

TECHNICAL PAPER

04

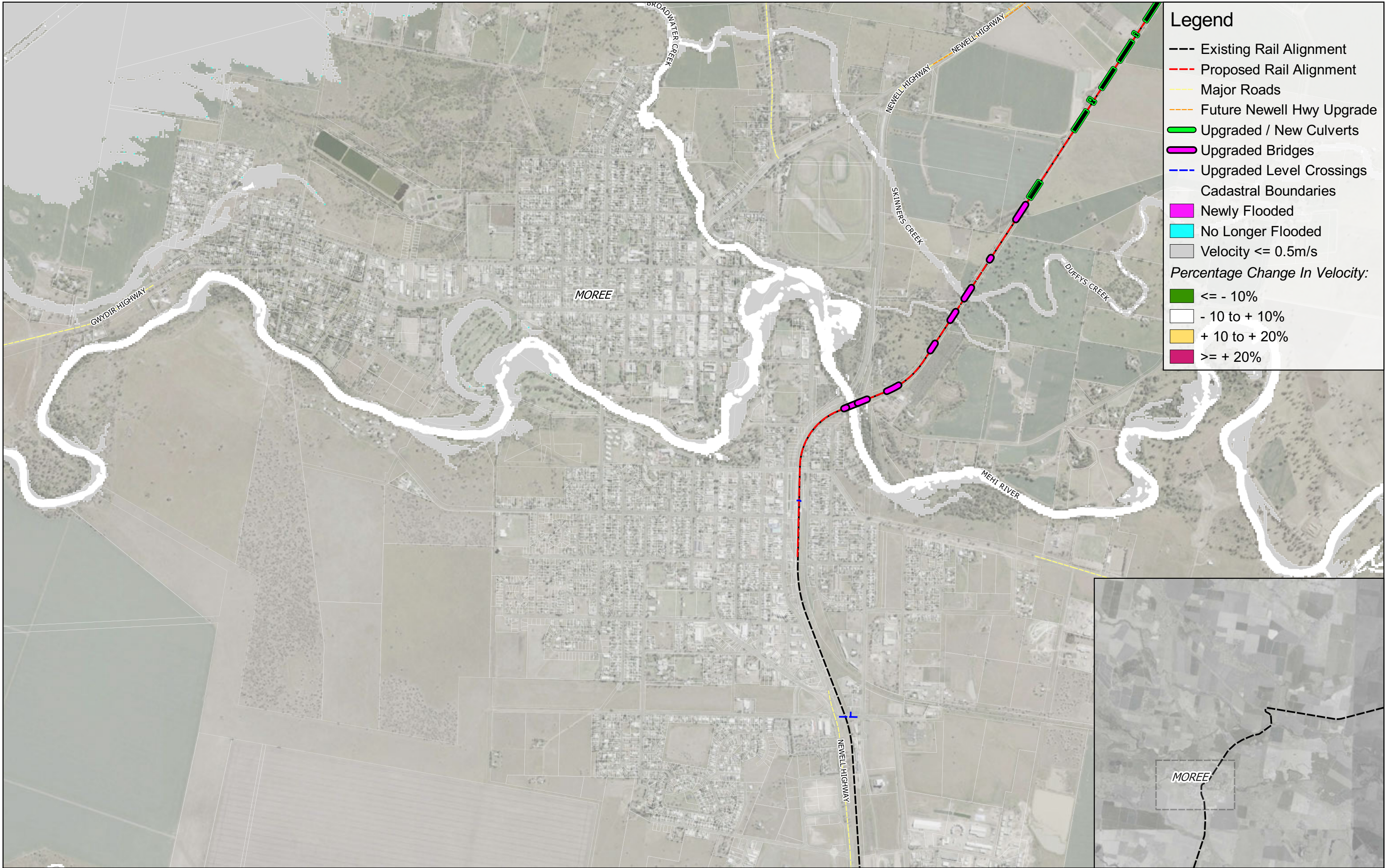
Hydrology and flooding impact assessment

