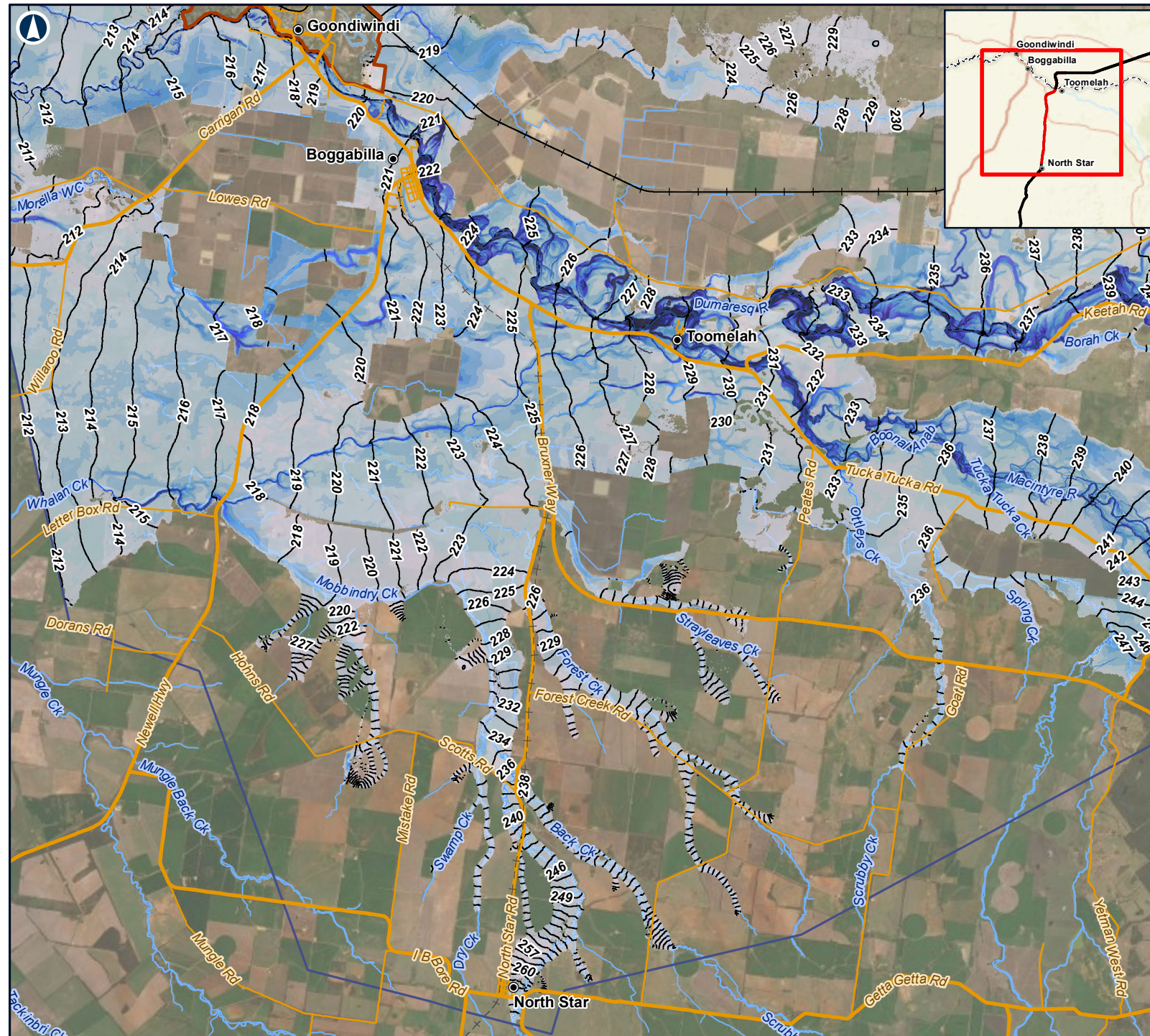


Appendix E

Figures – BRVFMP levees and validated 1976 flows



The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

NORTH STAR TO NSW/QLD BORDER

Figure E1: Existing Case
 BRVMP levees and validated 1976 flows
 Peak water levels

LEGEND

- Localities
- Existing rail (operational)
- - - Existing rail (non-operational)
- - - NSW/Qld border
- Watercourses
- Goondiwindi levee
- 1m contour (mAHD)
- Sub-model extent

Depth (m)

- 0 - 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 2.5
- 2.5 - 3.0
- 3.0 - 3.5
- 3.5 - 4.0
- 4.0 - 4.5
- 4.5 - 5.0
- > 5.0

10km

Coordinate System: GDA 1994 MGA Zone 56

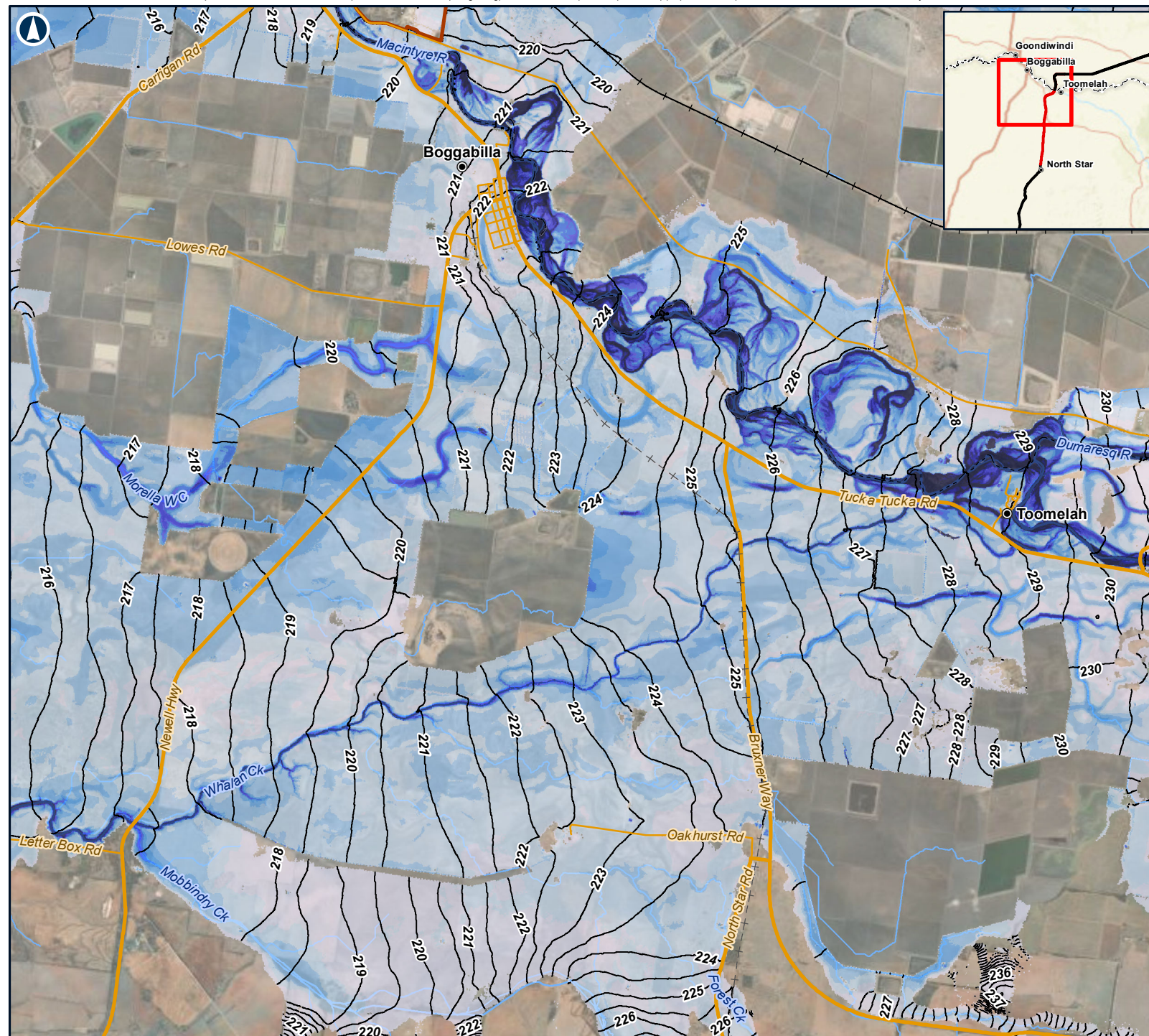
ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material. ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

Date: 12/03/2021

Paper: A4

Author: FFJV GIS

Scale: 1:240,000



The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

NORTH STAR TO NSW/QLD BORDER

Figure E1-A: Existing Case
 BRVMP levees and validated 1976 flows
 Peak water levels

LEGEND

- Localities
- +— Existing rail (operational)
- - - Existing rail (non-operational)
- - - NSW/QLD border
- Watercourses
- Goondiwindi levee
- 0.5m contour (mAHD)
- ▭ Sub-model extent

Depth (m)

- 0 - 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 2.5
- 2.5 - 3.0
- 3.0 - 3.5
- 3.5 - 4.0
- 4.0 - 4.5
- 4.5 - 5.0
- > 5.0

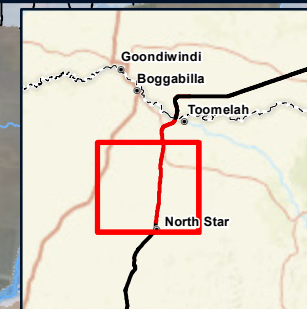
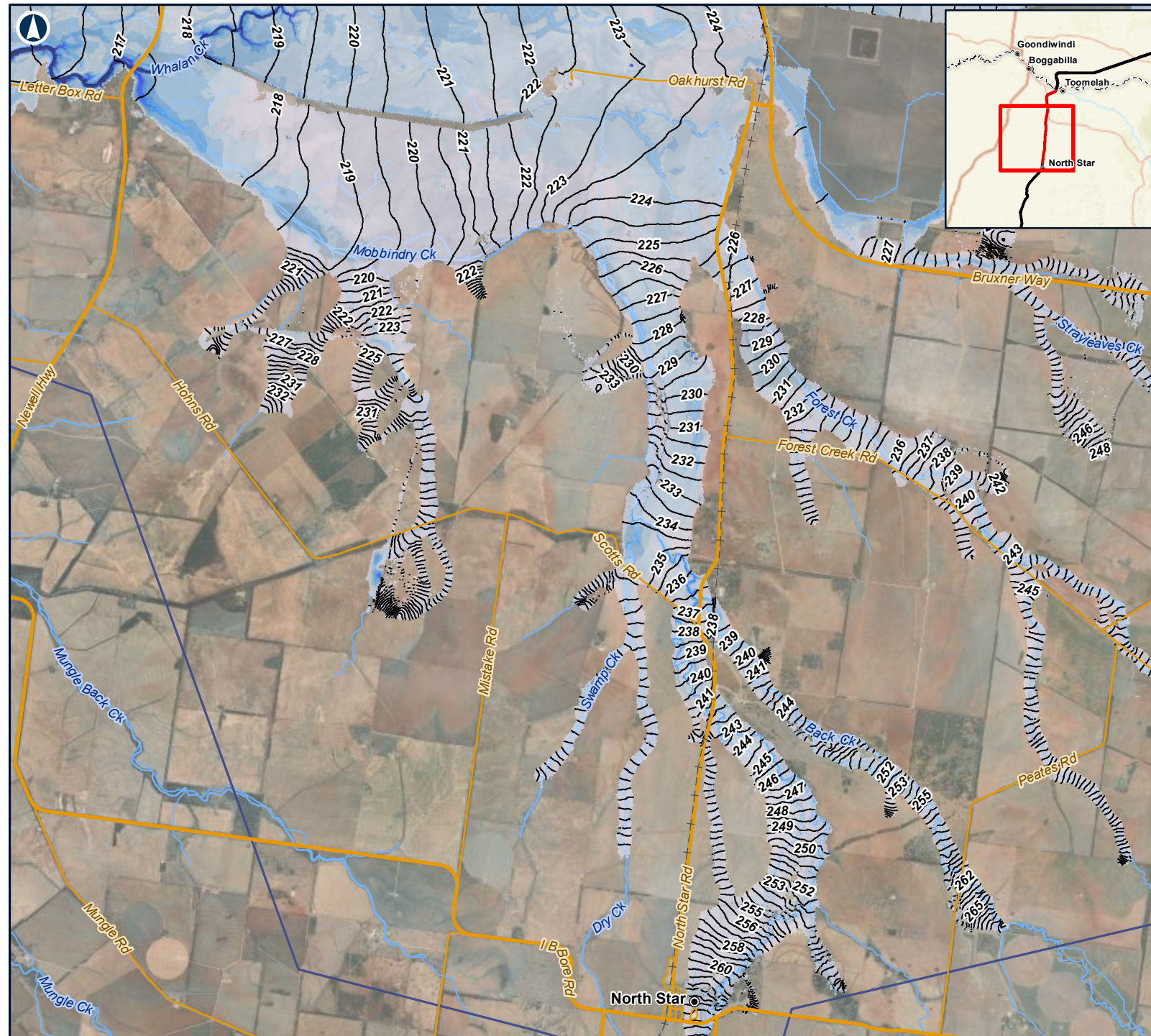
6km

Coordinate System: GDA 1994 MGA Zone 56

ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material. ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

Date: 12/03/2021
 Author: FFJV GIS

Paper: A4
 Scale: 1:125,000



The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

NORTH STAR TO NSW/QLD BORDER

Figure E1-B: Existing Case
 BRVMP levees and validated 1976 flows
 Peak water levels

LEGEND

- Localities
- +— Existing rail (operational)
- - - Existing rail (non-operational)
- - - NSW/QLD border
- Watercourses
- 0.5m contour (mAHD)
- ▭ Sub-model extent

Depth (m)

- 0 - 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 2.5
- 2.5 - 3.0
- 3.0 - 3.5
- 3.5 - 4.0
- 4.0 - 4.5
- 4.5 - 5.0
- > 5.0

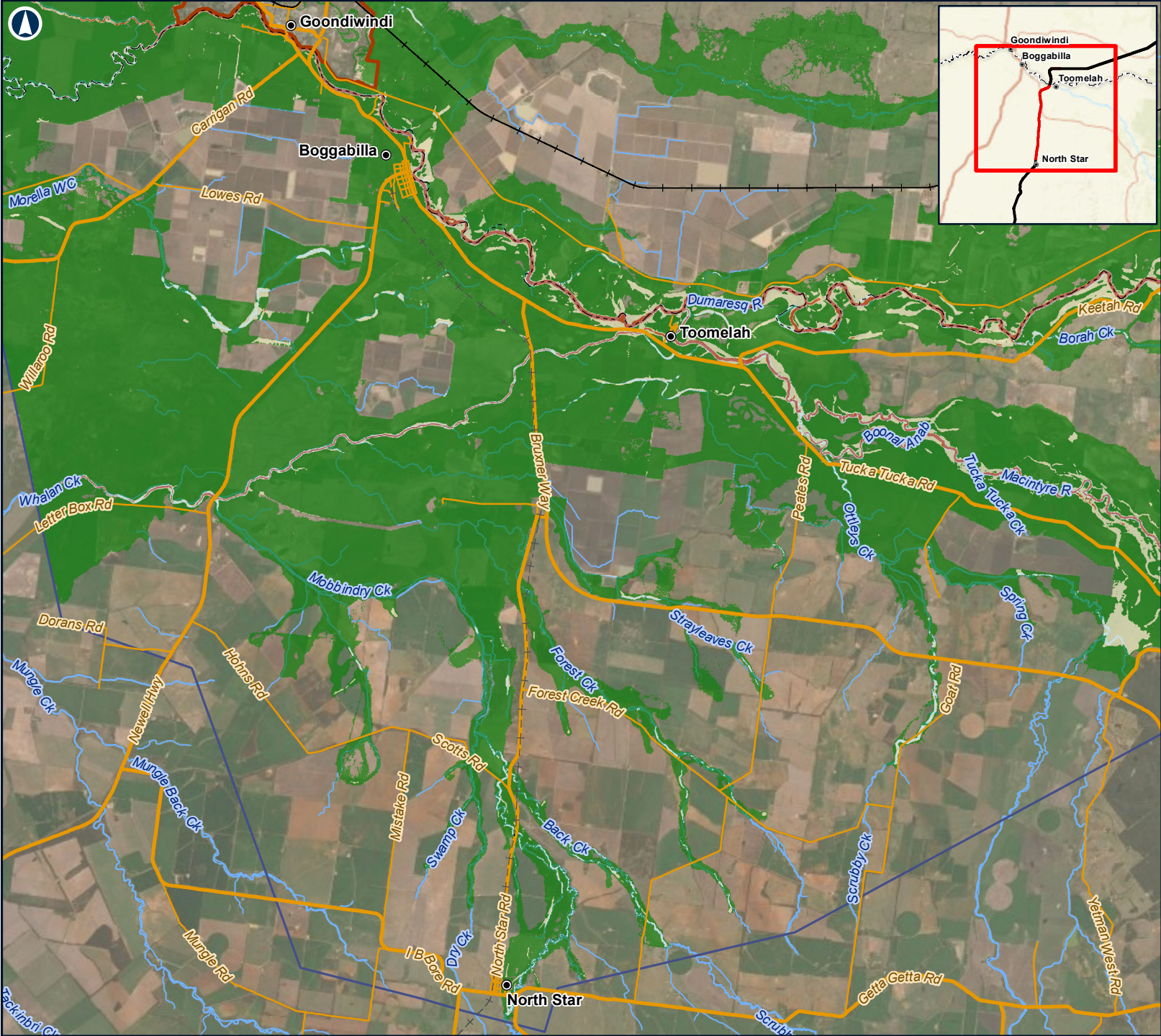
6km

Coordinate System: GDA 1994 MGA Zone 56

ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material. ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

