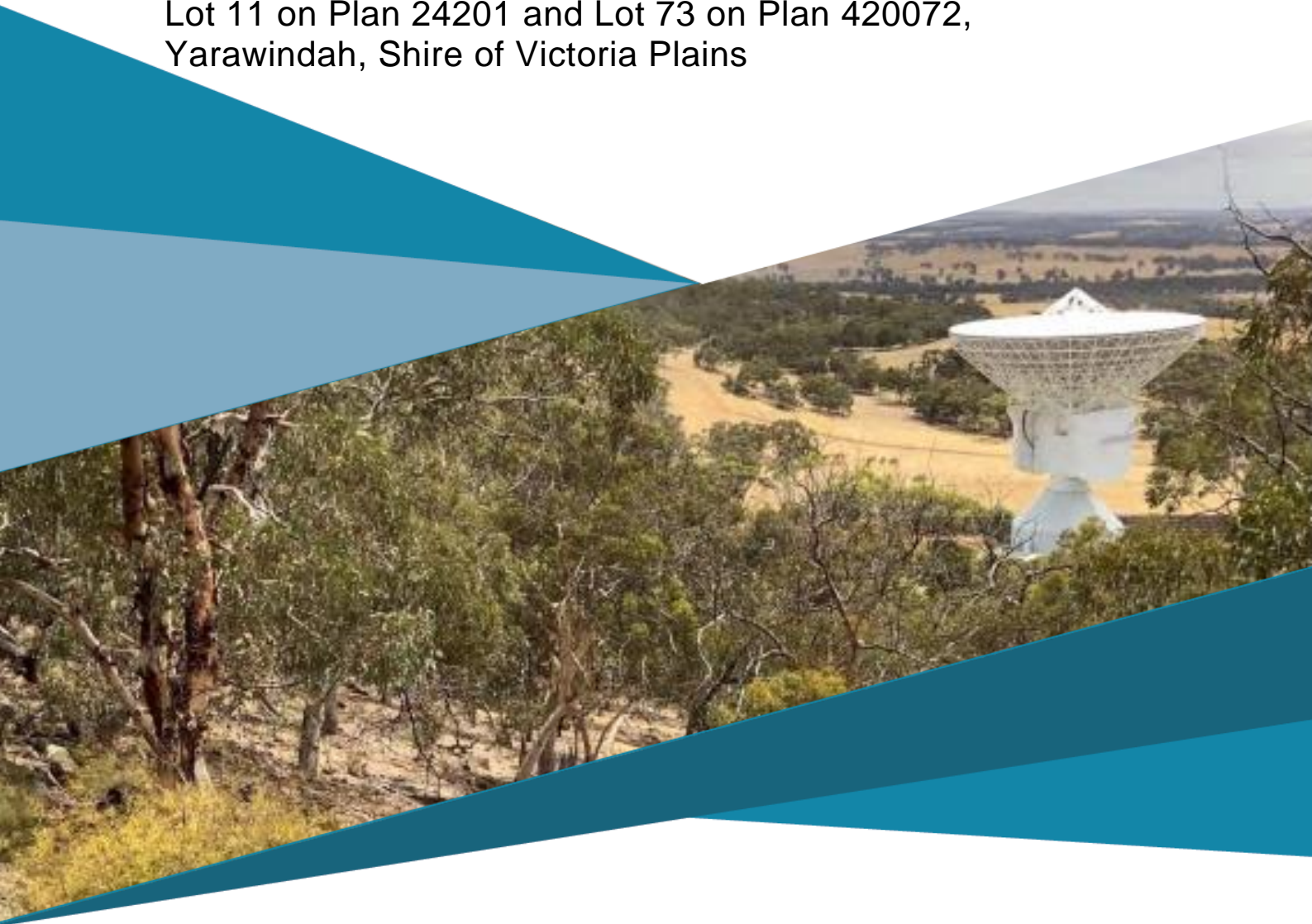




Government of **Western Australia**
Office of the **Appeals Convenor**
Environmental Protection Act 1986

Appeals Convenor's Report to the Minister for Environment

Appeal against conditions of Clearing Permit CPS 9479/1,
Lot 11 on Plan 24201 and Lot 73 on Plan 420072,
Yarawindah, Shire of Victoria Plains



Appellant	Mr Warwick Boardman
Permit holder	European Space Agency and Stratham Engineering Consulting Services
Authority	Department of Water and Environmental Regulations (DWER)
Appeal No.	019 of 2022
Date	February 2023

Office of the Appeals Convenor

08 6364 7990 or TTY 13 36 77 (National Relay Service)

admin@appealsconvenor.wa.gov.au

www.appealsconvenor.wa.gov.au

221 St Georges Terrace
Perth WA 6000

Appeals Convenor

Emma Gaunt

Investigating Officer

Emma Bramwell

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Cover image: Ecoscape Australia Pty Ltd (2020) *Deep Space Facility Flora and Fauna Survey*. Report prepared for the European Space Agency and Stratham Engineering Consultancy Service. September 2020.

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Acknowledgement of Country

The Office of the Appeals Convenor acknowledges the traditional custodians throughout Western Australia and their continuing connection to the land, waters and community.

We pay our respects to all members of the Aboriginal communities and their cultures, and to Elders past, present and emerging.

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1 Executive summary

1.1 Decision under appeal

This report relates to an appeal against the conditions applied by the Department of Water and Environmental Regulation (DWER) in Clearing Permit CPS 9479/1 (clearing permit) under Part V of the *Environmental Protection Act 1986* (EP Act). The clearing permit was granted to the European Space Agency and Stratham Engineering Consulting Services (permit holder) on 25 May 2022, and authorises the clearing of up to 8.15 hectares (ha) of native vegetation on Lot 11 on Plan 24201 and Lot 73 on Plan 420072, Yarawindah, in the Shire of Victoria Plains (impact site; Figure 1). Lot 11 is freehold land owned by the permit holder, and Lot 73 is freehold land currently owned by another party. The clearing purpose is to construct a BIOMASS Calibration Transponder and associated infrastructure.

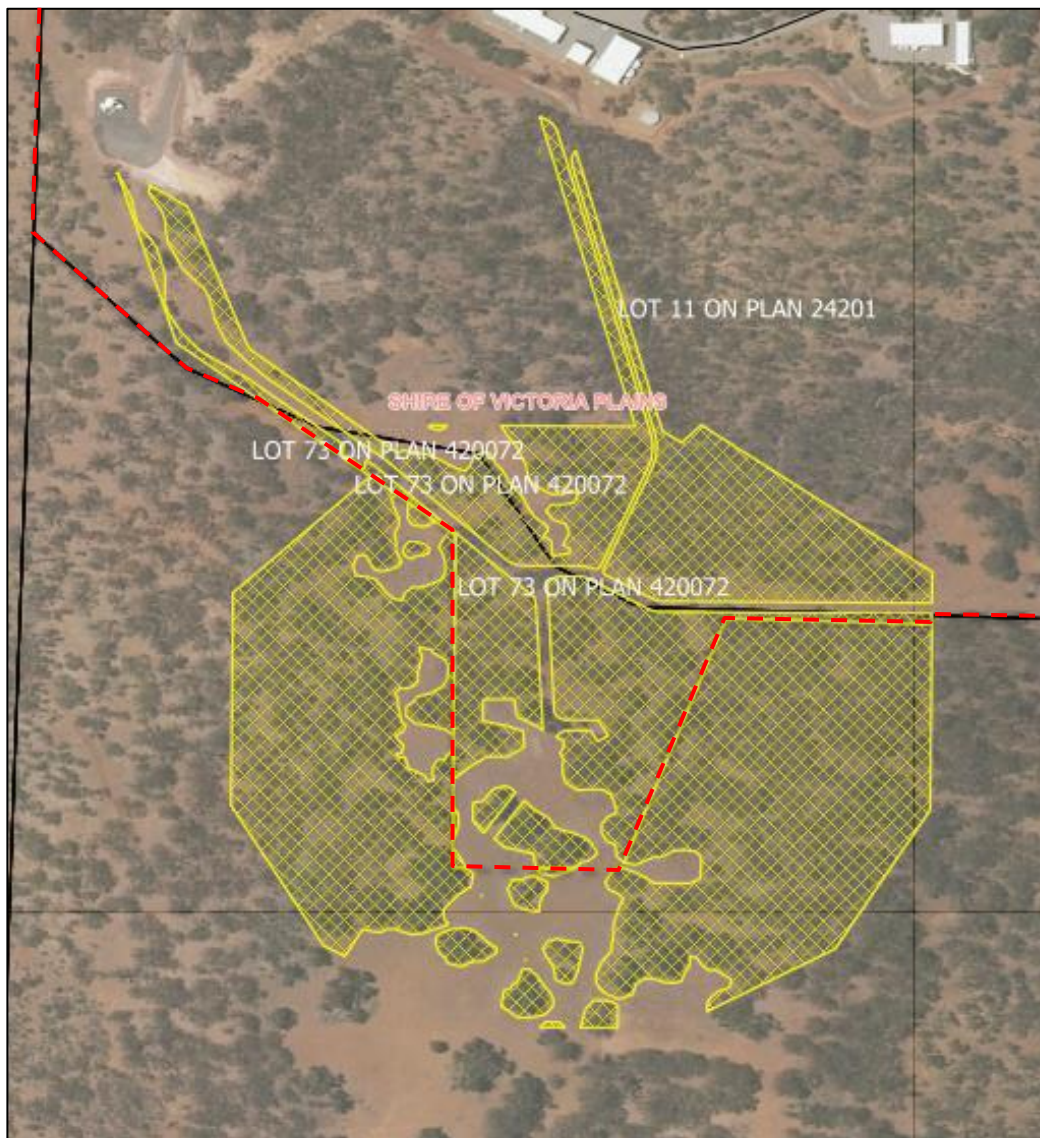


Figure 1. Area authorised to be cleared under CPS 9479/1 (cross-hatched yellow);¹ red dash line indicates boundary between 'Special Use Area' and 'Rural' zoning

¹ Department of Water and Environmental Regulation (2022a) *Clearing Permit granted under section 51E of the Environmental Protection Act 1986: Purpose Permit Number CPS 9479/1 and Decision Report*. 25 May 2022.

