Caravan Parks in Flood Prone Areas Policy (DCP / LAP)

Development Control Plan 123
Local Approvals Policy POL12/104

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PART 1. THE CARAVAN PARKS IN FLOOD PRONE AREAS POLICY (DCP/LAP)

1.1. About the Caravan Parks in Flood Prone Areas Policy (DCP/LAP)

1.1.1. Introduction

The Caravan Parks in Flood Prone Areas Policy (DCP/LAP) (hereafter referred to as DCP/LAP) is both a development control plan (DCP) and a local approvals policy (LAP). The DCP/LAP provides information and development controls needed to assess applications relating to manufactured home estates, caravan parks, camping grounds, moveable dwellings, rigid annexes and associated structures on flood prone land. Manufactured home estates, caravan parks and camping grounds will all be referred to as caravan parks from here on.


Caravan parks provide a valuable economic and social contribution to a local community. While there is an overriding body of legislation and policy applicable at the State Government level, there is a need for more detailed guidelines which apply to caravan parks within the floodplains of the Shoalhaven local government area (LGA). These more detailed guidelines address:

- the ongoing operation of existing caravan parks,
- proposals for alterations and additions to existing caravan parks,
- new installations, and
- proposals for new complexes.

This DCP/LAP recognises the unique use and management of caravan parks compared to other types of development.

While DCP 106 Amendment 1 deals with all development within flood prone areas, this DCP/LAP has been prepared to ensure that the objectives of The Policy and The Manual are met specifically for the unique requirements of caravan parks or similar development. It is based on the overall principles of those documents and translates them to the requirements of caravan parks within the Shoalhaven LGA. This DCP/LAP aims to:

- reduce the risk to life and damage to property caused by flooding.
- ensure caravan parks are planned and operated in recognition of the full range of potential floods up to and including the PMF.
- provide detailed controls for the assessment of applications subject to this DCP/LAP and lodged in accordance with the 1979 EP&A Act and the 1993 LG Act.
- provide a range of guidelines for the development and operation of caravan parks, which address the full range of flood events and associated risks.
- deal equitably and consistently with applications for development and installations on flood affected land, in accordance with the principles contained in the Manual.
- incorporate the philosophy, that in principle, flood risk to new long-term sites will be no greater than what would be expected for general residential development as per DCP 106 Amendment 1. A marginally greater risk could be acceptable for short-term sites occupied by holiday or park vans as this risk is usually taken into account as part of an overall business risk assessment within a business plan.
Caravan Parks in Flood Prone Areas (DCP/LAP)

1.1.2. Citation
This DCP/LAP may be cited as Caravan Parks in Flood Prone Areas Policy (DCP 123/LAP).

1.1.3. Where this DCP/LAP applies
This applies to all flood prone caravan parks within the Shoalhaven LGA.

This DCP/LAP relates to and applies in conjunction with the below legislation:

<table>
<thead>
<tr>
<th>Legislation</th>
<th>Further information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shoalhaven Local Environmental Plan 1985;</td>
<td><a href="http://www.shoalhaven.nsw.gov.au">www.shoalhaven.nsw.gov.au</a></td>
</tr>
<tr>
<td>Environmental Planning and Assessment Act 1979</td>
<td><a href="http://www.legislation.nsw.gov.au">www.legislation.nsw.gov.au</a></td>
</tr>
<tr>
<td>State Environmental Planning Policy No. 21 – Caravan Parks</td>
<td><a href="http://www.planning.nsw.gov.au">www.planning.nsw.gov.au</a></td>
</tr>
<tr>
<td>State Environmental Planning Policy No. 36 – Manufactured Home Estates</td>
<td><a href="http://www.planning.nsw.gov.au">www.planning.nsw.gov.au</a></td>
</tr>
<tr>
<td>Shoalhaven Design Guidelines for Permanent Occupancy of Caravan Parks (Policy No: POL08/174)</td>
<td><a href="http://www.shoalhaven.nsw.gov.au">www.shoalhaven.nsw.gov.au</a></td>
</tr>
<tr>
<td>DCP 106 Development on Flood Prone Land (Amendment 1)</td>
<td><a href="http://www.shoalhaven.nsw.gov.au">www.shoalhaven.nsw.gov.au</a></td>
</tr>
</tbody>
</table>

1.1.4. How to use this DCP/LAP
To prepare your application to Council, follow the below steps. Alternatively following the steps as shown in Figure 1:

Step 1:
Read the document carefully and seek assistance from Council officers as required.

Step 2:
Determine if the property (land) is within Council’s mapped flood extent. Go to www.shoalhaven.nsw.gov.au
Step 3:

If flood information is available, apply for a flood certificate online or in person at the Nowra or Ulladulla Council administrative buildings.

When applying for a flood certificate, in the comments box, state that the flood certificate is for a caravan park. This will ensure the caravan park flood risk precinct is provided.

If no current flood information is available, you may be required to engage a suitably qualified engineer to undertake a Flood Assessment (Section 1.11.3 schedule 3).

Step 4:

Identify the type of approval you are seeking:
- approval for a new caravan park, an extension or change of use to an existing caravan park;
- approval for a new installation; or
- approval to operate.

If you are applying for an installation, identify the installation/activity type (section 1.11.5, schedule 4):
- Long term moveable dwelling or relocatable home;
- Privately owned moveable dwelling - short term;
- Park owned moveable dwelling - short term;
- Rigid annexe;
- Minor associated structure; or
- Large associated structure

Applications for substantive structures and buildings, such as a manager’s residence, office, community building, amenity blocks or emergency refuge are not covered within this DCP/LAP, they are covered and require compliance with DCP 106 Amendment 1 – Development on Flood Prone Land.

You do NOT need approval for the installation of tents, campervans or caravans.

Step 5:

Prepare / review the caravan park Flood Emergency Management Plan (Section 1.7.10).

Step 6:

Determine the Caravan Park Flood Risk Precinct (Section 1.5.1). A property may be located in more than one Caravan Park Flood Risk Precinct, in which case the assessment must consider the controls relative to each precinct.

Step 7:

Review the appropriate objectives, performance criteria, prescriptive controls (sections 1.6) and acceptable solutions (section 1.11.6- schedule 6) to determine which criteria are relevant to your proposal.
Step 8:

Determine what type of assessment you are preparing:
- performance based assessment (standard)
- merit based assessment (non-standard) (Section 1.3)

Step 9:

Using the appropriate performance criteria compile your Caravan Park Compliance Report (refer section 1.7).

Choose the correct checklist 1.8, 1.9 or 1.10, to ensure you have included all the required documentation.

Step 10:

Submit your Caravan Park Compliance Report to Council.
Is the land within Council's mapped flood extent?  
To check go to: http://goo.gl/vM6DO or http://goo.gl/gt8ud (Schedule 2)

Apply for a flood certificate online or at the Nowra or Ulladulla Council administrative buildings. http://goo.gl/QBSww (Schedule 2)

Is the land:
- is within 40 metres of a creek; or
- is within 10 metres of a major drainage system, local - overland flood path or drainage easement; or
- has a history of flooding

YES

NO

Suitably qualified engineer to conduct flood assessment (Schedule 3)

Is the property flood affected?

YES

NO

What are you seeking approval for?

A) a new caravan park, an extension or change of use to an existing caravan park? (Section 1.8)
B) a new installation? (Section 1.9)
C) an approval to operate? (Section 1.10)

If the development is large scale or will impact on neighbouring properties, talk to neighbouring property owners about the proposed development.

Prepare / Review the Caravan Park Flood Emergency Management Plan (Section 1.7.10)

Determine the Caravan Park Flood Risk Precinct (Section 1.5.1)

Determine which performance criteria apply to the type of approval you are seeking (Section 1.6.3)

Determine what type of assessment you are preparing (Section 1.3):
- performance based assessment (standard)
- merit based assessment (non-standard)

Prepare the compliance report for your application (Section 1.7)
A) for development approval for a new caravan park, an extension or change of use to an existing caravan park refer to checklist A (Section 1.8)
B) for a new installation refer to checklist B (Section 1.9)
C) for an approval to operate refer to checklist C (Section 1.10)

Submit your compliance report to Council.

Figure 1: Steps to follow when preparing an application to Council
1.2. Considerations when preparing an application

1.2.1. Is consent required under the Local Government (LG) or the Environmental Planning and Assessment (EP&A) Acts?

A Development Application is required for:
- Development for an activity involving caravan parks, manufactured homes estates or the installation of a manufactured home, moveable dwelling or associated structure;
- New and extensions to caravan parks, camping grounds and manufactured home estates;
- Converting campsites to short-term or long-term sites;
- Construction of buildings.

These applications fall under the EP&A Act (1979).

A section 68 application under the LG Act is required for the following circumstances:
- Operation of a caravan park or camping ground (s.68(1) Part F-2);
- Operation of a manufactured home estate (s.68(1) Part F-3);
- Installation of a manufactured home, moveable dwelling or an associated structure on flood liable land in a manufactured home estate (s.68(1) Part A-1);
- Installation of a relocatable home, rigid annexe or associated structure on flood liable land in a caravan park or camping ground.

This means that an application must be submitted to Council and approval obtained prior to any activity, installation or works are carried out.

You DO NOT need consent for the installation of tents, campervans or caravans (as per exemptions granted under clause 74 of the Local Government (Manufactured Home Estate, Caravan Park, Camping Ground and Moveable Dwellings) Regulation 2005).

1.2.2. How can I get advice on my application?

For advice when preparing small scale applications, speak to one of Council's Development Planner's. For large scale development or installation projects, it may be beneficial to arrange a meeting with Council's Development Advisory Unit. The Unit is made up of senior officers of the Council who provide a "one stop" venue for the gathering of information by prospective applicants and give advice on issues to be addressed in the application and how particular problems may be resolved.

It is the duty of the applicant to ascertain from Council whether consent for any proposed development or work is required. You can confirm this with Council's Planning and Development Group on telephone (02) 4429 3111.

1.2.3. What notification and consultation do I need to do?

Applicants are urged to consult with adjoining landowners, likely to be affected by the proposal. Consultation may allow the concerns of affected parties to be taken into account in the design process and may therefore minimise any delays in the processing of the application.
All development applications on flood prone land will be advertised publically (in accordance with Council's Community Consultation Policy for Subdivision & Development Applications).

Submissions received will be considered by Council. You may be asked by Council to address particular issues raised in the submissions.

1.2.4. **What flood information is available?**

Controls that apply to a certain development or installation depend on the caravan park flood risk precinct/s for that site. This can only be determined if flood information is available.

Due to the large number of water bodies in the Shoalhaven, available information for different catchments varies significantly and could range from historical information to very detailed flood modelling data formulated as part of a Flood Study or Floodplain Risk Management Study and Plan.

It is therefore necessary to determine what existing flood information is available for your site. You can determine the type of information available by checking Council’s website at [www.shoalhaven.nsw.gov.au](http://www.shoalhaven.nsw.gov.au).

Please note, there are a number of areas within the Shoalhaven for which flood information, specific to the proposed development or installation is not available. In areas where Council has no flood information but the land is:
- is within 40 metres of a creek; or
- is within 10 metres of a major drainage system, local overland flood path or drainage easement; or
- has a history of flooding; or
- is considered to be flood prone by Council’s Floodplain Engineer;

a Flood Assessment Report is required to determine the flood affectation of the property (schedule 1.11.3).

If council has flood information, this can be provided to you in the form of a flood certificate (refer to 1.11.2).
1.3. **Performance based policy**

The DCP/LAP contains controls for development and installations in the floodplain which are based on **objectives, prescriptive controls, performance criteria and acceptable solutions**. A performance based application must comply with these.

An **objective** states the outcome that Council wishes to achieve from the control.

**Performance criteria** are a means of assessing whether the objectives will be achieved.

**Prescriptive controls** detail the development controls which must be met by all applications.

**Acceptable solutions** are suggested ways of meeting the performance criteria. If you use the identified acceptable solutions your assessment is a “performance based” assessment.

If however, you identify other solutions to meet the objectives and performance criteria your assessment is a “merit based” assessment.

It is the responsibility of the applicant in such circumstances to demonstrate to Council that the proposal satisfies the objectives, prescriptive controls and performance criteria of the DCP/LAP.

Note that compliance with the requirements of this DCP/LAP does not necessarily imply that Council will provide consent to an application. Council must also take into consideration all relevant matters listed under other legislation.
1.4. **Flood prone land - legislative context**

This DCP/LAP is based on best practice principles as set out in the NSW Flood Prone Land Policy and the NSW Floodplain Development Manual. The following provides a summary of the contents of these documents and shows how the DCP/LAP sits within the overall policy framework.

1.4.1. **NSW Flood Prone Land Policy (1984)**

The primary objectives of the 1984 NSW Flood Prone Land Policy (“The Policy”) are to reduce the impact of flooding and flood liability on individual owners and occupiers of flood prone property and to reduce private and public losses resulting from floods.

At the same time, The Policy recognises the benefits flowing from the limited use, occupation and development of flood prone land.

The Policy promotes the use of a merit approach (section 1.3) which balances social, economic, environmental and flood risk parameters to determine whether a particular development or use of the floodplain is appropriate and sustainable.

