

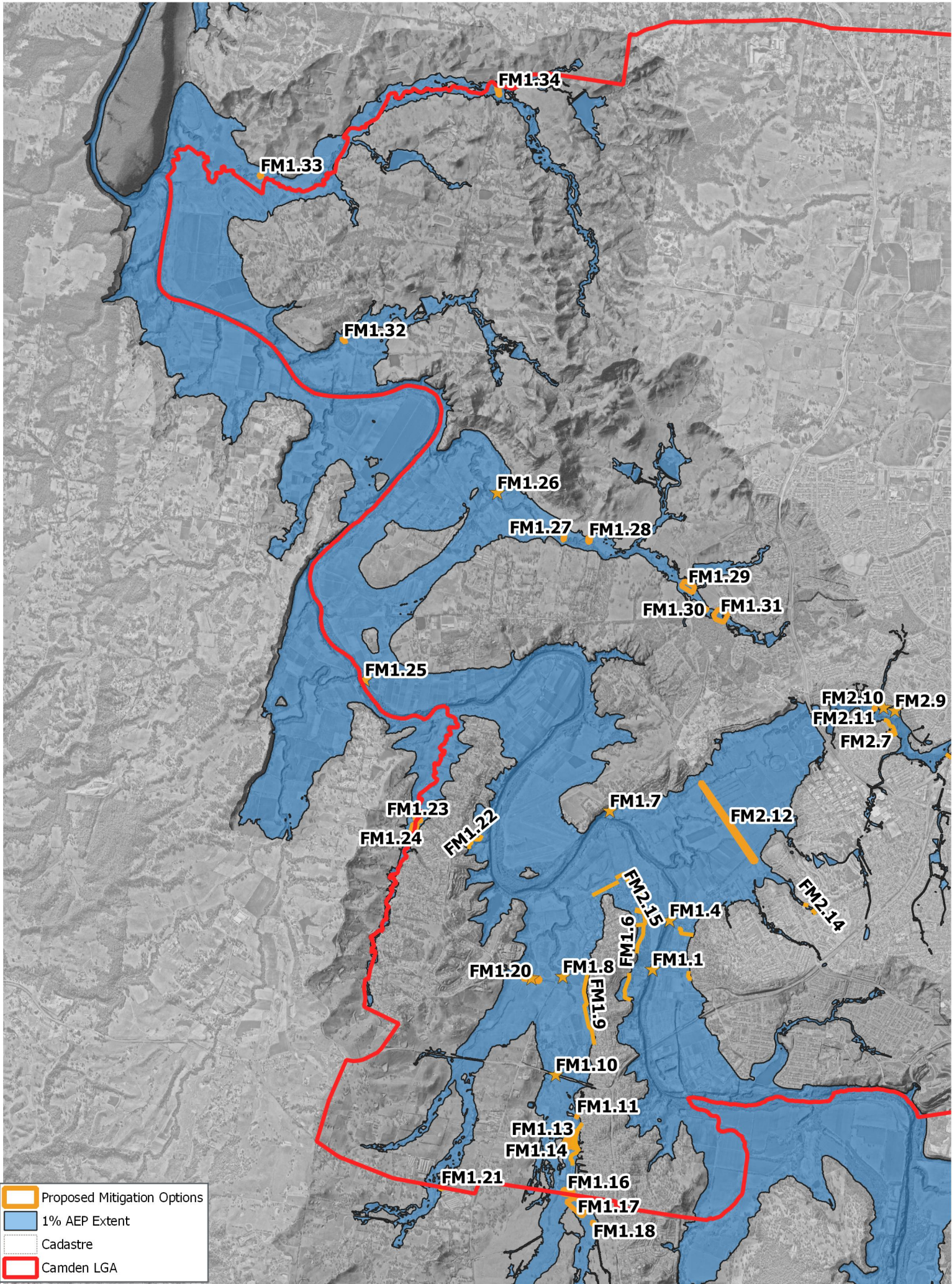


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