Ballimore Floodplain Risk Management Study and Plan

Volume 3: Flood Mapping Compendium
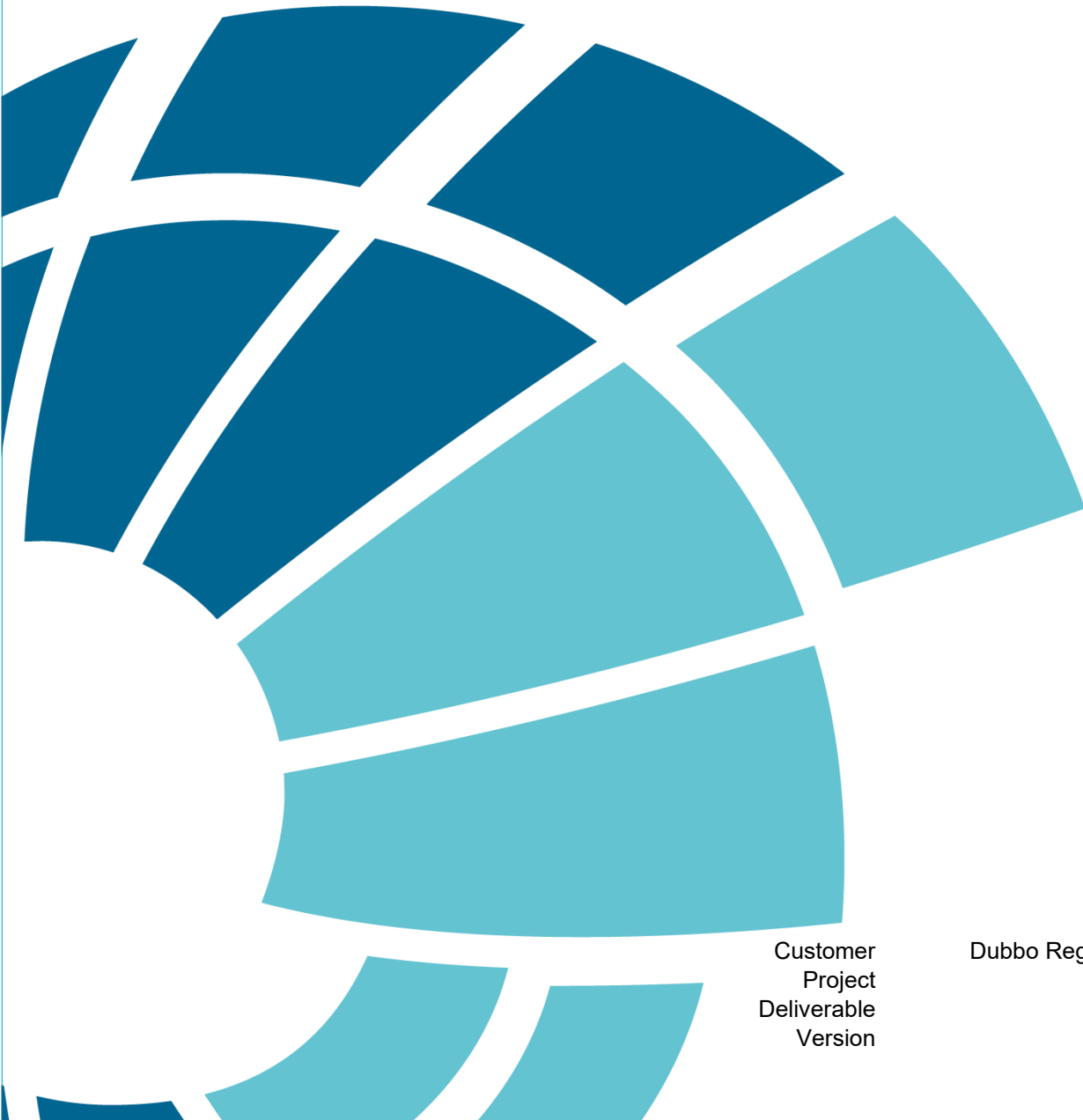
Document Control

Document Identification

Title	Ballimore Floodplain Risk Management Study and Plan
Project No	N21201
Deliverable No	001
Version No	01
Version Date	11 July 2024
Customer	Dubbo Regional Council
Classification	BMT (OFFICIAL)

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Amendment Record

The Amendment Record below records the history and issue status of this document.

Version	Version Date	Distribution	Record
00	22 August 2022	Dubbo Regional Council	Draft Report
01	11 July 2024	Dubbo Regional Council	Final Report

Explanatory Notes

Overview

This Volume 3 report of the Ballimore Floodplain Risk Management Study and Plan contains the calibration and design flood mapping. The maps should be considered in conjunction with the accompanying technical report (Volume 1) which contains the supporting methodology and assumptions.

The maps contain the following model outputs:

- Peak flood levels (mAHD)
- Peak flood depth (m)
- Peak flood velocity (m/s)
- Model sensitivity - change in peak flood levels (mAHD)

Disclaimer

The mapping has been prepared for Dubbo Regional Council for the purposes of the Ballimore Floodplain Risk Management Study and Plan. Use of the mapping by third parties is done so at their own risk. BMT does not warrant the accuracy or completeness of information displayed in the mapping. BMT shall bear no responsibility of liability for any errors, faults, defects or omissions in the information.

Table of Mapping

LEGEND

☐ Cadastral Boundaries

○ Key Locations

Peak Flood Depth (m)

▇	0.2
▇	0.5
▇	1
▇	2
▇	4

━━━ Major Flood Level Contour (1.0m spacing)

━━━ Minor Flood Level Contour (0.2m spacing)

Title:

Peak Flood Depth and Level Contours
1990 Calibration Event

Figure: **A-1**

Rev: **A**

0   250   500 m

BMT

LEGEND

□ Cadastral Boundaries

○ Key Locations

Peak Flood Depth (m)

- 0.2
- 0.5
- 1
- 2
- 4

— Major Flood Level Contour (1.0m spacing)

— Minor Flood Level Contour (0.2m spacing)

Title:

Peak Flood Depth and Level Contours
2000 Calibration Event

Figure:
A-2

Rev:
A

0   250   500 m

BMT

LEGEND

☐ Cadastral Boundaries

○ Key Locations

Peak Flood Depth (m)

- 0.2
- 0.5
- 1
- 2
- 4

— Major Flood Level Contour (1.0m spacing)

— Minor Flood Level Contour (0.2m spacing)

Map labels:
- Rocky Creek
- 307
- Talbragar River
- 302
- BALLIMORE
- 300
- Goan Creek Rd
- Bunyip St
- 301
- BALLIMORE
- Nardoo St
- School
- Golden Hwy
- Ballimore Creek
- Church
- Federation St
- Train Station
- Railway
- Ballimore Rd

Title:	Figure:	Rev:
Peak Flood Depth and Level Contours 10% AEP Event	**B-1**	**A**

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0   250   500 m

BMT

Rocky Creek

Talbragar River

BALLIMORE

BALLIMORE

304

304

304

303

302

302

301

301

308

Goan Creek Rd

Bunyip St

School

Nardoo St

Golden Hwy

Church

Federation St

Train Station

Railway

Ballimore Creek

Ballimore Rd

LEGEND

☐ Cadastral Boundaries

○ Key Locations

Peak Flood Depth (m)

▇	0.2
▇	0.5
▇	1
▇	2
▇	4

▬▬ Major Flood Level Contour
(1.0m spacing)

─── Minor Flood Level Contour
(0.2m spacing)

Title:

**Peak Flood Depth and Level Contours
5% AEP Event**

Figure:

B-2

Rev:

A

0   250   500 m

BMT

LEGEND

☐ Cadastral Boundaries

○ Key Locations

Peak Flood Depth (m)

- 0.2 (cyan)
- 0.5 (green)
- 1 (yellow)
- 2 (orange)
- 4 (red)

── Major Flood Level Contour (1.0m spacing)

── Minor Flood Level Contour (0.2m spacing)

Title:
Peak Flood Depth and Level Contours 2% AEP Event

Figure: **B-3**

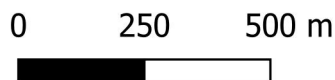Rev: **A**

0   250   500 m

BMT

LEGEND

☐ Cadastral Boundaries

○ Key Locations

Peak Flood Depth (m)

- 0.2
- 0.5
- 1
- 2
- 4

━━━ Major Flood Level Contour
(1.0m spacing)

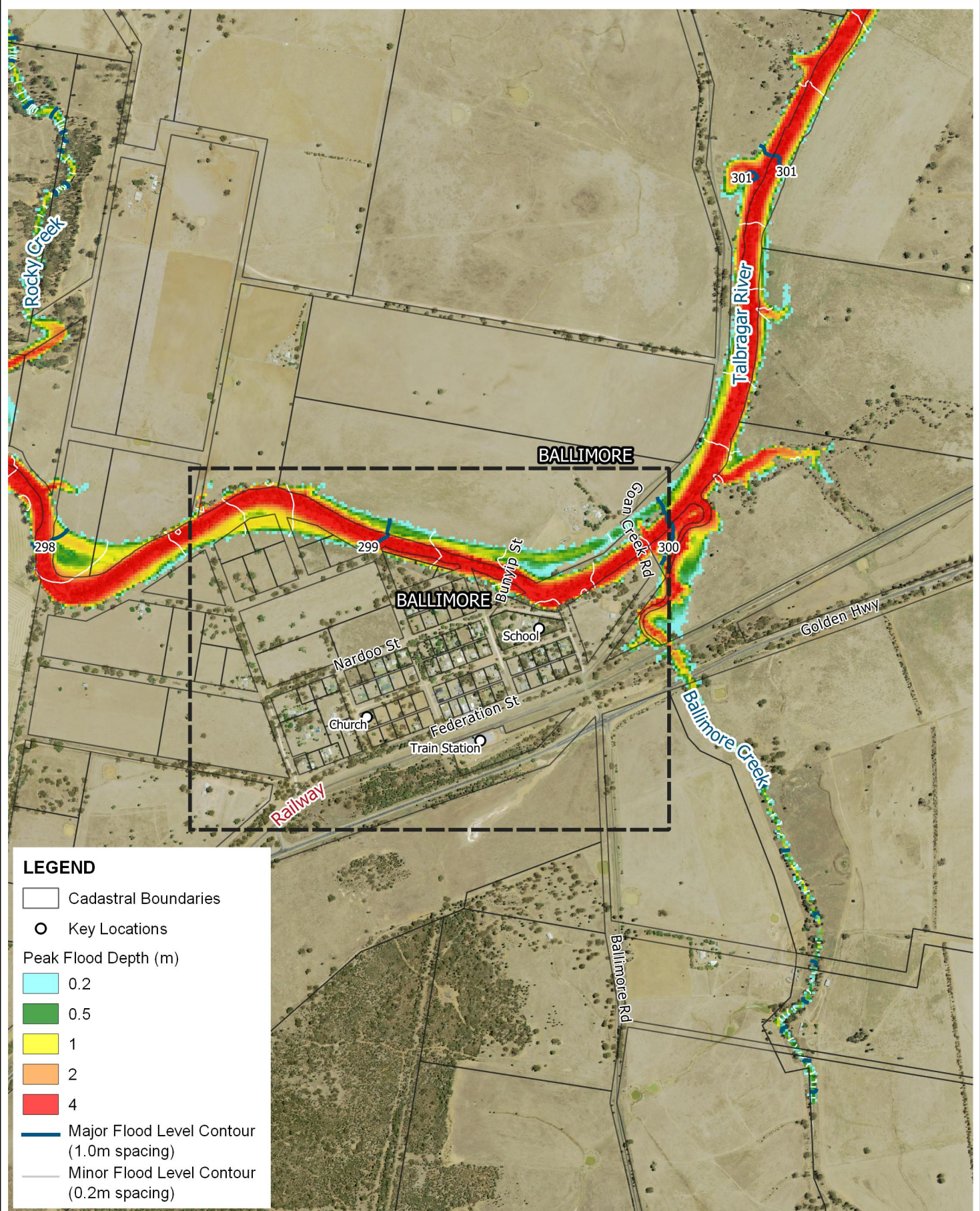──── Minor Flood Level Contour
(0.2m spacing)

Title:
**Peak Flood Depth and Level Contours
1% AEP Event**

Figure:
B-4

Rev:
A

0   250   500 m

BMT

LEGEND

☐ Cadastral Boundaries

○ Key Locations

Peak Flood Depth (m)

▨	0.2
▨	0.5
▨	1
▨	2
▨	4

▬▬▬ Major Flood Level Contour (1.0m spacing)

─── Minor Flood Level Contour (0.2m spacing)

Title:

Peak Flood Depth and Level Contours
0.5% AEP Event

Figure: **B-5**

Rev: **A**

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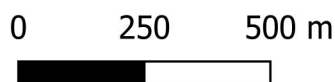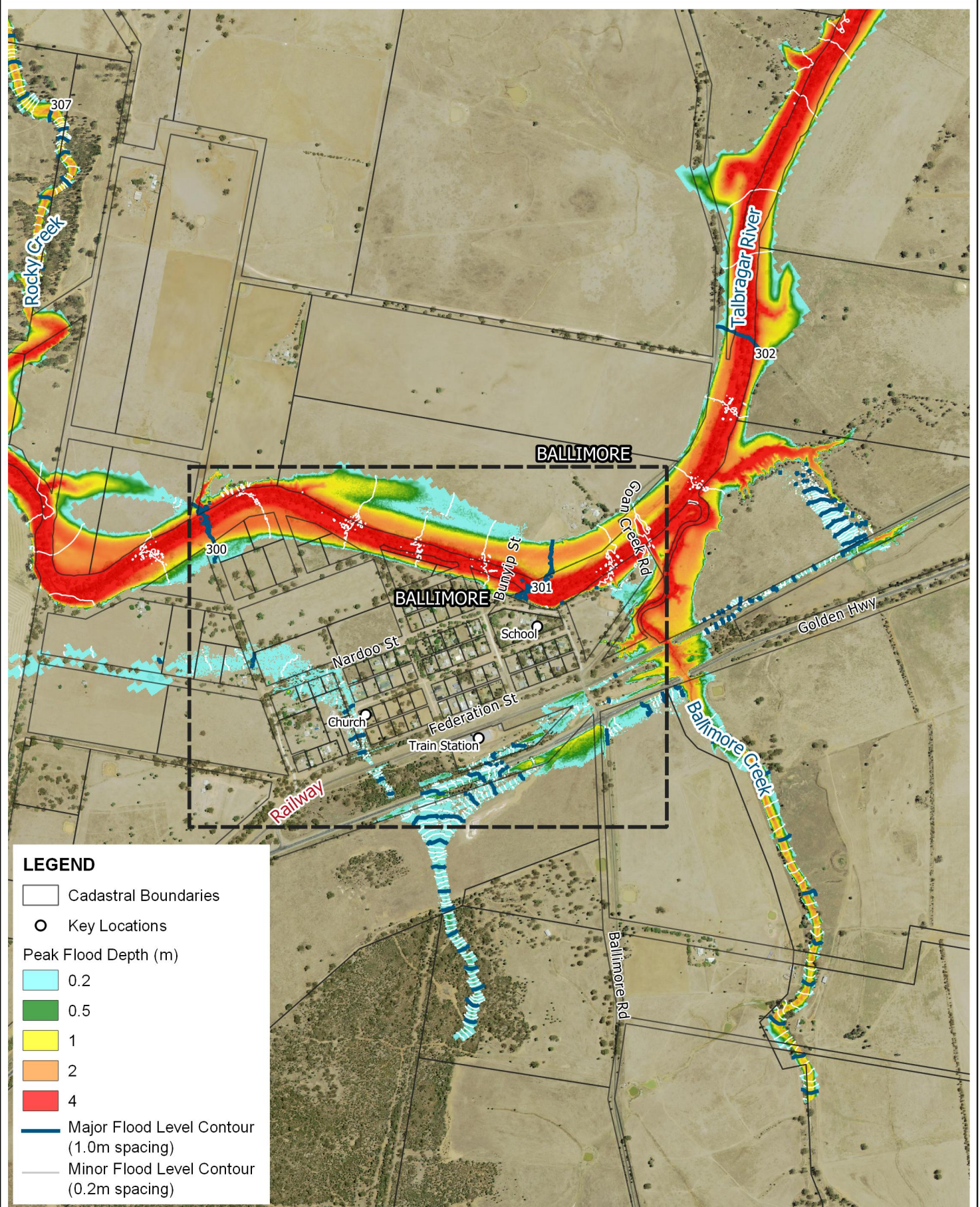
0   250   500 m

