

Yanchep Rail Extension: Part 1 – Butler to Eglinton

Application to change proposal under s43A

March 2019

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Rev	Date	Author	Reviewer(s)	Description
1	25/02/2019	L. Zimmermann	M. Ludlow C. Stedman	First version
2	5/03/2019	L. Zimmermann	M. Ludlow	Second version

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1.Introduction

1.1 Proposal

The Yanchep Rail Extension Part 1 – Butler to Eglinton (YRE Part 1) Project was referred to the Environmental Protection Authority (EPA) on the 12th of February 2018. On the 13th of March 2018, the EPA set the level of assessment for the proposal at Referral Information (s39A (2) (b) with Additional Information (s40(2)(a)). The preliminary key environmental factors were: Flora and Vegetation, Terrestrial Environmental Quality, Terrestrial Fauna, Subterranean Fauna, Landforms, Inland Waters and Social Surroundings. The proposal is currently being assessed by the EPA.

The proposal comprises construction of a 7.3 kilometre (km) new dual railway track from the existing terminus north of Butler Station, heading generally north via new stations at Alkimos and Eglinton, before terminating north of the proposed Eglinton Station. The two new stations at Alkimos and Eglinton will include intermodal interchanges for bus services, ‘park and ride’, ‘kiss and ride’, active mode facilities and associated infrastructure. The proposal includes a contingency for a turnback facility to be constructed to the north of the Eglinton Station, to allow for the turning of two six-car trains should Part 2 of the YRE Project not proceed.

The proposal also includes construction of six new road bridges over the railway and construction and access areas.

Proposal Title:	Yanchep Rail Extension: Part 1 – Butler to Eglinton
Assessment Number:	2157

1.2 Proposed change to proposal

Since the referral was submitted, the Public Transport Authority (PTA) has made a number of changes to the proposal to avoid or minimise potential environmental impacts. The PTA is conscious of the high conservation value of the environmental aspects proposed to be impacted by the proposal, and therefore has undertaken a detailed review of the project requirements to avoid or minimise potential impacts.

The purpose of this document is to request to change the proposal under s43A of the *Environmental Protection Act 1986* (EP Act), including a description of the proposed changes, the rationale for these changes and an assessment of the significance of these changes.

This document has been prepared in accordance with the requirements identified in Section 3.8 of the Environmental Impact Assessment (Part IV Divisions 1 and 2) Procedures Manual 2016 (EPA 2016). Additional information will be supplied to support this application to reflect the changes outlined in this document, further to the information provided in the Referral Information with Additional Information previously supplied (Eco Logical Australia 2018).

2. Proposed change

2.1 Proposed change to key characteristics

The proposed change will require modification of key proposal characteristics. The proposed amended key characteristics are presented in **Table 1** and **Table 2**, with the proposed changes identified in **bold**. Specifically, the changes are limited to reducing the area of the development envelope from 70.19 hectares¹ (ha) to 63.33 ha.

Table 1 Key proposal characteristics

Summary of the Proposal ²	
Proposal title	Yanchep Rail Extension: Part 1 – Butler to Eglinton
Proponent name	Public Transport Authority
Short description	The Public Transport Authority proposes to extend the existing Joondalup railway line by 7.3 kilometres from Butler Station to the suburb of Eglinton in the City of Wanneroo. The proposal is to construct and operate the rail extension and includes two new intermodal (rail, bus, 'park and ride', 'kiss and ride', walk and cycle) transit stations at Alkimos and Eglinton.

