



# APPENDIX A

ENVIRONMENTAL CONSTRAINTS  
ATLAS



Appendix A -1  
**Environmental constraints atlas**

Narrabri to Turravan Line Upgrade  
 REVIEW OF ENVIRONMENTAL FACTORS



**Legend**

**Ecology**

- Key Fish Habitat
- National Parks and Wildlife Service Reserve (NPWS)
- State forest

**Vegetation types**

- Exotic grassland
- Low condition native grassland
- Narrow-leaved Ironbark - White Cypress Pine Woodland
- Native grassland
- Native grassland on cracking clay soil
- Pilliga Box - White Cypress Pine Woodland
- Poplar Box - White Cypress Pine Woodland

**General**

- Places
- Point of interest
- Railway
- Heritage (Local Environmental Plan)
- State heritage

**Hydrology**

- Watercourse
- Hydrological area
- Noise**
- Noise logger location 1 (L1)
- Noise logger location 2 (L2)

**Worst case scenario noise contours**

- Day
- Evening
- Evening/Night (NCA 3)
- Night

**Noise catchment areas**

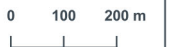
- Noise catchment area 1 (NCA 1)
- Noise catchment area 2 (NCA 2)
- Noise catchment area 3 (NCA 3)

**Pollution**

- National pollution inventory
- Contaminated sites (NSW EPA; 13Aug21)

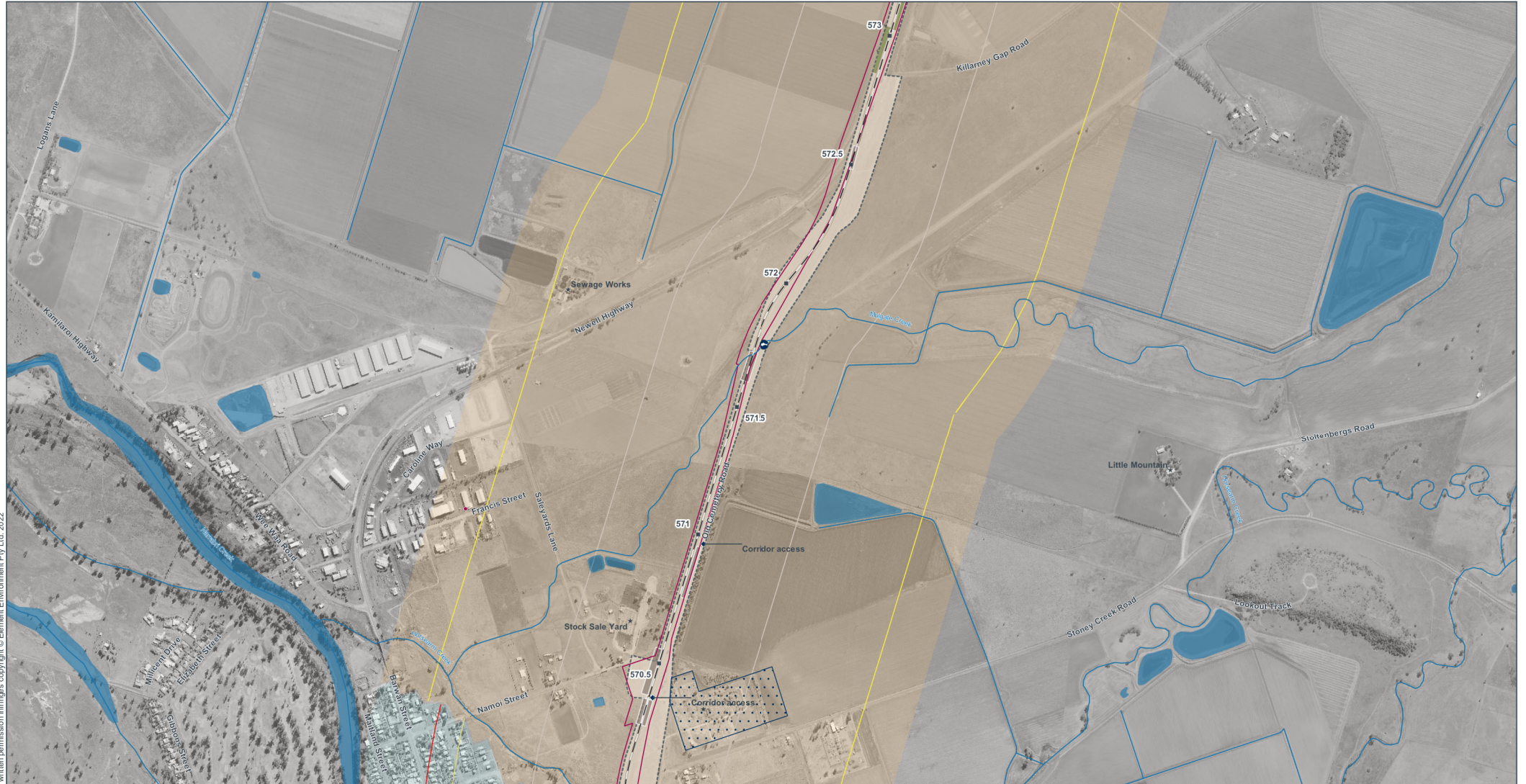
**Project components**

- Approximate corridor access points
- ARTC lease
- Approximate construction sites including Laydown/storage/ancillary facilities