BMT

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LEGEND

☐ Cadastral Boundaries

○ Key Locations

Peak Flood Depth (m)

- 0.2
- 0.5
- 1
- 2
- 4

━━ Major Flood Level Contour
(1.0m spacing)

── Minor Flood Level Contour
(0.2m spacing)

Title:
Peak Flood Depth and Level Contours
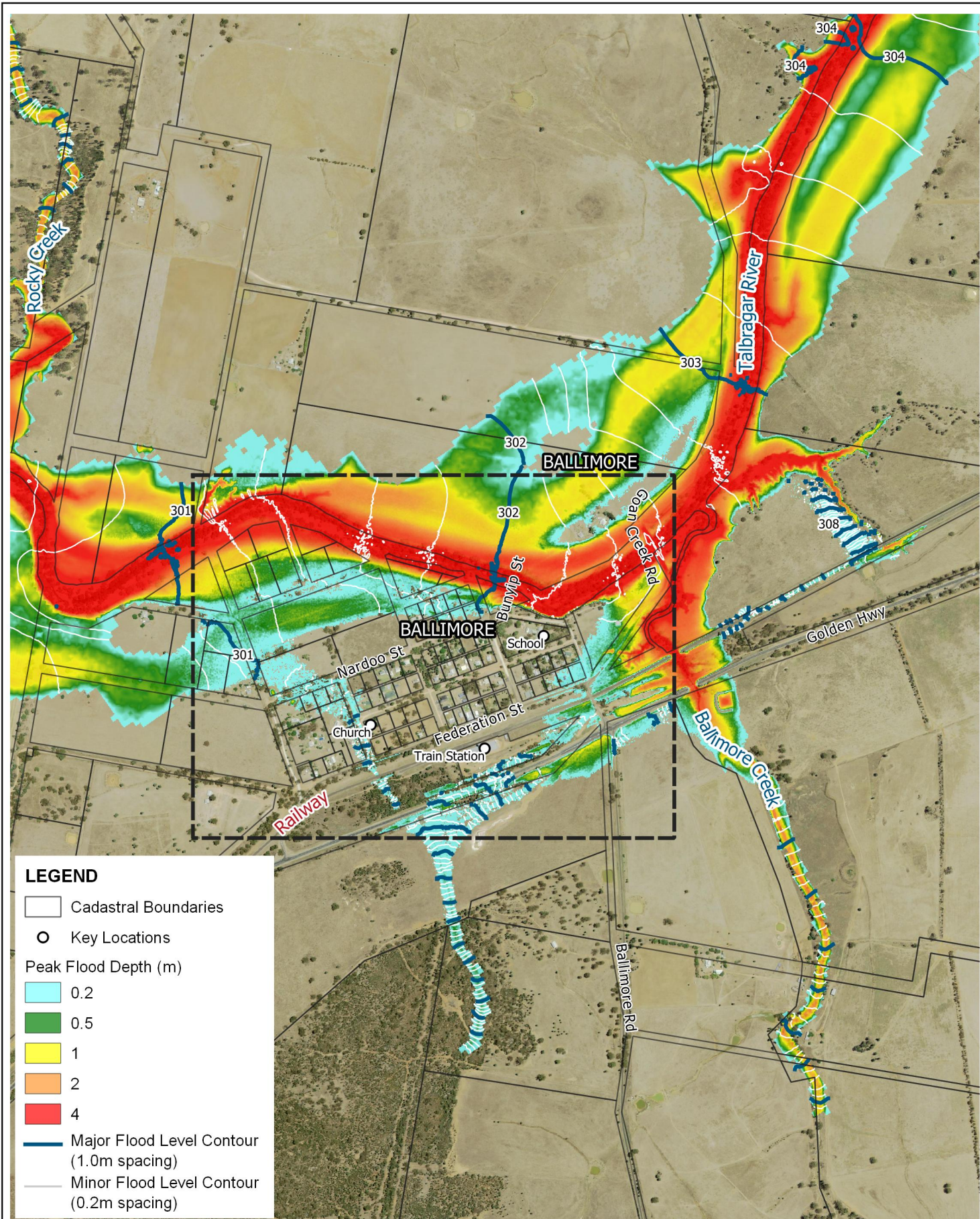**0.2% AEP Event**

Figure:
B-6

Rev:
A

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guarantee or make representations regarding the currency and
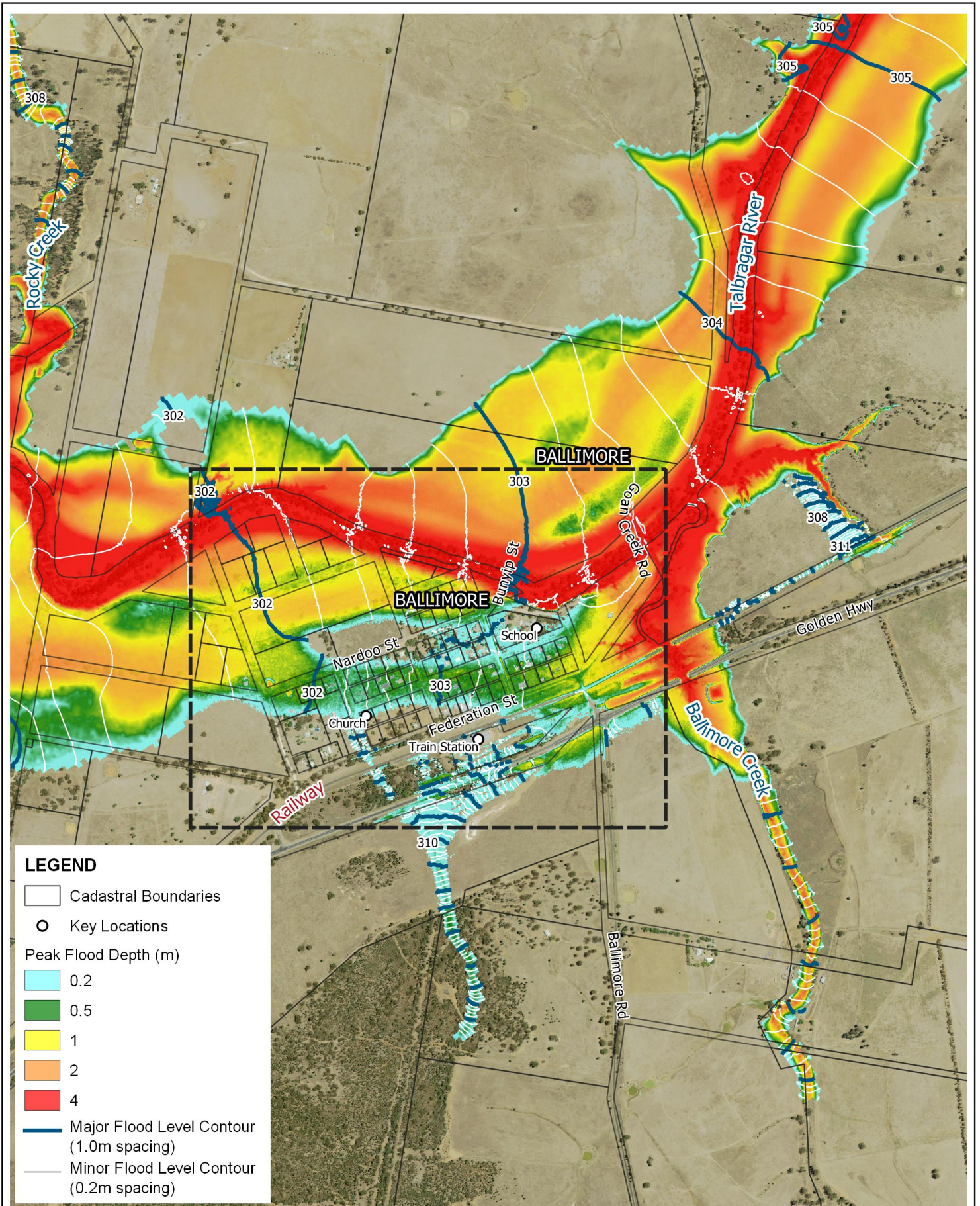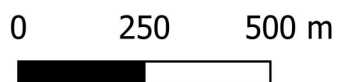accuracy of information contained in this map.

0   250   500 m

BMT

LEGEND

☐ Cadastral Boundaries

○ Key Locations

Peak Flood Depth (m)

🟦	0.2
🟩	0.5
🟨	1
🟧	2
🟥	4

▬▬ Major Flood Level Contour
(1.0m spacing)

—— Minor Flood Level Contour
(0.2m spacing)

Title:
**Peak Flood Depth and Level Contours
0.1% AEP Year Event**

Figure: **B-7**

Rev: **A**

0   250   500 m

BMT

LEGEND

Cadastral Boundaries

○ Key Locations

Peak Flood Depth (m)

- 0.2
- 0.5
- 1
- 2
- 4

━━━ Major Flood Level Contour (1.0m spacing)

─── Minor Flood Level Contour (0.2m spacing)

Title:
**Peak Flood Depth and Level Contours
0.05% AEP Event**

Figure: **B-8**

Rev: **A**

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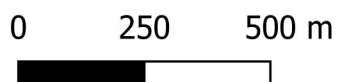
0   250   500 m

BMT

LEGEND

☐ Cadastral Boundaries

○ Key Locations

Peak Flood Depth (m)

■ 0.2
■ 0.5
■ 1
■ 2
■ 4

▬ Major Flood Level Contour
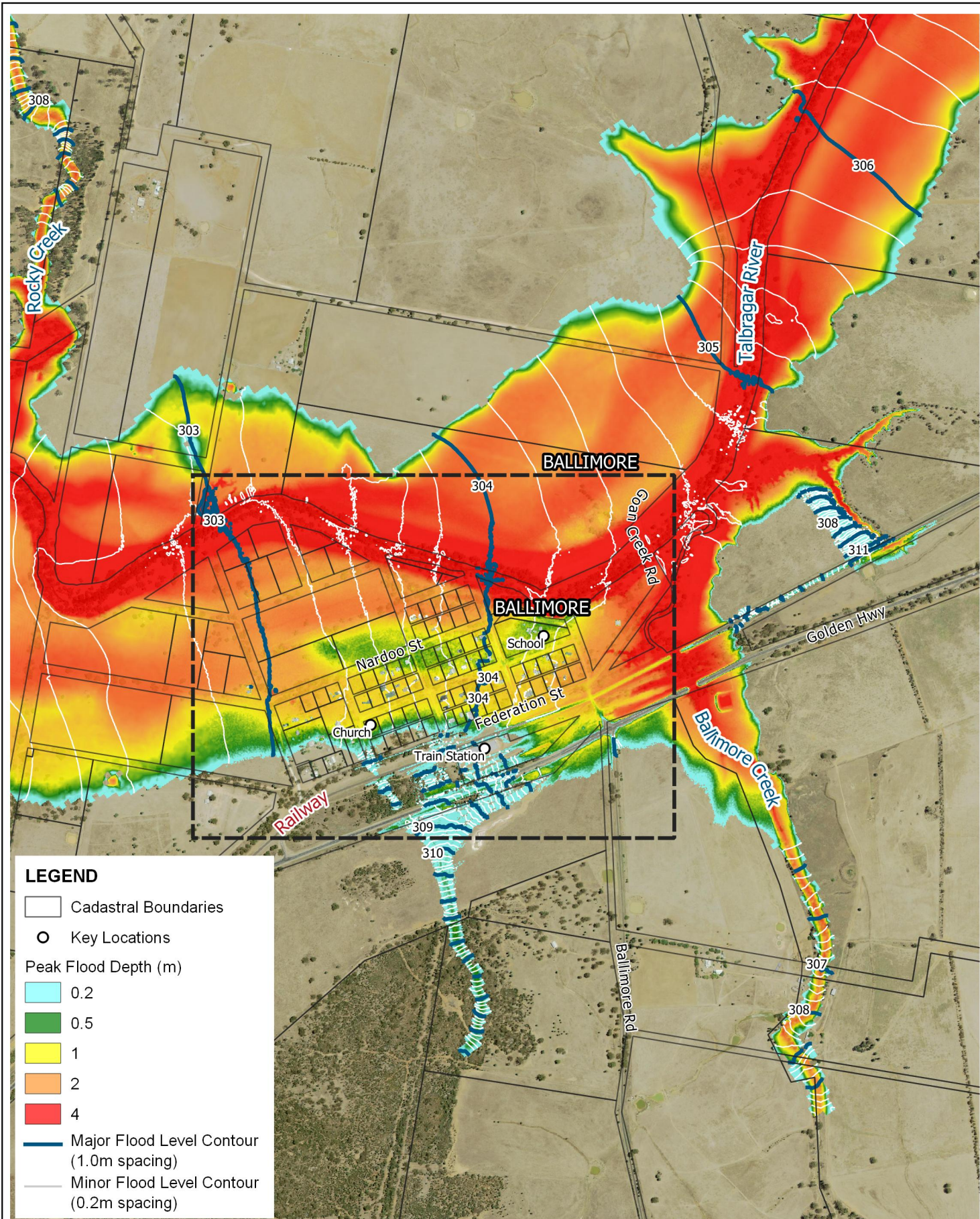(1.0m spacing)

── Minor Flood Level Contour
(0.2m spacing)

Title:

**Peak Flood Depth and Level Contours
PMF Event**

Figure:

B-9

Rev:

A

0   250   500 m

BMT

LEGEND

☐ Cadastral Boundaries

○ Key Locations

Peak Flood Velocity (m/s)

■	0
■	0.2
■	0.4
■	0.6
■	0.8
■	1
■	2
■	3
■	4

Map labels: Rocky Creek, Talbragar River, BALLIMORE, Goan Creek Rd, Golden Hwy, Bunyip St, School, Nardoo St, Federation St, Ballimore Creek, Church, Train Station, Railway, Ballimore Rd