Date: 12/03/2021
 Author: FFJV GIS

Paper: A4
 Scale: 1:125,000



The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

NORTH STAR TO NSW/QLD BORDER

Figure E2: Existing Case
BRVMP levees and validated 1976 flows
Velocities

LEGEND

- Localities
- +— Existing rail (operational)
- - - Existing rail (non-operational)
- - - NSW/QLD border
- Watercourses
- Goondiwindi levee
- ▭ Sub-model extent

Peak velocity (m/s)

- 0 to 0.5
- 0.5 to 1.0
- > 1.0

10km

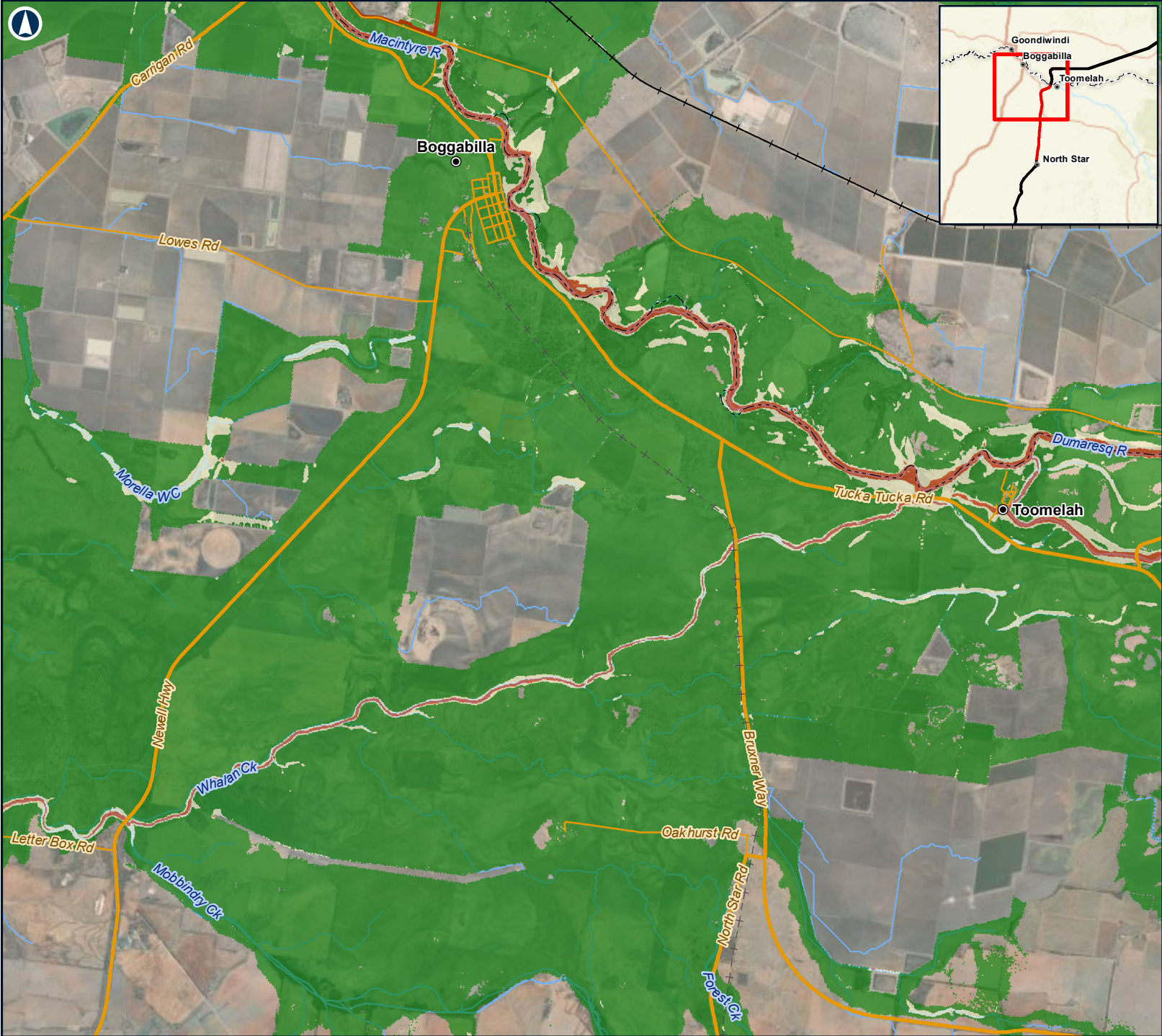
Coordinate System: GDA 1994 MGA Zone 56

ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material.

ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

Date: 12/03/2021
Author: FFJV GIS

Paper: A4
Scale: 1:240,000



The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

NORTH STAR TO NSW/QLD BORDER

Figure E2-A: Existing Case
BRVMP levees and validated 1976 flows
Velocities

LEGEND

- Localities
- +— Existing rail (operational)
- - - Existing rail (non-operational)
- - - NSW/QLD border
- Watercourses
- Goondiwindi levee
- Sub-model extent

Peak velocity (m/s)

- 0 to 0.5
- 0.5 to 1.0
- > 1.0

6km

Coordinate System: GDA 1994 MGA Zone 56

ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material. ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

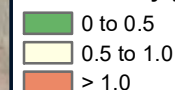
Date: 12/03/2021
Author: FFJV GIS

Paper: A4
Scale: 1:125,000

Figure E2-B: Existing Case
BRVFMP levees and validated 1976 flows
Velocities

- Localities
- +— Existing rail (operational)
- - - Existing rail (non-operational)
- - - - NSW/QLD border
- Watercourses
- Sub-model extent

Peak velocity (m/s)



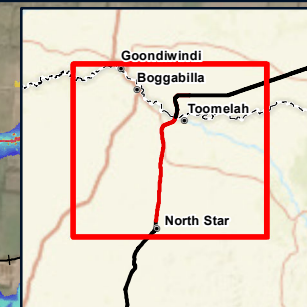
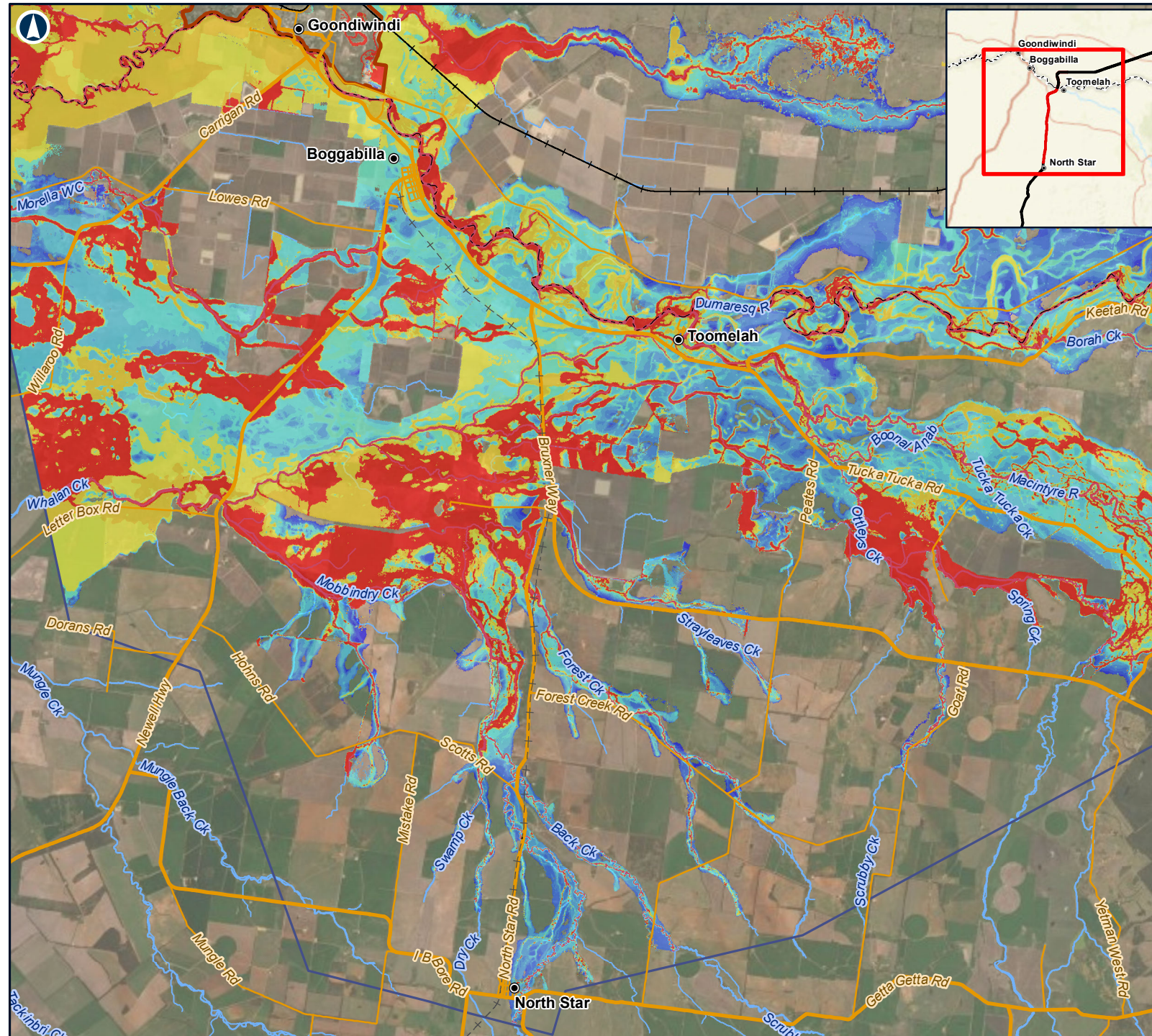
6 km

Coordinate System: GDA 1994 MGA Zone 56

ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material.

ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

Date: 12/03/2021 Paper: A4
Author: FFJV GIS Scale: 1:125,000



The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

NORTH STAR TO NSW/QLD BORDER

Figure E3: Existing Case
 BRVMP levees and validated 1976 flows
 Duration of Inundation

LEGEND

- Localities
- +— Existing rail (operational)
- - - Existing rail (non-operational)
- - - NSW/QLD border
- Watercourses
- Goondiwindi levee
- ▭ Sub-model extent

Duration of inundation (hours)

- 0 to 10
- 10 to 20
- 20 to 30
- 30 to 40
- 40 to 50
- 50 to 60
- 60 to 70
- 70 to 80
- 80 to 90
- 90 to 100
- > 100

10km

Coordinate System: GDA 1994 MGA Zone 56

ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material.

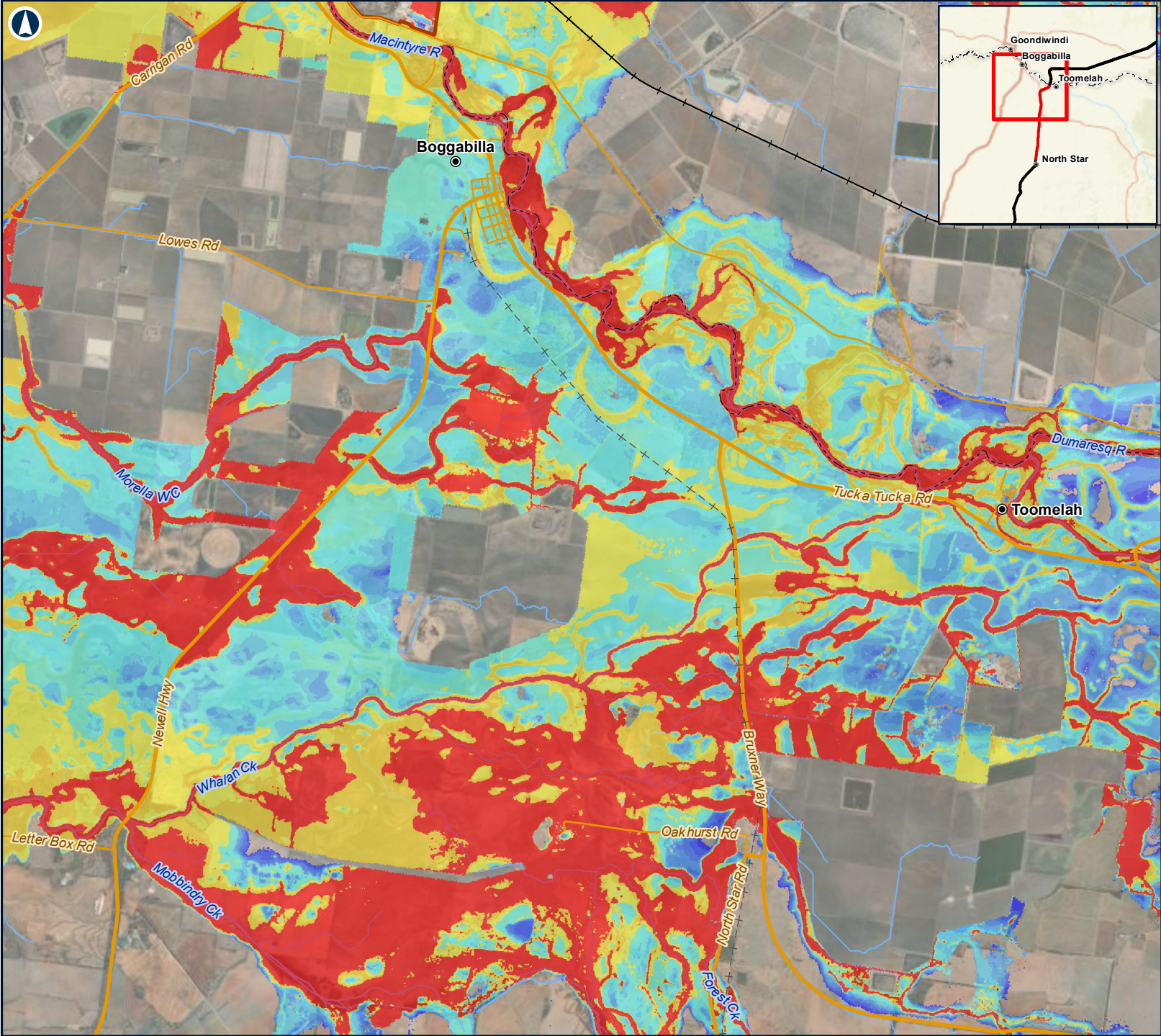
ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

Date: 12/03/2021

Paper: A4

Author: FFJV GIS

Scale: 1:240,000



The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

NORTH STAR TO NSW/QLD BORDER

Figure E3-A: Existing Case
BRVMP levees and validated 1976 flows
Duration of Inundation

LEGEND

- Localities
- +— Existing rail (operational)
- - - Existing rail (non-operational)
- - - NSW/QLD border
- Watercourses
- Goondiwindi levee
- ▭ Sub-model extent

Duration of inundation (hours)

- 0 to 10
- 10 to 20
- 20 to 30
- 30 to 40
- 40 to 50
- 50 to 60
- 60 to 70
- 70 to 80
- 80 to 90
- 90 to 100
- > 100

