# Frankston Municipality

**Storm and Flood Emergency Plan** 



For the Frankston Municipality And VICSES Unit Frankston

Version 4.5 Reviewed March 2023







This page is Intentionally Blank

## **Table of Contents**

TABLE OF CONTENTS	III
ELECTRONIC DISTRIBUTION LIST	VIII
DOCUMENT TRANSMITTAL FORM / AMENDMENT CERTIFICATE	x
LIST OF ABBREVIATIONS & ACRONYMS	XI
GLOSSARY	XII
PART 1. INTRODUCTION	1
1.1 APPROVAL AND ENDORSEMENT	1
1.2 Purpose and Scope of this Storm and Flood Emergency Plan	2
1.3 MUNICIPAL EMERGENCY MANAGEMENT PLANNING COMMITTEE (MEMPC)	2
1.4 RESPONSIBILITY FOR PLANNING, REVIEW & MAINTENANCE OF THIS PLAN	2
PART 2. BEFORE: PREVENTION / PREPAREDNESS ARRANGEMENTS	3
2.1 COMMUNITY AWARENESS FOR ALL TYPES STORM AND FLOODING	3
2.2 STRUCTURAL FLOOD MITIGATION MEASURES ERROR! BOOKMARK	NOT DEFINED.
2.3 Non-structural Flood Mitigation Measures	3
2.3.1 Exercising the Plan	3
2.3.2 Storm and Flood Warning	3
2.3.3 Local Knowledge	3
PART 3. DURING: RESPONSE ARRANGEMENTS	4
3.1 Introduction	4
3.1.1 Activation of Response	4
3.1.2 Responsibilities	4
3.1.3 Municipal Emergency Coordination Centre (MECC)	4
3.1.4 Escalation	4
3.2 STATE EMERGENCY MANAGEMENT PRIORITIES	5
3.3 THE SIX C'S	
3.3.1 Control	
3.3.2 Incident Controller (IC)	6
3.3.3 Incident Control Centre (ICC)	6
3.3.4 Divisions and Sectors	6
3.3.5 Incident Management Team (IMT)	6

	3.3.6	Incident Emergency Management Team (IEMT)	7
	3.3.7	On Receipt of a Flood Watch / Severe Weather Warning	7
	3.3.8	On Receipt of the First and Subsequent Storm and/or Flood Warnings	7
3	.4	COMMUNITY INFORMATION AND WARNINGS	8
3	.5	MEDIA COMMUNICATION	9
3	.6	IMPACT ASSESSMENT (IA)	9
3	.7	PRELIMINARY DEPLOYMENTS	9
3	.8	RESPONSE TO FLASH FLOODING	9
3	.9	EVACUATION	10
3	.10	FLOOD RESCUE	11
3	.11	AIRCRAFT MANAGEMENT	11
3	.12	ESSENTIAL INFRASTRUCTURE AND PROPERTY PROTECTION	11
3	.13	DISRUPTION TO SERVICES	12
3	.14	Levees	12
3	.15	ROAD CLOSURES	12
3	.16	Dam Spilling / Failure	12
3	.17	WASTE WATER RELATED PUBLIC HEALTH ISSUES AND CRITICAL SEWERAGE ASSETS	13
3	.18	ACCESS TO TECHNICAL SPECIALISTS	13
3	.19	AFTER ACTION REVIEW	13
PAI	RT 4.	AFTER: EMERGENCY RELIEF AND RECOVERY ARRANGEMENTS	14
4	.1	GENERAL	14
4	.2	EMERGENCY RELIEF	14
4	.3	Animal Welfare	14
4	.4	TRANSITION FROM RESPONSE TO RECOVERY	14
API	PEND	IX A – FLOOD THREATS FOR FRANKSTON MUNICIPALITY	15
G	ENER.	AL	15
R	RIVERIN	NE FLOODING	15
F	LASH	FLOODING AND OVERLAND FLOWS	16
Т	IDAL F	LOODING AND STORM SURGES	16
D	)ESCRI	PTION OF MAJOR WATERWAYS AND DRAINS	17
F	listor	IC STORMS AND FLOODS	18
D	AM SF	PILLING / FAILURE	20
API	PEND	IX B – TYPICAL FLOOD PEAK TRAVEL TIMES	21
Т	YPICA	L Travel Times	21
	liet∩p	ICAL TRAVEL TIMES	21

APPENDIX C1 – SEAFORD & FRANKSTON FLOOD EMERGENCY PLAN	22
OVERVIEW OF FLOODING CONSEQUENCES	22
GAUGES AND WARNINGS	23
AREA MAP OF FLOOD RISK FOR FRANKSTON AND SEAFORD	25
PROPERTIES AT FLOOD RISK	26
ISOLATION	64
Essential Infrastructure	64
ROAD CLOSURES	65
FLOOD MITIGATION	66
Retarding Basins	66
Pumping Stations	70
Levees	71
Tidal Gates	71
Sewerage Infrastructure	72
Sewer Pumping Stations	72
FLOOD IMPACTS AND OPERATIONAL CONSIDERATIONS (INTELLIGENCE CARDS)	73
APPENDIX C2 – CARRUM DOWNS, SKYE & LANGWARRIN FLOOD EMERGE	ENCY PLAN 104
OVERVIEW OF FLOODING CONSEQUENCES	104
GAUGES AND WARNINGS	105
AREA MAP OF FLOOD RISK FOR CARRUM DOWNS, SKYE AND LANGWARRIN	106
PROPERTIES AT FLOOD RISK	107
ISOLATION	108
Essential Infrastructure	108
Road Closures	108
FLOOD MITIGATION	109
Retarding Basins	109
Pumping Stations	110
Levees	111
Sewerage Infrastructure	111
COMMAND, CONTROL AND COORDINATION	112
FLOOD IMPACTS AND OPERATIONAL CONSIDERATIONS (INTELLIGENCE CARDS)	112
APPENDIX C3 – FRANKSTON SOUTH & LANGWARRIN SOUTH FLOOD EME	
OVERVIEW OF ELOODING CONSEQUENCES	118

GAUGES AND WARNINGS	119
AREA MAP OF FLOOD RISK IN FRANKSTON SOUTH & LANGWARRIN SOUTH	120
PROPERTIES AT FLOOD RISK	121
ISOLATION	121
ESSENTIAL INFRASTRUCTURE	121
ROAD CLOSURES	122
FLOOD MITIGATION	123
Retarding Basins	123
Sewerage Infrastructure	123
Sewer Pumping Stations	123
FLOOD IMPACTS AND OPERATIONAL CONSIDERATIONS (INTELLIGENCE CARDS)	124
APPENDIX D – FLOOD EVACUATION ARRANGEMENTS	126
Phase 1 – Decision to Evacuate	126
Phase 2 – Warning	127
Phase 3 – Withdrawal	127
Vulnerable People in Emergencies	127
Phase 4 – Shelter	127
Animal Shelter	128
Caravans and Caravan parks	128
Phase 5 – Return	129
DISRUPTION TO SERVICES	129
ESSENTIAL INFRASTRUCTURE AND PROPERTY PROTECTION	130
Rescue	130
APPENDIX E – FLOOD WARNING SYSTEMS	131
STORM AND FLOOD WARNING	131
FLOOD BULLETINS	131
LOCAL FLOOD WARNING SYSTEM ARRANGEMENTS	131
MODERATE FLOOD WARNING EXAMPLE	132
APPENDIX F – MAPS AND SCHEMATICS	135
Overview	135
CITY OF FRANKSTON MUNICIPAL MAPS (SOURCED MELBOURNE WATER GIS)	136
FLOOD EXTENT MAPS (SOURCED MELBOURNE WATER GIS)	138
VICSES SEVERE WEATHER (STORM OR FLOOD) REQUESTS FOR ASSISTANCE MAPI	PING 153
CATCHMENT SCHEMATICS	155

Α	PPENDIX G – SEVERE WEATHER (STORM) EVENTS	157
	Overview	157
	LARGE STORM EVENTS	157
	VICSES REQUESTS FOR ASSISTANCE (REAS)	158

## **Electronic Distribution List**

Issue To:		Date
Role	Organisation	
Emergency Management Unit	Ambulance Victoria	
Flood Warning Manager	Bureau of Meteorology (Flood Warning)	
Commander	CFA – Frankston Fire Station	
Assistant Chief Fire Officer	CFA – District 8 Headquarters	
District Manager	DEECA District Office	
Manager Emergency Management	Department of Families, Fairness and Housing	
Regional Emergency Management Officer	Department of Transport (VicRoads)	
Commander	Fire Rescue Victoria	
Assistant Chief fire Officer	Fire Rescue Victoria	
MEMPC Committee Executive Officer	Frankston City Council	
Council Office Copy	Frankston City Council	
MEMPC Committee Chair	Frankston City Council	
MEMO (Municipal Emergency Management Officer)	Frankston City Council	
Deputy MEMO	Frankston City Council	
MRM (Municipal Recovery Manager)	Frankston City Council	
Deputy MRM	Frankston City Council	
Assistant MRM	Frankston City Council	
MECC Centre Manager	Frankston City Council	
Deputy MECC Centre Manager	Frankston City Council	
Assistant MECC Centre Manager	Frankston City Council	
Municipal Building Surveyor	Frankston City Council	
CEO (or council delegate)	Frankston City Council	
Environmental Health Coordinator	Frankston City Council	
BIT Manager	Frankston City Council	
BIT Coordinator	Frankston City Council	
Director Communities	Frankston City Council	
Director Corporate Development	Frankston City Council	
Director City Development	Frankston City Council	
Team Leader Hydrology & Flood Warnings	Melbourne Water	
Manager Compliance and Quality	South East Water	
Manager Emergency Services	United Energy UED Network	
MERC (Carrum Downs Police Station)	Victoria Police	
Deputy MERC (Frankston Police Station)	Victoria Police	

## \_\_\_OFFICIAL

Assistant MERC (Frankston Police Station)	Victoria Police	
RERC	Victoria Police	
REMI	Victoria Police	
VICSES Controller	VICSES – Frankston Unit	
ROEM	VICSES Central Region Headquarters	

## **Document Transmittal Form / Amendment Certificate**

This Municipal Storm and Flood Emergency Plan (MSFEP) will be amended, maintained and distributed as required by VICSES in consultation with the Frankston Municipal Emergency Planning Committee (MEMPC)

Suggestions for amendments to this Plan should be forwarded to VICSES Central Office- Mulgrave Unit 6, 3–5 Gilda Court, Mulgrave VIC 3170 .Email: central@ses.vic.gov.au

Amendments listed below have been included in this Plan and distributed to all registered copyholders.

Amendment Number	Date of Amendment	Amendment Entered By	Summary of Amendment				
Issue date of Floo	Issue date of Flood Emergency Plan -						
2.0	30/06/2015	Ross Butler	Update of Appendix A, B, C, F and addition of Appendix G				
3.0	08/08/2017	Gerry Sheridan	Update legislative references, acronyms, inclusion of operational information				
4.0	31/12/2020	Ross Butler and Jule Syme	Application of new template. Updated parts of the body as well as Appendices A, B, C, F and G Changes and edits to accommodate the <i>Emergency Management Legislation Amendment Act 2018</i> (EMLA Act) that amended the <i>Emergency Management Act 2013</i> (EM Act 2013).				
4.1	27/08/2021	Ross Butler	oss Butler Edits based on FCC feedback				
5	29/06/2022	Jule Syme & Ross Butler	Application of new template. Updated parts of the body as well as Appendices A, B, C, F & G. Changes and edits for standardisation and to accommodate the <i>Emergency Management Legislation Amendment Act 2018</i> (EMLA Act) that amended the <i>Emergency Management Act 2013</i> (EM Act 2013).				
5.1	29/03/2023	David Goldfinch					

This Plan will be maintained on the VICSES website (ses.vic.gov.au/plan-and-stay-safe/flood-guides/Frankston-city-council) and referenced on the Frankston City Council website (Frankston.vic.gov.au).

## **List of Abbreviations & Acronyms**

The following abbreviations and acronyms are used in the Plan:

	The following abbreviations	and acronym	ns are used in the Plan
AAR	After Action Review	IC	Incident Controller
AEP	Annual Exceedance Probability	ICC	Incident Control Centre
AHD	AHD Australian Height Datum (the height of a location above mean sea level in metres)		Incident Management Team
AIDR	Australian Institute of Disaster Resilience	IMS	Incident Management System
AIIMS	Australasian Inter-service Incident Management System	EMLO	Emergency Management Liaison Officer
AoCC	Area of Operations Control Centre / Command Centre	LSIO	Land Subject to Inundation Overlay
ARI	Average Recurrence Interval	MECC	Municipal Emergency Coordination Centre
AV	Ambulance Victoria	MEMP	Municipal Emergency Management Plan
ВоМ	Bureau of Meteorology	MEMPC	Municipal Emergency Management Planning Committee
CEO	Chief Executive Officer	MERC	Municipal Emergency Response Coordinator
CERA	Community Emergency Risk Assessment	MEMO	Municipal Emergency Management Officer
CFA	Country Fire Authority	MRM	Municipal Recovery Manager
CMA	Catchment Management Authority	PMF	Probable Maximum Flood
RERC	RC Regional Emergency Response Coordinator		Regional Agency Commander
RERCC	Regional Emergency Response Coordination Centre	RCC	Regional Control Centre
DFFH	DEPARTMENT OF Families, Fairness & Housing		Regional Duty Officer
Dol	Department of Infrastructure	RSPCA	Royal Society for the Prevention of Cruelty to Animals
DEECA	Department of Energy, Environment & Climate Action	SBO	Special Building Overlay
DJSIR	Department of Jobs, Skills, Industry and Regions	SCC	State Control Centre
DoT	Department of Transport	SERP	State Emergency Response Plan
EMT	Emergency Management Team	SEWS	Standard Emergency Warning Signal
EMV	Emergency Management Victoria	SHERP	State Health Emergency Response Plan
EO	Executive Officer	SOP	Standard Operating Procedure
FO	Floodway Overlay	VicPol	Victoria Police
FRV	Fire Rescue Victoria	VICSES	Victoria State Emergency Service
FWS	Flood Warning System	DoH	Department of Health
FZ	Floodway Zone	SEMP	State Emergency Management Plan

## **Glossary**

Below are terms defined for the purpose of this plan:

Term	Definition
Annual Recurrence Interval (ARI)	The average, or expected, value of the period between exceedances of a given rainfall or flow total accumulated over a given duration
Annual Exceedance Probability (AEP)	The probability that a given total rainfall or flow is accumulated over a given duration will be exceeded in any one year
Flash flooding	Sudden unexpected flooding caused by local heavy rainfall or rainfall in another area. Often defined as flooding which occurs within six hours of the significant rain event.
Flood mapping	The process where the extent of flooding is documented in mapping software based on flood studies and surface elevations
Floodplain	Area of land adjacent to a creek, river, estuary, lake, dam or artificial channel, which is subject to inundation.
Hot spot	A known flood problem area which has a history of repeat flooding of a road, crossing or property, often highlighted through anecdotal information and customer complaints. It is a localised issue which will vary from council to council.
Natural drainage system	Flow paths which are largely undeveloped by human sources, these include rivers, streams, natural depressions and wetlands. All-natural systems greater than 60 ha are managed by Melbourne Water.
Overland flooding	Flooding by local runoff caused by heavier than usual rainfall. Overland flooding can be caused by local flow exceeding the capacity of an urban stormwater drainage system or by the backwater effects of mainstream flooding causing urban stormwater drainage system to overflow. For local government areas this is over the 5 year ARI in residential or over 10 year ARI in commercial/industrial. For Melbourne Water catchment areas this is for all other ARIs up to the 100 year ARI.
Retarding Basin	A Retarding Basin is a large, open, free draining basin that temporarily stores collected stormwater runoff. These basins are normally maintained in a dry condition between storm events.
Stormwater drainage system	A series of drains and waterways into which surface and stormwater flows.  Features of a stormwater drainage system can include underground pipe drains, open channels, retarding basins, floodways, waterway improvements, water sensitive urban design, integrated water management systems and environment protection measures.
Stormwater Runoff	The amount of rainfall that enters the stormwater drainage system, (via pits, pipes, retarding basins, water sensitive structures, harvesting tanks and overland flow paths) after water which is not absorbed into the ground has been taken into account.

#### Part 1. INTRODUCTION

### 1.1 Approval and Endorsement

This Municipal Storm and Flood Emergency Plan (MSFEP) has been prepared by the Victorian State Emergency Service pursuant to Section 20 of the Emergency Management Act 1986 (as amended).

This MSFEP is a complementary plan to the Frankston Municipal Emergency Management Plan (MEMP). It is consistent with the State Emergency Management Plan (SEMP), State Flood Emergency Plan and State Storm Emergency Plan (sub-plans of the now superseded State Emergency Response Plan and transitioned to be sub-plans of the SEMP).

It is also consistent with the Victoria State Emergency Service (VICSES) Central Region Storm and Flood Emergency Plans and the Victorian Floodplain Management Strategy and takes into account the outcomes of the Community Emergency Risk Assessment (CERA) process undertaken by the Frankston MEMPC

Minor and administrative amendments will be made to this MSFEP from time to time without representing the Plan to the MEMPC. Any major structural or policy changes will be considered before adoption.

## 1.2 Purpose and Scope of this Storm and Flood Emergency Plan

The purpose of this MSFEP is to detail arrangements agreed for the planning, preparedness/prevention, response and recovery from flood incidents within the Frankston Municipality

As such, the scope of the Plan is to:

- Identify the storm and flood risk to the Frankston Municipality
- Support the implementation of measures to minimise the causes and impacts of storm and flood incidents within the Frankston Municipality
- Detail Response and Recovery arrangements including preparedness, incident management, command and control;
- Identify linkages with Local, Regional and State emergency and wider planning arrangements with specific emphasis on those relevant to storm and flood.

## 1.3 Municipal Storm and Flood Planning Committee

Membership of the Frankston MSFPC is comprised of representatives from the following agencies and organisations:

- Regional Officer Emergency Management (Chair)
- VICSES Unit Controller/delegate and
- Frankston City Council
- Victoria Police Municipal Emergency Response Coordinator (MERC)
- Catchment Management Authority as required
- · Department of Health (DH) as required
- Department of Families, Fairness and Housing (DFFH) as required
- Water authorities as required
- Bureau of Meteorology (BOM) as required
- Other agencies as required

## 1.4 Responsibility for Planning, Review & Maintenance of this Plan

This MSFEP must be maintained in order to remain effective. This Plan must be assured, approved and published every three years, or more frequently if required.

VICSES through the MEMPC has responsibility for preparing, reviewing, maintaining and distributing this plan. The MSFPC will meet as required.

The plan should be reviewed and where necessary, arrangements and information contained in it should be amended:

- Following any new flood or stormwater drainage studies
- Following a change in non-structural and/or structural flood mitigation measures
- After the occurrence of a significant storm and/or flood event within the municipality

## Part 2. BEFORE: Prevention/Preparedness arrangements

## 2.1 Community Awareness for all Types of Storms and Flooding

This Plan will be published and maintained on the VICSES website. This will occur following any updates and amendments and in accordance with assurance, approval and publishing requirements.

Details of this MSFEP will be released to the community through local media, VICSES FloodSafe and StormSafe programs and websites (VICSES and the Municipality) upon consent of Frankston MEMPC.

VICSES, with the support of Frankston City Council and Melbourne Water, will coordinate community education programs for storm and flooding within the municipality (i.e., Local Flood Guides and public events). Engagement will include raising awareness about the projected impacts on the frequency and intensity of flood and storm events and what actions can be taken to minimise these impacts.

Community engagement programs to support this Plan may be developed in conjunction with the local VICSES unit. VICSES Frankston Unit may lead the delivery of programs with support from Frankston City Council and VICSES Central Region.

#### 2.2 Structural Flood Mitigation Measures

Refer to **Appendix C** for detailed information of structural flood mitigation measures.

## 2.3 Non-structural Flood Mitigation Measures

#### 2.3.1 Exercising the Plan

Arrangements for exercising this Plan will be at the discretion of VicSES. This Plan should be regularly exercised, (preferably on an annual basis and reviewed after a significant event).

#### 2.3.2 Storm and Flood Warning

Arrangements for storm and flood warning are contained within the State Flood and Storm Emergency Plan and State Flood Emergency Plan (see <a href="https://www.ses.vic.gov.au/em-sector/vicses-emergency-plans">https://www.ses.vic.gov.au/em-sector/vicses-emergency-plans</a>) and the SEMP and on the BoM website (see <a href="http://www.bom.gov.au">http://www.bom.gov.au</a>).

Specific details of local storm and flood warning system arrangements are provided in **Appendix E.** 

#### 2.3.3 Local Knowledge

There are no official community observers within the Frankston municipality however local knowledge is incorporated into this plan through consultation with local response agencies.

Previous event history and likely operational considerations are noted in the Flood Intelligence Cards in **Appendix C**. In line with the VICSES Local Knowledge Policy, reviews of this plan will be undertaken with input from multiple local sources to ensure appropriate local knowledge can be captured before, during and after incidents.

#### Part 3. DURING: RESPONSE ARRANGEMENTS

#### 3.1 Introduction

#### 3.1.1 Activation of Response

Storm and flood response arrangements may be activated by the VICSES Regional Duty Officer (RDO), Regional Agency Commander (RAC) or Incident Controller (IC).

The VICSES RDO, RAC or IC will activate agencies as required and documented in the VICSES Central Region Storm and Flood Emergency Plans, the State Storm Emergency Plan and the State Flood Emergency Plan (ses.vic.gov.au/about-us/state-and-regional-emergency-plans).

#### 3.1.2 Responsibilities

There are a number of agencies with specific roles that will act in support of VICSES and provide support to the community in the event of a serious storm and/or flood within the Frankston municipality. These agencies will be engaged through the EMT.

The general roles and responsibilities of supporting agencies are as agreed within the Frankston MEMP, SEMP (Roles and Responsibilities) VICSES Central Region Flood Emergency Plan and State Flood and Storm Emergency Plans.

#### 3.1.3 Municipal Emergency Coordination Centre (MECC)

Where activated, the function, location, establishment and operation of the MECC (or similar coordination centre) will be as detailed in the Frankton MEMP.

Liaison with the MECC will be through the VICSES Central Region RDO/IC or established ICC.

In the event that a MECC is not operating, Frankston City Council MEMO will be contacted.

#### 3.1.4 Escalation

Most storm and/or flood incidents are of local concern and an appropriate response can usually be coordinated using local resources. However, when these resources are exhausted, the Regional and if required, State arrangements provide for further resources to be made available.

#### 3.2 State Emergency Management Priorities

To provide guidance to the Incident Management Team (IMT) and Incident Emergency Management Team (IEMT), the following State emergency Management Priorities shall form the basis of incident action planning processes:

- Protection and preservation of life is paramount this includes:
  - a. Safety of emergency services personnel, and;
  - b. Safety of community members including vulnerable community members and visitors/tourist located within the incident area.
- Issuing of community information and community warnings detailing incident information that is timely, relevant and tailored to assist community members make informed decisions about their safety.;
- Protection of critical infrastructure and community assets that supports community resilience;
- Protection of residential property as a place of primary residence;
- Protection of assets supporting individual livelihoods and economic production that supports individual and community financial sustainability
- Protection of environmental and conservation values that considers the cultural, biodiversity, and social values of the environment;

Circumstances may arise where the IC is required to vary these priorities, with the exception being that the protection of life should remain the highest. This shall be done in consultation with the State Response Controller and relevant stakeholders based on sound incident predictions and risk assessments.

#### 3.3 The Six C's

Arrangements in this MSFEP must be consistent with the 6 C's detailed in State and Regional Flood and Storm Emergency Plans. For further information, refer to the SEMP

- Control: Overall direction of response activity in an emergency, operating horizontally across agencies.
- Command: Internal direction of personnel and resources within an agency.
- Coordination: Bringing together agencies and resources to ensure effective preparation for response and recovery.
- Consequence: Management of the effect of emergencies on individuals, communities, infrastructure and the environment.
- Communication: Engagement and provision of information across agencies and proactively with the community around preparation, response and recovery in emergencies.
- Community Connection: Understanding and connecting with trusted networks, leaders and communities around resilience and decision making.

Specific details of arrangements for this plan are to be provided in Appendix C.

#### 3.3.1 Control

Sections 5 (1) (a) and 5(c) of the Victoria State Emergency Service Act 2005 detail the authority for VICSES to plan for and respond to flood.

Table 9 of the SEMP, Roles and Responsibilities identifies VICSES as the Control Agency (CA) for storm and flood. It identifies DEECA as the CA responsible for dam safety as well as water and wastewater service disruption related incidents and other emergencies.

All flood response activities within the Frankston Municipality including those arising from a dam failure or retarding basin/levee bank failure incident will therefore be under the control of the appointed IC or his/her delegated representative.

#### 3.3.2 Incident Controller (IC)

An IC will be appointed by the VICSES (as the CA) to command-and-control available resources in response to a storm and /or flood event on the advice of the Bureau of Meteorology, or other reliable source, that a storm and/or flood event will occur or is occurring. The IC responsibilities are as defined in the SEMP

#### 3.3.3 Incident Control Centre (ICC)

As required, the Incident Controller will establish an Incident Control Centre (ICC) from which to initiate incident response, command and control functions. The decision as to if and when the ICC should be activated, rests with the CA (i.e., VICSES).

Pre-determined Incident Control Centres are located at:

Dandenong ICC (Primary)

Ferntree Gully ICC (Secondary)

Sunshine ICC (Primary)

Woori Yallock ICC (Secondary)\*\*

Burnley ICC (Secondary)\*\*

\*\* to be considered as redundant ICC sites should other ICCs become unavailable or unserviceable. At the time of publishing, arrangements for the use of Burnley ICC were under review.

#### 3.3.4 Divisions and Sectors

To ensure that effective Command and Control is in place, the IC may establish Divisions and Sectors depending upon the complexity of the event and resource capacities.

Divisions and Sectors may be established to assist with the management of storm and flooding within the Municipality.

Predetermined Divisional Command Locations may include:

- Frankston Unit LHQ
- Moorooduc (CFA)

Sector Command locations are allocated on an as needs basis.

#### 3.3.5 Incident Management Team (IMT)

The IC will form an IMT in line with AIIMS principals.

Refer to the SEMP for guidance on IMTs.

#### 3.3.6 Incident Emergency Management Team (IEMT)

The IC will establish a multi-agency IEMT to assist the storm and flood response. The IEMT will consist of key personnel, with appropriate authority, from stakeholder agencies and relevant organisations who need to be informed of strategic issues related to incident control and who are able to provide high level strategic guidance and policy advice to the IC for consideration in developing incident management strategies.

Organisations required within the IEMT will provide an Emergency Management Liaison Officer (EMLO) to the ICC if and as required as well as other staff and/or resources identified as being necessary, within the capacity of the organisation.

Refer to the SEMP for guidance on IEMTs.

#### 3.3.7 On Receipt of a Flood Watch / Severe Weather Warning

The VICSES RDO/IC will undertake actions as defined within the flood intelligence cards (**Appendix C**). General considerations by the VICSES RDO/IC will be as follows:

- Review storm and flood intelligence to assess likely storm and flood consequences;
- Monitor weather and flood information <u>www.bom.gov.au</u>;
- Assess Command and Control requirements;
- Review local resources and consider needs for further resources regarding personnel, property protection, storm/flood rescue and air support;
- Notify and brief appropriate officers. This includes RCC (if established), SCC (if established), Council (as outlined in the Frankston MEMP), other emergency services through the IEMT;
- Assess ICC readiness (including staffing of IMT and IEMT) and open if required;
- Ensure flood bulletins and community information are prepared and issued to the community;
- Monitor watercourses and undertake reconnaissance of low-lying areas;
- Develop media and community information management strategy;
- Ensure storm and flood mitigation works are being checked by owners;
- Develop and issue incident action plan, if required;
- Develop and issue situation report, if required.

#### 3.3.8 On Receipt of the First and Subsequent Storm and/or Flood Warnings

The VICSES RDO, or the IC will undertake actions as defined within the flood intelligence cards (**Appendix C**). General considerations by the VICSES RDO/Incident Controller will be as follows:

- Develop an appreciation of current flood levels and predicted levels. Are floodwaters, rising, peaking or falling?
- Review storm and flood intelligence to assess likely flood consequences. Consider:
  - What areas may be at risk of inundation.
  - What areas may be at risk of isolation.
  - What areas may be at risk of indirect affects as a consequence of power, gas, water, telephone, sewerage, health, transport or emergency service infrastructure interruption.

- What areas may be at risk of building damage.
  - o The characteristics of the populations at risk.
- Determine what the at-risk community need to know and do as the storm and/or flood develops.
- Warn the at-risk community ensuring that an appropriate warning and community information strategy is implemented including details of:
  - o The current storm and/or flood situation;
  - Storm and/or flood predictions;
  - What the consequences of predicted levels may be;
  - Public safety advice;
  - Who to contact for further information;
  - o Who to contact for emergency assistance.
- Liaise with relevant asset owners as appropriate (i.e. water and power utilities).
- Implement response strategies as required based upon storm/or flood consequence assessment.
- Continue to monitor the storm /flood situation www.bom.gov.au/
- Continue to conduct reconnaissance of low-lying areas.

### 3.4 Community Information and Warnings

Guidelines for the distribution of community information and warnings are contained in the VICSES Central Region State Storm Emergency Plan and State Flood Emergency Plan.

Community information and warnings communication methods available include:

- Emergency Alert
- Phone messages (including SMS)
- Radio and Television
- Two-way radio
- Mobile and fixed public address systems
- Sirens
- Verbal Messages (i.e. doorknocking)
- Agency websites, including VicEmergency website
- VicEmergency Hotline
- Variable Message Signs (i.e. road signs)
- Community meetings and connecting to trusted community networks
- Newspapers
- Email
- Newsletters
- Letter drops
- Social media and/or social networking sites (i.e. Twitter and/or Facebook).

Refer to Appendix E for the specific details of how community information and warnings are to be provided.

The release of flood bulletins and information with regard to response activities at the time of a flood event is the responsibility of VICSES.

Responsibility for public information, including media briefings, rest with VICSES. Frankston City Council will assist VICSES to warn individuals within the community where practicable.

Other agencies such as CFA, DEECA and VICPOL may also be requested to assist VICSES with the communication of community storm and/or flood warnings.

In cases where severe flash flooding is predicted, dam failure or landslide is likely or flooding necessitating evacuation of communities is predicted, the IC may consider the use of the Emergency Alert System and SEWS.

DFFH will coordinate information regarding public health and safety precautions.

#### 3.5 Media Communication

The IC through the Public Information Unit established at the ICC will manage Media communication. If the ICC is not established the RDO will manage all media communication. Frankston City Council will work with the IC to ensure that consistent and timely messaging occurs.

#### 3.6 Initial Impact assessment (IIA)

An initial impact assessment must be conducted by the CA in accordance with State doctrine and SOPs, to assess and record the extent and nature of damage caused by storm and/or flooding. This information is then used to provide the basis for further needs assessment and recovery planning by council, Department of Health (DH), DFFH and applicable recovery agencies.

The CA is responsible for coordinating the collection, collations and dissemination of IA information on a whole-of government basis during the emergency response. The purpose, function and conduct of IIAs are outlined in the State Flood Emergency Plan. All IIAs should be conducted in accordance with current State Impact assessment doctrine and SOPs.

## 3.7 Preliminary Deployments

When storm impacts and/or flooding is expected to be severe enough to cut access to towns, suburbs and/or communities the IC will consult with relevant agencies to ensure that resources are in place if required to provide emergency response. These resources might include emergency service personnel, food items and non-food items such as medical supplies, shelter, assembly areas, relief centres etc. in line with the Frankston MEMP.

## 3.8 Response to Flash Flooding

Emergency management response to flash flooding should be consistent with the guideline for the emergency management of flash flooding contained within the VICSES Central Region Storm and Flood Emergency Plans and State Storm Emergency Plan and State Flood Emergency Plan.

When conducting pre-event planning for flash floods the following steps should be followed, and in the order as given:

 Determine if there are barriers to evacuation by considering warning time, safe routes and resources available;

- Should evacuation be the adopted strategy it must be supported by a public information capability and a rescue contingency plan; Contact MERC who liaises with MEMO and MRM about activating ERC.
- 3. Where its likely people will become trapped by floodwaters, safety advice needs to be provided to people at risk advising them not to attempt to flee by entering floodwater if they become trapped, and that it may be safer to seek the highest point within the building and to telephone 000 if they require rescue;
- 4. For buildings known to be structurally un-suitable an earlier evacuation trigger will need to be established (return to step 1 of this cycle).
- 5. If an earlier evacuation is not possible then specific preparations must be made to rescue occupants trapped in structurally unsuitable buildings either pre-emptively or as those people call for help.
- Contact MERC and MEMO at the earliest opportunity to allow relief preparation to commence.

Due to the rapid development of flash flooding it will often be difficult, to establish emergency relief centres ahead of triggering the evacuation. This is normal practice, but this is insufficient justification for not adopting evacuation.

Response arrangements for flash flood events are contained in **Appendix C**. Refer to the Vic Roads Website for road closures (<a href="http://alerts.vicroads.vic.gov.au">http://alerts.vicroads.vic.gov.au</a>).

#### 3.9 Evacuation

In Victoria, evacuation from your place of residence is voluntary, however in particular circumstances, legislation provides some emergency services with authority to remove people from areas or prohibit their entry.

The decision to recommend or warn people to prepare to evacuate or to evacuate immediately rests with the IC and where possible the EMT.

It is the choice of individuals as to how they respond to this recommendation.

Once the decision is made, VicPol is responsible for the coordination of the evacuation process. VICSES and other agencies will assist where practical. VICSES is responsible for the development and communication of evacuation warnings.

VicPol (or delegate to Australian Red Cross) may take on the responsibility of registering people affected by the emergency (through the Register Find Reunite program) including those who have been evacuated if an ERC is activated.

Refer to Joint Standard Operating Procedure (JSOP) 3.12 Evacuations for major emergencies and the Frankston Relief and Recovery section of the MEMP for guidance on evacuations for flood emergencies. If evacuation is determined as appropriate, Frankston City Council will be notified and collaborative arrangements made accordingly.

Evacuation operations should be consistent with the JSOP on Evacuation (JSOP3.12). Guidelines for best practice for planning evacuations are provided in Australian Institute for Disaster Resilience Handbook 4, available at:

https://knowledge.aidr.org.au/resources/handbook-evacuation-planning/.

Refer to Appendix D of this Plan for detailed evacuation arrangements

#### 3.10 Flood Rescue

VicPol as the designated CA for water rescue and they coordinate rescues undertaken during flood events.

In order to activate water rescue services, VICSES, as the CA for overall flood response, will identify areas at risk of requiring rescue and will notify the OIC of the Water Police Search and Rescue Squad to request pre-deployment of rescue resources to those areas.

In conducting rescues VicPoI may require the assistance of appropriately trained and equipped personnel. In these circumstances, appropriately trained and equipped VICSES units or other agencies may carry out rescues.

Rescue operations may be undertaken where voluntary evacuation is not possible, has failed or is considered too dangerous for an at-risk person or community. An assessment of available flood rescue resources (if not already done prior to the event) should be undertaken prior to the commencement of Rescue operations.

Rescue is considered a high-risk strategy to both rescuers and persons requiring rescue and should not be regarded as a preferred emergency management strategy. Rescuers should always undertake a dynamic risk assessment before attempting to undertake a flood rescue.

## 3.11 Aircraft Management

Aircraft can be used for a variety of purposes during storm and/or flood operations including evacuation, resupply, reconnaissance, intelligence gathering and emergency travel.

Air support operations will be conducted under the control of the Incident Controller in line with State Aircraft Unit Policy 01-Air Operations.

## 3.12 Resupply

Communities, neighbourhoods or households can become isolated during storm and/or floods as a consequence of road closures or damage to roads, bridges and causeways. Under such circumstances, the need may arise to resupply isolated communities/properties with essential items.

When predictions and/or intelligence indicate that communities, neighbourhoods and/or households may become isolated, and if time permits, VICSES will advise businesses and/or households that they should stock up on essential items.

After the impact, agencies may assist with the transport of essential items to isolated communities and assist with logistics functions.

## 3.13 Essential Infrastructure and Property Protection

Essential Infrastructure and Property (e.g., residences, businesses, roads, power supply etc.) may be affected in the event of a storm/or flood.

The IC will ensure that owners of Essential Infrastructure are kept advised of the storm/flood situation. Essential Infrastructure providers must keep the IC informed of their status and ongoing ability to provide services.

The Frankston City Council maintains a small stock of sandbags for their own municipal infrastructure defence. Supplies are available through the VICSES Regional Headquarters and local hardware suppliers. The IC will determine the priorities related the use of sandbags, which will be consistent with the State Emergency Management priorities and VICSES Sandbagging policy.

If VICSES sandbags are becoming limited in supply, then priority will be given to protection of Essential Infrastructure. Other high priorities may include for example the protection of historical buildings.

Property may be protected by:

- Sandbagging to minimise entry of water into buildings
- Encouraging businesses and households to lift or move contents
- Construction of temporary levees in consultation with the Catchment Management Authority (CMA), Local Government Area (LGA) and VICPOL and within appropriate approval frameworks.

Refer to **Appendix C** for further specific details of essential infrastructure requiring protection.

#### 3.14 Disruption to Services

Disruption to services other than essential infrastructure and property can occur in storm and/or flood events. Refer to Appendix D for specific details of likely disruption to services and proposed arrangements to respond to service disruptions in the municipality.

#### 3.15 Levees

Levee owners / operators are responsible for the maintenance, operation and monitoring of their levees. Levee owners / operators must keep the IC informed of levee status and be prepared to provide expert advice to the IC about the design and construction of their levees. In accordance with the State Emergency Management Priorities, the IC may assist levee owners to coordinate resources, both technical and physical, to provide advice and affect temporary repairs to or augmentation of levees.

#### 3.16 Road Closures

Frankston City Council, VicPol and the Department of Transport and Planning (DTP) will carry out their formal functions of road closures. This includes observation and placement of warning signs, roadblocks to its designated local and regional roads, bridges, walking and bike trails. VicPol may liaise with and advise Frankston City Council and DTP of the need to erect warning signs and / or for closure of roads and bridges. DTP are responsible for designated main roads and highways and Frankston City Council is responsible for the designated local and regional road network.

DTP, VicPol and Frankston City Council will communicate community information regarding road closures.

## 3.17 Dam Spilling / Failure

DEECA is the CA for dam safety incidents (e.g., breach, failure or potential breach / failure of a dam), however VICSES is the CA for any flooding that may result.

Details of the major dam within the Frankston City Council with potential to cause structural and community damage within the Municipality are contained in **Appendix A**.

Frankston municipality may be impacted by the failure of the Frankston Reservoir (Frankston Re-assessment of Risk, URS June 2010). There are also a number of smaller private dams which could cause damage if they failed.

## 3.18 Wastewater related Public Health Issues and Critical Sewerage Assets

Inundation of critical sewerage assets including septic tanks and sewerage pump stations may result in water quality problems within the Municipality. Where this is likely to occur or has occurred the responsible agency for the critical sewerage asset should undertake the following:

- Advise VICSES of the security of critical sewerage assets to assist preparedness and response activities in the event of flood;
- Maintain or improve the security of critical sewerage assets;
- Check and correct where possible the operation of critical sewerage assets in times of flood;
- Advise the VICSES RDO / IC or established ICC in the event of inundation of critical sewerage assets.

It is the responsibility of the Frankston City Council Environmental Coordinator to inspect and report to the MEMO and the ICC on any water quality issues relating to flooding.

General Public Health information and messages are provided by Frankston City Council, DFFH and DH and may contain information that is relevant prior to, during and following an incident. Information may also be provided in sub plans to the MEMP, specific health notifications and, after discussion within the IEMT may be included in Flood Bulletins.

#### 3.19 Access to Technical Specialists

VICSES Manages contracts with private technical specialists who can provide technical assistance in the event of flood operations or geotechnical expertise. Refer to VICSES SOP061 for the procedure to engage these specialists.

#### 3.20 After Action Review

VICSES will coordinate the after-action review arrangements of storm and/or flood operations as soon as practical following an event.

All agencies involved in the storm/and or flood incident should be represented at the After-Action Review.

## Part 4. AFTER: EMERGENCY RELIEF AND RECOVERY ARRANGEMENTS

#### 4.1 General

Arrangements for emergency relief and recovery from any emergency, including storm/flood incidents within the Frankston municipality are detailed in the MEMP.

#### 4.2 Emergency Relief

The IC determines the need for emergency relief services with advice from the emergency management team (such as IEMT) including the MRM in accordance with the SEMP Relief arrangements. IC's are responsible for ensuring that relief arrangements have been considered and implemented where required under the State Emergency Relief and Recovery Plan. These should be carried out in line with the Frankston MEMP.

The range and type of emergency relief services to be provided in response to a storm/flood event will be dependent upon the size, impact, and scale of the storm/flood. Refer to the SEMP for further information.

Suitable relief facilities identified for use during storm/floods are detailed in **Appendix D** and the MEMP.

Details of the relief arrangements are available in the Frankston MEMP.

#### 4.3 Animal Welfare

Matters relating to the welfare of livestock are to be referred to Department of Jobs, Skills, Industry and Regions (DJSIR).

Matters relating to companion animals will be shared between Council and Royal Society for the Prevention of Cruelty to Animals (RSPCA). Council assists in the support and temporary rehousing of displaced companion animals.

Requests for emergency supply and/or delivery of fodder to stranded livestock or for livestock rescue are to be referred to DJSIR.

Matters relating to the welfare of wildlife are to be referred to DEECA.

#### 4.4 Transition from Response to Recovery

VICSES as the CA is responsible for ensuring effective transition from response to recovery.

Transition should be done in consultation with emergency management teams (including IEMT and MRM). Further information about transition is provided in the SEMP and the Frankston MEMP.

## APPENDIX A - FLOOD THREATS FOR CITY OF FRANKSTON

#### General

The municipality of Frankston is located in the southern area of Metropolitan Melbourne along Port Phillip Bay. The Frankston municipality has two distinct morphological zones; that of the Baxter sandstones and old marine sediments uplifted at the Selwyn's fault in the southern portion of the municipality and then that of the sunk-lands that evolved to form the Carrum Lowlands that dominate in the northern portion of the Municipality.

The Carrum Lowlands comprise over 4000 hectares of swamp and alluvial flats that drain to Kananook Creek. Kananook Creek is a creek that has had its channel and valley form established through a number of processes over a long period of time. Essentially Kananook Creek as it is today is the result of many thousands of years of formation by forces of flows from the larger Dandenong and Eumemmerring Creek catchments and that of longshore action along the coast of Port Phillip Bay, which formed a series of parallel dunes along the seaward interface of the Carrum Carrum Swamp. The Carrum Carrum Swamp is part of a geological trough (Figure A1) that is bounded on the north side by a monoclinal fold near Beaumaris and on the south side by Selwyn's Fault near Frankston.

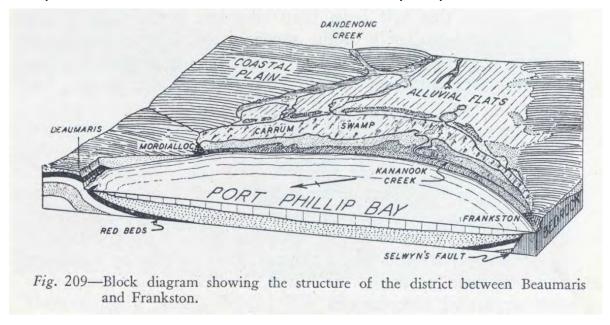


Figure A1 Diagram of Kananook Creek & Carrum Lowlands Physiography (Sherbourne Hills 1951)

## **Riverine Flooding**

Large severe floods within the Municipality generally occur as a result of a moist warm airflow from northern Australia bringing moderate to heavy rainfall over a period of 12 hours or more following a prolonged period of general rainfall. The period of general rainfall "wets up" the catchments and (partially) fills both the on-stream dams and the natural floodplain storage. These combine to increase the runoff generated during the subsequent period of heavy rainfall.

Large but less severe floods result from sequences of cold fronts during winter and spring that progressively wet up the catchments and fill the on-stream dams and the natural floodplain storage. Prolonged moderate to heavy rain leads to major flooding.

## Flash Flooding and Overland Flows

Short Duration, high intensity rainfall (usually associated with thunderstorms) can also cause localised flooding within the municipality along overland flow paths when the local urban drainage system surcharges. Such events, which are mainly confined to the summer months, do not generally create widespread flooding since they only last for a short time and affect limited areas. Flooding from these storms occurs with little warning and localised damage can be severe.

High intensity rainfall such as associated with thunderstorms giving average rainfall rates of more than 20mm/hour for an hour or more is likely to lead to flash flooding and / or overland flows, across the urbanised parts of the municipality.

Blocked or capacity impaired stormwater drains can also lead to overland flows and associated flooding: the drain surcharges and excess water flows above ground.

## **Tidal Flooding and Storm Surges**

Moderate to heavy rainfall, coupled with a high or incoming tide from Port Phillip Bay can exacerbate flooding within the municipality or create areas of flooding in and around the drainage network. Due to the proximity of the Municipality to Port Phillip Bay and its flat terrain, tidal flows from Port Phillip Bay may reduce the capacity of the stormwater drains to discharge runoff back into the bay, while extreme storm events can cause backflow to the point where water surcharges back above ground around the drainage pits and channels. This is most notably seen along Kananook Creek where floodwaters entering from Eel Race Drain, Seaford Wetlands, Skye Rd / Karingal, Lee Street Drain & Sandgate Avenue Drains may backup in Kananook Creek if tide levels from Port Phillip Bay are high.

#### **Description of Major Waterways and Drains**

There are three main waterways within the Frankston municipality - Kananook Creek, Boggy Creek and Sweetwater Creek. Their total length is approximately 47.3 km and Map B in **Appendix F** shows their location. Outlined below is a description of the three main waterways.

- Sweetwater Creek is located in the south west corner of the municipality and discharges into Port Phillip Bay. Sweetwater Creek also contains the Frankston Reservoir.
- Boggy Creek starts on the eastern edge of the municipality on the outskirts of Langwarrin and flows to the northwest corner near Patterson Lakes (Kingston municipality). Here it becomes the Eel Race Drain which transfers the water to Kananook Creek which flows parallel to Port Phillip Bay on the western edge of the municipality.
- Kananook Creek discharges into Port Phillip Bay near Frankston CBD. However, in flood events, the majority of flow is diverted through Riviera Outlet north of Seaford.

Below contains an asset list of Waterways and Drain managed by Melbourne Water in Frankston City

Melbourne Water Drains Suburb/s		Melbourne Water Drains & Waterways	Suburb/s	
Ballarto Road Drain	Carrum Downs & Skye	Rodds Drain	Skye	
Bardia Avenue Drain	Seaford	Sandgate Avenue Drain	Frankston & Frankston South	
Baxter East Drain	Frankston South & Langwarrin South	Seaford Lowlands Drain	Seaford	
Baxter West Drain	Frankston South	Seaford Wetlands Drain	Seaford	
Boggy Creek	Langwarrin	Skye Road / Karingal	Frankston & Seaford	
Eastern Contour Drain	Sandhurst & Skye	Skye Road North Drain	Frankston & Langwarrin	
Eel Race Creek	Carrum Downs	Skye South Drain	Skye	
Eel Race Creek East Branch	Carrum Downe & Sandhuret		Frankston South	
Eel Race Creek North Branch	Carrum Downs	Sweetwater Creek South Branch	Frankston South	
Kananook Creek	nanook Creek Seaford & Frankston		Langwarrin	
Langwarrin Drain Langwarrin		Tamarisk Creek Diversion	Carrum Downs & Frankston North	
Langwarrin South Drain	Langwarrin & Langwarrin South	Upper Carrum Downs Drain	Carrum Downs, Sandhurst & Skye	
Lathams Road Drain	Lathams Road Drain Carrum Downs & Seaford		Carrum Downs, Langwarrin & Skye	
Lee Street Drain	Frankston	Wadsleys Drain	Carrum Downs	
Little Boggy Creek	Carrum Downs & Langwarrin	Wells Road Drain	Seaford	
Lower Carrum Downs Drain	Carrum Downs	Wells Road Extension Drain	Seaford	
Potts Road West Drain	Langwarrin			

Table A1 – Melbourne Water Drains and Waterways within or bordering Frankston City

#### **Historic Storms and Floods**

Significant floods (with high flood gauge levels and likely flooding consequences to property and infrastructure) that have occurred within the municipality of Frankston are as follows in the table below. Levels and rain totals in black indicate large-scale impacts to surrounding areas were recorded, whereas grey figures indicate localised impacts if any occurred.

Event	Event Type		Kananook Creek Seaford North (228371A)		Kananook Creek at Seaford (228372A)	Skye Road Retarding Basin at Frankston North (228378A)	
	Wind	Rain	Rainfall at Gauge	Stream / Tide Level	Stream / Tide Level	Rainfall at Gauge	Stream Level
Normal Water Level				0.7m	0.4m - 0.6m		0.20m
Minor Flood Class				1.1m – 1.5m	-		-
Moderate Flood Class				1.1m – 1.5m	-		-
Major Flood Class				1.5m	-		-
16 <sup>th</sup> October 1983		✓	-	-	0.79m	75mm / 24hrs	3.26m
10 <sup>th</sup> December 1988		✓	-	-	0.96m	20mm / 2hrs	4.10m
28 <sup>th</sup> April 1989		✓	-	-	0.78m	38mm / 4hrs	2.93m
18 <sup>th</sup> July 1990		✓	-	-	0.80m	33mm / 7hrs	2.77m
4 <sup>th</sup> September 1995	✓		-	1.15m	0.66m	-	0.45m
23 <sup>rd</sup> June 1996	✓		25mm / 12hrs	1.11m	-	25mm / 14hrs	1.49m
22 <sup>nd</sup> April 2001	✓	✓	59mm / 15hrs	1.34m	-	57mm / 16hrs	2.05m
3 <sup>rd</sup> February 2005		✓	104mm / 28hrs	1.17m	1.11m	102mm / 28hrs	2.69m
10 <sup>th</sup> July 2008	✓		-	-	1.12m	6mm / 4hrs	0.35m
13 <sup>th</sup> December 2008		✓	55mm / 20hrs	1.09m	0.88m	63mm / 19hrs	2.77m
5 <sup>th</sup> September 2010	✓		3mm / 22hrs	0.67m	0.48m	3mm / 21hrs	0.29m
31st October 2010		✓	57mm / 26hrs	1.25m	1.08m	55mm / 28hrs	2.71m
5 <sup>th</sup> February 2011		✓	80mm / 15hrs	0.90m	1.04m	55mm / 15hrs	3.42m
9 <sup>th</sup> November 2011		✓	37mm / 8hrs	0.90m	1.00m	50mm / 7hrs	3.22m
26 <sup>th</sup> November 2011		✓	59mm / 13hrs	1.00m	0.94m	25mm / 9hrs	2.45m
24 <sup>th</sup> April 2012	✓		57mm / 21hrs	1.00m	0.94m	49mm / 21hrs	2.34m
1st October 2013	✓		3mm/ 6hrs	0.75m	0.70m	4mm / 6hrs	0.96m

Event	Event Type Kana			ananook Creek Seaford North (228371A)		Skye Road Retarding Basin at Frankston North (228378A)	
	Wind	Rain	Rainfall at Gauge	Stream / Tide Level	Stream / Tide Level	Rainfall at Gauge	Stream Level
Normal Water Level				0.7m	0.4m – 0.6m		0.20m
Minor Flood Class				1.1m – 1.5m	-		-
Moderate Flood Class				1.1m – 1.5m	-		-
Major Flood Class				1.5m	-		-
24 <sup>th</sup> June 2014	✓		7mm / 2hrs	1.13m	0.95m	6mm / 2hrs	1.28m
13 <sup>th</sup> July 2016	✓		6mm / 16hrs	1.09m	1.10m	4mm / 15hrs	0.81m
9 <sup>th</sup> October 2016	✓		4mm / 2hrs	0.68m	0.68m	4mm / 2hrs	1.27m
29 <sup>th</sup> December 2016		✓	42mm / 4hrs	0.90m	1.01m	35mm / 4hrs	2.62m
5 <sup>th</sup> February 2017		✓	39mm / 5hrs	0.83m	0.88m	38mm / 5hrs	2.50m
1 <sup>st</sup> December 2017		✓	31mm / 8hrs	0.82m	0.83m	29mm / 8hrs	2.01m
14 <sup>th</sup> February 2018	✓		0mm	0.73m	0.73m	0mm	0.12m
18 <sup>th</sup> March 2018	✓		1mm / 4hrs	0.63m	0.64m	1mm / 2hrs	0.38m
5 <sup>th</sup> March 2020		✓	55mm / 8hrs	1.08m	1.01m	50mm / 8hrs	3.80m

Table A12 – Selection of Historical Flood Events along the Kananook Creek and Skye / Karingal Waterways

### Dam Spilling / Failure

Flooding resulting from failure of the following dams is likely to cause significant structural and community damage within Frankston City. See Dam Failure in Section 3 of this plan for more information. Note that if the storage capacity is reached and water flows over the spillway, this is not to be referred to as a flow release or a storage breach or failure.

Note: Baxter Park Dam – FCC and DEECA via Engineering Services, Parks and Environment are undertaking a study and rectification works to address the possible failure of the dam which could cause significant structural and community damage within Frankston City. This is a funded project to be undertaken by Engineering Services and completed end 2022.

Dam	Location	Owner	Dam Capacity	Full Supply Level	Melway Reference
Baxter Park Dam	Frankston South	Frankston City Council	22 ML	67.5m AHD	106 4G
Frankston Reservoir	Frankston South	Parks Victoria	680 ML	77.25m AHD	102 E10

Table A13 – Dams that pose a risk to Frankston City from Dam Failure

Service Reservoirs located within the Municipality are listed below.

Melbourne Water Service Reservoir	Location	Owner	Material	Reservoir Capacity	Melway Reference
Frankston Chlorine Detention Reservoir	Frankston Reservoir, Sweetwater Creek	Melbourne Water	Steel	2.0 ML	102 E9
Frankston Steel Tank	Frankston Reservoir, Sweetwater Creek	Melbourne Water	Steel	53 ML	102 E10

Table A14- Melbourne Water Service Reservoirs in Frankston City

There may be private dams within the municipality, particularly within rural areas, which have not yet been identified for inclusion within this Plan.

## APPENDIX B - TYPICAL FLOOD PEAK TRAVEL TIMES

In using the information contained in this Appendix, consideration needs to be given to the time of travel of the flood peak. A flood on a 'dry' waterway will generally travel more slowly than a flood on a 'wet' waterway (e.g. The first flood after a dry period will travel more slowly than the second flood in a series of floods). Hence, recent flood history, soil moisture and forecast weather conditions all need to be considered when using the following information to direct flood response activities.

Note that flooding will start some time ahead of the time indicated by the following travel times – these are the time between the flood peaks at respective sites.

Where negative values are shown in the table below this indicates that a flood peak may be expected at the gauge downstream before a separate flood peak is experienced at the upstream gauge. This phenomenon may be due to the location of the thunderstorm passing through the catchment between the two gauges, because of the urban environment found downstream causing floodwaters to enter the waterway quicker than those in a more rural setting upstream, because of tidal influences, or lastly because of the existence of retarding basins upstream.

## **Typical Travel Times**

Location From (gauge)	Location To (gauge)	Typical Travel Time		Comments
KANANOOK CRI	EEK			
Seaford North	Seaford	Between (-2) to 1 hour	Minor – Moderate Flood at Seaford North	
	Seaford	Unknown	Major Flood at Seaford North	

Table B1 – Typical Flood Travel Times between gauges on Kananook Creek

#### **Historical Travel Times**

Flood Event	Location From (gauge)	Location To (gauge)	Flood Peak Travel Time	Flood Class at
KANANOOK CREE	K			Seaford North
4 <sup>th</sup> September 1995	Seaford North	Seaford	1 hour	Minor-Moderate
3 <sup>rd</sup> February 2005	Seaford North	Seaford	Seaford peaked 2 hours before Seaford North	Minor-Moderate
27 <sup>th</sup> September 2009	Seaford North	Seaford	Seaford peaked 1 hour before Seaford North	Minor-Moderate
31 <sup>st</sup> October 2010	Seaford North	Seaford	Seaford peaked 1 hour before Seaford North	Minor-Moderate
5 <sup>th</sup> July 2011	Seaford North	Seaford	1 hour	Minor-Moderate
24 <sup>th</sup> June 2014	Seaford North	Seaford	Less than 1 hour	Minor-Moderate

Table B2 – Historical Flood Travel Times between gauges on Kananook Creek

## APPENDIX C1 – SEAFORD & FRANKSTON FLOOD EMERGENCY PLAN

## **Overview of Flooding Consequences**

This Summary table is generated from Victorian Government data. The State of Victoria does not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for error, loss or damage which may arise from reliance upon it. All persons access this information should make appropriate enquiries to assess the currency of the data.