Appendix A -2  
**Environmental constraints atlas**

Narrabri to Turravan Line Upgrade  
 REVIEW OF ENVIRONMENTAL FACTORS



**Legend**

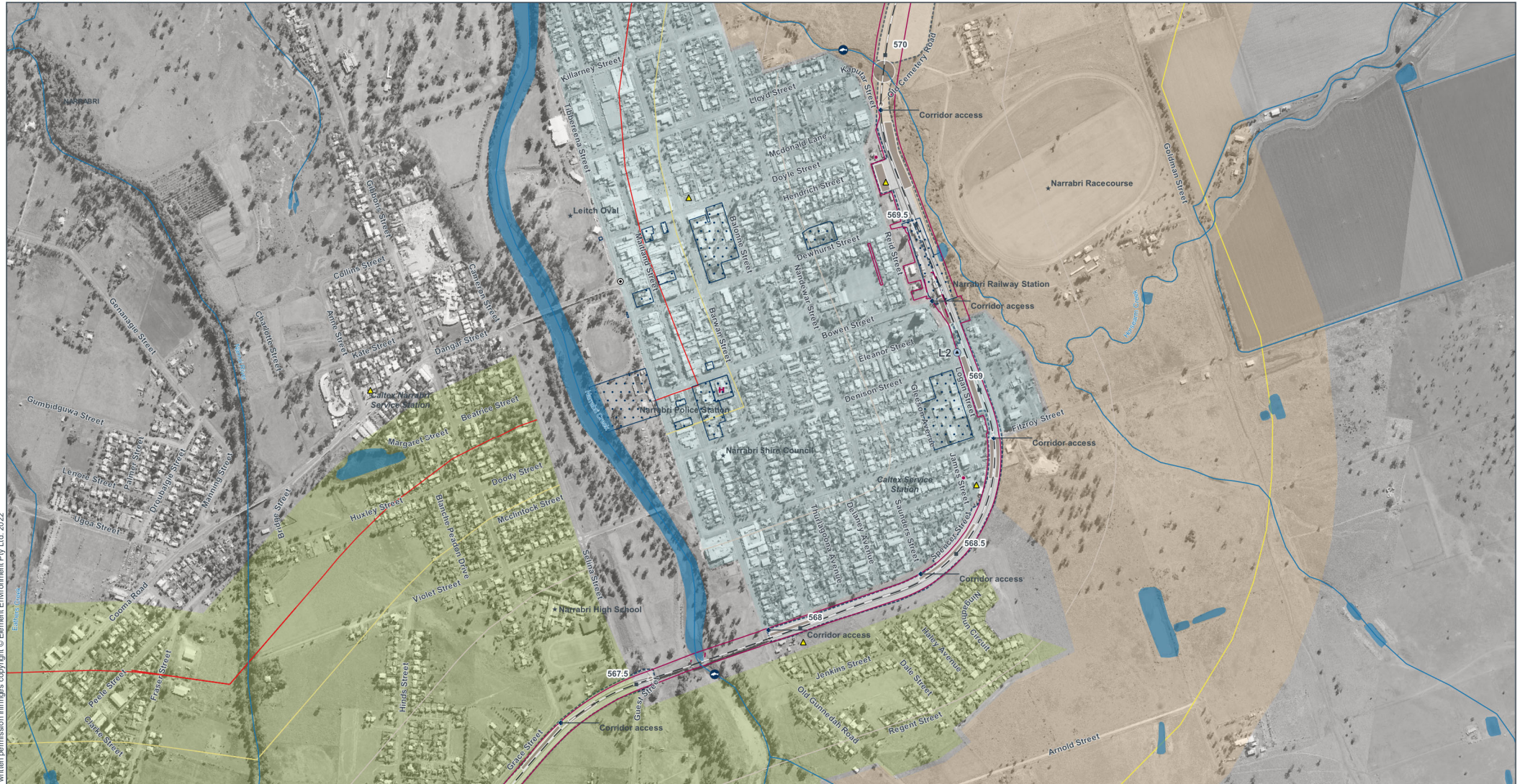
<p><b>Ecology</b></p> <ul style="list-style-type: none"> <li> Key Fish Habitat</li> <li> National Parks and Wildlife Service Reserve (NPWS)</li> <li> State forest</li> </ul>	<p><b>Vegetation types</b></p> <ul style="list-style-type: none"> <li> Exotic grassland</li> <li> Low condition native grassland</li> <li> Narrow-leaved Ironbark - White Cypress Pine Woodland</li> <li> Native grassland</li> <li> Native grassland on cracking clay soil</li> <li> Pilliga Box - White Cypress Pine Woodland</li> <li> Poplar Box - White Cypress Pine Woodland</li> </ul>	<p><b>General</b></p> <ul style="list-style-type: none"> <li> Places</li> <li> Point of Interest</li> <li> Railway</li> </ul> <p><b>Heritage</b></p> <ul style="list-style-type: none"> <li> Heritage (Local Environmental Plan)</li> <li> State heritage</li> </ul>	<p><b>Hydrology</b></p> <ul style="list-style-type: none"> <li> Watercourse</li> <li> Hydrological area</li> </ul> <p><b>Noise</b></p> <ul style="list-style-type: none"> <li> Noise logger location 1 (L1)</li> <li> Noise logger location 2 (L2)</li> </ul>	<p><b>Worst case scenario noise contours</b></p> <ul style="list-style-type: none"> <li> Day</li> <li> Evening</li> <li> Evening/Night (NCA 3)</li> <li> Night</li> </ul>	<p><b>Noise catchment areas</b></p> <ul style="list-style-type: none"> <li> Noise catchment area 1 (NCA 1)</li> <li> Noise catchment area 2 (NCA 2)</li> <li> Noise catchment area 3 (NCA 3)</li> </ul> <p><b>Pollution</b></p> <ul style="list-style-type: none"> <li> National pollution inventory</li> <li> Contaminated sites (NSW EPA; 13Aug21)</li> </ul>	<p><b>Project components</b></p> <ul style="list-style-type: none"> <li> Approximate corridor access points</li> <li> ARTC lease</li> <li> Approximate construction sites including Laydown/storage/ancillary facilities</li> </ul>
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Appendix A -3  
**Environmental constraints atlas**

Narrabri to Turravan Line Upgrade  
 REVIEW OF ENVIRONMENTAL FACTORS



**Legend**

**Ecology**

- Key Fish Habitat
- National Parks and Wildlife Service Reserve (NPWS)
- State forest

**Vegetation types**

- Exotic grassland
- Low condition native grassland
- Narrow-leaved Ironbark - White Cypress Pine Woodland
- Native grassland
- Native grassland on cracking clay soil
- Pilliga Box - White Cypress Pine Woodland
- Poplar Box - White Cypress Pine Woodland

**General**

- Places
- Point of Interest
- Railway
- Heritage**
- Heritage (Local Environmental Plan)
- State heritage

**Hydrology**

- Watercourse
- Hydrological area
- Noise**
- Noise logger location 1 (L1)
- Noise logger location 2 (L2)

**Worst case scenario noise contours**

- Day
- Evening
- Evening/Night (NCA 3)
- Night

**Noise catchment areas**

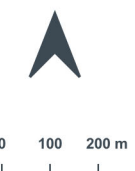
- Noise catchment area 1 (NCA 1)
- Noise catchment area 2 (NCA 2)
- Noise catchment area 3 (NCA 3)

**Pollution**

- National pollution inventory
- Contaminated sites (NSW EPA; 13Aug21)

