# Nature Conservation Management Sub-Plan

## Cross River Rail – Rail, Integration and Systems Alliance

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| Project number: | Q01080 |
| Document number: | RIS-UNA-000-001-MPL-000277 |
| Revision date: | 07 October 2021 |
| Revision number: | 04 |

### Document Approval

| Rev | Date | Prepared By | Reviewed By | Approved By | Remarks |
|---|---|---|---|---|---|
| A | 28/06/19 | UNITY – Environment Manager | UNITY – Delivery Manager | | IFR |
| B | 08/09/19 | UNITY – Environment Manager | UNITY – Delivery Manager | | IFR |
| C | 16/09/19 | UNITY – Environment Manager | UNITY – Delivery Manager | | IFR |
| D | 07/10/19 | UNITY – Environment Manager | UNITY – Delivery Manager | UNITY – Environment Manager | IFU |
| 00 | 27/10/19 | UNITY – Environment Manager | UNITY – Delivery Manager | UNITY – Environment Manager | IFU |
| 01 | 27/07/20 | UNITY – Senior Environmental Advisor | UNITY – Environment Manager | | IFR |
| 02 | 07/09/20 | | | UNITY – Environment Manager | IFU |
| 03 | 26/08/21 | UNITY – Senior Environmental Advisor | UNITY – Environment Manager | | IFR |
| 04 | 07/10/21 | | | UNITY – Environment Manager | IFU |
| Signature: | | | | [redacted] | |

## Plan Control

This Nature Conservation Management Sub-Plan (the plan) has been developed for the Cross River Rail – Rail, Integration and Systems Project.

## Approvals, Revisions and Amendments

Plan approval is in accordance with Section 4.1.2 of the Construction Environmental Management Plan (C-EMP).

Plan reviews and updates is in accordance with Section 7 and Section 8.1 of the C-EMP.

### Revision Details

| Revision | Remarks |
|---|---|
| A | Final C-EMP for Review and endorsement by the Environmental Monitor |
| B | Incorporation of IEM review comments from 16 August 2019 |
| C | Incorporation of IEM's second review from 12 September 2019 |
| D | Incorporation of IEM's third review from 20 September 2019<br>Plan endorsed for all works |
| 00 | Plan updated to Rev00 to reflect endorsed status |
| 01 | 6 monthly review and updated to incorporate changes linked to RfPC-7 and Updated O-EMP<br>The update does not include new or additional Relevant Project Works |
| 02 | Issued for Use |
| 03 | Issued for review to the IEM<br>6 monthly review and update to incorporate<br>• changes linked to RfPC-11<br>• addition of the Southern Area Scope of Works (Dutton Park and Buranda) |
| 04 | Issued for Use |

# Table of Contents

# 1 Purpose of this Plan

This sub-plan has been prepared to comply with

- Coordinator-General's Conditions of Approval – Appendix 1 – Part C
  - Condition 20(c)
- Final Outline – Environment Management Plan (O-EMP) – Outline Nature Conservation Management Plan.