1.2 Grounds of appeal and appellant concerns

Mr Warwick Boardman (appellant) raised concerns around the adequacy of the offset requirements applied on the clearing permit. The appellant is seeking for the offsets to be achieved wholly through revegetation and rehabilitation to ensure no net loss of native vegetation. The appellant also submitted that all clearing undertaken in accordance with exemptions should be recorded and replaced through revegetation and rehabilitation.

Table 1 Grounds of appeal

Ground	Main concerns the appellant submitted
Offsets	With reference to DWER's response to a public submission [about offsets and net loss] ² , there is no reason given (such as increased fire risk) as to why time constraints and the significance of the project means that offset areas cannot be found on-site to rehabilitate to create more habitat (to achieve no net loss of vegetation).
Exempt clearing	It is concerning that exempt clearing is a factor in the decision. If the proposed offset is accepted then there needs to be some form of constraint on exempt clearing actions, including rehabilitating an area of equivalent area to that destroyed.

1.3 Key issues and conclusions

The appellant's key concerns centre around the adequacy of the offset requirements to counterbalance the significant residual impact. The question for the Minister on appeal is whether, based on the concerns raised by the appellant, the conditions on the permit are adequate.

These issues are summarised below. Section 2 provides further details about our reasons and supporting information is provided in Section 3.

What are the environmental values of the clearing area?

We agree with DWER's assessment that the loss of 8.15 ha of native vegetation that is suitable habitat for Carnaby's cockatoo (*Zanda³ latirostris*; Endangered) will result in a significant residual impact, as it is significant as a remnant of native vegetation in an area that has been extensively cleared.⁵

Are the clearing permit conditions appropriate to manage impacts?

While we consider that DWER has generally applied reasonable conditions to manage the identified impacts so that the proposed clearing does not lead to unacceptable risks to the environment, we find that the offsets package in its current form does not adequately counterbalance the significant residual impacts to the environment.

Firstly, we note that the revegetation component of the offsets package is currently not protected from future clearing, and therefore may not be consistent with principle 6 in the *WA Environmental Offsets Policy*⁸ (Offsets Policy) which sets out that offsets must be enduring and deliver long-term strategic outcomes. To address this, DWER recommended that the

² Department of Water and Environmental Regulation (2022a), decision report, page 10.

³ Consistent with taxonomical revision described by the [WA Museum Checklist of Terrestrial Vertebrate Fauna of WA](#), Baudin's cockatoo and Carnaby's cockatoo were moved to the genus *Zanda* in November 2022.

⁵ Department of Water and Environmental Regulation (2022a), decision report, page 2.

⁸ Government of Western Australia (2011) *WA Environmental Offsets Policy*. September 2011.

revegetation component be protected by a conservation covenant. We agree with this recommendation.

Secondly, we find that DWER's application of the *WA Environmental Offsets Calculator*⁹ (State Calculator) was inconsistent with the *Environmental offsets metric: Quantifying environmental offsets in Western Australia*¹⁰ (State Calculator Guidance). We also find that some of the scores applied in the offset calculations should be changed to ensure consistency with the State Calculator Guidance and DWER's own *Draft Procedure for environmental offsets metric inputs*¹¹ (Draft Calculator Inputs Procedure). As a result, we find that the offsets package currently required under the clearing permit does not adequately counterbalance the significant residual impact.

We consulted with the permit holder and explained our findings and discussed options for addressing the shortfall. In response, the permit holder agreed to increase the land acquisition component (noting that this will likely result in an increased monetary contribution) to ensure that the offsets package is consistent with the WA offsets framework and will adequately counterbalance the significant residual impact.

1.4 Recommendation to the Minister

We recommend that the appeal is allowed to the extent that the conditions in the clearing permit are strengthened:

- condition 9 is changed to add a requirement that the permit holder must establish a conservation covenant in perpetuity over the revegetation component of the offsets package.
- condition 10 and the corresponding Advice Note are changed to reflect the increased land acquisition component of the offsets package from '4.64' ha to '6.27' ha of suitable habitat for Carnaby's cockatoo (*Zanda latirostris*; Endangered).

⁹ Government of Western Australia (2021a) *WA environmental offsets calculator*. Department of Water and Environmental Regulation, October 2021.

¹⁰ Government of Western Australia (2021b) *Environmental offsets metric: Quantifying environmental offsets in Western Australia*. Department of Water and Environmental Regulation, October 2021.

¹¹ Department of Water and Environmental Regulation (2022b) *Draft Procedure for environmental offsets metric inputs: For use with the WA environmental offsets metric*. Consultation draft. Government of Western Australia, May 2022.

2 Reasons for recommendation

Based on the available information including the concerns raised by the appellant, we agree that the offsets package in its current form does not adequately counterbalance the significant residual impacts to the environment and find that the permit conditions should be improved to achieve this outcome.

Specifically, we recommend that conditions 9 and 10 (and the corresponding Advice Note) on the clearing permit are modified to:

- add a requirement that the permit holder must establish a conservation covenant in perpetuity over the revegetation component of the offsets package
- reflect the increased land acquisition component of the offsets package from '4.64' ha to '6.27' ha of suitable habitat for Carnaby's cockatoo.

We explain our reasoning below.

2.1 What are the environmental values of the clearing area?

Clearing area contains important environmental values

DWER's assessment against the clearing principles found the proposed clearing 'is at variance' to (b) and (e), 'may be at variance' to (a), (d), (f), (g) and (i), and 'is not likely to be at variance' with (c), (h) and (j). In summary, DWER found that the clearing area:

- contains vegetation consisting of three primary vegetation units:^{16,17}
 - *Eucalyptus wandoo* subsp. *wandoo* (wandoo) woodland over *Melaleuca marginata* and *Hibbertia hypericoides* subsp. *hypericoides* (yellow buttercups) mid shrubland over bearded oat low isolated grasses; about 6.62 ha mostly in 'Degraded' condition¹⁸ with about 0.44 ha in 'Good' condition
 - *Corymbia calophylla* (marri) woodland over introduced *Avena barbata* (bearded oat) low isolated grasses; about 1.42 ha in 'Degraded' condition
 - *Eucalyptus loxophleba* subsp. *loxophleba* (York gum) woodland over introduced bearded oat low isolated grasses; about 0.1 ha in 'Degraded' condition
- is within the known breeding range for Carnaby's cockatoo and the vagrant distribution for forest red-tailed black cockatoo (*Calyptorhynchus banksii* subsp. *naso*; Vulnerable); there is a high likelihood of Carnaby's cockatoo occurring despite none being observed
- is within a local area that retain less than 30 per cent of its original remnant vegetation cover, which is below the threshold for biodiversity conservation in Australia^{19,20}
- contains tree species consistent the 'Eucalypt Woodlands of the Western Australian Wheatbelt' threatened ecological community (TEC), however lacks the key diagnostic species to be representative and is outside the IBRA region for this TEC

¹⁶ Ecoscape Australia Pty Ltd (2020) *Deep Space Facility Flora and Fauna Survey*. Report prepared for the European Space Agency and Stratham Engineering Consultancy Service. September 2020. Pages 45-48.

¹⁷ Ecoscape Australia Pty Ltd (2022) *Figure 4: Vegetation Type and Vegetation Condition*. Revision 05, 1 February 2022.

¹⁸ As per the condition scale described in: Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.

¹⁹ Commonwealth of Australia (2001) *National Objectives and Targets for Biodiversity Conservation 2001-2005*. Commonwealth of Australia, Canberra.

²⁰ Environmental Protection Authority (2008) *Environmental Guidance for Planning and Development*. Guidance Statement No. 33, May 2008. Government of Western Australia.

- intersects about 20 metres (m) of a minor non-perennial watercourse, however a flora survey²¹ did not report any vegetation growing in association with this watercourse; the proposed clearing may have a short-term impact on its water quality
- does not contain local or regionally significant flora; flora surveys^{22,23} did not record any conservation significant flora taxa within the clearing area.²⁴

By the decision report, DWER followed a risk-based approach in undertaking its assessment and had regard for the site characteristics, relevant datasets, the findings of the permit holder's flora surveys, and assessment provisions set out in the EP Act. DWER concluded that the proposed clearing will result in the loss of 8.15 ha of native vegetation that is suitable habitat for Carnaby's cockatoo, and is significant as a remnant of native vegetation in an area that has been extensively cleared.²⁵

From the available information, including the appeal, the permit holder's flora surveys, DWER's assessment and published literature, there is no question that the clearing area contains important environmental values.

