



**STATE AND COMMONWEALTH OFFSET PROPOSAL**

**Northam Pithara Widening SLK 129.12-152.25**

**July 2015**

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# CONTENTS

<b>OFFSET PROPOSAL SUMMARY</b>	<b>4</b>
<b>1 ROAD PROJECT DESCRIPTION</b>	<b>6</b>
1.1 LOCATION	6
<b>2 MEASURES UNDERTAKEN TO AVOID AND MITIGATE CLEARING IMPACTS</b>	<b>9</b>
<b>3 OFFSET PROPOSAL REQUIREMENTS</b>	<b>9</b>
3.1 SUMMARY OF OFFSET PROPOSED	9
3.2 STATE OFFSET	9
3.2.1 Assessment against Ten Clearing Principles	9
3.2.2 Assessment Against State Offset Principles	10
3.3 COMMONWEALTH OFFSET	13
3.3.1 Assessment against Commonwealth Offset Principles	13
<b>4 FINANCIAL OFFSET CALCULATION</b>	<b>16</b>
<b>5 PHYSICAL OFFSET CALCULATION</b>	<b>17</b>
<b>6 FINAL PROPOSED OFFSET</b>	<b>20</b>
<b>7 OFFSET CONDITION MILESTONES</b>	<b>20</b>
<b>8 CONCLUSION</b>	<b>20</b>
<b>9 REFERENCES</b>	<b>21</b>
<b>10 APPENDIX A</b>	<b>22</b>
<b>11 APPENDIX B</b>	<b>23</b>
<b>12 APPENDIX C</b>	<b>24</b>

# OFFSET PROPOSAL SUMMARY

**Project location:** MRWA Wheatbelt region is planning to widen 21.08 km of Northam Pithara Road between SLK 129.12 and 152.25, within the Shire of Dalwallinu and the Shire of Wongan-Ballidu.

**Project Details:** The Northam Pithara Road Widening Project (the project) will involve the widening of Northam Pithara Road for 21.08 km, between Ballidu and Pithara. A smaller section of this road, from SLK 148.8 to SLK 150.85 (2.05 km) was conditionally approved and constructed in early 2015 (Project 1). The larger project (Project 2) is expected to be constructed in the 2015/2016 or 2016/2017 financial year, depending upon funding. Project 1 had an approved offset, with the offset of impacts to 0.4 ha of *Dampiera glabrescens* still outstanding and addressed in this Offset Proposal.

The project was determined by the Commonwealth Department of the Environment (DotE) to be a 'Controlled Action' under the *Environment Protection Biodiversity Act 1999* (EPBC Act) (EPBC referral no. 2015/7454) due to impacts on Listed Threatened species and communities. A clearing permit is required under Part V of the *Environmental Protection Act 1986* (EP Act). The project was considered against the Ten Clearing Principles and is considered to be at variance to Principles a), b), c) and e). Under the new bilateral agreement, the Department of Environment Regulation will assess the impacts of the proposal on matters of national environmental significance and the clearing of native vegetation.

## Project impacts:

The project will involve the clearing of up to 21.96 ha of native vegetation. Of this 6.35 ha is native salt lake vegetation approved under Section 17 of the *Rights in Water and Irrigation Act 1914* in accordance with Clearing Regulation 5 Item 16. A total of 15.61 ha is non-salt lake native vegetation, to be approved under a state clearing permit.

The key impacts of the Project 2 will be:

- Clearing of 13.56 ha of Carnaby's Black Cockatoo (Endangered) foraging habitat
- Clearing of 56 potential future Carnaby's Black Cockatoo breeding trees
- Clearing of 150 *Frankenia conferta* (Declared Rare Flora; Vulnerable) plants totalling 0.06 ha
- Clearing of 8 *Dampiera glabriscens* (Priority 1) plants totalling 0.01 ha
- Clearing of 10.5 ha of Priority Ecological Community 'Eucalyptus Woodlands of the Western Australian Wheatbelt'.
- Clearing of 0.52 ha and 3.22 ha Beard Vegetation Associations 125 (Bare areas; salt lakes) and 1024 (Shrublands; mallee & casuarina thicket) respectively.

