

Our ref: AU213002048.001



Date: 16 November 2021

Department of Water and Environmental Regulation
Locked Bag 10
Joondalup DC WA 6919

Dear Sir/ Madam,

Clearing permit application: Brookfield Estate sewer extension

Please find attached a purpose permit clearing application to facilitate the installation of a sewer extension to the Brookfield Estate's future subdivision and development area in Margaret River. The Brookfield sewer extension clearing area is approximately 1.23 hectares (ha) in size, containing approximately 0.69 ha of native vegetation. The Brookfield sewer extension clearing area traverses the eastern extent of the Rapids Landing estate to connect to the Brookfield Estate's northern boundary (Figure A).

Background

The Brookfield sewer extension, located within portions of Lot 9014 (DP 413998) and Lot 9007 (DP 57387), is required to connect sewer services from the neighbouring Rapids Landing's McCormick Crescent to the Brookfield Estate's future subdivision and development area (211 Darch Road, Margaret River). Extension of the existing sewer infrastructure will require vegetation clearing to be undertaken prior to open trenching for service installation.

Much of the vegetation to be cleared includes land previously cleared that has regenerated and small patches of remnant vegetation concentrated in the wetter areas of Darch Brook and its tributary.

A flora and fauna significance assessment (Ecosystem Solutions 2021)¹ was undertaken for the Brookfield sewer extension clearing area in October 2021. This assessment identified the presence and distribution of flora and fauna on site and assessed its vegetation values. Conservation significant flora, vegetation and fauna species were assessed, including an assessment against the Commonwealth's significant impact guidelines for black cockatoos and western ringtail possum (Appendix B).

The proposed sewer alignment and works were approved by the Minister for Water on 9 November 2020 (Appendix C). There are no alternative options available for this route. This sewer alignment is shown on the Water Corporation's scheme planning and is critical for regional development. The sewer extension works boundary was reduced to avoid 0.02 ha of Good condition native vegetation within the Darch Road reserve. The Rapids Landing's future cadastral boundaries in Lot 9014 also informed the sewer alignment, including:

¹ Ecosystem Solutions, 2021, Flora and Fauna Significance Assessment, prepared for RPS AAP Consulting Pty Ltd.

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- Direct routes used to cross each watercourse to connect the existing gravity sewer pipe on McCormick Crescent to the Rapids Landing's future lots and to connect from the Rapids Landing's future lots to the Brookfield Estate's future lots.
- Maintaining close proximity to the Rapids Landing's developable area, usually within 10 m, to limit encroachment on Darch Brook's riparian vegetation wherever practicable.

In addition, Brookfield Estate Pty Ltd is committed to engaging a qualified fauna specialist prior to and for the duration of clearing activities to inspect the vegetation for evidence of recent use by fauna species. Should occupation of the vegetation by fauna species be confirmed, the vegetation will only be cleared after a repeat inspection undertaken by a qualified fauna specialist confirms that they are no longer occupied.

Supporting the above purpose permit clearing application, the following figures and documents have been provided:

- Figures A to D
- Appendix A: Application for a Clearing Permit (Purpose Permit)
- Appendix B: Flora and Fauna Significance Assessment (Ecosystem Solutions 2021)
- Appendix C: Minister for Water approval
- Appendix D: Engineering Design
- Appendix E: Certificate of Title
- Appendix F: Landholder consent
- Shapefile data.

Landholder context

The Brookfield sewer extension clearing area is located within portions of Lot 9014 (DP 413998) and Lot 9007 (DP 57387). The owners of this land are identified below:

- Lot 9014 is owned by Balwyn Margaret River Pty Ltd, under the Certificate of Title Volume 2959 / Folio 570.
- Lot 9007 is owned by Brookfield Estate Pty Ltd, under the Certificate of Title Volume 2691 / Folio 465.

Copies of the Certificate of Titles are provided in Appendix E.

Balwyn Margaret River Pty Ltd has been consulted regarding the proposed clearing of native vegetation within its landholding. They raised concerns on the proposed installation methodology, particularly in relation to the northern connection that crosses the Darch Brook tributary, potential impacts to the installed drainage and landscaping infrastructure and the extent of reinstatement proposed.