Title:
**Peak Flood Velocity
10% AEP Event**

Figure: **B-10**

Rev: **A**

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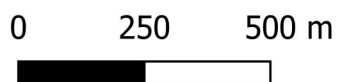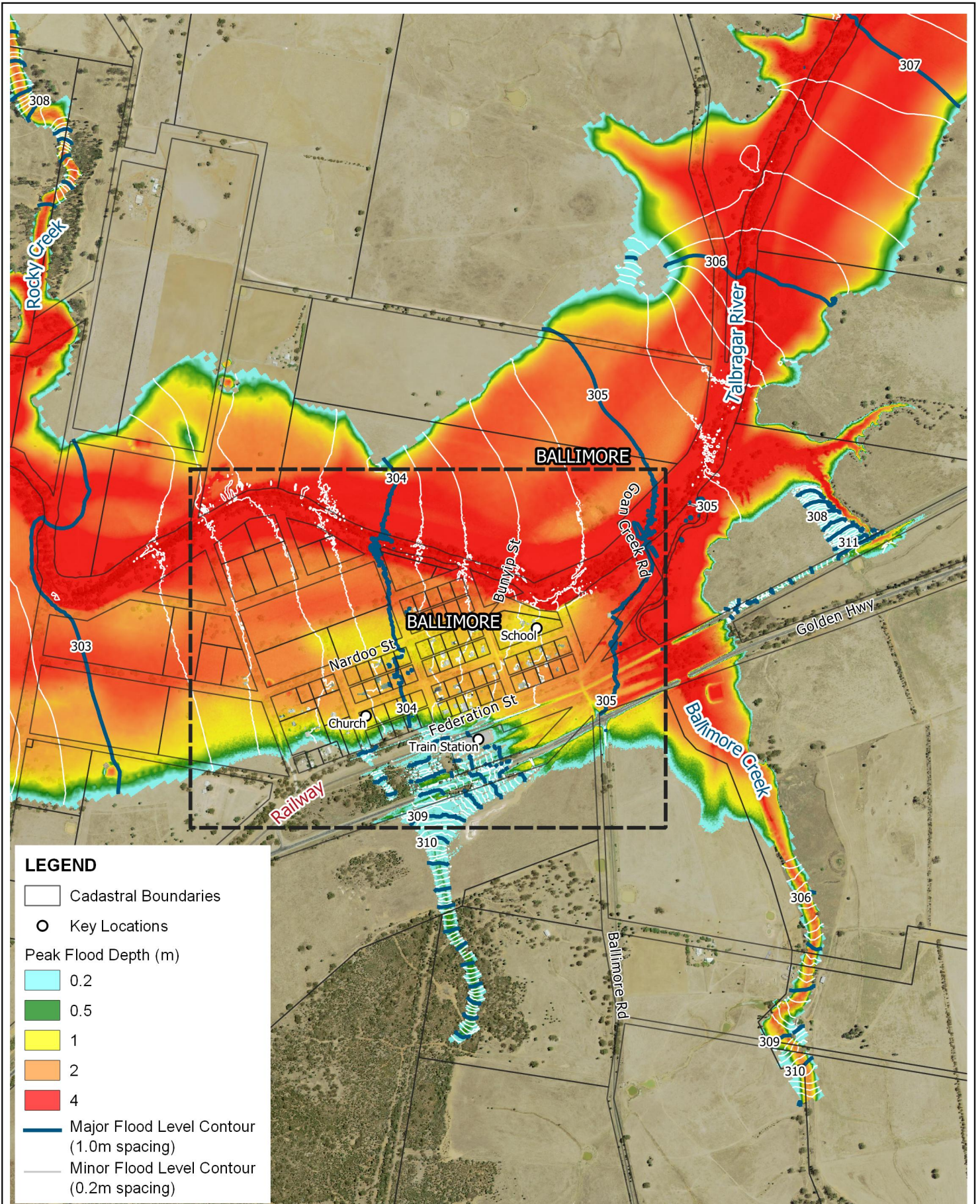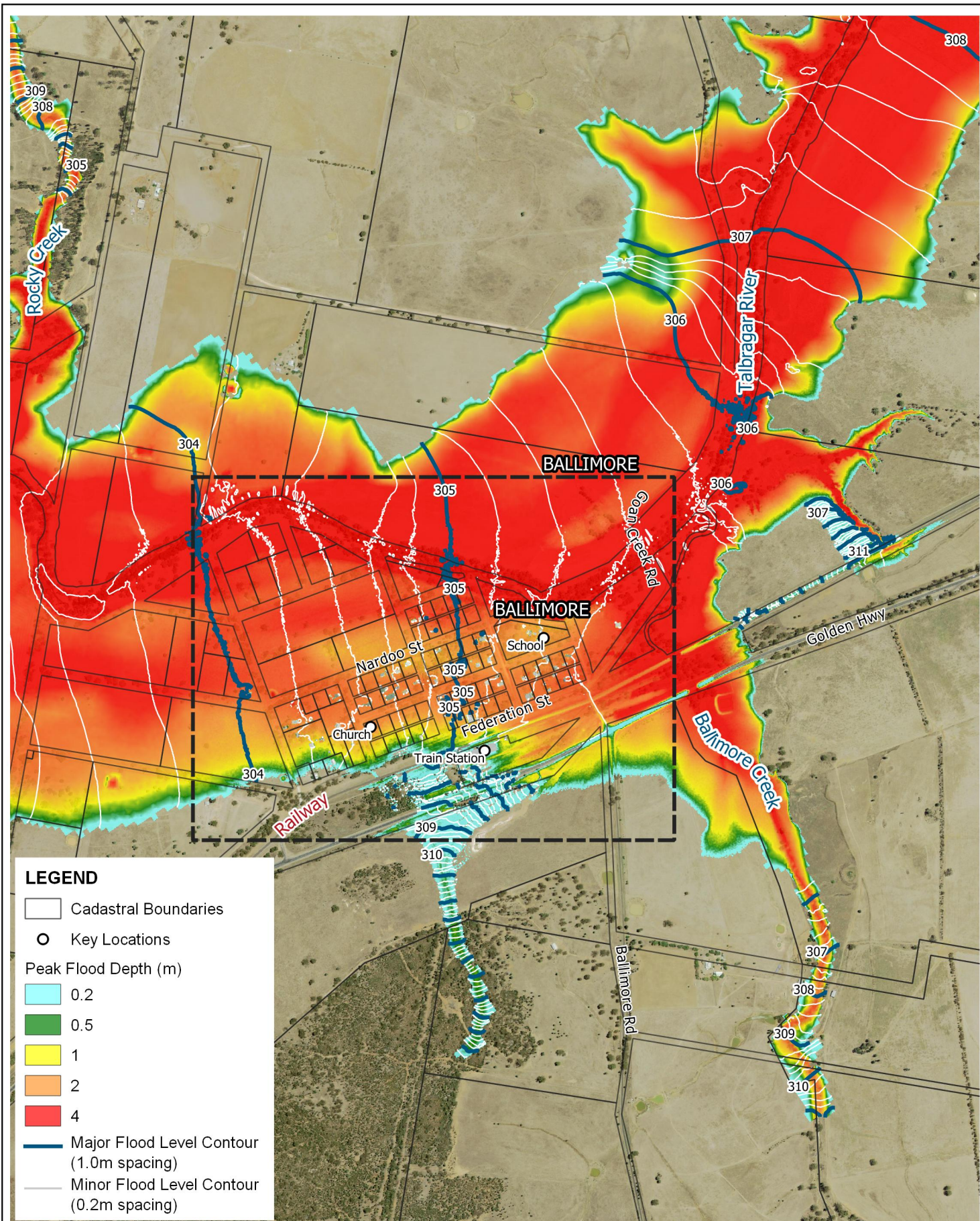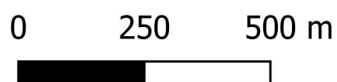
0   250   500 m

BMT

Rocky Creek

Talbragar River

Goan Creek Rd

BALLIMORE

Bunyip St

BALLIMORE

School

Nardoo St

Golden Hwy

Federation St

Church

Train Station

Ballimore Creek

Railway

Ballimore Rd

LEGEND

☐ Cadastral Boundaries

○ Key Locations

Peak Flood Velocity (m/s)

■	0
■	0.2
■	0.4
■	0.6
■	0.8
■	1
■	2
■	3
■	4

Title: **Peak Flood Velocity** **5% AEP Event**	Figure: **B-11**	Rev: **A**

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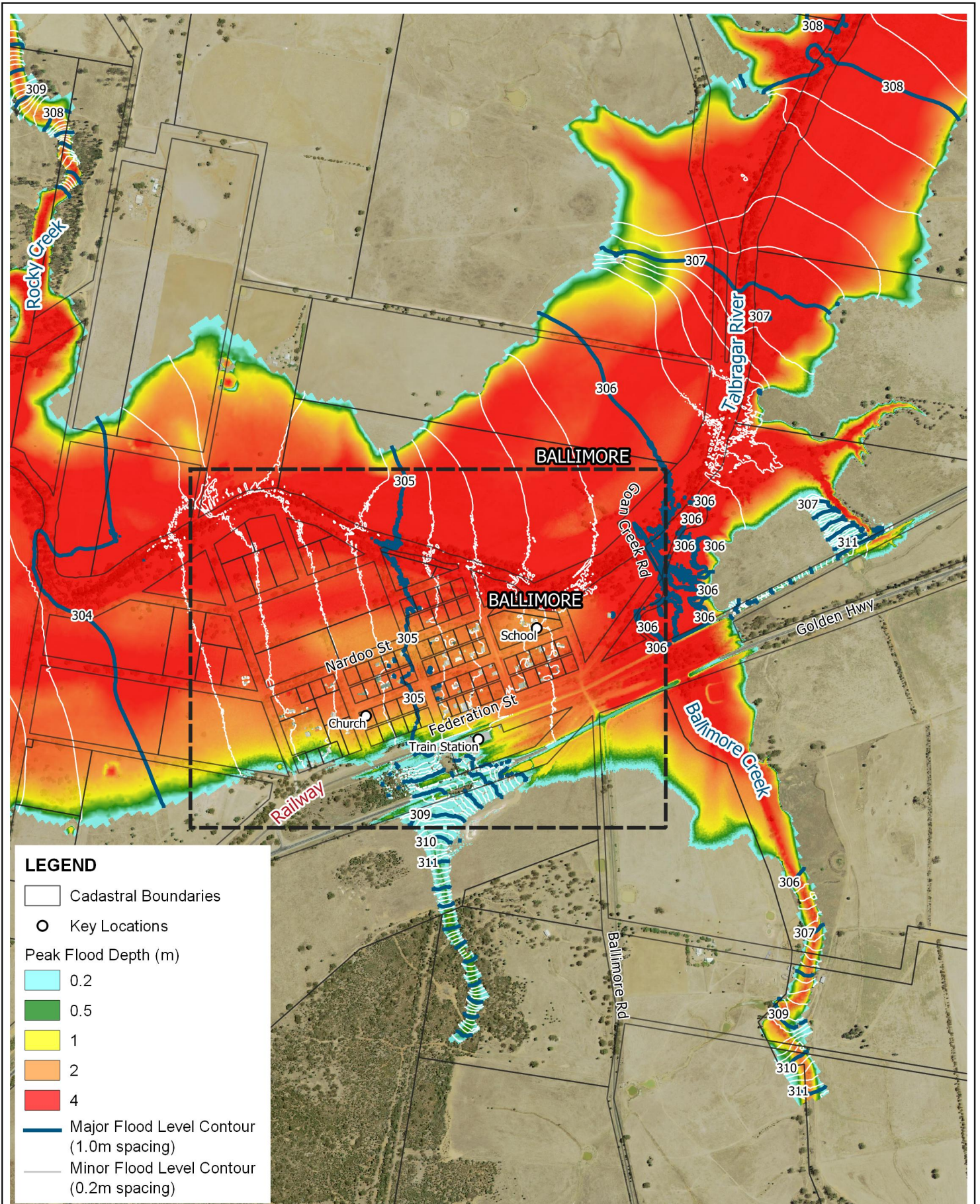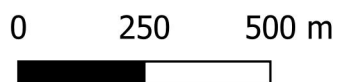
0   250   500 m

BMT

LEGEND

☐ Cadastral Boundaries

○ Key Locations

Peak Flood Velocity (m/s)

- 0
- 0.2
- 0.4
- 0.6
- 0.8
- 1
- 2
- 3
- 4

Title:
**Peak Flood Velocity
2% AEP Event**

Figure:
B-12

Rev:
A

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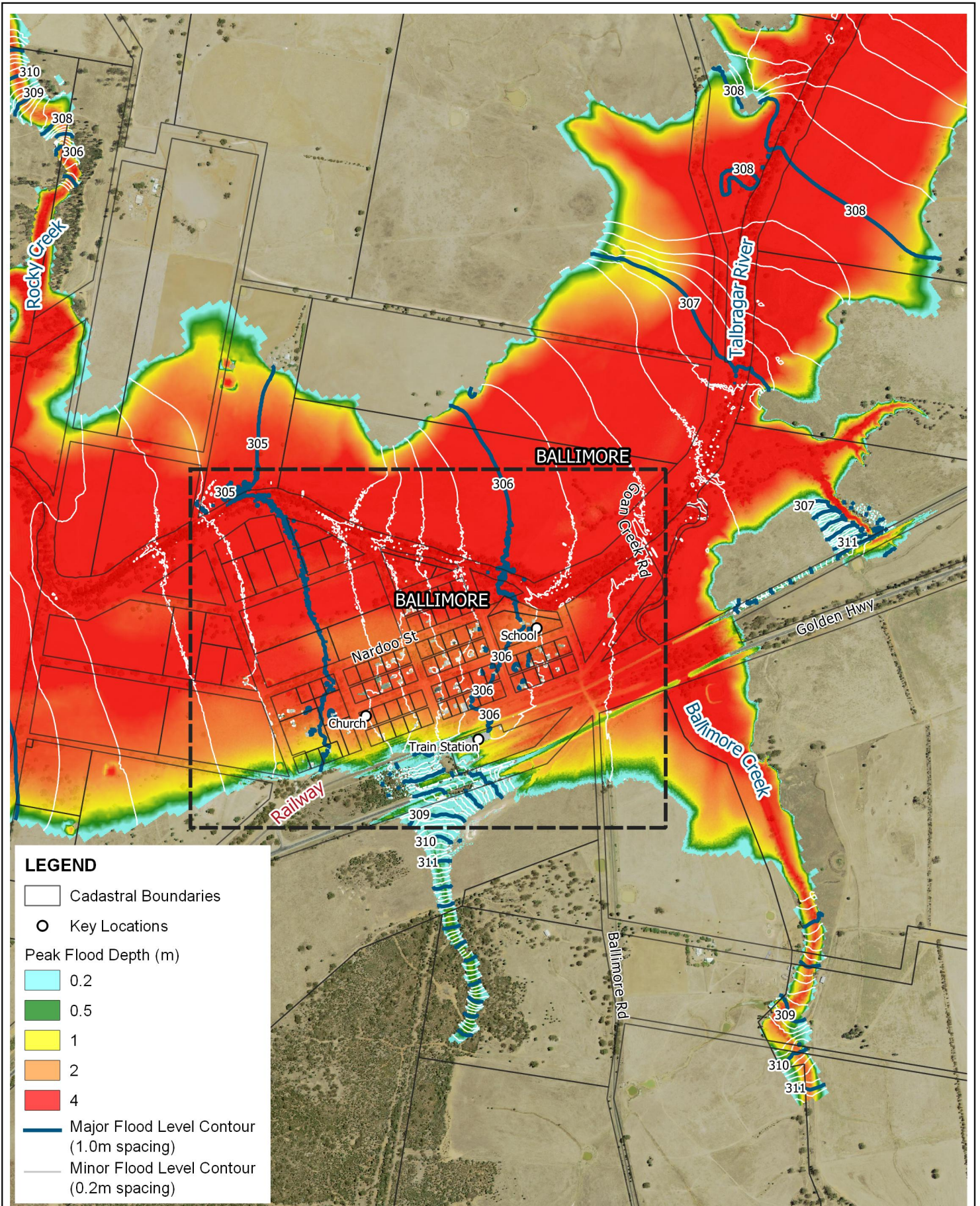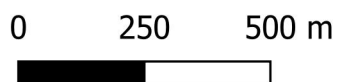
0   250   500 m

BMT

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LEGEND

Cadastral Boundaries

○ Key Locations

Peak Flood Velocity (m/s)

