



# Education Centre

## 92-96 Railway Crescent, Broadmeadows

### Flood Risk Management Plan

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Version A  
September 2023

### Steps to operationalisation of this FRMP

1. Replace the cover photo with a post-construction image.
2. Confirm the position of the Responsible Person in Section 1.2.
3. Replace Figure 3-1 and Figure 4-1 if a post-construction aerial image is available.
4. Add location of FRMP – Section 4.1.3.4.
5. Confirm or adjust terminology that is yellow highlighted - **Occupational Health and Safety and Operational Procedures Manual (part of the Risk Management Framework, or equivalent)** – 3 occurrences (Sections.1.6, 4.1.3.1 & 4.2.1).
6. Populate Appendix B.
7. Delete this text box when all activities completed and adjust formatting on this page.

**If flooding is likely  
refer to Appendix A**

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# 1. Introduction

## 1.1 Application

This Flood Risk Management Plan (FRMP) has been prepared for the Education Centre at 92-96 Railway Crescent, Broadmeadows. The Education Centre comprises of two buildings; a northern building for the secondary school and a southern building for the primary school (see Figure 1-1).

The Plan aims to provide guidance to personnel involved in the management and maintenance of the Education Centre as well as to all teaching and administrative staff, on the management of flood risk at the site in order to reduce flood related damage and risk to life (i.e. risk to public safety) due to flooding from the local stormwater drainage system.

Sections 2.2 of this Plan provides an explanation of possible flooding and impacts in the vicinity of the property.

## 1.2 Responsible Person

The Responsible Person (or Delegate) is responsible for the maintenance and application of all elements of this FRMP.

The Responsible Person as per this FRMP is the **Director of the Education Centre**. Details are provided in Appendix B. Delegates are also listed in Appendix B.

## 1.3 Why this FRMP Exists

The predominant risk of flooding in the vicinity of the Education Centre comes from overland flow caused by intense rainfall producing runoff in excess of the capacity of the local underground piped drainage network. As a consequence of the overland flows in the vicinity of the development, and especially along Railway Crescent (see Figure 1-1), there is a risk to personal safety and assets during flood events.

Preparation of this FRMP is a condition of Melbourne Water's consent<sup>1</sup> (Melbourne Water Ref MWA-1297281, dated 29 August 2023) to works associated with the development of the Education Centre. This FRMP has been prepared to the satisfaction of Melbourne Water and the City of Hume.

## 1.4 Purpose of this FRMP

This FRMP details the measures that need to be implemented in relation to the continued use and future development of the site to ensure best possible preparedness as well as appropriate response and recovery measures (i.e. those things that need to be done before, in the lead up to, during and after a flood – the planning, training, monitoring, warning and evacuation procedures and accountabilities) in the event of a significant flood in the vicinity.

The FRMP recognises and is structured to operate independently of but with due regard for:

- Existing severe weather, thunderstorm and flash flood warning services for the Melbourne metropolitan area as provided by the Bureau of Meteorology;

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<sup>1</sup> Pursuant to Section 56 (1) of the *Planning and Environment Act 1987*, Melbourne Water is the Floodplain Management (or Referral) Authority for the Port Phillip and Westernport Catchment Management Authority's area of responsibility which includes relevant parts of the City of Hume.