Table 2 Updated location and proposed extent of physical and operational elements

Element	Location	Proposed extent
Physical elements		
Railway	The railway will begin from the terminus of the existing Northern Suburbs Railway north of Butler Station, generally following the land reserved 'Railways' in the MRS before terminating approximately 500 m north of Pipidinny Road in Eglinton	7.3 km of dual track railway generally in cuttings approximately 6 m below surrounding ground level within an area of approximately 45.40¹ ha
Alkimos Station	Located approximately 500 m north of the intersection of Marmion Avenue and Graceful Boulevard in Alkimos	At-grade railway station and associated facilities including intermodal rail, bus, 'park and ride', 'kiss and ride' and active mode facilities
Eglinton Station	Located immediately south of Pipidinny Road in Eglinton	At-grade railway station and associated facilities including intermodal rail, bus, 'park and ride', 'kiss and ride' and active

¹ Note: All area calculations are provided in coordinate system GDA 1994 MGA (Zone 50). The referral calculations were provided in Perth Coastal Grid (PCG) 94 which resulted in the total area of the referred development envelope being calculated as 70.22 ha and the proposed extent of the railway being 45.42. In GDA 1994 MGA (Zone 50) the referred development envelope is 70.19 ha and the proposed extent of the railway is 45.40 ha. The proposed extent of the railway has not changed.

² Please note that there are not any changes to the 'Summary of the Proposal'.

Element	Location	Proposed extent
		mode facilities
Construction and access areas	At locations of proposed future urban development or roads reserved in the MRS or as detailed within other approved or draft local structure plans to minimise environmental impact	Approximately 17.93 ha
Road bridges	Passing over the railway at approximate locations (indicated in Figure 6-3 of Referral Information with Additional Information)	Six road bridges approximately 31 m wide, including 3 m wide footpath
<i>Operational elements</i>		
Railway	The railway will begin from the terminus of the existing Northern Suburbs Railway north of Butler Station, generally following the land reserved 'Railways' in the MRS before terminating approximately 500 m north of Pipidinny Road in Eglinton	Rail services will operate between Butler Station, Alkimos Station and Eglinton Station up to 24 hours per day, 7 days per week
Alkimos Station	Located approximately 500 m north of the intersection of Marmion Avenue and Graceful Boulevard in Alkimos	Rail and bus services may operate from Alkimos Station up to 24 hours per day, 7 days per week
Eglinton Station	Located immediately south of Pipidinny Road in Eglinton	Rail and bus services may operate from Eglinton Station up to 24 hours per day, 7 days per week

2.2 Description of change

The proposed change relates to reductions in the size of the development envelope, including the removal of five construction access roads and the addition of one construction access road to Alkimos Station.

The overall outcome of the proposed change is a 6.86 ha³ reduction in the area of the proposal's development envelope, from 70.19 ha to 63.33 ha, and an associated 5.45 ha reduction in the extent of native vegetation clearing from 43.18 ha to 37.73 ha (**Figure 1**).

The six locations where the development envelope has changed are summarised in **Table 3** and shown in **Figure 1**. All six locations involve changes to the proposed extent of the physical elements of the proposal.

The revised development envelope is shown in **Figure 2**.

Table 3 Summary of changes to proposed extent of physical elements

Change Number	Element	Location	Proposed Change to Development Envelope	Extent ³
1	Construction access road	Figure 1A	Reduction	0.86 ha
2	Construction access road	Figure 1A	Reduction	1.59 ha
3	Construction access road	Figure 1C	Reduction	4.00 ha
4	Construction access road	Figure 1C	Reduction	0.68 ha
5	Construction access road	Figure 1C	Reduction	0.51 ha
6	Construction access road	Figure 1C	Increase	0.81 ha

³ All area calculations are provided in coordinate system GDA 1994 MGA (Zone 50). Due to rounding there is a small difference between the overall reduction in area (6.86 ha) and the sum of the values in this table is (6.83 ha).

2.3 Impact changes

Table 4 provides a summary of the changes to the potential impacts of the proposal. All of the changes represent reductions in the potential impact to environmental aspects, including native vegetation, Black Cockatoo foraging habitat and potential breeding trees, two Threatened Ecological Communities (TEC) and three Priority Ecological Communities (PECs).

