: (a) adequate separation from potentially hazardous vegetation; (b) siting to achieve an acceptable or tolerable risk from bushfire; (c) design to withstand damage from bushfire; and (d) the ability to function before, during and after an event.	AO16.1	Infrastructure such as water supply, electricity, gas, and telecommunications are located underground within the site with the exception of above ground components required for operation.
Bushfire resilient precincts			
PO17	Development does not increase the number of people living in a Bushfire Resilience Precinct.	AO17.1	Development must achieve the minimum lot size for the Bushfire Resilient Precincts as set out in Table 9.4.3.3.2 of the Reconfiguring a Lot Code.

Table 8.2.5.4 – Bushfire hazard overlay: Static water supply requirements

Lot size / use type	Static water supply requirement for exclusive firefighting purposes
Multiple dwellings	Reticulated water supply is required.
Multiple dwellings, where on Fraser Island	25,000 litres per building,
Short term accommodation	Only for **Communal facilities (such as shared amenities)** as per AS2304 – Water storage tanks for fire protection systems.
Dwelling houses and Dual occupancy	20,000 litres per building,
Industrial and commercial	As per AS2304 – Water storage tanks for fire protection systems.

Note - It is recommended that additional static water supply exclusively for firefighting purposes is provided for other buildings and structures such outbuildings.

Appendix A6 - Reconfiguring a lot code

PART 9 - DEVELOPMENT CODES

9.4.3 Reconfiguring a lot code

…

(2) The overall outcomes sought for the Reconfiguring a lot code are the following:-

…

(x) Where within a bushfire prone area, safe and adequate evacuation routes are provided.

(x) Development does not increase the level of bushfire hazard exposure to people or property in mapped Bushfire Resilient Precincts.

Performance outcomes		Acceptable outcomes	
Where in Bushfire Prone Areas			
POX	The reconfigured lot layout in Bushfire Prone Areas provides for adequate access and egress and safe evacuation routes, to achieve an acceptable or tolerable risk to people.	**AOX.X**	Reconfiguration for residential purpose provides adequate access and egress options and avoids a single point of access and egress for larger scale developments. This is achieved through the provision of sufficient exit points to the connecting road network, relative to the number of allotments proposed, in accordance with **Table 9.4.3.X.**
Where in a Bushfire Resilient Precinct			
POX	Development does not increase the number of people living in a Bushfire Resilient Precinct.	**AOX.X**	Where within a Bushfire Resilient Precinct identified in **Figure 9.4.3.3.2**, development must achieve the minimum lot size for the Bushfire Resilient Precincts as set out in Table 9.4.3.3.2.

Table 9.4.3.3.2 - Minimum lot size and dimensions

Column 1 Zone	Column 2 Minimum lot size (excluding access strip in rear hatchet lots).	Column 3 Minimum frontage (metres)	Column 4 Maximum depth to frontage ratio
Rural Residential zone	2ha unless otherwise specified	60	4:1
	4,000m^2 if located in Precinct RR1	25	3:5:1

Column 1 Zone	Column 2 Minimum lot size (excluding access strip in rear hatchet lots).	Column 3 Minimum frontage (metres)	Column 4 Maximum depth to frontage ratio
	1ha if located in Precinct RR2	40	3:5:1
	2ha if in a Bushfire Resilient Precinct	60	4:1
Township Zone	…	…	…
	3,000sqm	25	3:5:1

Table 9.4.3.X – Minimum road network connections

Number of residential lots	Minimum number of exiting roads from development to connecting road network
1 – 50	1
51 – 300	2
301 – 600	3
601+	4