Appendix C Design case cumulative flood impact maps

Appendix C2 Velocity change maps

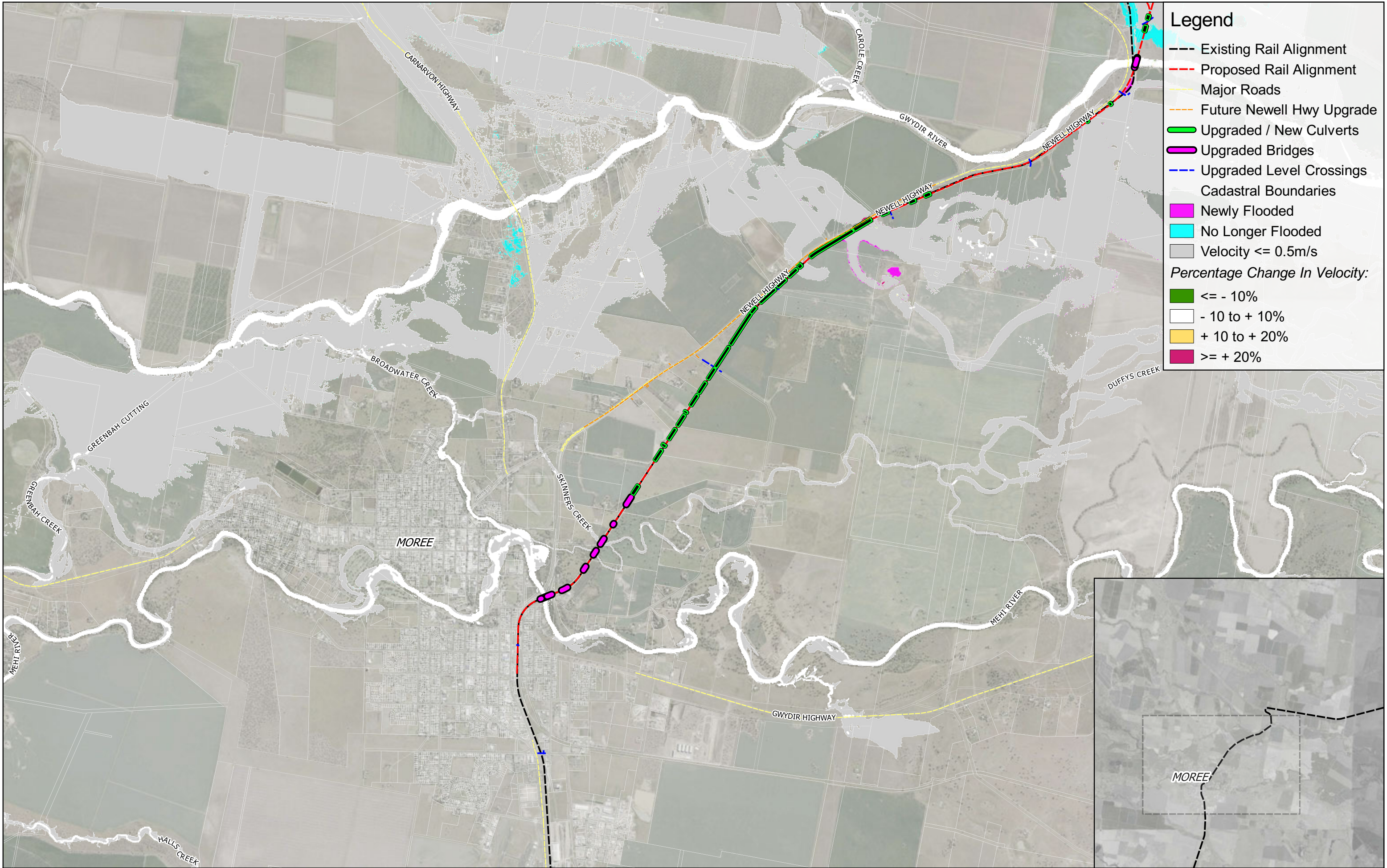
NARRABRI TO NORTH STAR—PHASE 2 ENVIRONMENTAL IMPACT STATEMENT





Legend

- Existing Rail Alignment
- Proposed Rail Alignment
- Major Roads
- Future Newell Hwy Upgrade
- Upgraded / New Culverts
- Upgraded Bridges
- Upgraded Level Crossings
- Cadastral Boundaries
- Newly Flooded
- No Longer Flooded
- Velocity <= 0.5m/s
- Percentage Change In Velocity:
 - <= - 10%
 - 10 to + 10%
 - + 10 to + 20%
 - >= + 20%



