

# **Appendix B**

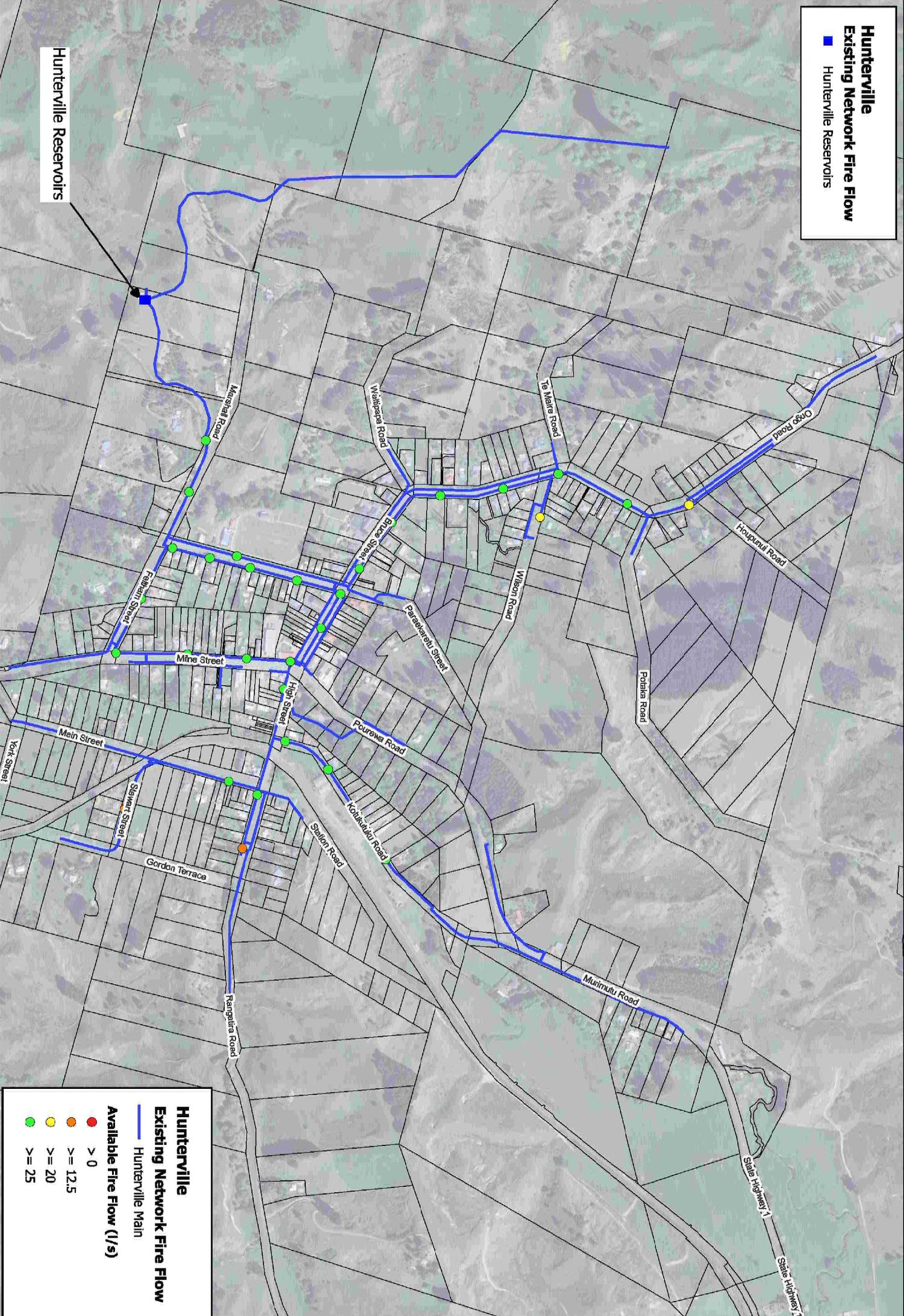
**Hunterville Maps**

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1.3	Hunternville Stormwater Rapid Flood Hazard Assessment



Figure 1.1.2 Hunterville Existing Fire Flow (FW2) Assessment



Hunterville Reservoirs

**Hunterville Existing Network Fire Flow**

- Hunterville Reservoirs

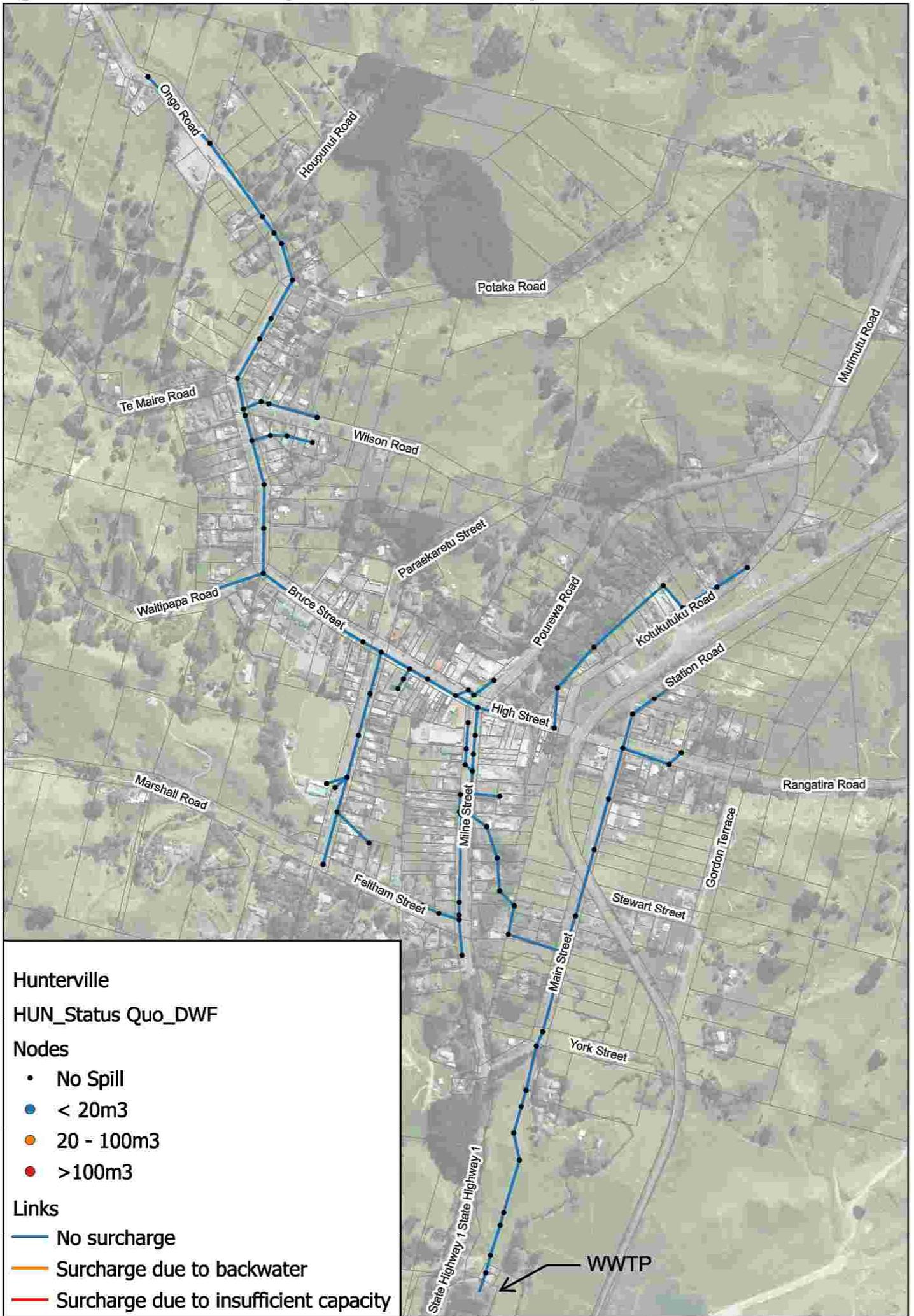
**Hunterville Existing Network Fire Flow**

- Hunterville Main

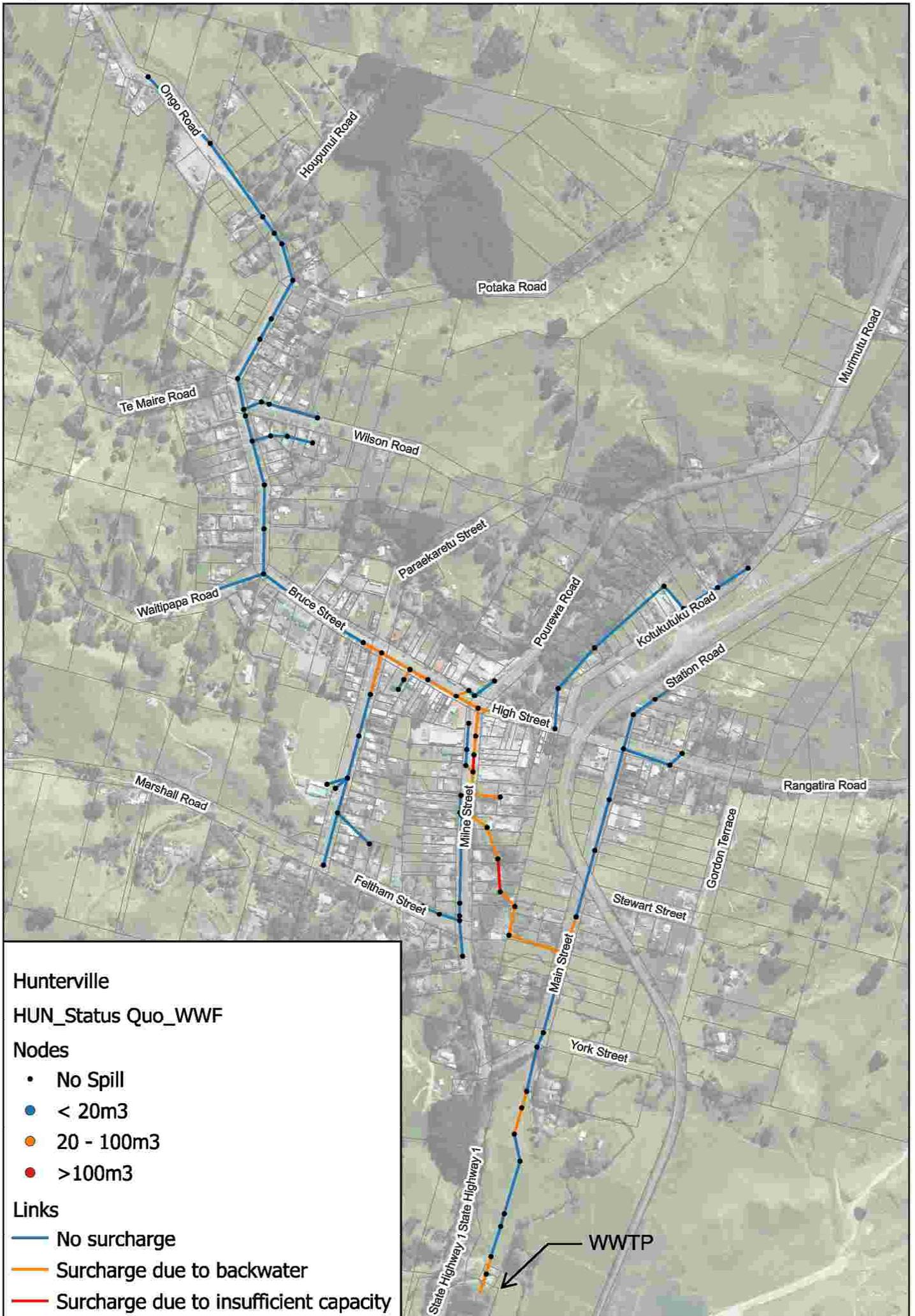
**Available Fire Flow (l/s)**

- > 0
- >= 12.5
- >= 20
- >= 25

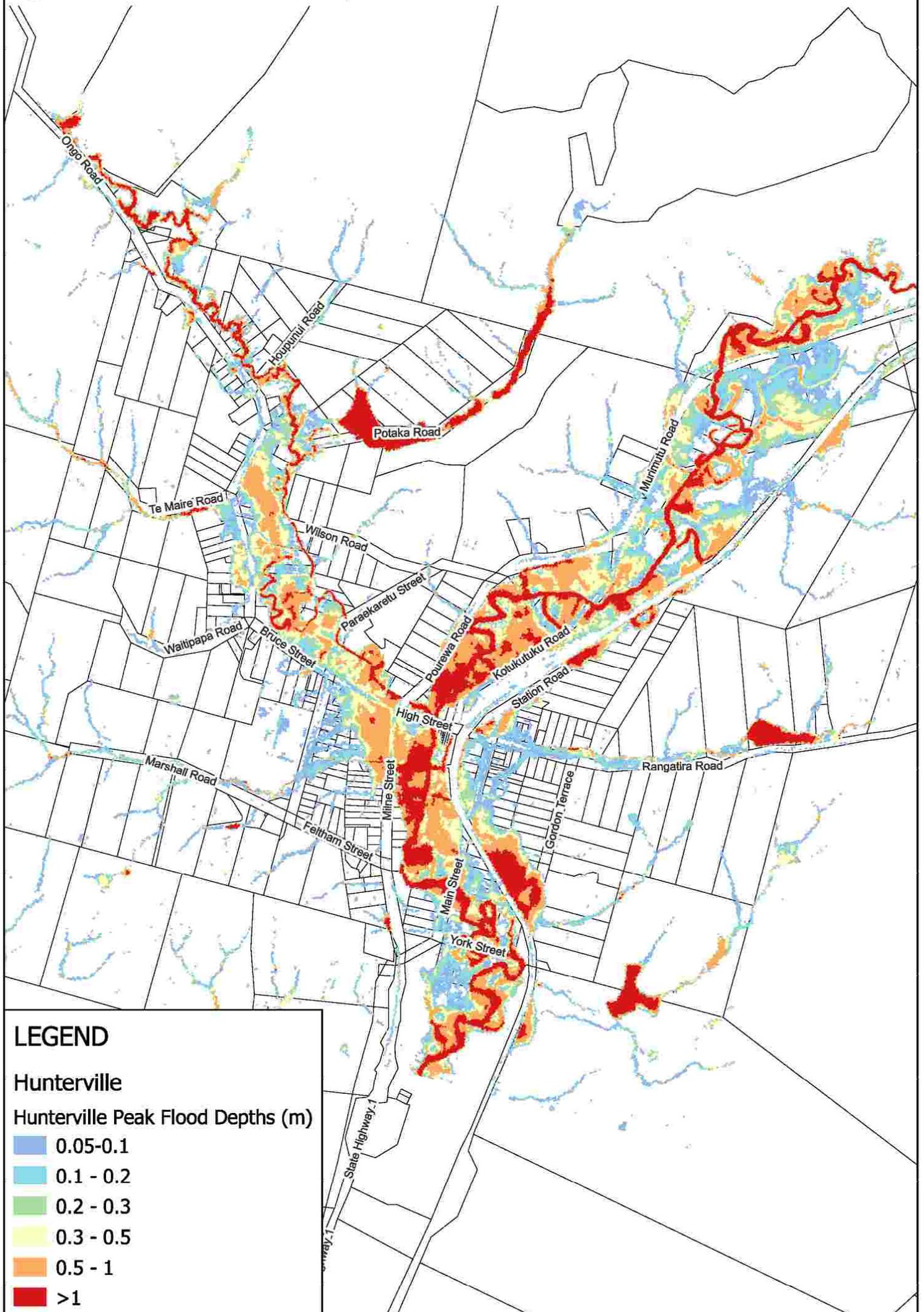
**Figure 1.2.1** Hunterville Existing Wastewater Network - Dry Weather Flow



**Figure 1.2.2** Hunterville Existing Wastewater Network - Wet Weather Flow



**Figure 1.3** Hunterville Stormwater Rapid Flood Hazard Assessment



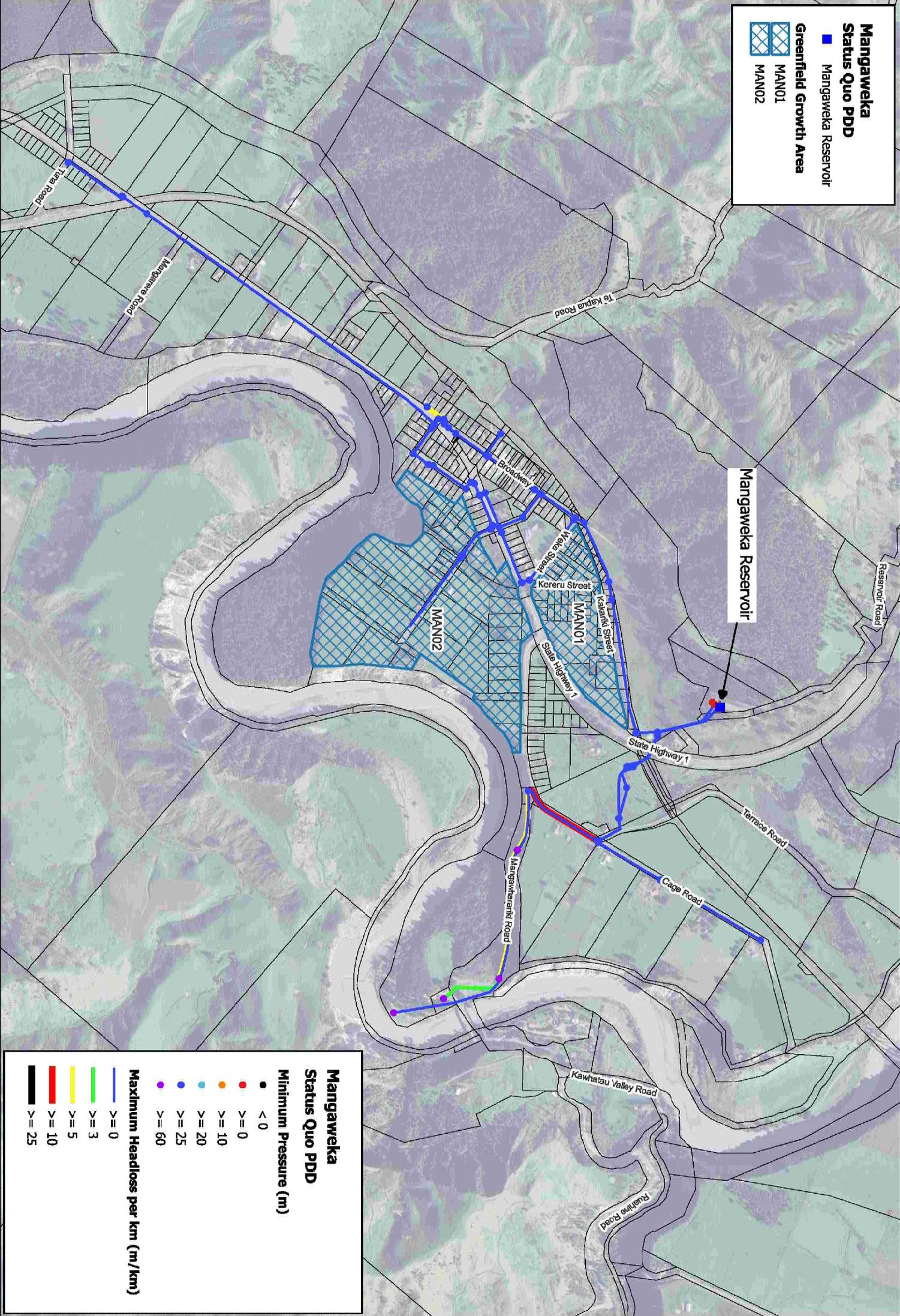
# **Appendix C**

## **Mangaweka Maps**

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3.2.2	MAN02 Wastewater Network Performance - Wet Weather Flow

Figure 1.1.1 Mangaweka Existing Water Supply System Performance



**Mangaweka Status Quo PDD**

- Mangaweka Reservoir

**Greenfield Growth Area**

- MANO1
- MANO2

**Mangaweka Status Quo PDD**

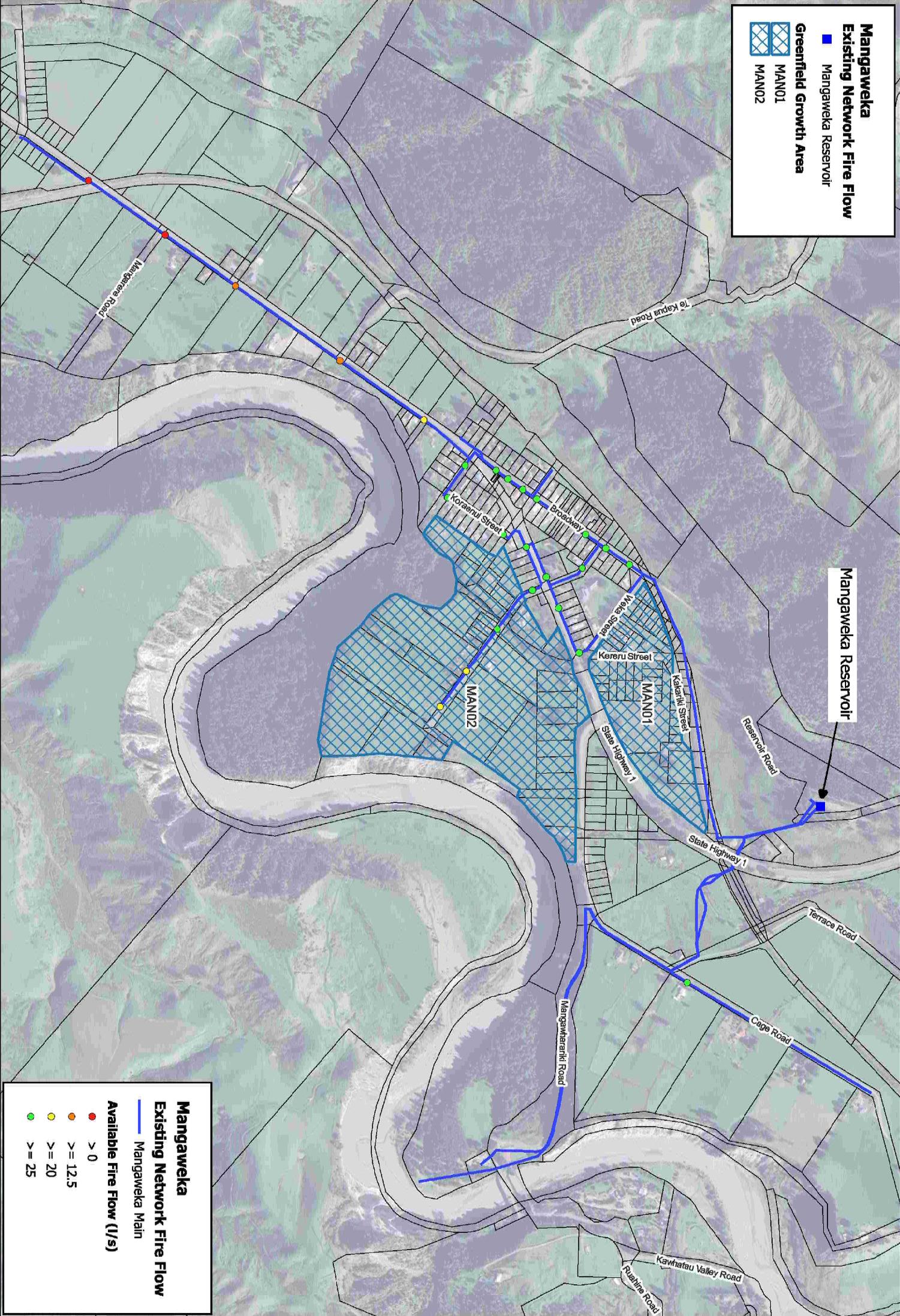
**Minimum Pressure (m)**

- < 0
- >= 0
- >= 10
- >= 20
- >= 25
- >= 60

**Maximum Headloss per km (m/km)**

- >= 0
- >= 3
- >= 5
- >= 10
- >= 25

Figure 1.1.2 Mangaweka Existing Fire Flow (FW2) Assessment



**Mangaweka Existing Network Fire Flow**

- Mangaweka Reservoir

**Greenfield Growth Area**

- MANO1
- MANO2

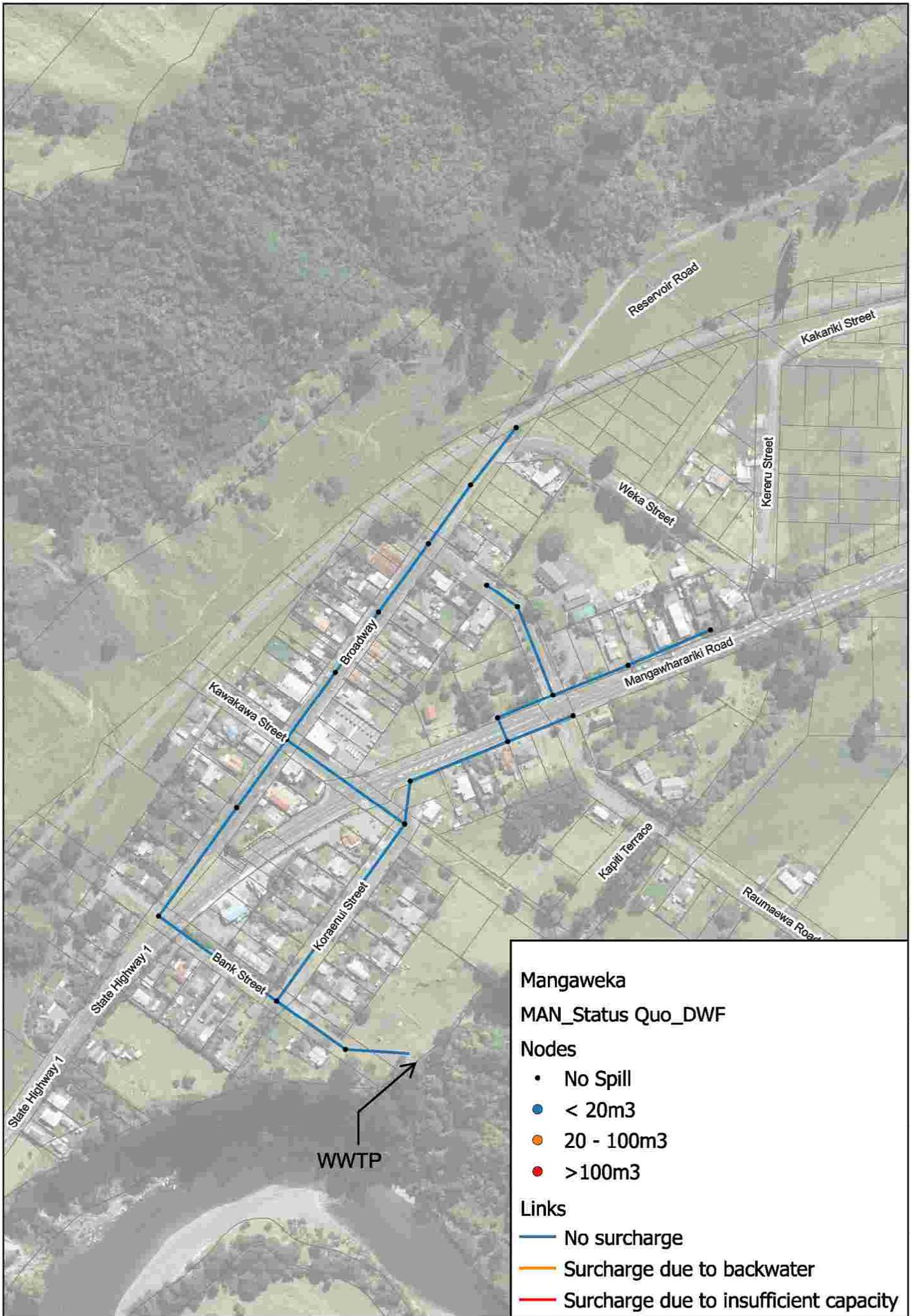
**Mangaweka Existing Network Fire Flow**

