



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 8195/1
Permit Holder:	City of Busselton
Duration of Permit:	From 16 June 2019 to 16 June 2029

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

1. Purpose for which clearing may be done

Clearing for the purpose of constructing the Eastern Link.

2. Land on which clearing is to be done

Lot 40 on Deposited Plan 222226 (Crown Reserve 2236), Busselton
Lot 41 on Deposited Plan 222226 (Crown Reserve 2236), Busselton
Lot 43 on Deposited Plan 222226 (Crown Reserve 2237), Busselton
Lot 231 on Deposited Plan 91174 (Crown Reserve 2241), Busselton
Lot 265 on Deposited Plan 222226 (Crown Reserve 7443), Busselton
Lot 511 on Deposited Plan 408687 (Crown Reserve 52822), Busselton
Road Reserve (PIN 11370127), Busselton
Road Reserve (PIN 11370129), Busselton
Road Reserve (PIN 11370130), Busselton
Road Reserve (PIN 11370166), Busselton
Road Reserve (PIN 11438900), Busselton
Water Feature (PIN 11725413), Busselton

3. Area of clearing

- The Permit Holder must not clear more than 0.49 hectares of native vegetation within the area hatched yellow on attached Plan 8195/1a.
- The 0.49 hectares of native vegetation to be cleared shall not include more than seven mature *Agonis flexuosa* trees.

4. Period in which clearing is authorised

The Permit Holder shall not clear any native vegetation after 16 June 2024.

5. Application

This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

6. Type of clearing authorised

This Permit authorises the Permit Holder to clear native vegetation for the activities described in condition 1 of this Permit to the extent that the Permit Holder has the power to carry out works involving clearing for those activities under the *Local Government Act 1995* or any other written law.

7. Avoid, minimise and reduce the impacts and extent of clearing

In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:

- (a) avoid the clearing of native vegetation;
- (b) minimise the amount of native vegetation to be cleared; and
- (c) reduce the impact of clearing on any environmental value.

8. Dieback and weed management

When undertaking any clearing authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds* and *dieback*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no known *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

9. Fauna management – translocations

Prior to clearing, the Permit Holder must provide to the *CEO* a copy of the fauna licence obtained under the *Biodiversity Conservation Act 2016* for the translocation of Carter’s freshwater mussel (*Westralunio carteri*) and western ringtail possum (*Pseudocheirus occidentalis*) individuals.

10. Fauna management – pre-clearing inspections

- (a) In relation to the area hatched yellow on attached Plan 8195/1a, the Permit Holder must engage a *fauna specialist* to inspect that area immediately prior to, and for the duration of, clearing, for the presence of western ringtail possum(s) (*Pseudocheirus occidentalis*).
- (b) Clearing must cease in any area where a western ringtail possum (*Pseudocheirus occidentalis*) is identified until either:
 - (i) the individual has been removed by a *fauna specialist*; or
 - (ii) the individual has moved on from that area to adjoining *suitable habitat*.
- (c) Any western ringtail possum (*Pseudocheirus occidentalis*) individuals removed in accordance with condition 10(b)(i) of this Permit must be relocated by a *fauna specialist* to *suitable habitat*.
- (d) Where a western ringtail possum(s) (*Pseudocheirus occidentalis*) is identified under condition 10(a) of this Permit, the Permit Holder must provide the following records to the *CEO* as soon as practicable:
 - (i) the number of individuals identified;
 - (ii) the date each individual was identified;
 - (iii) the location where each individual was identified recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (iv) the number of individuals removed and relocated;
 - (v) the date each individual was removed;
 - (vi) the date each individual was relocated;
 - (vii) the location where each individual was relocated to, recorded using a GPS unit set to GDA94, expressing the geographical coordinates in Eastings and Northings or decimal degrees; and
 - (viii) details pertaining to the circumstances of any death of, or injury sustained by, an individual.

11. Fauna management – rope bridges

- (a) Within 12 months of the commencement of clearing, the Permit Holder must install four western ringtail possum (*Pseudocheirus occidentalis*) rope bridges in accordance with the following requirements:
 - (i) two rope bridges must be installed over the Eastern Link, one on each foreshore of the Lower Vasse River;
 - (ii) two rope bridges must be installed over the Lower Vasse River, one on each side of the Eastern Link; and
 - (iii) the end of each rope bridge must be connected to at least two mature trees, or two different locations in the canopy of a single mature tree, at a height of at least three metres above ground level.
- (b) The Permit Holder must maintain the rope bridges installed for the remaining term of this Permit.

12. Revegetation – mitigation

- (a) Within 24 months of the commencement of clearing, the Permit Holder must revegetate 0.16 hectares of the area hatched yellow on attached Plan 8195/1a by planting *Eucalyptus rudis*, *Agonis flexuosa*, *Melaleuca raphiophylla*, *Melaleuca preissii*, *Melaleuca teretifolia* and *Melaleuca viminea* at a combined density of at least 400 stems per hectare.
- (b) The Permit Holder must maintain a combined density of at least 400 stems per hectare for the remaining term of this Permit.

13. Revegetation – mitigation

- (a) Within 24 months of the commencement of clearing, the Permit Holder must revegetate the area hatched green on attached Plan 8195/1a by planting *Lepidosperma gladiatum* (sword sedge) so as to achieve a native vegetation cover of at least 75 per cent.
- (b) The Permit Holder must achieve a native vegetation cover of at least 75 per cent within 5 years of the commencement of clearing and maintain a native vegetation cover of at least 75 per cent for the remaining term of this Permit.

14. Offset – Lot 230

- (a) Within 12 months of the commencement of clearing, the Permit Holder must revegetate the area hatched orange on attached Plan 8195/1a by planting *local provenance* native understorey species so as to achieve a native understorey cover of at least 75 per cent within 3 years of planting.
- (b) In relation to the area hatched orange on attached Plan 8195/1a, the Permit Holder must maintain a native understorey cover of at least 75 per cent for the remaining term of this Permit.
- (c) Within 12 months of the commencement of clearing, the Permit Holder must provide to the CEO a copy of the executed change in purpose of the area hatched orange on attached Plan 8195/1a within Lot 230 on Deposited Plan 222226 (being Crown Reserve 7442) from 'Recreation' to 'Recreation' and 'Conservation'.

15. Offset – Lot 42

- (a) Within 12 months of the commencement of clearing, the Permit Holder must revegetate the area hatched red on attached Plan 8195/1a by:
 - (i) planting *local provenance* native understorey species so as to achieve a native understorey cover of at least 75 per cent within 3 years of planting; and
 - (ii) planting *Agonis flexuosa* at a density of at least 400 stems per hectare.
- (b) In relation to the area hatched red on attached Plan 8195/1a, the Permit Holder must:
 - (i) maintain a density of *Agonis flexuosa* of at least 400 stems per hectare for the remaining term of this Permit; and
 - (ii) maintain a native understorey cover of at least 75 per cent for the remaining term of this Permit.
- (c) Within 12 months of the commencement of clearing, the Permit Holder must
 - (i) give a conservation covenant under section 30B of the *Soil and Land Conservation Act 1945* setting aside the area hatched red on attached Plan 8195/1a for the protection and management of vegetation in perpetuity; and
 - (ii) provide to the CEO a copy of the executed conservation covenant.

