

Transport  
for NSW

# M1 Pacific Motorway extension to Raymond Terrace Condition E6 Clearing Report

October 2024



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## Acknowledgement of Country

Transport for NSW acknowledges the Awabakal, Wonnarua and Worimi Traditional Custodians of the land on which the M1 Pacific Motorway Extension to Raymond Terrace project is located.

We pay our respects to Awabakal, Wonnarua and Worimi Elders past and present and celebrate the diversity of Aboriginal people and their ongoing culture and connections to the lands and waters of NSW.

Many of the transport routes we use today – from rail lines, to roads, to water crossings – follow the traditional Songlines, trade routes and ceremonial paths in Country that our nation’s First Peoples followed for tens of thousands of years.

Transport for NSW is committed to honouring Aboriginal peoples’ cultural and spiritual connections to the land, waters and seas and their rich contribution to society.

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## Document control

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<b>Document number</b>	
<b>Department</b>	Infrastructure & Place

## Versions

Version	Amendment notes
1.0	Draft for Transport review
2.0	Revised for issue



# 1. Introduction

## 1.1 Background

### 1.1.1 Project background

Transport is extending the M1 Pacific Motorway from Black Hill to the Pacific Highway at Raymond Terrace, bypassing Beresfield, Hexham and Heatherbrae. The project passes through the City of Newcastle and Port Stephens Council local government areas (LGAs).

The project addresses a key national motorway ‘missing link’ between Sydney and Brisbane as the existing M1 Pacific Motorway, New England Highway and Pacific Highway carry some of the highest traffic volumes across the Hunter.

Once complete, the extension will remove thousands of vehicles from key congestion and merge points along this corridor. Key features of the project include:

- A 15km motorway comprised of a four-lane divided road (two lanes in each direction).
- Motorway access from the existing road network via four new interchanges at Black Hill, Tarro, Tomago and Raymond Terrace.
- A 2.6km viaduct over the Hunter River floodplain including new bridge crossings over the Hunter River, the Main North Rail Line, and the New England Highway.
- Bridge structures over local waterways at Tarro and Raymond Terrace, and an overpass for Masonite Road in Heatherbrae.

The Ministers Conditions of Approval for the M12RT project made an allowance for construction and operation of the project to be carried out in stages. The development of a staging report to describe the proposed staging was accepted by the NSW Planning Secretary on 13 May 2023 and an updated staging report was accepted on 25 July 2023.

### 1.1.2 Planning approval background

Transport for NSW (Transport) completed an environmental impact statement (EIS) of the M1 Pacific Motorway from Black Hill to the Pacific Highway at Raymond Terrace Project (the M12RT project) in July 2021. The EIS identified a range of environmental, social and planning issues associated with the construction and operation of the M12RT project and proposed measures to mitigate and manage those potential impacts.

The EIS was publicly exhibited from 28 July 2021 to 24 August 2021. Following public exhibition, submissions from stakeholders were received and addressed by Transport in the Submissions Report, which was lodged in June 2022. The Submissions Report included a revised biodiversity report.

The Minister for Planning approved the M12RT project under section 5.19 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) on 8 November 2022 (the approval). The approval incorporated the Minister’s conditions of approval.

Part E (key issue conditions) of the approval includes several conditions relating to biodiversity credits which are relevant to this report. These conditions and their relevance are reviewed below in Table 1-1.

Table 1-1 Approval conditions relevant to this report

ID	Condition	Relevance
E5	The clearing of native vegetation, in particular Koala habitat and Mangroves, must be minimised with the objective of reducing impacts to threatened species and ecological communities and threatened species habitat.	This report addresses this requirement.
E6	A report on the final construction footprint demonstrating how clearing of native vegetation has been minimised, in particular Koala habitat and mangroves, must be provided to the Planning Secretary, BCD and DCCEEW for information, within 12 months of the commencement of construction.	This report addresses this requirement for an interim project footprint which is yet to be finalised. Refer to Section 1.3.
E7*	<p>The Proponent must meet the biodiversity offset obligations for ecosystem and species credits as set out in Table 3 and Table 4 within 12 months of the commencement of construction. The retirement of the biodiversity credits must be carried out in accordance with the NSW Biodiversity Offsets Policy for Major Projects and can be achieved by:</p> <p>(a) acquiring and retiring “biodiversity credits” within the meaning of the Biodiversity Conservation Act 2016; and/or</p> <p>(b) properties secured with the NPWS, on the basis of a draft credit report to show what the property would provide and written confirmation from NPWS that the financial contributions for acquisition and management have been received; and/or</p> <p>(c) making a payment into the Biodiversity Conservation Fund; and/or</p> <p>(d) a Biodiversity Offset Strategy prepared in consultation with Biodiversity Conservation Trust, BCD and DCCEEW that provides supplementary measures or where the Proponent intends to utilise the biodiversity credit variation rules.</p>	<p>Condition E7 offset requirements are being addressed separate to this report.</p> <p>The Condition E7 offset requirements are based on the Plant Community Type (PCT) and habitat impacts identified in the revised biodiversity report.</p> <p>This report identifies reduced clearing impacts compared the revised biodiversity report.</p>

ID	Condition	Relevance
E8	The Proponent may review and update the ecosystem and species credit requirements in Table 3 and Table 4 to reflect the final construction footprint and resulting extent and type of plant community types to be cleared and the extent of threatened species habitat impacted by the construction of the CSSI. Amendments to the ecosystem and species credit requirements must be undertaken in consultation with and endorsed by BCD and DCCEEW and submitted to the Planning Secretary for approval within six months of determining the final construction footprint.	Condition E7 offset requirements are being addressed separate to this report.  Transport will identify any changes to ecosystem and species credit requirements based on the final construction footprint when available.

\* Tables 3 and 4 from the approval not reproduced.

## 1.2 Purpose of this report

The purpose of this report is to address the requirements of Condition E6 of the approval. In doing so the report:

- Provides the relevant environmental context, including a summary of native vegetation types present, mangroves and koala habitat
- Explains how native vegetation impacts have been reduced during the design and delivery of the project
- Identifies the clearing of native vegetation associated with the interim construction footprint and reduced impacts compared to the revised biodiversity assessment
- Identifies the extent of impacts on mangroves associated with the interim construction footprint reduced impacts compared to the revised biodiversity assessment
- Identifies the extent of impacts on koala habitat associated with the interim construction footprint reduced impacts compared to the revised biodiversity assessment.

## 1.3 Limitations

Some aspects of the project construction are still to be finalised. Additional clearing areas across the project may include but are not limited to breakdown bays, operation stage signage and utilities/services connections and other adjustments. These project elements are expected to result in some minor changes to the clearing amounts documented in this report. Where required, an addendum to this report will be prepared to address any additional clearing for the final construction footprint.

The findings presented in this report are based on clearing data dated 30 September 2024.

## 2. Environmental context

### 2.1 Native vegetation

The native vegetation impacts of the proposal for the purposes on the approval are documented in Table 3-2 of the Revised Biodiversity Assessment Report and are reproduced below in Table 2-1. The location of each PCT in relation to the project construction boundary and clearing footprint is shown in Appendix A.