- Mangaweka Main

**Available Fire Flow (l/s)**

- > 0
- >= 12.5
- >= 20
- >= 25

Figure 1.2.1 Mangaweka Existing Wastewater Network - Dry Weather Flow



**Figure 1.2.2 Mangaweka Existing Wastewater Network - Wet Weather Flow**



**Figure 1.3 Mangaweka Stormwater Rapid Flood Hazard Assessment**

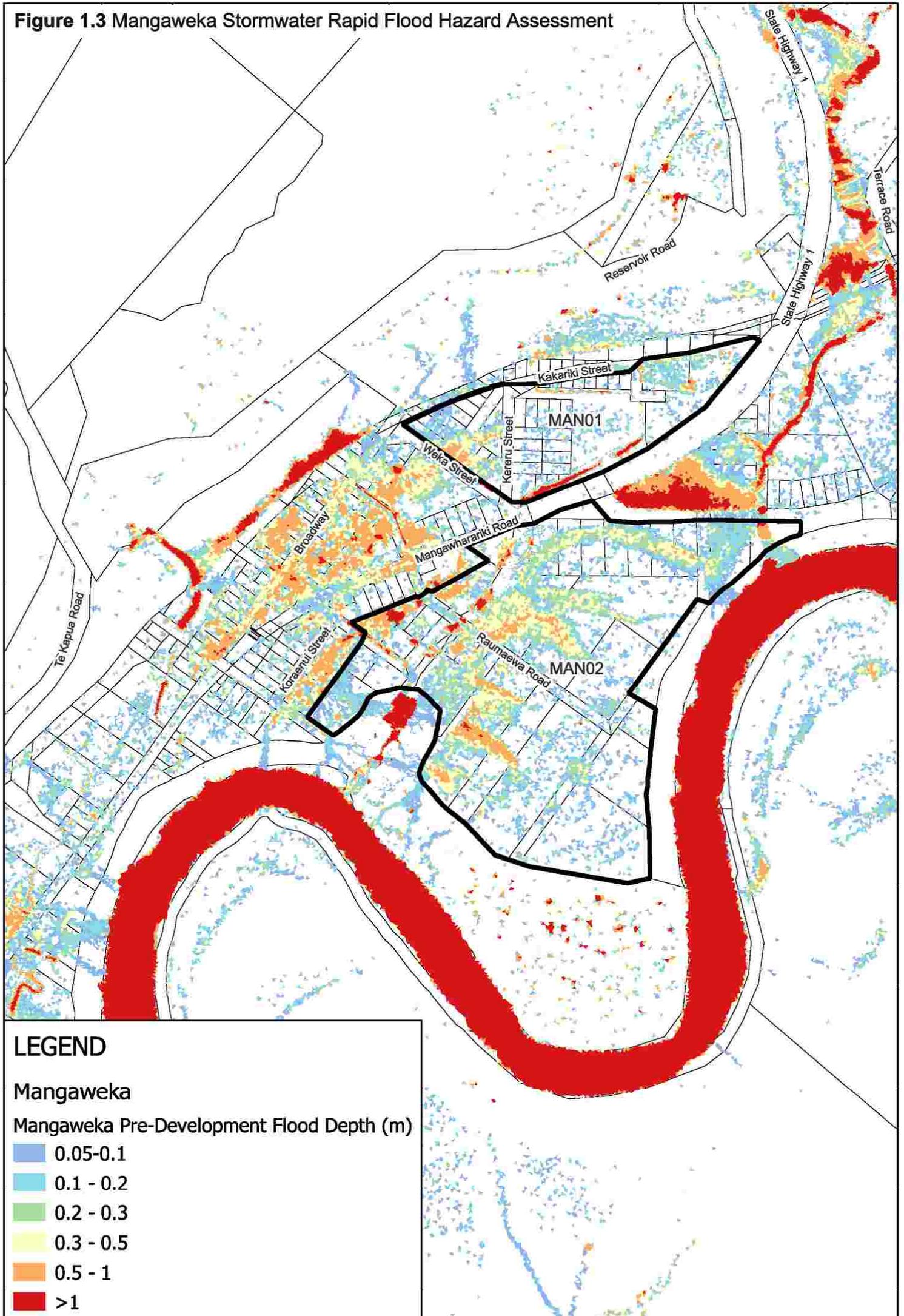
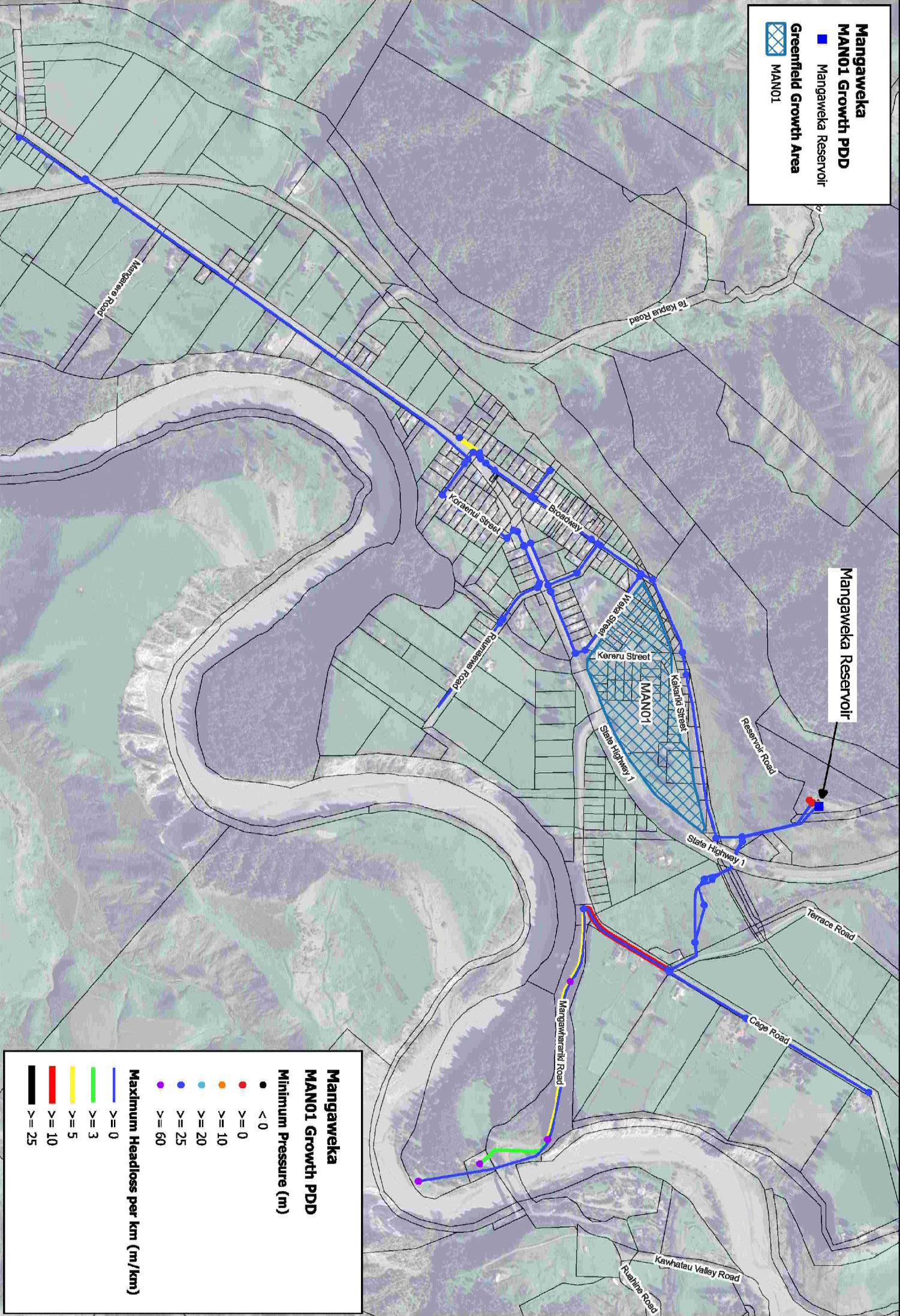


Figure 2.1.1 MAN01 Water Supply System Performance



**Mangaweka**  
**MAN01 Growth PDD**  
 ■ Mangaweka Reservoir  
 ■ Greenfield Growth Area  
 ■ MAN01

**Mangaweka**  
**MAN01 Growth PDD**

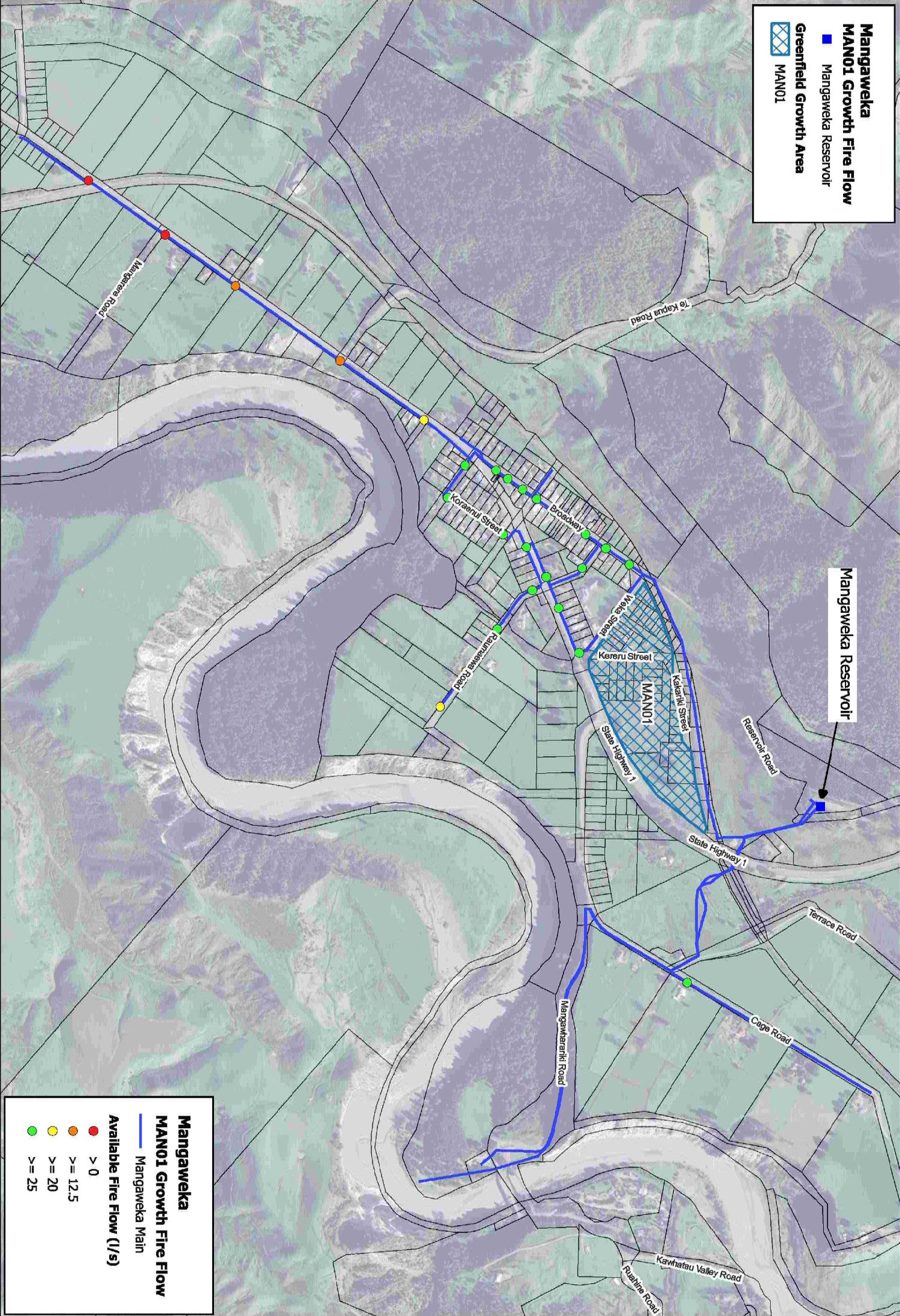
**Minimum Pressure (m)**

- < 0
- >= 0
- >= 10
- >= 20
- >= 25
- >= 60

**Maximum Headloss per km (m/km)**

- >= 0
- >= 3
- >= 5
- >= 10
- >= 25

Figure 2.1.2 MAN01 Fire Flow (FW2) Assessment



**Mangaweka**  
**MAN01 Growth Fire Flow**  
 ■ Mangaweka Reservoir  
 ■ Mangaweka Growth Area  
 ■ MAN01

**Mangaweka**  
**MAN01 Growth Fire Flow**  
 — Mangaweka Main  
**Available Fire Flow (l/s)**  
 ● > 0  
 ● >= 12.5  
 ● >= 20  
 ● >= 25

Figure 2.2.1 MAN01 Wastewater Network Performance - Dry Weather Flow

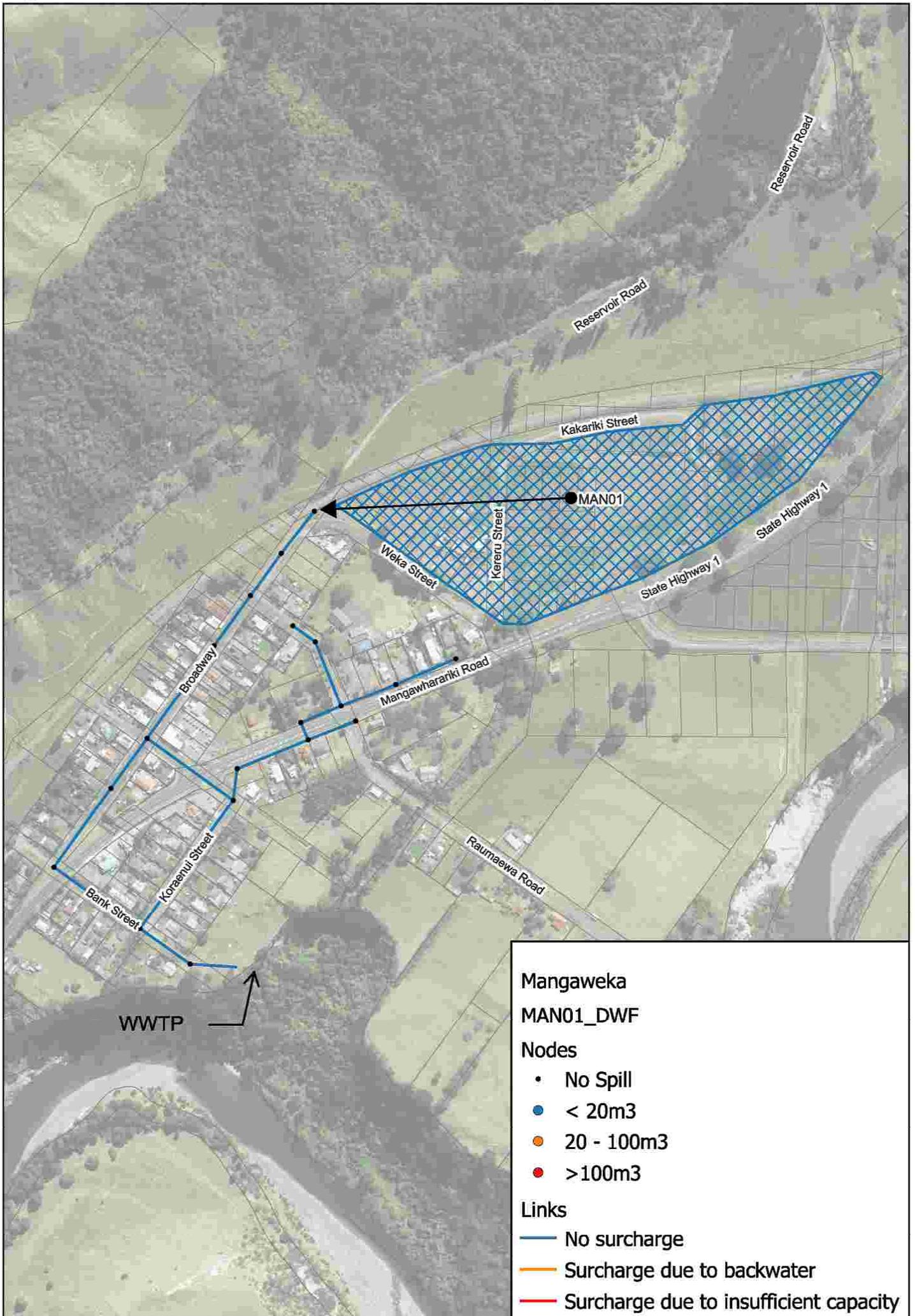


Figure 2.2.2 MAN01 Wastewater Network Performance - Wet Weather Flow

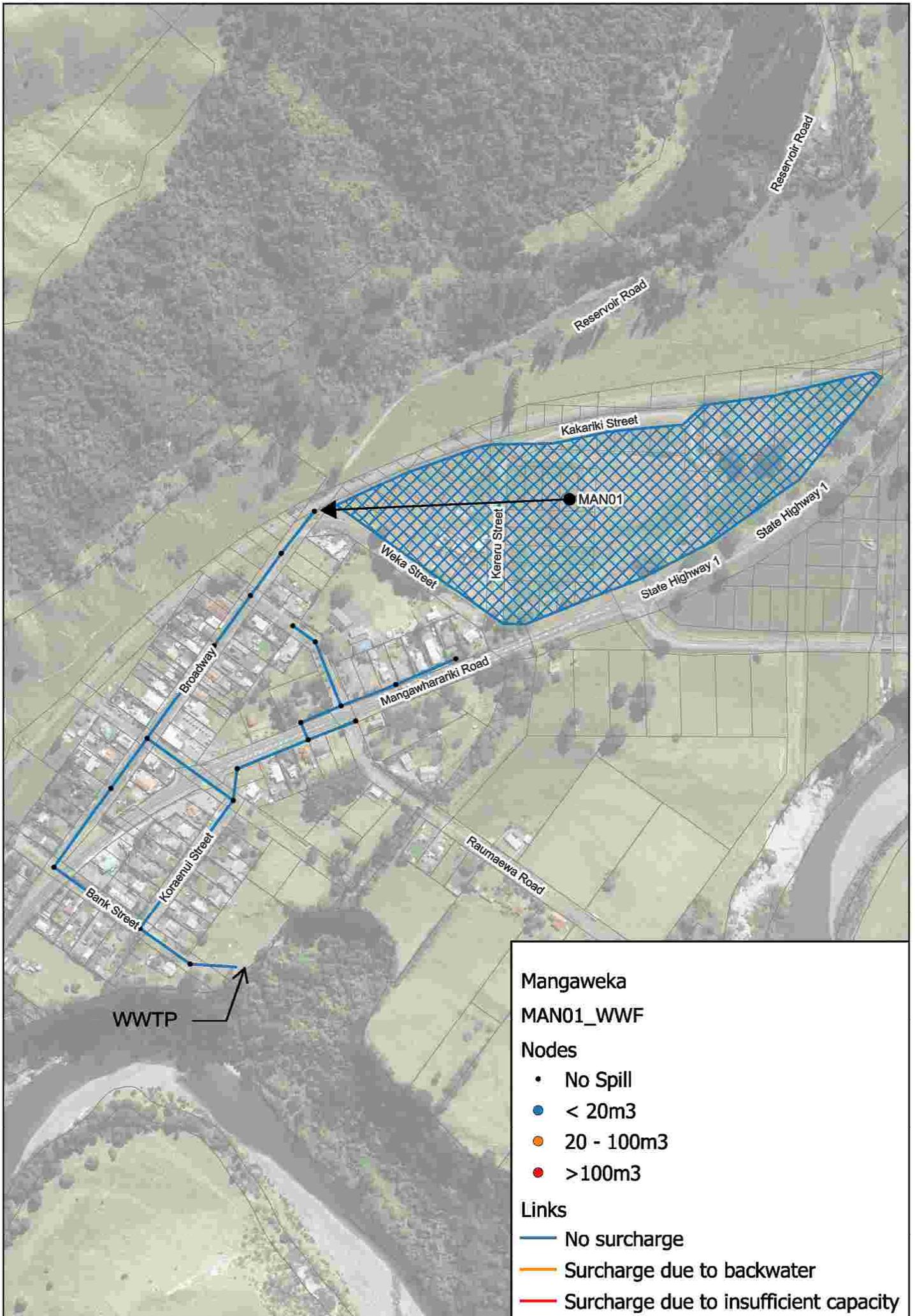
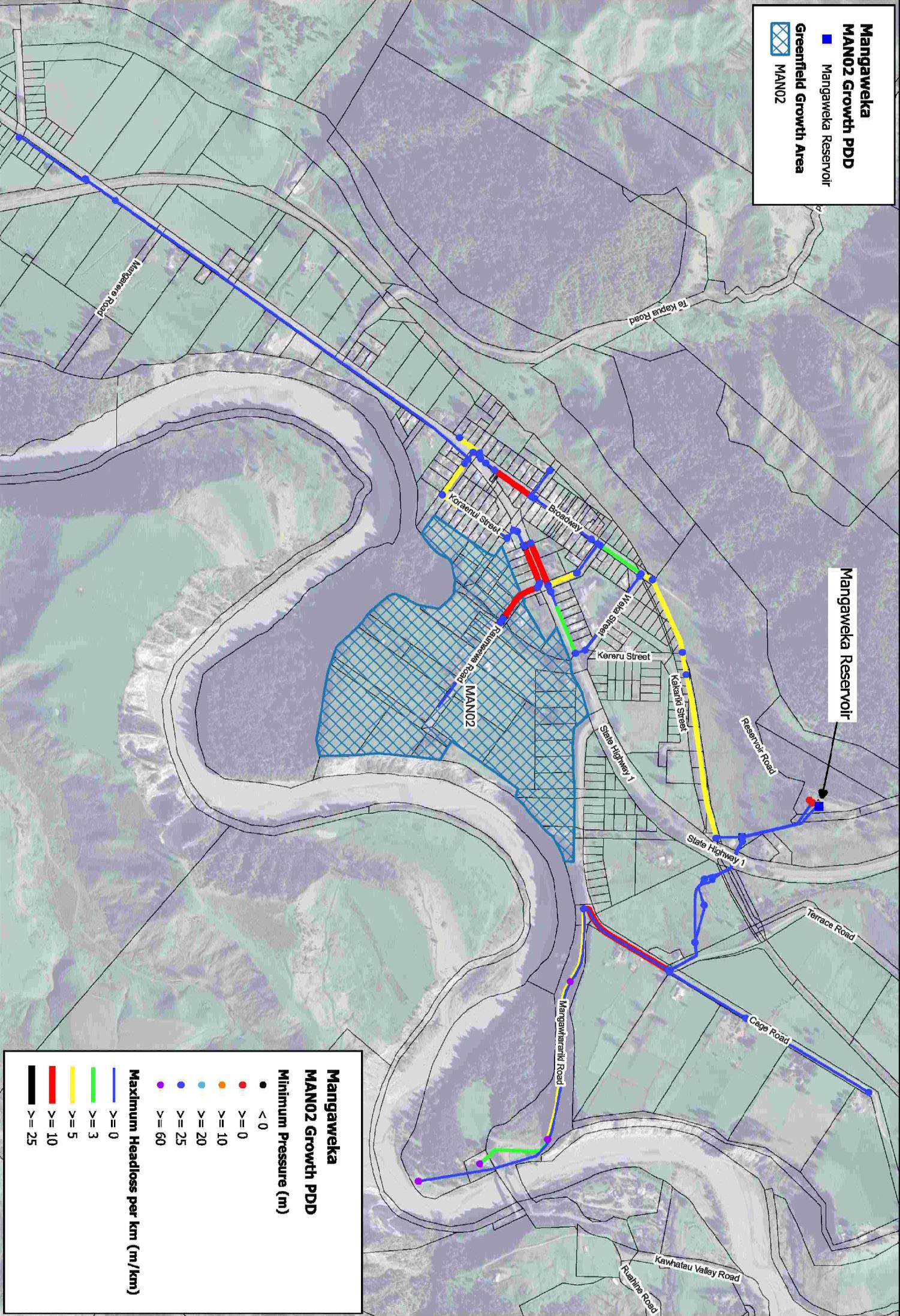