16. Offset – Lot 509

- (a) Within 12 months of the commencement of clearing, the Permit Holder must revegetate the area hatched red on attached Plan 8195/1b by:
 - (i) planting *local provenance* native understorey species so as to achieve a native understorey cover of at least 75 per cent within 3 years of planting; and
 - (ii) planting *Agonis flexuosa* at a density of at least 400 stems per hectare.
- (b) In relation to the area hatched red on attached Plan 8195/1b, the Permit Holder must:
 - (i) maintain a density of *Agonis flexuosa* of at least 400 stems per hectare for the remaining term of this Permit; and
 - (ii) maintain a native understorey cover of at least 75 per cent for the remaining term of this Permit.

17. Record keeping

The Permit Holder must maintain the following records:

- (a) In relation to the clearing of native vegetation authorised under this Permit:
 - (i) the boundaries of clearing undertaken on each date, recorded using a Global Positioning System GPS unit set to GDA94, expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (ii) the size of the area cleared (in hectares);
 - (iii) the number of peppermint (*Agonis flexuosa*) trees cleared;
 - (iv) the location of each peppermint (*Agonis flexuosa*) tree cleared recorded using a GPS unit set to GDA94, expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (v) actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 7 of this Permit;
 - (vi) actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with condition 8 of this Permit; and
 - (vii) details required in accordance with fauna management conditions 9 and 10 of this Permit.
- (b) In relation to fauna management pursuant to condition 11 of this Permit:
 - (i) a copy of the design drawings for each rope bridge;
 - (ii) the date(s) each rope bridge was installed;
 - (viii) the location of each rope bridge installed recorded using a GPS unit set to GDA94, expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (iii) photographs of each rope bridge as installed; and

- (iv) the date(s) each rope bridge was maintained and a description of the maintenance activities undertaken.
- (c) In relation to revegetation activities undertaken pursuant to conditions 12 to 16 of this Permit:
 - (i) the date(s) each area was revegetated;
 - (ii) the location of each area revegetated recorded using a GPS unit set to GDA94, expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (iii) at least two photographs of each area revegetated taken on an annual basis at the same location each year;
 - (iv) a description of the revegetation activities undertaken each year for each area revegetated; and
 - (v) a description of the tree density and native understorey vegetation cover for each area revegetated recorded on an annual basis.

18. Reporting

- (a) The Permit Holder must provide to the *CEO* on or before 30 June of each year, a written report:
 - (i) of records required under condition 17 of this Permit; and
 - (ii) concerning activities done by the Permit Holder under this Permit between 1 January to 31 December of the preceding calendar year.
- (b) If no clearing authorised under this Permit has been undertaken, a written report confirming that no clearing under this Permit has been undertaken, must be provided to the *CEO* on or before 30 June of each year.
- (c) Prior to 16 March 2029, the Permit Holder must provide to the *CEO* a written report of records required under condition 17 of this Permit where these records have not already been provided under condition 18(a) of this Permit.

Definitions

The following meanings are given to terms used in this Permit:

CEO means the Chief Executive Officer of the Department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*;

dieback means the effect of *Phytophthora* species on native vegetation;

fauna specialist: means a person who holds a tertiary qualification specializing in environmental science or equivalent, and has a minimum of 2 years work experience in fauna identification and surveys of fauna native to the region being inspected or surveyed, or who is approved by the *CEO* as a suitable fauna specialist for the bioregion, and who holds a valid fauna licence issued under the *Biodiversity Conservation Act 2016*;

fill means material used to increase the ground level, or fill a hollow;

local provenance means native vegetation seeds and propagating material from natural sources within 100 kilometres and the same Interim Biogeographic Regionalisation for Australia (IBRA) subregion of the area cleared.

mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

suitable habitat: means habitat known to support western ringtail possums (*Pseudocheirus occidentalis*) within the known current distribution of the species. This often includes stands of myrtaceous trees (usually Peppermint Tree (*Agonis flexuosa*)) growing near swamps, watercourses or floodplains, and at topographic low points which provide cooler, often more fertile, conditions.

weed/s means any plant -

- (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*;
or
- (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or
- (c) not indigenous to the area concerned.



Mathew Gannaway
SENIOR MANAGER
NATIVE VEGETATION REGULATION







Officer delegated under section 20
of the *Environmental Protection Act 1986*

17 May 2019

Plan 8195/1a



Legend

- Roads
-  Areas approved to clear
-  Areas subject to conditions
-  Areas subject to conditions
-  Areas subject to conditions
-  Cadastre, Land Tenure
-  Local Government Authorities

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Officer with delegated authority under section 20 of the Environmental Protection Act 1986



GOVERNMENT OF
WESTERN AUSTRALIA
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GDA 94 Zone 50



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Plan 8195/1b

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115°21'25"E

115°21'30"E

115°21'35"E

115°21'40"E

33°38'25"S

33°38'30"S

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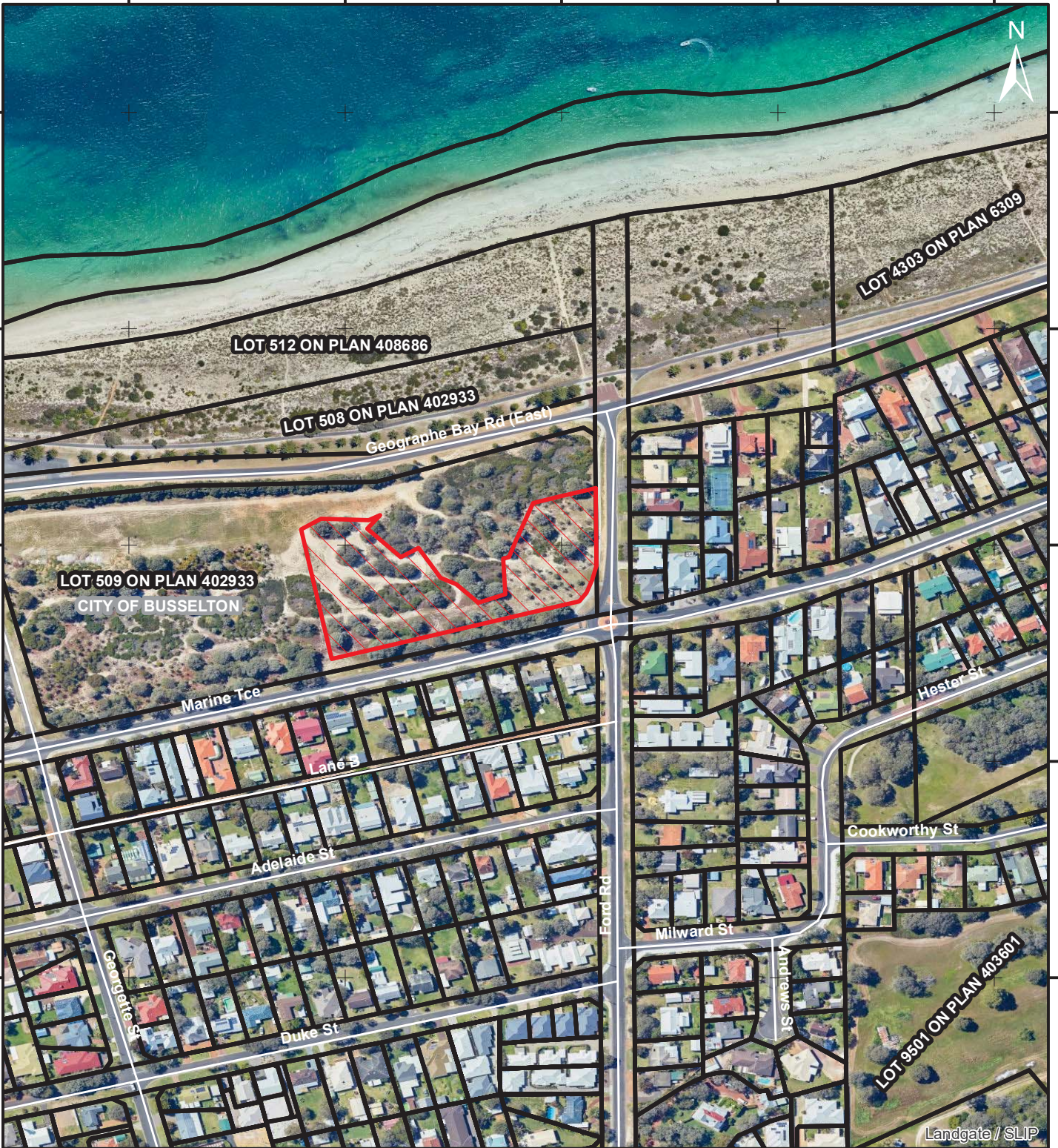
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Legend