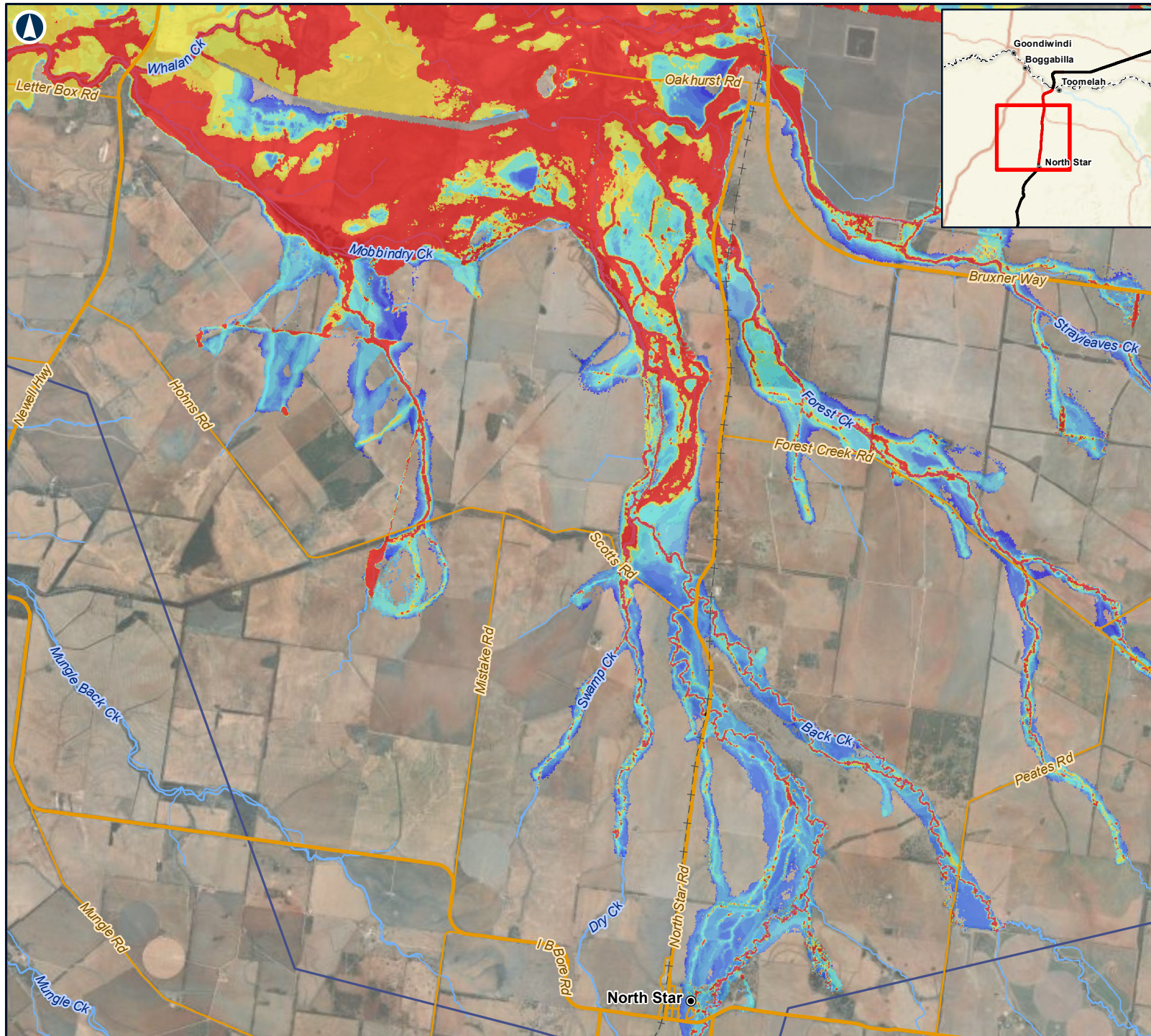
6km

Coordinate System: GDA 1994 MGA Zone 56

ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material. ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

Date: 12/03/2021
Author: FFJV GIS

Paper: A4
Scale: 1:125,000



The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

NORTH STAR TO NSW/QLD BORDER

Figure E3-B: Existing Case
 BRVMP levees and validated 1976 flows
 Duration of Inundation

LEGEND

- Localities
- +— Existing rail (operational)
- - - Existing rail (non-operational)
- - - NSW/QLD border
- Watercourses
- ▭ Sub-model extent

Duration of inundation (hours)

- 0 to 10
- 10 to 20
- 20 to 30
- 30 to 40
- 40 to 50
- 50 to 60
- 60 to 70
- 70 to 80
- 80 to 90
- 90 to 100
- > 100

6km

Coordinate System: GDA 1994 MGA Zone 56

ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material.

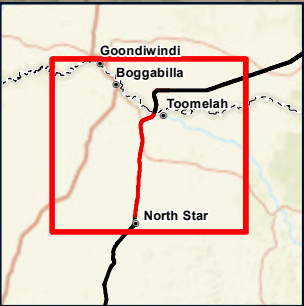
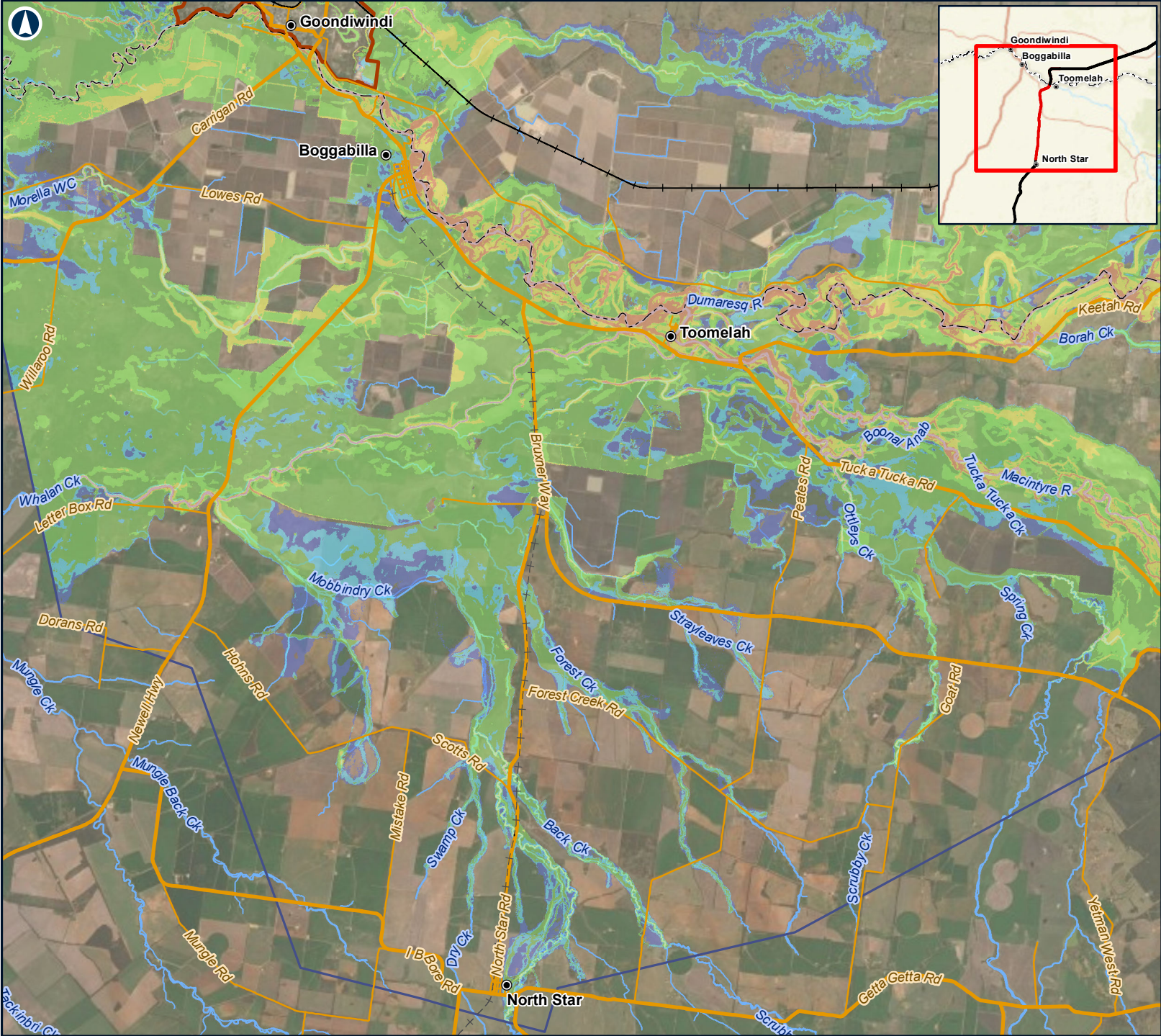
ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

Date: 12/03/2021

Paper: A4

Author: FFJV GIS

Scale: 1:125,000



The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

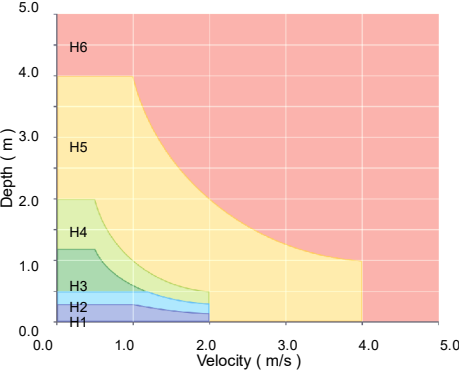
NORTH STAR TO NSW/QLD BORDER

Figure E4: Existing Case
BRVFP levees and validated 1976 flows
Hazard Categories

LEGEND

- Localities
- +— Existing rail (operational)
- - - Existing rail (non-operational)
- - - NSW/QLD border
- Watercourses
- Goondiwindi levee
- ▭ Sub-model extent

Hazard Categories



Source: Australian Disaster Resilience Handbook Guideline 7-3 (AIDR 2017)

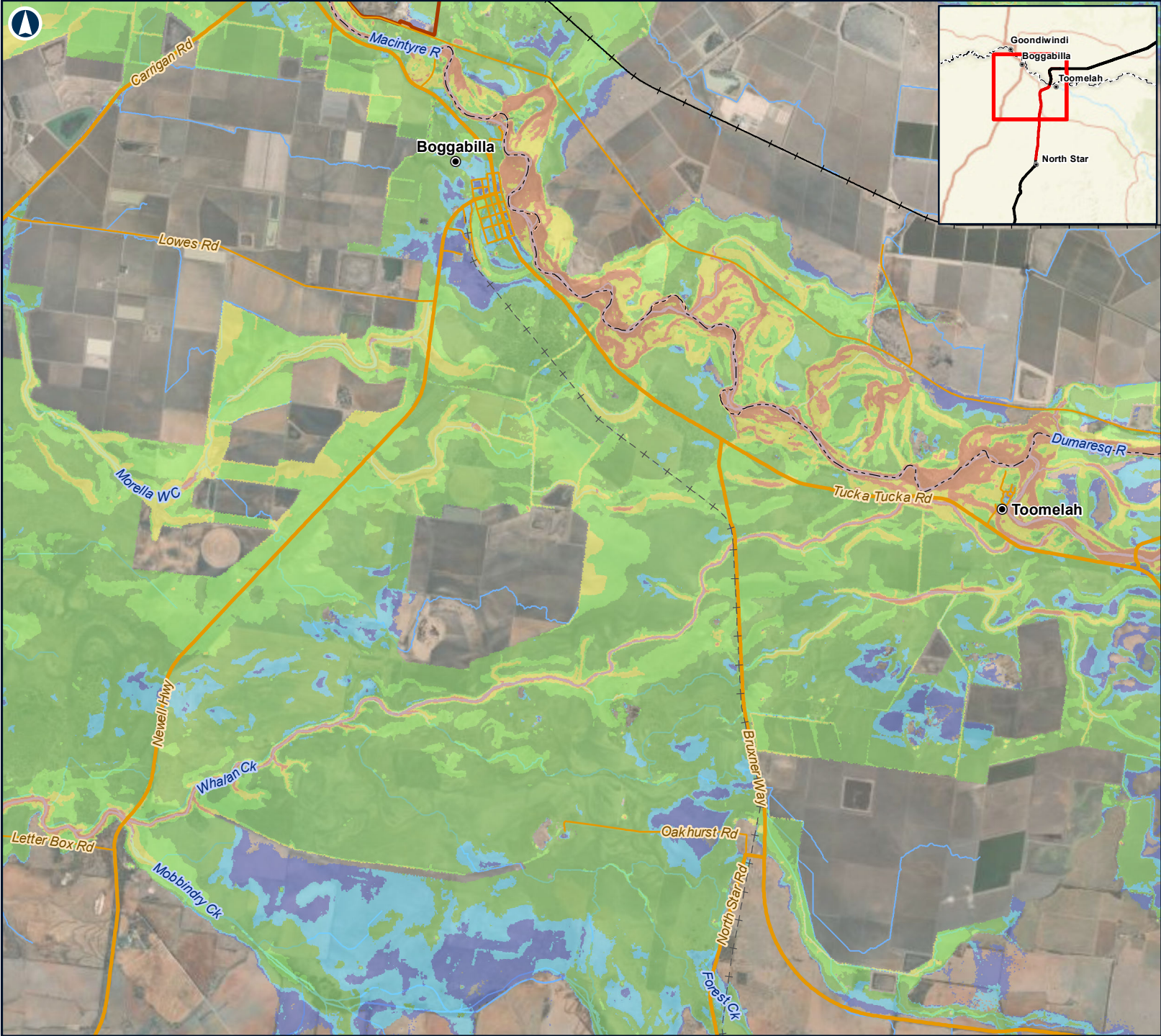
10km

Coordinate System: GDA 1994 MGA Zone 56

ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material. ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

Date: 12/03/2021
Author: FFJV GIS

Paper: A4
Scale: 1:240,000



The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

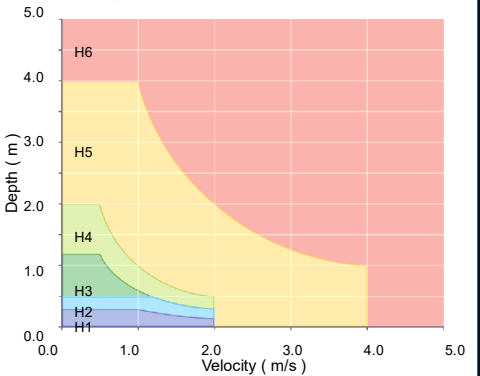
NORTH STAR TO NSW/QLD BORDER

Figure E4-A: Existing Case
BRVMP levees and validated 1976 flows
Hazard Categories

LEGEND

- Localities
- +— Existing rail (operational)
- - - Existing rail (non-operational)
- - - NSW/QLD border
- Watercourses
- Goondiwindi levee
- Sub-model extent

Hazard Categories



Source: Australian Disaster Resilience Handbook Guideline 7-3 (AIDR 2017)

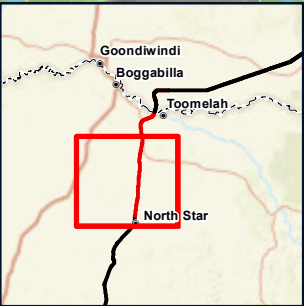
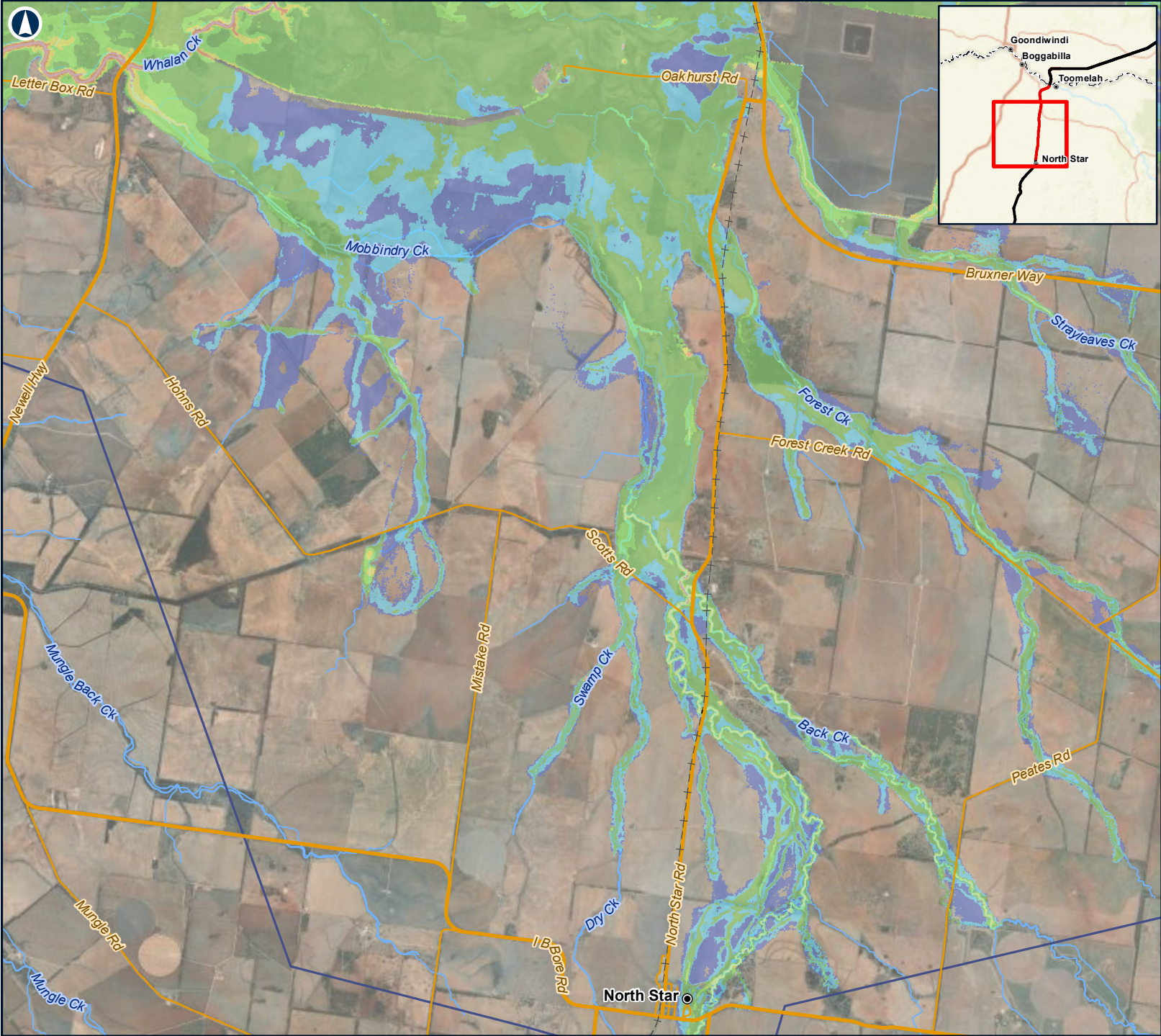
6km

Coordinate System: GDA 1994 MGA Zone 56

ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material. ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