Brookfield Estate Pty Ltd advised that its preferred installation method is to bore horizontally through the creek area, which would avoid disturbing the Darch Brook tributary. However, ground conditions may prevent this if there is considerable rock or saturated loose ground conditions material at depth or if solid rock is hit, necessitating those areas be opened up regardless and cracking or removing rock as required. Brookfield Estate Pty Ltd has agreed to make every effort to minimise impacts to the existing infrastructure and landscaping and in the event that there are impacts, reinstatement of landscaping will be undertaken to the same or better condition.

Balwyn Margaret River Pty Ltd has provided conditional endorsement for the clearing of native vegetation within Lot 9014 to facilitate the installation of sewer infrastructure (Appendix F).

Proposed clearing area

Figure A shows the spatial extent of the 0.69 ha of native vegetation subject to this clearing permit application and details the vegetation units identified by the survey (Ecosystem Solutions 2021; Appendix B). The final area to be cleared may be slightly less than 0.39 ha if horizontal boring is successfully undertaken under the Darch Brook and its tributary. The installation methodology is dependent on the contractor, discussions with Water Corporation and what material is encountered. As such, all native vegetation that is at risk of being cleared has been considered in this application.

A summary of the purpose permit clearing application is provided below in Table 1.

Table 1: Clearing proposal summary

Location	Portions of Lot 9014 on Deposited Plan 413998 and Lot 9007 on Deposited Plan 57387
Clearing area	Up to 0.69 ha
Timing	Clearing is proposed occur as one action in the 2022 calendar year
Clearing method	The native vegetation will be cleared mechanically
Purpose of clearing	To facilitate the installation of a sewer extension to the Brookfield Estate
Vegetation proposed to be cleared	<ul style="list-style-type: none">• Approximately 0.48 ha of <i>Corymbia calophylla</i> open woodland in Degraded to Good condition (Figures B and C)• Approximately 0.21 ha of <i>Melaleuca viminea</i> and <i>Taxandria linearifolia</i> tall, closed shrub in Good to Very Good condition (Figures B and C).

Vegetation and flora

The flora and fauna significance assessment (Ecosystem Solutions 2021) was undertaken in accordance with the Environmental Protection Authority's (EPA) Technical Guidance: Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment (EPA 2016)² and the Technical Guidance: Terrestrial vertebrate fauna surveys for environmental impact assessment (EPA 2020)³.

The findings of this report relevant to the areas proposed to be permanently lost through clearing are summarised as follows:

- No Threatened flora species listed under the *Biodiversity Conservation Act 2016* (BC Act), or the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), were recorded. No Department of Biodiversity, Conservation and Attractions (DBCA) listed Priority flora species were recorded.
- Two vegetation communities were described and mapped within the Brookfield sewer extension clearing area:
 - Vegetation Community A – *Corymbia calophylla* open woodland over *Agonis flexuosa* and *Corymbia calophylla* low open forest over *Agonis flexuosa*, *Hovea elliptica* and *Hakea amplexicaulis* tall open shrubland over *Acacia myrtifolia*, *Taxandria linearifolia* and *Agonis flexuosa* shrubland over *Taxandria linearifolia*, *Acacia myrtifolia* and *Hibbertia hypericoides* low open shrubland over *Loxocarya cinerea* sedgeland
 - Vegetation Community B – *Corymbia calophylla* scattered trees over *Melaleuca viminea*, *Taxandria linearifolia* and *Agonis flexuosa* tall, closed scrub over *Leptocarpus* sp. sedgeland.
- The majority of the native vegetation to be cleared is classified as Degraded, with smaller areas of Good to Very Good condition vegetation found in the wetter areas of Darch Brook and its tributary.
- The recorded vegetation communities did not have the characteristics of any Threatened Ecological Communities (TECs), as listed under the BC Act or the EPBC Act, or DBCA listed Priority Ecological Communities (PECs).

² Environmental Protection Authority, 2016, Technical Guidance: Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment, EPA, Western Australia.