Legend

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Proposed Rail Alignment

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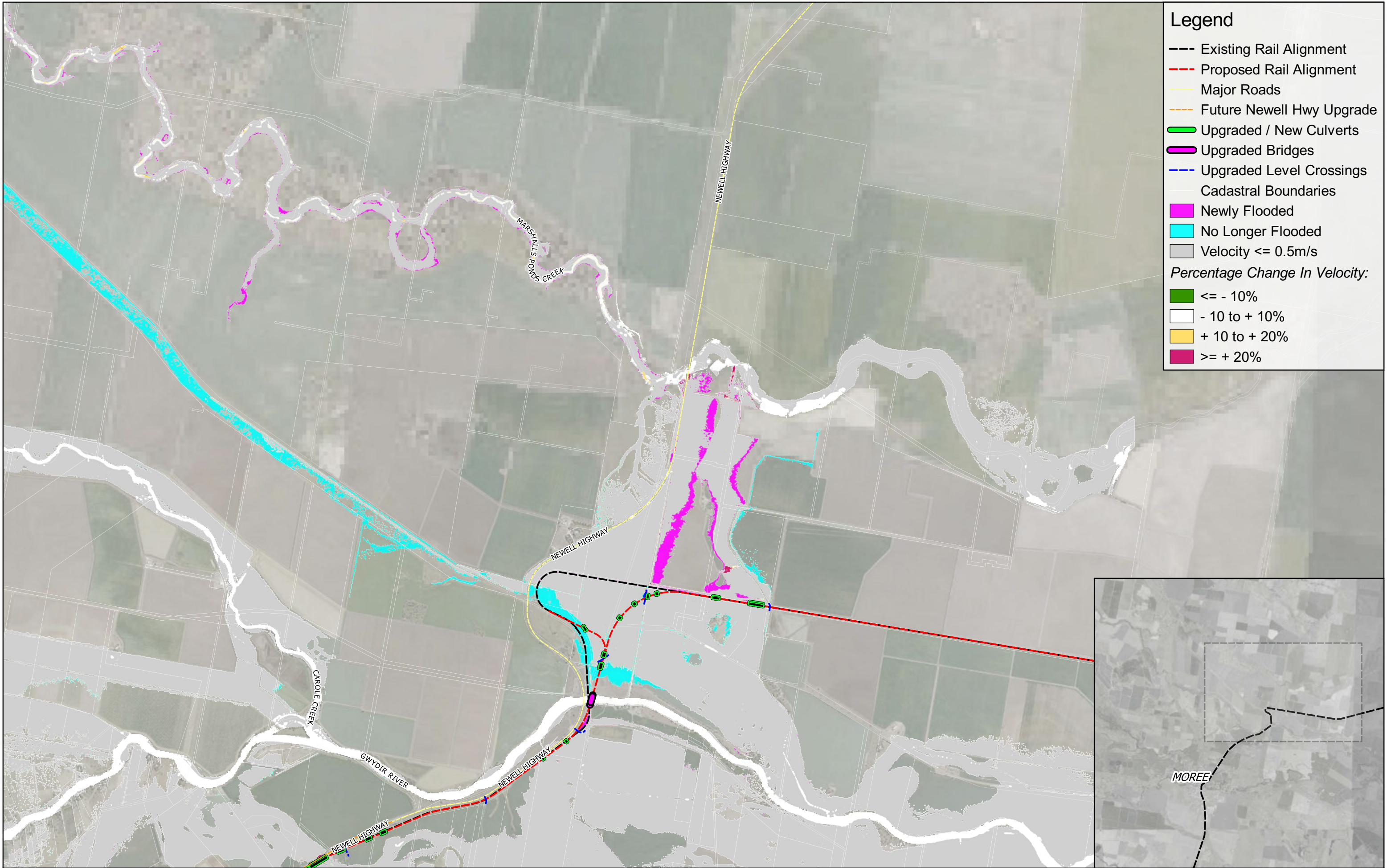
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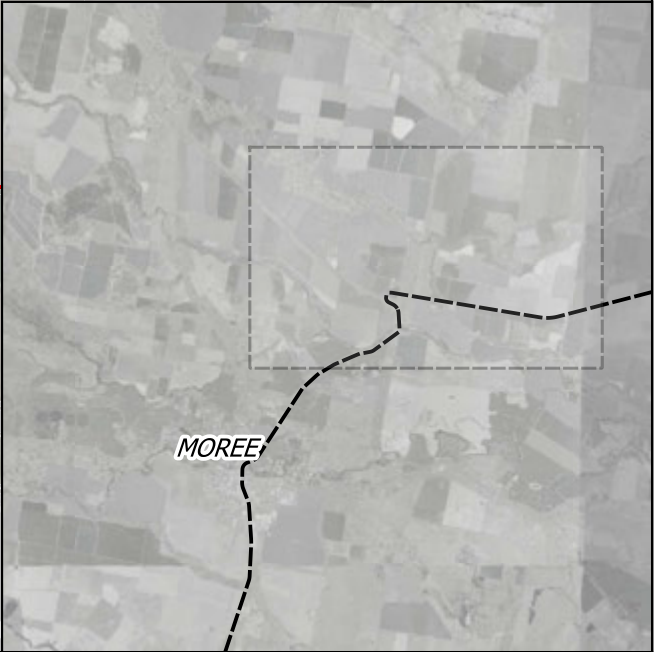
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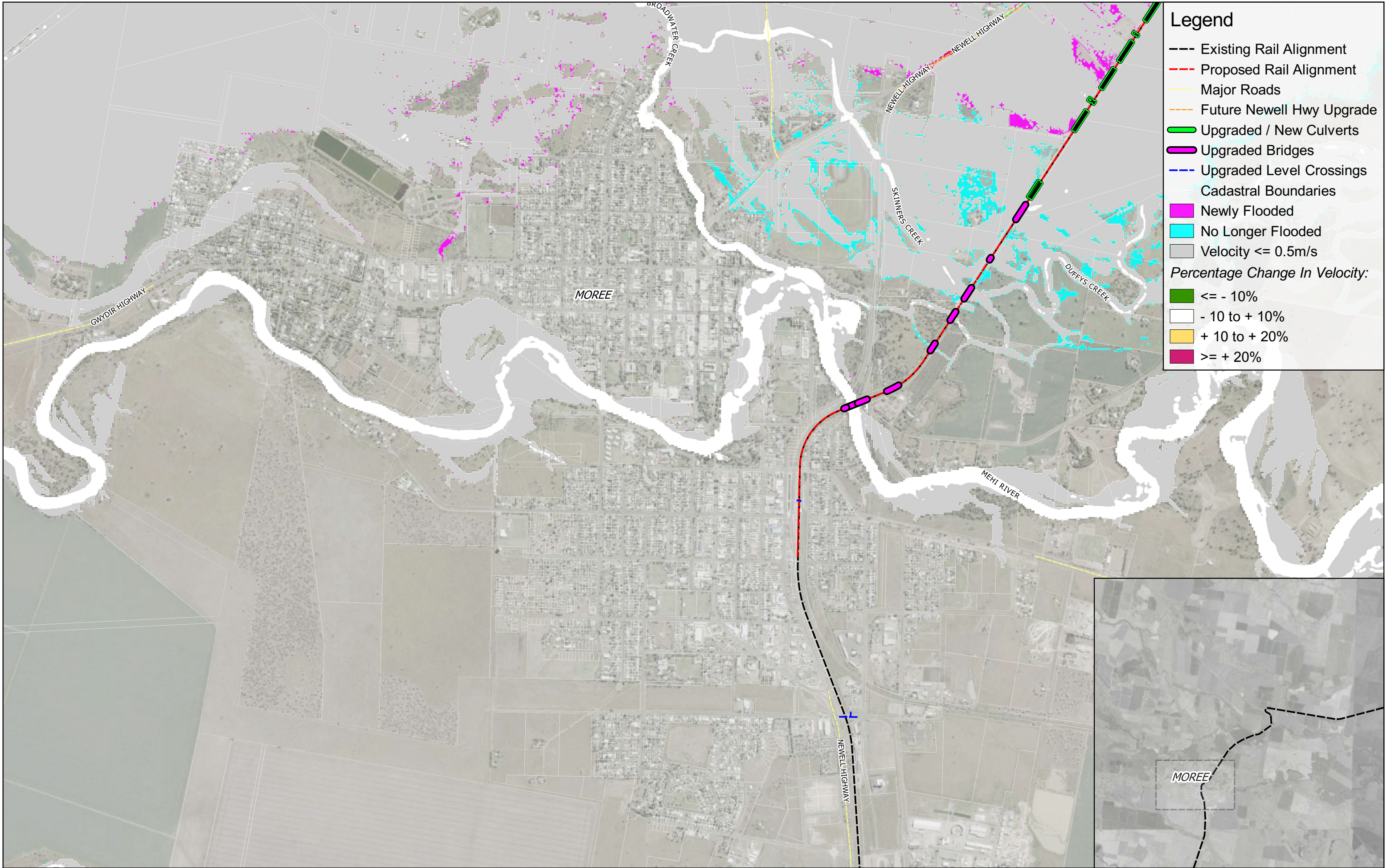