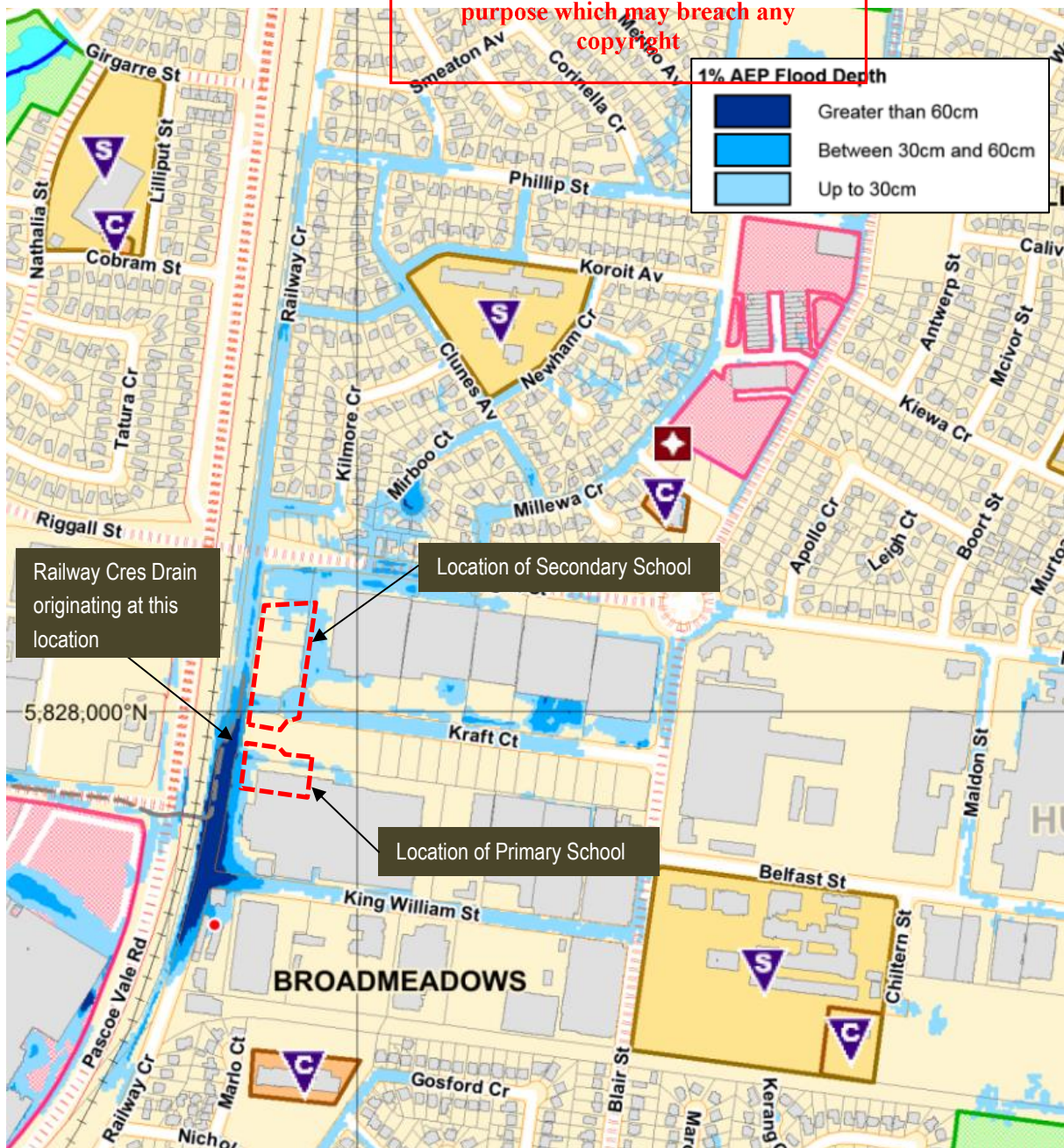


Figure 1-1: Location of the Education Centre with 1% AEP flood extent  
[flood extent extracted from the Hume City Storm and Flood Emergency Plan (VICSES, May 2020)].

- Local flood response activities initiated by the City of Hume and / or VicSES (as the Control Agency for flood response) under the Hume City Council Flood and Storm Emergency Plan or other plans as applicable;
- Provisions of the *Victorian Occupational Health and Safety Act 2004* and particularly Section 21, Section 22 and Section 23.

It follows that the purpose of this FRMP is to guide the Responsible Person (or his / her delegate(s)) in the maintenance and application of flood response procedures so as to manage flood risk at site by facilitating:

- A timely and effective response in the event of a flood which would likely impact the site and, in so



doing, maximise the safety of individuals and assets (i.e. minimise the threat to life and property of staff, children and visitors to the Education Centre) without increasing reliance on emergency service personnel;

- The effective functioning of the Education Centre during small flood events and the restoration of its functionality as quickly as possible after a severe flood event; and
- The identification and documentation of operational, maintenance and other flood related responsibilities associated with the long-term use of the Education Centre.

## 1.5 Familiarity with this FRMP

With appropriate regard for the requirements of the Victorian OH&S Act (2004), particularly the provisions of Section 21, 22 and 23, and successor legislation, it is essential that the Responsible Person and his / her delegate(s) maintain a high degree of familiarity with the content and operation of this FRMP. This familiarity would ideally have been gained through active involvement in:

- Establishing and exercising the procedures that support this FRMP;
- Periodic briefing sessions involving staff at the Education Centre;
- Establishment and refresh of flood related elements of the staff induction program; and
- Driving routine review of procedures and associated tools.

## 1.6 Management of this FRMP

This FRMP has been and is to remain incorporated, as a stand-alone loose-leaf insert, into the **Occupational Health and Safety and Operational Procedures Manual (part of the Risk Management Framework, or equivalent)** established for the Education Centre. A bulleted summary of the Responsible Person's responsibilities with respect to this FRMP is provided in Appendix F.

## 1.7 Using this FRMP

This FRMP takes account of the full range of floods that could reasonably be expected to occur in the vicinity of the Education Centre.

Essential response activities (i.e. actions at site) in the event of a flood that may affect the property are detailed in the **Flood Action Plan at Appendix A.**

## 1.8 Maintenance of this FRMP

The FRMP must be maintained as a "live" document. This means that it must be reviewed routinely and updated as new information comes to hand and also as a result of learning from experience with its application during the flood events (see for example Sections 2, 4, 5 and 6). The importance of this FRMP and its maintenance should not be under-estimated. It is a fundamental principle of emergency management that communities that have thought about a problem and planned for it beforehand are able to cope better than those who have ignored it and hoped it would never occur.

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## 2. Flooding at Site

### 2.1 Background

The Hume Planning Scheme identifies areas in the vicinity of the Education Centre as subject to overland flows during a 1% AEP flood event through a Special Building Overlay (SBO) (see Figure 2-1).

The purpose of the SBO is to identify areas subject to periodic flooding from overland flows caused by runoff in excess of the capacity of the local drainage system.

Any new development within the SBO must minimise on-site flood damage, be compatible with the flood hazard and local drainage conditions and not cause an increase in flood level or flow velocity across the property boundary or on adjacent properties.

