

## PORT FAIRY LOCAL FLOODPLAIN DEVELOPMENT PLAN

### INCORPORATED DOCUMENT

Incorporated within clause 81 of the Moyne Shire Planning Scheme pursuant to Section 6(2)(j) of the *Planning and Environment Act 1987*

#### 1.0 APPLICATION

This plan establishes minimum design and development performance criteria for buildings and works and subdivision both within and outside the township area of Port Fairy affected by the Floodway Overlay (FO) and Land Subject to Inundation Overlay (LSIO). This plan provides a performance-based approach for floodplain development decisions. It reflects a best practice approach to minimisation of risk associated with development that is directly affected by flooding. Applications for planning permits to develop land within the FO and LSIO at Port Fairy must be consistent with this local floodplain development plan.

A schedule applies to both the LSIO and FO within Port Fairy. Schedule 2 to the LSIO applies to all flood fringe land that is directly affected by flooding of the Moyne River and Belfast Lough. Schedule 2 to the FO applies to all land likely to convey active flood flows and/or store floodwaters to hazardous depths as a result of flooding of the Moyne River and Belfast Lough. Further details are provided under Section 5.0.

The minimum design and development performance criteria established by this plan respond to floodplain development risks associated with the entire floodplain.

It also establishes criteria that respond to specific characteristics of land within two separate areas in Port Fairy hereby referred to as Special Areas. These special areas are identified as areas A and B on Figure 1 on Page 6. Special Areas A and B are entirely within the 1% AEP floodplain of the Moyne River and Belfast Lough as determined by the 2008 Flood Study.

#### 2.0 FLOOD HISTORY

One extreme flood in March 1946 and a number of minor floods have been recorded in Port Fairy. The 1946 flood was a major event driven by an East Coast Low weather front. East coast lows mainly affect eastern Victoria and are seldom observed as far west as Port Fairy. The best available information indicates that the 1946 flood magnitude was greater than a 1 in 500 year ARI (Annual Recurrence Interval) event. The 1946 flood caused severe impacts in the Port Fairy district. It destroyed the Moyne River bridges at Rosebrook and Reedy Creek and damaged the footbridge and wharf within the township. Other major floods are reported to have occurred in 1870 and 1894 however no historical photographs or flood level information is known to exist for these events.

A number of minor floods have occurred in Port Fairy since 1946 however none of these resulted in significant damage to the township area. The main impact of moderate floods is inundation of road access along Griffiths Street which restricts access to the residential land on both sides of the road.

#### 3.0 FLOOD INFORMATION

The extent of flooding has been determined by the 2008 Port Fairy Regional Flood Study (*Water Technology, 2008*) and the 2010/2012 Sea Level Rise Modelling addendum reports (*Water Technology, 2010 & 2012*). The 2008 study utilised knowledge of past flood events, extensive LiDAR-derived ground level survey data and detailed 2D hydrologic and hydraulic modelling to produce a set of detailed flood planning maps for the Moyne River floodplain. Further work was completed in 2012 to address a change to the State Planning Policy Framework climate change provisions (Clause 13.01-1). This requires that when planning for sea level rise, 0.2 metres over current 100 year ARI flood levels be used for urban infill development in close proximity to existing development. Consequently the flood levels and extents used for planning in Port Fairy are based upon 0.2 metres over the 100 year ARI flood. The FO and LSIO areas are based on the relative flood risk assessed for different parts

of the floodplain, considering factors including flood depth, velocity, natural storage and flood duration.

#### **4.0 FLOOD IMPACTS**

Flood impacts in the Port Fairy area and its surrounds around Belfast Lough can be significant. Large floods pose significant risks to life, health and wellbeing of residents and emergency personnel, causing road closures, loss of access/egress for residents, property isolation, and damage to buildings and infrastructure.

Flood levels at Port Fairy are influenced by sea levels, tides and storm surge. Increased flood levels are likely into the future as a consequence of rising mean sea level induced by climate change.

Flood impacts in both the rural and urban LSIO areas are less than in the FO areas. However, flood damage costs in the urban LSIO area of Port Fairy can still be considerable because of the higher density of development. Based on 0.2 metres over current 100 year ARI there are 300 properties that would be inundated, 65 properties would experience above floor flooding, while 235 would experience below floor flooding. The flood damage cost has been calculated to be over \$3.5 million, with average annual damages of approximately \$375,000 per year (*Water Technology, 2008*).