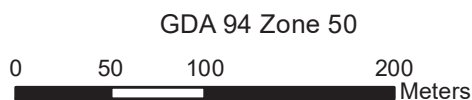
-  Roads
-  Areas subject to conditions
-  Cadastre, Land Tenure
-  Local Government Authorities

Landgate_Subscription_Imagery/WANow



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Officer with delegated authority under section 20 of the Environmental Protection Act 1986



GDA 94 Zone 50

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1. Application details

1.1. Permit application details

Permit application No.: 8195/1
Permit type: Purpose Permit
Application received date: 14 September 2018

1.2. Applicant details

Applicant's name: City of Busselton

1.3. Property details

Property: Lot 40 on Deposited Plan 222226 (Crown Reserve 2236), Busselton
Lot 41 on Deposited Plan 222226 (Crown Reserve 2236), Busselton
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Road Reserve (PIN 11370166), Busselton
Road Reserve (PIN 11438900), Busselton
Water Feature (PIN 11725413), Busselton
Local Government Authority: City of Busselton

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	Purpose category:
0.49		Mechanical Removal	Road construction or upgrades

1.5. Decision on application

Decision: Granted

Date: 17 May 2019

Reasons for Decision: The clearing permit application has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the EP Act. It has been concluded that the proposed clearing is at variance to principles (b), (e) and (f), may be at variance to principle (h), and is not likely to be at variance to the remaining principles.

The Delegated Officer considered that the proposed clearing:

- has the potential to result in death of/injury to carter's freshwater mussel and western ringtail possum individuals;
- will result in the loss of 0.25 hectares of significant western ringtail possum habitat that is also significant as a remnant in an area that has been extensively cleared;
- will result in the loss of vegetation growing in, or in association with, an environment associated with a watercourse or wetland; and
- includes vegetation that forms part of an ecological linkage between the Broadwater Nature Reserve and the Vasse-Wonnerup Estuary.

The Delegated Officer considered that:

- the risk of death/injury to carter's freshwater mussel and western ringtail possum individuals can be mitigated through pre-clearing translocations/dispersal;
- the rehabilitation of 0.16 hectares of the area cleared will partially mitigate the loss of 0.25 hectares of significant habitat/significant remnant vegetation in an area that has been extensively cleared;
- the watercourse/wetland values present do not represent conservation significant watercourse/wetland values due to the relatively small amount of watercourse/wetland vegetation to be cleared and its level of historical disturbance; and
- the installation of overpasses/underpasses will sufficiently mitigate the loss of linkage values.

Noting the rehabilitation of 0.16 hectares will only partially mitigate the loss of 0.25 hectares of significant habitat/significant remnant vegetation in an area that has been extensively cleared, the Delegated Officer considered that an offset was required. The approved offset involves the revegetation of 1.1 hectares of parkland cleared land nearby which is expected to re-establish quality habitat for the western ringtail possum in an area that has been extensively cleared.

Given the above, the Delegated Officer decided to grant a clearing permit subject to fauna management, rehabilitation and offset conditions as well as avoid/minimise, dieback, weed, recordkeeping and reporting conditions.

2. Site Information

Clearing Description The proposed clearing of 0.49 hectares of native vegetation within an application area measuring 1.25 hectares (Figure 1) is for the City of Busselton's Eastern Link project. The Eastern Link project involves the construction of a new two lane road linking Causeway Road (near Rosemary Drive) to Cammilleri Court (at the intersection with Peel Terrace). The new road will also include a new dual use path on its western side and a new bridge over the Lower Vasse River. The bridge will comprise a single span without piers.

Note: The application form submitted on 14 September 2018 refers to the clearing of 0.56 hectares of native vegetation. This was later confirmed to be an error with the actual intended applied clearing being 0.49 hectares.

Vegetation Description Two Heddle vegetation complexes are mapped within the application area:

- Vasse complex – Mixture of the closed scrub of *Melaleuca* species fringing woodland of *Eucalyptus rudis* (flooded gum) - *Melaleuca* species and open forest of *Eucalyptus gomphocephala* (tuart) - *Eucalyptus marginata* (jarrah) - *Corymbia calophylla* (marri). Will include areas dominated by *Tecticornia* and *Sarcocornia* species (samphire) near Mandurah and south of the Capel River.
- Quinalup complex – Coastal dune complex consisting mainly of two alliances - the strand and fore-dune alliance and the mobile and stable dune alliance. Local variations include the low closed forest of *Melaleuca lanceolata* (Rottnest teatree) - *Callitris preissii* (Rottnest Island pine), the closed scrub of *Acacia rostellifera* (summer-scented wattle) and the low closed *Agonis flexuosa* (peppermint) forest of Geographe Bay.
(Government of Western Australia, 2018b taken from Heddle et al., 1980 and Webb et al., 2016)

The Vasse complex is mapped over the portion of the application area south of the Lower Vasse River with the Quinalup complex mapped over the remainder.

A flora and vegetation survey commissioned by the applicant and undertaken by Strategen Environmental recorded five different vegetation types within the application area:

- VT1 – *Agonis flexuosa* low woodland over **Cynodon dactylon* grassland (managed);
- VT2 – *Eucalyptus rudis*, *Eucalyptus cornuta* and **Eucalyptus grandis* mid woodland over *Melaleuca raphiophylla* and *Agonis flexuosa* low open woodland over *Callistemon* sp. low open shrubland over **Cenchrus clandestinus* and *Bolboschoenus caldwellii* low grassland/sedgeland;
- VT3 – *Melaleuca raphiophylla*, *Melaleuca teretifolia* and *Melaleuca preissii* low open forest over *Melaleuca viminea* mid shrubland over **Cynodon dactylon* and **Cenchrus clandestinus* low grassland;
- VT4 – *Salicornia quinqueflora*, *Tecticornia indica* subsp. *bidens* and *Salicornia blackiana* low samphire shrubland; and
- VT4d - **Carex divisa* closed sedgeland over **Stenotaphrum secundatum* low open grassland (Strategen Environmental, 2017).

VT1 was recorded on the northern side of the Lower Vasse River with the remaining vegetation types all recorded on the southern side.

The flora and vegetation survey also recorded areas of 'Open Water' (OW) and 'Cleared or manicured grassland' (CL) within the application area (Strategen Environmental, 2017).

