



Appeals Convenor
Environmental Protection Act 1986

**REPORT TO THE
MINISTER FOR ENVIRONMENT**

**APPEALS IN OBJECTION TO THE CONTENT OF, AND RECOMMENDATIONS
IN, AN ENVIRONMENTAL PROTECTION AUTHORITY REPORT**

**EPA REPORT 1683: SUBDIVISION OF LOT 102 FARRALL ROAD,
MIDVALE**

PROPONENT: PEET STRATTON PTY LTD

Appeal Number 034.001–002 of 2020

January 2021

Appeals Summary

This report relates to two appeals lodged in objection to the report and recommendations of the Environmental Protection Authority (EPA) for the proposed Peet Stratton Pty Ltd subdivision of Lot 102 Farrall Road, Midvale (Report 1683).

The proposal is for the clearing of up to 5.08 hectares within an 8.3 hectare development envelope, for the purpose of subdivision for residential land allotments, road reserves, provision of services and public open space. A 'conservation' area that retains Bush Forever site 309 (commensurate with a Conservation Category Wetland) is proposed to be rehabilitated and managed for conservation purposes.

The appellants sought for the subdivision proposal not to be implemented, and for Lot 102 to be included in conservation estate due to its significant environmental values and location on the eastern side of the Swan Coastal Plain. Such values include the presence of poorly represented vegetation communities, occurrences of a threatened ecological community (TEC), black cockatoo habitat, short-range endemic (SRE) species and a Conservation Category Wetland. It was also submitted that the proposal will have indirect hydrological impacts on the Conservation Category Wetland and will disturb acid sulphate soils.

The EPA identified three key environmental factors for the proposal, being terrestrial fauna, flora and vegetation and inland waters. The EPA concluded that, subject to its recommended conditions, the proposal meets its objectives for these factors.

The appeals investigation found that the EPA's report and recommendations were generally appropriate. However, it is considered that the loss of 1.22 hectares of Carnaby's black cockatoo foraging habitat is a significant residual impact that should be counterbalanced through an offset.

It was also found that the EPA's recommended Condition 6-1(3) requires refinement to reflect the intended outcome for maintenance and restoration of vegetation within Bush Forever site 309.

The final decision on whether the proposal should be implemented, and the precise wording of the conditions which should apply, is to be made under section 45 of the *Environmental Protection Act 1986*.

Recommendations

It is recommended that the appeals be allowed in part, to the extent that the EPA's recommended conditions are amended to:

- require an offset for the loss of 1.22 hectares of Carnaby's cockatoo foraging habitat; and
- clarify Condition 6-1(3) to reflect the intended requirement to maintain 'Excellent' condition vegetation and restore degraded vegetation to 'Good' or better condition within Bush Forever site 309.

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INTRODUCTION

This report relates to appeals made against the report and recommendations of the Environmental Protection Authority (EPA) in relation to the proposed subdivision of Lot 102 Farrall Road, Midvale by Peet Stratton Pty Ltd (the proponent). Appeals were received from the Urban Bushland Council WA Inc. (UBC) and the Blackadder/Woodbridge Catchment Group Inc. (BWCG) (the appellants).

The proponent proposes to clear and disturb up to 5.08 hectares (ha) within an 8.3ha development envelope for the purpose of subdivision for residential land allotments, road reserves, provision of services and public open space. A conservation area of 3.2ha is proposed to be retained and rehabilitated within the development envelope (Figure 1).

EPA factors

The EPA identified three key environmental factors during its assessment:

1. Flora and vegetation – direct and indirect impacts from clearing of flora and vegetation including impacts to Bush Forever, Priority and Threatened Ecological Communities (PECs and TECs).
2. Terrestrial fauna – direct and indirect impacts associated with the clearing of fauna habitat.
3. Inland waters – potential impacts to the hydrological regime and water quality and quantity, and a wetland with values commensurate with a Conservation Category Wetland (CCW).

The proposal was determined to be a controlled action by a delegate of the Commonwealth Minister for the Environment under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) on 2 July 2018 as it will, or is likely to have, a significant impact on the Shrublands and Woodlands of the eastern Swan Coastal Plain TEC (EPBC number 2017/8066).

The proposal was assessed as an accredited assessment between the Commonwealth and Western Australian governments under the *Environmental Protection Act 1986* (WA) (EP Act).

The EPA recommended that the proposal may be implemented subject to conditions. The recommended conditions include a requirement to maintain or restore 0.98ha of the TEC within the conservation area noting implementation of the proposal will see three patches of the TEC cleared totalling 0.23ha. The conditions also include a requirement to maintain or restore Bush Forever site 309 located within the conservation area which was found to be commensurate with a CCW¹. Regarding the recognition of long-term management and input of resources to achieve these outcomes, the City of Swan has conditionally agreed to manage the site once completion criteria have been achieved by the proponent and the vegetation is self-sustaining.

Two appeals were received regarding the EPA's assessment of the proposal at Lot 102 Farrall Road with objections to the content of, and recommendations in the EPA's report.

¹ EPA Report and recommendations for subdivision of Lot 102 Farrall Rd, Midvale - [Report 1683](#).



Figure 1: Development envelope, footprint and proposed conservation area at Lot 102 Farrall Rd, Midvale².

² EPA Report and recommendations for subdivision of Lot 102 Farrall Rd, Midvale - [Report 1683](#).

OVERVIEW OF APPEAL PROCESS

In accordance with the EP Act, for appeals in respect to an EPA report, two reports relating to the matters raised on appeal are required for the Minister for Environment to determine the outcome of the appeals:

- a report from the Appeals Convenor, as required by section 109(3) of the EP Act; and
- a report from the EPA on the appeal, as required by section 106(1).

This document is the Appeals Convenor's report to the Minister.

To properly advise the Minister, the Appeals Convenor investigated the matters raised on appeal. The investigation included review of and regard for:

- the report from the EPA provided on 4 August 2020;
- the response to the appeals and the EPA's report provided by the proponent on 7 August 2020 and subsequent clarification provided on 22 September 2020;
- advice from the Department of Biodiversity, Conservation and Attractions (DBCA) regarding the threatened ecological community occurrences, hydrological impacts and impacts to black cockatoos;
- further advice from the EPA received on 23 December 2020 and the proponent's response to that advice, received 13 January 2021.

The investigation also included:

- meetings with the proponent and representatives on 14 August 2020 and 3 September 2020;
- on-site meeting with both appellants on 24 August 2020; and
- review of relevant information, policy and guidance as considered necessary.

The environmental appeals process is a merits-based process. For appeals in relation to an EPA report and recommendations, the Appeals Convenor normally considers the environmental merits of the assessment by the EPA, based on objectives as set by the EPA as well as other environmental factors. The appeals process considers environmental significance, relevance of factors, additional information not considered by the EPA, technical errors, and attainment of policy objectives. Where the development has been the subject of previous EPA assessments, those assessments and any subsequent Ministerial appeal decisions also need to be considered.

OUTCOME SOUGHT BY APPELLANTS

The appellants are of the view that the proposal is environmentally unacceptable and should not be permitted.

The Minister's options in dealing with an appeal against an EPA report set out in section 101(1) of the EP Act are to dismiss the appeals, remit the proposal to the EPA for further assessment, or vary the EPA's recommendations by changing the implementation conditions.