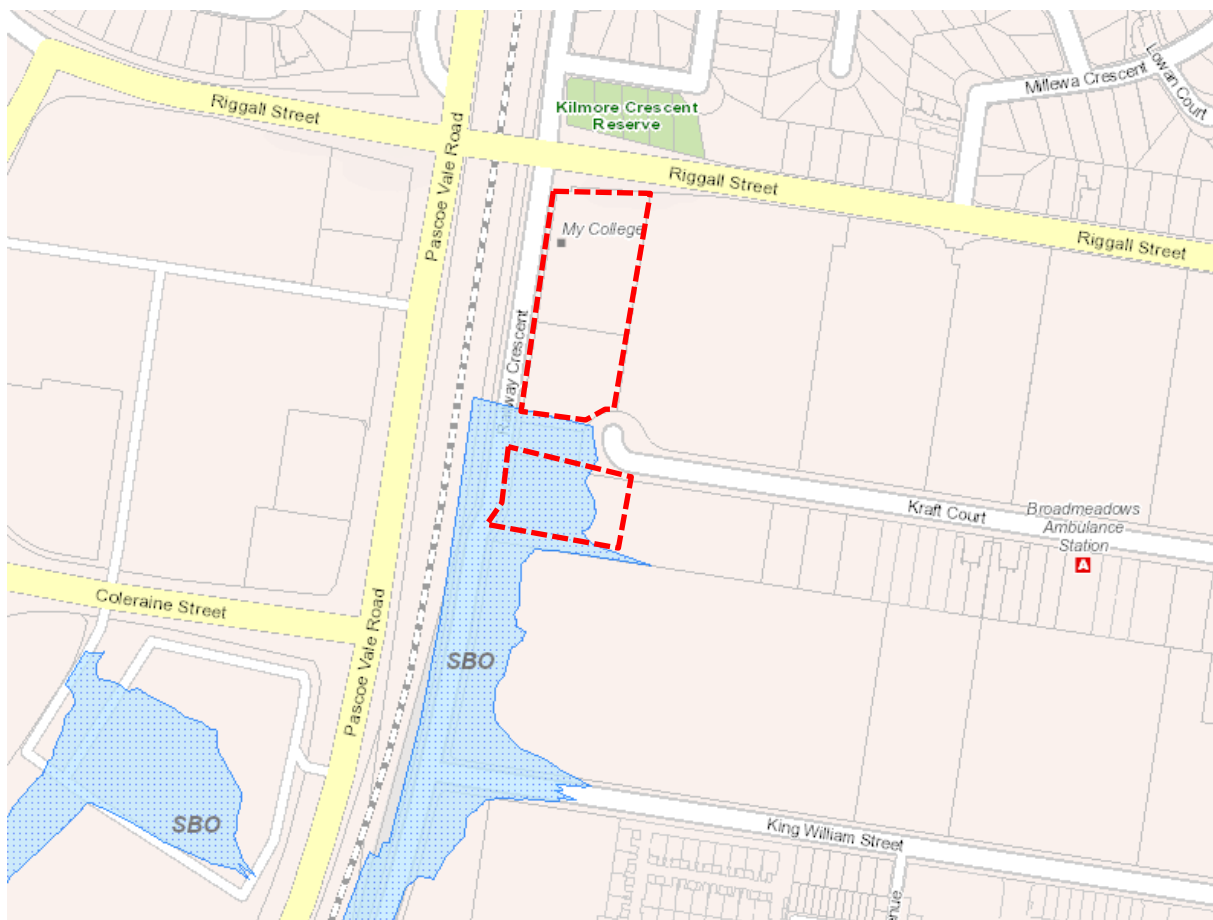


Figure 2-1: Location of the Education Centre (marked in red) with Special Building Overlay (SBO)

### 2.2 Cause of Flooding

The Education Centre is situated opposite the Broadmeadows Activity Centre, a very busy shopping precinct. There is one main underground drain that originates in front of the Education Centre in Railway Crescent, runs beneath the shopping precinct and connects to a 200m long open concrete channel west of Ripplebrook Drive. The open channel outfalls into Yuroke Creek.

While a firm relationship is not available, locally heavy rain (such as associated with thunderstorms) falling at the rate of around 20 mm in 10 minutes is likely to result in local roadside gutters and footpaths



being flooded to a shallow depth. More intense rain (e.g. 35 mm in 30 minutes, 45 mm or more in 1 hour, 60 mm or more in 2 hours, 80 mm or so in 5 to 6 hours) would indicate that local stormwater (or flash) flooding (i.e. overland flows) is likely in the vicinity of the Education Centre. This is likely to result in flooding along Railway Crescent.

Local rain gauges of most relevance to the Education Centre are Broadmeadows and Greenvale Reservoir. Near real-time data are available from the Bureau of Meteorology and Melbourne Water website – see Appendix C.

It should be noted that every flood is different, and a real flood may in fact be somewhat bigger or smaller in magnitude than the 1% AEP flood. This may mean additional (or less) flooding in the vicinity of the property. Care should be taken not to assume that all floods will manifest themselves as described above.

## 2.3 Likely Impacts

The main access to the Education Centre is from Railway Crescent, on the western side of the property. The Education Centre is also accessible from Kraft Court to the east. Riggall Street is immediately to the north while King William Street is to the south.