Figure 3.1.1 MAN02 Water Supply System Performance



**Mangaweka**  
**MAN02 Growth PDD**  
 ■ Mangaweka Reservoir  
 ■ Mangaweka Growth Area  
 ■ MAN02

**Mangaweka**  
**MAN02 Growth PDD**

**Minimum Pressure (m)**

- < 0
- >= 0
- >= 10
- >= 20
- >= 25
- >= 60

**Maximum Headloss per km (m/km)**

- >= 0
- >= 3
- >= 5
- >= 10
- >= 25

Figure 3.1.2 MAN02 Water Supply Option 1 System Performance with Proposed Upgrades

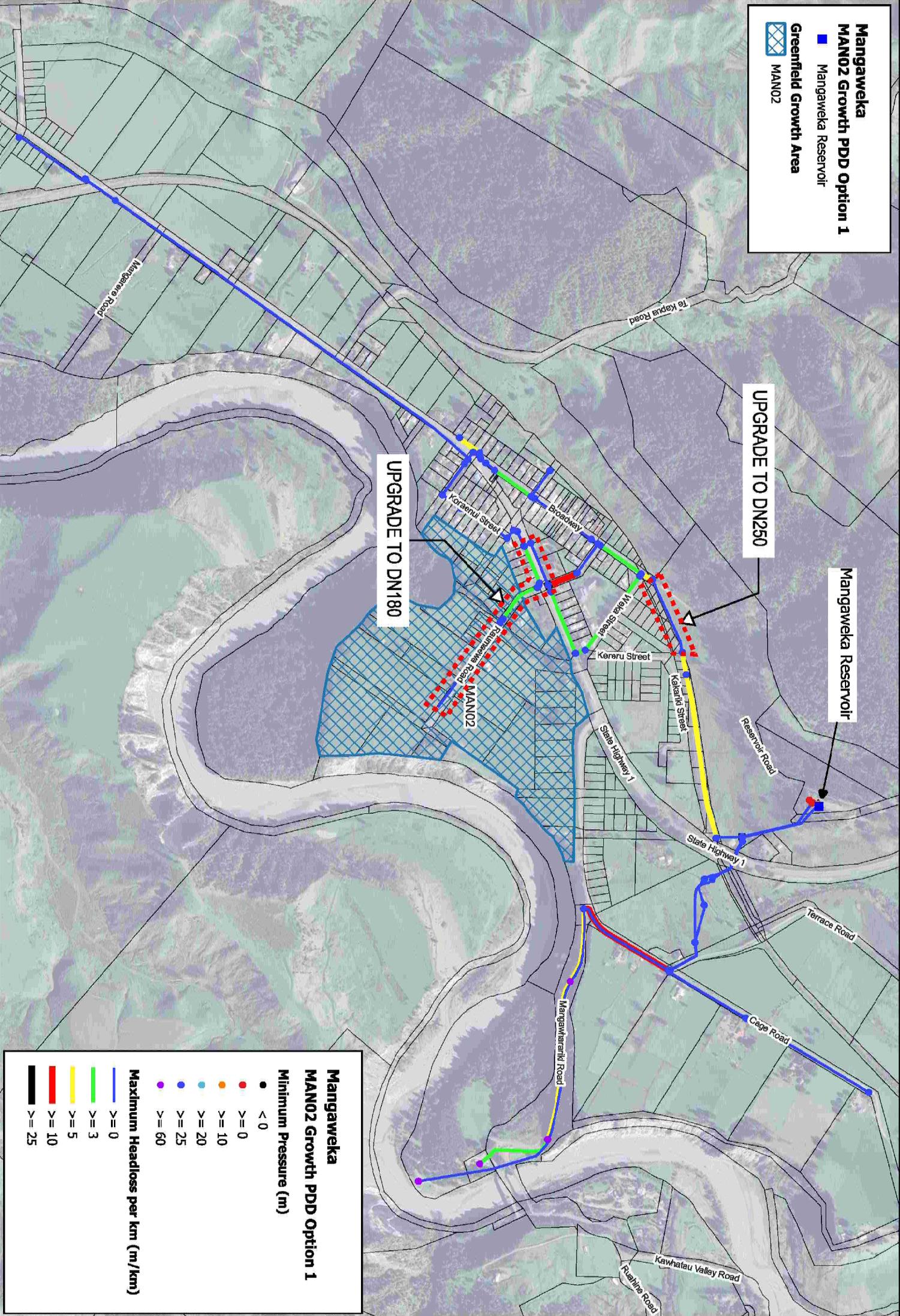
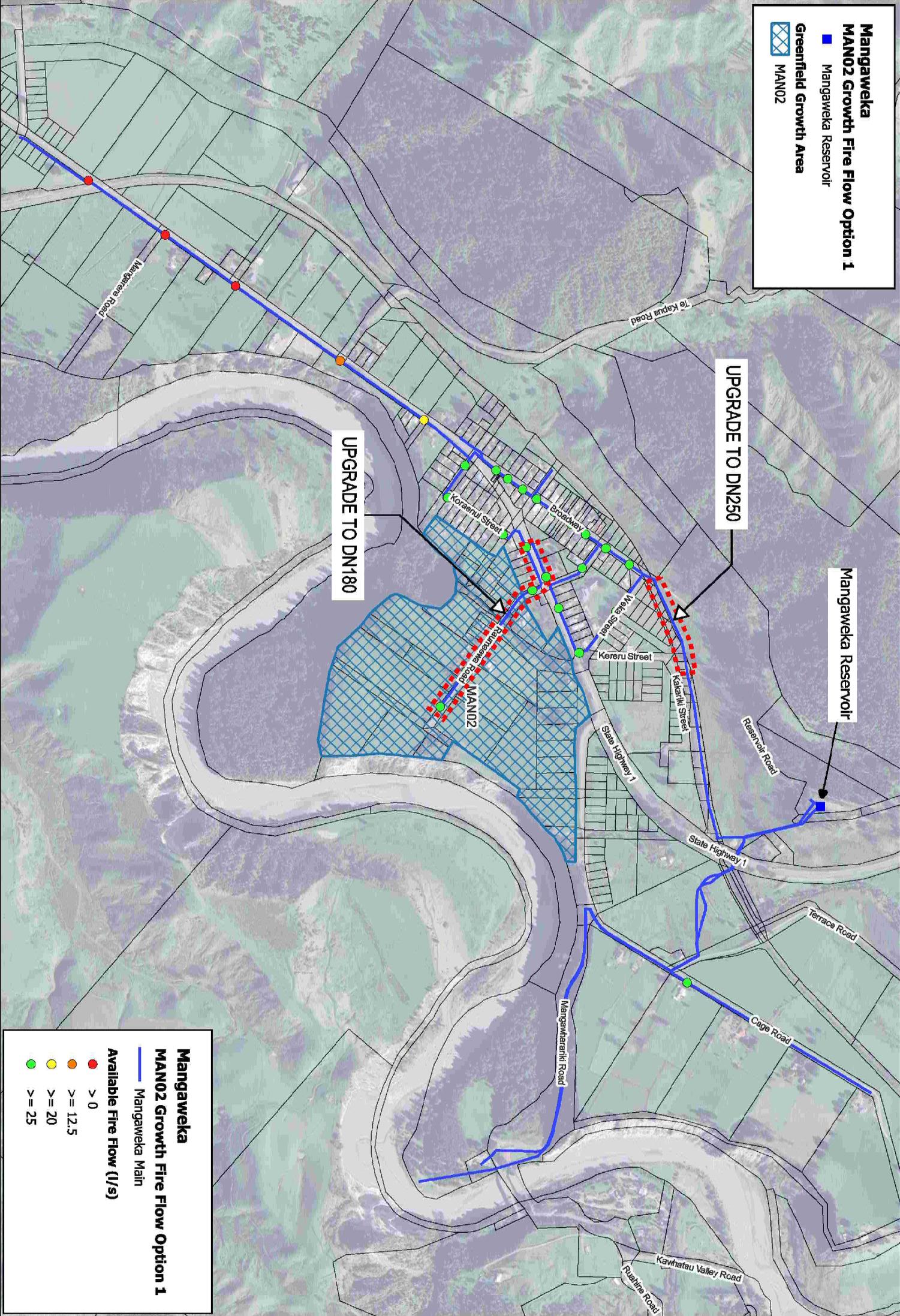


Figure 3.1.3 MAN02 Water Supply Option 1 Fire Flow (FW2) Assessment with Proposed Upgrades



**Mangaweka**  
**MAN02 Growth Fire Flow Option 1**  
■ Mangaweka Reservoir  
  Greenfield Growth Area  
  MAN02

**Mangaweka**  
**MAN02 Growth Fire Flow Option 1**  
— Mangaweka Main  
**Available Fire Flow (l/s)**  
● > 0  
● >= 12.5  
● >= 20  
● >= 25

UPGRADE TO DN250

UPGRADE TO DN180

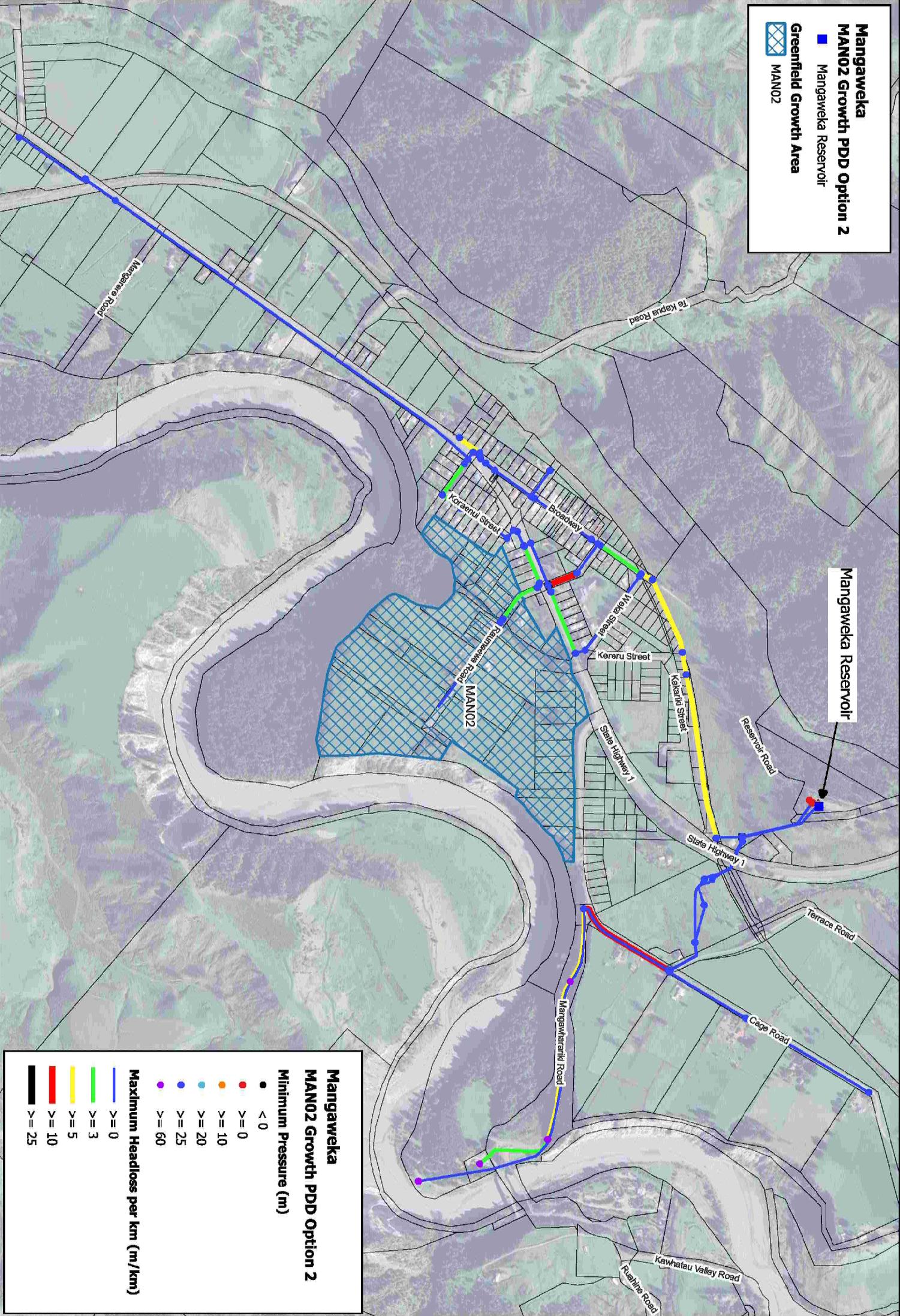
Mangaweka Reservoir

MAN02

Map labels include: Mangaweka Road, Te Kapua Road, Korarua Street, Broadway, Waka Street, Kereru Street, Karamaki Street, State Highway 1, Reservoir Road, Terrace Road, Cage Road, Mangawakariki Road, Kawhatau Valley Road, and Ruaeira Road.

**Mangaweka**  
**MANO2 Growth PDD Option 2**

- Mangaweka Reservoir
- Greenfield Growth Area
- MANO2



Mangaweka Reservoir

**Mangaweka**  
**MANO2 Growth PDD Option 2**

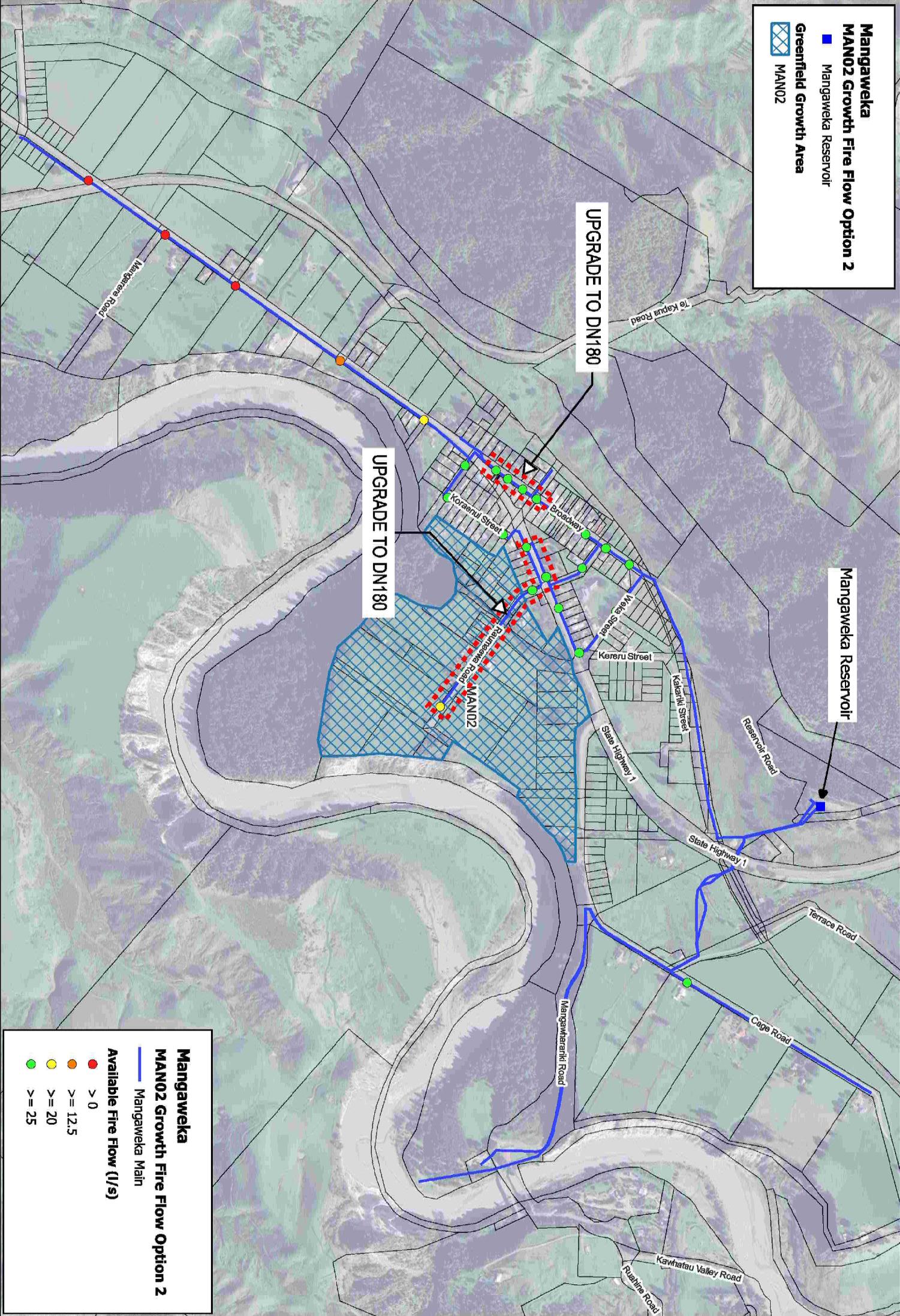
**Minimum Pressure (m)**

- < 0
- >= 0
- >= 10
- >= 20
- >= 25
- >= 60

**Maximum Headloss per km (m/km)**

- >= 0
- >= 3
- >= 5
- >= 10
- >= 25
- >= 60

Figure 3.1.5 MAN02 Water Supply Option 2 Fire Flow (FW2) Assessment with Proposed Upgrades



**Mangaweka**  
**MAN02 Growth Fire Flow Option 2**  
 ■ Mangaweka Reservoir  
 ■ Greenfield Growth Area  
 ■ MAN02

**Mangaweka**  
**MAN02 Growth Fire Flow Option 2**  
 — Mangaweka Main  
**Available Fire Flow (l/s)**  
 ● > 0  
 ● >= 12.5  
 ● >= 20  
 ● >= 25

