



Thornlie-Cockburn Link

Application to change proposal under s43A

July 2019

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1. Introduction

1.1 Proposal

The Thornlie-Cockburn Link (TCL) Project was referred to the Environmental Protection Authority (EPA) on the 7th of June 2018. On 2 July 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, Hydrological Processes, Inland Waters and Social Surroundings. The proposal is currently being assessed by the EPA.

The proposal comprises construction of a 14.5 kilometre (km) new dual railway track within existing railway and road reserves, to extend the existing Thornlie spur line to Cockburn Central station as well as the duplication of 3 km of railway track between Beckenham Junction and Thornlie train station. The proposal also includes the following:

- Construction of two new stations: Ranford Road Station and Nicholson Road Station;
- Modification of two existing stations: Thornlie Station and Cockburn Central Station; and
- Modifications to one rail bridge, two road bridges and the grade separation of a pedestrian crossing.

Proposal Title:	Thornlie-Cockburn Link
Assessment Number:	2168

1.2 Proposed change to proposal

Since the referral was submitted, a number of changes have been made to the proposal including updates to the design and minimisation of potential environmental impacts. A request to change the proposal under section 43A of the *Environmental Protection Act 1986* (EP Act) was approved on 19 December 2018, to increase the area of the development envelope from 119.37 hectares (ha) to 119.41 ha and make changes to the proposed extent of temporary construction laydown areas, Ranford Road Station and operational areas.

The PTA has recently undertaken an assessment of the two potential options for Ranford Road Station and now proposes to construct Option 1 as the final footprint. Option 1 retains a larger amount of remnant native vegetation outside of the proposal's development envelope and provides for greater longer term viability of this remnant.

The purpose of this document is to request to change the proposal under s43A of the EP Act, and includes 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). The recent PTA Response to Public and Agency Submissions package has been updated to reflect the changes outlined in this document.

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:

- Decreasing the area of the development envelope from 119.41 ha to 116.81 ha; and
- Increasing the area of native vegetation clearing at Ranford Road Station Site to 4.37 ha.

Note: all area calculations are provided in coordinate system MGA (Zone 50).

Table 1 Key proposal characteristics

Summary of the Proposal ¹	
Proposal title	Thornlie to Cockburn Link
Proponent name	Public Transport Authority
Short description	The proposal includes construction of 14.5 km of new dual railway track within existing railway and road reserves, to extend the existing Thornlie passenger line to Cockburn Central Station along with the duplication of 3 km of single track from Beckenham Junction to Thornlie Station and the relocation of 11 km of freight line within the existing rail reserve. Modifications to existing stations, bridges and roads will be undertaken, and two new stations will be constructed at Ranford Road and Nicholson Road in Canning Vale as well as the construction of a principal shared path.

¹ Please note that there are not any changes to the 'Summary of the Proposal'.

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

Element	Location	Referral Extent ²	s43A ³ Extent 19/12/2018	Proposed Extent ⁴⁵
Physical Elements				
14.5 km dual railway track, new bridges, modified bridges and operational areas.	Figure 1 Between Thornlie Station and Cockburn Central.	Clearing of up to 0.55 ha of native vegetation within a development envelope of 119.37 ha.	Clearing of up to 13.37 ha of native vegetation within a development envelope of 119.41 ha.	Clearing of up to 13.06 ha of native vegetation within a development envelope of 116.81 ha.
3 km of duplicated rail, modification of Thornlie Station to allow through movement of trains, new bridges and modified bridges.	Figure 1 From Beckenham Junction to Thornlie Station.	Clearing of up to 18.74 ha of native vegetation within a development envelope of 119.37 ha.	Clearing of up to 3.67 ha of native vegetation within a development envelope of 119.41 ha.	Clearing of up to 4.02 ha of native vegetation within a development envelope of 116.81 ha.
Temporary construction laydown areas	Figure 1 Several locations between Beckenham Junction and Karel Avenue.	Clearing of up to 22.66 ha of native vegetation within a development envelope of 119.37 ha.	Clearing of up to 7.76 ha of native vegetation within a development envelope of 119.41 ha.	Clearing of up to 5.69 ha of native vegetation within a development envelope of 116.81 ha.

² Please note that there were errors in the calculated extents of native vegetation in the referral.

³ s43A Notice 19 December 2018.