In this way The Policy avoids the unnecessary sterilisation of flood prone land. Equally it ensures that flood prone land is not the subject of uncontrolled development inconsistent with its exposure to flooding.

The Policy requires that Councils address flooding:
- through the preparation and implementation of Floodplain Risk Management Plans;
- by reducing the impact of flooding through flood mitigation works, emergency management, development controls and the raising of houses; and
- by containing potential flood losses through ecologically sensitive planning and development controls.

1.4.2. **The NSW Floodplain Development Manual (2005)**


The Manual requires that management decisions regarding occupation of the floodplain need to satisfy the social and economic needs of the community, as well as being compatible with the maintenance or enhancement of the natural ecosystems that sustain the floodplain.

The Manual states that the most effective means of achieving sound flood risk management outcomes is to formulate and implement management plans through the Floodplain Risk Management Process as shown in Figure 2 - *Floodplain Risk Management Process (Source: 2005 NSW Floodplain Development Manual)*. Due to the level of detail required; technical studies and other complexities, the process generally takes several years to be completed.
Figure 2 - Floodplain Risk Management Process (Source: 2005 NSW Floodplain Development Manual)

A Floodplain Risk Management Plan generally involves a mix of options as it is unusual for a single management option to manage the full range of flood risk. Determining the optimum mix of measures can require complex studies and extensive community consultation. Typical options considered are:

- property modification measures such as development controls in new areas or voluntary purchase and house raising in developed areas;
- response modification measures such as evacuation and associated operational logistics; and
- flood mitigation measures such as levees or bypass channels.

As per The Policy, The Manual provides for the application of a “merit approach” for decisions on the future use of the floodplain. This “merit approach” operates at two levels:

- the strategic level; and
- the site specific level.

At the strategic level, the “merit approach” allows for consideration of social, economic, ecological, cultural and flooding issues to determine strategies for the management of continuing and future flood risk. Identified strategies are formulated into Floodplain Risk Management Plans and associated Local Floodplain Risk Management Policy, and then into Council Environmental Planning Instruments such as the Shoalhaven Local Environmental Plan (SLEP).

At a site specific level, the “merit approach” involves consideration of the best way of assessing development allowable under the Floodplain Risk Management Plans, the Local Floodplain Risk Management Policy and Environmental Planning Instruments. These considerations include site specific issues such as minimum floor levels, building location within the site, access to the site, structural stability, and flood proofing etc, as appropriate.
1.4.3. Development Control Plan (DCP) No. 106 Amendment 1 - Development on Flood Prone Land

DCP 106 Amendment 1 has been prepared to ensure that the objectives of The Policy and The Manual are met within the Shoalhaven LGA. It is based on the overall principles of those documents and translates them to the requirements of the local area. As such, the specific objectives of DCP 106 Amendment 1 are to:

- Reduce risk to life and property resulting from floods;
- Ensure that the impacts of the full range of flood sizes up to and including the probable maximum flood (PMF) are considered when assessing development on flood prone land;
- Ensure that the impact of climate change are considered when assessing development on flood prone land;
- Ensure the future use of flood prone land does not cause undue distress to individuals nor unduly increases potential flood liability to individuals or the community; and
- Incorporate site specific floodplain management recommendations from local Floodplain Risk Management Plans into Council’s overall Planning Framework.

DCP 106 Amendment 1 applies to applications for substantive structures and buildings, such as a manager’s residence, office, community building, amenity block or emergency refuge.
1.5. Flood planning concepts

The flood planning area is any land identified as being flood affected in the 1% AEP flood event plus freeboard. It is this area, the area of land below, or islands within, the flood planning level that are subject to flood related development controls. An aerial view of the flood planning area can be seen in Figure 3.

![Figure 3 - Floodplain Aerial View – Flood planning area](image)

**Flood planning levels** are the combination of adopted design flood level plus freeboard. They determine the area of land (flood planning area) on which specific flood related development controls will be imposed. They are set during the Floodplain Risk Management process and are based on a detailed understanding of flood behaviour across the full range of floods, their probability of occurrence and the social, economic and ecological consequences associated with those floods.

**Freeboard** is a factor of safety applied as an additional height to identified flood levels. The purpose of a freeboard is to cater for uncertainties in the estimation of flood levels across the floodplain due to wave action, localised hydraulic behaviour such as eddies and embankment or levee settlement and some of the uncertainties associated with estimating climate change impacts. The freeboard and flood planning levels can be seen in Figure 4.

![Figure 4: Cross section through floodplain - hydraulic categories within flood planning area](image)
Different development controls apply to different land uses, levels of potential flood inundation and hazard within the flood planning area. The following hydraulic categories apply:

- Flood Fringe
- Flood Storage
- Floodway (Figure 4).

1.5.1. **Caravan Park Flood Risk Precincts**

The floodplain can be further classified according to the potential flood risks specifically related to caravan parks. The flood risk is not determined from a single flood but from considering all floods that could possibly occur at a site (up to the PMF).

When determining the caravan park flood risk precinct, the following must be considered:

- flood behaviour, topography and access routes that influence the flood hazard on the site (such considerations include depths, velocities, time to rise, duration and other factors noted in Section L6 of The Manual);
- available public warning time for the specific locality (i.e. ignoring any local, site specific or private flood warning systems that might be available); and
- the risk to the site as if fully developed to its current approved community map.

Based on this approach, the flood affected area can be classified into three caravan park flood risk precincts: ‘high’, ‘medium’ and ‘low’, as discussed below. Figure 5 shows a schematic approach to determining flood risk precincts.

**Determining Caravan Park Flood Risk Precinct**

<table>
<thead>
<tr>
<th>Flood affectation (from adopted Council Flood Study or Flood Assessment Report)</th>
<th>Below FPL</th>
<th>Above FPL below PMF</th>
<th>Above PMF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evacuation capability (as determined by Table 1)</td>
<td>Inadequate</td>
<td>Adequate</td>
<td></td>
</tr>
<tr>
<td>Caravan park flood risk precinct</td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
</tr>
</tbody>
</table>

Figure 5: Determining Caravan Park Flood Risk Precincts (adapted from Caravan Park Food Safety Study 2008)

**High caravan park flood risk precinct**

The high caravan park flood risk precinct is an area where high flood damages, potential risk to life or evacuation problems would be anticipated, or where development/activities would significantly and adversely affect flood behaviour. Most development/activities are restricted in this precinct. In this precinct there would be significant damage to development without compliance to flood related building and planning controls.
This precinct is initially identified as a ‘high hazard floodway’ although:
- it may also include areas of ‘high hazard flood storage’ or ‘high hazard flood fringe’ if dangerous and life-threatening evacuation difficulties are identified.
- some areas of ‘high hazard floodway’ might not be included if sufficient time/access is available to mitigate the risks to people and property.

Medium caravan park flood risk precinct
The medium caravan park flood risk precinct would usually comprise land in the flood planning area that was not classified within the high caravan park flood risk precinct. Note that in this precinct there may still be a significant potential for flood damage, but these damages could be minimised by the application of appropriate development controls.

This precinct initially comprises areas that have been classified by Council in previous flood studies or in a Flood Assessment Report as ‘high hazard flood storage’, ‘high hazard flood fringe’, ‘low hazard floodway’, ‘low hazard flood storage’ or ‘low hazard flood fringe’. The medium caravan park flood risk precinct may also include:
- some areas previously classified as ‘high hazard floodway’ might be included if sufficient time/access was available to mitigate the risks to people and property.
- some of these areas might be classified as high flood risk precinct if dangerous and life-threatening evacuation difficulties were anticipated.

Low caravan park flood risk precinct
This precinct is defined as all other land within the floodplain not identified within either the high or medium caravan park flood risk precinct. This land is above the flood planning level but below the PMF.

The risk to both people and property is low within this precinct. For example, development may be above the flood planning area, but may become isolated during a flood event which is why development controls apply, such as the consideration of evacuation.

Evacuation Capability
Whether a caravan park has adequate or inadequate evacuation capability contributes to the determination of the caravan park flood risk precinct. Table 1 steps out how to assess the evacuation capability for a caravan park.

When determining the time required for evacuation the SES paper “The Application of Timelines to Evacuation Planning (Opper, S. 2004)” provides guidelines on the time required for different aspects of evacuation.

The below have been extracted from the paper and are to be used when determining the evacuation capability of a caravan park:
- One hour for the warning lag factor, which is the time lag between the delivery of a warning and when the occupants would be ready to depart from the scene,
- 600 vehicles/hour/lane has been allowed for traffic flow,
- 5 minutes per team (two people) per door for door knocking.
Table 1: Determining Evacuation Capability

DETERMINING EVACUATION CAPABILITY – ADEQUATE / INADEQUATE

If you answer yes to all of the below questions your caravan park has **adequate evacuation capability**. If you answer no to any of the below questions your caravan park has **inadequate evacuation capability**. Detailed information and calculations are to be provided in the flood emergency management plan. This will be used to confirm the information provided below.

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>RESPONSE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1. Is a warning system in place?</td>
<td>Yes / No (circle)</td>
<td>If a warning system is not in place one will need to be established prior to determining the evacuation capability for the caravan park</td>
</tr>
<tr>
<td>Q2. What is the warning system?</td>
<td></td>
<td>Provide brief description (i.e. Bureau of Meteorology weather warnings). Full details of the system and how it will be triggered are to be provided in flood emergency management plan (FEMP)</td>
</tr>
<tr>
<td>Q3. Warning time:</td>
<td>________________ hours</td>
<td>Provide source of information in FEMP</td>
</tr>
<tr>
<td>Q4. Number of people requiring evacuation:</td>
<td>________________ people</td>
<td>Calculate for peak season</td>
</tr>
<tr>
<td>Q5. Time/staff required to evacuate people:</td>
<td>_______ hours _______ staff</td>
<td>Use SES paper to calculate</td>
</tr>
<tr>
<td>Q6. ‘Other actions’ to be done during flood:</td>
<td></td>
<td>List (i.e. tie down structures, removal of structures/vans, relocation of hazardous goods)</td>
</tr>
<tr>
<td>Q7. Time/staff required to do ‘other actions’:</td>
<td>_______ hours _______ staff</td>
<td></td>
</tr>
<tr>
<td>Q8. Are the total number of staff (Q5 plus Q7) available to conduct evacuation and ‘other actions’?</td>
<td>Yes / No (circle)</td>
<td>It is likely Q4 and Q6 will need to be conducted at the same time, therefore the number of staff identified in Q5 and Q7 need to be summed</td>
</tr>
<tr>
<td>Q9. Is an evacuation site available?</td>
<td>Yes / No (circle)</td>
<td>Contact the SES to determine whether an evacuation site is already established for your area</td>
</tr>
<tr>
<td>Q10. What is the evacuation site?</td>
<td>i.e. SES identified evacuation site</td>
<td></td>
</tr>
<tr>
<td>Q11. If required, do you have permission to use this site?</td>
<td>Yes / No (circle)</td>
<td>If yes, provide written consent in the FEMP</td>
</tr>
<tr>
<td>Q12.1 Is flood free access available to evacuation site?</td>
<td>Yes (circle) Go to Q13 OR answer Q12.2 and Q12.3</td>
<td></td>
</tr>
<tr>
<td>Q12.2 How long before access is cut by flooding?</td>
<td>________________ hours</td>
<td>Provide source of information in FEMP</td>
</tr>
<tr>
<td>Q12.3 Can all people requiring evacuation be evacuated before access is cut?</td>
<td>Yes / No (circle)</td>
<td>Only circle yes if time given in Q12.2 is greater than or the same as Q5.</td>
</tr>
<tr>
<td>Q13. Can both Q4 and Q6 be done prior to flood free access being cut?</td>
<td>Yes / No (circle)</td>
<td>Only circle yes if the time to conduct Q4 and Q6 concurrently is less than Q5 or 12.2 if flood free access is not available. Calculations and timeline to be provided in FEMP.</td>
</tr>
</tbody>
</table>
1.5.2. Climate Change Implications

Climate change is expected to have impacts on sea levels and rainfall intensities, both of which may influence flood behaviour at specific locations. Potential impacts are therefore considered during the floodplain risk management process and are taken into account when Design Flood Levels for each individual catchment are determined.

Current NSW Government legislation requires climate change to be considered.

Figure 6 shows how the 1% AEP flood levels will incrementally factor in sea level rise planning benchmarks.

![Coastal Flooding Consideration in Development Assessment Process](Source: NSW Coastal Planning Guideline: Adapting to Sea Level Rise 2010)

Currently no relevant planning benchmarks have been adopted by Government in relation to rainfall intensity changes. However, NSW State Government guidelines recommend doing a sensitivity analysis using nominal increases in rainfall intensities. If a Flood Assessment Report is required, the sensitivity analysis is to be done at this time.

In order to meet the above requirements, the following is to be considered.

- For new applications for installations in caravan parks below 4m AHD, the impact of a 0.4m sea level rise is to be included when determining the flood planning level. This can be done by adding 0.4m to identified flood levels or through a Flood Assessment Report which includes 0.4m sea level rise increase in design flood calculations.

or

- demonstrate that the development can be relocated or elevated to the 2050 flood levels, if directed by Council in the future to comply with future sea level rise conditions.