UPGRADE TO DN180

UPGRADE TO DN180

Mangaweka Reservoir

MAN02

State Highway 1

Reservoir Road

Terrace Road

Cage Road

Kawhatau Valley Road

Ruehira Road

Mangawakariki Road

State Highway 1

Karamu Street

Weka Street

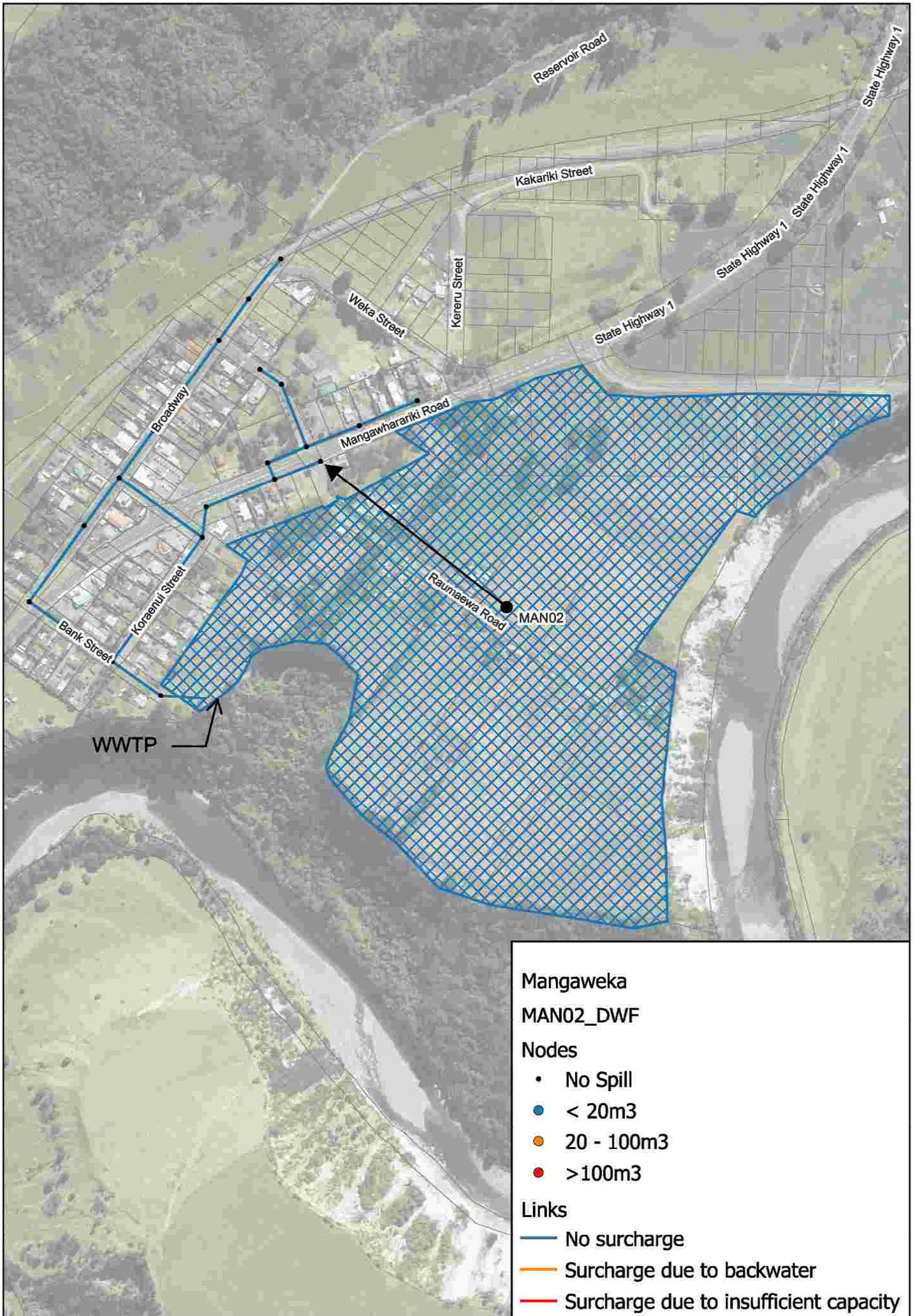
Broadway

Koraeru Street

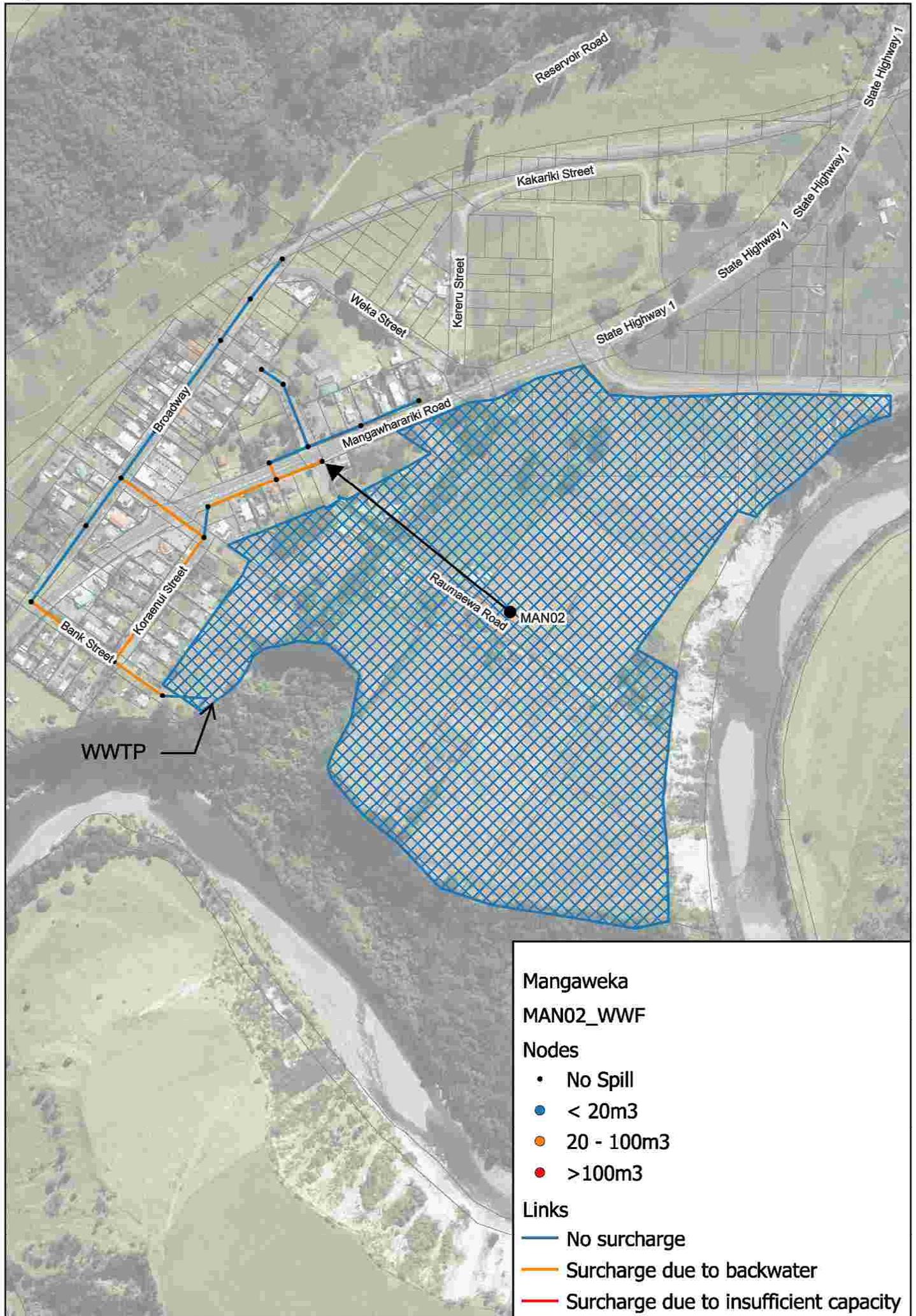
Mangaweka Road

Te Kapua Road

Figure 3.2.1 MAN02 Wastewater Network Performance - Dry Weather Flow



**Figure 3.2.2 MAN02 Wastewater Network Performance - Wet Weather Flow**



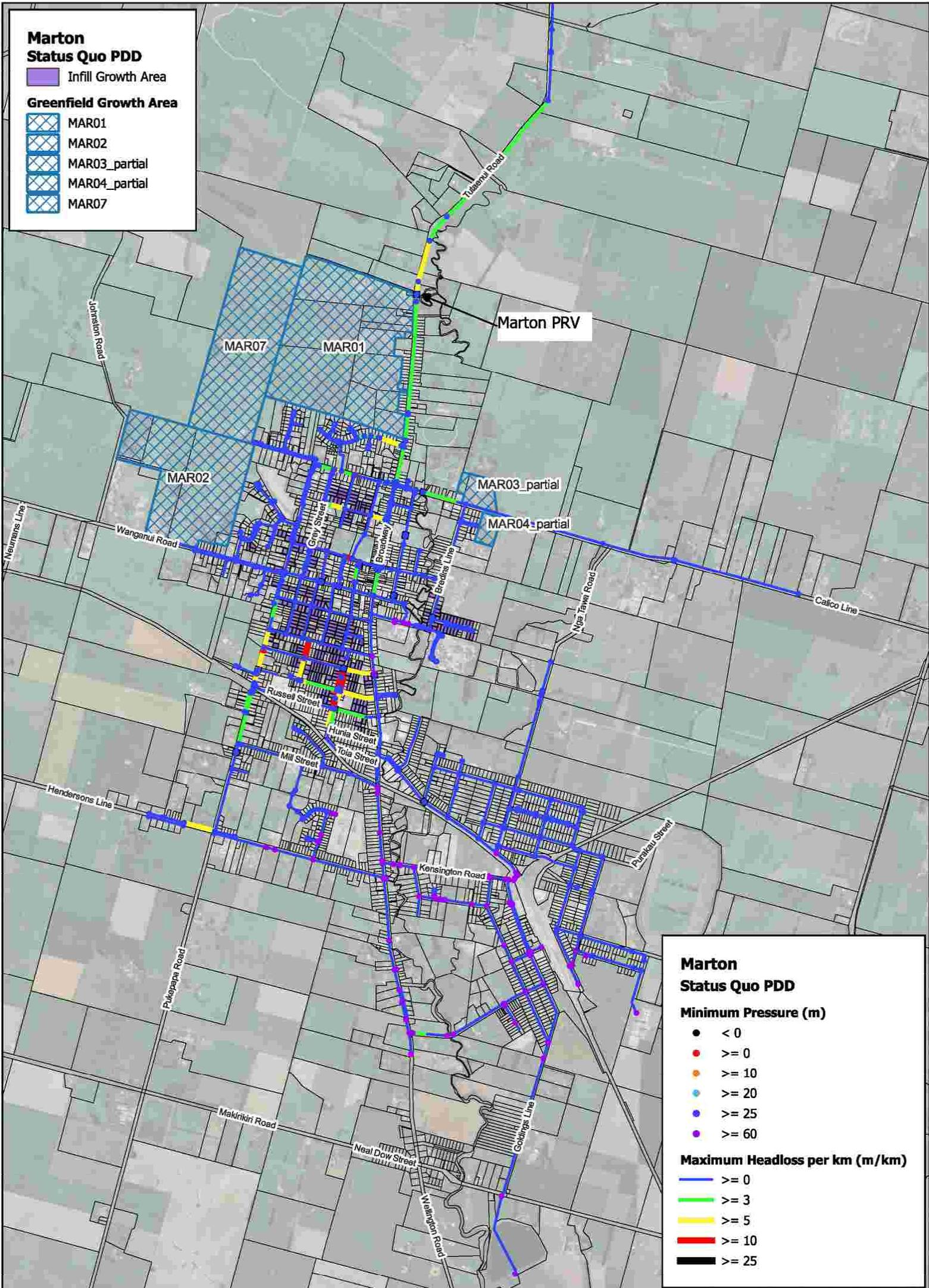
# Appendix D

**Marion Maps**

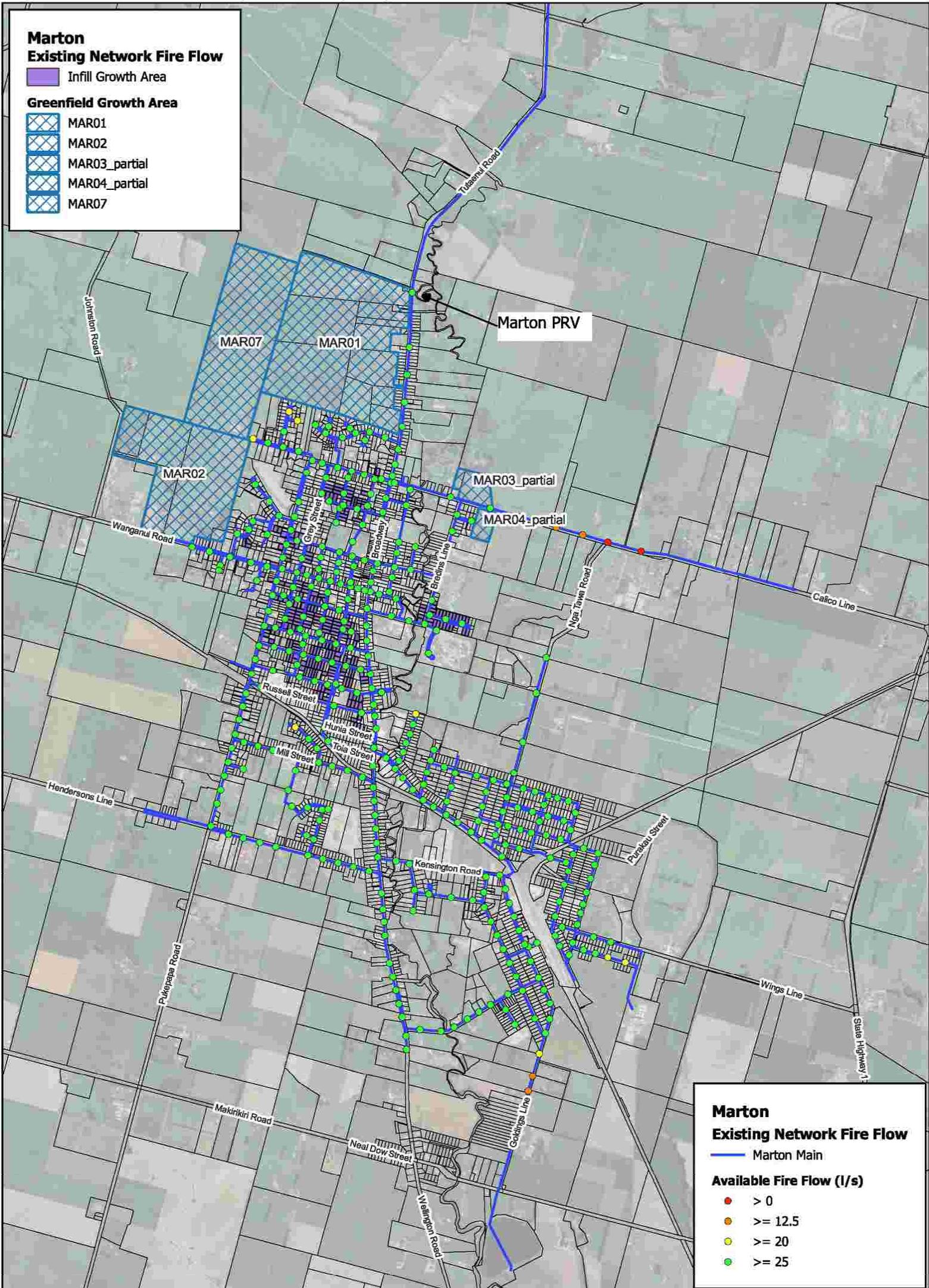
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6.2.1	Marton Infill Wastewater Network Performance - Dry Weather Flow
6.2.2	Marton Infill Wastewater Network Performance - Wet Weather Flow
6.3	Marton Infill Stormwater Rapid Hazard Assessment

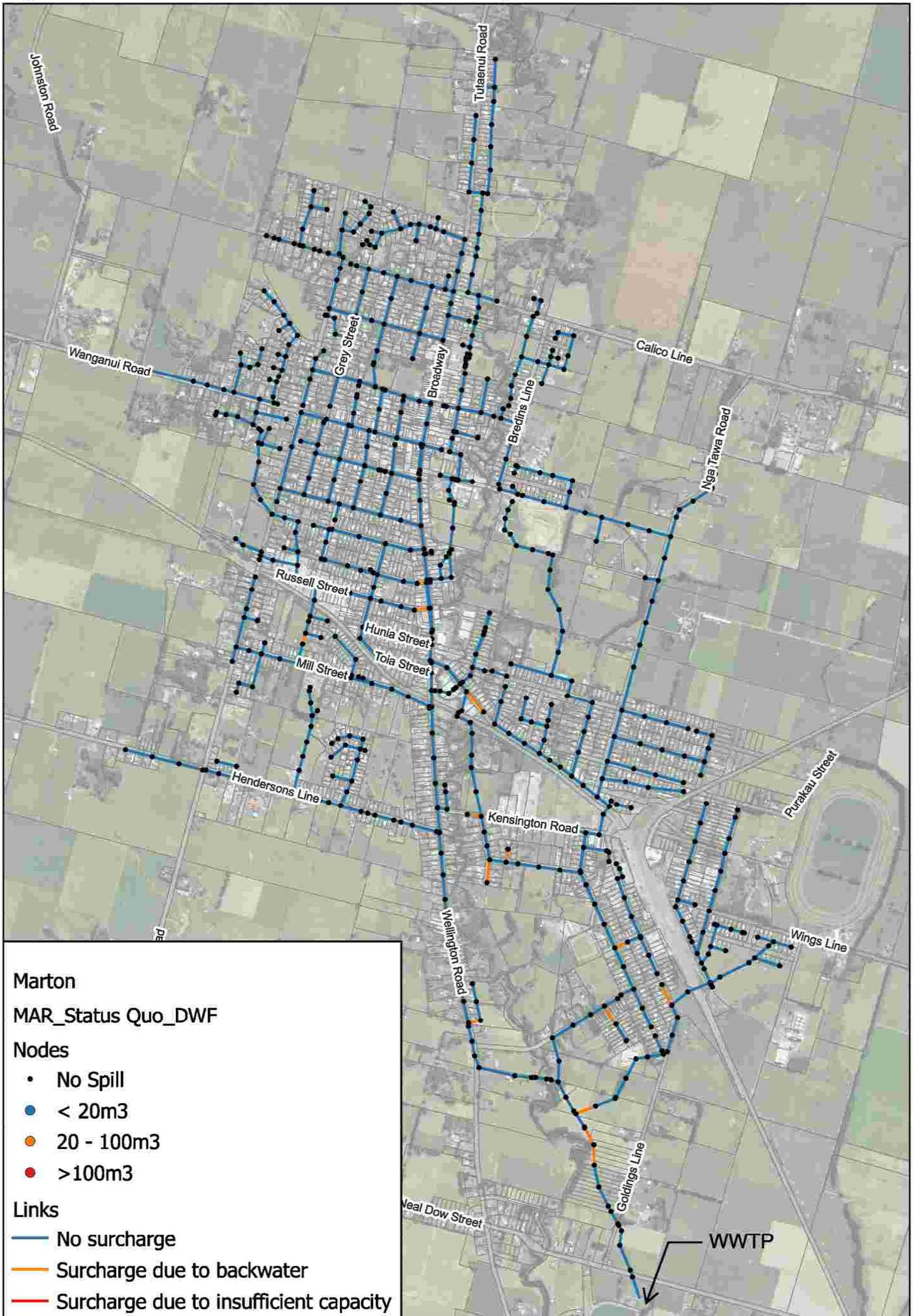
**Figure 1.1.1 Marton Existing Water Supply System Performance**



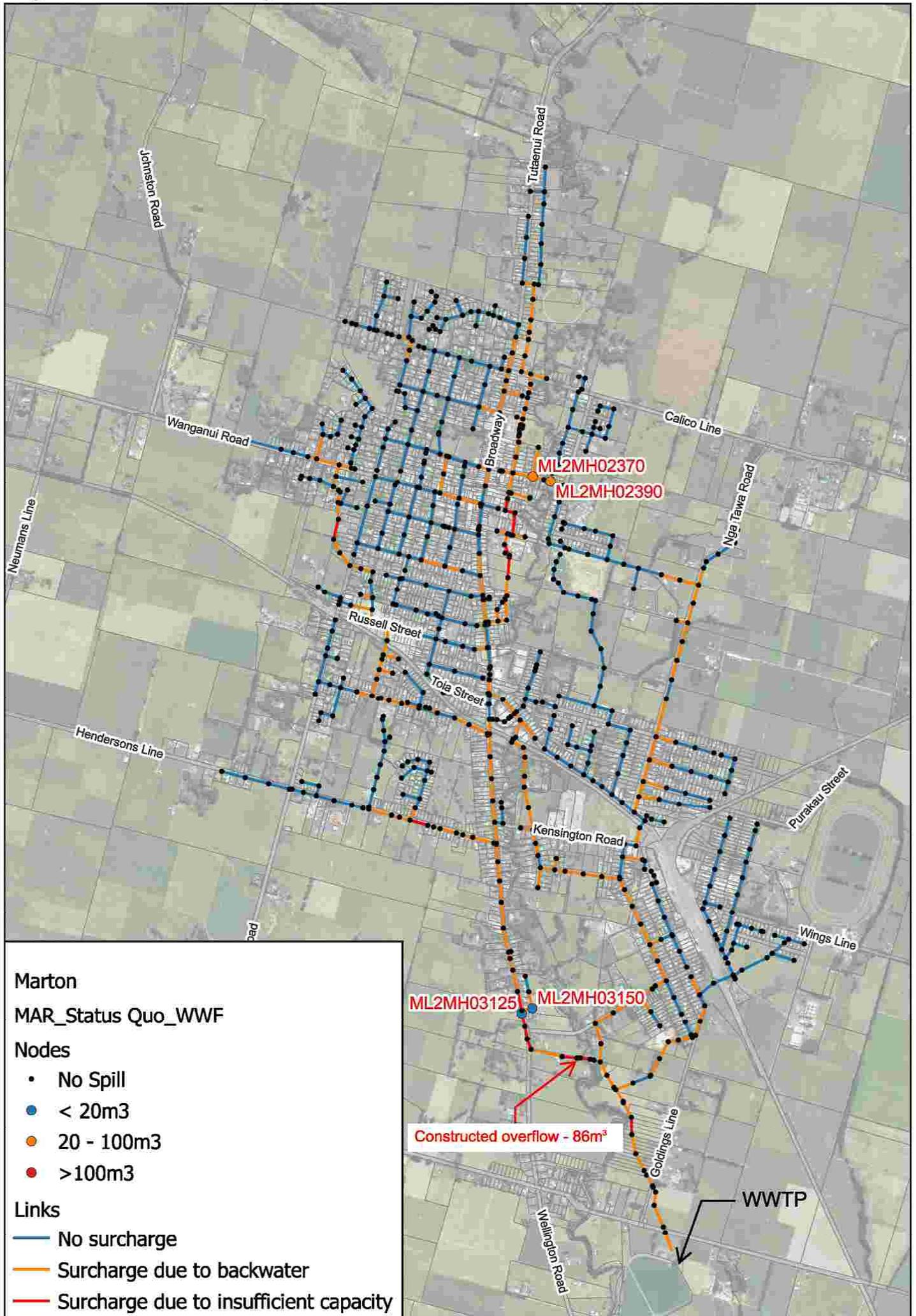
**Figure 1.1.2 Marton Existing Fire Flow (FW2) Assessment**



**Figure 1.2.1 Marton Existing Wastewater Network - Dry Weather Flow**



**Figure 1.2.2 Marton Existing Wastewater Network - Wet Weather Flow**



**Figure 1.3 Marton Stormwater Rapid Flood Hazard Assessment**

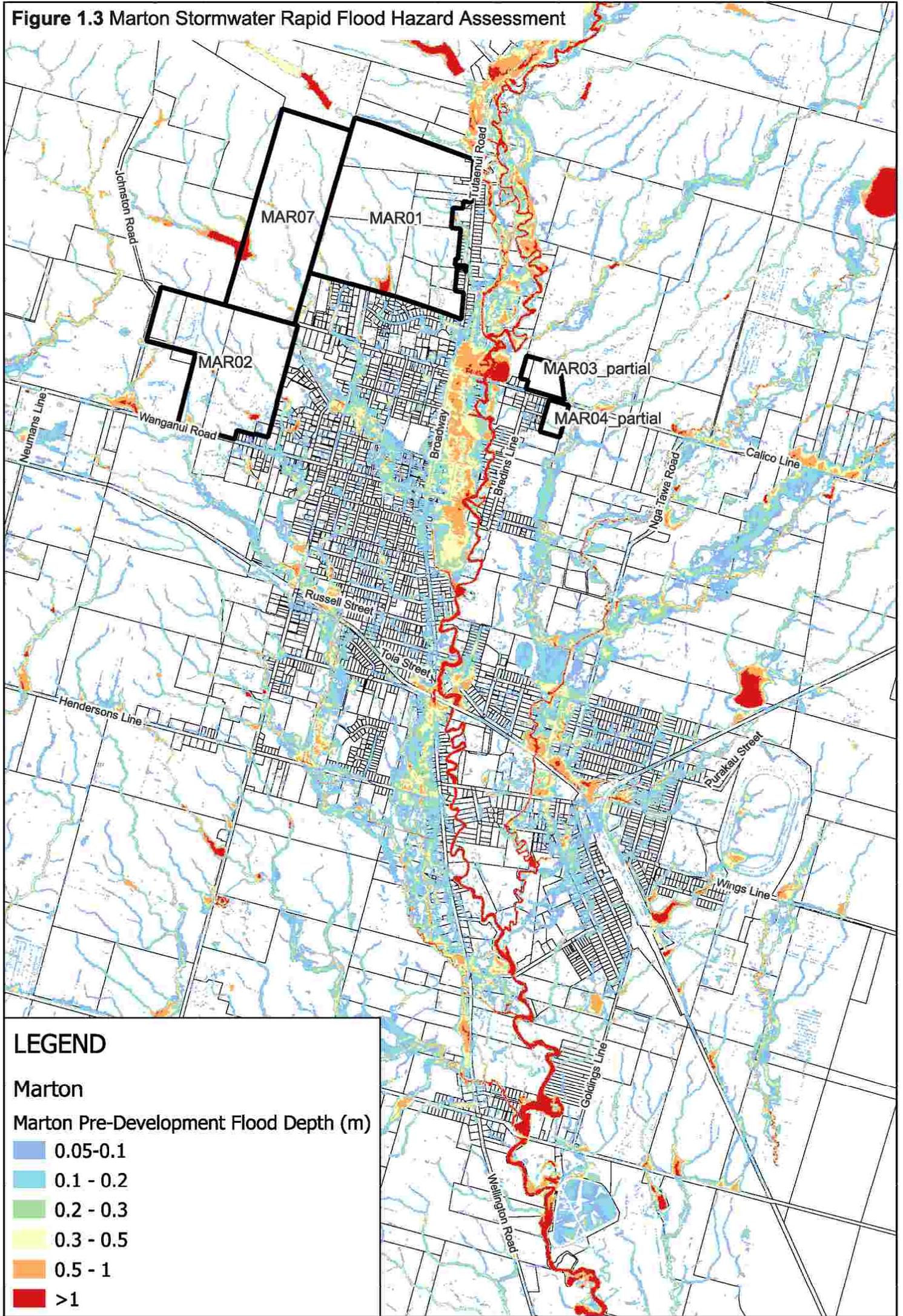


Figure 2.1.1 MAR01 Water Supply System Performance

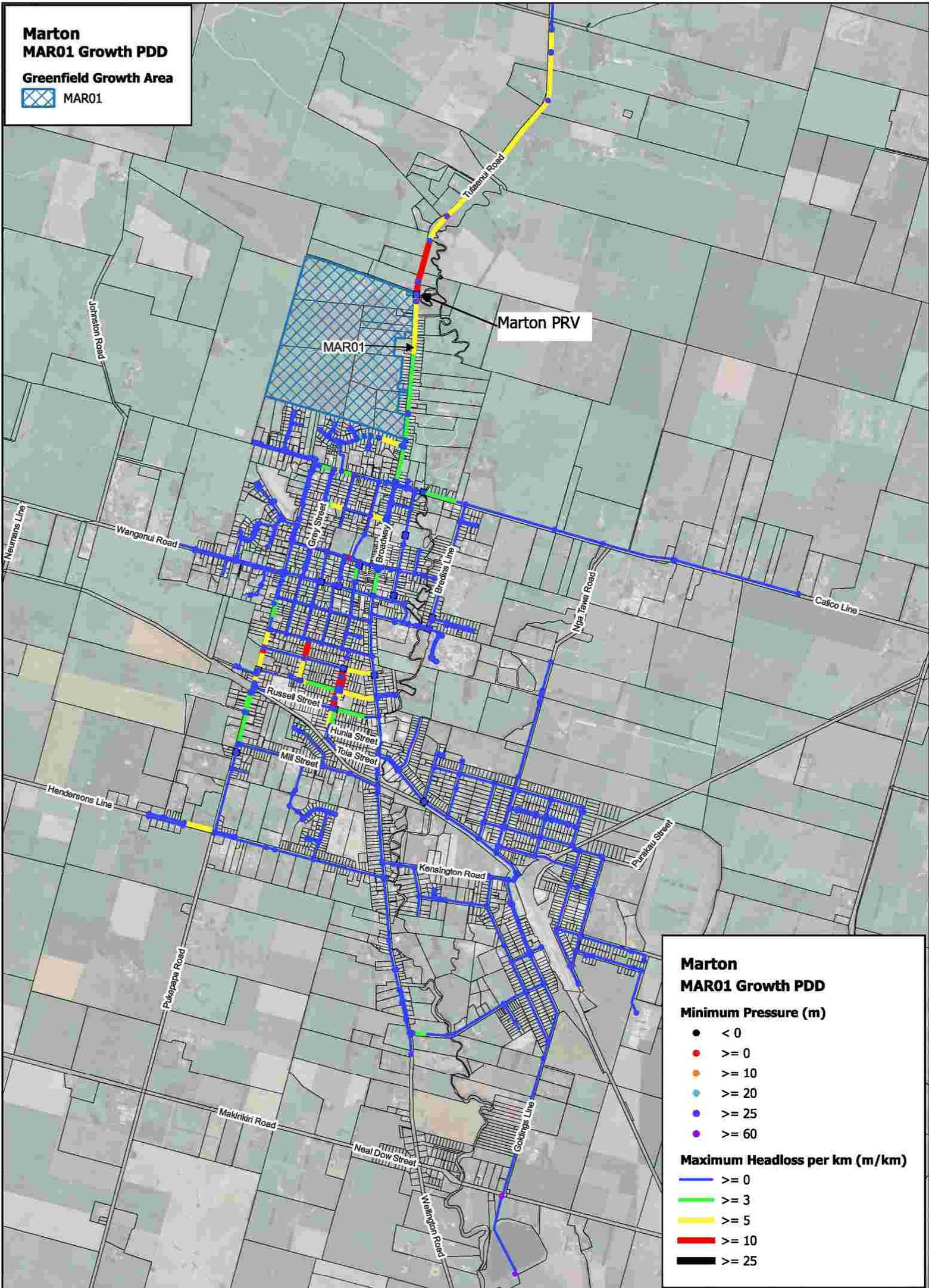
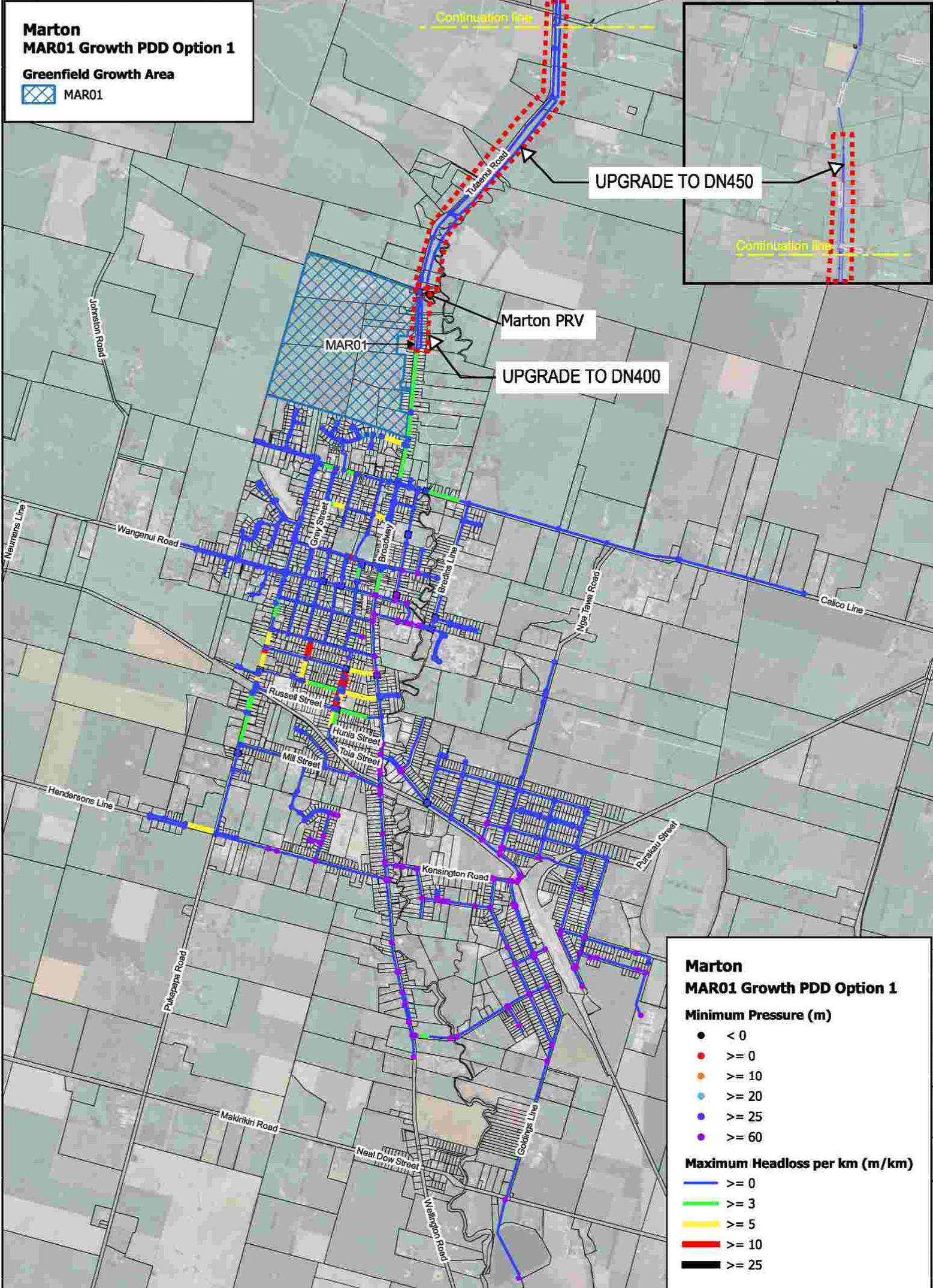
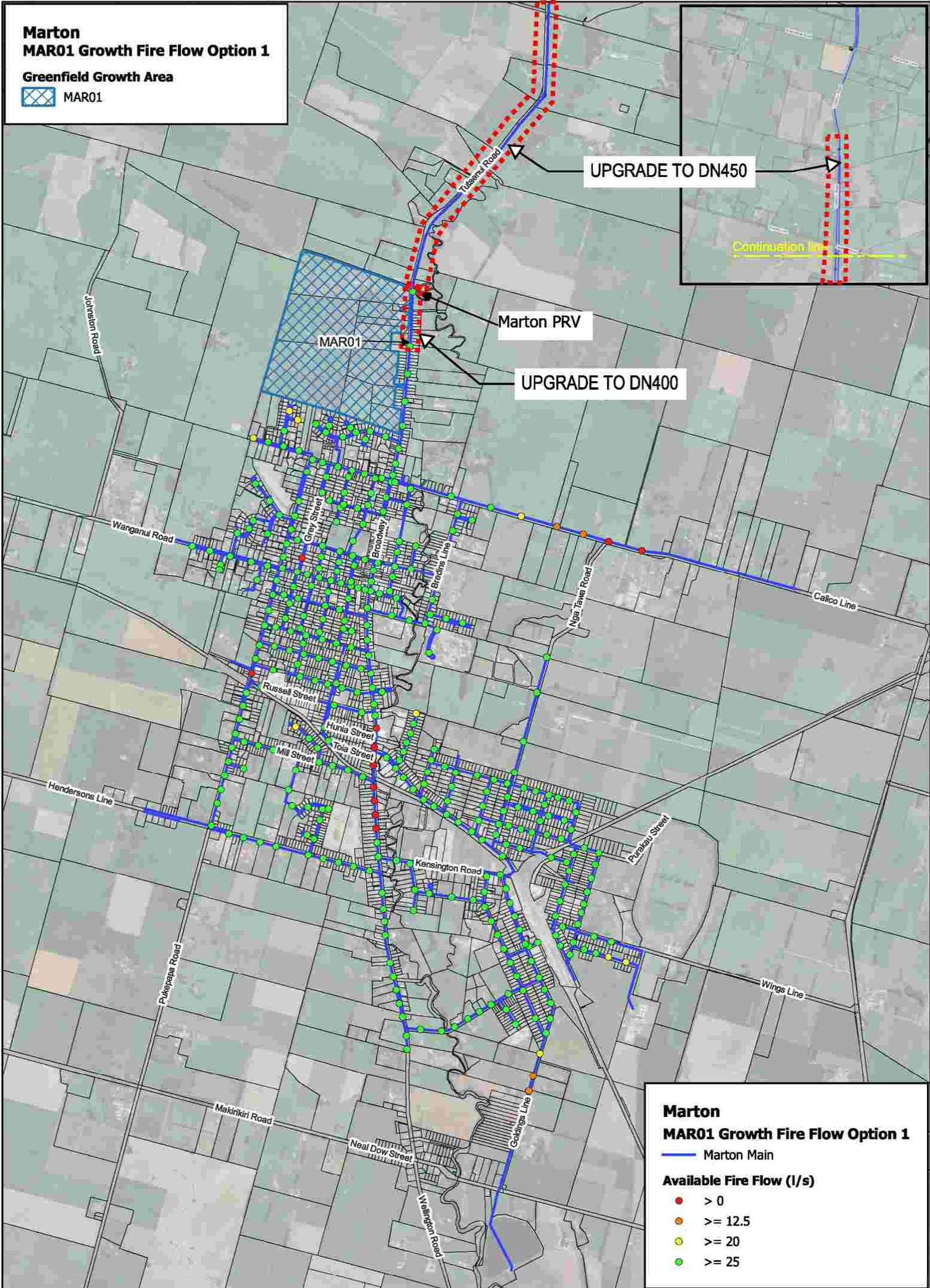