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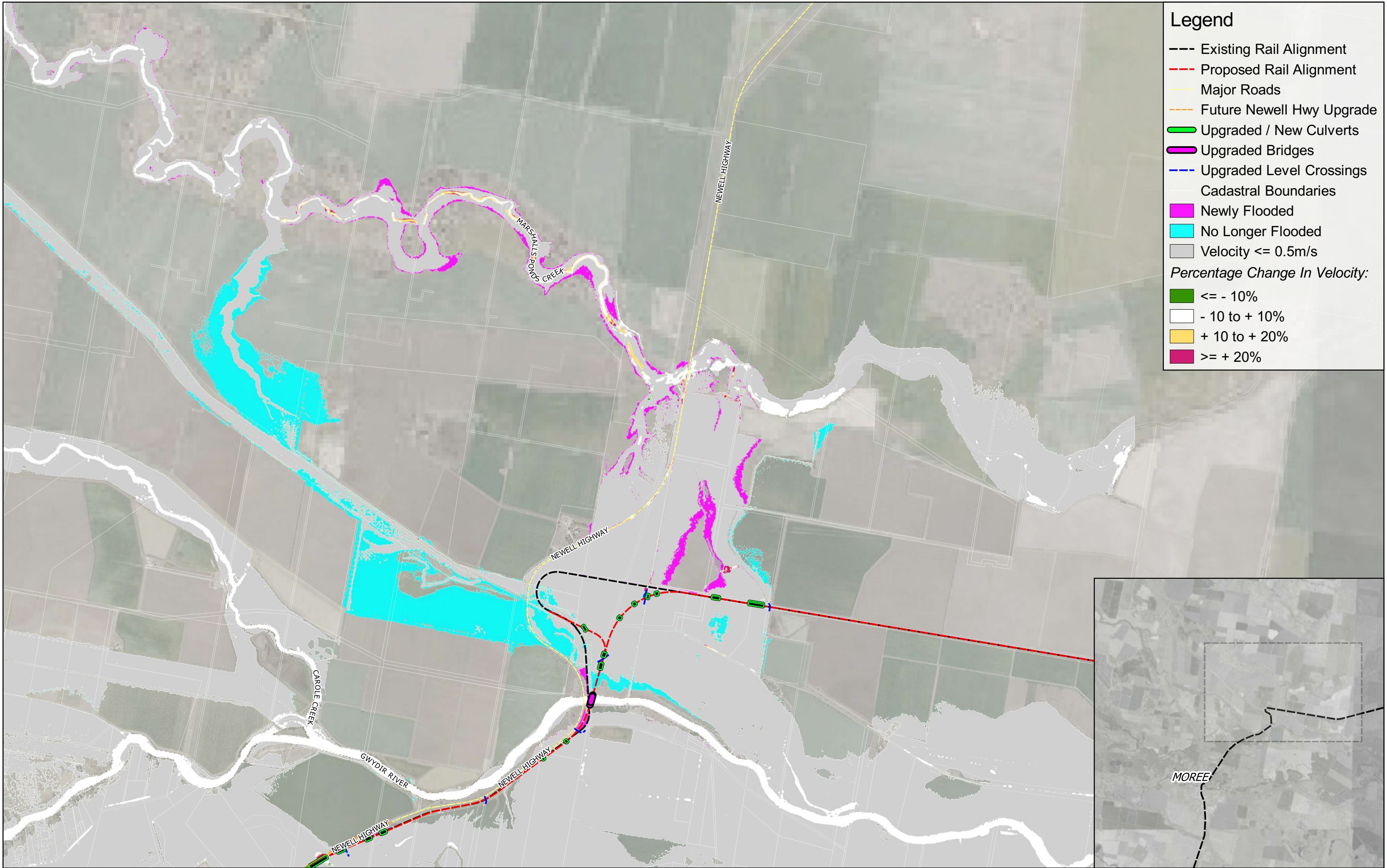
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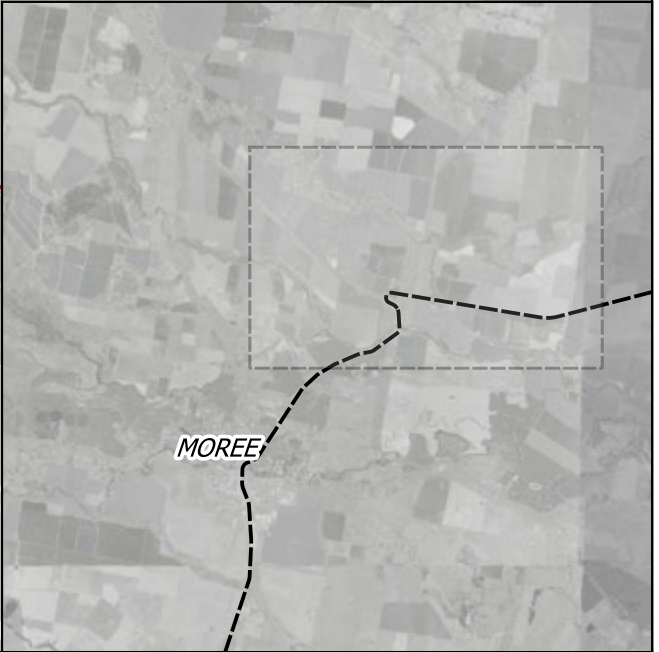
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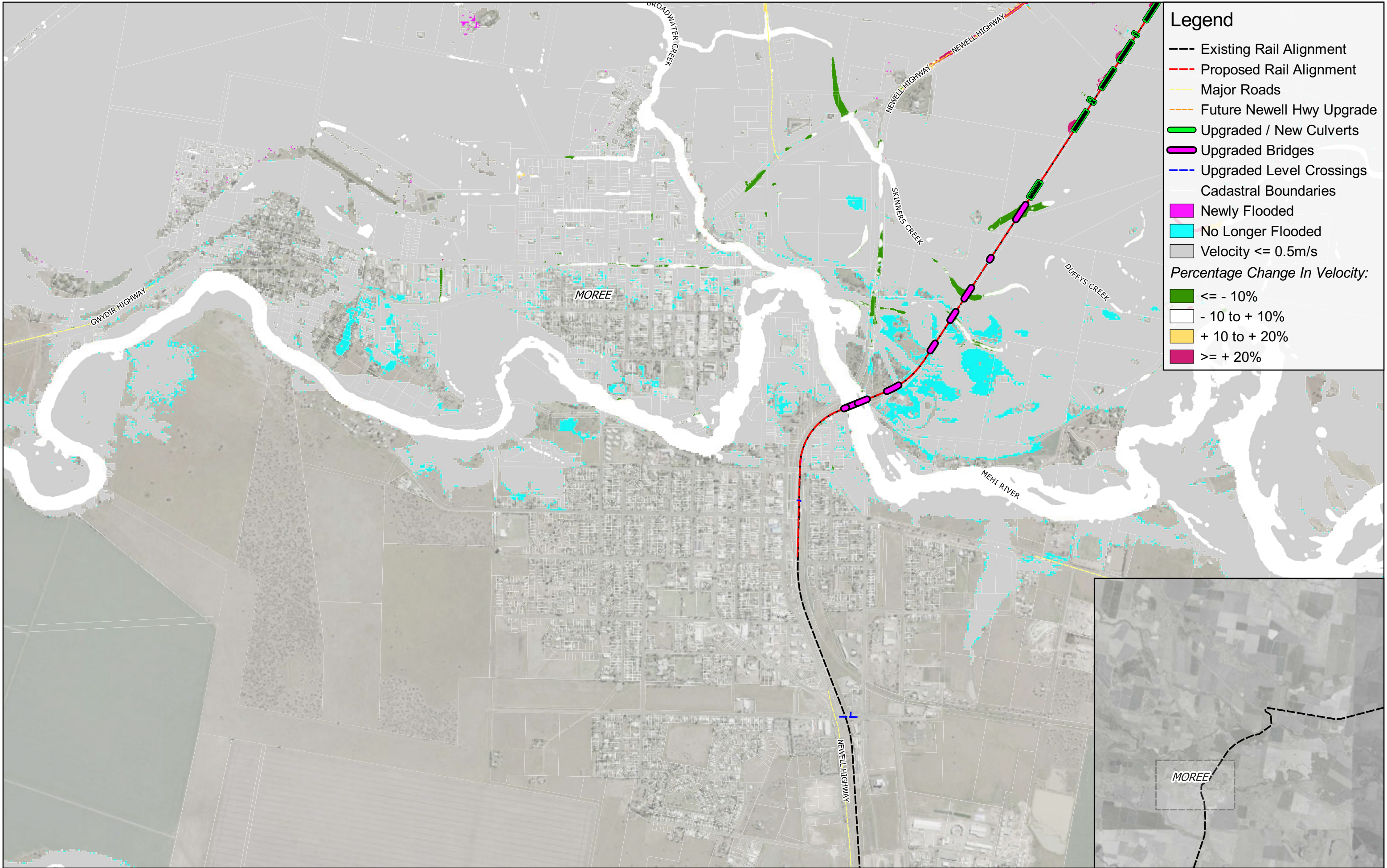
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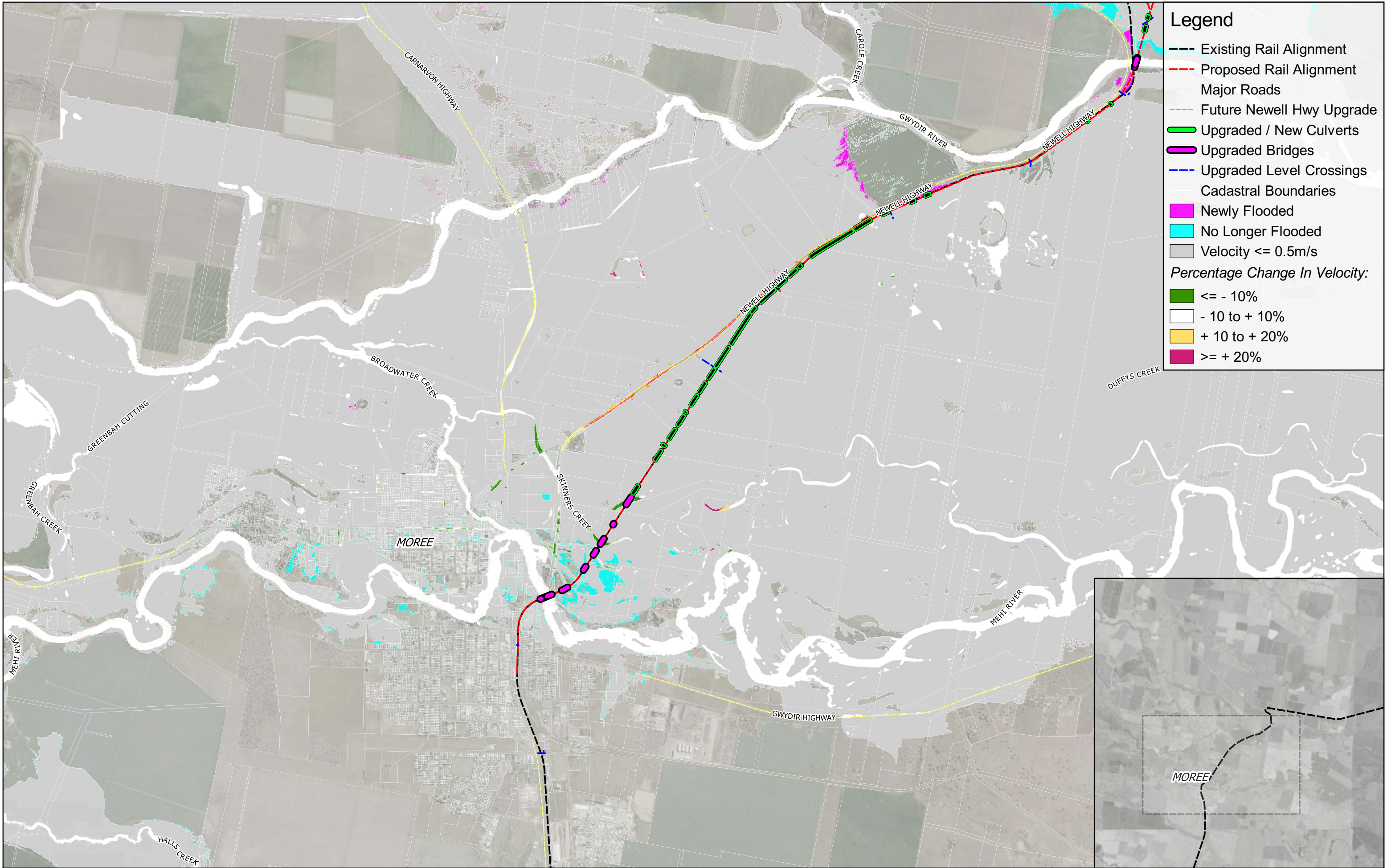
>= + 20%