Table 2-1 Impacted Plant Community Types (revised biodiversity report)

PCT ID*	PCT name	Area within construction footprint (ha)	Threatened ecological community (TSC Act)#
1590	Spotted Gum – Broad-leaved Mahogany – Red Ironbark shrubby open forest	40.93	Yes
1588	Grey Ironbark - Broad-leaved Mahogany - Forest Red Gum shrubby open forest on Coastal Lowlands of the Central Coast	7.74	No
1646	Smooth-barked Apple - Blackbutt – Old Man Banksia woodland on coastal sands of the Central and Lower North Coast	27.73	No
1649	Smooth-barked Apple – Red Mahogany – Swamp Mahogany – <i>Melaleuca sieberi</i> heathy swamp woodlands of coastal lowlands	1.33	Yes
1598	Forest Red Gum grassy open forest on floodplains of the lower Hunter	0.51	Yes
1716	Prickly-leaved Paperbark Forest on coastal lowlands of the Central Coast and Lower North Coast	1.88	Yes
1717	Broad-leaved Paperbark - Swamp Mahogany – Swamp Oak – Saw Sedge swamp forest of the Central Coast and Lower North Coast	10.56	Yes
1724	Broad-leaved Paperbark - Swamp Oak – Saw Sedge swamp forest on coastal lowlands of the Central Coast and Lower North Coast	1.64	Yes
1727	Swamp Oak – Sea Rush – <i>Baumea juncea</i> swamp forest on coastal lowlands of the Central Coast and Lower North Coast	8.84	Yes
1736	Water Couch – Tall Spike Rush freshwater wetland of the Central Coast and lower Hunter	59.21	Yes

PCT ID*	PCT name	Area within construction footprint (ha)	Threatened ecological community (TSC Act)#
1742	Jointed Twig-rush sedgeland	1.79	Yes
1071	<i>Phragmites australis</i> and <i>Typha orientalis</i> coastal freshwater wetlands of the Sydney Basin Bioregion	8.05	Yes

\* Legacy PCTs have been referenced consistent with the Revised Biodiversity Assessment Report.

# Former provisions of *Threatened Species Conservation Act 1995* remain as the project was assessed under transitional arrangements

## 2.2 Mangroves

Mangroves occur within the Grey Mangrove low closed forest PCT (1747). This community occurs on saline muds within the tidal zone of estuaries, including the Hunter River and Purgatory Creek within in the construction boundary. This community is dominated by *Avicennia marina* (Grey Mangrove) with an open midstorey of *Aegiceras corniculatum* and a sparse muddy ground layer dominated by pneumatophores of the Grey Mangrove. Common understorey species includes a sparse cover of salt tolerant species.

A total of 2.28 hectares of Grey Mangrove low closed forest occurs within the construction boundary (2.05 hectares assessed as good condition and 0.23 hectares assessed as moderate condition). The location of Grey Mangrove low closed forest is shown on the maps in Appendix A.

## 2.3 Koala habitat

The Revised Biodiversity Assessment Report identifies the following six PCTs within the construction boundary as containing primary, secondary and supplementary koala feed tree species:

- 1588 Grey Ironbark – Broad-leaved Mahogany – Forest Red Gum shrubby open forest on Coastal Lowlands of the Central Coast
- 1590 Spotted Gum – Broad-leaved Mahogany – Red Ironbark shrubby open forest
- 1598 Forest Red Gum grassy open forest on floodplains of the lower Hunter
- 1646 Smooth-barked Apple - Blackbutt – Old Man Banksia woodland on coastal sands of the Central and Lower North Coast
- 1717 Broad-leaved Paperbark - Swamp Mahogany – Swamp Oak – Saw Sedge swamp forest of the Central Coast and Lower North Coast
- 1724 Broad-leaved Paperbark - Swamp Oak – Saw Sedge swamp forest on coastal lowlands of the Central Coast and Lower North Coast

The Revised Biodiversity Assessment Report further refines koala habitat through the development of a koala species polygon which is shown in Figure 8-2 of the report. A total of 89.1 hectares of koala habitat (based on the koala species polygon) occurs within the construction boundary. This amount is also referenced in Table 4 to Condition E7 in the approval.

## 3. Native vegetation clearing

### 3.1 Measures to native vegetation impacts

Transport has sought to minimise native vegetation clearing throughout the design and construction of the project. Construction contract requirements require the clearing of native vegetation to be minimised and allowable clearing limits under the contract are lower than the extent of native vegetation impacts identified in the Revised Biodiversity Assessment Report.

Any variations to the contract clearing limits have been subject to Transport agreement and each has required detailed justification. The types of works that have been allowed to exceed contract clearing limits include:

- Drainage works
- Boundary fencing
- Services connections and utility adjustments
- Additional working area for embankments and bridge works
- Property accesses, site access and ancillary facilities
- Line of site for traffic signs and trimming for electrical lines.

The flora and fauna management subplans for the M12RT project include measures to minimise biodiversity impacts (including clearing of native vegetation) during construction. This has included implementation of a Flora and Fauna Protection Procedure which includes limits on native vegetation clearing, a vegetation clearing permit process, pre-clearing procedures and reporting, clearing procedures, and post-clearing reporting.

Pre-clearing measures have been implemented to reduce the risk of error or misinterpretation of clearing limits and have included:

- Identification of the approved limits of clearing and exclusion zones by clearly visible markers placed on each side of the road formation and bridges
- Installation of “No-go” Zone fencing and signage
- Delineation of clearing limits using signage and highly visible barrier or tape such as flagging, bunting, nightline or other robust and durable material
- Establishment of tree protection zones around all trees retained within and adjacent to the disturbance footprint using signage and highly visible barrier or tape such as flagging, bunting, nightline or other robust and durable material.

### 3.2 Native vegetation clearing

The clearing required for the project (noting the limitations identified in Section 1.3) is shown in Table 3-1. The reduction in native vegetation clearing compared the impacts Revised Biodiversity Assessment Report is also provided.

Table 3-1 Impacted Plant Community Types (revised biodiversity report)

PCT ID	PCT name	Revised BAR impact (ha)	Total clearing (ha)	Total clearing savings (ha)
1590	Spotted Gum – Broad-leaved Mahogany – Red Ironbark shrubby open forest	40.93	30.12	10.81
1588	Grey Ironbark - Broad-leaved Mahogany - Forest Red Gum shrubby open forest on Coastal Lowlands of the Central Coast	7.74	7.05	0.69
1646	Smooth-barked Apple - Blackbutt – Old Man Banksia woodland on coastal sands of the Central and Lower North Coast	27.73	23.32	7.81
1649	Smooth-barked Apple – Red Mahogany – Swamp Mahogany – <i>Melaleuca sieberi</i> heathy swamp woodlands of coastal lowlands	1.33	1.33	0
1598	Forest Red Gum grassy open forest on floodplains of the lower Hunter	0.51	0.31	0.2
1716	Prickly-leaved Paperbark Forest on coastal lowlands of the Central Coast and Lower North Coast	1.88	1.77	0.11
1717	Broad-leaved Paperbark - Swamp Mahogany – Swamp Oak – Saw Sedge swamp forest of the Central Coast and Lower North Coast	10.56	6.16	4.4
1724	Broad-leaved Paperbark - Swamp Oak – Saw Sedge swamp forest on coastal lowlands of the Central Coast and Lower North Coast	1.64	0.65	0.99