A final decision as to whether a proposal is to be implemented is made by the Minister for Environment in accordance with the processes set out under section 45 following the conclusion of the appeals process (unless the proposal is remitted to the EPA, in which case a final decision cannot be made until after a fresh report of the EPA is published under section 44(3) of the EP Act).

GROUNDS OF APPEAL

The matters raised by the appellants can be broadly summarised under the following grounds:

1. Impacts to poorly represented vegetation complexes;
2. Impacts to shrublands and woodlands of the eastern side of the swan coastal plain TEC (FCT20c);
3. Impacts to black cockatoo habitat;
4. Impacts to short-range endemic (SRE) species; and
5. Loss of palusplain wetland quality and acid sulphate soil disturbance

GROUND 1: IMPACTS TO POORLY REPRESENTED VEGETATION COMPLEXES

Through this ground of appeal, UBC³ submitted that the EPA's assessment failed to adequately consider the loss of Guildford and Forrestfield vegetation complexes stating this is contrary to EPA policy. The appellant submitted that:

The EPA notes that the Guildford Complex has less than 10% of its pre-European extent remaining on the SCP and the Forrestfield Complex has 12.29%. The EPA does not note its own data from 2015 that only 0.5% of the Guildford Complex remains in secure tenure and only 1% of the Forrestfield Complex remains in secure tenure in the Perth Peel region (EPA Perth and Peel @ 3.5million. July 2015).

Consideration

This appeal ground is relevant to the flora and vegetation environmental factor as identified by the EPA. In its assessment, the EPA⁴ noted that both Guildford and Forrestfield vegetation complexes occur within the development envelope; and as submitted by the appellant, that Guildford has less than 10% of its pre-clearing extent remaining and Forrestfield has only 12.3% remaining. It is unclear in the EPA's assessment as to how it arrived at a proposed impact of 0.23ha of 'Good' condition Forrestfield complex.

In response to this ground of appeal, the proponent clarified that although the site is mapped by DBCA⁵ as Guildford complex, the site is more representative of the Forrestfield complex due to the soil type and floristics (Figure 2). The proponent noted this is due to the sandy soils at Lot 102 which are more closely associated with the Forrestfield complex, rather than the heavier loams associated with the Guildford complex. This was supported by the flora and vegetation survey undertaken by Tauss & Associates⁶ in 2016.

As part of the investigation, the above was confirmed through the interrogation of the Department of Primary Industries and Regional Development (DPIRD) soil mapping⁷. The wetland area of Lot 102 (the Bush Forever site) is mapped predominantly as Pinjarra Phase Gf3 soil type which is characterised by poorly drained earths with a loamy topsoil with low woodlands of *Melaleuca* spp. This soil type is characteristic of the Guildford complex.

Conversely, the remainder of the site is mapped as Forrestfield (D Range) F1 Phase soil type, which is characterised by deep, rapidly drained sands. This soil type is characteristic of the Forrestfield complex as inferred by the proponent and additional flora survey. Given the above, the inferred vegetation complex mapping compiled by the proponent and used in the EPA's assessment is considered appropriate⁸.

³ UBC, Appeal letter 034/20, 10 July 2020.

⁴ EPA Report and recommendations for subdivision of Lot 102 Farrall Rd, Midvale - [Report 1683](#).

⁵ DBCA Vegetation Complexes – Swan Coastal Plain ([DBCA-046](#))

⁶ Tauss & Associates (2016) [Winter flora & vegetation survey](#) Lot 102 Farrall Rd, Stratton.

⁷ DPIRD Soil Landscape Mapping – Best available ([DPIRD-027](#))

⁸ Emerge Associates (2020) Supplementary Environmental Report Lot 102 Farrall Road, Midvale.

Noting the proponent's inferred mapping, in response to the appeals⁹ the EPA advised

The 3.4 ha of vegetation representative of Forrestfield complex ranges in condition from Excellent to Completely Degraded. Of the 2.7 ha proposed to be cleared, only 0.2 ha is in good condition. Noting the clearing of 2.7 ha represents 0.10 per cent of the extent remaining on the Swan Coastal Plain (page 15 of EPA Report 1683) and considering 2.54 ha is in Degraded and Completely Degraded condition, the EPA considered the proposal is unlikely to have a significant impact.

In the EPA's assessment¹⁰ regarding Guildford complex, it noted that 0.0046ha of the complex in 'Degraded condition' will be impacted by the proposal. The EPA considers this immaterial and advised in response to the appeal that:

The site contains 1.8 ha of Guildford complex vegetation, most of which is in Excellent condition. All of the mapped extent of the Guildford complex is proposed to be retained in the conservation area.

The Forrestfield complex is a poorly represented and reserved vegetation complex on the Swan Coastal Plain. The EPA 2008 Environmental Guidance for Planning and Development¹¹ provides some guidance on its assessment of the clearing of such vegetation complexes. Within this document, a 10% threshold was introduced by the EPA in relation to the representation of ecological communities in 'constrained' areas on the Swan Coastal Plain.

The 2008 document states that:

Ecological communities in constrained areas on the Swan Coastal Plain (are to be) maintained above 10% of the pre-clearing extent of the ecological community.

Furthermore, a constrained area is defined as:

...an area where there is a reasonable expectation that development will be able to proceed. This may include urban, urban deferred or industrial zoned land or land with existing development approvals.

As the proposal is located within the Perth Metropolitan Region within the Metropolitan Regional Scheme, it can be considered to occur within a 'constrained area'. The 10% threshold relates only to pre-clearing extents and not to that remaining in conservation estate. So, despite only 1.7% of Forrestfield complex existing in secure tenure¹², the *total* remaining extent is above the 10% threshold. While not stated in its assessment or response to appeal, it is assumed that as this is above the 10% threshold, the EPA considers this acceptable.

⁹ EPA response to appeals, 4 August 2020.

¹⁰ EPA Report and recommendations for subdivision of Lot 102 Farrall Rd, Midvale - [Report 1683](#).

¹¹ Environmental Protection Authority (EPA) (2008) [Environmental Guidance for Planning and Development Guidance Statement](#) No 33. Western Australia.

¹² Government of Western Australia (2019) 2018 South West Vegetation Complex Statistics. DBCA, Perth.