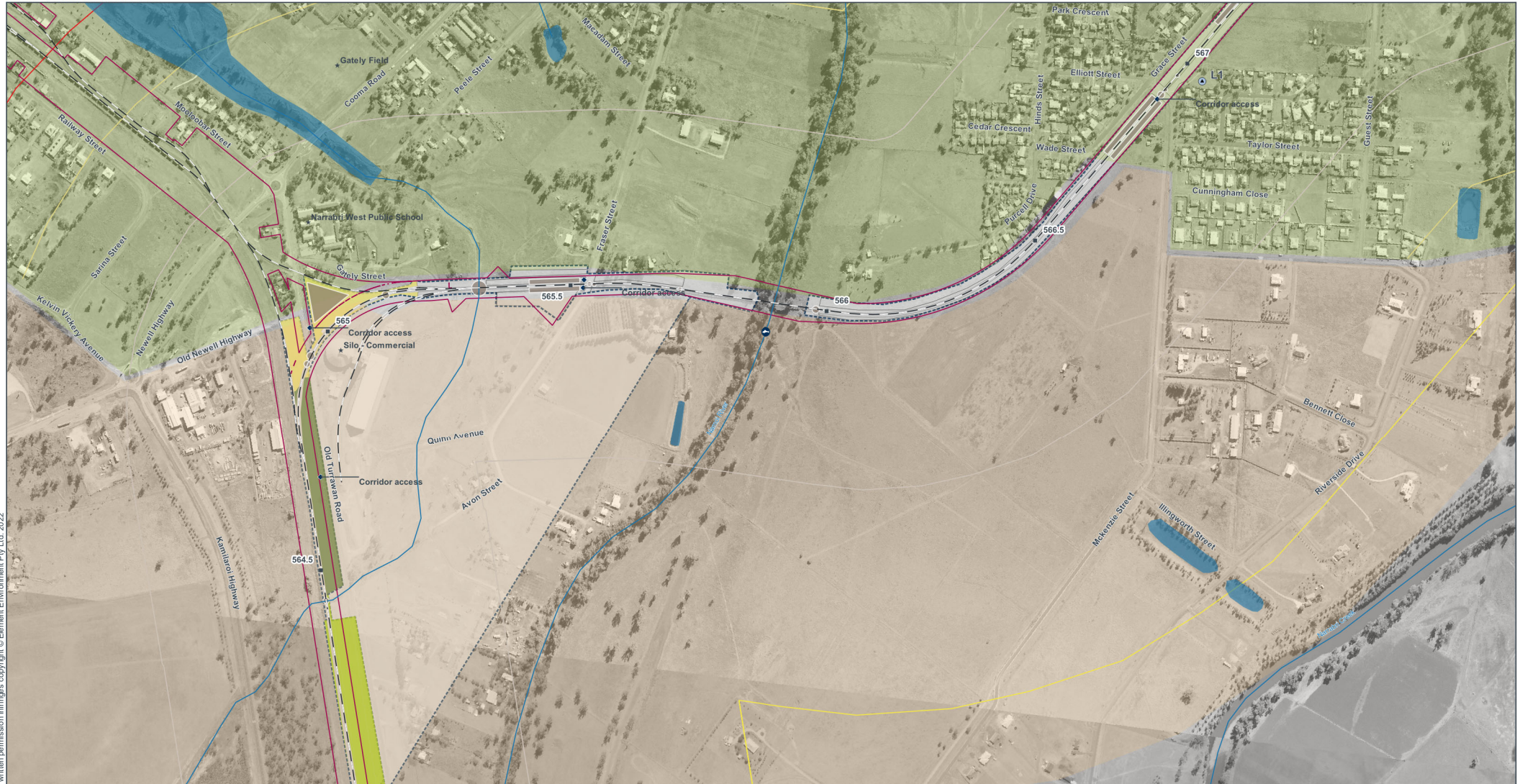
**Project components**

- Approximate corridor access points
- ARTC lease
- Approximate construction sites including Laydown/storage/ancillary facilities



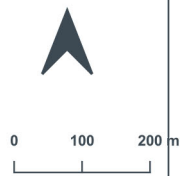
Appendix A -4  
**Environmental constraints atlas**

Narrabri to Turravan Line Upgrade  
 REVIEW OF ENVIRONMENTAL FACTORS



**Legend**

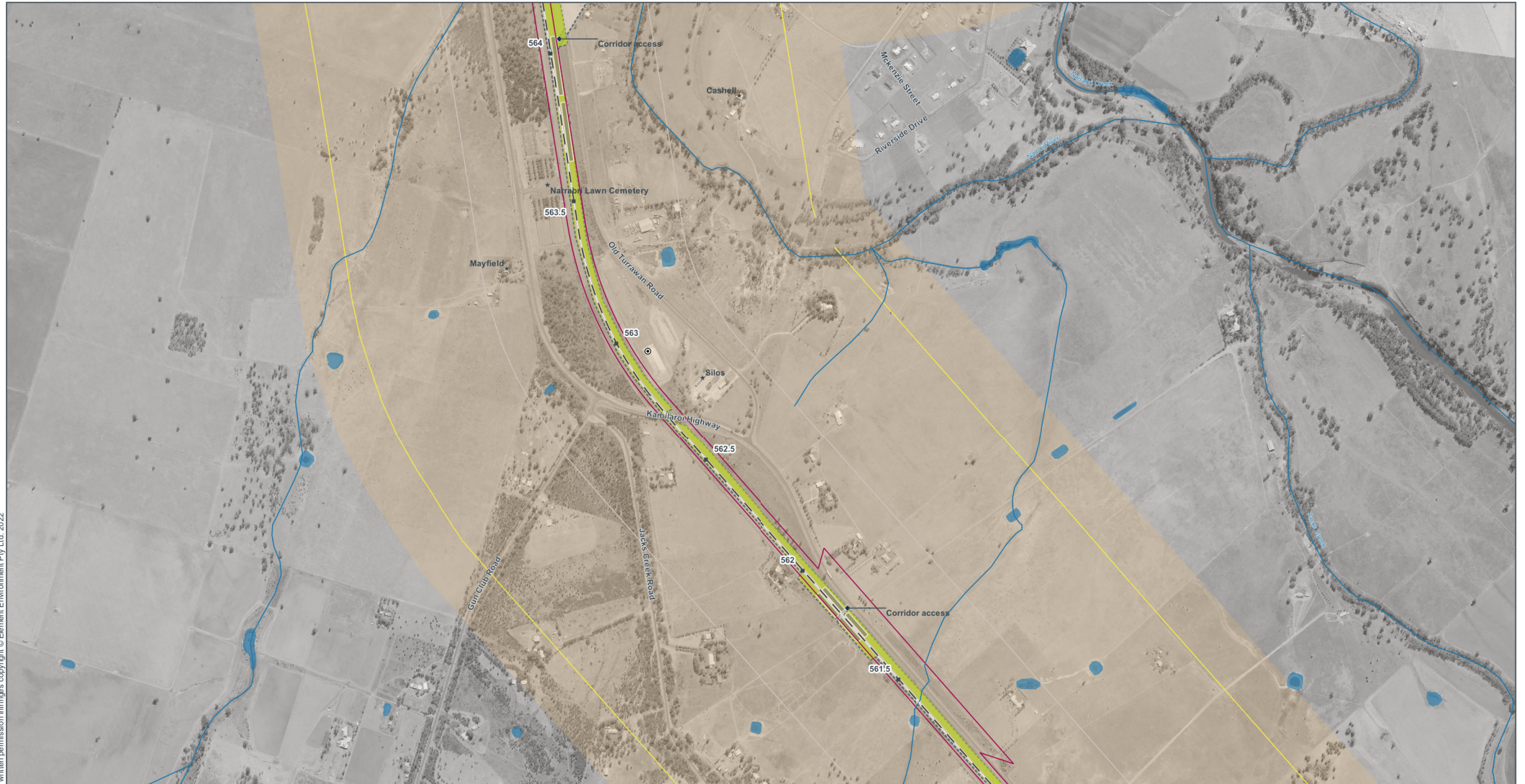
<p><b>Ecology</b></p> <ul style="list-style-type: none"> <li> Key Fish Habitat</li> <li> National Parks and Wildlife Service Reserve (NPWS)</li> <li> State forest</li> </ul>	<p><b>Vegetation types</b></p> <ul style="list-style-type: none"> <li> Exotic grassland</li> <li> Low condition native grassland</li> <li> Narrow-leaved Ironbark - White Cypress Pine Woodland</li> <li> Native grassland</li> <li> Native grassland on cracking clay soil</li> <li> Pilliga Box - White Cypress Pine Woodland</li> <li> Poplar Box - White Cypress Pine Woodland</li> </ul>	<p><b>General</b></p> <ul style="list-style-type: none"> <li> Places</li> <li> Point of interest</li> <li> Railway</li> </ul> <p><b>Heritage</b></p> <ul style="list-style-type: none"> <li> Heritage (Local Environmental Plan)</li> <li> State heritage</li> </ul>	<p><b>Hydrology</b></p> <ul style="list-style-type: none"> <li> Watercourse</li> <li> Hydrological area</li> </ul> <p><b>Noise</b></p> <ul style="list-style-type: none"> <li> Noise logger location 1 (L1)</li> <li> Noise logger location 2 (L2)</li> </ul>	<p><b>Worst case scenario noise contours</b></p> <ul style="list-style-type: none"> <li> Day</li> <li> Evening</li> <li> Evening/Night (NCA 3)</li> <li> Night</li> </ul>	<p><b>Noise catchment areas</b></p> <ul style="list-style-type: none"> <li> Noise catchment area 1 (NCA 1)</li> <li> Noise catchment area 2 (NCA 2)</li> <li> Noise catchment area 3 (NCA 3)</li> </ul> <p><b>Pollution</b></p> <ul style="list-style-type: none"> <li> National pollution inventory</li> <li> Contaminated sites (NSW EPA; 13Aug21)</li> </ul>	<p><b>Project components</b></p> <ul style="list-style-type: none"> <li> Approximate corridor access points</li> <li> ARTC lease</li> <li> Approximate construction sites including Laydown/storage/ancillary facilities</li> </ul>
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Appendix A -5  
**Environmental constraints atlas**