We consider that DWER's identification and assessment of the direct and indirect impacts from the proposed clearing was reasonable and had appropriate regard for the mitigation hierarchy, and we generally agree with DWER's assessment findings. In this regard, and on review of impact examples in the DWER's *A guide to the assessment of applications to clear native vegetation*²⁶ (Guide to Assessment) and *WA Environmental Offsets Guidelines*²⁷ (Offsets Guidelines) (Section 1.1), we agree with DWER's conclusion that the loss of 8.15 ha of native vegetation constitutes a significant residual impact.

We now turn to the adequacy of the offset proposed to counterbalance the significant residual impact.

2.2 Are the clearing permit conditions appropriate to manage impacts?

Significant residual impacts should be counterbalanced

Offsets policy context

The elements of the WA offsets framework include: the Offsets Policy, the Offsets Guidelines, the *WA Environmental Offsets Register*³⁷ (Offsets Register), the State Calculator, and the State Calculator Guidance.

Of note, the State Calculator and the State Calculator Guidance (collectively referred to in this report as the State Offsets Metric) were developed by the State government in consultation with working groups comprised of industry, utility, conservation and other stakeholder representatives to meet a commitment in the Offsets Guidelines:

... As soon as practical within twelve months, government agencies, in consultation with stakeholders, will refine this methodology to establish specific metrics as appropriate.³⁸

²¹ Ecoscape Australia Pty Ltd (2020).

²² Ecoscape Australia Pty Ltd (2020).

²³ PGV Environmental (2020) *Deep Space Facility, New Norcia – Targeted Flora Survey and Carnaby's Black Cockatoo Additional Information*. Report prepared for the European Space Agency and Stratham Engineering Consultancy Service. 7 September 2021.

²⁴ Department of Water and Environmental Regulation (2022a), decision report, pages 5-8 and 15-16.

²⁵ Department of Water and Environmental Regulation (2022a), decision report, pages 2 and 5.

²⁶ Department of Environment Regulation (2014a) *A guide to the assessment of applications to clear native vegetation under Part V Division 2 of the Environmental Protection Act 1986*. December 2014.

²⁷ Government of Western Australia (2014) *WA Environmental Offsets Guidelines*. August 2014.

³⁷ Government of Western Australia (2013) *WA Environmental Offsets Register*. July 2013.

³⁸ Government of Western Australia (2014), page 14.

The Offsets Policy and Offsets Guidelines provide that environmental offsets are not appropriate for all projects and are not appropriate in all circumstances; their applicability is considered on a project-by-project basis.

The Offsets Policy describes two offset categories:

- direct offsets are actions designed to provide for on-ground improvement, rehabilitation and conservation of habitat; include acquisition, restoration, revegetation and rehabilitation of natural areas outside the project area
- indirect offsets are actions aimed at improving scientific or community understanding and awareness of environmental values that are affected by a development or activity; designed to result in positive conservation outcomes and may include research.

The Offsets Guidelines describes three types of environmental offsets:

- land acquisition offsets involve the protection of environmental values through improved security of tenure or restricting the use of the land; achieved through ceding freehold land to the Crown for conservation purposes or perpetual conservation covenants.
- on-ground management offsets include revegetation (re-establishment of native vegetation) and rehabilitation (repair of ecosystem processes and management of threats); objective is tangible improvement to environmental values in the offset area
- research project offsets (can only be applied under Part IV of the EP Act).

In relation to clearing permits, section 51H(1) of the EP Act provides that:

A clearing permit may be granted subject to such conditions as the CEO considers to be necessary or convenient for the purposes of preventing, controlling, abating or mitigating environmental harm or directly or indirectly offsetting the loss of the cleared vegetation.

The CEO can therefore apply a condition to a clearing permit requiring the loss of the vegetation to be offset.

DWER's *Clearing of Native Vegetation Offsets Procedure*³⁹ (Offsets Procedure) sets out that offsets are required when clearing is at variance with one or more of the biodiversity-related clearing principles⁴⁰ and a significant residual impact remains following application of the mitigation hierarchy.

This is consistent with Principles 1 and 2 in the Offsets Policy, which state that 'Environmental offsets address environmental impacts that remain after on-site avoidance and mitigation measures have been undertaken', and that 'While environment offsets may be appropriate for significant residual environmental impacts, they will not be applied to minor environmental impacts', respectively.

Further, in relation to offsets for clearing under the EP Act, DWER prepared the Draft Calculator Inputs Procedure to assist users of the State Offsets Metric to understand the range of inputs. This document is currently under review following public consultation.

Offsets package

Consistent with the Offsets Guidelines and its own Offsets Procedure, DWER determined that the loss of 8.15 ha of native vegetation constitutes a significant residual impact.⁴¹

³⁹ Department of Environment Regulation (2014b) *Guideline: Clearing of native vegetation Offsets procedure under the Environmental Protection Act 1986*. August 2014.

⁴⁰ Being clearing principles (a), (b), (c), (d), (e), (f) and (h).

⁴¹ Department of Water and Environmental Regulation (2022a), decision report, pages 2, 7-8.

DWER applied condition 9 ('Offsets – revegetation and rehabilitation requirements') and condition 10 ('Offsets – monetary contributions to the Offsets Fund') on the clearing permit to counterbalance this significant residual impact. As the two values for which offsets are required are wholly overlapping in this case, DWER based these requirements on the value with the highest conservation significance: Carnaby's cockatoo (Endangered).

Condition 9 requires the permit holder to revegetate and rehabilitate about 2.85 ha on Lot 11 (Figure 2) within 12 months of undertaking clearing, and no later than 18 June 2029, in accordance with the permit holder's *Revegetation Management Plan, ESA Deep Space Facility* dated December 2021, as well as specified actions and completion criteria.

Condition 10 requires the permit holder to transfer \$100,734.40 to DWER 'for the purpose of establishing or maintaining native vegetation as an environmental offset' under the permit prior to commencing clearing. Relevant to this, an Advice Note in the clearing permit states:

The funds referred to in condition 10 of this permit are intended for contributing towards the purchase of 4.64 hectares of native vegetation with habitat for Carnaby's cockatoo (*Calyptorhynchus latirostris*) that occurs in an area that has been extensively cleared.



Figure 2. Location of revegetation component of offsets package (cross-hatched red)⁴²

In its response to the appellant's submission that there is no good reason in this case for the offset not to be achieved wholly through revegetation and rehabilitation, DWER noted that:

[W]ithin the Offsets Policy, a degree of flexibility is provided towards the use of environmental offsets to achieve real and sustainable environmental outcomes through a combination of avoidance and mitigation, as well as direct and indirect environmental offsets. The Offsets Policy provides for a number of different offset options, and the Department applied discretion to identify the most appropriate offset type in this instance.⁴³

In the decision report DWER acknowledged that 'land acquisition will result in some net loss of native vegetation'.⁴⁴ Notwithstanding, the offsets package in this case, comprising of both revegetation and land acquisition components, is consistent with the WA offsets framework.

⁴² Department of Water and Environmental Regulation (2022a), clearing permit, pages 9-12.

⁴³ Department of Water and Environmental Regulation response to Appeal 019/22 (1 August 2022), page 3.

⁴⁴ Department of Water and Environmental Regulation (2022a), decision report, page 10.

Offsets package insufficient to counterbalance impacts

We note that the total spatial area of the offsets package is about 7.49 ha to counterbalance the loss of 8.15 ha. We find it unusual for an offsets package to have a total spatial area that is less than the extent of the significant residual impact required to be counterbalanced (in this case representing a ratio of 1 : ~0.92). We reviewed offsets published on the Offsets Register relating to the clearing of suitable habitat for black cockatoos generally (refer Section 3.4); all the reviewed offsets are larger than the corresponding clearing impacts.

Further, we note that the revegetation component comprises 2.85 ha, however is currently not required to be protected from future clearing and therefore may not be consistent with principle 6 in the Offsets Policy which sets out that 'Environmental offsets will be designed to be enduring, enforceable and deliver long term strategic outcomes'.

Given the above, we consider that the offsets package should be reviewed.

Revegetation component should be enduring and deliver long-term outcomes

The appellant submitted that if the offset is accepted there needs to be a form of constraint on exempt clearing, including rehabilitating an area of equivalent size to that cleared.

The Offsets Guidelines recognises that:

Revegetation that is established as a requirement of a written law (e.g. revegetation required under a ... clearing permit as an offset) is considered to be native vegetation for the purposes of the EP Act and cannot be cleared without a permit or exemption.⁴⁵

DWER acknowledged that in the absence of permanent protection, exempt clearing could potentially be undertaken within the revegetation site in future. DWER recommended that: 'a condition is added to Clearing Permit CPS 9479/1 requiring a conservation covenant to be placed over the revegetated areas to protect the revegetation in perpetuity'.⁴⁶

DWER's recommendation is consistent with the permit holder's revegetation commitments:

The ESA is supportive of this area being revegetated with Black Cockatoo habitat and commits to preparing and implementing a Revegetation Management Plan in keeping with the DWER document *A Guide to Preparing Revegetation Plans for Clearing Permits* to the satisfaction of the DWER, and that the revegetated area be conserved in perpetuity.⁴⁷

With regard for principle 6 in the Offsets Policy, we agree with DWER's recommendation.