⬛	0
⬛	0.2
⬛	0.4
⬛	0.6
⬛	0.8
⬛	1
⬛	2
⬛	3
⬛	4

Title:
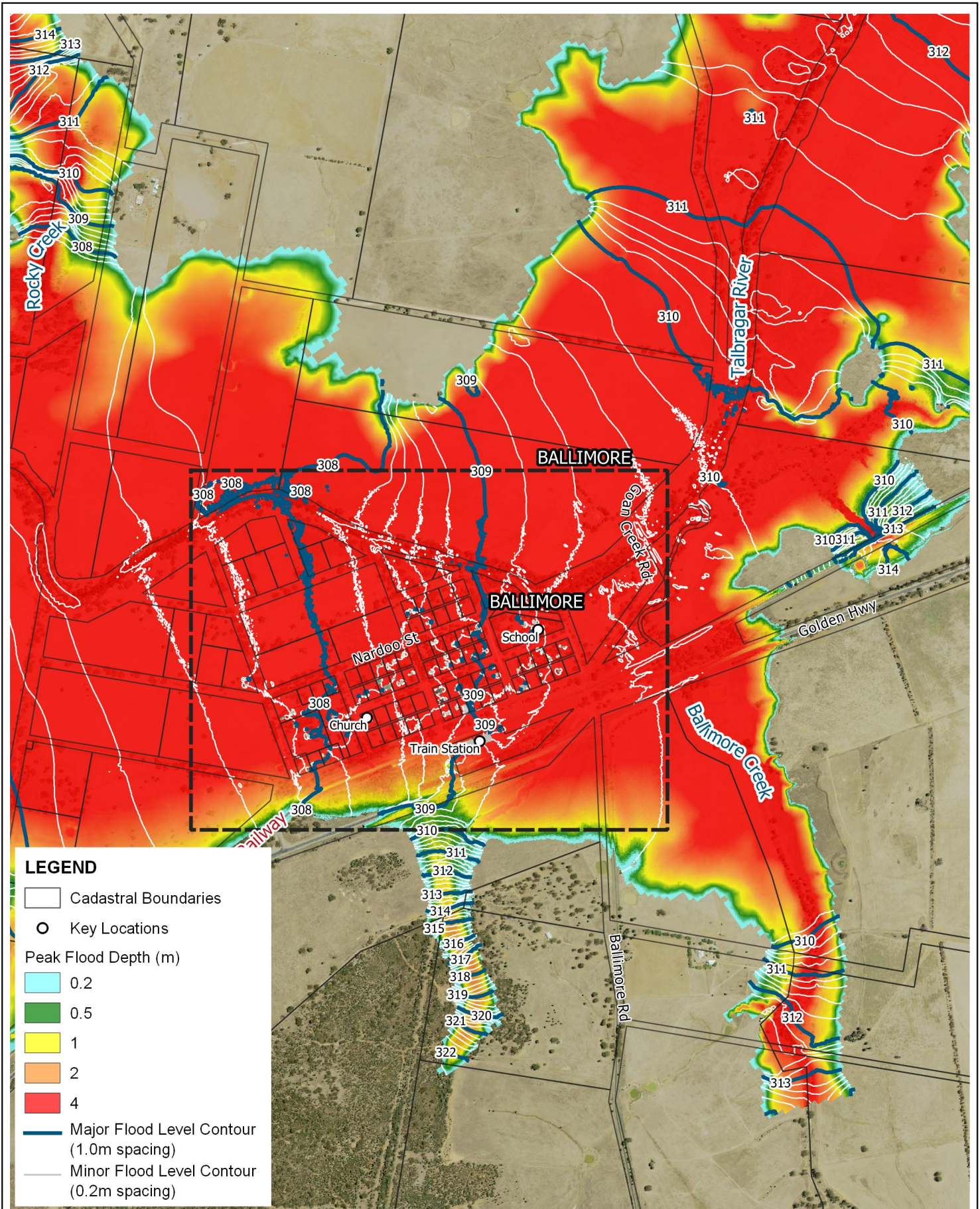**Peak Flood Velocity
1% AEP Event**

Figure:
B-13

Rev:
A

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0   250   500 m

BMT

LEGEND

☐ Cadastral Boundaries

○ Key Locations

Peak Flood Velocity (m/s)

- 0 (dark blue)
- 0.2 (blue)
- 0.4 (cyan)
- 0.6 (green)
- 0.8 (light green)
- 1 (yellow)
- 2 (red)
- 3 (dark red)
- 4 (brown)

Title:
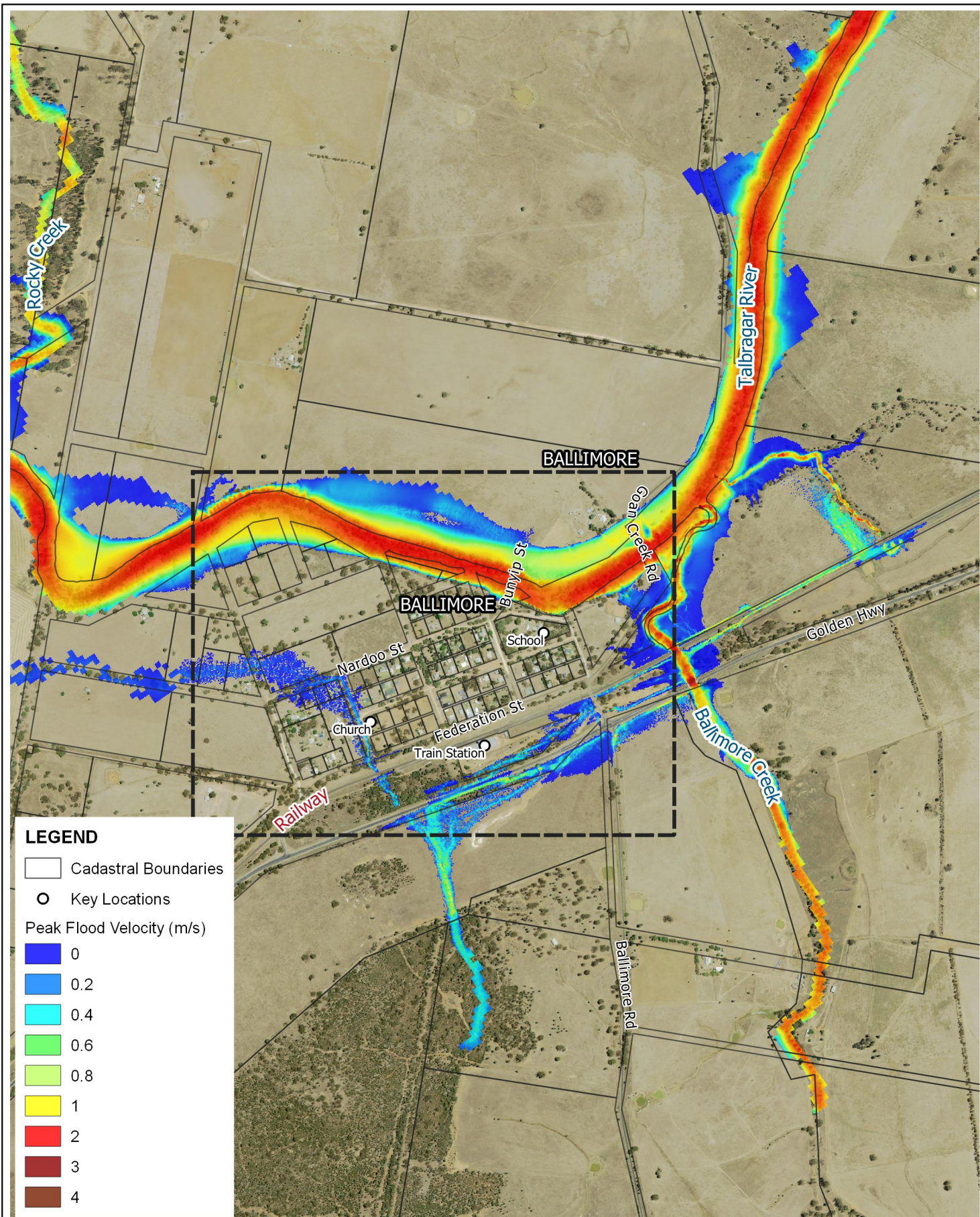**Peak Flood Velocity
0.5% AEP Event**

Figure: **B-14**

Rev: **A**

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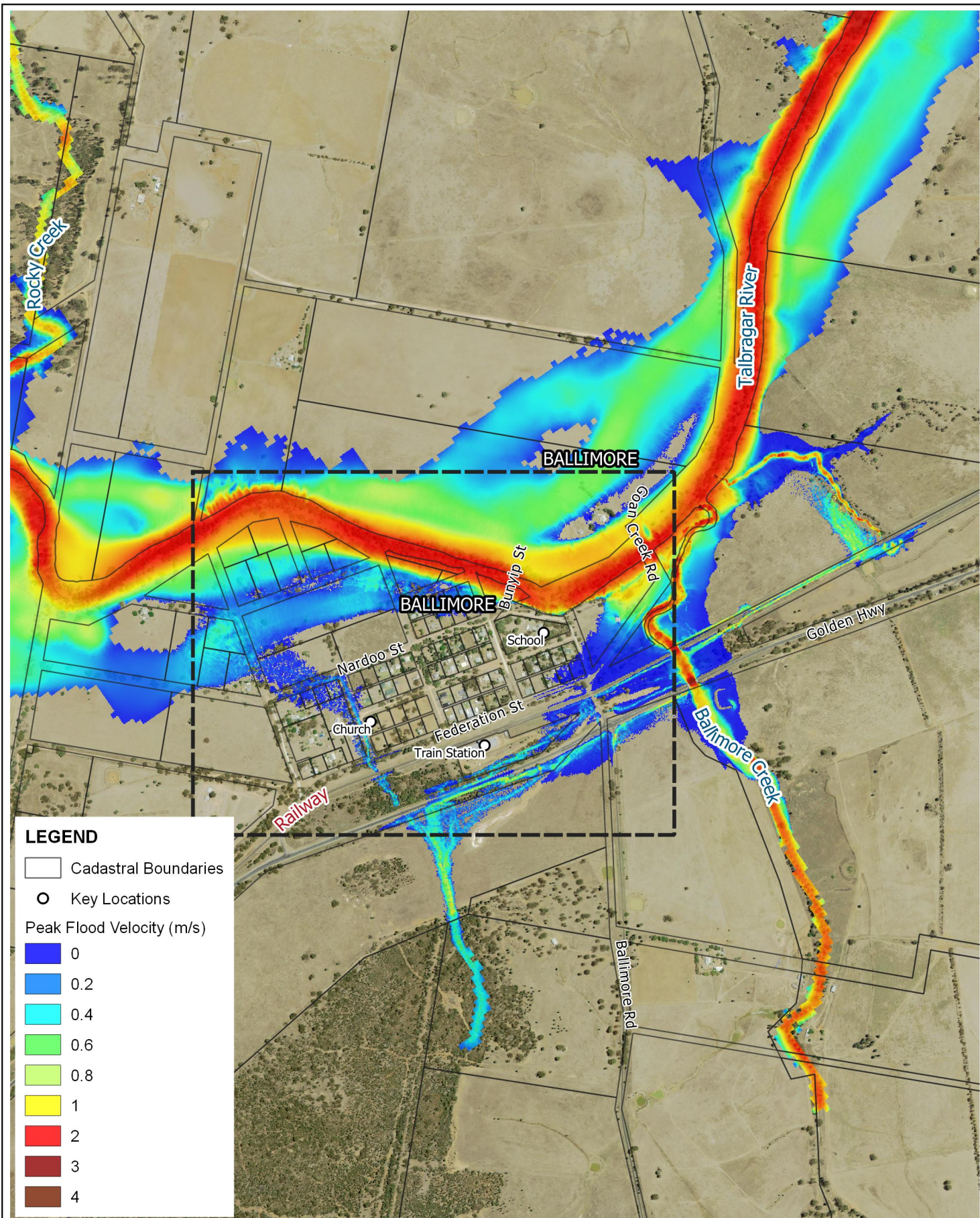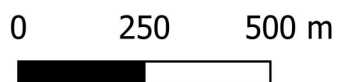
0   250   500 m

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LEGEND

☐ Cadastral Boundaries

◯ Key Locations

Peak Flood Velocity (m/s)

■	0
■	0.2
■	0.4
■	0.6
■	0.8
■	1
■	2
■	3
■	4

Map labels: Rocky Creek, Talbragar River, BALLIMORE, Goan Creek Rd, Golden Hwy, Bunyip St, BALLIMORE, School, Nardoo St, Federation St, Church, Train Station, Railway, Ballimore Creek, Ballimore Rd

Title:
Peak Flood Velocity
0.2% AEP Event

Figure: **B-15**

Rev: **A**

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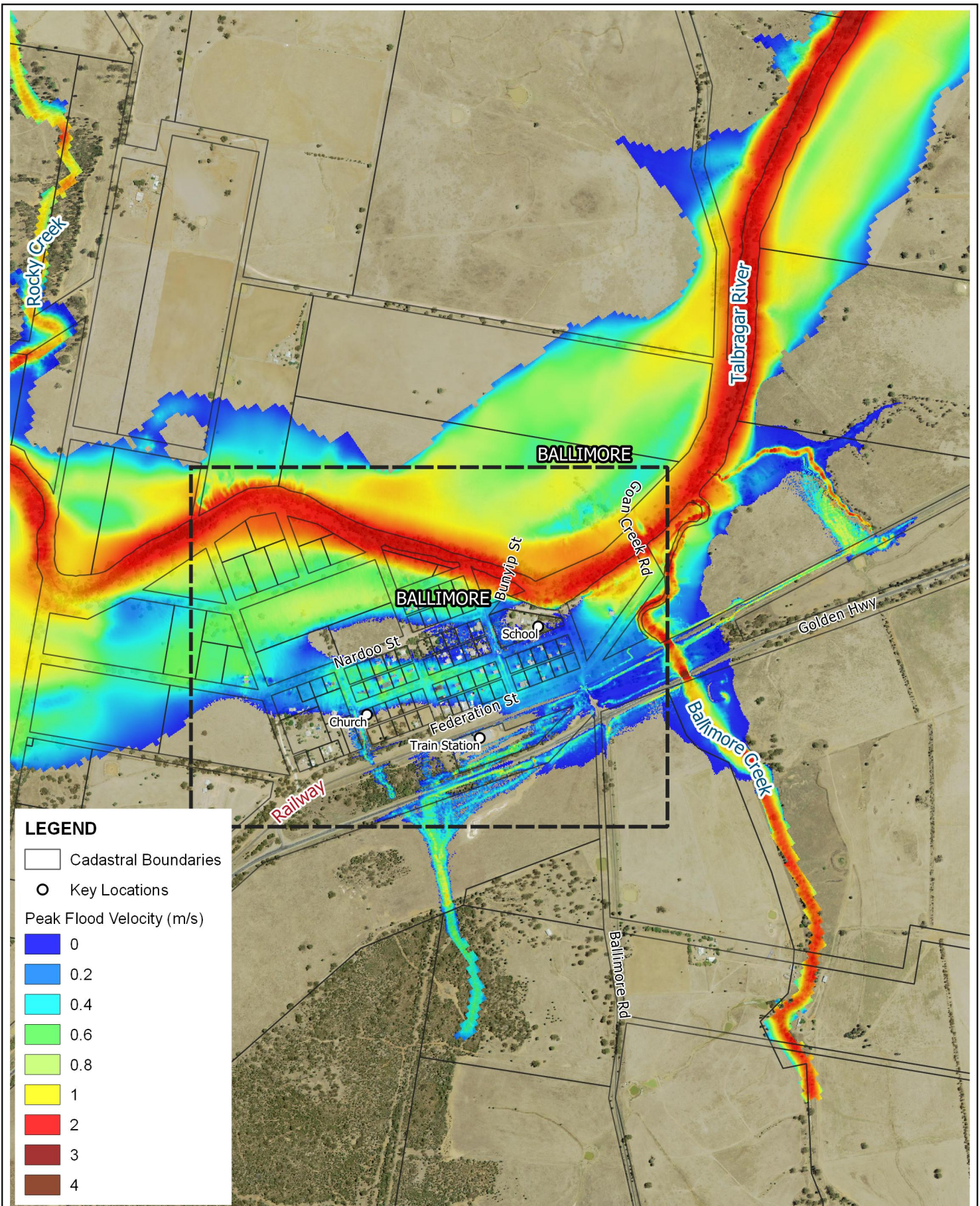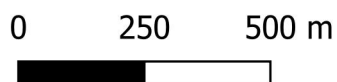
0   250   500 m