- For applications for a new complex or extension to an existing complex on land below 4m AHD, the impact of a 0.9m sea level rise is to be included in their design.
This can be done by adding 0.9m to identified flood levels or through a Flood Assessment Report which includes 0.9m sea level rise increase in design flood calculations.
1.6. **Performance Criteria for Caravan Park Development on Flood Prone Land**

1.6.1. **Objectives**

a) To minimise risk to life by controlling development on flood prone land;

b) To minimise damage to property by controlling development on flood prone land;

c) To ensure that the impacts of the full range of flood sizes up to and including the PMF are considered when assessing development on caravan parks within flood prone areas in the Shoalhaven LGA;

d) To ensure that development does not have a significant impact on flood behaviour, people’s safety, surrounding properties, structures or the environment in the specific area where the development is proposed;

e) To ensure that the impacts of climate change are considered when assessing caravan park development within flood prone areas in the Shoalhaven LGA;

f) To ensure that development on the floodplain is consistent with the NSW Flood Prone Land Policy (1984) and the NSW Floodplain Development Manual (2005);

g) To ensure that caravan park owners, developers and park occupants are conscious of the potential flood hazard and consequent risk associated with the use and development of land within the floodplain;

h) To ensure that all land uses and essential services are appropriately sited and designed in recognition of all potential floods;

i) To ensure that caravan park development on flood prone land does not place an unacceptable financial burden on landowners or the community;

j) To restrict intensification of development and activity in High Flood Risk Precincts, and where possible to reduce continued occupancy by long-term residents within High Flood Risk Precincts;

k) To protect the integrity of floodplains and floodways, including riparian vegetation, fluvial geomorphologic environmental processes and water quality.

1.6.2. **Prescriptive Controls**

a) Any portion of a structure below the Flood Planning Level will be built from materials that minimise potential damage due to inundation (flood compatible materials) (section 1.11.4).

b) New complexes, extensions and change of use to existing complexes and new long-term moveable dwellings or relocatable homes are located outside high caravan park flood risk precincts.

c) A Caravan Park Compliance Report is submitted with all applications (section 1.10)
d) Existing installations in a high caravan park flood risk precinct, can only be replaced by the same type of installation (i.e. a cabin with a cabin) so long as the new installation does not intensify development.

1.6.3. **Performance criteria and acceptable solutions**

<table>
<thead>
<tr>
<th>Performance Criteria</th>
<th>Acceptable Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>P 1</td>
<td>A 1 New installations, new complexes or an extension to an existing complex satisfies the requirements of the Development Control Matrix (section 1.15.5).</td>
</tr>
<tr>
<td>P 2</td>
<td>A 2 Buildings and installations are designed to withstand the forces of flood waters in accordance with current best practice engineering standards. OR Where appropriate, structures and installations are designed to collapse under the force of water in order to not obstruct the flood flow, but are sufficiently secured to not become floating debris and to not endanger people or animals. AND / OR Openings in structures and installations (i.e. fences) will be provided below the flood planning level to allow free flow of water. AND, where relevant</td>
</tr>
<tr>
<td>P 3</td>
<td>A 3 Structures and installations are located and designed to satisfy relevant best practice guidelines with regard to erosion, siltation and destruction of vegetation. AND, where relevant</td>
</tr>
<tr>
<td>P 4</td>
<td>A 4 Foundations are designed by a suitably qualified geotechnical engineer to be suitable for ground with potentially reduced bearing capacity under flood conditions. AND, where relevant</td>
</tr>
<tr>
<td>P 5</td>
<td>A 1 New installations, new complexes or an extension to an existing complex satisfies the requirements of the Development Control Matrix (section 1.15.5).</td>
</tr>
<tr>
<td>P 6</td>
<td>A 2 Buildings and installations are designed to withstand the forces of flood waters in accordance with current best practice engineering standards. OR Where appropriate, structures and installations are designed to collapse under the force of water in order to not obstruct the flood flow, but are sufficiently secured to not become floating debris and to not endanger people or animals. AND / OR Openings in structures and installations (i.e. fences) will be provided below the flood planning level to allow free flow of water. AND, where relevant</td>
</tr>
<tr>
<td>P 7</td>
<td>A 3 Structures and installations are located and designed to satisfy relevant best practice guidelines with regard to erosion, siltation and destruction of vegetation. AND, where relevant</td>
</tr>
<tr>
<td>P 8</td>
<td>A 4 Foundations are designed by a suitably qualified geotechnical engineer to be suitable for ground with potentially reduced bearing capacity under flood conditions. AND, where relevant</td>
</tr>
<tr>
<td>Performance Criteria</td>
<td>Acceptable Solutions</td>
</tr>
<tr>
<td>----------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td></td>
<td>A 5  All Caravan Parks, including extensions, demonstrate a means of safe self evacuation to a refuge outside of the floodplain.</td>
</tr>
<tr>
<td></td>
<td>A 6  When a lease for a long-term site, located in a high flood risk precinct is concluded, and the occupant of the long-term site indicates their intention not to seek a renewal of lease, continued use of the site as a long-term site is not encouraged.</td>
</tr>
</tbody>
</table>
1.7. Caravan Park Compliance Report

Compliance Reports are required for:
- approval for a new caravan park, an extension or change of use to an existing caravan park;
- approval for a new installation; or
- approval to operate.

Requirements of a Compliance Report vary for each installation/activity type. For individual requirements refer to checklist A, B or C (sections 1.8, 1.9 and 1.10 respectively). Sections 1.7.1 – 1.7.13 (below) detail all possible requirements for inclusion in a Compliance Report.

1.7.1. Existing Flood Information

Flood information is to be based on site conditions as found prior to the proposed development. Flood information can be provided as either:

1. A Current Flood Certificate (section 1.1.2)

   Where available an up to date Flood Certificate, which includes the caravan park flood risk precinct, for the caravan park must be submitted with your application.

   OR

2. A Flood Assessment Report (section 1.1.3)

   A Flood Assessment Report may be required for areas where:

   a) Flood information is not available but the site:
      - is within 40 metres of a creek; or
      - is within 10 metres of a major drainage system, local overland flood path or drainage easement; or
      - has a history of flooding; or
      - is considered to be flood prone by Council’s Floodplain Engineer;

   OR

   b) Flood information is available but requires more detail (i.e. interpolation, extrapolation).

Flood Assessment Reports must be prepared by a suitably qualified and experienced civil engineer recognised under the National Professional Engineers Register (NPER) in this field. The full name of the person who prepared the report, relevant qualifications and registration number are to be provided on the front page of the report.

1.7.2. Compliance Assessment

There are two types of assessment which can be submitted:

1. “Performance based” assessment which uses the identified acceptable solutions. A performance based assessment is the most straight forward application type. This
means that your compliance report demonstrates that the performance criteria are being met using acceptable solutions (section 1.6.3) and the development control matrix (section 1.11.6).

It is the responsibility of the applicant in such circumstances to demonstrate to Council that the proposal meets the prescriptive controls and acceptable solutions of the DCP/LAP (section 1.6.3 and 1.11.6).

2. “Merit based” assessment which identifies other solutions to meet the objectives and performance criteria.

It is the responsibility of the applicant in such circumstances to demonstrate to Council that the proposal satisfies the objectives, prescriptive controls and performance criteria of the DCP/LAP (section 1.6).

It is expected that all relevant objectives, performance criteria and prescriptive controls will be listed, explaining how each individual criteria has been met.

1.7.3. Development Plans

Plans for the proposed development, indicating compliance with all relevant Development Controls, must be submitted. This must include a current Community Map of the caravan park.

1.7.4. Survey Details

All survey details are to be incorporated into the Community Map. The survey details must be prepared by a Registered Surveyor and must indicate the following:

a) Existing ground levels at the proposed development site;

b) The floor levels of all existing buildings or long term and permanent structures to be retained as well as proposed floor levels for all new buildings and structures;

c) The location of any existing buildings or structures; and

d) Where the land is only partly flood prone, provide the contour lines showing the 1% AEP flood height and Flood Planning Level.

e) Where multiple Caravan Park Flood Risk Precincts occur on the site (i.e. High and Medium) the boundaries of these are to be mapped.

All levels must be relative to Australian Height Datum (AHD). Levels relating to an arbitrary assumed datum are not acceptable.

1.7.5. Additional Survey Details

Council may ask for additional survey detail. All additional survey detail, as outlined below, is to be incorporated into the Community Map.

a) Existing ground levels at 0.2 metre contour intervals across the entire property (contours are to extend across adjoining land to enable suitable consideration of the effect of the proposed development);

b) The ceiling heights of existing structures that are retained as well as for proposed new buildings and structures;
c) Existing and/or proposed drainage lines (including sizes and if piped or open channel) or easements and watercourses, or other means of conveying stormwater that are relevant to the flood characteristics of the site.

1.7.6. Fill or Excavation Details

A development application that includes significant land filling must be supported by the relevant documentation as required under DCP 106 Amendment 1 – Development on Flood Prone Land.

1.7.7. Hydraulic Impact Assessment Report (section 1.11.3)

For some development a Hydraulic Impact Assessment Report will be required. The report shall demonstrate that the development will not increase flood hazard or flood damage to other properties or adversely affect flood behaviour for a 5% AEP flood event up to the PMF scenario.

A Hydraulic Impact Assessment Report must be prepared by a suitably qualified and experienced civil engineer recognised under the National Professional Engineers Register (NPER) in this field. The full name of the person who prepared the report, relevant qualifications and registration number are to be provided on the front page of the report.

1.7.8. Structural Engineering Certificate (section 1.11.3)

Some development may require a Structural Engineering Certificate to ensure that the proposed structures can withstand flood forces including debris and buoyancy forces up to a specified flood scenario.

1.7.9. Geotechnical Engineering Certificate

Flooding of developed areas has the potential to cause significantly reduced bearing capacities of building foundations and, for masonry structures, these may lead to capacity failures. As such, some proposed development may require certification of building foundations by a chartered geotechnical practitioner especially in light of changing flood behaviour due to climate change and sea level rise.

1.7.10. Flood Emergency Management Plan

All caravan parks require a Flood Emergency Management Plan (FEMP) outlining the risk to the caravan park and how it is to be managed. The FEMP must demonstrate that permanent, fail-safe and maintenance free measures are incorporated in the development to ensure that the timely, orderly and safe evacuation of people is possible from the area and that it will not add significant cost and disruption to the community or the SES. The recommended template for a FEMP can be found in 1.11.7.

Please note, this template can be altered to suit the individual needs of a caravan park. For example, it may be preferred to move evacuation actions (i.e. when evacuation is triggered, how evacuation is conducted, who conducts evacuation) to the front of the document. Table 1 is also to be included in the FEMP.

The FEMP may require the installation of flood marker posts or a more sophisticated flash flood warning system. These must be in appropriately visible locations within the caravan park and are to be maintained in working order.
1.7.11. Evacuation Capability Assessment

Where the FEMP requires the caravan park manager to execute evacuation measures to move people, animals and vans or the like to refuge areas within or outside the caravan park, an evacuation capability assessment is required. Such an assessment will be undertaken by a suitably qualified professional and must assess whether the available warning time and resources are adequate to ensure the orderly and safe evacuation of people, animals and property from the caravan park. Where appropriate, this will include an assessment of the adequacy of quick release tie downs where used, the serviceability of draw bars and wheels, the ability to quickly detach services, as well as any impediments to evacuation posed by towable dwellings attached to non-towable structures or objects.

The assessment will also address the evacuation implications of growth of the caravan park over the following years and identify constraints to the likely growth if any such constraints exist.

The Evacuation Capability Assessment needs to be signed off by the caravan park manager annually to receive approval to operate. This is to ensure that caravan park managers are aware of their responsibilities for maintaining the evacuation capability of the caravan park.

1.7.12. Community Consultation Details

Some development may require a report on community consultation that was undertaken as part of the pre-development investigations. The report will note all issues raised and how they were addressed.

Please note that Council may undertake further community consultation in accordance with Council’s Community Consultation Policy for Subdivision and Development Applications.