Table 4 Summary of changes to potential impacts

Environmental Aspect	Referral (ha)	Proposed change (ha)	Difference (ha)
Native vegetation	43.18	37.72	-5.46
Black Cockatoo foraging habitat	52.43	48.21	-4.22
Black Cockatoo potential breeding trees	21 trees	5	-16 trees
<i>Melaleuca huegelii</i> – <i>M. systema</i> shrublands on limestone ridges (type 26a) TEC	1.12	Direct impact: 0.53	-0.59
		Direct and indirect impact*: 0.94	-0.18
Banksia woodlands of the Swan Coastal Plain (SCP) TEC	12.12	10.69	-1.43
Banksia dominated woodlands of the SCP IBRA Region PEC	16.45	14.17	-2.28
Northern Spearwood shrublands and woodlands ('community type 24') PEC	17.18	16.05	-1.13
Tuart (<i>Eucalyptus gomphocephala</i>) woodlands of the SCP PEC	0.32	0.00	-0.32
Parabolic dunes	8.49	7.00	-1.49
<p>*Due to the limited natural extent of two occurrences of TEC type 26a, the area of impact has been adjusted to include the full extent of the patch that extends outside of the development envelope where the impact is approximately greater than 50% of the patch. This is to incorporate indirect impacts to the ecological viability of the remainder of the patch and is based on the outcomes of the targeted TEC type 26a patch survey (GHD 2019). The direct impact to TEC type 26a from the proposal is 0.53 ha, and inclusive of the indirect impacts to two occurrences is 0.94 ha (refer to patches 2 and 5 in GHD (2019)). This does not include indirect impacts to patch 6 in GHD (2019).</p>			

The changes outlined in **Table 4** represent the most accurate change in the potential impacts of the proposal. There were errors in the original referral in how areas of two PECs were defined – Banksia dominated woodlands of SCP PEC and Northern Spearwood shrublands and woodlands PEC. Both of these PECs included vegetation in Completed Degraded condition, which has now been excluded from the extent calculations for the proposed development envelope.

2.4 Rationale for changes

The rationale for each of the six location changes is outlined below and in Table 5. Overall, the majority of the changes to the development envelope were undertaken to avoid or minimise impacts to environmental values. At the one location where the development envelope has been increased, the construction access road has been positioned in an area in Completely Degraded condition.

The PTA undertook a process of reviewing the access requirements for the proposal during construction with the purpose of avoiding or minimising impacts to areas of TEC type 26a. The PTA is conscious of the high conservation value of this TEC, as well as the restricted extent of occurrences and sought to reduce the impacts wherever possible.

Through this process, a number of construction access roads were identified as not being essential and therefore were removed from the development envelope. This process resulted in an avoidance of direct impacts to 0.32 ha of Tuart woodlands of the Swan Coastal Plain PEC and reduced direct impacts to 0.59 ha of TEC type 26a. In addition, there are also reduced impacts to native vegetation, Black Cockatoo foraging habitat and potential breeding trees, Banksia woodlands of the Swan Coastal Plain TEC, two PECs and the parabolic dune formation.

As outlined in Table 4, refinement of the development envelope resulted in:

- Avoiding the entire 0.32 ha impact to Tuart woodlands of the SCP PEC
- Minimising impacts to 0.59 ha of TEC type 26a patches (including avoidance of four patches)
- Minimising impacts to 16 Black Cockatoo potential breeding trees
- Minimising impacts to Black Cockatoo foraging habitat (reduction of 4.22 ha)
- Minimising impacts to Banksia woodlands of the SCP TEC (reduction of 1.43 ha)
- Minimising impacts to Banksia dominated woodlands of the SCP PEC (reduction of 2.28 ha)
- Minimising impacts to Northern Spearwood shrublands and woodlands PEC (reduction of 1.13 ha)
- Minimising impacts to parabolic dunes (reduction of 1.49 ha)

2.5 Significance of potential impacts

Table 5 provides a summary of the environmental significance of the proposed change. The proposed change does not introduce any new environmental factors.