BMT

Rocky Creek

Talbragar River

BALLIMORE

Goan Creek Rd

Golden Hwy

Bunyip St

BALLIMORE

School

Nardoo St

Federation St

Church

Train Station

Railway

Ballimore Creek

Ballimore Rd

LEGEND

▭ Cadastral Boundaries

◯ Key Locations

Peak Flood Velocity (m/s)

■	0
■	0.2
■	0.4
■	0.6
■	0.8
■	1
■	2
■	3
■	4

Title:
**Peak Flood Velocity
0.1% AEP Event**

Figure:
B-16

Rev:
A

0   250   500 m

BMT

LEGEND

◻ Cadastral Boundaries

○ Key Locations

Peak Flood Velocity (m/s)

- 0
- 0.2
- 0.4
- 0.6
- 0.8
- 1
- 2
- 3
- 4

Title:
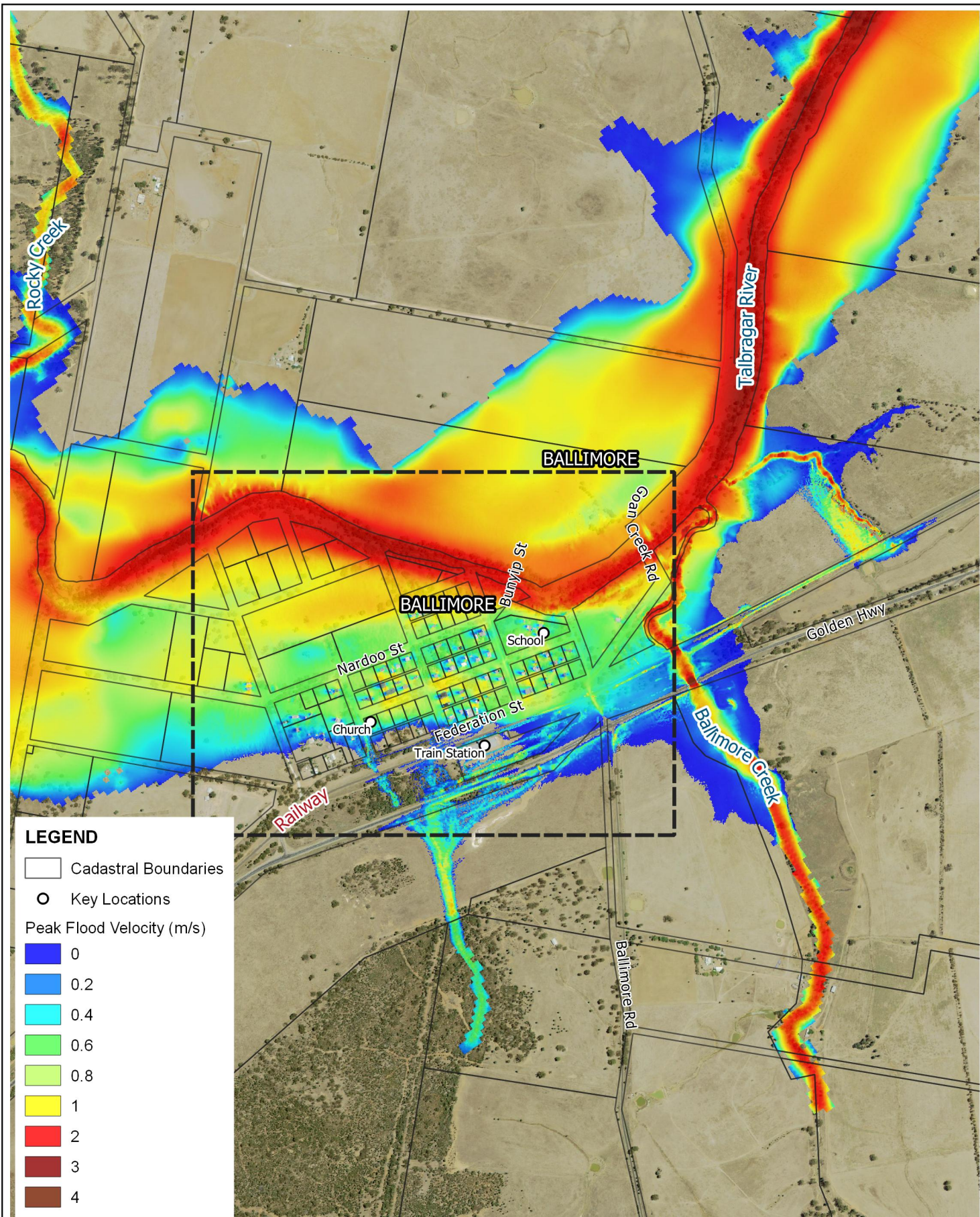**Peak Flood Velocity
0.05% AEP Event**

Figure:
B-17

Rev:
A

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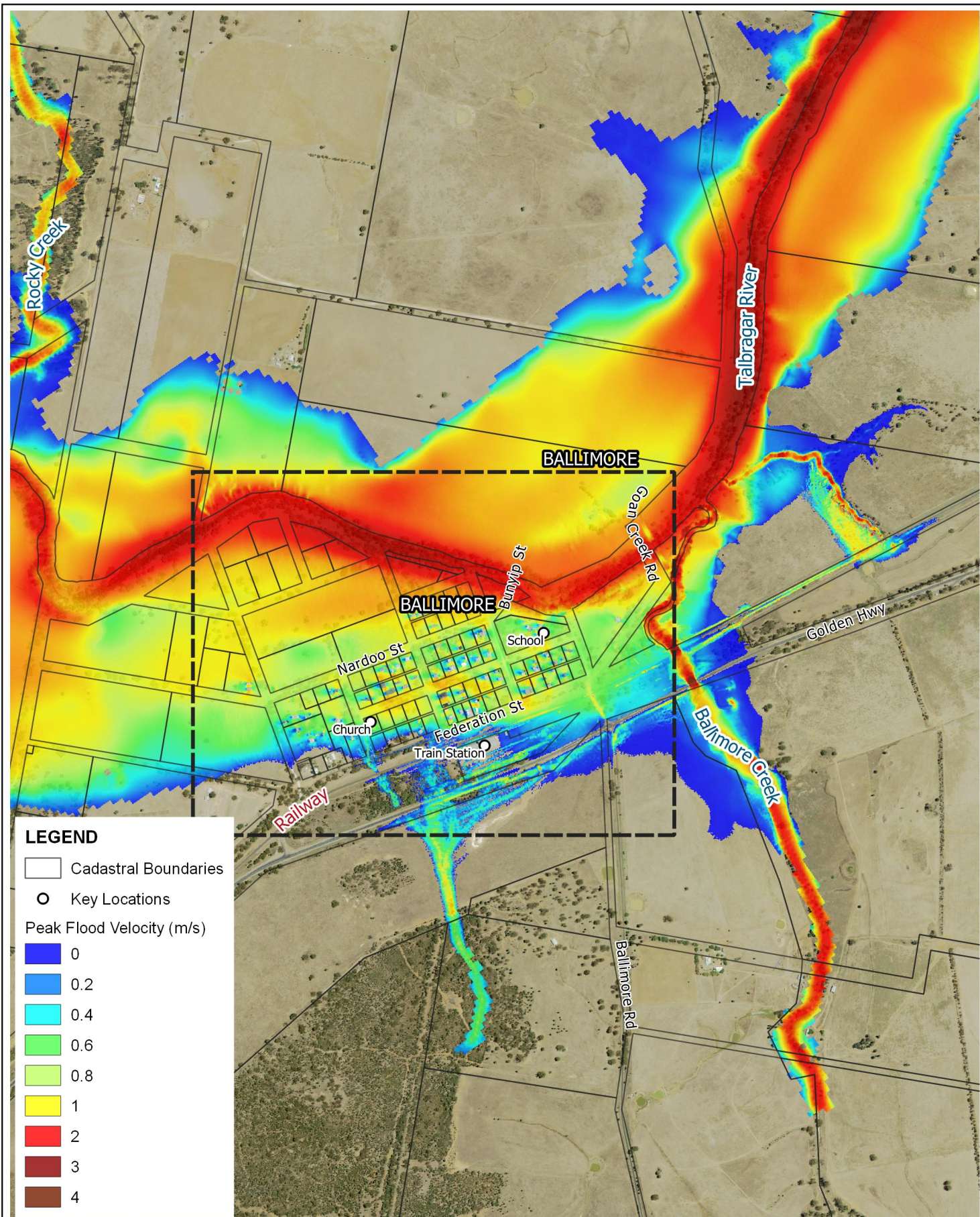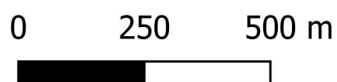
0   250   500 m

BMT

LEGEND

◻ Cadastral Boundaries

○ Key Locations

Peak Flood Velocity (m/s)

■	0
■	0.2
■	0.4
■	0.6
■	0.8
■	1
■	2
■	3
■	4
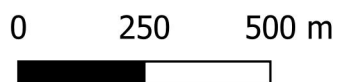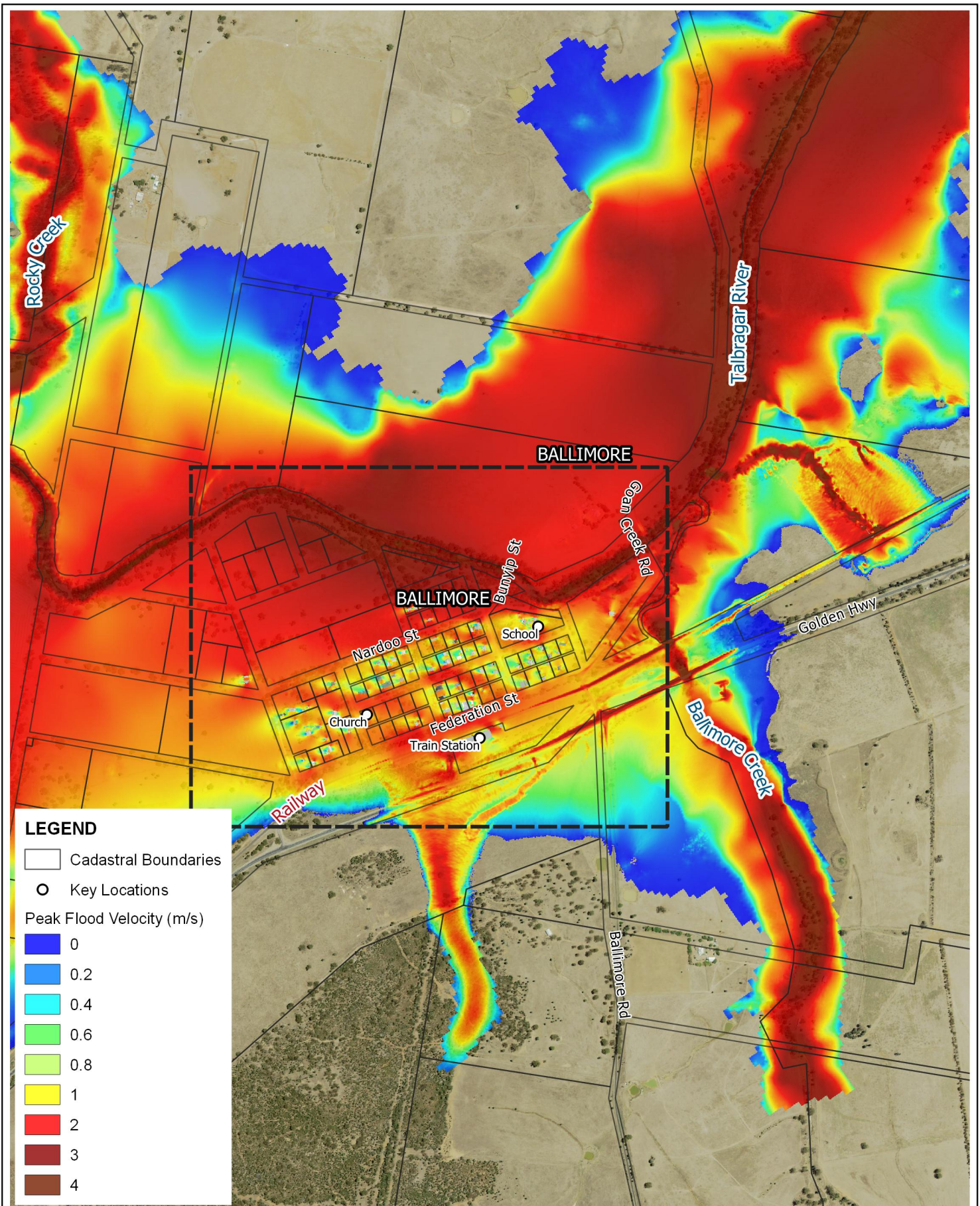
Title:
Peak Flood Velocity
PMF Event

Figure:
B-18

Rev:
A

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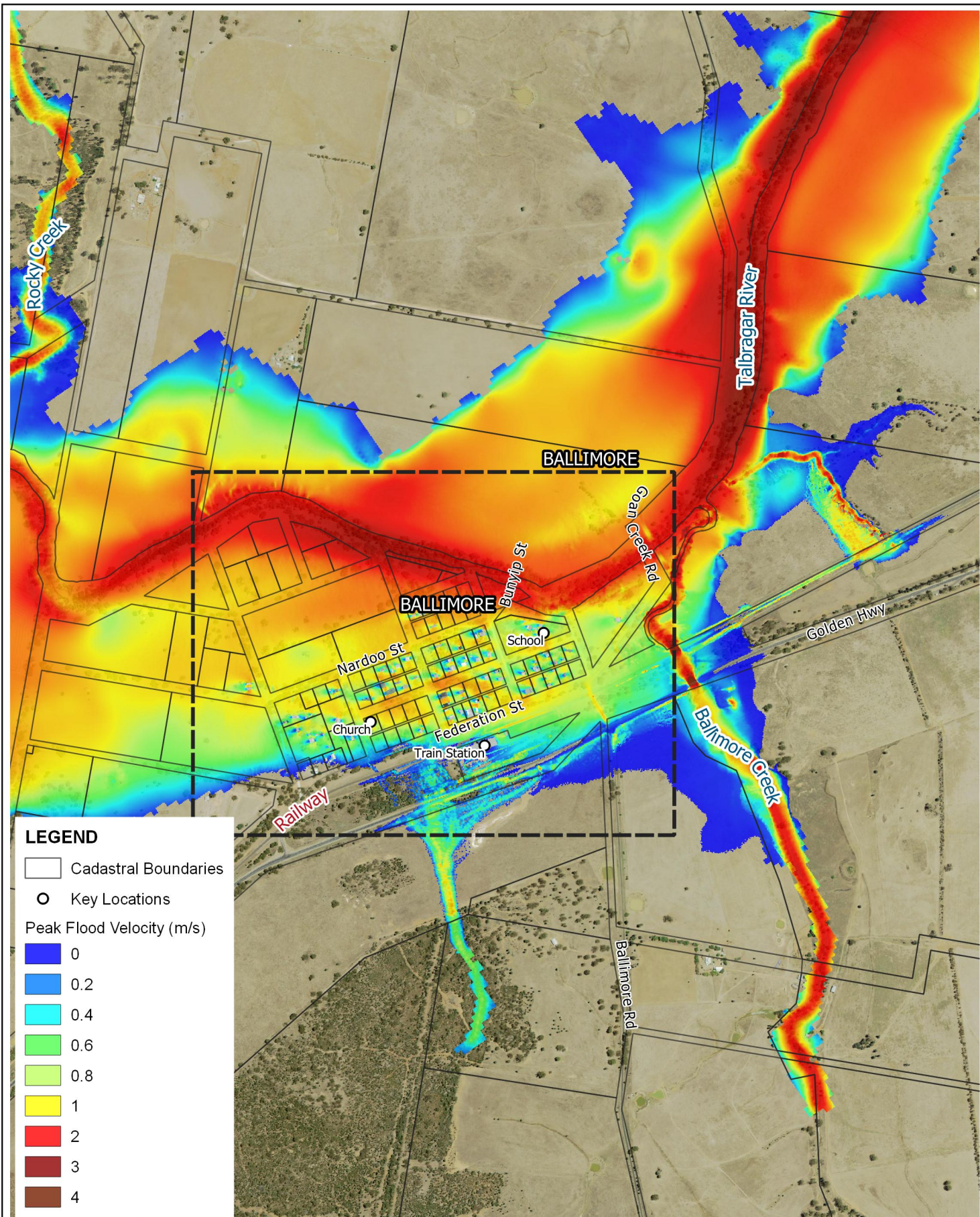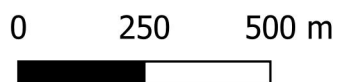
0   250   500 m