1.7.13. Flood Compliance Report Checklists

Checklists A, B and C (section 1.8, 1.9 and 1.10 respectively) detail mandatory items to be submitted as part of the Caravan Park Compliance Report. Non-mandatory items are also listed in the checklists. Refer to section 1.7 or check with Council’s Planning and Development Group on telephone (02) 4429 3111, as to which non-mandatory items need to be provided with your application.
1.8. Checklist A – Caravan Park Compliance Report – new, extension, or changed use of caravan park

Mandatory items to be submitted with an application for a new park or new extension or change of use to an existing caravan park include:

<table>
<thead>
<tr>
<th>MANDATORY ITEMS</th>
<th>SUPPLIED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Flood Certificate and/or Flood Assessment Report which includes flood risk precinct information (section 1.7.1)</td>
<td></td>
</tr>
<tr>
<td>Compliance Assessment (section 1.7.2)</td>
<td></td>
</tr>
<tr>
<td>Development Plans (e.g. updated community map/site plan) (section 1.7.3)</td>
<td></td>
</tr>
<tr>
<td>Survey Plan (section 1.7.4)</td>
<td></td>
</tr>
<tr>
<td>Hydraulic Impact Assessment Report (for development located in medium and high caravan park flood risk precincts) (section 1.7.7)</td>
<td></td>
</tr>
<tr>
<td>Flood Emergency Management Plan (section 1.7.10)</td>
<td></td>
</tr>
<tr>
<td>Evacuation Capability Assessment (section 1.7.11)</td>
<td></td>
</tr>
</tbody>
</table>

The below items may be required to be submitted with an application for a new park or new extension or changed use of an existing caravan park (section 1.11.6):

<table>
<thead>
<tr>
<th>REQUIRED?</th>
<th>SUPPLIED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1.9. Checklist B – Caravan Park Compliance Report – new installation

Mandatory items to be submitted with an application for a new installation include:

<table>
<thead>
<tr>
<th>MANDATORY ITEMS</th>
<th>SUPPLIED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Flood Certificate or Flood Assessment Report including Flood Risk Precinct Information (section 1.7.1)</td>
<td></td>
</tr>
<tr>
<td>Compliance Assessment (section 1.7.2)</td>
<td></td>
</tr>
<tr>
<td>Development Plans (e.g. updated community map/site plan) (section 1.7.3)</td>
<td></td>
</tr>
<tr>
<td>Survey Plan (section 1.7.4)</td>
<td></td>
</tr>
</tbody>
</table>

The below items may be required to be submitted with an application for a new installation (refer section 1.11.6):

<table>
<thead>
<tr>
<th>REQUIRED?</th>
<th>SUPPLIED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Survey Information (inserted into Survey Plan) (section 1.7.5)</td>
<td></td>
</tr>
<tr>
<td>Fill or Excavation Details (section 1.7.6)</td>
<td></td>
</tr>
<tr>
<td>Hydraulic Impact Assessment Report (section 1.7.7)</td>
<td></td>
</tr>
<tr>
<td>Structural Engineering Certificate (section 1.7.8)</td>
<td></td>
</tr>
<tr>
<td>Geotechnical Engineering Certificate (section 1.7.9)</td>
<td></td>
</tr>
<tr>
<td>Flood Emergency Management Plan (section 1.7.10)</td>
<td></td>
</tr>
<tr>
<td>Evacuation Capability Assessment (section 1.7.11)</td>
<td></td>
</tr>
<tr>
<td>Community Consultation Details (section 1.7.12)</td>
<td></td>
</tr>
</tbody>
</table>
1.10. Checklist C – Caravan Park Compliance Report – approval to operate

Where NO changes have occurred since the last approval to operate was granted, below are the mandatory items to be submitted with an application for approval to operate:

<table>
<thead>
<tr>
<th>MANDATORY ITEMS – NO changes since last approval to operate</th>
<th>SUPPLIED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signed statement stating: no changes to the caravan park have occurred since the last approval to operate was granted</td>
<td></td>
</tr>
<tr>
<td>Signed Evacuation Capability Assessment (section 1.7.11)</td>
<td></td>
</tr>
<tr>
<td>Proof that actions identified in the Flood Emergency Management Plan and Evacuation Capability Assessment are implemented</td>
<td></td>
</tr>
</tbody>
</table>

Where changes have occurred since the last approval to operate was granted, below are the mandatory items to be submitted with an application for approval to operate:

<table>
<thead>
<tr>
<th>MANDATORY ITEMS – changes since last approval to operate</th>
<th>SUPPLIED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Flood Certificate or Flood Assessment Report including Caravan Park Flood Risk Precinct Information (section 1.7.1)</td>
<td></td>
</tr>
<tr>
<td>Flood Emergency Management Plan (section 1.7.10)</td>
<td></td>
</tr>
<tr>
<td>Evacuation Capability Assessment (section 1.7.11)</td>
<td></td>
</tr>
<tr>
<td>Survey Plan (section 1.7.4)</td>
<td></td>
</tr>
<tr>
<td>Current Community Plan</td>
<td></td>
</tr>
</tbody>
</table>

The below items may be required to be submitted with an application for approval to operate (refer section 1.11.6):

<table>
<thead>
<tr>
<th>REQUIRED?</th>
<th>SUPPLIED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Survey Information (section 1.7.5)</td>
<td></td>
</tr>
<tr>
<td>Proof that actions identified in the Flood Emergency Management Plan and Evacuation Capability Assessment are implemented.</td>
<td></td>
</tr>
</tbody>
</table>
1.11. Schedules

1.11.1. Schedule 1 - Glossary

The following key terms will assist in working through the requirements contained in this DCP/LAP. For the purpose of this DCP/LAP, the following definitions have been adopted:

**AEP / Annual exceedance probability** means the chance of a flood of a given or larger size occurring in any one year, usually expressed as a percentage.

**Amenity block** means a community building used as a shower block, toilet block or laundry block.

**Annexe** is as defined by the Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2005:

An annexe is a moveable dwelling that:
- is an attachment to a re-locatable home or caravan, and
- is used as an extension of the habitable area of the re-locatable home or caravan, and
- is capable of being erected or removed within 24 hours.

**Associated structure** is as defined by the Local Government Act 1993:

An associated structure means:
- a carport, garage, shed, pergola, veranda or other structure designed to enhance the amenity of a moveable dwelling and attached to or integrated with, or located on the same site as, the dwelling concerned, or
- a separating wall between 2 moveable dwellings.

**Australian height datum (AHD)** is a common national surface level datum corresponding approximately to mean sea level.

**Bearing capacity** is defined in geotechnical engineering as the capacity of soil to support the loads applied to the ground, such as the loads from housing foundations for example.

**Bypass channels** redirect a portion of floodwater away from areas under threat from flooding, and so reduce flood levels along the channel downstream of the diversion.

**Camp site** is as defined by the Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2005:

A camp site means an area of land within a camping ground on which a campervan or tent may be installed or, in the case of a primitive camping ground, on which a campervan, tent or caravan may be installed, and that is designated as a camp site by the approval for the camping ground.

**Caravan** is as defined by the Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2005:

A caravan means a moveable dwelling that is designed so as to be registrable as a trailer under the Road Transport (Vehicle Registration) Act 1997, but does not include a camper trailer.

**Carport** means a covered car parking space with no walls other than the abutting walls of a moveable dwelling from which the structure projects, provided that no more than two sides of the car port are enclosed.
Community building is as defined by the Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2005: community building means a building (such as a shower block, toilet block or laundry block) that is used or intended to be used in connection with a community amenity, and includes a building that is to be used as a manager's or caretaker's office or residence.

Community map is as defined by the Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2005: community map means:
(a) in relation to a manufactured home estate – means a scale map that accurately shows the road reserves, the community amenities and the dwelling sites within the manufactured home estate, and
(b) in relation to a caravan park or camping ground – means a scale map that accurately shows:
   (i) the access roads, community amenities and community buildings within the caravan park or camping ground, and
   (ii) the number, size, location and dimensions of dwelling sites or camp sites within the caravan park or camping ground, and
   (iii) in relation to a dwelling site or camp site within the caravan park or camping ground, the particular off-site parking space or spaces (if any) designated for use by the occupier of the dwelling site or camp site.

Complex in this Policy means a caravan park, camping ground or manufactured home estate.

Compliance report is a document prepared by a suitably qualified engineer, detailing how a proposed development complies with the requirements of this Policy.

Development is defined in Part 4 of the Environmental Planning and Assessment Act, 1979.

Conveyance is a direct measure of the flow carrying capacity of a particular cross-section of a stream or stormwater channel. (For example, if the conveyance of a channel cross-section is reduced by half, then the flow carrying capacity of that channel cross-section will also be halved).

Development control plan (DCP) is a detailed guideline that includes procedures and development requirements to be followed when preparing and lodging development proposals. A DCP can apply to a particular type of development or to a particular area. A DCP refines or supplements a regional environmental plan or local environmental plan and is made according to the Environmental Planning and Assessment Act 1979. A DCP adds to the controls in the LEP and cannot therefore include anything that is contrary to the LEP.

Dwelling site is as defined by the Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2005: dwelling site:
   (a) in relation to a manufactured home estate – means an area of land within the manufactured home estate that is designated as a dwelling site by the approval for the manufactured home estate, and
in relation to a caravan park – means an area of land within the caravan park on which a moveable dwelling may be installed and that is designated as a dwelling site by the approval for the caravan park.

(c) **Ensuite facility** is as defined by the Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2005: 

**ensuite facility**, in relation to a dwelling site, means a building, part of a building or an associated structure that contains at least a shower, toilet and handbasin, is provided for the exclusive use of the occupiers of the site and is located on or adjacent to the site.

**Effective warning time** is the time available after receiving advice of an impending flood and before the floodwaters prevent appropriate flood response actions being undertaken.

**Environmental planning instrument** means a state environmental planning policy, a regional environmental plan, or a local environmental plan.

Evacuation capability means the ability of a park manager and staff to evacuate people and to remove all the towable on-site moveable dwellings and other assets identified to be relocated (e.g. tourists’ vans, vehicles, boats) from the flood prone area to a location above the PMF, having regard to the number of moveable dwellings and assets to be moved, the available resources with which to move them (caravan park staff and equipment, without recourse to the emergency services), the required time to move them, the capacity and suitability (e.g. in terms of impacts on traffic) of the evacuation route and intended storage location, and the effective warning time.

**Flexible annexe** is as defined by the Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2005.

**flexible annexe** means an annexe that (apart from any rigid support frame and any floor, or any door, window or other securable opening, constructed of non-flexible material) consists entirely of canvas or other flexible material.

**Flood affected** means that a parcel of land is either fully or partly within the floodplain.

**Flood assessment report** is a document prepared by a suitably qualified hydraulic engineer, detailing existing flood risk for a catchment.

**Flood certificate** is a document providing flood information for a particular parcel of land - it can be obtained from Council.

**Flood compatible materials** include those materials used in buildings that are resistant to damage when inundated.

**Flood conveyance** is a direct measure of the flow carrying capacity of a particular cross-section of a stream or stormwater channel.

**Flood fringe** is that part of the floodplain remaining after the floodway and flood storage areas have been defined.
**Floodplain** means the area of land which is subject to inundation by floods up to and including the probable maximum flood event, that is, flood prone land.

**Floodplain risk management plan** is a plan developed in accordance with the principles and guidelines contained in the NSW Government Floodplain Management Manual. It usually includes both written and diagrammatic information describing how particular areas of flood prone land are to be used and managed to achieve defined objectives.

**Floodplain risk management study** is a study that identifies and compares various flood risk management options. This includes an assessment of their social, economic, ecological and cultural impacts, together with opportunities to maintain and enhance river and floodplain environments.

**Flood planning area** means the area of land below, or islands within, the flood planning level that are subject to flood related development controls.

**Flood planning level** means the combination of flood level and freeboard selected for planning purposes, as determined in floodplain risk management studies and incorporated in floodplain risk management plans.

**Flood proofing** means a combination of measures incorporated in the design, construction and alteration of individual buildings or structures subject to flooding, to reduce or eliminate flood damages.

**Flood prone land (FPL)** means the land susceptible to flooding by the probable maximum flood event (that is, land within the floodplain) as indicated on the map marked "Flood Prone Land" deposited in the office of the Council as amended from time to time.

**Floodway** means those parts of the floodplain where a significant discharge of water occurs during floods. They are often aligned with natural defined channels. Floodways are areas that, even if only partially blocked, would cause a significant redistribution of flood flow, or a significant increase in flood levels. (and/or velocities).

**Flood storage areas** are those parts of the floodplain that are important for the temporary storage of floodwaters during the passage of a flood.

**Flood study** is a technical investigation of flood behaviour. It defines the nature of flood risk by establishing the extent, level and velocity of floodwaters. The study also provides information on the distribution of flood flows across various sections of the flood plain for the full range of flood events up to and including the PMF.

**Fluvial geomorphology** is the branch of geology that examines the formation and structure of the features of the surface of the earth which is created by flowing rivers.

**Freeboard** is a factor of safety typically used in relation to the setting of floor levels, levee crest levels etc. Freeboard is expressed as additional height on top of the flood level and provides a factor of safety to compensate for uncertainties in the estimation of flood levels across the floodplain. Freeboard is included in the flood planning level.

**Garage** means an enclosed single storey structure capable of accommodating not more than two motor vehicles which is either attached to a moveable dwelling or detached.
Habitable room in a residential situation is a living or working area, such as a lounge room, dining room, rumpus room, kitchen, bedroom or workroom. In an industrial or commercial situation it is an area used for offices or to store valuable possessions susceptible to flood damage.

Holiday van is as defined by the Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2005:

holiday van means a moveable dwelling (other than a tent) that is or usually is continuously located on a short-term site and used primarily by its owner for occasional occupancy for holiday purposes.

Hydraulics is a term given to the study of water flow in waterways - in particular, the evaluation of flow parameters such as water level and velocity.

Hydraulic impact assessment report is a document prepared by a suitably qualified hydraulic engineer, detailing how a proposed development will change flood behaviour on and off the site as well as how the new development itself will be impacted by flooding.