Revegetation component should be calculated using 'Offset calculation (Area)' part

The decision report indicates that DWER utilised the State Calculator to assess the suitability of the offsets package, and sets out the scores applied by DWER in its calculations.⁴⁸

From our review, we consider that most of the scores applied by DWER can be justified within the context of the State Calculator Guidance (Appendix 2). However, we consider that the value of the revegetation component should be determined using the 'Offset calculation (Area)' function in the State Calculator (including scores for 'Duration of offset implementation', 'Time until offset site secured' and 'Risk of future loss' without/with offset), and that the 'Risk of future loss without offset' score for the land acquisition component should be changed.

⁴⁵ Government of Western Australia (2014), page 18.

⁴⁶ Department of Water and Environmental Regulation response to Appeal 019/22 (1 August 2022), page 3.

⁴⁷ Department of Water and Environmental Regulation response to Appeal 019/22 (1 August 2022), attachment 1.

⁴⁸ Department of Water and Environmental Regulation (2022a), decision report, pages 9 and 17-20.

Impact site (clearing area)

DWER afforded the impact site a 'Quality' score of '2' with the rationale: 'Quality score obtained from report 'Deep space facility flora and fauna survey' prepared for Stratham Engineering Consultancy Services by Ecoscape ..., condition is described as 'degraded'".⁴⁹

We reviewed the value of the impact site for Carnaby's cockatoo in the context of the three elements of quality based on the available information (Section 3.4: Table 7), and with regard for other clearing permits requiring offsets for black cockatoos where scores are published. Based on our review, we consider that a higher 'Quality' score might be warranted.

We conducted a site inspection on 25 October 2022 to ground-truth our desktop review, however the vegetation had been cleared, consistent with the active clearing permit.⁵⁰ Given this, we have not suggested changing the 'Quality' score applied by DWER.

Revegetation offset

DWER afforded the revegetation site a 'Current quality' score of '1', with the rationale: 'Quality score start is assumed to be degraded condition'.⁵¹

We reviewed the value of the revegetation site for Carnaby's cockatoo in the context of the three elements of quality based on available information (Section 3.4: Table 7), and with regard for the value of the impact site from our desktop review. We also conducted a site inspection to ground-truth our desktop review (Figure 3). Based on this, we consider DWER's score of '1' is reasonable.



Figure 3. Section of proposed revegetation site, facing south-west. The site comprises two parallel strips of about 5-10 m wide either side of the access road to the facility.

⁴⁹ Department of Water and Environmental Regulation (2022a), decision report, page 19.

⁵⁰ Under section 101A(3) and (6) of the EP Act, in the case of a third party appeal against the conditions of a clearing permit, the conditions against which the appeal was lodged continues to have effect.

⁵¹ Department of Water and Environmental Regulation (2022a), decision report, page 20.

DWER considered that the ‘Future quality’ without the revegetation is not likely to change from its ‘Current quality’, and applied a score of ‘1’. DWER applied a score of ‘4’ for the ‘Future quality’ with the revegetation, based on being 80 per cent confident that ‘at best, the linear strip proposed for revegetation could achieve ‘good’ condition’ within 20 years.⁵²

We note that the proposed revegetation comprises two parallel strips of up to 15 m wide either side of the access road to the facility (Figure 2). This approach is likely to require intensive management into the future to achieve and retain ‘Good’ condition due to edge effects from adjacent land uses; we suggest that a consolidated planting adjacent to existing remnant vegetation would likely be more sustainable and viable into the longer term.

In any event, we accept that the value of the proposed revegetation offset for Carnaby’s cockatoo relates to the successful establishment of appropriate foraging species, irrespective of the planting configuration. Given this, we have not suggested changing DWER’s scores for ‘Future quality’, ‘Time until ecological benefit’ or ‘Confidence in result’ for the revegetation.

Use of rehabilitation credit calculation to determine value of proposed revegetation

The decision report indicates that DWER’s calculation considered the contribution of the off-site revegetation to the overall offsets package using the ‘Part B: Rehabilitation credit calculation (Area)’ function in the State Calculator (refer Figure 4).

Part B: Rehabilitation credit calculation Area (onsite)					
Rehabilitation Credit	Description	Proposed rehabilitation (area in hectares)	2.85	Time until ecological benefit (years)	20.00
	Revegetation of 2.85 hectares within the property from degraded to good condition	Current quality of rehabilitation site (scale)	1.00	Confidence in rehabilitation result (%)	80.0%
		Future quality WITHOUT rehabilitation (scale)	1.00	Rehabilitation credit	0.54
		Future quality WITH rehabilitation (scale)	4.00		

Figure 4. DWER’s calculation of the value of the revegetation component⁵³

By the State Calculator Guidance, the ‘Part B: Rehabilitation credit calculation (Area)’ function is intended to be used to determine the environmental value of any on-site rehabilitation and other activities to return biodiversity values to an impact site following temporary clearing (for example, rehabilitation following sand extraction):

To be included in the rehabilitation credit calculation, [rehabilitation] must be undertaken in accordance with a plan approved as part of a clearing permit, Ministerial Statement or approval under the *Mining Act 1978*⁵⁴ ... Generally, a rehabilitation credit will not apply for natural regeneration in the absence of active onsite on-ground management, except in circumstances when encouraging natural regeneration is a requirement of approval. The values entered into the rehabilitation part of the calculation should be consistent with the outcomes expected to be achieved in conditions of approval.

If onsite rehabilitation is not proposed for an impact site, the fields in the rehabilitation credit calculation components must be left blank.⁵⁵

⁵² Department of Water and Environmental Regulation (2022a), decision report, page 20.
⁵³ Department of Water and Environmental Regulation (2022a), decision report, page 18.
⁵⁴ This may relate to rehabilitation that is part of a project approved via a Ministerial Statement where the rehabilitation component is regulated by an approval under the *Mining Act 1978* (see the Department of Mines, Industry Regulation and Safety *Statutory guidelines for mine closure plans*).
⁵⁵ Government of Western Australia (2021b), pages 10-11.

In this regard, the 'Part B: Rehabilitation credit calculation (Area)' function acknowledges an intention to re-instate 'temporarily' cleared values within an impact site ('on-site'); this results in a reduced significant residual impact which forms the basis for an offset. By the guidance, this function is not intended to be used to determine the value of on-ground actions that seek to re-establish 'permanently' cleared values at a location other than within the impact site ('off-site'; irrespective of whether on the same land parcel as the impact site).

We note that the use of this function to determine the value of off-site revegetation and/or rehabilitation is likely to affect the quantum of the offset required, since it does not factor in 'Duration of offset implementation', 'Time until offset site secured' or 'Risk of future loss' fields that form part of the offset calculation. In effect, the use of this function for an off-site offset assumes the following fixed scores for these fields in the background calculation:

- '20' years for 'Duration of offset implementation'
- '20' years for 'Time until offset site secured'
- '0' per cent for 'Risk of future loss' with/without revegetation.

From the decision report and condition 9 on the clearing permit, the proposed revegetation is characterised as an off-site offset (despite being on the same land parcel as the impact site):

- the proposed clearing of 8.15 ha is 'permanent', that is, there is no stated intention that any portion of the impact site will be revegetated or rehabilitated in future⁵⁶
- the title of condition 9 is 'Offsets – revegetation and rehabilitation requirements'
- the proposed revegetation is to be established at a location other than within the impact site (despite being on the same land parcel).

Given the above, we consider that DWER's calculation for the revegetation component ought to have used the 'Offset calculation (Area)' function in the State Calculator, and suggest that the following scores would be reasonable in re-calculating the revegetation component:

- '20' years for 'Duration of offset implementation', reflecting the recommendation above that a conservation covenant in perpetuity is placed on the revegetation site
- '9' years for 'Time until offset site secured', based on the commencement of clearing in early 2023, the commencement of revegetation by 18 June 2029⁵⁷, and allowing time for successful establishment to a point where a conservation covenant can be registered.⁵⁸
- '20' per cent 'Risk of future loss without offset' and '10' per cent 'Risk of future loss with offset', consistent with examples contained in DWER's Draft Calculator Inputs Procedure for 'Rural' zoned lands and conservation tenure respectively⁵⁹ and other recent appeals⁶⁰.

'Risk of future loss without offset' for land acquisition component should be changed

DWER afforded the land acquisition site a 'Current quality' score of '7' with the rationale: 'As per the land parcels identified by [the Department of Biodiversity, Conservation and Attractions (DBCA)], the native vegetation to be acquired is considered to be in 'very good to excellent' condition'.⁶¹

⁵⁶ The Council Minutes of 3 May 2021 note that a 5.8027 hectare 'Rural' zoned portion of Lot M1991 (Lot 73) is to be maintained as a cleared area around the proposed infrastructure, with an opportunity to use it for grazing.