PCT ID	PCT name	Revised BAR impact (ha)	Total clearing (ha)	Total clearing savings (ha)
1727	Swamp Oak – Sea Rush – <i>Baumea juncea</i> swamp forest on coastal lowlands of the Central Coast and Lower North Coast	8.84	6.3	2.54
1736	Water Couch – Tall Spike Rush freshwater wetland of the Central Coast and lower Hunter	59.21	34.67	24.54
1742	Jointed Twig-rush sedgeland	1.79	1.12	0.67
1071	<i>Phragmites australis</i> and <i>Typha orientalis</i> coastal freshwater wetlands of the Sydney Basin Bioregion	8.05	5.51	2.54
1746	Saltmarsh Estuarine Complex	1.33	0.12	1.21
1747	Grey Mangrove low closed forest	2.28	0.83	1.45

### 3.3 Mangrove impacts

Mangroves within the project construction boundary occur within PCT 1747 Grey Mangrove low closed forest and are shown below in Figure 3-1. The calculated clearing of mangroves is 0.83 hectares, which is a reduction of 1.44 hectares compared to the impact identified in the Revised Biodiversity Assessment Report.

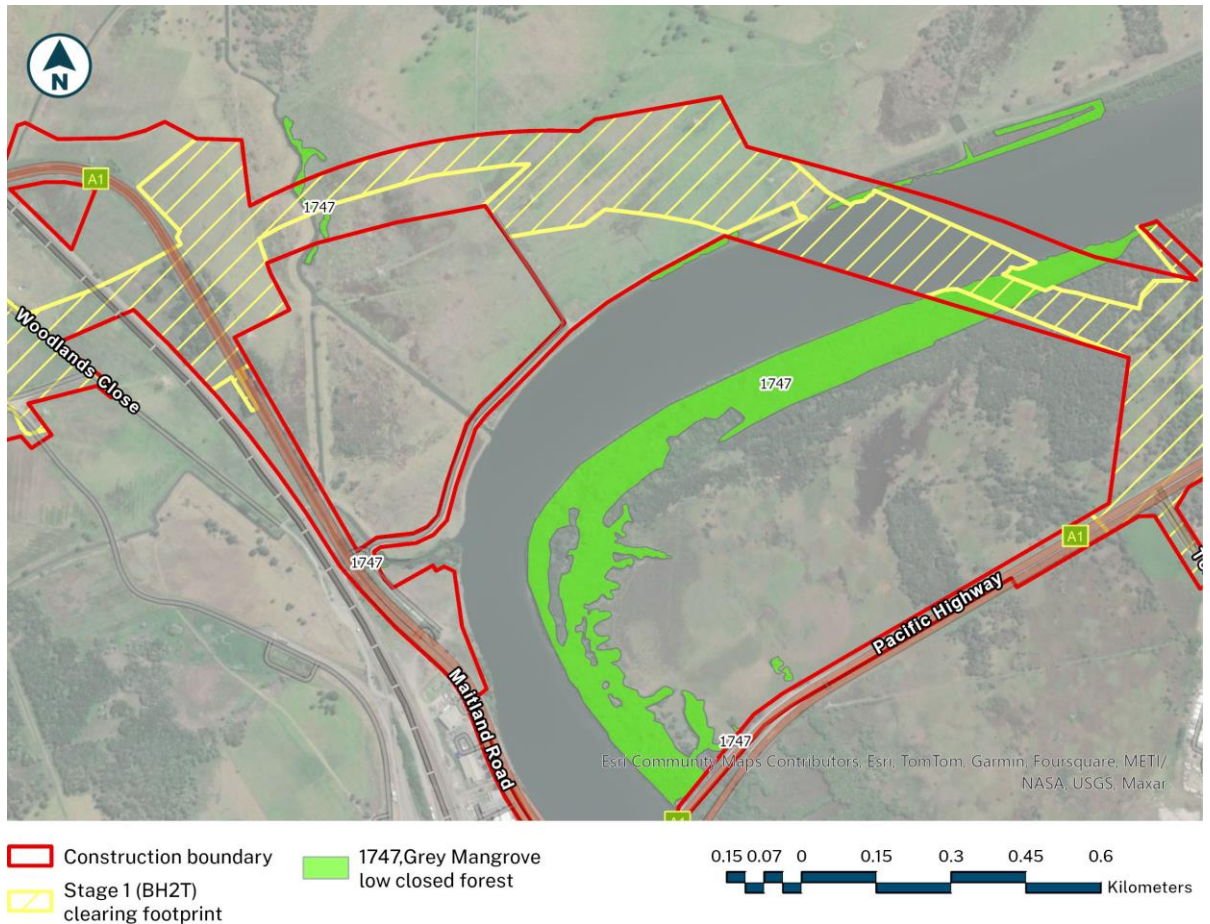


Figure 3-1: PCT 1747 Grey Mangrove low closed forest locations

### 3.4 Koala habitat impacts

Koala habitat within the project construction boundary occurs within PCTs 1588, 1590, 1598, 1646, 1717 and 1724 and is further refined by the koala species polygon included in Table 8-2 of the Revised Biodiversity Assessment Report.

The calculated clearing of these koala habitat is 57.96 hectares, which is a reduction of 31.14 hectares compared to the impact identified in the Revised Biodiversity Assessment Report (and Table 4 to Condition E7 in the approval).

## 4. Conclusion

Condition E6 of the approval requires preparation of a report on the final construction footprint demonstrating how clearing of native vegetation has been minimised, in particular Koala habitat and mangroves.