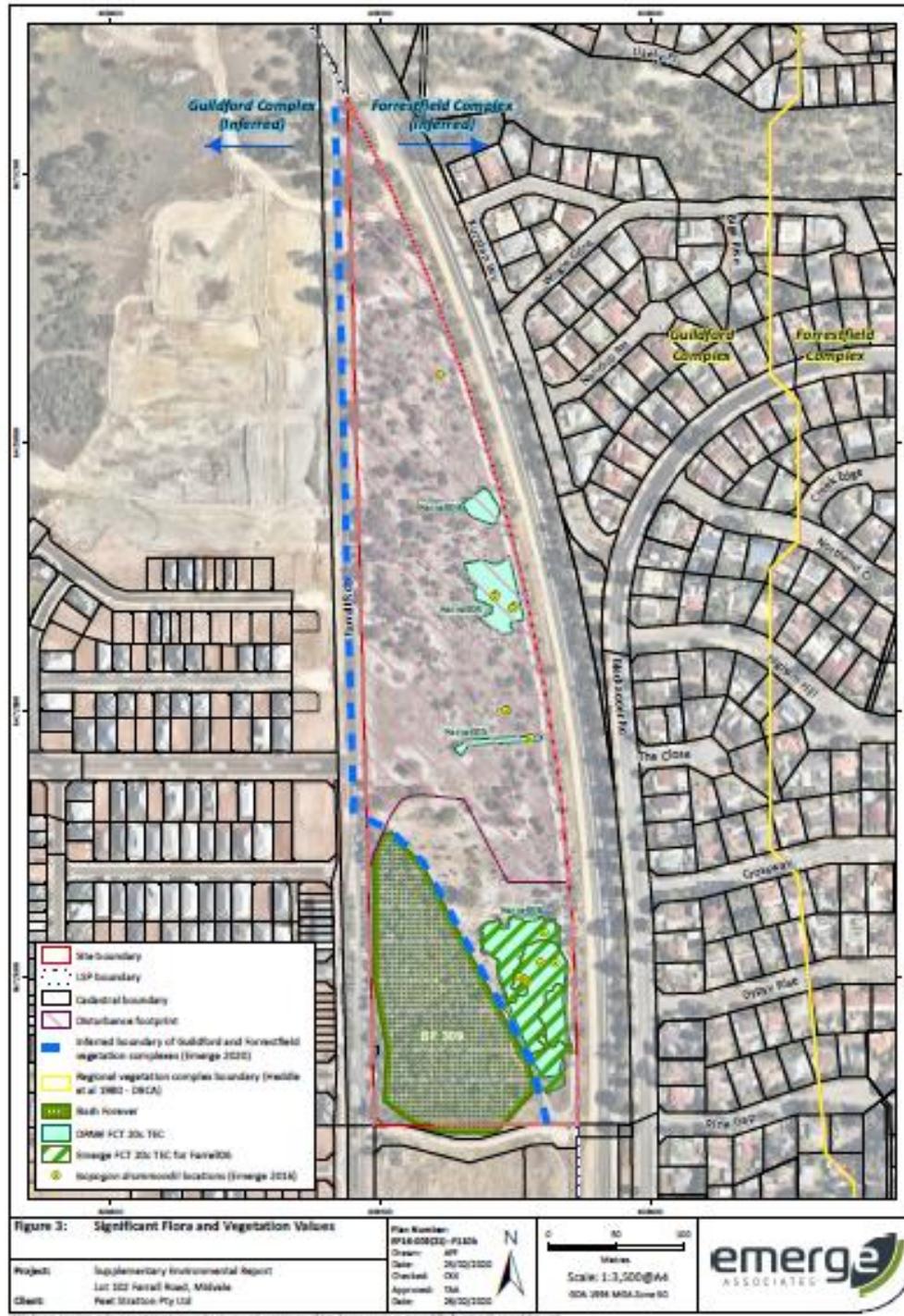


Figure 2: Forrestfield and Guildford vegetation complex boundaries based on soil mapping (inferred vs mapped)

Conclusion

Having regard for the information provided on this ground of the appeal, it was considered that the EPA's assessment in relation to impacts to the Forrestfield and Guildford vegetation complexes was generally appropriate and consistent with its guidance about clearing ecological communities in constrained areas on the Swan Coastal Plain. Based upon DBCA vegetation complex statistics from 2018¹³, there is above 10% of Forrestfield remaining across

¹³ Government of Western Australia (2019). 2018 South West Vegetation Complex Statistics, DBCA, Perth.

the Swan Coastal Plain and in this case the EPA's conclusion that this loss to be negligible is supported. It is therefore recommended that this ground of appeal be dismissed.

It is noted however, that continued incremental loss, such as the above and associated developments on the eastern Swan Coastal Plain, is contributing to the cumulative loss and impact on poorly reserved and represented vegetation complexes.

GROUND 2: IMPACTS TO SHRUBLANDS AND WOODLANDS OF THE EASTERN SWAN COASTAL PLAIN TEC (FCT 20C)

By this ground of appeal, UBC submitted that the proposal had the potential to result in serious or irreversible damage to occurrences of the Shrublands and Woodlands of the eastern Swan Coastal Plain TEC, also referred to as Floristic Community Type (FCT) Swan Coastal Plain (SCP) 20c. Specifically, it submitted that:

The EPA has failed to protect the occurrences of TEC FCT SCP 20c, 'Shrublands and woodlands of the eastern side of the Swan Coastal Plain' listed as 'Critically Endangered' under State legislation, by recommending approval of the development. The justification used is that 'conditions are recommended to ensure that risks are minimised or avoided where possible', and relevant measures are undertaken by the proponent to manage residual impacts.¹⁴

...

Housing development will create hydrological disturbance and edge impacts on the TEC.

Furthermore, BWCG submitted that the proposal was inconsistent with the Commonwealth's Approved Conservation Advice¹⁵ for the TEC. BWCG noted that:

The (EPA) Report appears to accept without comment the contentious and unsubstantiated claims made by the "independent" assessor Van Etten 2019: "Although the conservation advice for FCT 20c released by the Commonwealth states that all patches are important irrespective of condition, there is likely to be point in the degradation cycle where the community is: 1) is not recoverable even with serious intervention; and 2) no longer identifiable as that particular community as its characteristics have changed so much".

BWCG also questioned the practicability of the rehabilitation condition recommended by the EPA submitting that many of the plant species are not available in nurseries nor are they able to be propagated. It also noted that the Approved Conservation Advice clearly states that remnant vegetation that surrounds or links several occurrences is critical for survival of the ecological community.

Consideration

This ground of appeal is relevant to the flora and vegetation environmental factor and indirectly to the inland water factor. In undertaking its assessment¹⁶ the EPA acknowledged that the *Shrublands and Woodlands of the eastern Swan Coastal Plain* TEC (TEC FCT 20c) is listed as 'Critically Endangered' under the *Biodiversity Conservation Act 2016* (BC Act) and 'Endangered' under the EPBC Act.

Within Lot 102 Farrall Road there are four mapped occurrences of TEC FCT 20c. Forming the basis of the proposal and EPA assessment, three occurrences are proposed to be cleared totalling 0.23ha ranging in condition from 'Good' to 'Completely Degraded' (Table 1 & Figure 3).

¹⁴ UBC, Appeal letter 034/20, 10 July 2020.

¹⁵ Department of the Environment and Energy (2017). [Approved Conservation Advice for Shrublands and Woodlands of the eastern Swan Coastal Plain](#). Canberra: Department of the Environment and Energy.

¹⁶ EPA Report and recommendations for subdivision of Lot 102 Farrall Rd, Midvale - [Report 1683](#).

During the assessment, the EPA¹⁷ noted that:

Due to the TECs restricted distribution and extent, no condition thresholds have been applied to the ecological community and hence all areas meeting the description of the ecological community are habitat critical to its survival.



Figure 3: Vegetation condition and TEC locations¹⁸

¹⁷ EPA Report and recommendations for subdivision of Lot 102 Farrall Rd, Midvale - [Report 1683](#).

¹⁸ EmERGE Associates (2020) Supplementary Environmental Report Lot 102 Farrall Road, Midvale.

Table 1: Vegetation condition and size of Farrall Road 20c TEC occurrences¹⁹

Vegetation patch identifier (DBCA database)	Size (ha)	Vegetation Condition		
		Emerge 2016	DBCA 2016	Independent consultant (van Etten 2019)
Farrell03	0.05	Good	Good	Good
Farrell04	0.15	Good	Good	Degraded
Farrell05	0.03	Completely degraded-degraded. Not included as a 'patch'.	Good	Degraded. Not included as a 'patch'.