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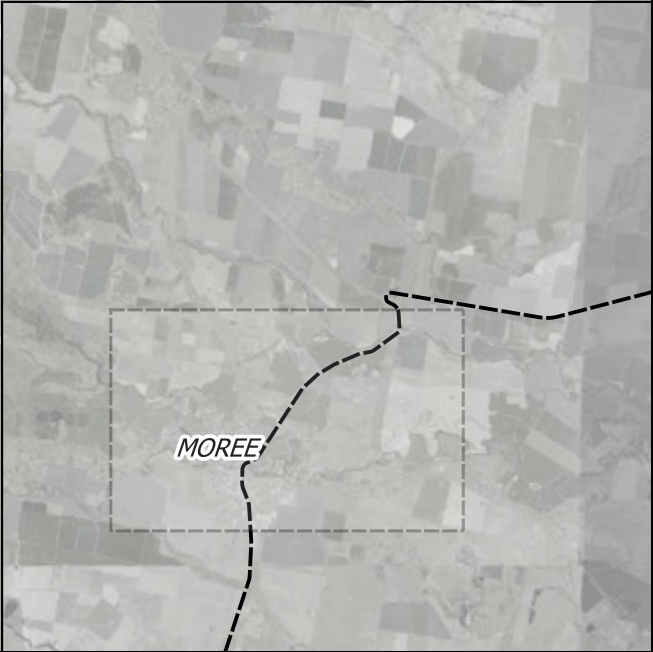