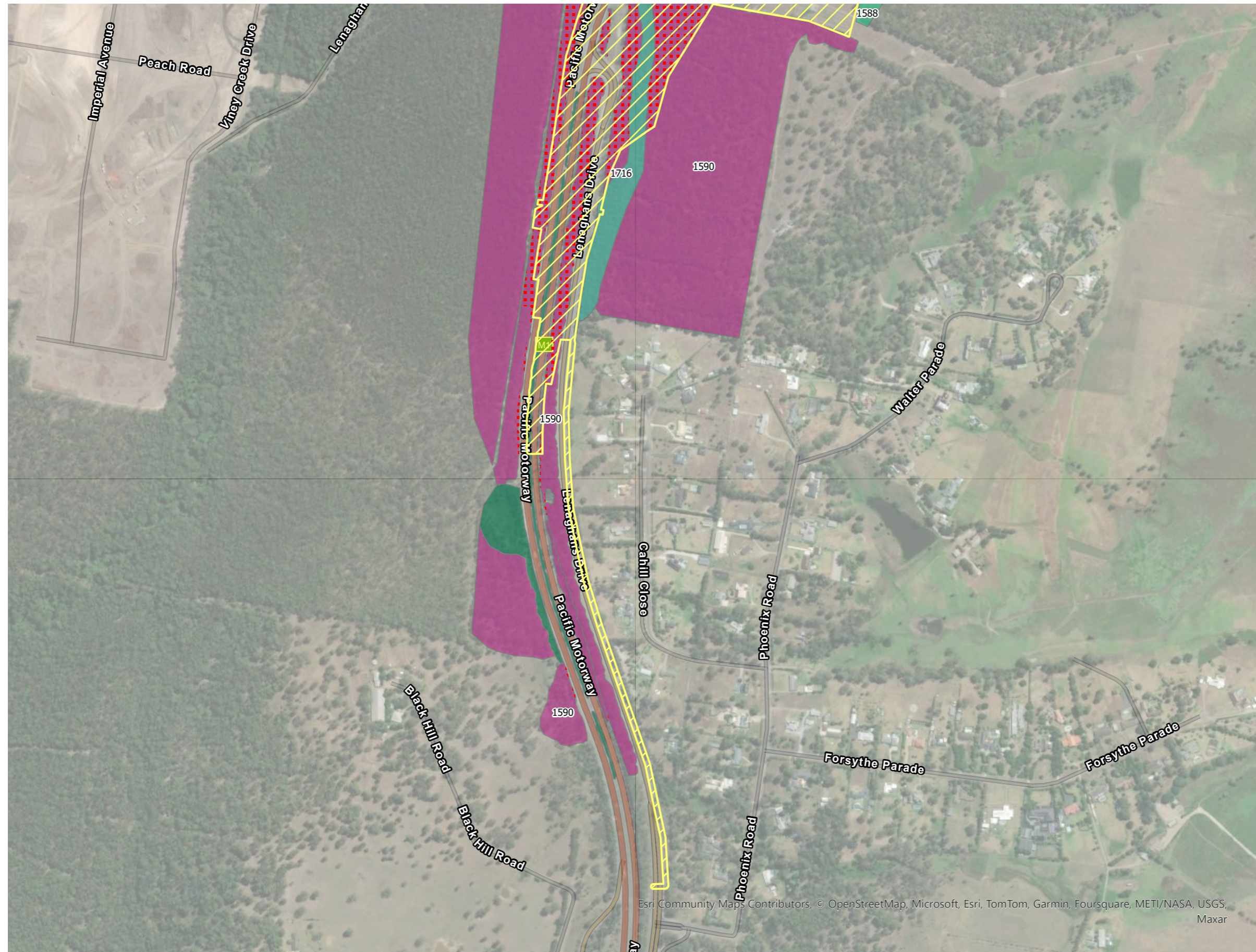
This report shows that impacts native vegetation, mangroves and koala habitat have been minimised as follows:

- Native vegetation impacts reduced within most PCTs totalling 57.96 hectares
- Mangrove impacts reduced by 1.45 hectares
- Koala habitat impacts (based on the koala species polygons in the Revised Biodiversity Assessment Report) reduced by 28.24 hectares.

Some minor changes to clearing amounts are expected for project elements including breakdown bays, operation stage signage and utilities/services connections and adjustments. Where required, an addendum to this report will be prepared to address any additional clearing for the final construction footprint.

# Appendix A

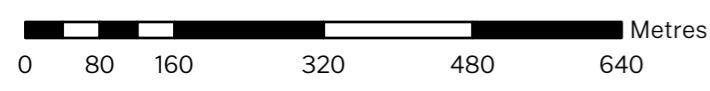
## Native vegetation clearing - mapping



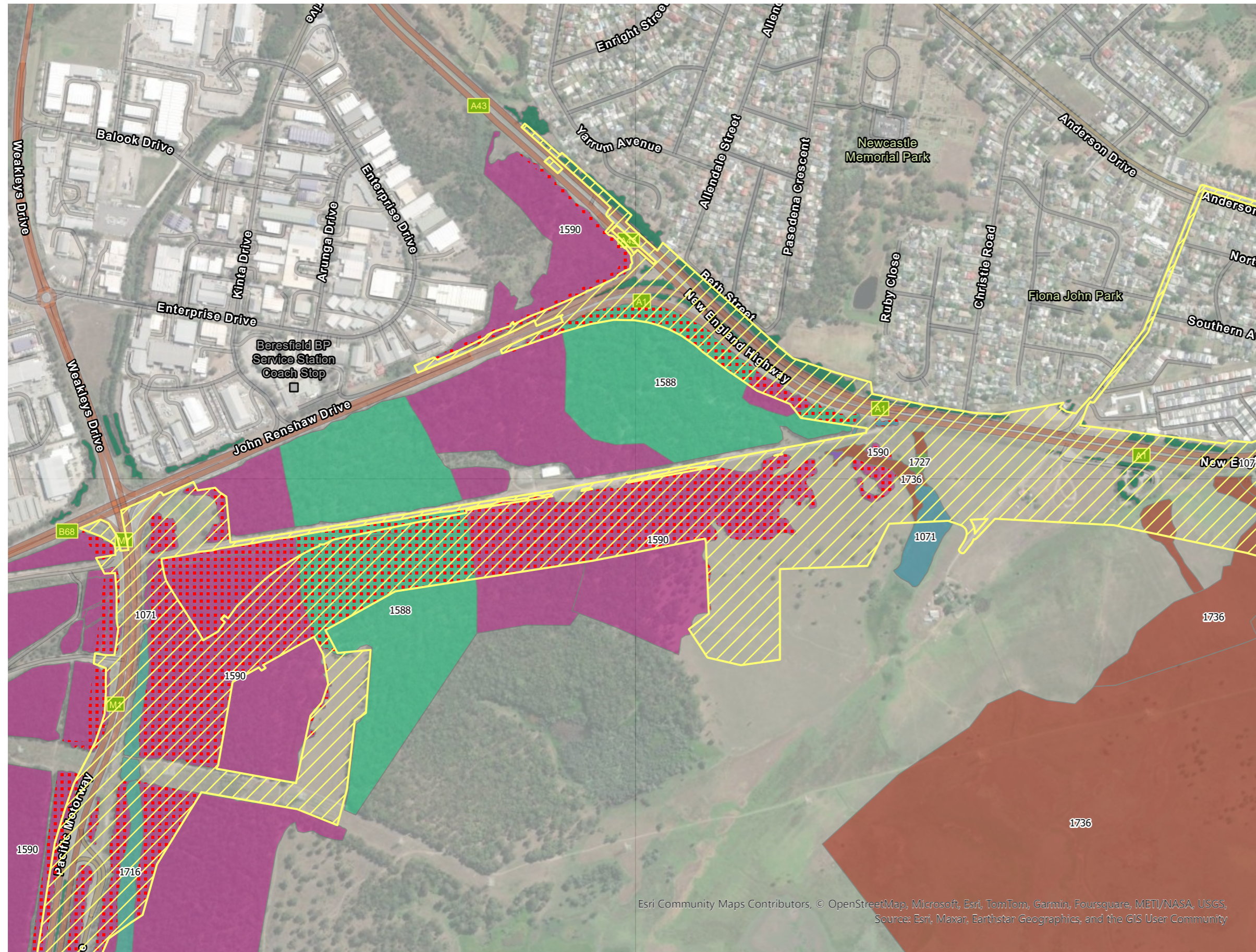
- Stage 1 (BH2T) clearing footprint
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