#### **5.0 BASIS OF THE FO AND LSIO**

The purpose of the Floodway Overlay (“FO”) is to:

- Identify active floodplains and flood fringe areas where flood waters are either deep, or flow at such a velocity as to pose a significant risk to public safety
- Ensure new development is compatible with the level of flood hazard.

The purpose of the Land Subject to Inundation Overlay (“LSIO”) is to:

- Identify flood fringe or flood storage land affected by the 100 year ARI flood where the depth and velocity of flood water flow is relatively low
- Ensure new development is compatible with the level of flood hazard.

The LSIO and FO ensure that new development proposals:

- Recognise and respond via appropriate design and/or flood mitigation measures - to the level of flood risk associated with the subject land.

#### **5.1 SCHEDULES TO THE LSIO AND FO**

Schedule 2 to the LSIO applies to all land on the fringe of the Moyne River/Belfast Lough floodplain that is subject to flooding.

Schedule 2 to the FO applies to all land likely to convey active flood flows and/or store floodwaters to hazardous depths as a result of flooding of the Moyne River/Belfast Lough.

#### **6.0 POLICY**

##### **6.1 FUTURE PLANNING**

Future planning exercises, such as structure planning or planning scheme amendments, should:

- Consider the risks to the township associated with flooding from the Moyne River and seek to ensure that use of floodplain land is not excessively intensified.

- Consider any flooding information that supersedes the aforementioned flood investigations.

## **6.2 EXERCISING DISCRETION**

When a Planning Permit is required, it is policy to:

- Encourage construction of new buildings and works on land outside the LSIO and FO.
- Discourage the construction of new residential buildings within Special Area A shown on Figure 1.
- Discourage subdivision of parcels that could lead to intensification of development on land within the FO.
- With the exception of normal residential gardening activities – strongly discourage filling of the floodplain in all areas within the LSIO and FO unless it can be demonstrated that balanced cut and fill can be achieved consistent with the Glenelg Hopkins CMA Guidelines for Floodplain Cut and Fill.
- Preclude the construction of private levees.

## **6.3 PERFORMANCE CRITERIA**

The following criteria apply to all land covered by the FO and LSIO.

*New Buildings and Works including outbuildings and sheds exceeding 20m<sup>2</sup> in floor area must:*

- Be on the highest available natural ground
- Be constructed to minimise potential for disrupting flood water flow.
- Be constructed on stumps or piers and bearers unless the Glenelg Hopkins CMA has advised otherwise in writing.
- The construction of a new dwelling (excluding replacement dwellings) must be sited on land where the 100 year ARI flood depth is less than 0.5 metres above the natural surface level, and have an access way to the dwelling site from a main road that has a 100 year ARI flood depth not more than 0.5 metres
- New dwellings must not obstruct natural flood flow paths or drainage lines.
- The floor level of any new or replacement dwelling must be finished at least 0.6 metres above the 100 year ARI flood level. This level is known as the Nominal Flood Protection Level (NFPL).
- Dwellings should be aligned with their longitudinal axis parallel to the direction of flood flow.
- Dwellings must use water resistant materials up to NFPL.
- Outbuildings including sheds and garages should be:
  - Aligned with their longitudinal axis parallel to the direction of flood flow.
  - Designed to minimise damage caused by flooding to the structure and its contents, such as by raising floor levels, using water resistant materials and raising electrical fittings above flood level.
  - Not more than 40m<sup>2</sup> in area.

### *Extensions to existing buildings*

Extensions to existing buildings may have a floor level matching that of the existing building provided the total floor area of the extension does not exceed 20 square metres.

Extensions must be constructed on stumps and bearers unless it can be demonstrated that this requirement cannot be practically achieved.

### *Fences*

Fences should be designed and constructed to minimise the likely effects of flooding. Fences should not divert or obstruct floodwater unduly. The potential for fences to trap debris should be minimised.

When considering an application for a fence on land within the FO or LSIO at Port Fairy, the responsible authority will give consideration to flood depth and flow velocity and ensure that the proposed fence is consistent with the Glenelg Hopkins CMA Guidelines for Fencing in Flood-prone Areas.

### *Earthworks*

Earthworks should not reduce the capacity of the floodplain to store and convey floodwater.

Earthworks should not divert or impede the flow of floodwater. The applicant may seek a formal advice letter from the Glenelg Hopkins CMA as to the potential for impacts on floodwater flow and attach this letter in support of the application.

Any planning permit application for the construction of a dam or in ground swimming pool should ensure that excavated material is removed off site and away from land within the FO. The surface level of land surrounding the dam or pool, including embankments should not cause a net decrease in flood storage volume.