Figure 9.4.3.X: Bauple Estate Bushfire Resilient Precinct

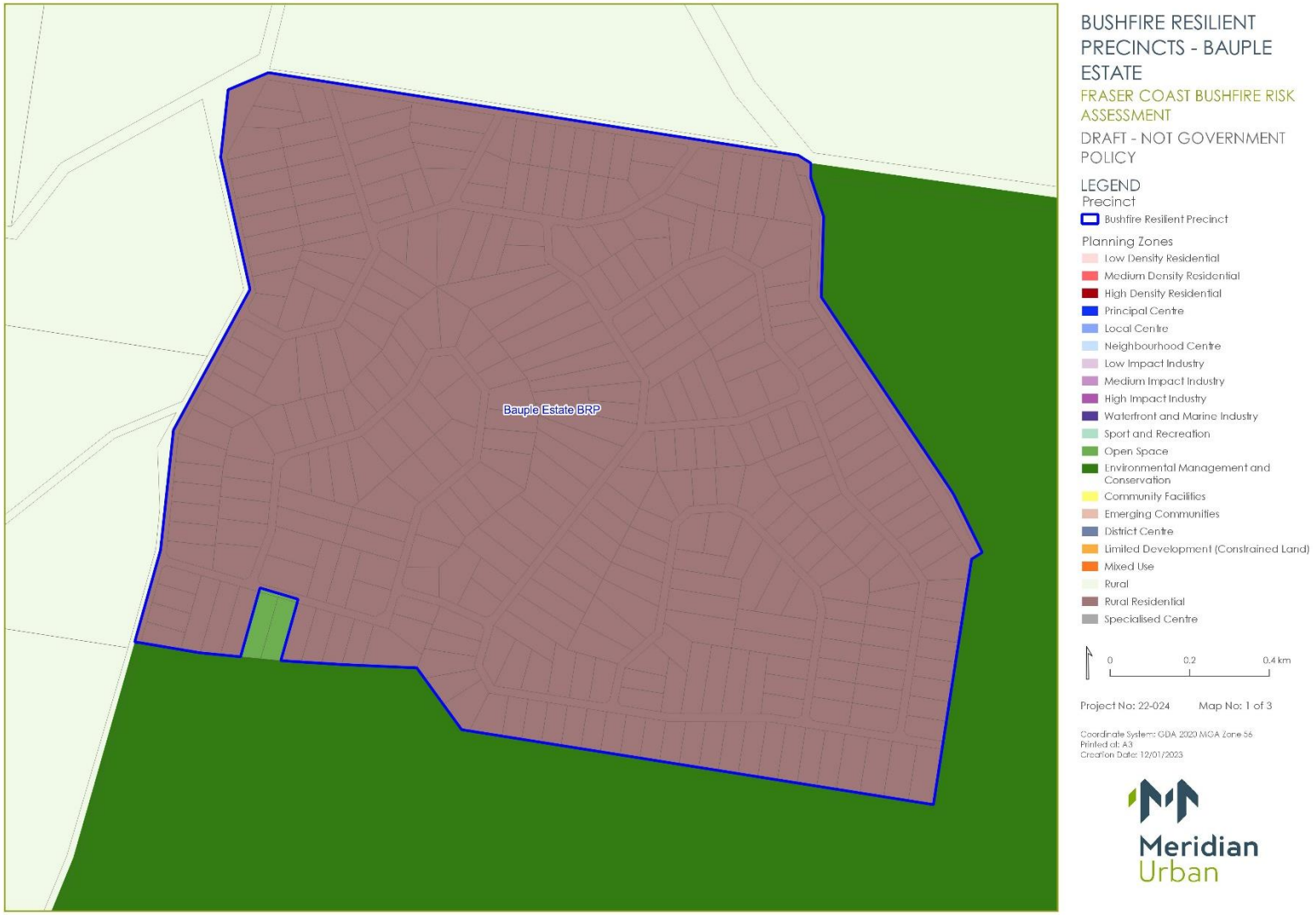