Narrabri to Turravan Line Upgrade  
 REVIEW OF ENVIRONMENTAL FACTORS



**Legend**

<p><b>Ecology</b></p> <ul style="list-style-type: none"> <li> Key Fish Habitat</li> <li> National Parks and Wildlife Service Reserve (NPWS)</li> <li> State forest</li> </ul>	<p><b>Vegetation types</b></p> <ul style="list-style-type: none"> <li> Exotic grassland</li> <li> Low condition native grassland</li> <li> Narrow-leaved Ironbark - White Cypress Pine Woodland</li> <li> Native grassland</li> <li> Native grassland on cracking clay soil</li> <li> Pilliga Box - White Cypress Pine Woodland</li> <li> Poplar Box - White Cypress Pine Woodland</li> </ul>	<p><b>General</b></p> <ul style="list-style-type: none"> <li> Places</li> <li> Point of interest</li> <li> Railway</li> </ul> <p><b>Heritage</b></p> <ul style="list-style-type: none"> <li> Heritage (Local Environmental Plan)</li> <li> State heritage</li> </ul>	<p><b>Hydrology</b></p> <ul style="list-style-type: none"> <li> Watercourse</li> <li> Hydrological area</li> </ul> <p><b>Noise</b></p> <ul style="list-style-type: none"> <li> Noise logger location 1 (L1)</li> <li> Noise logger location 2 (L2)</li> </ul>	<p><b>Worst case scenario noise contours</b></p> <ul style="list-style-type: none"> <li> Day</li> <li> Evening</li> <li> Evening/Night (NCA 3)</li> <li> Night</li> </ul>	<p><b>Noise catchment areas</b></p> <ul style="list-style-type: none"> <li> Noise catchment area 1 (NCA 1)</li> <li> Noise catchment area 2 (NCA 2)</li> <li> Noise catchment area 3 (NCA 3)</li> </ul> <p><b>Pollution</b></p> <ul style="list-style-type: none"> <li> National pollution inventory</li> <li> Contaminated sites (NSW EPA; 13Aug21)</li> </ul>	<p><b>Project components</b></p> <ul style="list-style-type: none"> <li> Approximate corridor access points</li> <li> ARTC lease</li> <li> Approximate construction sites including Laydown/storage/ancillary facilities</li> </ul>
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Appendix A -6  
**Environmental constraints atlas**

Narrabri to Turravan Line Upgrade  
 REVIEW OF ENVIRONMENTAL FACTORS



**Legend**

**Ecology**

- Key Fish Habitat
- National Parks and Wildlife Service Reserve (NPWS)
- State forest

**Vegetation types**

- Exotic grassland
- Low condition native grassland
- Narrow-leaved Ironbark - White Cypress Pine Woodland
- Native grassland
- Native grassland on cracking clay soil
- Pilliga Box - White Cypress Pine Woodland
- Poplar Box - White Cypress Pine Woodland

**General**

- Places
- Point of interest
- Railway
- Heritage (Local Environmental Plan)
- State heritage

**Hydrology**

- Watercourse
- Hydrological area
- Noise**
- Noise logger location 1 (L1)
- Noise logger location 2 (L2)

**Worst case scenario noise contours**

- Day
- Evening
- Evening/Night (NCA 3)
- Night

**Noise catchment areas**

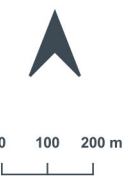
- Noise catchment area 1 (NCA 1)
- Noise catchment area 2 (NCA 2)
- Noise catchment area 3 (NCA 3)

**Pollution**

- National pollution inventory
- Contaminated sites (NSW EPA; 13Aug21)

**Project components**

- Approximate corridor access points
- ARTC lease
- Approximate construction sites including Laydown/storage/ancillary facilities





Appendix A -7  
**Environmental constraints atlas**

Narrabri to Turravan Line Upgrade  
 REVIEW OF ENVIRONMENTAL FACTORS



**Legend**

**Ecology**

- Key Fish Habitat
- National Parks and Wildlife Service Reserve (NPWS)
- State forest

**Vegetation types**

- Exotic grassland
- Low condition native grassland
- Narrow-leaved Ironbark - White Cypress Pine Woodland
- Native grassland
- Native grassland on cracking clay soil
- Pilliga Box - White Cypress Pine Woodland
- Poplar Box - White Cypress Pine Woodland

**General**

- Places
- Point of interest
- Railway
- Heritage**
- Heritage (Local Environmental Plan)
- State heritage

**Hydrology**

- Watercourse
- Hydrological area
- Noise**
- Noise logger location 1 (L1)
- Noise logger location 2 (L2)

**Worst case scenario noise contours**

- Day
- Evening
- Evening/Night (NCA 3)
- Night

**Noise catchment areas**

- Noise catchment area 1 (NCA 1)
- Noise catchment area 2 (NCA 2)
- Noise catchment area 3 (NCA 3)

**Pollution**

- National pollution inventory
- Contaminated sites (NSW EPA; 13Aug21)