Any planning permit application proposing filling of floodplain land must be consistent with the Glenelg Hopkins CMA Guidelines for Floodplain Cut and Fill.

### *Chemical Storage*

The storage of chemicals should be at a height of at least 1.0m above the 100 year ARI flood level.

### *Subdivision*

Subdivision applications for land that is either partly or wholly within the LSIO must not create new lots wholly within the overlay areas, unless it can be demonstrated that:

- There is an adequate building envelope on each lot to be formally defined on the plan of subdivision where the inundation depth is determined to be less than 500 millimetres.
- Access to the building envelope does not traverse land where the inundation depth is determined to be more than 500 millimetres.

Neither the building envelope or the defined access route to it may be subject to a hazard rating of more than  $0.4\text{m/s}^{2a}$ .

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<sup>a</sup> The product of depth (m) and velocity of flow ( $\text{m}^2/\text{s}$ )

## 6.4 SPECIAL AREA A

Special Area A shown in Figure 1 on Page 6 delineates land that is totally reliant on Griffith Street for access/egress during large floods. The majority of this land is on the Belfast Lough side of Griffiths Street, northeast of the Gipps Street Bridge. Special Area A also extends over a narrow strip of land to the south of the Gipps Street Bridge and covers portions of some lots on the ocean side of Griffiths Street.

The following design and development criteria apply to planning permit applications:

### *New Buildings*

Buildings and works must comply with the following requirements in addition to those included under 6.3 above. While intensification of development in this area is generally discouraged, any remaining infill development opportunities that can reduce or manage access flood risk to acceptable levels will be considered.

- Dwellings proposed for land that relies on access that has a 100 year ARI flood depth **greater** than 0.5 metres may be approved when the risks associated with loss of road access due to flooding have been mitigated by either structural or non-structural means.

## 6.6 SPECIAL AREA B

Special Area B shown in Figure 1 can be described as land adjoining Mariner Court.

The following design and development criteria apply to planning permit applications:

### *Garage Floors*

Unless constructed on stumps (or piers) and bearers, all garage floors must be finished at a level no higher than 2.10 metres AHD.