Summary of Consequences in a 1% AEP (100yr ARI) flood around Frankston and Seaford

Property (Over-Floor	Flood Ris	k)					
Properties	1,586						
Residential	1,165						
Commercial	80						
Industrial	332						
Public Land	9						
Rural	0						
Community Infrastruc	cture						
Child Care / Kindergartens	2	Seaford Heights Preschool	l; and grounds of Erinwood	Presch	ool		
Community Venues	1	Centro Karingal & Village (	Cinemas Karingal carparks				
Schools / Colleges	4	Grounds of Seaford North Belvedere Park Primary So	Primary School; of St John' chool; and of John Paul Cat				
Essential Infrastructu	ire						
Major Roads	1	Cranbourne Road, Frankst	Cranbourne Road, Frankston east of Moorooduc Highway Intersection				
Railway	1	Frankston & Stony Point Railway Line with low level flooding at various points.					
Bus & Tram Routes		770, 771, 778, 779 and 97	770, 771, 778, 779 and 970				
Power Facility	1	Substation on Wright Stree	Substation on Wright Street, Seaford				
Government Buildings	1	Frankston City Council Sea	aford Municipal Depot				
Drainage & Water Facilities	32	24 Retarding Basins, 7 Pu	mping Stations and 1 Tidal	Gate			
Levees	6	Levees including Eel Race flood level) with potential fl			eeboard above 1% AEP		
Emergency Services	1	Frankston VICSES Unit LF	IQ				
Sewerage Facilities	24	Pumping Stations					
Tourism / Recreation							
Trails & Footbridges	3	Coates Walk Pedestrian B Walking Trail	ridge; Kananook Creek Wa	lking Tr	ail; Seaford Wetlands		
Government Bounda	ries						
Local Gov't Areas	1	Frankston	СМА	1	Port Phillip & Westernport		
Adjacent LGAs	1	Kingston	CFA District	1	District 08		
SES Unit Area	1	Frankston	FRV District	0			

Table C1.1 – Consequence Summary of 1% AEP flood around Frankston and Seaford

Seaford and parts of Frankston are located on the site of the old Carrum Flats; an area of reclaimed marsh and wetlands. Because of this, the terrain is flat and the area sees slow moving flood waters which spread out across streets and properties.

The Eel Race drain delivers stormwater from Langwarrin, Carrum Downs and Bangholme along the City of Frankston's northern border, to the Seaford Wetlands and Kananook Creek in Seaford. A diversion drain is located on Kananook Creek to discharge a proportion of the flow directly into Port Phillip Bay. Remaining flow will be deposited into the Bay further south in Frankston.

The predominant risk of flooding in the area comes from overland flow from the Seaford Lowlands, Skye / Karingal, Lee Street and Sandgate Drains which all join Kananook Creek and various points. Approximately 3729 properties are at risk of flooding during a 1% AEP event, with 1583 of these at risk of over-floor flooding.

Other risks in the area include the Electrical Sub-station on Wright Street, Seaford which may be flooded during a 2% AEP event; Cranbourne Road, Frankston east of Moorooduc Highway which may need to be closed during a 5% AEP event; and the site of the Frankston VicSES Unit and Frankston City Municipal Depot on McCulloch Street and Buna Avenue respectively may experience flooding during a 2% AEP event.

#### **Gauges and Warnings**

Warnings are available for flooding expected along Kananook Creek at Seaford North. All other flood response actions must therefore be driven by rainfall and / or river level observations. Telemetered water level / flood gauges are located at Seaford & Frankston North within the Kananook Creek catchment. See Appendix B for typical flood travel times for Kananook Creek.

Gauge	Station No.	Location	Stream Level & Flow Gauge	Rain Gauge	Melway Reference
Eel Race Drain at Riviera St Culverts, Seaford North	228371A	Pedestrian Crossing along Riviera Street, Seaford	✓	✓	97 D11
Kananook Creek at Seaford Rd, Seaford	228372A	East bank on the North side of Seaford Road bridge	<b>✓</b>		99 E5
Skye Road Retarding Basin at Frankston North	228378A	North side of Skye Road opposite Bokissa Drive, Frankston	✓	✓	99 K12
Patterson River at Patterson Lakes	228383A	Whalers Cove Floodgate, at end of boat ramp & parking area, Patterson Lakes	<b>✓</b>		97 F6

Table C1.2 - Gauges monitoring flood levels for the Eel Race Drain, Kananook Creek & Skye/Karingal catchments.

These Gauges may provide some warning of expected flooding. See the Melbourne Water website for more information on these gauges: <a href="http://www.melbournewater.com.au/waterdata/rainfallandriverleveldata/Pages/Rainfall-and-river-level-new.aspx">http://www.melbournewater.com.au/waterdata/rainfallandriverleveldata/Pages/Rainfall-and-river-level-new.aspx</a>. The Bureau of Meteorology's website also links a number of these gauges at: <a href="http://www.bom.gov.au/cgi-bin/wrap\_fwo.pl?IDV60201.html">http://www.bom.gov.au/cgi-bin/wrap\_fwo.pl?IDV60201.html</a>. It is advised that residents monitor the Bureau of Meteorology's website <a href="http://www.bom.gov.au/vic/warnings/index.shtml?ref=hdr">http://www.bom.gov.au/vic/warnings/index.shtml?ref=hdr</a> and the VicEmergency website <a href="https://emergency.vic.gov.au/">https://emergency.vic.gov.au/</a> for any thunderstorm, flood or severe weather warnings present for their area.

The Bureau does not issue formal flood warnings for Eel Race Creek or Skye / Karingal Drain due to their rapid response to rainfall. This is due to either to the urban surrounds which quickly direct

stormwater into drains and waterways or the small catchment size. These result in rapid stream rises during thunderstorms and heavy rainfall creating a short lead time for response.

There is currently one Melbourne Water flood warning gauge on Kananook Creek that could be used to assist with public safety through the issue of flood warnings. This is at Seaford North and its flood class levels established are outlined in the table below.

Flood Class Gauge	Creek Flood Class Level			
Flood Class Gauge	Minor - M	Major		
Eel Race Drain at Riviera St Culverts, Seaford North	1.1m – 1.5m	1.1m – 1.5m	1.5m	

Table C1.3 - Gauges with established Flood Class Levels for Frankston City

At this site on Kananook Creek, the Bureau of Meteorology (the Bureau) in consultation with Melbourne Water will issue flood warnings if levels reach those classified above. This warning will be placed on the Bureau's website (<a href="http://www.bom.gov.au/vic/warnings/index.shtml">http://www.bom.gov.au/vic/warnings/index.shtml</a>). While Frankston City Council monitors these warnings in times of high rainfall, there are no specific guidelines to advise how these situations should be responded to.

## Area Map of Flood Risk for Frankston and Seaford

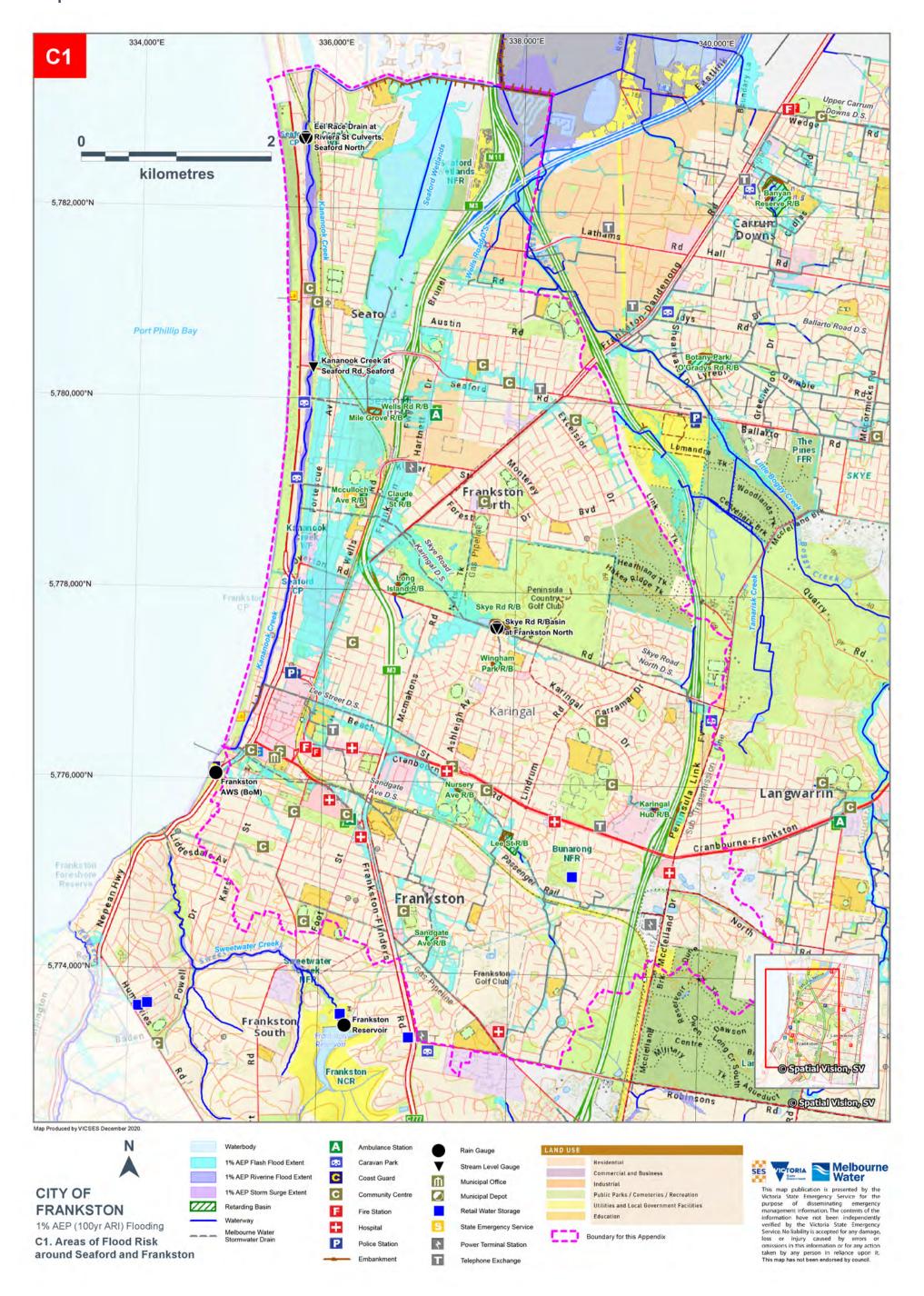


Figure C1 – Areas of flood risk around Frankston and Seaford in Frankston City

## **Properties at Flood Risk**

Properties listed in the table below are at risk from flooding Over-Floor. As more intelligence becomes available, this list may grow.

This Property Flood Risk Table is presented by the Victoria State Emergency Service for the purpose of disseminating emergency management information. The contents of the information have not been independently verified by the Victoria State Emergency Service. No liability is accepted for any damage, loss or injury caused by errors or omissions in this information or for any action taken by any person in reliance upon it.

	ies at risk from sidential		mercial	Indus		Rural	Public Use
Street	t No. at Risk in AEP Event		Address	Subi		Along Melbou	ne Floor
20% AEP	5% 1% AEP AE					Water Waterco	ırse Type
2	2	2	Alice Grove		Frankston	Lee Street Drain	Flash
-	4	4	Alice Grove		Frankston	Lee Street Drain	Flash
-	-	6A	Alice Grove		Frankston	Lee Street Drain	Flash
1	1	1	Amber Aver	nue	Frankston	Skye / Karingal D	rain Flash
3	3	3	Amber Aver	nue	Frankston	Skye / Karingal D	rain Flash
5	5	5	Amber Aver	nue	Frankston	Skye / Karingal D	rain Flash
7	7	7	Amber Aver	nue	Frankston	Skye / Karingal D	rain Flash
9	9	9	Amber Aver	nue	Frankston	Skye / Karingal D	rain Flash
	7	7	Arden Cour	į	Seaford	Seaford Lowlands	Flash
8	8	8	Arden Cour	t	Seaford	Seaford Lowlands	Flash
82	82	82	Austin Road	İ	Seaford	Seaford Lowlands	Flash
-	-	2	Baillie Cour	t	Frankston	Lee Street Drain	Flash
4	4	4	Baillie Cour	t	Frankston	Lee Street Drain	Flash
-	5	5	Baillie Cour	t	Frankston	Lee Street Drain	Flash
6	6	6	Baillie Cour	t	Frankston	Lee Street Drain	Flash
-	-	8	Bainbridge A	Avenue	Seaford	Skye Rd / Karinga	al Drain Flash
-	-	1/13	Bainbridge A	Avenue	Seaford	Skye Rd / Karinga	al Drain Flash
-	-	2/13	Bainbridge A	Avenue	Seaford	Skye Rd / Karinga	al Drain Flash
-	-	3/13	Bainbridge A	Avenue	Seaford	Skye Rd / Karinga	al Drain Flash
-	-	4/13	Bainbridge A	Avenue	Seaford	Skye Rd / Karinga	al Drain Flash
-	-	5/13	Bainbridge A	Avenue	Seaford	Skye Rd / Karinga	al Drain Flash
-	-	1/15	Bainbridge A	Avenue	Seaford	Skye Rd / Karinga	al Drain Flash
-	-	2/15	Bainbridge A	Avenue	Seaford	Skye Rd / Karinga	al Drain Flash
-	-	3/15	Bainbridge A	Avenue	Seaford	Skye Rd / Karinga	al Drain Flash
-	-	4/15	Bainbridge A	Avenue	Seaford	Skye Rd / Karinga	al Drain Flash
-	-	5/15	Bainbridge A	Avenue	Seaford	Skye Rd / Karinga	al Drain Flash
-	-	6/15	Bainbridge A	Avenue	Seaford	Skye Rd / Karinga	
-	-	7/15	Bainbridge A	Avenue	Seaford	Skye Rd / Karinga	al Drain Flash
-	-	8/15	Bainbridge A	Avenue	Seaford	Skye Rd / Karinga	al Drain Flash
-	-	9/15	Bainbridge A	Avenue	Seaford	Skye Rd / Karinga	al Drain Flash
-	-	10/15	Bainbridge A	Avenue	Seaford	Skye Rd / Karinga	al Drain Flash
-	-	17	Bainbridge A	Avenue	Seaford	Skye Rd / Karinga	al Drain Flash
-	-	18	Bainbridge A		Seaford	Skye Rd / Karinga	
-	-	1/20-22	Bainbridge A		Seaford	Skye Rd / Karinga	
-	-	2/20-22	Bainbridge A		Seaford	Skye Rd / Karinga	

Re	sidential	Com	mercial	Industri	al	Rural	Publi	ic Use
	t No. at Risk AEP Event	in						Floo
20%	5%	1% AEP	Address	Suburk		Along Mell Water Wate		Risk Type
AEP	AEP /	3/20-22	Bainbridge Ave	enue	Seaford	Skye Rd / Ka	ringal Drain	Flash
_	_	4/20-22	Bainbridge Ave		Seaford	Skye Rd / Ka		Flash
_	_	5/20-22	Bainbridge Ave		Seaford	Skye Rd / Ka		Flash
_	_	2	Bardia Avenue		Seaford	Bardia Avenu		Flash
_	_	4	Bardia Avenue		Seaford	Bardia Avenu		Flash
_	_	6	Bardia Avenue		Seaford	Bardia Avenu		Flash
_	_	8	Bardia Avenue		Seaford	Bardia Avenu		Flash
_	_	10	Bardia Avenue		Seaford	Bardia Avenu		Flash
_	_	24	Bardia Avenue		Seaford	Bardia Avenu		Flash
_		38	Bardia Avenue		Seaford	Bardia Avenu		Flash
		1/40	Bardia Avenue		Seaford	Bardia Avenu		Flash
-	-	2/40	Bardia Avenue		Seaford	Bardia Avenu		Flash
		42	Bardia Avenue		Seaford	Bardia Avenu		Flasi
-	-				Seaford			-
-	-	44-46	Bardia Avenue			Bardia Avenu		Flash
-	-	48	Bardia Avenue		Seaford	Bardia Avenu		Flasi
-	-	50	Bardia Avenue		Seaford	Bardia Avenu		Flash
-	-	58-62	Bardia Avenue		Seaford	Bardia Avenu		Flasi
-	-	68	Bardia Avenue		Seaford	Bardia Avenu		Flasi
-	-	1/72	Bardia Avenue		Seaford	Bardia Avenu		Flasi
-	-	2/72	Bardia Avenue		Seaford	Bardia Avenu		Flasi
-	-	3/72	Bardia Avenue		Seaford	Bardia Avenu		Flasi
-	-	1/76	Bardia Avenue		Seaford	Bardia Avenu	ie Drain	Flasi
-	-	2/76	Bardia Avenue	9	Seaford	Bardia Avenu	ie Drain	Flasi
-	-	3/76	Bardia Avenue	)	Seaford	Bardia Avenu	ie Drain	Flasi
-	-	4/76	Bardia Avenue	)	Seaford	Bardia Avenu	ie Drain	Flasi
-	-	78	Bardia Avenue	)	Seaford	Bardia Avenu	ie Drain	Flasi
-	-	1/80	Bardia Avenue	)	Seaford	Bardia Avenu	ie Drain	Flasi
-	-	2/80	Bardia Avenue	)	Seaford	Bardia Avenu	ie Drain	Flasi
-	-	3/80	Bardia Avenue	)	Seaford	Bardia Avenu	ie Drain	Flast
-	-	1/84	Bardia Avenue	)	Seaford	Bardia Avenu	ie Drain	Flast
-	-	2/84	Bardia Avenue	)	Seaford	Bardia Avenu	ie Drain	Flast
-	-	4	Bardwell Aven	ue	Frankston	Sandgate Ave	enue Drain	Flasi
-	-	6	Bardwell Aven	ue	Frankston	Sandgate Av	enue Drain	Flasi
-	-	8	Bardwell Aven	ue	Frankston	Sandgate Av	enue Drain	Flasi
-	-	10	Bardwell Aven	ue	Frankston	Sandgate Av	enue Drain	Flast
-	-	1	Bayside Grove	•	Seaford	Seaford Lowl	ands	Flash
-	2B	2B	Bayside Grove	)	Seaford	Seaford Lowl	ands	Flash
-	-	3	Bayside Grove	•	Seaford	Seaford Lowl	ands	Flast
-	-	4	Bayside Grove	)	Seaford	Seaford Lowl	ands	Flash
-	-	6	Bayside Grove	)	Seaford	Seaford Lowl	ands	Flash
-	-	7	Bayside Grove	)	Seaford	Seaford Lowl	ands	Flash
-	-	13	Bayside Grove	)	Seaford	Seaford Lowl	ands	Flast
_		14	Bayside Grove	,	Seaford	Seaford Lowl	ands	Flas

Propertie	s at risk from	r Flooding	over-floor in Fran	nkston and S	Seaford		
Resi	idential	Comi	mercial	Industria	ı	Rural	Public Use
	No. at Risk in						
Al	EP Event		Address	Suburb		Along Melbourne	Flood Risk
20%	5% 1%	6	Addiess	Cubuib		Water Watercourse	Туре
AEP	AEP AE						
-	-	15	Bayside Grove		Seaford	Seaford Lowlands	Flash
-	16	16	Bayside Grove		Seaford	Seaford Lowlands	Flash
-	18	18	Bayside Grove		Seaford	Seaford Lowlands	Flash
-	19	19	Bayside Grove		Seaford	Seaford Lowlands	Flash
-	-	20	Bayside Grove		Seaford	Seaford Lowlands	Flash
-	-	21A	Bayside Grove		Seaford	Seaford Lowlands	Flash
-	22	22	Bayside Grove		Seaford	Seaford Lowlands	Flash
-	-	23	Bayside Grove		Seaford	Seaford Lowlands	Flash
-	-	24	Bayside Grove		Seaford	Seaford Lowlands	Flash
-	-	25	Bayside Grove		Seaford	Seaford Lowlands	Flash
-	-	26	Bayside Grove		Seaford	Seaford Lowlands	Flash
-	27	27	Bayside Grove		Seaford	Seaford Lowlands	Flash
-	28	28	Bayside Grove		Seaford	Seaford Lowlands	Flash
-	-	29	Bayside Grove		Seaford	Seaford Lowlands	Flash
-	31	31	Bayside Grove		Seaford	Seaford Lowlands	Flash
-	-	33	Bayside Grove		Seaford	Seaford Lowlands	Flash
-	-	35	Bayside Grove		Seaford	Seaford Lowlands	Flash
-	37	37	Bayside Grove		Seaford	Seaford Lowlands	Flash
-	-	39	Bayside Grove		Seaford	Seaford Lowlands	Flash
1/41	1/41	1/41	Bayside Grove		Seaford	Seaford Lowlands	Flash
2/41	2/41	2/41	Bayside Grove		Seaford	Seaford Lowlands	Flash
3/41	3/41	3/41	Bayside Grove		Seaford	Seaford Lowlands	Flash
43	43	43	Bayside Grove		Seaford	Seaford Lowlands	Flash
-	35-39	35-39	Beach Street	F	rankston	Lee Street Drain	Flash
41-45	41-45	41-45	Beach Street		rankston	Lee Street Drain	Flash
-	47	47	Beach Street	F	rankston	Lee Street Drain	Flash
53	53	53	Beach Street	F	rankston	Lee Street Drain	Flash
53A	53A	53A	Beach Street	F	rankston	Lee Street Drain	Flash
53B	53B	53B	Beach Street	F	rankston	Lee Street Drain	Flash
-	53C	53C	Beach Street		rankston	Lee Street Drain	Flash
53D	53D	53D	Beach Street		rankston	Lee Street Drain	Flash
53E	53E	53E	Beach Street		rankston	Lee Street Drain	Flash
53F	53F	53F	Beach Street		rankston	Lee Street Drain	Flash
53G	53G	53G	Beach Street		rankston	Lee Street Drain	Flash
59-63	59-63	59-63	Beach Street		rankston	Lee Street Drain	Flash
1/65-67	1/65-67	1/65-67	Beach Street		rankston	Lee Street Drain	Flash
2/65-67		2/65-67	Beach Street		rankston	Lee Street Drain	Flash
3/65-67		3/65-67	Beach Street		rankston	Lee Street Drain	Flash
-	69	69	Beach Street	F	rankston	Lee Street Drain	Flash
69	69	69	Beach Street	F	rankston	Lee Street Drain	Flash
-	-	1/73-75	Beach Street	F	rankston	Lee Street Drain	Flash
-	-	2/73-75	Beach Street	F	rankston	Lee Street Drain	Flash
-	-	3/73-75	Beach Street	F	rankston	Lee Street Drain	Flash

Res	idential	Comr	mercial	Industrial	Rural	Public Use
	No. at Risk in			maaama	Narai	i abiic Ose
	EP Event		Address	Suburb	Along Melbou	rne Flood Risk
20% AEP	5% 1% AEP AE	, 0	ridui 000	Cubuib	Water Waterco	urse Type
-	-	4/73-75	Beach Street	Frankston	Lee Street Drain	Flash
-	-	5/73-75	Beach Street	Frankston	Lee Street Drain	Flash
77	77	77	Beach Street	Frankston	Lee Street Drain	Flash
79	79	79	Beach Street	Frankston	Lee Street Drain	Flash
-	-	81	Beach Street	Frankston	Lee Street Drain	Flash
-	-	83	Beach Street	Frankston	Lee Street Drain	Flash
-	91	91	Beach Street	Frankston	Lee Street Drain	Flash
-	93	93	Beach Street	Frankston	Lee Street Drain	Flash
1/102	1/102	1/102	Beach Street	Frankston	Lee Street Drain	Flash
2/102	2/102	2/102	Beach Street	Frankston	Lee Street Drain	Flash
104	104	104	Beach Street	Frankston	Lee Street Drain	Flash
-	134	134	Beach Street	Frankston	Lee Street Drain	Flash
-	136-138	136-138	Beach Street	Frankston	Lee Street Drain	Flash
_	-	139	Beach Street	Frankston	Lee Street Drain	Flash
_	141	141	Beach Street	Frankston	Lee Street Drain	Flash
_	143	143	Beach Street	Frankston	Lee Street Drain	Flash
145	145	145	Beach Street	Frankston	Lee Street Drain	Flash
147	147	147	Beach Street	Frankston	Lee Street Drain	Flash
149	149	149	Beach Street	Frankston	Lee Street Drain	Flash
- 149	143	151-153	Beach Street	Frankston	Lee Street Drain	Flash
-	158	151-153	Beach Street	Frankston	Lee Street Drain	Flash
-	100					
-		2	Benton Avenue		Skye Rd / Karing	
53	53	53	Bokissa Drive	Frankston	Skye / Karingal D	
-	-	24	Bondi Avenue	Frankston	Sandgate Avenu	
-	-	38	Bondi Avenue	Frankston	Sandgate Avenu	
-	-	40	Bondi Avenue	Frankston	Sandgate Avenu	
-	42	42	Bondi Avenue	Frankston	Sandgate Avenu	
-	44	44	Bondi Avenue	Frankston	Sandgate Avenu	
-	46	46	Bondi Avenue	Frankston	Sandgate Avenu	
-	48	48	Bondi Avenue	Frankston	Sandgate Avenu	
-	58	58	Bondi Avenue	Frankston	Sandgate Avenu	
-	60	60	Bondi Avenue	Frankston	Sandgate Avenu	
-	62	62	Bondi Avenue	Frankston	Sandgate Avenu	e Drain Flash
-	85	85	Bondi Avenue	Frankston	Sandgate Avenu	e Drain Flash
-	-	92	Bondi Avenue	Frankston	Sandgate Avenu	e Drain Flash
-	-	94	Bondi Avenue	Frankston	Sandgate Avenu	e Drain Flash
96	96	96	Bondi Avenue	Frankston	Sandgate Avenu	e Drain Flash
98	98	98	Bondi Avenue	Frankston	Sandgate Avenu	e Drain Flash
-	-	1	Boonong Aven	ue Seaford	Skye Rd / Karing	al Drain Flash
-	-	3	Boonong Aven	ue Seaford	Skye Rd / Karing	al Drain Flash
-	-	7	Boonong Aven	ue Seaford	Skye Rd / Karing	al Drain Flash
-	-	9	Boonong Aven	ue Seaford	Skye Rd / Karing	al Drain Flash
-	-	27	Boonong Aven	ue Seaford	Skye Rd / Karing	al Drain Flash

Res	sidential		Com	mercial	Industrial	Rural	Public Use
	t No. at Ri AEP Event					Along Melbourne	Floo
20% AEP	5% AEP	1% AEP		Address	Suburb	Water Watercourse	Risl Typ
-	-		29	Boonong Avenue	Seaford	Skye Rd / Karingal D	rain Flash
-	-		31	Boonong Avenue	Seaford	Skye Rd / Karingal D	rain Flash
-	-		33	Boonong Avenue	Seaford	Skye Rd / Karingal D	rain Flash
-	-		1/34	Boonong Avenue	Seaford	Skye Rd / Karingal D	rain Flash
-	-		2/34	Boonong Avenue	Seaford	Skye Rd / Karingal D	rain Flash
-	-		4/34	Boonong Avenue	Seaford	Skye Rd / Karingal D	rain Flast
-	-		5/34	Boonong Avenue	Seaford	Skye Rd / Karingal D	rain Flasl
-	-		35	Boonong Avenue	Seaford	Skye Rd / Karingal D	rain Flasl
-	-		37	Boonong Avenue	Seaford	Skye Rd / Karingal D	rain Flasl
-	-		2	Bragge Street	Frankston	Skye Rd / Karingal D	rain Flash
-	-		8-10	Bragge Street	Frankston	Skye Rd / Karingal D	rain Flasl
-	_		14	Bragge Street	Frankston	Skye Rd / Karingal D	rain Flas
-	-		16	Bragge Street	Frankston	Skye Rd / Karingal D	rain Flas
-	-		19	Brooklyn Avenue	Frankston	Sandgate Avenue Dr	ain Flas
-	21	ı	21	Brooklyn Avenue	Frankston	Sandgate Avenue Dr	
_	37	7	37	Brooklyn Avenue	Frankston	Sandgate Avenue Dr	
_	38		38	Brooklyn Avenue	Frankston	Sandgate Avenue Dr	
_	_	,	40	Brooklyn Avenue	Frankston	Sandgate Avenue Dr	
_	_		45	Brooklyn Avenue	Frankston	Sandgate Avenue Dr	
_	_		47	Brooklyn Avenue	Frankston	Sandgate Avenue Dr	
_	49	2	49	Brooklyn Avenue	Frankston	Sandgate Avenue Dr	
	51		51	Brooklyn Avenue	Frankston	Sandgate Avenue Dr	
	31		53	Brooklyn Avenue	Frankston	Sandgate Avenue Dr	
	_		55	,			
	_			Brooklyn Avenue	Frankston	Sandgate Avenue Dr	
-	62		62	Brooklyn Avenue	Frankston	Sandgate Avenue Dr	
-	-		63	Brooklyn Avenue	Frankston	Sandgate Avenue Dr	
-	64		64	Brooklyn Avenue	Frankston	Sandgate Avenue Dr	
-	65	)	65	Brooklyn Avenue	Frankston	Sandgate Avenue Dr	
-	-		67	Brooklyn Avenue	Frankston	Sandgate Avenue Dr	
68	68	3	68	Brooklyn Avenue	Frankston	Sandgate Avenue Dr	
-	-		69	Brooklyn Avenue	Frankston	Sandgate Avenue Dr	
70	70		70	Brooklyn Avenue	Frankston	Sandgate Avenue Dr	
72	72		72	Brooklyn Avenue	Frankston	Sandgate Avenue Dr	
74	74		74	Brooklyn Avenue	Frankston	Sandgate Avenue Dr	
76	76		76	Brooklyn Avenue	Frankston	Sandgate Avenue Dr	ain Flasl
3/63	3/6	3	3/63	Brunel Road	Seaford	Wells Road Drain	Flasi
4/63	4/6	3	4/63	Brunel Road	Seaford	Wells Road Drain	Flash
5/63	5/6	3	5/63	Brunel Road	Seaford	Wells Road Drain	Flasi
-	-		5	Buna Avenue	Seaford	Skye Rd / Karingal D	rain Flasl
-	-		10	Buna Avenue	Seaford	Skye Rd / Karingal D	rain Flasl
-	-		12	Buna Avenue	Seaford	Skye Rd / Karingal D	rain Flasl
-	-		14	Buna Avenue	Seaford	Skye Rd / Karingal D	rain Flasl
-	-		17	Buna Avenue	Seaford	Skye Rd / Karingal D	rain Fla

	idential		over-floor in F	Indust		Rural	Dula	ic Use
			merciai	industi	riai	Rurai	Publ	ic use
	: No. at Risk in EP Event					Along Mell	oourna	Flood
20%	5% 1%	<i>L</i>	Address	Subu	rb	Water Wate		Risk Type
AEP	AEP AE							Турс
1/14	1/14	1/14	Burns Street		Frankston	Sandgate Ave	enue Drain	Flash
2/14	2/14	2/14	Burns Street		Frankston	Sandgate Ave	enue Drain	Flash
15	15	15	Cambridge S	Street	Frankston	Sandgate Ave	enue Drain	Flash
-	17	17	Cambridge S	Street	Frankston	Sandgate Ave	enue Drain	Flash
-	-	1/1-7	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	2/1-7	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	3/1-7	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	1/2	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	2/2	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	3/2	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	4/2	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	5/2	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	6/2	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	7/2	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	8/2	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	9/2	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	10/2	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	1/3	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	2/3	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	3/3	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	4/3	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	5/3	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	6/3	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	7/3	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	4	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	1/7	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	2/7	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	3/7	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	1/8	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	2/8	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	3/8	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	4/8	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	1/8A	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	2/8A	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	3/8A	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	4/8A	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	1/9	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	2/9	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	3/9	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	1/10	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	2/10	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	3/10	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	4/10	Carder Aven	ue	Seaford	Skye Rd / Ka	ringal Drain	Flash

Res	sidential		Comn	nercial	Industrial	Rural	Publi	ic Use
	t No. at Risk AEP Event	c in				Along Melb	ourne	Floor
20% AEP	5% AEP	1% AEP	,	Address	Suburb	Water Water		Risk Type
-	-		11	Carder Avenue	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-		12	Carder Avenue	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-		1/14	Carder Avenue	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-		2/14	Carder Avenue	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-		3/14	Carder Avenue	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-		4/14	Carder Avenue	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-		1/16	Carder Avenue	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-		2/16	Carder Avenue	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-		3/16	Carder Avenue	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-		4/16	Carder Avenue	Seaford	Skye Rd / Kar		Flash
-	-		5/16	Carder Avenue	Seaford	Skye Rd / Kar		Flash
-	-		1/18	Carder Avenue	Seaford	Skye Rd / Kar		Flash
_	_		2/18	Carder Avenue	Seaford	Skye Rd / Kar		Flash
_	_		3/18	Carder Avenue	Seaford	Skye Rd / Kar		Flash
_	_		4/18	Carder Avenue	Seaford	Skye Rd / Kar	-	Flash
_			5/18	Carder Avenue	Seaford	Skye Rd / Kar		Flash
_	_		1/20	Carder Avenue	Seaford	Skye Rd / Kar		Flash
_	_		2/20	Carder Avenue	Seaford	Skye Rd / Kar		Flash
_			3/20	Carder Avenue	Seaford	Skye Rd / Kar		Flash
_	_		4/20	Carder Avenue	Seaford	Skye Rd / Kar		Flash
			5/20	Carder Avenue	Seaford	Skye Rd / Kar		Flash
_		1	/22-24	Carder Avenue	Seaford	Skye Rd / Kar		Flash
			2/22-24		Seaford	,		Flash
-	-			Carder Avenue		Skye Rd / Kar		
-	-		3/22-24	Carder Avenue	Seaford	Skye Rd / Kar		Flash
-	-		1/22-24	Carder Avenue	Seaford	Skye Rd / Kar		Flash
-	-		5/22-24	Carder Avenue	Seaford	Skye Rd / Kar		Flash
-	-		/23-25	Carder Avenue	Seaford	Skye Rd / Kar		Flash
-	-		2/23-25	Carder Avenue	Seaford	Skye Rd / Kar		Flash
-	-		3/23-25	Carder Avenue	Seaford	Skye Rd / Kar	-	Flash
-	-		/23-25	Carder Avenue	Seaford	Skye Rd / Kar		Flash
-	-		/27-29	Carder Avenue	Seaford	Skye Rd / Kar		Flash
-	-		2/27-29	Carder Avenue	Seaford	Skye Rd / Kar		Flash
-	-		3/27-29	Carder Avenue	Seaford	Skye Rd / Kar		Flash
-	-		/27-29	Carder Avenue	Seaford	Skye Rd / Kar	<u> </u>	Flash
-	-	5	5/27-29	Carder Avenue	Seaford	Skye Rd / Kar		Flash
-	9		9	Casale Court	Frankston	Lee Street Dra		Flash
-	-		12	Catherine Parad	e Frankston	Lee Street Dra	ain	Flash
14-16	14-16		14-16	Catherine Parad	e Frankston	Lee Street Dra	ain	Flash
-	21		21	Catherine Parad	e Frankston	Lee Street Dra	ain	Flash
-	-		1/25	Catherine Parad	e Frankston	Lee Street Dra	ain	Flash
-	-		2/25	Catherine Parad	e Frankston	Lee Street Dra	ain	Flash
-	-		23	Claude Street	Seaford	Skye Rd / Kar	ingal Drain	Flash
_	-		24	Claude Street	Seaford	Skye Rd / Kar	ingal Drain	Flash

Nes	sidential	,	Commercial	Industrial		Rural Public U	Jse
	t No. at Risk AEP Event	in	Address	Suburb		Along Melbourne	Flood Risk
:0% AEP	5% AEP	1% AEP	Audress	Suburb		Water Watercourse	Туре
-	-	25	Claude Street	Se	aford	Skye Rd / Karingal Drain	Flash
-	-	27	Claude Street	Se	aford	Skye Rd / Karingal Drain	Flash
-	-	29	Claude Street	Se	aford	Skye Rd / Karingal Drain	Flash
-	-	31	Claude Street	Se	aford	Skye Rd / Karingal Drain	Flash
-	-	33	Claude Street	Se	aford	Skye Rd / Karingal Drain	Flash
-	-	35	Claude Street	Se	aford	Skye Rd / Karingal Drain	Flash
-	-	38	Claude Street	Se	aford	Skye Rd / Karingal Drain	Flash
-	-	40	Claude Street	Se	aford	Skye Rd / Karingal Drain	Flash
-	-	42	Claude Street	Se	aford	Skye Rd / Karingal Drain	Flash
-	-	1	Cooba Place	Fra	ankston	Lee Street Drain	Flash
-	-	1	Coogee Aven	ue Fra	ankston	Sandgate Avenue Drain	Flash
-	3	3	Coogee Aven	ue Fra	ankston	Sandgate Avenue Drain	Flash
80	80	80	Cranbourne F	toad Fra	ankston	Lee Street Drain	Flash
86	86	86	Cranbourne F	toad Fra	ankston	Lee Street Drain	Flash
87	87	87	Cranbourne F	load Fra	ankston	Lee Street Drain	Flash
-	-	11	1 Cranbourne F	load Fra	ankston	Lee Street Drain	Flash
-	119A	119	A Cranbourne F	Road Fra	ankston	Lee Street Drain	Flash
-	-	9	Crathie Court	Fra	ankston	Sandgate Avenue Drain	Flash
-	-	10	Crathie Court	Fra	ankston	Sandgate Avenue Drain	Flash
-	1/11	1/1	1 Cumberland [	Drive Se	aford	Austin Road / Excelsior Avenue Drain	Flash
-	-	2/1	1 Cumberland [	Drive Se	aford	Austin Road / Excelsior Avenue Drain	Flash
-	-	21-2	Cumberland [	Orive Se	aford	Austin Road / Excelsior Avenue Drain	Flash
-	1/32	1/3	2 Cumberland [	Drive Se	aford	Austin Road / Excelsior Avenue Drain	Flash
-	2/32	2/3	2 Cumberland [	Orive Se	aford	Austin Road / Excelsior Avenue Drain  Austin Road / Excelsior Avenue	Flash
34	34	34	Cumberland [	Orive Se	aford	Drain	Flash
-	11	11	Dandenong R	oad Fra	ankston	Lee Street Drain	Flash
13	13	13			ankston	Lee Street Drain	Flash
-	-	2/15			ankston	Lee Street Drain	Flash
-	-	3/15	-17 Dandenong R		ankston	Lee Street Drain	Flash
-	-	4/15	-17 Dandenong R	oad Fra	ankston	Lee Street Drain	Flash
-	-	5/15	-17 Dandenong R	oad Fra	ankston	Lee Street Drain	Flash
-	-	6/15	-17 Dandenong R	oad Fra	ankston	Lee Street Drain	Flash
-	-	21	Dandenong R	oad Fra	ankston	Lee Street Drain	Flash
-	23	23	Dandenong R	oad Fra	ankston	Lee Street Drain	Flash
-	-	78			ankston	Skye Rd / Karingal Drain	Flash
-	-	80			ankston	Skye Rd / Karingal Drain	Flash
-	-	82			ankston	Skye Rd / Karingal Drain	Flash
-	_	86-8	-		ankston	Skye Rd / Karingal Drain	Flash
-		90-9			ankston	Skye Rd / Karingal Drain	Flash

Res	sidential	Com	mercial	Indust	trial	Rural	Publi	ic Use
	t No. at Risk AEP Event	in				Alana Mal		Flood
20% AEP	5% ´	I% EP	Address	Subu	ırb	Along Mel Water Wate		Risk Type
	, AEI ,	94-98	Dandenong	Road West	Frankston	Skye Rd / Ka	ringal Drain	Flash
_	_	35/106	Dandenong		Frankston	Skye Rd / Ka		Flash
_	_	36/106	Dandenong		Frankston	Skye Rd / Ka		Flash
_	_	37/106	Dandenong		Frankston	Skye Rd / Ka		Flash
_	_	38/106	Dandenong		Frankston	Skye Rd / Ka		Flash
-	9	9	Darius Aven		Frankston	Lee Street D		Flash
11	11	11	Darius Aven	ue	Frankston	Lee Street D	rain	Flash
13	13	13	Darius Aven		Frankston	Lee Street D		Flash
_	-	1B	Deane Stree	t	Frankston	Lee Street D		Flash
3	3	3	Deane Stree		Frankston	Lee Street D		Flash
-	-	5	Deane Stree		Frankston	Lee Street D		Flash
	27	27	Deane Stree		Frankston	Lee Street D		Flash
_	1/29	1/29	Deane Stree		Frankston	Lee Street D		Flash
_	2/29A	2/29A	Deane Stree		Frankston	Lee Street D	-	Flash
	2/29A	2/29	Deane Stree		Frankston	Lee Street D		Flash
-	3/29	3/29	Deane Stree		Frankston	Lee Street D		Flash
2/201								
3/29A	3/29A	3/29A	Deane Stree		Frankston	Lee Street D		Flash
-	4/00 A	4/29	Deane Stree		Frankston	Lee Street D		Flash
-	4/29A	4/29A	Deane Stree		Frankston	Lee Street D		Flash
0/04	0/04	5/29	Deane Stree		Frankston	Lee Street D		Flash
2/31	2/31	2/31	Deane Stree		Frankston	Lee Street D		Flash
3/31	3/31	3/31	Deane Stree		Frankston	Lee Street D		Flash
6/33	6/33	6/33	Deane Stree		Frankston	Lee Street D		Flash
7/33	7/33	7/33	Deane Stree		Frankston	Lee Street D		Flash
8/33	8/33	8/33	Deane Stree		Frankston	Lee Street D		Flash
-	-	9/33	Deane Stree		Frankston	Lee Street D		Flash
-	-	10/33	Deane Stree		Frankston	Lee Street D		Flash
-	-	11/33	Deane Stree		Frankston	Lee Street D		Flash
-	-	14	Devereaux C	Court	Frankston	Lee Street D		Flash
-	-	11	Donald Aver	iue	Frankston	Skye Rd / Ka	ringal Drain	Flash
-	-	1	Douglas Gro		Frankston	Skye Rd / Ka		Flash
-	-	5/2	Douglas Gro	ve	Frankston	Skye Rd / Ka		Flash
-	-	6/2	Douglas Gro	ve	Frankston	Skye Rd / Ka	ringal Drain	Flash
-	-	4	Douglas Gro	ve	Frankston	Skye Rd / Ka	ringal Drain	Flash
-	-	5	Douglas Gro	ve	Frankston	Skye Rd / Ka	ringal Drain	Flash
-	-	1/11	Duncan Ave	nue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	2/11	Duncan Ave	nue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	3/11	Duncan Ave	nue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	4/11	Duncan Ave	nue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	5/11	Duncan Ave	nue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	6/11	Duncan Ave	nue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	7/11	Duncan Ave	nue	Seaford	Skye Rd / Ka	ringal Drain	Flash
_	-	8/11	Duncan Ave	nue	Seaford	Skye Rd / Ka	ringal Drain	Flash

Res	sidential		Com	nercial	Industrial	Rural	Publi	ic Use
	t No. at Risk AEP Event	in .				Along Melbo	urne	Flood
20% AEP	5% AEP	1% AEP		Address	Suburb	Water Waterc		Risk Type
-	-		9/11	Duncan Avenue	Seaford	Skye Rd / Karir	ngal Drain	Flash
-	-		10/11	Duncan Avenue	Seaford	Skye Rd / Karir	ngal Drain	Flash
-	-		1/13	Duncan Avenue	Seaford	Skye Rd / Karir	ngal Drain	Flash
-	-		2/13	Duncan Avenue	Seaford	Skye Rd / Karir	ngal Drain	Flash
-	-		3/13	Duncan Avenue	Seaford	Skye Rd / Karir	ngal Drain	Flash
-	-		4/13	Duncan Avenue	Seaford	Skye Rd / Karir	ngal Drain	Flash
-	-		5/13	Duncan Avenue	Seaford	Skye Rd / Karir	ngal Drain	Flash
-	-		6/13	Duncan Avenue	Seaford	Skye Rd / Karir	ngal Drain	Flash
-	-		7/13	Duncan Avenue	Seaford	Skye Rd / Karir	ngal Drain	Flash
-	-		8/13	Duncan Avenue	Seaford	Skye Rd / Karir		Flash
-	-		9/13	Duncan Avenue	Seaford	Skye Rd / Karir		Flash
-	-		10/13	Duncan Avenue	Seaford	Skye Rd / Karir		Flash
_	-		11/13	Duncan Avenue	Seaford	Skye Rd / Karir		Flash
_	-		12/13	Duncan Avenue	Seaford	Skye Rd / Karir		Flash
_	_		1/15	Duncan Avenue	Seaford	Skye Rd / Karir	-	Flash
_	_		2/15	Duncan Avenue	Seaford	Skye Rd / Karir		Flash
_	_	+	3/15	Duncan Avenue	Seaford	Skye Rd / Karir		Flash
_	_		4/15	Duncan Avenue	Seaford	Skye Rd / Karir		Flash
_	_	+	17	Duncan Avenue	Seaford	Skye Rd / Karir		Flash
_	_		17A	Duncan Avenue	Seaford	Skye Rd / Karir		Flash
	_		18	Duncan Avenue	Seaford	Skye Rd / Karir		Flash
-			19	Duncan Avenue	Seaford	Skye Rd / Karir		Flash
	-		19A	Duncan Avenue	Seaford	-		Flash
-	-			Duncan Avenue		Skye Rd / Karir		
-	-	-	20		Seaford	Skye Rd / Karir		Flash
-	-		21	Duncan Avenue	Seaford	Skye Rd / Karir		Flash
-	-	-	23	Duncan Avenue	Seaford	Skye Rd / Karir		Flash
-	-		24	Duncan Avenue	Seaford	Skye Rd / Karir		Flash
-	-		25	Duncan Avenue	Seaford	Skye Rd / Karir		Flash
-	-		26	Duncan Avenue		Skye Rd / Karir	-	Flash
-	-		27	Duncan Avenue	Seaford	Skye Rd / Karir		Flash
-	-		1	Easton Avenue	Seaford	Skye Rd / Karir		Flash
-	-		1/3	Easton Avenue	Seaford	Skye Rd / Karir		Flash
-	-		2/3	Easton Avenue	Seaford	Skye Rd / Karir		Flash
-	-		3/3	Easton Avenue	Seaford	Skye Rd / Karir		Flash
-	-		4/3	Easton Avenue	Seaford	Skye Rd / Karir		Flash
-	-		5	Easton Avenue	Seaford	Skye Rd / Karir	ngal Drain	Flash
-	-		6	Easton Avenue	Seaford	Skye Rd / Karir	ngal Drain	Flash
-	12		12	Ellesmere Court	Frankston	Lee Street Drai	n	Flash
13	13		13	Ellesmere Court	Frankston	Lee Street Drai	n	Flash
-	-		7	Elliott Street	Seaford	Skye Rd / Karir	ngal Drain	Flash
-	-		9	Elliott Street	Seaford	Skye Rd / Karir	ngal Drain	Flash
-	-		11	Elliott Street	Seaford	Skye Rd / Karir	ngal Drain	Flash
-	-		13	Elliott Street	Seaford	Skye Rd / Karir	ngal Drain	Flash

Res	sidential		Comi	mercial	Industrial		Rural	Publi	ic Use
	t No. at Ris AEP Event	k in		Address	Suburb		Along Mel	bourne	Flood Risk
20% AEP	5% AEP	1% AEP		Address	Suburb		Water Water	ercourse	Type
-	-		15	Elliott Street	Sea	aford	Skye Rd / Ka	aringal Drain	Flash
-	-		4	Elsie Avenue	Sea	aford	Bardia Aveni	ue Drain	Flash
-	-		14	Elsie Avenue	Sea	aford	Bardia Aveni	ue Drain	Flash
-	-		16	Elsie Avenue	Sea	aford	Bardia Aveni	ue Drain	Flash
-	-		18	Elsie Avenue	Sea	aford	Bardia Aveni	ue Drain	Flash
-	-		20	Elsie Avenue	Sea	aford	Bardia Aveni	ue Drain	Flash
-	-		22	Elsie Avenue	Sea	aford	Bardia Aveni	ue Drain	Flash
1	1		1	Emora Court	Fra	nkston	Lee Street D	rain	Flash
2	2		2	Emora Court	Fra	nkston	Lee Street D	rain	Flash
3	3		3	Emora Court	Fra	nkston	Lee Street D	rain	Flash
4	4		4	Emora Court	Fra	nkston	Lee Street D	rain	Flash
-	-		12	Erskine Street	Fra	nkston	Lee Street D	rain	Flash
-	-		31	Evelyn Street	Fra	nkston	Skye Rd / Ka	aringal Drain	Flash
-	-		33	Evelyn Street	Fra	nkston	Skye Rd / Ka	aringal Drain	Flash
-	-		35	Evelyn Street	Fra	nkston	Skye Rd / Ka	aringal Drain	Flash
-	-		39	Evelyn Street	Fra	nkston	Skye Rd / Ka	aringal Drain	Flash
15	15		15	Fingal Drive	Fra	nkston	Skye / Karing	gal Drain	Flash
-	31		31	Fingal Drive	Fra	nkston	Skye / Karing	gal Drain	Flash
-	-		2	Finlay Street	Fra	nkston	Lee Street D	rain	Flash
25N	25N	ı	25N	Fletcher Road	Fra	nkston	Lee Street D	rain	Flash
-	-		25R	Fletcher Road	Fra	nkston	Lee Street D	rain	Flash
-	-		25L	Fletcher Road	Fra	nkston	Lee Street D	rain	Flash
-	-		25K	Fletcher Road	Fra	nkston	Lee Street D	rain	Flash
250	25C	)	250	Fletcher Road	Fra	nkston	Lee Street D	rain	Flash
-	-		25J	Fletcher Road	Fra	nkston	Lee Street D	rain	Flash
-	-		8	Foot Street	Fra	nkston	Sandgate Av	enue Drain	Flash
-	-		12	Foot Street	Fra	nkston	Sandgate Av	renue Drain	Flash
-	1/43	A	1/43A	Foot Street	Fra	nkston	Sandgate Av	enue Drain	Flash
-	-		2/43A	Foot Street	Fra	nkston	Sandgate Av	enue Drain	Flash
-	-		43B	Foot Street	Fra	nkston	Sandgate Av	enue Drain	Flash
-	-		43C	Foot Street	Fra	nkston	Sandgate Av	enue Drain	Flash
-	-		45	Foot Street	Fra	nkston	Sandgate Av	enue Drain	Flash
-	-		47	Foot Street	Fra	inkston	Sandgate Av	enue Drain	Flash
-	49		49	Foot Street	Fra	inkston	Sandgate Av	enue Drain	Flash
-	-		51	Foot Street	Fra	nkston	Sandgate Av	renue Drain	Flash
-	53		53	Foot Street	Fra	nkston	Sandgate Av	enue Drain	Flash
-	-		55	Foot Street	Fra	nkston	Sandgate Av	enue Drain	Flash
-	-		57	Foot Street	Fra	nkston	Sandgate Av	enue Drain	Flash
-	-		45	Fortescue Avenue	e Sea	aford	Bardia Aveni	ue Drain	Flash
-	-		69	Fortescue Avenue	e Sea	aford	Bardia Aveni	ue Drain	Flash
-	-		79	Fortescue Avenue	e Sea	aford	Skye Rd / Ka	aringal Drain	Flash
-	-		89	Fortescue Avenue	e Sea	aford	Skye Rd / Ka		Flash
_	-		93	Fortescue Avenue	9 90	aford	+ -	aringal Drain	Flash

Res	sidential	Com	mercial	Indus	trial	Rural	Publi	c Use	
A	t No. at Risk in AEP Event		Address	Subı	ırb	Along Mel		Flood Risk	
20% AEP	5% 1% AEP AE					mator mato		Туре	
-	-	95	Fortescue Av	venue	Seaford	Skye Rd / Ka	ringal Drain	Flash	
-	-	99	Fortescue Av	renue	Seaford	Skye Rd / Ka	ringal Drain	Flash	
-	-	101	Fortescue Av	renue	Seaford	Skye Rd / Ka	ringal Drain	Flash	
-	-	107	Fortescue Av	renue	Seaford	Skye Rd / Ka	ringal Drain	Flash	
-	-	115-117	Fortescue Av	renue	Seaford	Skye Rd / Ka	ringal Drain	Flash	
-	-	121	Fortescue Av	renue	Seaford	Skye Rd / Ka	ringal Drain	Flash	
-	-	174	Fortescue Av	venue	Seaford	Skye Rd / Ka	ringal Drain	Flash	
-	-	176	Fortescue Av	venue	Seaford	Skye Rd / Ka	ringal Drain	Flash	
-	-	178	Fortescue Av	renue	Seaford	Skye Rd / Ka	ringal Drain	Flash	
-	-	1	Frallon Creso	cent	Frankston	Skye / Karing	al Drain	Flash	
3	3	3	Frallon Creso	cent	Frankston	Skye / Karing	Skye / Karingal Drain		
8	8	8	Frallon Creso	cent	Frankston	Skye / Karing	al Drain	Flash	
-	-	10	Frallon Creso	cent	Frankston	Skye / Karing	al Drain	Flash	
-	-	38	Franciscan A	venue	Frankston	Lee Street Di	ain	Flash	
-	-	52	Franciscan A	venue	Frankston	Lee Street Dr	ain	Flash	
-	-	54	Franciscan A	venue	Frankston	Lee Street Dr	ain	Flash	
-	55	55	Franciscan A	venue	Frankston	Lee Street Dr	ain	Flash	
56	56	56	Franciscan A	venue	Frankston	Lee Street Dr	ain	Flash	
-	58	58	Franciscan A	venue	Frankston	Lee Street Di	ain	Flash	
-	-	60	Franciscan A	venue	Frankston	Lee Street Di	ain	Flash	
-	-	62	Franciscan A	venue	Frankston	Lee Street Di	ain	Flash	
-	1/1	1/1	Franklin Cou	rt	Frankston	Lee Street Di	ain	Flash	
-	3/1	3/1	Franklin Cou	rt	Frankston	Lee Street Di	ain	Flash	
-	-	12	Franklin Cou	rt	Frankston	Lee Street Di	ain	Flash	
144	144	144	Frankston-Da Road	andenong	Seaford	Skye Rd / Ka	ringal Drain	Flash	
-	148	148	Frankston-Da Road	andenong	Seaford	Skye Rd / Ka	ringal Drain	Flash	
150	150	150	Frankston-Da Road	andenong	Seaford	Skye Rd / Ka	ringal Drain	Flash	
164	164	164	Frankston-Da Road	andenong	Seaford	Skye Rd / Ka	ringal Drain	Flash	
-	168	168	Frankston-Da Road	andenong	Seaford	Skye Rd / Ka		Flash	
-	11	11	Frankston-Fli Road	inders	Frankston	Sandgate Av	-	Flash	
-	30-36	30-36	Frankston-Fli Road	inders	Frankston	Sandgate Av	enue Drain	Flash	
-	-	2/44	Frankston-Fli Road	inders	Frankston	Sandgate Av	enue Drain	Flash	
-	-	3/44	Frankston-Fli Road		Frankston	Sandgate Av	enue Drain	Flash	
-	-	4/44	Road			Sandgate Av	enue Drain	Flash	
-	-	5/44	Frankston-Fli Road		Frankston	Sandgate Avenue Drain			
		47-49	Frankston-Fli Road	inders	Frankston	Sandgate Av	D	Flash	