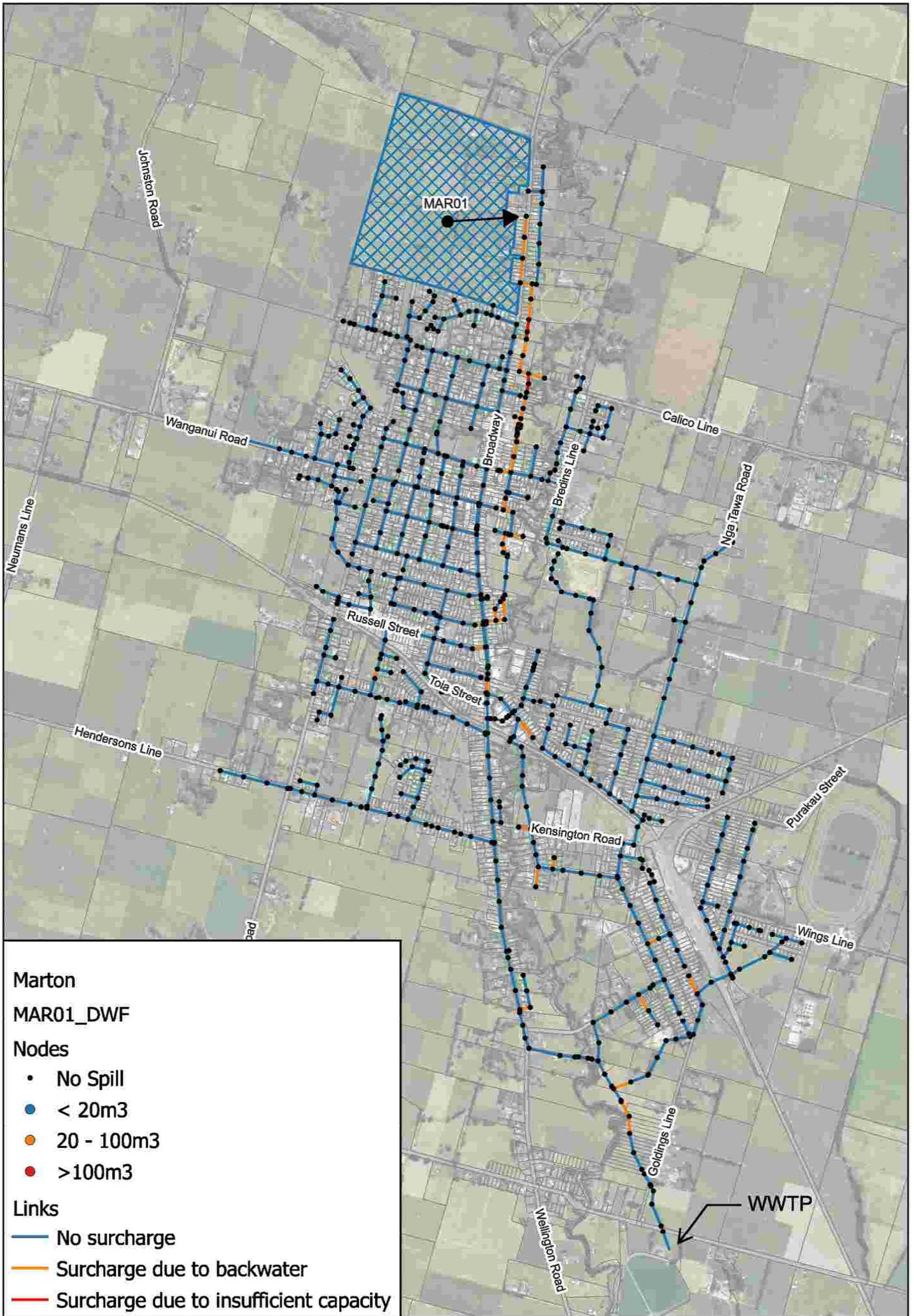
Figure 2.1.2 MAR01 Water Supply Option 1 System Performance with Proposed Upgrades



**Figure 2.1.3 MAR01 Water Supply Option 1 Fire Flow (FW2) Assessment with Proposed Upgrades**

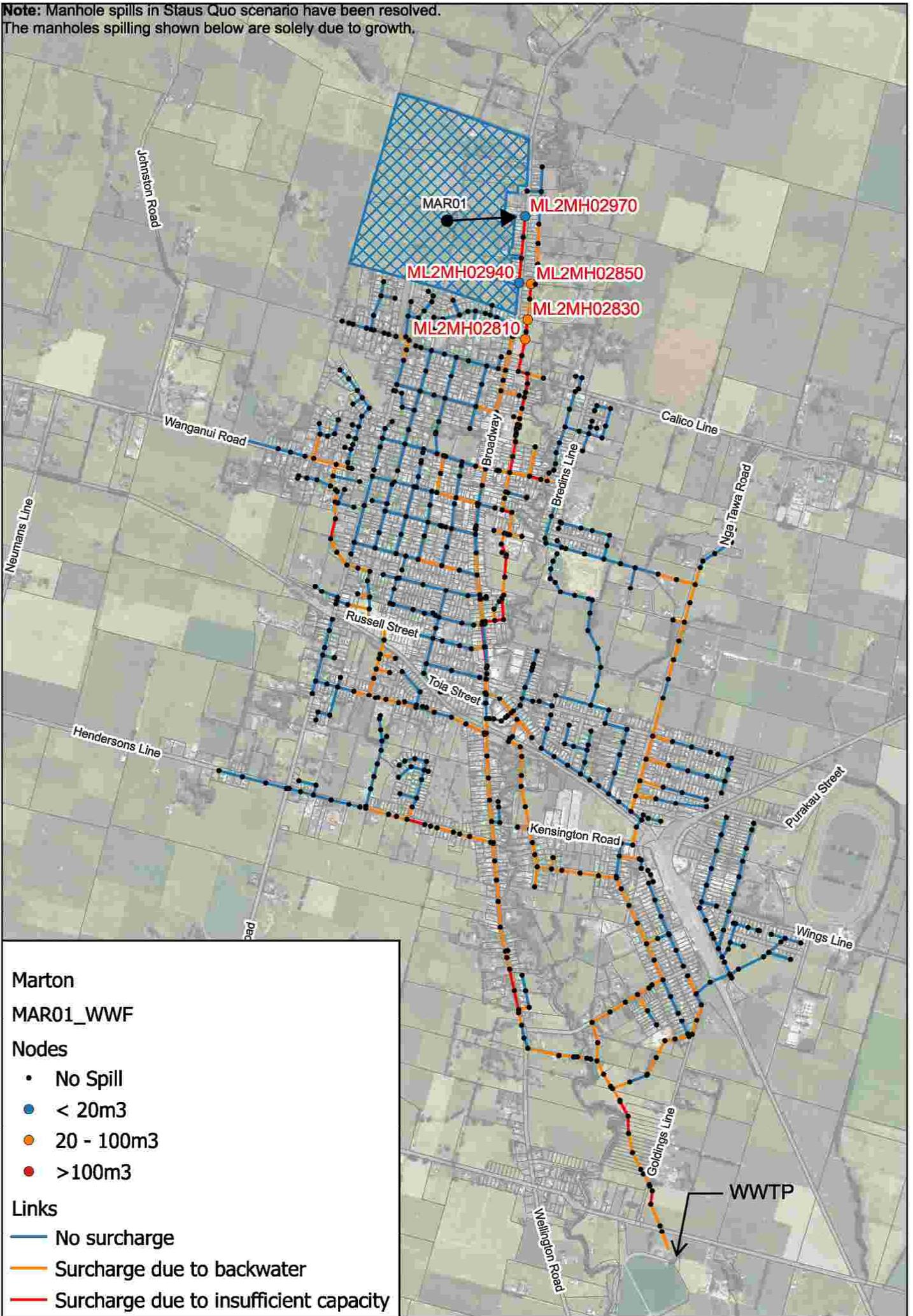


**Figure 2.2.1 MAR01 Wastewater Network Performance - Dry Weather Flow**



**Figure 2.2.2 MAR01 Wastewater Network Performance - Wet Weather Flow**

**Note:** Manhole spills in Staus Quo scenario have been resolved.  
The manholes spilling shown below are solely due to growth.



**Figure 2.2.3 MAR01 Wastewater Network with Upgrades - Wet Weather Flow**

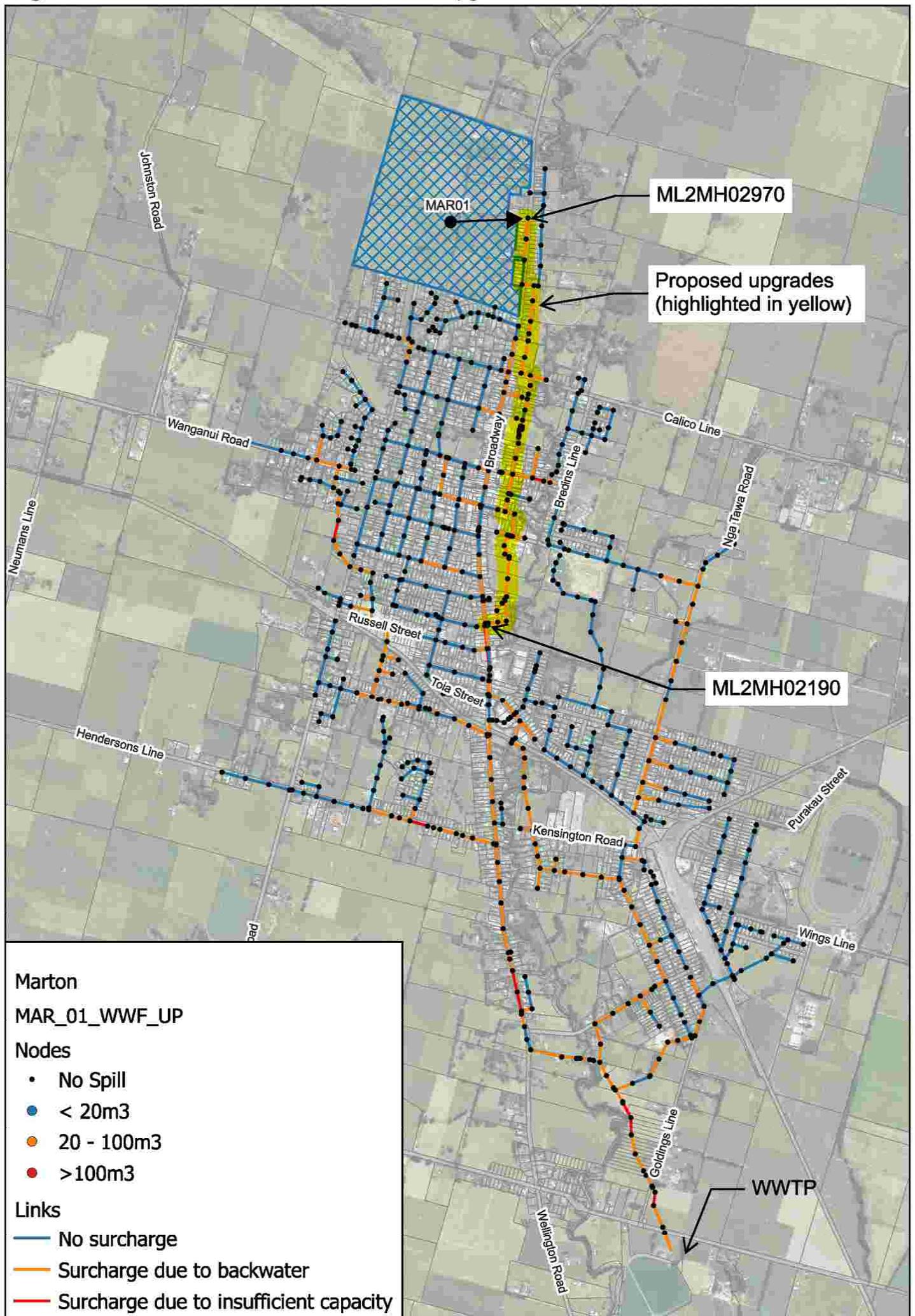
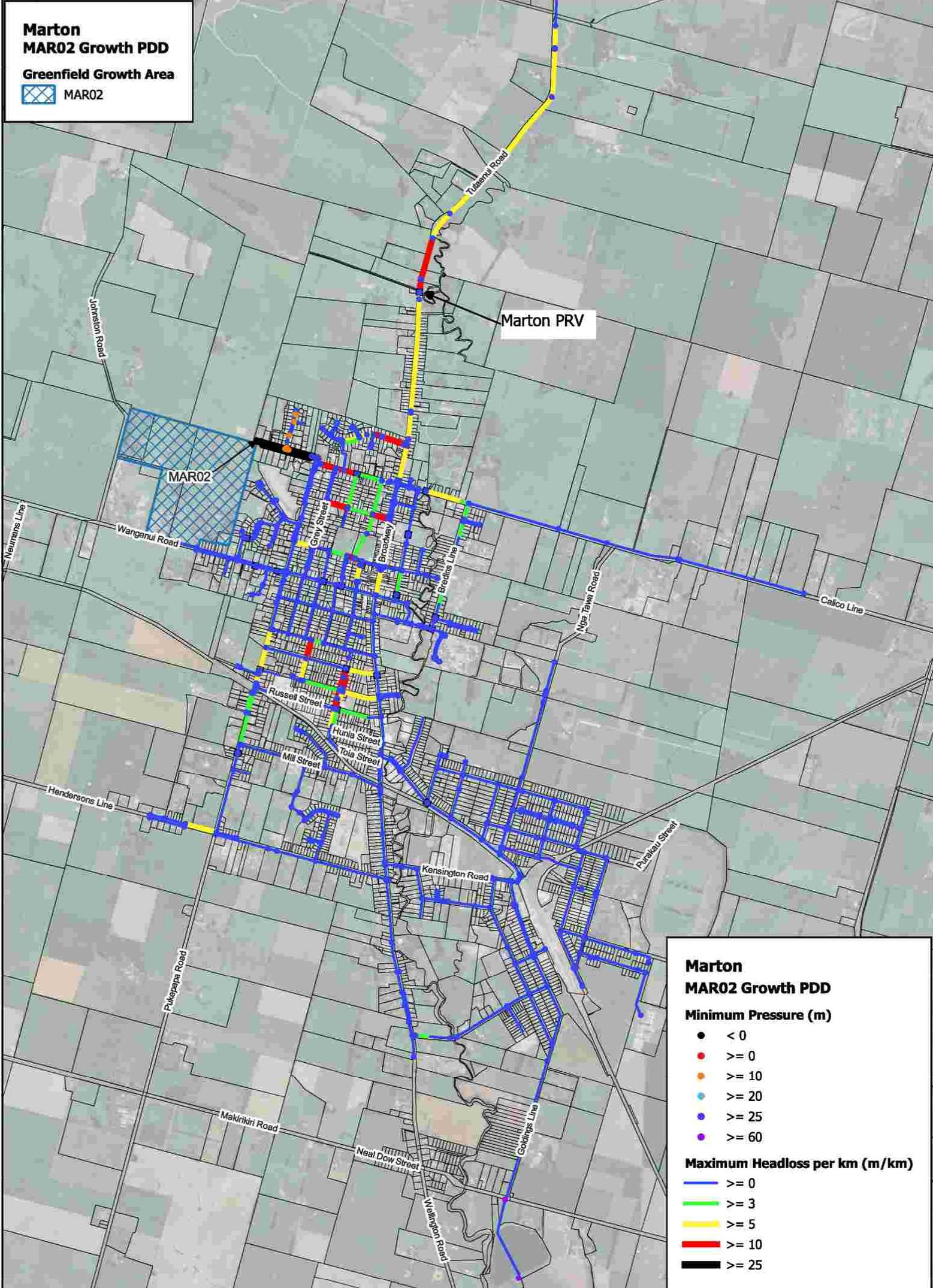


Figure 3.1.1 MAR02 Water Supply System Performance



**Marton  
MAR02 Growth PDD**  
Greenfield Growth Area  
MAR02

**Marton  
MAR02 Growth PDD**

**Minimum Pressure (m)**

- < 0
- >= 0
- >= 10
- >= 20
- >= 25
- >= 60

**Maximum Headloss per km (m/km)**

- >= 0
- >= 3
- >= 5
- >= 10
- >= 25

Figure 3.1.2 MAR02 Water Supply Option 1 System Performance with Proposed Upgrades