Vegetation Condition Vegetation condition within the application area was recorded by Strategen Environmental using the Keighery (1994) condition scale as follows:

- Good = 18.3 per cent
- Degraded = 13.2 per cent
- Completely Degraded = 40.5 per cent

(Strategen Environmental, 2017).

The remaining 28 per cent of the application area comprised areas of OW (Strategen Environmental, 2017).

Keighery (1994) vegetation condition ratings are defined as follows:

- Pristine: Pristine or nearly so, no obvious signs of disturbance.
- Excellent: Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species.
- Very Good: Vegetation structure altered; obvious signs of disturbance.
- Good: Vegetation structure significantly altered by very obvious signs of multiple disturbance; retains basic structure or ability to regenerate.
- Degraded: Basic vegetation structure severely impacted by disturbance; scope for regeneration but not to a state approaching Good condition without intensive management.
- Completely Degraded: The structure of the vegetation is no longer intact and the area is completely or almost completely without native species.

The application area has historically been highly modified. Aerial imagery from 1987 (Figure 2) shows the application area containing little remnant native vegetation. Vegetation cover has increased since this time which is likely attributable to both plantings and natural recruitment of both native and non-native species.

A site inspection of the application area by the Department of Water and Environmental Regulation (DWER) confirmed that the majority of the application area is in a Completely Degraded condition (DWER, 2018).

Soil type

Soils north of the river are expected to comprise calcareous sand of aeolian origin. Soils south of the river are expected to comprise imported fill associated with a disused railway embankment and land adjacent to Causeway Road, and silts in wetland areas (Strategen Environmental, 2018).



Figure 1. Application area



Figure 2. Application area (1987 aerial imagery)

3. Assessment of application against clearing principles, planning instruments and other relevant matters

(a) Native vegetation should not be cleared if it comprises a high level of biodiversity.

Proposed clearing is not likely to be at variance to this Principle

Biodiversity is defined as the variability among living organisms and the ecosystems of which those organisms are a part and includes the following:

- diversity within native species and between native species;
- diversity of ecosystems; and
- diversity of other biodiversity components (which includes native species, habitats, ecological communities, genes, ecosystems and ecological processes) (*Biodiversity Conservation Act 2016* (BC Act)).

A flora and vegetation survey of the application area and adjoining properties recorded a total of 21 native plant taxa and 25 introduced plant taxa (Strategen Environmental, 2017). No threatened or priority flora species were recorded. According to available Department of Biodiversity, Conservation and Attractions (DBCAs) datasets, no records of threatened or priority flora occur within a one kilometre radius of the application area. No significant impacts to threatened or priority flora are expected from the proposed clearing. The number of native species recorded also does not suggest a high level of floral diversity.

According to available DBCA datasets, approximately 20 per cent of the application area is mapped as the 'Subtropical and Temperate Coastal Saltmarsh' ecological community. This community is listed as a priority ecological community (PEC) in WA (Priority 3) and as a threatened ecological community (TEC) under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (Vulnerable). Strategen Environmental identified that vegetation type VT4 exhibits floristic and structural similarities to the community and that vegetation type VT4d is likely to have been of similar floristic composition but disturbance and weed infestation has changed its composition such that it is no longer representative of the community (Strategen Environmental, 2017).

The portion of the community mapped within the application area by DBCA represents the western edge of an approximately 420 hectare occurrence that surrounds a portion of the Vasse Delta Wetlands/Vasse-Wonnerup Estuary. The application area is highly modified already containing numerous introduced flora species. It is considered that the proposed clearing of a small portion of the degraded fringes of the community is unlikely to result in significant impacts to the community's conservation status.

No other PECs or TECs are expected to occur within or adjacent to the application area.

As outlined under Principle (b), it is considered that the application area supports significant habitat for the western ringtail possum. The application area is also likely to support habitat for other native fauna, but due to the largely degraded condition of the vegetation, it is not likely to support a high level of faunal diversity.

Given the above, the application area is not likely to comprise a high level of biodiversity. The proposed clearing is not likely to be at variance to this Principle.

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna.

Proposed clearing is at variance to this Principle

A fauna survey of the application area and adjoining vegetation targeting conservation significant fauna was commissioned by the applicant. The survey confirmed the presence of one fauna species of conservation significance within the application area; the western ringtail possum (WRP) (*Pseudocheirus occidentalis*) (Critically Endangered). An additional six fauna species of conservation significance were expected to occur:

- Carnaby's cockatoo (*Calyptorhynchus latirostris*) (Endangered);
- southwestern brown bandicoot (*Isodon fusciventer*) (Priority 4);
- blue billed duck (*Oxyura australis*) (Priority 4);
- long-toed stint (*Calidris subminuta*) (migratory bird protected under an international agreement);
- glossy ibis (*Plegadis falcinellus*) (migratory bird protected under an international agreement); and
- common greenshank (*Tringa nebularia*) (migratory bird protected under an international agreement) (Ecosystem Solutions, 2017; Strategen Environmental, 2018).

The applicant has also advised that Carter's freshwater mussel (CFM) (*Westralunio carteri*) (Vulnerable) is proposed to be translocated from the site where the Eastern Link bridge will cross the Lower Vasse River (refer Section 4).

WRP

Six WRP scats and one drey were recorded during the day time component of the survey. The nocturnal component recorded three individual WRPs on one night and four individual WRPs when repeated on a second night (Ecosystem Solutions, 2017).

The WRP individuals recorded were located on both sides of the Lower Vasse River within vegetation types VT1, VT2 and VT3. These vegetation types include *Agonis flexuosa* (peppermint), *Eucalyptus rudis*, *Melaleuca viminea* and/or *Melaleuca raphiophylla* which are all noted as preferred foraging species for WRP. Peppermint leaves have been found to comprise the major component of the WRP's diet for near coastal areas, similar to the application area (Shedley and Williams, 2014).

The application area intersects a largely continuous canopy of vegetation that fringes the Lower Vasse River on both sides. This vegetation is expected to be acting as a linkage for WRPs. The proposed clearing will create an approximately 30 to 40 metre wide gap in the linkage.

The proposed clearing also has the potential to isolate individual WRPs within Arthur and Norah Breeden Park (bound by the Eastern Link, Peel Terrace, Causeway Road and the Lower Vasse River) and Rotary Park (bound by the Eastern Link, Causeway Road and the Lower Vasse River). The vegetated portion of these two areas measure approximately 0.5 hectares and 1 hectare respectively.

Population density estimates for WRP vary from 0.2 per hectare to 20 per hectare. Higher densities have been recorded in smaller urban parks and holiday villages with large mature peppermints (Shedley and Williams, 2014). The four WRPs recorded on the second night of the nocturnal surveys were located within an area measuring approximately one hectare (i.e. a density of 4 WRP per hectare).

Advice was sought from DBCA in relation to potential WRP impacts. DBCA advised:

- the results of the surveys indicate approximately four WRPs may be impacted;
- provided the animals are given a method of dispersal (i.e. not stuck in isolated trees), the displacement of four individuals is acceptable;
- it is probable that a larger number of WRPs will be impacted as movement over the larger area will be impacted;
- due to a number of factors such as terrain/access and the size of the survey area, the actual survey effort that may have been given to the application area is likely to have been limited and it is suspected that the extent of impact has been under estimated;
- additional night surveys need to be undertaken focusing on the application area and the vegetation that will be isolated;
- if a larger potential population is recorded then translocation may need to be considered; and an offset should be provided (DBCA, 2018).