Res	sidential		Comr	mercial	Indus	strial	Rural	Publi	ic Use
Street	t No. at Ris	sk in							
A	AEP Event			Address	Sub	urb	Along Melbou		Flood Risk
20% AEP	5% AEP	1% AEP					Water Waterco	ourse	Туре
-	-		50	Frankston-Fl Road	inders	Frankston	Sandgate Avenu	ıe Drain	Flash
-	-		145	Frankston-Fl Road	inders	Frankston	Sandgate Avenu	ıe Drain	Flash
-	-		43	Gattinara Dri	ve	Frankston	Lee Street Drain	l	Flash
5	5		5	Glenelg Ave	nue	Frankston	Sandgate Avenu	ıe Drain	Flash
9	9		9	Glenelg Ave	nue	Frankston	Sandgate Avenu	ıe Drain	Flash
-	18		18	Glenelg Ave	nue	Frankston	Sandgate Avenu	ıe Drain	Flash
-	-		1	Glenview Cr	escent	Frankston	Lee Street Drain	ı	Flash
-	-		3	Glenview Cr	escent	Frankston	Lee Street Drain	ı	Flash
-	4		4	Glenview Cr	escent	Frankston	Lee Street Drain	ı	Flash
-	-		5	Glenview Cr	escent	Frankston	Lee Street Drain	ı	Flash
6	6		6	Glenview Cr	escent	Frankston	Lee Street Drain	ı	Flash
-	-		8	Glenview Cr	escent	Frankston	Lee Street Drain	ı	Flash
43	43		43	Golf Links R	oad	Frankston	Sandgate Avenu	ıe Drain	Flash
47	47		47	Golf Links R	oad	Frankston	Sandgate Avenu	ıe Drain	Flash
49	49		49	Golf Links R	oad	Frankston	Sandgate Avenu	ıe Drain	Flash
51	51		51	Golf Links R	oad	Frankston	Sandgate Avenu	ıe Drain	Flash
71	71		71	Golf Links R	oad	Frankston	Sandgate Avenu		Flash
_	_		2	Govan Stree	t	Seaford	Bardia Avenue [		Flash
_	_		4	Govan Stree	t	Seaford	Bardia Avenue [	Orain	Flash
_	_		1/6-10	Govan Stree		Seaford	Bardia Avenue [		Flash
_	_		2/6-10	Govan Stree	t	Seaford	Bardia Avenue [	Drain	Flash
_	_		7	Govan Stree		Seaford	Bardia Avenue [		Flash
_	_		1/12	Govan Stree		Seaford	Bardia Avenue [		Flash
_	_		2/12	Govan Stree		Seaford	Bardia Avenue [		Flash
_	_		3/12	Govan Stree		Seaford	Bardia Avenue [		Flash
_	_		4/12	Govan Stree		Seaford	Bardia Avenue [		Flash
-			15	Govan Stree		Seaford	Bardia Avenue I		Flash
	-		17	Govan Stree		Seaford	Bardia Avenue I		Flash
_			1/18	Govan Stree		Seaford	Bardia Avenue I		Flash
_			2/18	Govan Stree		Seaford	Bardia Avenue [		Flash
	-		3/18	Govan Stree		Seaford	Bardia Avenue I		Flash
-			19	Govan Stree		Seaford	Bardia Avenue I		Flash
				Govan Stree		Seaford			
-	-		22				Bardia Avenue I		Flash
-	-		24	Gover Stree		Seaford	Bardia Avenue I		Flash
	_		26 18	Govan Stree Grady Court		Seaford Frankston South	Bardia Avenue I Sandgate Avenu		Flash
20	20		20	Grady Court			Sandgate Avenu		Flash
22	22		22	Grady Court			-	Sandgate Avenue Drain	
3	3		3	Grant Avenu	e	Seaford	Skye Rd / Karingal Drain		Flash
8	8		8	Grant Avenu	е	Seaford	Skye Rd / Karing		Flash

Properties	at risk from	Flooding	over-floor in Franks	ston and	l Seaford			
Resid	lential	Comr	nercial	Industr	rial	Rural	Public U	se
	lo. at Risk in P Event		Address	Subur	'b	Along Melbo		Flood Risk
20% AEP	5% 1% AEP AE					Water Waterc	ourse	Туре
-	-	1	Gray Street		Seaford	Bardia Avenue	Drain	Flash
-	-	3	Gray Street		Seaford	Bardia Avenue	Drain	Flash
-	-	4	Gray Street		Seaford	Bardia Avenue	Drain	Flash
-	-	5	Gray Street		Seaford	Bardia Avenue	Drain	Flash
-	-	6	Gray Street		Seaford	Bardia Avenue	Drain	Flash
-	-	8-10	Gray Street		Seaford	Bardia Avenue	Drain	Flash
-	-	11	Gray Street		Seaford	Bardia Avenue	Drain	Flash
-	-	12	Gray Street		Seaford	Bardia Avenue	Drain	Flash
-	-	12	Guildford Close		Frankston	Sandgate Aven	ue Drain	Flash
-	14	14	Guildford Close		Frankston	Sandgate Aven	ue Drain	Flash
-	18	18	Guildford Close		Frankston	Sandgate Aven	ue Drain	Flash
-	-	6	Gulwa Avenue		Frankston	Lee Street Drai	n	Flash
-	-	8	Gulwa Avenue		Frankston	Lee Street Drai	n	Flash
-	-	10	Gulwa Avenue		Frankston	Lee Street Drai	n	Flash
-	-	23	Gulwa Avenue		Frankston	Lee Street Drai	n	Flash
-	-	25	Gulwa Avenue		Frankston	Lee Street Drai	n	Flash
27	27	27	Gulwa Avenue		Frankston	Lee Street Drai	n	Flash
-	-	1	Hadley Street		Seaford	Skye Rd / Karir	ngal Drain	Flash
-	-	3	Hadley Street		Seaford	Skye Rd / Karir	ngal Drain	Flash
-	-	5	Hadley Street		Seaford	Skye Rd / Karir	ngal Drain	Flash
-	-	9	Hadley Street		Seaford	Skye Rd / Karir	ngal Drain	Flash
-	-	13-15	Hadley Street		Seaford	Skye Rd / Karin	ngal Drain	Flash
-	-	26	Hannah Street		Seaford	Skye Rd / Karin	ngal Drain	Flash
-	30	30	Hartnett Drive		Seaford	Austin Road / E Drain	Excelsior Avenue	Flash
-	5/32	5/32	Hartnett Drive		Seaford	Austin Road / E Drain	Excelsior Avenue	Flash
-	-	1/36	Hartnett Drive		Seaford	Austin Road / E Drain	Excelsior Avenue	Flash
-	2/36	2/36	Hartnett Drive		Seaford	Austin Road / E Drain	Excelsior Avenue	Flash
-	3/36	3/36	Hartnett Drive		Seaford	Austin Road / E Drain	Excelsior Avenue	Flash
-	4/36	4/36	Hartnett Drive		Seaford	Austin Road / E Drain	excelsior Avenue	Flash
-	5/36	5/36	Hartnett Drive		Seaford	Austin Road / E Drain	Excelsior Avenue	Flash
-	-	6/36	Hartnett Drive		Seaford	Austin Road / E Drain	excelsior Avenue	Flash
1/42	1/42	1/42	Hartnett Drive		Seaford	Austin Road / E Drain	xcelsior Avenue	Flash
2/42	2/42	2/42	Hartnett Drive		Seaford	Austin Road / E Drain	excelsior Avenue	Flash
3/42	3/42	3/42	Hartnett Drive		Seaford	Austin Road / E Drain	Excelsior Avenue	Flash
4/42	4/42	4/42	Hartnett Drive		Seaford	Austin Road / E Drain	excelsior Avenue	Flash

	dential		over-floor in Frankst nercial	Industrial	Rural Public U	Jse
	No. at Risk in					
	EP Event 5% 1%		Address	Suburb	Along Melbourne Water Watercourse	Flood Risk
AEP	AEP AE					Туре
5/42	5/42	5/42	Hartnett Drive	Seaford	Austin Road / Excelsior Avenue Drain	Flash
6/42	6/42	6/42	Hartnett Drive	Seaford	Austin Road / Excelsior Avenue Drain	Flash
7/42	7/42	7/42	Hartnett Drive	Seaford	Austin Road / Excelsior Avenue Drain	Flash
8/42	8/42	8/42	Hartnett Drive	Seaford	Austin Road / Excelsior Avenue Drain	Flash
3/46-48	3/46-48	3/46-48	Hartnett Drive	Seaford	Austin Road / Excelsior Avenue Drain	Flash
4/46-48	4/46-48	4/46-48	Hartnett Drive	Seaford	Austin Road / Excelsior Avenue Drain	Flash
5/46-48	5/46-48	5/46-48	Hartnett Drive	Seaford	Austin Road / Excelsior Avenue Drain	Flash
3	3	3	Hastings Road	Frankston	Sandgate Avenue Drain	Flash
-	-	35	Hastings Road	Frankston	Sandgate Avenue Drain	Flash
-	-	12	Heatherhill Road	Frankston	Sandgate Avenue Drain	Flash
14	14	14	Heatherhill Road	Frankston	Sandgate Avenue Drain	Flash
16	16	16	Heatherhill Road	Frankston	Sandgate Avenue Drain	Flash
18	18	18	Heatherhill Road	Frankston	Sandgate Avenue Drain	Flash
18A	18A	18A	Heatherhill Road	Frankston	Sandgate Avenue Drain	Flash
-	4	4	Helvetia Court	Frankston	Sandgate Avenue Drain	Flash
-	6	6	Helvetia Court	Frankston	Sandgate Avenue Drain	Flash
10	10	10	Helvetia Court	Frankston	Sandgate Avenue Drain	Flash
-	12	12	Helvetia Court	Frankston	Sandgate Avenue Drain	Flash
13	13	13	Helvetia Court	Frankston	Sandgate Avenue Drain	Flash
15	15	15	Helvetia Court	Frankston	Sandgate Avenue Drain	Flash
22	22	22	Helvetia Court	Frankston	Sandgate Avenue Drain	Flash
7	7	7	Heversham Drive	Seaford	Austin Road / Excelsior Avenue Drain	Flash
-	24-26	24-26	Heversham Drive	Seaford	Austin Road / Excelsior Avenue Drain	Flash
-	-	2/12-14	Hill Street	Frankston	Lee Street Drain	Flash
-	-	4/12-14	Hill Street	Frankston	Lee Street Drain	Flash
-	-	6/12-14	Hill Street	Frankston	Lee Street Drain	Flash
-	-	8/12-14	Hill Street	Frankston	Lee Street Drain	Flash
-	-	10/12- 14	Hill Street	Frankston	Lee Street Drain	Flash
2/17-19	2/17-19	2/17-19	Hill Street	Frankston	Lee Street Drain	Flash
3/17-19	3/17-19	3/17-19	Hill Street	Frankston	Lee Street Drain	Flash
6/17-19	6/17-19	6/17-19	Hill Street	Frankston	Lee Street Drain	Flash
8/17-19	8/17-19	8/17-19	Hill Street	Frankston	Lee Street Drain	Flash
9/17-19	9/17-19	9/17-19	Hill Street	Frankston	Lee Street Drain	Flash
-	-	10/17- 19	Hill Street	Frankston	Lee Street Drain	Flash
11/17-19	11/17- 19	11/17- 19	Hill Street	Frankston	Lee Street Drain	Flash

Resi	dential	Comi	nercial	Industrial	Rural	Public Use
	No. at Risk in EP Event		Address	Suburb	Along Melbourne	Flood Risk
20% AEP	5% 1% AEP AE	6	Address	Suburb	Water Watercourse	Type
12/17-19	12/17- 19	12/17- 19	Hill Street	Frankston	Lee Street Drain	Flash
13/17-19	13/17- 19	13/17- 19	Hill Street	Frankston	Lee Street Drain	Flash
1/21-23	1/21-23	1/21-23	Hill Street	Frankston	Lee Street Drain	Flash
3/21-23	3/21-23	3/21-23	Hill Street	Frankston	Lee Street Drain	Flash
4/21-23	4/21-23	4/21-23	Hill Street	Frankston	Lee Street Drain	Flash
5/21-23	5/21-23	5/21-23	Hill Street	Frankston	Lee Street Drain	Flash
-	-	6/21-23	Hill Street	Frankston	Lee Street Drain	Flash
-	-	7/21-23	Hill Street	Frankston	Lee Street Drain	Flash
8/21-23	8/21-23	8/21-23	Hill Street	Frankston	Lee Street Drain	Flash
-		12/21- 23	Hill Street	Frankston	Lee Street Drain	Flash
		14/21- 23	Hill Street	Frankston	Lee Street Drain	Flach
4/05	4/05			Frankston		Flash
1/25	1/25	1/25	Hill Street	Frankston	Lee Street Drain	Flash
	2/25	2/25	Hill Street	Frankston	Lee Street Drain	Flash
3/25	3/25	3/25	Hill Street	Frankston	Lee Street Drain	Flash
4/25	4/25	4/25	Hill Street	Frankston	Lee Street Drain	Flash
5/25	5/25	5/25	Hill Street	Frankston	Lee Street Drain	Flash
6/25	6/25	6/25	Hill Street	Frankston	Lee Street Drain	Flash
-	7/25	7/25	Hill Street	Frankston	Lee Street Drain	Flash
98	98	98	Hillcrest Road	Frankston	Lee Street Drain	Flash
1/104	1/104	1/104	Hillcrest Road	Frankston	Lee Street Drain	Flash
3/104	3/104	3/104	Hillcrest Road	Frankston	Lee Street Drain	Flash
-	-	8/104	Hillcrest Road	Frankston	Lee Street Drain	Flash
-	9/104	9/104	Hillcrest Road	Frankston	Lee Street Drain	Flash
-	11/104	11/104	Hillcrest Road	Frankston	Lee Street Drain	Flash
-	12/104	12/104	Hillcrest Road	Frankston	Lee Street Drain	Flash
13/104	13/104	13/104	Hillcrest Road	Frankston	Lee Street Drain	Flash
-	14/104	14/104	Hillcrest Road	Frankston	Lee Street Drain	Flash
106	106	106	Hillcrest Road	Frankston	Lee Street Drain	Flash
-	107	107	Hillcrest Road	Frankston	Lee Street Drain	Flash
-	1/108	1/108	Hillcrest Road	Frankston	Lee Street Drain	Flash
2/108	2/108	2/108	Hillcrest Road	Frankston	Lee Street Drain	Flash
2/100	-	109	Hillcrest Road	Frankston	Lee Street Drain	Flash
110	110	110	Hillcrest Road			
				Frankston	Lee Street Drain	Flash
111	111	111	Hillcrest Road	Frankston	Lee Street Drain	Flash
1/5	1/5	1/5	Hillcrest Road	Frankston	Sandgate Avenue Drain	Flash
2/5	2/5	2/5	Hillcrest Road	Frankston	Sandgate Avenue Drain	Flash
3/5	3/5	3/5	Hillcrest Road	Frankston	Sandgate Avenue Drain	Flash
3	3	3	Hunt Drive	Seaford	Seaford Lowlands	Flash
-	-	5	Hunt Drive	Seaford	Seaford Lowlands	Flash
-	-	10	Ilma Court	Seaford	Seaford Lowlands	Flash
-	-	1	Inglis Avenue	Frankston	Skye Rd / Karingal Drain	Flash

Res	sidential		Com	mercial	Industrial	Rural	Public Use
	t No. at Ris AEP Event			Address	Outout	Along Melbourne	Floor
20% AEP	5% AEP	1% AEP		Address	Suburb	Water Watercourse	Risk Type
-	-		1/3-5	Inglis Avenue	Frankston	Skye Rd / Karingal Dra	ain Flash
-	-		2/3-5	Inglis Avenue	Frankston	Skye Rd / Karingal Dra	ain Flash
-	-		3/3-5	Inglis Avenue	Frankston	Skye Rd / Karingal Dra	ain Flash
-	-		4/3-5	Inglis Avenue	Frankston	Skye Rd / Karingal Dra	ain Flash
-	-		5/3-5	Inglis Avenue	Frankston	Skye Rd / Karingal Dra	ain Flash
-	-		6/3-5	Inglis Avenue	Frankston	Skye Rd / Karingal Dra	ain Flash
-	-		7	Inglis Avenue	Frankston	Skye Rd / Karingal Dra	ain Flash
-	-		9	Inglis Avenue	Frankston	Skye Rd / Karingal Dra	ain Flash
-	-		11	Inglis Avenue	Frankston	Skye Rd / Karingal Dra	ain Flash
4	4		4	Iranda Street	Frankston	Lee Street Drain	Flash
-	6		6	Iranda Street	Frankston	Lee Street Drain	Flash
-	-		1/26	James Street	Frankston	Lee Street Drain	Flash
-	2/20	6	2/26	James Street	Frankston	Lee Street Drain	Flash
3/26	3/20	6	3/26	James Street	Frankston	Lee Street Drain	Flash
28	28		28	James Street	Frankston	Lee Street Drain	Flash
29	29		29	James Street	Frankston	Lee Street Drain	Flash
-	31		31	James Street	Frankston	Lee Street Drain	Flash
-	-		42	Johnstone Stree	t Seaford	Seaford Lowlands	Flash
-	-		27	Joy Street	Frankston	Lee Street Drain	Flash
28	28		28	Joy Street	Frankston	Lee Street Drain	Flash
30	30		30	Joy Street	Frankston	Lee Street Drain	Flash
2	2		2	Jubilee Avenue	Seaford	Skye Rd / Karingal Dra	ain Flash
-	-		4	Jubilee Avenue	Seaford	Skye Rd / Karingal Dra	ain Flash
6	6		6	Jubilee Avenue	Seaford	Skye Rd / Karingal Dra	ain Flash
7	7		7	Jubilee Avenue	Seaford	Skye Rd / Karingal Dra	ain Flash
9	9		9	Jubilee Avenue	Seaford	Skye Rd / Karingal Dra	ain Flash
11	11		11	Jubilee Avenue	Seaford	Skye Rd / Karingal Dra	ain Flash
13	13		13	Jubilee Avenue	Seaford	Skye Rd / Karingal Dra	ain Flash
17	17		17	Jubilee Avenue	Seaford	Skye Rd / Karingal Dra	ain Flash
19	19		19	Jubilee Avenue	Seaford	Skye Rd / Karingal Dra	
-	-		1	Kananook Avenu	ue Seaford	Bardia Avenue Drain	Flash
-	-		2	Kananook Avenu	ue Seaford	Bardia Avenue Drain	Flash
-	-		3	Kananook Avenu		Bardia Avenue Drain	Flash
-	-		4	Kananook Avenu		Bardia Avenue Drain	Flash
-	-		5	Kananook Avenu		Bardia Avenue Drain	Flash
-	-		6	Kananook Avenu		Bardia Avenue Drain	Flash
-	-		7	Kananook Avenu		Bardia Avenue Drain	Flash
-	_		8	Kananook Avenu		Bardia Avenue Drain	Flash
_	_		9	Kananook Avenu		Bardia Avenue Drain	Flash
_	-		10	Kananook Avenu		Bardia Avenue Drain	Flash
_	_		11	Kananook Avenu		Bardia Avenue Drain	Flash
_			12	Kananook Avenu		Bardia Avenue Drain	Flash
	-		13	Kananook Avenu		Bardia Avenue Drain	Flash

Res	sidential		Com	mercial	Indus	trial	Rural		Public Use
	t No. at Ri								Floo
•				Address	Subu	ırb	Along Me		Risk
:0% \EP	5% AEP	1% AEP					Water Wat	ercourse	Туре
-	-		14	Kananook Av	enue	Seaford	Bardia Aver	nue Drain	Flash
-	-		15	Kananook Av	enue	Seaford	Bardia Aver	nue Drain	Flash
-	-		18	Kananook Av	enue	Seaford	Bardia Aver	nue Drain	Flash
-	-		19	Kananook Av	enue	Seaford	Bardia Aver	nue Drain	Flash
-	-		20	Kananook Av	enue	Seaford	Bardia Aver	nue Drain	Flash
-	-		21	Kananook Av	enue	Seaford	Bardia Aver	nue Drain	Flash
-	-		22	Kananook Av	enue	Seaford	Bardia Aver	nue Drain	Flash
-	-		23	Kananook Av	enue	Seaford	Bardia Aver	nue Drain	Flash
-	-		24	Kananook Av	enue	Seaford	Bardia Aver	nue Drain	Flash
-	-		25	Kananook Av	enue	Seaford	Bardia Aver	nue Drain	Flash
-			26	Kananook Av	enue	Seaford	Bardia Aver	nue Drain	Flash
-	-		27	Kananook Av	enue	Seaford	Bardia Aver	nue Drain	Flash
-	-		28	Kananook Av	enue	Seaford	Bardia Aver	nue Drain	Flash
-	-		29	Kananook Av	enue	Seaford	Bardia Aver	nue Drain	Flash
-	-		1/30	Kananook Av	enue	Seaford	Bardia Aver	nue Drain	Flash
-	-		2/30	Kananook Av	enue	Seaford	Bardia Aver	nue Drain	Flash
-	-		31	Kananook Av	enue	Seaford	Bardia Aver	nue Drain	Flash
-	_		32	Kananook Av	enue	Seaford	Bardia Aver	nue Drain	Flash
-	_		33	Kananook Av	enue	Seaford	Bardia Aver	nue Drain	Flash
-	_		34	Kananook Av		Seaford	Bardia Aver		Flash
-	_		35	Kananook Av		Seaford	Bardia Aver	nue Drain	Flash
_	_		36	Kananook Av		Seaford	Bardia Aver		Flash
_	_		36A	Kananook Av		Seaford	Bardia Aver		Flash
_	_		37	Kananook Av		Seaford	Bardia Aver	nue Drain	Flash
_	_		38	Kananook Av		Seaford	Bardia Aver		Flash
_	-		39	Kananook Av		Seaford	Bardia Aver		Flash
_	_		40	Kananook Av		Seaford	Bardia Aver		Flash
			41	Kananook Av		Seaford	Bardia Aver		Flash
_	-		42	Kananook Av		Seaford	Bardia Aver		Flash
			43	Kananook Av		Seaford	Bardia Aver		Flash
			44	Kananook Av		Seaford			Flash
	-						Bardia Aver		
-	-		45	Kananook Av		Seaford	Bardia Aver		Flash
-	-		46	Kananook Av		Seaford	-	aringal Drain	
-	-		48	Kananook Av		Seaford	-	aringal Drain	
-	-		50	Kananook Av		Seaford	-	aringal Drain	
-	-		52	Kananook Av		Seaford	-	aringal Drain	
-	-		53	Kananook Av		Seaford	-	aringal Drain	
-	-		54	Kananook Av		Seaford		aringal Drain	
-	-		56	Kananook Av		Seaford	-	aringal Drain	
-	-		57	Kananook Av		Seaford	-	aringal Drain	
-	-		59	Kananook Av	enue	Seaford	Skye Rd / K	aringal Drain	
-	-		60	Kananook Av	enue	Seaford	Skye Rd / K	aringal Drain	Flash
-	-		62	Kananook Av	enue	Seaford	Skye Rd / K	aringal Drain	Flash

	Street No. at Risk in				strial			olic Use	
	No. at Risk i EP Event	n				Along Me	bourne	Floo	
20% AEP		% E <b>P</b>	Address	Sub	urb	Water Water	ercourse	Risl Typ	
-	-	63	Kananook A	venue	Seaford	Skye Rd / Ka	aringal Drain	Flash	
-	-	65	Kananook A	venue	Seaford	Skye Rd / Ka	aringal Drain	Flash	
-	-	66	Kananook A	venue	Seaford	Skye Rd / Ka	aringal Drain	Flash	
-	-	68	Kananook A	venue	Seaford	Skye Rd / Ka	aringal Drain	Flash	
-	-	68A	Kananook A	venue	Seaford	Skye Rd / Ka	aringal Drain	Flash	
-	-	69	Kananook A	venue	Seaford	Skye Rd / Ka	aringal Drain	Flash	
-	-	70	Kananook A	venue	Seaford	Skye Rd / Ka	aringal Drain	Flash	
-	-	70A	Kananook A	venue	Seaford	Skye Rd / Ka	aringal Drain	Flasi	
-	-	71	Kananook A	venue	Seaford	Skye Rd / Ka	aringal Drain	Flast	
-	-	72	Kananook A	venue	Seaford	Skye Rd / Ka	aringal Drain	Flasi	
-	-	74	Kananook A	venue	Seaford	Skye Rd / Ka	aringal Drain	Flas	
-	-	76	Kananook A	venue	Seaford	Skye Rd / Ka		Flas	
-	-	77	Kananook A	venue	Seaford	Skye Rd / Ka	aringal Drain	Flas	
-	-	78	Kananook A	venue	Seaford	Skye Rd / Ka	aringal Drain	Flas	
-	-	80	Kananook A	venue	Seaford	Skye Rd / Ka		Flas	
_	-	82	Kananook A	venue	Seaford	Skye Rd / Ka		Flas	
_	_	84	Kananook A		Seaford	Skye Rd / Ka		Flas	
_	_	85	Kananook A		Seaford	Skye Rd / Ka		Flas	
_	_	87	Kananook A		Seaford	Skye Rd / Ka		Flas	
_	_	89	Kananook A		Seaford	Skye Rd / Ka		Flas	
_	_	90	Kananook A		Seaford	Skye Rd / Ka		Flas	
_	_	92	Kananook A		Seaford	Skye Rd / Ka		Flas	
_	-	93	Kananook A		Seaford	Skye Rd / Ka		Flas	
_		93 94A	Kananook A		Seaford	Skye Rd / Ka		Flas	
_	-	95	Kananook A		Seaford			Flas	
-	-					Skye Rd / Ka			
-	-	1/96	Kananook A		Seaford	Skye Rd / Ka		Flas	
-	-	2/96	Kananook A		Seaford	Skye Rd / Ka		Flas	
-	-	3/96	Kananook A		Seaford	Skye Rd / Ka		Flas	
-	-	97	Kananook A		Seaford	Skye Rd / Ka		Flas	
-	-	99	Kananook A		Seaford	Skye Rd / Ka		Flas	
-	-	100	Kananook A		Seaford	Skye Rd / Ka		Flas	
-	-	102	Kananook A		Seaford	Skye Rd / Ka		Flas	
-		103	Kananook A		Seaford	Skye Rd / Ka		Flas	
-	-	104	Kananook A		Seaford	Skye Rd / Ka		Flas	
-	-	106	Kananook A		Seaford	Skye Rd / Ka		Flasi	
-	-	107	Kananook A		Seaford	Skye Rd / Ka		Flasi	
-	-	108	Kananook A	venue	Seaford	Skye Rd / Ka		Flasi	
-	-	109	Kananook A	venue	Seaford	Skye Rd / Ka	aringal Drain	Flasi	
-	-	111	Kananook A	venue	Seaford	Skye Rd / Ka	aringal Drain	Flasi	
-	-	112	Kananook A	Kananook Avenue S		Skye Rd / Karingal Drain		Flasi	
-	-	1/113	Kananook A	venue	Seaford	Skye Rd / Ka	aringal Drain	Flasi	
-	-	2/113	Kananook A	venue	Seaford	Skye Rd / Ka	aringal Drain	Flash	

Res	idential	Con	nmercial	Indu	strial	Rural	Publi	ic Use
	No. at Risk ir EP Event		Address	Cb	b	Along Melb	ourne	Floo
20% NEP	5% 19 AEP AE		Address	Sub	ourb	Water Water	course	Risl Typ
-	-	117	Kananook A	venue	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-	118	Kananook A	venue	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-	119	Kananook A	venue	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-	120	Kananook A	venue	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-	122	Kananook A	venue	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-	124	Kananook A	venue	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-	125	Kananook A	venue	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-	128	Kananook A	venue	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-	132	Kananook A	venue	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-	134	Kananook A	venue	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-	135	Kananook A	venue	Seaford	Skye Rd / Kar	ingal Drain	Flast
-	-	1/136	Kananook A	venue	Seaford	Skye Rd / Kar	ingal Drain	Flast
-	-	2/136	Kananook A	venue	Seaford	Skye Rd / Kar	ingal Drain	Flasi
-	-	137	Kananook A	venue	Seaford	Skye Rd / Kar	ingal Drain	Flasi
-	-	139	Kananook A	venue	Seaford	Skye Rd / Kar	ingal Drain	Flasi
-	-	141	Kananook A	venue	Seaford	Skye Rd / Kar		Flasi
-	-	143	Kananook A	venue	Seaford	Skye Rd / Kar		Flasi
_	_	145	Kananook A	venue	Seaford	Skye Rd / Kar		Flas
_	_	5	Kandy Cour	t	Frankston	Lee Street Dra		Flasi
-	-	1	Karingal Dri		Frankston	Skye / Karinga		Flasi
46	46	46	Kenilworth /		Frankston	Lee Street Dra		Flas
-	1/49A	1/49A	Kenilworth /		Frankston	Lee Street Dra		Flasi
_	-	3/49A	Kenilworth /		Frankston	Lee Street Dra		Flasi
_	_	51	Kenilworth /		Frankston	Lee Street Dra		Flasi
_	_	21	Kildare Cou		Frankston	Lee Street Dra		Flas
1	1	1	Kintal Court		Frankston	Skye / Karinga		Flas
	<u> </u>	1-7	Kirkwood A		Seaford	Bardia Avenue		Flasi
		2	Kirkwood A		Seaford	Bardia Avenu		Flas
-		4	Kirkwood A		Seaford	Bardia Avenu		Flasi
		6	Kirkwood A		Seaford	Bardia Avenu		Flasi
		8	Kirkwood A		Seaford	Bardia Avenu		Flasi
-	-	9	Kirkwood A		Seaford	Bardia Avenu		
								Flasi
-		10	Kirkwood A		Seaford	Bardia Avenue		Flasi
-	-	11	Kirkwood A		Seaford	Bardia Avenue		Flash
-	-	12	Kirkwood A		Seaford	Bardia Avenu		Flash
-	-	13	Kirkwood A		Seaford	Bardia Avenu		Flash
-	-	14	Kirkwood A		Seaford	Bardia Avenu		Flash
-	-	15	Kirkwood A		Seaford Seaford	Bardia Avenu		Flash
-	-	16		Kirkwood Avenue		Bardia Avenu		Flast
-	-	1/19-21		Kirkwood Avenue			Bardia Avenue Drain	
-	-	2/19-21	Kirkwood A		Seaford	Bardia Avenu		Flast
	-	3/19-21	Kirkwood A	(00110	Seaford	Bardia Avenu	o Drain	Flash

Res	sidential		Com	mercial	Industrial	Rural	Publi	ic Use
	t No. at Ris AEP Event					Along Mell	oourne	Floo
20% AEP	5% AEP	1% AEP		Address	Suburb	Water Water		Risk Type
-	-		20	Kirkwood Avenue	e Seaford	Bardia Avenu	e Drain	Flash
-	-		24	Kirkwood Avenue	e Seaford	Bardia Avenu	e Drain	Flash
-	-		27	Kirkwood Avenue	e Seaford	Bardia Avenu	e Drain	Flash
-	-		33	Kirkwood Avenue	e Seaford	Bardia Avenu	e Drain	Flash
-	-		40	Kirkwood Avenue	e Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-		46	Kirkwood Avenue	e Seaford	Skye Rd / Kai	ringal Drain	Flash
-	-		54	Kirkwood Avenue	e Seaford	Skye Rd / Kai	ringal Drain	Flash
-	-		67	Kirkwood Avenue	e Seaford	Skye Rd / Kar	ringal Drain	Flash
-	-		77	Kirkwood Avenue	e Seaford	Skye Rd / Kai		Flash
-	-		88	Kirkwood Avenue	e Seaford	Skye Rd / Kai		Flash
-			91	Kirkwood Avenue	e Seaford	Skye Rd / Kai		Flash
-			93	Kirkwood Avenue		Skye Rd / Kai		Flash
_	_		95	Kirkwood Avenue	e Seaford	Skye Rd / Kai		Flash
_	_		97	Kirkwood Avenue	e Seaford	Skye Rd / Kai		Flash
_	_		99	Kirkwood Avenue	e Seaford	Skye Rd / Kai		Flash
_	_		100	Kirkwood Avenue		Skye Rd / Kai		Flash
_	_		1/102	Kirkwood Avenue		Skye Rd / Kai		Flash
_	_		2/102	Kirkwood Avenue		Skye Rd / Kai		Flash
_	_		3/102	Kirkwood Avenue		Skye Rd / Kai		Flash
_	_		103	Kirkwood Avenue		Skye Rd / Kai		Flash
	_		104	Kirkwood Avenue		Skye Rd / Kai		Flash
			105	Kirkwood Avenue		Skye Rd / Kai		Flash
			107	Kirkwood Avenue		-		Flasi
-	-					Skye Rd / Kar		
	-		110	Kirkwood Avenue		Skye Rd / Ka		Flash
-	-		112	Kirkwood Avenue		Skye Rd / Kai		Flash
-	-		114	Kirkwood Avenue		Skye Rd / Kai		Flash
-	-		116	Kirkwood Avenue		Skye Rd / Kai		Flasi
-	-		118	Kirkwood Avenue		Skye Rd / Kai		Flash
-	-		4	Kitson Street	Frankston	Skye Rd / Kai		Flasi
-	-		1/6	Kitson Street	Frankston	Skye Rd / Kai		Flash
-	-		2/6	Kitson Street	Frankston	Skye Rd / Kai		Flash
-	-		8	Kitson Street	Frankston	Skye Rd / Kai		Flasi
-	-		10	Kitson Street	Frankston	Skye Rd / Kai		Flast
-	-		12	Kitson Street	Frankston	Skye Rd / Kai		Flasi
-	-		14	Kitson Street	Frankston	Skye Rd / Ka		Flash
-	-		20	Kitson Street	Frankston	Skye Rd / Ka	ringal Drain	Flash
-	-		3	Kookaburra Stree	et Frankston	Skye Rd / Kai	ringal Drain	Flash
-	-		2/9	Kookaburra Stree	et Frankston	Skye Rd / Ka	ringal Drain	Flash
-	-		3/9	Kookaburra Stree	et Frankston	Skye Rd / Ka	ringal Drain	Flash
-	-		10	Kookaburra Stree	et Frankston	Skye Rd / Ka	ringal Drain	Flash
-	-		11	Kookaburra Stree	et Frankston	Skye Rd / Ka	ringal Drain	Flash
-	-		8/12-14	Kookaburra Stree	et Frankston	Skye Rd / Ka	ringal Drain	Flash
-	-		9/12-14	Kookaburra Stree	et Frankston	Skye Rd / Kar	ringal Drain	Flas

Resi	dential	Com	nercial	Industria	al	Rural	Publi	ic Use
	No. at Risk in EP Event		Address	Cubuub		Along Melk	oourne	Flood Risk
20% AEP	5% 1% AEP AE	0	Address	Suburb		Water Wate	rcourse	Type
-	-	15	Kookaburra St	reet	Frankston	Skye Rd / Kai	ringal Drain	Flash
-	-	16A	Kookaburra St	reet	Frankston	Skye Rd / Ka	ringal Drain	Flash
-	-	16B	Kookaburra St	reet	Frankston	Skye Rd / Ka	ringal Drain	Flash
-	-	17-21	Kookaburra St	reet	Frankston	Skye Rd / Ka	ringal Drain	Flash
-	-	22	Kookaburra St	reet	Frankston	Skye Rd / Kai	ringal Drain	Flash
-	-	23-29	Kookaburra St	reet	Frankston	Skye Rd / Kar	ringal Drain	Flash
-	-	24	Kookaburra St	reet	Frankston	Skye Rd / Kar	ringal Drain	Flash
-	-	26	Kookaburra St	reet	Frankston	Skye Rd / Kai	ringal Drain	Flash
-	-	1/30-34	Kookaburra St	reet	Frankston	Skye Rd / Kai	ringal Drain	Flash
-	-	2/30-34	Kookaburra St	reet	Frankston	Skye Rd / Kai	ringal Drain	Flash
-	-	3/30-34	Kookaburra St	reet	Frankston	Skye Rd / Kai	ringal Drain	Flash
-	-	31-33	Kookaburra St	reet	Frankston	Skye Rd / Kai	ringal Drain	Flash
-	-	35	Kookaburra St	reet	Frankston	Skye Rd / Kai	ringal Drain	Flash
-	-	36-38	Kookaburra St	reet	Frankston	Skye Rd / Kai	ringal Drain	Flash
-	-	37	Kookaburra St	reet	Frankston	Skye Rd / Kai	ringal Drain	Flash
-	-	39	Kookaburra St	reet I	Frankston	Skye Rd / Kai		Flash
-	-	41	Kookaburra St	reet I	Frankston	Skye Rd / Kai		Flash
_	3	3	Lansvale Cour	t I	Frankston	Sandgate Ave		Flash
_	4	4	Lansvale Cour	t	Frankston	Sandgate Ave		Flash
-	5	5	Lansvale Cour		Frankston	Sandgate Ave		Flash
_	_	6	Lansvale Cour		Frankston	Sandgate Ave		Flash
14	14	14	Leawarra Para		Frankston	Lee Street Dr		Flash
-	20	20	Leawarra Para		Frankston	Lee Street Dr	-	Flash
_	-	22	Leawarra Para		Frankston	Lee Street Dr	-	Flash
23	23	23	Leawarra Para		Frankston	Lee Street Dr		Flash
		24	Leawarra Para		Frankston	Lee Street Dr		Flash
1	1	1	Lee Street		Frankston	Lee Street Dr		Flash
<u>'</u> 	11	11	Lee Street		Frankston	Lee Street Dr		Flash
-	12	12	Lee Street		Frankston	Lee Street Dr		Flash
13	13	13	Lee Street		Frankston	Lee Street Dr		Flash
-	-	16	Lee Street		Frankston	Lee Street Dr		Flash
-	-	18	Lee Street		Frankston	Lee Street Dr		Flash
22	22	22	Lee Street		Frankston	Lee Street Dr		Flash
-	-	9	Lefevre Court		Frankston	Lee Street Dr		Flash
2	2	2	Leighton Court		Frankston	Skye / Karing		Flash
3	3	3	Leighton Court		Frankston	Skye / Karing		Flash
4	4	4	Leighton Court		Frankston	Skye / Karing		Flash
12	12	12	Leighton Court		Frankston	Skye / Karing		Flash
13	13	13	Leighton Court		Frankston	Skye / Karing		Flash
-	-	3	Levuka Street		Seaford	Bardia Avenu		Flash
-	-	5	Levuka Street		Seaford	Bardia Avenu	e Drain	Flash
-	-	7	Levuka Street	1 .	Seaford	Bardia Avenu	e Drain	Flash

Properti Res	sidential	Com	mercial	Industi		Rural	Publ	ic Use
Street	t No. at Risk ir	1						
A	AEP Event		Address	Subu	rh	Along Mel	bourne	Flood Risk
20% AEP	5% 1° AEP AE		Audiess	Jubui	. U	Water Water	ercourse	Туре
-	-	4/15	Levuka Stree	t	Seaford	Bardia Aven	ue Drain	Flash
-	-	27	Levuka Stree	t	Seaford	Bardia Aven	ue Drain	Flash
-	-	3	Lewis Street		Frankston	Lee Street D	rain	Flash
1/4	1/4	1/4	Lewis Street		Frankston	Lee Street D	rain	Flash
2/4	2/4	2/4	Lewis Street		Frankston	Lee Street D	rain	Flash
3/4	3/4	3/4	Lewis Street		Frankston	Lee Street D	rain	Flash
4/4	4/4	4/4	Lewis Street		Frankston	Lee Street D	rain	Flash
5/4	5/4	5/4	Lewis Street		Frankston	Lee Street D	rain	Flash
6/4	6/4	6/4	Lewis Street		Frankston	Lee Street D	rain	Flash
-	1/6	1/6	Lewis Street		Frankston	Lee Street D	rain	Flash
5/6	5/6	5/6	Lewis Street		Frankston	Lee Street D	rain	Flash
-	1/11	1/11	Lewis Street		Frankston	Lee Street D	rain	Flash
-	2/11	2/11	Lewis Street		Frankston	Lee Street D	rain	Flash
-	5/11	5/11	Lewis Street		Frankston	Lee Street D	rain	Flash
-	6/11	6/11	Lewis Street		Frankston	Lee Street D	rain	Flash
-	-	19	Lewis Street		Frankston	Lee Street D	rain	Flash
5	5	5	Lingi Court		Frankston	Skye / Karing	gal Drain	Flash
48	48	48	Lipton Drive		Frankston	Lee Street D		Flash
50	50	50	Lipton Drive		Frankston	Lee Street D	rain	Flash
52	52	52	Lipton Drive		Frankston	Lee Street D		Flash
54	54	54	Lipton Drive		Frankston	Lee Street D		Flash
-	56	56	Lipton Drive		Frankston	Lee Street D	-	Flash
_	-	13	Lyster Close		Seaford	Skye Rd / Ka		Flash
_	_	15	Lyster Close		Seaford	Skye Rd / Ka		Flash
_	_	17	Lyster Close		Seaford	Skye Rd / Ka		Flash
_	_	19	Lyster Close		Seaford	Skye Rd / Ka		Flash
_	_	21	Lyster Close		Seaford	Skye Rd / Ka		Flash
_	_	1	Macrosty Cor	ırt	Frankston	Lee Street D		Flash
_	_	9	Macrosty Co.		Frankston	Lee Street D		Flash
_		3	Mahoney Cre		Seaford	Bardia Aven		Flash
								Flash
-	-	5 7	Mahoney Cre		Seaford Seaford	Bardia Aven		
		8	Mahoney Cre		Seaford	Bardia Aven		Flash
			Mahoney Cre			Bardia Aven		Flash
-	-	10	Mahoney Cre		Seaford	Bardia Aven		Flash
-	-	12	Mahoney Cre		Seaford	Bardia Aven		Flash
-	-	13	Mahanay Cre		Seaford	Bardia Aven		Flash
-	-	15	Mahoney Cre		Seaford	Bardia Aven		Flash
-	-	16	Mahoney Cre		Seaford	Bardia Aven		Flash
-	-	20	Mahoney Cre		Seaford	Bardia Aven		Flash
-	-	22	Mahoney Cre		Seaford	Bardia Aven		Flash
-	-	24	Mahoney Cre		Seaford	Bardia Aven		Flash
-	-	31	Mahoney Cre		Seaford	Bardia Aven		Flash
-	-	33	Mahoney Cre	escent	Seaford	Bardia Aven	ue Drain	Flash

Res	sidential	Со	mmercial	Industrial	Rural	Public Use
	et No. at Risk AEP Event	in				_ Flood
,	ALF EVEIIL		Address	Suburb	Along Melbourn	Risk
20% AEP	5% AEP	1% AEP			Water Watercours	<sup>se</sup> Туре
-	-	35	Mahoney Creso	cent Seaford	Bardia Avenue Drai	n Flash
-	-	1	Manning Road	Seaford	Skye Rd / Karingal	Drain Flash
-	-	2	Manning Road	Seaford	Skye Rd / Karingal	Drain Flash
-	-	3	Manning Road	Seaford	Skye Rd / Karingal	Drain Flash
-	-	4	Manning Road	Seaford	Skye Rd / Karingal	Drain Flash
-	-	5	Manning Road	Seaford	Skye Rd / Karingal	Drain Flash
-	-	6	Manning Road	Seaford	Skye Rd / Karingal	Drain Flash
-	-	7	Manning Road	Seaford	Skye Rd / Karingal	Drain Flash
-	-	8	Manning Road	Seaford	Skye Rd / Karingal	Drain Flash
-	45	45	Margate Avenu	e Frankston	Sandgate Avenue D	Drain Flash
-	-	3	Marillac Court	Frankston	Lee Street Drain	Flash
-	1	1	Martha Street	Seaford	Seaford Lowlands	Flash
-	3	3	Martha Street	Seaford	Seaford Lowlands	Flash
-	-	1/4-10	Martha Street	Seaford	Seaford Lowlands	Flash
-	-	2/4-10	Martha Street	Seaford	Seaford Lowlands	Flash
-	-	3/4-10	Martha Street	Seaford	Seaford Lowlands	Flash
-	_	4/4-10	Martha Street	Seaford	Seaford Lowlands	Flash
-	-	5/4-10	Martha Street	Seaford	Seaford Lowlands	Flash
-	-	6/4-10	Martha Street	Seaford	Seaford Lowlands	Flash
_	-	7/4-10		Seaford	Seaford Lowlands	Flash
_	_	8/4-10		Seaford	Seaford Lowlands	Flash
_	7	7	Martha Street	Seaford	Seaford Lowlands	Flash
_	11	11	Martha Street	Seaford	Seaford Lowlands	Flash
_	1/12	1/12	Martha Street	Seaford	Seaford Lowlands	Flash
_	2/12	2/12	Martha Street	Seaford	Seaford Lowlands	Flash
_	14	14	Martha Street	Seaford	Seaford Lowlands	Flash
	16	16	Martha Street	Seaford	Seaford Lowlands	Flash
_	17	17	Martha Street	Seaford	Seaford Lowlands	Flash
_	- 17	19	Martha Street	Seaford	Seaford Lowlands	Flash
	21	21	Martha Street	Seaford	Seaford Lowlands	Flash
	21		Martin Street	Seaford	Seaford Lowlands	
-	-	2				Flash
-	4	4	Martin Street	Seaford	Seaford Lowlands	Flash
-	-	2	McCulloch Ave		Skye Rd / Karingal	
-	-	4	McCulloch Ave		Skye Rd / Karingal	
-	-	6	McCulloch Ave		Skye Rd / Karingal	
-	-	8	McCulloch Ave		Skye Rd / Karingal	
-	-	10	McCulloch Ave		Skye Rd / Karingal	
-	-	14	McCulloch Ave		Skye Rd / Karingal	
-	-	29	McCulloch Ave		Skye Rd / Karingal	
-	-	30	McCulloch Ave		Skye Rd / Karingal	
-	-	31	McCulloch Ave		Skye Rd / Karingal	
-	-	1/33	McCulloch Ave	nue Seaford	Skye Rd / Karingal	
-	-	2/33	McCulloch Ave	nue Seaford	Skye Rd / Karingal	Drain Flash

Res	sidential		Com	mercial		nd Seaford strial	Rural	Publ	ic Use
Street	t No. at Ris	sk in							
F	AEP Event			Addross	Cul	ourb	Along Me	lbourne	Flood Risk
20%	5%	1%		Address	Suc	ourb	Water Wat	ercourse	Type
AEP	AEP	AEP	34	McCulloch A	Avenue	Seaford	Skye Pd / K	aringal Drain	Flash
			35	McCulloch A		Seaford	-	aringal Drain	Flash
			36	McCulloch A		Seaford	,		Flash
-	-		37	McCulloch A		Seaford	-	aringal Drain aringal Drain	Flash
-							-		
-			39	McCulloch A		Seaford	·	aringal Drain	Flash
-			43	McCulloch A		Seaford	-	aringal Drain	Flash
-	-		45	McCulloch A		Seaford	-	aringal Drain	Flash
-	-		7	McMahons		Frankston	Sandgate A		Flash
10	10		10	McMahons		Frankston		venue Drain	Flash
11	11		11	McMahons		Frankston		venue Drain	Flash
13	13		13	McMahons		Frankston		venue Drain	Flash
-	20		20	McMahons		Frankston	-	venue Drain	Flash
48	48		48	McMahons		Frankston		venue Drain	Flash
50	50		50	McMahons	Road	Frankston	Sandgate A	venue Drain	Flash
52	52		52	McMahons	Road	Frankston	Sandgate A	venue Drain	Flash
55	55		55	McMahons	Road	Frankston	Sandgate A	venue Drain	Flash
-	60		60	McMahons	Road	Frankston	Sandgate A	venue Drain	Flash
-	-		3	McMannis V	Vay	Seaford	Skye Rd / K	aringal Drain	Flash
-	-		4	McMannis V	Vay	Seaford	Skye Rd / K	aringal Drain	Flash
-	-		5	McMannis V	Vay	Seaford	Skye Rd / K	aringal Drain	Flash
-	-		12	McMurtry W	/ay	Frankston	Sandgate A	venue Drain	Flash
-	-		14	McMurtry W	/ay	Frankston	Sandgate A	venue Drain	Flash
-	-		18	McMurtry W	/ay	Frankston	Sandgate A	venue Drain	Flash
-	19		19	McMurtry W	/ay	Frankston	Sandgate A	venue Drain	Flash
-	-		21	McMurtry W	/ay	Frankston	Sandgate A	venue Drain	Flash
-	-		25	McMurtry W	/ay	Frankston	Sandgate A	venue Drain	Flash
-	-		26	McMurtry W	/ay	Frankston	Sandgate A	venue Drain	Flash
-	-		27	McMurtry W	/ay	Frankston	Sandgate A	venue Drain	Flash
-	28		28	McMurtry W	/ay	Frankston	Sandgate A	venue Drain	Flash
-	35/	4	35A	McMurtry W	/ay	Frankston	Sandgate A	venue Drain	Flash
-	-		35	McMurtry W	/ay	Frankston	Sandgate A	venue Drain	Flash
-	1/3	7	1/37	McMurtry W	•	Frankston	Sandgate A	venue Drain	Flash
-	-		2/37	McMurtry W	•	Frankston	-	venue Drain	Flash
-	-		39	McMurtry W	•	Frankston		venue Drain	Flash
-	_		14	Mereweathe	•	Frankston		aringal Drain	Flash
-	_		16	Mereweathe		Frankston	-	aringal Drain	Flash
-	_		18	Mereweathe		Frankston	·	aringal Drain	Flash
_	_		19	Mereweathe		Frankston	·	aringal Drain	Flash
_	_		1/20	Mereweathe		Frankston	·	aringal Drain	Flash
_	_		2/20	Mereweathe		Frankston	·	aringal Drain	Flash
_			3/20	Mereweathe		Frankston	·	aringal Drain	Flash
			4/20	Mereweathe		Frankston	•	aringal Drain	Flash
			5/20	Mereweathe		FIANKSIUN	Skye Ru / K	aringal Drain	Fiasii

Kes	idential		Commercial	inaus	strial	Rural	Publi	ic Use
	No. at Risk EP Event	in	Address	0		Along Mell	bourne	Floo
0% NEP	5% AEP	1% AEP	Address	Sub	ourb	Water Wate	rcourse	Risk Type
-	-	2	2 Mereweath	ner Avenue	Frankston	Skye Rd / Ka	ringal Drain	Flash
-	-	2	3 Mereweath	ner Avenue	Frankston	Skye Rd / Ka	ringal Drain	Flash
-	-	2	5 Mereweath	ner Avenue	Frankston	Skye Rd / Ka	ringal Drain	Flash
-	-	2	7 Mereweath	ner Avenue	Frankston	Skye Rd / Ka	ringal Drain	Flash
-	-	2	9 Mereweath	ner Avenue	Frankston	Skye Rd / Ka	ringal Drain	Flash
-	-	3	1 Mereweath	ner Avenue	Frankston	Skye Rd / Ka	ringal Drain	Flash
-	-	3	2 Mereweath	ner Avenue	Frankston	Skye Rd / Ka	ringal Drain	Flash
-	-	3	3 Mereweath	ner Avenue	Frankston	Skye Rd / Ka	ringal Drain	Flash
-	-	3	5 Mereweath	ner Avenue	Frankston	Skye Rd / Ka	ringal Drain	Flash
-	-	3	6 Mereweath	ner Avenue	Frankston	Skye Rd / Ka	ringal Drain	Flash
30	30	3	Miles Grov	re	Seaford	Seaford Lowl	ands	Flash
-	-	42-	44 Miles Grov	re	Seaford	Seaford Lowl	ands	Flash
-	-	47-	49 Miles Grov	re	Seaford	Seaford Lowl	ands	Flasi
53	53	5	Miles Grov	re	Seaford	Seaford Lowl	ands	Flasi
-	63	6	Miles Grov	'e	Seaford	Seaford Lowl	ands	Flasi
71-77	71-77	71-	77 Miles Grov	'e	Seaford	Seaford Lowl	ands	Flasi
79-83	79-83	79-	83 Miles Grov	re	Seaford	Seaford Lowl	ands	Flasi
-	-	8	5 Miles Grov	re .	Seaford	Seaford Lowl	ands	Flasi
-	-	89-	93 Miles Grov	re .	Seaford	Seaford Lowl	ands	Flasi
-	-	1	Milne Aver	nue	Seaford	Skye Rd / Ka	ringal Drain	Flasi
-	-	1-	4 Milne Aver	nue	Seaford	Skye Rd / Ka	ringal Drain	Flasi
-	-	1:	5 Milne Aver	nue	Seaford	Skye Rd / Ka	ringal Drain	Flasi
-	-	1/	Milne Aver	nue	Seaford	Skye Rd / Ka	ringal Drain	Flasi
-	-	2/	Milne Aver	nue	Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-	2	1 Milne Aver	nue	Seaford	Skye Rd / Ka		Flasi
_	_	2	Milne Aver	nue	Seaford	Skye Rd / Ka		Flasi
-	-	25			Seaford	Skye Rd / Ka		Flasi
-	-	27-			Seaford	Skye Rd / Ka		Flasi
-	-	31-			Seaford	Skye Rd / Ka		Flasi
-	-	3			Seaford	Skye Rd / Ka		Flasi
-	_	3			Seaford	Skye Rd / Ka		Flasi
-	-	3			Seaford	Skye Rd / Ka		Flasi
13	13	1			Frankston	Sandgate Ave		Flasi
27	27	2			Frankston	Sandgate Ave		Flas
-	-	1/3			Seaford	Skye Rd / Ka		Flasi
_		2/3			Seaford	Skye Rd / Ka		Flash
		1			Seaford	Bardia Avenu		Flash
	-	2.			Seaford	Bardia Avenu		Flash
		3			Seaford	Bardia Avenu		Flash
_								
-	-	3,			Seaford	Bardia Avenu		Flash
-	-	5	,		Seaford	Bardia Avenu		Flash
-	-	7	Moresby A  Moresby A	venue	Seaford	Bardia Avenu	ie Drain ie Drain	Flash

Res	sidential		Comn	nercial	Industrial	Rural	Publi	c Use
	t No. at Ris	k in						Flood
,	AEP Event			Address	Suburb	Along Melb		Flood Risk
:0% \EP	5% AEP	1% AEP				Water Water	course	Туре
-	-		11	Moresby Avenue	Seaford	Bardia Avenue	Drain	Flash
-	-		13	Moresby Avenue	e Seaford	Bardia Avenue	Drain	Flash
-	-		15	Moresby Avenue	e Seaford	Bardia Avenue	Drain	Flash
-	-		17	Moresby Avenue	e Seaford	Bardia Avenue	Drain	Flash
-	-		10/19- 21	Moresby Avenue	e Seaford	Bardia Avenue	Drain	Flash
-	-		11/19- 21	Moresby Avenue	e Seaford	Bardia Avenue	Drain	Flash
-	-		1/22	Moresby Avenue	e Seaford	Bardia Avenue	Drain	Flash
-	-		2/22	Moresby Avenue	e Seaford	Bardia Avenue	Drain	Flash
-	-		3/22	Moresby Avenue	e Seaford	Bardia Avenue	Drain	Flash
-	-		25	Moresby Avenue	e Seaford	Bardia Avenue	Drain	Flash
-	-		25A	Moresby Avenue	e Seaford	Bardia Avenue	Drain	Flash
-	-		27-29	Moresby Avenue	e Seaford	Bardia Avenue	Drain	Flash
-	-		30-34	Moresby Avenue	e Seaford	Bardia Avenue	Drain	Flash
-	-		31-33	Moresby Avenue	e Seaford	Bardia Avenue	Drain	Flash
-	-		41	Moresby Avenue	e Seaford	Bardia Avenue	Drain	Flash
-	-		43	Moresby Avenue	e Seaford	Bardia Avenue	Drain	Flash
-	-		45	Moresby Avenue	e Seaford	Bardia Avenue	Drain	Flash
-	-		47	Moresby Avenue	e Seaford	Bardia Avenue	Drain	Flash
-	-		49	Moresby Avenue	e Seaford	Bardia Avenue	Drain	Flash
-	-		365-367	Nepean Highwa	y Frankston	Skye Rd / Kari	ngal Drain	Flash
1	1		1	Netherplace Driv	ve Frankston	Sandgate Ave	nue Drain	Flash
3	3		3	Netherplace Driv	ve Frankston	Sandgate Ave	nue Drain	Flash
5	5		5	Netherplace Driv	ve Frankston	Sandgate Ave	nue Drain	Flash
7	7		7	Netherplace Driv	ve Frankston	Sandgate Ave	nue Drain	Flash
-	9		9	Netherplace Driv	ve Frankston	Sandgate Ave	nue Drain	Flash
-	11		11	Netherplace Driv	ve Frankston	Sandgate Ave	nue Drain	Flash
-	13		13	Netherplace Driv	ve Frankston	Sandgate Ave	nue Drain	Flash
-	-		15	Netherplace Driv	ve Frankston	Sandgate Ave	nue Drain	Flash
-	17		17	Netherplace Driv	ve Frankston	Sandgate Ave	nue Drain	Flash
19	19		19	Netherplace Driv	ve Frankston	Sandgate Ave	nue Drain	Flash
-	21		21	Netherplace Driv	ve Frankston	Sandgate Ave	nue Drain	Flash
-	-		1	New Street	Frankston	Skye Rd / Kari	ngal Drain	Flash
-	-		1/2	New Street	Frankston	Skye Rd / Kari	ngal Drain	Flash
-	-		2/2	New Street	Frankston	Skye Rd / Kari	ngal Drain	Flash
-	-		3	New Street	Frankston	Skye Rd / Kari	ngal Drain	Flash
-	-		1/4	New Street	Frankston	Skye Rd / Kari	ngal Drain	Flash
-	-		2/4	New Street	Frankston	Skye Rd / Kari	ngal Drain	Flash
-	-		3/4	New Street	Frankston	Skye Rd / Kari	ngal Drain	Flash
-	-		4/4	New Street	Frankston	Skye Rd / Kari	ngal Drain	Flash
-	-		5	New Street	Frankston	Skye Rd / Kari	ngal Drain	Flash
-	-		9	New Street	Frankston	Skye Rd / Kari	ngal Drain	Flash
-	_		11	New Street	Frankston	Skye Rd / Kari	ngal Drain	Flash