Figure 9.4.3.X: Glenwood Bushfire Resilient Precinct

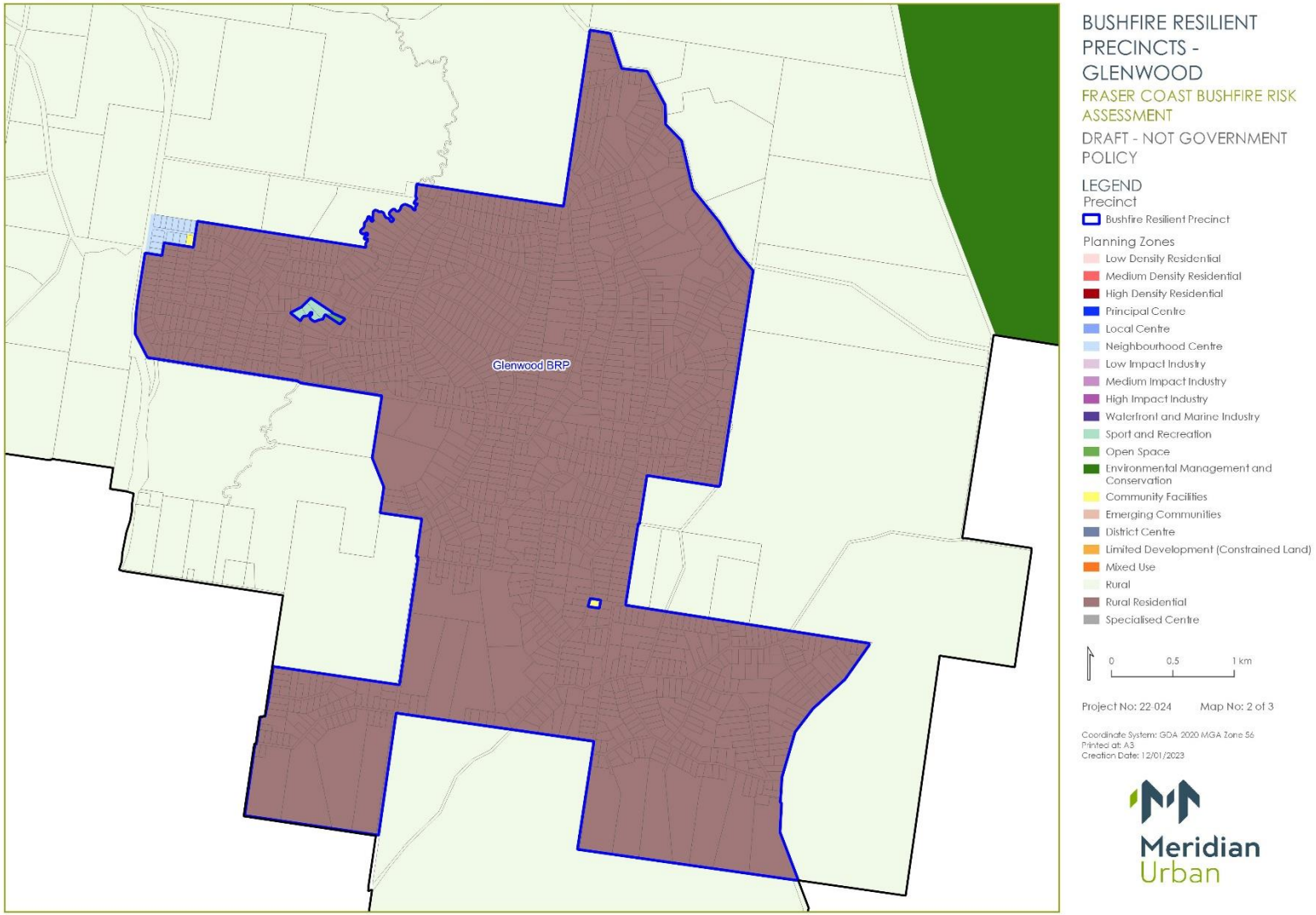
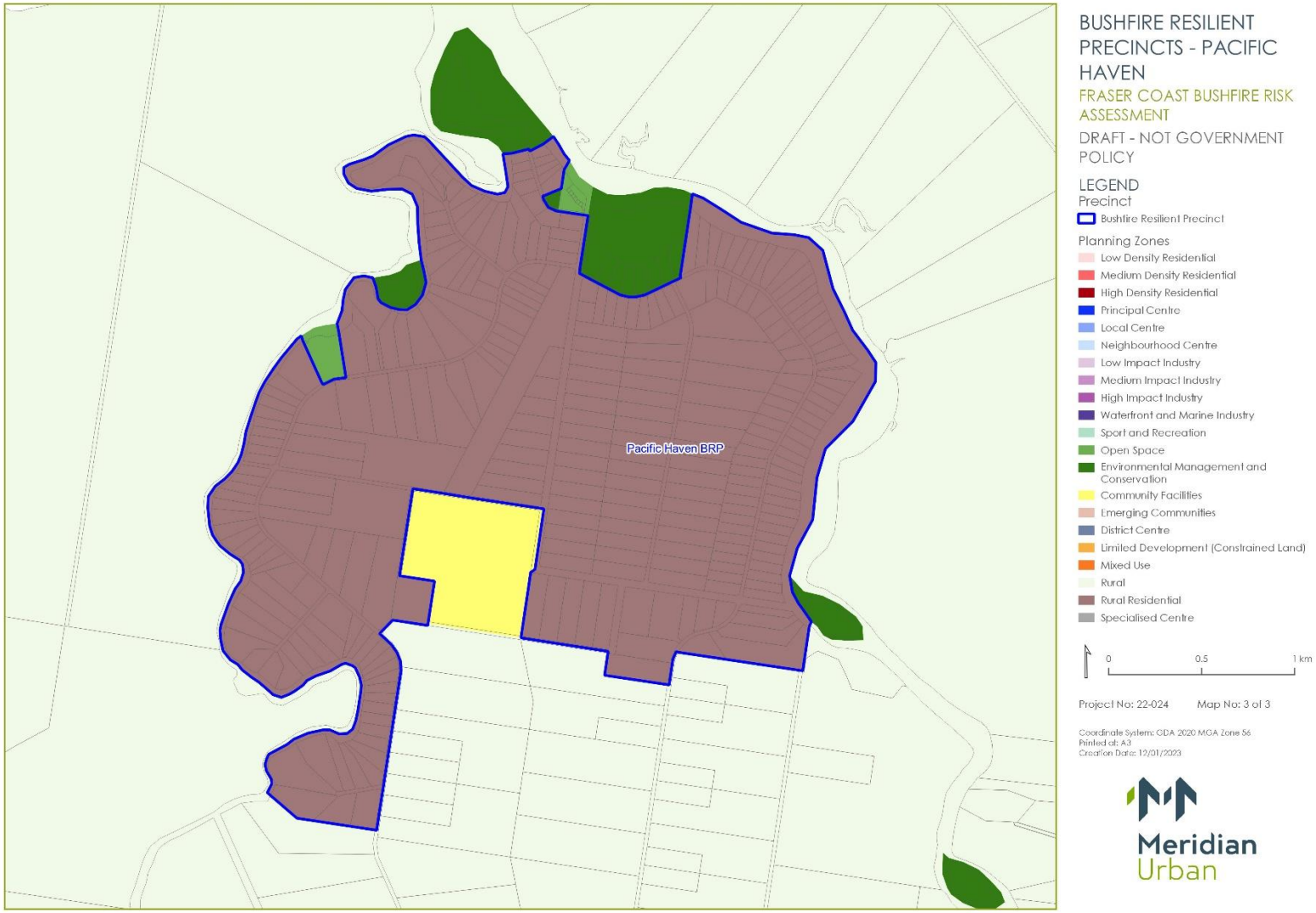