DWER subsequently notified the applicant that the proposed clearing had the potential to result in impacts to a greater numbers of WRP and that translocation may be required. The applicant was invited to provide additional information addressing this matter. In response, the applicant commissioned a further targeted WRP survey which was undertaken on three nights from 27 to 29 March 2019 (Bamford Consulting Ecologists, 2019).

Spotlighting for WRP individuals largely focussed on the application area and immediately adjacent vegetation on the first night, and on the vegetation fringing both sides of the Lower Vasse River between the application area and Causeway Road on the second and third nights. Four WRP individuals were recorded on the first night, 13 on the second night and 17 on the third night. Individuals were recorded from peppermint, *Eucalyptus* sp. and *Melaleuca* sp. trees. The survey concluded that a population very likely in excess of 17 animals over a total habitat area of 1.5 hectares occurs (Bamford Consulting Ecologists, 2019). This equates to a density of approximately 11 WRP per hectare.

The targeted WRP survey also searched for dreys within the application area and vegetation immediately adjacent. A total of seven dreys were recorded, three within the application area and four within vegetation immediately west of the application area. Dreys were recorded within peppermint and *Melaleuca* sp. trees (Bamford Consulting Ecologists, 2019).

Further comment was sought from DBCA on the targeted WRP survey results. DBCA advised:

- the habitat where WRP individuals were recorded is very restricted in extent and fragmented and there is an absence of consolidated habitat in adjacent areas to which WRP individuals could be expected to disperse into;
- in these circumstances DBCA regards translocation as an appropriate mitigation action to address both individual animals welfare concerns and to reduce the ongoing stress (feeding and territory stress) on the retained vegetation; and
- based on the survey results DBCA recommends translocation of between 4 to 6 WRP individuals (DBCA, 2019).

It is considered that the portions of the application area mapped as VT1, VT2 and VT3 provide significant habitat for WRP. A total of 0.25 hectares of these vegetation types is proposed to be cleared. Further details on mitigation of WRP impacts and offsets is provided in Sections 4 and 5.

Carnaby's cockatoo

The fauna survey did not observe any black cockatoos (i.e. Carnaby's, Baudin's or forest red-tailed) or associated breeding or foraging evidence within the application area. No trees with suitable breeding hollows for black cockatoos were recorded (Ecosystem Solutions, 2017).

Due to the vegetation types present, the application area provides minimal suitable foraging habitat for black cockatoos. The proposed clearing is not likely to result in significant impacts to black cockatoo species.

Carter's freshwater mussel

CFM is the only species of freshwater mussel in southwestern Australia. The current distribution of CFM is bounded by Gingin Brook in the north to the Kent, Goodga and Waychinicup Rivers in the south, within 50-100 kilometres of the coast. The species has been found to have undergone a 49 per cent reduction in extent of occurrence in less than three generations, due primarily to secondary salinisation. Apart from salinity, perenniality of stream flow was identified to be the other major limiting variable in the distribution of CFM, suggesting that habitat drying, inadequate provision of environmental stream flows and dewatering could pose further conservation constraints on the species (Klunzinger et al., 2015).

Dehydration, heat stress, nutrient pollution, cattle trampling and predation by feral pigs have also been identified as current threats to CFM. Maintaining shading riparian vegetation is recommended in relation to limiting dehydration and heat stress related impacts. The species is also most abundant amongst submerged tree root complexes, along the edges of stream banks and amongst woody debris/leaf litter out of direct streamflow or on the leeward side of logs in faster-flowing ripple zones (Threatened Species Scientific Committee, 2018).

The Lower Vasse River is known to support CFM. The proposed clearing will result in the loss of riparian vegetation along the Lower Vasse River which may provide habitat and shading for CFM. The loss of this vegetation may lead to a reduction in population size, however, it is considered that the impacts are likely to be minor noting the size of clearing proposed and that secondary salinisation and impacts to water regimes are the main threats to the species.

Other fauna

The southwestern brown bandicoot, blue billed duck, long-toed stint, glossy ibis and common greenshank are all known to utilise wetland habitats. The application area includes wetland and riparian vegetation and may provide habitat for these species as well as a range of other wetland fauna. However, the vegetation condition is largely degraded owing to historical disturbances. Given this and the relatively small size of clearing proposed, no significant impacts to any of these species are expected.

Summary

Portions of the application area are considered to provide significant habitat for WRP and may also provide habitat and shading for CFM. Therefore the proposed clearing is at variance to this Principle.

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.

Proposed clearing is not likely to be at variance to this Principle

A flora and vegetation survey of the application area and adjoining properties did not record any threatened flora species listed under the BC Act (Stratigen Environmental, 2017). According to available DBCA datasets, no records of threatened flora occur within a one kilometre radius of the application area. The application area is not likely to include, or be necessary for the continued existence of, threatened flora. The proposed clearing is not likely to be at variance to this Principle.

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community.

Proposed clearing is not likely to be at variance to this Principle

According to available DBCA datasets, no TECs listed under the BC Act are mapped within the application area. A flora and vegetation survey of the application area did not record any TECs listed under the BC Act. The proposed clearing is not likely to be at variance to this Principle.

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

Proposed clearing is at variance to this Principle

The National Objectives and Targets for Biodiversity Conservation 2001-2005 include a target to have clearing controls in place that prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750 (i.e. pre-European settlement) (Commonwealth of Australia, 2001). This is the threshold level, below which species loss appears to accelerate exponentially.

As indicated in Table 1, the current vegetation extents for the Swan Coastal Plain bioregion and Heddle vegetation complexes Vasse and Quindalup are greater than 30 per cent.

The local area (10 kilometre radius excluding ocean) surrounding the application area measures approximately 19,000 hectares. Based on available datasets, approximately 2,500 hectares of remnant native vegetation remains in this area (i.e. approximately 13 per cent). It is considered that the local area has been extensively cleared. Noting this and the presence of significant WRP habitat, the proposed clearing is at variance to this Principle.

Table 1. Vegetation extent remaining statistics (Government of Western Australia, 2018a; Government of Western Australia, 2018b)

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed lands (ha)	Extent remaining in all DBCA managed lands (proportion of Pre-European extent) (%)
IBRA bioregion					
Swan Coastal Plain	1,501,222	578,997	38.6	222,767	14.8
Heddle vegetation complex					
Vasse	15,692	4,929	31.4	2,287	14.6
Quindalup	54,574	32,983	60.4	5,992	11.0

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Proposed clearing is at variance to this Principle

The application area intersects the Lower Vasse River and the Vasse Delta Wetlands which both feed into the Vasse-Wonnerup System RAMSAR site located approximately one kilometre to the east.

According to DBCA's Geomorphic Wetlands of the Swan Coastal Plain dataset, approximately 0.3 hectares of the application area is mapped as "estuary- waterbody" (i.e. the portion that intersects the Lower Vasse River). The majority of the remainder of the application area is mapped as "estuary-peripheral" (i.e. the portion that intersects the Vasse Delta Wetlands). It is

considered that all of the vegetation within the application area is growing in, or in association with, an environment associated with a watercourse or wetland. Therefore the proposed clearing is at variance to this Principle.

Wetlands in the Geomorphic Wetlands of the Swan Coastal Plain dataset have been evaluated and assigned a management category (or spatially divided into multiple categories where relevant) based on their ecological values. There are three management categories:

- Conservation – wetlands which support a high level of attributes and functions;
- Resource Enhancement – wetlands which may have been partially modified but still support substantial ecological attributes and functions; and
- Multiple Use – wetlands with few remaining important attributes and functions (DBCA, 2014).