In the event of a 1% AEP flood, it is expected that:

- Railway Crescent will no longer be trafficable;
- The flood level at the Primary School and the Secondary School will be around 123.76 m AHD and 123.9 m AHD respectively, with flooding along Railway Crescent up to around 1 m deep;
- Parts of Riggall Street will also be flooded, generally less than 300 mm deep but with a few very small pockets of water between 300 mm and 500 mm deep;
- Access from Kraft Court and King William Street will also be inundated to shallow depths of up to a maximum of 300 mm.

In view of the above and particularly with respect to the expected flood depth during a 1% AEP event, access to and egress from the Education Centre is considered to exhibit a potential safety risk during severe flood events. This FRMP is aimed at addressing that risk.

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### 3. Area Covered by this Plan

The Education Centre and surrounding area is shown in Figure 3-1.



Figure 3-1: Location of the Education Centre (marked in red).

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## 4. Preparedness for Flood

### 4.1 What Has Been Done Already

#### 4.1.1 Initial Damage and Flood Risk Reduction Measures

Susceptibility of the Education Centre to flooding and flood damage has been contained by:

- Setting the ground floor level of the Primary School building at 124.06 m AHD (i.e. 300 mm above the 1% AEP flood level);
- Setting the ground floor level of the Secondary School building at 124.62 m AHD (i.e. 720 mm above the 1% AEP flood level);
- Maintaining the open space areas fronting Railway Crescent at natural surface levels so as not to obstruct the passage of overland flows;
- Open style fencing fronting Railway Crescent to allow for passage of floodwater;
- A fully operational public address system that operates across the Education Centre site as well as within both the Secondary and Primary school buildings;
- Development and implementation of this FRMP;
- Allocation of responsibility to the “Responsible Person” for the on-going operation, maintenance and application of this FRMP (see Section 1.2).

#### 4.1.2 Access and Egress from the Education Centre

During a 1% AEP flood event, the flow along Railway Crescent can be up to 1 m deep, thereby posing risk to life. Alternate route to access and egress is via Kraft Court where flow is generally less than 300 mm deep. The rear pedestrian gates opening into Kraft Court are marked in Figure 4-1.

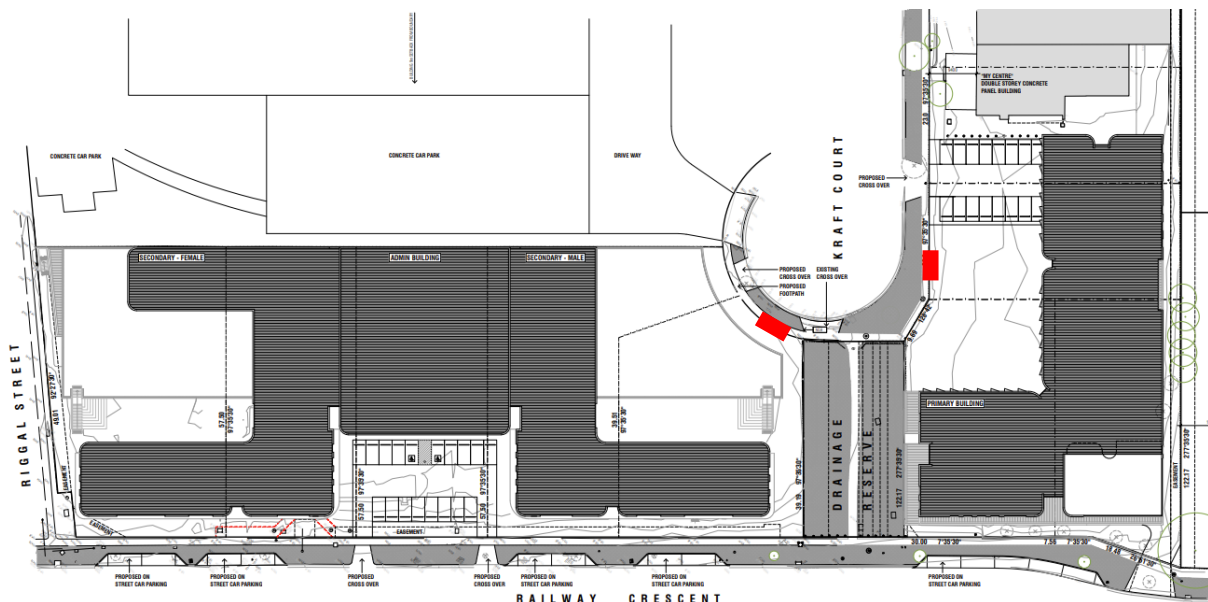


Figure 4-1: Access and egress locations (marked in red) for primary and secondary school buildings

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### 4.1.3 Flood Risk Management Plan

#### 4.1.3.1 Overview of FRMP

This Flood Risk Management Plan (FRMP) details the measures that need to be taken to ensure best possible *preparedness* as well as appropriate *response* and *recovery* measures (i.e. those things that need to be done before, in the lead up to, during and after a flood – the planning, monitoring, warning and evacuation procedures and accountabilities) in the event of a significant flood. These measures are aimed in particular at effectively maximising the safety and well-being of staff, students and visitors to the Education Centre in times of significant flood. The FRMP takes account of the full range of floods that could reasonably be expected to occur at site.

This FRMP has been incorporated into the **Occupational Health and Safety and Operational Procedures Manual (part of the Risk Management Framework, or equivalent)** established for the Education Centre and as such is subject to routine review as part of that framework. See Sections 1.6 and 1.8.