| Component | Details |
|---|---|
| Environmental Outcome(s) | • Ecological, habitat and natural asset values of open space areas near Project Works are maintained;<br>• No net loss of MSES habitat, as defined in the Environmental Offsets Regulation 2014, occurs as a result of the design and construction of the Project; |
| Relevant Area | Site wide<br>Key areas (refer mapping section):<br>• Gilchrist Avenue construction work site in Victoria Park<br>• Mayne Yard – marine plants associated with Enoggera/Breakfast Creek as per the meaning of the Fisheries Act 1994<br>• Mayne Yard – potential for Flying Foxes.<br>• Areas mapped with NALL vegetation<br>– Breakfast Creek<br>– RNA Showgrounds<br>– Victoria Park<br>– Parts of the Fairfield to Salisbury (F2S) corridor<br>– Southern Area<br>– Any vegetation located on road reserves managed where BCC is the Road Authority<br>• Riparian Vegetation along Moolabin and Rocky Water Holes Creeks which have been determined Watercourses as per the meaning of the Water Act 2000<br>• Vegetation contributing to the State Heritage Listing of Victoria Park and the RNA Showgrounds |
| Relevant Works / Activities | • Vegetation clearing and trimming<br>• Trenching and excavation activities (entrapment risk)<br>• Rehabilitation<br>• All works that are in proximity of flora and fauna. |
| Performance Criteria | • Habitat for significant vegetation removed during construction is restored and rehabilitated to the extent reasonable and practical, consistent with a rehabilitation plan agreed with the relevant stakeholders<br>• Necessary clearing permits or approvals for vegetation clearing are obtained and clearing is undertaken in accordance with these permits or approvals. |
| Sustainability | Eco-1. |
| Mitigation Measure | • Undertake a pre-construction fauna survey within and around worksites to identify any species for which a species management plan needs to be developed<br>• Undertake a pre-construction ecological survey to confirm presence and extent of:<br>– Marine plants<br>– Regional ecosystems<br>– Flora EVNT species, particularly as it pertains to species under the Nature Conservation Act 1992 (hereafter referred to as the NC Act)<br>– Other protected plants (least concern and special least concern)<br>– Pest species under the Biosecurity Act 2014<br>• Obtain the relevant flora clearing and exemption permits /approvals as detailed in the Approvals Register for: |

| Component | Details |
|---|---|
| | – NC Act<br>– Marine plants<br>– Riparian Vegetation of Moolabin and Rocky Water Holes Creeks<br>• For areas of Marine Plants:<br>– Minimise the extent of permanent and temporary disturbance to a reasonable and practical level<br>– UNITY will develop a Marine Plant rehabilitation strategy in consultation with DAF as part of the development approval application process prior to construction works<br>– Rehabilitate the temporary Marine Plants disturbance in accordance with the relevant Approvals Conditions set by DAF<br>– Provide the Delivery Authority with a register summarising the extent of clearing of Marine Plants to support the Delivery Authority's in identifying whether net loss of habitat[1] has occurred across the Overall Project<br>• For areas of Riparian Vegetation:<br>– Minimise the extent of permanent and temporary disturbance to a reasonable and practical level<br>– Rehabilitate the temporary riparian vegetation disturbance with trees, shrub and grasses endemic to the area, sufficient to re-establish a riparian environment and protect bed and banks from erosion in accordance with the replanting Plan approved by DoR under the relevant Riverine Protection Permit<br>– Provide the Delivery Authority with a register summarising the extent of clearing of Riparian Vegetation to support the Delivery Authority in identifying whether net loss of habitat[2] has occurred across the Overall Project<br>• For exempt vegetation clearing (NALL)<br>– Provide the Delivery Authority with a register summarising the extent of clearing of Natural Assets Local Law 2003 (NALL) vegetation.<br>– The register must also clearly identify where enforceable State Statutory Requirements overlap NALL vegetation to support the Delivery Authority's commitment to develop a Project Wide Offset Strategy[3] in consultation with BCC.<br>– Engage and consult a suitably qualified arborist to provide advice on the management of NALL vegetation to be retained. The management measures are to be incorporated in the relevant documentation such as Workpacks and SEPs.<br>• For clearing of vegetation which contributes to the State Heritage Significance of a Place<br>– Undertake a Heritage Assessment in accordance with the Non-Indigenous Cultural Heritage Management Plan. This must include an assessment of the Heritage Value of the vegetation<br>– Obtain the relevant permits / approval from the DES and / or Heritage Council<br>– Comply with the requirements of the permits /approvals[4]<br>• All findings of the Ecological Survey for Pest Species to be incorporated in the relevant documentation as relevant such as the Biosecurity Management Plan, Workpacks and SEP<br>• Develop the necessary Species Management Programs (SMPs) based on the findings of the pre-construction surveys<br>• Implement the requirements of the SMP |