The summary in **Table 5** identifies that the proposed change does not significantly change any impact that the proposal may have on the environment.

Table 5 Summary of changes to the proposal, rationale and significance

Change Number	Element and location	Description of change to development envelope	Rationale for change	Significance of change
1	Construction access road West of Eglinton Station Figure 1A	Reduced extent: 0.86 ha Reduced impacts to: <ul style="list-style-type: none"> • Native vegetation • TEC type 26a • Black Cockatoo foraging habitat • Northern Spearwood shrublands and woodlands PEC • Parabolic dunes 	Removal of construction access road to minimise impacts to: <ul style="list-style-type: none"> • TEC type 26a • Native vegetation • Black Cockatoo foraging habitat • One PEC • Parabolic dunes 	Reduced environmental impact and therefore change not significant.
2	Construction access road East of Eglinton Station Figure 1A	Reduced extent: 1.59 ha Reduced impacts to: <ul style="list-style-type: none"> • Native vegetation • TEC type 26a • Banksia woodlands of the SCP TEC • Black Cockatoo foraging habitat • Black Cockatoo potential breeding trees • Banksia dominated woodlands of the SCP PEC • Northern Spearwood shrublands and woodlands PEC • Tuart woodlands of the Swan Coastal Plain PEC • Parabolic dunes 	Removal of construction access road to minimise impacts to: <ul style="list-style-type: none"> • Two TECs • Native vegetation • Black Cockatoo foraging habitat • Black Cockatoo potential breeding trees • Three PECs • Parabolic dunes 	Reduced environmental impact and therefore change not significant.

Change Number	Element and location	Description of change to development envelope	Rationale for change	Significance of change
3	Construction access road South-east of Alkimos Station – future Romeo Road Figure 1C	Reduced extent: 4.00 ha Reduced impact to: <ul style="list-style-type: none"> • Native vegetation • TEC type 26a • Banksia woodlands of the SCP TEC • Black Cockatoo foraging habitat • Black Cockatoo potential breeding trees • Banksia dominated woodlands of the SCP PEC • Northern Spearwood shrublands and woodlands PEC • Tuart woodlands of the Swan Coastal Plain PEC • Parabolic dunes 	Removal of construction access road to minimise impacts to: <ul style="list-style-type: none"> • Two TECs • Native vegetation • Black Cockatoo foraging habitat • Black Cockatoo potential breeding trees • Three PECs • Parabolic dunes 	Reduced environmental impact and therefore change not significant.
4	Construction access road South-west of Alkimos Station – future Romeo Road Figure 1C	Reduced extent: 0.68 ha Reduced impact to: <ul style="list-style-type: none"> • Native vegetation • TEC type 26a • Black Cockatoo foraging habitat • Banksia dominated woodlands of the SCP PEC • Northern Spearwood shrublands and woodlands PEC 	Removal of construction access road to minimise impacts to: <ul style="list-style-type: none"> • TEC type 26a • Native vegetation • Black Cockatoo foraging habitat • Two PECs 	Reduced environmental impact and therefore change not significant.

Change Number	Element and location	Description of change to development envelope	Rationale for change	Significance of change
5	Construction access road South-west of Alkimos Station and east of Marmion Avenue Figure 1C	Reduced extent: 0.51 ha Reduced impact to: <ul style="list-style-type: none"> • Native vegetation • TEC type 26a • Black Cockatoo foraging habitat • Northern Spearwood shrublands and woodlands PEC • Parabolic dunes 	Removal of construction access road to minimise impacts to: <ul style="list-style-type: none"> • TEC type 26a • Native vegetation • Black Cockatoo foraging habitat • One PEC • Parabolic dunes 	Reduced environmental impact and therefore change not significant.
6	Construction access road West of Alkimos Station and east of Marmion Avenue Figure 1C	Increased extent: +0.81 ha Increased impact to: <ul style="list-style-type: none"> • Black Cockatoo foraging habitat 	Addition of new construction access road to: <ul style="list-style-type: none"> • Provide access to Alkimos Station for construction activities 	Change within area in Completely Degraded vegetation condition with minor increased impact to Black Cockatoo foraging habitat (low quality).