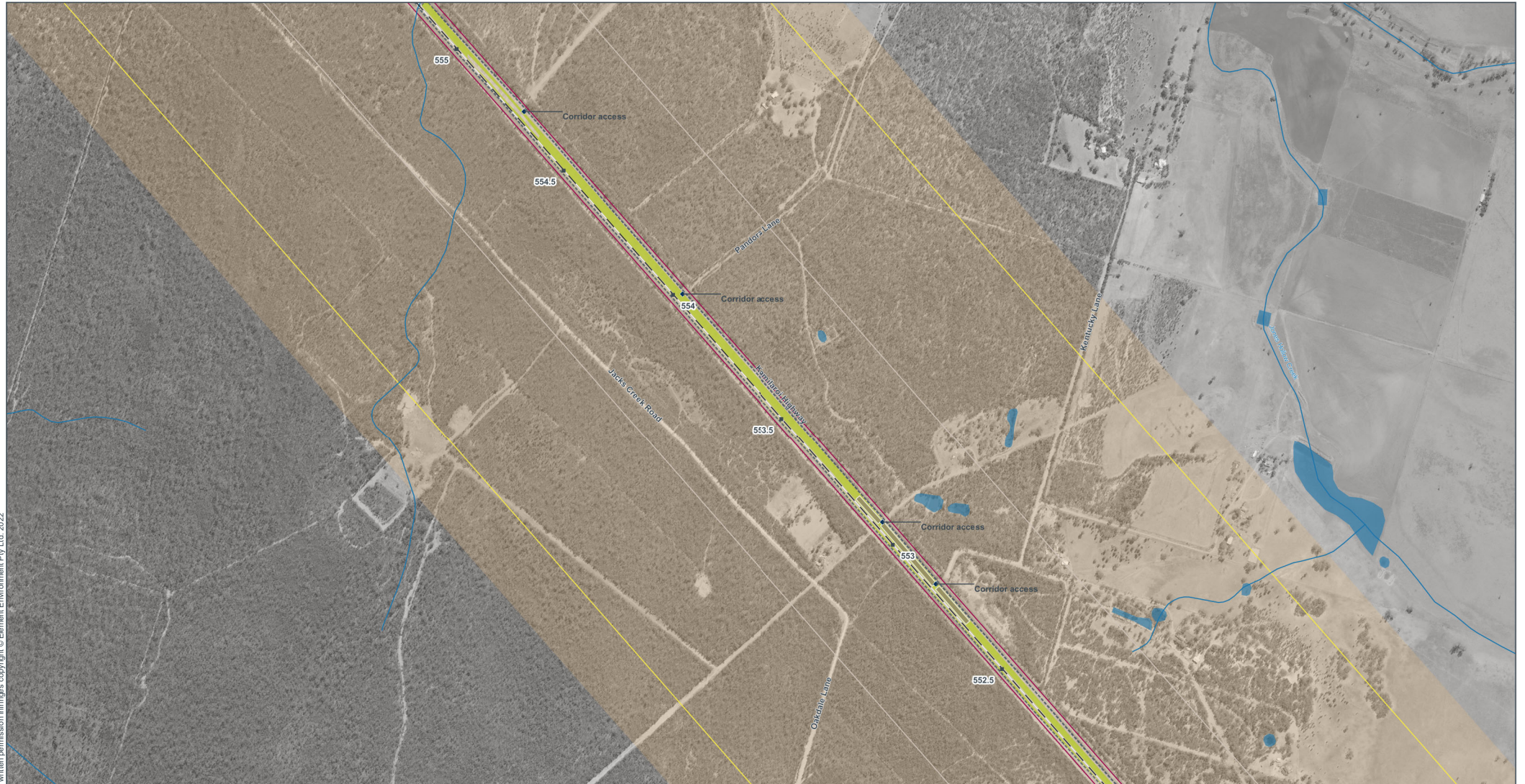
**Project components**

- Approximate corridor access points
- ARTC lease
- Approximate construction sites including Laydown/storage/ancillary facilities



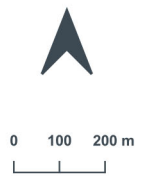
Appendix A - 8  
**Environmental constraints atlas**

Narrabri to Turravan Line Upgrade  
 REVIEW OF ENVIRONMENTAL FACTORS



**Legend**

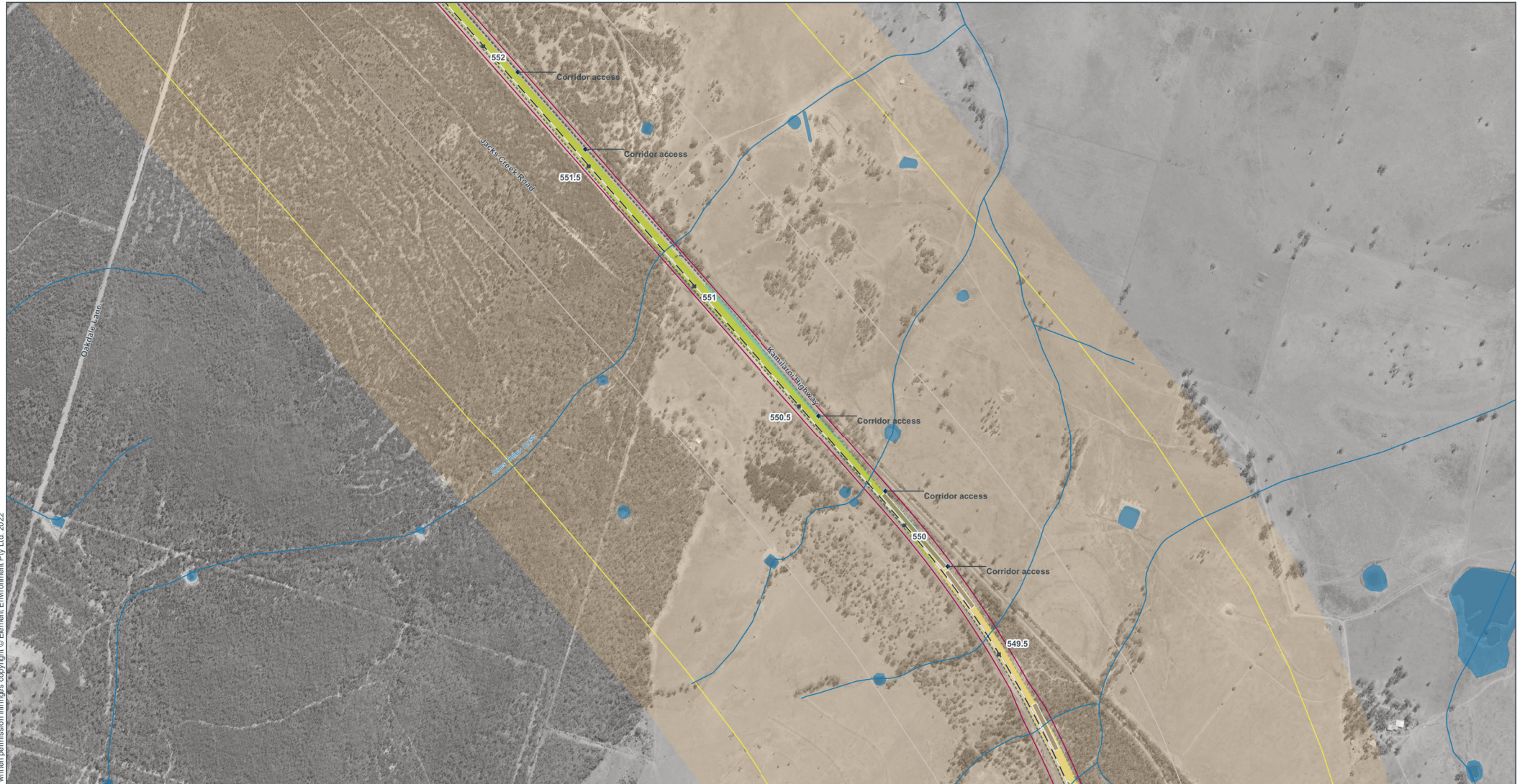
<p><b>Ecology</b></p> <ul style="list-style-type: none"> <li> Key Fish Habitat</li> <li> National Parks and Wildlife Service Reserve (NPWS)</li> <li> State forest</li> </ul>	<p><b>Vegetation types</b></p> <ul style="list-style-type: none"> <li> Exotic grassland</li> <li> Low condition native grassland</li> <li> Narrow-leaved Ironbark - White Cypress Pine Woodland</li> <li> Native grassland</li> <li> Native grassland on cracking clay soil</li> <li> Pilliga Box - White Cypress Pine Woodland</li> <li> Poplar Box - White Cypress Pine Woodland</li> </ul>	<p><b>General</b></p> <ul style="list-style-type: none"> <li> Places</li> <li> Point of interest</li> <li> Railway</li> </ul> <p><b>Heritage</b></p> <ul style="list-style-type: none"> <li> Heritage (Local Environmental Plan)</li> <li> State heritage</li> </ul>	<p><b>Hydrology</b></p> <ul style="list-style-type: none"> <li> Watercourse</li> <li> Hydrological area</li> </ul> <p><b>Noise</b></p> <ul style="list-style-type: none"> <li> Noise logger location 1 (L1)</li> <li> Noise logger location 2 (L2)</li> </ul>	<p><b>Worst case scenario noise contours</b></p> <ul style="list-style-type: none"> <li> Day</li> <li> Evening</li> <li> Evening/Night (NCA 3)</li> <li> Night</li> </ul>	<p><b>Noise catchment areas</b></p> <ul style="list-style-type: none"> <li> Noise catchment area 1 (NCA 1)</li> <li> Noise catchment area 2 (NCA 2)</li> <li> Noise catchment area 3 (NCA 3)</li> </ul> <p><b>Pollution</b></p> <ul style="list-style-type: none"> <li> National pollution inventory</li> <li> Contaminated sites (NSW EPA; 13Aug21)</li> </ul>	<p><b>Project components</b></p> <ul style="list-style-type: none"> <li> Approximate corridor access points</li> <li> ARTC lease</li> <li> Approximate construction sites including Laydown/storage/ancillary facilities</li> </ul>
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Appendix A -9  
**Environmental constraints atlas**