Date: 12/03/2021
Author: FFJV GIS

Paper: A4
Scale: 1:125,000



The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

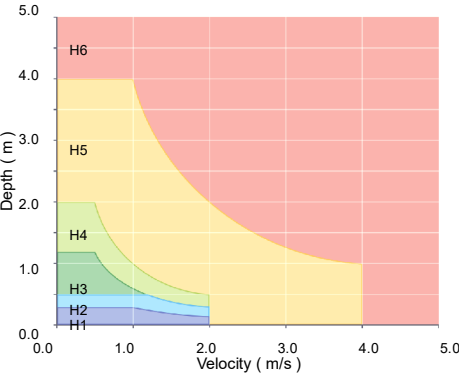
NORTH STAR TO NSW/QLD BORDER

Figure E4-B: Existing Case
BRVFP levees and validated 1976 flows
Hazard Categories

LEGEND

- Localities
- +— Existing rail (operational)
- - - Existing rail (non-operational)
- - - NSW/QLD border
- Watercourses
- ▭ Sub-model extent

Hazard Categories



Source: Australian Disaster Resilience Handbook Guideline 7-3 (AIDR 2017)

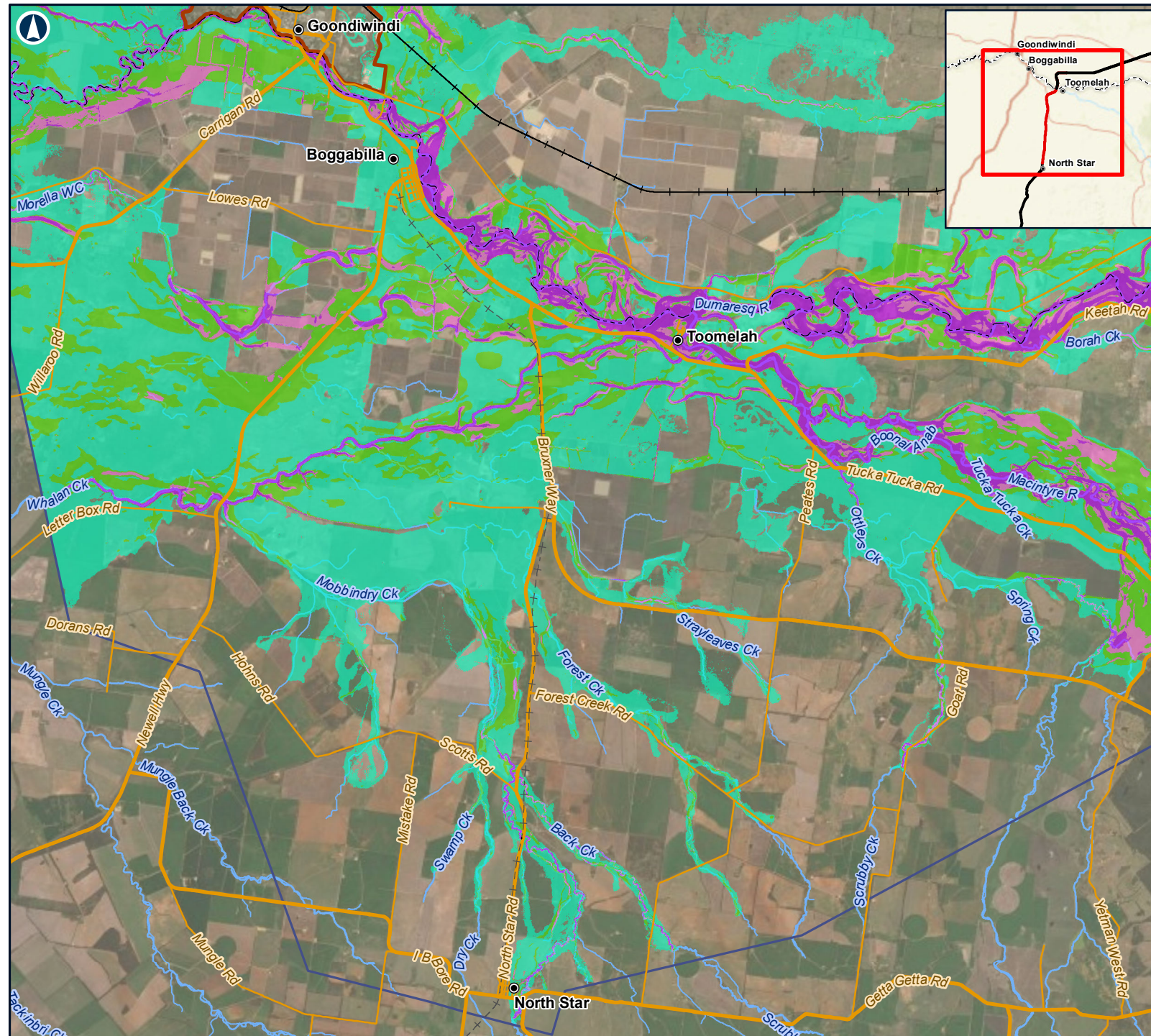
6km

Coordinate System: GDA 1994 MGA Zone 56

ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material. ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

Date: 12/03/2021
Author: FFJV GIS

Paper: A4
Scale: 1:125,000



The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

NORTH STAR TO NSW/QLD BORDER

Figure E5: Existing Case
BRVMP levees and validated 1976 flows
Velocity x Depth product

LEGEND

- Localities
- Existing rail (operational)
- Existing rail (non-operational)
- NSW/Qld border
- Watercourses
- Goondiwindi levee
- Sub-model extent

Velocity x Depth product (m²/s)

- 0 to 0.3
- 0.3 to 0.6
- 0.6 to 1
- 1 to 40

10km

Coordinate System: GDA 1994 MGA Zone 56

ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material.

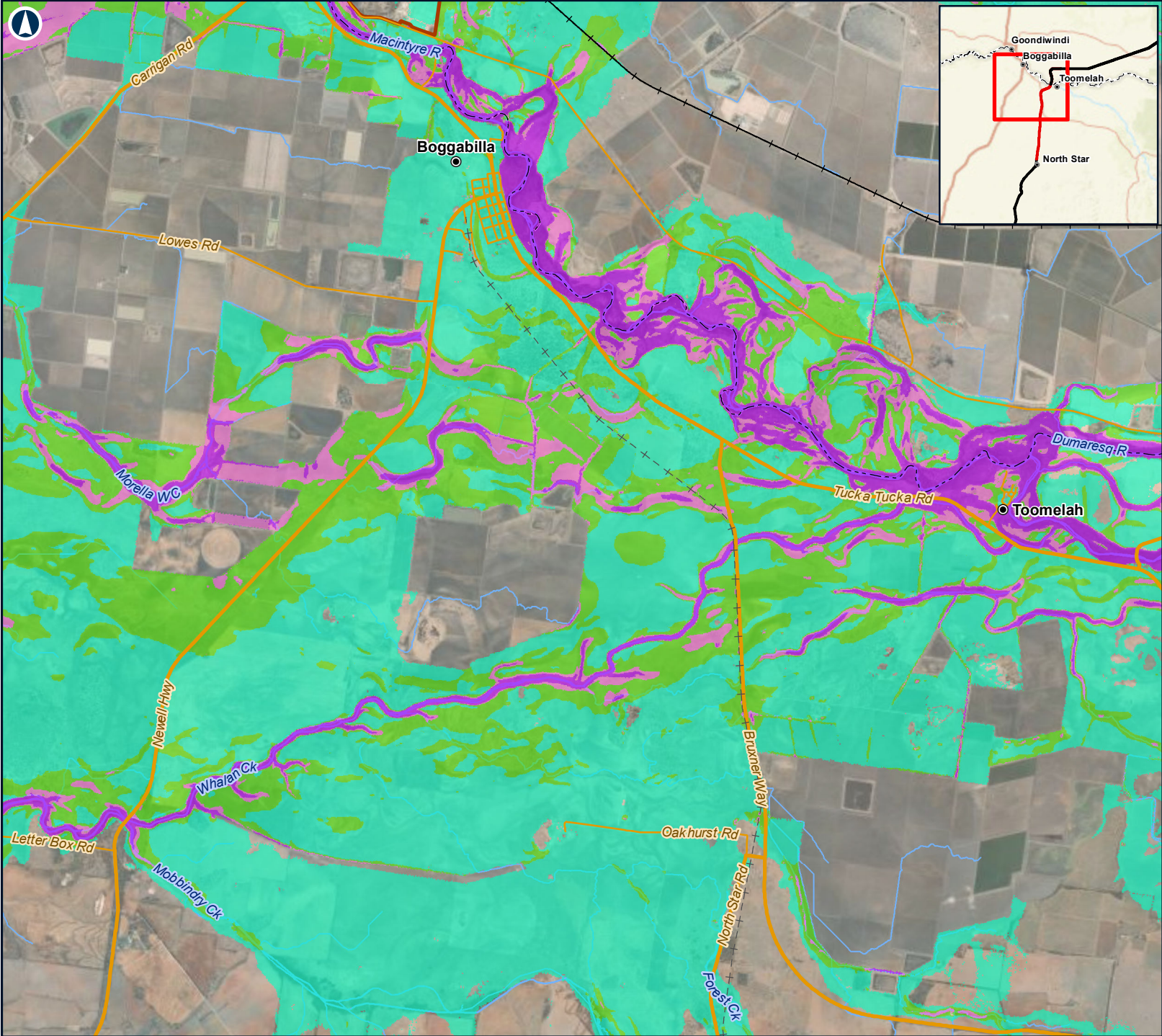
ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

Date: 12/03/2021

Paper: A4

Author: FFJV GIS

Scale: 1:240,000



The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

NORTH STAR TO NSW/QLD BORDER

Figure E5-A: Existing Case
BRVMP levees and validated 1976 flows
Velocity x Depth product

LEGEND

- Localities
- +— Existing rail (operational)
- - - Existing rail (non-operational)
- - - NSW/QLD border
- Watercourses
- Goondiwindi levee
- ▭ Sub-model extent

Velocity x Depth product (m²/s)

- 0 to 0.3
- 0.3 to 0.6
- 0.6 to 1
- 1 to 40

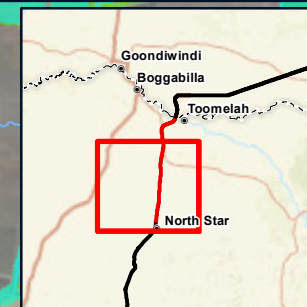
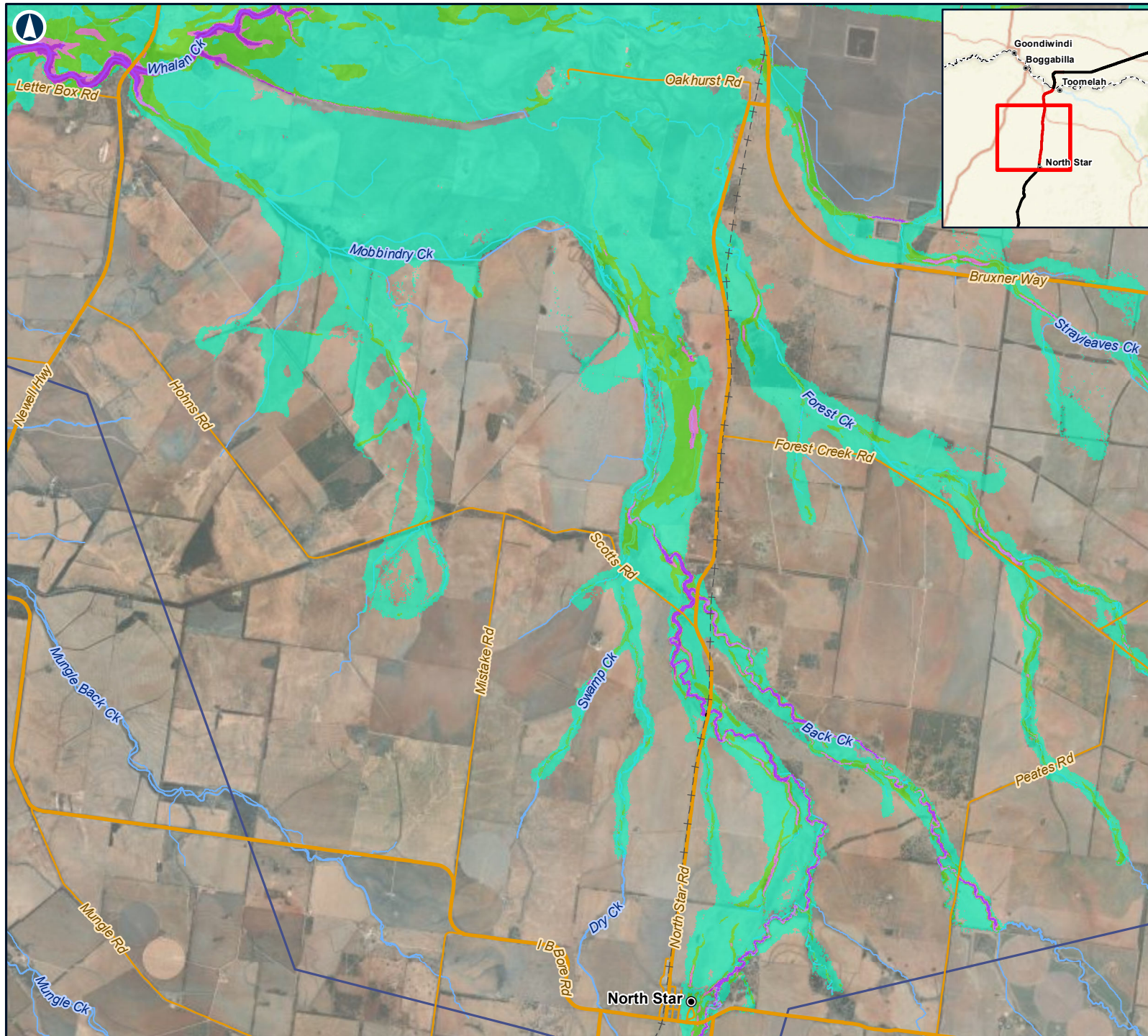
6km

Coordinate System: GDA 1994 MGA Zone 56

ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material. ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

Date: 12/03/2021
Author: FFJV GIS

Paper: A4
Scale: 1:125,000



The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

NORTH STAR TO NSW/QLD BORDER

Figure E5-B: Existing Case
 BRVMP levees and validated 1976 flows
 Velocity x Depth product

LEGEND

- Localities
- +— Existing rail (operational)
- - - Existing rail (non-operational)
- - - NSW/QLD border
- Watercourses
- ▭ Sub-model extent

Velocity x Depth product (m^2/s)

- 0 to 0.3
- 0.3 to 0.6
- 0.6 to 1
- 1 to 40

6km

Coordinate System: GDA 1994 MGA Zone 56

ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material.