[1] The Marine Plants located along the projects are not Prescribed MSES. The Project is therefore exempt from the Marine Plants offset provisions under the Environmental Offsets Regulation 2014. The Delivery Authority as the Project Owner is therefore not required to develop and implement a Marine Plant Offset Strategy in consultation with DAF. Development and implementation of such a strategy outside of the legislative framework is at the discretion of the Delivery Authority.
[2] The Riparian Vegetation located along the projects is not a Prescribed MSES. The Project is exempt from the Regulated Vegetation offset provisions under the Environmental Offsets Regulation 2014. The Delivery Authority as the Project Owner is therefore not required to develop and implement an Offset Strategy in consultation with DNRME. Development and implementation of such a strategy outside of the legislative framework is at the discretion of the Delivery Authority.
[3] The implementation of the requirements of the NALL Offset Strategy is the responsibility of the Delivery Authority unless otherwise agreed.
[4] Where vegetation replacement options are imposed through the State Heritage permits / approval which may conflict with the Offset Agreement negotiated by the Delivery Authority for NALL vegetation in the same are, the State requirements prevail.

| Component | Details |
|---|---|
| | • At Mayne Yard implement the requirements, implement the DES Codes of practice Low impact activities affecting flying-fox roosts and Ecologically sustainable management of flying-fox roosts<br>• Minimise disturbance to significant vegetation and habitat during construction through:<br>– Disturbance extents, whether temporary or permanent, will be controlled using Permit to Clear Land or Vegetation with adequate barriers installed to identify limits of disturbance<br>– Installation of Tree Protection Zones for significant trees as required through pre-existing data or else as identified using UNITY's qualified arborist assessment prior to construction works<br>• Ensure a qualified fauna spotter/catcher is present prior to and during the removal of vegetation of habitat value or breeding places, to capture and relocate any disturbed native fauna<br>• Ensure the fauna spotter/catcher has necessary and current Rehabilitation or Damage Mitigation Permits<br>• Ensure appropriate mitigation measures in Victoria Park are implemented to manage light spills that may adversely impact native fauna, while maintaining safe driving conditions for motorists on adjacent roads |
| Monitoring | • Monitoring is in accordance with Attachment 4 of the C-EMP by way of the Weekly Scheduled Inspection Checklist. This checklist, where required, may be expanded to incorporate site-specific monitoring requirements identified throughout the Pre-construction Ecology surveys<br>• Where Significant Vegetation (Heritage, NALL) vegetation may be impacted by construction works, monitoring requirements as per the findings of the Arborist take precedence<br>• Where Species Management Programs are triggered, the SMP monitoring requirements take precedence. |
| Reporting | • Reporting will be in accordance with Section 8.2 of the C-EMP<br>• Reporting for FSC activities will be in accordance with the DES requirements and will be the responsibility of the FSC<br>• Where SMPs are triggered, the SMP reporting requirements take precedence over the C-EMP requirements.<br>• Reporting of impact to significant vegetation will be in accordance with the requirements of the Operational Works Development Approvals, Heritage Approvals and Accepted Development Codes as relevant |
| Corrective Action | Management of corrective actions will be undertaken as per Section 6 of the C-EMP. |
| Auditing | Auditing will be undertaken as per Section 7 of the C-EMP. |

# 2 Significant Habitat Sites and Vegetation Mapping

The below mapping depicts the areas of significant habitat and significant vegetation on State and Local Legislative layers.

## 2.1 Significant Habitat - Flying Fox Roost Sites

Flying Foxes are listed species under the Nature Conservation Act 1992. There are the following species of flying foxes;

- Black flying-fox, *Pteropus Alecto*. This species is listed as Least Concern in Queensland
- Grey-headed flying-fox, *Pteropus poliocephalus*. This species is listed as Least Concern in Queensland
- Little red flying-fox, *Pteropus scapulatus*. This species is listed as Least Concern in Queensland
- Spectacled flying-fox, *Pteropus conspicillatus*. This species is listed as Vulnerable in Queensland

The grey-headed flying fox and the spectacled flying-fox are also listed as Vulnerable under the EPBC Act 1999.

Due to the anecdotal evidence of flying foxes visiting the mangroves in the vicinity of Mayne Yard, Unity has reviewed publicly available information to identify whether known roosts are present in the area.