Narrabri to Turravan Line Upgrade  
 REVIEW OF ENVIRONMENTAL FACTORS



**Legend**

**Ecology**

- Key Fish Habitat
- National Parks and Wildlife Service Reserve (NPWS)
- State forest

**Vegetation types**

- Exotic grassland
- Low condition native grassland
- Narrow-leaved Ironbark - White Cypress Pine Woodland
- Native grassland
- Native grassland on cracking clay soil
- Pilliga Box - White Cypress Pine Woodland
- Poplar Box - White Cypress Pine Woodland

**General**

- Places
- Point of interest
- Railway
- Heritage (Local Environmental Plan)
- State heritage

**Hydrology**

- Watercourse
- Hydrological area
- Noise**
- Noise logger location 1 (L1)
- Noise logger location 2 (L2)

**Worst case scenario noise contours**

- Day
- Evening
- Evening/Night (NCA 3)
- Night

**Noise catchment areas**

- Noise catchment area 1 (NCA 1)
- Noise catchment area 2 (NCA 2)
- Noise catchment area 3 (NCA 3)

**Pollution**

- National pollution inventory
- Contaminated sites (NSW EPA; 13Aug21)

**Project components**

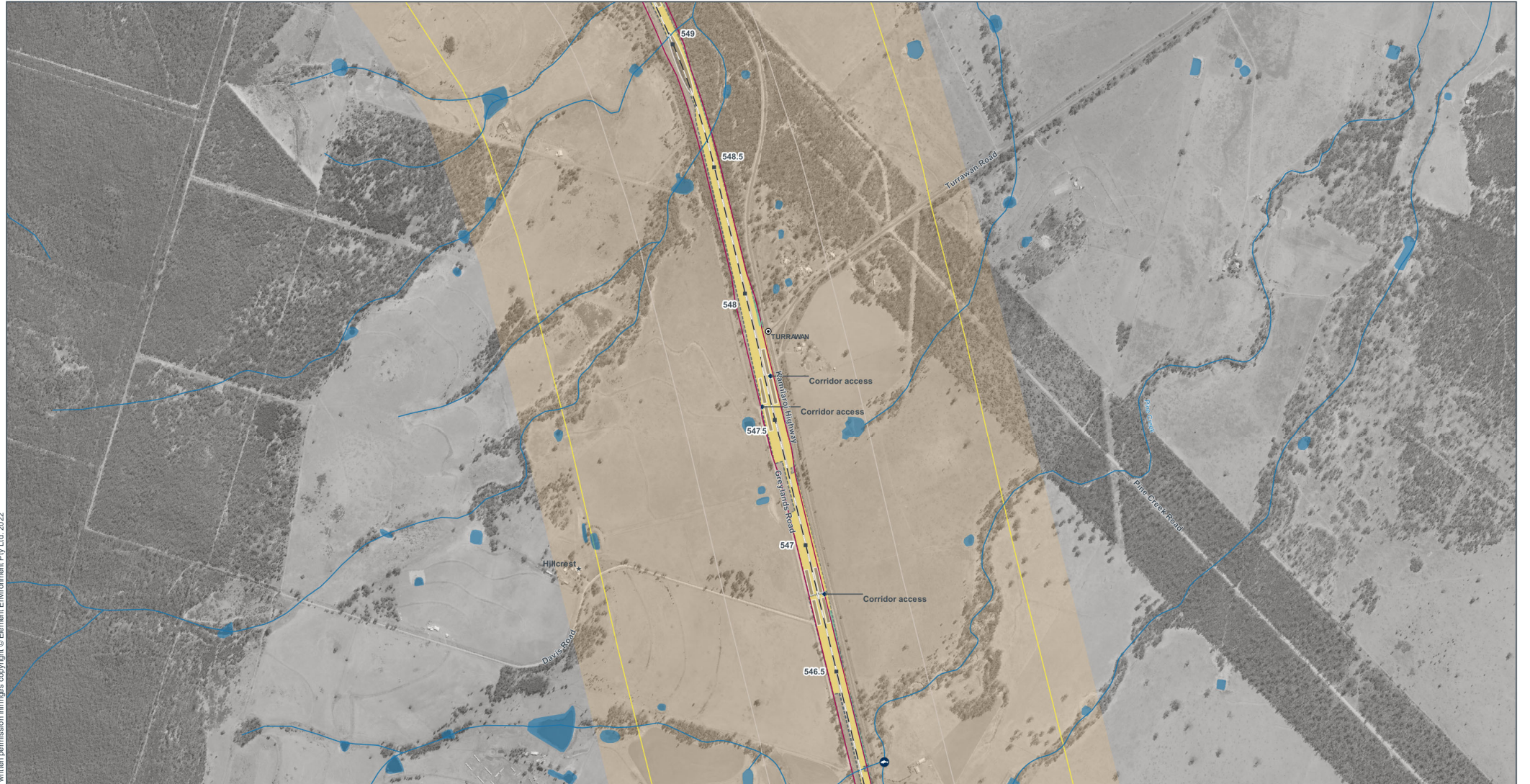
- Approximate corridor access points
- ARTC lease
- Approximate construction sites including Laydown/storage/ancillary facilities