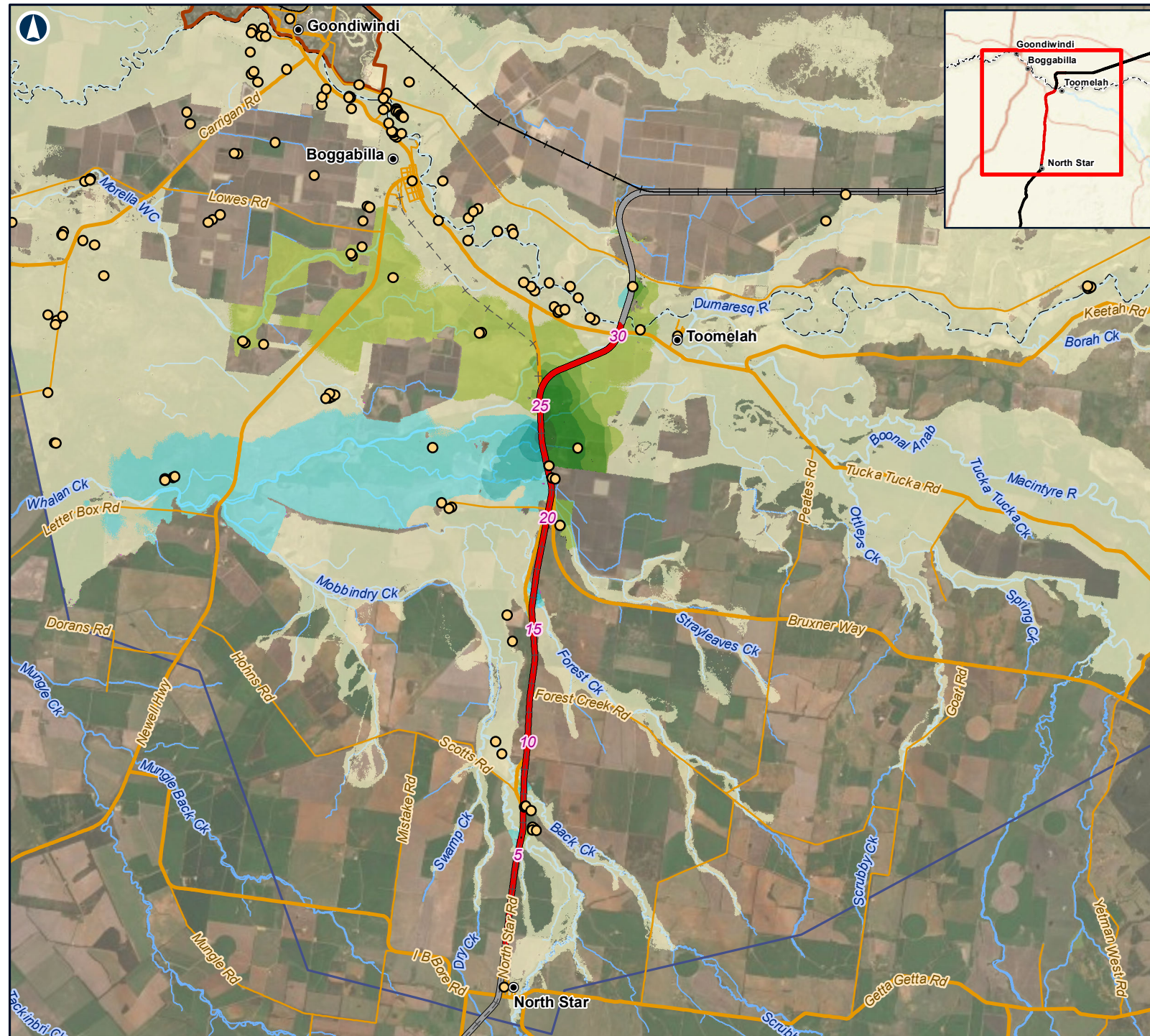
ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

Date: 12/03/2021

Paper: A4

Author: FFJV GIS

Scale: 1:125,000



The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

NORTH STAR TO NSW/QLD BORDER

Figure E6: Developed Case
BRVMP levees and validated 1976 flows
Change in peak water levels

LEGEND

- Flood sensitive receptor
 - Localities
 - 5 Chainage (km)
 - North Star to NSW/QLD border alignment
 - Adjoining alignments
 - Existing rail (operational)
 - - - Existing rail (non-operational)
 - - - NSW/QLD border
 - Watercourses
 - Goondiwindi levee
 - Sub-model extent
- Change in peak water levels (m)**
- < -0.5
 - 0.5 to -0.2
 - 0.2 to -0.1
 - 0.1 to -0.05
 - 0.05 to -0.01
 - 0.01 to 0.01
 - 0.01 to 0.05
 - 0.05 to 0.1
 - 0.1 to 0.2
 - 0.2 to 0.5
 - > 0.5
 - Was Wet Now Dry
 - Was Dry Now Wet

10km

Coordinate System: GDA 1994 MGA Zone 56

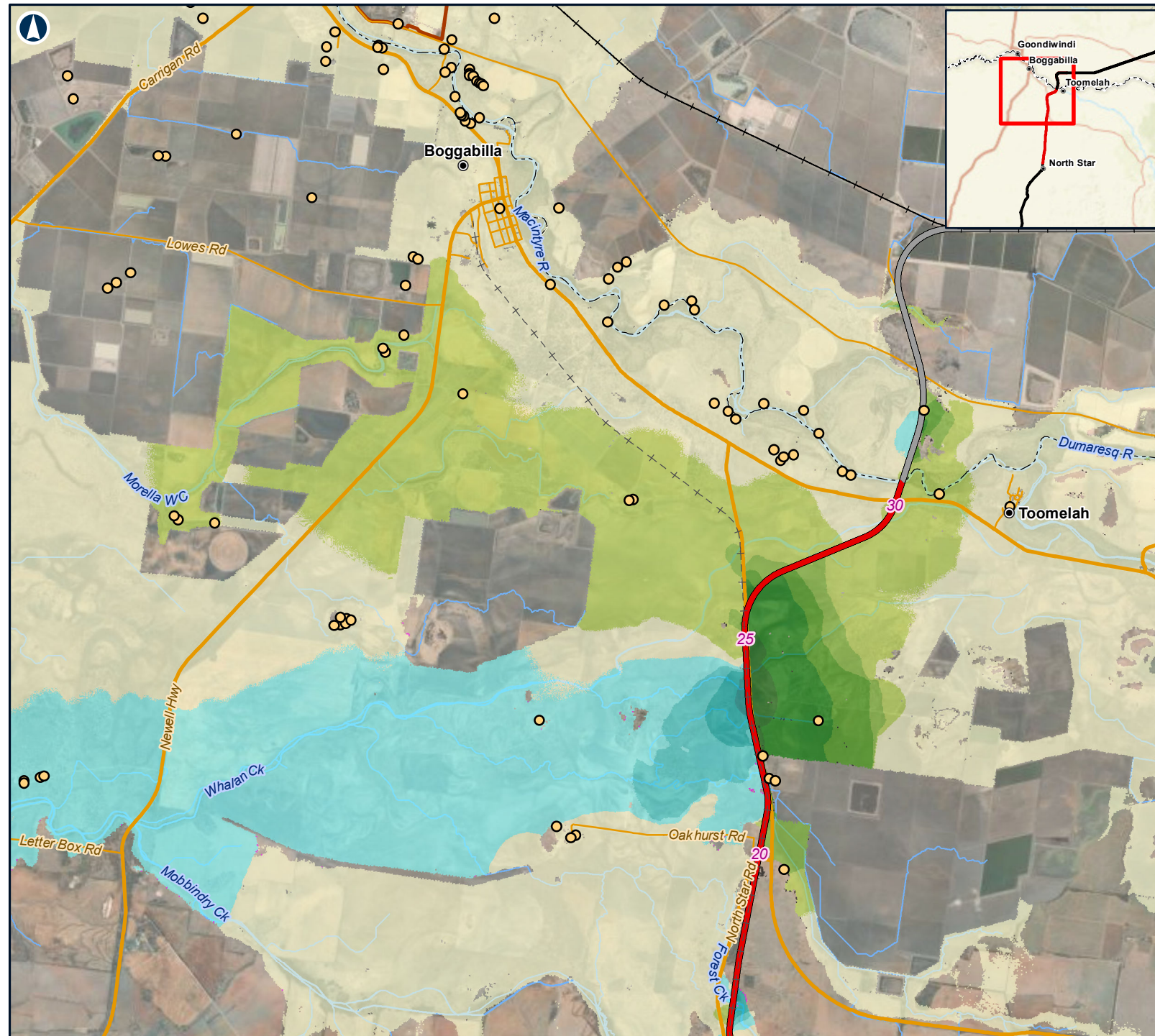
ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material. ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

Date: 12/03/2021

Paper: A4

Author: FFJV GIS

Scale: 1:240,000



The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

NORTH STAR TO NSW/QLD BORDER

Figure E6-A: Developed Case
BRVMP levees and validated 1976 flows
Change in peak water levels

LEGEND

- Flood sensitive receptor
 - Localities
 - 5 Chainage (km)
 - North Star to NSW/QLD border alignment
 - Adjoining alignments
 - + + Existing rail (operational)
 - - Existing rail (non-operational)
 - NSW/QLD border
 - Watercourses
 - Goondiwindi levee
 - Sub-model extent
- Change in peak water levels (m)**
- < -0.5
 - 0.5 to -0.2
 - 0.2 to -0.1
 - 0.1 to -0.05
 - 0.05 to -0.01
 - 0.01 to 0.01
 - 0.01 to 0.05
 - 0.05 to 0.1
 - 0.1 to 0.2
 - 0.2 to 0.5
 - > 0.5
 - Was Wet Now Dry
 - Was Dry Now Wet

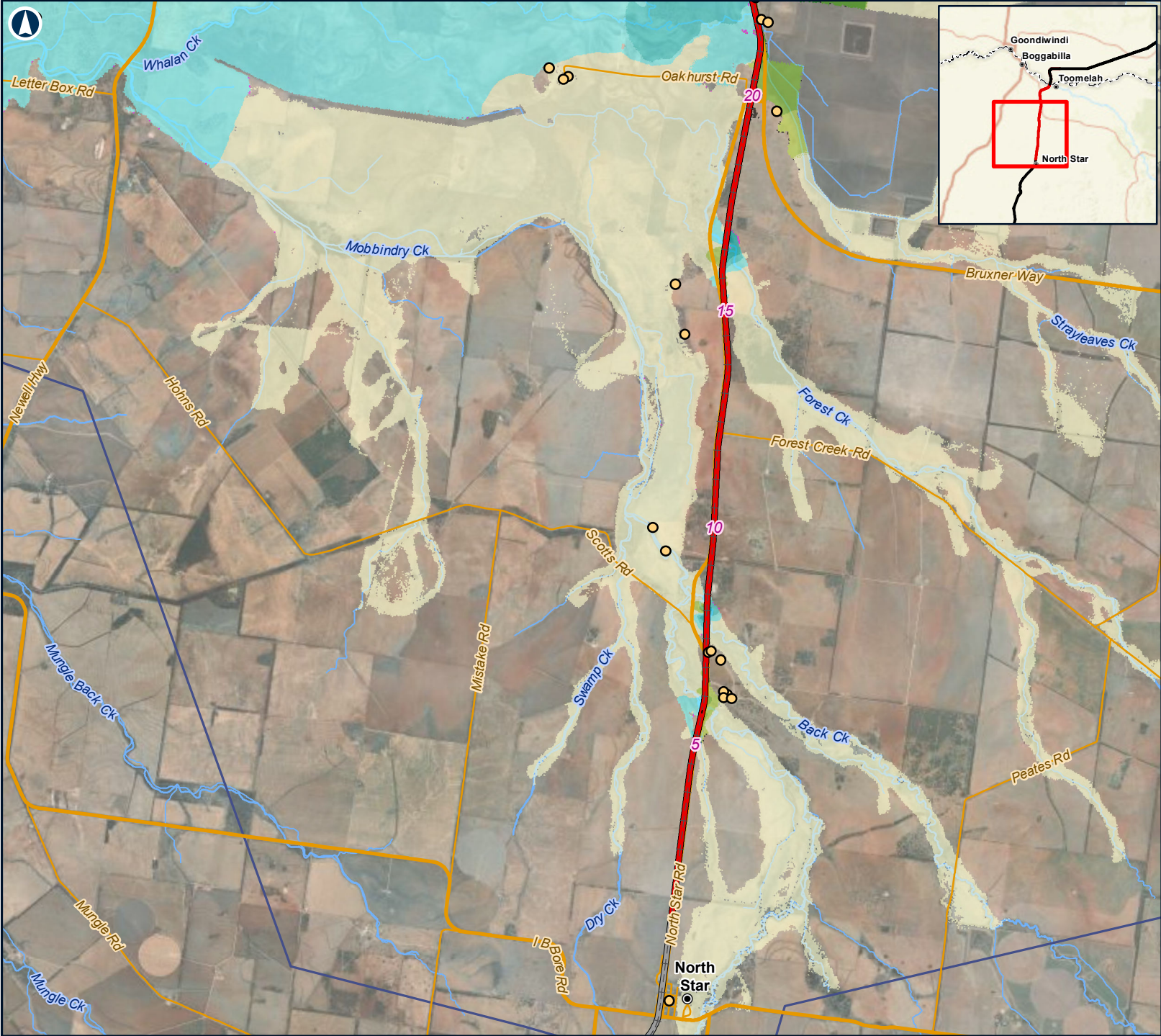
6km

Coordinate System: GDA 1994 MGA Zone 56

ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material. ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

Date: 12/03/2021
Author: FFJV GIS

Paper: A4
Scale: 1:125,000



ARTC

InlandRail

The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

NORTH STAR TO NSW/QLD BORDER

Figure E6-B: Developed Case BRVMP levees and validated 1976 flows

Change in peak water levels

6km

Coordinate System: GDA 1994 MGA Zone 56

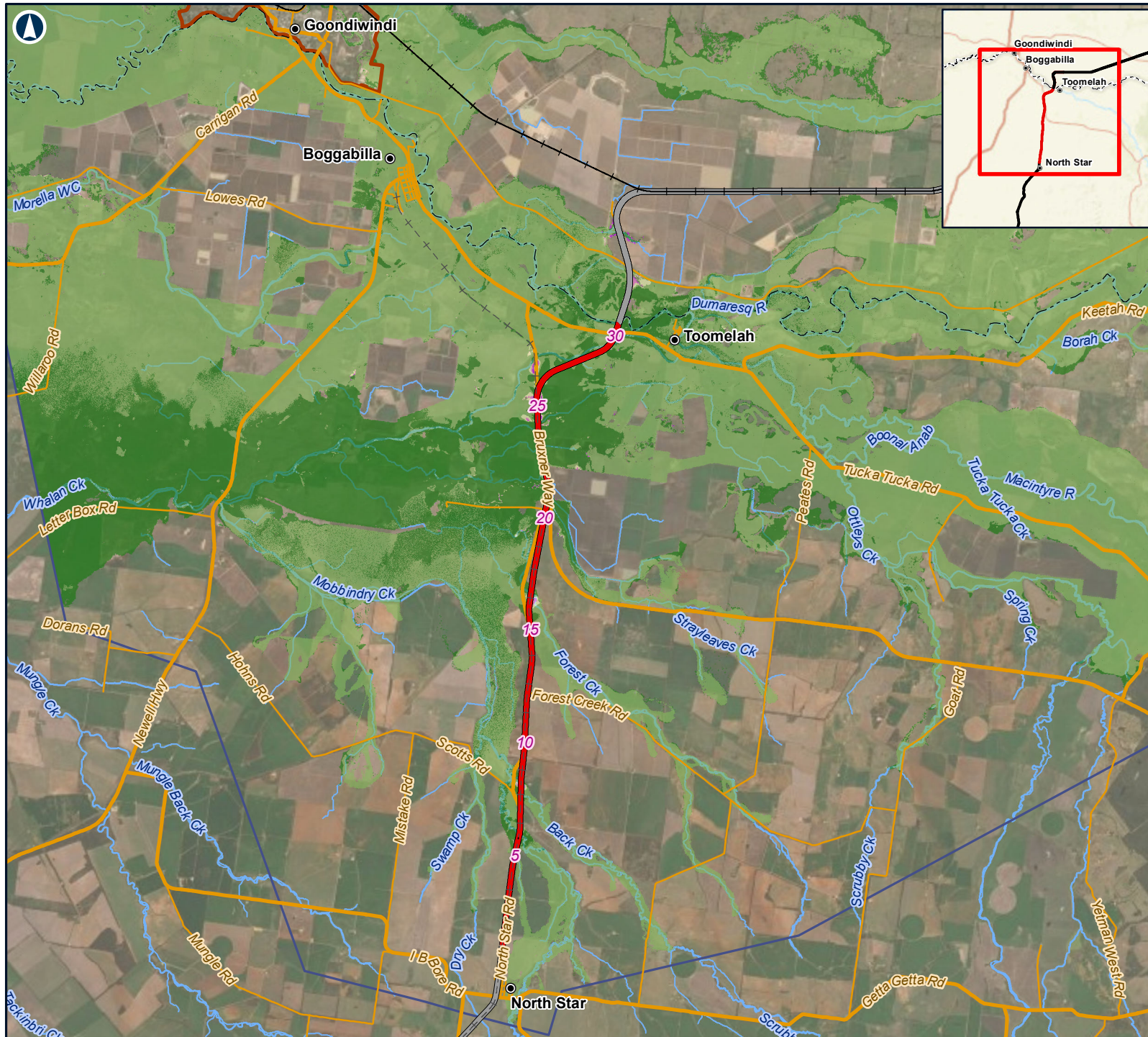
ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material. ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

Date: 12/03/2021

Author: FFJV GIS

Paper: A4

Scale: 1:125,000



The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

NORTH STAR TO NSW/QLD BORDER

Figure E7: Developed Case
 BRVMP levees and validated 1976 flows
 Percentage change in velocities

LEGEND

- Localities
 - 5 Chainage (km)
 - North Star to NSW/QLD border alignment
 - Adjoining alignments
 - Existing rail (operational)
 - - - Existing rail (non-operational)
 - - - NSW/QLD border
 - Watercourses
 - Goondiwindi levee
 - Sub-model extent
- Change in velocities (%)**
- < 0
 - 0 to 10
 - 10 to 20
 - 20 to 30
 - > 30

10km

Coordinate System: GDA 1994 MGA Zone 56

ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material.