The “estuary-waterbody” within the application area has been assigned the management category Conservation and the “estuary-peripheral” has been assigned the management category Multiple Use. Noting the assigned management category, the proposed clearing within the “estuary-peripheral” is not likely to be significant.

Approximately 0.2 hectares of the 0.3 hectares of the “estuary-waterbody” was determined to be in Completely Degraded condition. The remaining 0.1 hectares was determined to be in Good condition (Strategen Environmental, 2017). Given the vegetation condition and the relatively small size of clearing, impacts to the “estuary-waterbody” are not likely to be significant.

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Proposed clearing is not likely to be at variance to this Principle

Significant soil erosion from high intensity winds is considered unlikely to occur as a result of the proposed clearing due to the wet setting of the application area. Significant soil erosion from high intensity rainfall is also considered unlikely to occur due to the flat topography of the application area.

The application area is not located in an area of the State considered to be highly susceptible to dryland salinity.

The proposed clearing is not likely to result in significant soil acidification noting the scale of clearing proposed and the high level of historical disturbance to the application area.

Given the above, appreciable land degradation is not expected to occur. The proposed clearing is not likely to be at variance to this Principle.

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

Proposed clearing may be at variance to this Principle

The closest DBCA managed conservation area to the application area is a Nature Reserve (Crown Reserve 49385) located approximately 500 metres east. Crown Reserve 49385 is one of a series of conservation areas that are considered to form part of an ecological linkage between the Broadwater Nature Reserve and the Vasse-Wonnerup Estuary.

The proposed clearing will create an approximately 30 to 40 metre wide gap in the linkage which may impact the level of connectivity between nearby conservation areas, particularly for ground dwelling and arboreal fauna. Therefore the proposed clearing may be at variance to this Principle.

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

Proposed clearing is not likely to be at variance to this Principle

The portion of the Lower Vasse River intersected by the application area is influenced by engineering controls intended to modify flows through the City of Busselton. High flow rates are not expected to regularly occur within the application area and therefore the value of riparian vegetation for minimising erosion and associated turbidity/sedimentation is substantially reduced. Significant deterioration in the water quality of the Lower Vasse River attributable to the proposed clearing is not expected to occur. It is anticipated that any sedimentation of the waterway is likely to be minimal and short term.

The application area has historically been highly modified and is located within an urban setting. This is reflected in the Multiple Use management category assigned to the portion of the Vasse Delta Wetlands within the application area. Noting this and the scale of clearing proposed, significant deterioration in the water quality of the Vasse Delta Wetlands is not expected to occur.

The proposed clearing is not likely to be at variance to this Principle.

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

Proposed clearing is not likely to be at variance to this Principle

The application area has historically been highly modified. Given this and the relatively small size of the application area, the vegetation present is unlikely to be playing a significant role in maintaining existing water regimes within the wider catchment. The proposed clearing is not likely to cause, or exacerbate, the incidence or intensity of flooding.

Planning instruments and other relevant matters.

The Eastern Link project was deemed a controlled action under the EPBC Act on 25 March 2018 (EPBC 2018/8155). At the time of writing, the project remains under assessment under the EPBC Act. The bilateral agreement between the Commonwealth of

Australia and the State of Western Australia made under section 45 of the EPBC Act relating to environmental assessment does not apply to this application.

The Eastern Link project was referred to the Environmental Protection Authority (EPA) by the City of Busselton on 8 January 2018. On 9 April 2018 the EPA decided not to assess the project, however, public advice was given as follows:

- The EPA notes that the proponent has minimised impacts to WRP habitat corridor through the reduction in clearing of peppermint trees from 17 to 7 trees, and has proposed measures to maintain habitat connectivity for fauna. The EPA expects the rope bridge overpass and vegetated underpass to be appropriately designed, managed, maintained and monitored by the City of Busselton.
- The EPA recognises the potential impact to one population of Carter's freshwater mussel and the translocation measures proposed by the proponent to minimise these impacts during construction. Consistent with the DBCA advice the EPA recommends that the required Regulation 15 licence is supported by a management plan acceptable to the DBCA. The management plan should address the: scientific approach; objectives; methods (including consideration of the number of mussels to be removed, the carrying capacity of the temporary receival site, and alternative temporary sites); monitoring (including a detailed post release monitoring program, frequency, duration and population targets), and any contingencies to successfully undertake the mussel translocation.
- The EPA recognises potential for disturbance of acid sulfate soils (ASS) and monosulfidic black ooze (MBO), which if not managed appropriately could result in impacts to soil, ground and surface water, and the values of the Lower Vasse River. The EPA notes that the proponent has committed to prepare and implement an ASS and dewatering management plan, and undertake further investigations for MBO. Consistent with the advice of the DWER, the EPA recommends that the proponent prepare an ASS management plan consistent with the DWER's ASS guidelines. The result of MBO investigations should be referred to DWER for review, and MBO management measures included in the ASS management plan as required. The EPA expects that that the proponent will refer the results of MBO investigations and the ASS management plan to DWER for review and response prior to undertaking the ground and riverine sediment disturbing works. The EPA expects that construction will be undertaken in a manner which reduces the disturbance of ASS as far as practicable.

In relation to the EPA's public advice, the following is noted:

- the applicant has re-affirmed the commitment to only clear seven of the 17 mature peppermint trees within the application area and this commitment is reflected in the permit conditions;
- translocation of threatened fauna is regulated by DBCA under the *Biodiversity Conservation Act 2016* – the permit conditions restrict clearing until translocation has occurred; and
- the MBO investigations and ASS management were considered by DWER in granting licences to construct or alter a well and to take water under sections 26D and 5C of the *Rights in Water and Irrigation Act 1914* respectively for dewatering required for the bridge construction works (Instrument No's. GWL202723(1) and CAW202724(1) granted 3 May 2019).

An Aboriginal heritage survey was commissioned by the applicant for the project. No Aboriginal heritage sites were recorded within the application area (Strategen Environmental, 2018).

Public submissions

The clearing permit application was advertised on the DWER website on 20 November 2018 for a public submission period closing 10 December 2018. Seven public submissions were received in relation to the application. All submissions objected to the proposed clearing. Issues raised include, but are not limited to:

- impacts to the following flora and fauna:
 - WRP
 - phascogales
 - CFM
 - waterbirds
 - mature peppermint trees
 - paperbarks
 - samphire
- the already high extent of historical clearing;
- impacts to wetlands;
- impacts to ecological linkages;
- fauna strikes attributable to the new road;
- concern over whether the proposed WRP rope bridges will work successfully;
- lack of public consultation by the City of Busselton;
- the lack of public support for the Eastern Link project;
- questions over whether the Eastern Link project will reduce traffic congestion;
- the availability of alternative options to reduce traffic congestion;
- support for construction of the Ford Road alternative;
- support for construction of the Causeway Road duplication alternative;
- impacts to the use and enjoyment of Rotary Park;
- the cost of the Eastern Link project;
- access impacts to the Old Butter Factory Museum; and
- removal of the old heritage railway bridge and loss of access that it provides.