This offset proposal also includes an offset for 0.4 ha of *Dampiera glabrescens* as cleared for Project 1.

## Offset proposal:

An offset proposal has been prepared for this project, based on a combination of a monetary offset for both state and federal impacts, and a land offset for impacts to Priority 1 *Dampiera glabrescens*. Project 1 still requires the development of an offset for one small area (0.4 ha) of *Dampiera glabrescens* and this has been included in this Offset Proposal.

Correspondence with the Department of Environment Regulation regarding the *Dampiera glabrescens* offset for both projects is included in Appendix A. This Offset Proposal includes an offset for *Dampiera glabrescens* for both Project 1 and Project 2.

This offset proposal includes the following:

- A monetary contribution of \$188,000 is proposed for the purposes of purchasing land to offset the impacts to Black Cockatoo habitat, both foraging and breeding. This land would also offset the impacts to Priority Ecological Community 'Eucalyptus Woodlands of the Western Australian Wheatbelt'.
- A further financial offset of \$5,976.88 is proposed for impacts to *Frankenia conferta*, taking into account its relative abundance in WA.
- A physical offset will be provided for *Dampiera glabriscens* for Projects 1 and 2.

Figures were arrived at through the use of the EPBC Offset Calculator.

## 1 ROAD PROJECT DESCRIPTION

The Northam Pithara Road Widening Project (the project) will involve the widening of Northam Pithara Road for 21.08 km, between Ballidu and Pithara. A smaller section of this road, from SLK 148.8 to SLK 150.85 (2.05 km) was conditionally approved and constructed in early 2015 (Project 1). Widening of the seal and road formation along Northam Pithara Road between SLK 129.12 and 152.25 is necessary to comply with safety requirements. Up to 21.96 ha will be cleared for this project. Of this, 6.35 ha is native salt lake vegetation, and 15.61 ha is non-salt lake native vegetation to be approved under a state clearing permit.

The road will be realigned in two sections that contain substandard curves, from SLK 136.82 to 139.57 and SLK 140.27 to 141.33. Approval is being sought for the entirety of the potential impact area for realignment 1 (Figure 2). The precise location of the road in this area has yet to be determined, and the clearing impact area calculations have been based on the worst case scenario with the highest environmental impact.

The road section between SLK 128.96 and 131.28 will be moved to provide a clear distance zone away from the above ground water main situated on the western side of the existing road verge. This section of road will also involve widening of the existing 4 way intersection with Federation Road and Ballidu-Bindi Bindi Road. Gravel will be sourced from farmland and therefore there will be no significant environmental impact expected for the gravel pits.

Widening from SLK 148.8 – 150.85 has been constructed separately (Project 1), in the 2015 financial year. Project 1 was granted conditional approval by DER in early 2015. Construction has started for this project, with the majority of the offset determined and a contribution to the Offset Fund provided. A small area (0.4 ha) of *Dampiera glabrescens* was impacted and an offset for this area is pending. Project 2 will also impact *Dampiera glabrescens* and therefore this Offset Proposal includes a combined offset for both Projects 1 and 2 for *Dampiera glabrescens*.

### 1.1 Location

The project area is located on Northam-Pithara Road between 129.12 and 152.25 SLK, within the Shire of Dalwallinu and the Shire of Wongan-Ballidu.