⁵⁷ Consistent with conditions 4 and 9 on the clearing permit.

⁵⁸ Proposed amendments to the EP Act include adding new provisions enabling DWER to enter into environmental protection covenants if conditioned in clearing permits or Ministerial statements. At the time of DWER's decision to grant this clearing permit, these proposed provisions were not yet in effect.

⁵⁹ Department of Water and Environmental Regulation (2022b), pages 18-19.

⁶⁰ Including [Appeal 040/21](#) against the conditions of Clearing Permit [CPS 9094/1](#).

⁶¹ Department of Water and Environmental Regulation (2022a), decision report, page 20.

DWER considered the 'Future quality' of the site without acquisition would decline to a score of '6' due to 'clearing for exempt purposes or other land degradation factors', and that with acquisition the site is not likely to change from its 'Current quality'. This is based on DWER being 90 per cent confident that 'transfer to conservation estate will avoid the likely decline in quality' over the next 20 years.⁶² We note DWER's 'Time until ecological benefit' and 'Time until offset site secured' scores of '1' year imply that a suitable site which meets the specified 'Current quality' and 'Risk of loss' scores can be identified and conserved within one year of clearing. This is reflected in DWER's rationale for the scores, which indicate that DBCA has commenced negotiations in relation to the purchase of a site located in a rural zoned area.⁶³

In the absence of site-specific information about the land acquisition site, we have not suggested changes to the scores applied by DWER for the land acquisition component other than 'Risk of future loss without offset', for which we suggest a score of '20' per cent would be reasonable, consistent with examples contained in DWER's Draft Calculator Inputs Procedure for 'Rural' zoned lands.

Revised offset calculation (increased land acquisition component)

By DWER's calculations, the offsets package meets the minimum 100 per cent required to counterbalance the significant residual impact (Table 2).

Table 2 DWER's offset calculations using 'Part B: Rehabilitation credit calculation (Area)'

Component	Value (as 'adjusted hectares')	Contribution to package (%)
Revegetation (2.85 ha)	0.54	33.1
Land acquisition (4.64 ha)	1.09	66.9
TOTAL	1.63⁶⁴	100

We undertook revised offset calculations based on DWER's calculations but using the 'Offset calculation (Area)' function for both components, and applying revised scores of '20' years for 'Duration of offset implementation', '9' years for 'Time until offset site secured', '20' per cent 'Risk of future loss without offset' and '10' per cent 'Risk of future loss with offset' for the revegetation component and '20' per cent 'Risk of future loss without offset' for the land acquisition component. Our findings indicate that the current offsets package is insufficient to counterbalance the significant residual impact (shortfall of 17.5 per cent) (Table 3).

Table 3 Our offset calculations using 'Offset calculation (Area)' and applied scores

Component	Value (as 'adjusted hectares')	Contribution to package (%)
Revegetation (2.85 ha)	0.53	32.7
Land acquisition (4.64 ha)	0.81	49.8
TOTAL	1.34	82.5

We explained our findings to the permit holder, and invited the permit holder to consider a revised offsets package to address the shortfall.

⁶² Department of Water and Environmental Regulation (2022a), decision report, page 20.

⁶³ Department of Water and Environmental Regulation (2022a), decision report, page 20.

⁶⁴ Based on the clearing of 8.15 ha of native vegetation that has a quality score of '2' for Carnaby's cockatoo, the quantum of the significant residual impact required to be offset has a value of 1.63 (as 'adjusted hectares')

The permit holder indicated that there is limited scope to increase the area of revegetation on Lot 11 due to the need for the existing cleared areas to remain cleared for possible future development and fire management. The permit holder also indicated that the monetary contribution required under condition 10 had already been paid. Despite this, the permit holder agreed to increase the land acquisition component (noting that this will likely result in an additional monetary contribution) to ensure that the offsets package is consistent with the WA offsets framework and will adequately counterbalance the significant residual impact.

We reviewed our revised calculations with regard for the permit holder's response, and determined that the shortfall can be addressed by increasing the 'Proposed offset (area in hectares)' for the land acquisition component to 6.27 ha.

The permit holder is aware that an increase in the spatial area for the land acquisition component will likely result in an increase in the overall monetary contribution (noting that the permit holder has already paid the amount currently stated in the clearing permit).

3 Supporting information

3.1 DWER's assessment of the clearing application

On 4 November 2021, the permit holder applied to DWER for a 'purpose' permit to clear 8.15 ha on Lot 11 and Lot 73 to construct a BIOMASS Calibration Transponder and associated infrastructure (Figure 1).⁶⁵

The application was advertised for public comment. The decision report states that two public submissions were received. The concerns raised in the public submissions and DWER's response to them is set out in Appendix B of the decision report.⁶⁶

During the assessment process DWER invited the applicant to provide further information to support the application:

... DWER wrote to the applicant seeking clarification of the vegetation condition as reported within the survey ... It was observed that the condition within the body of the report was given as 'degraded' while the quadrat data suggested it may be in better condition.

The applicant engaged with the consultant who conducted the survey, and the data was reviewed by the consultant. A response from the applicant contained a correspondence and detail with maps of the revised condition rating of the vegetation proposed to be cleared (prepared by the consultant). The survey data was updated and lodged within the Index of Biodiversity Surveys for Assessments (IBSA) ...⁶⁷

DWER assessed the clearing application against the 10 clearing principles set out in Schedule 5 of the EP Act. DWER's assessment found the proposed clearing is at variance to clearing principles (b) and (e), may be at variance to clearing principles (a), (d), (f), (g) and (i), and is not likely to be at variance with clearing principles (c), (h) and (j). DWER also considered the site characteristics, relevant datasets, the findings of a flora and fauna survey, and the significance of the project.

DWER's assessment identified that the proposed clearing would result in the loss of 8.15 hectares of native vegetation that is suitable habitat for Carnaby's cockatoo and is significant as a remnant of native vegetation in an area that has been extensively cleared, and the potential introduction and spread of weeds into adjacent vegetation which could impact on the quality of the adjacent vegetation and its habitat values.

Based on its assessment, including consideration of the permit holder's minimisation and mitigation measures, DWER determined that, subject to management to address the impacts of the clearing and offset measures to counterbalance significant residual impacts to Carnaby's cockatoo foraging habitat and a significant remnant, the clearing is unlikely to lead to an unacceptable risk to the environment.

Clearing Permit CPS 9479/1 was granted on 25 May 2022, subject to conditions relating to: avoid, minimise, and reduce impacts and extent of clearing; weed and dieback (*Phytophthora cinnamomi*) management; directional clearing (for the benefit of fauna); fauna management (inspection of habitat trees for black cockatoo use); offsets (revegetation and monetary contribution); and keeping of records on activities done under the clearing permit and reporting on these.

The decision to grant the clearing permit was published on DWER's website.

⁶⁵ European Space Agency and Stratham Engineering Consulting Services application for a clearing permit (04/11/21). Also DWER's Clearing Permit System (CPS) online database: <https://cps.dwer.wa.gov.au/main.html>

⁶⁶ Department of Water and Environmental Regulation (2022a), decision report, pages 1 and 10.

⁶⁷ Department of Water and Environmental Regulation (2022a), decision report, page 10.

Permit holder applied measures to avoid and minimise impacts

The permit holder's application for a clearing permit sets out the manner in which they aimed to avoid and minimise clearing impacts:

Information from the flora and fauna surveys conducted on-site has influenced the design of the proposed action as far as practicable. Removal of remnant native vegetation is required due to project constraints such as the need to [maintain a cleared area] around the BIOMASS Calibration Transponder so that radio frequency interference does not occur. Within this area, all vegetation must remain below 600 mm in height.⁶⁸

The decision report outlines additional measures by which the permit holder proposes to avoid and minimise clearing impacts: consideration of two potential sites; the selected site has the benefit of landscape elevation that reduces the possibility of radio frequency interference; preparation of a Construction Environmental Management Plan (CEMP) to reduce impacts; content will include vegetation retention/protection, native fauna protection, dieback hygiene, environmental induction for staff, management of hydrocarbons; and revegetation of 2.8 ha on Lot 11 that is in 'Completely Degraded' condition to 'Good' condition, in accordance with a revegetation plan.⁶⁹

DWER was satisfied that the permit holder has made a reasonable effort to avoid and minimise potential impacts of the proposed clearing on environmental values.^{70,71}

Proposed clearing consistent with local planning framework

Section 51O of the EP Act sets out the principles and instruments that DWER shall have regard to when making decisions about clearing applications, which include: the clearing principles as far as they are relevant to the matter under consideration; and any development approval, planning instrument, or other matter, that the CEO considers relevant. DWER's Guide to Assessment sets out the considerations for these relevant matters, including consideration of by-laws, policies, biodiversity guidelines/plans, regional planning strategies, and environmental issues within the object and principles of the EP Act.⁷²

The Shire of Victoria Plains local planning framework^{73,74} generally promotes the protection and enhancement of native vegetation. Under the Local Planning Scheme, the clearing area is zoned as both 'Special Use Area' (Lot 11 and part of Lot 73) and 'Rural' (Lot 73).⁷⁵ By the Council Minutes of 3 May 2021, the clearing area is subject to the purchase of a 2.0037 ha portion of Lot 73 zoned 'Special Use Area' for addition to Lot 11, and a lease arrangement with the owner of Lot 73 for a 5.8027 ha portion zoned 'Rural'.⁷⁶

The permit holder has obtained development approval from the Shire of Victoria Plains for the Stage 1 antenna on Lot 11,⁷⁷ and the Stage 2 proposal to construct 'a proposed new biomass antenna ... and various associated improvements' on Lots 11 and 73.⁷⁸

⁶⁸ European Space Agency and Stratham Engineering Consulting Services application for a clearing permit (04/11/21). Also DWER's Clearing Permit System (CPS) online database: <https://cps.dwer.wa.gov.au/main.html>

⁶⁹ Department of Water and Environmental Regulation (2022), decision report, section 3.1 pages 4-5.