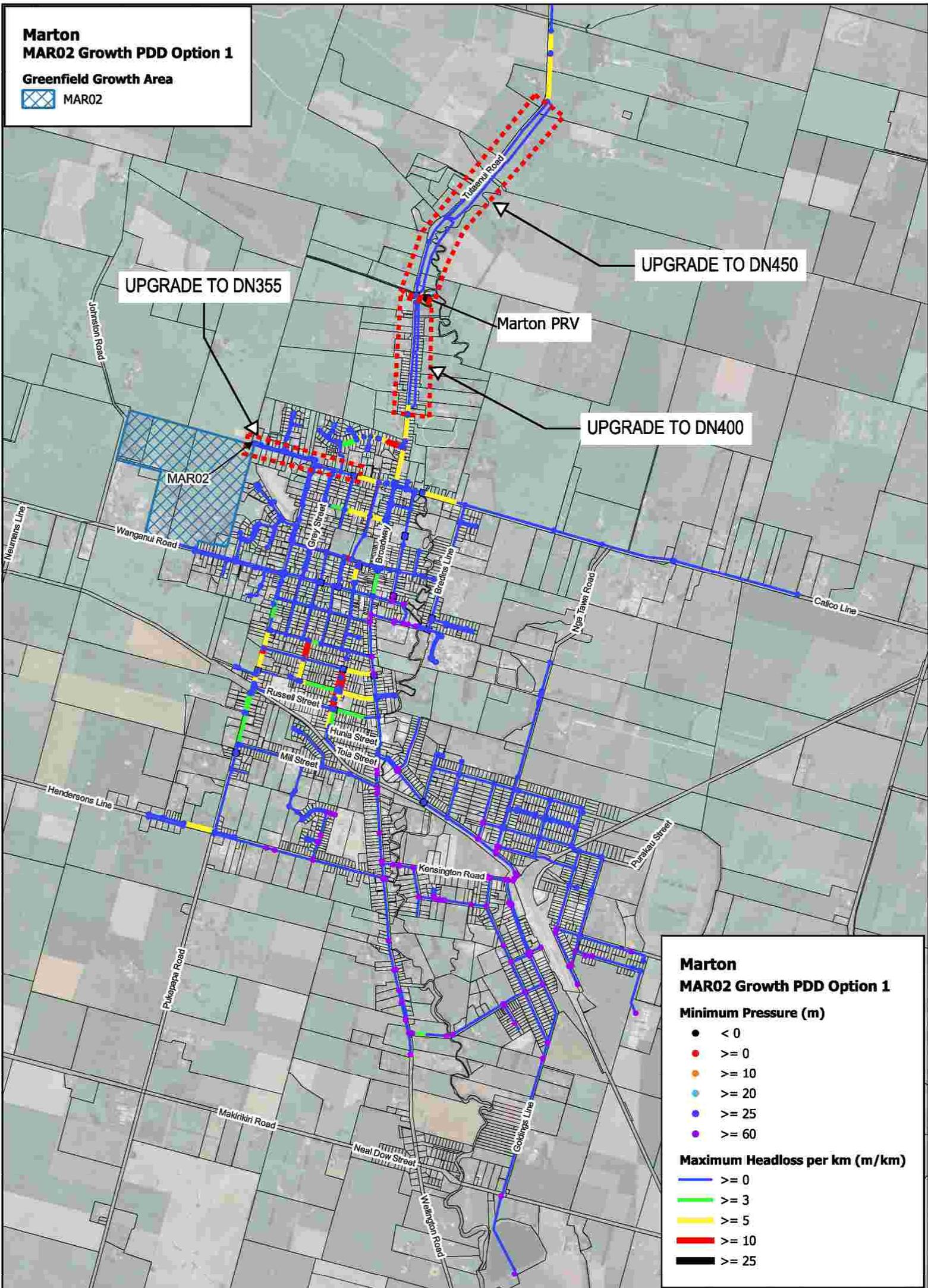
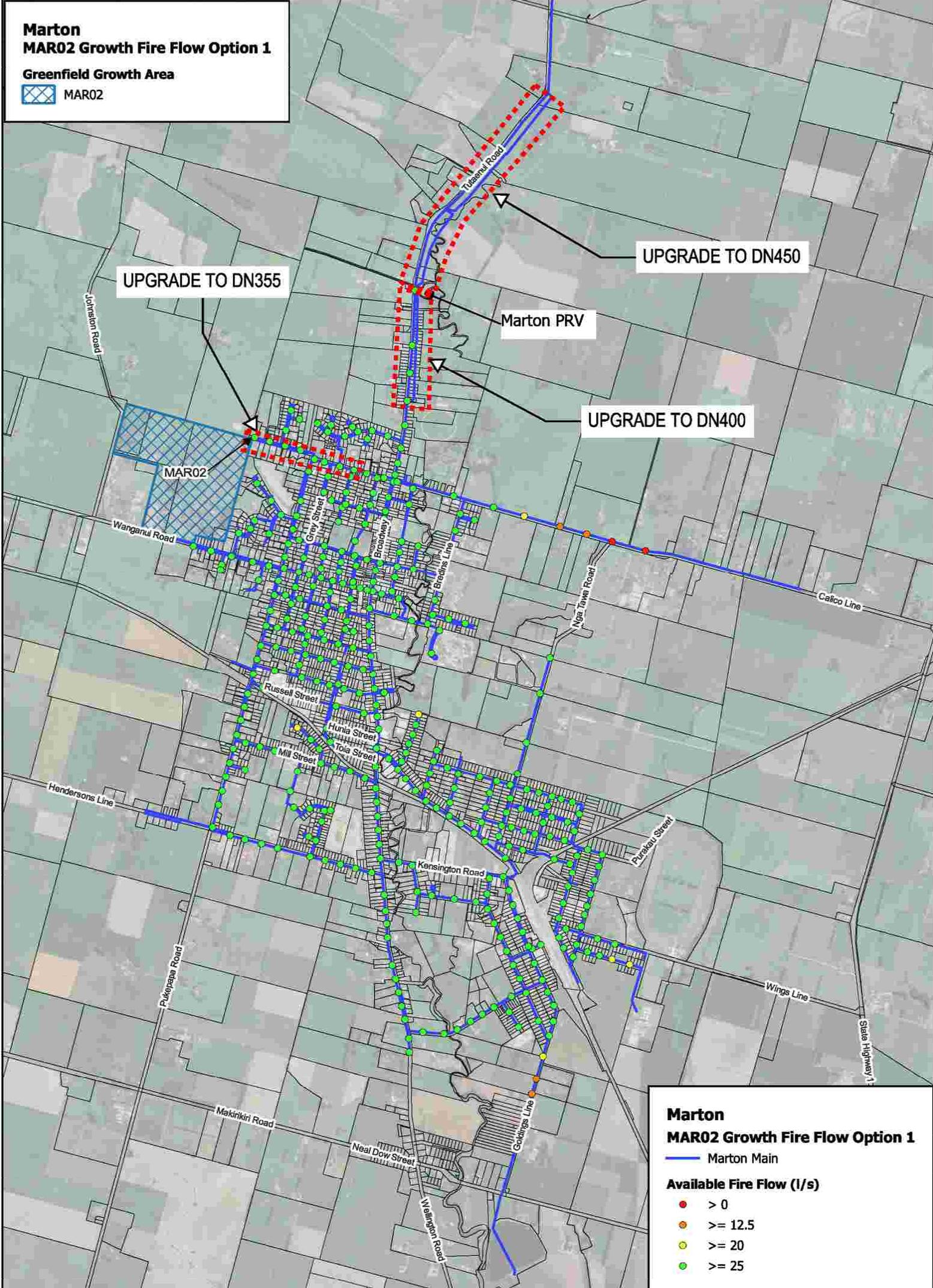
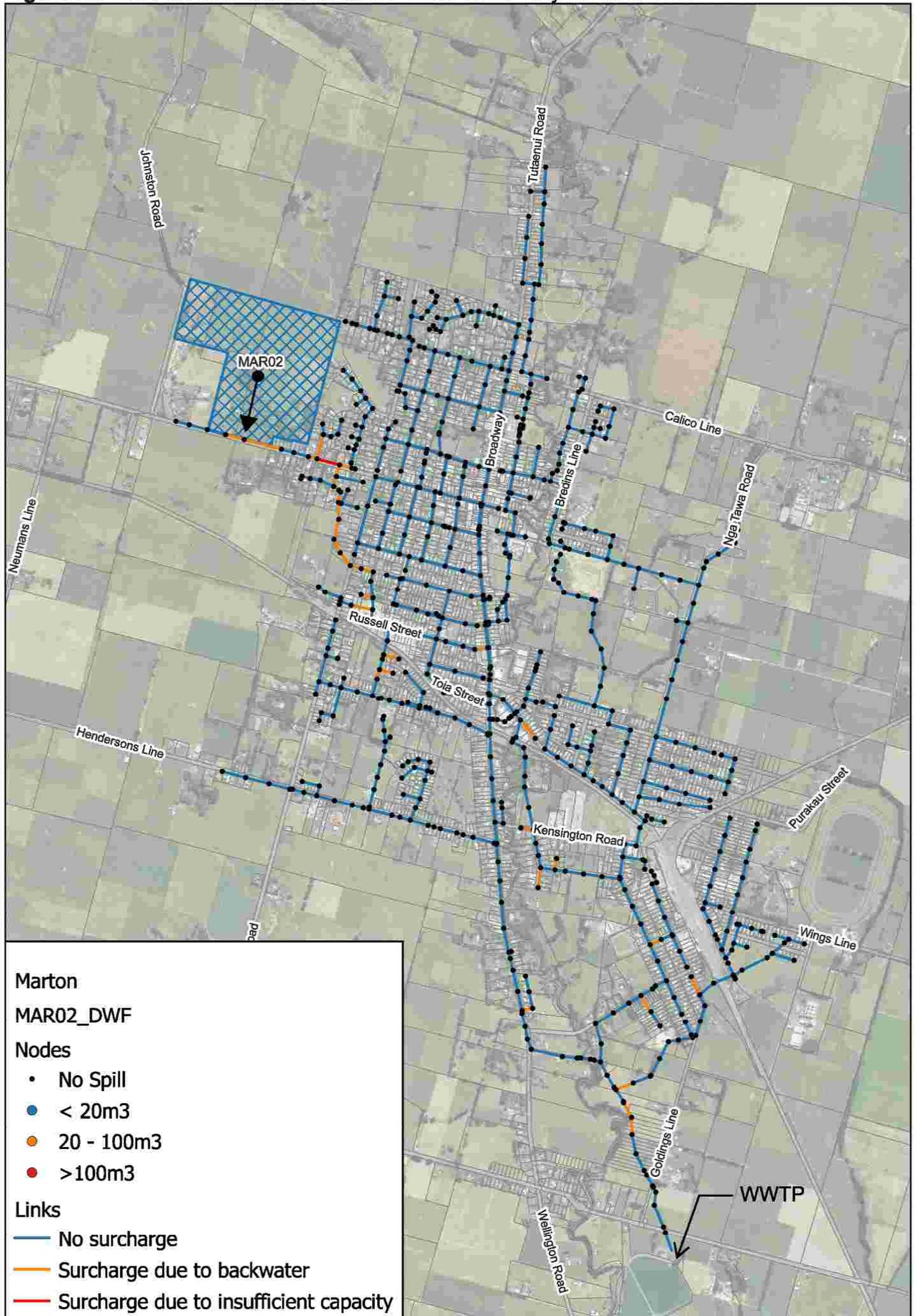


Figure 3.1.3 MAR02 Water Supply Option 1 Fire Flow (FW2) Assessment with Proposed Upgrades

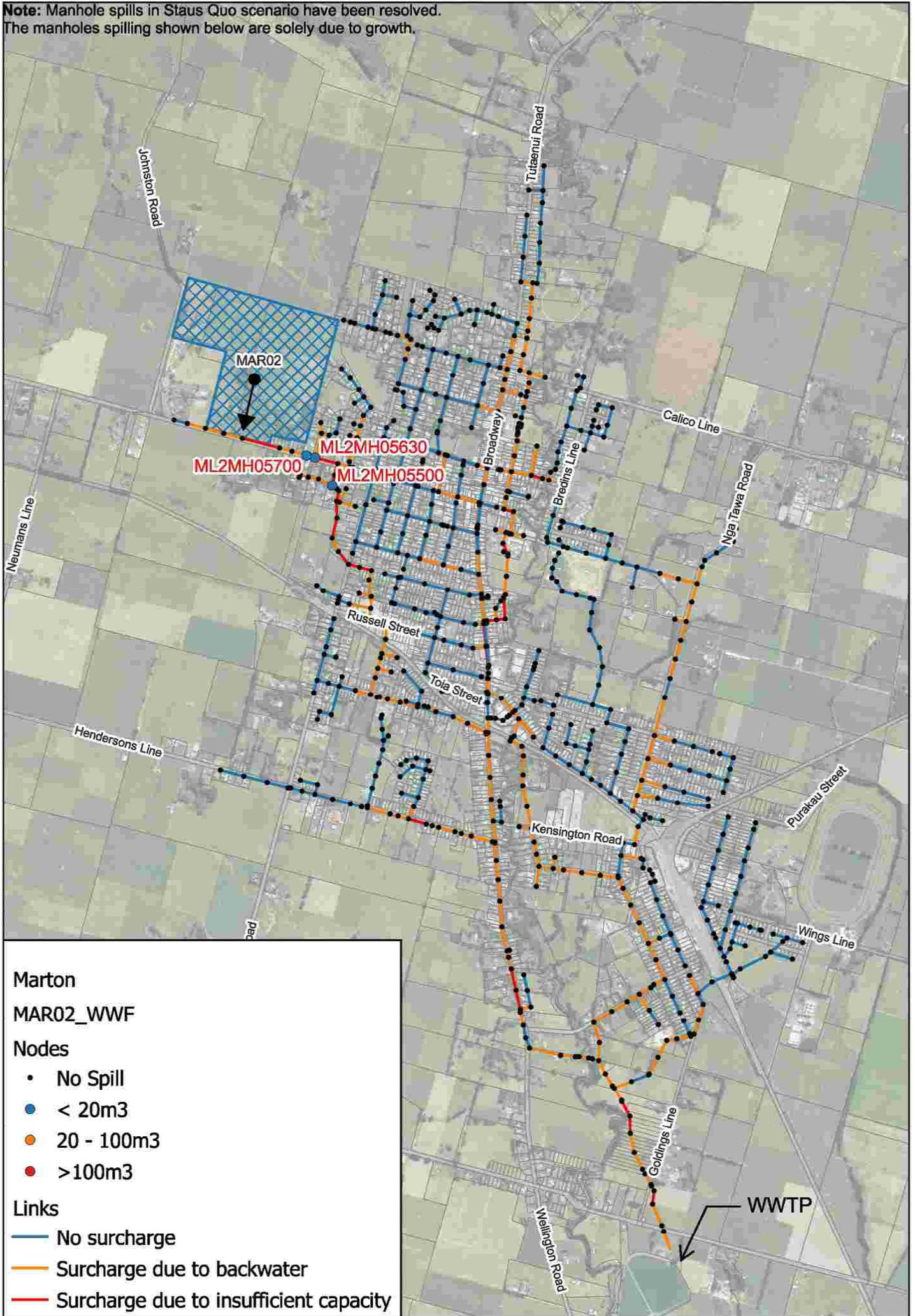


**Figure 3.2.1 MAR02 Wastewater Network Performance - Dry Weather Flow**



**Figure 3.2.2 MAR02 Wastewater Network Performance - Wet Weather Flow**

**Note:** Manhole spills in Staus Quo scenario have been resolved. The manholes spilling shown below are solely due to growth.



**Marion**

MAR02\_WWF

**Nodes**

- No Spill
- < 20m3
- 20 - 100m3
- >100m3

**Links**

- No surcharge
- Surcharge due to backwater
- Surcharge due to insufficient capacity

**Figure 3.2.3 MAR02 Wastewater Network with Upgrades - Wet Weather Flow**

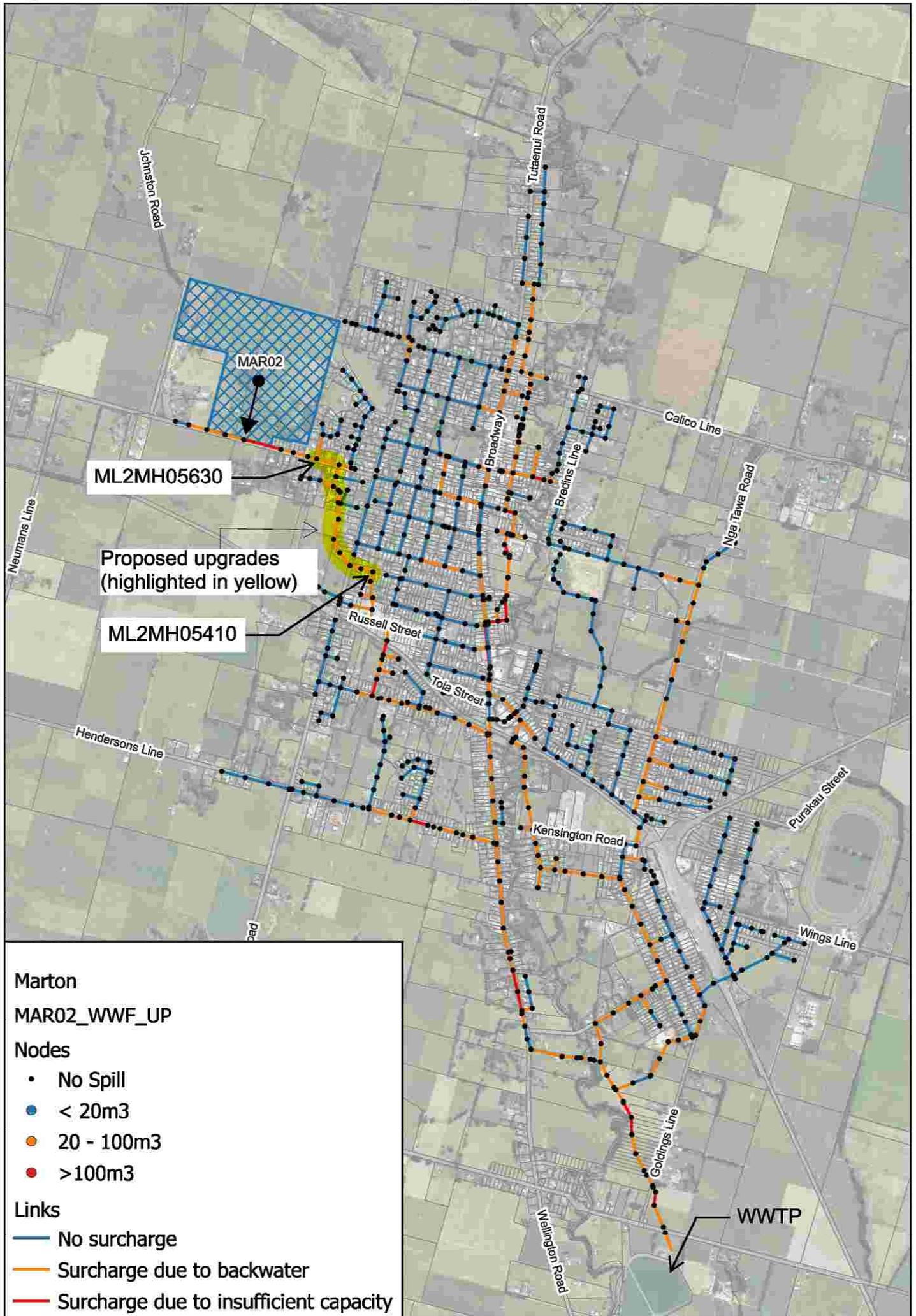
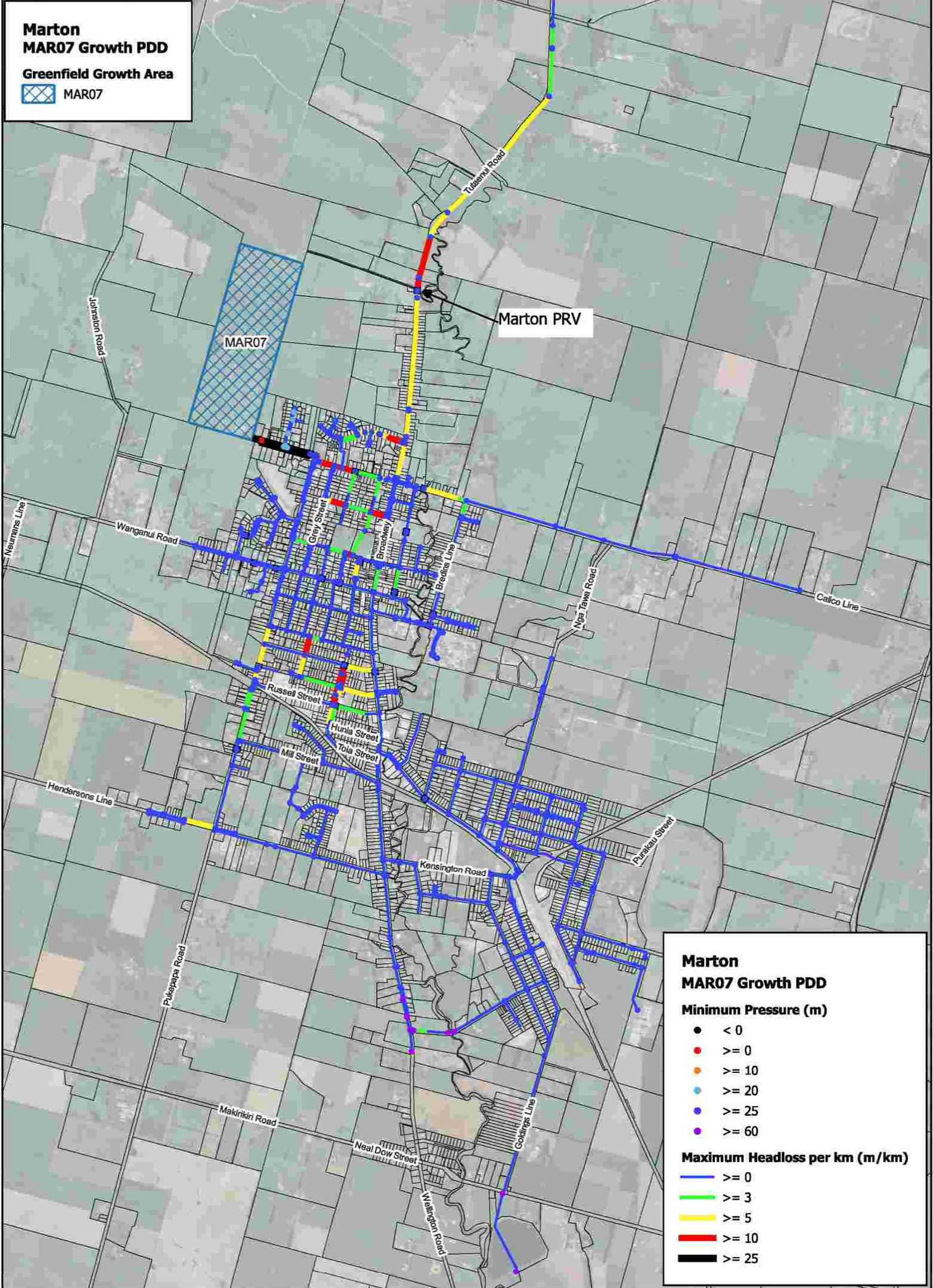


Figure 4.1.1 MAR07 Water Supply System Performance



**Marton  
MAR07 Growth PDD**  
Greenfield Growth Area  
MAR07

**Marton  
MAR07 Growth PDD**

**Minimum Pressure (m)**

- < 0
- ≥ 0
- ≥ 10
- ≥ 20
- ≥ 25
- ≥ 60

**Maximum Headloss per km (m/km)**

- ≥ 0
- ≥ 3
- ≥ 5
- ≥ 10
- ≥ 25

Figure 4.1.2 MAR07 Water Supply Option 1 System Performance with Proposed Upgrades

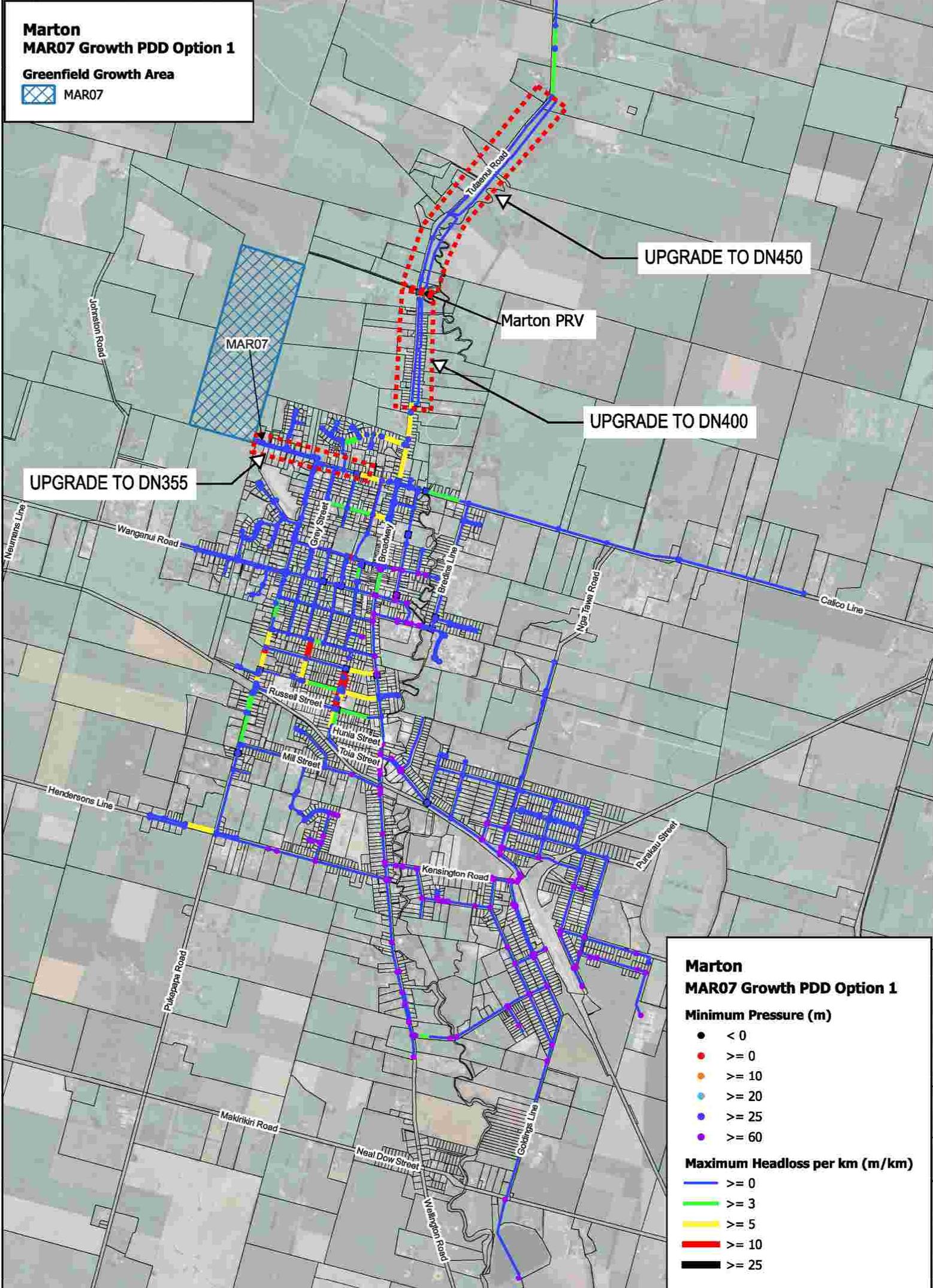
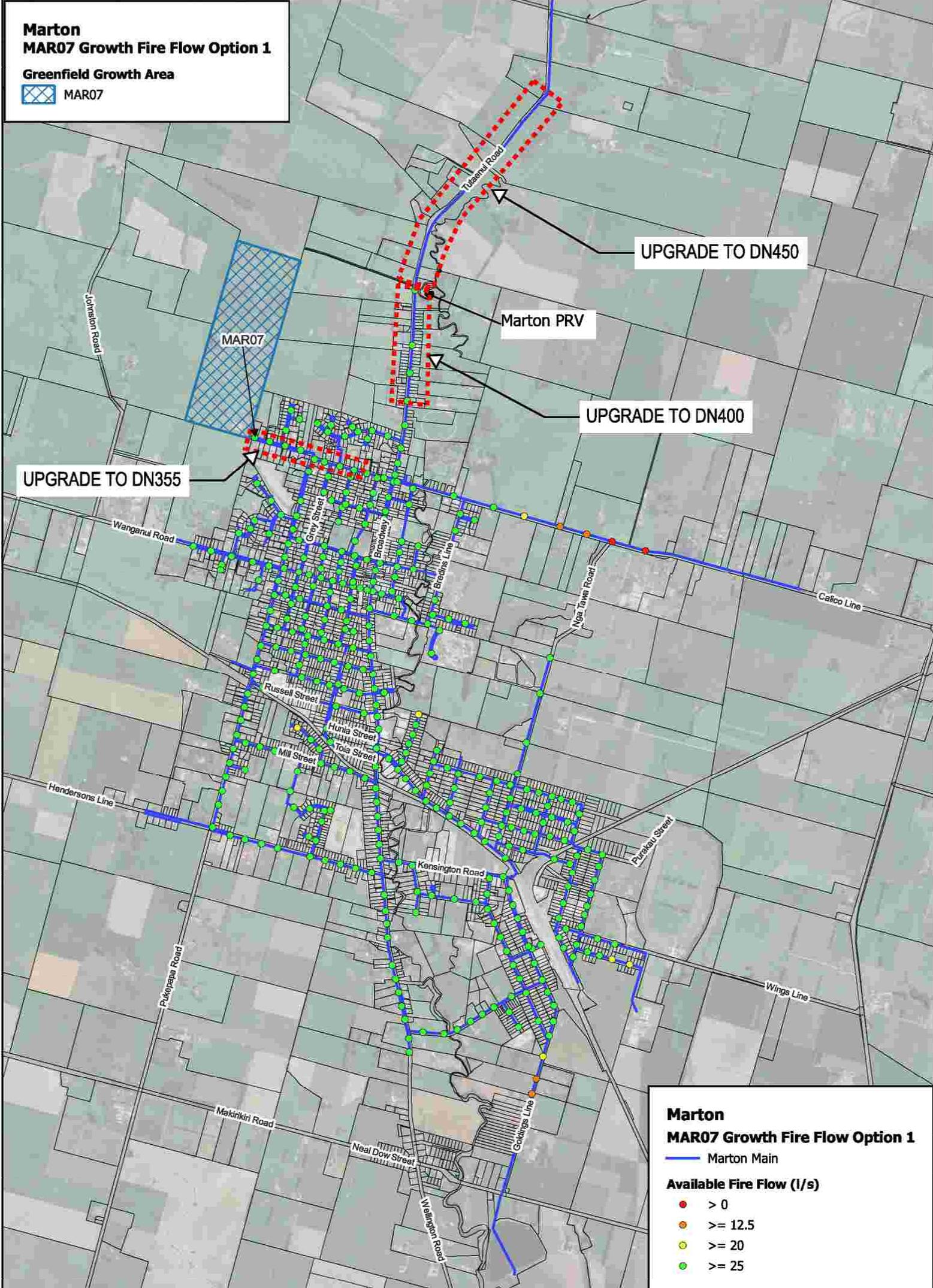
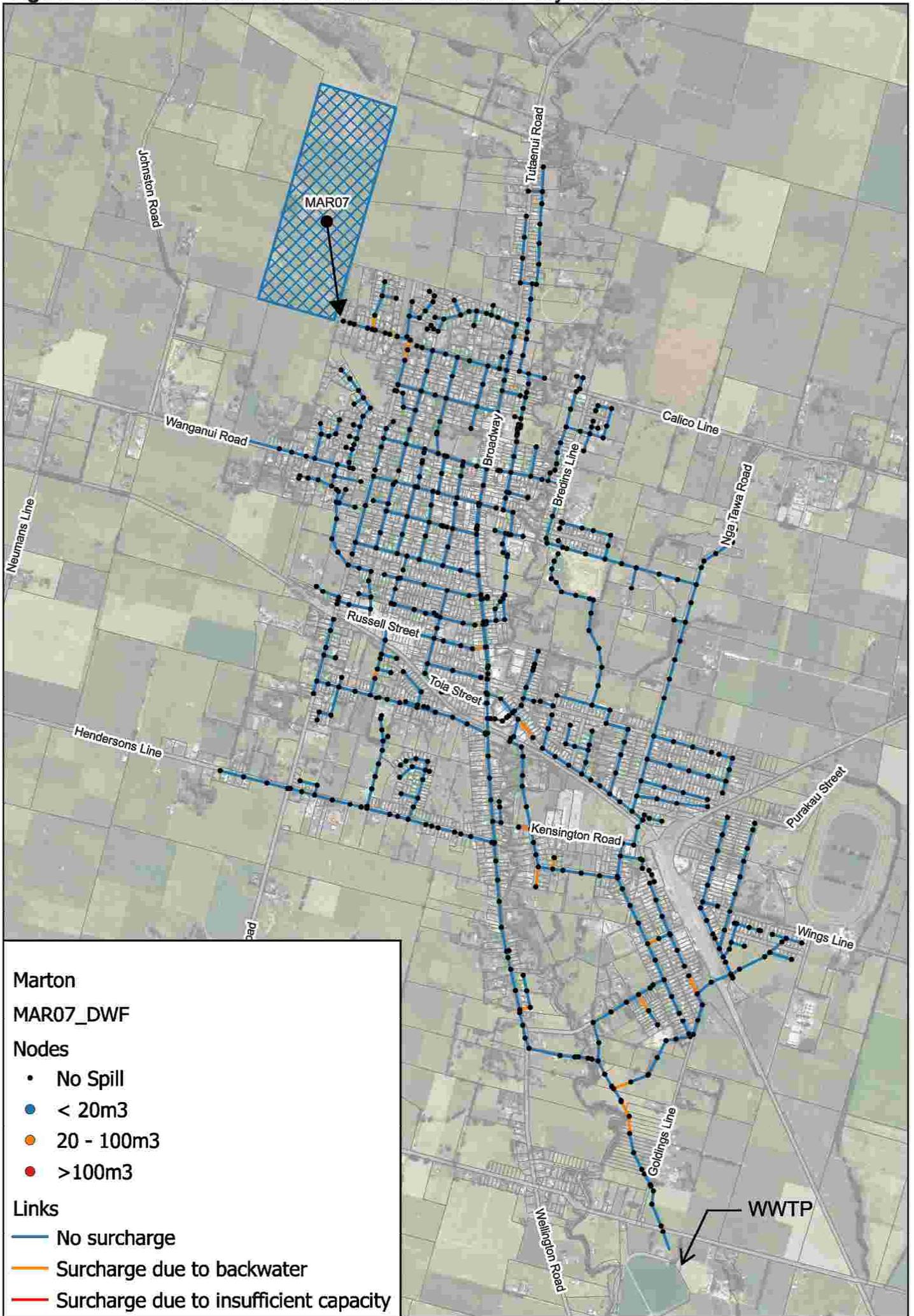