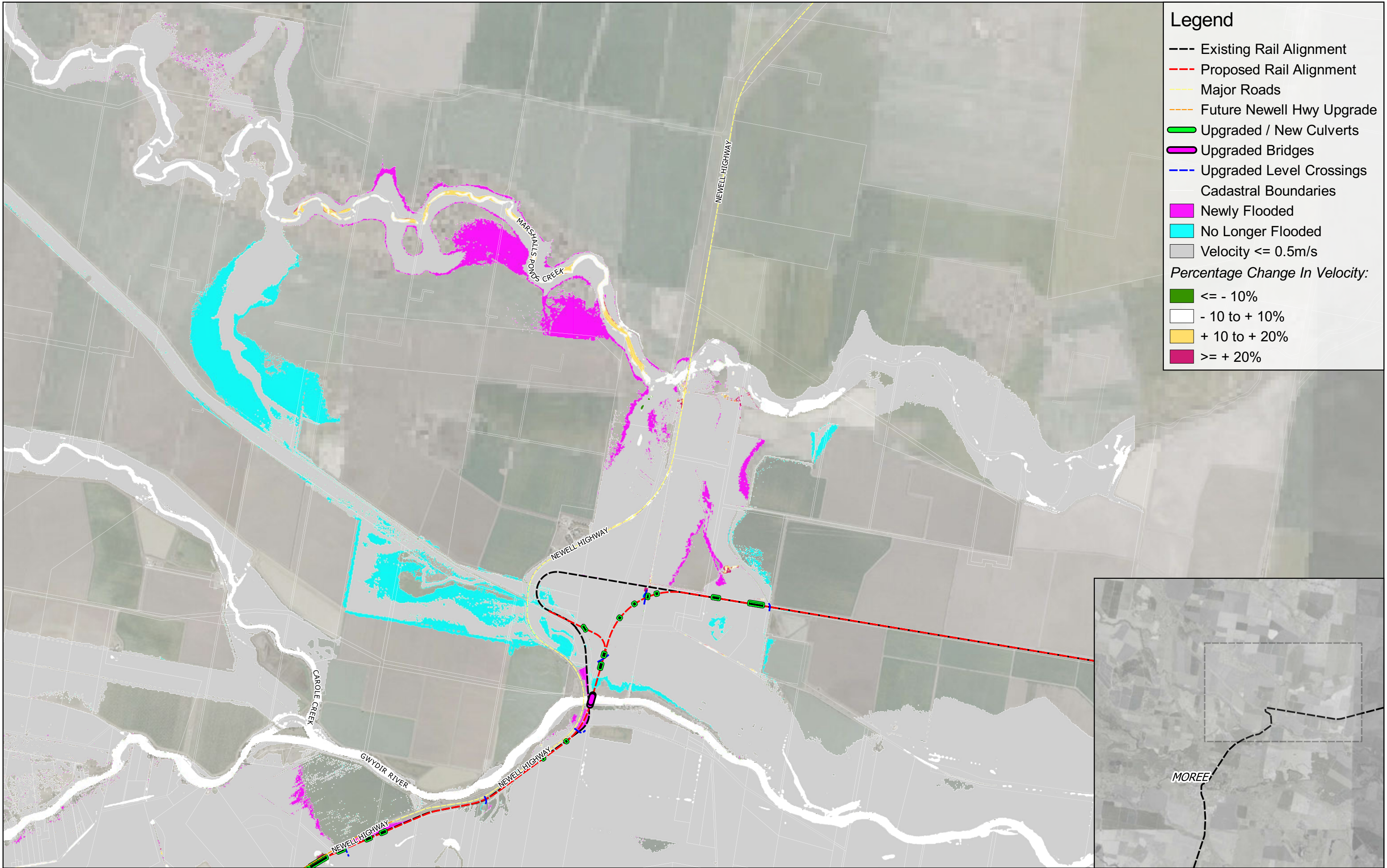
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Percentage Change In Velocity:

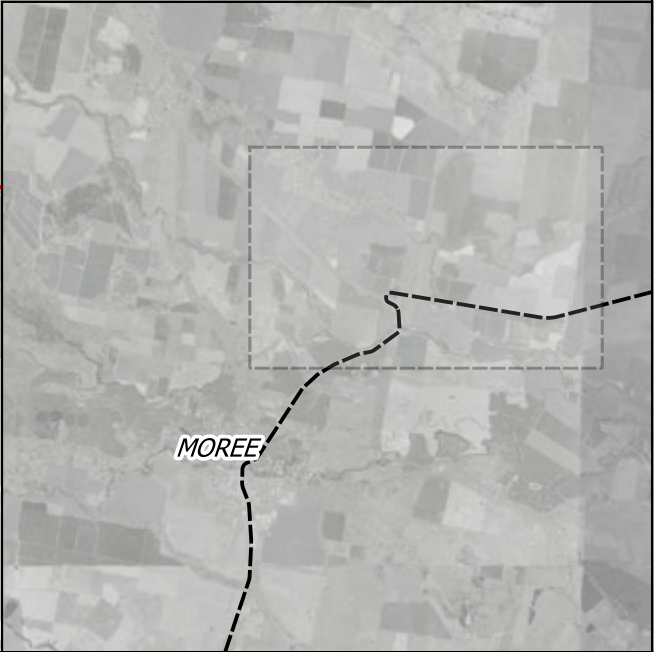
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 - + 10 to + 20%
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Prepared for: ARTC
Coordinate system: GDA 1994 MGA Zone 55
Aerial Source: NSW Six Maps
Scale ratio correct when printed at A3

0 500 1000 1500 2000 m

Scale: 1:40000



Stage: EIS
Version: C
Author: JS
Approved by: RL
Date: 30/03/2022

Inland Rail - Narrabri to North Star Phase 2
Peak Flood Change In Velocity - Proposed Design Scenario
Event: 5% AEP
Cumulative Impact of N2NS and Newell Highway Upgrade - Sheet 3
Map ID: DESNH_CHV_005_3



Legend

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- Proposed Rail Alignment
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Legend