³ Environmental Protection Authority, 2020, Technical Guidance: Terrestrial vertebrate fauna surveys for environmental impact assessment, EPA, Western Australia.

Significant fauna and fauna habitat

Black cockatoos

The Revised Draft Referral Guideline for the Three Threatened Black Cockatoo Species (Department of the Environment and Energy 2017)⁴ provides updated information and requirements on habitat quality, survey expectations, standards for mitigating impacts and significant impacts for black cockatoo species.

In addition to the information contained in the earlier 2012 guidance, the revised draft referral guideline identifies that the following actions are likely to result in significant impacts to black cockatoo species:

1. Clearing of known nesting tree⁵ or breeding habitat
2. Complete clearance of roost sites that are close to high quality foraging habitat and water resources in non-breeding areas
3. Clearing very high to high quality foraging habitat.

No evidence of black cockatoo foraging, nesting or roosting were observed by Ecosystem Solutions (2021).

Potential foraging habitat

The flora and fauna significance assessment (Ecosystem Solutions 2021) identified vegetation types considered to be potential black cockatoo foraging habitat within the clearing area (Table 2).

Table 2: Potential black cockatoo foraging habitat within the clearing area

Vegetation community	Vegetation condition	Clearing area extent
Vegetation Community A	Good	0.065 ha
Inclusive of marri (<i>Corymbia calophylla</i>) and prickly hakea (<i>Hakea amplexicaulis</i>)	Degraded	0.412 ha
Vegetation Community B	Very Good	0.097 ha
Inclusive of marri (<i>Corymbia calophylla</i>)	Good	0.117 ha
Total		0.691 ha

The 0.69 ha of potential black cockatoo foraging habitat represents small stands of foraging plants or individual trees within the 1.23 ha clearing area. Approximately 0.41 ha of the potential black cockatoo foraging habitat is in a Degraded condition, whilst the extent of vegetation in Good or better condition is 0.28 ha.

The removal of up to 0.69 ha of potential black cockatoo foraging habitat is not at variance with any high-risk factors where referral is recommended in the EPBC Act Referral Guidelines (Commonwealth of Australia 2012⁶; Commonwealth of Australia 2017). This conclusion is shared by the Ecosystem Solutions (2021) significant impact assessment (Appendix B).

Potential breeding and roosting habitat

The flora and fauna significance assessment (Ecosystem Solutions 2021) identified four trees with a diameter at breast height (DBH) of over 500 millimetres (mm), two of which were just outside the clearing area (Appendix B). Of the two trees within the clearing area, one had observable hollows while no hollows

⁴ Department of the Environment and Energy, 2017, Revised draft referral guideline for three threatened black cockatoo species: Carnaby's Cockatoo (Endangered) *Calyptorhynchus latirostris* Baudin's Cockatoo (Vulnerable) *Calyptorhynchus baudinii* Forest Red-tailed Black Cockatoo (Vulnerable) *Calyptorhynchus banksii naso*. Canberra, Australian Capital Territory.

⁵ Any existing tree in which breeding has been recorded or suspected.

⁶ Commonwealth of Australia, 2012, EPBC Act Referral guidelines for three threatened black cockatoo species: Carnaby's cockatoo, Baudin's cockatoo and Forest red-tailed black cockatoo. Canberra, Australian Capital Territory.

were observed in the other. Ecosystem Solutions noted a survey limitation that all prerequisites for the suitability of hollows for black cockatoos are difficult to assess, and that the listing of potential nesting hollows is likely to be an over estimation of those suitable for black cockatoos.

Black cockatoo species were heard to the north-east of the site, approximately 100 m from the Brookfield sewer extension clearing area's northern extent. This approximate location was mapped by Ecosystem Solutions (2021) (Appendix B). No black cockatoos were observed utilising the site during the two dawn and two dusk/nocturnal surveys.

Clearing of the two potential black cockatoo nesting/roosting trees is unlikely to result in a significant impact to black cockatoos and does not warrant an EPBC Act referral. This conclusion is shared by the Ecosystem Solutions (2021) significant impact assessment (Appendix B).