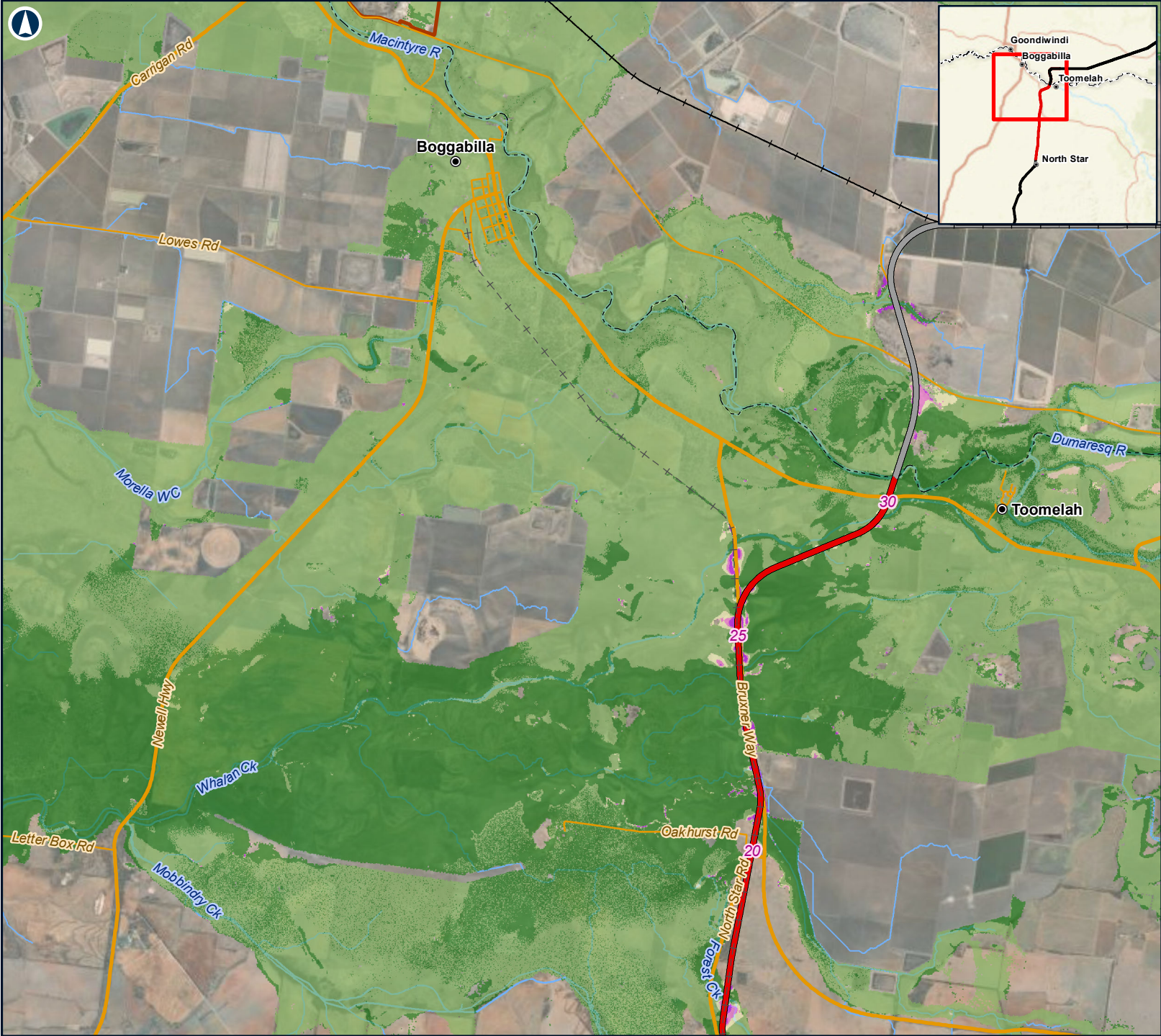
ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

Date: 12/03/2021

Paper: A4

Author: FFJV GIS

Scale: 1:240,000



ARTC

InlandRail

The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

NORTH STAR TO NSW/QLD BORDER

Figure E7-A: Developed Case
BRVMP levees and validated 1976 flows
Percentage change in velocities

LEGEND

● Localities

5 Chainage (km)

North Star to NSW/QLD border alignment

Adjoining alignments

Existing rail (operational)

Existing rail (non-operational)

NSW/QLD border

Watercourses

Goondiwindi levee

Sub-model extent

Change in velocities (%)

< 0

0 to 10

10 to 20

20 to 30

> 30

6km

Coordinate System: GDA 1994 MGA Zone 56

ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material.

ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

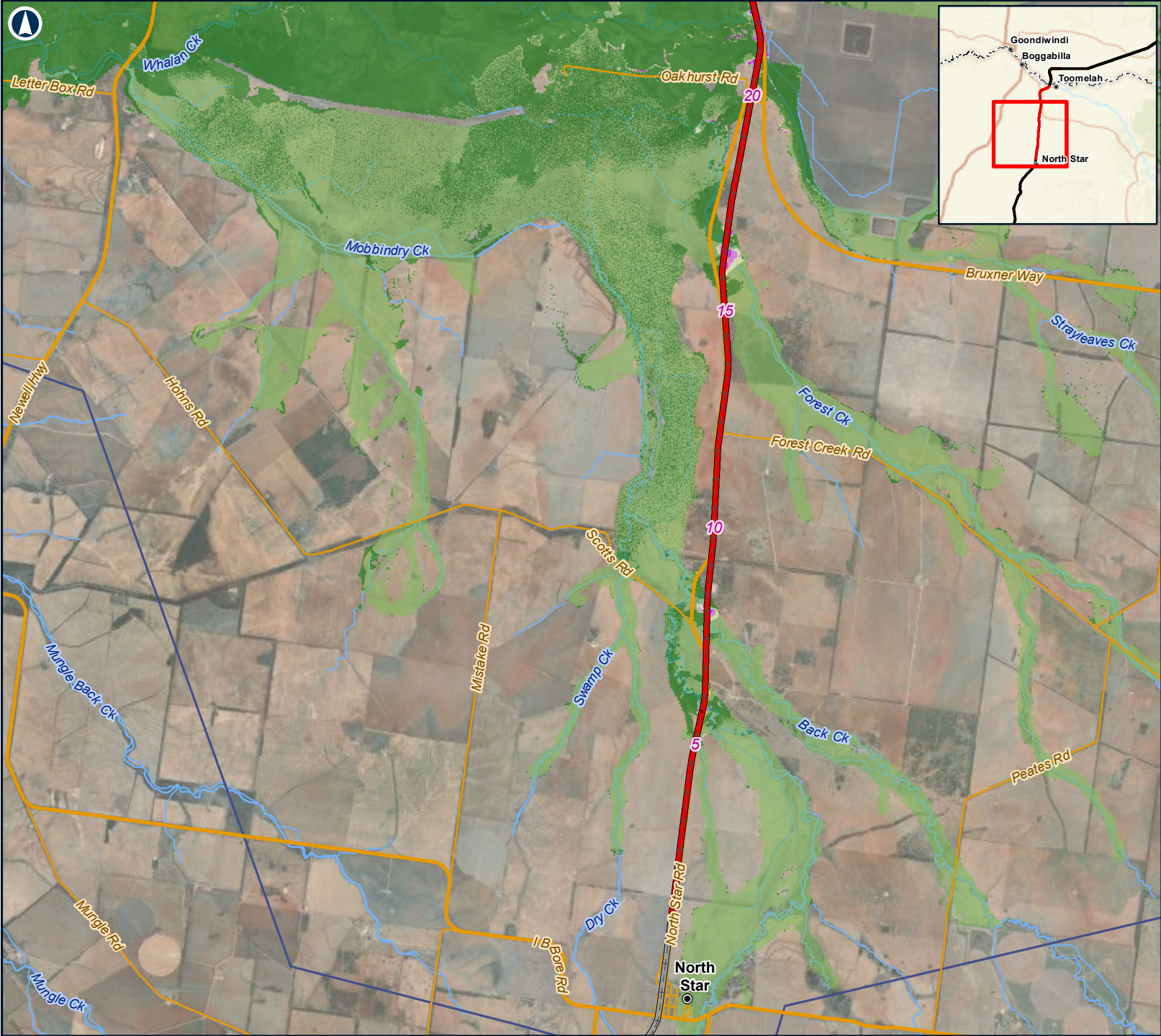
Date: 12/03/2021

Paper: A4

Author: FFJV GIS

Scale: 1:125,000

Map by: DTH Z:\GIS\GIS_270_NS2B\Tasks\270-IHY-202102151444_Hydrology_and_Flooding_PIR\270-IHY-202102151444_ARTC_FigX7_DV_PercentChangeVelocity_A4L_v1.mxd Date: 14/03/2021 16:12



The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

NORTH STAR TO NSW/QLD BORDER

Figure E7-B: Developed Case
BRVMP levees and validated 1976 flows
Percentage change in velocities

LEGEND

- Localities
 - 5 Chainage (km)
 - North Star to NSW/QLD border alignment
 - Adjoining alignments
 - Existing rail (operational)
 - - - Existing rail (non-operational)
 - - - NSW/QLD border
 - Watercourses
 - Sub-model extent
- Change in velocities (%)**
- < 0
 - 0 to 10
 - 10 to 20
 - 20 to 30
 - > 30

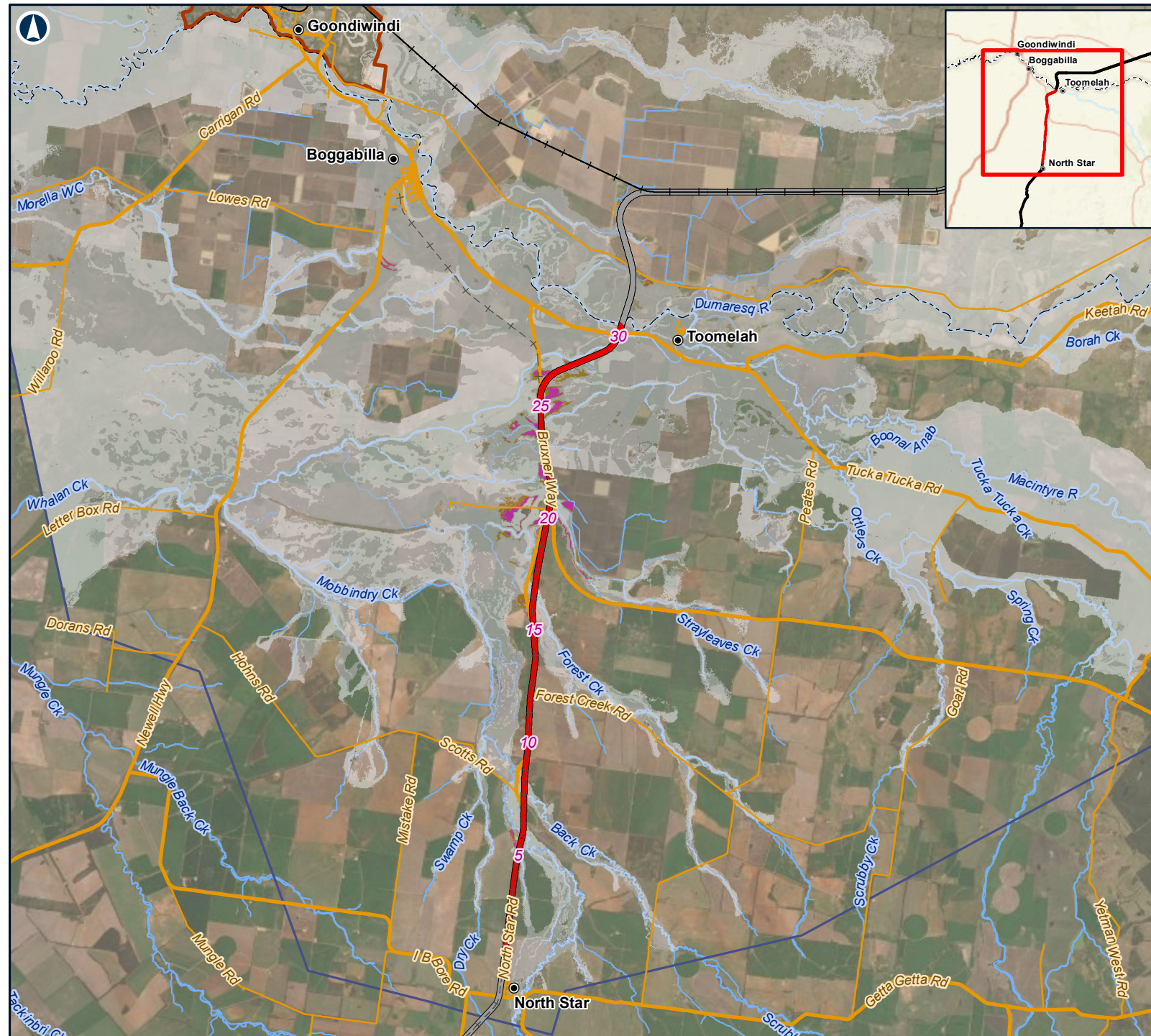
6km

Coordinate System: GDA 1994 MGA Zone 56

ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material. ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

Date: 12/03/2021
Author: FFJV GIS

Paper: A4
Scale: 1:125,000



The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

NORTH STAR TO NSW/QLD BORDER

Figure E8: Developed Case
 BRVMP levees and validated 1976 flows
 Percentage change in duration of inundation

LEGEND

- Localities
 - 5 Chainage (km)
 - North Star to NSW/QLD border alignment
 - Adjoining alignments
 - Existing rail (operational)
 - - - Existing rail (non-operational)
 - - - NSW/QLD border
 - Watercourses
 - Goondiwindi levee
 - Sub-model extent
- Change in duration of inundation (%)**
- < 0
 - 0 to 10
 - 10 to 20
 - > 20

10km

Coordinate System: GDA 1994 MGA Zone 56

ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material.

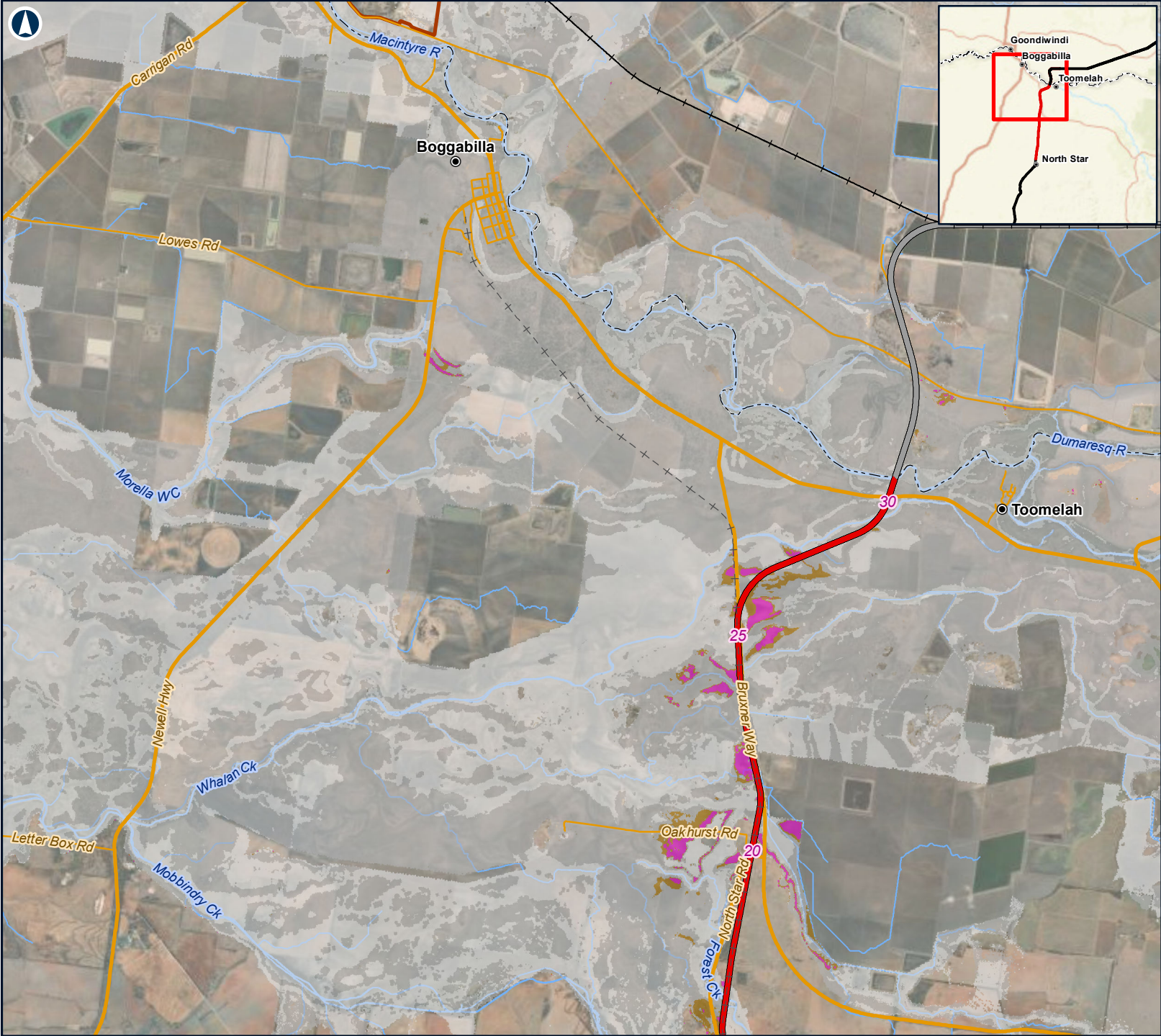
ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