Figure 9.4.3.X: Pacific Haven Bushfire Resilient Precinct



Appendix A7 - Definitions

SCHEDULE 1 - DEFINITIONS

SC1.2 - Defined activity groups

Term	Definition
Vulnerable uses	i. Childcare centre ii. Community care centre iii. Detention facility iv. Educational establishment v. Hospital vi. Rooming accommodation vii. Residential care facility viii. Retirement facility
Essential community infrastructure	ix. Emergency services x. Hospital xi. Community use
Critical community infrastructure	i. Renewable energy facility ii. Substation iii. Utility installation iv. Telecommunications facility v. Major electricity infrastructure.

SC1.4 - Administrative terms and definitions

Risk Terms and definitions:

Term	Definition
Risk	The level of risk associated with a hazard is commonly measured in terms of consequences and likelihood.
Acceptable Risk	A risk that is sufficiently low as to require no new treatments or actions to reduce the risk as communities can live with this level of risk without further action.
Tolerable Risk	A tolerable risk is a risk that is low enough as to allow the exposure to a natural hazard to continue while at the same time high enough to require new treatments or actions to reduce risk. Communities can live with this level of risk but as much as is reasonably practical should be done to further reduce the risk and may include planning responses for: • reducing the likelihood of the risk (avoidance) • reducing the consequences of the risk (mitigation and hazard management over time).
Intolerable Risk	An intolerable risk is a risk that, following an understanding of the likelihood and consequences, is so high that it requires actions to avoid or reduce the risk. Individuals and society will not accept this risk and measures are to be put in place to reduce the risk to at least a tolerable level.

Other terms and definitions:

Term	Definition
Asset protection zone	An asset protection zone is a specified area of land that enables emergency access and operational space for fire-fighting. Within the asset protection zone vegetation is modified and maintained to reduce fuel load and mechanisms of bushfire attack such as flame and radiant heat. The zone may include a combination of elements such as perimeter road, fire trail and working area and open space where vegetation is managed. Note – The asset protection zone need not be maintained 'fuel free' – sensible landscape design can ensure a balance between landscape

Term	Definition
	design outcomes and minimising the vulnerability to bushfire attack. Refer to the QFES Bushfire resilient communities document for guidance on landscape design and vegetation management. Note – The 'asset protection zone' considered as part of a planning development application is different from the siting of a building as part of designing and constructing the building to reduce the risk of ignition from a bushfire, appropriate to the intensity of the bushfire attack on the building and the associated requirements prescribed in AS 3959–2018 Construction of buildings in bushfire prone areas as part of a building development application.
Building envelope	A building envelope is a three-dimensional extent of where a building or associated structure may be built on a site after consideration of appropriate height and setback provisions.
Exposure	Exposure refers to the elements within a given area that have been, or could be, subject to the impact of a particular hazard. Exposure is also sometimes referred to as the 'elements at risk' and could include the number and characteristics of the values or assets exposed, where the values or assets could be tangible or intangible aspects of environmental, social, cultural, economic, or political/reputational dimensions.
Hazard	In the context of bushfires, hazards include: smoke, radiation, hot gases, airborne particles, burning embers, fire-induced winds and flames.
Hazard and risk	The difference between hazard and risk is: • A hazard is a process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation • The concept of risk combines an understanding of the likelihood of a hazardous event occurring with an assessment of its impact represented by interactions between hazards, elements at risk and vulnerability.
Hazardous materials in the context of bushfire hazard	Hazardous chemicals that are present at the levels or in the quantities that would constitute the use being a hazardous chemical facility. Hazardous materials that are present in the quantities identified in the Work Health and Safety Regulation, Schedule 15..
Vulnerability	Vulnerabilities are the characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard. Land use planning measures for new development can reduce community susceptibility by ensuring that premises, infrastructure and services are located to ensure high levels of physical and social resilience during and after a significant hazard event.

Appendix A8 - Bushfire Planning Scheme Policy

SCHEDULE 6 - PLANNING SCHEME POLICIES

SC6-X Bushfire Planning Scheme Policy

6.1 Objectives

1. The policy intent is for development to achieve an acceptable or tolerable risk to people and property from bushfire. Where development occurs in bushfire hazard areas, the policy provides guidance for the protection of life and property, as well as avoiding adverse impacts on environmental values.

6.2 Purpose

2. The purpose of the bushfire planning scheme policy is to —

    a. provide guidance for the preparation of bushfire hazard assessments in accordance with the Bushfire Hazard Overlay Code;

    b. identify information required for a development application in a bushfire prone area; and

    c. provide guidance about satisfying assessment criteria in the planning scheme relative to specific mitigation measures.

6.3 Application

3. This policy is to be read in conjunction with the Bushfire Hazard Overlay Code and applies to development that requires the preparation of a bushfire hazard assessment and/or bushfire management plan to demonstrate compliance with the acceptable outcomes of the Bushfire Hazard Overlay Code.