Res	sidential		Com	mercial	Industrial	Rural	Publi	ic Use
	t No. at Ris AEP Event	sk in		Address	Cubunk	Along Melk	oourne	Floo
0% AEP	5% AEP	1% AEP		Address	Suburb	Water Water	course	Risl Typ
-	-		18	New Street	Frankston	Skye Rd / Kar	ingal Drain	Flash
-	-		20-22	New Street	Frankston	Skye Rd / Kar	ingal Drain	Flash
-	-		1/23	New Street	Frankston	Skye Rd / Kar	ingal Drain	Flash
-	-		2/23	New Street	Frankston	Skye Rd / Kar	ingal Drain	Flash
-	-		3/23	New Street	Frankston	Skye Rd / Kar	ingal Drain	Flash
-	-		4/23	New Street	Frankston	Skye Rd / Kar	ingal Drain	Flash
-	-		5/23	New Street	Frankston	Skye Rd / Kar	ingal Drain	Flash
-	-		6/23	New Street	Frankston	Skye Rd / Kar	ingal Drain	Flash
-	-		1/24	New Street	Frankston	Skye Rd / Kar	ingal Drain	Flash
-	-		3/24	New Street	Frankston	Skye Rd / Kar	ingal Drain	Flash
-	-		4/24	New Street	Frankston	Skye Rd / Kar	ingal Drain	Flast
-	-		5/24	New Street	Frankston	Skye Rd / Kar	ingal Drain	Flast
-	-		6/24	New Street	Frankston	Skye Rd / Kar	ingal Drain	Flast
-	-		7/24	New Street	Frankston	Skye Rd / Kar	ingal Drain	Flash
-	-		8/24	New Street	Frankston	Skye Rd / Kar	ingal Drain	Flasi
-	-		26	New Street	Frankston	Skye Rd / Kar		Flasi
-	_		27-31	New Street	Frankston	Skye Rd / Kar		Flasi
_	-		33	New Street	Frankston	Skye Rd / Kar		Flasi
_	-		35	New Street	Frankston	Skye Rd / Kar		Flasi
_	_		37M	New Street	Frankston	Skye Rd / Kar		Flasi
_	_		39	New Street	Frankston	Skye Rd / Kar		Flasi
_	_		40	New Street	Frankston	Skye Rd / Kar		Flasi
_	_		41	New Street	Frankston	Skye Rd / Kar		Flasi
_	_		46-48	New Street	Frankston	Skye Rd / Kar		Flasi
_	_		50-54	New Street	Frankston	Skye Rd / Kar		Flasi
_			56	New Street	Frankston	Skye Rd / Kar		Flasi
2	2		2	Nursery Avenu		Lee Street Dra		Flasi
-			3	Nursery Avenu		Lee Street Dra		Flasi
	7		7	Nursery Avenu		Lee Street Dra		Flasi
	,		9					-
-			2/10	Nursery Avenu		Lee Street Dra		Flasi
-	3/10	)	3/10	Nursery Avenu		Lee Street Dra		Flasi
-	4/10		4/10					Flasi
-				Nursery Avenu		Lee Street Dr		
-	17		17	Nursery Avenu		Lee Street Dr		Flasi
-	-		19	Nursery Aven		Lee Street Dr		Flash
-	-		11	Olympic Aven		Lee Street Dr		Flash
-	-		13	Olympic Aven		Lee Street Dr		Flash
-	-		15	Olympic Aven		Lee Street Dra		Flash
-	-		17	Olympic Aven		Lee Street Dra		Flash
-	-		20	Olympic Aven		Lee Street Dra		Flash
-	-		12/1-3	Overton Road		Skye Rd / Kar		Flash
-	-		13/1-3	Overton Road	Seaford	Skye Rd / Kar	ingal Drain	Flash

Res	sidential		Comi	mercial	Industrial	Rural	Publi	ic Use
	t No. at Ris AEP Event	sk in				Along Molh	ourno.	Floor
20% AEP	5% AEP	1% AEP		Address	Suburb	Along Melb Water Water		Risk Type
-	-	A.E.	17/1-3	Overton Road	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-		18/1-3	Overton Road	Seaford	Skye Rd / Kar		Flash
-	_		20/1-3	Overton Road	Seaford	Skye Rd / Kar		Flash
-	-		21/1-3	Overton Road	Seaford	Skye Rd / Kar		Flash
-	-		22/1-3	Overton Road	Seaford	Skye Rd / Kar		Flash
-	_		23/1-3	Overton Road	Seaford	Skye Rd / Kar		Flash
_	_		24/1-3	Overton Road	Seaford	Skye Rd / Kar		Flash
_	_		25/1-3	Overton Road	Seaford	Skye Rd / Kar		Flash
_	_		26/1-3	Overton Road	Seaford	Skye Rd / Kar		Flash
_			27/1-3	Overton Road	Seaford	Skye Rd / Kar		Flash
_			28/1-3	Overton Road	Seaford	Skye Rd / Kar		Flash
-			29/1-3	Overton Road	Seaford	Skye Rd / Kar		Flash
			30/1-3	Overton Road	Seaford	Skye Rd / Kar		Flasi
			31/1-3	Overton Road	Seaford	Skye Rd / Kar		Flash
-	-						-	
-	-		32/1-3	Overton Road	Seaford	Skye Rd / Kar		Flash
-	-		33/1-3	Overton Road	Seaford	Skye Rd / Kar		Flash
-	-	-	40/1-3	Overton Road	Seaford	Skye Rd / Kar		Flasi
-	-	-	41/1-3	Overton Road	Seaford	Skye Rd / Kar		Flash
-	-		42/1-3	Overton Road	Seaford	Skye Rd / Kar		Flash
-	-		43/1-3	Overton Road	Seaford	Skye Rd / Kar		Flash
-	-		45/1-3	Overton Road	Seaford	Skye Rd / Kar		Flash
-	-		46/1-3	Overton Road	Seaford	Skye Rd / Kar		Flasi
-	-		47/1-3	Overton Road	Seaford	Skye Rd / Kar		Flash
-	-		48/1-3	Overton Road	Seaford	Skye Rd / Kar	ingal Drain	Flasi
-	-		49/1-3	Overton Road	Seaford	Skye Rd / Kar	ingal Drain	Flasi
-	-		50/1-3	Overton Road	Seaford	Skye Rd / Kar	ingal Drain	Flasi
-	-		51/1-3	Overton Road	Seaford	Skye Rd / Kar	ingal Drain	Flasi
-	-		52/1-3	Overton Road	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-		53/1-3	Overton Road	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-		54/1-3	Overton Road	Seaford	Skye Rd / Kar	ingal Drain	Flast
-	-		55/1-3	Overton Road	Seaford	Skye Rd / Kar	ingal Drain	Flast
-	-		56/1-3	Overton Road	Seaford	Skye Rd / Kar	ingal Drain	Flasi
-	-		57/1-3	Overton Road	Seaford	Skye Rd / Kar	ingal Drain	Flast
-	-		58/1-3	Overton Road	Seaford	Skye Rd / Kar	ingal Drain	Flasi
-	-		86/1-3	Overton Road	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-		87/1-3	Overton Road	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-		88/1-3	Overton Road	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-		89/1-3	Overton Road	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-		90/1-3	Overton Road	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-		91/1-3	Overton Road	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-		92/1-3	Overton Road	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-		93/1-3	Overton Road	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	_		94/1-3	Overton Road	Seaford	Skye Rd / Kar	ingal Drain	Flash

Res	sidential	Com	mercial	Industrial	Rural	Public Use
	t No. at Risk ir AEP Event	1	Address	Output	Along Melbourn	ne Flood
20% AEP	5% 19 AEP AE		Address	Suburb	Water Watercour	rse Risk Type
-	-	95/1-3	Overton Road	Seaford	Skye Rd / Karingal	Drain Flash
-	-	96/1-3	Overton Road	Seaford	Skye Rd / Karingal	Drain Flash
-	-	98/1-3	Overton Road	Seaford	Skye Rd / Karingal	Drain Flash
-	-	99/1-3	Overton Road	Seaford	Skye Rd / Karingal	Drain Flash
-	-	100/1-3	Overton Road	Seaford	Skye Rd / Karingal	Drain Flash
-	-	101/1-3	Overton Road	Seaford	Skye Rd / Karingal	Drain Flash
-	-	102/1-3	Overton Road	Seaford	Skye Rd / Karingal	Drain Flash
-	-	103/1-3	Overton Road	Seaford	Skye Rd / Karingal	Drain Flash
-	-	104/1-3	Overton Road	Seaford	Skye Rd / Karingal	Drain Flash
-	-	105/1-3	Overton Road	Seaford	Skye Rd / Karingal	Drain Flash
-	-	110/1-3	Overton Road	Seaford	Skye Rd / Karingal	
-	-	111/1-3	Overton Road	Seaford	Skye Rd / Karingal	
-	-	112/1-3	Overton Road	Seaford	Skye Rd / Karingal	Drain Flash
-	-	1/5	Overton Road	Seaford	Skye Rd / Karingal	Drain Flash
-	-	2/5	Overton Road	Seaford	Skye Rd / Karingal	
_	-	4/5	Overton Road	Seaford	Skye Rd / Karingal	
_	_	11	Overton Road	Seaford	Skye Rd / Karingal	
_	-	13	Overton Road	Seaford	Skye Rd / Karingal	
_	_	17	Overton Road	Seaford	Skye Rd / Karingal	
_	_	19	Overton Road	Seaford	Skye Rd / Karingal	
_	_	1/21	Overton Road	Seaford	Skye Rd / Karingal	
_	_	2/21	Overton Road	Seaford	Skye Rd / Karingal	
_	_	3/21	Overton Road	Seaford	Skye Rd / Karingal	
		23-25	Overton Road	Seaford	Skye Rd / Karingal	
	_	23-23	Overton Road	Frankston		
-					Skye Rd / Karingal	
-	4/45	28	Overton Road	Frankston	Skye Rd / Karingal	
-	1/15	1/15	Oxford Street	Frankston	Sandgate Avenue	
-	2/15	2/15	Oxford Street	Frankston	Sandgate Avenue	
-	22	22	Oxford Street	Frankston	Sandgate Avenue	
-	-	47	Partridge Cresce		Lee Street Drain	Flash
58	58	58	Partridge Cresce		Lee Street Drain	Flash
-	-	1	Patrick Court	Seaford	Bardia Avenue Dra	
-	-	2	Patrick Court	Seaford	Bardia Avenue Dra	
-	-	6	Patrick Court	Seaford	Bardia Avenue Dra	
-	-	1/7-9	Patrick Court	Seaford	Bardia Avenue Dra	
-	-	2/7-9	Patrick Court	Seaford	Bardia Avenue Dra	
-	-	3/7-9	Patrick Court	Seaford	Bardia Avenue Dra	in Flash
-	-	4/7-9	Patrick Court	Seaford	Bardia Avenue Dra	in Flash
-	-	5/7-9	Patrick Court	Seaford	Bardia Avenue Dra	in Flash
-	-	1/10	Patrick Court	Seaford	Bardia Avenue Dra	in Flash
-	-	2/10	Patrick Court	Seaford	Bardia Avenue Dra	in Flash
-	-	3/10	Patrick Court	Seaford	Bardia Avenue Dra	in Flash
-	-	4/10	Patrick Court	Seaford	Bardia Avenue Dra	in Flash

Kes	sidential		Com	mercial	Industrial	Rural	Public U	se
	No. at Ris			Address	Suburb	Along Melb	ourne	Flood Risk
20% AEP	5% AEP	1% AEP		71441 555	Cabana	Water Water	course	Туре
-	-		5/10	Patrick Court	Seaford	Bardia Avenu	e Drain	Flash
-	-		12	Patrick Court	Seaford	Bardia Avenu	e Drain	Flash
-	-		1/13	Patrick Court	Seaford	Bardia Avenu	e Drain	Flash
-	-		2/13	Patrick Court	Seaford	Bardia Avenu	e Drain	Flash
-	-		14	Patrick Court	Seaford	Bardia Avenu	e Drain	Flash
-	-		15A	Patrick Court	Seaford	Bardia Avenu	e Drain	Flash
-	-		1/17	Patrick Court	Seaford	Bardia Avenu	e Drain	Flash
-	-		2/17	Patrick Court	Seaford	Bardia Avenu	e Drain	Flash
-	-		18	Patrick Court	Seaford	Bardia Avenu	e Drain	Flash
1/2-8	1/2-	-8	1/2-8	Peninsula Bouleva	rd Seaford	Austin Rd / Ex	celsior Ave Drain	Flash
2/2-8	2/2-	-8	2/2-8	Peninsula Bouleva	rd Seaford	Austin Rd / Ex	celsior Ave Drain	Flash
4/2-8	4/2-	-8	4/2-8	Peninsula Bouleva	rd Seaford	Austin Rd / Ex	celsior Ave Drain	Flash
5/2-8	5/2-	-8	5/2-8	Peninsula Bouleva	rd Seaford	Austin Rd / Ex	celsior Ave Drain	Flash
6/2-8	6/2-	-8	6/2-8	Peninsula Bouleva	rd Seaford	Austin Rd / Ex	celsior Ave Drain	Flash
7/2-8	7/2-	-8	7/2-8	Peninsula Bouleva	rd Seaford	Austin Rd / Ex	celsior Ave Drain	Flash
8/2-8	8/2-	-8	8/2-8	Peninsula Bouleva	rd Seaford	Austin Rd / Ex	celsior Ave Drain	Flash
-	1/5	5	1/5	Petrie Street	Frankston	Lee Street Dra	ain	Flash
-	2/5	5	2/5	Petrie Street	Frankston	Lee Street Dra	ain	Flash
-	-		2	Phillip Street	Frankston	Skye Rd / Kar	ingal Drain	Flash
4	4		4	Phillip Street	Frankston	Skye Rd / Kar	ingal Drain	Flash
-	-		1/9	Phillip Street	Frankston	Skye Rd / Kar	ingal Drain	Flash
-	-		2/9	Phillip Street	Frankston	Skye Rd / Kar	ingal Drain	Flash
-	-		3/9	Phillip Street	Frankston	Skye Rd / Kar	ingal Drain	Flash
-	-		4	Putney Lane	Frankston	Sandgate Ave	nue Drain	Flash
-	5		5	Putney Lane	Frankston	Sandgate Ave	nue Drain	Flash
-	-		7	Putney Lane	Frankston	Sandgate Ave	nue Drain	Flash
-	-		19	Quamby Avenue	Frankston	Lee Street Dra	ain	Flash
6	6		6	Quandong Court	Frankston	Lee Street Dra	ain	Flash
-	-		11	Quinn Street	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-		13	Quinn Street	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-		15	Quinn Street	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-		17	Quinn Street	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-		19	Quinn Street	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	_		21	Quinn Street	Seaford	Skye Rd / Kar	ingal Drain	Flash
-	-		23	Quinn Street	Seaford	Skye Rd / Kar		Flash
-	-		25	Quinn Street	Seaford	Skye Rd / Kar		Flash
-	-		27	Quinn Street	Seaford	Skye Rd / Kar		Flash
-	-		31	Quinn Street	Seaford	Skye Rd / Kar		Flash
-	-		37	Quinn Street	Seaford	Skye Rd / Kar		Flash
-	-		39	Quinn Street	Seaford	Skye Rd / Kar		Flash
-	_		41	Quinn Street	Seaford	Skye Rd / Kar		Flash
-	_		43	Quinn Street	Seaford	Skye Rd / Kar		Flash
3	3		3	Raphael Crescent	Frankston	Lee Street Dra		Flash

Res	sidential	Con	nmercial	Indust	rial	Rural	Publ	lic Use
	t No. at Risk AEP Event	in				Along Me	lbourne	Flood
20% AEP		1% AEP	Address	Subu	irb	Water Water		Risk Type
5	5	5	Raphael Cre	scent	Frankston	Lee Street D	rain	Flash
-	-	1	Raymond Ro	oad	Seaford	Seaford Low	lands	Flash
-	-	1/2-4	Raymond Ro	oad	Seaford	Seaford Low	lands	Flash
-	-	2/2-4	Raymond Ro	oad	Seaford	Seaford Low	lands	Flash
-	-	3/2-4	Raymond Ro	oad	Seaford	Seaford Low	lands	Flash
-	-	4/2-4	Raymond Ro	oad	Seaford	Seaford Low	lands	Flash
-	-	5/2-4	Raymond Ro	oad	Seaford	Seaford Low	lands	Flash
-	-	3	Raymond Ro	oad	Seaford	Seaford Low	lands	Flash
-	-	5	Raymond Ro	oad	Seaford	Seaford Low	lands	Flash
-	6	6	Raymond Ro	pad	Seaford	Seaford Low	lands	Flash
-	-	7	Raymond Ro	pad	Seaford	Seaford Low	lands	Flash
-	8	8	Raymond Ro	oad	Seaford	Seaford Low	lands	Flash
-	-	1/10	Raymond Ro		Seaford	Seaford Low	lands	Flash
-	-	2/10	Raymond Ro	pad	Seaford	Seaford Low	lands	Flash
-	-	11	Raymond Ro	oad	Seaford	Seaford Low	lands	Flash
_	_	14	Raymond Ro		Seaford	Seaford Low	lands	Flash
_	-	11	Reid Street		Frankston	Sandgate Av	venue Drain	Flash
_	1/12	1/12	Reid Street		Frankston	Sandgate Av		Flash
_	2/12	2/12	Reid Street		Frankston	Sandgate Av		Flash
_		13	Reid Street		Frankston	Sandgate Av		Flash
1/14A	1/14A	1/14A	Reid Street		Frankston	Sandgate Av		Flash
2/14A	2/14A	2/14A	Reid Street		Frankston	Sandgate Av		Flash
	-	1/15	Reid Street		Frankston	Sandgate Av		Flash
_	3/15	3/15	Reid Street		Frankston	Sandgate Av		Flash
_	3/13	1/18	Reid Street		Frankston	Sandgate Av		Flash
		2/18	Reid Street			Sandgate Av		Flash
4	4	4		and a	Frankston Frankston	Lee Street D		
4	4		Reservoir Ro					Flash
- E/0	- E/0	6	Reservoir Ro		Frankston	Lee Street D		Flash
5/8	5/8	5/8			Frankston	Lee Street D		Flash
-	-	7/8	Reservoir Ro		Frankston	Lee Street D		Flash
- 0/0	- 0/9	8/8	Reservoir Ro		Frankston	Lee Street D		Flash
9/8	9/8	9/8	Reservoir Ro		Frankston	Lee Street D		Flash
-	10/8	10/8	Reservoir Ro		Frankston	Lee Street D		Flash
-	1/9	1/9	Reservoir Ro		Frankston	Lee Street D		Flash
-	2/9	2/9	Reservoir Ro		Frankston	Lee Street D		Flash
-	9A	9A	Reservoir Ro		Frankston	Lee Street D		Flash
16	16	16	Reservoir Ro		Frankston	Lee Street D		Flash
1/18	1/18	1/18	Reservoir Ro		Frankston	Lee Street D		Flash
2/18	2/18	2/18	Reservoir Ro	oad	Frankston	Lee Street D		Flash
3/18	3/18	3/18	Reservoir Ro	oad	Frankston	Lee Street D	rain	Flash
-	4/18	4/18	Reservoir Ro	oad	Frankston	Lee Street D	rain	Flash
-	-	5/18	Reservoir Ro	oad	Frankston	Lee Street D	rain	Flash
6/18	6/18	6/18	Reservoir Ro	oad	Frankston	Lee Street D	rain	Flash

	idential	Com	over-floor in Fran	Industrial	Rural	Publi	ic Use
Street	No. at Risk i	n					
	EP Event		Address	Outunt	Along Melbo	ourne	Flood
20% AEP		% EP	Address	Suburb	Water Water	course	Risk Type
7/18	7/18	7/18	Reservoir Road	Frankston	Lee Street Dra	in	Flash
8/18	8/18	8/18	Reservoir Road	Frankston	Lee Street Dra	in	Flash
9/18	9/18	9/18	Reservoir Road	Frankston	Lee Street Dra	in	Flash
-	11/18	11/18	Reservoir Road	Frankston	Lee Street Dra	in	Flash
-	13/18	13/18	Reservoir Road	Frankston	Lee Street Dra	in	Flash
15/18	15/18	15/18	Reservoir Road	Frankston	Lee Street Dra	in	Flash
-	20	20	Reservoir Road	Frankston	Lee Street Dra	in	Flash
-	-	3/22	Reservoir Road	Frankston	Lee Street Dra	in	Flash
4/22	4/22	4/22	Reservoir Road	Frankston	Lee Street Dra		Flash
-	6	6	Roberts Street	Frankston	Sandgate Aver		Flash
-	_	16-18	Roberts Street	Frankston	Sandgate Aver		Flash
1/2	1/2	1/2	Ropley Grange	Frankston	Skye Rd / Karii		Flash
2/2	2/2	2/2	Ropley Grange	Frankston	Skye Rd / Karii		Flash
-,-	3/2	3/2	Ropley Grange	Frankston	Skye Rd / Karii		Flash
_	4/2	4/2	Ropley Grange	Frankston	Skye Rd / Karii		Flash
4B	4B	4B	Ropley Grange	Frankston	Skye Rd / Karii		Flash
6	6	6	Ropley Grange	Frankston	Skye Rd / Karii		Flash
1/8	1/8	1/8		Frankston	-		Flash
2/8	2/8	2/8	Ropley Grange		Skye Rd / Karii		Flash
3/8	3/8	3/8	Ropley Grange	Frankston Frankston	Skye Rd / Karii	•	Flash
3/0	-	1	Ropley Grange Rosella Street	Frankston	Skye Rd / Karii		Flash
-	-				Skye Rd / Karii		
-	-	3/3-11	Rosella Street	Frankston	Skye Rd / Karii		Flash
-	-	4/3-11	Rosella Street	Frankston	Skye Rd / Karii		Flash
-	-	5/3-11	Rosella Street	Frankston	Skye Rd / Kari		Flash
-	-	4	Rosella Street	Frankston	Skye Rd / Karii		Flash
-	-	6-8	Rosella Street	Frankston	Skye Rd / Karii	-	Flash
-	-	14	Rosella Street	Frankston	Skye Rd / Karii		Flash
-	-	20	Rosella Street	Frankston	Skye Rd / Karii		Flash
-	-	22	Rosella Street	Frankston	Skye Rd / Karii		Flash
-	6	6	Rosewood Cour		Sandgate Aver		Flash
7	7	7	Rosewood Cour		Sandgate Aver		Flash
-	-	8	Rosewood Cour		Sandgate Aver		Flash
9	9	9	Rosewood Cour		Sandgate Aver		Flash
10	10	10	Rosewood Cour		Sandgate Aver		Flash
-	-	1	Rosslyn Avenue	Seaford	Bardia Avenue		Flash
-	-	2	Rosslyn Avenue		Bardia Avenue	Drain	Flash
-	-	6	Rosslyn Avenue		Bardia Avenue	Drain	Flash
-	-	7	Rosslyn Avenue	Seaford	Bardia Avenue	Drain	Flash
-	-	8	Rosslyn Avenue	Seaford	Bardia Avenue	Drain	Flash
-	-	9	Rosslyn Avenue	Seaford	Bardia Avenue	Drain	Flash
-	-	10	Rosslyn Avenue	Seaford	Bardia Avenue	Drain	Flash
-	-	11	Rosslyn Avenue	Seaford	Bardia Avenue	Drain	Flash
-	-	13	Rosslyn Avenue	Seaford	Bardia Avenue	Drain	Flash

Res	sidential		Com	mercial	Industrial	Rural	Publ	ic Use
	t No. at Ris AEP Event					Along Mell	bourne	Floo
0% .EP	5% AEP	1% AEP		Address	Suburb	Water Wate		Risl Typ
-	-		15	Rosslyn Avenue	Seaford	Bardia Avenu	ie Drain	Flash
-	-		17	Rosslyn Avenue	Seaford	Bardia Avenu	ie Drain	Flash
-	-		18	Rosslyn Avenue	Seaford	Bardia Avenu	ie Drain	Flash
-	-		20	Rosslyn Avenue	Seaford	Bardia Avenu	ie Drain	Flasi
-	-		23	Rosslyn Avenue	Seaford	Bardia Avenu	ie Drain	Flasi
-	-		26	Rosslyn Avenue	Seaford	Bardia Avenu	ie Drain	Flas
-	-		27	Rosslyn Avenue	Seaford	Bardia Avenu	ie Drain	Flasi
-	-		28	Rosslyn Avenue	Seaford	Bardia Avenu	ie Drain	Flas
-	-		32	Rosslyn Avenue	Seaford	Bardia Avenu	ie Drain	Flasi
-	-		33	Rosslyn Avenue	Seaford	Bardia Avenu	ie Drain	Flas
-	-		36	Rosslyn Avenue	Seaford	Bardia Avenu	ie Drain	Flas
-	-		37	Rosslyn Avenue	Seaford	Bardia Avenu	ie Drain	Flas
-	-		39	Rosslyn Avenue	Seaford	Bardia Avenu	ie Drain	Flas
-	-		43	Rosslyn Avenue	Seaford	Bardia Avenu	ie Drain	Flas
-	-		44	Rosslyn Avenue	Seaford	Skye Rd / Ka	ringal Drain	Flas
-	-		55	Rosslyn Avenue	Seaford	Skye Rd / Ka	ringal Drain	Flas
-	-		56A	Rosslyn Avenue	Seaford	Skye Rd / Ka	ringal Drain	Flas
-	-		59	Rosslyn Avenue	Seaford	Skye Rd / Ka	ringal Drain	Flas
-	-		60	Rosslyn Avenue	Seaford	Skye Rd / Ka	ringal Drain	Flas
-	-		61	Rosslyn Avenue	Seaford	Skye Rd / Ka	ringal Drain	Flas
-	-		64	Rosslyn Avenue	Seaford	Skye Rd / Ka	ringal Drain	Flas
-	-		75	Rosslyn Avenue	Seaford	Skye Rd / Ka	ringal Drain	Flas
-	-		147	Rosslyn Avenue	Seaford	Skye Rd / Ka	ringal Drain	Flas
-	-		2	Rosslyn Court	Seaford	Skye Rd / Ka	ringal Drain	Flas
-	-		4	Rosslyn Court	Seaford	Skye Rd / Ka	ringal Drain	Flas
-	-		5	Rosslyn Court	Seaford	Skye Rd / Ka	ringal Drain	Flas
-	-		1	Sandgate Avenue	e Frankston	Sandgate Av	enue Drain	Flas
-	6		6	Sandgate Avenue	e Frankston	Sandgate Ave	enue Drain	Flas
6	6		6	Screen Street	Frankston	Sandgate Av	enue Drain	Flas
7	7		7	Screen Street	Frankston	Sandgate Av	enue Drain	Flas
-	1/1	0	1/10	Screen Street	Frankston	Sandgate Av	enue Drain	Flas
2/10	2/1	0	2/10	Screen Street	Frankston	Sandgate Ave	enue Drain	Flas
3/10	3/1	0	3/10	Screen Street	Frankston	Sandgate Ave	enue Drain	Flas
4/10	4/1	0	4/10	Screen Street	Frankston	Sandgate Ave	enue Drain	Flas
5/10	5/1	0	5/10	Screen Street	Frankston	Sandgate Ave	enue Drain	Flasi
-	-		53A	Seaford Grove	Seaford	Seaford Lowl	ands	Flasi
-	-		55	Seaford Grove	Seaford	Seaford Lowl	ands	Flash
-	60		60	Seaford Grove	Seaford	Seaford Lowl	ands	Flasi
-	62		62	Seaford Grove	Seaford	Seaford Lowl	ands	Flasi
-	64		64	Seaford Grove	Seaford	Seaford Lowl	ands	Flasi
-	-		65	Seaford Grove	Seaford	Seaford Lowl	ands	Flasi
-	-		66	Seaford Grove	Seaford	Seaford Lowl	ands	Flasi
-	_		68	Seaford Grove	Seaford	Seaford Lowl		Flas

Res	idential	Comi	mercial	Industrial		Rural	Public U	se
	: No. at Risk i LEP Event		Address	Suburb		Along Melbe		Flood Risk
20% AEP		% E <b>P</b>				Water Water	course	Туре
-	-	70	Seaford Grove	Seafo	ord	Seaford Lowla	nds	Flash
-	-	72	Seaford Grove	Seafo	ord	Seaford Lowla	nds	Flash
-	-	73	Seaford Grove	Seafo	ord	Seaford Lowla	nds	Flash
-	-	74	Seaford Grove	Seafo	ord	Seaford Lowla	nds	Flash
-	-	76	Seaford Grove	Seafo	ord	Seaford Lowla	nds	Flash
111-113	3 111-113	111-113	Seaford Place	Seafo	ord	Austin Road / I Drain	Excelsior Avenue	Flash
-	-	25	Seaford Road	Seafo	ord	Seaford Lowla	nds	Flash
-	-	27	Seaford Road	Seafo	ord	Seaford Lowla	nds	Flash
-	-	28	Seaford Road	Seafo	ord	Seaford Lowla	nds	Flash
-	-	29	Seaford Road	Seafo	ord	Seaford Lowla	nds	Flash
-	-	32	Seaford Road	Seafo	ord	Seaford Lowla	nds	Flash
-	-	33	Seaford Road	Seafo	ord	Seaford Lowla	nds	Flash
-	-	34	Seaford Road	Seafo	ord	Seaford Lowla	nds	Flash
-	-	36	Seaford Road	Seafo	ord	Seaford Lowla	nds	Flash
-	-	37	Seaford Road	Seafo	ord	Seaford Lowla	nds	Flash
-	-	40	Seaford Road	Seafo	ord	Seaford Lowla	nds	Flash
-	-	20	Shearer Court	Frank South		Sandgate Aver	nue Drain	Flasi
-	-	22	Shearer Court	Frank South		Sandgate Aver	nue Drain	Flasi
-	24	24	Shearer Court	Frank South		Sandgate Aver	nue Drain	Flash
-	26	26	Shearer Court	Frank South		Sandgate Aver	nue Drain	Flasi
-	-	2	Sheridan Aven	ue Frank	kston	Skye Rd / Kari	ngal Drain	Flasi
-	-	3	Sheridan Aven	ue Frank	kston	Skye Rd / Kari	ngal Drain	Flasi
-	-	11-13	Sheridan Aven	ue Frank	rston	Skye Rd / Kari	ngal Drain	Flasi
-	-	12	Sheridan Aven	ue Frank	kston	Skye Rd / Kari	ngal Drain	Flasi
-	-	14	Sheridan Aven	ue Frank	kston	Skye Rd / Kari	ngal Drain	Flasi
5	5	5	Silas Avenue	Frank	kston	Lee Street Dra	in	Flasi
-	184	184	Skye Road	Frank	kston	Skye / Karinga	l Drain	Flasi
206	206	206	Skye Road	Frank	kston	Skye / Karinga	l Drain	Flasi
208	208	208	Skye Road	Frank	kston	Skye / Karinga	l Drain	Flasi
-	238	238	Skye Road	Frank	kston	Skye / Karinga	l Drain	Flasi
252	252	252	Skye Road	Frank	kston	Skye / Karinga	l Drain	Flas
254	254	254	Skye Road	Frank	kston	Skye / Karinga	l Drain	Flasi
258	258	258	Skye Road	Frank	kston	Skye / Karinga	l Drain	Flash
260	260	260	Skye Road	Frank	kston	Skye / Karinga	l Drain	Flash
-	-	10	St Johns Aven	ue Frank	kston	Sandgate Aver	nue Drain	Flasi
-	2	2	Tarook Court	Frank	kston	Sandgate Aver	nue Drain	Flasi
-	3	3	Tarook Court	Frank	kston	Sandgate Aver	nue Drain	Flasi
-	-	11	Taverner Squa	re Frank	kston	Lee Street Dra	in	Flash
-	-	14	Taverner Squa	re Frank	kston	Lee Street Dra	in	Flash
-	-	7	Tooyal Street	Frank	cston	Skye Rd / Kari	ngal Drain	Flas

Properti	es at risk fron	n Flooding o	over-floor in F	rankston an	d Seaford			
Res	idential	Comr	nercial	Indust	trial	Rural	Publ	ic Use
	No. at Risk in	1						
A	EP Event		Address	Subu	ırb	Along Melbo		Flood Risk
20%	5% 1%	%				Water Watero	ourse	Туре
AEP	AEP AE		T1 04		Frankatas	Olava Dal / Karis	and Davis	Flack
-	-	1/9	Tooyal Stree		Frankston	Skye Rd / Karir		Flash
-	-	2/9	Tooyal Stree		Frankston	Skye Rd / Karir		Flash
-	-	3/9	Tooyal Stree		Frankston	Skye Rd / Karir		Flash
-	-	4/9	Tooyal Stree		Frankston	Skye Rd / Karir		Flash
-	-	10	Tooyal Stree		Frankston	Skye Rd / Karir		Flash
-	-	12	Tooyal Stree		Frankston	Skye Rd / Karir		Flash
-	-	14	Tooyal Stree		Frankston	Skye Rd / Karir		Flash
-	-	15-19	Tooyal Stree		Frankston	Skye Rd / Karir		Flash
		16	Tooyal Stree		Frankston	Skye Rd / Karir		Flash
		18	Tooyal Stree		Frankston	Skye Rd / Karir		Flash
-	-	26	Tooyal Stree		Frankston	Skye Rd / Karir		Flash
-	-	28	Tooyal Stree		Frankston	Skye Rd / Karir		Flash
-	-	1/30-32	Tooyal Stree		Frankston	Skye Rd / Karir		Flash
-	-	2/30-32	Tooyal Stree		Frankston	Skye Rd / Karir		Flash
-	18	18	Towerhill Ro		Frankston	Sandgate Aver		Flash
-	-	5	Turnberry Co		Frankston	Lee Street Drai		Flash
-	-	1B	Warrain Stre		Frankston	Sandgate Aver		Flash
-	21	21	Warrain Stre		Frankston	Sandgate Aver		Flash
32	32	32	Warrain Stre		Frankston	Sandgate Aver		Flash
-	-	36	Warrain Stre		Frankston	Sandgate Aver		Flash
2	2	2	Weatherston		Seaford	Seaford Lowlar		Flash
-	-	32	Weatherston	Road	Seaford	Seaford Lowlar		Flash
-	-	4	Wells Road		Seaford	Skye Rd / Karir		Flash
-	-	6	Wells Road		Seaford	Skye Rd / Karir		Flash
-	-	8	Wells Road		Seaford	Skye Rd / Karir	•	Flash
-	-	9	Wells Road		Seaford	Skye Rd / Karir		Flash
-	-	13	Wells Road		Seaford	Skye Rd / Karir	•	Flash
-	-	16	Wells Road		Seaford	Skye Rd / Karir	-	Flash
-	-	35	Wells Road		Seaford	Skye Rd / Karir		Flash
-	-	36	Wells Road		Seaford	Skye Rd / Karir	-	Flash
-	-	37	Wells Road		Seaford	Skye Rd / Karir		Flash
-	-	39	Wells Road		Seaford	Skye Rd / Karir	-	Flash
-	F0 F2	45 50.52	Wells Road		Seaford	Skye Rd / Karir		Flash
-	50-52	50-52	Wells Road	not.	Seaford	Skye Rd / Karir		Flash
-	1/140	1/140	Williams Stre		Frankston	Sandgate Aver		Flash
-	2/4.40	2/140	Williams Stre		Frankston	Sandgate Aver Sandgate Aver		Flash
-	3/140 4/140	3/140 4/140	Williams Stre		Frankston			Flash
-		5/140	Williams Stre		Frankston	Sandgate Aver		Flash
	5/140			5 <b>C</b> l	Frankston	Sandgate Aver		Flash
	28A	28A	Willis Street		Frankston	Lee Street Drai		Flash
-		26	Willow Road		Frankston	Lee Street Drai		Flash
4D	1D	116	Willow Road		Frankston	Lee Street Drai		Flash
1B	1B	1B	Winifred Stre	:cl	Frankston	Sandgate Aver	iue Drain	Flash

Res	sidential		Comi	mercial	Industrial	Rural	Pub	olic Use
	t No. at Ris	k in						Floor
,	AEP Event			Address	Suburb	Along Mel		Flood Risk
20% AEP	5% AEP	1% AEP				Water Wate	rcourse	Туре
-	1		1	Wise Avenue	Seaford	Seaford Lowl	ands	Flash
-	-		1/2	Wise Avenue	Seaford	Seaford Lowl	ands	Flash
-	-		2/2	Wise Avenue	Seaford	Seaford Lowl	ands	Flash
-	3		3	Wise Avenue	Seaford	Seaford Lowl	ands	Flash
-	5		5	Wise Avenue	Seaford	Seaford Lowl	ands	Flash
-	-		6	Wise Avenue	Seaford	Seaford Lowl	ands	Flash
-	7		7	Wise Avenue	Seaford	Seaford Lowl	ands	Flash
8	8		8	Wise Avenue	Seaford	Seaford Lowl	ands	Flash
9	9		9	Wise Avenue	Seaford	Seaford Lowl	ands	Flash
10	10		10	Wise Avenue	Seaford	Seaford Lowl	ands	Flash
-	1/11		1/11	Wise Avenue	Seaford	Seaford Lowl	ands	Flash
-	2/11		2/11	Wise Avenue	Seaford	Seaford Lowl	ands	Flash
-	12-1	4	12-14	Wise Avenue	Seaford	Seaford Lowl	ands	Flash
1/15	1/15	5	1/15	Wise Avenue	Seaford	Seaford Lowl	ands	Flash
2/15	2/15	5	2/15	Wise Avenue	Seaford	Seaford Lowl	ands	Flash
3/15	3/15	5	3/15	Wise Avenue	Seaford	Seaford Lowl	ands	Flash
16	16		16	Wise Avenue	Seaford	Seaford Lowl	ands	Flash
17	17		17	Wise Avenue	Seaford	Seaford Lowl		Flash
18	18		18	Wise Avenue	Seaford	Seaford Lowl		Flash
1/19	1/19	)	1/19	Wise Avenue	Seaford	Seaford Lowl		Flash
2/19	2/19		2/19	Wise Avenue	Seaford	Seaford Lowl		Flash
-	-		1/20	Wise Avenue	Seaford	Seaford Lowl		Flash
2/20	2/20	`	2/20	Wise Avenue	Seaford	Seaford Low		Flash
21	21		21	Wise Avenue	Seaford	Seaford Low		Flash
22	22		22	Wise Avenue	Seaford	Seaford Low		Flash
			23	1110071101100				
23	23			Wise Avenue	Seaford	Seaford Lowl		Flash
1/24	1/24		1/24	Wise Avenue	Seaford	Seaford Lowl		Flash
2/24	2/24		2/24	Wise Avenue	Seaford	Seaford Lowl		Flash
3/24	3/24		3/24	Wise Avenue	Seaford	Seaford Lowl		Flash
4/24	4/24		4/24	Wise Avenue	Seaford	Seaford Lowl		Flash
25	25		25	Wise Avenue	Seaford	Seaford Lowl		Flash
-	-		1/2	Wisewould Ave		Skye Rd / Ka		Flash
-	-		2/2	Wisewould Ave		Skye Rd / Ka		Flash
-	-		3/2	Wisewould Ave		Skye Rd / Ka		Flash
-	-		1/4-6	Wisewould Ave		Skye Rd / Ka		Flash
-	-		2/4-6	Wisewould Ave		Skye Rd / Ka		Flash
-	-		3/4-6	Wisewould Ave		Skye Rd / Ka		Flash
-	-		4/4-6	Wisewould Ave	nue Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-		5/4-6	Wisewould Ave	nue Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-		6/4-6	Wisewould Ave	nue Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-		7/4-6	Wisewould Ave	nue Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-		1/8	Wisewould Ave	nue Seaford	Skye Rd / Ka	ringal Drain	Flash
-	-		2/8	Wisewould Ave	nue Seaford	Skye Rd / Ka	ringal Drain	Flash

Res	idential	Co	mmercial	Indu	ıstrial	Rural	Publi	c Use
	No. at Risk EP Event	cin	Address	Sul	burb	Along Melbo		Floo Risl
20% AEP	5% AEP	1% AEP				Water Waterco	ourse	Тур
-	-	3/8	Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flash
-	-	4/8	Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flash
-	-	5/8	Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flash
-	-	6/8	Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flash
-	-	7/8	Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flash
-	-	1/12-1	4 Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flash
-	-	2/12-1	4 Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flash
-	-	3/12-1	4 Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flash
-	-	4/12-1	4 Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flash
-	-	5/12-1	4 Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flash
-	-	6/12-1	4 Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flash
-	-	1/13	Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flast
-	-	2/13	Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flast
-	-	3/13	Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flash
-	-	4/13	Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flast
-	-	5/13	Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flast
-	-	6/13	Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flash
-	-	7/13	Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flash
-	-	10/13	Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flast
-	-	11/13	Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flast
-	-	12/13	Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flash
-	-	13/13	Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flash
-	-	14/13	Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flash
-	-	15/13	Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flasi
-	-	16/13	Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flast
-	-	3/19	Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flast
-	-	4/19	Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flash
-	-	5/19	Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flast
-	-	6/19	Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flast
-	-	7/19	Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flasi
-	-	8/19	Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flasi
-	-	10/19	Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flasi
-	-	1/24-20	6 Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flasi
-	-	2/24-20	6 Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flasi
-	-	3/24-20	6 Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flash
-	-	4/24-20	6 Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flash
-	-	1/28-30	0 Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flash
-	-	2/28-30	0 Wisewould	Avenue	Seaford	Skye Rd / Karin	gal Drain	Flash
-	-	1	Yuille Stree	et	Frankston	Sandgate Avenu	ue Drain	Flash
	Totals							

Table C1.4 – Properties at risk of flooding around Frankston, Frankston North & Seaford

#### **Isolation**

No major isolation risks exist for areas around Seaford & Frankston during a 1% AEP (100yr ARI) event. Some localised short-duration isolation may occur due to flash flooding.

### **Essential Infrastructure**

- Frankston SES LHQ on McCulloch Street, Seaford likely flooded during a 2% AEP event
- Parts of the Frankston City Municipal Depot on Buna Avenue, Seaford likely flooded during a 2% AEP event
- Electrical Substation on Wright Street, Seaford likely flooded during a 2% AEP event
- The Frankston and Stony Point Railway Line may have low level flooding crossing the tracks at various locations during a 1% AEP flood. Unknown whether this will force the closure of the line.

During an event, see the Public Transport Victoria's Website for details on delays or alterations to services. <a href="http://ptv.vic.gov.au/live-travel-updates/">http://ptv.vic.gov.au/live-travel-updates/</a>. A map of Public Transport routes for the City of Frankston is available via the website at: <a href="https://www.ptv.vic.gov.au/assets/default-site/more/maps/Local-area-maps/Metropolitan/4afa74b3f6/14\_Frankston\_LAM.pdf">https://www.ptv.vic.gov.au/assets/default-site/more/maps/Local-area-maps/Metropolitan/4afa74b3f6/14\_Frankston\_LAM.pdf</a>

Apart from the roads outlined below, all other essential infrastructure and services areas around Seaford & Frankston are expected to remain unaffected by flooding during a 1% AEP (100yr ARI) event.

### **Road Closures**

The following roads are subject to closure during flooding around Seaford & Frankston. Check the VicRoads website for more details: <a href="mailto:alerts.vicroads.vic.gov.au">alerts.vicroads.vic.gov.au</a>

#### Department of Transport (VicRoads) Roads flooded in a 1% AEP (100yr ARI) event

Cranbourne Road, Frankston east of Moorooduc Highway Intersection

Table C1.5 – Department of Transport (VicRoads) Possible Road Closures during a flooding event

RANKSTON	James Street	Woorilla Court	Johnstone Street
Ashleigh Avenue	Kananook Creek Blvd Sth	Young Street	Jubilee Avenue
Baillie Court	Kareela Road	FRANKSTON NORTH	Kananook Avenue
Balwyn Street	Karingal Drive	Alde Court	Kirkwood Avenue
Banyan Drive	Kashmir Crescent	Bursaria Crescent	Levuka Street
Barclay Avenue	Keys Street	Pecan Court	Lyster Close
Beach Street	Kookaburra Street	SEAFORD	Manning Road
Belar Avenue	Lee Street	Admans Avenue	Martha Street
Bragge Street	Lewis Street	Arden Court	Martin Street
Bush Court	Lipton Drive	Austin Road	McCulloch Avenu
Cambridge Street	Long Island Drive	Bardia Avenue	Michael Court
Camoustie Court	Macrosty Court	Bayside Grove	Miles Grove
Catherine Parade	McMahons Road	Boonong Avenue	Milne Avenue
Coogee Avenue	Meerlu Avenue	Bruce Street	Molesworth Street
Dandenong Road East	Mereweather Avenue	Brunel Road	Moresby Avenue
Deane Street	Mincha Street	Carder Avenue	Patrick Court
Dirleton Close	Murawa Street	Carrington Court	Pimpala Avenue
Douglas Grove	New Street	Chapman Avenue	Prince Crescent
Eastbourne Court	Nursery Avenue	Claude Street	Quinn Street
Ellesmere Court	Overton Road	Duncan Avenue	Raymond Road
Ellis Street	Paetrie Street	Easton Avenue	Riviera Street
Emora Court	Partidge Crescent	Elisdon Drive	Robinsons Road
Erica Street	Quandong Court	Elliott Street	Rosslyn Avenue
Erskine Street	Raphael Crescent	Erwin Drive	Rosslyn Court
Finch Street	Reid Street	Fern Court	Scott Street
Frallon Crescent	Rosella Street	Fortescue Avenue	Sussex Crescent
Franciscan Avenue	Rushcliffe Court	Galway Street	Valerie Court
Frank Street	Sandpiper Place Frankston	Govan Street	Wicklow Street
Glenelg Avenue	Savannah Court	Gray Street	Wise Avenue
Grimwade Crescent	Sheridan Avenue	Greaves Court	Wisewould Avenue
Heatherhill Road	Skye Road	Henry Crescent	Wright Street
Highgate Court	Thompson Street	Heversham Drive	Young Street
Hillcrest Road	Tooyal Street	Hummerstone Road	
Iranda Street	Willow Road	Hunt Drive	

Table C1.6 – Frankston City Council Possible Road Closures during a flooding event

## **Flood Mitigation**

Flood mitigation for Frankston and Seaford has predominantly been developed in the form of Retarding Basins, Pumping Stations, Levees & 1 set of Tidal Gates. These flood mitigation systems are as follows in the tables below. To view their locations and connecting waterway/drainage systems, see map B in **Appendix F**. Miles Grove RB (Retarding Basin) has been enlarged and upgraded by LXRA (Level Crossing Removal Authority) in conjunction with MW due to Kananook train stabling yards construction. MW has reconstructed RB embankments in Frankton i.e. Lee Street, Sandgate Avenue, Long Island, Banyan Reserve and Botany Park in Carrum Downs

### **Retarding Basins**

Melbourne Water Retarding Basin	On Drain/ Waterway	Area	Storage Capacity	Spillway Crest Level	Full Supply Level	Embankment Crest Level	ANCOLD Hazard Rating	Properties in Flow Path (WD DCF Failure)	Melway Reference
Claude Street	Skye Road / Karingal	Unavailable	Unavailable	nil	Unavailable	In cut	Very Low	0	99 G8
Karingal Hub	Skye Road / Karingal	0.335 ha	6.0 ML	61.6m AHD	62.0m AHD	62.5m AHD	Very Low	0	103 D4
Lee Street	Lee Street Drain	2.346 ha	80.8 ML	49.4m AHD	50.22m AHD	50.5m AHD	Very Low	98	102 K5
Long Island	Skye Road / Karingal	Unavailable	Unavailable	nil	8.7m AHD	8.89m AHD	Significant	49	99 G10
McCulloch Avenue	Skye Road / Karingal	0.536 ha	4.0 ML	nil	Unavailable	2.1m AHD	Very Low	0	99 F8
Mile Grove	Bardia Avenue Drain	1.092 ha	6.0 ML	nil	1.4m AHD	Unavailable	Low	4	99 F6
Nursery Avenue	Lee Street Drain	Unavailable	Unavailable	Unavailable	Unavailable	Unavailable	High C	Unavailable	102 H4
Sandgate Avenue	Sandgate Avenue Drain	3.024 ha	8.3 ML	75.62m AHD	75.61m AHD	75.65m AHD	Very Low	13	102 H8
Skye Road	Skye Road / Karingal	2.084 ha	44.0 ML	nil	16.0m AHD	17.5m AHD	Significant	0	99 K12
Wells Road	Bardia Avenue Drain	0.735 ha	6.5 ML	nil	3.2m AHD	In cut	Very Low	0	99 G6
Wingham Park	Skye Road / Karingal	~ 0.8 ha	6 ML	22.0m AHD	21.8m AHD	22.0m AHD	Very Low	171	99 K12

Table C1.7 - Melbourne Water Retarding Basins around Frankston, Frankston North & Seaford

## Lee Street RB Design Flood Discharges

AEP % (1 in X ARI)	Elevation (mAHD)
20% (5 year)	48.62
10% (10 year)	49.27
5% (20 year)	49.82
FSL 3.2% (31 year)	50.22
DCF 2.4% (42 year)	50.50
2% (50 year)	50.66

Table C1.8 (GHD Report for Melbourne Water – Risk Assessment of Lee Street RB, July 2016)

## **Long Island RB Design Flood Discharges**

AEP % (1 in X ARI)	Elevation (mAHD)	Critical Duration Storm for Peak Outflow (hours)
20% (5 year)	8.07	9
5% (20 year)	8.66	9
DCF & FSL 2.3% (44 year)	8.89	unavailable
2% (50 year)	8.93	4
1% (100 year)	9.02	3
0.2% (500 year)	9.06	3
0.01% (10,000 year)	9.13	3
PMPDF 0.001% (100,000 year)	9.22	2

Table C1.9 (GHD Report for Melbourne Water – Risk Assessment of Long Island RB, July 2016)

# **Skye Road RB Design Flood Discharges**

AEP % (1 in X ARI)	Elevation (mAHD)	Critical Duration Storm for Peak Outflow (hours)
20% (5 year)	15.60	9
10% (10 year)	16.03	9
5% (20 year)	16.46	9
2% (50 year)	17.06	4
DCF 1.05% (95 year)	17.50	3
1% (100 year)	17.54	3
0.5% (200 year)	17.55	3
0.2% (500 year)	17.56	2
0.1% (1,000 year)	17.57	2
PMPDF 0.01% (10,000 year)	17.76	unknown

Table C1.10 (GHD Report for Melbourne Water – Risk Assessment of Skye Rd RB, July 2016)

## Sandgate Avenue RB Design Flood Discharges

AEP % (1 in X ARI)	Elevation (mAHD)	Critical Duration Storm for Peak Outflow (hours)
20% (5 year)	75.15	unknown
Piping – Partially Full 10% (10 year)	75.50	9
DCF 6.25% (16 year)	75.65	9
5% (20 year)	75.73	9
Overtopping - 2% (50 year)	75.86	2

Table C1.11 (GHD Report for Melbourne Water – Risk Assessment of Sandgate Avenue RB, July 2016)

Frankston City Council Retarding Basin	Location	Area	Spillway Crest Level	Full Supply Level	Embankment Crest Level	Properties in Flow Path (WD DCF Failure)	Melway Reference
EDBALE/EVELYN STREET RETARDING BASIN	Ebdale Street Frankston	6500m2	2.70	2.80	3.00	10	99 D12
PAT ROLLO RESERVE RETARDING BASIN	Silver Avenue Frankston North				In Cut	0	100 B6
BEAUTY PARK RETARDING BASIN / LAKE	High Street Frankston				In Cut	0	102 C3
WORLAND PARK RESERVE RETARDING BASIN	Belar Avenue Frankston				In Cut	0	103 B2
LEE STREET (Nursery Reserve) RETARDING BASIN (Natural depression)	Lee Street Frankston				In Cut	0	102 K4
REX STREET SMALL RETARDING BASIN (Natural depression)	Joy Street Frankston				In Cut	0	102 E2
BALLAM PARK RETARDING BASIN (Soccer Training Pitch #2) AND SPORTING GROUNDS	Cranbourne Road Frankston	1.6 ha				Approx. 10	103 A4
MONTAGUE PARK RETARDING BASIN	Bentley Place Frankston	2200m2	35.75		36.00	Approx. 5	102 C5
VICTORIA PARK RETARDING BASIN	Williams Street Frankston	7500m2	22.60		22.80		102 C4
JUBILEE PARK RETARDING BASIN	Hillcrest Road Frankston					Approx. 13	102 J4
PARC RETARDING BASIN	Olive Grove Frankston				In Cut	0	102 E2

Table C1.12 – Frankston City Council Water Retarding Basins in Frankston, Frankston North and Seaford

Private Water Retarding Basin	Location	Area	Spillway Crest Level	Full Supply Level	Embankment Crest Level	Properties in Flow Path (WD DCF Failure)	Melway Reference
MCCLELLAND DRIVE RETENTION BASIN 3	Karingal Hub Shopping Centre				In Cut	0	103 D4
RETENTION BASIN 75 Playne Street	75 Playne Street Frankston				In Cut		100A E8

Table C1.13 – Private Water Retarding Basins in Frankston, Frankston North and Seaford

## **Pumping Stations**

Melbourne Water Pumping Station	On Drain / Waterway	Location	No. of Pumps	Consequence of Failure	Melway Reference
Bardia Avenue	Bardia Avenue Drain	Within Creek reserve at west end of Bardia Avenue	1	Water in Bardia Ave Drain becomes Black Aerobic within 2 to 3 days	99 E6
Bunna Avenue	Skye Road / Karingal	Corner of Lyster and Buna Avenue, south side. Next to primary school grounds.	1	Local flooding of up to 100 properties	99 F9
James Street	Seaford Lowlands	End of James Street and adjacent to bicycle path abutting Seaford Wetland.	1	Local flooding of up to 50 properties	99 F2
Kananook Creek	Eel Race Drain	Palm Beach Drive. North side levee of Eel Race drain opposite no 93-95.	2	Rapid deterioration (within hours) of water quality along Kananook Creek and into Patterson Lakes when temperatures are greater than 30 degrees	97 G9
McCulloch Avenue	Skye Road / Karingal	North side of MucCulloch Avenue next to Kananook Reserve entrance	1	Local flooding of up to 100 properties	99 F8
Wadsleys Drain	Wadsleys Drain	East side of freeway on drain just up-stream of junction with Eel Race drain. Access from the freeway.	1	Loss of environmental flow to the Seaford Wetlands	97 J9
Weatherston Road	Kananook Creek	Between Kananook Creek and Seaford Oval. Access from Seaford Road via track next to east side of Kananook Creek Bridge	1	Water in Weatherston Road Drain becomes Black Aerobic within 2 to 3 days	99 E5

Table C1.14 – Melbourne Water Pumping Stations around Frankston, Frankston North & Seaford

#### Levees

Levee	Reach	Side	Levee Height	Levee Length	Expected Level of Protection	ANCOLD Hazard Rating	Consequences of Failure	Melway Reference
Eel Race Creek	Boggy Creek to Wadsley Drain	North	2.0m	500m	Unavailable	Very Low	None significant	97K10-98A10
Eel Race Creek	Boggy Creek to Peninsula Fwy	South	2.0m	500m	Unavailable	Very Low	None significant	97K10-98A10
Eel Race Drain	Mornington Peninsula Fwy to Footbridge	South	1.0m	1.3km	100yr ARI Event with in excess of 800mm freeboard	Low	Flooding of ~2500 residential properties, Patterson River Secondary College, Seaford North Primary School and Seaford Wetland	97F10-97J10
Kananook Creek Retaining Wall	Beach Street to Wells Street	East	1.52m	310m	Unavailable	Unavailab le	Unavailable	102C1-102C2
Wadsley Drain	Eel Race Creek to Wadsley Rd	East	1.26m	900m	100yr ARI Event (freeboard unknown)	Low	None significant	97K7-97K10
Wadsley Drain	Eel Race Creek to Wadsley Rd	West	1.26m	900m	100yr ARI Event (freeboard unknown)	Very Low	Mornington Freeway likely closed in case of flooding	97K7-97K10

Table C1.15 – Melbourne Water Levees along the Eel Race Drain & Kananook Creek catchments

### **Tidal Gates**

On Drain / Waterway	Location	Regulate Gates at Level against Gauge	Melway Reference
Kananook Creek	Riviera Outlet Gates, Riviera Street directly behind the Riviera Hotel. Access via Riviera Street	1.1m at the Seaford Gauge. Gates opened / closed based upon flood risk to lower Frankston area and tide levels.	97 D11

Table C1.16 – Melbourne Water Tidal Gates along Kananook Creek

# **Sewerage Infrastructure**

Sewerage Infrastructure of note during a severe flood event located around Frankston, Frankston North and Seaford is contained within the following table.