Based on DBCA mapping²⁰, the occurrences proposed to be impacted are referred to as Farrell03, Farrell04 and Farrell05. As noted in Table 1, the proponent and DBCA had differing opinions in regards to vegetation condition of the three patches. This inconsistency led to the EPA engaging Dr Eddie van Etten from Edith Cowan University (ECU) to conduct an independent review of the TEC FCT 20c occurrences at Farrall Road, including an assessment of vegetation condition.

The review²¹ by Dr van Etten noted that:

All patches of FCT 20c at Lot 102 are vulnerable and unlikely to survive over the long term without management given ongoing weed invasion, lack of recruitment and other threats, in combination with their size and isolation. The largest patch is potentially viable provided effective buffer, restoration and management prescriptions are applied.

...with the ongoing degradation of the patches of FCT 20c TEC, these patches will reach a point where the description of the community does not reflect the vegetation contained within the patch and the patch cannot recover from this degradation without significant intervention.

...

Although the conservation advice for FCT 20c released by the Commonwealth states that all patches are important irrespective of condition, there is likely to be point in the degradation cycle where the community is: 1) is not recoverable even with serious intervention; and 2) no longer identifiable as that particular community as its characteristics have changed so much.

Consistent with the findings of the review, the EPA considered that the three occurrences of TEC FCT 20c proposed to be impacted, were unlikely to be viable in the long-term without intensive, ongoing management and investment of resources. Therefore, the EPA concluded that the loss of the three occurrences was acceptable subject to appropriate mitigation measures being applied.

Noting the impact to 0.23ha of TEC FCT 20c and the Approved Conservation Advice, further advice was sought from the DBCA during the appeal investigation. DBCA²² advised that:

In the complete absence of any development of the site, these occurrences are likely to continue to deteriorate in condition through impacts including increased weed invasion and recreational activity. Intensive long-term management would be required to increase the future viability of these small patches, if they were considered for retention. A revegetated buffer linking them would also increase the resilience of the patches and assist them to persist into the future. It is likely that creation of quite substantial areas of revegetated and maintained

¹⁹ Emerge Associates (2020) Supplementary Environmental Report Lot 102 Farrall Road, Midvale.

²⁰ DBCA Species and Communities 2019 – Threatened & Priority Ecological Communities (WA TEC/PEC) corporate data

²¹ [van Etten, E. 2019](#), Review of Threatened Ecological Community FCT 20c, Lot 102 Farrall Road, Midvale.

²² DBCA advice to Office to the Appeals Convenor, 9 September 2020.

buffer areas would be required to improve long term persistence of the three smaller mapped TEC patches (Farrell03, Farrell04 and Farrell05).

Given DBCA's advice that intensive management is required for the persistence of the three TEC occurrences, it is considered that the investigation of mitigation measures was reasonable and appropriate.

Mitigation

To mitigate the loss of 0.23ha of TEC FCT 20c, the proponent intends to retain, rehabilitate, and manage the largest TEC occurrence at Farrall Road (Farrell06 = 0.54ha) within a consolidated conservation area that includes Bush Forever site 309. The conservation area will be changed from freehold to conservation estate and managed by the City of Swan.

The proponent also intends to revegetate 0.44ha of the conservation area directly adjoining the Farrell06 occurrence (based on the Commonwealth *Offsets Assessment Guide*)²³. This work aims to provide a 'buffer' adjacent to the largest occurrence.

In response to the appeal ground, the proponent²⁴ noted that:

While, the proposal will result in the removal of areas of native vegetation including patches of FCT 20c TEC, the implementation of the proposal will retain the largest, most intact patch of FCT 20c TEC plus a wetland commensurate of a Conservation Category Wetland (also a Bush Forever site). These values will be retained within a consolidated area of conservation POS transferred to the Crown in secure tenure. Improvements through weed control and revegetation within the southern POS area will increase the extent and resilience of FCT 20c TEC.

...

Offsets are discussed within the Conservation Advice and while they should be avoided, it is considered that offsets are an appropriate mitigation response for the proposal given:

- The size of the patches of FCT 20c TEC which are likely to be unviable in the long term as remnants given edge effects and current threats.
- The separation between patches which makes rehabilitation and ongoing management of all patches unreasonable.
- An offset will provide a net conservation benefit including a change in land tenure for conservation purposes.

In the TEC review, van Etten noted that the Farrell06 occurrence is the least vulnerable to edge effects and is potentially viable through ongoing management and a revegetated buffer.

In its assessment the EPA noted that:

... the proponent proposes to retain and manage the largest TEC FCT20c occurrence of 0.54 ha, undertake rehabilitation of this occurrence, and revegetate 0.44 ha of adjacent 'Degraded' and 'Completely Degraded' vegetation.

In response to this aspect of the appeal, the EPA considered that retention, revegetation and management of the largest TEC occurrence, together with the adjacent wetland in a conservation area, provides for long term protection and management.

The EPA advised that it recommended conditions to minimise and mitigate impacts to the TEC including the preparation of a Rehabilitation and Vegetation Management Plan²⁵ (RVMP).

²³ Available at: <http://www.environment.gov.au/epbc/publications/epbc-act-environmental-offsets-policy>

²⁴ Emerge Associates, Advice to Appeals Convenor, 7 August 2020, p. 6-7.

²⁵ Emerge Associates 2020 [Rehabilitation and Vegetation Management Plan Lot 102 Farrall Road, Midvale](#)

The EPA noted that the RVMP will be implemented for a minimum of 5 years and the subsequent conservation area will be handed over to the City of Swan once the objectives set in condition 6-1 have been met. In this regard the objectives set in condition 6-1 include:

...maintain or **restore**, the condition of 0.98 ha of self-sustaining vegetation (with similar species composition and structure) to the Shrublands and Woodlands of the eastern Swan Coastal Plain Threatened Ecological Community to 'good' or better condition; and

...maintain or **restore** the condition of vegetation to 'good' or better condition within Bush Forever Site 309 incorporating wetland UFI 15136.

To ensure that the objectives set in condition 6-1 are met, the RVMP is to be developed in consultation with DBCA and the City of Swan and requires that management actions and targets and monitoring parameters be developed to ensure that the effectiveness of the RVMP can be measured.

In response to the appellants concern regarding species availability due to the inability to propagate many of the TEC species, the RVMP notes that there will be several methods of plant establishment in addition to propagated tubestock. The RVMP notes that:

A list of 39 species suitable for use in the shrubland/woodland management areas, and recommended tubestock numbers, is provided in Table 7. This species list is constructed from observations of FCT 20c vegetation on site, combined with species known to be present within FCT 20c. Seed has already been collected from within the site for 19 of these species, as indicated in Table 7. The other species are available from specialist nurseries but their use will be subject to availability of a local seed source.

...

In addition to translocation, topsoil may be harvested, as required, from parts of Lot 102 with higher native species cover and re-spread in intensive management areas. Topsoil is acknowledged as best source for native seed and is the only way to source some native species found in banksia woodland that are difficult to propagate (Stevens *et al.* 2016).