4. The relevant legislation, planning instruments and supporting reference material to this Planning Scheme Policy include:

    a. Queensland legislation and planning instruments:

        i. Planning Act 2016
        ii. State Planning Policy – planning for safety and resilience to hazards state interest
        iii. Natural hazards, risk and resilience – Bushfire: State Planning Policy – state interest guidance material
        iv. Bushfire Resilient Communities Technical Reference Guide for the State Planning Policy State Interest 'Natural hazards, risk and resilience – bushfire'

    b. Other relevant technical reference materials:

        i. AS3959 – Construction of Buildings in Bushfire Prone Areas, prepared by Standards Australia
        ii. NASH Standard – Steel Framed Construction in Bushfire Areas
        iii. Land Use Planning for Disaster Resilient Communities Handbook, prepared by the Australian Institute for Disaster Resilience
        iv. A new methodology for State-wide mapping of bushfire prone areas in Queensland, prepared by CSIRO
        v. Estimating the potential bushfire hazard of vegetation patches and corridors, prepared by CSIRO

vi. State-wide interactive mapping system (IMS) and site-wide bushfire prone areas mapping, prepared by Queensland Fire and Emergency Services
vii. QSpatial - Queensland Government data portal, hosted by the Queensland Government
v. Overall Fuel Hazard Assessment Guide - Fire and adaptive management (4th edition, July 2010

6.4 Contents of bushfire hazard assessments and management plans

5. The evidence provided as part of the bushfire hazard assessment or management plan must:

a. be prepared following the methodologies of the Bushfire Resilient Communities technical reference guide and this policy;

b. categorise the bushfire hazard level as low, moderate, high, or very high using an approach which considers the mature vegetation classification, and must account for revegetation proposed that may ultimately constitute bushfire hazard. This includes any ecological rehabilitation / restoration work on and adjoining the site, including:

i. riparian corridors;

ii. areas within a development that will be retained or restored as natural areas; and

iii. natural regeneration within existing reserves and natural areas.

c. Overall fuel hazard assessments must have regard to mature Regional Ecosystems. This may vary to vegetation structures in situ at present particularly in regrowth areas;

d. provide photographic evidence in addition to aerial imagery and/or vegetation mapping data to verify vegetation classifications and site context generally;

e. adopt fire weather severity in accordance with that informing the State-wide Bushfire Prone Areas mapping;

f. define all slopes (including effective slope and site slope) within the assessment area with land contour information;

g. identify areas and extents of classified vegetation and excluded vegetation (if any);

h. identify areas where vegetation is proposed to be cleared or revegetated (if applicable);

i. provide photo points to show where images of vegetation have been taken; and

j. provide any other features of the subject site and assessment area that are relevant bushfire considerations.

6.5 Qualifications and experience

6. Bushfire management plans submitted to Council as part of a development application must be prepared by a suitably qualified and experienced professional. For the purposes of this document, a suitably qualified and experienced professional is as per

the definition in Part 10 of the Bushfire Resilient Communities – Technical reference guide.

6.6 Bushfire protection measures

6.6.1 Evacuation

7. The Bushfire Hazard Overlay Code requires that in order to achieve an acceptable or tolerable risk to people, development:

    a. enables access and safe evacuation;

    b. establishes evacuation areas, arrangements and procedures; and

    c. does not worsen evacuation capability of other premises; or

    d. result in significant additional burden on emergency services personnel.

8. Land uses should be compatible within bushfire prone areas where evacuation can be achieved through road network design and enabling persons to evacuate a site or area, without the need to traverse through bushfire hazard areas.

9. Multiple egress opportunities are provided or identified to avoid one-way-in and one-way-out situations. Evacuation routes should be identified by a bushfire management plan and in accordance with the number of access and egress options as per the Reconfiguration of a Lot Code and as set out below.

Table 9.4.3.X – Minimum road network connections

Number of residential lots	Minimum number of exiting roads from development to connecting road network
1 – 50	1
51 – 300	2
301 – 600	3
601+	4

10. Outdoor emergency assembly areas identified for developments are not likely to be safe in bushfire emergencies. Alternative emergency provisions and evacuation plans are likely required.

11. Where development involves land uses that involve residents, occupants, visitors and animals which may require fit-for-purpose evacuation considerations, the following are considered:

    a. site-based evacuation and ability of the wider road network to support evacuation of the use;

    b. avoiding evacuation through bushfire hazard areas to reach safety;

    c. access to vehicles to evacuate;

    d. any safe assembly places on site;

    e. any specific requirements of occupants or visitors (i.e. the aged, ill, young children and persons with disability), and associated procedures, noting reliance on emergency services is not desirable. It is for this reason that vulnerable uses should be avoided in bushfire prone areas;

    f. evacuation of animals (i.e. animal keeping uses, equine-related facilities);

g. the potential need for staged evacuation in certain instances; and

h. the need for specific operating provisions to limit or avoid operation or activity on days of higher fire danger conditions.