Installation is as defined by the Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2005:

installation means:
(a) in relation to a manufactured home or a relocatable home—the process of connecting together the major sections of the manufactured home or relocatable home, and any associated structures forming part of the manufactured home or relocatable home, and attaching them to footings, or
(b) in relation to an associated structure—the process of constructing or assembling the components of the associated structure, and (if appropriate) attaching them to footings,
and includes the connection of gas, electricity, telephone, water, sewerage and drainage services.

Land filling means to place or allow to fall upon any land any ballast, rock, stone, shingle, gravel, sand, clay, earth, cinders, debris or any other matter or thing so as to alter the contours or levels of the land.

Local drainage means small scale inundation in urban areas outside the definition of major drainage as defined in the FDM. Local drainage problems invariably involve shallow depths (less than 0.3m) with generally little danger to personal safety.

Local overland flooding means inundation by local runoff rather than overbank discharge from a stream, river, estuary, lake or dam.

Long-term site is as defined by the Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2005:

long-term site means a dwelling site that is specified in the approval for a caravan park as being a long-term site.

Manufactured home is as defined within the Dictionary of the Local Government Act 1993:

manufactured home means a self-contained dwelling (that is, a dwelling that includes at least one kitchen, bathroom, bedroom and living area and that also includes toilet and laundry facilities), being a dwelling:
Caravan Parks in Flood Prone Areas (DCP/LAP)

(a) that comprises one or more major sections, and
(b) that is not a registrable vehicle within the meaning of the Road Transport (Vehicle Registration) Act 1997, and includes any associated structures that form part of the dwelling.

Manufactured home estate is as defined by the Local Government Act 1993:
 manufactured home estate means: land on which manufactured homes are, or are to be, erected.

Merit approach is an approach, the principles of which are embodied in the Floodplain Development Manual, which weighs social, economic, ecological and cultural impacts of land use options for different flood prone areas together with flood damage, hazard and behaviour implications, and environmental protection and well being of the State’s rivers and floodplains.

Moveable dwelling is as defined by the Local Government Act 1993.
 moveable dwelling means:
(a) any tent, or any caravan or other van or other portable device (whether on wheels or not), used for human habitation, or
(b) a manufactured home, or
(c) any conveyance, structure or thing of a class or description prescribed by the regulations for the purposes of this definition.

Park van is as defined by the Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2005:
 park van means a moveable dwelling (other than a tent), whether or not capable of being registered under the Road Transport (Vehicle Registration) Act 1997, that:
(a) is or usually is continuously located on a short-term site, and
(b) is provided for hire, and
(c) is used by a site occupier other than the owner of the moveable dwelling primarily for holiday purposes.

Probable maximum flood (PMF) is the largest flood that could conceivably occur at a particular location, usually estimated from probable maximum precipitation. Generally, it is not physically or economically possible to provide complete protection against this event. The PMF defines the extent of flood prone land, that is, the floodplain.

Probable maximum precipitation (PMP) is the greatest depth of precipitation for a given duration meteorologically possible over a given size storm area at a particular location at a particular time of the year, with no allowance made for long-term climatic trends (World Meteorological Organisation, 1986). It is the primary input to the estimation of the probable maximum flood.

Regulation means the Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds & Moveable Dwellings) Regulation 2005.

Reliable access means the ability for people to safely evacuate an area subject to imminent flooding within effective warning time having regard to the depth and velocity of floodwaters, the suitability of the evacuation route, and without the need to travel through areas where the “water depth - velocity product” is greater than 0.3m²/s.
Relocatable home is as defined by the Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2005:

relocatable home means:
(a) a manufactured home, or
(b) any other moveable dwelling (whether or not self-contained) that comprises one or more major sections, including any associated structure that forms part of the dwelling, but does not include a tent, caravan or campervan or any moveable dwelling that is capable of being registered under the Road Transport (Vehicle Registration) Act 1997.

Rigid annexe is as defined by the Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2005:

rigid annexe means an annexe that is not a flexible annexe.

Risk means the chance of something happening that will have an impact. It is measured in terms of consequences and probability (likelihood). In the context of this Policy, it is the likelihood of consequences arising from the interaction of floods, communities and the environment.

Roughness coefficients describe the resistance of the bed of a channel to the flow of water within it. They are used in equations calculating energy loss due to roughness of a surface.

Short-term site is as defined by the Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2005:

short-term site means a dwelling site on which a moveable dwelling that is ordinarily used for holiday purposes may be installed and that is specified in the approval for a caravan park as being a short-term site.

Suitably qualified hydraulic engineer means an experienced and qualified professional engineer, recognised as a chartered professional engineer by the Institution of Engineers Australia in the field of civil engineering, flood risk management, emergency management, structural engineering or similar, acting at all times within their experience and qualifications, and able to demonstrate to Council that they have the experience and qualifications to act as required.

Tourist and camping site means a short-term or camping site in a caravan park or a camping site in a camping ground that is available for hire by tourists and does not have or usually have a moveable dwelling continuously located on site.

Towable on-site moveable dwelling means a moveable dwelling that is or usually is continuously located on site, and has been approved to be installed on the basis that the structure will be removed from the flood prone area within the effective warning time. It would typically be maintained with quick-release tie-downs, draw-bar and wheels attached and serviceable, services readily detachable, and not attached to or impeded by non-towable moveable dwellings or associated structures or other objects.
1.11.2. Schedule 2 – Flood Information Enquiries and Flood Certificates

One component of your application is to determine whether the land proposed for development is flood prone. To do this you can:

a) Look at Council’s online mapping by:
   i. Searching Council’s website www.shoalhaven.nsw.gov.au - the zoning details of properties within the Shoalhaven can be found in the LEP maps online. Where council has flood information, this is shown on the “flood planning area” map. Alternatively you can look at the individual catchment maps in the flood risk section.
   ii. Attending Council’s Customer Service Counter in the Administration Building to view the mapping, or
   iii. Contacting Council by either phone, email or in writing and request the flood information for a subject site.

OR;

b) Consult the Section 149 Planning Certificate (149 certificate).

A 149 certificate for a parcel of land may state whether or not the land is subject to “flood related development controls”.

Please note that land may still be flood prone even though the 149 Certificate contains no reference to flooding. Historical information is not contained in certificates and further research should be undertaken if the property is in the vicinity of a watercourse or if the contours suggest a local flowpath may cross the land. While existing flood information may not exist there is the possibility that a property is flood affected and further investigations by a suitably qualified engineer would be warranted.

A 149 Certificate can be obtained by contacting Council.

If the property is flood affected you will need to obtain a Flood Certificate from Council. An application fee applies in accordance with Council’s Fees and Charges. Figure 7 details the procedure for making a flood certificate request.

Figure 7: Procedure for obtaining a Flood Certificate from Council

Complete a flood certificate request in person from a customer service counter at Council’s administration buildings or access the electronic form online via Council’s homepage: www.shoalhaven.nsw.gov.au

Enter all required information, property details and preferred mode of reply. Submit the completed form.

You will be sent an invoice; once the invoice has been paid your request will be completed by a flood engineer within 10 working days.
1.11.3. Schedule 3 – Technical Reporting Requirements

Flood Assessment Report

A Flood Assessment Report must be prepared by a suitably qualified and experienced engineer recognised under the National Professional Engineers Register (NPER) in this field. The full name of the person who prepared the report, relevant qualifications and registration number are to be provided on the front page of the report.

The assessment report provides information on existing flood risk for a catchment and is to be commensurate with the NSW Floodplain Development Manual and must include the following information:

a) A description of the creek or drainage system that is relevant to the flood characteristics of the site, whether located on, adjacent to or remote from the development site;

b) A plan showing cross-sections through the site. As a guide, the following cross-section information should be provided:
   • A minimum of 5 cross-sections, at a maximum distance of 20m apart, should be taken through the site, perpendicular to the likely flow path (i.e. the direction of the cross-section may not necessarily be in a single straight line);
   • One cross-section should be at the upstream end and one cross-section at the downstream end of the proposed development site;
   • Cross-sections should extend at least as high as the highest flood level available at the site and if possible be wide enough to cover the full width of the floodplain at that location; and
   • The cross-sections should be plotted at a suitable exaggerated scale (i.e. the vertical scale is not necessarily the same as the horizontal scale);

c) Flood levels for the PMF, 1%, 2%, 5% and 10% AEP events for the predevelopment scenario (all assumptions, calculations and modelling output tables must be provided);

d) Flood velocities and vectors for the 1% AEP event for the predevelopment scenario (all assumptions, calculations and modelling output tables must be provided);

e) Provisional Hazard categories based on depth and velocity as well as obvious other hazards such as evacuation difficulties as per the requirements of the 2005 NSW Floodplain Development Manual;

f) Provisional Hydraulic categories based on depth and velocity as per the requirements of the 2005 NSW Floodplain Development Manual; and

g) Plans showing the results of (c) to (f) as well as the location of the proposed development.

h) Caravan Park Flood Risk Precinct/s as per section 1.5.1.

Please note:

a) The modelling shall include climate change considerations as per current Government Guidelines for both sea level rise and predicted changes in rainfall.

b) The modelling shall include a 50% and 100% blockage analysis of all existing drainage structures that may affect the development site.
c) Localised flow effects shall be investigated and reported on where relevant.
d) The roughness coefficients used shall allow for fully vegetated stream conditions in order to account for potential revegetation of degraded areas without impact on flood levels.
e) In areas where local sub-catchment flooding, such as flows from drains, overland flow paths or similar, interact with overall catchment flooding from waterways and lakes; or, with ocean inundation a joint probability analysis of flood behaviour shall be undertaken.

Hydraulic Impact Assessment/Report

For some development a Hydraulic Impact Assessment/Report is required as part of the Caravan Park Compliance Report, demonstrating that the development will not increase flood hazard or flood damage to other properties or adversely affect flood behaviour for a 5% AEP up to the PMF scenario. Flooding from all possible sources must be taken into account.

A Hydraulic Impact Assessment/Report must be prepared by a suitably qualified and experienced civil engineer recognised under the National Professional Engineers Register (NPER) in this field. The full name of the person who prepared the report, relevant qualifications and registration number are to be provided on the front page of the report.

This Schedule describes two methods for assessing hydraulic impacts of proposed developments. The two methods are:

- **Assessment method 1** — Cross-section Analysis (No Computer Modelling);
- **Assessment method 2** — Use of Existing Flood Study data or Preparation of a Site-Specific Model (Computer Modelling).

Method 1 will be sufficient for small scale development proposals. For larger developments, developments in sensitive areas, or where special circumstances exist, Council may require assessment method 2 to be used.

Both assessment methods need to be commensurate with the NSW Floodplain Development Manual. In some circumstances, Council may determine the method(s) to be used.

**Assessment method 1 - Cross-section Analysis (No Computer Modelling)**

In order to satisfy the requirement that the development will not increase flood hazard or potential flood damage to other properties or adversely affect flood behaviour for the full range of flood scenarios, the applicant must demonstrate that:

i. The proposed development will not involve fill volumes that occupy more than 1% of the available 20%, 5% and 1% AEP flood volume on the development site or involve cutting or filling in floodways.

*Please note: it is too simplistic to assume that earthworks will have a negligible impact on the hydraulics of a waterway if the net cut and fill volumes for the PMF balance out. Hydraulic processes are complex and a simple “total fill < total cut” equation will not guarantee that the flood storage capacity of a waterway corridor are maintained. It is therefore necessary to check net cut and fill volumes within the site over a range of flood events.*
ii. the proposed development will not adversely change flow direction and velocity or create any new preferential flow paths for the PMF, 1%, 2%, 5%, and 10% AEP flood events; and

iii. The proposed development will not change the flood conveyance at any of the cross sections up to and including the PMF.

*Please note: The flood conveyance should be calculated at each cross-section for pre-development and post-development conditions. Flood conveyance should be calculated at a range of water levels, at each cross-section, including the 1% AEP and PMF. All assumptions, particularly those relating to hydraulic roughness, must be documented, especially where the development results in a change in hydraulic roughness.*

*In special circumstances, small size developments inside a floodway may not reduce conveyance (e.g. minor alterations or additions carried out in the ‘lee’ of an existing structure). In such cases, Council may require assessment using Assessment Method 1 and 2 of this Schedule to demonstrate that conveyance is not being reduced.*

This method does not require computer modelling. It checks for changes in flood storage volume, flood behaviour and conveyance at critical cross sections only through the proposed development.

This approach, whilst simpler than computer modelling, assumes a thorough knowledge of flood behaviour to ensure that the cross-section locations are representative of the principal impacts of the development.

In addition to the survey details and pre-development flood information, the following shall be submitted, accompanied by appropriate supporting written information:

a) Post development flood level plots for the PMF, 1%, 2%, 5% and 10% AEP flood events at all cross sections (all assumptions, calculations and modelling output tables must be provided);

b) Post development in-stream and overbank flow velocity vector plots for the 1% AEP event at all cross sections (all assumptions, calculations and modelling output tables must be provided);

c) Calculation results for all calculations undertaken in order to demonstrate the above requirements and;

d) Pre and post development ground surface levels — this information should be shown on each cross-section, with areas of cut and fill clearly shown.