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\*Disturbance footprint as of 30 September 2024. Subject to change prior to finalisation of M12RT Construction Boundary



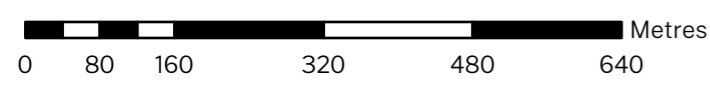
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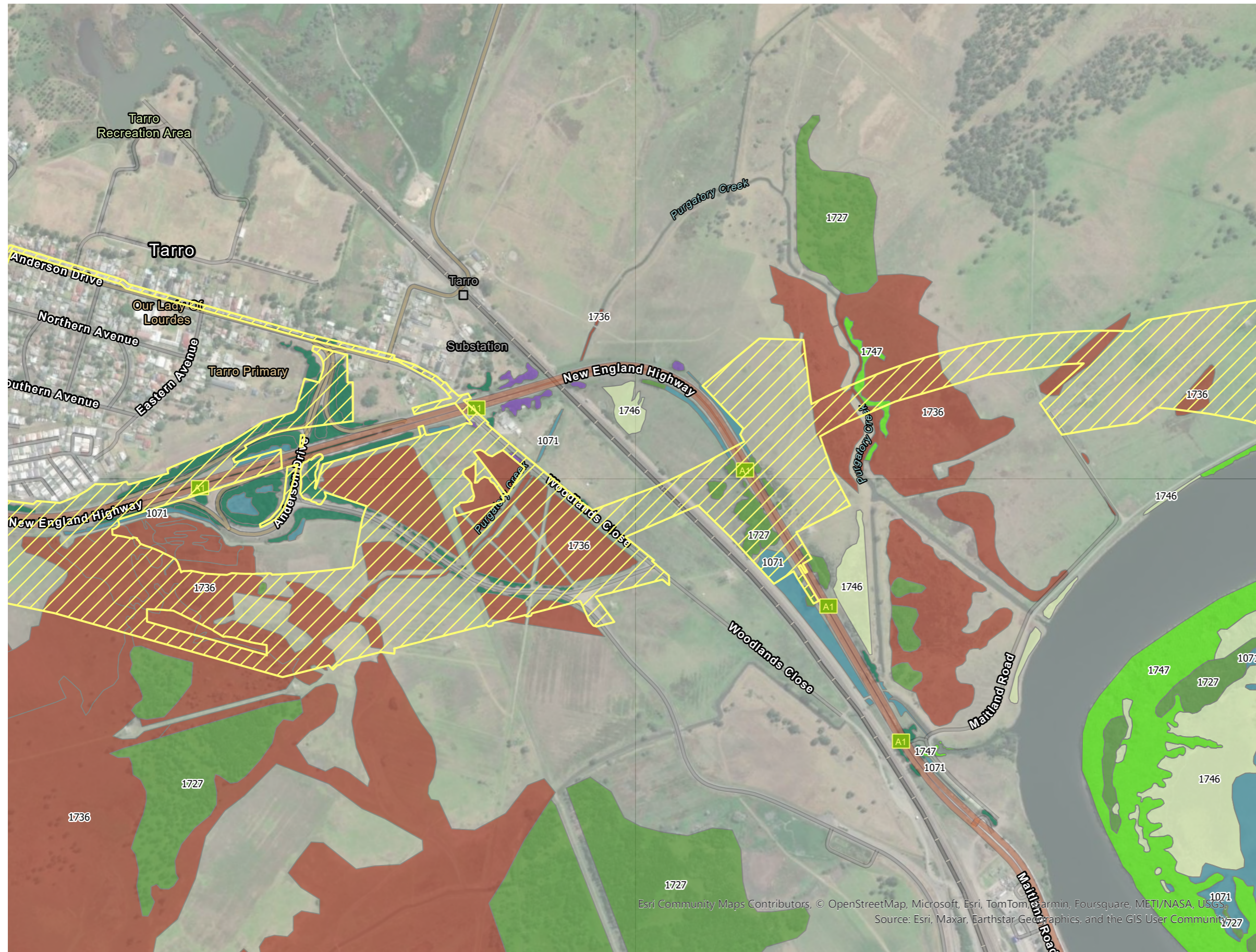
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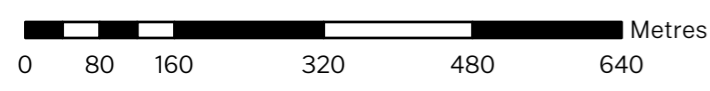
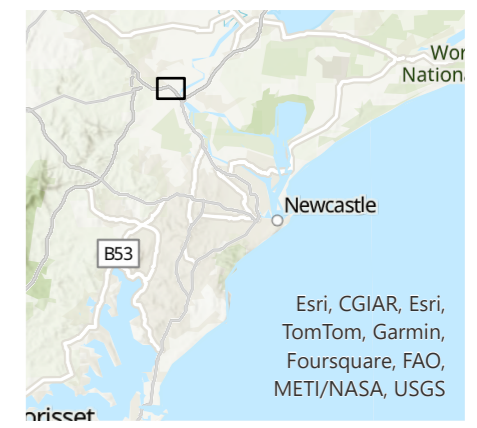