12. Linkages to the road network are subject to design requirements and standards as specified by Council. Exits may be provided in the form of a temporary access arrangements (e.g. as an interim measure for staged development) or emergency access points where it can be demonstrated they provide a safe evacuation route and facilitate emergency access and does not worsen the evacuation capability of other premises.

6.6.2 Perimeter roads, fire trails and access

13. The provision of perimeter roads are required for reconfiguration of allotments as a critical element of bushfire hazard mitigation by providing:

a. passive surveillance of bushland areas;

b. a guaranteed separation of land use between development and hazardous vegetation;

c. direct access to the hazard interface for firefighting and land management (fuel load reduction) activities;

d. the ability for firefighters to fallback from the area to safety, using the formal road network; and

e. the ability for persons to evacuate the area using the formal road network.

14. Fire trails are not provided in lieu of perimeter roads for reconfiguration of a lot.

15. At the interface with the bushfire hazard area, the design of the perimeter road reserve should:

a. be a minimum of 20 metres in width clear of hazardous vegetation[1] (excluding street trees); and

b. provide a two-lane sealed carriageway; and

c. be connected to the wider public road network at both ends and at intervals of no more than 250 metres; and

d. does not include design elements that may impede access for firefighting and maintenance for firefighting purposes (for example traffic calming involving chicanes); and

e. enables access to reticulated water supply (hydrants) for firefighting; and

f. has a maximum gradient of 12.5 per cent.

16. Where fire trails are required to support or facilitate access to hazardous vegetation to enable land management activities and access in case of emergency, the fire trail network is designed in accordance with the following design provisions set out at **Table**

[1] Hazardous vegetation is defined as vegetation that contributes to fine fuels and results in bushfire hazard when burnt. Areas that are mapped as either very high, high or medium potential bushfire intensity include potentially hazardous vegetation that could support a significant bushfire. This vegetation is classified and mapped as having a vegetation hazard class (Bushfire Resilient Communities (Section 12. Glossary).

1. These provisions also apply to on-site working areas required where access to reticulated water supply is not available.

Table 1: Fire trail and working area design requirements

Parameter	Provisions
Width	Contains a width of at least 20 metres including: 1. A trafficable area (cleared and formed): a) with a minimum trafficable width of 4 metres that can accommodate a rural firefighting vehicle b) with no less than 4.8 metres vertical clearance from canopy vegetation c) with no adjacent inhibiting embankments or retaining walls d) appropriately drained and constructed to avoid erosion 2. A working area each side of the trafficable area: a) with a minimum width of 3 metres each side b) cleared of all flammable vegetation greater than 10 centimetres in height 3. The balance (i.e. 10 metre width) managed vegetation area: a) sited to separate the trafficable area from adjacent mapped medium, high or very high bushfire hazard areas managed vegetation b) comprising managed vegetation clear of major surface hazards.
Access	Access is granted in favour of the local government and Queensland Fire and Emergency Services. Note – This access is commonly granted in the form of an easement that is to be maintained by the grantor.
Egress	Contains trafficable vehicle routes into low hazard areas, with passing bays measuring 20m in length every 250 metres. Vehicles must be able to access and egress the trail network in a forward gear, either by way of vehicle turnaround with a minimum inner radius of 6 metres, or connections back to the formal road network every 250 metres.

17. Multiple egress opportunities are provided or identified to avoid one-way-in and one-way-out situations. Evacuation routes should be identified by a bushfire management plan.

18. Adequate internal access is achieved by reconfiguration design. Internal or site-based roads and road network shall incorporate the following features:

    a. width, vertical clearances and gradient which allow the two-way movement of firefighting appliances;

    b. construction standards of roads and any bridges which allow for the carrying of fully loaded fire appliances (28 tonnes or 8 tonnes per axle);

c. curves which have a minimum inner radius of 12 metres and are minimal in number;

d. maximum grades which do not exceed 12.5 per cent (1:8) and preferably not more than 10 per cent (1:10);

e. the exclusion of cul-de-sacs, except where the cul-de-sac is provided with an alternative access linking the cul-de-sac to other through roads and length of the cul-de-sac is limited to 250m;

f. the head of any cul-de-sac incorporates a minimum turning circle of 12.5 metres diameter; and

g. a road network which connects regularly (i.e. every 250m) to any access tracks and trails.

6.6.3 Asset protection zones

19. Vegetation clearing for the express purpose of establishing an APZ is to be avoided where possible. Development should be sited to avoid or minimise the need for vegetation clearing to achieve the required APZ.

20. The provision of Asset Protection Zones (APZs) shall be integrated as part of subdivision and material change of use siting and layout, preferably located on private land. The Bushfire Resilient Communities – Technical reference guide defines APZs as:

> '*a specified area of land that enables emergency access and operational space for firefighting. Vegetation is modified and maintained within the APZ to reduce fuel load and mechanisms of bushfire attack such as flame contact and radiant heat. The zone may include a combination of elements such as perimeter road, fire trail and working area and open space where vegetation is managed*'.

21. Development, including development setbacks is required to provide adequate separation from hazardous vegetation by way of an APZ.

22. Building envelopes can be used as part of a reconfiguring a lot application to demonstrate an appropriate setback and Asset Protection Zone.