**Assessment method 2** - Use of Existing Flood Study or Preparation of Site-Specific Flood Study (Computer Modelling)

This method requires computer modelling. An existing flood study model may be used if available and suitable (e.g. it contains sufficient local detail).

For large scale developments or developments in critical locations, a flood study using a fully dynamic one or two dimensional hydraulic computer model may be required. Such a flood study would be prepared in a manner consistent with the NSW Floodplain Development Manual, *Australian Rainfall and Runoff — A Guide to Flood Estimation* (Institution of Engineers, Australia) and relevant Council codes.
In addition to the survey details and pre development flood information, the following shall be submitted in plan form, accompanied by appropriate supporting written information:

a) Post development water surface contours — these should be provided in metres to Australian Height Datum (m AHD);
b) Post development flood profiles — these should be provided at a suitable vertical and horizontal scale such that any changes in flood levels are easily identified;
c) Post development velocity vectors — these show direction and relative size of flood velocities and should be provided in metres per second (m/s);
d) Difference plots for flood levels and velocities for the 20% and 1% AEP flood events.
e) Post development contours of flood velocities multiplied by depth of flooding over ground level indicating provisional hydraulic categories as per the requirements of the 2005 NSW Floodplain development manual — these should be provided to one decimal place.
f) Post development provisional hazard categories based on depth and velocity as well as obvious other hazards such as evacuation difficulties as per the requirements of the 2005 NSW Floodplain Development Manual.

An interpretation of the results clearly indicating the effects of the proposed development on general and local flood behaviours and potential impacts on neighbouring properties is to be provided. This interpretation should clearly inform the last section of the Caravan Park Compliance Report which seeks to provide a detailed assessment of how the proposed development will achieve the objectives and performance criteria of this DCP/LAP.

Please note:
- A range of flood sizes should be chosen for the above analyses so that the full impacts of the development can be assessed. Typically, the flood sizes to be considered would be: a 20% AEP, 5% AEP, 1% AEP and probable maximum flood.
- For the post-development scenario, all proposed works and structures, including any revegetation and enhancements should be included in the analysis.
- All assumptions relating to hydraulic roughness should be clearly documented.
- Flood levels and velocities need to be computed not only at the site but also at an appropriate distance upstream and downstream to allow the principal impacts of the development to be determined.

Structural conditions for developments affected by flood

Where required, a structural engineer must certify that a building and/or structure will be able to withstand hydrostatic and hydrodynamic forces of flood waters including debris and buoyancy forces based on relevant depth, velocity and debris loadings for the specific site. Some guidance on this issue is provided in Appendix A of the Hawkesbury and Nepean floodplain Management Steering committee, Reducing Vulnerability of Buildings to Flood Damage (2006) (www.ses.nsw.gov.au).
1.11.4. Schedule 4 – Flood Proofing

There are many different ways in which to reduce flood damages and flood proofing is generally recommended for any building, installation or structure on land that is considered by Council to be flood prone. Flood proofing refers to the design and construction of buildings, installations and the like with appropriate water resistant materials such that flood damage is minimised, should it be inundated. Certain types of materials are better able to withstand inundation than others, for example, plasterboard and chipboard, both materials commonly used for the internal wall linings and cupboard fittings of a house, can be badly damaged on inundation and may have to be replaced. In contrast, double brick construction can withstand inundation and may only require a hose and scrub down when the flood subsides.

Adequate flood proofing of structures and buildings in flood liable areas is an effective and equitable means of reducing flood damage. More information on flood proof materials can be found in schedule 5 of DCP 106 Amendment 1 – Development on Flood Prone Land.
1.11.5. Schedule 5 – Installation / Activity Types

The installation/activity types (IA types) listed in Table 2 are not exhaustive, they are indicative only. *Where an installation or activity does not fit within the IA types, assessment will be undertaken based on merit in accordance with the NSW Floodplain Development Manual provisions.* Council will determine, based on the documentation provided to Council, which IA type the proposal fits into.

Table 2 is to be used in conjunction with Schedule 6.

**Table 2: Installation / Activity type description - IA types**

<table>
<thead>
<tr>
<th>Installation/Activity Type (abbreviation)</th>
<th>Installation/Activity Type (full description)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long-term moveable dwelling or relocatable home</td>
<td>Long-term site in caravan park or dwelling site in manufactured home estate occupied by moveable dwelling. Sometimes described as “permanents”.</td>
</tr>
<tr>
<td>Privately owned moveable dwelling – short term</td>
<td>Short-term site occupied by privately owned moveable dwelling. Sometimes described as “annuals” or “semi-permanents”. This may include manufactured homes.</td>
</tr>
<tr>
<td>Park owned moveable dwelling – short term</td>
<td>Short-term site occupied by moveable dwelling (other than a tent) owned by park and provided for tourist hire. This may include manufactured homes.</td>
</tr>
<tr>
<td>Rigid annexe</td>
<td>Rigid annexe is an annexe that is not a flexible annexe as defined by the Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2005.</td>
</tr>
<tr>
<td>Minor Associated structure</td>
<td>Associated structures such as a carport, small shed (&lt;6m²), pergola, veranda or similar</td>
</tr>
<tr>
<td>Large Associated structure</td>
<td>Garage or large shed (≥ 6m²)</td>
</tr>
</tbody>
</table>
### Caravan Park Flood Risk Precinct

**New complexes, extensions to existing complexes and installations**

Note: development controls in the matrix do not apply to existing installations.

<table>
<thead>
<tr>
<th>Installation / Activity Type</th>
<th>Caravan Park Flood Risk Precinct</th>
<th>HIGH</th>
<th>HIGH</th>
<th>MEDIUM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Replacement of existing development already in a high caravan park flood risk precinct</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>New development in a high caravan park flood risk precinct</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>New development in a medium caravan park flood risk precinct</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term moveable dwelling or relocatable home</td>
<td>Privately owned moveable dwelling – short term</td>
<td>1*</td>
<td>3*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Park owned moveable dwelling – short term</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rigid annexe</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Minor associated structure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term moveable dwelling or relocatable home</td>
<td>Privately owned moveable dwelling – short term</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Park owned moveable dwelling – short term</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rigid annexe</td>
<td></td>
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<tr>
<td></td>
<td>Minor associated structure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large Associated Structure</td>
<td>Privately owned moveable dwelling – short term</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Park owned moveable dwelling – short term</td>
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<tr>
<td></td>
<td>Rigid annexe</td>
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<tr>
<td></td>
<td>Minor associated structure</td>
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</tr>
<tr>
<td></td>
<td>Large Associated Structure</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Minimum Floor Level:**
  - Replacement of existing development: 1*, 3*  
  - New development: 1*, 3*  
  - New development: 1*, 2*, 3*  

- **Building components:**
  - Replacement of existing development: 1, 2  
  - New development: 1, 2  
  - New development: 1, 2, 1, 2, 1, 2, 1, 2  

- **Design & Maintenance:**
  - Replacement of existing development: 1, 3, 4  
  - New development: 1, 3, 4  
  - New development: 1, 3, 4, 1, 3, 4, 2, 2, 1, 4  

- **Hydraulic Impact:**
  - Replacement of existing development: 1, 2  
  - New development: 1, 2  
  - New development: 1, 2, 1, 2, 1, 2, 1, 2  

- **Evacuation Access:**
  - Replacement of existing development: 1, 2, 3, 4  
  - New development: 1, 2, 3, 4  
  - New development: 1, 2, 3, 4, 1, 2, 3, 4, 1, 2, 3, 4  

- **Management:**
  - Replacement of existing development: 1, 2  
  - New development: 1, 2  
  - New development: 1, 2, 1, 1, 1, 1, 1, 1  

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*Matrix continued on next page.* Legend on page 45  
[Not permitted]  
[No flood related development controls]
## Caravan Parks in Flood Prone Areas (DCP/LAP)

### Schedule 6 – Development Control Matrix – Continued - New complexes, extensions to existing complexes and installations

<table>
<thead>
<tr>
<th>Caravan Park Flood Risk Precinct</th>
<th>LOW</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Installation / Activity Type</strong></td>
<td><strong>New development in a low caravan park flood risk precinct</strong></td>
</tr>
<tr>
<td>Long-term moveable dwelling or relocatable home</td>
<td></td>
</tr>
<tr>
<td>Privately owned moveable dwelling – short term</td>
<td></td>
</tr>
<tr>
<td>Park owned moveable dwelling – short term</td>
<td></td>
</tr>
<tr>
<td>Rigid annexe</td>
<td></td>
</tr>
<tr>
<td>Minor associated structure</td>
<td></td>
</tr>
<tr>
<td>Large Associated Structure</td>
<td></td>
</tr>
</tbody>
</table>

| Minimum Floor Level | |
| Building components | |
| Design & Maintenance | 4 4 4 |
| Hydraulic Impact | |
| Evacuation Access | 1,2,3,4 1,2,3,4 1,2,3,4 |
| Management | |

Legend on next page

No flood related development controls
Legend: Development Control Matrix - New complexes, extensions to existing complexes and installations

Minimum Floor Level
1. 2050 1% AEP flood level plus 0.5m freeboard*
2. 2050 5% AEP flood level plus 0.5m freeboard*
3. 2050 5% AEP flood level*

*Note: all development is to be built to the 2050 flood levels (above) or demonstrate that it can be relocated or elevated to the 2050 flood levels, if be directed by Council in the future to comply with future sea level rise conditions.

Building Components
1. Any portion of the structure below the Flood Planning Level to be built from materials that will minimise potential damage due to inundation.
2. Where practicable, electrical installations to be above the Flood Planning Level. Otherwise, they must be able to be isolated in the event of flooding.

Design and Maintenance
1. Appropriate engineer's report to certify that the structure can withstand forces of flood-water, debris and buoyancy up to the 1% AEP flood.
2. Appropriate engineer's report to certify that the structure will not become floating debris during a 1% AEP flood.
3. Re-distribution of dwelling type sites within the complex should occur where existing location of structures poses substantial risk to occupants and property.
4. If required as a flood refuge, appropriate engineer's report to certify that the structure can withstand forces of flood-water, debris and buoyancy up to the PMF.

Hydraulic Impact
1. Applicant to demonstrate that the development will not increase flood effects elsewhere. Council may require this to be certified by an appropriate engineer.
2. Appropriate consulting engineer’s report for earthworks of volumes exceeding 250 cubic metres or with a length of more than 20m in high hazard areas.

Evacuation Access
1. Sufficient time/access must be available to evacuate pedestrians to an area of refuge (above at least the 1% AEP flood level but preferably above the PMF and with suitable community facilities).
2. Reliable access should be available for ambulance, SES, fire brigade, police and other emergency services up to a 1% AEP flood event.
3. Sufficient time and access should be available to evacuate vehicles and towable vans/dwellings/structures to an area above the 1% AEP flood level.
4. Applicant to ensure that the Caravan Park Flood Evacuation Plan is updated to include the new installation.
Management

1. Applicant to demonstrate that there is an area where hazardous and valuable goods can be stored above the 1% AEP level plus freeboard.

2. Applicant to demonstrate that there is an area where animals can find refuge above the 1% AEP level plus freeboard.
1.11.7. Schedule 7 – Flood Emergency Management Plan Template

**INSERT NAME OF CARAVAN PARK**

**FLOOD EMERGENCY PLAN**

**WHY PLAN FOR FLOODING?**

**Future flooding is inevitable.**
Although a long time may elapse between floods, prevailing weather conditions can change quickly.

**Planning for flooding saves lives and prevents injury.**
A flood can be life threatening to you, your staff and park patrons.

**Planning for flooding reduces damage and speeds the clean-up process.**
A flood can cause hundreds of thousands of dollars worth of damage to caravan park assets.