Additionally, it is noted that the City of Swan has conditionally agreed to manage the proposed 'conservation' area within Lot 102. The City notes that maintenance will comprise of rubbish removal and weed pulling and spraying with an estimated cost will be approximately \$10,000 per year. It should be noted that additional to this, a dieback monitoring and treatment plan is required due to the inherent susceptibility of banksia woodland to dieback diseases.

On the 5 June 2019²⁶ the City of Swan resolved to:

Authorise the CEO to enter into an agreement which will allow the Crown to vest management of the site to the City, given the following conditions are agreed upon;

- a. The developer to develop and implement an environmental management plan to the satisfaction of the CEO;
- b. The developer to set up a "friends of group" in conjunction with the City, to assist with management of the site; and
- c. The developer to maintain the site for the full life of the estate to the satisfaction of the CEO, before gifting the site to the City.

Hydrological impacts and TEC edge effects

The EPA's environmental objective for Inland Waters is to:
maintain the hydrological regimes and quality of groundwater and surface water so that environmental values area protected.

²⁶ [City of Swan Ordinary Council Meeting](#) 5 June 2019 Item 4.1

In its assessment the EPA noted that the proposal has the potential to alter hydrological regimes. The EPA noted the proponent's application of the mitigation hierarchy to reduce impacts of the proposal on inland waters. In particular, the EPA noted that the proposed rehabilitation and retention of the adjacent TEC FCT20c within the proposed conservation area will provide a vegetated buffer to the wetland.

To minimise and manage the potential impacts to inland waters the proponent proposes to:

- limit the hours of groundwater pumping to construction operating hours
- monitor groundwater levels adjacent to the wetland and vegetation condition
- adopt water sensitive urban design
- consistent with the approved Local Water Management Strategy, prepare and implement an Urban Water Management Plan, with advice from the Department of Biodiversity Conservation and Attractions.

As submitted by the UBC, monitoring ground water bores may identify impacts to inland waters but not manage such impacts. In response to the appeal, the proponent²⁷ advised that a bore monitoring program including contingencies will be developed and that an Urban Water Management Plan (UWMP) will be developed and submitted as part of the subdivision application process²⁸.

Regarding use of the existing production bore, the proponent²⁹ clarified that it will be used for temporary construction and dust suppression (up to 3 to 6 months per year) and the impacts will be managed by the UWMP.

The importance of the UWMP was reiterated in DBCA advice³⁰ which noted that:

An Urban Water Management Plan as a condition of subdivision is essential to establish the current hydrological function. This should involve determination of the surface and groundwater flows to the TEC and wetlands, and the likely impacts of the proposed development on these water sources. This is an essential step in seeking to maintain the hydrological processes of the values proposed to be retained in the conservation area. Specific work is required to determine the impacts of the proposal on the hydrology of areas of the TEC that are proposed for retention or rehabilitation, and the buffer required to protect the hydrological processes of the wetland in Bush Forever site 309. Wet conditions within and upgradient of the wetland in the Bush Forever site will need to be maintained for pre-development wetland hydroperiods to be sustained.

In reference to a suitable buffer size DBCA advised that:

As noted in the DBCA letter to the EPA dated 28 January 2020, there have been no extensive peer-reviewed studies of effective buffer widths to Banksia woodlands. DBCA is aware of a buffer study for an industrial site in Neerabup that recommended a 40m buffer be applied to the adjoining area of Banksia woodlands to mitigate against rubbish blowing into the adjacent TEC.

To address the potential hydrological changes and impact on the conservation area, DBCA further advised that:

The UWMP study will be required to help determine the impacts of the proposal on the areas of the TEC that are proposed for retention or rehabilitation, and the buffer and management required to protect the hydrological processes of the wetland in Bush Forever site 309, the TEC, and other values.

The effectiveness of a buffer will also be determined by the supporting management effort that is applied to mitigate the impacts of weed invasion, rubbish dumping, hydrological changes, and potential recreational use within the area.

²⁷ Emerge Associates, Advice to Appeals Convenor, 7 August 2020.

²⁸ Emerge Associates [Local Water Management Strategy 2015](#)

²⁹ Emerge Associates, Advice to Appeals Convenor, 7 August 2020.

³⁰ DBCA advice to Office to the Appeals Convenor, 9 September 2020.

In this regard, it is noted that the EPA has set clear objectives by condition 6-1 for the conservation area to protect flora and vegetation so that the biological diversity and ecological integrity are maintained and to maintain and restore the condition of the vegetation.

As noted by DBCA³¹, it will be essential for the UWMP to establish the current hydrological function through the determination of surface and groundwater flows to the TEC and wetland, to ensure that any impacts of the proposed development on these water sources are managed and the EPA's objective is met.

Conclusion

Having regard for the information provided in this ground of appeal, it is considered that the EPA's assessment in relation to impacts to the TEC was generally appropriate and the EPA's advice that the retention, revegetation and management of the largest TEC occurrence, together with the adjacent wetland in a conservation area, provides for the long term protection and management of the TEC, is accepted. It is recommended that this ground of appeal be dismissed.

GROUND 3: IMPACTS TO BLACK COCKATOO HABITAT

By this ground of appeal, the UBC submitted that the proposal would result in the clearing of black cockatoo foraging and potential breeding habitat and that the recommended conditions fail to ensure no net loss of foraging habitat. Additionally, the appellant notes that black cockatoo foraging habitat was not included in the EPBC controlled action and the loss of habitat is inconsistent with recovery plans.

Consideration

This appeal ground is relevant to the terrestrial fauna environmental factor, as identified by the EPA. In its assessment the EPA³² considered the fauna habitat assessment³³ undertaken in 2018 and identified that the proposal would impact 2.74 ha³⁴ of black cockatoo foraging habitat. This included 0.2 ha of 'quality' marri (*Corymbia calophylla*) foraging habitat with the remainder of the foraging habitat described as 'low' quality sparse to open banksia woodland. The fauna assessment observed Carnaby's cockatoo feeding within the proposal area and further foraging evidence was found for forest red-tailed black cockatoos.

While noting the above, the EPA concluded that the impact to black cockatoo foraging habitat was not significant and for Carnaby's cockatoo that:

the area of impact is less than 0.1% of the known foraging habitat within 6 km of the site.

The EPA also noted the proponent's application of the mitigation hierarchy to reduce impacts to fauna. The EPA outlined that:

the proposed retention and revegetation of the proposed conservation area will include species which black cockatoo use to forage, and the retention of four potential habitat trees.

In response to the appeal, the EPA advised that it did not consider there was a significant residual impact to require a condition to offset the loss of black cockatoo habitat. The EPA did not consider the proposed clearing of foraging habitat significant due to its small area and the availability of large areas of foraging habitat nearby.³⁵

³¹ DBCA advice to Office to the Appeals Convenor, 9 September 2020.

³² EPA Report and recommendations for subdivision of Lot 102 Farrall Rd, Midvale - [Report 1683](#).

³³ [Harewood 2018 Fauna Assessment](#)

³⁴ Advice received from the EPA on 17 November 2020 confirmed that its assessment of black cockatoo habitat impacted by the proposal was based on 2.74 ha not 2.55 ha as quoted erroneously in EPA Report 1683.

³⁵ EPA response to appeals, 4 August 2020.