#### 4.1.3.2 Flood Action Plan

A Flood Action Plan is provided in Appendix A. This Plan provides a summary of the key drivers and actions as outlined in this FRMP.

This FRMP and more particularly Appendix A, includes directions for guiding parents, students and staff away from areas that are likely to be flooded and / or are flooded (e.g. Railway Crescent) but does not include a detailed flood evacuation plan. This is because rapid site evacuation is not required in the event of a local flash flood as:

- Flooding occurs very quickly but is short lived;
- The finished floor levels within all buildings are at least 300 mm above the 1% AEP flood level;
- Safe access / egress is available via Kraft Court; and
- In general, it is not good practice to move students into and encourage parents to drive into flood water even when it is shallow as is the case along parts of Kraft Court,

#### 4.1.3.3 Clear Responsibility

Responsibility for the implementation and maintenance of this Plan rests with the Responsible Person (Section 1.2). The Responsible Person must maintain a current list of all delegations relating to the implementation, operation and management of this FRMP. Any person with delegated responsibility must be part of the contact list in Appendix B of this FRMP.

#### 4.1.3.4 Location of FRMP

A hardcopy of this FRMP is kept at -----location----- and a digital copy maintained here: --  
-- file name and path ----- . See also Section 1.6.

### 4.1.4 Access to Flood Warnings and Rain Data

Details on how to access flood and weather-related warnings as well as rain information are provided in Appendix C. See also Section 4.1.5.

### 4.1.5 VicEmergency App

The Responsible Person and delegate(s) are required to maintain access to the VicEmergency App from their personal devices (i.e. mobile phones, tablets) with the Education Centre selected as (one of) their area(s) of interest.

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All severe weather, severe thunderstorm and flash flood related alerts or warnings applicable to the area of interest and received via the VicEmergency App will trigger the Responsible Person (or his / her delegate(s)) to consider the Flood Action Plan at Appendix A.

#### 4.1.6 Improved Flash Flood Warning Services

VicSES and Melbourne Water are investigating and trialling opportunities for the provision of improved flash flood warning services within the Melbourne metropolitan area. If improved services become available, the Responsible Person and delegate(s) should subscribe.

#### 4.1.7 FRMP and Flood Awareness

The Responsible Person must review this FRMP on a regular basis, ideally once per year with the first review occurring within 1 month of this Plan being adopted. The review should comprise a read-through of the document with particular attention to what the Responsible Person or his / her delegate(s) need to do before, during and after a flood event. The review should also trigger adjustment of any details that have changed since the last review and the addition of new relevant information. It should also include a briefing session for all teaching and administrative staff as well as all personnel involved in the management and maintenance of the Education Centre. See also Section 4.2.

It is the responsibility of the Responsible Person or Delegate(s) to coordinate and facilitate the briefing sessions.

#### 4.1.8 Site Induction for New Staff

Any induction process developed and / or implemented for teaching, administration, maintenance and grounds staff should include reference to this FRMP and particularly to flood response and recovery activities and procedures.

### 4.2 What needs to be Done Each Year or More Frequently

#### 4.2.1 Maintenance of this FRMP

This FRMP must be maintained in order to remain effective. As a minimum, this will involve the following:

- Formal allocation of responsibility for the maintenance of this FRMP to the Responsible Person (see Section 1.2 & 4.1.3.3);
- Formal review of this FRMP by the Responsible Person on initial commissioning and thereafter annually (or more frequently if deemed appropriate – see Section 4.1.7) in order to determine:
  - Currency:
    - FRMP is up-to-date and able to be implemented;
    - The induction program is current and refers appropriately to this FRMP;
    - All links from and to other procedures and plans are correct, valid and viable;
    - All contact details at Appendix B (names, telephone numbers – business and after hours, addresses – if required, etc) are correct and that the list is complete.
  - Applicability:
    - With particular attention to any changed conditions at site since the last review.
  - Availability and accessibility:
    - Of this FRMP, all signs and other materials that support and / or are necessary to implement this FRMP (see Section 4.1).
  - Presence and continued good condition of the:

- FRMP and associated procedures;
  - School's public address system (see Section 4.1.1);
  - VicEmergency (or successor or related) App in good working order on the personal devices used by the Responsible Person and by the delegate(s).
- Annual (or more frequent) review and rework of the Flood Action Plan at Appendix A.
  - Formal sign-off on the review with notation of any changes made and any required follow-ups along with the name and position of the person responsible for the changes (see Appendix D).

It is also suggested that periodic risk assessments undertaken as part of **the risk management, OH&S and incident management framework** established for the Education Centre, should include consideration of flooding with due regard for this FRMP. Any outcomes of any actions arising from such assessments must be reflected in this FRMP and / or successor plans.

*Note that while it is possible that response arrangements detailed in this FRMP may appear excessively conservative under some flood conditions, the temptation to relax those arrangements should be strenuously avoided without appropriate professional and informed advice.*

Any and all changes to this FRMP must be documented at Appendix D.

#### 4.2.2 Maintenance of Flood Awareness

Periodically (ideally once per year and perhaps as an extension to another formal activity), the Responsible Person or his / her delegate will conduct a flood response briefing session for all teaching and administrative staff as well as for all personnel involved in the management and maintenance of the Education Centre (see Section 4.1.7). As a minimum, the information session should outline the details of this FRMP including roles and responsibilities with respect to warning, evacuation, and recovery: what the Responsible Person or his / her delegate(s) need to do before, during and after a flood event.