⁷⁰ Department of Water and Environmental Regulation (2022), decision report, section 3.1 page 5.

⁷¹ Department of Water and Environmental Regulation response to Appeal 019/22 (01/08/22). Page 3.

⁷² Department of Environment Regulation (2014a), page 39.

⁷³ Department of Planning, Lands and Heritage (2022) *Shire of Victoria Plains Local Planning Scheme No. 5*.

⁷⁴ Planwest (WA) Pty Ltd (2012) *Shire of Victoria Plains Local Planning Strategy*.

⁷⁵ Department of Planning, Lands and Heritage (2022), Map 2 'Victoria Plains South'.

⁷⁶ Unconfirmed Minutes of Shire of Victoria Plains Ordinary Council Meeting held on 3 May 2021, page 21.

⁷⁷ Endplan Environmental Planning Consultants (2021) *CPS 9270/1 Application to Clear Native Vegetation – Request for Further Information*. 23 September 2021. Schedule 1 page 1 and Attachment 2.

⁷⁸ Information provided by the permit holder during the appeal investigation, 5 October 2022.

3.2 Examples of significant residual impacts

Table 4 Examples of clearing that ‘is at variance’⁹⁰ and residual impact significance model⁹¹

Clearing principle	Examples of clearing that ‘is at variance’	Significant impacts requiring an offset	Potentially significant impacts which may require an offset
Clearing principle (b) sets out that 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.	<p>Clearing of native vegetation that is habitat for specially protected or threatened fauna.</p> <p>Clearing of native vegetation that is habitat for meta-populations of fauna</p> <p>Clearing of native vegetation that is necessary for the maintenance of habitat of priority, migratory, specially protected, threatened fauna or meta-populations of fauna.</p>	Impact to or removal of habitat necessary to maintain species declared as specially protected under the <i>Biodiversity Conservation Act 2016</i> or listed as threatened species under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> .	Impact likely to result in a species being listed as specially protected under the <i>Biodiversity Conservation Act 2016</i> or listed as threatened under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> or impact affects significant habitat for a species.
Clearing principle (e) sets out that 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>Clearing of native vegetation which contains habitat for a threatened fauna species and is below the national target and objective for biodiversity conservation.</p> <p>Clearing of biologically diverse remnant vegetation within an extensively cleared landscape.</p> <p>Clearing of remnant vegetation which is part of a significant ecological linkage and is located within an extensively cleared landscape.</p> <p>Clearing in landscapes where the existing vegetation is required to maintain ecosystem services (e.g., hydrological processes), or to compensate for a high degree of fragmentation.</p>	Impacts where the existing vegetation is highly cleared (such as [a] vegetation [complex] with <30% of its pre-clearing extent remaining in a bioregion (<10% in constrained areas on the Swan Coastal Plain)).	Impacts in landscapes where the existing vegetation is required to maintain ecosystem services, impact causes a high degree of fragmentation.

⁹⁰ Adapted from: Department of Environment Regulation (2014a)

⁹¹ Adapted from: Government of Western Australia (2014), Figure 3 on page 11.

3.3 Previous clearing application CPS 9270/1

On 20 April 2021, the permit holder applied to DWER for a 'purpose' permit to clear 11.69 ha (within a 13.49 ha footprint) on Lot 11, Lot 856 and Lot M1991 on Diagram 14747, Yarawindah, to construct an antenna, BIOMASS Calibration Transponder and associated infrastructure. The application was advertised for public comment. The decision report states that one public submission was received. The concern raised in the public submission and DWER's response to it is set out in Appendix B of the decision report.⁹²

During the assessment process DWER invited the applicant to provide further information. In the absence of finalising the development approval and an environmental offset, the permit holder requested that the BIOMASS Calibration Transponder and associated infrastructure be removed from the application area.⁹³ The application area was subsequently reduced to 0.64 ha (Figure 5) and the purpose changed to construction of a powerline corridor.



Figure 5. Area authorised to be cleared under CPS 9270/1 (cross-hatched yellow)⁹⁴

DWER assessed the clearing application against the 10 clearing principles set out in Schedule 5 of the EP Act. DWER's assessment found the proposed clearing may be at variance to clearing principles (b), (e), (f) and (i), and is not likely to be at variance to clearing principles (a), (c), (d), (g), (h) and (j). DWER also considered the site characteristics, relevant datasets, the findings of a flora and fauna survey, and the significance of the project.

DWER's assessment identified that the proposed clearing would result in: the loss of native vegetation that is suitable habitat for Carnaby's cockatoo; and the potential introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values. Based on its assessment, including consideration of the permit holder's minimisation and mitigation measures, DWER determined that the proposed clearing is unlikely to have long-term adverse impacts on environmental values and can be managed to be unlikely to lead to an unacceptable risk to environmental values.

Clearing Permit CPS 9270/1 was granted on 12 November 2021, authorising the clearing of up to 0.64 ha on Lots 11 and 856 for the purpose of constructing a powerline corridor, subject to conditions to: avoid, minimise, and reduce impacts and extent of clearing; weed and dieback management; and keeping records and reporting on clearing activities. The decision to grant the clearing permit was published on DWER's website.

⁹² Department of Water and Environmental Regulation (2021) *Clearing Permit granted under section 51E of the Environmental Protection Act 1986: Purpose Permit Number CPS 9270/1 and Decision Report*. 12 November 2021. Decision report, pages 1 and 9.

⁹³ Department of Water and Environmental Regulation (2021), decision report, page 8.

⁹⁴ Department of Water and Environmental Regulation (2021)

3.4 Review of offsets package

Other offsets for black cockatoo foraging habitat

Table 5 Review of published offsets for black cockatoo foraging habitat⁹⁵

CPS	Impact	Approved offset	Ratio
CPS 9168/1	20.8 ha critical habitat	47.51 ha revegetation	1 : ~2.28
CPS 9058/1	3.58 ha significant foraging habitat	15.71 ha land acquisition (relinquish)	1 : ~4.39
CPS 8933/1	1.12 ha foraging habitat	2.68 ha revegetation	1 : ~2.39
CPS 8922/1	0.84 ha moderate to high quality foraging habitat	3.25 ha land acquisition (funding)	1 : ~3.87
CPS 8861/2	0.48 ha significant foraging habitat	2.7 ha land acquisition (funding)	1 : 5.4
CPS 8826/1	1.91 ha suitable foraging habitat	8.4 ha land acquisition (funding)	1 : ~4.4
CPS 8753/1	29.39 ha critical habitat	18 ha rehabilitation and 140 ha land acquisition (funding)	1 : ~5.4
CPS 8681/1	29 ha foraging habitat	164 ha land acquisition (funding)	1 : ~5.66
CPS 8622/1	20.6 ha foraging habitat	54.502 ha land acquisition (covenant)	1 : ~2.65
CPS 8582/1	4.34 ha foraging habitat	30.61 ha land acquisition (funding)	1 : ~7.05
CPS 8573/1	20 ha foraging habitat	20 ha revegetation and 126 ha land acquisition (funding)	1 : 7.3
CPS 8486/2	7.8 ha foraging habitat	16.8 ha land acquisition (funding)	1 : ~2.15
CPS 8457/1	0.75 ha significant foraging habitat	2.8754 ha revegetation / covenant	1 : ~3.83
CPS 8360/1	4.81 ha foraging habitat	45 ha land acquisition (funding)	1 : ~9.36
CPS 7231/4	30 ha foraging habitat	159 ha land acquisition (funding)	1 : 5.3
CPS 818/15 ⁹⁶	4.14 ha suitable foraging habitat	19.46 ha land acquisition (funding)	1 : ~4.7
CPS 818/15 ⁹⁷	2.91 ha habitat	4.3 ha revegetation	1 : ~1.48

⁹⁵ Source: Government of Western Australia (2013), accessed 4 August 2022.