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Rocky Creek

BALLIMORE

Talbragar River

Goan Creek Rd

Nardoo St

School

Golden Hwy

Ballimore Creek

Church

Federation St

Train Station

Ballimore Rd

LEGEND

☐ Cadastral Boundaries

○ Key Locations

Change in Flood Extent

🟩 Was Wet Now Dry

🟨 Was Dry Now Wet

Change in Flood Level (m)

■ <= -0.5
■ -0.5 - -0.3
■ -0.3 - -0.1
■ -0.1 - -0.02
■ -0.02 - 0.02
■ 0.02 - 0.1
■ 0.1 - 0.3
■ 0.3 - 0.5
■ => 0.5

Title:	Figure:	Rev:
Change in Peak Flood Level - Sensitivity Map **1% AEP Event - Concurrent Tributary Flows**	**C-1**	**A**

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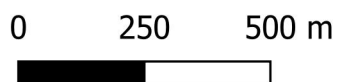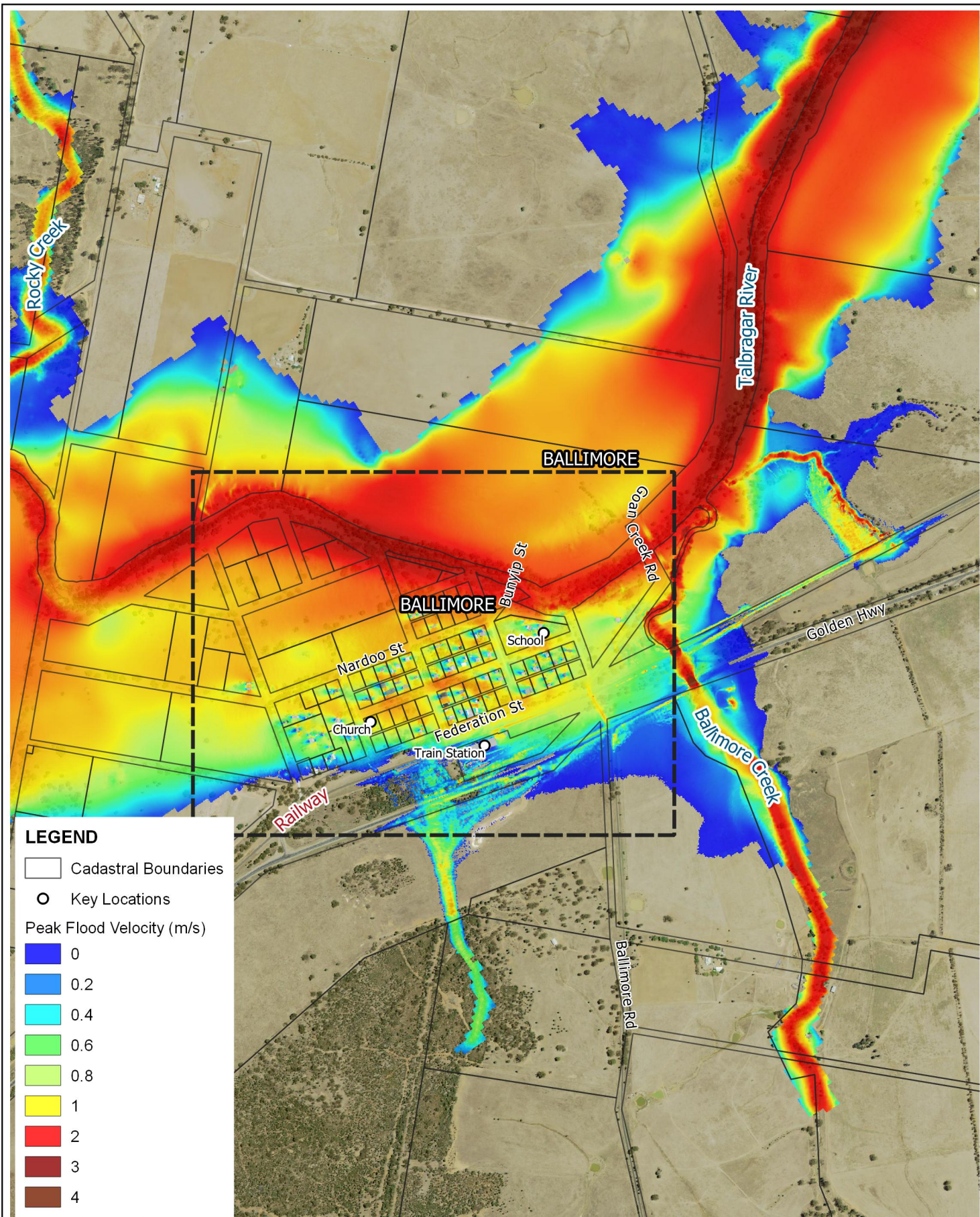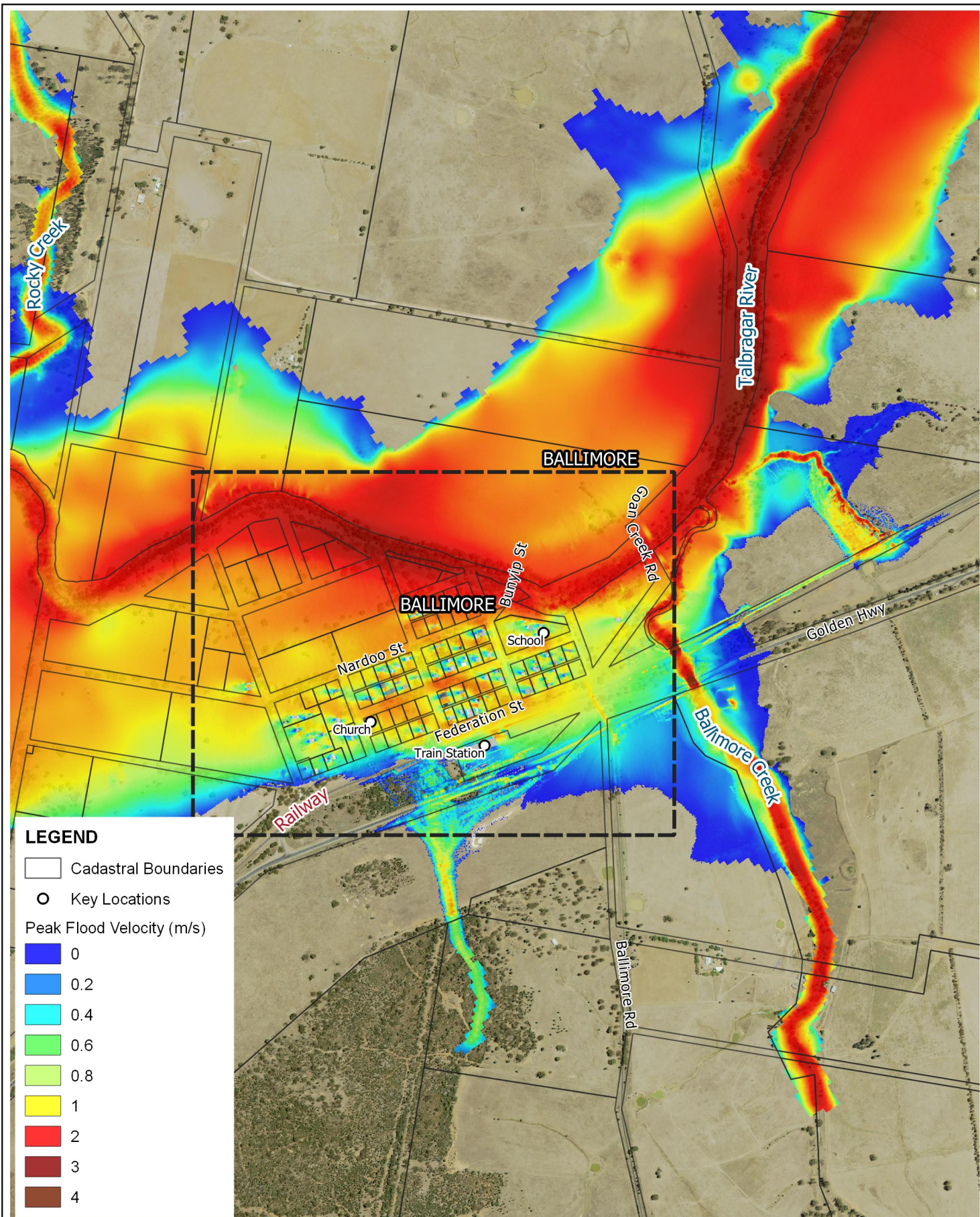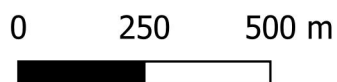
0   250   500 m

BMT

LEGEND

☐ Cadastral Boundaries

○ Key Locations

Change in Flood Extent

🟩 Was Wet Now Dry

🟨 Was Dry Now Wet

Change in Flood Level (m)

🟦 <= -0.5

🟦 -0.5 - -0.3

🟦 -0.3 - -0.1

🟦 -0.1 - -0.02

⬜ -0.02 - 0.02

🟨 0.02 - 0.1

🟧 0.1 - 0.3

🟥 0.3 - 0.5

🟥 => 0.5

Title:

Change in Peak Flood Level - Sensitivity Map
1% AEP Event - Increased Manning

Figure: **C-2**

Rev: **A**

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0   250   500 m

BMT

BALLIMORE

Rocky Creek

Talbragar River

Goan Creek Rd

Golden Hwy

Ballimore Creek

Bunyip St

Nardoo St

School

Church

Federation St

Train Station

Railway

Ballimore Rd

LEGEND

☐ Cadastral Boundaries

○ Key Locations

Change in Flood Extent

🟩 Was Wet Now Dry

🟨 Was Dry Now Wet

Change in Flood Level (m)

<= -0.5
-0.5 - -0.3
-0.3 - -0.1
-0.1 - -0.02
-0.02 - 0.02
0.02 - 0.1
0.1 - 0.3
0.3 - 0.5
=> 0.5

Title:
**Change in Peak Flood Level - Sensitivity Map
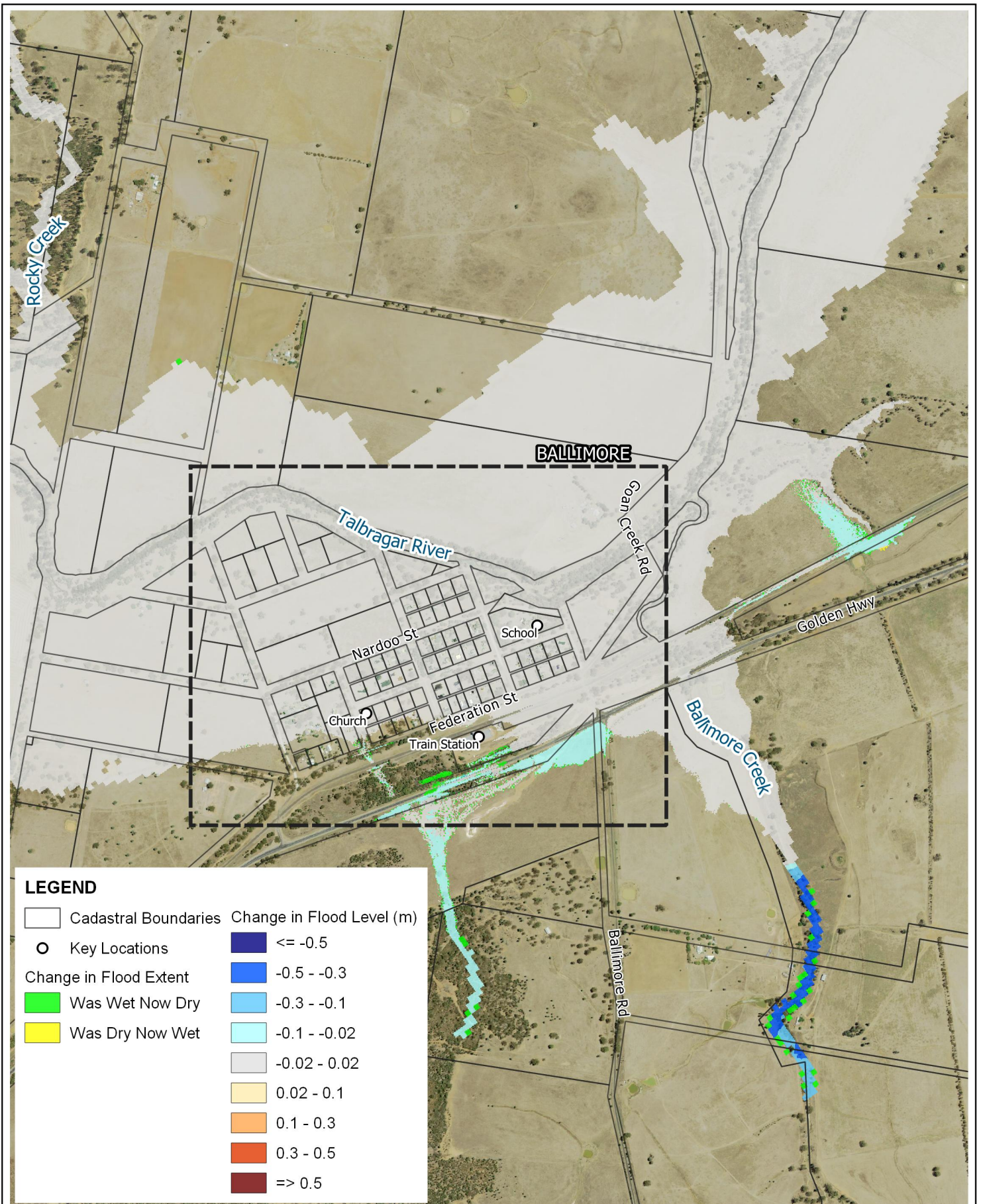1% AEP Event - Reduced Tailwater Energy Slope**