In this regard, the EPA's technical report Carnaby's Cockatoo in EIA³⁶ is considered relevant, it notes:

The importance of Banksia woodland habitat for Carnaby's cockatoo has been demonstrated through foraging studies, which determined that Carnaby's cockatoo exploit all areas of available Banksia food resources on the Swan Coastal Plain (Johnson et al., 2016). andall available banksia woodland habitat (is) considered important.

Additionally, peer-reviewed studies^{37,38,39,40} indicate that:

- the factor limiting population growth of Carnaby's cockatoo is adult survival, related directly to bottlenecks in food resources on the Swan Coastal Plain and surrounds⁴¹
- Carnaby's cockatoo has declined in numbers in response to historic and ongoing removal of foraging habitat (i.e. food has become limiting)

To further investigate this matter, clarification was sought from the proponent in relation to its assessment of the quality of foraging habitat to be impacted.

In response, the proponent provided a revised assessment⁴², recalculating the area of black cockatoo foraging habitat to be impacted by estimating the percent cover of both primary and secondary foraging species.

Primary foraging species were defined by the proponent as those plants with historical and contemporary records of regular consumption by black cockatoos. Secondary species were defined as plants that black cockatoos have been recorded consuming occasionally, or that based on their limited extent or agricultural origin, should not be considered a sustaining resource.

The assessment identified that the proposal would result in the clearing of 1.22 ha of Carnaby's cockatoo foraging habitat (comprising 0.93 ha primary and 0.29 ha secondary), and 0.25 ha of forest red-tailed black cockatoo foraging habitat (comprising 0.22 ha primary and 0.03 ha secondary).⁴³

The assessment also identified the extent of such habitat that would be conserved in the conservation area being 0.34 ha of Carnaby's cockatoo foraging habitat (0.32 ha primary and 0.02 ha secondary), and 0.16 ha of forest red-tailed black cockatoo foraging habitat (0.11 ha primary and 0.05 ha secondary).

The revised assessment was provided to DBCA⁴⁴ for comment which advised that the revised methodology is appropriate, but that there appears to be minimal residual difference between the two assessments of foraging habitat to be impacted.

³⁶ [EPA Technical Report \(May 2019\)](#) – Carnaby's Cockatoo in Environmental Impact Assessment in the Perth and Peel Region

³⁷ Stock, W.D., Finn, H., Parker, J., Dods, K., 2013. Pine as fast food: foraging ecology of an endangered cockatoo in a forestry landscape. PLoS ONE 8, e61145.

³⁸ Johnston, T.R., Stock, W.D., Mawson, P.R., 2016. Foraging by Carnaby's Black-Cockatoo in *Banksia* woodland on the Swan Coastal Plain, Western Australia. Emu 116, 284-293.

³⁹ Groom, C., White, N.E., Mitchell, N., Roberts, J.D., Mawson, P., 2017. Assessing the spatial ecology and resource use of a mobile and endangered species in an urbanized landscape using satellite telemetry and DNA faecal metabarcoding. Ibis 159, 390-405.

⁴⁰ Valentine, L.E., Fisher, R., Wilson, B.A., Sonneman, T., Stock, W.D., Fleming, P.A., Hobbs, R.J., 2014. Time since fire influences food resources for an endangered species, Carnaby's cockatoo, in a fire-prone landscape. Biological Conservation 175, 1-9.

⁴¹ Williams, M.R., Yates, C.J., Saunders, D.A., Dawson, R., Barrett G.W. (2017). Combined demographic and resource models quantify the effects of potential land-use change on the endangered Carnaby's cockatoo (*Calyptorhynchus latirostris*). Biological Conservation 210, pp. 8–15.

⁴² Emerge 2020 Technical memorandum - Black Cockatoo Habitat Review, Lot 102 Farrall Road, Midvale.

⁴³ Note: the 0.22 ha of primary forest red-tailed black cockatoo foraging habitat was also identified as primary Carnaby's cockatoo foraging habitat.

⁴⁴ DBCA advice to OAC, received 11 January 2021.

The proponent's revised black cockatoo habitat assessment was also provided to the EPA. In its response, the EPA⁴⁵ noted:

- there are differences in the methodologies used in the original compared to the revised habitat assessment;
- that the two methodologies resulted in different outcomes i.e. that the revised assessment has resulted in a decrease in the overall quantity of foraging habitat but an increase in the overall quality (by virtue of the fact that non-foraging species have been excluded); and
- that the number of potential habitat trees and the assessment of the quality of the vegetation in the northern portion of the development envelope (i.e. the 0.2 ha originally identified as 'quality' habitat) was unchanged between the two assessments (it was identified as primary foraging habitat in the revised assessment).

The EPA advised that noting the above,

...there is no change to the EPA's assessment that there is not a significant residual impact on black cockatoos from the proposal which requires offsetting.

In relation to cumulative impacts and how its Technical Guidance⁴⁶ was considered, the EPA advised that in the context of local and regional environments, an incremental impact in one place may be significant even though an incremental impact in another place is not. The EPA reiterated that it has not assessed there to be a significant residual impact in this case.

However, in light of the fact that both assessments identified the northern tip of the development area as 'quality'/primary foraging habitat, and that this foraging habitat is not well represented in the conservation area, the EPA advised that consistent with its Technical Guidance that impacts should be avoided or minimised. The EPA advised that consideration could be given to whether mitigation of the northern portion of the development envelope could be practicably undertaken so as to avoid the marri woodland.

The proponent's⁴⁷ advice was sought in this regard, and it advised:

Farrall Road needs to be realigned in accordance with the broader local structure plan... This is a road traffic safety matter in relation to its interaction with the at grade rail crossing, and needs to occur as a priority. This alignment (as shown on the structure plan) would mean that avoidance is simply not possible. Conversely avoidance has been demonstrated in other areas and in particular for a larger area of Primary foraging habitat for Carnaby's black cockatoo.

The EPA's advice was also provided to DBCA⁴⁸ for comment which advised:

Consideration of cumulative impact includes by definition that contributing impacts may not be individually significant. It is not known at which point cumulative loss in habitat could interact with population ecology to result in an impact on the population beyond simple multiplier of area of habitat area lost... The EPA have noted that their advice to the proponent was that further avoidance of black cockatoo habitat should be implemented if practicable (however this is non-binding advice). If this avoidance is not achieved then some form of compensation (offset) for the loss could be considered.

Having considered the revised habitat assessment and the further advice received from the EPA, the proponent and DBCA, the appeals investigation then considered the WA Environmental Offsets Policy (September 2011) and the WA Environmental Offsets Guidelines (August 2014). Together these documents set out the framework for determining significant residual impacts and when offsets should be applied.

⁴⁵ EPA response to OAC - revised black cockatoo habitat assessment 23 December 2020

⁴⁶ [EPA Technical Report \(May 2019\)](#) – Carnaby's Cockatoo in Environmental Impact Assessment in the Perth and Peel Region

⁴⁷ Further advice from Emerge Associates, 13 January 2021.

⁴⁸ DBCA advice to OAC, received 13 January 2021.

Principle 2 of the Offsets Policy outlines that offsets are not appropriate for all projects, that their applicability will be determined on a project-by-project basis, and that while they may be appropriate for significant residual impacts, they will not be applied to minor impacts.

The Offsets Guidelines outline that, in general, significant residual impacts include those that affect rare and endangered plants and animals, among other things. The Guidelines state:

In determining the significance of an impact, it is important to consider the impacts in the regional context. In isolation, a project may not be considered to have a significant impact. However, when considered along with other projects, activities and threats in the region, the cumulative impacts may be significant. That is, the context of impacts plays a role in determining the requirement for and scale of an offset.