## **Sewer Pumping Stations**

Sewerage Pumping Station	On Drain / Waterway	Bank / Side of Waterway	Operator	Location	Melway Reference
Allawah Avenue	Kananook Creek	Left	South East Water	Allawah Avenue, Frankston	99 D11
Beach Grove	Kananook Creek	West	South East Water	Beach Grove, Seaford	99 E1
Belvedere Road	Local Drainage	-	South East Water	Belvedere Road, Seaford	99 H5
Boonong Avenue	Kananook Creek	Right	South East Water	Boonong Avenue, Seaford	99 D9
Coolibar Avenue	Seaford Lowlands Drain	-	South East Water	Coolibar Avenue, Seaford	97 E11
Fiocchi Avenue	Kananook Creek	Right	South East Water	Fiocchi Avenue, Frankston	99 D12
Fortescue Avenue	Local Drainage	-	South East Water	Fortescue Avenue, Seaford	99 E6
Greaves Court	Seaford Lowlands Drain	-	South East Water	Greaves Court, Seaford	99 G3
Hallifax Street	Local Drainage	-	South East Water	Hallifax Street, Seaford	99 F1
Kirkwood Avenue	Local Drainage	-	South East Water	Kirkwood Avenue, Seaford	99 E8
Lanena Court	Local Drainage	-	South East Water	Lanena Court, Frankston	100 D11
Manorwood Drive	Skye Road North Drain	-	South East Water	Manorwood Drive, Frankston	103 E2
McKenzie Street	Seaford Lowlands Drain	-	South East Water	McKenzie Street, Seaford	99 F3
Nepean Highway Frankston	Local Drainage	-	South East Water	Nepean Highway, Frankston	102 B4
Nepean Highway Seaford	Kananook Creek	West	South East Water	Nepean Highway, Seaford south of Seaford Road	99 D5
New Street	Local Drainage	-	South East Water	New Street, Frankston	99 E10
Oliphant Way	Wells Road Drain	-	South East Water	Oliphant Way, Seaford	99 K1
Park Street	Local Drainage	-	South East Water	Park Street, Seaford	99 F2
Pascal Road	Wells Road Drain	-	South East Water	Pascal Road, Seaford	99 J2
Playne St Foreshore	Kananook Creek	Left	South East Water	Kananook Creek Reserve on Long Island Drive, Frankston	102 C2
Riviera Street	Kananook Creek	West	South East Water	Riviera Street, Seaford	97 D10
Seaford Oval	Kananook Creek	East	South East Water	Seaford Reserve on Seaford Road, Seaford	99 E5
Wedge Court	Seaford Lowlands Drain	-	South East Water	Wedge Court, Seaford	99 H1
Wise Avenue	Bardia Avenue Drain	-	South East Water	Wise Avenue, Seaford	99 F5

Table C1.17 – Sewer Pumping Stations in Frankston, Frankston North and Seaford

### **Control, Command and Coordination**

VICSES will assume overall control of the response to flood incidents. Other agencies will be requested to support operations as detailed in this Plan. Control and coordination of a flood incident shall be carried out at the lowest effective level and in accordance with the State Emergency Management Plan during significant events, VICSES will conduct incident management using multiagency resources.

### Flood Impacts and Operational Considerations (Intelligence Cards)

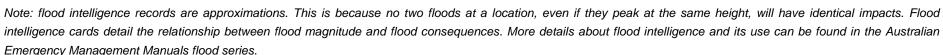
The tables on the following pages provide a breakdown of the possible consequences of flooding along Kananook Creek and the Skye / Karingal Drain at various creek heights or rain totals within Frankston, Frankston North and Seaford. These tables are to be used only as a guide as no two floods at a location will have identical impacts.

Intelligence Cards have been included for the following locations:

- Kananook Creek at Seaford North
- Kananook Creek at Seaford
- Skye / Karingal Drain at Frankston North
- Frankston & Seaford Stormwater Drains

# FLOOD INTELLIGENCE CARD – SEAFORD NORTH GAUGE, KANANOOK CREEK

Version 4 - January 2021





he by

This Flood Intelligence Card publication is presented by the Victoria State Emergency Service for the purpose of disseminating emergency management information. The contents of the information have not been independently verified by the Victoria State Emergency Service. No liability is accepted for any damage, loss or injury caused by errors or omissions in this information or for any action taken by any person in reliance upon it. **Scan the QR code for the current levels for this gauge.** 

LOCATION	Riviera Street Culverts, Seaford North
CURRENT LEVEL:	https://www.melbournewater.com.au/water-data-and-education/rainfall-and-river-levels#/reader/228371A
STREAM:	Kananook Creek
GAUGE NUMBER:	228371A
GAUGE ZERO:	0.00m AHD
GAUGE TYPE	Stream Level & Rain

MELWAY REFERENCE:	97 D11
MINOR – MODERATE:	1.1m – 1.5m
MAJOR	1.5m
LEVEE HEIGHT:	2.50m
TELEMETRIC/MANUAL	Telemetric
HIGHEST RECORDED FLOOD:	1.67m (3 <sup>rd</sup> February 2005)

Creek Height	Flood Class or Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
1.1m – 1.5m	MINOR - MODERATE FLOOD LEVEL	Properties at Flood Risk 19 Properties in Total  2, 4, 6, 8, 10, 12-14, 16, 18, 20, 22, 24, 26, 28, 30, 32 & 34 Beach Grove, Seaford 2, 3 & 4 Ti-Tree Grove, Seaford Community Infrastructure Flooded  Seaford Wetlands Walking Trail flooded in various locations	VICSES to respond on a request-by-request basis.
1.17m	3 <sup>rd</sup> February 2005 Flood Level Peak	Event Summary  Businesses and factories in Patrick Court, Miles Grove & Bardia Avenue in Seaford were subject to flooding	
1.5m	MAJOR FLOOD LEVEL	Community Infrastructure Flooded  • Grounds of the Seaford North Primary School on Halifax Street, Seaford start flooding Water Over Road (Over 300mm Depth)  • Riviera Street, Seaford  • Greaves Court, Seaford	VICSES may provide warnings using EM-COP to Frankston City Council and appropriate agencies as required based on the predictions provided by BoM regarding flood levels and the risk of Flash Flooding. The VICSES Central Duty officer in conjunction with the Regional Agency Commander will maintain operational awareness and form an appropriate response arrangement to suit the level of incident.  VICSES to respond on a request by request  Council and VicRoads (as appropriate) to provide road closure signage under predetermined arrangements

Creek Height	Flood Class or Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
1.7m	1% AEP (100yr ARI) Flood Level (Major)	Properties at Flood Risk  Many properties between Kananook Creek and the Frankston Freeway likely flooded with a large number flooded over-floor  Water Over Road (Over 300mm Depth)  Many streets between Kananook Creek and the Frankston Freeway likely flooded  Chapman Avenue, Seaford	VICSES to respond on a request-by-request basis
2.5m		Levee Height Reached at Eel Race Drain, south bank. Water starts flowing over crest into Seaford Wetlands	

Table C1.18 – Breakdown of likely consequences at various Seaford North gauge level heights along Kananook Creek with operational considerations

# FLOOD INTELLIGENCE CARD - SEAFORD GAUGE, KANANOOK CREEK

Version 4 - January 2021

Note: flood intelligence records are approximations. This is because no two floods at a location, even if they peak at the same height, will have identical impacts. Flood intelligence cards detail the relationship between flood magnitude and flood consequences. More details about flood intelligence and its use can be found in the Australian Emergency Management Manuals flood series.



This Flood Intelligence Card publication is presented by the Victoria State Emergency Service for the purpose of disseminating emergency management information. The contents of the information have not been independently verified by the Victoria State Emergency Service. No liability is accepted for any damage, loss or injury caused by errors or omissions in this information or for any action taken by any person in reliance upon it. **Scan the QR code for the current levels for this gauge.** 

LOCATION	Seaford Road, Seaford
CURRENT LEVEL:	https://www.melbournewater.com.au/water-data-and-education/rainfall-and-river-levels#/reader/228372A
STREAM:	Kananook Creek
GAUGE NUMBER:	228372A
GAUGE ZERO:	0.00m AHD
GAUGE TYPE	Stream Level

MELWAY REFERENCE:	99 E5
MINOR:	N/A
MODERATE:	N/A
MAJOR	N/A
LEVEE HEIGHT:	N/A
HIGHEST RECORDED FLOOD:	1.12m (10 <sup>th</sup> July 2008)

Creek Height	Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
1.1m		Properties at Flood Risk 19 Properties in Total  2, 4, 6, 8, 10, 12-14, 16, 18, 20, 22, 24, 26, 28, 30, 32 & 34 Beach Grove, Seaford 2, 3 & 4 Ti-Tree Grove, Seaford Community Infrastructure Flooded  Seaford Wetlands Walking Trail flooded at various locations Kananook Creek Walking Trail flooded at various locations	VICSES to respond on a request-by-request basis
1.7m	1% AEP (100yr ARI) Flood Level	Properties at Flood Risk  Many properties between Kananook Creek and the Frankston Freeway likely flooded with a large number flooded over-floor  Community Infrastructure Flooded  Coates Walk Pedestrian Bridge flooded  Water Over Road  Many streets between Kananook Creek and the Frankston Freeway likely flooded  Chapman Avenue, Seaford  Kananook Creek Boulevard South, Frankston  Long Island Drive, Frankston near boat sheds	VICSES may provide warnings using EM-COP to Frankston City Council and appropriate agencies as required based intelligence regarding flood levels and the risk of Flash Flooding. The VICSES Central Duty officer in conjunction with the Regional Agency Commander will maintain operational awareness and form an appropriate response arrangement to suit the level of incident.  Council and VicRoads (as appropriate) to provide road closure signage under predetermined arrangements

Table C1.19 - Breakdown of likely consequences at various Seaford gauge level heights along Kananook Creek with operational considerations

# FLOOD INTELLIGENCE CARD – FRANKSTON NORTH GAUGE, SKYE / KARINGAL DRAIN

Version 4 - January 2021

Note: flood intelligence records are approximations. This is because no two floods at a location, even if they peak at the same height, will have identical impacts. Flood intelligence cards detail the relationship between flood magnitude and flood consequences. More details about flood intelligence and its use can be found in the Australian Emergency Management Manuals flood series.



This Flood Intelligence Card publication is presented by the Victoria State Emergency Service for the purpose of disseminating emergency management information. The contents of the information have not been independently verified by the Victoria State Emergency Service. No liability is accepted for any damage, loss or injury caused by errors or omissions in this information or for any action taken by any person in reliance upon it.

LOCATION	Skye Road Retarding Basin on Skye Road, Frankston North
CURRENT LEVEL:	https://www.melbournewater.com.au/water-data-and-education/rainfall-and-river-levels#/reader/228378A
STREAM:	Skye / Karingal Drain
GAUGE NUMBER:	228378A
GAUGE ZERO:	12.84m AHD
GAUGE TYPE	Stream Level & Rain

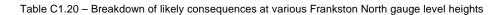
MELWAY REFERENCE:	99 K12
MINOR:	N/A
MODERATE:	N/A
MAJOR	N/A
EMBANKMENT HEIGHT:	4.6m
HIGHEST RECORDED FLOOD:	2.71m (31st October 2010)

Drain Height	Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
4.21m	20% AEP (5yr ARI) Flood Level	•	
4.54m	10% AEP (10yr ARI) Flood Level	•	
4.6m		Top of Retarding Basin Embankment reached	
4.75m	5% AEP (20yr ARI) Flood Level	Properties at Flood Risk (Over-Floor) 22 Properties in Total  1, 3, 5, 7 & 9 Amber Avenue, Frankston 53 Bokissa Drive, Frankston 15 Fingal Drive, Frankston 15 Fingal Drive, Frankston 1 Kintal Court, Frankston 1 Kintal Court, Frankston 1 Kintal Court, Frankston 1 Kintal Court, Frankston 2, 3, 4, 12 & 13 Leighton Court, Frankston 5 Lingi Court, Frankston 206, 208, 252, 254, 258 & 260 Skye Road, Frankston Community Infrastructure Flooded Driveway and carpark off Karingal Drive of Centro Karingal & Village Cinemas Karingal flooded Grounds of St John's Primary School, Jayne Street, Frankston flooded	VICSES to respond on a request-by-request basis VICSES may provide warnings using EM-COP to Frankston City Council and appropriate agencies as required based intelligence regarding flood levels and the risk of Flash Flooding. The VICSES Central Duty officer in conjunction with the Regional Agency Commander will maintain operational awareness and form an appropriate response arrangement to suit the level of incident. Council and VicRoads (as appropriate) to provide road closure signage under predetermined arrangements

# OFFICIAL

Drain Height	Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
		Water Over Road (Over 300mm Depth)  Sandpiper Place, Frankston  Belar Avenue, Frankston  Karingal Drive, Frankston between Ashleigh Drive and Lindrum Road  Ashleigh Drive, Frankston at Mallum Avenue  Skye Road, Frankston at Frank Street  Grimwade Crescent, Frankston  Savannah Court, Frankston  Rushcliffe Court, Frankston  Eastbourne Court, Frankston	
4.80m	2% AEP (50yr ARI) Flood Level	Properties at Flood Risk (Over-Floor) 25 Properties in Total  1, 3, 5, 7 & 9 Amber Avenue, Frankston 53 Bokissa Drive, Frankston 15 & 31 Fingal Drive, Frankston 15 & 31 Fingal Drive, Frankston 1 Kintal Court, Frankston 2, 3, 4, 12 & 13 Leighton Court, Frankston 5 Lingi Court, Frankston 1 Kintal Court, Frankston 5 Lingi Court, Frankston 6 Lingi Court, Frankston 7 Elingi Court, Frankston 8 Elingi Court, Frankston 1 River Brinder Standard Stan	VICSES to respond on a request-by-request basis VICSES may provide warnings using EM-COP to Frankston City Council and appropriate agencies as required based intelligence regarding flood levels and the risk of Flash Flooding. The VICSES Central Duty officer in conjunction with the Regional Agency Commander will maintain operational awareness and form an appropriate response arrangement to suit the level of incident. Council and VicRoads (as appropriate) to provide road closure signage under predetermined arrangements

Drain Height	Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
4.83m	1% AEP (100yr ARI) Flood Level	Properties at Flood Risk (Over-Floor) 28 Properties in Total 1, 3, 5, 7 & 9 Amber Avenue, Frankston 53 Bokissa Drive, Frankston 1, 3, 8 & 10 Frallon Crescent, Frankston 1, 3, 8 & 10 Frallon Crescent, Frankston 1, Kintal Court, Frankston 1, Kintal Court, Frankston 1, Kintal Court, Frankston 2, 3, 4, 12 & 13 Leighton Court, Frankston 1, Kintal Court, Frankston 2, 3, 4, 12 & 13 Leighton Court, Frankston 1, Kintal Court, Frankston 1, Kintal Court, Frankston 1, Kintal Court, Frankston 2, 3, 4, 12 & 13 Leighton Court, Frankston 2, 2, 3, 4, 12 & 13 Leighton Court, Frankston 1, Kintal Court, Frankston 1, Kintal Court, Frankston 1, Kintal Court, Frankston 1, Kintal Court, Frankston 2, Xintal Court, Frankston 3, Kintal Court, Frankston 4, Kintal Court, Frankston 4, Kintal Court, Frankston 4, Kashmir Crescent, Frankston 4, Kashmir Crescent, Frankston 4, Kashmir Crescent, Frankston 4, Kashmir Crescent, Frankston 5, Kintal Court, Frankston 5, Kintal Court, Frankston 6, Kintal Court, Frankston 7, Frank Street, Frankston 8, Kintal Court, Frankston 8, Kintal Court, Frankston 9, Kintal Court, Frankston 1, Kintal Court, Frankston 2, Kintal Court, Frankston 3, Kintal Court, Frankston 4, Kintal Court, Frankston 5, Kintal Court, Frankston 6, Kintal Court, Frankston 7, Kintal Court, Frankston 8, Kintal Court, Franksto	VICSES may provide warnings using EM-COP to Frankston City Council and appropriate agencies as required based intelligence regarding flood levels and the risk of Flash Flooding. The VICSES Central Duty officer in conjunction with the Regional Agency Commander will maintain operational awareness and form an appropriate response arrangement to suit the level of incident. Council and VicRoads (as appropriate) to provide road closure signage under predetermined arrangements



along the Skye/Karingal Drain with operational considerations

## FLOOD INTELLIGENCE CARD - FRANKSTON & SEAFORD STORMWATER DRAINS (UNGAUGED)

Version 3 – January 2021

Note: flood intelligence records are approximations. This is because no two floods at a location, even if they peak at the same height, will have identical impacts. Flood intelligence cards detail the relationship between flood magnitude and flood consequences. More details about flood intelligence and its use can be found in the Australian Emergency Management Manuals flood series.



This Flood Intelligence Card publication is presented by the Victoria State Emergency Service for the purpose of disseminating emergency management information. The contents of the information have not been independently verified by the Victoria State Emergency Service. No liability is accepted for any damage, loss or injury caused by errors or omissions in this information or for any action taken by any person in reliance upon it. **Scan the QR code for the current levels for this gauge.** 

CLOSEST RAIN GAUGE	Skye Road Retarding Basin at Frankston North
LOCATION	Skye Road Retarding Basin on Skye Road, Frankston North
RECENT RAINFALL:	https://www.melbournewater.com.au/water-data-and-education/rainfall-and-river-levels#/reader/228378A

MELWAY REF:	99 K12
GAUGE NUMBER	228378A
GAUGE TYPE	Stream Level & Rain

Design Rainfall Depths (mm) – Indication of Possible Flooding	Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
10mm in 10 mins; 17mm in 30 mins; 23mm in 1 hour; 30mm in 2 hours; 45mm in 6 hours; or 57mm in 12 hours  Note: rainfall depths are a very rough method of estimating flood events and have been used due to the ungagged nature of the catchment. This should be used as a guide only.	20% AEP (5-year ARI)	Properties at Flood Risk (Over-Floor) 65 Properties in Total Lee Street Drain 41 Properties in Total  53, 53A, 53B, 53D, 2/65-67, 3/65-67, 77, 1/102 & 104 Beach Street, Frankston 14-16 Catherine Parade, Frankston 80 & 87 Cranbourne Road, Frankston 12/31 & 3/31 Deane Street, Frankston 1 Emora Court, Frankston 1 Emora Court, Frankston 1/1-19, 8/17-19, 3/21-23, 4/21-23 & 5/21-23 Hill Street, Frankston 1/2 James Street, Frankston 29 James Street, Frankston 29 James Street, Frankston 11 Lee Street, Frankston 11 Lee Street, Frankston 11/4, 2/4, 3/4, 4/4, 5/4, 6/4 & 5/6 Lewis Street, Frankston 1/4, 2/4, 3/4, 4/4, 5/4, 6/4 & 5/6 Lewis Street, Frankston 1/4, 2/4, 3/4, 4/4, 5/4, 6/4 & 5/6 Lewis Street, Frankston 10 & 55 McMahons Road, Frankston 9/8, 16 & 9/18 Reservoir Road, Frankston Sandgate Avenue Drain 21 Properties in Total 68, 70, 72 & 74 Brooklyn Avenue, Frankston	VICSES to respond on a request-by-request basis VICSES may provide warnings using EM-COP to Frankston City Council and appropriate agencies as required based intelligence regarding flood levels and the risk of Flash Flooding.  The VICSES Central Duty officer in conjunction with the Regional Agency Commander will maintain operational awareness and form an appropriate response arrangement to suit the level of incident.  Council and VicRoads (as appropriate) to provide road closure signage under predetermined arrangements

Design Rainfall Depths (mm) – Indication of Possible Flooding	Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
		<ul> <li>1/14 &amp; 2/14 Burns Street, Frankston</li> <li>47 &amp; 49 Golf Links Road, Frankston</li> <li>22 Grady Court, Frankston South</li> <li>3 Hastings Road, Frankston</li> <li>10 &amp; 15 Helvetia Court, Frankston</li> <li>1/5 Hillcrest Road, Frankston</li> <li>11 &amp; 13 McMahons Road, Frankston</li> <li>13 Mincha Street, Frankston</li> <li>9 &amp; 10 Rosewood Court, Frankston</li> <li>6, 4/10 &amp; 5/10 Screen Street, Frankston</li> <li>Wells Road Drain</li> <li>3 Properties in Total</li> <li>3/63, 4/63 &amp; 5/63 Brunel Road, Seaford</li> <li>Water Over Road (Over 300mm Depth)</li> <li>Lee Street Drain</li> <li>Franciscan Avenue, Frankston at Gattinara Drive</li> <li>Baillie Court, Frankston</li> <li>Iranda Street, Frankston</li> <li>Beach Street, Frankston at Frankston Freeway underpass</li> <li>Wells Road Drain</li> <li>Brunel Road, Seaford</li> </ul>	
12mm in 10 mins; 20mm in 30 mins; 27mm in 1 hour; 34mm in 2 hours; 51mm in 6 hours; or 66mm in 12 hours  Note: rainfall depths are a very rough method of estimating flood events and have been used due to the ungagged nature of the catchment. This should be used as a guide only.	10% AEP (10-year ARI)	Properties at Flood Risk (Over-Floor) 93 Properties in Total Lee Street Drain 65 Properties in Total  2 Alice Grove, Frankston 41-45, 53, 53A, 53B, 53D, 53E, 59-63, 1/65-67, 2/65-67, 3/65-67, 77, 79, 1/102, 104, 145 & 147 Beach Street, Frankston 3/63, 4/63 & 5/63 Brunel Road, Seaford 14-16 Catherine Parade, Frankston 80, 86 & 87 Cranbourne Road, Frankston 2/31 & 3/31 Deane Street, Frankston 13 Ellesmere Court, Frankston 1 & 4 Emora Court, Frankston 25 Fletcher Road, Frankston - Building: N 27 Gulwa Avenue, Frankston 3/17-19, 8/17-19, 11/17-19, 3/21-23, 4/21-23, 5/21-23, 3/25, 4/25 & 6/25 Hill Street, Frankston 106 Hillcrest Road, Frankston 4 Iranda Street, Frankston	VICSES to respond on a request-by-request basis VICSES may provide warnings using EM-COP to Frankston City Council and appropriate agencies as required based intelligence regarding flood levels and the risk of Flash Flooding. The VICSES Central Duty officer in conjunction with the Regional Agency Commander will maintain operational awareness and form an appropriate response arrangement to suit the level of incident. Council and VicRoads (as appropriate) to provide road closure signage under predetermined arrangements

Design Rainfall Depths (mm) – Indication of Possible Flooding	Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
		<ul> <li>29 James Street, Frankston</li> <li>30 Joy Street, Frankston</li> <li>46 Kenilworth Avenue, Frankston</li> <li>23 Leawarra Parade, Frankston</li> <li>11, 13 &amp; 22 Lee Street, Frankston</li> <li>114, 2/4, 3/4, 4/4, 5/4, 6/4 &amp; 5/6 Lewis Street, Frankston</li> <li>48, 50, 52 &amp; 54 Lipton Drive, Frankston</li> <li>10, 50 &amp; 55 McMahons Road, Frankston</li> <li>4, 9/8, 16, 8/18 &amp; 9/18 Reservoir Road, Frankston</li> <li>Sandgate Avenue Drain</li> <li>25 Properties in Total</li> <li>68, 70, 72 &amp; 74 Brooklyn Avenue, Frankston</li> <li>1/14 &amp; 2/14 Burns Street, Frankston</li> <li>22 Grady Court, Frankston South</li> <li>3 Hastings Road, Frankston</li> <li>22 Grady Court, Frankston</li> <li>10 &amp; 15 Helvetia Court, Frankston</li> <li>11 &amp; 13 McMahons Road, Frankston</li> <li>13 Mincha Street, Frankston</li> <li>9 &amp; 10 Rosewood Court, Frankston</li> <li>9 &amp; 10 Rosewood Court, Frankston</li> <li>6, 2/10, 3/10, 4/10 &amp; 5/10 Screen Street, Frankston</li> <li>Wells Road Drain</li> <li>3 Properties in Total</li> <li>3/63, 4/63 &amp; 5/63 Brunel Road, Seaford</li> <li>Water Over Road (Over 300mm Depth)</li> <li>Lee Street Drain</li> <li>Franciscan Avenue, Frankston at Gattinara Drive</li> <li>Macrosty Court, Frankston</li> <li>Iranda Street, Frankston</li> <li>Baillie Court, Frankston</li> <li>Iranda Street, Frankston</li> <li>Erskine Street, Frankston</li> <li>Erskine Street, Frankston</li> <li>Erskine Street, Frankston</li> <li>Winifred Street, Frankston</li> <li>Beach Street, Frankston</li> <li>Brunel Road, Seaford</li> </ul>	
15mm in 10 mins;	5% AEP (20-year ARI)	Properties at Flood Risk (Over-Floor) 252 Properties in Total	VICSES to respond on a request-by-request basis

Design Rainfall Depths (mm) – Indication of Possible Flooding	Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
24mm in 30 mins;		Seaford Lowlands / Bardia Avenue / Skye / Karingal Drains	VICSES may provide warnings using EM-COP to Frankston City Council and appropriate agencies as required based intelligence
31mm in 1 hour;		53 Properties in Total	regarding flood levels and the risk of Flash Flooding.
41mm in 2 hours; 60mm in 6 hours; or		8 & 82 Arden Court, Seaford  AVA SVA SVA SVA SVA SVA SVA SVA SVA SVA	The VICSES Central Duty officer in conjunction with the Regional
77mm in 12 hours		• 1/41, 2/41, 3/41 & 43 Bayside Grove, Seaford	Agency Commander will maintain operational awareness and
//IIIII III 12 110u15		144, 150 & 164 Frankston-Dandenong Road, Seaford     0.8.0 Graph American Conference	form an appropriate response arrangement to suit the level of incident.
Note: rainfall depths are		3 & 8 Grant Avenue, Seaford     3 Unit Drive, Seaford	Council and VicRoads (as appropriate) to provide road closure
a very rough method of		3 Hunt Drive, Seaford     3 6 7 0 44 43 47 8 40 Jubilee Avenue Seaford	signage under predetermined arrangements
estimating flood events		2, 6, 7, 9, 11, 13, 17 & 19 Jubilee Avenue, Seaford     30, 53, 74, 8, 70 Miles Carrie, Seaford	
and have been used due to the ungagged		30, 53, 71 & 79 Miles Grove, Seaford     A Phillip Street Freeketen	
nature of the		<ul> <li>4 Phillip Street, Frankston</li> <li>1/2, 2/2, 4B, 6, 1/8, 2/8 &amp; 3/8 Ropley Grange, Frankston</li> </ul>	
catchment. This should		, , , , , , , , , , , , , , , , , , , ,	
be used as a guide only.		<ul> <li>2 Weatherston Road, Seaford</li> <li>8, 9, 10, 1/15, 2/15, 3/15, 16, 17, 18, 1/19, 2/19, 2/20, 21, 22, 23, 1/24, 2/24, 3/24, 4/24 &amp; 25 Wise Avenue, Seaford</li> </ul>	
		Austin Road / Excelsior Avenue Drain	
		21 Properties in Total	
		34 Cumberland Drive, Seaford	
		1/42, 2/42, 3/42, 4/42, 5/42, 6/42, 7/42, 8/42, 3/46-48, 4/46-48 & 5/46-48     Hartnett Drive, Seaford	
		7 Heversham Drive, Seaford	
		1/2-8, 2/2-8, 4/2-8, 5/2-8, 6/2-8, 7/2-8 & 8/2-8 Peninsula Boulevard, Seaford	
		111-113 Seaford Place, Seaford	
		Lee Street Drain	
		117 Properties in Total	
		2 Alice Grove, Frankston	
		4 & 6 Baillie Court, Frankston	
		• 41-45, 53, 53A, 53B, 53D, 53E, 53F, 53G, 59-63, 1/65-67, 2/65-67, 3/65-67, 5/69, 77, 79, 1/102, 2/102, 104, 145, 147 & 149 Beach Street, Frankston	
		14-16 Catherine Parade, Frankston	
		80, 86 & 87 Cranbourne Road, Frankston	
		13 Dandenong Road, Frankston	
		11 & 13 Darius Avenue, Frankston	
		• 3, 3/29A, 2/31, 3/31, 6/33, 7/33 & 8/33 Deane Street, Frankston	
		13 Ellesmere Court, Frankston	
		1, 2, 3 & 4 Emora Court, Frankston	
		25 Fletcher Road, Frankston - Buildings: L & N	
		56 Franciscan Avenue, Frankston	
		6 Glenview Crescent, Frankston	
		27 Gulwa Avenue, Frankston	

# OFFICIAL

Design Rainfall Depths (mm) – Annual Exceedanc Indication of Probability (% AEF Possible Flooding		Operational Considerations
	<ul> <li>2/17-19, 3/17-19, 6/17-19, 8/17-19, 9/17-19, 11/17-19, 12/17-19, 13/17-19, 1/21-23, 3/21-23, 4/21-23, 5/21-23, 8/21-23, 1/25, 3/25, 4/25, 5/25 &amp; 6/25 Hill Street, Frankston</li> <li>9/104, 12/104, 106, 1/108, 2/108, 109, 110 &amp; 111 Hillcrest Road, Frankston</li> <li>4 Iranda Street, Frankston</li> <li>3/26, 28 &amp; 29 James Street, Frankston</li> <li>46 Kenilworth Avenue, Frankston</li> <li>14 &amp; 23 Leawarra Parade, Frankston</li> <li>14, 2/4, 3/4, 4/4, 5/4, 6/4 &amp; 5/6 Lewis Street, Frankston</li> <li>1/4, 2/4, 3/4, 4/4, 5/4, 6/4 &amp; 5/6 Lewis Street, Frankston</li> <li>10, 48, 50, 52 &amp; 54 Lipton Drive, Frankston</li> <li>2 Nursery Avenue, Frankston</li> <li>3 &amp; 5 Raphael Crescent, Frankston</li> <li>4 5/8, 9/8, 16, 1/18, 2/18, 3/18, 6/18, 7/18, 8/18, 9/18, 15/18 &amp; 4/22 Reservoir Road, Frankston</li> <li>5 Silas Avenue, Frankston</li> <li>5 Silas Avenue Drain</li> <li>58 Properties in Total</li> <li>96 &amp; 98 Bondi Avenue</li> <li>68, 70, 72, 74 &amp; 76 Brooklyn Avenue, Frankston</li> <li>15 Cambridge Street, Frankston</li> <li>16 Cambridge Street, Frankston</li> <li>17/14 &amp; 2/14 Burns Street, Frankston</li> <li>17/14 &amp; 2/14 Burns Street, Frankston</li> <li>18 Hastings Road, Frankston</li> <li>19 A Hastings Road, Frankston</li> <li>10, 13, 15 &amp; 22 Helvetia Court, Frankston</li> <li>10, 13, 15 &amp; 22 Helvetia Court, Frankston</li> <li>10, 13, 14, 8, 50, 52 &amp; 55 McMahons Road, Frankston</li> <li>10, 11, 13, 48, 50, 52 &amp; 55 McMahons Road, Frankston</li> <li>10, 11, 13, 48, 50, 52 &amp; 55 McMahons Road, Frankston</li> <li>10, 11, 13, 48, 50, 52 &amp; 55 McMahons Road, Frankston</li> <li>10, 11, 13, 6, 20, 52 &amp; 55 McMahons Road, Frankston</li> <li>10, 11, 10, 10, 10, 10, 10, 10, 10, 10,</li></ul>	

Design Rainfall Depths (mm) – Annual Exceedance Indication of Probability (% AEP) Possible Flooding	Consequence / Impact	Operational Considerations
	1B Winifred Street, Frankston Wells Road Drain     3 Properties in Total     3/63, 4/63 & 5/63 Brunel Road, Seaford Community Infrastructure Flooded     Austin Road / Excelsior Avenue Drain     Seaford Heights Preschool on Prince Crescent, Seaford flooded     Lee Street Drain     Grounds of the Erinwood Preschool flooded on Raphael Crescent, Frankston Water Over Road (Over 300mm Depth)     Seaford Lowlands / Bardia Avenue / Skye / Karingal Drains     Austin Road, Seaford between Mitchell Street and Frankston Freeway     Hummerstone Road, Seaford     Ilma Court, Seaford     Scott Street, Seaford     Erwin Drive, Seaford     Arden Court, Seaford     Hunt Drive, Seaford     Hunt Drive, Seaford     Wise Avenue, Seaford     Martha Street, Seaford     Martha Street, Seaford     Martha Street, Seaford     Martha Street, Seaford     Marthin Street, Seaford     Marthin Street, Seaford     Marthin Street, Seaford     Marthin Street, Seaford     Moresby Avenue, Seaford     Moresby Avenue, Seaford     Moresby Avenue, Seaford     Kinkwood Avenue, Seaford     Kananook Avenue, Seaford     Kosslyn Avenue, Seaford     Koculloch Avenue, Seaford     Kirkwood Avenue, Seaford     McCulloch Avenue, Seaford     Seaton Street, Seaford     Seaford Seaford     Kirkwood Avenue, Seaford     Seaford Seaford     Koculloch Avenue, Seaford     Moculloch Avenue, Seaford     Seaford Seaford     Wright Street, Seaford     Wright Street, Seaford     Bruce Street, Seaford     Blictt Street, Seaford     Elictt Street, Seaford     Elictt Street, Seaford	

Design Rainfall Depths (mm) – Indication of Possible Flooding	Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
Possible Flooding		Manning Road, Seaford Claude Street, Seaford Jubillee Avenue, Seaford Lyster Close, Seaford Rosslyn Court, Seaford Boonong Avenue, Seaford Wisewould Avenue, Seaford New Street, Frankston Balwyn Street, Frankston Rosella Street, Frankston Kookaburra Street, Frankston Tooyal Street, Frankston Tooyal Street, Frankston Finch Street, Frankston Douglas Grove, Frankston Mereweather Avenue, Frankston Sheridan, Avenue, Frankston Pecan Court, Frankston North Alde Court, Frankston North Bursaria Crescent, Feaford Henry Crescent, Seaford Prince Crescent, Seaford Prince Crescent, Seaford Prince Crescent, Seaford Prince Crescent, Frankston Wicklow Street, Seaford Galway Street, Seaford Fartidge Crescent, Frankston Franciscan Avenue, Frankston Franciscan Avenue, Frankston Franciscan Avenue, Frankston Autin Partridge Crescent, Frankston Autin Partridge Crescent, Frankston Autin Partridge Crescent, Frankston Franciscan Avenue, Frankston at Gattinara Drive Raphael Crescent, Frankston Heatherhill Road, Frankston at Lochaber Avenue Baillie Court, Frankston Willow Road, Frankston near railway line	
		<ul><li>Lipton Drive, Frankston</li><li>Quandong Court, Frankston</li></ul>	

	Exceedance Conseque	nce / Impact	Operational Considerations
18mm in 10 mins; 24mm in 30 mins; 38mm in 1 hour; 49mm in 2 hours; 73mm in 6 hours; or 93mm in 12 hours  Note: rainfall depths are a very rough method of estimating flood events and have been used due to the ungagged nature of the catchment. This should be used as a guide only.	Street  James Street, Frankston Erskine Street, Frankston Sandgate Avenue Drain Winifred Street, Frankston Murawa Street, Frankston Mincha Street, Frankston Coogee Avenue, Frankston Brunel Road, Seaford  Properties at Flood Risk (Over-Floor) 432 Properties in Total Seaford Lowlands / Bardia Avenue 92 Properties in Total 7, 8 & 82 Arden Court, Seaford 2B, 16, 18, 19, 22, 27, 28, 31, 37, 1/ Seaford 144, 148, 150, 164 & 168 Frankston 3 & 8 Grant Avenue, Seaford 144, 148, 150, 164 & 168 Frankston 3 & 8 Grant Avenue, Seaford 3 Hunt Drive, Seaford 1, 3, 7, 11, 1/12, 2/12, 14, 16, 17 & 2 4 Martin Street, Seaford 30, 53, 63, 71 & 79 Miles Grove, Seaford 4 Phillip Street, Frankston 6 & 8 Raymond Road, Seaford 1/2, 2/2, 3/2, 4/2, 4B, 6, 1/8, 2/8 & 3/ 60, 62 & 64 Seaford Grove, Seaford 2 Weatherston Road, Seaford 50 Wells Road, Seaford	f Moorooduc Highway Intersection ankston Freeway underpass and Kelman  e / Skye / Karingal Drains  41, 2/41, 3/41 & 43 Bayside Grove, -Dandenong Road, Seaford  enue, Seaford 21 Martha Street, Seaford aford  8 Ropley Grange, Frankston  15, 2/15, 3/15, 16, 17, 18, 1/19, 2/19, 2/20, 25 Wise Avenue, Seaford	VICSES to respond on a request-by-request basis VICSES may provide warnings using EM-COP to Frankston City Council and appropriate agencies as required based intelligence regarding flood levels and the risk of Flash Flooding.  The VICSES Central Duty officer in conjunction with the Regional Agency Commander will maintain operational awareness and form an appropriate response arrangement to suit the level of incident.  Council and VicRoads (as appropriate) to provide road closure signage under predetermined arrangements

# OFFICIAL

Design Rainfall Depths (mm) – Indication of Possible Flooding	Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
		31 Properties in Total	
		• 1/11, 1/32, 2/32 & 34 Cumberland Drive, Seaford	
		• 30, 5/32, 1/36, 2/36, 3/36, 5/36, 1/42, 2/42, 3/42, 4/42, 5/42, 6/42, 7/42, 8/42, 3/46-48, 4/46-48 & 5/46-48 Hartnett Drive, Seaford	
		7 & 24-26 Heversham Drive, Seaford	
		• 1/2-8, 2/2-8, 4/2-8, 5/2-8, 6/2-8, 7/2-8 & 8/2-8 Peninsula Boulevard, Seaford	
		111-113 Seaford Place, Seaford	
		Lee Street Drain	
		183 Properties in Total	
		2 & 4 Alice Grove, Frankston	
		4, 5 & 6 Baillie Court, Frankston	
		• 35-39, 41-45, 47, 53, 53A, 53B, 53C, 53D, 53E, 53F, 53G, 59-63, 1/65-67, 2/65-67, 3/65-67, 3/69, 5/69, 77, 79, 91, 93, 1/102, 2/102, 104, 134, 136-138, 141, 143, 145, 147, 149 & 158 Beach Street, Frankston	
		9 Casale Court, Frankston	
		14-16 & 21 Catherine Parade, Frankston	
		80, 86, 87 & 119A Cranbourne Road, Frankston	
		11, 13 & 23 Dandenong Road, Frankston	
		9, 11 & 13 Darius Avenue, Frankston	
		• 3, 27, 1/29, 2/29, 2/29A, 3/29, 3/29A, 4/29A, 5/29, 2/31, 3/31, 6/33, 7/33 & 8/33 Deane Street, Frankston	
		12 & 13 Ellesmere Court, Frankston	
		1, 2, 3 & 4 Emora Court, Frankston	
		25 Fletcher Road, Frankston - Buildings: L & N	
		55, 56 & 58 Franciscan Avenue, Frankston	
		1/1 & 3/1 Franklin Court, Frankston	
		4 & 6 Glenview Crescent, Frankston	
		27 Gulwa Avenue, Frankston	
		<ul> <li>2/17-19, 3/17-19, 6/17-19, 8/17-19, 9/17-19, 11/17-19, 12/17-19, 13/17-19, 1/21-23, 3/21-23, 4/21-23, 5/21-23, 8/21-23, 12/21-23, 14/21-23, 1/25, 2/25, 3/25, 4/25, 5/25, 6/25 &amp; 7/25 Hill Street, Frankston</li> </ul>	
		• 1/104, 3/104, 8/104, 9/104, 11/104, 12/104, 13/104, 14/104, 106, 1/108, 2/108, 109, 110 & 111 Hillcrest Road, Frankston	
		4 & 6 Iranda Street, Frankston	
		• 2/26, 3/26, 28, 29 & 31 James Street, Frankston	
		28 & 30 Joy Street, Frankston	
		46 & 1/49A Kenilworth Avenue, Frankston	
		14, 20 & 23 Leawarra Parade, Frankston	
		1, 11, 12, 13 & 22 Lee Street, Frankston	
		• 1/4, 2/4, 3/4, 4/4, 5/4, 6/4, 1/6, 5/6, 1/11, 2/11, 5/11 & 6/11 Lewis Street, Frankston	

Design Rainfall Depths (mm) – Annual Exceedance Indication of Probability (% AEP) Possible Flooding	Consequence / Impact	Operational Considerations
	<ul> <li>48, 50, 52, 54 &amp; 56 Lipton Drive, Frankston</li> <li>10, 20, 48, 50, 52, 55 &amp; 60 McMahons Road, Frankston</li> <li>2, 7, 3/10, 4/10 &amp; 17 Nursery Avenue, Frankston</li> <li>58 Partridge Crescent, Frankston</li> <li>1/5 &amp; 2/5 Petrie Street, Frankston</li> <li>6 Quandong Court, Frankston</li> <li>3 &amp; 5 Raphael Crescent, Frankston</li> <li>4, 5/8, 9/8, 10/8, 1/9, 2/9, 9A, 16, 1/18, 2/18, 3/18, 4/18, 6/18, 7/18, 8/18, 9/18, 11/18, 3/18, 15/18, 20 &amp; 4/22 Reservoir Road, Frankston</li> <li>5 Silas Avenue, Frankston</li> <li>26 Willis Street, Frankston</li> <li>8andgate Avenue Drain</li> <li>123 Properties in Total</li> <li>42, 44, 46, 48, 58, 60, 62, 85, 96 &amp; 98 Bondi Avenue</li> <li>21, 37, 38, 49, 51, 62, 64, 65, 68, 70, 72, 74 &amp; 76 Brooklyn Avenue, Frankston</li> <li>1/14 &amp; 2/14 Burns Street, Frankston</li> <li>3 Coogee Avenue, Frankston</li> <li>15 &amp; 17 Cambridge Street, Frankston</li> <li>16 &amp; 7 Cambridge Street, Frankston</li> <li>11 &amp; 30-36 Frankston-Flinders Road, Frankston</li> <li>5, 9 &amp; 18 Glenelg Avenue, Frankston</li> <li>43, 47, 49, 51 &amp; 71 Golf Links Road, Frankston</li> <li>43, 47, 49, 51 &amp; 71 Golf Links Road, Frankston</li> <li>43, 47, 49, 51 &amp; 71 Golf Links Road, Frankston</li> <li>14 &amp; 18 Guilford Close, Frankston</li> <li>3 Hastings Road, Frankston</li> <li>44, 16, 18 &amp; 18A Heatherhill Road, Frankston</li> <li>45, 2/5 &amp; 3/5 Hillcrest Road, Frankston</li> <li>46, 10, 12, 13, 15 &amp; 22 Helvetia Court, Frankston</li> <li>47, 28, 35 &amp; 41/37 McMurtry Way, Frankston</li> <li>15, 2/5 &amp; 3/5 Hillcrest Road, Frankston</li> <li>11 &amp; 13 McMahons Road, Frankston</li> <li>13 &amp; 27 Mincha Street, Frankston</li> <li>11, 5, 2/15 &amp; 22 Oxford Street, Frankston</li> <li>5 Putney Lane, Frankston</li> <li>11, 11/2, 2/12, 13, 11/4A, 2/14A, 3/15 Reid Street, Frankston</li> <li>6 Roberts Street, Frankston</li> <li>6 Roberts Street, Frankston</li> <li>6 Roberts Street, Frankston</li> <li>6 Roberts Street, Frankston</li> <li>6 Sandgate Avenue, Frankston</li> <li>6 Sandgate Avenue, Frankston</li> </ul>	

# OFFICIAL

Design Rainfall Depths (mm) – Indication of Possible Flooding	Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
Possible Flooding		<ul> <li>6, 7, 1/10, 2/10, 3/10, 4/10 &amp; 5/10 Screen Street, Frankston</li> <li>24 &amp; 26 Shearer Court, Frankston South</li> <li>2 &amp; 3 Tarook Court, Frankston</li> <li>18 Towerhill Road, Frankston</li> <li>21 &amp;, 32 Warrain Street, Frankston</li> <li>1/140, 3/140, 4/140 &amp; 5/140 Williams Street, Frankston</li> <li>1B Winifred Street, Frankston</li> <li>Wells Road Drain</li> <li>3 Properties in Total</li> <li>3/63, 4/63 &amp; 5/63 Brunel Road, Seaford</li> <li>Community Infrastructure Flooded</li> <li>Austin Road / Excelsior Avenue Drain</li> <li>Seaford Heights Preschool on Prince Crescent, Seaford flooded</li> <li>Grounds of the Belvedere Park Primary School on Belvedere Road, Seaford flooded</li> <li>Lee Street Drain</li> <li>Grounds of the Erinwood Preschool flooded on Raphael Crescent, Frankston Essential Infrastructure Impacted</li> <li>Frankston SES LHQ on McCulloch Street flooded</li> <li>Parts of the City of Frankston Municipal Depot on Buna Avenue, Seaford flooded</li> <li>Electrical Substation on Wright Street, Seaford flooded</li> <li>Water Over Road (Over 300mm Depth)</li> <li>Seaford Lowlands / Bardia Avenue / Skye / Karingal Drains</li> <li>Austin Road, Seaford between Mitchell Street and Frankston Freeway</li> <li>Hummerstone Road, Seaford</li> <li>Scott Street, Seaford</li> <li>Scott Street, Seaford</li> <li>Arden Court, Seaford</li> <li>Hunt Drive, Seaford</li> <li>Valerie Court, Seaford</li> <li>Valerie Court, Seaford</li> <li>Valerie Court, Seaford</li> <li>Nichael Court, Seaford</li> <li>Wise Avenue, Seaford</li> <li>Wise Avenue, Seaford</li> <li>Michael Street, Seaford</li> <li>Michael Street, Seaford</li> <li>Michael Street, Seaford</li> <li>Michael Street, Seaford</li> <li>Miles Grove, Seaford</li> <li>Miles Grove, Seaford</li> <li>Miles Grove, Seaford</li> </ul>	
		Bayside Grove, Seaford	

Design Rainfall Depths (mm) – Indication of Possible Flooding	Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
Possible Flooding		Martin Street, Seaford Levuka Street, Seaford Bardia Avenue, Seaford Govan Street, Seaford Gray Street, Seaford Mines Avenue, Seaford Milne Avenue, Seaford Milne Avenue, Seaford Avenue, Seaford Avenue, Seaford Fortescue Avenue, Seaford Krikwood Avenue, Seaford Kirkwood Avenue, Seaford Kirkwood Avenue, Seaford McCulloch Avenue, Seaford McCulloch Avenue, Seaford McCulloch Avenue, Seaford Bruce Street, Seaford Wright Street, Seaford Bruce Street, Seaford Bruce Street, Seaford Bliott Street, Seaford Claude Street, Seaford Jubillee Avenue, Seaford Lyster Close, Seaford Rosslyn Court, Seaford Boonong Avenue, Seaford Carder Avenue, Seaford Duncan Avenue, Seaford New Street, Frankston Balwyn Street, Frankston Kookaburra Street, Frankston Finch Street, Frankston Finch Street, Frankston Finch Street, Frankston Douglas Grove, Frankston Sheridan, Avenue, Frankston Dandenong Road East, Frankston at Hope Court	
		Austin Road / Excelsior Avenue Drain     Pecan Court, Frankston North	

Design Rainfall Depths (mm) – Indication of Possible Flooding	Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
		Alde Court, Frankston North Bursaria Crescent, Frankston North Pimpala Avenue, Seaford Sussex Crescent, Seaford Henry Crescent, Seaford Prince Crescent, Seaford Elisdon Drive, Seaford Carrington Court, Seaford Fern Court, Seaford Molesworth Street, Seaford Galway Street, Seaford Heversham Drive, Seaford Franciscan Avenue, Frankston at roundabout intersection Ellesmere Court, Frankston Franciscan Avenue, Frankston at Gattinara Drive Raphael Crescent, Frankston at Erinwood Pre-school Macrosty Court, Frankston Heatherhill Road, Frankston at Lochaber Avenue Baillie Court, Frankston Heatherhill Road, Frankston near railway line Lipton Drive, Frankston Quandong Court, Frankston Lee Street, Frankston Lee Street, Frankston Emora Court, Frankston Franciscan Avenue, Frankston Lee Street, Frankston Sandyate Avenue, Frankston Deane Street, Frankston Seach Street, Frankston near Cranbourne Road Cranbourne Road, Frankston east of Moorooduc Highway Intersection Beach Street, Frankston between Fletcher Road and Kelman Street Catherine Parade, Frankston James Street, Frankston Petrie Street, Frankston Lewis Street, Frankston Lewis Street, Frankston Erskine Street, Frankston	
		Young Street, Frankston at Frankston Park	

Design Rainfall Depths (mm) – Indication of Possible Flooding	Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
		<ul> <li>Reid Street, Frankston</li> <li>Cambridge Street, Frankston</li> <li>Winifred Street, Frankston</li> <li>Murawa Street, Frankston</li> <li>Mincha Street, Frankston</li> <li>Coogee Avenue, Frankston</li> <li>Erica Street, Frankston</li> <li>Wells Road Drain</li> <li>Brunel Road, Seaford</li> </ul>	
21mm in 10 mins; 34mm in 30 mins; 44mm in 1 hour; 56mm in 2 hours; 83mm in 6 hours; or 106mm in 12 hours  Note: rainfall depths are a very rough method of estimating flood events and have been used due to the ungagged nature of the catchment. This should be used as a guide only.	1% AEP (100-year ARI)	Properties at Flood Risk (Over-Floor) 1558 Properties in Total Seaford Lowlands / Bardia Avenue / Skye / Karingal Drains 1041 Properties in Total  7, 8 & 82 Arden Court, Seaford  8, 1/13, 2/13, 3/13, 4/13, 5/13, 1/15, 2/15, 3/15, 4/15, 5/15, 6/15, 7/15, 8/15, 9, 15, 10/15, 17, 18, 1/20, 2/20, 3/20, 4/20 & 5/20 Bainbridge Avenue, Seaford  2, 4, 6, 8, 10, 24, 38, 1/40, 2/40, 42, 44, 48, 50, 58, 68, 1/72, 2/72, 3/72, 1/76, 2/76, 3/76, 4/76, 78, 1/80, 2/80, 3/80, 1/84 & 2/84 Bardia Avenue, Seaford  1, 2B, 3, 4, 6, 7, 13, 14, 15, 16, 18, 19, 20, 21A, 22, 23, 24, 25, 26, 27, 28, 29, 31, 33, 35, 37, 39, 1/41, 2/41, 3/41 & 43 Bayside Grove, Seaford  2 Benton Avenue, Seaford  2, 8, 14 & 16 Bragge Street, Frankston  5, 10, 12, 14 & 17 Buna Avenue, Seaford  1/1, 2/1, 3/1, 1/2, 2/2, 3/2, 4/2, 5/2, 6/2, 7/2, 8/2, 9/2, 10/2, 1/3, 2/3, 3/3, 4/3, 5/3, 6/3, 7/3, 4, 1/7, 2/7, 3/7, 1/8, 2/8, 3/8, 4/8, 1/8A, 2/8A, 3/8A, 4/8A, 1/9, 2/9, 3/9, 1/10, 2/10, 3/10, 4/10, 11, 12, 1/14, 2/14, 3/14, 4/14, 1/16, 2/16, 3/16, 4/16, 5/16, 1/18, 2/18, 3/18, 4/18, 5/18, 1/20, 2/20, 3/20, 4/20, 5/20, 1/22, 2/22, 3/22, 4/22, 5/22, 1/23, 2/23, 3/23, 4/23, 1/17, 2/27, 3/27, 4/27 & 5/27 Carder Avenue, Seaford  23, 24, 25, 27, 29, 31, 33, 35, 38, 40 & 42 Claude Street, Seaford  78, 80, 82, 86, 90, 94, 35/106, 36/106, 37/106 & 38/106 Dandenong Road West, Frankston  11 Donald Avenue, Frankston  11, 5/2, 6/2, 4 & 5 Douglas Grove, Frankston  11, 5/2, 6/2, 4 & 5 Douglas Grove, Frankston  11, 5/2, 6/2, 4 & 5 Douglas Grove, Frankston  11, 7/11, 3/11, 3/11, 4/11, 5/11, 6/11, 7/11, 8/11, 9/11, 10/11, 1/13, 2/13, 3/13, 4/13, 5/13, 6/13, 7/13, 8/13, 9/13, 10/13, 11/13, 11/13, 12/13, 3/15, 4/15, 17, 17A, 18, 19, 19A, 20, 21, 23, 24, 25, 26 & 27 Duncan Avenue, Seaford  7, 9, 11, 13 & 15 Elliott Street, Seaford  7, 9, 11, 16, 18, 20 & 22 Elsie Avenue, Seaford	VICSES to respond on a request-by-request basis VICSES may provide warnings using EM-COP to Frankston City Council and appropriate agencies as required based intelligence regarding flood levels and the risk of Flash Flooding. The VICSES Central Duty officer in conjunction with the Regional Agency Commander will maintain operational awareness and form an appropriate response arrangement to suit the level of incident. Council and VicRoads (as appropriate) to provide road closure signage under predetermined arrangements