Western ringtail possum

The flora and fauna significance assessment (Ecosystem Solutions 2021) identified *Agonis flexuosa* (peppermint) trees and shrubland in Vegetation Community A and *Agonis flexuosa* (peppermint) scrub in Vegetation Community B. *Agonis flexuosa* (peppermint) trees are the key component of western ringtail possum habitat (Department of the Environment, Water, Heritage and the Arts 2009a)⁷.

Ecosystem Solutions (2021) recorded three western ringtail possums within the clearing area over two dusk/nocturnal surveys. No dreys were observed in the vegetation canopy. The location of the observed western ringtail possums is mapped by Ecosystem Solutions (Appendix B).

The significant impact guideline for the vulnerable western ringtail possum (*Pseudocheirus occidentalis*) in the southern Swan Coastal Plain, Western Australia (Department of the Environment, Water, Heritage and the Arts 2009a) identifies three important areas for the western ringtail possum:

1. Core habitat includes vegetation remnants inhabited by local western ringtail possum populations and contain sites necessary for breeding and dispersal (Department of the Environment, Water, Heritage and the Arts 2009b)⁸
2. Primary corridors provide connectivity between areas of core habitat and allow populations to remain connected in the landscape (Department of the Environment, Water, Heritage and the Arts 2009b)
3. Supporting habitat includes vegetation patches that buffer key local populations from threats, as well as providing foraging, breeding and dispersal opportunities (Department of the Environment, Water, Heritage and the Arts 2009b).

Informed by the above important area descriptions, and also noting that the Brookfield Estate and Rapids Landing are not situated on the southern Swan Coastal Plain nor would the surrounding vegetation be considered core habitat, the *Agonis flexuosa* (peppermint) trees, shrubland and scrub have the most affinity with the supporting habitat description. In respect to supporting habitat, Department of the Environment, Water, Heritage and the Arts (2009a) identifies that there is a real chance or possibility of a significant impact on the western ringtail possum if the action will result in one or more of the following:

- Clearing in a remnant habitat patch that is greater than 0.5 ha in size
- Clearing of more than 50% of a remnant habitat patch that is between 0.2 and 0.5 ha in size
- Fragmentation of existing habitat linkages.

Up to 0.69 ha of western ringtail possum habitat may be cleared, which is above the 0.5 ha southern Swan Coastal Plain threshold. However, if horizontal boring is permissible then only up to 0.39 ha of western ringtail possum habitat will be cleared. This action will not be undertaken within southern Swan Coastal Plain and is considered to have a low risk of impacting western ringtail possums within the site as the majority of the native vegetation to be cleared is degraded. The small western ringtail possum population on site are not

⁷ Department of the Environment, Water, Heritage and the Arts, 2009a, Significant impact guideline for the vulnerable western ringtail possum (*Pseudocheirus occidentalis*) in the southern Swan Coastal Plain, Western Australia. Canberra: Australian Capital Territory.

⁸ Department of the Environment, Water, Heritage and the Arts. 2009b. Background Paper to EPBC Act Policy Statement 3.10 – Nationally Threatened Species and Ecological Communities, Significant impact guideline for the vulnerable western ringtail possum (*Pseudocheirus occidentalis*) in the southern Swan Coastal Plain, Western Australia. Canberra: Australian Capital Territory.

relying on this native vegetation for survival and better-quality habitat located adjacent to the clearing area, associated with the Darch Brook and its tributary, will remain. This conclusion is shared by the Ecosystem Solutions (2021) significant impact assessment (Appendix B).

Brookfield Estate Pty Ltd is committed to engaging a qualified fauna specialist prior to and for the duration of clearing activities to inspect the vegetation for evidence of recent use by fauna species. Should occupation of the vegetation by fauna species be confirmed, the vegetation will only be cleared after a repeat inspection undertaken by a qualified fauna specialist confirms that they are no longer occupied.

South-western brush-tailed phascogale

The flora and fauna significance assessment (Ecosystem Solutions 2021) identified the south-western brush-tailed phascogale (*Phascogale tapoatafa* subsp. *wambenger*) as a conservation significant fauna species with potential to occur within the Brookfield sewer extension clearing area. This is listed as a Species of special conservation interest under the BC Act.