Based on the DES mapping the nearest known roost to the RIS footprint is the Windsor Roost along Enogerra Creek, and therefore whilst there is a potential for flying foxes to be present in the vicinity of Mayne Yard, there is no recognised Roost (Habitat) within or directly adjacent the RIS Footprint.

The fauna survey has therefore focused on the area of Mayne Yard to confirm the presence of an actual roost to inform species management program and associated permitting.

The ecological assessment identified that flying foxes have been reported from the study area previously, using portions of the fringing mangrove community as roosting habitat. Quaterly survey by the Queensland Government confirmed a resident black flying fox population between 2012-2014. However, monitoring from 2014 onwards has not recorded flying fox individuals from any species, sugesting the roost may have been abandonded. Consequently, UNITY is confident that the site does not presently contain an active roost for flying foxes.

Further, as the works being carried out are not for preventing or minimising damage or harm from flying foxes, it is not possible for a Flying Fox Roost Management Permit (FFRMP) to be issued for clearing of vegetation within a flying fox roost area.

As the area is not presently utilised as a roost and as it is not possible to seek a permit, UNITY's current position is that a FFRMP is not required for clearing of vegetation along the banks of Breakfast Creek.

While the vegetation adjacent to Breakfast Creek does not presently operate as a flying fox roost, it is recognised that there is potential for this area to be utlised by flying foxes.

Prior to carrying out clearing activities, a suitably qualified fauna spotter-catcher will be engaged to identify whether flying foxes are present. Where flying foxes are identified, a Suitably Qualified Person (such as a fauna spotter-catcher working) under a suitable Rehabilitation Permit or Damage Mitigation Permit will be supervise the clearing activities, support relocation efforts as required and advise on how the impact of the activities can be minimized.

The DES Codes of practice Low impact activities affecting flying-fox roosts and Ecologically sustainable management of flying-fox roosts will also be used as supporting information to ensure no undue harm comes to the flying foxes and the project personnel involved in the works.


Plate 1:Roost distribution based on field survey conducted as part of the Qld Government Flying Fox Monitoring Program. Left (2012), right (2014). Source: DES (Wildlife and Threatened Species Operations).

## 2.2 Significant Vegetation

Unity has reviewed publicly available information to identify key state and local vegetation, whether mapped as an ecosystem or as vegetation of significance (on an individual tree count basis).

The following information has been reviewed:

- Matters of State Environmental Significance (MSES) are prescribed by Schedule 2 of the Environmental Offsets Regulation 2014. Prescribed Environmental matters require to be offset when clearing occurs. They include Regulated vegetation, Wetlands and watercourses, inclusive of regulated vegetation intersecting a watercourse and Protected wildlife habitat (e.g. Koala Habitat, Fish Habitat Areas) amongst others. The following MSES are mapped as being intersected by the project
  - Regulated vegetation intersecting a watercourse at Breakfast Creek
  - Regulated vegetation intersecting a watercourse at Moolabin Creek
  - Regulated vegetation intersecting a watercourse at Rocky Water Holes Creek
  - Despite the State mapping, these vegetation communities are not prescribed environmental matters. Therefore, the offset provisions under the Environmental Offsets Regulation do not apply.
- The Vegetation Management Act spatial mapping which identifies the location of Potential Regional Ecosystems
  - RE 12.1.3 is mapped along Breakfast Creek at Mayne Yard. RE 12.1.3 is a least concern RE for Estuarine Wetlands (e.g. mangroves)
  - RE 12.3.11 is mapped along Breakfast Creek at Mayne Yard. RE 12.3.11 is an of concern RE for palustrine wetland (e.g. in swales), which may contain Eucalyptus tereticornis +/- Eucalyptus siderophloia, Corymbia intermedia open forest on alluvial plains usually near coast
  - There is no other Regional ecosystem mapped in the vicinity of the works
  - The project is exempt of obtaining approvals under the VMAct when clearing vegetation as it is deemed ‘exempt clearing work’. Indeed, the clearing is not deemed operational works as it is for the construction of transport infrastructure that is government supported transport infrastructure.
- The Nature Conservation Act Spatial High Risk Flora Trigger mapping which identified the location of potential EVNT species (Endangered, Vulnerable and Near Threatened Flora). The project footprint does not intersect or is not located within 100m of a mapped High Risk Flora trigger area.