Date: 12/03/2021

Paper: A4

Author: FFJV GIS

Scale: 1:240,000



The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

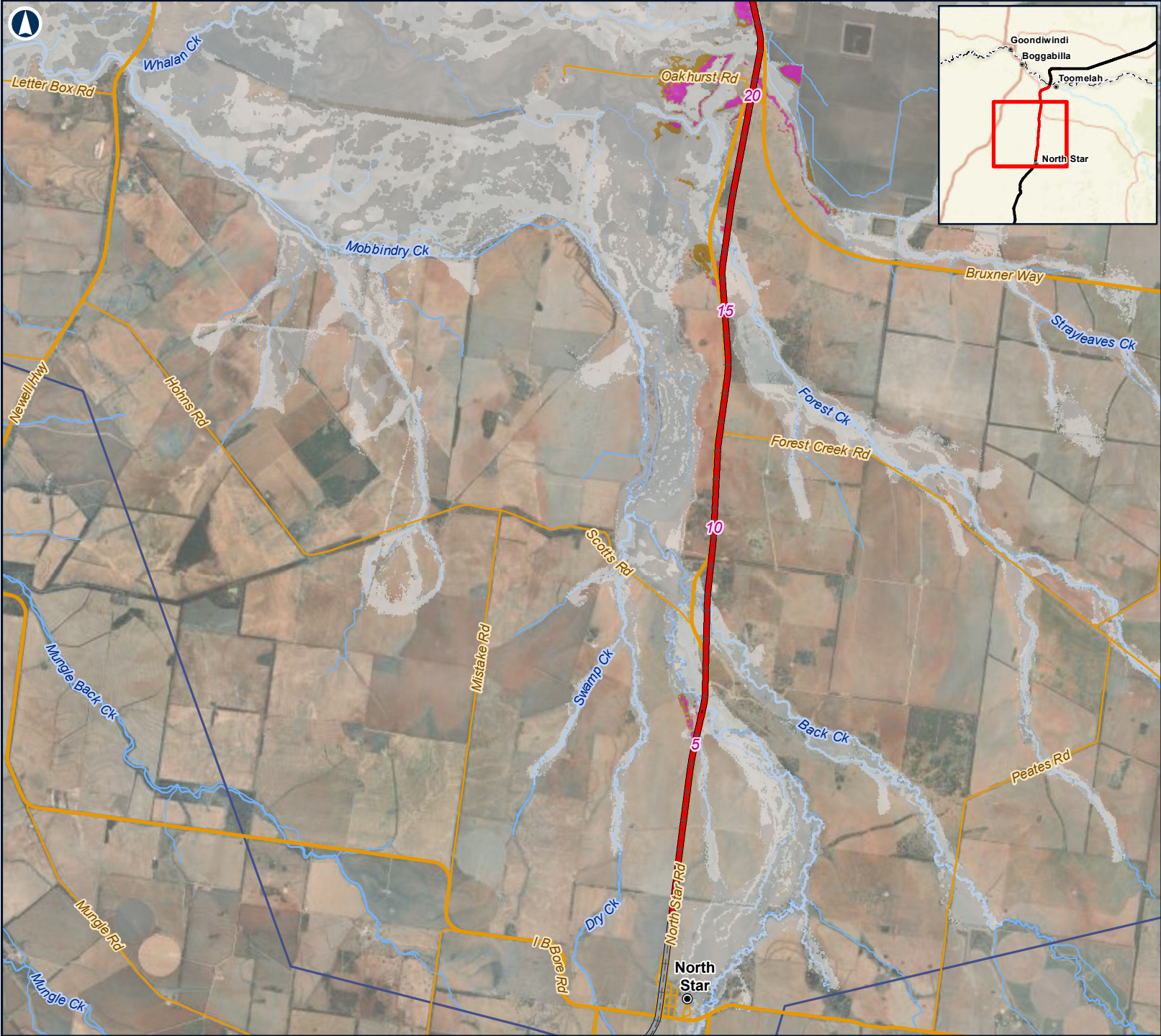
NORTH STAR TO NSW/QLD BORDER

Figure E8-A: Developed Case
BRVMP levees and validated 1976 flows
Percentage change in duration of inundation

LEGEND

- Localities
- 5 Chainage (km)
- North Star to NSW/QLD border alignment
- Adjoining alignments
- Existing rail (operational)
- - - Existing rail (non-operational)
- - - NSW/QLD border
- Watercourses
- Goondiwindi levee
- Sub-model extent
- Change in duration of inundation (%)**
- < 0
- 0 to 10
- 10 to 20
- > 20

6km
Coordinate System: GDA 1994 MGA Zone 56
ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material.
ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.
Date: 12/03/2021
Author: FFJV GIS
Paper: A4
Scale: 1:125,000



The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

NORTH STAR TO NSW/QLD BORDER

Figure E8-B: Developed Case
BRVMP levees and validated 1976 flows
Percentage change in duration of inundation

LEGEND

- Localities
- 5 Chainage (km)
- North Star to NSW/QLD border alignment
- Adjoining alignments
- Existing rail (operational)
- - - Existing rail (non-operational)
- - - NSW/QLD border
- Watercourses
- Sub-model extent

Change in duration of inundation (%)

- < 0
- 0 to 10
- 10 to 20
- > 20

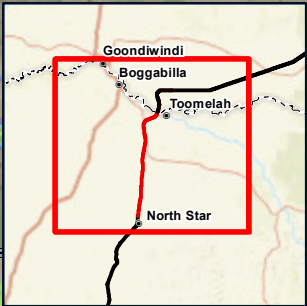
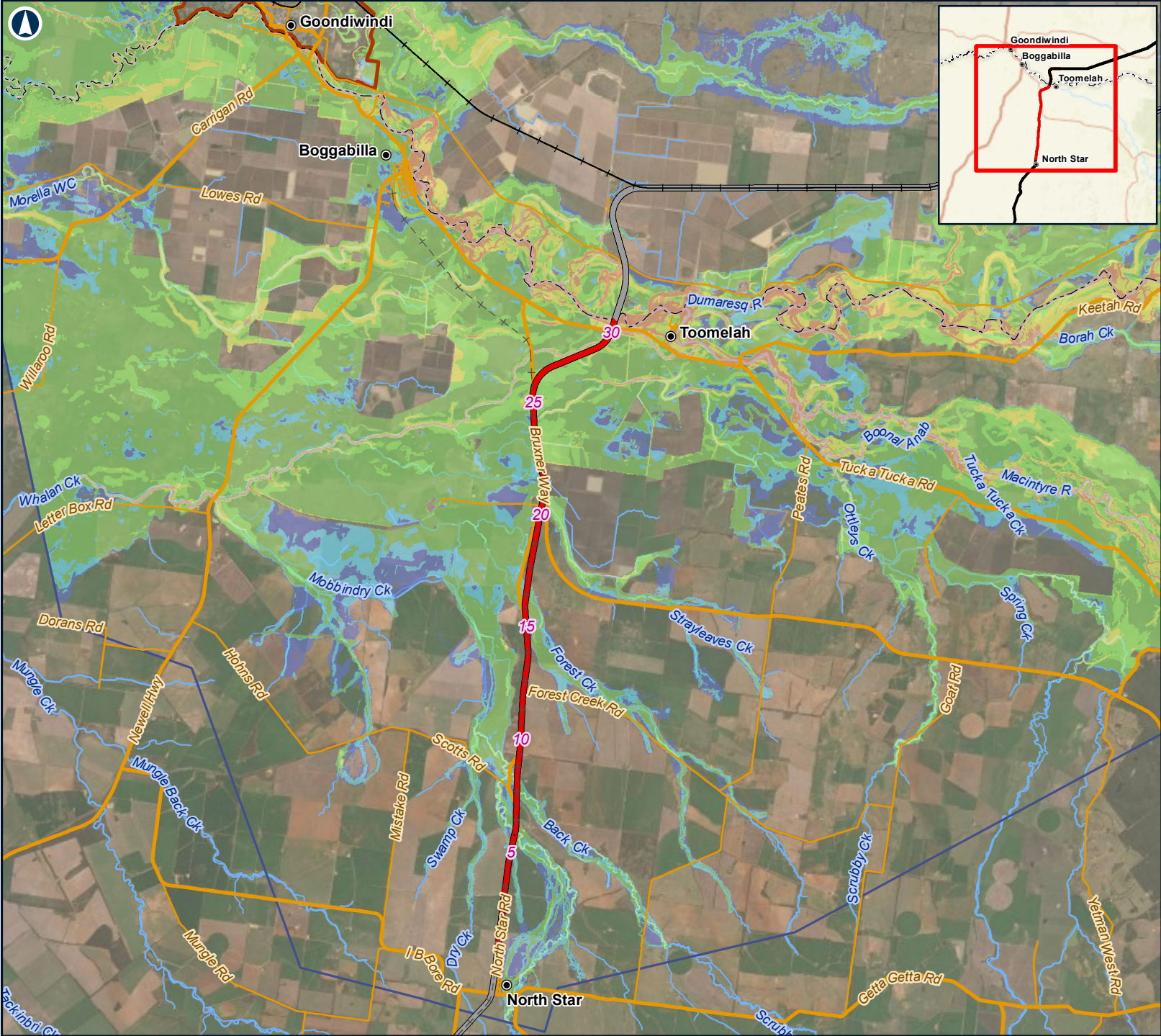
6km

Coordinate System: GDA 1994 MGA Zone 56

ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material. ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

Date: 12/03/2021
Author: FFJV GIS

Paper: A4
Scale: 1:125,000



The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

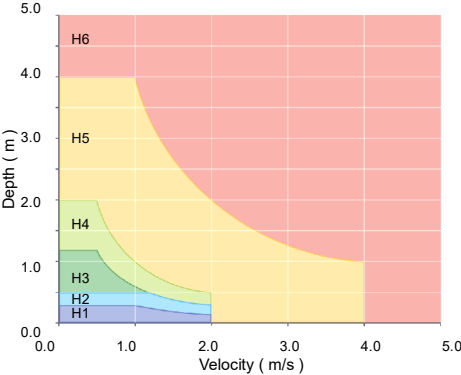
NORTH STAR TO NSW/QLD BORDER

Figure E9: Developed Case
BRVMP levees and validated 1976 flows
Hazard categories

LEGEND

- Localities
- 5 Chainage (km)
- North Star to NSW/QLD border alignment
- Adjoining alignments
- Existing rail (operational)
- Existing rail (non-operational)
- NSW/QLD border
- Watercourses
- Goondiwindi levee
- Sub-model extent

Hazard Categories



Source: Australian Disaster Resilience Handbook Guideline 7-3 (AIDR 2017)

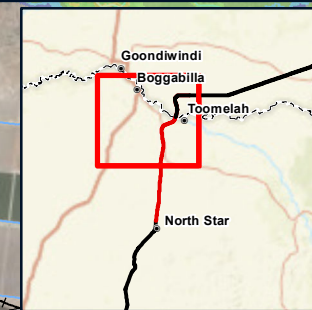
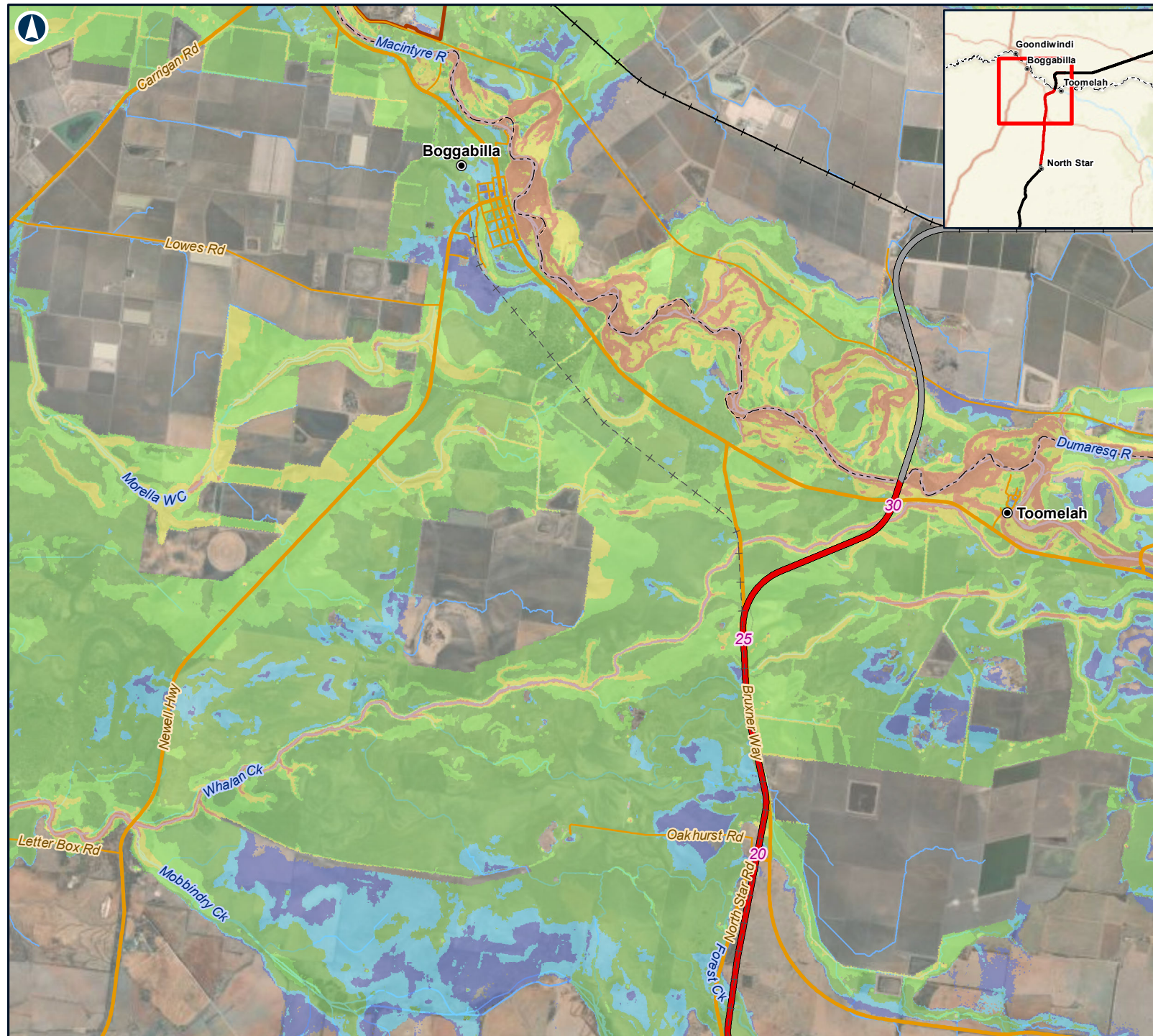
10km

Coordinate System: GDA 1994 MGA Zone 56

ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material. ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

Date: 12/03/2021
Author: FFJV GIS

Paper: A4
Scale: 1:240,000



The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

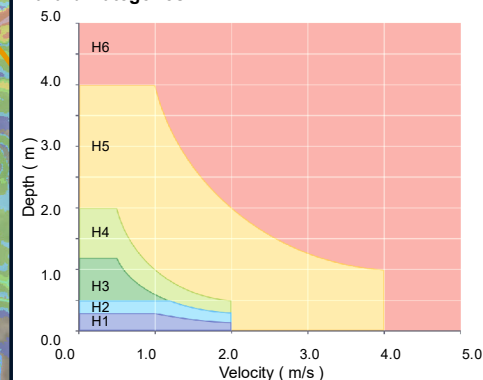
NORTH STAR TO NSW/QLD BORDER

Figure E9-A: Developed Case
 BRVMP levees and validated 1976 flows
 Hazard categories

LEGEND

- Localities
- 5 Chainage (km)
- North Star to NSW/QLD border alignment
- Adjoining alignments
- Existing rail (operational)
- Existing rail (non-operational)
- NSW/QLD border
- Watercourses
- Goondiwindi levee
- Sub-model extent

Hazard Categories



Source: Australian Disaster Resilience Handbook Guideline 7-3 (AIDR 2017)

6km

Coordinate System: GDA 1994 MGA Zone 56

ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material.