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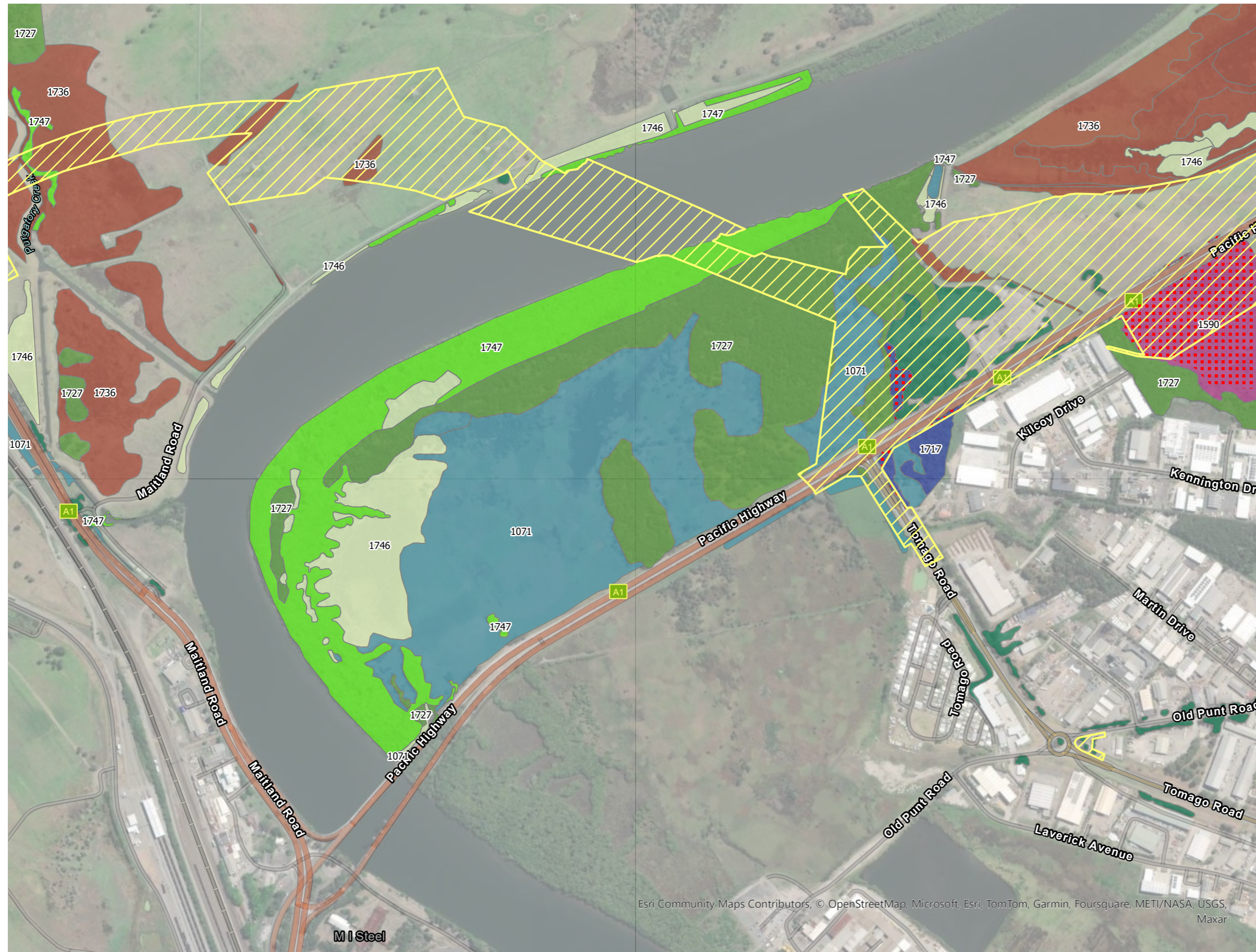
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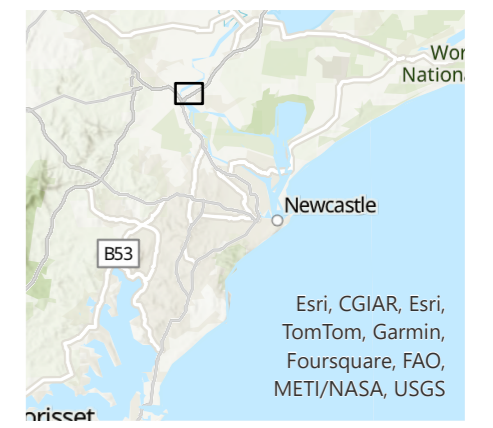
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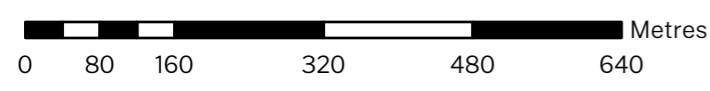
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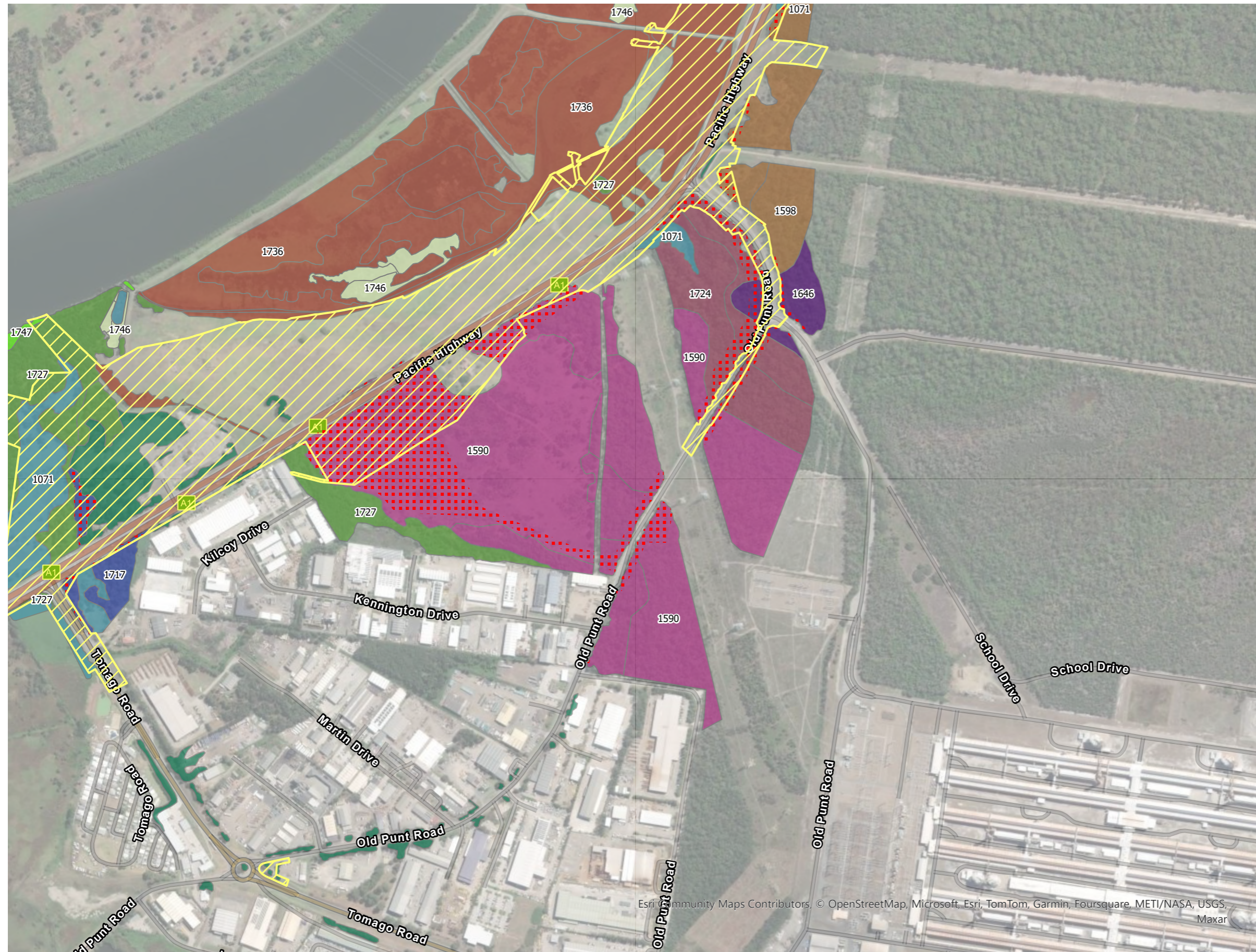
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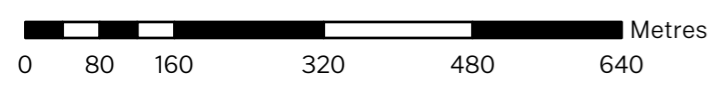
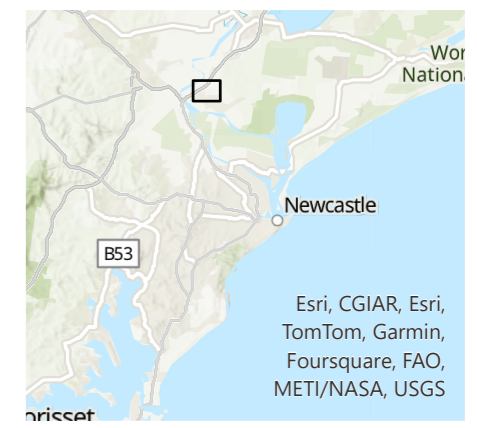