- The BCC NALL mapping which identifies trees under a VPO (Vegetation protection order) and Significant Council Vegetation (Native, Urban (generally all street vegetation), Waterways and Park Vegetation). Where the BCC NALL mapping overlaps State Matters which are subject to State Statutory Requirements, the State requirements prevail.

The below maps show an overlay of each type of vegetation against the project footprint.

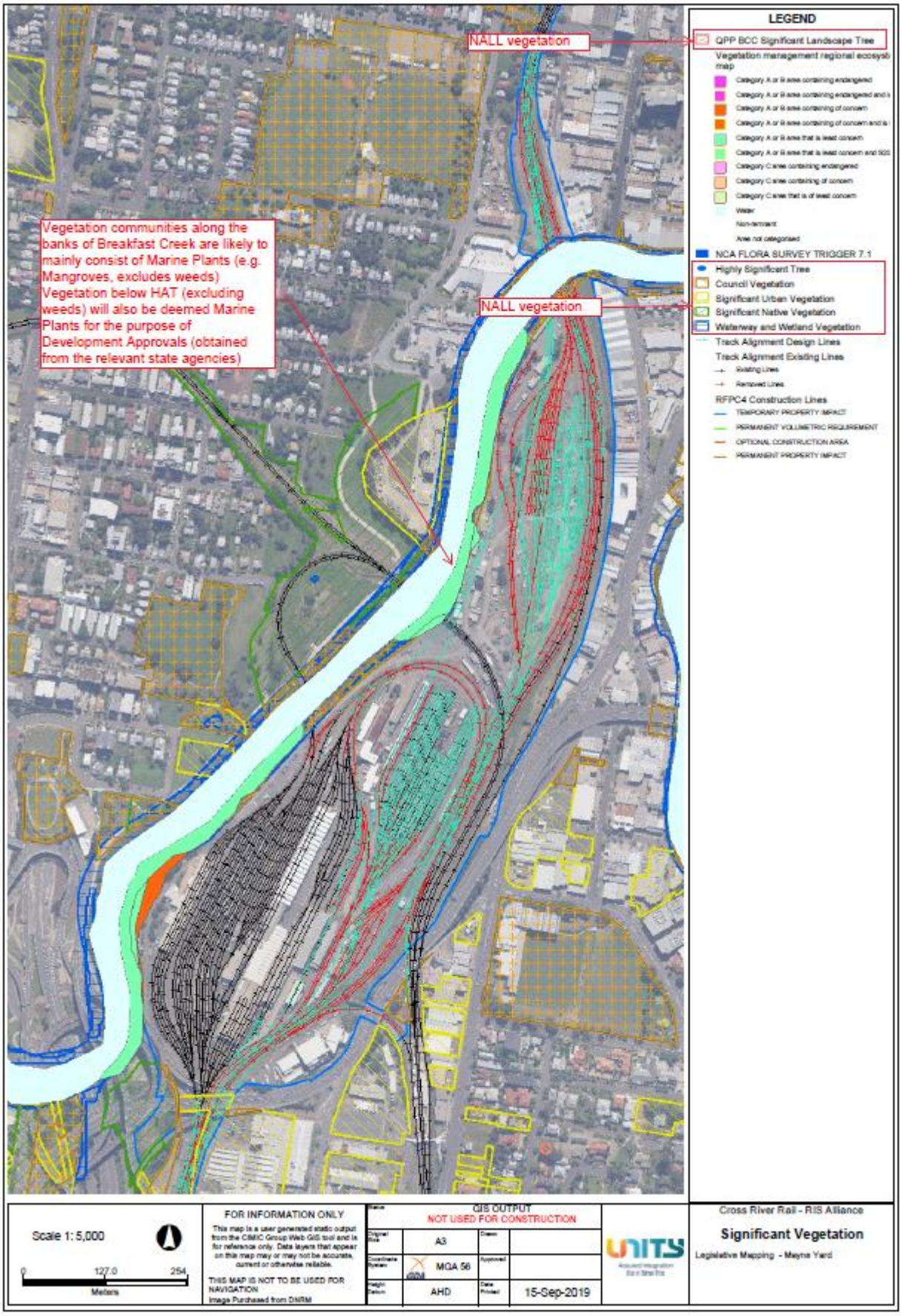