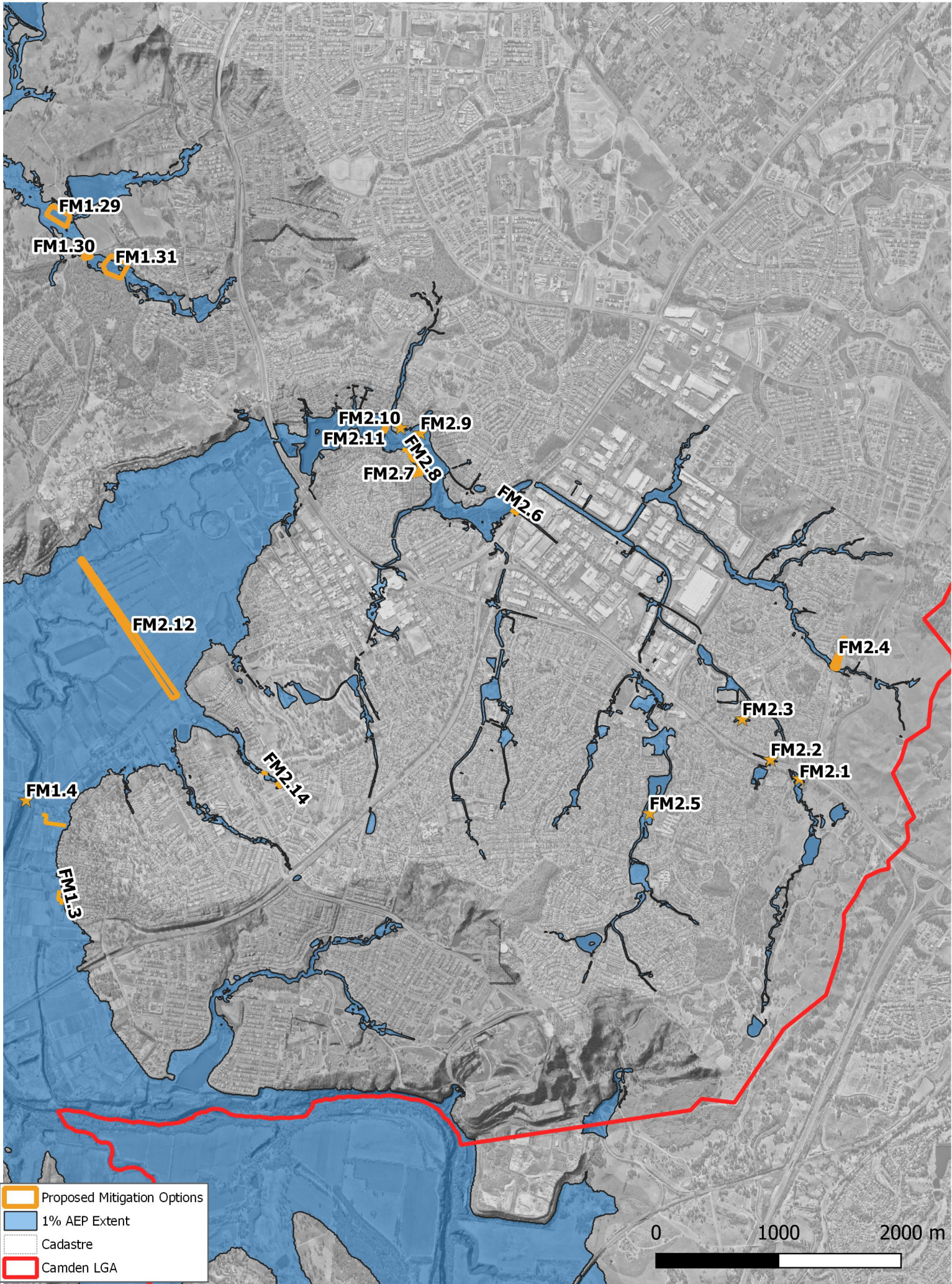
# **NEPEAN RIVER FLOODPLAIN RISK MANAGEMENT STUDY & PLAN INCLUDING NARELLAN CREEK**