<ul> <li>41, 33, 35 &amp; 39 Evelyn Street, Frankston</li> <li>45, 69, 79, 89, 59, 59, 59, 59, 50, 107, 07, 115, 121, 174, 176 &amp; 178 Fortescue Avenue, Seaford</li> <li>144, 148, 150, 104 &amp; 188 Frankston-Dandenong Road, Seaford</li> <li>2, 4, 146, 246, 7, 1412, 2412, 3412, 4412, 15, 17, 18, 2418, 3418, 19, 22, 24 &amp; 26 Govan Street, Seaford</li> <li>3 &amp; 8 Grant Avenue, Seaford</li> <li>1, 3, 4, 5, 6, 8, 11 &amp; 12 Gray Street, Seaford</li> <li>26 Hannah Street, Seaford</li> <li>10 Ima Court, Seaford</li> <li>11, 16, 23, 34, 53, 63, 7, 9 &amp; 11 Inglis Avenue, Frankston</li> <li>42 Hannah Street, Seaford</li> <li>11, 16, 23, 34, 35, 34, 35, 63, 7, 9 &amp; 11 Inglis Avenue, Frankston</li> <li>42 Johnstone Street, Seaford</li> <li>1, 1, 16, 37, 34, 34, 35, 63, 7, 9 &amp; 11 Inglis Avenue, Frankston</li> <li>42, 4, 6, 7, 9, 11, 13, 17 &amp; 19 Jubilee Avenue, Seaford</li> <li>1, 2, 4, 6, 7, 8, 10, 11, 12, 13, 14, 15, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 150, 20, 203, 34, 25, 36, 368, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 46, 50, 52, 53, 45, 55, 75, 59, 60, 62, 63, 65, 66, 58, 68, 68, 69, 70, 79, 79, 79, 79, 79, 79, 79, 79, 79, 79</li></ul>	Design Rainfall Depths (mm) – Annual Exceedan Indication of Probability (% AE Possible Flooding		Operational Considerations
30 42 47 53 63 71 79 85 & 89 Miles Grove Seaford		<ul> <li>31, 33, 35 &amp; 39 Evelyn Street, Frankston</li> <li>45, 69, 79, 89, 93, 95, 99, 101, 107, 115, 121, 174, 176 &amp; 178 Fortescue Avenue, Seaford</li> <li>144, 148, 150, 164 &amp; 168 Frankston-Dandenong Road, Seaford</li> <li>2, 4, 1/6, 2/6, 7, 1/12, 2/12, 3/12, 4/12, 15, 17, 1/8, 2/18, 3/18, 19, 22, 24 &amp; 26 Govan Street, Seaford</li> <li>3 &amp; 8 Grant Avenue, Seaford</li> <li>1, 3, 4, 5, 6, 8, 11 &amp; 12 Gray Street, Seaford</li> <li>1, 3, 5, 9 &amp; 13 Hadley Street, Seaford</li> <li>26 Hannah Street, Seaford</li> <li>3 &amp; 5 Hunt Drive, Seaford</li> <li>10 Ilma Court, Seaford</li> <li>1, 1/3, 2/3, 3/3, 4/3, 5/3, 6/3, 7, 9 &amp; 11 Inglis Avenue, Frankston</li> <li>2, 4, 6, 7, 9, 11, 13, 17 &amp; 19 Jubilee Avenue, Seaford</li> <li>1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 1/30, 2/30, 31, 32, 33, 34, 35, 36, 36A, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 48, 50, 52, 53, 54, 56, 57, 59, 60, 62, 63, 65, 66, 68, 68A, 69, 70, 70A, 71, 72, 74, 76, 77, 78, 80, 82, 84, 85, 87, 89, 90, 92, 93, 94A, 95, 1/96, 2/96, 3/96, 97, 99, 100, 102, 103, 104, 106, 107, 108, 109, 111, 112, 1/113, 2/113, 116, 117, 118, 119, 120, 122, 124, 125, 128, 132, 134, 135, 1/136, 2/136, 137, 139, 141, 143 &amp; 145 Kananook Avenue, Seaford</li> <li>2, 4, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 1/19, 2/19, 3/19, 4/19, 20, 24, 27, 33, 40, 46, 54, 67, 77, 88, 91, 93, 95, 97, 99, 100, 1/102, 2/102, 3/102, 103, 104, 105, 107, 110, 112, 114, 116 &amp; 118 Kirkwood Avenue, Seaford</li> <li>4, 1/6, 2/6, 8, 10, 12, 14, 820 Kitson Street, Frankston</li> <li>3, 2/9, 3/9, 10, 11, 8/12, 9/12, 15, 16A, 16B, 17, 22, 23, 24, 26, 1/30, 2/30, 3/30, 31, 35, 36, 37, 39, &amp; 41 Kookaburra Street, Frankston</li> <li>3, 5, 7, 1/15, 4/15 &amp; 27 Levuka Street, Seaford</li> <li>1, 2, 3, 4, 5, 6, 7 &amp; 8 Manning Road, Seaford</li> <li>1, 2, 3, 4, 5, 6, 7 &amp; 8 Manning Road, Seaford</li> <li>1, 2, 3, 4, 5, 6, 7 &amp; 8 Manning Road, Seaford</li> <li>2, 4, 6, 8, 10, 14, 29, 30, 31, 1/33, 2/33, 34, 35, 36, 37, 39, 43 &amp; 45 McCulloch Avenue, Seaford</li> <li>2</li></ul>	

Design Rainfall Depths (mm) – Indication of Possible Flooding	Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
Possible Flooding		<ul> <li>1, 14, 15, 1/19, 2/19, 21, 25, 25A, 27, 31, 35, 37 &amp; 39 Milne Avenue, Seaford</li> <li>1/35 &amp; 2/35 Molesworth Street, Seaford</li> <li>1, 2A, 3, 3A, 5, 7, 9, 11, 13, 15, 17, 10/19, 11/19, 1/22, 2/22, 3/22, 25, 25A, 27, 30, 31, 41, 43, 45, 47 &amp; 49 Moresby Avenue, Seaford</li> <li>365 Nepean Highway, Frankston</li> <li>1, 1/2, 2/2, 3, 1/4, 2/4, 3/4, 4/4, 5, 9, 11, 18, 20, 1/23, 2/23, 3/23, 4/23, 5/23, 6/23, 1/24, 3/24, 4/24, 5/24, 6/24, 7/24, 8/24, 26, 27, 33, 35, 37M, 39, 40, 41, 46, 50 &amp; 56 New Street, Frankston</li> <li>12/1, 13/1, 14/1, 17/1, 18/1, 20/1, 21/1, 22/1, 23/1, 24/1, 25/1, 26/1, 27/1, 28/1, 29/1, 30/1, 31/1, 32/1, 33/1, 40/1, 41/1, 42/1, 43/1, 45/1, 46/1, 47/1, 48/1, 49/1, 50/1, 51/1, 52/1, 53/1, 54/1, 55/1, 56/1, 57/1, 58/1, 86/1, 87/1, 88/1, 89/1, 90/1, 91/1, 92/1, 93/1, 94/1, 91/1, 100/1, 101/1, 102/1, 103/1, 104/1, 105/1, 11/1, 11/2/1, 1/5, 2/5, 4/5, 11, 13, 17, 19, 1/21, 2/21, 3/21, 23, 24 &amp; 28 Overton Road, Seaford</li> <li>1, 2, 6, 1/7, 2/7, 3/7, 4/7, 5/7, 1/10, 2/10, 3/10, 4/10, 5/10, 12, 1/13, 2/13, 14, 15A, 1/17, 2/7 &amp; 18 Patrick Court, Seaford</li> <li>2, 4, 1/9, 2/9 &amp; 3/9 Phillip Street, Frankston</li> <li>11, 13, 15, 17, 19, 21, 23, 25, 27, 31, 37, 39, 41 &amp; 43 Quinn Street, Seaford</li> <li>1, 1/4, 2/2, 3/2, 4/2, 5/2, 3, 5, 6, 7, 8, 1/10, 2/10, 11 &amp; 14 Raymond Road, Seaford</li> <li>1, 1/4, 2/2, 3/2, 4/2, 5/2, 3, 5, 6, 7, 8, 1/10, 2/10, 11 &amp; 14 Raymond Road, Seaford</li> <li>1, 2/2, 3/2, 4/2, 4B, 6, 1/8, 2/8 &amp; 3/8 Ropley Grange, Frankston</li> <li>1, 3/3, 4/3, 5/2, 4, 6, 14, 20 &amp; 22 Rosella Street, Frankston</li> <li>1, 2, 6, 7, 8, 9, 10, 11, 13, 15, 17, 18, 20, 23, 26, 27, 28, 32, 33, 36, 37, 39, 43, 44, 55, 56A, 59, 60, 61, 64, 75 &amp; 147 Rosslyn Avenue, Seaford</li> <li>2, 5, 7, 28, 29, 32, 33, 34, 36, 37, 40, 53A, 55, 60, 62, 64, 65, 66, 68, 70, 72, 73, 74 &amp; 76 Seaford Grove, Seaford</li> <li>2, 3, 11, 12 &amp; 14 Sheridan Avenue, Frankston</li> <li>7, 1/9, 2/9, 3/9, 4/9, 10, 12, 14, 15, 16, 18, 26, 28, 1/30, 2/30, 2, 32, 4, 6, 6, 8, 9, 13, 16, 18, 26, 28, 1/30 &amp; 2/30 Tooyal Str</li></ul>	
		7/42, 8/42, 3/46-48, 4/46-48 & 5/46-48 Hartnett Drive, Seaford	

# OFFICIAL

Design Rainfall Depths (mm) – Indication of Possible Flooding	Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
		<ul> <li>7 &amp; 24-26 Heversham Drive, Seaford</li> <li>1/2-8, 2/2-8, 4/2-8, 5/2-8, 6/2-8, 7/2-8 &amp; 8/2-8 Peninsula Boulevard, Seaford</li> <li>111-113 Seaford Place, Seaford Lee Street Drain 284 Properties in Total</li> <li>2, 4 &amp; 6A Alice Grove, Frankston</li> <li>2, 4, 5 &amp; 6 Baillie Court, Frankston</li> <li>35-39, 41-45, 47, 53, 53A, 53B, 53C, 53D, 53E, 53F, 53G, 59-63, 1/65-67, 2/65-67, 3/65-67, 3/69, 5/69, 1/73-75, 2/73-75, 3/73-75, 4/73-75, 5/73-75, 77, 79, 81, 83, 91, 93, 1/102, 2/102, 104, 134, 136-138, 139, 141, 143, 145, 147, 149, 151-153 &amp; 158 Beach Street, Frankston</li> <li>9 Casale Court, Frankston</li> <li>12, 14-16, 21, 1/25 &amp; 2/25 Catherine Parade, Frankston</li> <li>1 Cooba Place, Frankston</li> <li>80, 86, 87, 111 &amp; 119A Cranbourne Road, Frankston</li> <li>11, 13, 2/15-17, 3/15-17, 4/15-17, 5/15-17, 6/15-17, 21 &amp; 23 Dandenong Road, Frankston</li> <li>9, 11 &amp; 13 Darius Avenue, Frankston</li> <li>18, 3, 5, 27, 1/29, 1/29A, 2/29, 2/29A, 3/29, 3/29A, 4/29, 4/29A, 5/29, 2/31, 3/31, 6/33, 7/33, 8/33, 9/33, 10/33 &amp; 11/33 Deane Street, Frankston</li> <li>12 &amp; 13 Ellesmere Court, Frankston</li> <li>12 Eriskine Street, Frankston</li> <li>2 Finlay Street, Frankston</li> <li>2 Finlay Street, Frankston</li> <li>2 Finlay Street, Frankston</li> <li>2 Finlay Street, Frankston</li> <li>43 Gattinara Drive, Frankston</li> <li>1, 3, 4, 5, 6 &amp; 8 Glenview Crescent, Frankston</li> <li>1, 3, 4, 5, 6 &amp; 8 Glenview Crescent, Frankston</li> <li>6, 8, 10, 23, 25 &amp; 27 Gulwa Avenue, Frankston</li> <li>6, 8, 10, 23, 25 &amp; 27 Gulwa Avenue, Frankston</li> <li>98, 1/104, 3/104, 8/104, 8/104, 11/104, 12/14, 2/17-19, 3/17-19, 6/17-19, 8/17-19, 9/17-19, 10/17-19, 11/17-19, 12/17-19, 13/17-19, 1/21-23, 3/21-23, 4/21-23, 4/21-23, 7/21-23, 8/21-23, 1/21-23, 4/21-23, 1/221-23, 1/25, 2/25, 3/25, 4/25, 5/25, 6/25 &amp; 7/25 Hill Street, Frankston</li> <li>1/26, 2/26, 3/26, 28, 29 &amp; 31 James Street, Frankston</li> <li>1/26, 2/26, 3/26, 28, 29 &amp; 31 James Street, Frankston</li> <li>27, 28 &amp; 30 Joy Street, Frankston</li> </ul>	
		5 Kandy Court, Frankston	

Design Rainfall Depths (mm) – Indication of Possible Flooding	Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
		<ul> <li>46, 1/49A, 3/49A &amp; 51 Kenilworth Avenue, Frankston</li> <li>21 Kildare Court, Frankston</li> <li>14, 20, 22, 23 &amp; 24 Leawarra Parade, Frankston</li> <li>1, 11, 12, 13, 16, 18 &amp; 22 Lee Street, Frankston</li> <li>9 Lefevre Court, Frankston</li> <li>3, 1/4, 2/4, 3/4, 4/4, 5/4, 6/4, 1/6, 5/6, 1/11, 2/11, 5/11, 6/11 &amp; 19 Lewis Street, Frankston</li> <li>48, 50, 52, 54 &amp; 56 Lipton Drive, Frankston</li> <li>1 &amp; 9 Macrosty Court, Frankston</li> <li>3 Marillac Court, Frankston</li> <li>7, 10, 11, 13, 20, 48, 50, 52, 55 &amp; 60 McMahons Road, Frankston</li> <li>2, 3, 7, 9, 2/10, 3/10, 4/10, 17 &amp; 19 Nursery Avenue, Frankston</li> <li>2, 3, 7, 9, 2/10, 3/10, 4/10, 17 &amp; 20 Olympic Avenue, Frankston</li> <li>47 &amp; 58 Partridge Crescent, Frankston</li> <li>1/5 &amp; 2/5 Petrie Street, Frankston</li> <li>19 Quamby Avenue, Frankston</li> <li>3 &amp; 5 Raphael Crescent, Frankston</li> <li>4, 6, 5/8, 7/8, 8/8, 9/8, 10/8, 1/9, 2/9, 9A, 16, 1/18, 2/18, 3/18, 4/18, 5/18, 6/18, 7/18, 8/18, 11/18, 13/18, 15/18, 20, 3/22 &amp; 4/22 Reservoir Road, Frankston</li> <li>5 Silas Avenue, Frankston</li> <li>99 Sycamore Road, Frankston South</li> <li>11 &amp; 14 Taverner Square, Frankston</li> <li>5 Turnberry Court, Frankston</li> <li>26 &amp; 28A Willis Street, Frankston</li> <li>116 Willow Road, Frankston</li> <li>27, 38, 40, 42, 44, 46, 48, 58, 60, 62, 85, 92, 94, 96 &amp; 98 Bondi Avenue</li> <li>19, 21, 37, 38, 40, 45, 47, 49, 51, 53, 55, 62, 63, 64, 65, 67, 68, 69, 70, 72, 74 &amp; 76 Brooklyn Avenue, Frankston</li> <li>15 &amp; 17 Cambridge Street, Frankston</li> <li>16 &amp; 3 Coogee Avenue, Frankston</li> <li>15 &amp; 17 Cambridge Street, Frankston</li> <li>16 &amp; 3 Coogee Avenue, Frankston</li> <li>17 &amp; 3 Coogee Avenue, Frankston</li> <li>15 &amp; 17 Cambridge Street, Frankston</li> <li>16 &amp; 10 Crathie Court, Frankston</li> <li>17 &amp; 3 Coogee Avenue, Frankston</li> <li>18 10 Crathie Court, Frankston</li> <li>19 &amp; 10 Crathie Court, Frankston</li> <li>11 &amp;</li></ul>	
		Frankston	

# OFFICIAL .

Design Rainfall Depths (mm) – Indication of Possible Flooding	Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
		5, 9 & 18 Glenelg Avenue, Frankston	
		43, 47, 49, 51 & 71 Golf Links Road, Frankston	
		18, 20 & 22 Grady Court, Frankston South	
		12, 14 & 18 Guilford Close, Frankston	
		3 & 35 Hastings Road, Frankston	
		12, 14, 16, 18 & 18A Heatherhill Road, Frankston	
		4, 6, 10, 12, 13, 15 & 22 Helvetia Court, Frankston	
		1/5, 2/5 & 3/5 Hillcrest Road, Frankston	
		3, 4, 5 & 6 Lansvale Court, Frankston	
		45 Margate Avenue, Frankston	
		• 12, 14, 18, 19, 21, 25, 26, 27, 28, 35, 35A, 1/37, 2/37 & 39 McMurtry Way, Frankston	
		13 & 27 Mincha Street, Frankston	
		• 1, 3, 5, 7, 9, 11, 13, 15, 17, 19 & 21 Netherplace Drive, Frankston	
		• 1/15, 2/15 & 22 Oxford Street, Frankston	
		4, 5 & 7 Putney Lane, Frankston	
		• 11, 1/12, 2/12, 13, 1/14A, 2/14A, 1/15, 3/15, 1/18 & 2/18 Reid Street, Frankston	
		6 & 16-18 Roberts Street, Frankston	
		• 6, 7, 8, 9 & 10 Rosewood Court, Frankston	
		1 & 6 Sandgate Avenue, Frankston	
		• 6, 7, 1/10, 2/10, 3/10, 4/10 & 5/10 Screen Street, Frankston	
		20, 22, 24 & 26 Shearer Court, Frankston South	
		10 St Johns Avenue, Frankston	
		2 & 3 Tarook Court, Frankston	
		18 Towerhill Road, Frankston	
		1B, 21, 32 & 36 Warrain Street, Frankston	
		• 1/140, 2/140, 3/140, 4/140 & 5/140 Williams Street, Frankston	
		1B Winifred Street, Frankston	
		1 Yuille Street, Frankston	
		Wells Road Drain	
		3 Properties in Total	
		3/63, 4/63 & 5/63 Brunel Road, Seaford	
		Community Infrastructure Flooded	
		Austin Road / Excelsior Avenue Drain	
		Seaford Heights Preschool on Prince Crescent, Seaford flooded	
		Grounds of the Belvedere Park Primary School on Belvedere Road, Seaford flooded	
		Lee Street Drain	
		Grounds of the Erinwood Preschool flooded on Raphael Crescent, Frankston	

# OFFICIAL

Design Rainfall Depths (mm) – Indication of Possible Flooding	Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
Indication of	Probability (% AEP)	Essential Infrastructure Impacted     Frankston SES LHQ on McCulloch Street flooded     Parts of the City of Frankston Municipal Depot on Buna Avenue, Seaford flooded     Electrical Substation on Wright Street, Seaford flooded     The Frankston and Stony Point Railway Line may have low level flooding crossing the tracks at various locations during a 1% AEP flood. Unknown whether this will force the closure of the line.  Water Over Road (Over 300mm Depth) Seaford Lowlands / Bardia Avenue / Skye / Karingal Drains     Austin Road, Seaford between Mitchell Street and Frankston Freeway     Hummerstone Road, Seaford     Ilma Court, Seaford     Robinsons Road, Seaford     Scott Street, Seaford     Erwin Drive, Seaford     Found Court, Seaford     Michael Court, Seaford     Hunt Drive, Seaford     Valerie Court, Seaford     Valerie Court, Seaford     Michael Court, Seaford     Martha Street, Seaford     Martha Street, Seaford     Martha Street, Seaford     Martha Street, Seaford     Gayan Street, Seaford     Bayside Grove, Seaford     Bayside Grove, Seaford     Govan Street, Seaford     Govan Street, Seaford     Martin Street, Seaford     Martin Street, Seaford     Forescue Avenue, Seaford     Moresby Avenue, Seaford     Moresby Avenue, Seaford     Rosslyn Avenue, Seaford     Kananook Avenue, Seaford     Kananook Avenue, Seaford     Rosslyn Avenue, Seaford     Rosslyn Avenue, Seaford     Rosslyn Avenue, Seaford	Operational Considerations
		Kirkwood Avenue, Seaford     McCulloch Avenue, Seaford	

# OFFICIAL

Design Rainfall Depths (mm) – Indication of Possible Flooding	Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
Possible Plodding		Easton Avenue, Seaford Quinn Street, Seaford Bruce Street, Seaford Elliott Street, Seaford Elliott Street, Seaford Manning Road, Seaford Claude Street, Seaford Jubillee Avenue, Seaford Lyster Close, Seaford Rosslyn Court, Seaford Boonong Avenue, Seaford Wisewould Avenue, Seaford Carder Avenue, Seaford Duncan Avenue, Seaford Overton Road, Frankston New Street, Frankston Rosella Street, Frankston Rosella Street, Frankston Finch Street, Frankston Bragge Street, Frankston Bragge Street, Frankston Bragge Street, Frankston Finch Street, Frankston Douglas Grove, Frankston Sheridan Avenue, Frankston Dandenong Road East, Frankston Dandenong Road East, Frankston Dandenong Road East, Frankston Brasaria Crescent, Frankston North Alde Court, Frankston North Bursaria Crescent, Frankston North Pimpala Avenue, Seaford Sussex Crescent, Seaford Prince Crescent, Seaford Elisdon Drive, Seaford Eilisdon Drive, Seaford Fern Court, Seaford Molesworth Street, Seaford Molesworth Street, Seaford Molesworth Street, Seaford	
		Wicklow Street, Seaford	

# OFFICIAL .

Design Rainfall Depths (mm) – Indication of Possible Flooding	Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
Possible Flooding		Young Street, Seaford Galway Street, Seaford Heversham Drive, Seaford Lee Street Drain Partridge Crescent, Frankston at roundabout intersection Ellesmere Court, Frankston Franciscan Avenue, Frankston at Gattinara Drive Raphael Crescent, Frankston at Erinwood Pre-school Macrosty Court, Frankston Heatherhill Road, Frankston at Lochaber Avenue Baillie Court, Frankston Willow Road, Frankston near railway line Lipton Drive, Frankston Quandong Court, Frankston Lee Street, Frankston at Glenview Crescent Hillcrest Road, Frankston I randa Street, Frankston Emora Court, Frankston Emora Court, Frankston Deane Street, Frankston near Cranbourne Road Cranbourne Road, Frankston east of Moorooduc Highway Intersection Beach Street, Frankston between Fletcher Road and Kelman Street Catherine Parade, Frankston James Street, Frankston Petrie Street, Frankston Fetrie Street, Frankston Fetrie Street, Frankston Frankston Erskine Street, Frankston Frankston Thompson Street, Frankston Keys Street, Frankston Thompson Street, Frankston Thompson Street, Frankston Keys Street, Frankston Thompson Street, Frankston Winifred Street, Frankston Winifred Street, Frankston Mincha Street, Frankston Mincha Street, Frankston Mincha Street, Frankston Mincha Street, Frankston Genelg Avenue, Frankston Glenelg Avenue, Frankston	
		Erica Street, Frankston	

## OFFICIAL .

Design Rainfall Depths (mm) – Indication of Possible Flooding	Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
		Wells Road Drain	
		Brunel Road, Seaford	

Table C1.21 – Breakdown of possible consequences at various rainfall intensities around Frankston, Frankston North & Seaford with operational considerations

# APPENDIX C2 – CARRUM DOWNS, SKYE & LANGWARRIN FLOOD EMERGENCY PLAN

## **Overview of Flooding Consequences**

This Summary table is generated from Victorian Government data. The State of Victoria does not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for error, loss or damage which may arise from reliance upon it. All persons access this information should make appropriate enquiries to assess the currency of the data.

Summary of Consequences in a 1% AEP (100yr ARI) flood in Carrum Downs, Skye & Lanwarrin

Property (Over-Floor	Flood Ris	k)					
Properties	34						
Residential	29						
Commercial	3	Carrum Downs Regional SI	Carrum Downs Regional Shopping Centre and Carrum Downs Plaza				
Industrial	2						
Public Land	0						
Rural	0						
Community Infrastru	cture						
Child Care / Kindergartens	1	Early Learning Centre Carpark on Hall Road					
Community Venues	2	Carrum Downs Regional Shopping Centre; Carrum Downs Plaza					
Essential Infrastructu	ıre						
Bus & Tram Routes	3	832 on McCormicks Road a Road and Southgateway	and Greenwood Drive; 833	3 on Lyr	ebird Drive; 790 on Centre		
Drainage & Water Facilities	24	23 Retarding Basins; and 1	23 Retarding Basins; and 1 Pumping Station				
Levees	3	Boggy Creek X2 and Penin	sula Link				
Sewerage Facilities	14	Pumping Stations					
Government Bounda	ries						
Local Gov't Areas	1	Frankston	CMA	1	Port Phillip & Westernport		
Adjacent LGAs	2	Casey; and Greater Dandenong	CFA District	1	District 08		
SES Unit Area	1	Frankston	FRV District	0			

Table C2.1 - Consequence Summary of 1% AEP flood in Carrum Downs, Skye & Langwarrin

The Little Boggy Creek catchment begins in Langwarrin, running north-west through Carrum Downs where the creek joins Eel Race Creek to flow into Kananook Creek. A number of stormwater drainage systems feed into either Boggy Creek or Little Boggy Creek from the estates that reside in the area.

Approximately 1197 properties are at risk from flooding in the catchment, with 83 of these at risk of flooding over-floor in a 1% AEP flooding event. Ballarto Road in Skye and Dandenong-Frankston Road in Carrum Downs may need to be closed for a period during a 1% AEP event because of flooding. The carparks of Carrum Downs Regional Shopping Centre and Carrum Downs Plaza may also flood during a 5% AEP and 20% AEP events respectively.

## **Gauges and Warnings**

Neither the Bureau of Meteorology nor Melbourne Water currently provides flood forecasts for the Carrum Downs & Langwarrin areas. All flood response actions must therefore be driven by rainfall and / or river level observations. There are currently no stream level or rain gauges within the Little Boggy Creek catchment. Gauges in Seaford North & Frankston North are the closest available gauges and may provide an indication of rainfall across Carrum Downs & Langwarrin.

Gauge	Station No.	Location	Stream Level & Flow Gauge	Rain Gauge	Melway Reference
Eel Race Drain at Riviera St Culverts, Seaford North	228371A	Pedestrian Crossing along Riviera Street, Seaford	✓	✓	97 D11
Skye Road Retarding Basin at Frankston North	228378A	North side of Skye Road opposite Bokissa Drive, Frankston	✓	✓	99 K12
Eastern Contour Drain at Glasscocks Road, Dandenong South	228233A	North side of Glasscocks Road on Western bank of Eastern Contour Drain, Dandenong South	✓	✓	128 E3
Cranbourne	586375	Royal Botanic Gardens Cranbourne		✓	133 E12

Table C2.2 – Gauges monitoring rainfall near Carrum Downs, Skye and Langwarrin

These Gauges may provide some warning of expected flooding. See the Melbourne Water website for more information on these gauges: <a href="http://www.melbournewater.com.au/waterdata/rainfallandriverleveldata/Pages/Rainfall-and-river-level-new.aspx">http://www.melbournewater.com.au/waterdata/rainfallandriverleveldata/Pages/Rainfall-and-river-level-new.aspx</a>. The Bureau of Meteorology's website also links a number of these gauges at: <a href="http://www.bom.gov.au/cgi-bin/wrap\_fwo.pl?IDV60201.html">http://www.bom.gov.au/cgi-bin/wrap\_fwo.pl?IDV60201.html</a>. It is advised that residents monitor the Bureau of Meteorology's website <a href="http://www.bom.gov.au/vic/warnings/index.shtml?ref=hdr">http://www.bom.gov.au/vic/warnings/index.shtml?ref=hdr</a> and the VicEmergency website <a href="https://emergency.vic.gov.au/">https://emergency.vic.gov.au/</a> for any thunderstorm, flood or severe weather warnings present for their area.

# Langwarrin

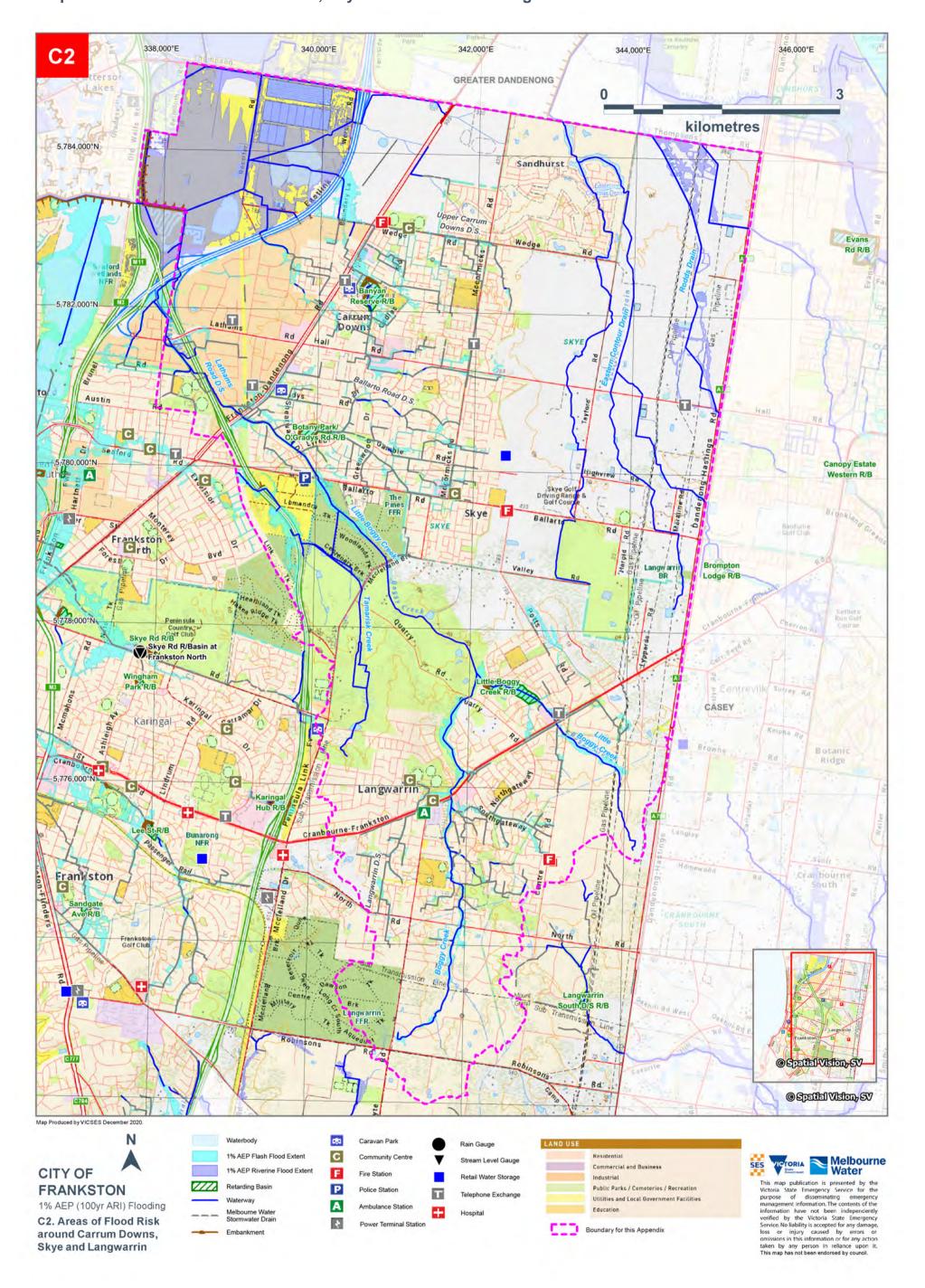


Figure C2 – Areas of flood risk around Carrum Downs, Skye & Langwarrin in Frankston City

#### **Properties at Flood Risk**

Properties listed in the table below are at risk from flooding over-floor in Carrum Downs, Skye and Langwarrin. As more intelligence becomes available, this list may change. This table has been populated based on modelling work as part of the Ballarto Road Drainage System (GHD, July 2020), the Upper Carrum Downs Drainage System (GHD, July 2020) and the Upper Boggy Creek (GHD, July 2020) flood mapping and risk assessment programs. Note that any multi-lot properties situated above ground floor likely impacted by isolation only with flooding on ground floor impacting access to common areas and/or carpark and storage facilities. Information on above ground-floor properties is not available in this list.

This Property Flood Risk Table is presented by the Victoria State Emergency Service for the purpose of disseminating emergency management information. The contents of the information have not been independently verified by the Victoria State Emergency Service. No liability is accepted for any damage, loss or injury caused by errors or omissions in this information or for any action taken by any person in reliance upon it.

Residential			Commercial	Industrial	Rural	Public U	Jse
Street No. at Risk in AEP Event 20% 5% 1%			Address	Suburb	Along Melb Water Water		Floo Risl
AEP	AEP	AEP					Тур
	✓	✓	93 Allied Drive	Carrum Downs	Ballarto Road Drai	nage System	Flasi
	✓	✓	6 Apollo Court	Langwarrin	Little Boggy Creek		Flas
		✓	8/4 Amayla Crescent	Carrum Downs	Ballarto Road Drai	nage System	Flas
		✓	12/4 Amayla Crescent	Carrum Downs	Ballarto Road Drai	nage System	Flas
		✓	24 Arlene Drive	Skye	Ballarto Road Drai	nage System	Flas
	✓	✓	317 Ballarto Road	Carrum Downs	Ballarto Road Drai	nage System	Flas
		✓	11 Beacon Drive	Langwarrin	Little Boggy Creek		Flas
		✓	83 Broderick Road	Carrum Downs	Ballarto Road Drai	nage System	Flas
		✓	4 Derby Court	Carrum Downs	Ballarto Road Drai	nage System	Flas
		✓	5 Derby Court	Carrum Downs	Ballarto Road Drai	nage System	Flas
		✓	6 Derby Court	Carrum Downs	Ballarto Road Drai	nage System	Flas
		✓	3 Falkiner Court	Carrum Downs	Ballarto Road Drai	nage System	Flas
		✓	13 Gleeson Court	Langwarrin	Little Boggy Creek		Flas
	✓	✓	90 Hall Road	Carrum Downs	Upper Carrum Dov	vns D.S.	Flas
	✓	✓	100 Hall Road	Carrum Downs	Upper Carrum Dov	vns D.S.	Flas
		✓	194 Hall Road	Carrum Downs	Upper Carrum Dov	vns D.S.	Flas
	✓	✓	50 Jarman Drive	Langwarrin	Little Boggy Creek		Flas
		✓	52 Jarman Drive	Langwarrin	Little Boggy Creek		Flas
		✓	10 Leffern Court	Carrum Downs	Ballarto Road Drai	nage System	Flas
	✓	✓	5 Leonard Drive	Langwarrin	Little Boggy Creek		Flas
		✓	7 Leonard Drive	Langwarrin	Little Boggy Creek		Flas
		✓	6/24 McCormicks Road	Skye	Ballarto Road Drai	nage System	Flas
		✓	61 McCormicks Road	Skye	Ballarto Road Drai	nage System	Flas
		✓	63 McCormicks Road	Skye	Ballarto Road Drai	nage System	Flas
		✓	13/15 Peninsula Crescen	t Langwarrin	Boggy Creek		Flas
		✓	22/15 Peninsula Crescen		Boggy Creek		Flas
		✓	23/15 Peninsula Crescen	t Langwarrin	Boggy Creek		Flas
		✓	24/15 Peninsula Crescen	-	Boggy Creek		Flas
		<b>√</b>	26/15 Peninsula Crescen	-	Boggy Creek		Flas

Residential		Commercial	Industrial		Rural	Public U	Jse	
Street N 20% AEP			Address		Suburb	Along Mell Water Wate		Flood Risk Type
		✓	39/15 Peninsula Cre	escent	Langwarrin	Boggy Creek		Flash
		✓	4 Swan Court		Carrum Dowr	ns Ballarto Road Dra	inage System	Flash
		✓	9 Swan Court	9 Swan Court Carrum Downs Ballarto Road Drainage System		inage System	Flash	
		✓	11 Swan Court		Carrum Dowr	ns Ballarto Road Dra	Ballarto Road Drainage System	
		✓	18 Veronica Drive		Skye Ballarto Road Drainage System		Flash	
	Totals							
0	7	34	1					

Table C2.3 – Properties at risk of flooding over-floor in Carrum Downs, Skye and Langwarrin

#### Isolation

No major isolation risks exist for areas around Carrum Downs & Langwarrin during a 1% AEP (100yr ARI) event. Some localised short-duration isolation may occur due to flash flooding.

#### **Essential Infrastructure**

During an event, see the Public Transport Victoria's Website for details on delays or alterations to services. <a href="http://ptv.vic.gov.au/live-travel-updates/">http://ptv.vic.gov.au/live-travel-updates/</a>. A map of Public Transport routes for the City of Frankston is available via the website at: <a href="https://www.ptv.vic.gov.au/assets/default-site/more/maps/Local-area-maps/Metropolitan/4afa74b3f6/14">https://www.ptv.vic.gov.au/assets/default-site/more/maps/Local-area-maps/Metropolitan/4afa74b3f6/14</a> Frankston LAM.pdf

Apart from the roads outlined below, all other essential infrastructure and services areas around Carrum Downs & Langwarrin are expected to remain unaffected by flooding during a 1% AEP (100yr ARI) event.

#### **Road Closures**

The following roads are subject to closure during flooding around Carrum Downs, Skye & Langwarrin. Check the VicRoads website for more details: <a href="mailto:alerts.vicroads.vic.gov.au">alerts.vicroads.vic.gov.au</a>

Department of Transport (VicRoads) Roads flooded in a 1% AEP (100yr ARI) event

Nil impacted in Carrum Downs, Skye and Langwarrin

Table C2.4 – Department of Transport (VicRoads) Possible Road Closures during a flooding event

Frankston City Council Roads flooded in a 1% AEP (100yr ARI) event						
CARRUM DOWNS	Lyrebird Drive	Whipbird Drive	Malcolm Road			
Amayla Crescent	McCormicks Road	LANGWARRIN	McClelland Drive			
Arcadia Street	Paddington Avenue	Anthony Street	Peninsula Crescent			
Aster Avenue	Pardalote Avenue	Centre Road	Southgateway			
Carmela Way	Polaris Court	Jarman Drive	SKYE			
Greenwood Drive	Redgum Avenue	John Street	Coco Parade			
Jacana Drive	Swan Court	Kerry Street	McCormicks Road			
Lena Place	Tyntynder Drive	North Road	Veronica Drive			

Table C2.5 - Frankston City Council Possible Road Closures during a flooding event

# **Flood Mitigation**

## **Retarding Basins**

Melbourne Water Retarding Basin	On Drain/ Waterway	Area	Storage Capacity	Spillway Crest Level	Full Supply Level	Embankment Crest Level	ANCOLD Hazard Rating	Properties in Flow Path (WD DCF Failure)	Melway Reference
Banyan Reserve	Upper Carrum Downs Drain	7.942 ha	76.3 ML	15.4m AHD	Unavailable	16.0m AHD	High C	Unavailable	98 G12
Botany Park / O'Grady's Road	Ballarto Road Drain	5.471 ha	58.9 ML	18.22m AHD	18.7m AHD	19.15m AHD	High C	Unavailable	100 F5
Langwarrin South	Langwarrin South Drain	4.006 ha	10 ML	nil	61.8m AHD	62.0m AHD	Very Low	0	136 D10
Little Boggy Creek	Little Boggy Creek	6.658 ha	Unavailable	50.7m AHD	51.0m AHD	Unavailable	High A	Unavailable	136 A1
Sandgate Avenue	Sandgate Avenue Drain	3.024 ha	8.3 ML	75.62m AHD	75.61m AHD	75.65m AHD	Very Low	13	102 H8

Table C2.6 – Melbourne Water Retarding Basins within the Little Boggy Creek and Carrum Downs Drains catchments in the City of Frankston

Frankston City Council Retarding Basin	Address	Area	Spillway Crest Level	Full Supply Level	Embankment Crest Level	Properties in Flow Path (WD DCF Failure)	Melway Reference
STUDIO PARK OVERFLOW RETARDING DEVICE	Poplar Grove Langwarrin			59.80	In Cut	0	103 F3
PINDARA RETARDING BASINS	Pindara Boulevard Langwarrin				In Cut	0	103 G2
SKYE VALLEY PARK RETARDING BASIN #1 (Santa Clara Mews)	Santa Clara Mews Skye	370m2				Approx. 5	100 K8
SKYE VALLEY PARK RETARDING BASIN #2 (Rhone Court)	Santa Clara Mews Skye				In Cut	0	100 K9
DIAMOND PARADE RETARDING BASIN	Diamond Parade Carrum Downs				In Cut	0	132 A8
FLAME ROBIN RESERVE RETARDING BASIN (Natural Reserve & Wetland)	North Road Langwarrin				In Cut	0	103 D7
BLACK WALLABY DRIVE RETARDING BASIN (Upper & Lower)	Black Wallaby Drive Langwarrin	4100m2			76.95	Approx. 2	103 E7
STEVENS RESERVE RETARDING BASIN	Stevens Road Langwarrin				In Cut	0	136 A1
PARK VALLEY RESERVE RETARDING BASIN (Natural drainage depression)	Park Valley Crescent Langwarrin				In Cut	0	136 A6
RETARDING BASIN Sediment Basin	Hafey Way Langwarrin				In Cut	0	132 E12
RETARDING BASIN Sediment Basin & WETLAND	Hafey Way Langwarrin				In Cut	0	132 D12

Table C2.7 – Frankston City Council Water Retarding Basins in Carrum Downs, Skye and Langwarrin

Private Water Retarding Basin	On Drain/ Waterway	Area	Spillway Crest Level	Full Supply Level	Embankment Crest Level	Properties in Flow Path (WD DCF Failure)	Melway Reference
BOGGY CREEK Retention Basin and Dwarf Galaxia Habitat	257 North Road Langwarrin				In Cut	0	103 K8
RETENTION BASIN 170 Union Road	170 Union Road Langwarrin				In Cut		103 K8
WATER STORAGE DAM	70 Valley Road Skye				In Cut		100 K9
RETENTION BASIN 70 Protea Street	70 Protea Street Carrum Downs				In Cut		100 H2
SANDHURST RESIDENTIAL ESTATE	75A Sandhurst Boulevard Sandhurst				In Cut		128 C9
SANDARA RESIDENTIAL ESTATE	345 McCormicks Road Sandhurst				In Cut		98 K10
SANDHURST GOLF CLUB	680 Thompsons Road Sandhurst				In Cut		128 C9

Table C2.8 – Private Water Retarding Basins in Carrum Downs, Skye, Sandhurst and Langwarrin

## **Pumping Stations**

Melbourne Water Pumping Station	On Drain / Waterway	Location	No. of Pumps	Consequence of Failure	Melway Reference
Parc Pump	Upper Carrum Downs Drain	Eastern Treatment Plant	1	Loss of environmental flow to Wetland	98 E8

Table C2.7 – Melbourne Water Pumping Stations along the Carrum Downs Drains catchments

#### Levees

Levee	Reach	Side	Levee Height	Levee Length	Expected Level of Protection	ANCOLD Hazard Rating	Consequences of Failure	Melway Reference
Boggy Creek	Eel Race Drain to Eastlink	East	2.0m	700m	Unavailable	Very Low	Flooding of Boggy Creek Wetland. 0 properties expected to be affected.	98A10-A12
Boggy Creek	Eel Race Drain to Eastlink	West	2.0m	700m	Unavailable	Very Low	Flooding of Boggy Creek Wetland. 0 properties expected to be affected.	98A10-A12
Peninsula Link Bund Wall	Peninsula Link to Tamarisk Creek	East	Unavailable	60m	Unavailable	Unavailable	Unavailable	100 D6

Table C2.8 – Melbourne Water Levees in Carrum Downs, Skye, Sandhurst and Langwarrin

## **Sewerage Infrastructure**

Sewerage Infrastructure of note during a severe flood event located around Carrum Downs, Skye, Sandhurst and Langwarrin are contained within the following table.

Sewerage Pumping Station	On Drain / Waterway	Bank / Side of Waterway	Operator	Location	Melway Reference
Apple Berry Avenue	Tamarisk Creek	East	South East Water	Hanson on McClelland Drive, Langwarrin	103 G2
Aqueduct Road	Local Drainage	-	South East Water	Aqueduct Road, Langwarrin	136 B8
Black Wallaby Drive	Local Drainage	-	South East Water	Black Wallaby Drive, Langwarrin	103 E7
Gateway Drive	Lower Carrum Downs Drain	-	South East Water	Gateway Drive, Carrum Downs	98 D11
Lakewood Boulevard	Lathams Road Drain	-	South East Water	Lakewood Boulevard, Carrum Downs	100 A1
McClelland Drive	Local Drainage	-	South East Water	McClelland Drive, Langwarrin	103 E4
Poplar Grove	Tamarisk Creek	-	South East Water	Sycamore Street, Langwarrin	103 G3
Potts Road	Potts Road West Drain	-	South East Water	Potts Road, Langwarrin	132 B11
Sandhurst Boulevard	Eastern Contour Drain	West	South East Water	Sandhurst Boulevard, Sandhurst	128 D9
Supernatant Pump Station No.4	Eel Race Creek	North	Melbourne Water	Melbourne Water Eastern Treatment Plant, Thompsons Road, Carrum Downs	98 F7
Supernatant Pump Station No.4A	Eel Race Creek	North	Melbourne Water	Melbourne Water Eastern Treatment Plant, Thompsons Road, Carrum Downs	98 F7
Tamara Circuit	Local Drainage	-	South East Water	Tamara Circuit, Langwarrin	132 E12
Valley Road	Local Drainage	-	South East Water	Valley Road, Skye	100 K9
Wadsley Road	Wadsleys Drain	-	South East Water	Wadsley Road, Carrum Downs	97 K7

Table C2.9 – Pumping Stations in Carrum Downs, Skye, Sandhurst and Langwarrin

#### **Control, Command and Coordination**

VICSES will assume overall control of the response to flood incidents. Other agencies will be requested to support operations as detailed in this Plan. Control and coordination of a flood incident shall be carried out at the lowest effective level and in accordance with the State Emergency Management Plan – Emergency management arrangements. During significant events, VICSES will conduct incident management using multi-agency resources.

## Flood Impacts and Operational Considerations (Intelligence Cards)

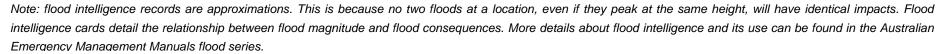
The tables on the following pages provide a breakdown of the possible consequences of flooding in Carrum Downs, Skye, Sandhurst and Langwarrin at various rain totals within the city of Frankston. These tables are to be used only as a guide as no two floods at a location will have identical impacts.

Intelligence Cards have been included for the following locations:

- Stormwater Drains in Carrum Downs & Skye
- Stormwater Drains in Langwarrin

# FLOOD INTELLIGENCE CARD - CARRUM DOWNS & SKYE (UNGAUGED)

Version 4 – January 2021





This Flood Intelligence Card publication is presented by the Victoria State Emergency Service for the purpose of disseminating emergency management information. The contents of the information have not been independently verified by the Victoria State Emergency Service. No liability is accepted for any damage, loss or injury caused by errors or omissions in this information or for any action taken by any person in reliance upon it. **Scan the QR code for the current rain totals for this gauge.** 

CLOSEST RAIN GAUGE	Eel Race Drain at Riviera St Culverts, Seaford North
LOCATION	Riviera Street, Seaford North
RECENT RAINFALL:	https://www.melbournewater.com.au/water-data-and-education/rainfall-and-river-levels#/reader/228371A

MELWAY REF:	97 D11
GAUGE NUMBER	228371A
GAUGE TYPE	Stream Level & Rain

Design Rainfall Depths (mm) – Indication of Possible Flooding	Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
10mm in 10 mins; 17mm in 30 mins; 23mm in 1 hour; 30mm in 2 hours; 45mm in 6 hours; or 57mm in 12 hours  Note: rainfall depths are a very rough method of estimating flood events and have been used due to the ungagged nature of the catchment. This should be used as a guide only.	20% AEP (5-year ARI)	Properties at Flood Risk (Over-Floor) 0 Properties in Total Water Over Road (Over 300mm Depth) Lyrebird Drive, Carrum Downs	VICSES to respond on a request-by-request basis VICSES may provide warnings using EM-COP to Frankston City Council and appropriate agencies as required based intelligence regarding flood levels and the risk of Flash Flooding. The VICSES Central Duty officer in conjunction with the Regional Agency Commander will maintain operational awareness and form an appropriate response arrangement to suit the level of incident. Council and VicRoads (as appropriate) to provide road closure signage under predetermined arrangements
15mm in 10 mins; 24mm in 30 mins; 31mm in 1 hour; 41mm in 2 hours; 60mm in 6 hours; or 77mm in 12 hours	5% AEP (20-year ARI)	Properties at Flood Risk (Over-Floor) 4 Properties in Total 93 Allied Drive, Carrum Downs 317 Ballarto Road, Carrum Downs 90 & 100 Hall Road, Carrum Downs Community Infrastructure Flooded	VICSES to respond on a request-by-request basis VICSES may provide warnings using EM-COP to Frankston City Council and appropriate agencies as required based intelligence regarding flood levels and the risk of Flash Flooding. The VICSES Central Duty officer in conjunction with the Regional Agency Commander will maintain operational

Design Rainfall Depths (mm) – Indication of Possible Flooding	Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
Note: rainfall depths are a very rough method of estimating flood events and have been used due to the ungagged nature of the catchment. This should be used as a guide only.		<ul> <li>Carrum Downs Regional Shopping Centre on Hall Road, Carrum Downs flooded Over-Floor with Carpark also Flooded</li> <li>Carpark of Carrum Downs Plaza on McCormicks Road, Carrum Downs</li> <li>Water Over Road (Over 300mm Depth)</li> <li>Arcadia Street, Carrum Downs</li> <li>Coco Parade, Skye</li> <li>Greenwood Drive, Carrum Downs</li> <li>Jacana Drive, Carrum Downs</li> <li>Lena Place, Carrum Downs</li> <li>Lyrebird Drive, Carrum Downs</li> <li>McCormicks Road, Carrum Downs at Heysen Drive</li> <li>Parkdale Drive, Carrum Downs</li> <li>Swan Court, Carrum Downs</li> <li>Tyntynder Drive, Carrum Downs</li> </ul>	awareness and form an appropriate response arrangement to suit the level of incident.  Council and VicRoads (as appropriate) to provide road closure signage under predetermined arrangements
21mm in 10 mins; 34mm in 30 mins; 44mm in 1 hour; 56mm in 2 hours; 83mm in 6 hours; or 106mm in 12 hours  Note: rainfall depths are a very rough method of estimating flood events and have been used due to the ungagged nature of the catchment. This should be used as a guide only.	1% AEP (100-year ARI)	Properties at Flood Risk (Over-Floor) 21 Properties in Total 93 Allied Drive, Carrum Downs 8/4 & 12/4 Amayla Crescent, Carrum Downs 24 Arlene Drive, Skye 317 Ballarto Road, Carrum Downs 83 Broderick Road, Carrum Downs 4, 5 & 6 Derby Court, Carrum Downs 3 Falkiner Court, Carrum Downs 90, 100 & 194 Hall Road, Carrum Downs 10 Leffern Court, Carrum Downs 6/24, 61 & 63 McCormicks Road, Skye 4, 9 & 11 Swan Court, Carrum Downs 18 Veronica Drive, Skye Community Infrastructure Flooded Carrum Downs Regional Shopping Centre on Hall Road, Carrum Downs flooded Over-Floor with Carpark also Flooded Carpark of Early Learning Centre (Child Care) on Hall Road, Carrum Downs flooded Carpark of Carrum Downs Plaza on McCormicks Road, Carrum Downs Water Over Road (Over 300mm Depth) Amayla Crescent, Carrum Downs Arcadia Street, Carrum Downs Aster Avenue, Carrum Downs Carmela Way, Carrum Downs Carmela Way, Carrum Downs Coco Parade, Skye Greenwood Drive, Carrum Downs	VICSES to respond on a request-by-request basis VICSES may provide warnings using EM-COP to Frankston City Council and appropriate agencies as required based intelligence regarding flood levels and the risk of Flash Flooding. The VICSES Central Duty officer in conjunction with the Regional Agency Commander will maintain operational awareness and form an appropriate response arrangement to suit the level of incident. Council and VicRoads (as appropriate) to provide road closure signage under predetermined arrangements

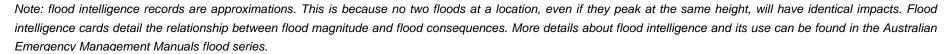
## OFFICIAL .

Design Rainfall Depths (mm) – Indication of Possible Flooding	Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
		Jacana Drive, Carrum Downs	
		Lena Place, Carrum Downs	
		Lyrebird Drive, Carrum Downs	
		McCormicks Road, Carrum Downs at Heysen Drive	
		McCormicks Road, Skye at Stable Grove	
		Paddington Avenue, Carrum Downs	
		Parkdale Drive, Carrum Downs	
		Polaris Court, Carrum Downs	
		Redgum Avenue, Carrum Downs	
		Swan Court, Carrum Downs	
		Tyntynder Drive, Carrum Downs	
		Veronica Drive, Skye	
		Whipbird Drive, Carrum Downs	

Table C1.10 – Breakdown of possible consequences at various rainfall intensities around Carrum Downs and Skye with operational considerations

# FLOOD INTELLIGENCE CARD – LANGWARRIN (UNGAUGED)

Version 4 – January 2021





This Flood Intelligence Card publication is presented by the Victoria State Emergency Service for the purpose of disseminating emergency management information. The contents of the information have not been independently verified by the Victoria State Emergency Service. No liability is accepted for any damage, loss or injury caused by errors or omissions in this information or for any action taken by any person in reliance upon it. **Scan the QR code for the current rain totals for this gauge.** 

CLOSEST RAIN GAUGE	Skye Road Retarding Basin at Frankston North
LOCATION	Skye Road Retarding Basin, Frankston North
RECENT RAINFALL:	https://www.melbournewater.com.au/water-data-and-education/rainfall-and-river-levels#/reader/228378A

MELWAY REF:	99 K12
GAUGE NUMBER	228378A
GAUGE TYPE	Rain

Design Rainfall Depths (mm) – Indication of Possible Flooding	Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
10mm in 10 mins; 17mm in 30 mins; 23mm in 1 hour; 30mm in 2 hours; 45mm in 6 hours; or 57mm in 12 hours  Note: rainfall depths are a very rough method of estimating flood events and have been used due to the ungagged nature of the catchment. This should be used as a guide only.	20% AEP (5-year ARI)	Properties at Flood Risk (Over-Floor) 0 Properties in Total Water Over Road (Over 300mm Depth) • McClelland Drive, Langwarrin at Little Boggy Creek Crossing (The Pines Reserve)	VICSES to respond on a request-by-request basis VICSES may provide warnings using EM-COP to Frankston City Council and appropriate agencies as required based intelligence regarding flood levels and the risk of Flash Flooding. The VICSES Central Duty officer in conjunction with the Regional Agency Commander will maintain operational awareness and form an appropriate response arrangement to suit the level of incident. Council and VicRoads (as appropriate) to provide road closure signage under predetermined arrangements
15mm in 10 mins; 24mm in 30 mins; 31mm in 1 hour; 41mm in 2 hours; 60mm in 6 hours; or 77mm in 12 hours	5% AEP (20-year ARI)	Properties at Flood Risk (Over-Floor) 3 Properties in Total  6 Apollo Court, Langwarrin  50 Jarman Drive, Langwarrin  5 Leonard Drive, Langwarrin  Water Over Road (Over 300mm Depth)	VICSES to respond on a request-by-request basis VICSES may provide warnings using EM-COP to Frankston City Council and appropriate agencies as required based intelligence regarding flood levels and the risk of Flash Flooding. The VICSES Central Duty officer in conjunction with the Regional Agency Commander will maintain operational

## OFFICIAL .

Design Rainfall Depths (mm) – Indication of Possible Flooding	Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
Note: rainfall depths are a very rough method of estimating flood events and have been used due to the ungagged nature of the catchment. This should be used as a guide only.		<ul> <li>Anthony Street, Langwarrin</li> <li>Centre Road, Langwarrin at McKays Road</li> <li>Jarman Drive, Langwarrin</li> <li>John Street, Langwarrin</li> <li>Malcolm Road, Langwarrin</li> <li>McClelland Drive, Langwarrin at Little Boggy Creek Crossing (The Pines Reserve)</li> <li>Peninsula Crescent, Langwarrin</li> <li>Southgateway, Langwarrin at Northgateway</li> </ul>	awareness and form an appropriate response arrangement to suit the level of incident.  Council and VicRoads (as appropriate) to provide road closure signage under predetermined arrangements
21mm in 10 mins; 34mm in 30 mins; 44mm in 1 hour; 56mm in 2 hours; 83mm in 6 hours; or 106mm in 12 hours  Note: rainfall depths are a very rough method of estimating flood events and have been used due to the ungagged nature of the catchment. This should be used as a guide only.	1% AEP (100-year ARI)	Properties at Flood Risk (Over-Floor) 13 Properties in Total  6 Apollo Court, Langwarrin  11 Beacon Drive, Langwarrin  13 Gleeson Court, Langwarrin  50 & 52 Jarman Drive, Langwarrin  5 & 7 Leonard Drive, Langwarrin  13/15, 22/15, 23/15, 24/15, 26/15 & 39/15 Peninsula Crescent, Langwarrin  Water Over Road (Over 300mm Depth)  Anthony Street, Langwarrin  Centre Road, Langwarrin at McKays Road  Jarman Drive, Langwarrin  Kerry Street, Langwarrin  Kerry Street, Langwarrin  North Road, Langwarrin at Boggy Creek  Malcolm Road, Langwarrin  McClelland Drive, Langwarrin at Little Boggy Creek Crossing (The Pines Reserve)  Peninsula Crescent, Langwarrin  Southgateway, Langwarrin at Northgateway	VICSES to respond on a request-by-request basis VICSES may provide warnings using EM-COP to Frankston City Council and appropriate agencies as required based intelligence regarding flood levels and the risk of Flash Flooding. The VICSES Central Duty officer in conjunction with the Regional Agency Commander will maintain operational awareness and form an appropriate response arrangement to suit the level of incident. Council and VicRoads (as appropriate) to provide road closure signage under predetermined arrangements

Table C1.11 – Breakdown of possible consequences at various rainfall intensities around Langwarrin with operational considerations

# APPENDIX C3 – FRANKSTON SOUTH & LANGWARRIN SOUTH FLOOD EMERGENCY PLAN

## **Overview of Flooding Consequences**

This Summary table is generated from Victorian Government data. The State of Victoria does not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for error, loss or damage which may arise from reliance upon it. All persons access this information should make appropriate enquiries to assess the currency of the data.