This species occurs at low densities in the northern Jarrah forest and highest densities in the Perup/Kingston area, Collie River valley, and near Margaret River and Busselton (Department of Environment and Conservation (DEC) 2012)⁹. South-western brush-tailed phascogales have been observed in dry sclerophyll forests and open woodlands that contain hollow-bearing trees but a sparse ground cover, with records less common from wetter forests (DEC 2012). No south-western brush-tailed phascogale observations were recorded by Ecosystem Solutions (2021).

There is one *Corymbia calophylla* (marri) tree with observed hollows within the clearing area (Ecosystem Solutions 2021). No south-western brush-tailed phascogales were observed during the two dawn and two dusk/nocturnal surveys.

Given the larger areas of more suitable habitat adjacent to the clearing area, it is considered unlikely that the clearing activity would result in a significant impact to this species.

Quenda

The flora and fauna significance assessment (Ecosystem Solutions 2021) identified the quenda (*Isoodon fusciventer*) as a conservation significant fauna species with potential to occur within the Brookfield sewer extension clearing area. This is listed as a Priority 4 species by the DBCA.

The quenda are ground-dwelling marsupials located in the south-west of Western Australia (DBCA 2018)¹⁰. They typically inhabit dense understory, such as those found in swamps or banksia and jarrah woodlands. Nest sites are indentations in the ground, located beneath shrubs and covered with leaves, dry grasses and other soft materials.

Ecosystem Solutions (2021) observed one quenda and quenda diggings during a dusk/nocturnal survey in the south of the clearing area. The location of these observations were mapped by Ecosystem Solutions (Appendix B).

Given the larger areas of more similar or better quality habitat adjacent to the clearing area, it is considered unlikely that the clearing activity would result in a significant impact to this species.

Assessment against the 10 clearing principles

Table 3 below provides an assessment of the proposed clearing activities against the 10 Clearing Principles as outlined in Schedule 5 of the EP Act to determine whether the proposed clearing is at variance to the principles.

⁹ Department of Environment and Conservation, 2012, Brush-tailed Phascogale, Phascogale tapoatafa (Meyer, 1793). Accessed 25 October 2021, <https://library.dbca.wa.gov.au/static/FullTextFiles/071549.pdf>

¹⁰ Department of Biodiversity, Conservation and Attractions, 2018, Fauna Notes Living with Quenda. Accessed on 25 October 2021, https://www.dpaw.wa.gov.au/images/documents/plants-animals/animals/living-with-wildlife/quenda_fauna_note_2018.pdf

Table 3: Assessment of the proposed clearing against the 10 clearing principles

Principle	Assessment	Outcome
Native vegetation should not be cleared if it comprises a high level of biological diversity	<p>The Threatened Species Scientific Committee for the Australia Government has identified a number of areas as Biodiversity Hotspots for priority action (Department of Environment Regulation [DER] 2014)¹¹. The Busselton-Augusta region, which includes the clearing area, has been identified as a biodiversity hot spot.</p> <p>Up to 0.69 ha of native vegetation will require clearing to facilitate the installation of a sewer extension to the Brookfield Estate. Approximately 0.27 ha (40%) is in Good or better condition, while approximately 0.41 ha (60%) is in Degraded condition as it has been previously cleared.</p> <p>No TECs listed under the BC Act or the EPBC Act were recorded within the proposed clearing area. No DBCA listed PECs were recorded within the proposed clearing area. The majority of native vegetation is in Degraded condition. No Threatened flora species listed under the BC Act or any species protected under the EPBC Act were recorded within the proposed clearing area. No DBCA listed Priority species were recorded within the proposed clearing area.</p> <p>Consequently, the biodiversity values associated with the native vegetation proposed to be cleared is considered to be low.</p>	The proposal is unlikely to be at variance with the principle
Native vegetation should not be cleared if it comprises the whole or part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia	<p>A small area of potential foraging habitat suitable for black cockatoos was identified within the clearing area (up to 0.69 ha and only 0.39 ha if horizontal boring is permissible). There are two trees with a DBH of over 500 mm within the clearing area, one with observed hollows, representing potential black cockatoo nesting/roosting habitat.</p> <p>Three western ringtail possums and one quenda were recorded within the proposed clearing area. Up to 0.69 ha (and only 0.39 ha if horizontal boring is permissible) of western ringtail possum habitat may be cleared, including one tree with a hollow, which could be utilised by western ringtail possum or potentially south-western brush-tailed phascogale.</p> <p>Given the larger areas of more similar or better quality habitat adjacent to the clearing area, it is unlikely that black cockatoos, western ringtail possum, south-western brush-tailed phascogale or quenda are solely reliant on the proposed clearing area for food resources or habitat.</p>	The proposal is unlikely to be at variance with the principle
Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora	No Threatened flora species listed under the BC Act or any species protected under the EPBC Act or DBCA listed priority species were recorded within the proposed clearing area.	The proposal is not at variance with the principle
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	No TECs listed under the BC Act or the EPBC Act were recorded within the proposed clearing area. No DBCA listed PECs were recorded within the proposed clearing area.	The proposal is not at variance with the principle