Existing Rail Alignment

Proposed Rail Alignment

Major Roads

Future Newell Hwy Upgrade

Upgraded / New Culverts

Upgraded Bridges

Upgraded Level Crossings

Cadastral Boundaries

Newly Flooded

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Velocity <= 0.5m/s

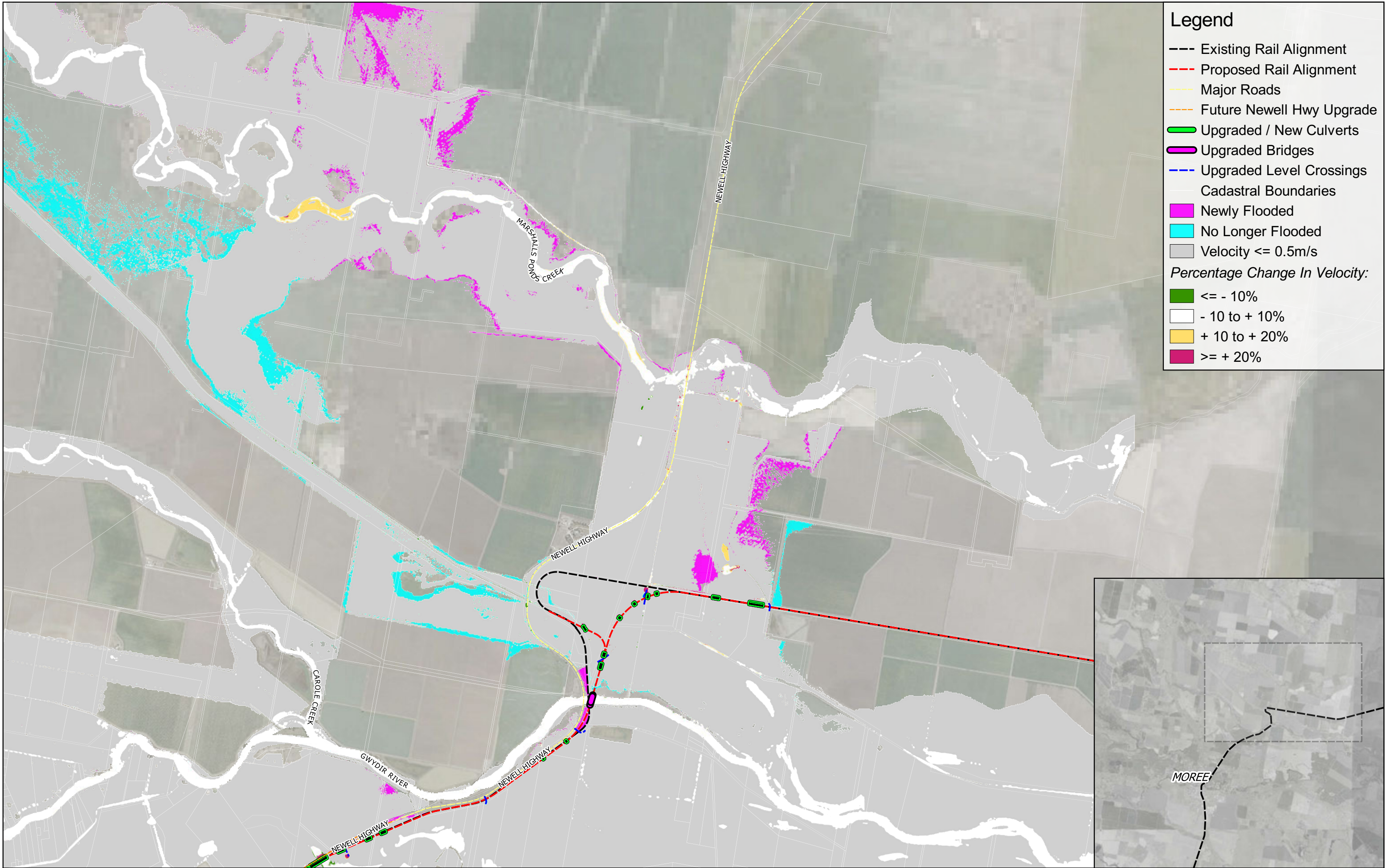
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- 10 to + 10%

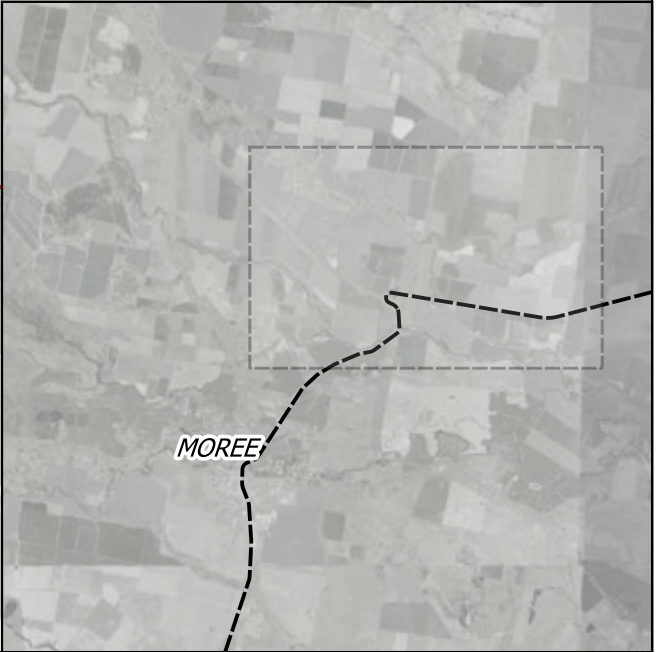
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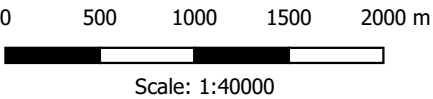


Legend

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- - - Proposed Rail Alignment
- Major Roads
- - - Future Newell Hwy Upgrade
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- Velocity <= 0.5m/s
- Percentage Change In Velocity:
 - <= - 10%
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 - >= + 20%



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Scale ratio correct when printed at A3



Stage: EIS
Version: C
Author: JS
Approved by: RL
Date: 30/03/2022

Inland Rail - Narrabri to North Star Phase 2
Peak Flood Change In Velocity - Proposed Design Scenario
Event: 2% AEP
Cumulative Impact of N2NS and Newell Highway Upgrade - Sheet 3
Map ID: DESNH_CHV_002_3



Legend

- Existing Rail Alignment
- Proposed Rail Alignment
- Major Roads
- Future Newell Hwy Upgrade
- Upgraded / New Culverts
- Upgraded Bridges
- Upgraded Level Crossings
- Cadastral Boundaries
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- Percentage Change In Velocity:
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Legend