Consideration of public submissions

Impacts to WRP, CFM and waterbirds have been discussed under Principle (b). Impacts to WRPs and their habitat (e.g. mature peppermint trees, paperbarks) are noted and are considered significant, however, it is considered that the impacts can be

adequately mitigated and offset as outlined in Sections 4 and 5. In relation to the effectiveness of rope bridges, the applicant has provided additional information demonstrating past success of rope bridges as follows:

"The effectiveness of rope bridges to provide safe passage for WRP has been demonstrated for a rope bridge developed by Main Roads WA on Caves Road west of Busselton (Bencini and Yokochi 2017, Yokochi and Bencini 2015). Monitoring indicated that the WRP began investigating the bridge during its construction, with the first complete crossing recorded at 36 days after installation. The frequency of crossings rose gradually over an eight month period, peaking at an average of approximately 12 complete crossings per night. The monitoring of the Caves Road bridge indicated that WRP used the bridge at higher rates than previously reported for other possums and gliders, which may be a lack of avoidance behaviour towards unfamiliar objects and the less dense canopy of their habitat (Bencini and Yokochi 2017). The monitoring also indicated that two generations of possums used the bridge, which suggests it will be used over generations and help increase gene flow across the road. The researchers suggested that WRP can learn to use rope bridges quickly and that rope bridges have potential to be very effective mitigation against the impacts of roads to the species. Monitoring at Caves Road indicated a lower frequency of crossings on brighter nights likely due to a higher risk of predation (Bencini and Yokochi 2017). The Project will incorporate shuttered lighting on the new road and bridge, to minimise light spill into the canopy and rope bridge, reduce the risk of predation and increase utilisation of the bridges."
(Strategen Environmental, 2019a)

In relation to impacts to phascogales (*Phascogale tapoatafa* subsp. *wambenger*), it was determined that suitable habitat for this species is not present (Strategen Environmental, 2018).

The extent of historical clearing has been discussed under Principle (e). Impacts to significant remnant vegetation in an area that has been extensively cleared are noted and are considered significant, however, it is considered that these impacts can be offset (refer Section 5).

Impacts to wetlands (which includes areas of samphire) have been discussed under Principle (f). While impacts are noted, they are not considered likely to be significant.

Impacts to ecological linkages have been discussed under Principle (h). Impacts are noted, however, as outlined under Section 4, the applicant has committed to the installation of fauna overpasses and underpasses to mitigate linkage impacts and potential fauna strikes.

In relation to the level of public consultation, the applicant has advised the following:

"The City has undertaken extensive public consultation on the Project, including:

1. Aboriginal consultation, including written notification to the South West Land and Sea Council (SWALSC) on 23 May 2017, and ethnographic survey involving consultation with a team of ten Aboriginal representatives selected by SWALSC.

2. Stakeholder consultation sessions involving tailored letter invitations to the following key stakeholders to attend briefings and Q&A sessions at City offices on 28 and 30 November 2017:

- Busselton Chamber of Commerce and Industry*
- Geographe Catchment Council*
- St Mary's Anglican Church*
- Busselton Historical Society*
- FAWNA*
- Possum Centre Busselton Inc*
- Busselton-Dunsborough Environment Centre*
- Busselton and Districts Residents' Association Inc*
- Busselton Volunteer Fire & Rescue Service*
- Residents/business owners in nearby streets.*

3. Public advertisement in the Busselton-Dunsborough Times on 15 November 2017 and the City of Busselton Facebook page inviting members of the public to a briefing and feedback session held at the City offices on 5 December 2017.

4. A slide show was presented during the three briefing and feedback sessions, including a Q&A session at the end, and factsheets available for all attendees. Attendees were encouraged to provide written submissions to the City and advised that the Proposal was to be referred to the EPA and Commonwealth DotEE and that submissions could be made when the referrals were advertised by those agencies.

5. Factsheets for the Eastern Link and other road upgrades were made available on the City of Busselton website and hard copies in the City offices foyer.

6. A total of 21 attendees were recorded on 28 and 30 November 2017 sessions, and a total of 64 attendees recorded on 5 December 2017. The matters raised by attendees during the information sessions were recorded and responded to in the s38 referral documentation submitted to the EPA. The matters raised included Western Ringtail Possum habitat, amenity, preference for Ford Road, and traffic planning / other road upgrade options.

7. It is understood that a total of 61 submissions were made during the public comment period on the EPA referral. The matters raised included Western Ringtail Possum habitat, amenity, preference for Ford Road, and traffic planning / other road upgrades.

8. Three appeals were made against the EPA decision to not assess the Project. The matters raised included preference for Ford Road, amenity, traffic planning / other road upgrades, Western Ringtail Possum habitat and Carters Freshwater Mussel. The appeals were dismissed by the WA Minister for the Environment on 27 August 2018.

9. Community information sessions were held at the City's offices on 28 and 29 August 2018 which provided a briefing on the Project as well as the Strategic Network Corridors, and included a Q&A on environmental and traffic issues.

10. The City ran a 4 week community survey in August-September 2018 on the Strategic Network Corridors, which included 4000 randomly selected contacts and a total of 687 online responses. The survey canvassed support, opposition and reasons relating to each of the road upgrades.

11. The Council considered the feedback from community information sessions and public survey along with traffic studies and on 16 November 2018 decided to proceed with the Project.

12. The City advertised EPBC Act preliminary documentation and invited comments from 6 to 36 February 2019. The advertisement was made in the West Australian and in the Busselton-Dunsborough Times. Documentation was available for download on the City website and hard copies available for viewing at the Busselton and WA State libraries.

13. Key outcomes of the public consultation included:

- reduction in clearing footprint, with clearing of mature Peppermint trees reduced from 17 to seven
 - replanting Peppermint trees at the rate of at least two per mature tree cleared
 - provision and design of fauna overpasses
 - provision of cultural monitoring by Aboriginal representatives during construction.”
- (Strategen Environmental, 2019a)

In relation to the level of public support for the Eastern Link, the applicant has advised the following:

“The findings of the community survey indicated a high level of community support for the City to take action to address congestion. 23% of respondents preferred the Eastern Link as the means of addressing congestion, compared to 29% who preferred the Cause Bridge duplication, with 22% having no preference between the two projects and 19% not supporting either project. The most commonly provided reasons for opposing the Eastern Link was a belief that it will not fix congestion in the City Centre and that Ford Road is preferable. The survey indicated that the level of opposition to both the Eastern Link and Causeway Bridge duplication was directly correlated to the level of support for Ford Road.

In deciding to develop the Eastern Link, the City has considered:

- the community preference for City action to address traffic congestion
 - the reasons for opposition to Eastern Link
 - the preference for Ford Road
 - the cost and environmental approvals to develop Ford Road and the City's inability to develop Ford Road in the short term
 - the cost and environmental approvals to develop Eastern Link, and the City's ability to develop the Eastern Link in the short term
 - the results of peer reviewed traffic studies demonstrating the effectiveness of Eastern Link at alleviating traffic congestion in the City Centre, contrary to the opinion of opponents.”
- (Strategen Environmental, 2019a)

In relation to the effect of Eastern Link on traffic congestion and alternative options the applicant has advised the following:

“The Eastern Link is one component of a suite of complimentary road upgrades within Busselton, which collectively are termed the Busselton Strategic Network Corridors.”

“The Strategic Network Initiatives were developed based on the City's Busselton Traffic Study Report Study, which comprised a process of investigation including several reports and workshops informed by traffic modelling.