Figure:
C-3

Rev:
A

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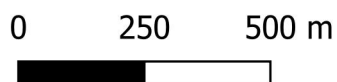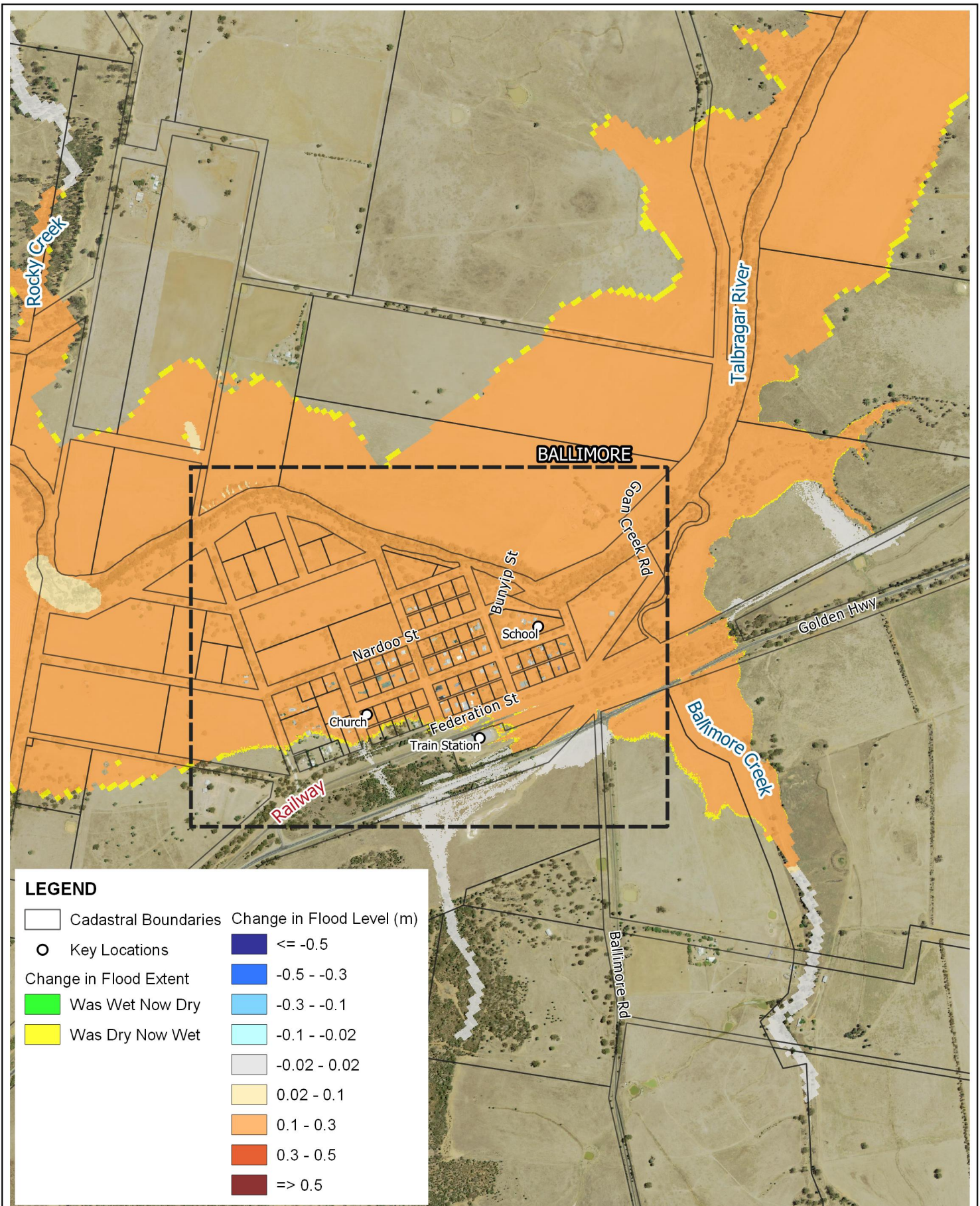
0   250   500 m

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LEGEND

☐ Cadastral Boundaries

○ Key Locations

Change in Flood Extent

🟩 Was Wet Now Dry

🟨 Was Dry Now Wet

Change in Flood Level (m)

■ <= -0.5
■ -0.5 - -0.3
■ -0.3 - -0.1
■ -0.1 - -0.02
■ -0.02 - 0.02
■ 0.02 - 0.1
■ 0.1 - 0.3
■ 0.3 - 0.5
■ => 0.5

Title:
Change in Peak Flood Level - Sensitivity Map
1% AEP Event - Increased Blockage at Ballimore Ck Bridges

Figure: **C-4**

Rev: **A**

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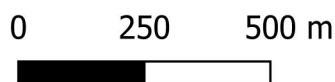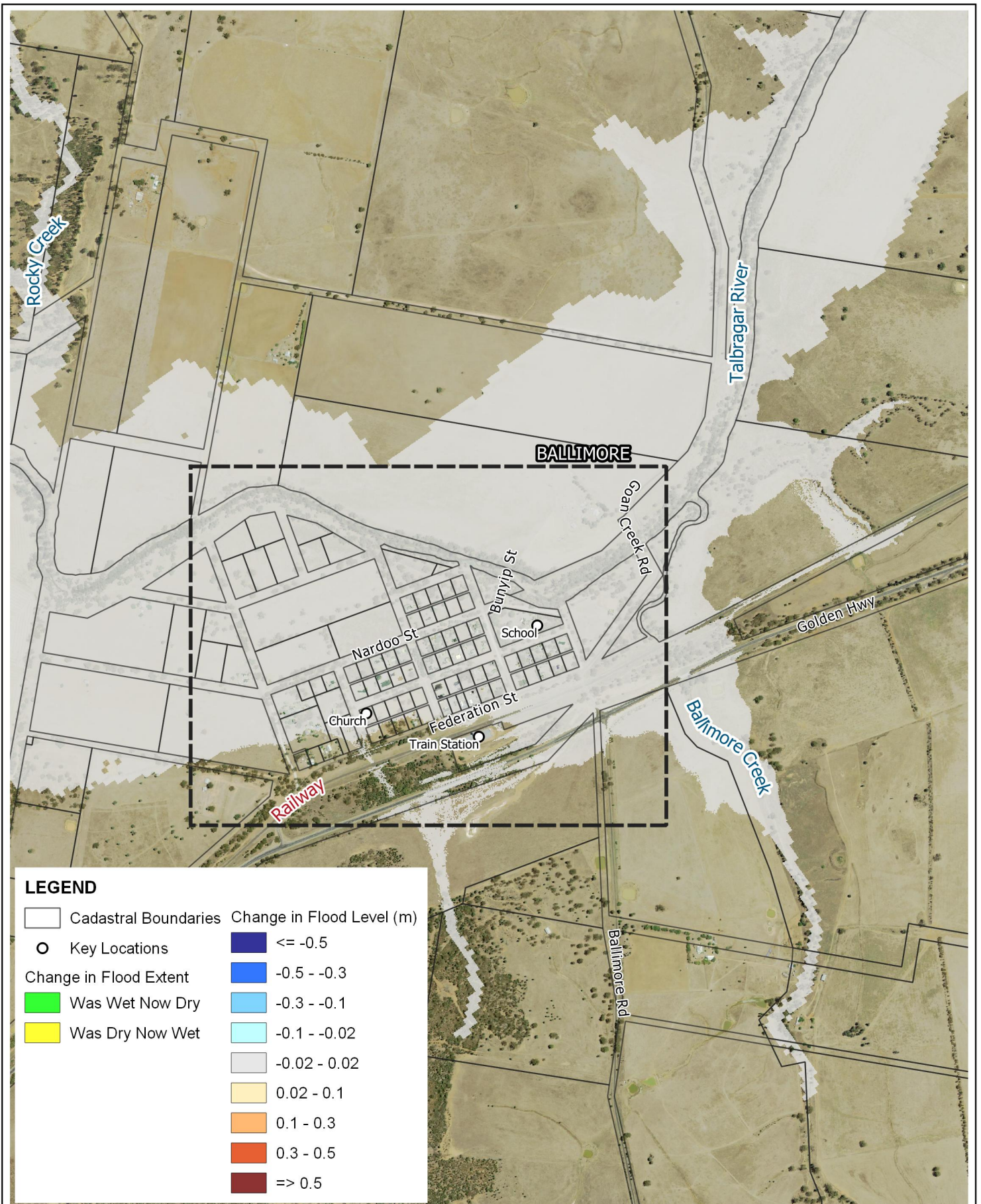
0   250   500 m

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LEGEND

▢	Cadastral Boundaries
○	Key Locations

Change in Flood Extent

🟩	Was Wet Now Dry
🟨	Was Dry Now Wet

Change in Flood Level (m)

	<= -0.5
	-0.5 - -0.3
	-0.3 - -0.1
	-0.1 - -0.02
	-0.02 - 0.02
	0.02 - 0.1
	0.1 - 0.3
	0.3 - 0.5
	=> 0.5

Map labels: Rocky Creek, BALLIMORE, Talbragar River, Goan Creek Rd, Golden Hwy, Ballimore Creek, Nardoo St, School, Federation St, Church, Train Station, Ballimore Rd

Title:
Change in Peak Flood Level - Sensitivity Map
1% AEP Event - 50% Blockage at Goan Creek Rd Bridge

Figure: **C-5**

Rev: **A**

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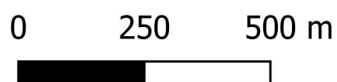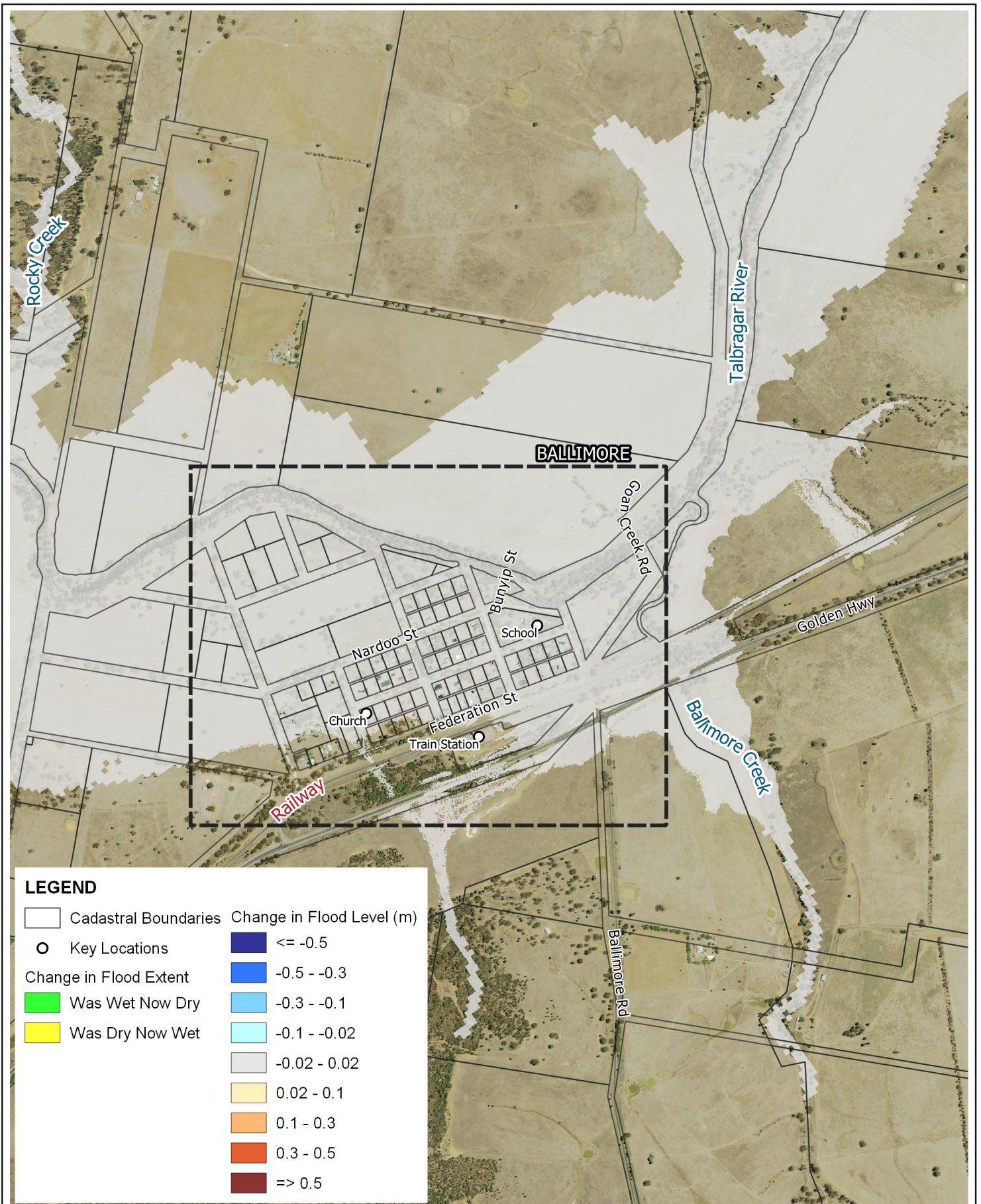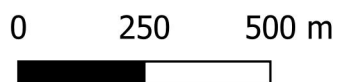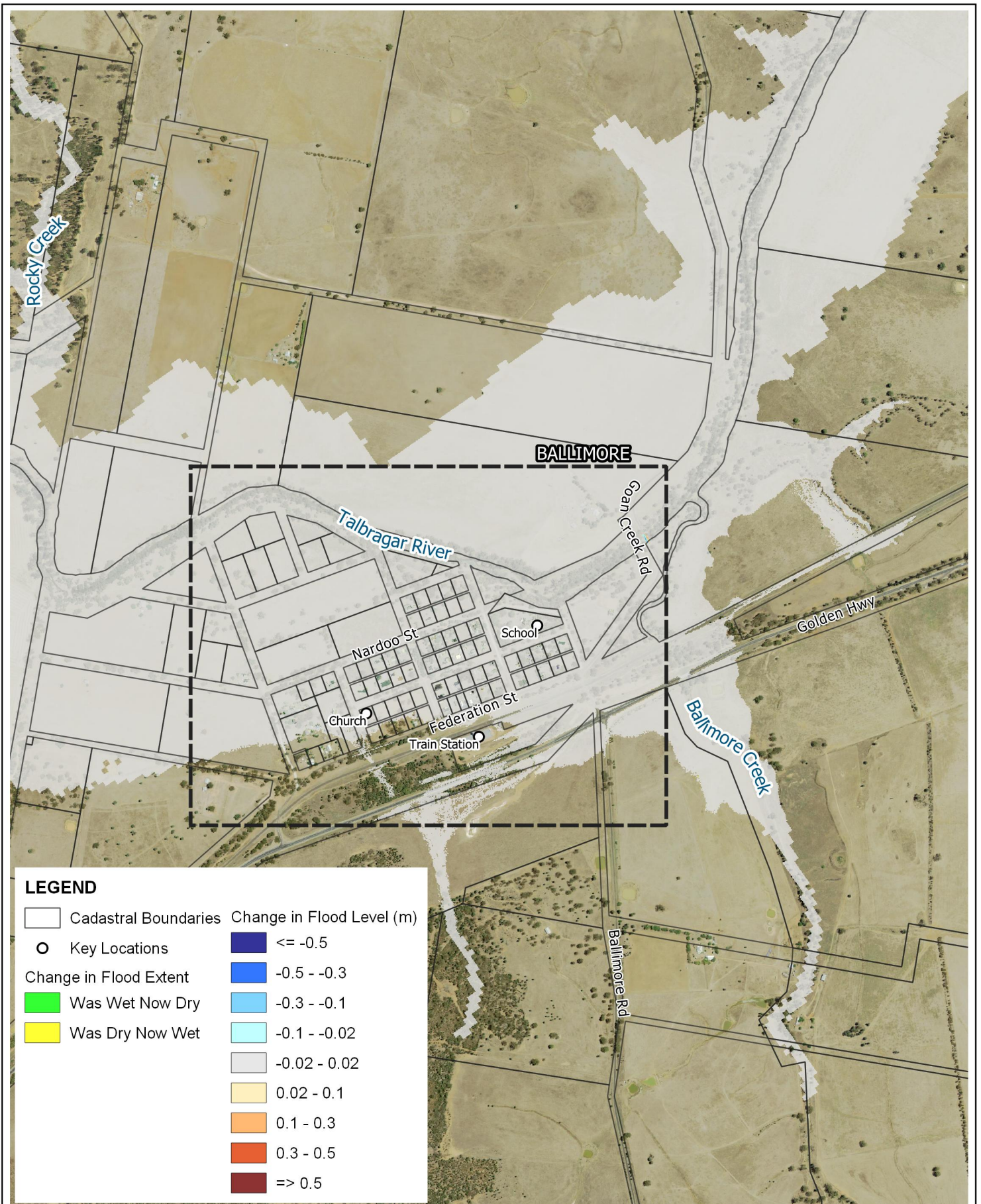
0   250   500 m