Figure 4.1.3 MAR07 Water Supply Option 1 Fire Flow (FW2) Assessment with Proposed Upgrades



**Figure 4.2.1 MAR07 Wastewater Network Performance - Dry Weather Flow**



**Figure 4.2.2 MAR07 Wastewater Network Performance - Wet Weather Flow**

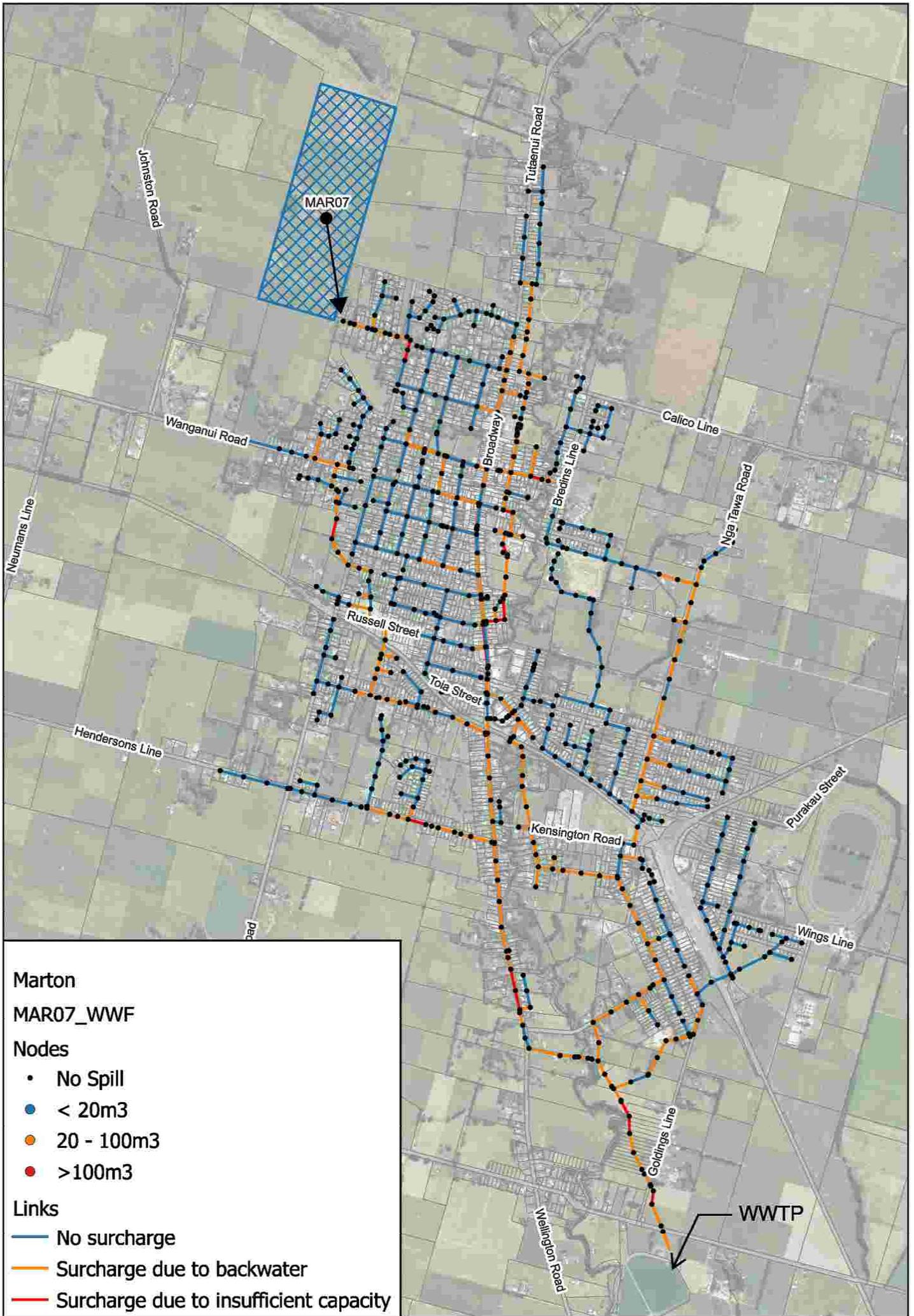
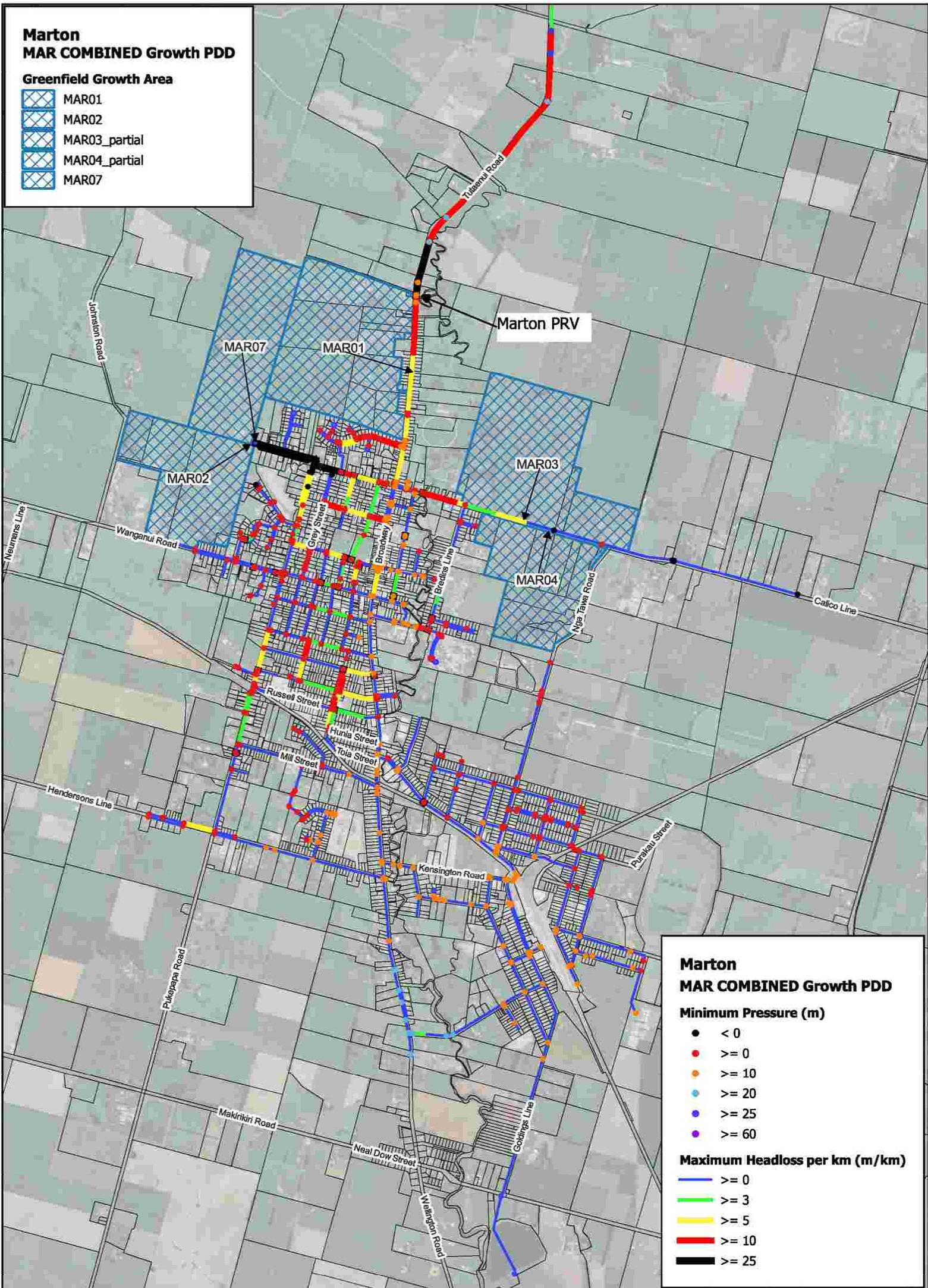
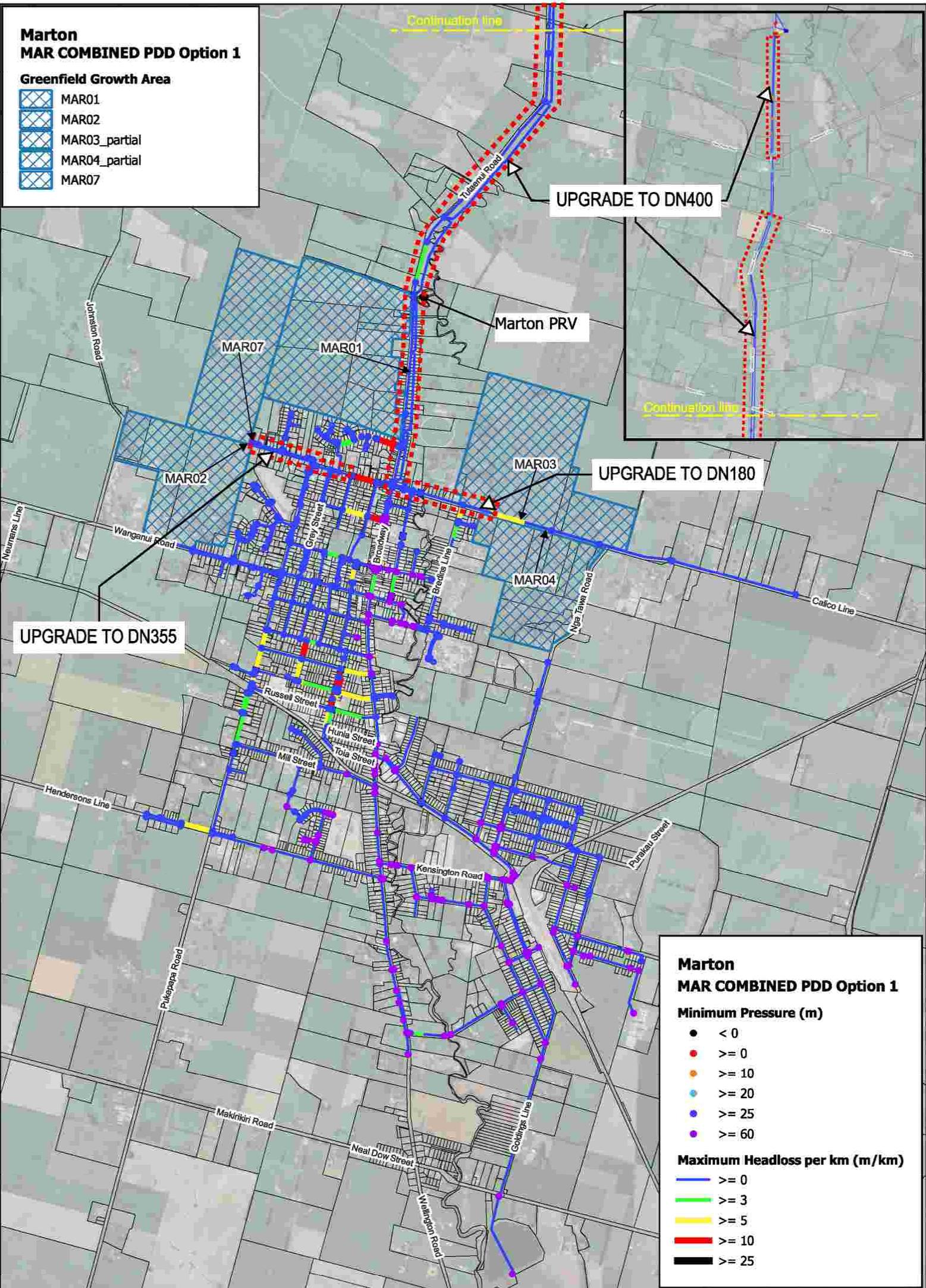


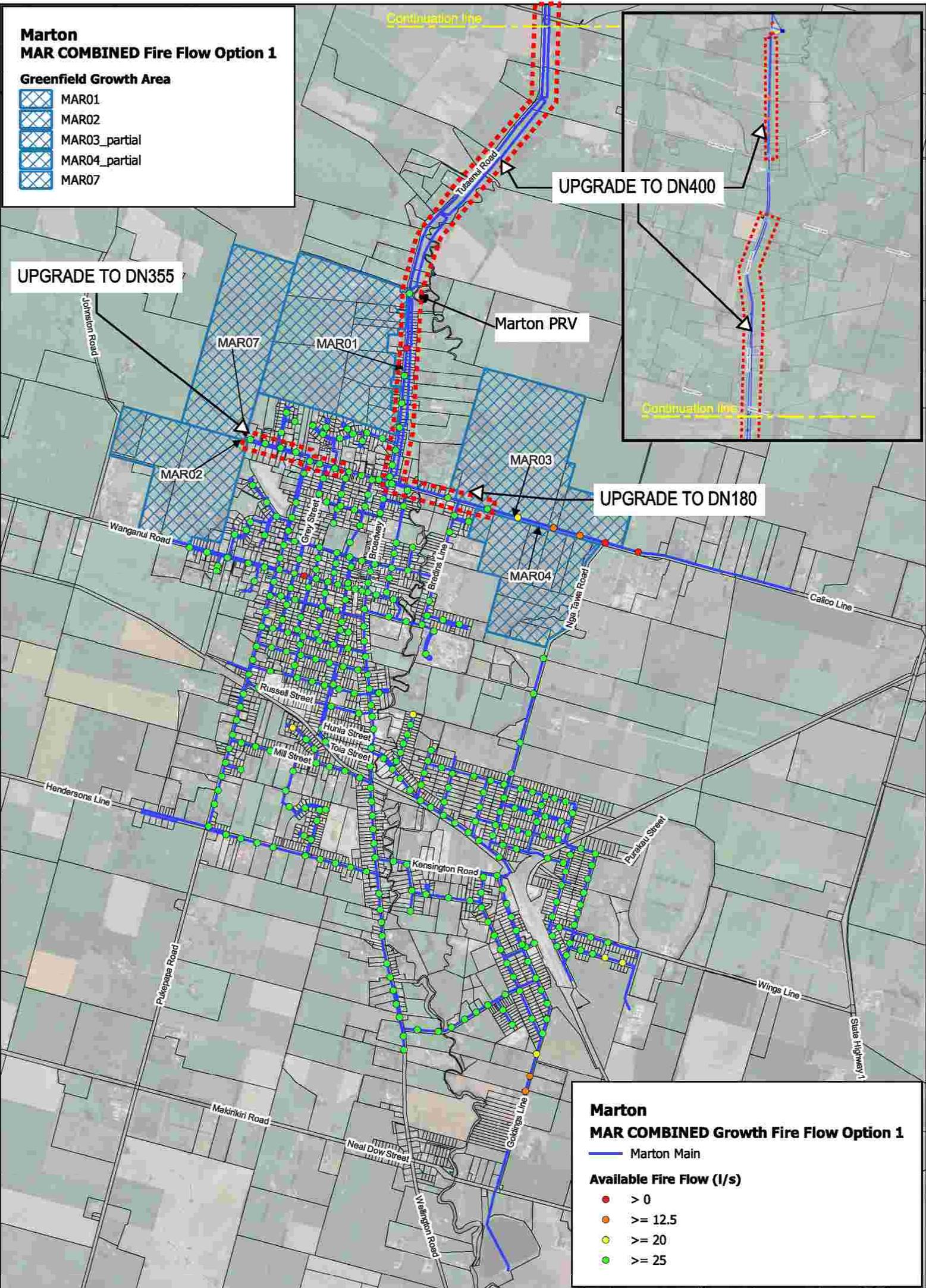
Figure 5.1.1 MAR-Combined Water Supply System Performance



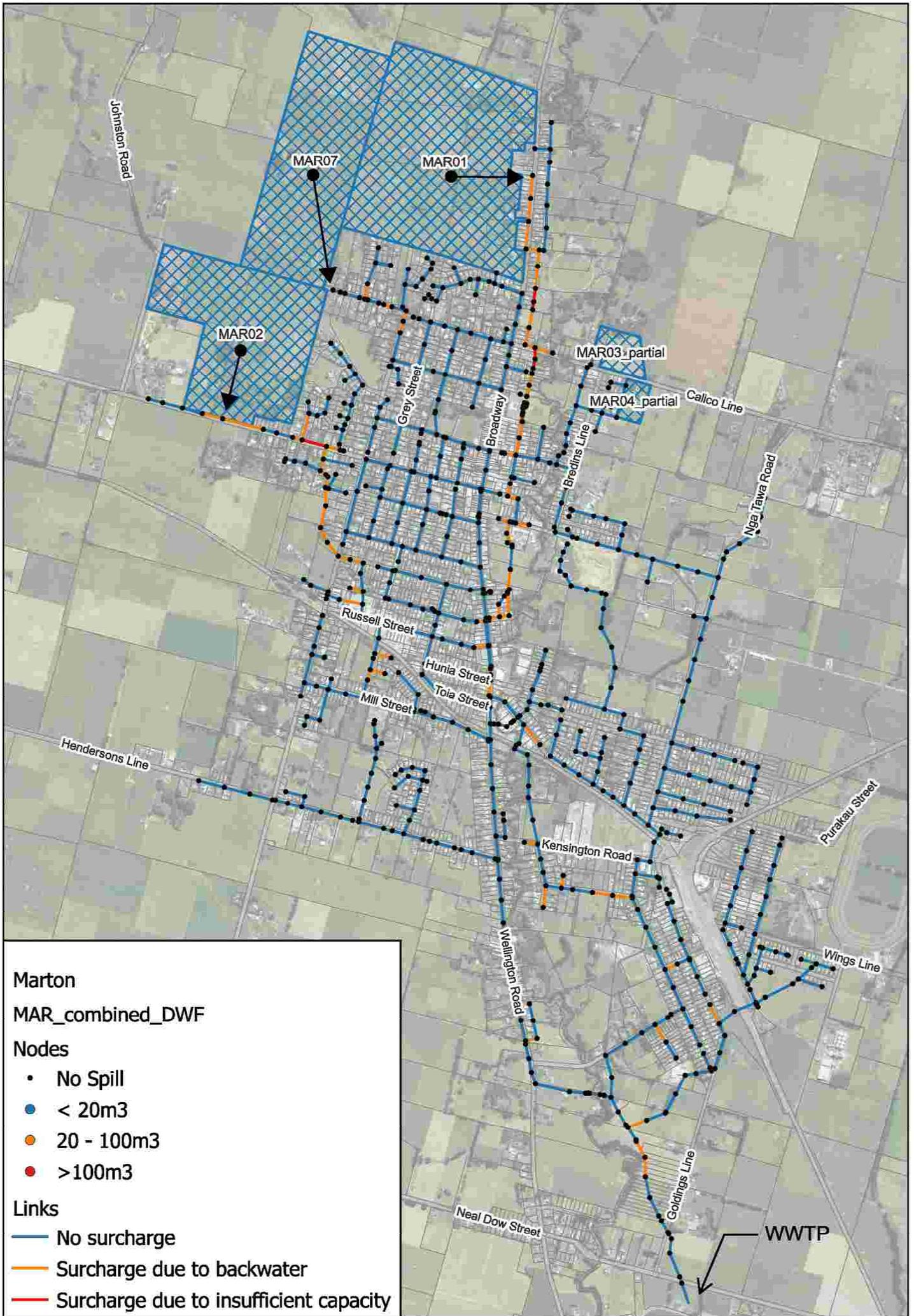
**Figure 5.1.2 MAR-Combined Water Supply Option 1 System Performance with Proposed Upgrades**