Whether the proposal will affect rare and endangered animals is not in dispute – it is acknowledged that the site is currently being used for foraging by black cockatoos. Therefore, the key consideration in this case is the context of the habitat to be lost. In this regard, it is noted that:

- the majority of foraging habitat referenced by the EPA as being within 6 km of the site is located at least 3km east within a different bioregion
- the proposal is located on the Swan Coastal Plain where foraging habitat has been subject to extensive fragmentation from urban and industrial development;
- the proposal is located within an urbanised setting and is considered representative of remaining remnants on the Swan Coastal Plain that provide a series of 'stepping stones' of black cockatoo food resources
- the proposal is located within 8km of recorded breeding sites for both Carnaby's and forest red-tailed black cockatoos⁴⁹;
- 24 confirmed roost sites occur within 10km (9 Carnaby's cockatoo roosts, 9 forest red-tailed black cockatoo roosts and 6 roosts utilised by both species)⁵⁰;
- in relation to Carnaby's cockatoo, resource depletion from the removal of pines and banksia woodlands, coupled with the large variability in annual seed production are the greatest contributors to the restricted availability of food in the region^{51,52}; and
- while the size of habitat that would be lost for forest red-tailed black cockatoos is minor (0.25 ha), this is not considered to be the case for Carnaby's cockatoo (1.22 ha).

It is considered that removal of the foraging habitat at Lot 102 Farrall Road will contribute to the cumulative loss of foraging habitat across the Swan Coastal Plain which is driving decline in Carnaby's cockatoo numbers^{53,54}. It follows that the loss of 1.22 ha of Carnaby's cockatoo foraging habitat is considered a significant residual impact that requires an offset.

It is acknowledged that the conservation of 0.34 ha of Carnaby's cockatoo foraging habitat within the conservation area may partially compensate for the loss of 1.22 ha. Furthermore, the rehabilitation of 0.44 ha to TEC FCT 20c required by the EPA's recommended condition 6 may also provide compensation through the establishment of primary and secondary foraging species within portions of that area. However, these two measures combined are considered insufficient to entirely offset the 1.22 ha. It is recommended that an additional condition is

⁴⁹ Emerge 2020 Technical memorandum - Black Cockatoo Habitat Review, Lot 102 Farrall Road, Midvale.

⁵⁰ DBCA Species and Communities 2019 black cockatoo roost data

⁵¹ Johnston, T. (2013) Food Resource Availability for Carnaby's Cockatoo (*Calyptorhynchus latirostris*) on the Swan Coastal Plain. MSc thesis Edith Cowan University, Western Australia.

⁵² Williams, M.R., Yates, C.J., Saunders, D.A., Dawson, R., Barrett G.W. (2017). Combined demographic and resource models quantify the effects of potential land-use change on the endangered Carnaby's cockatoo (*Calyptorhynchus latirostris*). Biological Conservation 210, pp. 8–15.

⁵³ Williams, M.R., Yates, C.J., Saunders, D.A., Dawson, R., Barrett G.W. (2017). Combined demographic and resource models quantify the effects of potential land-use change on the endangered Carnaby's cockatoo (*Calyptorhynchus latirostris*). Biological Conservation 210, pp. 8–15.

⁵⁴ Whitehead, A.L., Kujala, H., Wintle, B.A. (2016). Dealing with cumulative biodiversity impacts in strategic environmental assessment: a new frontier for conservation planning. Conservation Letters. 10, 195–204.

added requiring the proponent to prepare and implement an offset proposal to the satisfaction of DWER, in accordance with the requirements of the WA Environmental Offsets Policy and associated Guidelines.

Controlled action under the EPBC Act

The UBC also submitted that the Commonwealth did not consider the impacts to black cockatoos to be a controlled action under the EPBC Act. In the EPA's assessment⁵⁵ it was noted that:

...the Commonwealth Department of Water, Agriculture and Environment did not consider the potential impacts to black cockatoos a significant matter requiring further assessment.

In response to the appeals, the EPA responded that an assessment under the EP Act is unable to change this decision which is a matter for the Commonwealth.

Conclusion

Based on the available evidence, including the context of local and regional environments, the EPA's conclusion that the proposal will not result in a significant residual impact to Carnaby's cockatoo is not supported.

It is recommended that a suitable offset be provided to counterbalance the loss of 1.22 ha of Carnaby's cockatoo foraging habitat.

GROUND 4: IMPACTS TO SHORT RANGE ENDEMIC SPECIES

The appellant contends there is a high probability that two SRE species (*Idiosoma sigillatum* and a tree cricket) occur in the development envelope. It is suggested that each individual female and probably male *Idiosoma sigillatum* will be killed if clearing is permitted.

Consideration

This appeal ground is relevant to the terrestrial fauna environmental factor, as identified by the EPA.

In the EPA's assessment⁵⁶, it was noted that:

A desk top assessment for short range endemic invertebrate fauna identified a high probability of a species of Trapdoor spider and Tree cricket occurring in the development envelope.

The EPA reviewed a short range endemic (SRE) survey⁵⁷ provided by the proponent. The survey identified that although the proposal will directly remove habitat used by SRE species, the impacts are unlikely to be significant or result in local or species extinction.

Based upon habitat condition and distance to confirmed records, the SRE survey noted that there was a moderate probability of *Idiosoma sigillatum* (trapdoor spider) occurring at the site due to the presence of suitable habitat. This species of trapdoor spider usually occurs in banksia woodland and heathland on sandy soils such as those at Lot 102. The survey concluded that:

Given the that [sic] much of the vegetation within Lot 102 Farrall Rd, Midvale is degraded to highly degraded the species has a Low probability of occurring within the portions of Lot 102 that are planned to be developed.

⁵⁵ EPA report and recommendations - [Report 1683](#), p. 15.

⁵⁶ EPA Report and recommendations for subdivision of Lot 102 Farrall Rd, Midvale - [Report 1683](#).

⁵⁷ [Invertebrate Solutions 2019](#), Short Range Endemic Invertebrate Desktop Assessment for Lot 102 Farrall Road, Midvale, Western Australia.

Regarding the conservation significant tree cricket (*Throscodectes xiphos*), the SRE survey noted that it is only known from one location near Jandakot, which is approximately 30km south of Lot 102 Farrall Rd. Given this, the survey concluded a very low probability of the Tree cricket occurring at Farrall Rd. If present, the tree cricket would only be found within the higher quality vegetation associated with Bush Forever site 309 which the proponent has proposed to retain.

The EPA⁵⁸ concluded that:

The EPA notes the proposal may result in impacts to invertebrate fauna likely to be short range endemics. Considering that good quality fauna habitat is being retained, and the extent of fauna habitat remaining locally, the EPA considers that the impacts of the proposal represents a small incremental loss. Therefore, the EPA considers that the loss of fauna habitat as a result of the proposal is unlikely to have a significant impact on ground-dwelling terrestrial fauna and short range endemics.

Conclusion

Having regard to the information provided on this ground of appeal, it was considered that the EPA's assessment in relation to impacts to SRE species was appropriate. It is reasonable to conclude that *Idiosoma sigillatum* and the tree cricket are unlikely to be significantly impacted by this proposal. Consistent with the EPA's report, it is considered that the proposal can meet the EPA's objective for terrestrial fauna when considering impacts on SRE species. It is recommended that this ground of appeal be dismissed.