MGA reference: 50

#### **Northam Pithara Road at 129.12 SLK**

Latitude: -30.5954

Longitude: 116.7663

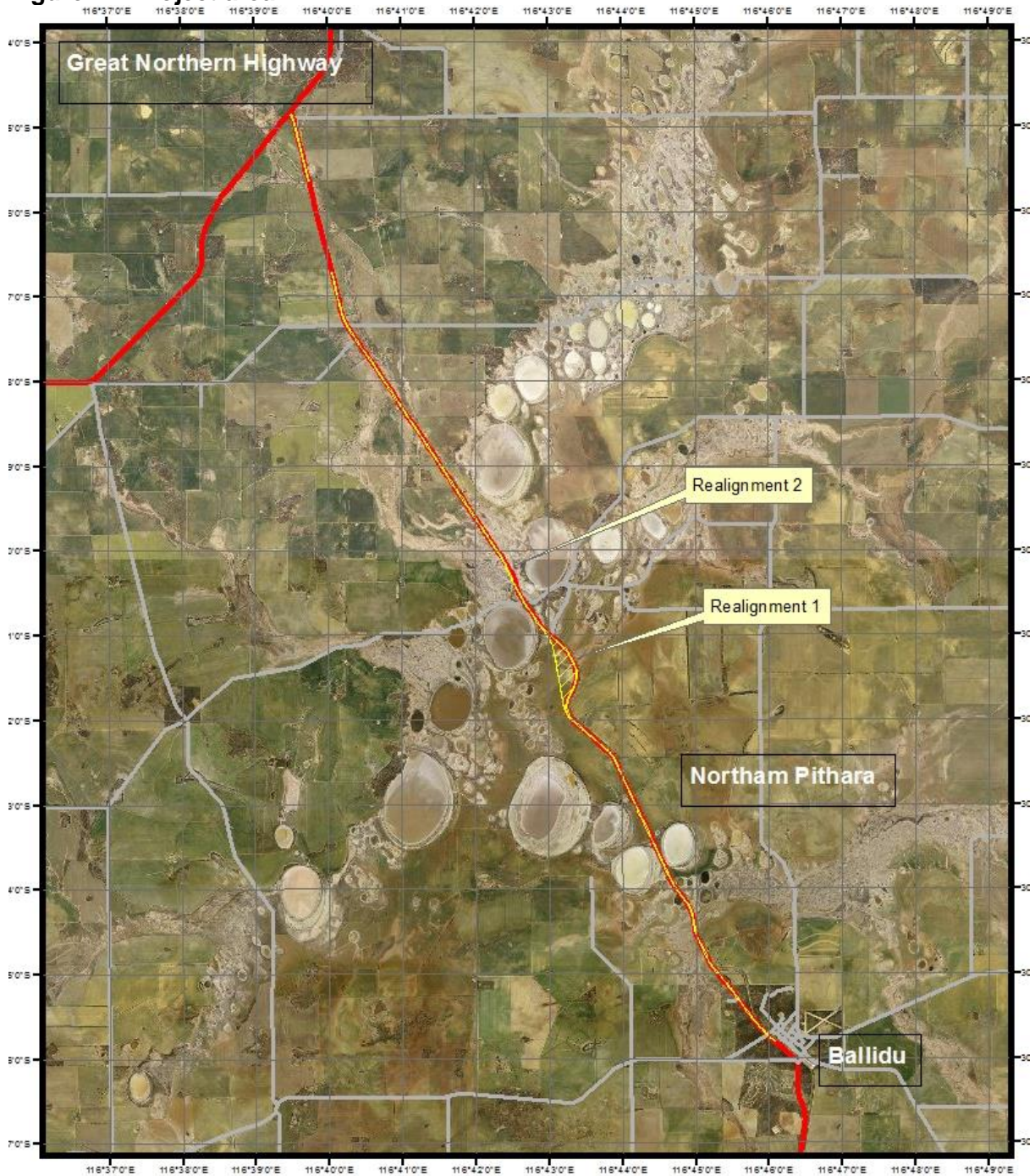
#### **Northam Pithara Road at 152.25 SLK**

Latitude: -30.415

Longitude: 116.6589

The project area is shown in Figure 1:

**Figure 1 – Project area**



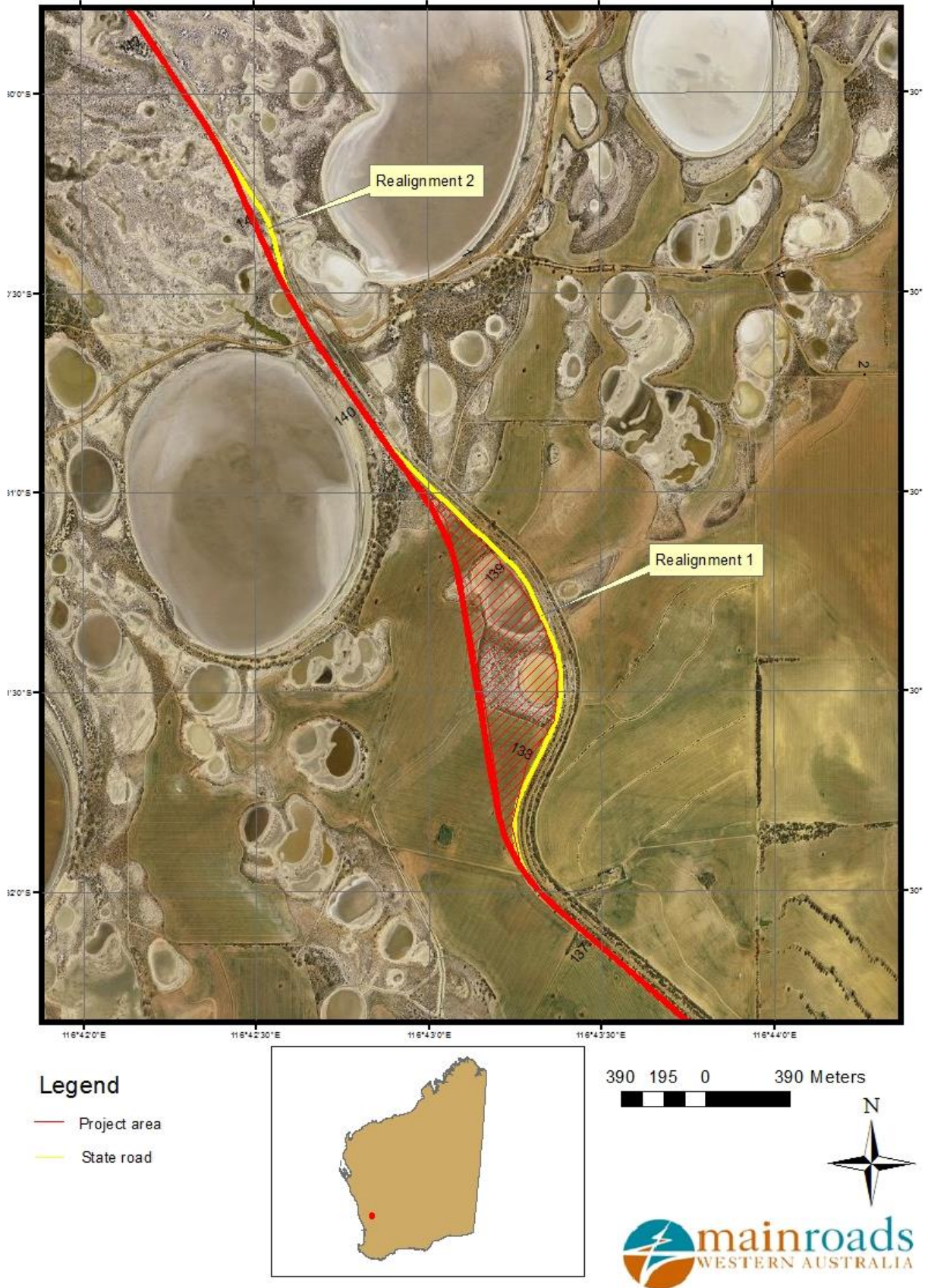
**Legend**

-  Clearing Area
-  State Road

0 0.75 1.5 3 Kilometers  
 1 cm = 1 kilometers



Figure 2 – Realignment areas





## 2 MEASURES UNDERTAKEN TO AVOID AND MITIGATE CLEARING IMPACTS

The project clearing area was minimised as far as practicable during project development, being the design plus a 1 m buffer for the movement of machinery. 15 trees suitable as future Black Cockatoo habitat are within 3 meters of the project area; however these were removed from the project envelope and will not be impacted.

The design has been further altered to steepen batters and prevent direct impacts to Declared Rare Flora *Frankenia conferta*. The final design is a balance between environmental and safety considerations. In addition, the existing alignment of the road has been utilised where possible, with only two realignments proposed to straighten steep unsafe curves. A number of management measures to mitigate clearing impacts have been included in the project Environmental Management Plan, and include:

- Installation of barriers around the *Frankenia conferta* population during works. A 'no go' zone 20 m x 3 m will be applied to *Frankenia conferta* to prevent impacts during construction.
- Inspection of clearing lines by Environment Officer prior to clearing.
- A 'soft start' will be implemented prior to clearing to allow animals in the area to move away before clearing activities commence.
- Topsoil and seed bank will be retained to aid in regeneration after works.