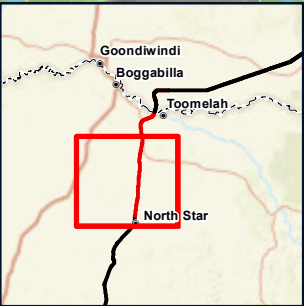
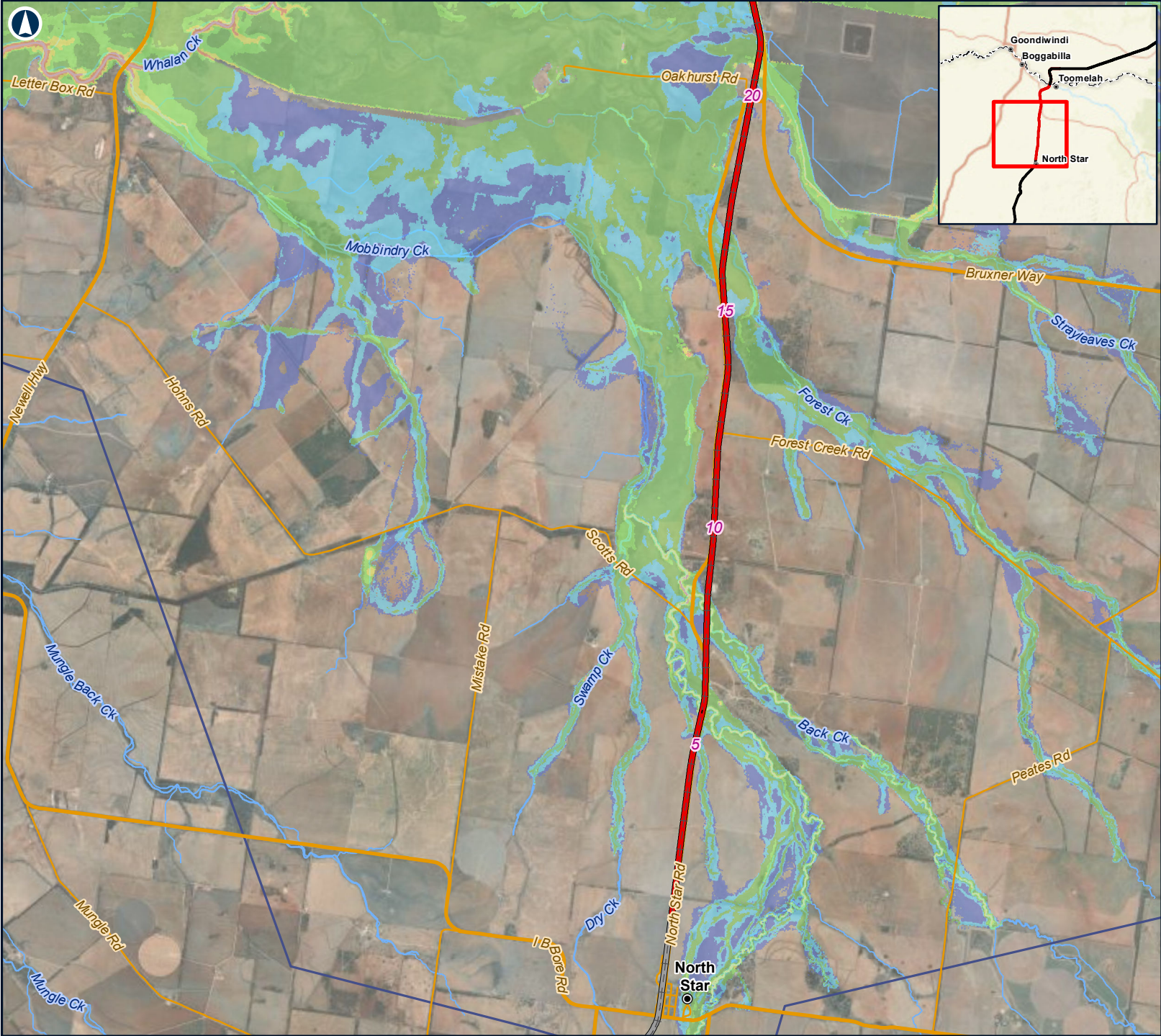
ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

Date: 12/03/2021

Paper: A4

Author: FFJV GIS

Scale: 1:125,000



The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

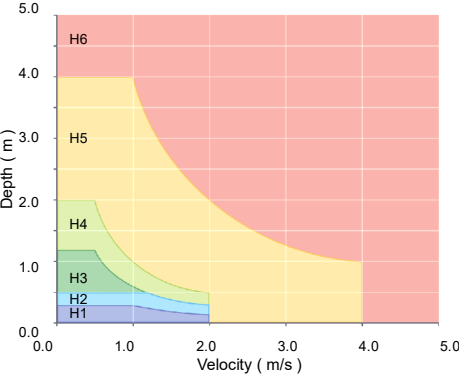
NORTH STAR TO NSW/QLD BORDER

Figure E9-B: Developed Case
BRVMP levees and validated 1976 flows
Hazard categories

LEGEND

- Localities
- 5 Chainage (km)
- North Star to NSW/QLD border alignment
- Adjoining alignments
- Existing rail (operational)
- Existing rail (non-operational)
- NSW/QLD border
- Watercourses
- Sub-model extent

Hazard Categories



Source: Australian Disaster Resilience Handbook Guideline 7-3 (AIDR 2017)

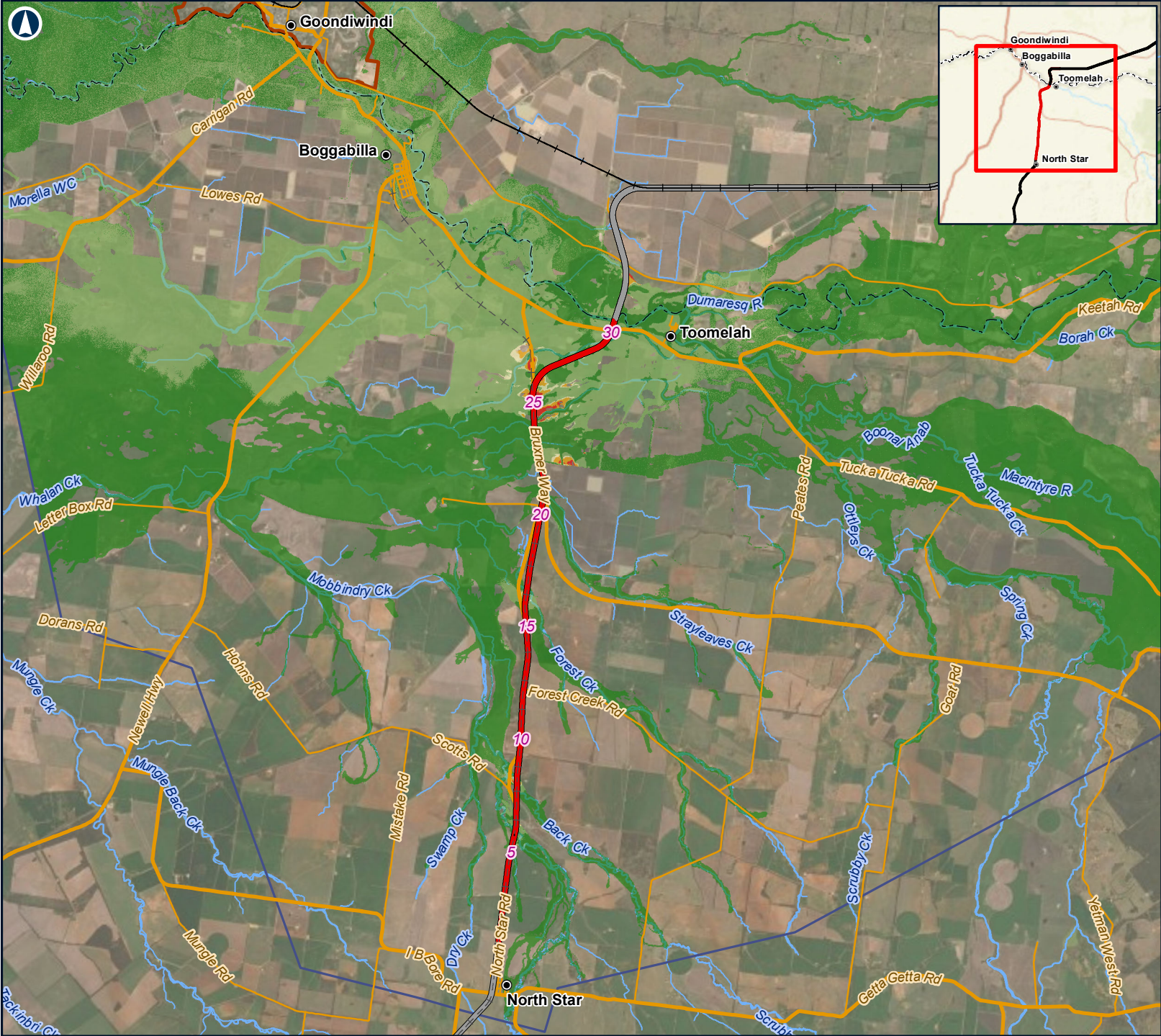
6km

Coordinate System: GDA 1994 MGA Zone 56

ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material. ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

Date: 12/03/2021
Author: FFJV GIS

Paper: A4
Scale: 1:125,000



The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

NORTH STAR TO NSW/QLD BORDER

Figure E10: Developed Case
BRVMP levees and validated 1976 flows
Percentage change in velocity x depth product

LEGEND

- Localities
- 5 Chainage (km)
- North Star to NSW/QLD border alignment
- Adjoining alignments
- Existing rail (operational)
- - - Existing rail (non-operational)
- - - NSW/QLD border
- Watercourses
- Goondiwindi levee
- Sub-model extent

Change in velocity x depth product (%)

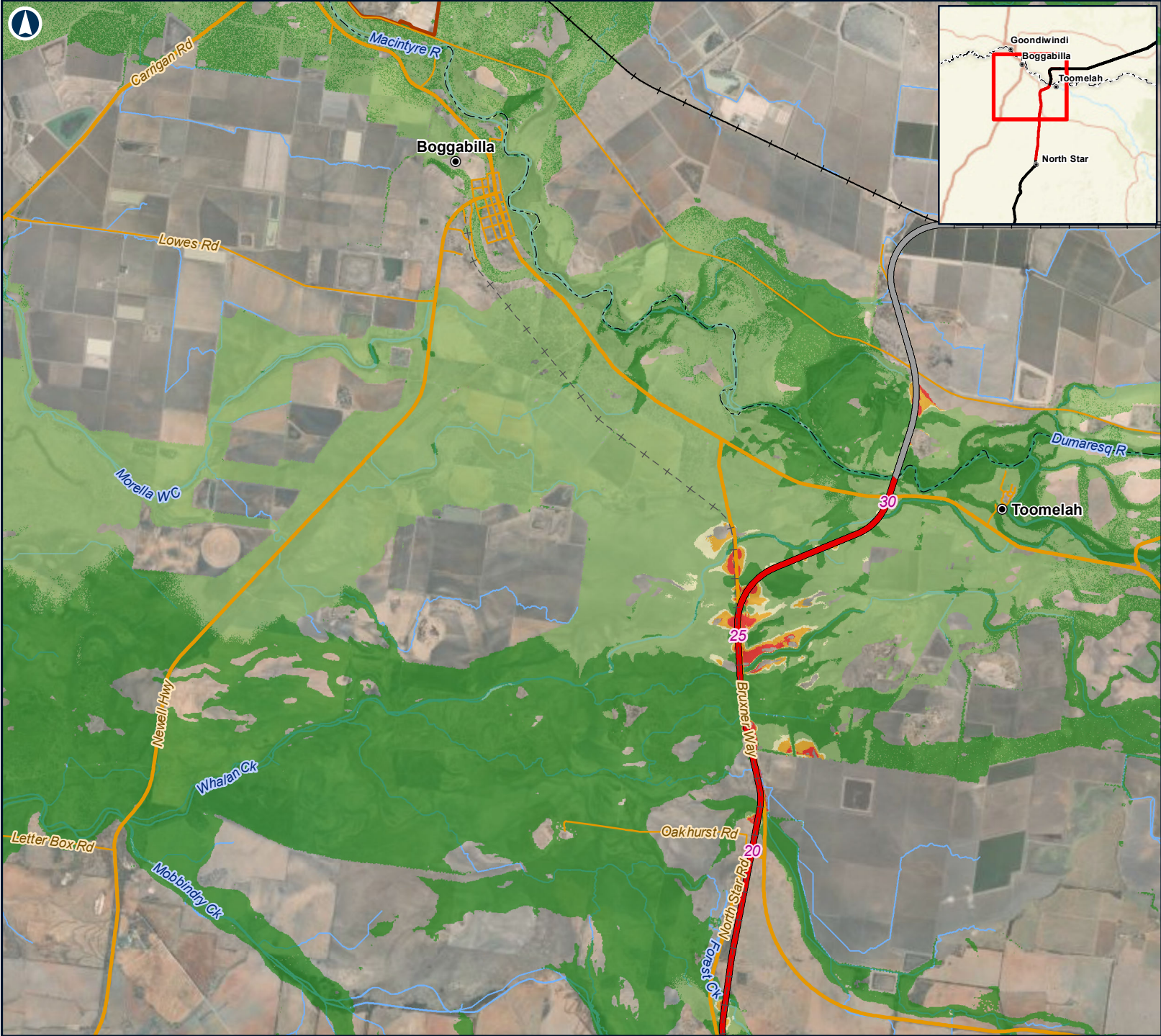
- < 0
- 0 to 10
- 10 to 20
- 20 to 30
- > 30

10km

Coordinate System: GDA 1994 MGA Zone 56

ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material. ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

Date: 12/03/2021 Paper: A4
Author: FFJV GIS Scale: 1:240,000



The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

NORTH STAR TO NSW/QLD BORDER

Figure E10-A: Developed Case
BRVFMP levees and validated 1976 flows
Percentage change in velocity x depth product

LEGEND

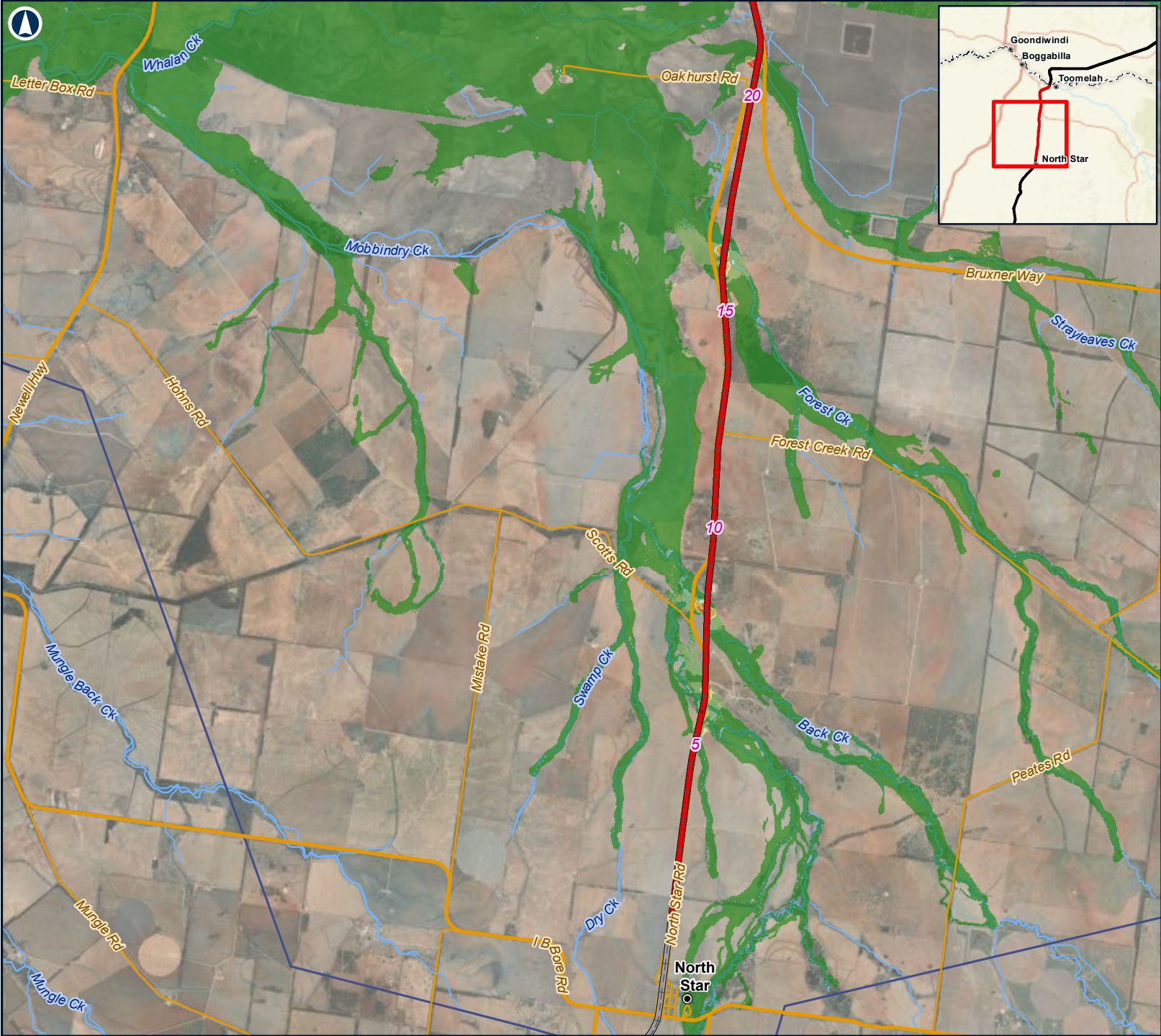
- Localities
- Chainage (km)
- North Star to NSW/QLD border alignment
- Adjoining alignments
- Existing rail (operational)
- Existing rail (non-operational)
- NSW/QLD border
- Watercourses
- Goondiwindi levee
- Sub-model extent
- Change in velocity x depth product (%)
 - < 0
 - 0 to 10
 - 10 to 20
 - 20 to 30
 - > 30

6km

Coordinate System: GDA 1994 MGA Zone 56

ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material. ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

Date: 12/03/2021
Author: FFJV GIS
Paper: A4
Scale: 1:125,000



ARTC
InlandRail

The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation, in partnership with the private sector.

NORTH STAR TO NSW/QLD BORDER
Figure E10-B: Developed Case
BRVFMP levees and validated 1976 flows
Percentage change in velocity x depth product

LEGEND

- Localities
- Chainage (km)
- North Star to NSW/QLD border alignment
- Adjoining alignments
- Existing rail (operational)
- Existing rail (non-operational)
- NSW/QLD border
- Watercourses
- Sub-model extent

Change in velocity x depth product (%)

- < 0
- 0 to 10
- 10 to 20
- 20 to 30
- > 30

6km

Coordinate System: GDA 1994 MGA Zone 56

ARTC makes no representation or warranty and assumes no duty of care or other responsibility to any party as to the completeness, accuracy or suitability of the information contained in this GIS map. The GIS map has been prepared from material provided to ARTC by an external source and ARTC has not taken any steps to verify the completeness, accuracy or suitability of that material. ARTC will not be responsible for any loss or damage suffered as a result of any person whatsoever placing reliance upon the information contained within this GIS map.

Date: 12/03/2021
Author: FFJV GIS

Paper: A4
Scale: 1:125,000