## **APPENDIX G – FLOOD MODIFICATION OPTIONS**

**Final Report (13 November 2022)**




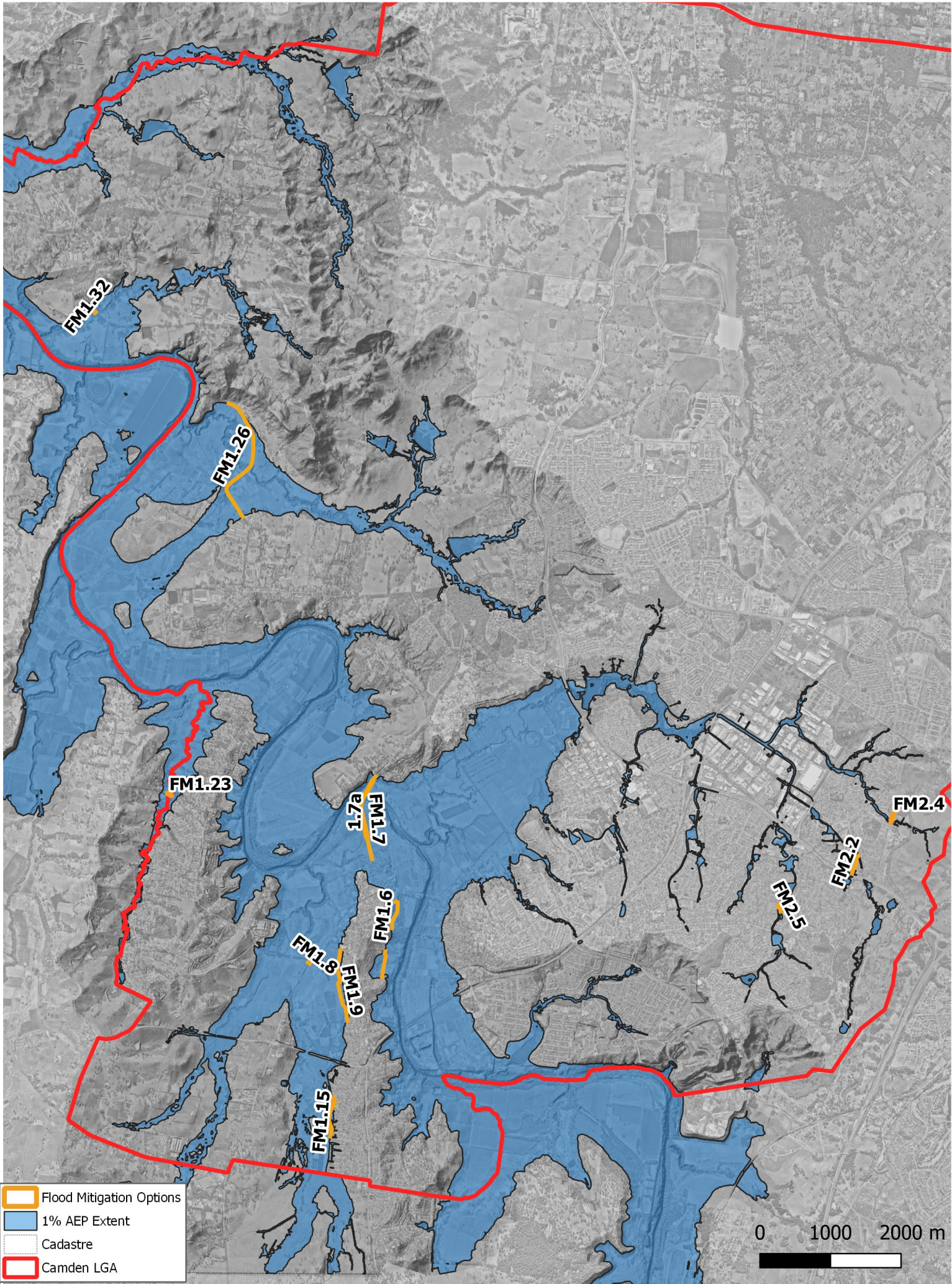
- Proposed Mitigation Options
- 1% AEP Extent
- Cadastre
- Camden LGA