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Map labels:
Rocky Creek
BALLIMORE
Talbragar River
Goan Creek Rd
Golden Hwy
Nardoo St
School
Ballimore Creek
Church
Federation St
Train Station
Ballimore Rd

LEGEND

☐ Cadastral Boundaries

○ Key Locations

Change in Flood Extent

🟩 Was Wet Now Dry

🟨 Was Dry Now Wet

Change in Flood Level (m)

- <= -0.5
- -0.5 - -0.3
- -0.3 - -0.1
- -0.1 - -0.02
- -0.02 - 0.02
- 0.02 - 0.1
- 0.1 - 0.3
- 0.3 - 0.5
- => 0.5

Title:
Change in Peak Flood Level - Sensitivity Map
1% AEP Event - 90% Blockage at Goan Creek Rd Bridge

Figure: **C-6**

Rev: **A**

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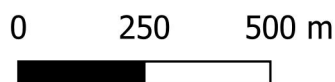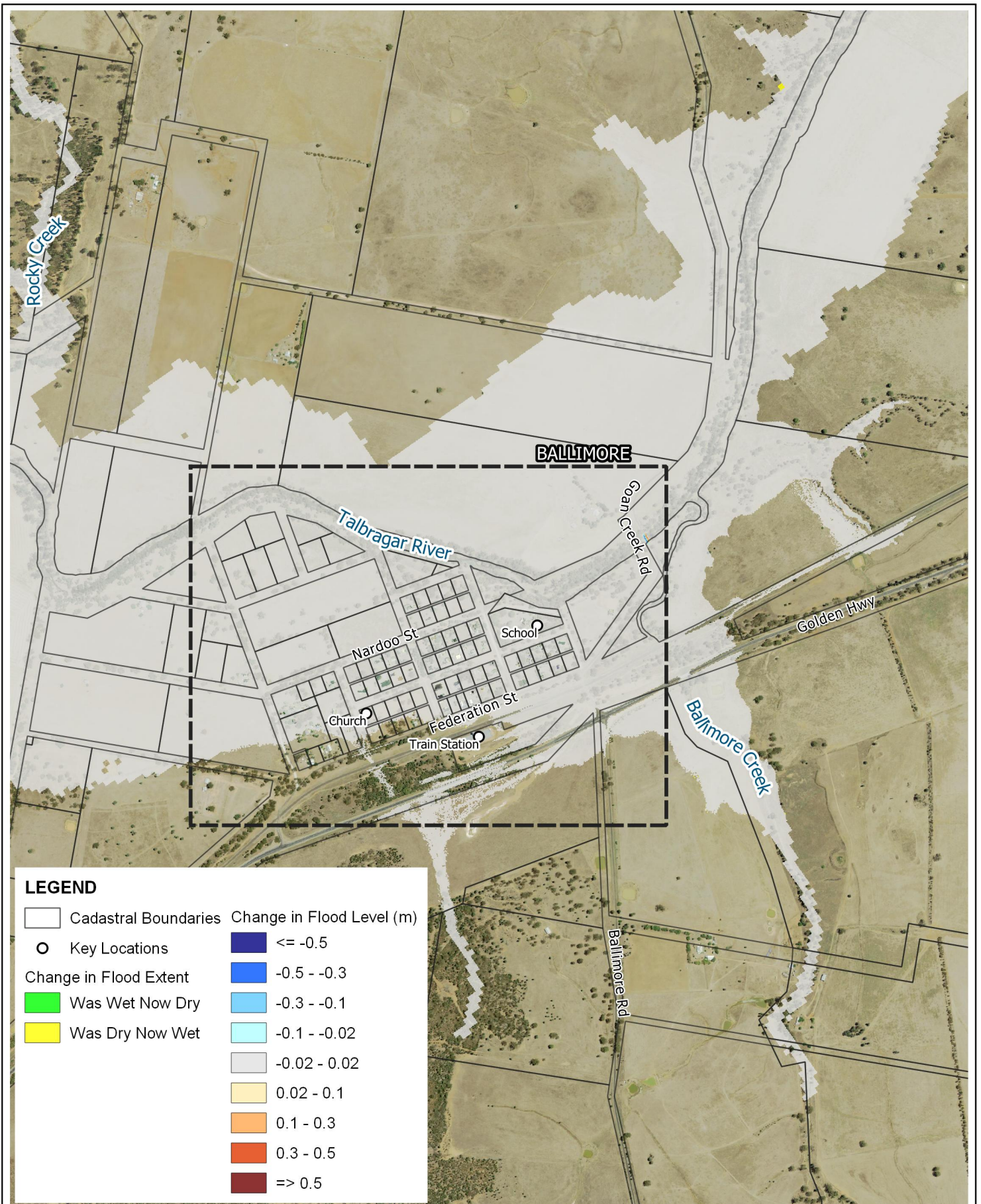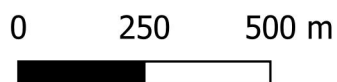
0   250   500 m

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LEGEND

▭	Cadastral Boundaries
○	Key Locations

Change in Flood Extent

🟩	Was Wet Now Dry
🟨	Was Dry Now Wet

Change in Flood Level (m)

■	<= -0.5
■	-0.5 - -0.3
■	-0.3 - -0.1
■	-0.1 - -0.02
■	-0.02 - 0.02
■	0.02 - 0.1
■	0.1 - 0.3
■	0.3 - 0.5
■	=> 0.5

Title:

Change in Peak Flood Level - Sensitivity Map
1% AEP Event - 0% Culverts' Blockage

Figure: C-7

Rev: A

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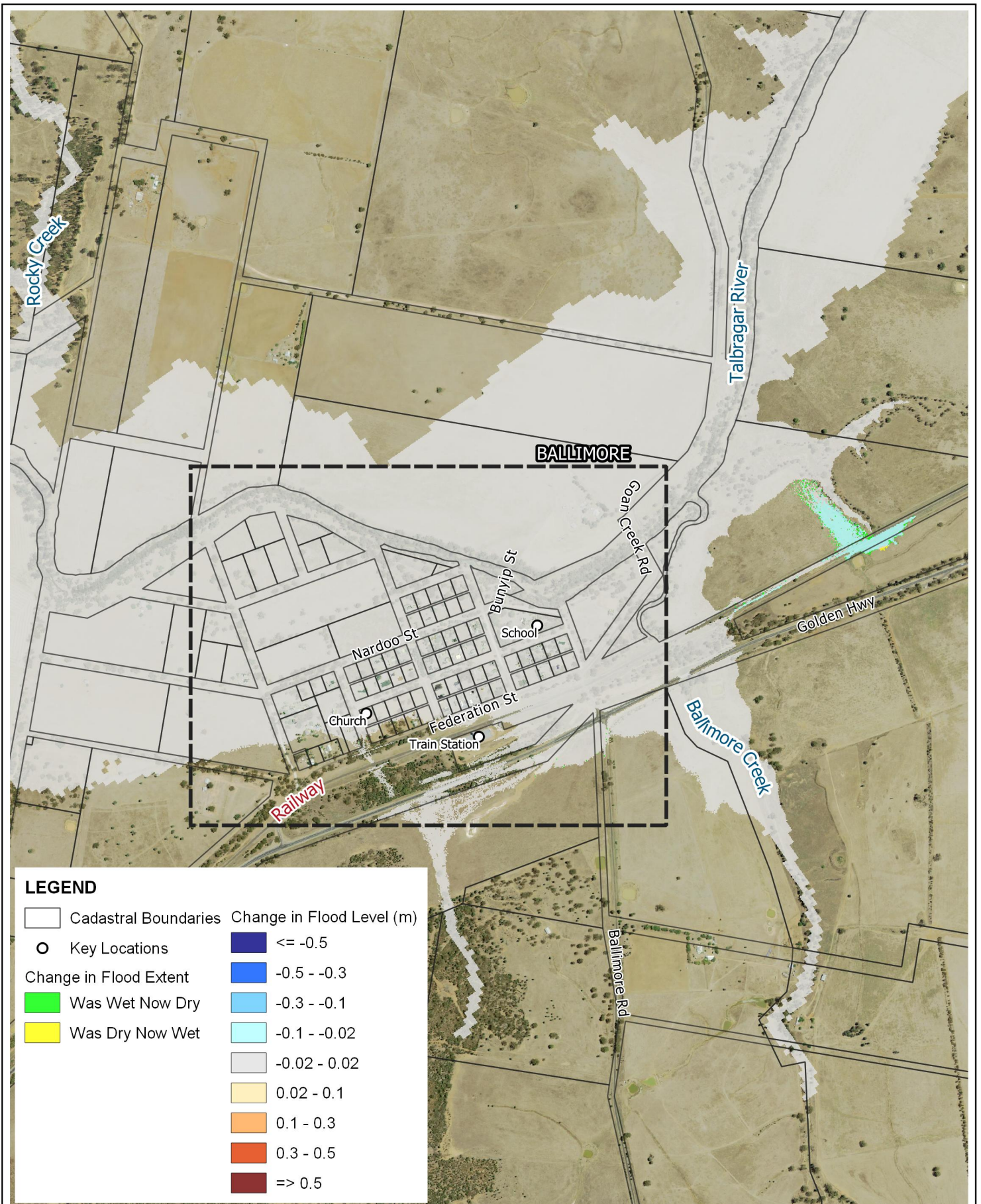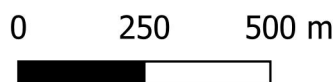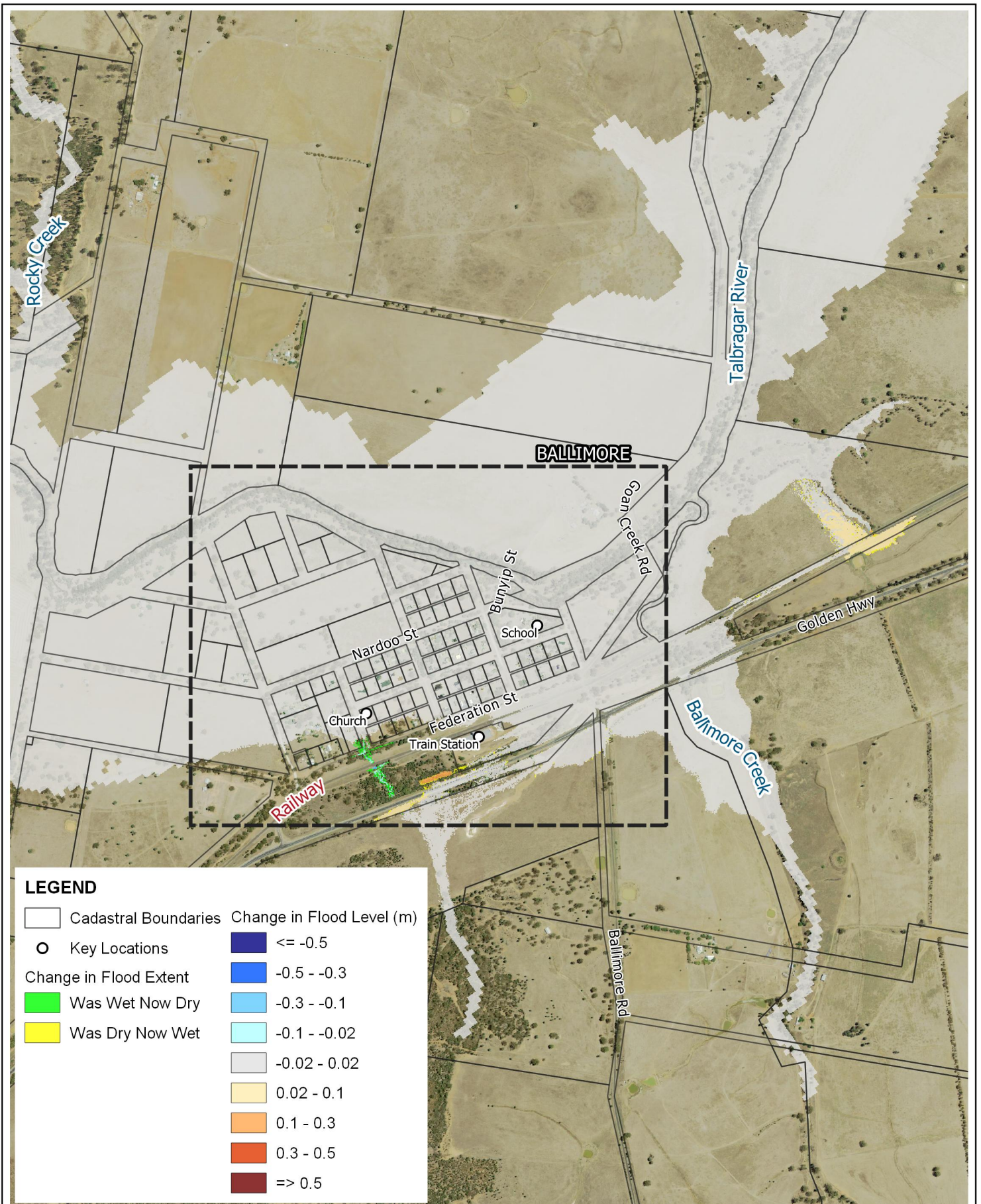
0   250   500 m

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LEGEND

▭	Cadastral Boundaries
○	Key Locations

Change in Flood Extent

🟩	Was Wet Now Dry
🟨	Was Dry Now Wet

Change in Flood Level (m)

■	<= -0.5
■	-0.5 - -0.3
■	-0.3 - -0.1
■	-0.1 - -0.02
■	-0.02 - 0.02
■	0.02 - 0.1
■	0.1 - 0.3
■	0.3 - 0.5
■	=> 0.5

Title:

Change in Peak Flood Level - Sensitivity Map
1% AEP Event - 100% Culverts' Blockage

Figure: **C-8**

Rev: **A**

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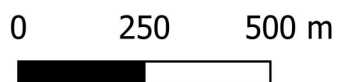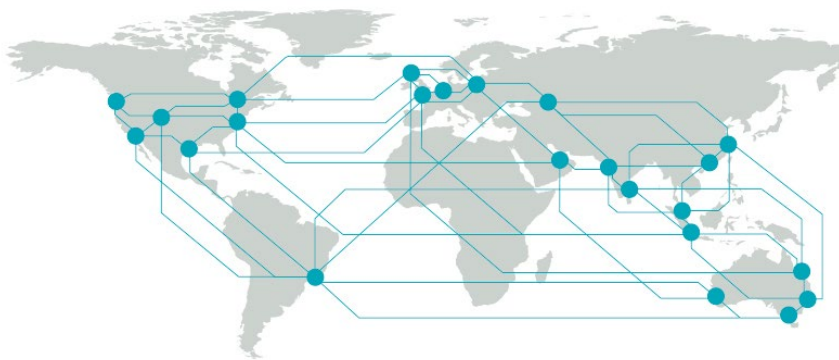
0   250   500 m

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