⁹⁶ York Chidlow Road realignment (SLK 32.4-37.8)

⁹⁷ Lloyd Street bridge over Helena River (various lots)

Examples of significant residual impacts

Table 6 Examples of clearing that ‘is at variance’⁹⁸ and residual impact significance model⁹⁹

Clearing principle	Examples of clearing that ‘is at variance’	Significant impacts requiring an offset	Potentially significant impacts which may require an offset
Clearing principle (b) sets out that 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.	<p>Clearing of native vegetation that is habitat for specially protected or threatened fauna.</p> <p>Clearing of native vegetation that is habitat for meta-populations of fauna</p> <p>Clearing of native vegetation that is necessary for the maintenance of habitat of priority, migratory, specially protected, threatened fauna or meta-populations of fauna.</p>	Impact to or removal of habitat necessary to maintain species declared as specially protected under the <i>Biodiversity Conservation Act 2016</i> or listed as threatened species under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> .	Impact likely to result in a species being listed as specially protected under the <i>Biodiversity Conservation Act 2016</i> or listed as threatened under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> or impact affects significant habitat for a species.
Clearing principle (e) sets out that 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>Clearing of native vegetation which contains habitat for a threatened fauna species and is below the national target and objective for biodiversity conservation.</p> <p>Clearing of biologically diverse remnant vegetation within an extensively cleared landscape.</p> <p>Clearing of remnant vegetation which is part of a significant ecological linkage and is located within an extensively cleared landscape.</p> <p>Clearing in landscapes where the existing vegetation is required to maintain ecosystem services (e.g., hydrological processes), or to compensate for a high degree of fragmentation.</p>	Impacts where the existing vegetation is highly cleared (such as [a] vegetation [complex] with <30% of its pre-clearing extent remaining in a bioregion (<10% in constrained areas on the Swan Coastal Plain)).	Impacts in landscapes where the existing vegetation is required to maintain ecosystem services, impact causes a high degree of fragmentation.

⁹⁸ Department of Environment Regulation (2014a)

⁹⁹ Adapted from: Government of Western Australia (2014), Figure 3 on page 11.

‘Quality’ of impact site and revegetation site

Table 7 Review of ‘Quality’ of impact site and revegetation site for Carnaby’s cockatoo

Element	Impact site	Revegetation site
Vegetation condition	<p>Wandoo woodland over <i>Melaleuca marginata</i> and yellow buttercups mid shrubland over bearded oat low isolated grasses; about 6.62 ha mostly in ‘Degraded’ condition with about 0.44 ha in ‘Good’ condition.</p> <p>Marri woodland over introduced bearded oat low isolated grasses; about 1.42 ha in ‘Degraded’ condition.</p> <p>York gum woodland over introduced bearded oat low isolated grasses; about 0.1 ha in ‘Degraded’ condition.^{100,101}</p>	<p>Largely mapped as Michibin complex: wandoo over <i>Acacia acuminata</i> (jam), with York gum and <i>Allocasuarina huegeliana</i> (rock sheoak).</p> <p>Partly mapped as Yalanbee complex: wandoo and <i>Eucalyptus accedens</i> (powderbark wandoo), less consistently <i>Eucalyptus marginata</i> (jarrah) and marri.</p> <p>Aerial imagery indicated scattered trees over cleared land; 2.85 ha in ‘Degraded’ condition.¹⁰²</p>
Site context	<p>Within the known breeding range for Carnaby’s cockatoo, high likelihood of occurrence of Carnaby’s black cockatoo (despite no recorded individuals).¹⁰³</p> <p>Majority of vegetation (excluding paddock trees) mapped as foraging habitat¹⁰⁴ and remnant vegetation¹⁰⁵.</p> <p>Carnaby’s cockatoo not observed at site by landholder ‘for at least the previous 20 years’, but have been observed in nature reserve ~1.5 kilometres (km) away.¹⁰⁶</p> <p>About 22 per cent remnant vegetation cover remaining within 10 km radius.¹⁰⁷</p>	<p>Within known range of Carnaby’s cockatoo.</p> <p>Portions mapped as/adjacent to foraging habitat¹⁰⁸ and remnant vegetation.¹⁰⁹</p>

¹⁰⁰ Ecoscape Australia Pty Ltd (2020), pages 45-48.

¹⁰¹ Ecoscape Australia Pty Ltd (2022).

¹⁰² Dataset: Vegetation Complexes – South West forest region of Western Australia (DBCA-047).

¹⁰³ Department of Water and Environmental Regulation (2022a), decision report, page 5.

¹⁰⁴ Dataset: Carnaby’s Cockatoo Areas requiring investigation as feeding habitat in the Jarrah Forest IBRA Region (DBCA-056).

¹⁰⁵ Dataset: Native Vegetation Extent (DPIRD-005).

¹⁰⁶ Ecoscape Australia Pty Ltd (2020), pages 49-50.

¹⁰⁷ Department of Water and Environmental Regulation (2022a), decision report, pages 10-11.

¹⁰⁸ Dataset: Carnaby’s Cockatoo Areas requiring investigation as feeding habitat in the Jarrah Forest IBRA Region (DBCA-056).

¹⁰⁹ Dataset: Native Vegetation Extent (DPIRD-005).

Element	Impact site	Revegetation site
Habitat value	<p>Wandoo woodland and York gum woodland vegetation types within clearing area likely to provide foraging habitat for Carnaby's cockatoo.¹¹⁰ This foraging habitat given a score of '5', described as 'quality' to 'low quality'.¹¹¹</p> <p>In the Jarrah Forest bioregion marri is primarily a foraging species for the forest red-tailed black cockatoo, however marri is also used by Carnaby's cockatoo for foraging, roosting and breeding.¹¹²</p> <p>Permit holder's survey report concluded that: 'Carnaby's Cockatoo may occur on the site on occasion, although there was no evidence of recent occurrence. However, it is unlikely to be resident due to the lack of food sources and the availability of better quality habitat nearby, including [Seven Mile Well] Nature Reserve, and to the west where the sandplain vegetation is more likely to support the proteaceous species that are favoured for food'.¹¹³</p> <p>DWER identified that 'proposed clearing will result in loss of 254 trees'; while none were found to contain hollows showing evidence of use by black cockatoos, they 'are considered 'breeding habitat' in accordance with the relevant guidelines as they are trees of species known to support breeding'. DWER considered that 'night roosting ... is unlikely within the application area due to the absence of riparian environments or permanent water sources'.¹¹⁴</p> <p>The Commonwealth <i>Referral guideline for 3 WA threatened black cockatoo species</i>¹¹⁵ identifies that any native vegetation that is used for foraging by black cockatoos at any time is important for recovery.</p> <p>DWER's Guide to Assessment defines 'significant habitat' as: 'habitat that provides resources (breeding, resting and feeding), connectivity or habitat area for a species or community that is critical for its survival'.¹¹⁶</p>	<p>Existing individual trees may comprise foraging habitat.</p> <p>Condition 9 in the clearing permit requires planting 'tube stock and salvaged native vegetation that will result in similar species composition, structure and density of native vegetation to the pre-European vegetation types' with a minimum species richness of 12 species (within two years) of which 50 per cent is to comprise tree and shrub foraging species for black cockatoos.</p>

¹¹⁰ Department of Water and Environmental Regulation (2022a), decision report, page 6.

¹¹¹ Ecoscape Australia Pty Ltd (2020), pages 35-36.

¹¹² Department of Agriculture, Water and the Environment (2022) *Referral guideline for 3 WA threatened black cockatoo species: Carnaby's Cockatoo (Zanda latirostris), Baudin's Cockatoo (Zanda baudinii) and the Forest Red-tailed Black-cockatoo (Calyptorhynchus banksii naso)*. Australian Government, Canberra. Pages 9-10, 14.

¹¹³ Ecoscape Australia Pty Ltd (2020), page 62.

¹¹⁴ Department of Water and Environmental Regulation (2022a), decision report, pages 6-7.

¹¹⁵ Department of Agriculture, Water and the Environment (2022).

¹¹⁶ Department of Environment Regulation (2014a), page 49.

Appendix 1 Appeal process

The Minister assesses the merits of a decision

Environmental appeals follow a merits-based process. This means the Minister can consider all the relevant facts, legal and policy aspects of the decision and decide whether it was correct and preferable.

For clearing permits, the Minister can overturn the original decision to grant the permit if this was the basis of the original appeal submission. Alternatively, if the appeal submission was against the conditions of the permit, the Minister may modify the conditions only.

The appeal investigation will consider the extent to which conditions can address the issues raised, as well as any new information that may not have been available at the time of the original decision.

While process issues can be raised in an appeal, the focus of investigations will be on the substantive environmental matters relevant to DWER's conditions.

We report to the Minister, as does the decision-making authority

To decide an appeal's outcome, the Minister for Environment must have a report from both:

- the Appeals Convenor (see section 109(3) of the EP Act), and
- the authority that originally made the decision under appeal (see section 106(1)).

To properly advise the Minister in our report, our investigation included:

- reviewing DWER's decision and appeal reports
- meetings with the permit holder on 17 June and 18 October 2022 (site visit)
- meeting with the appellant on 21 June 2022
- reviewing other information, policy and guidance as needed (Table 8).