Summary of Consequences in a 1% AEP (100yr ARI) flood in Frankston South & Langwarrin South

Property at Flood Ris	k (Over-Fl	oor)			
Properties	1				
Residential	1				
Commercial	0				
Industrial	0				
Public Land	0				
Rural	0				
Community Infrastruc	cture				
Schools / Colleges	1	Woodleight School – Senio	r Campus on Golf Links Ro	oad, Lar	ngwarrin South
Essential Infrastructu	ıre				
Drainage & Water Facilities	5	Retarding Basins			
Sewerage Facilities	3	Pumping Stations			
Government Boundar	ries				
Local Gov't Areas	1	Frankston	CMA	1	Port Phillip & Westernport
Adjacent LGAs	2	Mornington Peninsula & Casey	CFA District	1	District 08
SES Unit Area	1	Frankston	FRV District	0	

Table C3.1 – Consequence Summary of 1% AEP flood in Frankston South and Langwarrin South

## **Gauges and Warnings**

Neither the Bureau of Meteorology nor Melbourne Water currently provides flood forecasts for Frankston South or Langwarrin South. All flood response actions must therefore be driven by rainfall and observations. Telemetered rain gauges are located at Frankston Reservoir within the Sweetwater Creek catchment.

Gauge	Station No.	Location	Stream Level & Flow Gauge	Rain Gauge	Melway Reference
Frankston Reservoir	228819A	Frankston Reservoir, Frankston South		✓	102 E10

Table C3.2 - Gauges monitoring rainfall for Frankston South and Langwarrin South in the City of Frankston

This gague may provide some warning of expected flooding. See the Melbourne Water website for more information on these gauges: <a href="http://www.melbournewater.com.au/waterdata/rainfallandriverleveldata/Pages/Rainfall-and-river-level-new.aspx">http://www.melbournewater.com.au/waterdata/rainfallandriverleveldata/Pages/Rainfall-and-river-level-new.aspx</a>. The Bureau of Meteorology's website also links a number of these gauges at: <a href="http://www.bom.gov.au/cgi-bin/wrap\_fwo.pl?IDV60201.html">http://www.bom.gov.au/cgi-bin/wrap\_fwo.pl?IDV60201.html</a>. It is advised that residents monitor the Bureau of Meteorology's website <a href="http://www.bom.gov.au/vic/warnings/index.shtml?ref=hdr">http://www.bom.gov.au/vic/warnings/index.shtml?ref=hdr</a> and the VicEmergency website <a href="https://emergency.vic.gov.au/">https://emergency.vic.gov.au/</a> for any thunderstorm, flood or severe weather warnings present for their area.

# Area Map of Flood Risk in Frankston South & Langwarrin South

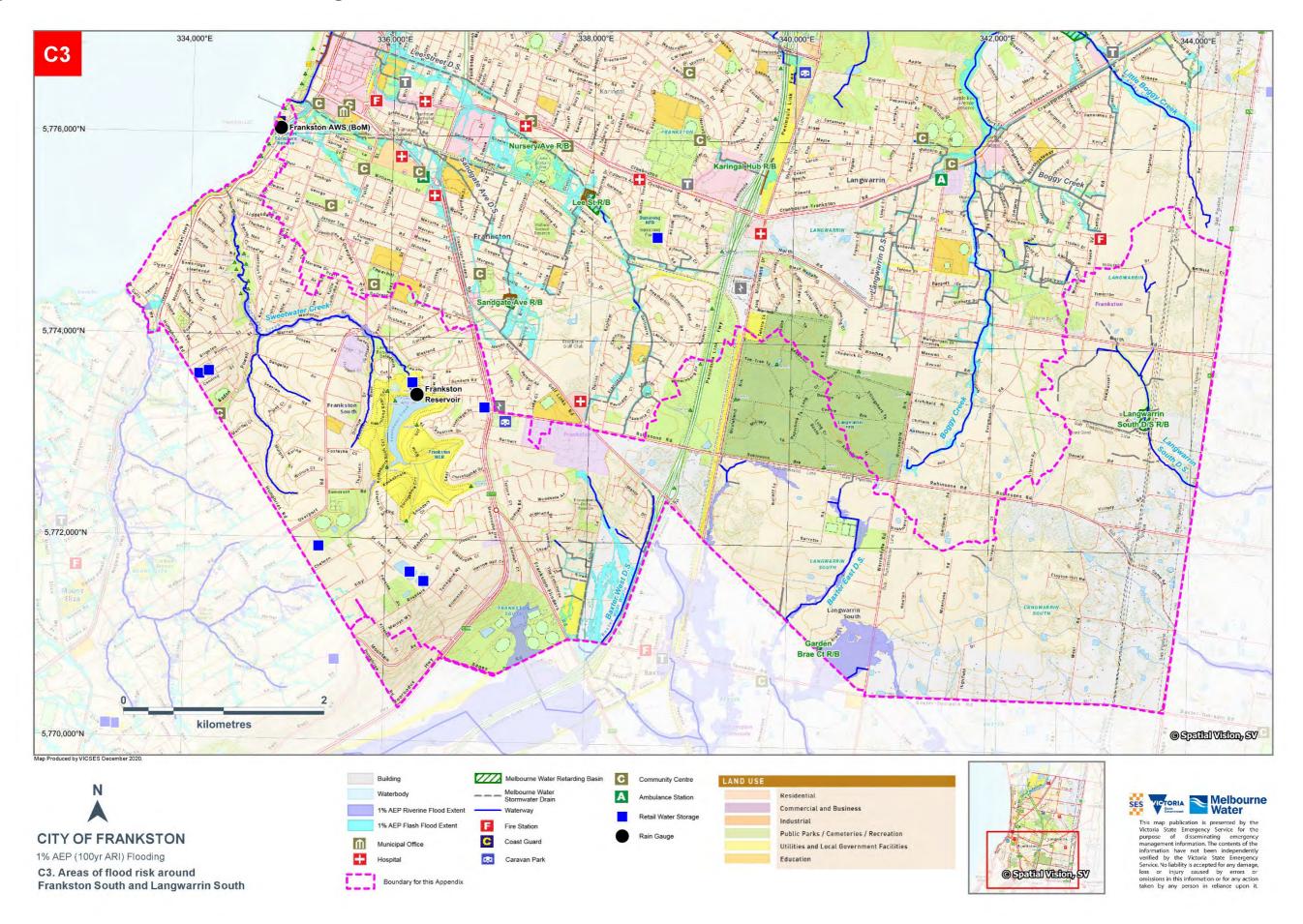


Figure C3 – Areas of flood risk around Frankston South and Langwarrin South in the City of Frankston and area covered by this appendix

#### **Properties at Flood Risk**

Properties listed in the table below are at risk from flooding over-floor in Frankston South and Langwarrin South. As more intelligence becomes available, this list may change. This table has been populated based on modelling work as part of the Sweetwater Creek (BMT WBM, October 2008), the Baxter East D.S. (Melbourne Water, August 2014) and the Baxter West D.S. (GHD, July 2020) flood mapping and risk assessment programs. Note that any multi-lot properties situated above ground floor likely impacted by isolation only with flooding on ground floor impacting access to common areas and/or carpark and storage facilities. Information on above ground-floor properties is not available in this list.

This Property Flood Risk Table is presented by the Victoria State Emergency Service for the purpose of disseminating emergency management information. The contents of the information have not been independently verified by the Victoria State Emergency Service. No liability is accepted for any damage, loss or injury caused by errors or omissions in this information or for any action taken by any person in reliance upon it.

Properties at risk from Flooding Over-Floor in Frankston South and Langwarrin South during a 1% AEP event								
Reside	ntial Commercial		al Commercial Industrial			Rural	Pι	ublic Use
Street No. at Risk		Street		Suburb	Alo	Along Melbourne Water Watercourse		Flood Risk Type
99	Sycamore Road		Frank	Frankston South		Sweetwater Creek		Flash
Total								
1								

Table C3.3 - Properties at risk of flooding over-floor in Frankston South and Langwarrin South in the City of Frankston

#### Isolation

No major isolation risks exist for areas around Frankston South and Langwarrin South during a 1% AEP (100yr ARI) event. Some localised short-duration isolation may occur due to flash flooding.

#### **Essential Infrastructure**

During an event, see the Public Transport Victoria's Website for details on delays or alterations to services. <a href="http://ptv.vic.gov.au/live-travel-updates/">http://ptv.vic.gov.au/live-travel-updates/</a>. A map of Public Transport routes for the City of Frankston is available via the website at: <a href="https://www.ptv.vic.gov.au/assets/default-site/more/maps/Local-area-maps/Metropolitan/4afa74b3f6/14\_Frankston\_LAM.pdf">https://www.ptv.vic.gov.au/assets/default-site/more/maps/Local-area-maps/Metropolitan/4afa74b3f6/14\_Frankston\_LAM.pdf</a>

Apart from the roads outlined below, all other essential infrastructure and services areas around Frankston South and Langwarrin South are expected to remain unaffected by flooding during a 1% AEP (100yr ARI) event.

#### **Road Closures**

The following roads are subject to closure during flooding around Frankston South and Langwarrin South. Check the VicTraffic website for more details: <a href="http://alerts.vicroads.vic.gov.au/">http://alerts.vicroads.vic.gov.au/</a>

#### Department of Transport Roads likely flooded in a 1% AEP (100yr ARI) event

• Nil Roads expected to be at flood risk

Table C3.4 – Department of Transport Possible Road Closures during a flooding event

Frankston City Council Roads likely flooded in a 1% AEP (100yr ARI) event				
FRANKSTON SOUTH	LANGWARRIN SOUTH			
Sycamore Street	•			

Table C3.5 – Frankston City Council Possible Road Closures during a flooding event

# **Flood Mitigation**

#### **Retarding Basins**

Melbourne Water Retarding Basin	On Drain/ Waterway	Area	Storage Capacity	Spillway Crest Level	Full Supply Level	Embankment Crest Height (Level)	ANCOLD Hazard Rating	Properties in Flow Path (WD DCF Failure)	Melway Reference
Garden Brae Court	Baxter East Drain	0.123 ha	0.5 ML	nil	Unknown	Unknown	Very Low	0	107 F4
Langwarrin South	Langwarrin South Drain	4.006 ha	10 ML	nil	61.8m AHD	62.0m AHD	Very Low	0	136 D10

Table C3.6 - Melbourne Water Retarding Basins within Frankston South and Langwarrin South in Frankston City

Frankston City Council Retarding Basin	On Drain/ Waterway	Area	Spillway Crest Level	Full Supply Level	Embankment Crest Height (Level)	Properties in Flow Path (WD DCF Failure)	Melway Reference
BAXTER PARK (Sages Road) RETARDING BASIN	Frankston Flinders Road Frankston South	1.8 ha	50.85	50.85	51.00	Approx. 20	106 H4
CHRISTOPHER RESERVE RETARDING BASIN (Moorooduc Hwy near Christopher Drive)	Frankston Flinders Road Frankston South				In Cut	0	102 H12
WOODSIDE AVENUE RETARDING BASIN	Woodside Avenue Frankston South				In Cut	0	102 J12

Table C3.7 – Frankston City Council Retarding Basins within Frankston South and Langwarrin South in Frankston City

# **Sewerage Infrastructure**

Sewerage Infrastructure of note during a severe flood event located around Frankston South and Langwarrin South is contained within the following table.

#### **Sewer Pumping Stations**

Sewerage Pumping Station	On Drain / Waterway	Bank / Side of Waterway	Operator	Location	Melway Reference
Aqueduct Road	Langwarrin South Drain	-	South East Water	Aqueduct Road, Langwarrin South	136 B8
Baden Powell Drive	Sweetwater Creek	North	South East Water	Baden Powell Drive, Frankston South	102 A8
Gulls Way	Kackeraboite Creek	North	South East Water	Gulls Way, Frankston South	101 H7

Table C3.8 - Sewer Pumping Stations in Frankston South and Langwarrin South in Frankston City

# Flood Impacts and Operational Considerations (Intelligence Cards)

The tables on the following pages provide a breakdown of the possible consequences of flooding in Frankston South and Langwarrin South at various rain totals. These tables are to be used only as a guide as no two floods at a location will have identical impacts.

Intelligence Cards have been included for the following locations:

Frankston South and Langwarrin South

## FLOOD INTELLIGENCE CARD - FRANKSTON SOUTH & LANGWARRIN SOUTH (UNGAUGED)

Version 1 – January 2021



Note: flood intelligence records are approximations. This is because no two floods at a location, even if they peak at the same height, will have identical impacts. Flood intelligence cards detail the relationship between flood magnitude and flood consequences. More details about flood intelligence and its use can be found in the Australian Emergency Management Manuals flood series.

This Flood Intelligence Card publication is presented by the Victoria State Emergency Service for the purpose of disseminating emergency management information. The contents of the information have not been independently verified by the Victoria State Emergency Service. No liability is accepted for any damage, loss or injury caused by errors or omissions in this information or for any action taken by any person in reliance upon it. **Scan the QR code for the current rain totals for this gauge.** 

CLOSEST RAIN GAUGE:	E: Frankston Reservoir		MELWA
LOCATION:	Frankston Reservoir, Frankston South		GAUGE
WEBSITE:	https://www.melbournewater.com.au/water-data-and-education/rainfall-and-river-levels#/reader/228819A		GAUGE

MELWAY REF:	102 E10
GAUGE NUMBER:	228819A
GAUGE TYPE:	Rain

Design Rainfall Depths (mm) – Indication of Possible Flooding	Annual Exceedance Probability (% AEP)	Consequence / Impact	Operational Considerations
20mm in 10 mins; 32mm in 30 mins; 39mm in 1 hour; 47mm in 2 hours; 54mm in 3 hours; or 70mm in 6 hours  Note: rainfall depths are a very rough method of estimating flood events and have been used due to the ungagged nature of the catchment. This should be used as a guide only.	1% AEP (100-year ARI)	Note: It is not known at what level infrastructure contained below starts being flooded Properties at Flood Risk (Over-Floor)  1 Properties in Total Sweetwater Creek 99 Sycamore Road, Frankston South Community Infrastructure Likely Flooded Baxter East Drain Woodleigh School – Senior Campus on Golf Links Road, Langwarrin South Water Over Road (over 300mm depth) Sweetwater Creek Sycamore Road, Frankston South	

Table C1.17 - Breakdown of possible consequences at various rainfall intensities around Frankston South and Langwarrin South with operational considerations

#### APPENDIX D - FLOOD EVACUATION ARRANGEMENTS

#### Phase 1 - Decision to Evacuate

The IC may make the decision to evacuate an at-risk community under the following circumstances:

Properties are likely to become inundated.

Properties are likely to become isolated and occupants are not suitable for isolated conditions.

Public health is at threat as a consequence of flooding and evacuation is considered the most effective risk treatment. This is the role of the Health Commander of the incident to assess and manage. Refer to the State Emergency Management Plan (SEMP) for details);

Essential services have been damaged and are not available to a community and evacuation is considered the most effective risk treatment.

The following should be considered when planning for evacuation:

- Anticipated flood consequences and their timing and reliability of predictions.
- Size and location of the community to be evacuated.
- Likely duration of evacuation.
- Forecast weather.
- Flood Models.
- Predicted timing of flood consequences.
- Time required to conduct the evacuation.
- Time available to conduct the evacuation.
- Evacuation priorities and evacuation planning arrangements.
- Access and egress routes available and their potential flood liability.
- Current and likely future status of essential infrastructure.
- Resources required to conduct the evacuation.
- Resources available to conduct the evacuation.
- Shelter including Emergency Relief Centres, Assembly Areas etc.
- Persons at higher risk in an emergency and their relevant facilities.
- Transportation.
- Registration
- People of CALD background and transient populations.
- Safety of emergency service personnel.

Different stages of an evacuation process.

The decision to evacuate is to be made by the IC in consultation with the MEMO, MERC, MRM, DFFH, DH, Health Commander and other key agencies and expert advice (CMA's and Flood Intelligence specialists).

There are currently no pre-established triggers for evacuation within Frankston City.

## Phase 2 - Warning

Warnings may include a warning to prepare to evacuate and a warning to evacuate immediately. Once the decision to evacuate has been made, the at-risk community will be warned to evacuate. Evacuation warnings can be disseminated via methods listed in part 3 of this plan.

Evacuation warning messages will be developed and issued by VICSES in consultation with the MEMO, MERC, MRM, DFFH, DH and other key agencies and expert advice (CMA's and Flood Intelligence specialists).

#### Phase 3 - Withdrawal

Withdrawal will be controlled by VicPol. VICSES will provide advice regarding most appropriate evacuation routes and locations for at-risk communities to evacuate to, etc.

VICSES, CFA, AV and Local Government will provide resources where available to support VicPol/VicRoads with route control and may assist VicPol in arranging evacuation transportation.

VicPol will control security of evacuated areas.

Evacuees will be encouraged to move using their own transport where possible. Transport for those without vehicles or other means will be arranged at the request of the IC or via the appointed VicPol evacuation manager.

Landing zones for helicopters:

No Landing Zones for helicopters have been pre identified. There are numerous parks and open areas which could be utilised in an emergency.

Landing zones for aircraft will be determined by the following:

- The IC will determine the requirements for airborne resources
- The State Aircraft Desk will deploy and coordinate air resources
- The pilot in command will determine the safest location to land.

#### **Vulnerable People in Emergencies**

Vulnerable people living in the community are often identified through funded agencies, community service organisations or other community networks. Such people will be assessed against the DFFH definition of vulnerability and may qualify for registration on the Vulnerable Persons Register (VPR). A list of facilities where vulnerable people may be located is also kept by Council however this list is not exhaustive. These may be funded facilities including education, health and childcare, Commonwealth regulated aged care facilities and other locally identified facilities. Many persons at higher risk in an emergency will remain unidentified and agencies must provide support and assistance to those most vulnerable as required. Consideration must be given to the dignity, mobility, accessibility and communication needs of all residents in all phases of an emergency,

#### Phase 4 – Shelter

Relief/ Recovery Centres and/or assembly areas which cater for people's basic needs may be established to meet the immediate needs of people affected by storm and/or flooding. Relief Centres will be determined dependent on location and size of event.

The emergency Relief/ Recovery centres and/or Assembly Areas are listed in the table below:

Sector	Relief Centre/Assembly Area (include address)	Comments
To be determined dependant on location/ size of event	Frankston South	As per ERC facility plan available through MEMO
To be determined dependant on location/ size of event	Frankston North	As per ERC facility plan available through MEMO

VicPol in consultation with VICSES will liaise with Frankston City Council and DFFH where regional coordination is required, via the relevant control centre to plan for the opening and operation of emergency relief centres. This can best be achieved through the Emergency Management Team (EMT).

#### **Animal Shelter**

The need for animal shelter compounds will be determined dependant on the location and size of the event. Refer to the MEMP for more information.

#### **Caravans and Caravan parks**

No caravan evacuation sites have been identified in Frankston City. Where present, caravans may be evacuated. Caravan evacuation will be determined dependent on location and size of event.

#### Phase 5 - Return

Return will be consistent with the Strategic Plan for the Return of Community

The IC in consultation with VicPol will determine when it is safe for evacuees to return to their properties and will arrange for the notification to the community.

VicPol will manage the return of evacuated people with the assistance of other agencies as required.

Considerations for deciding whether to return include:

- Current storm/flood situation.
- Status of flood mitigation systems.
- Size and location of the community.
- Access and egress routes available and their status.
- Resources required to coordinate the return.
- Special needs groups, communication, and accessibility and carer requirements.
- · Forecast weather; and
- Transportation particularly for people with mobility considerations

## **Disruption to Services**

Disruption to a range of services can occur in the event of a flood. This may include road closures affecting school bus routes, water treatment plant affecting potable water supplies etc.

This table will be populated as a more detailed analysis of flood risk is completed.

Service	Impact	Trigger Point for action	Strategy/Temporary Measures
School Bus Routes	General road closures across network leading to student pickups being suspended	Inundation of road network and associated damage to an extent that it is unsafe for vehicles to use road	Alternate routes via clearly signed detours. Alternate routes to be determined by Council Traffic Engineers or works crews in conjunction with VicPol and Dept. of Education. Council work crews to install and monitor detour signage. Council Network Inspectors to monitor road conditions, closure signage and detour signage.  Alternate student collection points to be established.
Local Road Network	General road closures across network	Inundation of road network and associated damage to an extent that it is unsafe for vehicles to use road	Alternate routes via clearly signed detours. Alternate routes to be determined by Council Traffic Engineers, Council works personnel and VicPol. Council works crews to install and monitor detour signage. Council Network Inspectors to monitor road conditions, closure signage and detour signage.

## **Essential Infrastructure and Property Protection**

Essential Community Infrastructure and properties may require protection include residences, businesses, roads, power supply etc.

For small scale events sandbags can be purchased from Bunnings. For larger scale events sandbag collection points and filling points will be determined, with the community being informed of these points depending on the nature and proximity of the event.

#### Rescue

Requests for Frankston City Council resources to support rescue operations will forwarded to the MECC if established or EMLO if an ICC has been established.

Resources are available within the Frankston SES unit to assist with rescue operations. Full details of equipment and resources are held by the SES unit. Known high-risk areas/communities (i.e., low-lying islands) where rescues might be required are detailed in the **Appendix F** flood maps.

#### APPENDIX E - STORM AND FLOOD WARNING SYSTEMS

#### **Storm and Flood Warning**

Storm and Flood Warning products and Flood Class Levels can be found on the BoM website and through the VicEmergency website. Storm and Flood Warning Products include Severe Thunderstorm Warnings, Severe Weather Warnings, Flood Watches and Flood Warnings.

#### Flood Bulletins

VICSES distributes flood emergency information to the media through "Flood Bulletins". Flood Bulletins provide BoM Flood Warning information as well as information regarding possible flood consequences and safety advice, not contained in BoM Flood Warning products. VICSES uses the title Flood Bulletin to ensure emphasis is placed upon BoM Flood Warning product titles.

The relevant VICSES RDO or the established ICC will normally be responsible for drafting, authorizing and issuing issue Flood Bulletins, using the VicEmergency system.

Flood Bulletins should refer to the warning title within the Bulletin header, for example Flood Bulletin for Major Flood Warning on Yarra River.

Flood Bulletins should follow the following structure:

- What is the current flood situation.
- · What is the predicted flood situation.
- What are the likely flood consequences;
- What should the community do in response to flood warnings.
- · Where to seek further information.
- Who to call if emergency assistance is required.

It is important that the description of the predicted flood situation is consistent with and reflects the relevant BoM Flood Warning.

Flood Bulletins should be focused on specific gauge (or in the absence of gauges, catchment) reference areas, that is the area in which flood consequences specifically relate to the relevant flood gauge.

Flood Bulletins should be prepared and issued after receipt of each Flood Watch and Flood Warning from the BoM, or after Severe Weather or Thunderstorm Warnings indicating potential for severe flash flooding.

To ensure flood bulletins are released in a timely manner, standardised flood bulletins may be drafted based on different scenarios, prior to events occurring. The standardised flood bulletins can then be adapted to the specifics of the event occurring or predicted to occur.

## **Local Flood Warning System Arrangements**

There are no local flood warning systems or arrangements in place in Frankston City.

# **Moderate Flood Warning Example**

# Community Notification Sign-off

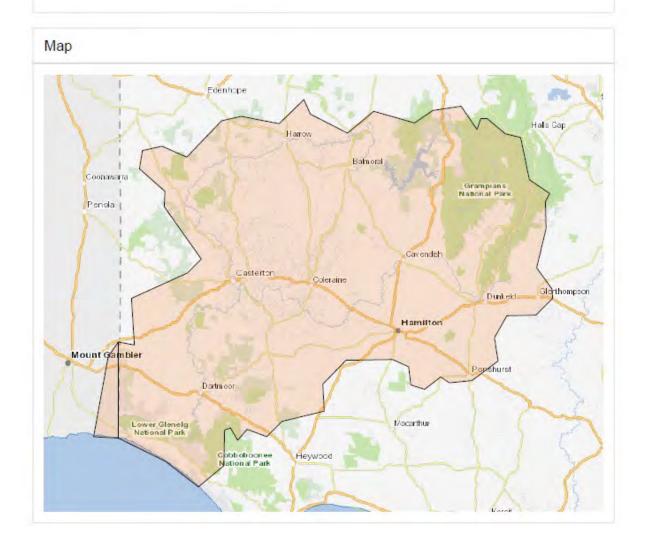


# MARNING - FLOOD

Incident Location: Incident Name: Issued:

Glenelg River at Casterton GlenelgRiverFloodSept2017 Set at publish time

Next Update Expected:



# Message

This Moderate Flood Warning is being issued for Glenelg River at Casterton.

- . In the 24hrs to 9am Friday up to 50mm of rainfall was recorded in the Glenelg River catchment.
- · A further 5mm to 10mm is forecast for the remainder of Friday.
- · Glenelg River: Moderate flooding is likely along the Glenelg River.
- The Glenelg River at Dergholm is above the minor flood level (4.0 m) and rising.
- The Glenelg River at Casterton is currently at 4.50 metres (minor flood level 3.8 m) and rising.
- The Glenelg River at Casterton is likely to exceed the moderate flood level (5.20 m) during Friday.

#### Act now - take actions immediately to protect your life and property.

#### What you should do:

Decide if you will evacuate if it becomes necessary.

#### If you choose to leave:

- · Remember to take your pets, mobile phone, spare clothes and medications.
- · Travel to the home of family or friends who are in a safe location, away from flooding.
- · Be aware of any road closures when you leave.

## If you are travelling:

- · Be aware of road hazards including mud, debris and damaged roads or bridges.
- · Floodwater is dangerous never drive, walk or ride through floodwater.

# If you stay or if it is unsafe to leave:

 Make sure you have enough food, drinking water, medications and pet food to survive for 3-5 days in case you become isolated.

You should stay informed by listening to emergency broadcasters and monitoring warnings.

## Impacts in your area:

· Flooding above floor level of a single story home is likely to occur in some locations.

This message was issued by State Emergency Service.

The next update is expected by [warning\_next\_update] or as the situation changes.

#### Flood information:

- For river heights check www.bom.gov.au (http://www.bom.gov.au/vic/flood/rain\_river.shtml) or phone 1300 659 217.
- For urgent animal welfare issues call Agriculture Victoria (http://agriculture.vic.gov.au/agriculture/emergencies) on 136 186 or your local vet.

#### Emergency contacts:

- For life threatening emergencies call Triple Zero (000).
- For flood and storm emergency assistance (http://www.ses.vic.gov.au/about/ShouldIcalltheSES.pdf) from the SES
  call 132 500.

## Stay informed:

- Via www.emergency.vic.gov.au (http://emergency.vic.gov.au/respond/).
- . Tune in to ABC Local Radio, commercial and designated community radio stations, or Sky News TV.
- Call the VicEmergency Hotline (https://vicemergency.zendesk.com/hc/en-gb/articles/115001055007-What-is-the-VicEmergency-Hotline-) to talk to someone about this warning on freecall 1800 226 226.
- People who are deaf, hard of hearing, or who have a speech/communication impairment can contact VicEmergency Hotline via the National Relay Service (http://relayservice.gov.au/) on 1800 555 677.

- For help with English, call the Translating and Interpreting Service (https://www.tisnational.gov.au/) on 131
  450 (freecall) and ask them to telephone VicEmergency Hotline. If you know someone who cannot speak English,
  provide them with this number.
- Download the VicEmergency app (https://vicemergency.zendesk.com/hc/en-gb/articles/230492607-What-is-the-VicEmergency-app-) or follow VicEmergency on Twitter (https://twitter.com/vicemergency) (#vicfloods) or Facebook (https://www.facebook.com/vicemergency).

_							
и.	0	C	٠.	h	~	$\sim$	,
_	а	ı, t	-		u		n

WARNING - FLOOD

Incident Location: Glenelg River at Casterton Incident Name: GlenelgRiverFloodSept2017

Issue Date: Next Update:

This Moderate Flood Warning is being issued for Glenelg River at Casterton.

- In the 24hrs to 9am Friday up to 50mm of rainfall was recorded in the Glenelg River catchment.
- A further 5mm to 10mm is forecast for the remainder of Friday.
- Glenelg River: Moderate flooding is likely along the Glenelg River.
- The Glenelg River at Dergholm is above the minor flood level (4.0 m) and rising.
- The Glenelg River at Casterton is currently at 4.50 metres (minor flood level 3.8 m) and rising.
- The Glenelg River at Casterton is likely to exceed the moderate flood level (5.20 m) during Friday.

Act now - take actions immediately to protect your life and property.

More details at http://emergency.vic.gov.au/respond/#!/warning/3941/moreinfo

# Twitter

Moderate Flood Warning for Glenelg River at Casterton. For more info: http://bit.ly/2tfmm6t #vicfloods

# Sign-off

Authorised By:

Authorised Signature:

# APPENDIX F – MAPS AND SCHEMATICS

# Overview

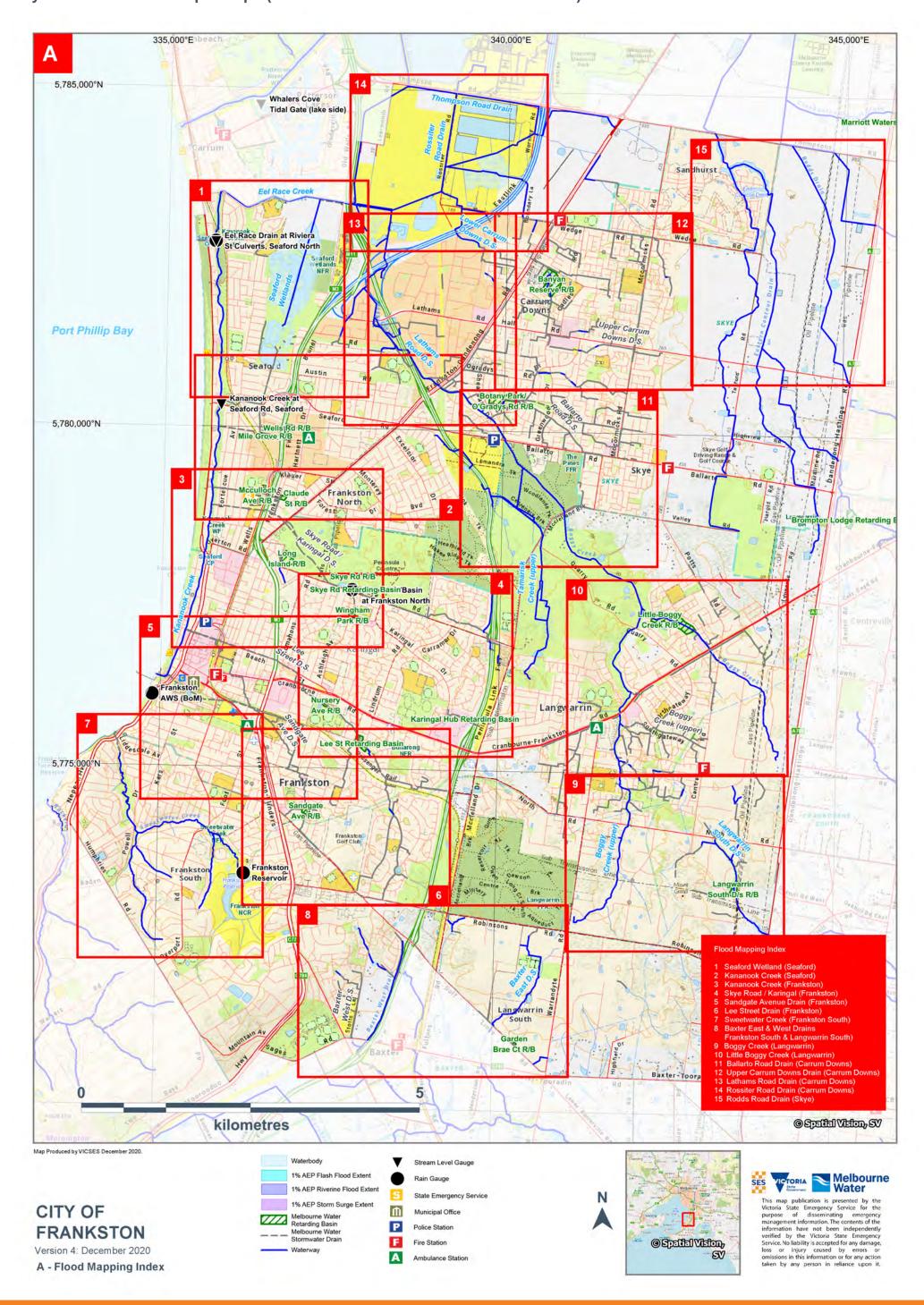
Maps considered useful to flood response are included in this Appendix. They include:

- A map outlining a series of flooding hot spot maps within Frankston City.
- A map showing the Municipal boundary together with the open waterways and underground stormwater drainage pipe network within Frankston City and the 1% AEP (100-year ARI) flood extents (sourced from Melbourne Water GIS).
- A set of 15 maps showing flooding hot spots within Frankston City together with the 1% AEP (100-year ARI) flood extents (sourced from the Melbourne Water GIS).
- Schematics detailing the drainage catchments relevant for this municipality.
  - Each Schematic outlines the drainage system comprising of rivers, creeks or stormwater drains contained within one of the major catchments in the Port Phillip & Westernport Region.
  - Within each Schematic, there are details useful to flood response such as those relating to gauges, towns, rivers, creeks, drains and reservoirs. Historical facts and figures may also be shown.
  - The schematics also detail the response boundaries for SES Units and local government, and provide a reference link to the corresponding Municipal Flood Emergency Plan.
  - Details within these Catchment Schematics reflect those contained within either other sections of this Municipal Flood Emergency Plan or refer to other Municipal Flood Emergency Plans. These details have been filtered to contain only key facts. For more information on a gauge, drainage system or town consult the corresponding Flood Emergency Plan

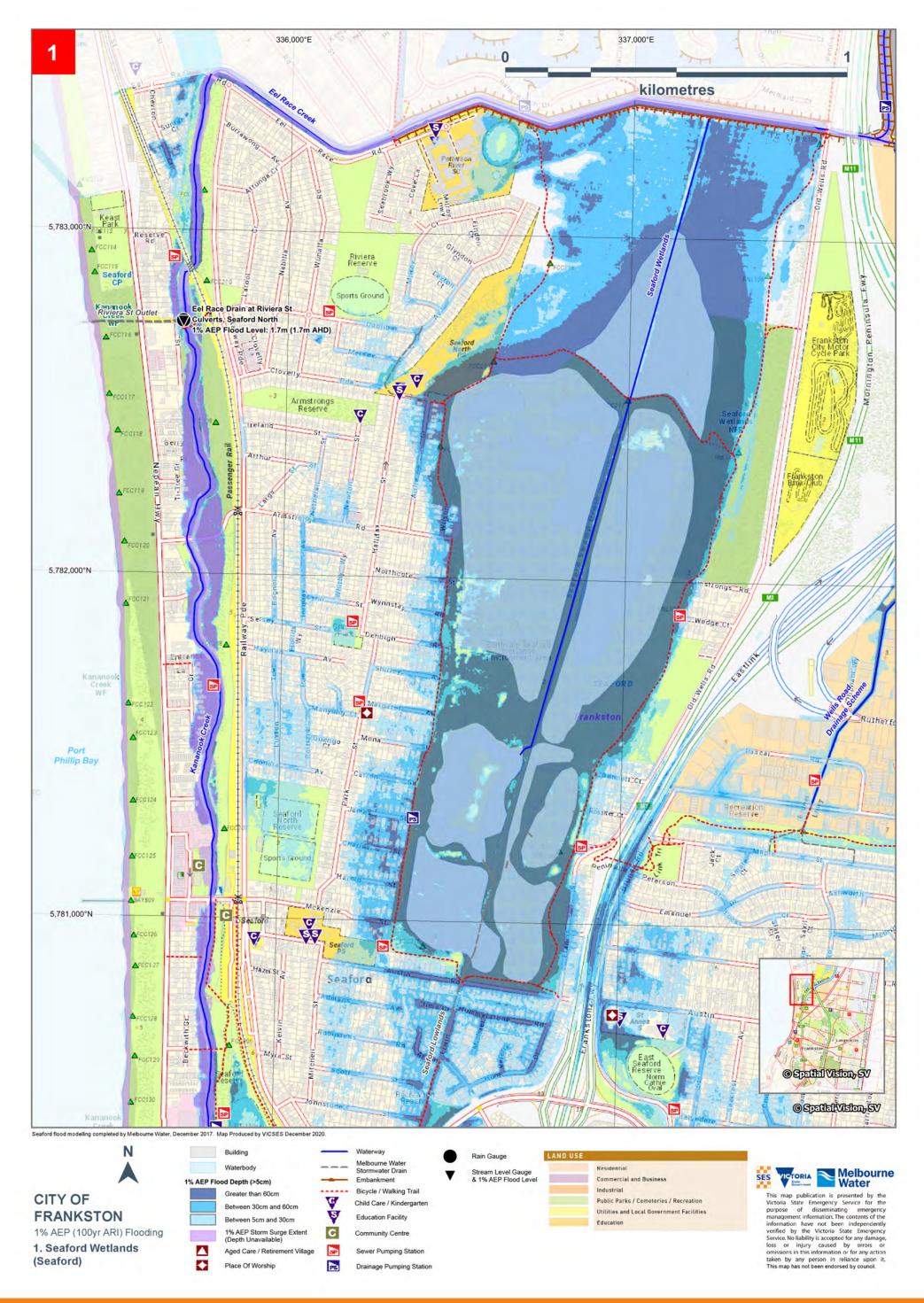
# Note that:

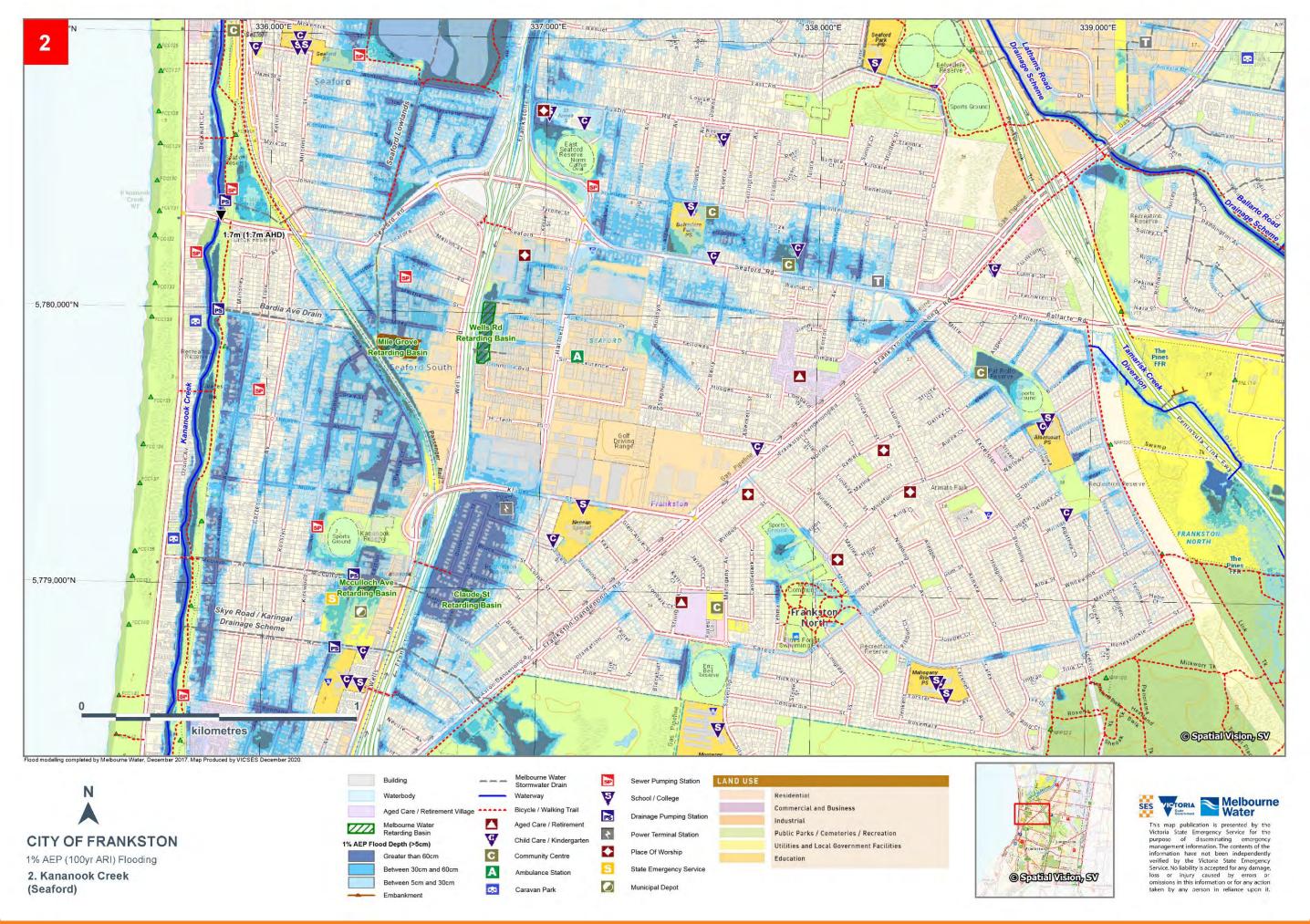
- The mapping/data provided in this Appendix has been developed from Melbourne Water and other sources and taken from historical records and flood modelling. It may not include more recent data or local anecdotal information. It is planned that the mapping/data be updated as further studies or modelling is completed and other Information obtained.
- Maps showing the Special Building Overlay and Land Subject to Inundation Overlay are included in the Frankston Planning Scheme can be used as a guide to areas that may flood during an event. The maps can be found in hard copy form at the Council's main office or online at the Department of Environment, Land, Water & Planning (DEECA) website <a href="https://mapshare.vic.gov.au/vicplan/">https://mapshare.vic.gov.au/vicplan/</a>.
- Maps showing 1 in 100-year ARI (1% AEP) flood extents and floodways (together with volume, height and water quality data) are shown at DEECA's mapshare website <a href="http://mapshare.maps.vic.gov.au/MapShareVic/index.html?viewer=MapShareVic.PublicSite&locale=e">http://mapshare.maps.vic.gov.au/MapShareVic/index.html?viewer=MapShareVic.PublicSite&locale=e</a> <a href="http://mapshare.maps.vic.gov.au/MapShareVic/index.html?viewer=MapShareVic.PublicSite&locale=e">http://mapshare.maps.vic.gov.au/MapShareVic/index.html?viewer=MapShareVic.PublicSite&locale=e</a> <a href="http://mapshare.maps.vic.gov.au/MapShareVic/index.html?viewer=MapShareVic.PublicSite&locale=e">http://mapshare.maps.vic.gov.au/MapShareVic/index.html?viewer=MapShareVic.PublicSite&locale=e</a> <a href="http://mapshare.maps.vic.gov.au/MapShareVic/index.html?viewer=MapShareVic.PublicSite&locale=e">http://mapshare.maps.vic.gov.au/MapShareVic/index.html?viewer=MapShareVic.PublicSite&locale=e</a> <a href="http://mapshare.maps.vic.gov.au/MapShareVic/index.html">http://mapshare.maps.vic.gov.au/MapShareVic/index.html</a>?

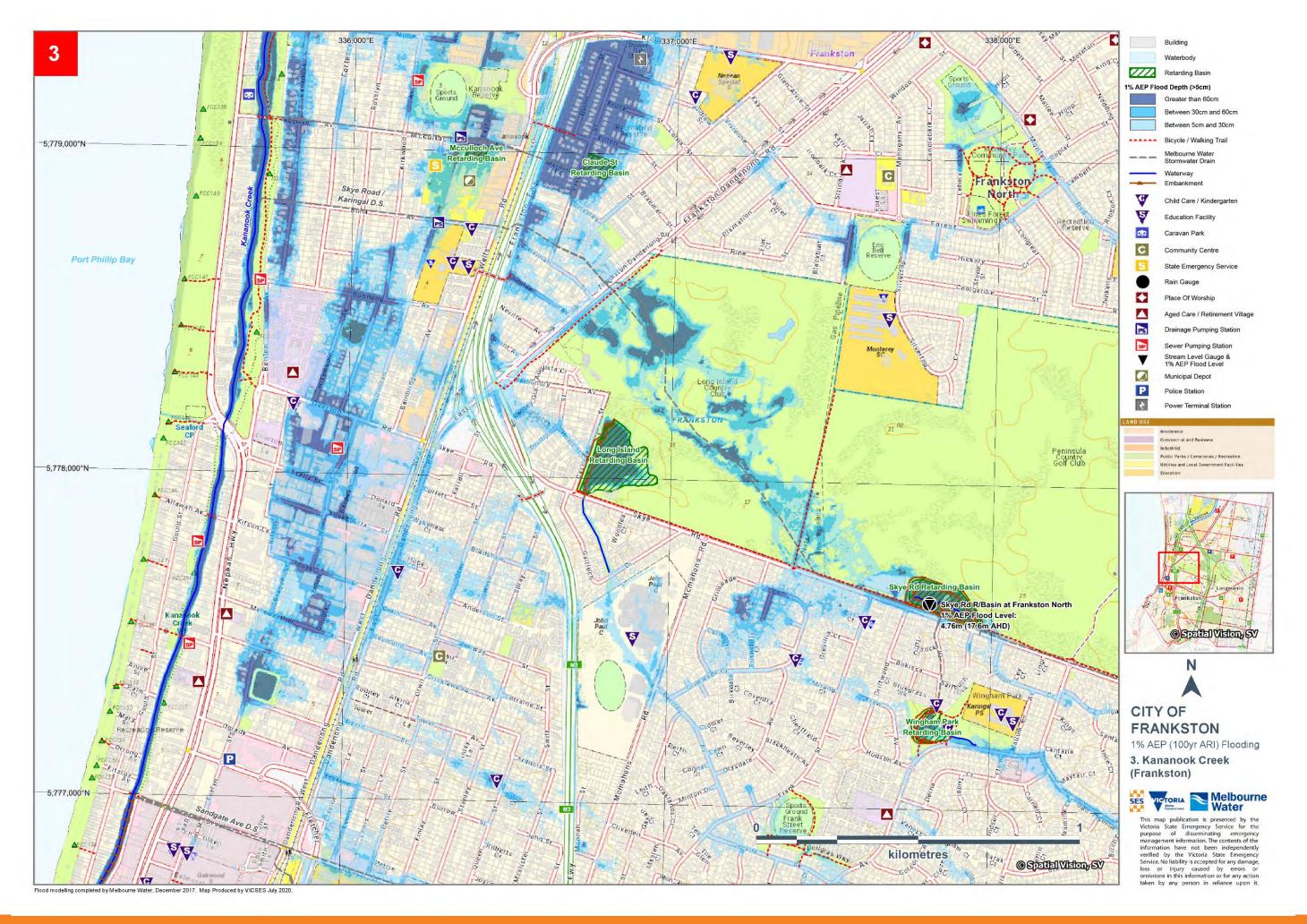
# Water GIS)