-  Proposed Mitigation Options
-  1% AEP Extent
-  Cadastre
-  Camden LGA

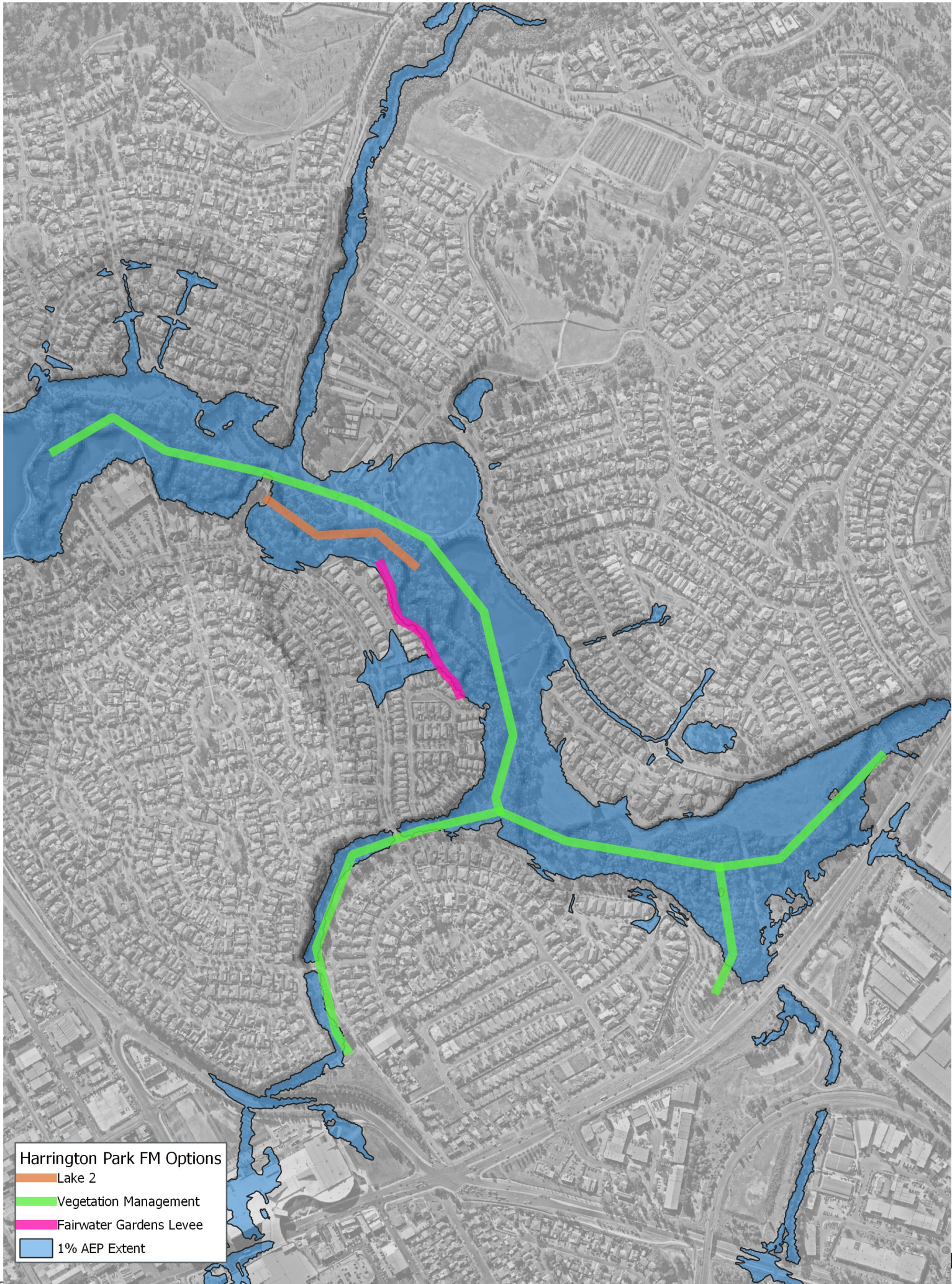
0 1000 2000 m





- Flood Mitigation Options
- 1% AEP Extent
- Cadastre
- Camden LGA

0 1000 2000 m



**Harrington Park FM Options**  
 Lake 2  
 Vegetation Management  
 Fairwater Gardens Levee  
 1% AEP Extent



Nepean River FRMSP  
 Harrington Park

**Harrington Park Flood Mitigation  
 Options**  
 (PublicWorks Advisory, 2017)

Map Produced by Cardno Water &  
 Environment  
 Date: 9/8/2019  
 Coordinate System: MGA Zone 56  
 Project: 59916092

Option ID	Option Type	Details	Expected Benefit	Major Constraints	Assess in Hydraulic Model
FM1.1	Road raising		Council has recorded flooding issues at this location (F5). It will prevent the access road from getting flooded	-	Yes
FM1.2	Building a Levee		Will benefit properies on the left side of the creek	-	Yes
FM1.3	Building a flood wall		Building a flood wall of 2m can protect the adjacent property up to 20Yr event	-	No
FM1.4	Road raising		This location is identified as an SES hotspot (SES4). It will prevent the access road from getting flooded	-	Yes
FM1.5	Building a flood wall		Building a flood wall of 4m can protect the adjacent properties as well as the Ds roads up to 20Yr event	It might cause increased flood Levels on properties further DS	No
FM1.6	Building a Levee		Will benefit properies on the left side of the creek	-	Yes
FM1.7	Road raising		This location is identified as an SES hotspot (SES3). It will prevent the access road from getting flooded	-	Yes
FM1.8	Drainage Augmentation	Upgrade the culverts	This location is identified as an SES hotspot (SES5). It will benefit the road	-	Yes
FM1.9	Building a Levee		Will benefit properies on the right side of the creek	-	Yes
FM1.10	Drainage Augmentation	Upgrade the culverts	This location is identified as an SES hotspot (SES6). It will benefit the road	-	Yes