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Appendix A - 10  
**Environmental constraints atlas**

Narrabri to Turravan Line Upgrade  
 REVIEW OF ENVIRONMENTAL FACTORS



**Legend**

<p><b>Ecology</b></p> <ul style="list-style-type: none"> <li> Key Fish Habitat</li> <li> National Parks and Wildlife Service Reserve (NPWS)</li> <li> State forest</li> </ul>	<p><b>Vegetation types</b></p> <ul style="list-style-type: none"> <li> Exotic grassland</li> <li> Low condition native grassland</li> <li> Narrow-leaved Ironbark - White Cypress Pine Woodland</li> <li> Native grassland</li> <li> Native grassland on cracking clay soil</li> <li> Pilliga Box - White Cypress Pine Woodland</li> <li> Poplar Box - White Cypress Pine Woodland</li> </ul>	<p><b>General</b></p> <ul style="list-style-type: none"> <li> Places</li> <li> Point of Interest</li> <li> Railway</li> </ul> <p><b>Heritage</b></p> <ul style="list-style-type: none"> <li> Heritage (Local Environmental Plan)</li> <li> State heritage</li> </ul>	<p><b>Hydrology</b></p> <ul style="list-style-type: none"> <li> Watercourse</li> <li> Hydrological area</li> </ul> <p><b>Noise</b></p> <ul style="list-style-type: none"> <li> Noise logger location 1 (L1)</li> <li> Noise logger location 2 (L2)</li> </ul>	<p><b>Worst case scenario noise contours</b></p> <ul style="list-style-type: none"> <li> Day</li> <li> Evening</li> <li> Evening/Night (NCA 3)</li> <li> Night</li> </ul>	<p><b>Noise catchment areas</b></p> <ul style="list-style-type: none"> <li> Noise catchment area 1 (NCA 1)</li> <li> Noise catchment area 2 (NCA 2)</li> <li> Noise catchment area 3 (NCA 3)</li> </ul> <p><b>Pollution</b></p> <ul style="list-style-type: none"> <li> National pollution inventory</li> <li> Contaminated sites (NSW EPA; 13Aug21)</li> </ul>	<p><b>Project components</b></p> <ul style="list-style-type: none"> <li> Approximate corridor access points</li> <li> ARTC lease</li> <li> Approximate construction sites including Laydown/storage/ancillary facilities</li> </ul>
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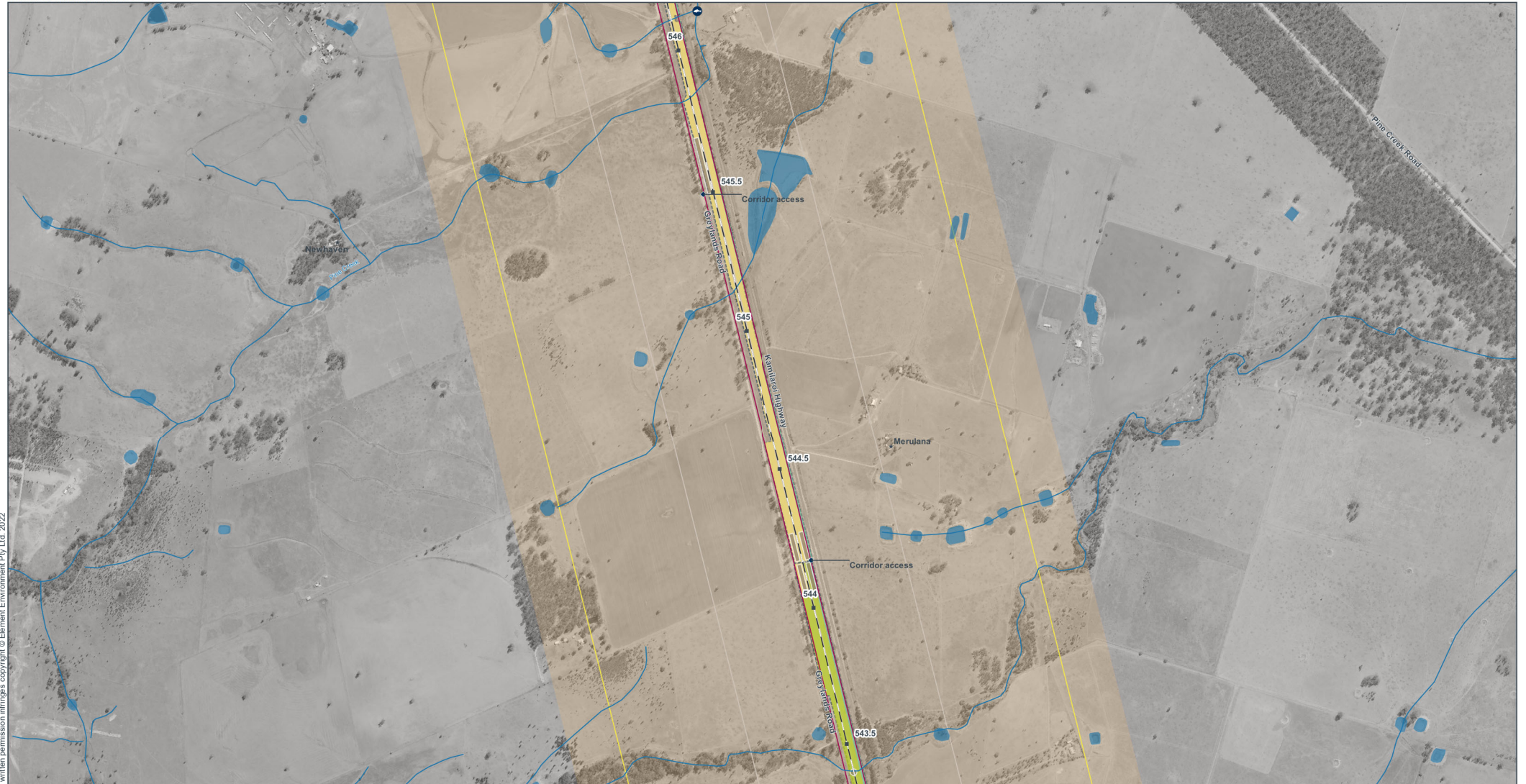
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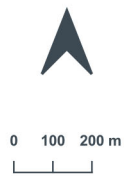
Appendix A - 11  
**Environmental constraints atlas**