Figure 1: Significant vegetation – Mayne Yard

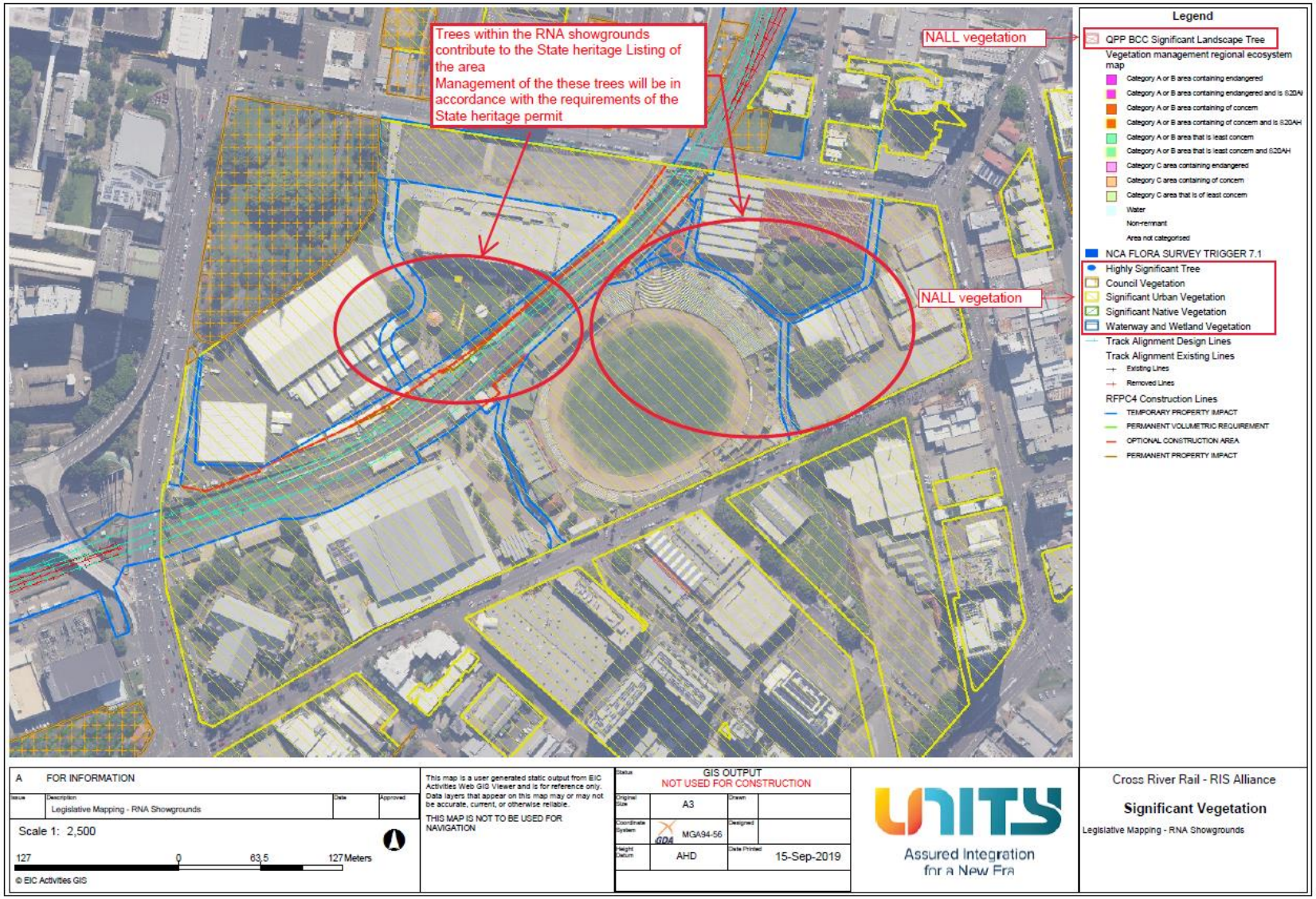


Figure 2: Significant vegetation – RNA Showgrounds

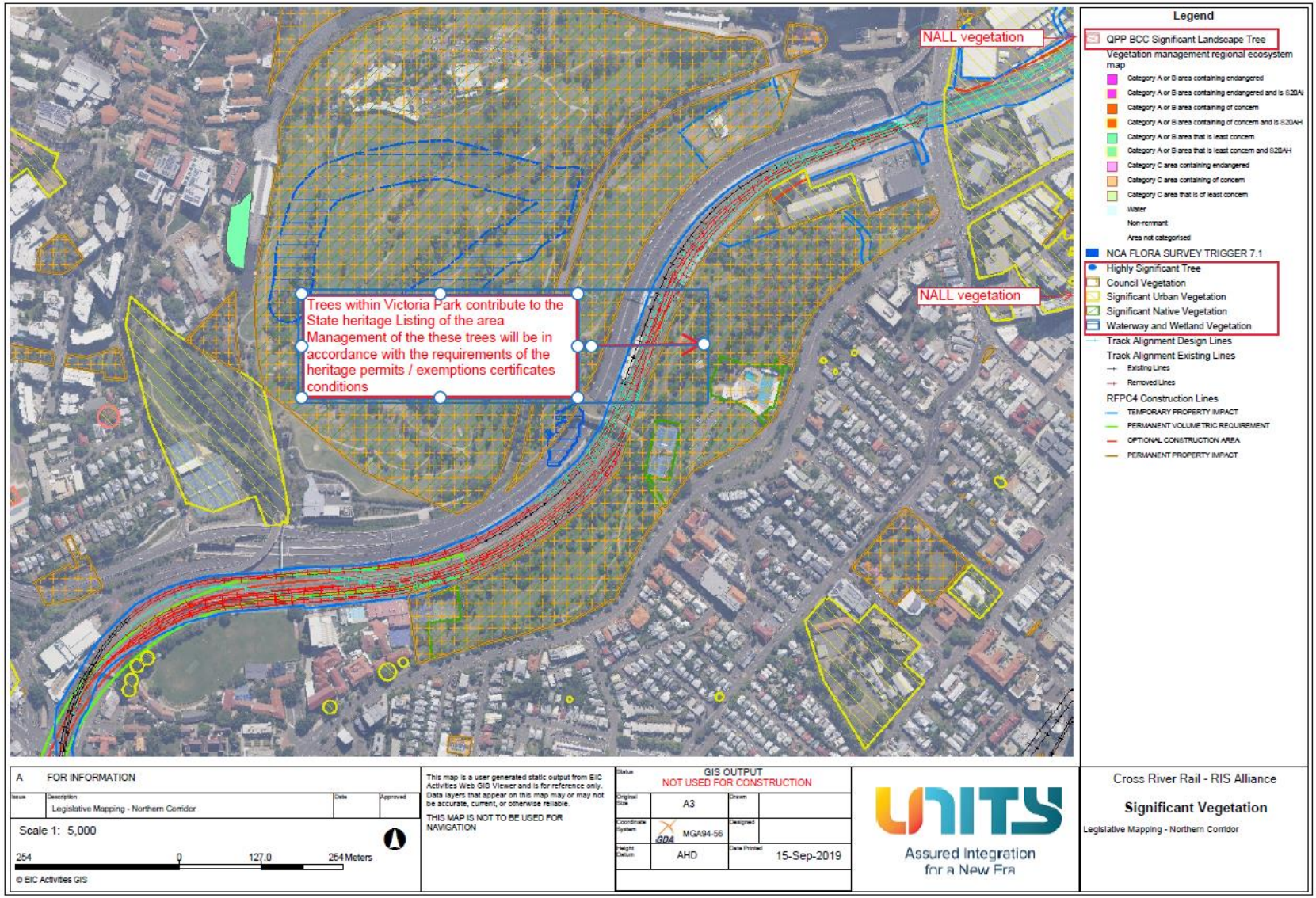


Figure 3: Significant vegetation – Northern Corridor (Victoria Park Area)