¹¹ Department of Environment Regulation, 2014, A guide to the assessment of applications to clear native vegetation Under Part V Division 2 of the *Environmental Protection Act 1986*.

Principle	Assessment	Outcome
Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared	<p>The native vegetation within the proposed clearing area was broadly mapped as Cowaramup valleys (Cw1) vegetation complex, with minor areas of Cowaramup uplands (C1) (Landgate 2021)¹². These vegetation complexes have approximately 28.09% and 34.46% of their pre-European extent remaining in the South West Forest region (Government of Western Australia 2019)¹³.</p> <p>The National Objectives and Targets for Biodiversity Conservation 2001-2005 and the EPA recognise that 30% or more of the pre-clearing extent of each ecological community is needed to adequately protect Australia's biodiversity (Department of Environmental Regulation [DER] 2014)¹⁴.</p> <p>Vegetation proposed for clearing includes one vegetation complex marginally below this 30% threshold, Cowaramup valleys (Cw1) at 28.09%. Given that most of the vegetation within the proposed clearing area is in a Degraded condition, it is not considered to be of conservation significance.</p>	The proposal is unlikely to be at variance with the principle
Native vegetation should not be cleared if it is growing in or in association with a watercourse or wetland	<p>The proposed clearing area partially overlaps two watercourses, the Darch Brook and its tributary, which DBCA mapped as a palusvale wetland and a floodplain respectively (Figure D). Darch Brook is a tributary of Margaret River. The two watercourses have not been listed as significant watercourses or wetlands (DER 2014; Landgate 2021).</p> <p>Vegetation community B was found to be growing within and adjacent to these watercourses, being described as concentrated in the seasonally wet areas to the north and south (Ecosystem Solutions 2021). Vegetation community A was largely in a Degraded condition due to historical clearing and is proximate to the Darch Brook.</p> <p>The majority of native vegetation proposed to be cleared is growing in or in association with the Darch Brook and its tributary watercourse. Noting the relatively small extent of the proposed clearing and that the vegetation is mostly in a Degraded condition, the proposed clearing is not likely to have a significant impact on the larger extent of riparian habitat associated with the Darch Brook and its tributary.</p>	The proposal is at variance with the principle
Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation	<p>Land degradation can be caused or exacerbated by uncontrolled run-off and wind or water erosion.</p> <p>The underlying soils of the proposed clearing area are mapped as Cowaramup wet vales Phase, which is described as small, broad U-shaped drainage depressions with swampy floors. Gravelly duplex (Forest Grove) soils on side slopes and poorly drained alluvial soils on valley floor (Landgate 2021). These soils were mapped by the Department of Primary Industries and Regional Development as having a moderate waterlogging, wind erosion and phosphorus export risk and a low water erosion and salinity risk (Landgate 2021).</p> <p>Given that the vegetation within the clearing area is mostly in a Degraded condition and relatedly small size of the clearing area, the proposed clearing is unlikely to increase the waterlogging, wind erosion and phosphorus export risk to an extent that would result in appreciable land degradation.</p>	The proposal is unlikely to be at variance with the principle.
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	<p>The proposed clearing area does not contain land held or managed for conservation. The closest conservation area is the Wooditjup National Park, located approximately 1.4 km south-east of the proposed clearing area. Given the distance to this conservation area, the proposed clearing is unlikely to impact upon its environmental values.</p>	The proposal is not at variance with the principle.