#### 4.3 What Needs to be Done After Each Flood

After each flood that results in inundation of any part of Education Centre and / or triggers the procedures detailed in this FRMP, the Responsible Person must initiate a review and update as appropriate of:

- The effectiveness and appropriateness of the standard operating and associated procedures established for flood – this FRMP (e.g. is the FRMP sufficiently complete, was contact timely and to the correct persons / personnel, etc);
- The appropriateness and inclusiveness of instructions and information contained in this FRMP with particular attention to the Flood Action Plan at Appendix A; and
- The adequacy of measures implemented at site to reduce the risk to life and property from flood.

If the flood event inundated any part of the Education Centre, the Responsible Person must:

- Arrange for the peak water level to be surveyed to AHD and for this and other related information (such as photographs and description of flood impacts and extents) to be recorded at Appendix E.
- Arrange for a sketch of the approximate flood extent complete with notes on flood characteristics (such as flow velocities, flow directions, dangerous areas, impacts, etc) to be prepared and attached to Appendix E.

The Responsible Person must also refer to Section 6 of this FRMP.

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## 5. What to do if a Flood Occurs – this FRMP

### 5.1 What Size Floods Will Affect the Education Centre

Flooding in the vicinity of the Education Centre is most likely to occur with little warning following heavy rain (possibly associated with thunderstorms). Typically, 20 mm in 10 minutes is likely to result in gutters and footpaths being flooded to a shallow depth. More intense rain (e.g. 35 mm in 30 minutes, 45 mm or more in 1 hour, 60 mm or more in 2 hours, 80 mm or so in 5 to 6 hours) would indicate that flooding in the vicinity of the Education Centre is likely.

Flood depths of up to 1 m during a 1% AEP flood event are expected along Railway Crescent, as shown in Figure 1-1. See also Sections 2.2 and 2.3.

### 5.2 How Will it be Known that the Education Centre is Likely to be Flooded

Environmental indicators (e.g. exceptionally heavy rain possibly associated with thunderstorm activity) will provide an indication that the stormwater drains may overflow and inundate the access to the Education Centre. In such an event, it is likely that the VicEmergency App will have provided an alert of heavy rain and / or flash flooding via a Severe Weather or similar warning from the Bureau of Meteorology. It is also likely that local media (radio, television and social) will be reporting on unexpected flooding and related issues within the local area.

Severe Weather warnings issued by the Bureau of Meteorology may include a thunderstorm warning. They are generally issued up to an hour ahead of heavy rain. They are advised through the VicEmergency App and are available from the Bureau and VicSES websites ([www.bom.gov.au](http://www.bom.gov.au) and [www.ses.vic.gov.au](http://www.ses.vic.gov.au)). The heavy rain cells will be visible on weather radar accessed through the Bureau of Meteorology website (<http://www.bom.gov.au/products/IDR024.loop.shtml#skip>) while rainfall data for nearby locations will be available from the Bureau of Meteorology and Melbourne Water websites. See Appendix C for further details.

### 5.3 What Needs to Be Done If There is Flooding

On either hearing a severe weather and / or flash flood warning for the area or observing flood waters overflowing from the roadside gutters, the Responsible Person or his / her delegate(s) should refer to the Flood Action Plan at Appendix A and complete the listed actions as appropriate.

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## 6. Recovery – After the Flood has Receded

### 6.1 Resumption of Activities at the Education Centre

After flood waters have receded, the Responsible Person or his / her delegate(s) shall, as necessary and in the order considered most appropriate at the time while also having regard for safety and timeliness:

- Arrange for an initial inspection and assessment of all parts of the Education Centre and carpark access impacted by flood water.
- Arrange for all flood debris and mud to be cleaned from all trafficked and parking surfaces.
- Arrange a check of all hard surfaces (i.e. lifting of the surface, pot holes, erosion / undermining at the surface edges, etc) for damage. Any damage likely to cause injury to carpark or foot path users must be appropriately isolated to minimise the possibility of injury or damage. Further, actions to repair damage should be initiated as quickly and as safely as possible.
- Arrange for all stormwater collection pits and structures to be cleaned and checked for damage and for actions to repair damage to be initiated as soon as possible.
- Arrange for the peak water level in the vicinity of the Education Centre to be pegged or marked and subsequently surveyed to AHD and recorded at Appendix E.
- Arrange for a sketch of the site with the approximate flood extent complete with notes on flood characteristics (such as estimated flow velocities, flow directions, dangerous areas, etc) to be prepared and attached to Appendix E.
- Collect and collate photographs and other information on flood impacts and extents. See also Section 4.3 and Section 6.3.
- Collate and record observations regarding interactions with and comments from staff and visitors for the feedback into the post-event review process (see Sections 4.3 & 6.2).
- Establish a date / time for resumption of partial / full activities at the Education Centre.

The above checks on the integrity of hard surfaces must continue on a daily basis for a minimum period of two weeks after flood waters have receded.

### 6.2 FRMP Review

Following resumption of use and as soon after the passing of the flood as possible and certainly within four weeks, all aspects of this FRMP and its implementation (particularly Appendix A, Appendix D and Appendix E) must be reviewed by the Responsible Person (see Section 4.3).