**To contribute towards compliance with Occupational Health and Safety standards.**

**To meet the requirements of the Approval to Operate.**

**INSERT PHOTO OF CARAVAN PARK**

---

**ACKNOWLEDGMENT AND DISCLAIMER**

This flood emergency plan is based on a template prepared by Bewsher Consulting Pty Ltd for Shoalhaven City Council, and funded by the Natural Disaster Mitigation Programme 2006/07 (two-thirds) and Council (one-third). Responsibility for the contents of each plan rests with the individual caravan park. The Consultant, Council and Commonwealth accept no responsibility or liability for the implementation or effectiveness of this plan, nor for any injury, death or damage that may result from a flood.
### Table 1

<table>
<thead>
<tr>
<th>Caravan park name</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative or former caravan park name</td>
<td></td>
</tr>
<tr>
<td>Caravan park street address</td>
<td></td>
</tr>
<tr>
<td>Caravan park postal address</td>
<td></td>
</tr>
<tr>
<td>Caravan park phone no.</td>
<td></td>
</tr>
<tr>
<td>Zoning</td>
<td></td>
</tr>
<tr>
<td>Land tenure (e.g. Crown, freehold, leasehold)</td>
<td></td>
</tr>
<tr>
<td>Name of creek/river/lake posing flood risk</td>
<td></td>
</tr>
</tbody>
</table>

### Table 2

<table>
<thead>
<tr>
<th></th>
<th>PHONE(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Park owner</td>
<td>(INSERT NAME OF OWNER)</td>
</tr>
<tr>
<td>Park manager</td>
<td>(INSERT NAME OF MANAGER)</td>
</tr>
<tr>
<td>SES</td>
<td>132 500 (emergency help)</td>
</tr>
<tr>
<td>(INSERT NAME OF LOCAL UNIT)</td>
<td>INSERT NUMBER</td>
</tr>
<tr>
<td>Bureau of Meteorology</td>
<td>1300 659 218</td>
</tr>
<tr>
<td>NSW Flood Warning Centre</td>
<td><a href="http://www.bom.gov.au/hydro/flood/nsw/">www.bom.gov.au/hydro/flood/nsw/</a></td>
</tr>
<tr>
<td>Service</td>
<td>Contact Information</td>
</tr>
<tr>
<td>-------------------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>Fire</td>
<td>000 (emergency)</td>
</tr>
<tr>
<td></td>
<td>(INSERT NAME OF LOCAL UNIT)</td>
</tr>
<tr>
<td></td>
<td>INSERT NUMBER</td>
</tr>
<tr>
<td>Police</td>
<td>000 (emergency)</td>
</tr>
<tr>
<td></td>
<td>(INSERT NAME OF LOCAL STATION)</td>
</tr>
<tr>
<td></td>
<td>INSERT NUMBER</td>
</tr>
<tr>
<td>Medical</td>
<td>000 (emergency)</td>
</tr>
<tr>
<td></td>
<td>(INSERT NAME OF LOCAL DOCTOR)</td>
</tr>
<tr>
<td></td>
<td>INSERT NUMBER</td>
</tr>
<tr>
<td>Shoalhaven City Council</td>
<td>4429 3111 (office hours)</td>
</tr>
<tr>
<td></td>
<td>4421 3100 (after hours emergencies)</td>
</tr>
<tr>
<td>RTA traffic enquiries</td>
<td>132 701</td>
</tr>
<tr>
<td>DOCS Disaster Recovery</td>
<td>1800 018 444</td>
</tr>
</tbody>
</table>
**PART C – FLOOD RISK ASSESSMENT**

### Flood History

Information about flood history may be obtained from Council, flood studies and long-term residents. Flooding may include inundation by large waves and raised ocean levels. Indicate the **RECORD** flood. Rows may be added or deleted as appropriate.

<table>
<thead>
<tr>
<th>DATE OF FLOOD AFFECTING CARAVAN PARK SITE (most recent first)</th>
<th>LOCAL CONSEQUENCES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Flood Levels and Extents

Information about potential floods may be obtained from Council and flood studies. For any single park there may be a range of flood levels for the one ‘design’ event e.g. 2.1–2.3 m AHD.

<table>
<thead>
<tr>
<th></th>
<th>HISTORICAL MAXIMUM YEAR:</th>
<th>10% AEP</th>
<th>5% AEP</th>
<th>2% AEP</th>
<th>1% AEP*</th>
<th>0.5% AEP</th>
<th>0.2% AEP</th>
<th>PMF*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10 YEAR ARI</td>
<td>20 YEAR ARI</td>
<td>50 YEAR ARI</td>
<td>100 YEAR ARI</td>
<td>200 YEAR ARI</td>
<td>500 YEAR ARI</td>
<td>PMF*</td>
<td></td>
</tr>
<tr>
<td>Flood level</td>
<td>(m AHD)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion of sites flooded (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source/date of flood data:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* AEP = annual exceedence probability (measured as a percentage), which is a term used to describe the probability of floods occurring. Large floods occur rarely, whereas small floods occur more frequently. For example, a 1% AEP flood occurs (or is exceeded) on average once every 100 years. It has a 1% chance of occurring in any one year.

ARI = average recurrence interval (measured in years), which is a term used to describe the probability of floods occurring. Large floods occur rarely, whereas small floods occur more frequently. For example, a 100 year ARI flood occurs (or is exceeded) on average once every 100 years. It has a 1% chance of occurring in any one year.

PMF = probable maximum flood, which is the largest flood likely to ever occur. It has a very rare chance of occurring.

m AHD = metres Australian Height Datum, which is common national plane of level approximately equivalent to the height above sea level.
### Ground Levels, Floor Levels and Flood Depths

Table 5

Ground and floor levels may be available from council or from survey plans prepared by a registered professional surveyor. Flood depths are calculated by subtracting ground/floor levels from flood levels. Additional rows may be inserted as required.

<table>
<thead>
<tr>
<th>FEATURE</th>
<th>GROUND LEVEL (m AHD)</th>
<th>FLOOD DEPTH OVER GROUND (M)</th>
<th>FLOOR LEVEL (m AHD)</th>
<th>FLOOD DEPTH OVER FLOOR (M)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20 YEAR ARI</td>
<td>100 YEAR ARI</td>
<td>PMF</td>
<td>20 YEAR ARI</td>
</tr>
<tr>
<td>Office</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amenities block(s)</td>
<td>(A)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowest site in park</td>
<td>(INSERT SITE NUMBER)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Highest site in park</td>
<td>(INSERT SITE NUMBER)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Park entrance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low-point on access road</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low-point on levee</td>
<td>(indicate “n/a” if no levee)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source/date of ground/floor level survey:
Flood Hazard Classification and Flood Planning Level(s)

<table>
<thead>
<tr>
<th>Flood hazard and hydraulic categorisation:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Flood planning level(s)</td>
<td></td>
</tr>
<tr>
<td>(m AHD):</td>
<td></td>
</tr>
</tbody>
</table>

Information about flood hazard classification and flood planning level(s) may be obtained from Council. For any single park there may be more than one flood hazard classification. High hazard means that the flood depths and velocities would likely be dangerous.
This section should be completed by the park owner/manager. The number of sites with readily moved structures refers to structures that could be moved in the often short time available after a flood warning, and should be realistic. Vans or cabins that are affixed to a rigid annexe or to services such as sewerage that are not easily detached, that have their draw-bars removed and tyres flat would not generally qualify as ‘readily moved structures’. Note that the purpose of this Table is to inform emergency response, not to assess compliance with any regulation.

<table>
<thead>
<tr>
<th>TYPE OF SITE</th>
<th>NUMBER OF SITES</th>
<th>NUMBER OF SITES WITHIN 100Y ARI FLOOD EXTENT</th>
<th>NUMBER OF SITES WITH READILY MOVED STRUCTURES</th>
<th>APPROX. NUMBER OF PEOPLE (PEAK SEASON)</th>
<th>APPROX. NUMBER OF PEOPLE (NON-PEAK SEASON)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long-term vans/cabins ('permanents')</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Holiday vans/cabins ('annuals')</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Park cabins (for hire)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Park vans (for hire)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Powered sites (for casual visitors)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unpowered sites (for casual visitors)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other assets within 100 year ARI flood extent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(e.g. manager's house, office, kiosk/shop, amenities block(s), sewage treatment plant, boats, fuel, gas)
**Flood Warning Arrangements and Constraints**

Information about flood warning arrangements and constraints may be obtained from the SES.

<table>
<thead>
<tr>
<th>NAME (NUMBER)</th>
<th>ARE HEIGHT/TIME PREDICTIONS ISSUED? (Y/N)</th>
<th>AGENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference gauge</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Flood warning time and duration**

<table>
<thead>
<tr>
<th>TIME (DAYS/HOURS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available flood warning time, which is a broad measure of the flood warning time typically available for a given catchment. Flash flooding is often defined as flooding which peaks within six hours of the causative rain.</td>
</tr>
<tr>
<td>Effective flood warning time, which is the time available after receiving advice of an impending flood and before the floodwaters prevent appropriate flood response actions (e.g. evacuation) being taken.</td>
</tr>
<tr>
<td>Duration of the 100 year flood</td>
</tr>
</tbody>
</table>

**Consequences at threshold flood levels**

A local description/indicator could be ‘low point on internal access road’ or ‘site no. 25 flooded’. Note that relating consequences at a caravan park to a sometimes distant flood gauge involves uncertainty due to flood slopes. Rows may be added as appropriate.

<table>
<thead>
<tr>
<th>LOCAL DESCRIPTION/INDICATOR</th>
<th>LOCAL LEVEL (m AHD) (^\text{a}) (Refer to Table 5)</th>
<th>GAUGE HEIGHT AT REFERENCE GAUGE (m) (Refer to Table 8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egress from park is cut</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flooding commences at park</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Park entirely inundated</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^{a}\) m AHD = metres Australian Height Datum, which is common national plane of level approximately equivalent to the height above sea level.
### Evacuation Arrangements and Constraints

Information about evacuation arrangements and constraints may be obtained from the SES. Note that the evacuation setting may vary with the magnitude of flooding.

Giving thought to access and topographic setting and using the diagrams below, classify the evacuation setting represented by the caravan park for a range of floods:

#### Evacuation setting

<table>
<thead>
<tr>
<th>Table 11</th>
<th>20 YEAR ARI EVACUATION SETTING</th>
<th>100 YEAR ARI EVACUATION SETTING</th>
<th>PMF EVACUATION SETTING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LOW FLOOD ISLAND (LFI)</strong></td>
<td>Access road cut and no overland or alternative road access possible; island below predicted flood level</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LOW TRAPPED PERIMETER (LTP)</strong></td>
<td>Access road cut and no overland or alternative road access possible; site below predicted flood level</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>OVERLAND ESCAPE ROUTE (OER)</strong></td>
<td>Access road cut but overland escape/rescue possible (on foot or AWD vehicle); site below predicted flood level</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HIGH FLOOD ISLAND (HFI)</strong></td>
<td>Access road cut and no overland or alternative road access possible; island above predicted flood level</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HIGH TRAPPED PERIMETER (HTP)</strong></td>
<td>Access road cut and no overland or alternative road access possible; site above predicted flood level</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RISING ROAD ACCESS (RRA)</strong></td>
<td>Access uninterrupted and via all-weather rising road (usual route or alternative); site below predicted flood level</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
INDIRECTLY AFFECTED AREA (IAA)

Access uninterrupted and via all-weather rising road (usual route or alternative); site above predicted flood level; one or more services failed
### Key evacuation information

This section should be completed by the park owner/manager.

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assembly area</td>
</tr>
<tr>
<td>Evacuation route</td>
</tr>
<tr>
<td>Evacuation centre (people)</td>
</tr>
<tr>
<td>Mobile caravan, vehicle, boat storage area</td>
</tr>
<tr>
<td>Hazardous substances storage area</td>
</tr>
</tbody>
</table>

### Summary of flood risk

This section should be completed by the park owner/manager. It should consist of a short, simple statement about flood risk at your caravan park. In addition to the previous material, indicate how fast floodwaters are expected to be, whether the park is at risk of flooding from raised ocean levels, and what level of protection, if any, is afforded by a levee.
PART D – KEY PRIORITIES AND TRIGGERS

This section should be completed by the park owner/operator, with assistance from the SES. The key priorities in any flood emergency are **ENSURING SAFETY** and **REDUCING PROPERTY DAMAGE**.

If you are in an area with a flood height prediction system, use river height predictions to trigger action. You should commence actions even when a Flood Watch is issued.

If you are in an area without a flood height prediction system, you will have to use other triggers (e.g. Severe Weather Warning, Severe Thunderstorm Warning, heavy rain, rising water).

If you are in an area adjacent to a coastal lake or estuary you may be subject to flooding from high ocean levels. The Bureau of Meteorology may issue a Severe Weather Warning for such events.

Refer to Table 10 to identify threshold flood levels. Refer to Table 14 for the detailed actions for each trigger. For this exercise, **assume peak occupancy**. Note that **the time allowed for the key responses such as evacuation must be less than the effective warning time** (Table 9). This can be achieved by using an earlier trigger (e.g., a Flood Watch instead of a Flood Warning) and/or by increasing resources.