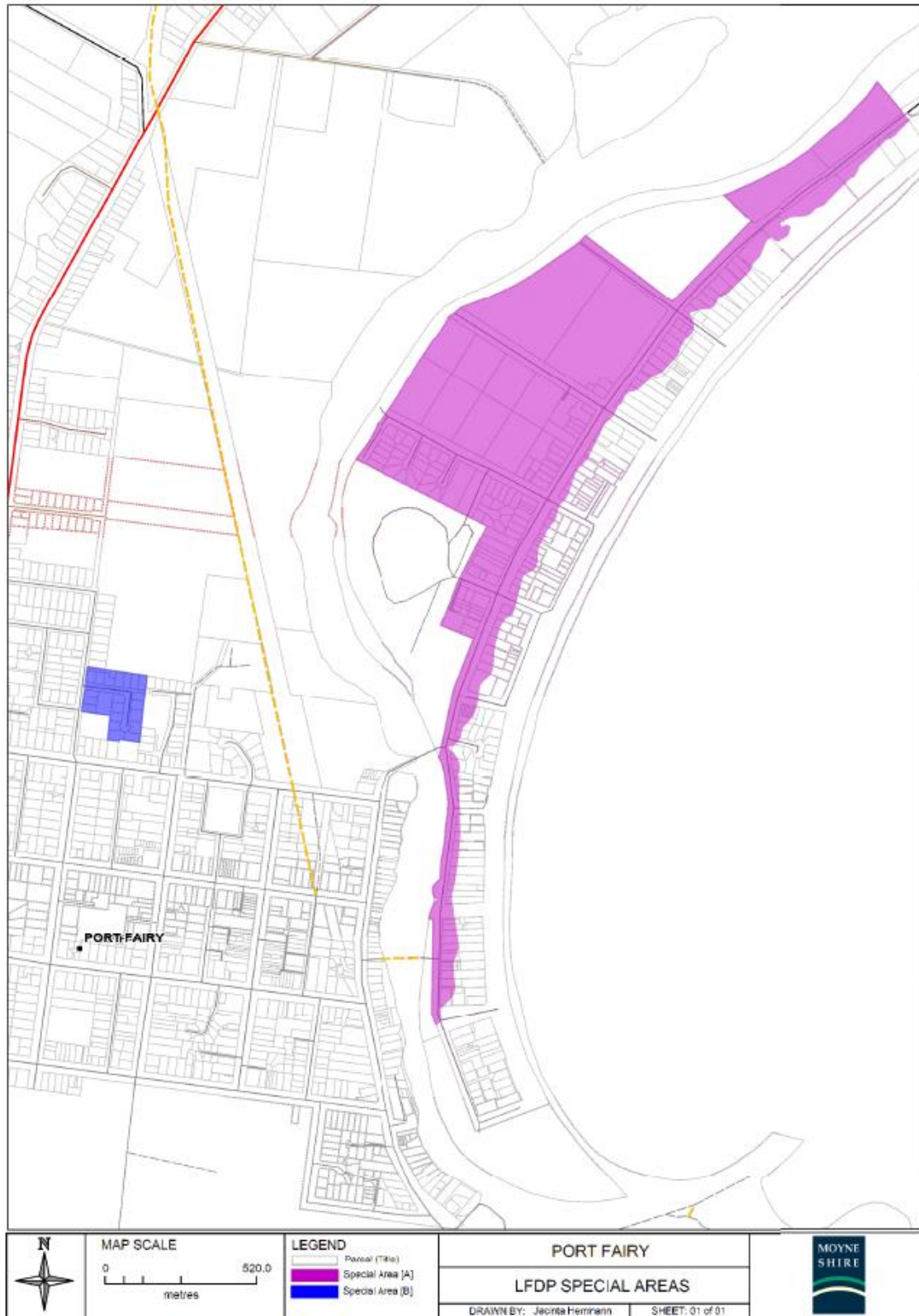


Figure 1. Special Areas Port Fairy

## 7.0 APPLICATION REQUIREMENTS

All applications for primary or secondary consent to construct a building, to carry out works, or to subdivide land covered by Clause 44.03 (FO), or Clause 44.04 (LSIO) of the Moyne Planning Scheme must be consistent with this Local Floodplain Development Plan.

All planning permit applications for development on land covered by the LSIO and FO must be accompanied by the following information, as considered appropriate by the responsible authority.

A site description, which may use a site plan (drawn to scale), photographs or any other relevant technique, that accurately describes:

- Whether the proposed development could be located on flood-free land or land with a lesser flood hazard.
- The boundaries, dimensions, shape, size, orientation, slope and elevation of the site.
- The use of surrounding properties and buildings.
- Location, layout and dimensions of existing and proposed buildings, works or subdivision boundaries.
- Adjoining roads, internal driveways, and access tracks.
- Elevations of all proposed buildings, drawn to scale.
- Floor levels of all existing and proposed buildings to Australian Height Datum.
- Relevant existing and proposed ground levels of the site to Australian Height Datum and the difference in levels between the site and surrounding properties.
- Construction details of all buildings, fences, works and driveways.
- Details of the measures to be used to reduce the susceptibility of the development to flood damage.
- In the case of fences, a statement of compliance with the Glenelg Hopkins CMA guidelines for Floodplain Fencing or evidence demonstrating that the fence does not significantly obstruct flood flows.
- For proposals involving cut-and-fill earthworks, a statement of compliance with Glenelg Hopkins CMA guidelines for Floodplain Cut and Fill is required. The statement must include plans showing ground levels to Australian Height Datum of all fill and borrow areas, depths of cut and height of fill, and calculations showing the net level for level cut and fill volume balance.
- Consideration and assessment of the decision guidelines where relevant that are outlined under Clause 44.03-6, Clause 44.04-6 and Clause 65 of the Moyne Shire Planning Scheme and the reference documents listed below

## 8.0 REFERENCES

Water Technology Port Fairy Regional Flood Study (various reports) 2008

Water Technology Port Fairy Regional Flood Study Addendum Report 2010

Water Technology Port Fairy – Sea Level Rise Modelling Report 2012

Department of Sustainability and Environment Guidelines for Coastal Catchment Management Authorities: Assessing Development in Relation to Sea Level Rise, June 2012.

Building Code of Australia – Australian Building Codes Board - Construction of Buildings in Flood Hazard Areas – Information Handbook and Standard.

Glenelg Hopkins CMA Guidelines for Fencing in Flood-prone Areas.

Glenelg Hopkins CMA Guidelines for Floodplain Cut and Fill.

Floodplain Management in Australia – Best Practice Principles and Guidelines, Standing Committee on Agriculture and Resource Management (SCARM), CSIRO 2000.

Victoria Planning Provisions – Practice Note – Applying for a Planning Permit under the flood provisions.

Victoria Planning Provisions – Practice Note – Applying the Flood Provisions in Planning Schemes.