FM1.11	Drainage Augmentation	Upgrade culverts	It will benefit the Road	-	No
FM1.12	Building a Levee		Will benefit properties on the left side of the creek	-	No
FM1.13	Channel works	Deepening the channel	It will benefit the flooded adjacent properties	-	Yes
FM1.14	Detention Basin	Constructing a detention basin	It will benefit flooded properties adjacent to the creek and DS and the road DS	-	No
FM1.15	Building a Levee		Will benefit properties on the left side of the creek	-	Yes
FM1.16	Drainage Augmentation	Construct culverts or upgrade if they already exist	It will benefit the Road	-	No
FM1.17	Detention Basin	Construct a new basin	It will benefit the DS road	-	No
FM1.18	Drainage Augmentation	Construct culverts or upgrade if they already exist	It will benefit the Road	Might not be economical. The road provides access for only one property	No
FM1.19	Drainage Augmentation	Upgrade the culverts	The road is heavily flooded (0.5m depth of flood in the 20Yr event), upgrading the culverts will help but may not be enough to the eliminate the issue	-	No
FM1.20	Road raising		It will benefit the road	-	No
FM1.21	Drainage Augmentation	Construct culverts or upgrade if they already exist	It will benefit the road	-	No
FM1.22	Building a flood wall		Building a flood wall of 3m can protect a number of properties up to 20Yr event	-	No
FM1.23	Drainage Augmentation	Upgrading the culverts	It will benefit the road	-	No
FM1.24	Detention Basin	Constructing a detention basin	It will benefit the DS road	-	No
FM1.25	Road raising		This location is identified as an SES hotspot (SES8). It will prevent the access road from getting flooded	-	Yes
FM1.26	Road raising		This location is identified as an SES hotspot (SES8). It will benefit the road	-	Yes
FM1.27	Road raising		Will benefit afew properties on the north which get access through this road	-	No
FM1.28	Road raising		Will benefit all the properties getting access through this road	-	No