The Busselton Traffic Study acknowledged the State Government's plans for progressive, significant upgrades to the regional Main Roads network, but considered that population and economic growth would place increased pressure on key local roads including the town's gateway entrance at Causeway Road Bridge and the intersections with Peel Terrace, Queen Street and Albert Street. These intersections are currently subject to significant congestion, particularly at times of peak tourism inflow such as Friday afternoons through much of the summer and prior to long weekends and major events throughout the rest of the year. This congestion is expected to become a daily and continuous occurrence (this is already starting to occur) based on the City's growth excluding the seasonal variances. Thus the suite of suggested initiatives has been investigated.

On the basis of the above reasoning, the City considered that the previously proposed extension at Ford Road over the Vasse Estuary east of Causeway Road Bridge would be unlikely to effectively divert traffic from the impacted intersections, as it would deliver traffic to and from the eastern side of the CBD only. Accordingly, the City has considered a program of road upgrades in the vicinity and west of Causeway Road as the priority for the short and medium term. The Eastern Link is proposed as a priority, short term road upgrade on the basis that it will effectively divert traffic from an alleviate congestion at the town's gateway entrance. The focus of the Eastern Link is to divert the traffic heading into the City to the eastern side of the CBD, carparks, the newly developed foreshore, caravan parks and sports grounds. Eastern Link would also reduce congestion at the Causeway/Peel/Queen and Albert Street intersections thus improving traffic flow heading north and to the west.”

“Ford Road lies adjacent to the Vasse Estuary, which is a conservation category wetland and Ramsar wetland of international importance protected under State and Commonwealth legislation. Ford Road also lies adjacent to the Vasse River Delta Wetlands to the west, which are important waterbird habitats proposed by DBCA to be reserved for conservation and ultimately included in the Vasse Estuary Ramsar listing. This reservation has already commenced, with a Class A Conservation Reserve (CR 50017) established immediately west of the proposed Ford Road alignment.

The then Shire of Busselton previously developed a proposal to extend Ford Road across the Vasse Estuary, which was assessed by the EPA in 1999 and 2000, then subject to a lengthy appeals process (interim and final Appeals Committee reports in 2002 and 2009) and ultimately rejected by the Minister for Environment in 2010.”

“The rejection of the previous Ford Road proposal was primarily due to the potential mortality and disturbance of waterbirds moving between the Vasse Estuary and Vasse River Delta Wetlands either side of the road corridor, as well as concerns on impacts to water quality. While the City considers Ford Road an important component of the Strategic Network Corridors, the City acknowledges that the road upgrade requires considerable additional study and redesign to be environmentally acceptable. Additionally, Ford Road will require considerably greater funding to develop, at an estimated \$20 million plus compared to an estimated \$3.8 million for Eastern Link. Addressing significant environmental matters and securing major funding indicates that Ford Road is a longer-term road upgrade.

The City re-iterate that, irrespective of the timing issue, Ford Road is not an effective alternative to the Eastern Link.”
(Strategen Environmental, 2019a)

Noting the above, it is considered that the public submissions received have not raised any issues that would warrant refusal of the application.

4. Mitigation measures

The applicant has advised that consideration was given to bridge design to minimise the clearing footprint. The applicant has also committed to a range of mitigation measures including:

- Installation of a WRP overpass (rope bridge) on both sides of the Lower Vasse River within 12 months of the commencement of clearing.
- Creation of vegetated underpasses on both sides of the Lower Vasse River using *Lepidosperma gladiatum* (sword sedge).
- Translocation of WRP and CFM individuals prior to clearing to an off-site location approved by DBCA. Inspections of the application area by a fauna spotter also to occur immediately prior to clearing to ensure dispersal into adjacent habitat of any remaining WRP individuals.
- Rehabilitation of 0.16 hectares of the area cleared (i.e. those areas not required to be permanently kept free of native vegetation) using native species recorded from vegetation types VT2 and VT3.
(Strategen Environmental, 2018; Strategen Environmental, 2019a; Strategen Environmental, 2019b)

It is considered that the installation of overpasses/underpasses will sufficiently mitigate the loss of linkage values of the vegetation proposed to be cleared. It is also considered that the translocations and pre-clearing inspections are appropriate for mitigating the risk of injury to/death of WRP and CFM individuals. In relation to the rehabilitation of 0.16 hectares, it is considered that this will partly mitigate the loss of 0.25 hectares of significant WRP habitat within an area that has been extensively cleared, however, significant residual impacts will remain given the smaller size of the rehabilitation and the time period required to re-establish vegetation with similar values. Therefore an offset is required.

5. Offsets

The applicant has proposed the following offset package:

- Revegetation of an approximately two metre wide strip (0.04 hectares total) of the northern bank of the Lower Vasse River between the application area and the Causeway bridge (i.e. within Arthur and Norah Breeden Park – Lot 230 on Deposited Plan 222226, Busselton). The revegetation will involve planting of native understorey species.
- Revegetation of a 0.07 hectare portion of Rotary Park (Lot 42 on Deposited Plan 222224, Busselton) located adjacent to the application area through the planting of peppermint trees and native understorey species.
- Revegetation of a 1 hectare portion of Barnard Park East (Lot 509 on Deposited Plan 402933, Busselton) through the planting of peppermint trees and native understorey species.
(Strategen Environmental, 2018; Strategen Environmental, 2019a; Strategen Environmental, 2019b)

All three offset locations are located within two kilometres of the application area and within an area that has been extensively cleared. All three are parkland cleared and the revegetation proposed is expected to create a closed canopy (i.e. establishing peppermint trees at a density of at least 400 stems per hectare) and/or an understorey layer with extensive cover (i.e. at least 75 per cent cover). It is considered that this will ultimately re-establish quality habitat for WRP in an area that has been extensively cleared. The revegetation offsets totalling 1.1 hectares are considered adequately proportionate to the significance of the environmental values being lost.

Lot 230 makes up Crown Reserve 7442 which is currently vested in the City of Busselton by the Department of Planning, Lands and Heritage (DPLH) for the land use of “Recreation”. It is considered that long term security of the revegetation area on Lot 230 can be achieved through an amendment to the management order to include the land use of “Conservation”.

Lot 42 is currently freehold land owned by the City of Busselton. It is considered that long term security of the revegetation area on Lot 42 can be achieved through the City entering into a conservation covenant for that area under the *Soil and Land Conservation Act 1945*.

Lot 509 forms part of Crown Reserve 52463 vested in the City of Busselton by DPLH for the land uses of "Recreation" and "Conservation". Given this it is considered that Lot 509 is already subject to long term security of tenure.

Noting the above it is considered that the revegetation of 1.1 hectares of parkland cleared land will counterbalance the significant residual impacts of the clearing consistent with the *WA Environmental Offsets Policy 2011*.

6. References

- Bamford Consulting Ecologists (2019). Assessment of the Western Ringtail Possum along the Vasse River for the Busselton Eastern Link Project. Unpublished report prepared for Strategen Environmental, 4 April 2019 (DWER Ref: A1779290).
- Bencini R and Yokochi K, 2017, Bridging the gap for the western ringtail possum (*Pseudocheirus occidentalis*): rope bridges provide safe passage across roads for a critically endangered marsupial, Conference Paper, 12 International Mammalogical Congress, Perth 2017.
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- Geographic Information System (GIS) datasets:
- Cadastre, Land Tenure
 - Hydrography, linear
 - Interim Biogeographic Regionalisation of Australia (IBRA)
 - Landgate Imagery
 - Native Vegetation Current Extent
 - Pre-European Vegetation
 - DBCA Species and Communities (accessed 11 February 2019)