### 6.3 Maintenance of Flood Records

The peak height of the flood as measured at various locations across the site along with any notes on flood behaviour and impacts should be recorded at Appendix E to this FRMP by the Responsible Person. Any photographs of the flood event should also be included at Appendix E. See also Section 4.3.

### 6.4 Flood Action Plan

Any changes to likely flood impacts and required actions at site as documented in this FRMP, perhaps following a flood event or as a result of changed conditions at or in the vicinity of the Education Centre, must be captured to a revised version. Any changes must be documented in this FRMP at Appendix D.



## Appendix A Flood Action Plan

DO NOT DRIVE OR WADE THROUGH FLOOD WATER – 150 mm of fast-flowing water can float small car At all times, have consideration for the safety and wellbeing of all staff, students and visitors		
This Table is to be checked and updated after each flood that inundates any part of the Education Centre		
When using this table, it is important to remember that bigger floods tend to rise and travel faster than smaller floods		
Triggers	Flood Threat	Actions Required (refer to Section 5.1 for guidance on the time it will take for flood waters to rise)
<ul style="list-style-type: none"> <li>VicEmergency App alert (severe weather, severe thunderstorm and / or flash flood warning for Broadmeadows).</li> <li>Severe thunderstorm activity (dark red areas on weather radar accessed through the BoM website) in the vicinity of Broadmeadows.</li> <li>Heavy local rain – typically 35 mm in 30 minutes, 45 mm or more in 1 hour, 60 mm or more in 2 hours, 80 mm or so in 5 to 6 hours. Refer to the Broadmeadows and Greenvale Reservoir rain gauges (ref Appendix C).</li> </ul>	Monitor situation	<p>Responsible Person or delegate to:</p> <ul style="list-style-type: none"> <li>Monitor VicEmergency App and Bureau of Meteorology website notifications.</li> <li>Maintain a heightened awareness of possible flooding at site.</li> <li>From time to time, check whether water is flowing out of the grated pits and / or beginning to flood roadside gutters and adjacent footpaths.</li> </ul> <p><b>ADVERTISED PLAN</b></p> <div> <p><b>This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright</b></p> </div>

Flooding of access to / egress from the Education Centre is possible or likely	Notify parents, staff and visitors	<p>Responsible Person or delegate to:</p> <ul style="list-style-type: none"> <li>■ Notify parents/ guardians via SMS (or other means used by the Education Centre) that some local flash flooding is likely. Further: <ul style="list-style-type: none"> <li>• <b>If the flooding begins before school starts</b>, advise parents / guardians to hold off on bringing their children to school. For those who are unable to delay drop-off, advise that they should use the Kraft Court gate(s) and avoid Railway Crescent;</li> <li>• <b>If the flooding begins during school hours</b>, advise parents / guardians that all students are safe and will be kept away from flood water. Advise parents / guardians wishing to collect their children from the Education Centre that they should only do so through the Kraft Court gate(s) and avoid Railway Crescent.</li> </ul> </li> <li>■ Using the school's public address system (or alternative means), arrange for staff and students to shelter within the school buildings pending downgrade of the threat of flash flooding and / or pick-up by parents / guardians.</li> <li>■ Initiate an orderly relocation from the Education Centre of students being picked up by parents / guardians.</li> <li>■ From time-to-time, check whether flood water is continuing to rise in the access roads.</li> <li>■ Continue to monitor VicEmergency App and Bureau of Meteorology website notifications.</li> <li>■ Maintain a heightened awareness of likely flooding at site.</li> </ul>
Water levels are rising - flooding is in progress	Notify students to use alternate route for exit	<p>Responsible Person to:</p> <ul style="list-style-type: none"> <li>■ Appoint delegates at building exits to <ul style="list-style-type: none"> <li>- Prevent students from exiting the Education Centre via Railway Crescent; and</li> <li>- Guide students to leave from Kraft Court if they are being picked-up; or</li> <li>- Guide students to remain in the school buildings to wait out the flash flood.</li> </ul> </li> <li>■ Notify parent/ guardians via SMS (or other means used by the Education Centre) to collect their children via the Kraft Court gate(s).</li> <li>■ From time-to-time check whether flood water is continuing to rise in access roads and that no one is stranded – <b>offer assistance if required but only if safe to do so, else call VICSES on 132 500.</b></li> <li>■ Continue to monitor VicEmergency App and Bureau of Meteorology website notifications.</li> <li>■ Maintain a heightened awareness of flooding at site.</li> <li>■ If there are any welfare or related concerns, call VicSES on 132 500.</li> </ul>

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Flood Water Receding	<p>Responsible Person or delegate to:</p> <ul style="list-style-type: none"><li>■ Confirm that flood water is receding in the vicinity of the Education Centre.</li><li>■ Notify students, staff and visitors via the school's public address system (or other means) that flood water is receding or has receded.</li><li>■ Initiate actions as per Section 6 of this Flood Risk Management Plan.</li></ul>
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## Appendix B Contact Details