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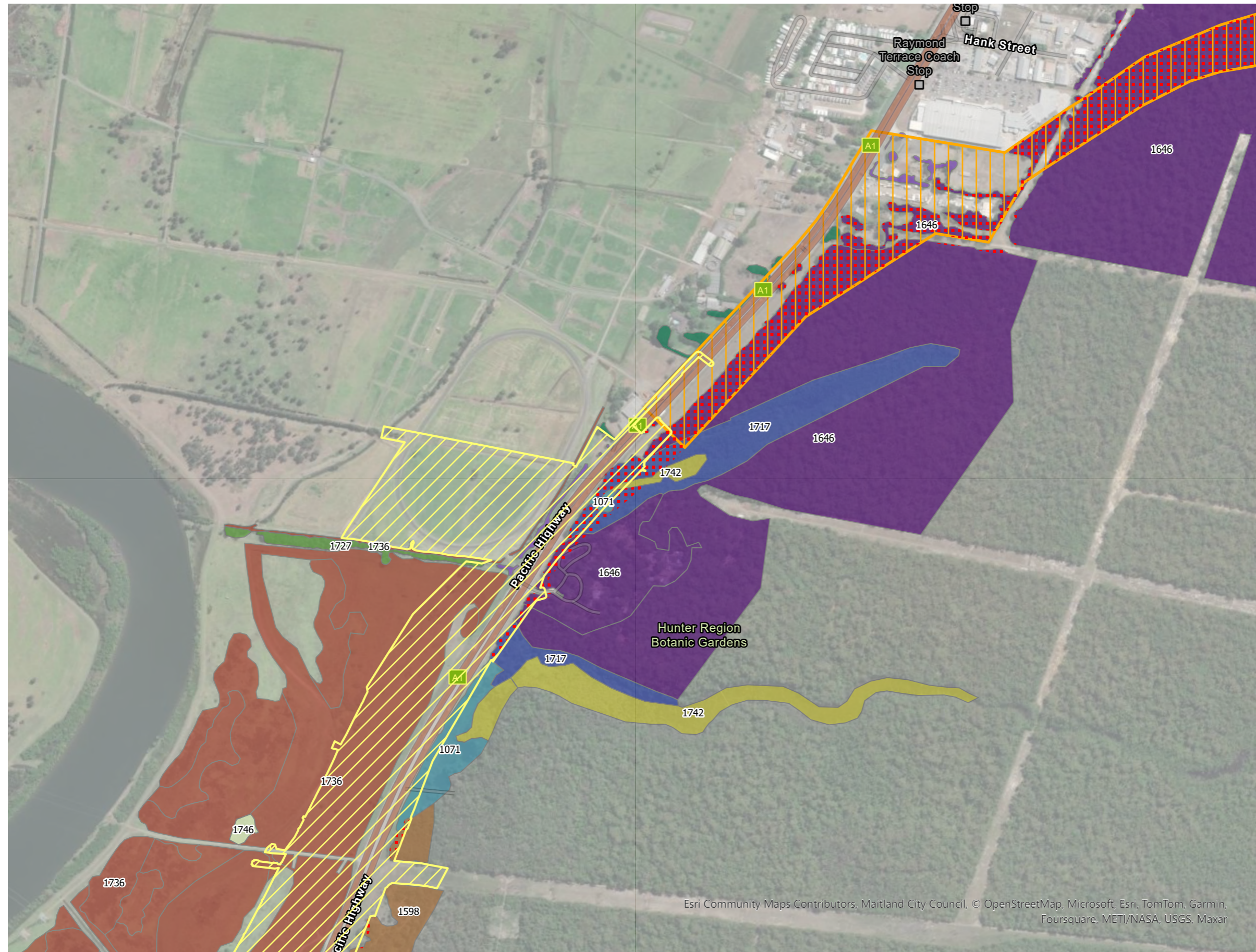
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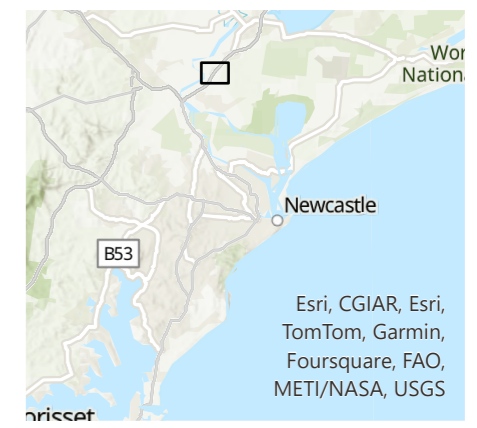
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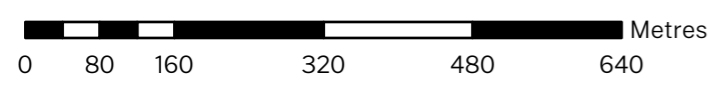
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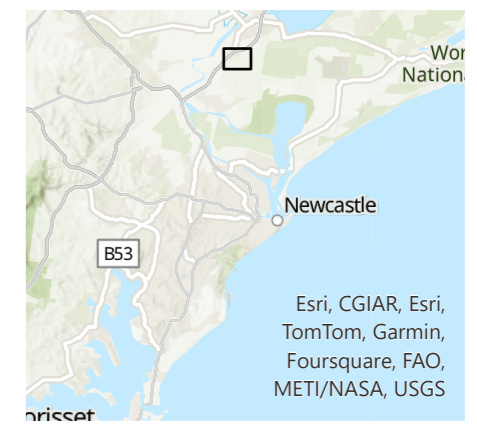
\*Disturbance footprint as of 30 September 2024. Subject to change prior to finalisation of M12RT Construction Boundary