Table 8 Documents we reviewed in the appeals investigation

Document	Date
Department of Water and Environmental Regulation (2022) Response to Appeal 019/22. 2 August 2022.	2 August 2022
Department of Agriculture, Water and the Environment (2022) <i>Referral guideline for 3 WA threatened black cockatoo species: Carnaby's Cockatoo (<i>Zanda latirostris</i>), Baudin's Cockatoo (<i>Zanda baudinii</i>) and the Forest Red-tailed Black-cockatoo (<i>Calyptorhynchus banksii naso</i>). Australian Government, Canberra. Available from: https://www.dcceew.gov.au/environment/epbc/publications/referral-guideline-3-wa-threatened-black-cockatoo-species-2022</i>	2022
Department of Water and Environmental Regulation (2022a) <i>Clearing Permit granted under section 51E of the Environmental Protection Act 1986: Purpose Permit Number CPS 9479/1 and Decision Report</i> . 25 May 2022. Available from: https://ftp.dwer.wa.gov.au/permit/9479	25 May 2022
Department of Water and Environmental Regulation (2022b) <i>Draft Procedure for environmental offsets metric inputs: For use with the WA environmental offsets metric</i> . Consultation draft. Government of Western Australia, May 2022. Available from: https://consult.dwer.wa.gov.au/strategic-policy/draft-procedure-for-environmental-offsets-metric	May 2022

Document	Date
Ecoscope Australia Pty Ltd (2022) <i>Figure 4: Vegetation Type and Vegetation Condition</i> . Revision 05, 1 February 2022. Available from: https://ftp.dwer.wa.gov.au/permit/9479	1 February 2022
Department of Planning, Lands and Heritage (2022) <i>Shire of Victoria Plains Local Planning Scheme No. 5</i> . First gazetted 15 March 2012, latest update 1 April 2022. Available from: https://www.wa.gov.au/government/document-collections/shire-of-victoria-plains-planning-information	1 April 2022
Department of Water and Environmental Regulation (2021) <i>Clearing Permit granted under section 51E of the Environmental Protection Act 1986: Purpose Permit Number CPS 9270/1 and Decision Report</i> . 12 November 2021. Available from: https://ftp.dwer.wa.gov.au/permit/9270	12 November 2021
Government of Western Australia (2021a) <i>WA environmental offsets calculator</i> . Department of Water and Environmental Regulation, October 2021. Available from: https://www.wa.gov.au/government/publications/dwer-wa-environmental-offsets-calculator	October 2021
Government of Western Australia (2021b) <i>Environmental offsets metric: Quantifying environmental offsets in Western Australia</i> . Department of Water and Environmental Regulation, October 2021. Available from: https://www.wa.gov.au/government/publications/guideline-environmental-offsets-metric-quantifying-environmental-offsets-wa	October 2021
Endplan Environmental Planning Consultants (2021) <i>CPS 9270/1 Application to Clear Native Vegetation – Request for Further Information</i> . 23 September 2021.	23 September 2021
PGV Environmental (2020) <i>Deep Space Facility, New Norcia – Targeted Flora Survey and Carnaby's Black Cockatoo Additional Information</i> . Report prepared for the European Space Agency and Stratham Engineering Consultancy Service. 7 September 2021. Available from: https://ftp.dwer.wa.gov.au/permit/9479	7 September 2021
Permit holder's supporting information: <i>Clearing Permit Application (Purpose Permit) Supporting Information – ESA Deep Space Facility, Lots 11, 856 and Part Lot M1991, 10353 Great Northern Highway, Yarawindah</i> . Version ECO203_01_V2, 24 May 2021. Available from: https://ftp.dwer.wa.gov.au/permit/9479	24 May 2021
Unconfirmed Minutes of Shire of Victoria Plains Ordinary Council Meeting held on 3 May 2021. Available from: https://www.victoriaplains.wa.gov.au/council-meetings/ordinary-council-meeting/28-april-2021-ocm-rescheduled-to-3-may-2021/363	3 May 2021
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Appendix 2 Some WA offsets calculator fields

Quality

The State Calculator Guidance describes ‘quality’ to be a measure of how well a particular site supports a particular environmental value (i.e., the matter required to be offset), and contributes to its ongoing viability, determined through evaluation of key ecological attributes. The determination of quality must include evaluation of the key ecological attributes of the environmental value, and must take into consideration the factors of:

- vegetation condition (forms of disturbance, presence of weeds, soil stability, native species composition and strata, regenerative capacity, and vegetation health)
- site context (movement patterns of specified environmental value, proximity of site to other suitable habitat, importance of site to species, vegetation extent, threats)
- habitat value (presence, density and context of a species or ecological community, threats that may impact survival at site).

The weighting given to each factor depends on the ecological requirements of the impacted environmental value.

The State Calculator Guidance recognises that an ‘improvement in the quality of a site over time is a key means of achieving a conservation gain for the environmental value being impacted’. The State Calculator Guidance describes how to determine ‘quality’ scores for use in offset calculations:

... Most importantly, the method for determining quality must be consistently applied across all calculations relating to a particular environmental value, and should reflect the site’s importance for the environmental value being impacted.

The user must determine the site’s quality score before impact and rate its importance between 0 and 10 as relevant to the environmental value identified in step 1, where ‘0’ is an area with no importance and ‘10’ is an area with the highest-possible importance. In this context, quality is a measure of how well a particular site supports a particular environmental value (i.e. the ecological requirements of the environmental value), and contributes to its ongoing viability. The determination of quality must consider the factors of vegetation condition, site context, and habitat value ...

An improvement in the quality of a site over time is a key means of achieving a conservation gain for the environmental value being impacted. Where completion criteria for proposed revegetation or rehabilitation are available during the assessment process, the future quality with offset score must be consistent. For example, if the completion criteria state that revegetation or rehabilitation will achieve a future quality of ‘5’, the future quality with offset score must be the same ...¹¹⁷

For both on-site rehabilitation and off-site revegetation and/or rehabilitation offsets, the State Calculator Guidance states that the score applied for ‘future quality with’ rehabilitation/ offset:

... should be based on demonstrated success and/or scientific evidence; for example current best-practice techniques and positive research outcomes for those techniques for the vegetation type or feature being rehabilitated.¹¹⁸

¹¹⁷ Government of Western Australia (2021b), page 9, 12 and 19.

¹¹⁸ Government of Western Australia (2021b), pages 13 and 19.

Duration of offset implementation

The State Calculator Guidance sets out that the ‘duration of offset implementation’ describes the estimated number of years over which an offset will be actively implemented:

... This score should represent the duration of the offset; for example, the duration specified in approval conditions, up to a maximum score of 20 years for sites protected in perpetuity.

The duration of offset implementation is linked to risk of future loss both with and without a proposed offset. Generally a higher score is applied where a longer duration of management or protection can be demonstrated.

For early offsets (those offsets established before being attributed to an impact), duration of offset implementation should be considered from the time of entering into an early offset arrangement with the relevant agency.¹¹⁹

An example of how ‘duration of offset implementation’ might be determined is contained in the State Calculator Guidance:

A proponent intends to undertake an offset involving replanting. The proponent has prepared a revegetation plan for this offset which states that the site will be revegetated over a period of three years, and monitored for a further five years with supplementary planting if required. The duration of offset implementation for this project is considered to be (3+5=) 8 years.¹²⁰

Time until offset site secured

The State Calculator Guidance indicates that ‘time until offset site secured’ is the time between the impact (clearing) and the time it is expected to take for the offset site to be secured:

Time until offset site secured is directly related to risk of future loss in that it represents the timeframe between the current risk of loss without the offset, and the reduced risk of loss expected to be achieved as a result of the offset being implemented.

The longer the time taken to reduce the risk of future loss, the greater the offset requirement will be.

For early offsets (those offsets established before being attributed to an impact) when the site has already been secured, a score of ‘0’ should be entered.¹²¹

Risk of future loss

The State Calculator Guidance describes ‘risk of loss’ to be the estimated likelihood that the environmental values of a site will be completely lost in the foreseeable future because of anthropogenic events, with regard to the likelihood and consequence of events occurring. The determination of risk of loss should consider the following factors:

- presence and strength of formal protection mechanisms currently in place on the proposed site (for example zoning, restrictive covenants or vegetation clearing laws)
- presence of pending development applications, mining leases or other activities on the proposed offset site that indicate development intent and likelihood
- average risk of loss for similar sites
- applicable risk factors (such as likelihood that development would occur under current land zoning, and whether it would result in the site no longer holding any importance for the environmental value being offset over the foreseeable future)

¹¹⁹ Government of Western Australia (2021b), pages 20-21.

¹²⁰ Government of Western Australia (2021b), page 37.

¹²¹ Government of Western Australia (2021b), page 21

- capacity to protect the environmental value through planning approvals and environmental assessment processes
- potential for partial or complete failure of the rehabilitation to achieve the predicted result because of modified soil profiles, climatic events etc.¹²²

The State Calculator Guidance describes how to determine 'risk of loss' scores for use in offset calculations:

... The difference between the risk of future loss with a proposed offset and without the proposed offset indicates the level of averted loss provided by the proposed offset.

[Risk of loss without offset] The user must enter, as a percentage, the likelihood that the environmental value on the offset site will be completely lost in the foreseeable future without an offset. The user should consider the duration for which the offset will be implemented in determining this score.

[Risk of future loss with offset] The user must enter, as a percentage, the likelihood that the environmental value on the offset site will be completely lost in the foreseeable future with the offset in place. The user should consider the number of years over which the offset will be actively implemented in determining this score. For conservation covenants in perpetuity and land ceded to the crown, a 20-year timeframe should be considered.¹²³

¹²² Government of Western Australia (2021b), pages 21 and 37-38.

¹²³ Government of Western Australia (2021b), page 21.