This table to be populated by the Responsible Person

	Name	Position	Telephone Numbers	Notes
To be called when this Flood Risk Management Plan is triggered				
		Responsible Person		
		Delegates		List names with contact details
Other useful contacts				
		VicSES – emergency assistance 92 500		
		VicSES – flood and storm info line 1300 842 737		<a href="http://www.ses.vic.gov.au">www.ses.vic.gov.au</a>
		Hume City Council 9205 2200		<a href="https://www.hume.vic.gov.au">https://www.hume.vic.gov.au</a>
		Bureau of Meteorology		<a href="http://www.bom.gov.au">www.bom.gov.au</a> or <a href="http://www.bom.gov.au/hydro/flood/vic">www.bom.gov.au/hydro/flood/vic</a>
		Melbourne Water		<a href="http://www.melbournewater.com.au/content/rivers_and_creeks/rainfall_and_river_level_data.asp">www.melbournewater.com.au/content/rivers_and_creeks/rainfall_and_river_level_data.asp</a>
		VicEmergency		<a href="http://emergency.vic.gov.au/map#now">http://emergency.vic.gov.au/map#now</a>
		Emergency Victoria (EMV)		<a href="http://emergency.vic.gov.au/respond/">http://emergency.vic.gov.au/respond/</a>
		Other services as required		

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## Appendix C Warnings, Data & Related Information

### Access to Severe Weather and Flash Flood Warnings

Severe weather, severe thunderstorm and flash flood warnings for the Melbourne metropolitan area are issued by the Bureau of Meteorology and broadcast by the electronic media (i.e. radio and TV – particularly 774 ABC radio). They are also available from the Bureau of Meteorology website (<http://www.bom.gov.au/>).

All current weather and flood related warnings are also available from the VICSES website <http://www.ses.vic.gov.au>, the EMV website <http://emergency.vic.gov.au/respond/> and via the VicEmergency App.

Other information about flooding as well as all current Bureau-issued flood and weather warnings, is also available from the VICSES website <http://www.ses.vic.gov.au>.

All flood (and other) warnings are pushed from the VicEmergency App to opted-in recipients.

### Access to Weather Radar and Satellite Images

Weather radar and satellite images are available from the Bureau of Meteorology website <http://www.bom.gov.au>.

### Access to Rain Data

Updated rain data are available from the Bureau website <http://www.bom.gov.au/vic/observations/melbourne.shtml>.

Ten minute data for a number of rainfall and water level gauge locations around Melbourne, can also be obtained from the Melbourne Water website (<https://www.melbournewater.com.au/water-data-and-education/rainfall-and-river-levels#/>).

Rain gauges of most interest and relevance to the property are:

- Broadmeadows rain gauge at Glenlitta Avenue
- Greenvale Reservoir rain gauge

### Flash Flooding – Guidance on Likelihood – Rainfall Rates and Depths

While a firm relationship is not available, rain falling at the rate of around 20 mm in 10 minutes is likely to result in gutters and footpaths being flooded to a shallow depth. More intense rain (e.g. 35 mm in 30 minutes, 45 mm or more in 1 hour, 60 mm or more in 2 hours, 80 mm or so in 5 to 6 hours) is likely to cause flash flooding in the vicinity of the Education Centre.

Half hourly and 10 minute rainfall totals are available respectively from the Bureau of Meteorology and Melbourne Water websites <http://www.bom.gov.au/vic/observations/melbourne.shtml> and <https://www.melbournewater.com.au/water-data-and-education/rainfall-and-river-levels#/>

Ten (10) minute rainfall radar images are available from the Bureau of Meteorology website <http://www.bom.gov.au/products/IDR024.loop.shtml#skip>.

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## Appendix D FRMP Review/ Amendment Record

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FPM00195\_EducationCentre\_Broadmeadows\_FRMP\_VersionA.docx

## Appendix F Summary of Responsibilities Detailed in this FRMP

Following is a bulleted summary of the responsibilities of the Responsible Person as detailed in this FRMP.

### **Flood Action Plan (Appendix A) – Sections 2.2, 4.1.3.2, 4.3 & 6.4**

- Drive annual review and rework.

### **Maintenance and annual review of the FRMP - Section 1.5, 1.8, 4.1.7, 4.2.1, 4.3 & 6.2**

- Review the FRMP annually and sign-off as per written procedures (see Appendix D).
- Maintain an up-to-date contact list for key personnel and other stakeholders (see Appendix B).
- Maintain a current list of all delegations relating to the implementation, operation and management of this FRMP. Any person with delegated responsibility must be included in the contact list at Appendix B.
- Following a flood event that impacts access to / egress from the Education Centre, review the effectiveness and appropriateness of procedures established for flood including the adequacy of this FRMP and measures implemented at site.

### **Maintain awareness of this FRMP and likely flood inundation – Sections 4.1.7, 4.1.8 & 4.2**

- Coordinate and facilitate the conduct of a flood response briefing for all teaching and administrative staff as well as all personnel involved in the management and maintenance of the Education Centre, within one (1) month of this Plan being adopted and thereafter annually.
- Maintain flood related elements of the induction program for teaching, administration, maintenance and grounds staff.

### **If access to / egress from the Education Centre is flooded – Section 2 & 5**

- Follow the procedures detailed at Appendix A. These procedures are aimed at enhancing the safety of students, staff and visitors during a flood event and minimising flood related damage.

### **Following an event that impacts the Education Centre – Sections 4.3 & 6**

- Coordinate and / or manage the resumption of normal activities at the Education Centre.
- Review the effectiveness and appropriateness of procedures established for flood including the adequacy of this FRMP and measures implemented at site.
- Arrange for peak flood water levels to be pegged and then surveyed to AHD and for update of Appendix E.
- Arrange for review and, as required, update of Appendix A.

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