23. For asset protection zones:

a. The APZ is measured from the canopy line of adjacent hazardous vegetation to the outermost projection of the proposed development or buildings.

b. For reconfiguration of allotments the APZ is measured from the canopy line of adjacent hazardous vegetation to the boundary of the proposed building envelope.

c. Where no building envelope is proposed, the APZ is measured to the proposed allotment boundary.

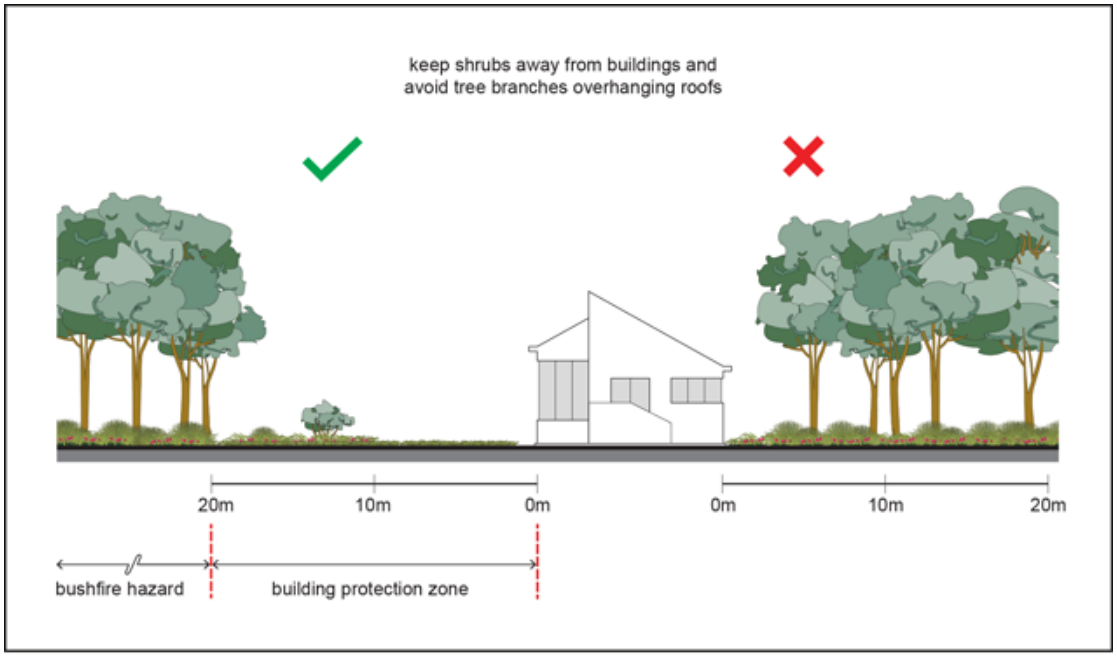


Figure b—Building protection zones

24. APZs should be contained within the bounds of the development site and cannot require fuel management on adjoining private land which does not form part of the development application.

25. Perimeter roads, internal development roads and overlapping APZs from adjoining development may contribute to the APZ. However, APZs are to avoid burdening public land, particularly public land managed for environmental purposes. Public open space that is managed for environmental purposes is shown on the Areas of Environmental Significance Overlay map x as 'protected areas' and includes both State and Council managed reserves.

26. Council may consider alternative options for APZs on lands to be dedicated to Council or on public lands, where it can be demonstrated that public benefit is provided

27. APZ maintenance provisions should be provided as part of a bushfire management plan prepared in support of a development application. These provisions should consider:

    a. The type of separation provided, by roads, driveways, carparks, sports courts, swimming pools, dams, mown lawns or bare earth around sheds in rural areas.

    b. A landscaping rationale which maintains vegetation in a 'low fuel condition'. This includes mown lawn which is kept to a height of no more than 100 millimetres. A maximum of 8 tonnes per hectare of total fuel is commonly adopted for low fuel areas as per Bushfire Resilient Communities - Technical reference guide.

    c. Ensure gardens, shrubs and trees are not located adjacent to any building windows, doors or decks.

    d. Adopting a planting rationale including species which align with the low flammability species (low threat vegetation) characteristics outlined by the *Bushfire Resilient Communities – Technical reference guide*. A list of low flammability species is contained in *Bushfire Resilient Building Guidance for Queensland Homes* prepared by the Queensland Government.

28. A maximum radiant heat flux of 29 kW/m2 must be achieved by the APZ, unless the use is a vulnerable use, community infrastructure for essential services or a use involving hazardous materials (which require a maximum radiant heat flux of 10 kW/m2). In an asset protection zone, existing trees can be retained and new trees planted where the canopy at maturity is more than 1m away from the canopy of an adjoining tree.

29. The calculation of radiant heat profiles must be undertaken by a suitably qualified and experienced professional as described in Section 6.4. Relevant calculations are to be provided to Council as part of any bushfire hazard assessment or bushfire management plan.