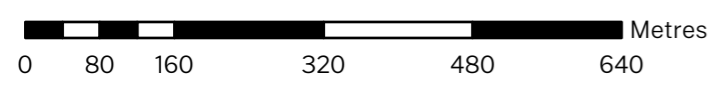
- Stage 1 (BH2T) clearing footprint
- Stage 2 (HB) clearing footprint
- Koala habitat
- Non-native woody vegetation
- Pine plantation
- 1071, Phragmites australis and Typha orientalis coastal freshwater wetlands of the Sydney Basin Bioregion
- 1598, Forest Red Gum grassy open forest on floodplains of the lower Hunter
- 1646, Smooth-barked Apple - Blackbutt - Old Man Banksia woodland on coastal sands of the Central and Lower North Coast
- 1649, Smooth-barked Apple - Red Mahogany - Swamp Mahogany - Melaleuca sieberi heathy swamp woodland of coastal lowlands
- 1717, Broad-leaved Paperbark - Swamp Mahogany - Swamp Oak - Saw Sedge swamp forest of the Central Coast and Lower North Coast
- 1742, Jointed Twig-rush sedgeland



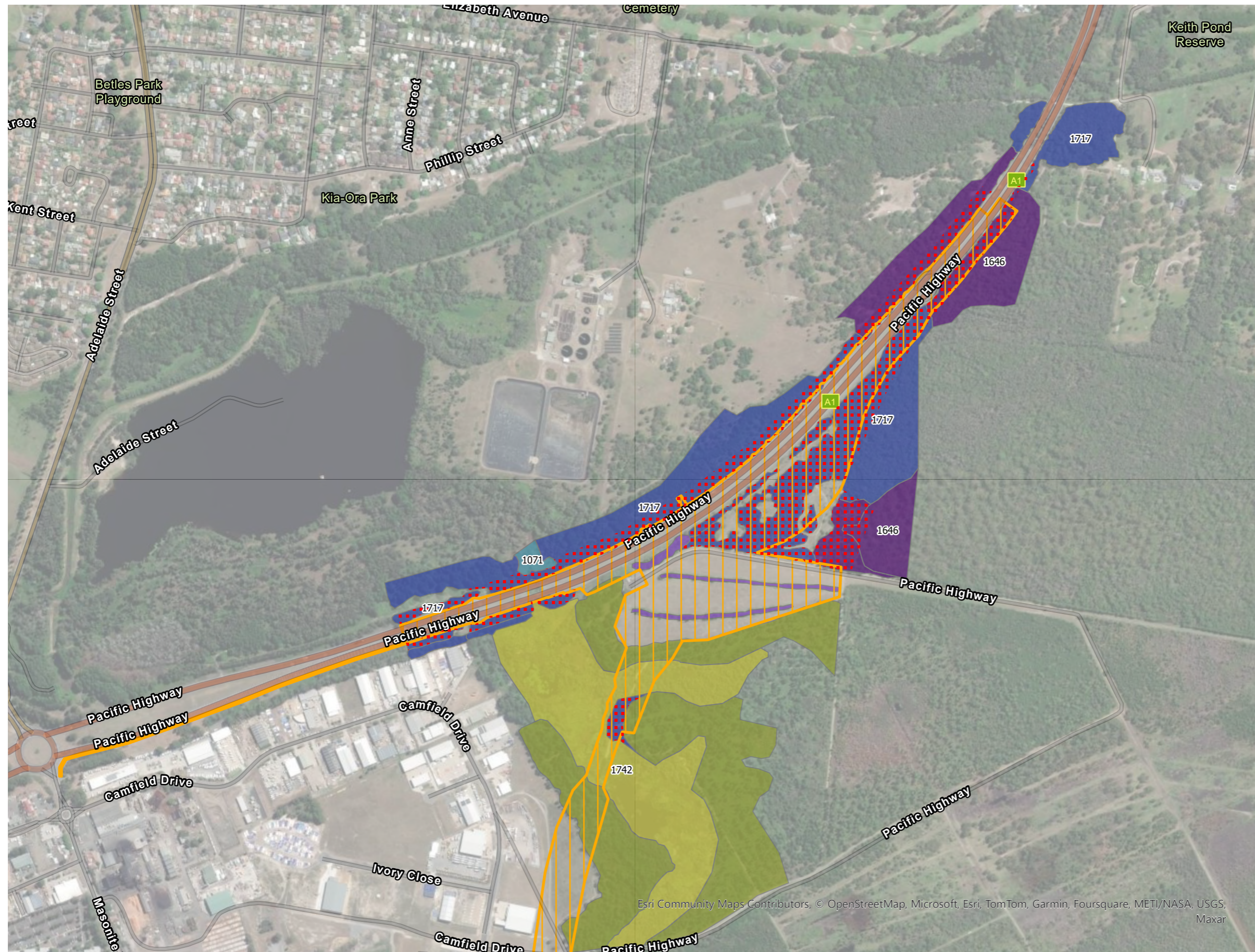
Spatial Reference  
 Name: GDA2020 MGA Zone 56  
 PCS: GDA2020 MGA Zone 56  
 GCS: GDA2020  
 Datum: GDA2020



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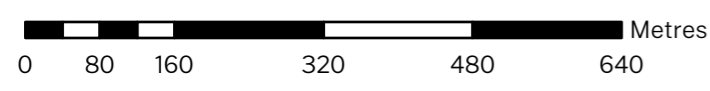
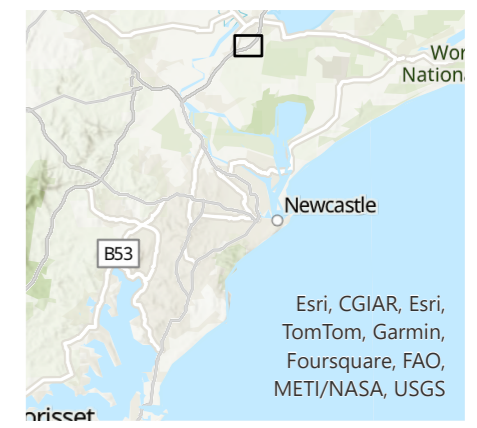
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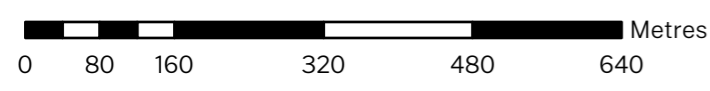
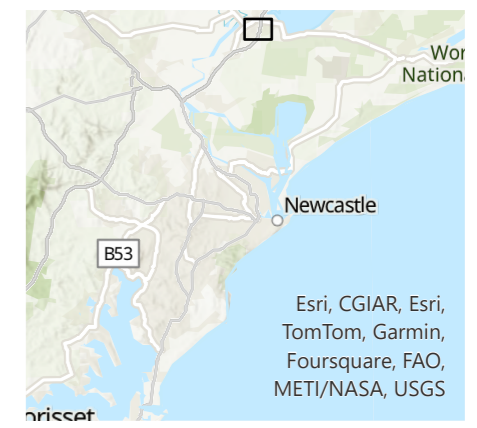
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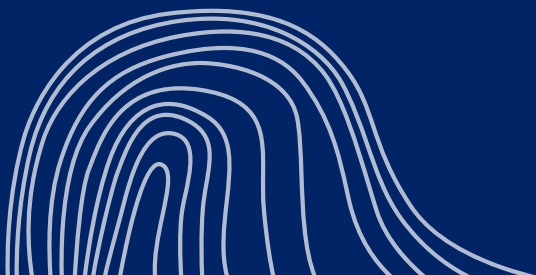
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