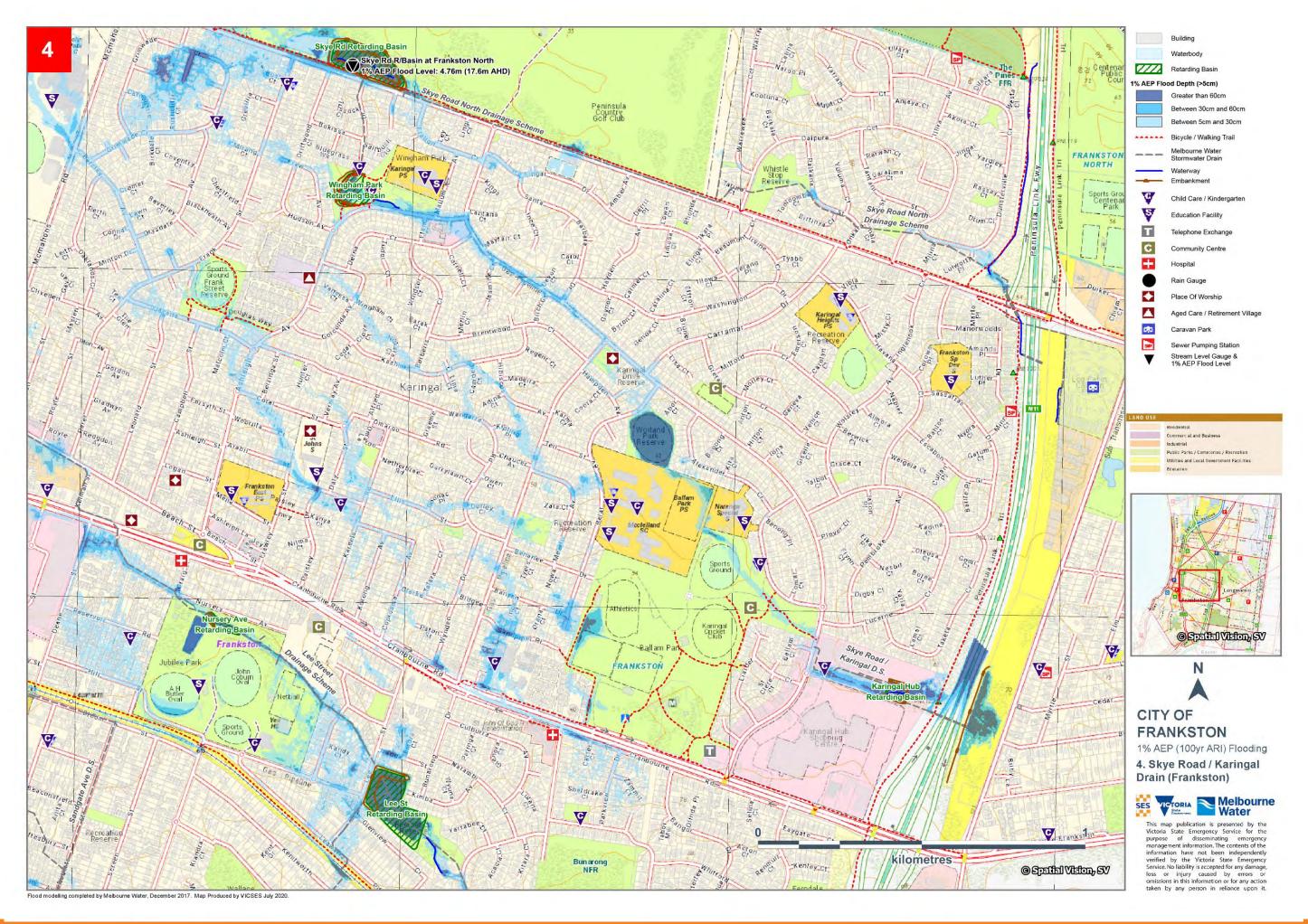


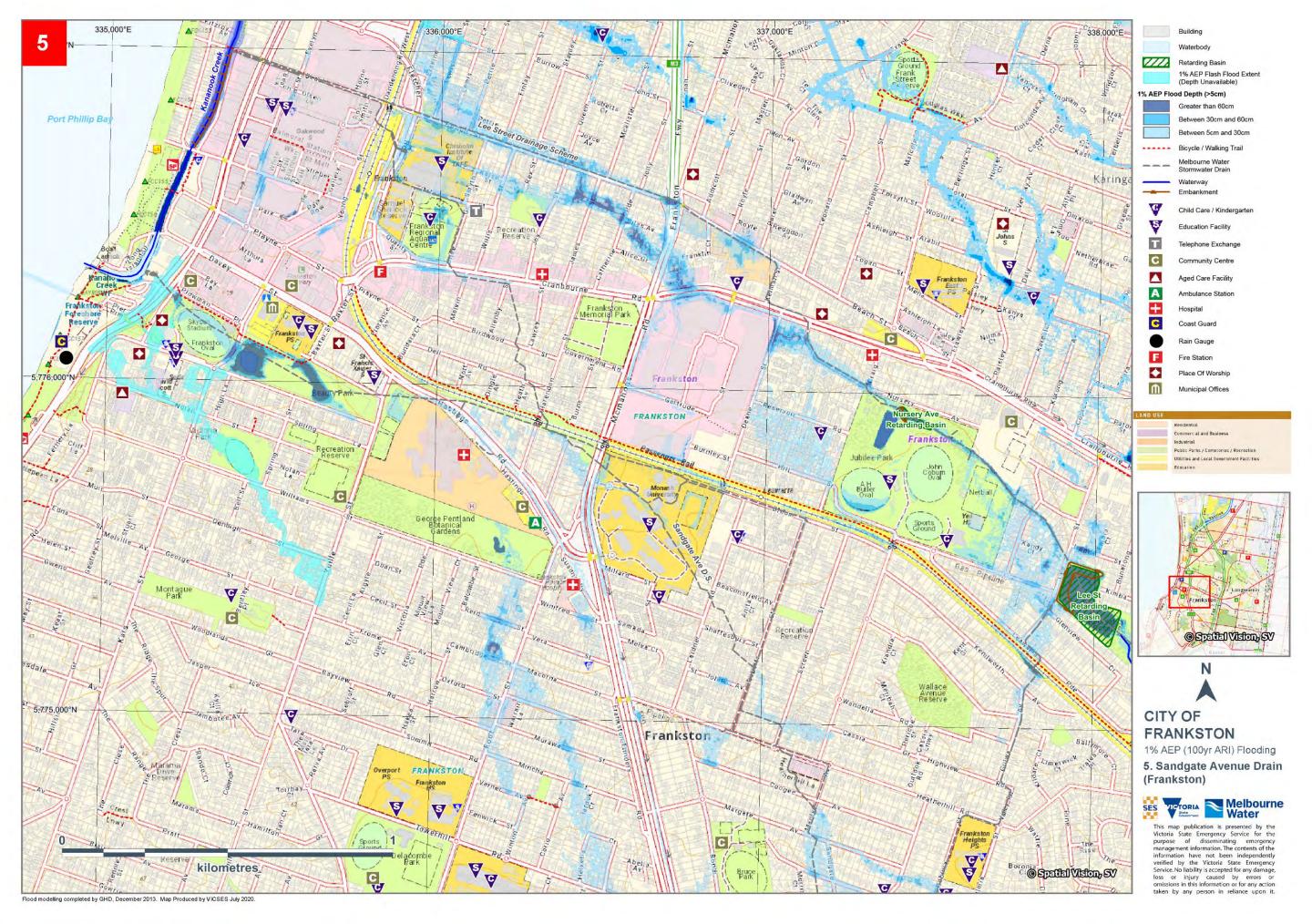


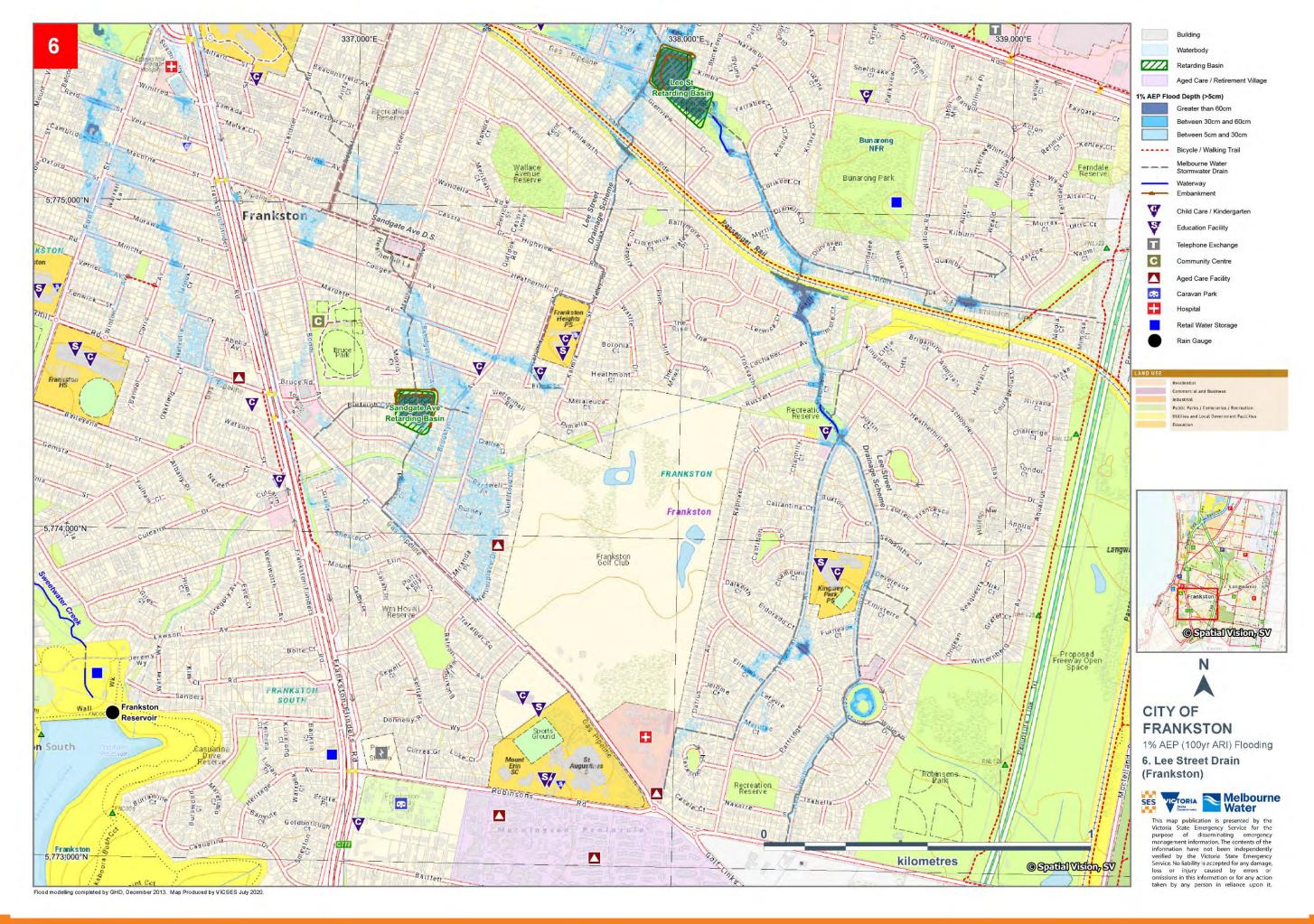


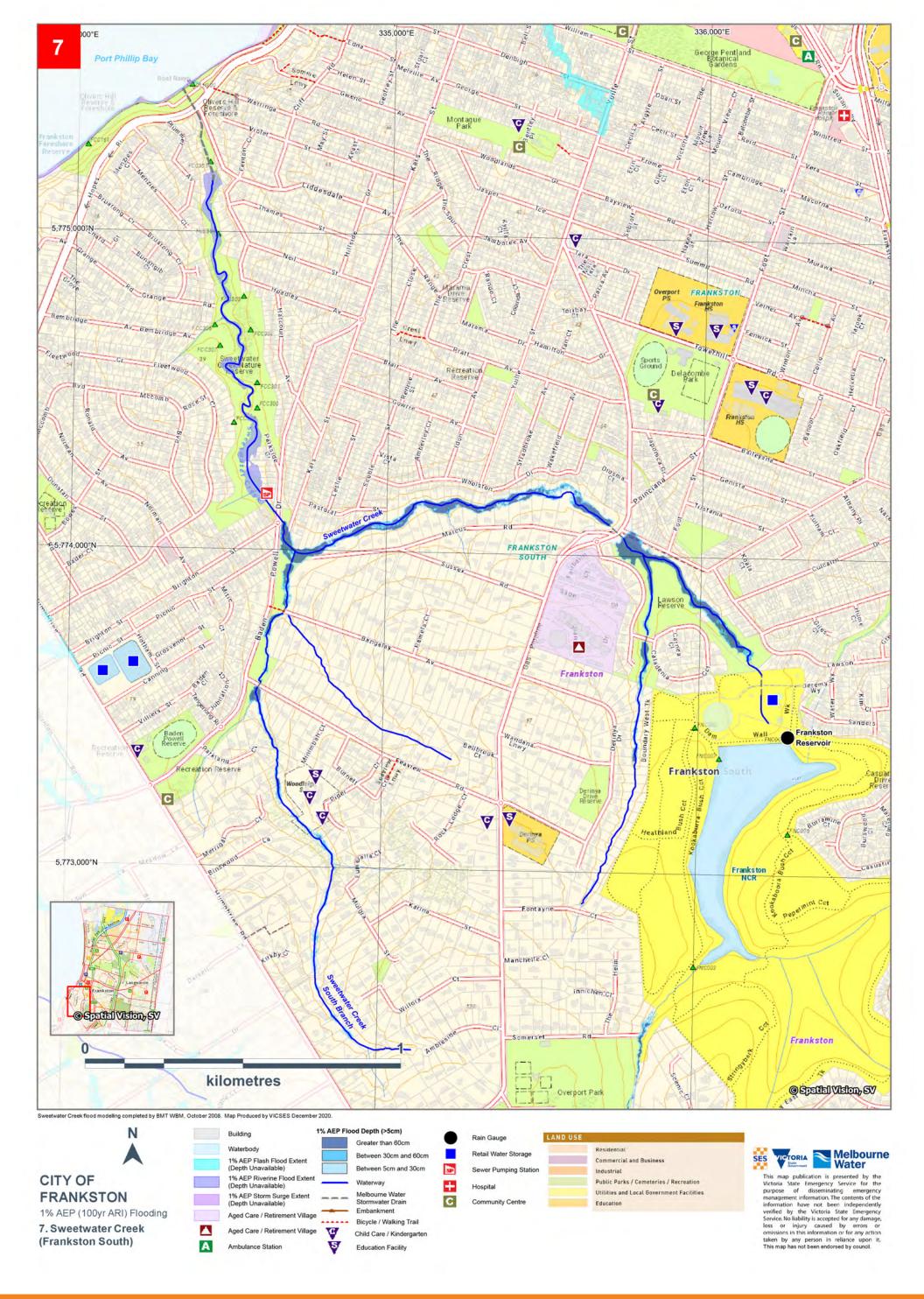


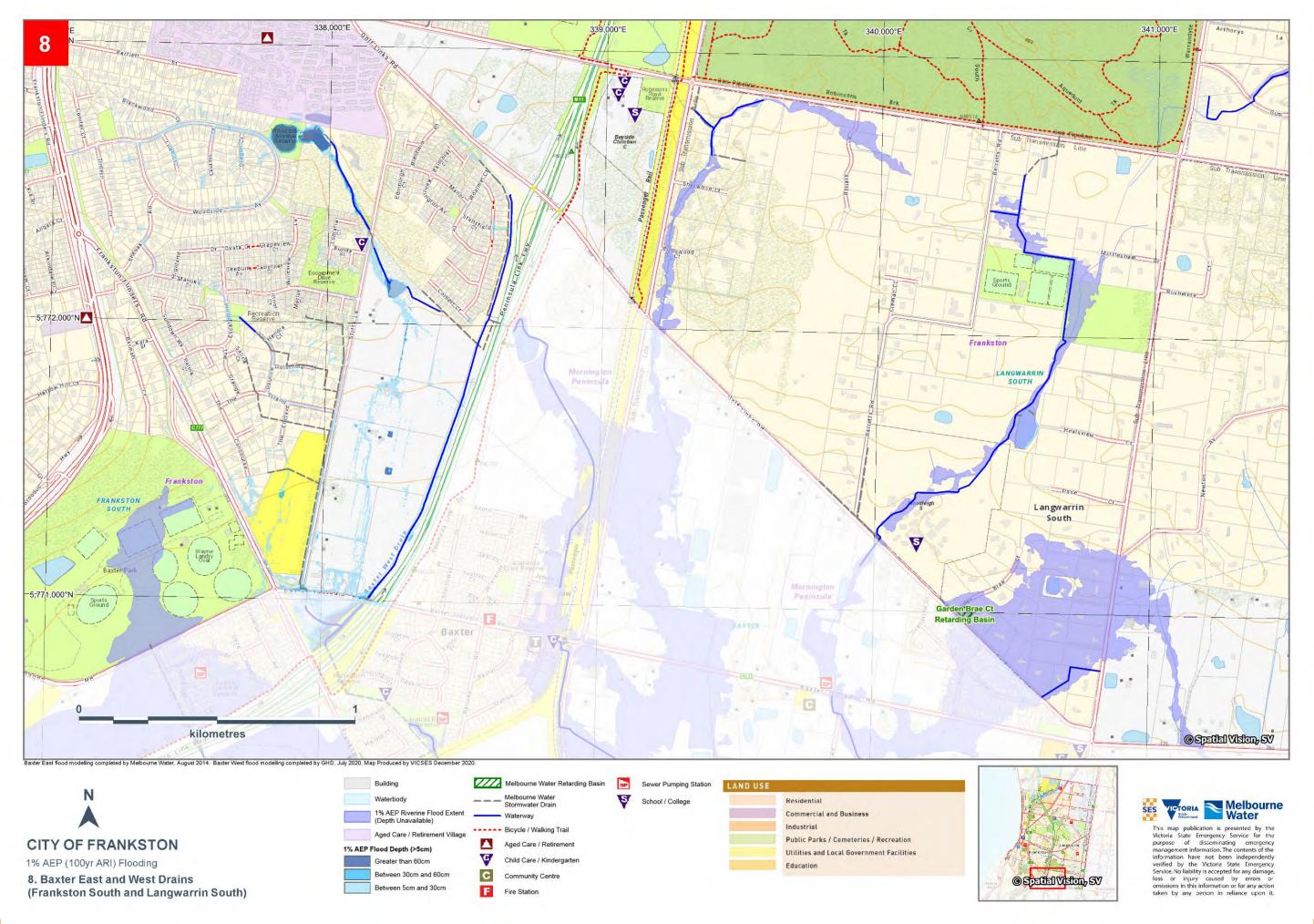


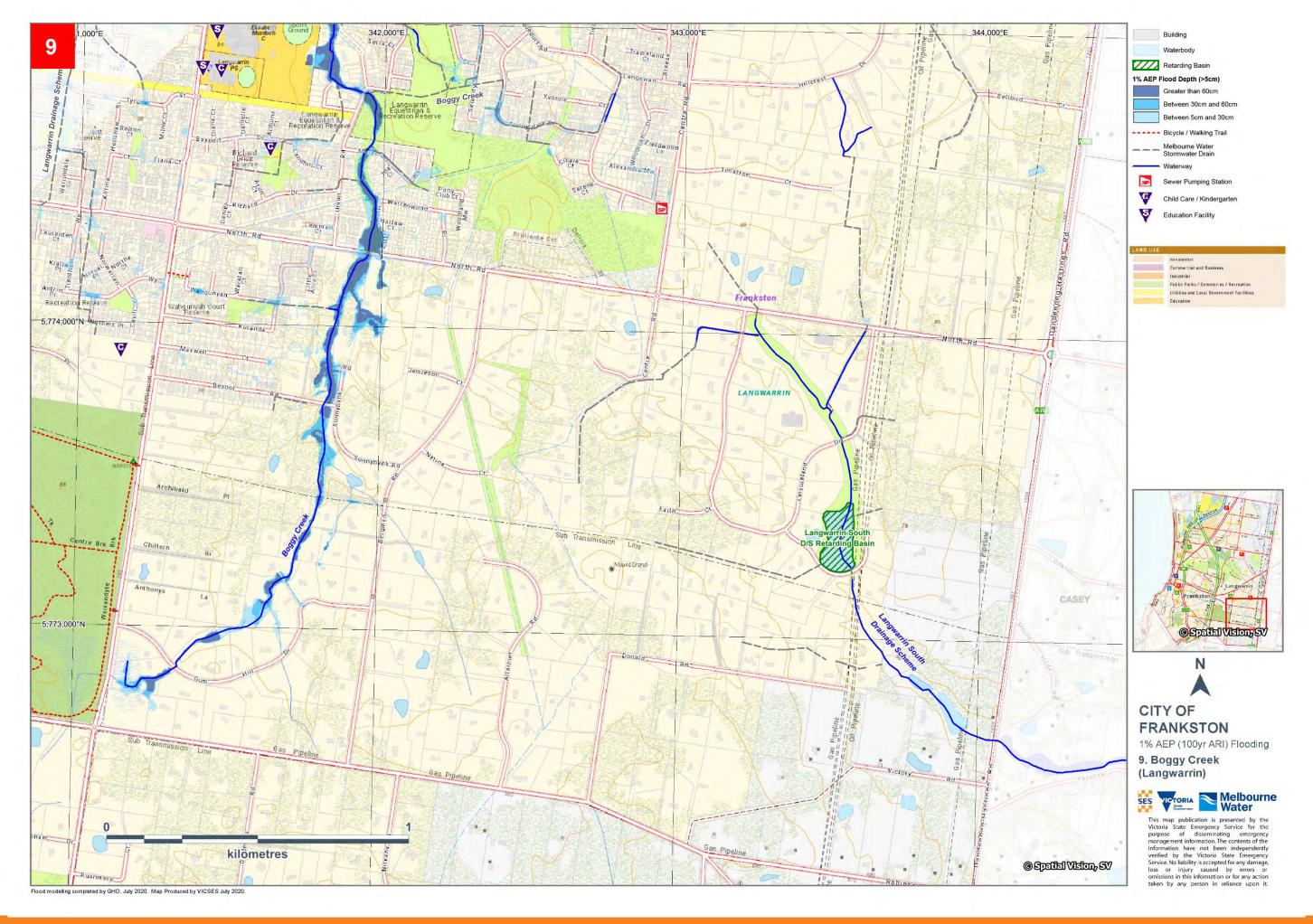


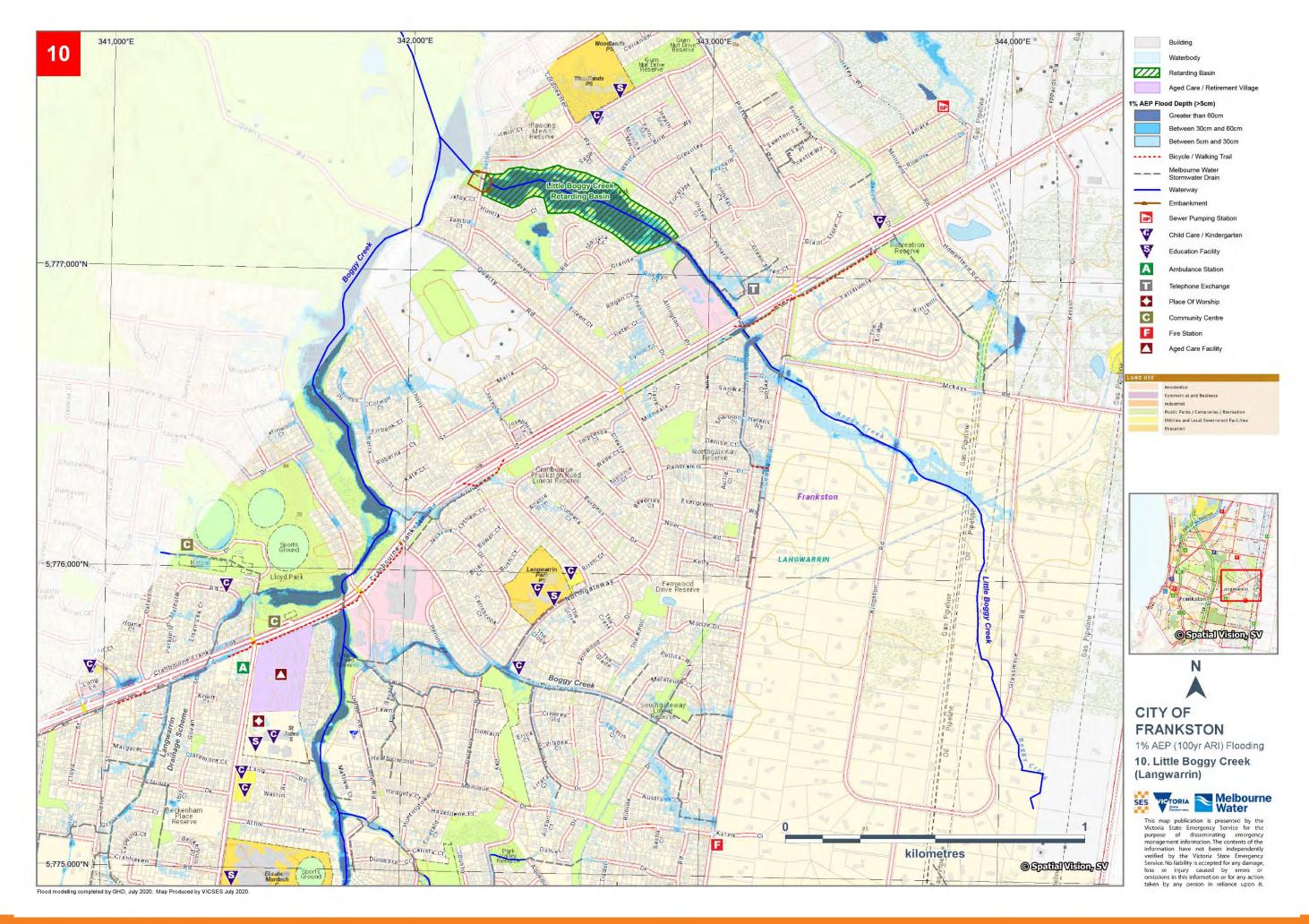


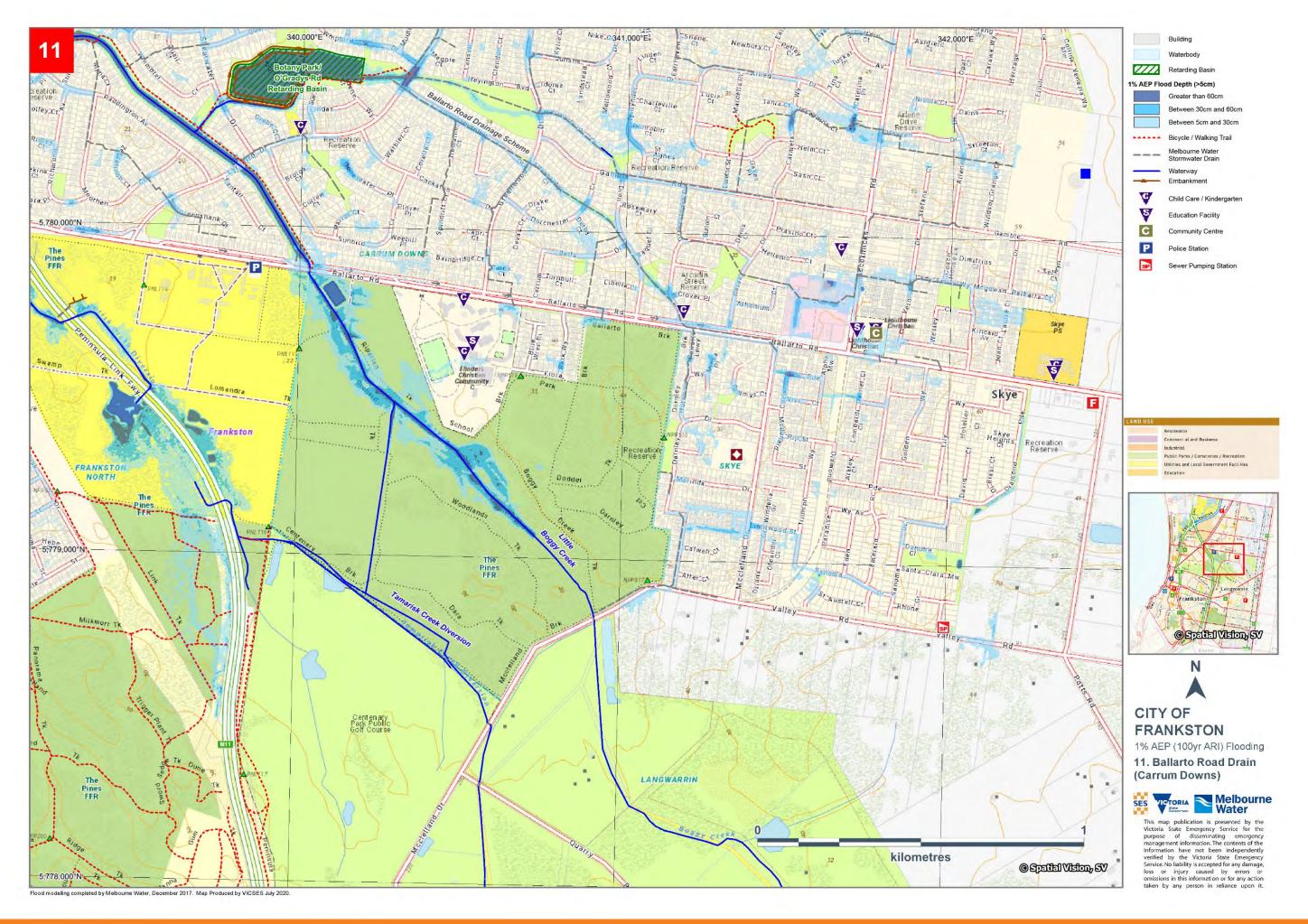


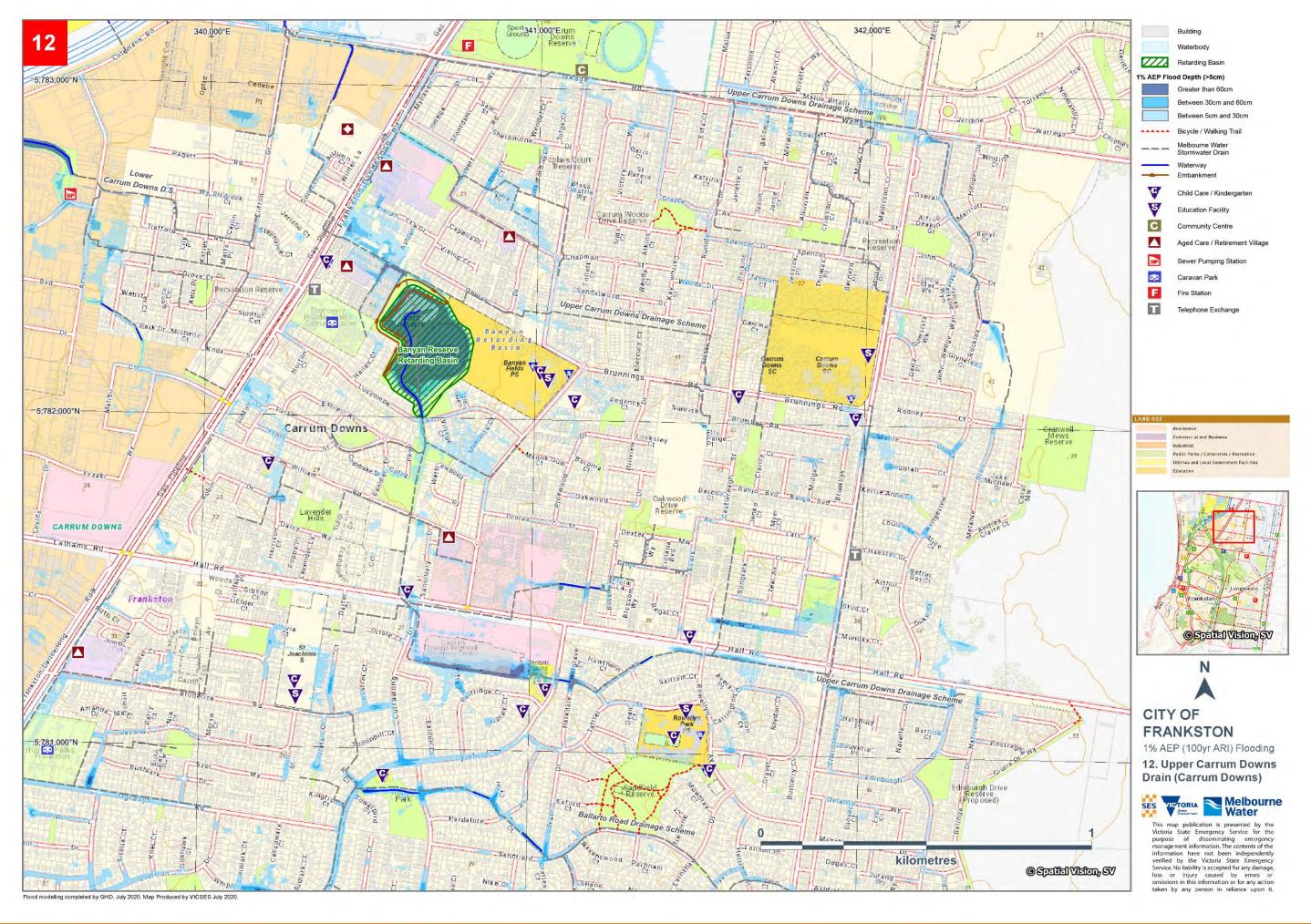




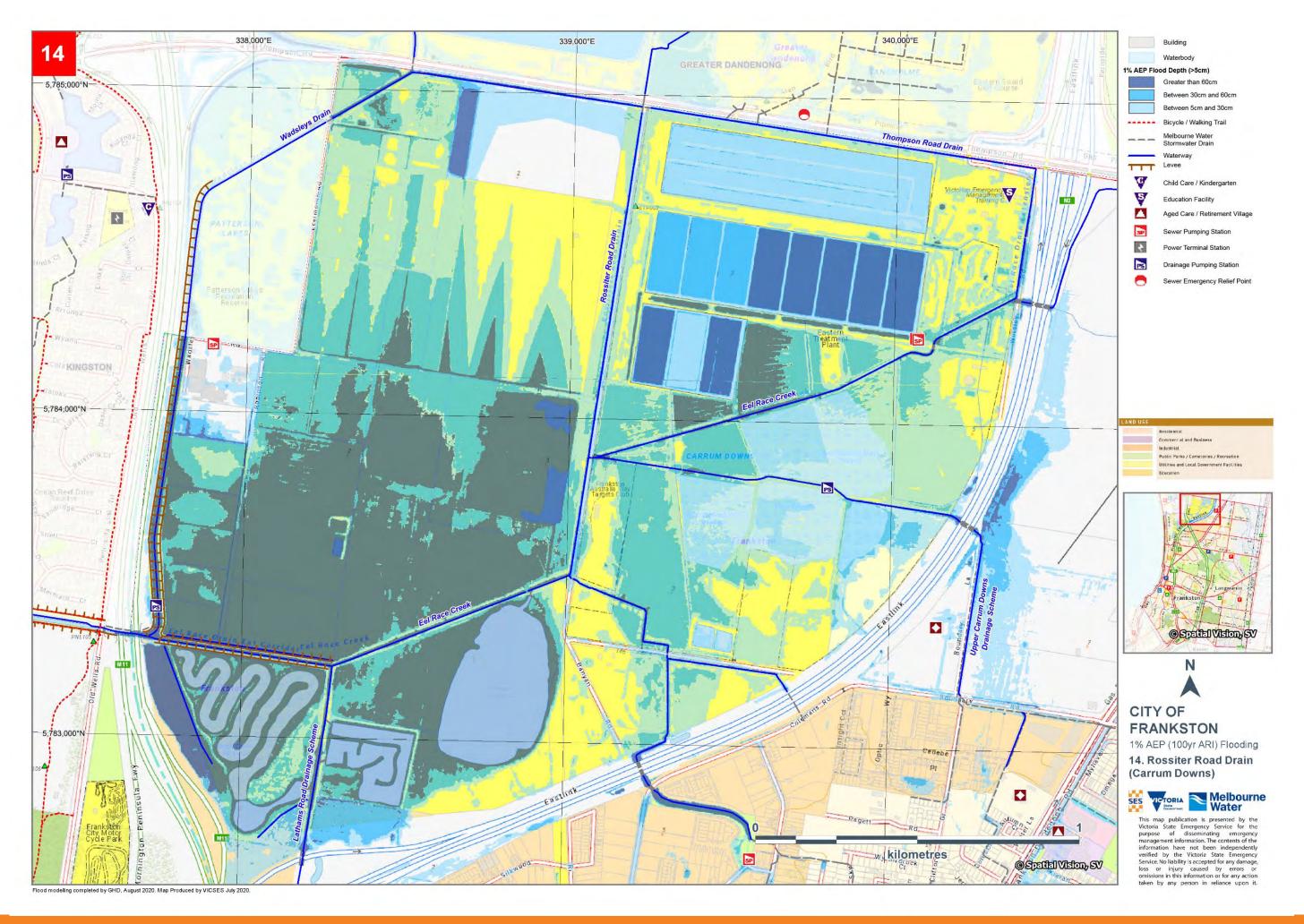


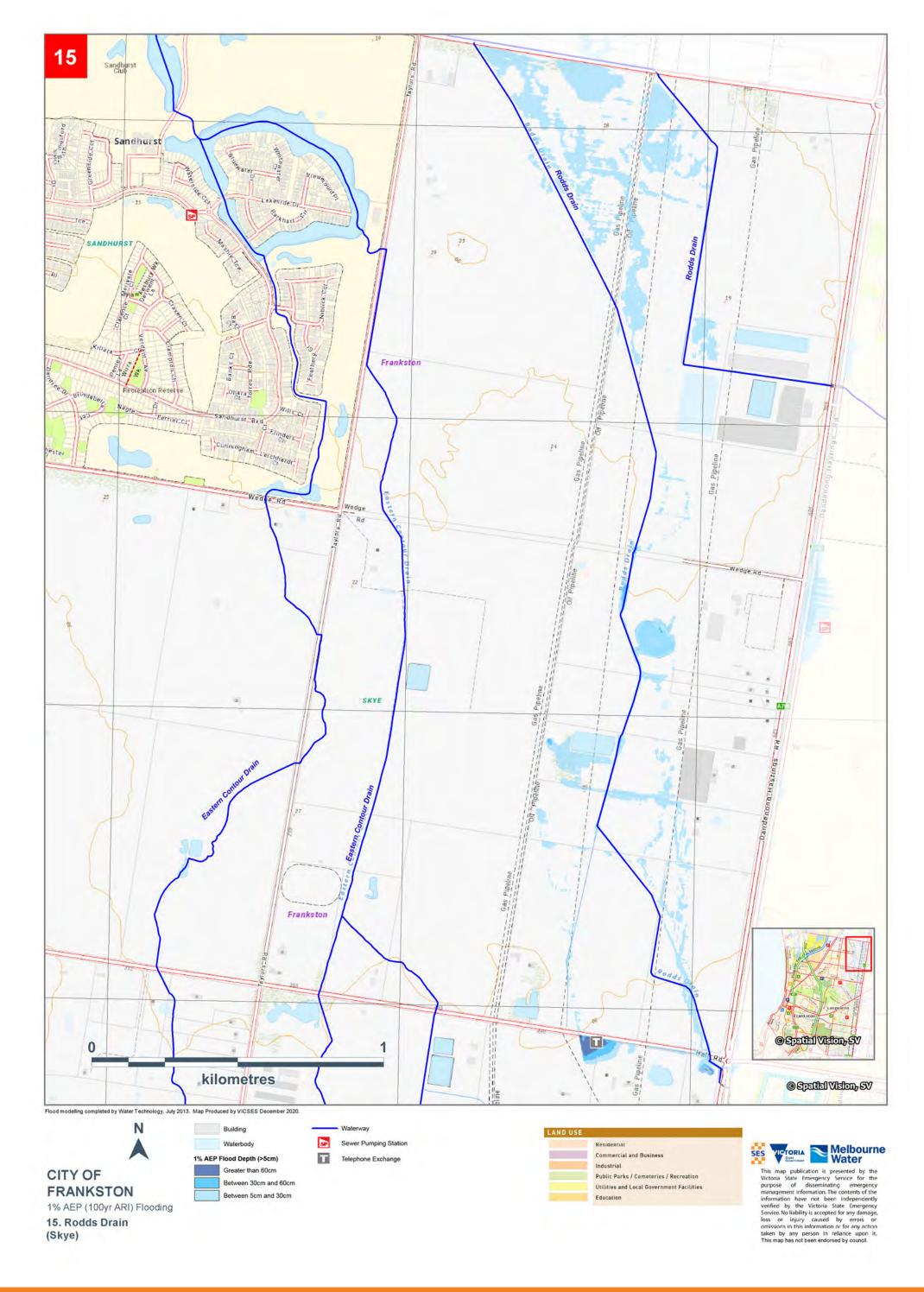


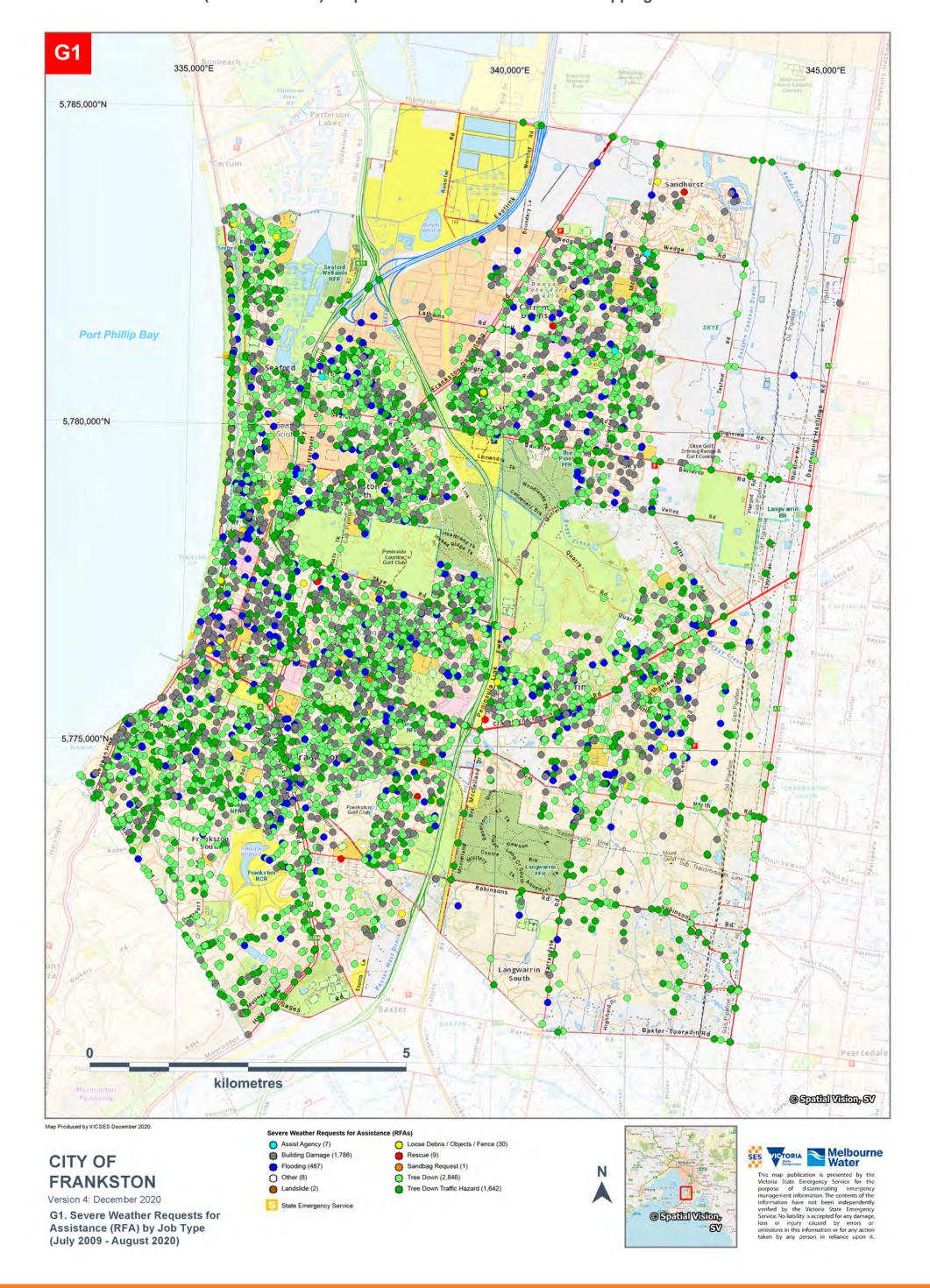


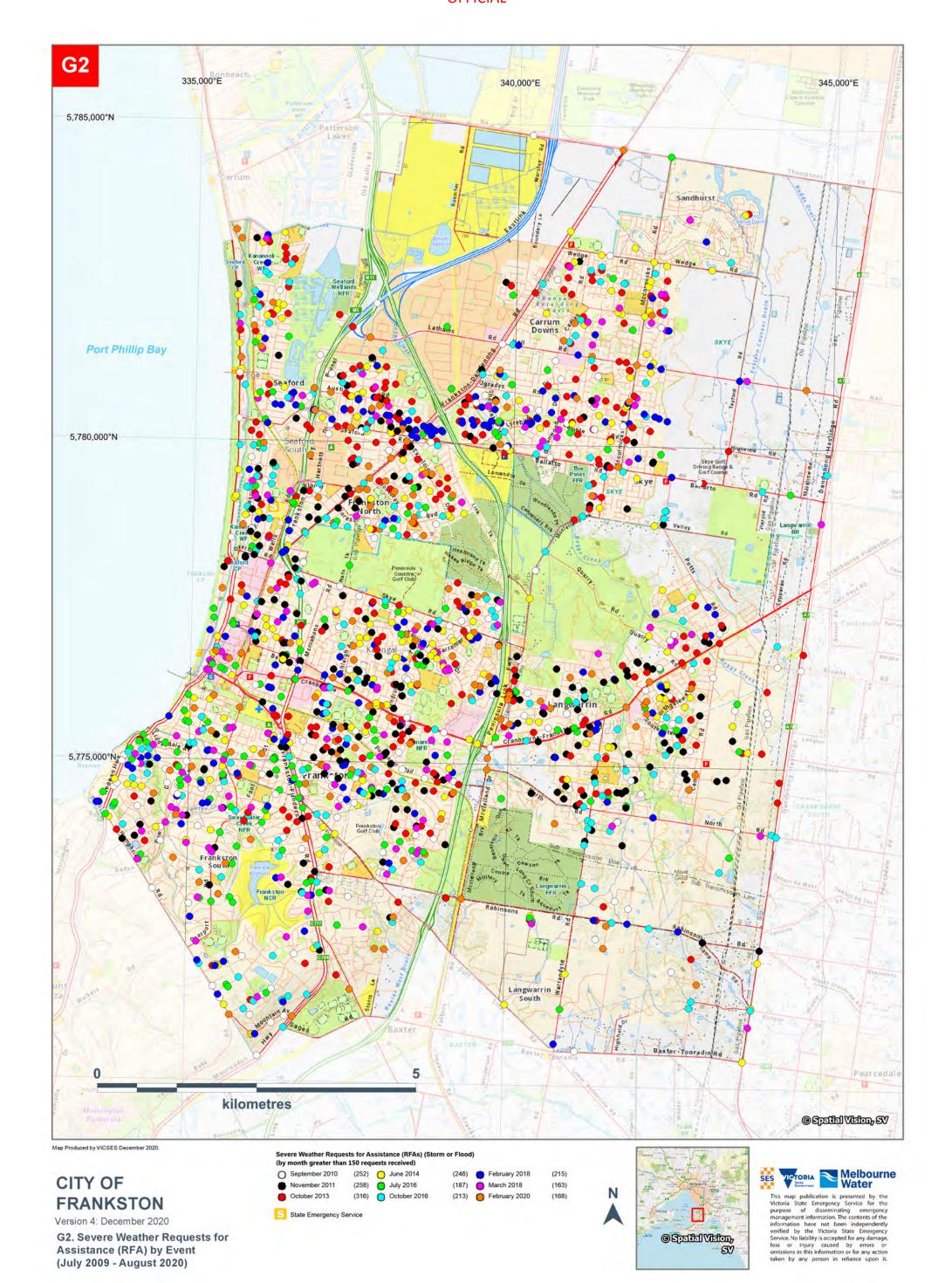








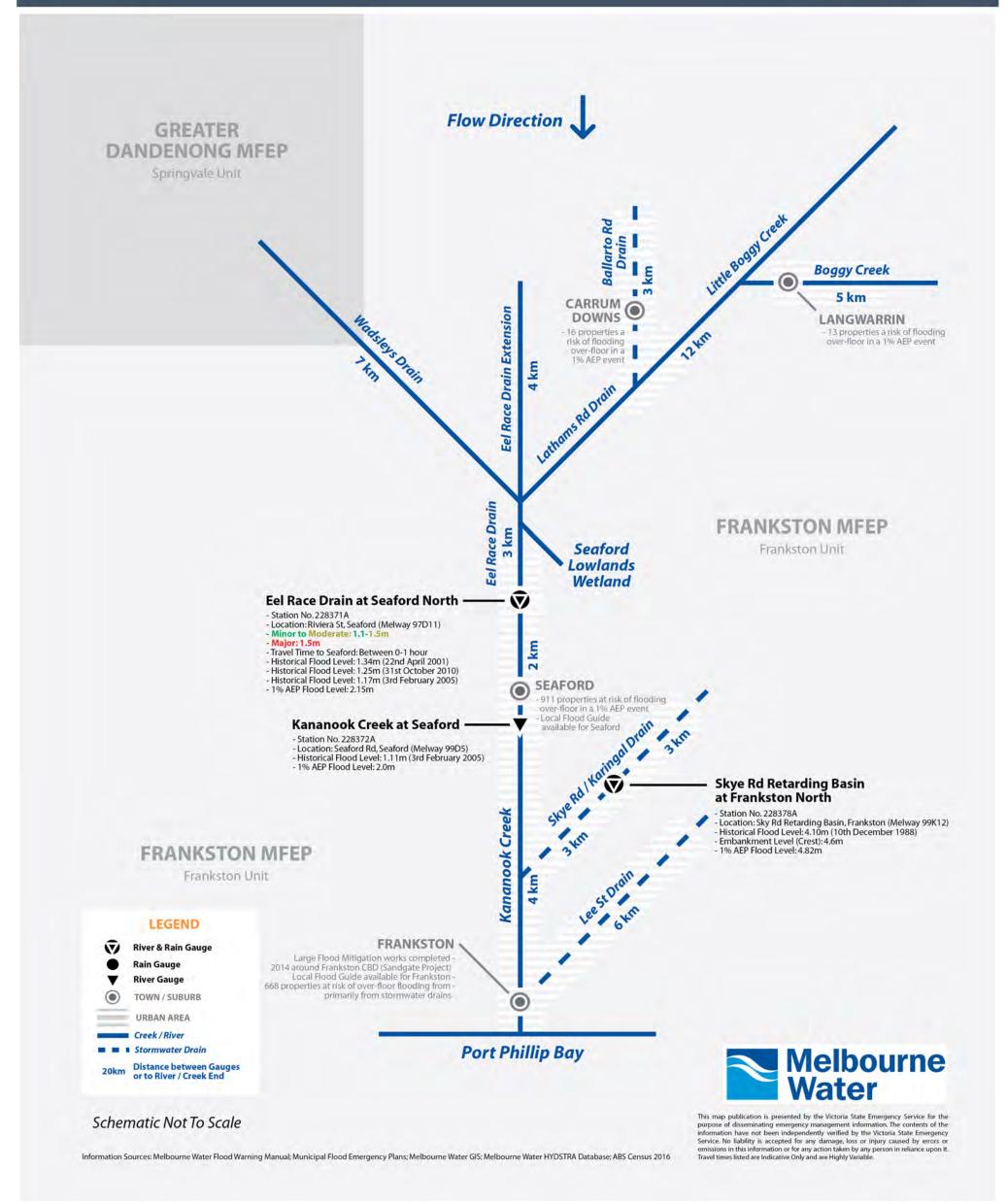






# Kananook Creek Catchment Schematic

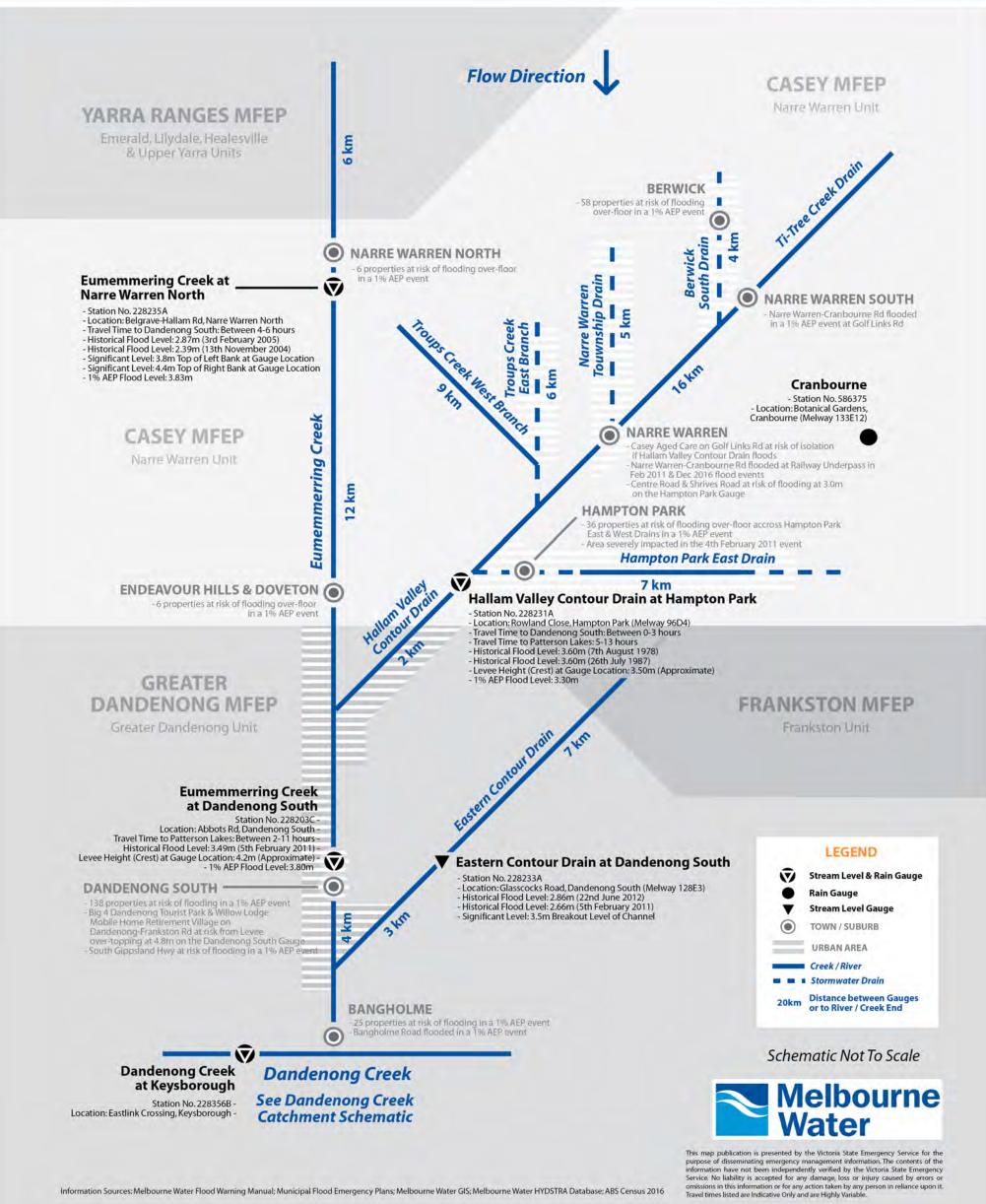
Version 2 - January 2021





# **Eumemmerring Creek**Catchment Schematic

Version 5 - April 2019



# **SAPPENDIX G – SEVERE WEATHER (STORM) EVENTS**

# Overview

Frankston City is susceptible to severe weather events because of a combination of its undulating terrain, urban boundary location and wind exposed properties. Storm events in the municipality may be subject to include wind storms, hailstorms, and thunderstorms (including lightning activity). There have also been occurrences of atmospheric downbursts/microburst within Frankston and adjacent municipalities.

Severe storm activity could result in injuries and increase in road accidents. Damaging wind events will tend to lead to trees down, with damage to the built and natural environment. Obstructions across roads could disrupt services, affect community functioning and have great potential for road traffic delays.

This Appendix uses Request for Assistance data from the Victoria State Emergency Service (VICSES) to display areas at risk from severe weather events.

# **Large Storm Events**

Typically, the Frankston unit would expect to be impacted by a large storm event once or twice a year (more than 100 RFA's per event).

Since 2009 the following larger storm events have occurred in Frankston City:

- September 2010 that saw 252 requests for help received, with a large number of trees down and building damage due to fallen trees.
- November 2011 Flood and storm event which saw 258 RFA's received, for flooding, wind and hail damage.
- October 2013 316 requests received for Trees Down and Building damage.
- June 2014 Another high wind event that saw 468 requests received for tree damage.
- October 2016 A storm that saw with 308 requests received
- February 2018 A storm that brought down many trees resulting in 215 requests for help
- October 2021 A storm that resulted in 800 RFA's mainly for trees down

# **VICSES** Requests for Assistance (RFAs)

The Victoria State Emergency Service records requests for assistance made by the public during severe weather events. Table G1 below is a breakdown of requests by suburb and damage type during the period July 2009 and August 2020.

	VICSES Request for Assistance (July 2009 – August 2020)						
Suburb	Building Damage	Flooding	Tree Down	Tree Down Traffic Hazard	Other *		
Carrum Downs	242	48	331	178	7		
Frankston	692	170	931	452	22		
Frankston North	89	13	170	83	4		
Frankston South	194	48	444	237	4		
Langwarrin	181	96	386	229	4		
Langwarrin South	10	6	42	54	0		
Sandhurst	18	4	6	7	2		
Seaford	280	85	435	294	12		
Skye	80	17	95	78	2		

Table G1 – Breakdown of severe weather RFAs received by VICSES Frankston Unit by suburb

Table G2 is a breakdown of requests for assistance by date (month) and damage type.

	VICSES Request for Assistance (July 2009 – August 2020)						
Date	Building Damage	Flooding	Tree Down	Tree Down Traffic Hazard	Other		
July 2009	2	0	5	1	0		
August 2009	28	0	41	20	0		
September 2009	10	1	13	5	0		
October 2009	5	7	2	1	0		
November 2009	9	2	6	3	0		
December 2009	0	0	6	4	0		
January 2010	9	2	20	14	0		
February 2010	15	10	28	20	0		
March 2010	11	5	5	4	0		
April 2010	35	7	13	7	0		
May 2010	5	0	5	1	0		
June 2010	10	2	11	10	0		
July 2010	3	0	3	0	0		
August 2010	7	4	14	13	0		
September 2010	59	1	133	59	0		
October 2010	14	14	13	9	0		
November 2010	24	10	27	22	0		
December 2010	18	23	25	16	0		
January 2011	10	11	13	10	0		
February 2011	6	26	18	9	0		
March 2011	5	0	6	10	0		
April 2011	2	2	6	3	0		
May 2011	10	1	6	6	0		
June 2011	16	1	36	15	0		
July 2011	9	0	11	5	0		
August 2011	2	0	1	4	0		
September 2011	4	3	11	13	0		
October 2011	2	0	6	6	0		
November 2011	59	148	37	12	2		

<sup>\*</sup>Assist Agency, Fence Down, Landslide, Loose Debris / Objects, Rescue Persons Trapped, Rescue Structure Collapse,
Rescue Vehicle into Structure and Sandbag Request

	VICSES Request for Assistance (July 2009 – August 2020)						
Date	Building Damage	Flooding	Tree Down	Tree Down Traffic Hazard	Other		
December 2011	3	4	7	2	0		
January 2012	21	0	45	28	0		
February 2012	11	0	42	10	0		
March 2012	19	0	44	13	0		
April 2012	26	3	49	21	0		
May 2012	13	1	25	10	0		
June 2012	10	7	12	6	0		
July 2012	2	1	4	2	0		
	8	0	8	10	0		
August 2012	24	0	67	24	0		
September 2012							
October 2012	1	1	3	1	0		
November 2012	2	0	12	3	0		
December 2012	4	0	25	14	0		
January 2013	9	2	9	6	0		
February 2013	7	4	10	6	00		
March 2013	14	0	24	17	0		
April 3013	0	0	0	0	0		
May 2013	2	2	3	7	0		
June 2013	12	2	1	2	0		
July 2013	8	1	19	13	0		
August 2013	40	2	37	24	0		
September 2013	25	0	46	28	0		
October 2013	98	0	149	69	0		
November 2013	8	2	7	6	0		
December 2013	3	0	7	1	0		
	4	0	26	11	0		
January 2014							
February 2014	7	0	15	9	0		
March 2014	22	4	9	3	0		
April 2014	10	1	5	5	0		
May 2014	1	1	3	1	0		
June 2014	76	1	99	70	0		
July 2014	12	0	23	7	0		
August 2014	2	0	10	2	0		
September 2014	23	0	44	25	0		
October 2014	14	1	23	11	0		
November 2014	10	1	6	6	0		
December 2014	8	0	17	11	0		
January 2015	12	0	28	12	0		
February 2015	7	0	10	12	0		
March 2015	14	1	46	22	0		
April 2015	5	1	4	3	0		
May 2015	7	0	12	6	0		
June 2015	3	0	5	4	0		
July 2015	11	2	8	5	0		
August 2015	7	0	5	4	0		
	6		1	4			
September 2015		0		-	0		
October 2015	3	0	5	5	0		
November 2015	6	0	13	6	0		
December 2015	9	1	12	12	0		
January 2016	11	3	44	25	0		
February 2016	3	29	9	6	0		
March 2016	0	3	62	37	0		
April 2016	3	0	10	5	0		
May 2016	41	11	44	26	0		
June 2016	7	0	16	4	0		
July 2016	47	1	75	64	0		
August 2016	4	0v	2	7	0		

	VICSES Request for Assistance (July 2009 – August 2020)						
Date	Building Damage	Flooding	Tree Down	Tree Down Traffic Hazard	Other		
September 2016	4	2	4	1	0		
October 2016	62	0	101	50	0		
November 2016	16	0	10	7	0		
December 2016	20	26	9	13	0		
January 2017	3	1	5	6	0		
February 2017	13	13	10	10	0		
March 2017	3	0	10	15	0		
April 2017	10	0	6	5	0		
May 2017	1	0	2	3	0		
June 2017	1	0	2	1	0		
July 2017	0	0	3	2	0		
August 2017	6	0	4	6	0		
September 2017	8	0	16	9	0		
October 2017	4	1	2	4	0		
November 2017	10	0	4	4	0		
December 2017	35	26	9	5	0		
January 2018	7	2	14	8	0		
February 2018	51	0	108	56	0		
March 2018	38	1	82	42	0		
April 2018	23	0	32	8	0		
May 2018	5	0	2	3	0		
June 2018	10	2	6	7	0		
July 2018	10	0	14	12	0		
August 2018	11	1	13	8	0		
September 2018	7	0	4	0	0		
October 2018	3	1	3	3	0		
November 2018	18	2	7	2	1		
December 2018	12	7	7	5	1		
January 2019	34	9	25	23	2		
February 2019	4	1	15	12	1		
March 2019	14	1	24	15	0		
April 2019	0	0	10	9	0		
May 2019	8	4	15	9	0		
June 2019	4	1	2	4	0		
July 2019	20	1	38	32	0		
			38				
August 2019	18	0		25 1	5 0		
September 2019	5 2	2	18				
October 2019			4	6	0		
November 2019	12	1	21	11	2		
December 2019	3	2	20	12	0		
January 2020	20	5	76	39	5		
February 2020	26	8	86	41	7		
March 2020	9	1	5	11	0		
April 2020	17	7	39	12	5_		
May 2020	2	1	19	6	5		
June 2020	2	2	6	3	0		
July 2020	11	3	2	3	1_		

Table G2 – Breakdown of severe weather RFAs received by VICSES Hastings and Sorrento Units by month

<sup>\*</sup>Assist Agency, Dam Incident, Fence Down, Landslide, Loose Debris / Objects, Rescue Persons Trapped, Rescue Structure
Collapse, Rescue Vehicle into Structure and Sandbag Request