FM1.29	Detention Basin	Constructing a detention basin	It will benefit the property DS	No constraint but may not be economical - FM15 might be preferred	No
FM1.30	Drainage Augmentation	Double the capacity of culverts	The road is a main road and will benefit from upgrading the culverts	-	No
FM1.31	Detention Basin	Constructing a detention basin	Constructing a detention basin can benefit the road DS which gets flooded	-	No
FM1.32	Drainage Augmentation	Double the capacity of culverts	It will benefit the properties getting access from this road	-	Yes
FM1.33	Drainage Augmentation	Double the capacity of culverts	The road is getting over topped in all the events from 15cm in 5yr event to 30cm in 100Yr events. Upgrading the culverts will help with this issue	-	No
FM1.34	Road raising		This road provides access to the properties in the south east and south west. Raising the road can help with the road's flooding issue as based on DEM it seems the road level in this area is lower than the levels before and after the creek.	-	No
FM2.1	Detention Basin	Construct a new basin	It will benefit flooded properties DS and the road DS	-	Yes
FM2.2	Drainage Augmentation	Upgrade the pits and pipes stormwater network	This location is identified as an SES hotspot (SES1). It will benefit the road and adjoining properties	-	Yes
FM2.3	Drainage Augmentation	Upgrade the pits and pipes stormwater network	It will benefit the road and some properties	-	No
FM2.4	Channel Works	Redirect overland flows via a new channel	It will benefit the road and some properties	-	No
FM2.5	Detention Basin	Modify existing basin	Council has recorded flooding issues at this location (F1). It will prevent the access road from getting flooded	-	Yes
FM2.6	Drainage Augmentation	Upgrade the culverts	It will benefit the road	-	No
FM2.7	Channel works	Regrading the channel	It will benefit the flooded adjacent properties	-	No
FM2.8	Building a Levee		Will benefit properties on the left side of the creek	-	No
FM2.9	Detention Basin	If Harrington Parkway bridge is functional, then option may not be required	Council has recorded flooding issues at this location (F4). It will prevent the access road from getting flooded	-	No
FM2.10	Channel works/New culvert	If Harrington Parkway bridge is functional, then option may not be required	Council has recorded flooding issues at this location (F4). It will prevent the access road from getting flooded	-	No
FM2.11	Bridge Raising	The bridge has not been incorporated into the model and did not take into account of the bridge elevation. The model simply cut the road to allow flow through. We require bridge elevations of the bridge deck to know if it is inundated. If the bridge deck is at 74.5m, then it is above 1% AEP flood.	Council has recorded flooding issues at this location (F4). It will prevent the access road from getting flooded		No
FM2.12	Road raising		This location is identified as an SES hotspot (SES2). It will benefit the road	-	Yes
FM2.13	Drainage Augmentation	Widen the outlet	It will benefit the road	-	No
FM2.14	Drainage Augmentation	Upgrade the culverts	It will benefit the road	-	No
FM2.15	Building a Levee		Will benefit properties on the left side of the creek	-	Yes
FM2.16	Building a Levee		Will benefit properties on the left side of the creek	-	Yes
FM2.17	Building a Levee		Will benefit properties on the left side of the creek	-	Yes