**Figure 5.1.3 MAR-Combined Water Supply Option 1 Fire Flow (FW2) Assessment with Proposed Upgrades**

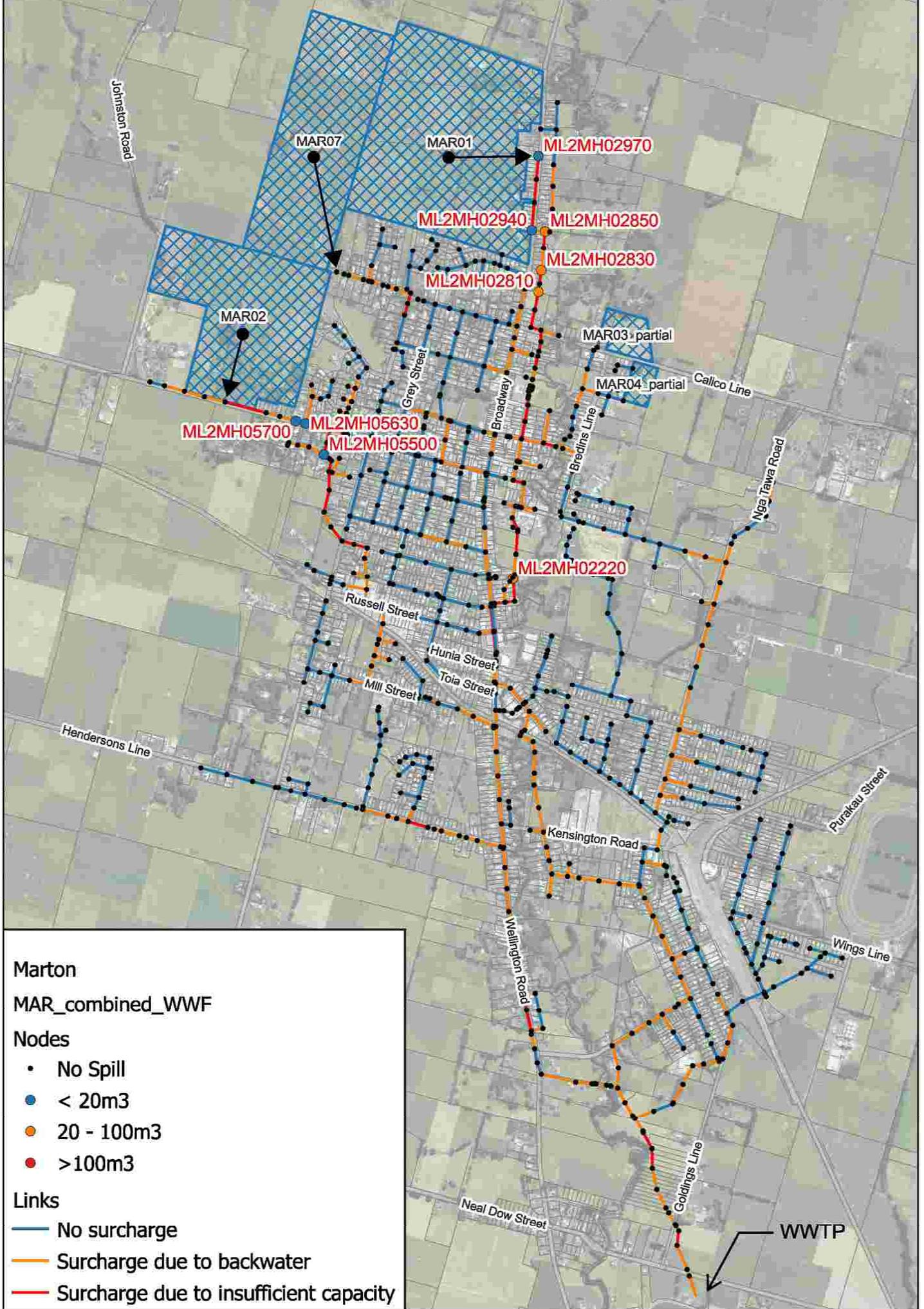


**Figure 5.2.1 MAR\_Combined Wastewater Network Performance - Dry Weather Flow**

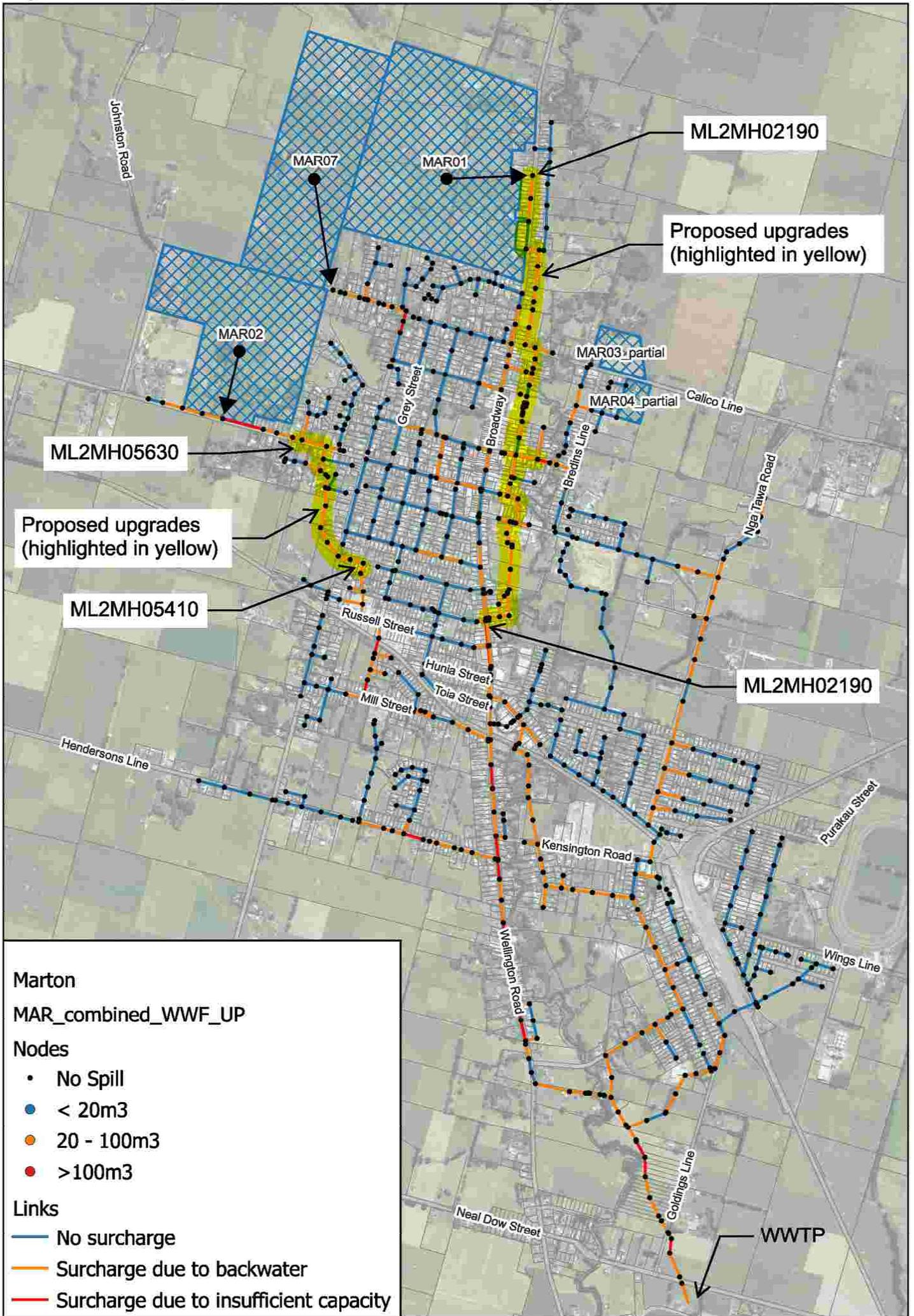


**Figure 5.2.2 MAR\_Combined Wastewater Network Performance - Wet Weather Flow**

**Note:** Manhole spills in Status Quo scenario have been resolved. The manholes spilling shown below are solely due to growth.



**Figure 5.2.3 MAR\_Combined Wastewater Network with Upgrades - Wet Weather Flow**



**Figure 6.1.1 Marton Infill Water Supply System Performance**

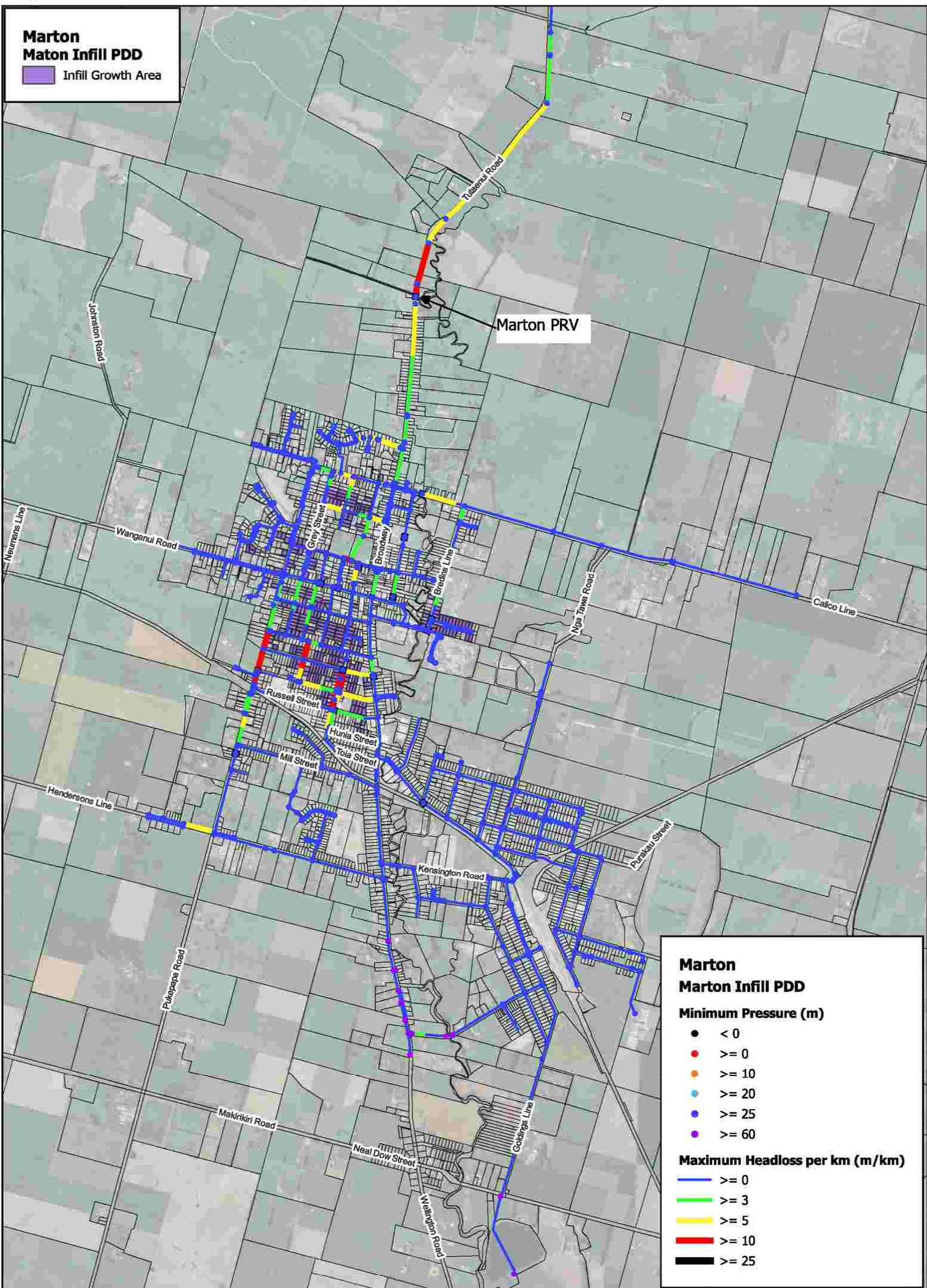


Figure 6.1.2 Marton Infill Water Supply Option 1 System Performance with Proposed Upgrades

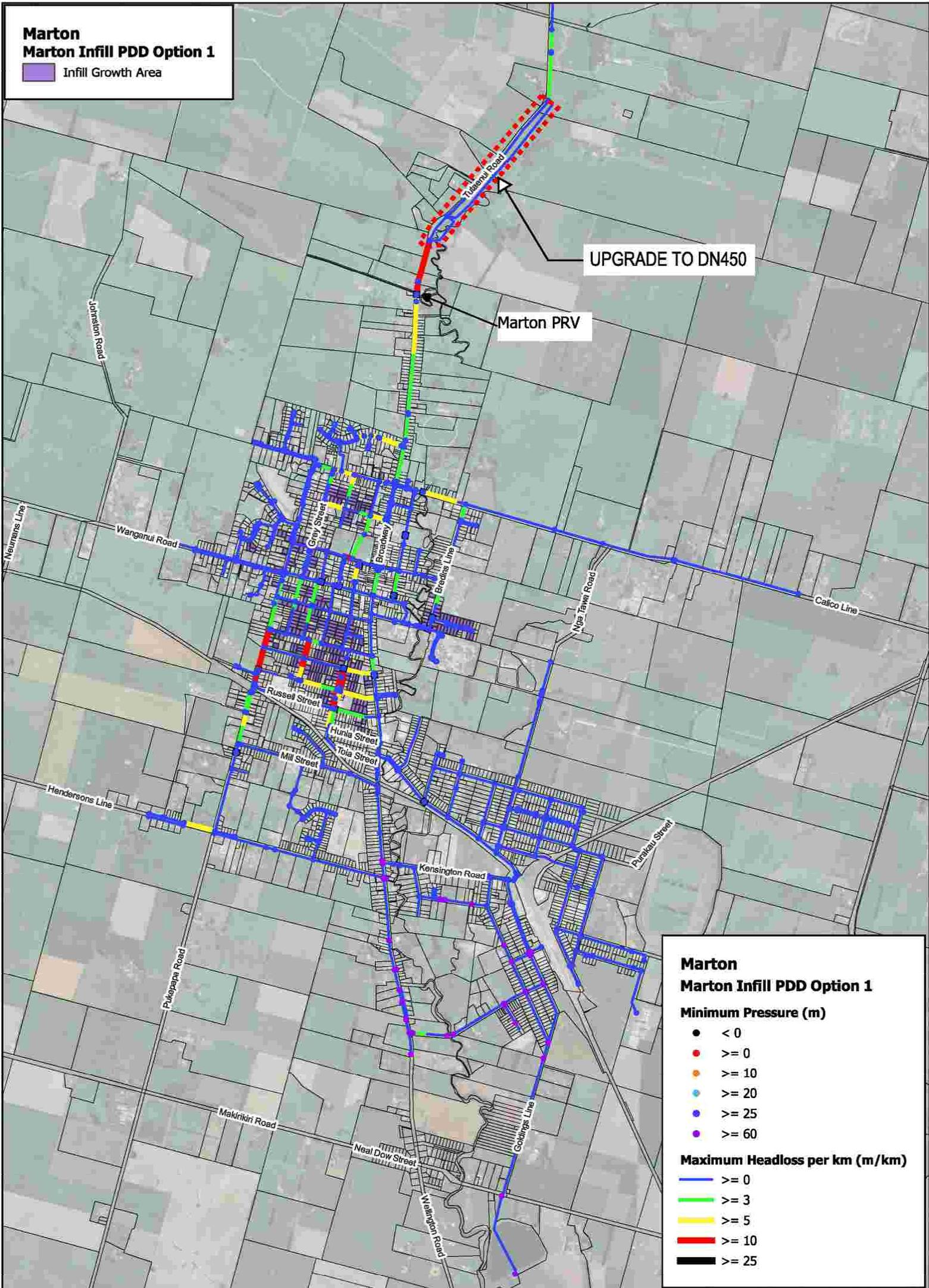
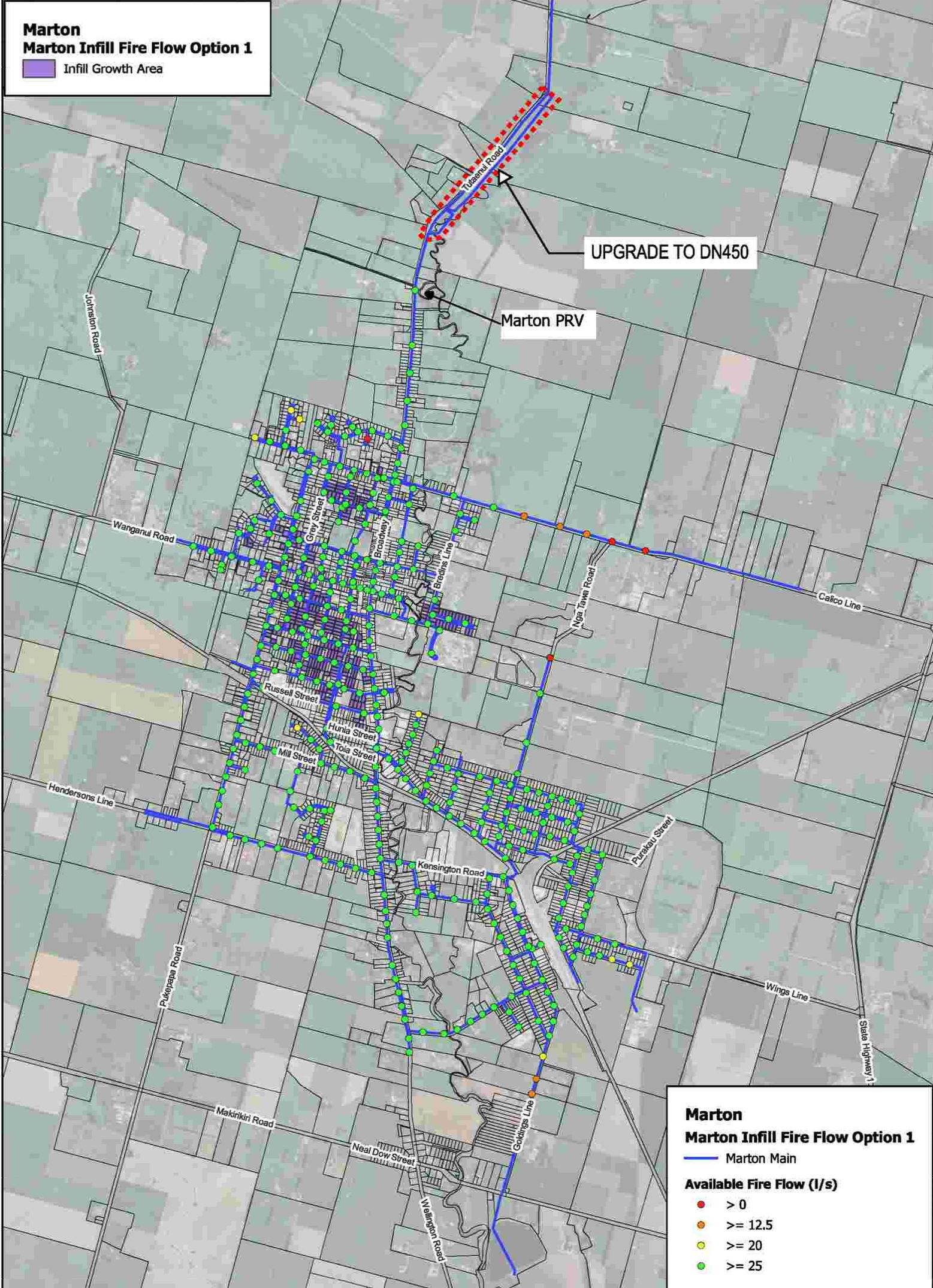
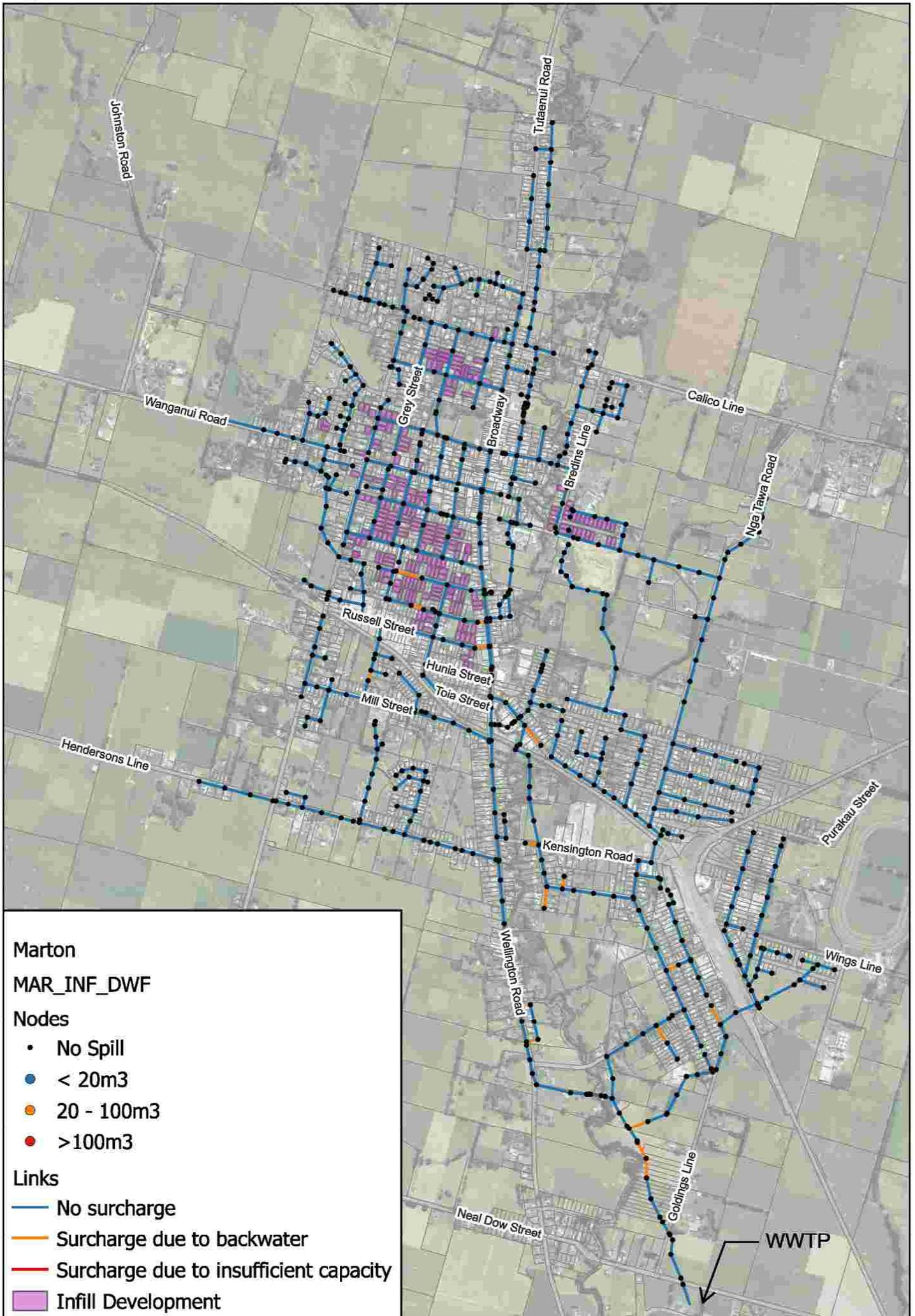


Figure 6.1.3 Marton Infill Water Supply Option 1 Fire Flow (FW2) Assessment with Proposed Upgrades

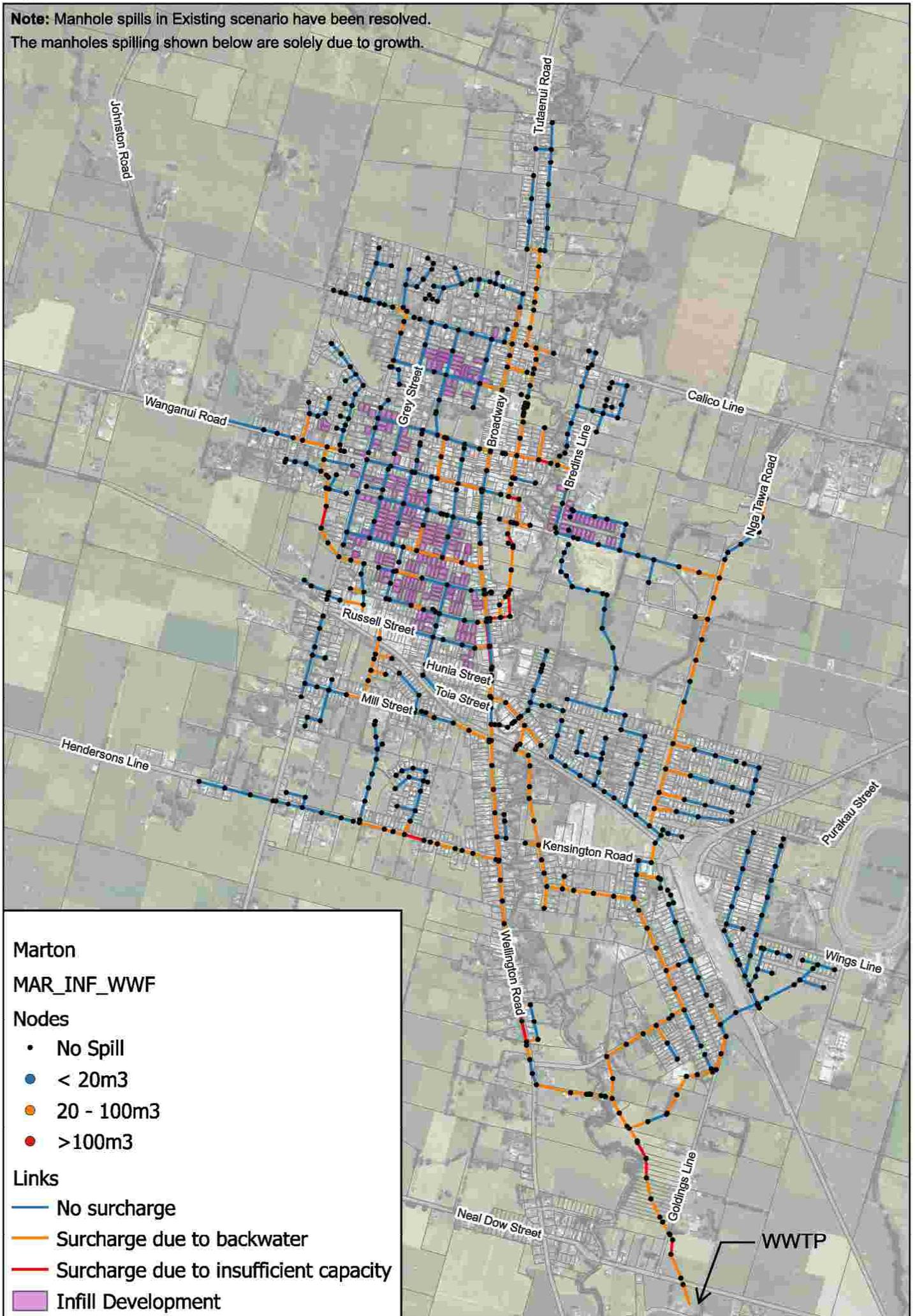


**Figure 6.2.1 Marton Infill Wastewater Network Performance - Dry Weather Flow**



**Figure 6.2.2 Marton Infill Wastewater Network Performance - Wet Weather Flow**

**Note:** Manhole spills in Existing scenario have been resolved.  
The manholes spilling shown below are solely due to growth.



**Figure 6.3 Marton Infill Stormwater Rapid Hazard Assessment**