⁴ Potential impacts to native vegetation based on the disturbance footprint June 2019 (114.67 ha). The native vegetation clearing values presented here represent the area of vegetation to be cleared (excluding VT07 which is a weed dominated vegetation community) within the disturbance footprint.

⁵ The difference in values of the extent of vegetation clearing for the 14.5 km and 3 km railway elements relate to a change in the boundary for where these two areas start/finish. The boundary has been corrected to the southern extent of Thornlie Station, and therefore the 14.5km value is slightly less than previously stated and the 3km value is slightly more.

Element	Location	Referral Extent²	s43A³ Extent 19/12/2018	Proposed Extent⁴⁵
Two new stations – Ranford Road Station and Nicholson Road Station	Figure 1	Clearing of up to 11.62 ha of native vegetation within a development envelope of 119.37 ha.	Clearing of up to 7.32 ha of native vegetation within a development envelope of 119.41 ha . Ranford Road Station – 18.15 ha. Nicholson Road Station – 5.83 ha.	Clearing of up to 4.37⁶ ha of native vegetation within a disturbance footprint of 12.17 ha at Ranford Road Station. Clearing of up to than 0.55 ha of native vegetation within a disturbance footprint of 5.83 ha at Nicholson Road Station.
Operational Elements				
Railway (passenger)	Between Cannington Station to Cockburn Central Station, through the suburbs of Beckenham, Kenwick, Thornlie, Canning Vale and Jandakot.	-	Dual railway track within the rail reserve within a footprint of approximately 75 ha.	Dual railway track within the rail reserve within a footprint of approximately 77 ha .
Ranford Road Station	Located south of the railway on Ranford Road approximately 300 m north-west of Livingstone drive in Canning Vale.	-	Rail and bus services operating within a footprint of approximately 18 ha.	Rail and bus services operating within a footprint of approximately 12.17 ha .
Nicholson Road Station	Located south of the railway on Nicholson Road approximately 500 m south of Bannister Road in Canning Vale.	-	Rail and bus services operating within a footprint of approximately 6 ha.	Rail and bus services operating within a footprint of approximately 5.83 ha .

⁶ Includes the Final Ranford Road Station footprint and native vegetation clearing related to the road modifications to construct Ranford Road Station. Both of these elements were previously described as 'Ranford Road Station'.

2.2 Description of change

The PTA has recently undertaken an assessment of the two potential options for Ranford Road Station and now proposes to construct Option 1 as the final footprint. Option 1 retains a larger amount of remnant native vegetation outside of the proposal's development envelope and provides for greater longer term viability of this remnant.

The proposed change relates to a **2.60 ha** reduction in the size of the proposal's development envelope from 119.41 ha to **116.81 ha**, and an associated decrease in the extent of native vegetation clearing from 32.12 ha to **27.69 ha (Figure 1)**.

Of the **27.69 ha** of native vegetation within the development envelope, **6.68 ha** (or **24.12%** of native vegetation) is in a Degraded or better condition.

The PTA has also revised the disturbance footprint of the proposal, which has been used to calculate the extent of native vegetation clearing. The disturbance footprint excludes two Native Vegetation Retention Areas (in Tom Bateman Reserve and adjacent to the Canning River).

While there has been an overall decrease of 4.43 ha in the extent of vegetation clearing, there will be a minor increase in native vegetation clearing at the Ranford Road Station.

At Ranford Road Station, the extent of native vegetation clearing has increased from 3.51 ha to 4.37 ha. This 4.37 ha of native vegetation clearing is for the final Ranford Road Station footprint, inclusive of the road reserve and modifications to Ranford Road to accommodate the station. Both these elements were included in the original Ranford Road station footprint.

The proposed change to the development envelope is summarised in **Table 3**, is shown in **Figure 1** and **Figure 2** and includes changes to the proposed extent of physical and operational elements of the proposal.

Table 3 Summary of changes to proposed extent of physical and operational elements

Change Number	Element	Location	Proposed Change to Extent of Development Envelope
1	Ranford Road Station (see further discussion in section 2.4)	Figure 2E Along Ranford Road	Reduced extent: 2.60 ha

2.3 Impact changes

Table 4 provides a summary of the changes to the potential impacts of the proposal.