6.6.3.1 Interim APZs for staged development

30. For developments which are intended to be completed over a series of two or more stages, staged (interim) approaches to bushfire protection must be considered. This may be in the form of temporary APZs around the perimeter of each development stage. This approach may continue to require assessment against and compliance with AS3959 for relevant development, unless the temporary APZ can achieve 100 metres in width, providing sufficient separation between the development stage and hazardous vegetation. Where a temporary APZ is less than 100 metres in width, assessment against and compliance with AS3959 for relevant development will continue to be required.

6.6.4 Vulnerable uses, essential community infrastructure and critical community infrastructure.

31. Vulnerable uses are defined in the SC1.2 Administrative Definitions of the Planning Scheme. These uses are considered vulnerable as they involve complications for evacuation or contain vulnerable persons.

32. Vulnerable uses are not to be established or intensified in a bushfire prone area unless there is an overriding need in the public interest for the new or expanded service and there is not other suitable alternative location and a maximum radiant heat flux of 10kW/m² can be achieved.

33. Essential community infrastructure and critical community infrastructure must remain functional during and immediately after disaster events.

34. Essential community infrastructure and critical community infrastructure is avoided in bushfire prone areas unless there is an overriding need in the public interest.

6.6.5 Landscaping

35. Unless otherwise required, on-site landscaping should be designed, implemented and maintained in a manner which reduces the opportunity for fire propagation across the site, beyond the bushfire hazard area.

36. This can be achieved by compliance with the landscaping design parameters set out at Part 8 of the Bushfire Resilient Communities - Technical reference guide. The concept of 'discontinuous fuel structures' means designing landscaping and landscaped areas to avoid or reduce vertical and horizontal fuel connectivity, across the site as well as within APZs. This can be achieved, for example, by separating garden areas from each other by mown lawns, pathways and driveways, as well as separating plant species which provide ground, mid-layer and canopy fuel continuity. Ensuring dense groundcovers and shrubs are not within the drip line of tree canopies is key.

Note: discontinuous fuel (such as grassland under 10 centimetres or low-hazard areas such as densely built-up areas or water). The following guide can be used to inform fuel load - overall-fuel-hazard-assessment-guide-4th-ed-2010.pdf (aidr.org.au).

37. Selection of plant species should focus on the use of low-flammability species or 'low threat vegetation'. Specimens which minimise leaf and bark litter are a good option.

38. Within APZs as well as the broader development site, landscaping should be maintained in a 'low fuel condition'. This includes mown lawn which is kept to a height of no more than 100 millimetres. A maximum of 8 tonnes per hectare of total fuel is commonly adopted for low fuel areas. Other non-residential examples of 'low fuel' vegetation can include the fairways of gold courses, mangrove and saline wetlands, public parks which are maintained, sporting fields, vineyards, orchards, nurseries, cultivated gardens and nature strips. A full definition of 'low threat' vegetation can be found at Section 2.2.3.2 of AS3959.

39. The above is a summary of concepts related to site landscaping but does not represent a comprehensive set of requirements. Further detail on on-site landscaping can be obtained from Part 8 of the Bushfire Resilient Communities - Technical reference guide. A landscape concept plan should be provided which articulates the intended construction, plant selection and maintenance of any APZ and the broader site area.

6.6.6 Revegetation and rehabilitation

40. Development that requires revegetation or rehabilitation:

    a. considers existing development in the surrounding area; and

    b. is located outside of any asset protection zone; or

    c. maintains a potential available fuel load which is less than eight tonnes per hectare in aggregate and fuel structure which is discontinuous.

41. Development balances the needs of bushfire mitigation with revegetation and rehabilitation requirements, including where drainage and urban heat mitigation is required.

6.6.7 Water supply

42. New development is located within a reticulated water supply area. Where a reticulated water supply is available, development is connected with sufficient pressure to enable an effective emergency response to bushfire.

43. Where this is not possible, a dedicated static water supply for the sole purpose of firefighting is provided and is readily accessible by emergency services.

44. Static water supply is to comply with the requirements of Section 9 of the Bushfire Resilient Communities – Technical reference guide unless where this Policy or the Bushfire Hazard Overlay Code exceeds its requirements in which case, the Policy and/or Code provisions prevail.

45. Table 8.8.3.3 of the Bushfire Hazard Overlay Code provides the design requirements for static water supply tanks and volume requirements for different uses.

46. In addition to static water supply, development which is not within a reticulated water supply area is required:

    a. to be serviced by appropriate evacuation options; and

b. to provide fire trail and working areas for emergency services in addition to APZs.

6.6.8 Bushfire resilient building guidance

47. The Bushfire Resilient Building Guidance for Queensland Homes, prepared by the Queensland Government, provides detailed dwelling design principles for Queensland homes, which include guidance on retrofitting, designing for bushfire resilience, landscaping for bushfire prone areas and ongoing property maintenance advice.

48. Applicants are strongly encouraged to consult this material, available on the Queensland Reconstruction Authority website, to embed bushfire resilient design principles at the development design and layout phase to enhance the effectiveness of planning and building approaches.

49. Details in relation to how this guidance has been considered should be provided to Council as part of any bushfire hazard assessment report and / or bushfire management plan.