¹² Landgate, 2021, Locate V5, Accessed 26 October 2021, <https://maps.slip.wa.gov.au/landgate/locate/>

¹³ Government of Western Australia, 2019, 2018 South West Vegetation Complex Statistics. Current as of March 2019. WA Department of Biodiversity, Conservation and Attractions, Perth, <https://catalogue.data.wa.gov.au/dataset/dbca>

¹⁴ Department of Environmental Regulation, 2014, A Guide to the Assessment of Applications to Clear Native Vegetation – Under Part V Division 2 of the Environmental Protection Act 1986.

Principle	Assessment	Outcome
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	Horizontal boring is the preferred method for installing the sewer extension under the Darch Brook and its tributary and is unlikely to result in surface water/groundwater quality deterioration occurring. If horizontal boring is not possible due to rock, proposed clearing may increase short term sedimentation, and potential deterioration in the quality of surface water of the Darch Brook and its tributary, particularly if there is any surface water flow at the time of proposed clearing.	The proposal may be variance with the principle (if horizontal boring is not permissible).
Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the intensity of flooding	The proposed clearing area is located well outside the Margaret River 100 year flood plain mapping (Landgate 2021). Its underlying soils have a moderate waterlogging risk and a low flood, water erosion and salinity risk (Landgate 2021). The proposed clearing area partially extends into the Darch Brook and its tributary. The small extent of native vegetation proposed to be cleared (up to 0.69 ha) is not likely to cause, or exacerbate, the intensity of flooding.	The proposal is unlikely to be at variance with the principle.

Concluding remarks

The native vegetation proposed to be cleared is found on historically impacted land and within the Darch Brook and its tributary. Approximately 0.27 ha (40%) is in Good or better condition, while approximately 0.41 ha (60%) is in Degraded condition as it has been previously cleared.

The proposed sewer alignment and works were approved by the Minister for Water on 9 November 2020 (Appendix C). There are no alternative options available for this route. This sewer alignment is shown on the Water Corporation’s scheme planning and is critical for regional development. The clearing of native vegetation within the Darch Road reserve has been avoided. The sewer extension alignment was informed by the Rapids Landing’s future cadastral boundaries in Lot 9014, utilising the most direct routes to cross each watercourse and maintaining close proximity to the Rapids Landing’s developable area, usually within 10 m, to limit encroachment on Darch Brook’s riparian vegetation wherever practicable.

Balwyn Margaret River Pty Ltd has been consulted regarding the proposed clearing of native vegetation within its landholding to install the sewer extension. Brookfield Estate Pty Ltd has advised that its preferred installation method is to bore horizontally through the creek area, which would avoid disturbing the Darch Brook tributary and the installed drainage and landscaping infrastructure. However, ground conditions may prevent this if there is considerable rock or saturated loose ground conditions material at depth or if solid rock is hit, necessitating those areas be opened up regardless and cracking or removing rock as required. Brookfield Estate Pty Ltd has agreed to make every effort to minimise impacts to the existing infrastructure and landscaping and in the event that there are impacts, reinstatement of landscaping will be undertaken to the same or better condition. Balwyn Margaret River Pty Ltd has provided conditional endorsement for the clearing of native vegetation to facilitate the installation of the sewer extension (Appendix F).

To address the low likelihood that conservation significant fauna species are present within the proposed sewer extension immediately prior to the proposed clearing works commencing, Brookfield Estate Pty Ltd is committed to undertake pre-clearing inspections for fauna species with clearing works commencing immediately after fauna species have been confirmed not to be present.

We trust this information is sufficient for your purposes, however, should you require further details or clarification, please do not hesitate to contact the undersigned.

Yours sincerely,
for RPS AAP Consulting Pty Ltd

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