Narrabri to Turravan Line Upgrade  
 REVIEW OF ENVIRONMENTAL FACTORS



**Legend**

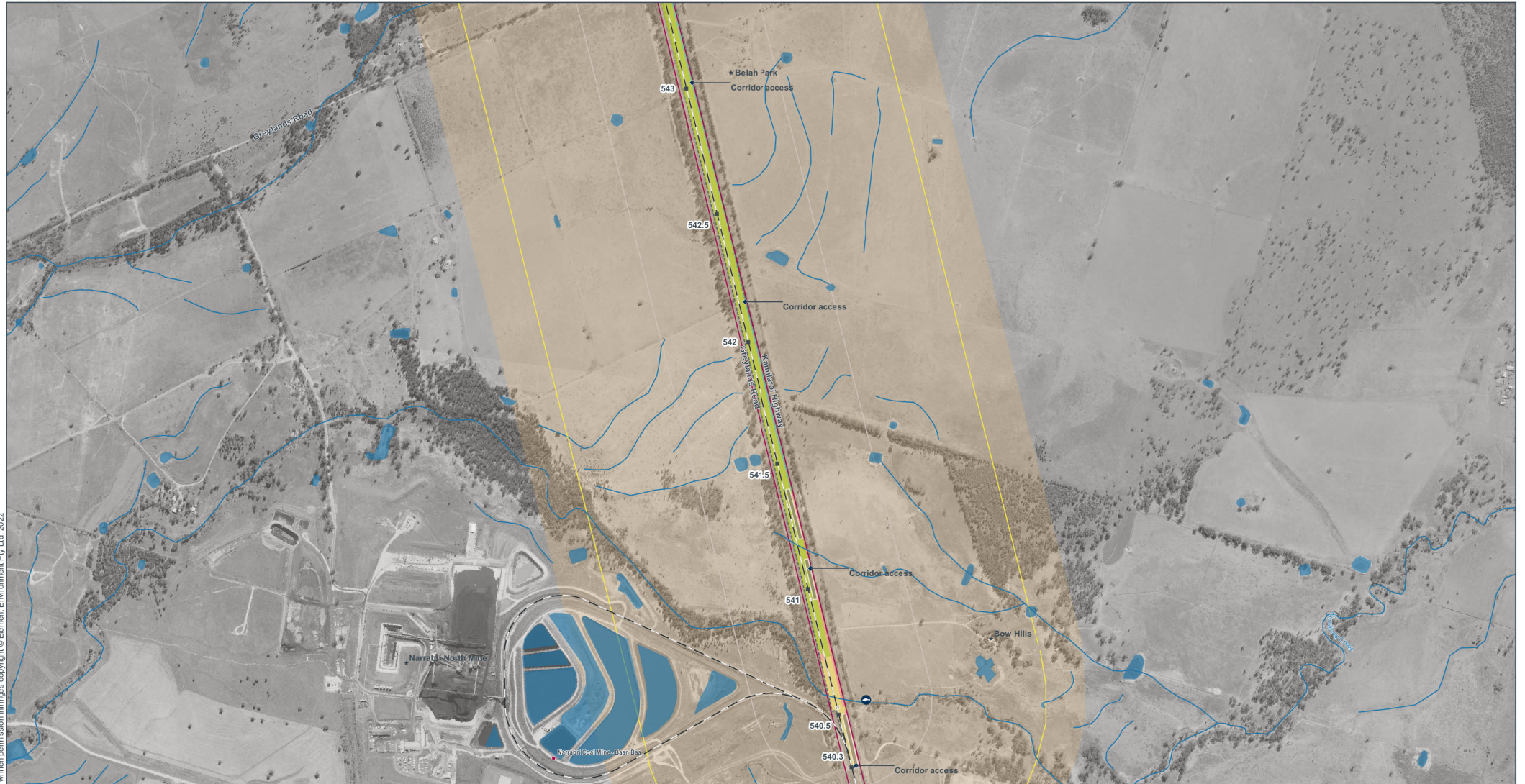
<p><b>Ecology</b></p> <ul style="list-style-type: none"> <li> Key Fish Habitat</li> <li> National Parks and Wildlife Service Reserve (NPWS)</li> <li> State forest</li> </ul>	<p><b>Vegetation types</b></p> <ul style="list-style-type: none"> <li> Exotic grassland</li> <li> Low condition native grassland</li> <li> Narrow-leaved Ironbark - White Cypress Pine Woodland</li> <li> Native grassland</li> <li> Native grassland on cracking clay soil</li> <li> Pilliga Box - White Cypress Pine Woodland</li> <li> Poplar Box - White Cypress Pine Woodland</li> </ul>	<p><b>General</b></p> <ul style="list-style-type: none"> <li> Places</li> <li> Point of interest</li> <li> Railway</li> </ul> <p><b>Heritage</b></p> <ul style="list-style-type: none"> <li> Heritage (Local Environmental Plan)</li> <li> State heritage</li> </ul>	<p><b>Hydrology</b></p> <ul style="list-style-type: none"> <li> Watercourse</li> <li> Hydrological area</li> </ul> <p><b>Noise</b></p> <ul style="list-style-type: none"> <li> Noise logger location 1 (L1)</li> <li> Noise logger location 2 (L2)</li> </ul>	<p><b>Worst case scenario noise contours</b></p> <ul style="list-style-type: none"> <li> Day</li> <li> Evening</li> <li> Evening/Night (NCA 3)</li> <li> Night</li> </ul>	<p><b>Noise catchment areas</b></p> <ul style="list-style-type: none"> <li> Noise catchment area 1 (NCA 1)</li> <li> Noise catchment area 2 (NCA 2)</li> <li> Noise catchment area 3 (NCA 3)</li> </ul> <p><b>Pollution</b></p> <ul style="list-style-type: none"> <li> National pollution inventory</li> <li> Contaminated sites (NSW EPA; 13Aug21)</li> </ul>	<p><b>Project components</b></p> <ul style="list-style-type: none"> <li> Approximate corridor access points</li> <li> ARTC lease</li> <li> Approximate construction sites including Laydown/storage/ancillary facilities</li> </ul>
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Appendix A -12  
**Environmental constraints atlas**

Narrabri to Turrawan Line Upgrade  
 REVIEW OF ENVIRONMENTAL FACTORS



**Legend**

**Ecology**

- Key Fish Habitat
- National Parks and Wildlife Service Reserve (NPWS)
- State forest

**Vegetation types**

- Exotic grassland
- Low condition native grassland
- Narrow-leaved Ironbark - White Cypress Pine Woodland
- Native grassland
- Native grassland on cracking clay soil
- Pilliga Box - White Cypress Pine Woodland
- Poplar Box - White Cypress Pine Woodland

**General**

- Places
- Point of interest
- Railway
- Heritage (Local Environmental Plan)
- State heritage

**Hydrology**

- Watercourse
- Hydrological area
- Noise**
- Noise logger location 1 (L1)
- Noise logger location 2 (L2)

**Worst case scenario noise contours**

- Day
- Evening
- Evening/Night (NCA 3)
- Night

**Noise catchment areas**

- Noise catchment area 1 (NCA 1)
- Noise catchment area 2 (NCA 2)
- Noise catchment area 3 (NCA 3)

**Pollution**

- National pollution inventory
- Contaminated sites (NSW EPA; 13Aug21)

**Project components**

- Approximate corridor access points
- ARTC lease
- Approximate construction sites including Laydown/storage/ancillary facilities