Table 4 Summary of changes to potential impacts⁷

Environmental Aspect	Referral (ha)	s43A (ha) 19/12/2018	Proposed change (ha)	Difference (ha) ⁸
Native vegetation	31.69 (excluding VT07)	32.12	27.69	-4.43
Black Cockatoo foraging habitat	27.64 (incorrect mapping) 24.44 (corrected)	24.59	23.01	-1.58
Banksia Woodlands of the Swan Coastal Plain TEC ⁹	2.85	2.32	2.88	+0.56
Low lying <i>Banksia attenuata</i> woodlands or shrublands (SCP21c) PEC	4.42	3.88	3.64	-0.23
Wetlands – Conservation (as mapped in Geomorphic Wetlands of the Swan Coastal Plain dataset) ¹⁰	2.43	2.62	3.03	+0.41
Wetlands – Resource Enhancement (as mapped in Geomorphic Wetlands of the Swan Coastal Plain dataset) ¹¹	7.85	8.28	5.51	-2.77
Bush Forever Sites	29.90	29.45	24.75	-4.70

⁷ Potential impacts based on the final disturbance footprint June 2019.

⁸ Numbers are rounded to two decimal places, and have been calculated based on the exact GIS data. Some rounding errors may occur.

⁹ Three patches of PEC have been reclassified as TEC.

¹⁰ Wetland UFI 13332 has been reclassified from Resource Enhancement to Conservation based on DBCA advice. The total area of UFI 13332 within the development envelope is 0.77 ha.

¹¹ If UFI 13332 is included as a Resource Enhancement wetland the total potential impacts Resource Enhancement and Conservation wetlands in the development envelope change to 6.28 ha and 2.26 ha, respectively.

The majority of the changes presented in **Table 4** represent decreases in the overall potential impacts to environmental aspects, including native vegetation, Low lying *Banksia attenuata* woodlands or shrublands (SCP21c) Priority Ecological Community (PEC), Resource Enhancement Wetlands and Bush Forever Site 388. The decrease in potential impacts are attributed to:

- The PTA minimising potential impacts decreasing the area of the development envelope for the proposed Ranford Road Station; and
- The reclassification of Wetland UFI 13332 to a Conservation Category Wetland at Ranford Road Station.

Of the **27.69 ha** of native vegetation within the development envelope, **6.68 ha** (or **24.12%** of native vegetation) is in a Degraded or better condition.

The decrease in impacts to Black Cockatoo foraging habitat is attributable to the PTA avoiding and minimising potential impacts to mature trees through applying Native Vegetation Retention Areas within the development envelope within the Tom Bateman Reserve, and within the temporary construction area adjacent to the Canning River. These areas have been excluded from the disturbance footprint.

The PTA has undertaken considerable design work to avoid and minimise the potential impacts of the disturbance footprint and proposed development envelope where practicable. The proposed change has resulted in a minor increase in the overall potential impacts to Banksia Woodlands of the Swan Coastal Plain TEC as three patches of Low lying *Banksia attenuata* woodlands or shrublands (SCP21c) Priority Ecological Community (PEC) have been reclassified as TEC, based on feedback from State and Commonwealth officers.

A minor increase in impacts to Conservation Category wetlands is attributable to the reclassification of UFI 13332 to a Conservation Category wetland at Ranford Road Station.

The changes outlined in **Table 4** represent the most accurate change in the potential impacts of the proposal.

2.4 Rationale for changes

The rationale for the changes is outlined below and in **Table 5**. Overall, the changes to the development envelope were undertaken to avoid or minimise impacts to environmental values.

Ranford Road Station – Final Footprint and Development Envelope

The development envelope has been decreased at the proposed Ranford Road Station to allow for the retention of native vegetation to the south of the final footprint, outside of the development envelope. At the time of referral, the development envelope was based on the design developed during the planning phase, this design was called Option 1.

During a site visit with the Chairman of the EPA and other DWER representatives on 27 June 2018, it was recommended that the PTA consider alternative designs to minimise impacts to an environmentally sensitive area immediately adjacent to Ranford Road. This alternative design was called Option 2.

The PTA considered the potential impacts of both Option 1 and Option 2, and now proposes to implement Option 1 as the final Ranford Road Station footprint and reduce the development envelope. This is the final Ranford Road Station footprint and includes a reduced development envelope that retains 2.38 ha of native vegetation that remains connected to Bush Forever Site 388; refer to Figure 2E.