GROUND 5: LOSS OF PALUSPLAIN WETLAND AND ACID SULPHATE SOIL DISTURBANCE

The UBC submitted that the subdivision and housing development will irreversibly degrade the wetland and its surrounding habitat. Additionally, the appellant contends that the area of palusplain wetland suite managed for conservation will be increased.

The UBC contends, that dewatering impacts from groundwater pumping will lead to the disturbance of acid sulphate soils (ASS), and that the site is not suitable for development if dewatering is required. Regarding ASS risk, the appellant refers to the expertise of Dr Stephen Appleyard (DWER). Regarding dewatering, the UBC submitted that:

Monitoring groundwater levels will not stop dewatering impacts of groundwater pumping which include irreversible acidification of the palusplain wetland site.

Consideration

This appeal ground is relevant to the inland waters environmental factor, as identified by the EPA. The objective of this factor is to maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected.

The impact of potential hydrological changes on the TEC and wetland dependent vegetation in Bush Forever site 309 is considered in Ground 2.

In its assessment the EPA notes that the proposal has the potential to directly impact inland waters through abstracting ground water and altering water quality

Dewatering

In response to the appeal, the EPA noted that dewatering of the site is not proposed nor required for the subdivision. The proponent advised that the existing production bore within the superficial aquifer will be used for temporary construction and dust suppression purposes

⁵⁸ EPA Report and recommendations for subdivision of Lot 102 Farrall Rd, Midvale - [Report 1683](#).

and is located 290 m north-west of the wetland area. The construction bore is only planned to be in operation during earthworks and civil construction, which will be conducted on a staged basis over a period of 12 weeks and may involve 1-2 stages per year (depending on market conditions)⁵⁹.

Palusplain wetland suite

In its assessment, the EPA⁶⁰ considered that retention of the Bush Forever site wetland, in an area managed for conservation, will increase the conservation area of the Swan River palusplain suite on the Swan Coastal Plain.

The EPA describe the wetland vegetation within Bush Forever site 309 as woodland to low open forest of *Melaleuca preissiana* in 'Excellent' condition. Regarding mitigation and management of the wetland area, the EPA reported that:

The proposal will retain the wetland area associated with the 'Excellent' condition vegetation within the boundary of BF site 309.

In response to the appeal, the EPA⁶¹ provided that:

The wetland is currently freehold land and impacted by uncontrolled access, rubbish dumping and weed incursion. The EPA considers that retention of the wetland in an area managed for conservation increases the extent of the wetland type in the conservation estate. Fencing and rehabilitation of the wetland, and larger conservation area, is proposed in the Rehabilitation and Vegetation Management Plan required by Condition 6-2.

Given the above, the resultant tenure change from freehold to conservation estate aims to increase the security of the site. This is distinct from increasing the spatial area of palusplain wetland.

Noting that the majority of Bush Forever site 309 is in 'Excellent' condition, the wording of Condition 6-1(3) is open to interpretation and does not reflect the EPA's intent of maintaining ecological integrity as noted in its consideration of the EP Act principles. The condition states that:

...maintain or **restore** the condition of vegetation to 'good' or better condition within Bush Forever Site 309 incorporating wetland UFI 15136.

However, the proponent's RVMP⁶² clarifies that the vegetation condition of the 'Excellent' portion of the Bush Forever site will be maintained and the 'Degraded' boundary areas will be restored:

Manage approximately 1.7ha FCT 11 vegetation associated with Bush Forever Site 309 to maintain its existing condition and restore any 'degraded' portions to 'good' or better condition.

Acid sulphate soil disturbance

The proponent submitted a geotechnical and preliminary acid sulphate soils analysis for consideration in the EPA's assessment. This included soil sampling from test pits within Lot 102 that underwent laboratory analysis to identify the presence of any potential or actual acid sulphate soils⁶³. The report concluded that:

...the risk of acid sulphate soils to depths of 2.0 m is low, which is generally consistent with the published mapping.

⁵⁹ Emerge Associates, Advice to Appeals Convenor, 7 August 2020.

⁶⁰ EPA Report and recommendations for subdivision of Lot 102 Farrall Rd, Midvale - [Report 1683](#).

⁶¹ EPA response to appeals, 4 August 2020.

⁶² Emerge Associates 2020, [Rehabilitation and Vegetation Management Plan](#)

⁶³ Douglas Partners 2014, Report on Geotechnical and Preliminary Acid Sulphate Soil Investigation Proposed Residential Development Lots 50, 102 and 427 Farrall Road Midvale, WA.

The published ASS risk mapping is publicly available at [Acid Sulphate Soil risk map, Swan Coastal Plain](#). The eastern third of Lot 102 is mapped as *risk class 2* and the remainder of the Lot is mapped as *no known risk*. The supporting report⁶⁴ describes three ASS risk classes as:

1. Risk class 1: High to moderate ASS disturbance risk (<3m from surface)
2. Risk class 2: Moderate to low ASS disturbance risk (<3m from surface)
3. Risk class 3: No known risk

The report and layer were compiled with technical expertise and input from Dr Steve Appleyard, currently Principal Hydrogeologist at DWER.

Given the above and that dewatering is not proposed for the site, the disturbance of acid sulphate soils is unlikely.

Conclusion

Palusplain wetland suite

The EPA confirmed that the area of palusplain wetland managed for conservation will increase, given the Bush Forever site wetland within the proposed conservation area will be rehabilitated, included in conservation estate, and maintained by the City of Swan once rehabilitation is self-sustaining.

However, it is recommended that Condition 6-1(3) be clarified to reflect the EPA's intent that degraded areas are restored to 'Good' or better condition and that areas in 'Excellent' condition are maintained in 'Excellent' condition.

Dewatering

Dewatering is not proposed or required for the establishment of the residential development as submitted by the UBC.

Acid sulphate soils

Regarding the potential disturbance of acid sulphate soils, this is unlikely given the risk was found to be low through standardised laboratory testing⁶⁵ which aligns with the publicly available ASS risk mapping.

CONCLUSION AND RECOMMENDATION

For the reasons stated in this report, it is considered that the EPA's assessment was generally supported by the available information.

However, it is recommended that the appeals should be allowed to the extent that the following conditions are required and improved:

- require an offset for the loss of 1.22ha of Carnaby's cockatoo foraging habitat; and
- clarify Condition 6-1(3) to reflect the intended requirement to maintain 'Excellent' condition vegetation and restore degraded vegetation to 'Good' or better condition as reflected in the proponent's draft RVMP.

⁶⁴ Singh, B., Pal Y., Clohessy, S. and Wong, S. 2012, Acid Sulfate Soil Survey in Perth Metropolitan Region, Swan Coastal Plain WA, Department of Environment and Conservation, Government of Western Australia.

⁶⁵ Douglas Partners 2014, Report on Geotechnical and Preliminary Acid Sulphate Soil Investigation.

It is otherwise recommended that the appeals be dismissed

The final decision on whether the proposal should be implemented, and on the precise wording of the conditions which should apply, is to be made under section 45 of the EP Act.

Emma Gaunt
APPEALS CONVENOR

Investigating Officer:
Carly Bishop, Senior Appeals Officer