### Examples of triggers

**Flood height prediction system**
- Flood Watch issued
- Flood Warning issued – predicted ...... m at ............ gauge within ...... hours’ time

**No flood height prediction system**
- Severe Weather Warning issued
- Severe Thunderstorm Warning issued
- Based on heavy rain/river levels/predicted tides, evacuation route anticipated to close within ...... hours’ time
- Based on heavy rain/river levels/predicted tides, lowest sites anticipated to flood within ...... hours’ time

### Examples of key actions

(Note that not all examples will suit a particular park)
- Advise park occupants
- Self-evacuation of park occupants
- Assist any occupants with special needs
- Move any mobile vans and vehicles to storage area(s) (note that prior approval may be required to move privately-owned assets)
- In the case of ‘annuals’ with absent owners, lift property from annexes to vans (note that prior approval may be required)

### Key triggers initiating main responses

<table>
<thead>
<tr>
<th>TRIGGER</th>
<th>KEY ACTION</th>
<th>RESOURCES</th>
<th>TIME NEEDED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 13
## Prepare – Before the Flood

<table>
<thead>
<tr>
<th>ACTION</th>
<th>WHEN</th>
<th>WHO</th>
<th>HOW (e.g. Resources)</th>
<th>COMPLETED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintain a flood emergency kit (e.g. first aid kit, portable radio,</td>
<td>Always</td>
<td>Manager</td>
<td></td>
<td>□</td>
</tr>
<tr>
<td>torch, waterproof bags, etc)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Back up records, accounts and computer files and store off site and</td>
<td></td>
<td>Manager</td>
<td></td>
<td>□</td>
</tr>
<tr>
<td>out of floodplain</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Document OH&amp;S procedures for a flood</td>
<td></td>
<td>Manager</td>
<td></td>
<td>□</td>
</tr>
<tr>
<td><em>(see NSW SES Business FloodSafe toolkit for ideas)</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Display evacuation procedures in office, amenities block(s), park-</td>
<td></td>
<td>Manager</td>
<td></td>
<td>□</td>
</tr>
<tr>
<td>owned dwellings</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check that vans/cabins are tied down to prevent their being blown or</td>
<td></td>
<td>Manager,</td>
<td>Inspections</td>
<td>□</td>
</tr>
<tr>
<td>washed away</td>
<td></td>
<td>owners of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>permanents and holiday vans</td>
<td></td>
<td>permanents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check that moveable dwellings intended to be shifted before a flood</td>
<td></td>
<td>Manager,</td>
<td>Inspections</td>
<td>□</td>
</tr>
<tr>
<td>retain their mobile status</td>
<td></td>
<td>owners of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>permanent and holiday vans</td>
<td></td>
<td>permanents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anchor any fuel tanks located below the 100 year ARI flood level</td>
<td></td>
<td>Manager</td>
<td></td>
<td>□</td>
</tr>
</tbody>
</table>
### PREPARE – BEFORE THE FLOOD

<table>
<thead>
<tr>
<th>ACTION</th>
<th>WHEN</th>
<th>WHO</th>
<th>HOW (e.g. Resources)</th>
<th>COMPLETED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investigate possibility of obtaining flood insurance for park-owned dwellings</td>
<td></td>
<td>Owner</td>
<td></td>
<td>□</td>
</tr>
</tbody>
</table>

## RESPOND – FLOOD POSSIBLE

<table>
<thead>
<tr>
<th>ACTION</th>
<th>WHEN (see Table 13)</th>
<th>WHO</th>
<th>HOW (e.g. Resources)</th>
<th>COMPLETED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obtain information about flooding via <a href="http://www.bom.gov.au">www.bom.gov.au</a>, SES, radio station (INSERT NAME/FREQUENCY)</td>
<td>e.g. Flood Watch issued/local conditions</td>
<td>Manager</td>
<td></td>
<td>□</td>
</tr>
<tr>
<td>Check availability of staff and others to assist in emergency</td>
<td></td>
<td>Manager</td>
<td></td>
<td>□</td>
</tr>
<tr>
<td>Check availability of equipment (e.g. trucks) to assist with evacuating people and relocating property</td>
<td></td>
<td>Manager</td>
<td></td>
<td>□</td>
</tr>
<tr>
<td>Advise park occupants of possible flood, assembly areas, evacuation routes, evacuation centres</td>
<td></td>
<td>Manager/staff</td>
<td>Door-knock, loud-speaker, notice board</td>
<td>□</td>
</tr>
<tr>
<td>Notify any advance bookings or prospective visitors of situation</td>
<td></td>
<td>Staff</td>
<td>Phone</td>
<td>□</td>
</tr>
<tr>
<td>If isolation is likely, ensure sufficient non-perishable food and other necessities to last a week</td>
<td></td>
<td>Staff</td>
<td></td>
<td>□</td>
</tr>
<tr>
<td>ACTION</td>
<td>WHEN (see Table 13)</td>
<td>WHO</td>
<td>HOW (e.g. Resources)</td>
<td>COMPLETED</td>
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<tr>
<td>Obtain information about flooding via <a href="http://www.bom.gov.au">www.bom.gov.au</a>, SES, radio station (INSERT NAME/FREQUENCY)</td>
<td>e.g. Flood Warning issued/local conditions</td>
<td>Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warn park occupants of flood and request they vacate park via evacuation route or wait for assistance (if without private transport)</td>
<td></td>
<td>Manager/staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arrange transport to evacuation centre for any people without private transport</td>
<td></td>
<td>Staff</td>
<td>(possibly with SES assistance)</td>
<td></td>
</tr>
<tr>
<td>Maintain a register of departing park occupants (see Appendix) and make available to Police or SES upon request</td>
<td></td>
<td>Manager/staff</td>
<td>Registration form (see Appendix)</td>
<td></td>
</tr>
<tr>
<td>Notify any advance bookings or prospective visitors of situation</td>
<td></td>
<td>Staff</td>
<td>Phone</td>
<td></td>
</tr>
<tr>
<td>Use safe manual handling procedures (for moving assets and equipment); wear protective clothing (including non-slip footwear and puncture-resistant gloves)</td>
<td></td>
<td>Staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relocate any mobile vans and vehicles to storage area(s) (if prior approval given, for privately-owned vans)</td>
<td></td>
<td>Staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACTION</td>
<td>WHEN (see Table 13)</td>
<td>WHO</td>
<td>HOW (e.g. Resources)</td>
<td>COMPLETED</td>
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</tr>
<tr>
<td>Relocate or tie down any unattended boats (if prior approval given, for privately-owned boats)</td>
<td></td>
<td>Staff (possibly with SES assistance)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lift items from annexes to vans for absentee ‘annuals’ (if prior approval given)</td>
<td></td>
<td>Staff (possibly with SES assistance)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secure objects that are likely to float or cause damage (including gas bottles)</td>
<td></td>
<td>Staff (possibly with SES assistance)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Block toilets, sinks and floor wastes with sand bags</td>
<td></td>
<td>Staff (possibly with SES assistance)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relocate chemicals/poisons above potential flood level</td>
<td></td>
<td>Staff (possibly with SES assistance)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turn off electricity, gas and water at sites and to park when required</td>
<td></td>
<td>Manager/staff</td>
<td></td>
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</tbody>
</table>
### RESPOND – DURING A RISING FLOOD

<table>
<thead>
<tr>
<th>ACTION</th>
<th>WHEN <em>(see Table 13)</em></th>
<th>WHO</th>
<th>HOW (e.g. Resources)</th>
<th>COMPLETED</th>
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<tbody>
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<tr>
<td>ACTION</td>
<td>WHEN</td>
<td>WHO</td>
<td>HOW (e.g. Resources)</td>
<td>COMPLETED</td>
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</tr>
<tr>
<td>Check with SES and Police before allowing people back into flooded area</td>
<td>Flood receded and warning lifted</td>
<td>Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have electric and gas fixtures checked by qualified personnel</td>
<td></td>
<td>Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never use matches, cigarette lights or any other naked flame since flammable gas may be trapped inside</td>
<td></td>
<td>Manager/staff/occupants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beware of sharp debris, snakes and spiders, and wading in contaminated water; wear protective clothing (including non-slip footwear and puncture-resistant gloves)</td>
<td></td>
<td>Manager/staff/occupants</td>
<td></td>
<td></td>
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<tr>
<td>Boil all water supplies until declared fit to drink</td>
<td></td>
<td>Manager/staff/occupants</td>
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<tr>
<td>Dispose of any food or medication contacted by floodwater</td>
<td></td>
<td>Manager/staff/occupants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remove debris and clean, repair and disinfect premises</td>
<td></td>
<td>Manager/staff/occupants</td>
<td></td>
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</tr>
<tr>
<td>Salvage, clean and dry as much as possible</td>
<td></td>
<td>Manager/staff/occupants</td>
<td></td>
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<tr>
<td>Task</td>
<td>Responsible Party</td>
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<td>----------------------------------------------------------------------</td>
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<tr>
<td>Replace any lost furniture, fittings and floor coverings with</td>
<td>Owner, owners of ‘permanents’ and ‘annuuals’</td>
<td></td>
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<td></td>
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<tr>
<td>more flood resistant products</td>
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<tr>
<td>Return any vans/vehicles/boats that were moved off site</td>
<td>Staff (possibly with SES assistance)</td>
<td></td>
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<tr>
<td>Implement strategies for winning back customers</td>
<td>Regional tourism body, owner/manager</td>
<td></td>
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</tbody>
</table>
Other resources available to caravan park owners/managers to assist in planning for flood and other hazards such as bushfire are listed below:

<table>
<thead>
<tr>
<th>RESOURCE</th>
<th>PUBLISHER</th>
<th>WEB-SITE</th>
</tr>
</thead>
</table>
The map should show on an aerial photograph or site plan base (to scale):

- the level/extent of the 100 year ARI flood (see Table 4);
- the ground/floor levels of key ‘elements at risk’ (see Table 5);
- the location of levees (where applicable);
- the assembly point(s) and the evacuation route (see Table 12);
- local flood gauge post (where applicable); and
- any other distinctive features influencing flood risk and response.

Any copies of a coloured map should be made in colour to preserve clarity.

Should any modifications to the map be required in the future, the background layers (excluding aerial photography), together with a list of organisations and persons qualified to update the map using a Geographical Information System (GIS), may be available from Council.
# APPENDIX: CARAVAN PARK EVACUATION REGISTRATION FORM

**DISTRIBUTION:**
- Retain original
- Fax one copy to SES and/or Police upon request

<table>
<thead>
<tr>
<th>GIVEN NAME/SURNAME</th>
<th>USUAL ADDRESS</th>
<th>CONTACT DETAILS/MOBILE PHONE NO</th>
<th>AUTHORITY TO RELEASE UPON PUBLIC ENQUIRY</th>
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<tbody>
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<td>Yes / No</td>
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<td>Yes / No</td>
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</table>

**Caravan Park:**

**Date/Time:**
<table>
<thead>
<tr>
<th>Caravan Parks in Flood Prone Areas (DCP/LAP)</th>
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<tbody>
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<td>Yes / No</td>
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<tr>
<td>Yes / No</td>
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</tbody>
</table>
1.11.8. Schedule 8 – Flood Evacuation Procedures Template for Display at Caravan Park

**INSERT NAME OF CARAVAN PARK**

**FLOOD EVACUATION PROCEDURES**

Please be informed that **parts of this caravan park are liable to flooding**. More detail about the extent of this risk is contained in the park’s Flood Emergency Plan, which is available for inspection at the park office.

The **site occupier shall evacuate the premises when directed to do so** by park management, an authorised Council officer, the Police, State Emergency Services personnel, Fire Brigade officers, or any other person on whom the park has delegated authority to give directions in an emergency.

The following table details the **actions park patrons shall take** in the event of an evacuation:

**PREPARE**

- **For owners of moveable dwellings on long-term sites or holiday van sites**: check and secure tie downs; elevate furniture and equipment as high as possible when vacating van for extended period
- **For owners of moveable dwellings intended to be relocated before a flood**: maintain van in condition allowing it to be towed (e.g. drawbar attached, tyres inflated, services readily detachable)

**RESPOND**

- Obtain updated flood information from park manager and radio station….. on frequency…..
- Isolate power and other services to moveable dwellings, and close down gas bottles
- Secure items that could float away, and elevate furniture as high as possible
- **For residents who need to evacuate**: collect personal papers, photos, medicines, toiletries and clothing
- Relocate mobile vans, boats and trailers to designated storage area
- Check for road closures with park management
- Register with park management as exiting the park
- Exit park via evacuate route

**NEVER DRIVE, RIDE OR WALK THROUGH FLOODWATER –**
**THESE ARE THE MAIN CAUSES OF DEATH DURING FLOODS**

**EMERGENCY CONTACTS**

Life-threatening emergency: 000
Park manager: **INSERT NUMBER**
SES: 132 500

This sheet should be accompanied by a map that shows the evacuation assembly point(s), evacuation route, location of fire hoses, and the extent of the 100 year ARI flood.
This sheet and map should be **displayed** in the park office, amenities block(s) and all park cabins/vans.
This sheet and map should be **distributed** annually to permanents and owners of holiday vans, and upon arrival to casual visitors.
PART 2. OTHER MATTERS

2.1. Implementation
The Planning and Development Group has responsibility for implementation of this DCP/LAP through the development approvals process.

2.2. Review
This DCP/LAP shall be reviewed within one year of the election of every new Council in accordance with Section 165 (4) of the Local Government Act 1993.

2.3. Application of ESD Principles
Applying this DCP/LAP ensures ESD principles are considered in terms of flooding for a new complex, extension to existing complex, new installation or an approval to operate in flood affected Caravan Parks.

2.4. Disclaimer
In certain circumstances Council reserves the right to make modifications to this DCP/LAP after its adoption without further consultation. Such circumstances are limited to modifications that will not alter the substance or intent or requirements of the adopted DCP/LAP and may include correction of typographic errors, changes to internal procedures relating to the DCP/LAP, changes to document formatting, alterations to appendices that do not form part of the actual DCP/LAP, amendments resulting from changed or new legislation or consequential to the adoption by Council of another policy, etc..

Every effort has been made to provide complete and accurate information. However, Shoalhaven City Council assumes no responsibility for any direct, indirect incidental or consequential damages arising from the use of information in this document.

Caravan Parks in Flood Prone Areas (DCP 123) - LAP

Adopted by Council: 22/10/2013

And

Became effective from: 06/11/2013

RD Pigg
General Manager
Date