The final footprint of Ranford Road Station results in a minor increase in clearing of up to 4.37 ha of native vegetation within a development envelope of 116.81 ha.

The PTA proposes to construct Option 1 as the final footprint as it retains a larger amount of remnant native vegetation outside of the proposal's development envelope; and provides for increased long-term viability of this remnant. The following summarises the environmental benefits of proceeding with Option 1 instead of Option 2:

- Reduced native vegetation clearing overall (4.37 ha, versus 5.33 ha in Option 2).
- Reduced clearing of Bush Forever Site 388 (3.37 ha, versus 4.56 ha in Option 2).
- Increased viability of remaining native vegetation due to larger size of the retained native vegetation (2.38 ha, versus 1.07 ha in Option 2)
- No fragmentation of the retained vegetation remnant as it is adjacent to, and maintains connectivity to the remainder of Bush Forever Site 388.
- Reduced native vegetation clearing of suitable (VT01), or supporting (VT02, VT02a) habitat for *Caladenia huegelii* (3.20 ha, versus 4.56 ha in Option 2).
- Reduced clearing of Conservation Category Wetlands UFI 6911 and UFI 13332 (2.30 ha, versus 3.46 ha in Option 2), and avoidance of clearing Conservation Category Wetland UFI 6912.
- Reduced risk of further spread of dieback by minimising the project footprint, and retaining the vegetation remnant outside of the proposal's development envelope.

The PTA will continue to work on the final station design within the Option 1 final footprint, to further avoid, mitigate and where practicable manage potential direct and indirect impacts to native vegetation at the Ranford Road Station site.

Summary

The PTA has reduced the size of the proposal's development envelope by approximately 2.60 ha, and the proposal's native vegetation clearing by 4.43 ha. Of the 27.69 ha of native vegetation to be cleared within the development envelope, 6.68 ha (24.12%) is in a Degraded or better condition.

An area of 2.59 ha of native vegetation located south of Ranford Road within Bush Forever Site 388, has been excluded from the new modified development envelope.

The increase in clearing of native vegetation of 0.86 ha at Ranford Road Station is due to:

- Approximately 10 metres of additional footprint required to install road batters required to the south of the design due to design heights and existing land topography.
- The need to maintain the City of Canning's existing access to their Waste Transfer Station, as PTA is removing the City's current access.
- Road modifications to Ranford Road, including a turning lane that is required for road safety reasons.

2.5 Significance of potential impacts

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

The summary in **Table 5** identifies that the proposed changes do not significantly increase 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/disturbance	Rationale for change	Significance of change
1	<p>Ranford Road Station (see further discussion is section 2.4)</p> <p>Figure 3E</p>	<p>Increased impact to:</p> <ul style="list-style-type: none"> • Native vegetation (+0.86 ha) <p>Increased native vegetation clearing from 3.51 ha to 4.37 ha.</p> <p>Decreasing the extent of the development envelope to the south of Ranford Road Station by 2.59 ha has reduced potential impacts to the following environmental aspects:</p> <ul style="list-style-type: none"> • Black Cockatoo foraging habitat. • Banksia Woodlands of the Swan Coastal Plain TEC. • Low lying <i>Banksia attenuata</i> woodlands or shrublands (SCP21c) PEC. • Wetlands – Conservation and Resource Enhancement. • Bush Forever Site 388. 	<p>Increase in native vegetation clearing required as:</p> <ul style="list-style-type: none"> • Approximately 10 metres of additional footprint required to install road batters required to the south of the design due to design heights and existing land topography. • The need to maintain the City of Canning’s existing access to their Waste Transfer Station, as PTA is removing their current access. • Road modifications to Ranford Road, including a turning lane that is required for road safety reasons. <p>Decrease in the area of the development envelope for the station to retain native vegetation in Bush Forever Site 388, with increased viability due to size of the remnant and that it retains connectivity to Bush Forever Site 388.</p>	<p>The additional impacts will not significantly increase the loss of native vegetation.</p> <p>The retention of 2.59 ha outside of the development envelope enables protection of a larger native vegetation remnant that remains connected to regional bushland in Bush Forever Site 388, and has longer term viability.</p> <p>The PTA will continue to undertake design work for the final station design (within the footprint) to avoid and minimise native vegetation clearing when practicable.</p>