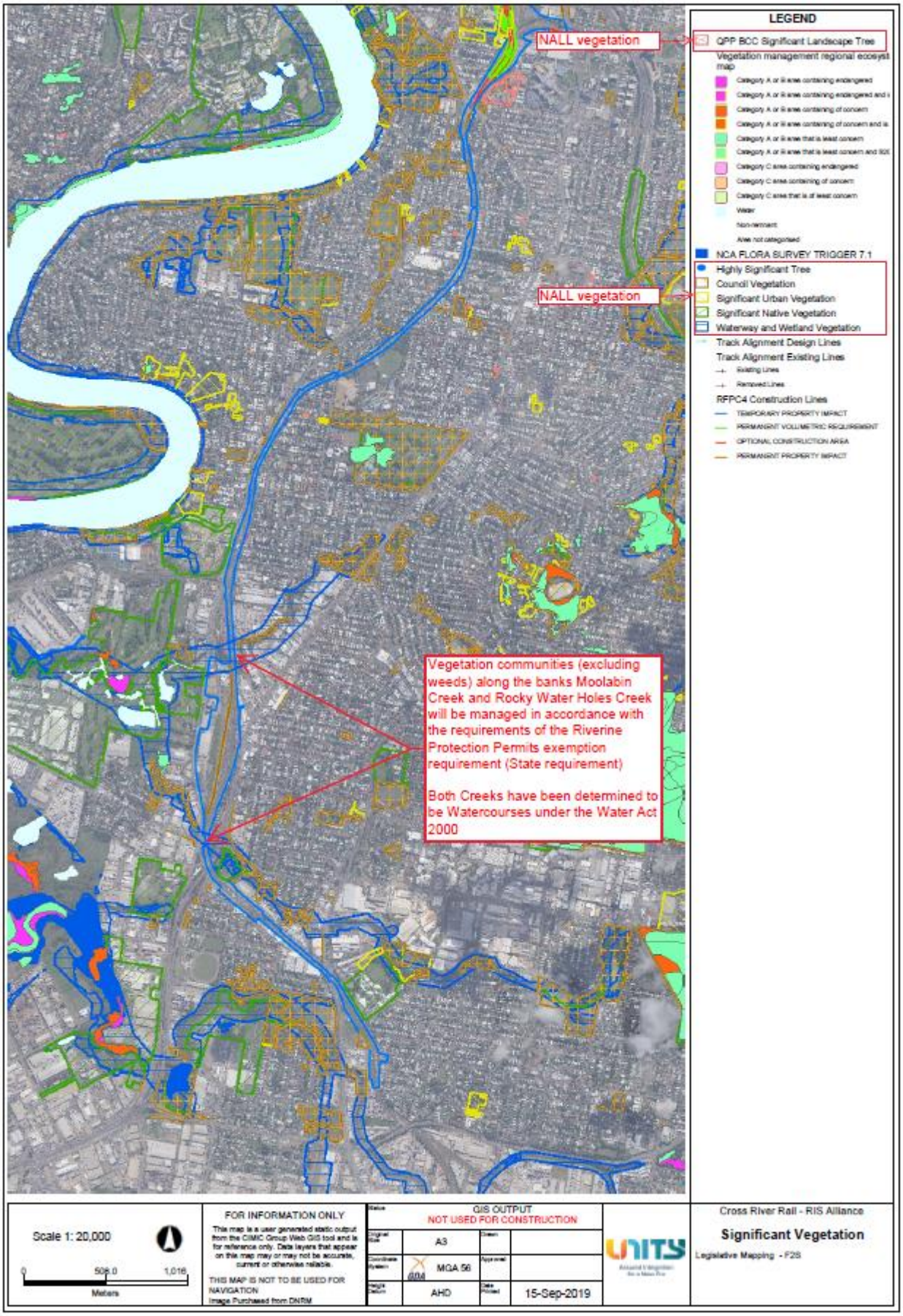


Figure 4: Significant vegetation – Southern and F2S