Existing Rail Alignment

Proposed Rail Alignment

Major Roads

Future Newell Hwy Upgrade

Upgraded / New Culverts

Upgraded Bridges

Upgraded Level Crossings

Cadastral Boundaries

Newly Flooded

No Longer Flooded

Velocity <= 0.5m/s

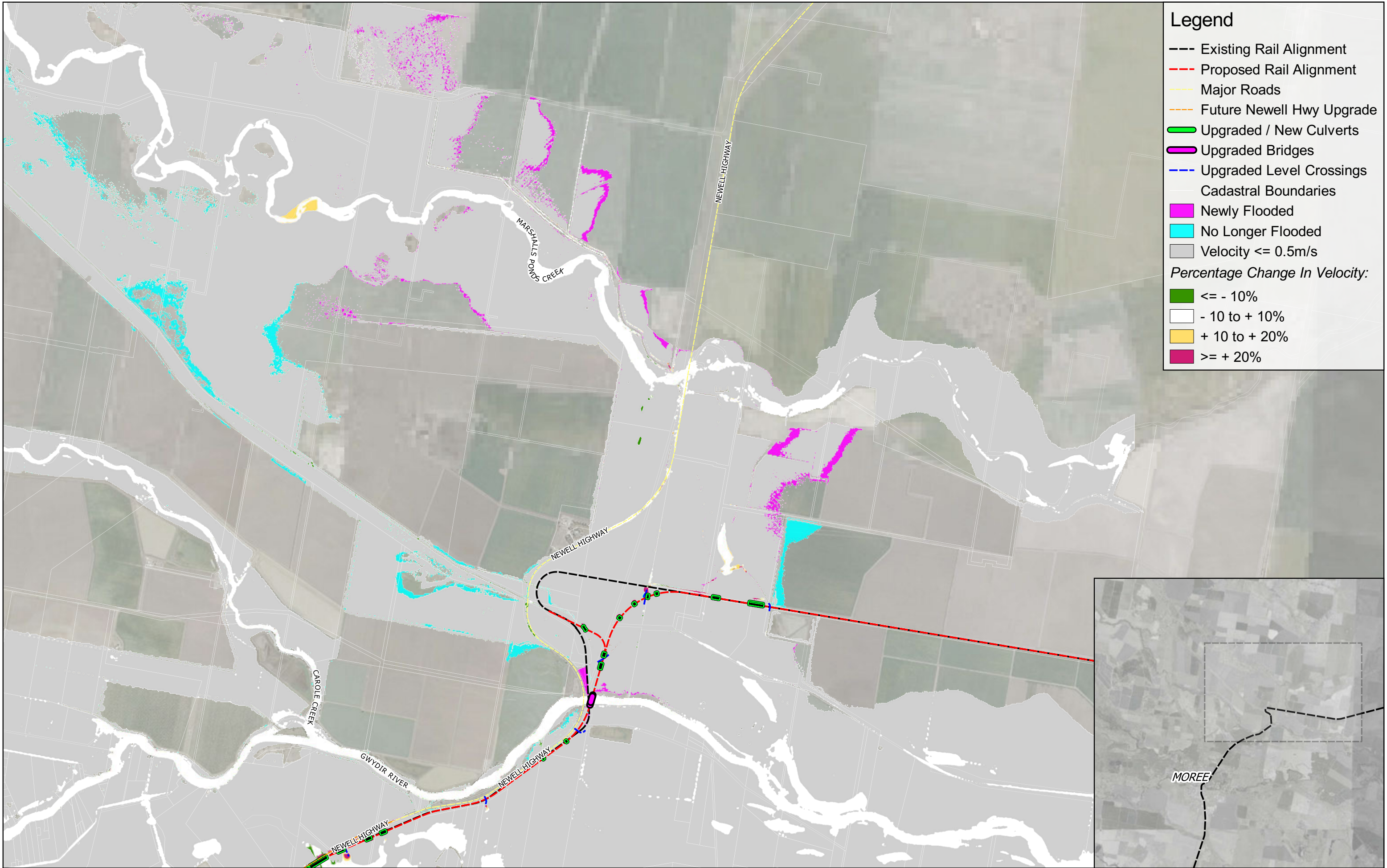
Percentage Change In Velocity:

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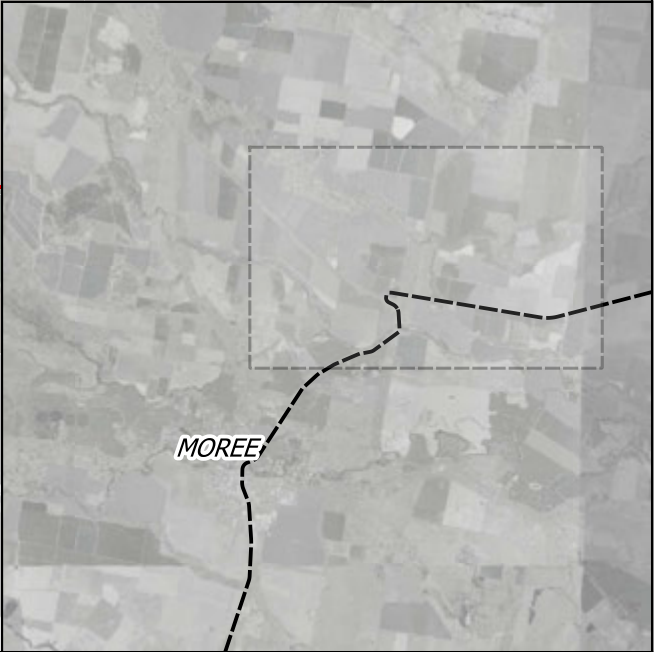
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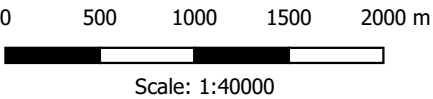


Legend

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Aerial Source: NSW Six Maps
Scale ratio correct when printed at A3



Stage: EIS
Version: C
Author: JS
Approved by: RL
Date: 30/03/2022

Inland Rail - Narrabri to North Star Phase 2
Peak Flood Change In Velocity - Proposed Design Scenario
Event: 1% AEP
Cumulative Impact of N2NS and Newell Highway Upgrade - Sheet 3
Map ID: DESNH_CHV_001_3