3. References

Eco Logical Australia (2018). Referral Information with Additional Information. December 2018.

GHD (2019). Yanchep Rail Extension, Targeted FCT 26a Survey Memorandum. 8 February 2019.



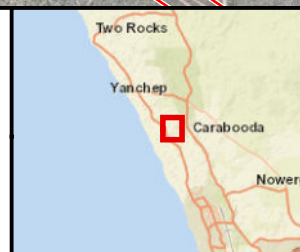
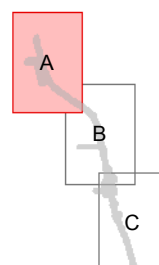
Figure 1 – s43A Changes to Part 1 Development Envelope

Legend

- ▬ Proposed Development Envelope
- Changes to Development Envelope**
- Area of Reduction



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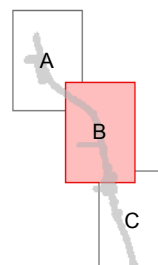
Figure 1 – s43A Changes to Part 1 Development Envelope

Legend

Proposed Development Envelope



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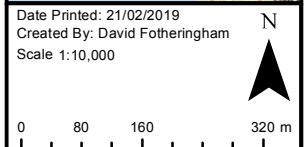




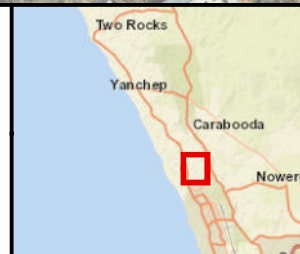
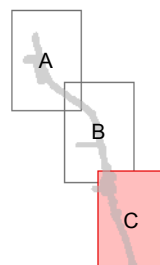
Figure 1 – s43A Changes to Part 1 Development Envelope

Legend

- ▬ Proposed Development Envelope
- Changes to Development Envelope**
 - ▬ Area of Reduction
 - ▬ Area of Increase



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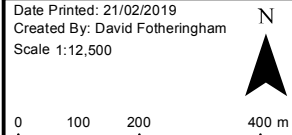




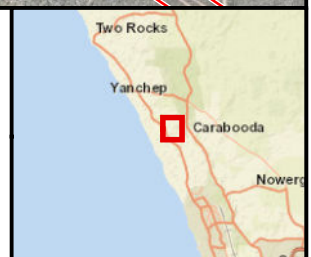
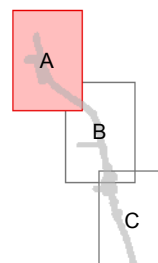
Figure 2 – s43A Part 1 Proposed Development Envelope

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Proposed Development Envelope



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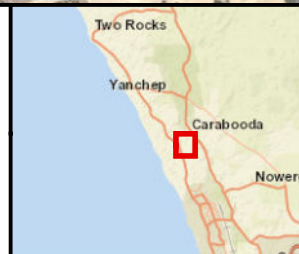
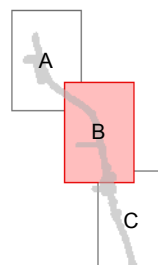
Figure 2 – s43A Part 1 Proposed Development Envelope

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Proposed Development Envelope



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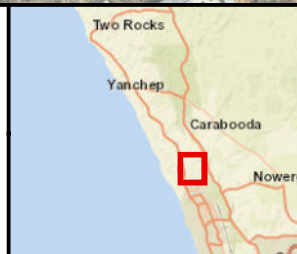
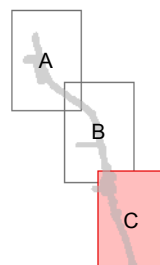
Figure 2 – s43A Part 1 Proposed Development Envelope

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Proposed Development Envelope



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