## 3 OFFSET PROPOSAL REQUIREMENTS

### 3.1 Summary of Offset Proposed

Main Roads proposes to compensate for the impacts associated with the clearing of vegetation for the project as follows:

- A monetary contribution of \$188,000 to the Offset Bank is proposed for the purposes of purchasing land to offset the impacts to Black Cockatoo habitat, both foraging and breeding. This land would also offset the impacts to Priority Ecological Community 'Eucalyptus Woodlands of the Western Australian Wheatbelt'.
- A further financial offset of \$5,976.88 is proposed for *Frankenia conferta*, taking into account its relative abundance in WA.
- A physical offset will be provided for *Dampiera glabriscens* for Projects 1 and 2. This will involve the revegetation of 2 ha of habitat suitable for this species.

### 3.2 State Offset

#### 3.2.1 Assessment against Ten Clearing Principles

Findings from the clearing assessment found that the project is at variance to Clearing Principles a, b, c and e. An offset is required to compensate for impacts on the following environmental values and assets:

- Clearing of 13.56 ha of Carnaby's Black Cockatoo foraging habitat.
- Clearing of 56 potential future Carnaby's Black Cockatoo breeding trees.
- Indirect impacts to 150 *Frankenia conferta* (Declared Rare Flora) totalling 0.06 ha.
- Clearing of 8 *Dampiera glabriscens* (Priority 1) totalling 0.01 ha.
- Clearing of 10.5 ha of Priority Ecological Community 'Eucalyptus Woodlands of the Western Australian Wheatbelt'.
- Clearing of 0.52 ha and 3.22 ha Beard Vegetation Association 125 (Bare areas; salt lakes) and 1024 (Shrublands; mallee & casuarina thicket) respectively.

The assessments of principles found to be at variance are included below. The following table also summarizes the offset required as defined by the EPBC Offset Calculator.

**Table 1 - Offsets for Northam Pithara Road Widening**

Factor	Area of vegetation at variance with 10 Clearing Principles	Proposed Offset (if required)
At variance to Clearing Principle (a) - Native vegetation should not be cleared if it comprises a high level of biological diversity.	13.56 ha of foraging habitat for Carnaby's Black Cockatoo 56 potential future breeding trees 150 <i>frankenia conferta</i> (0.06 ha) 8 <i>Dampiera glabrescens</i> (0.01 ha) 10.5 ha of Priority Ecological Community 'Eucalyptus Woodlands of the Western Australian Wheatbelt'	Main Roads is proposing to provide a monetary contribution to the Offset Fund. Monetary funds will be based on land values and the Commonwealth Offset Calculator. The monetary offset would be used for the purposes of purchasing land to offset the impacts to Black Cockatoo habitat, both foraging and breeding, which would be placed in a conservation covenant. This land would also offset the Priority Ecological Community 'Eucalyptus Woodlands of the Western Australian Wheatbelt'. A physical offset is proposed for <i>Dampiera glabrescens</i> .
At variance with Clearing Principle (b) - Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.	13.56 ha of foraging habitat for Carnaby's Black Cockatoo 56 potential future breeding trees	Main Roads is proposing to provide a monetary contribution to the Offset Fund. Monetary funds will be based on land values and the Commonwealth Offset Calculator.
At variance to Clearing Principle (c) - Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.	Indirect impacts to 150 <i>frankenia conferta</i> (0.06 ha)	Main Roads is proposing to provide a monetary contribution to the Offset Fund. Monetary funds will be based on land values and the Commonwealth Offset Calculator. It is assumed that the funds will be utilized for the purchase of land suitable for <i>Frankenia conferta</i> , either as part of a larger offset or purchase of existing known populations adjacent to Department of Parks and Wildlife (DPaW) land.
At variance with Clearing Principle (e) - Clearing of Under-represented vegetation types	Clearing of 0.52 ha and 3.22 ha Beard 125 (Bare areas; salt lakes) and 1024 (Shrublands; mallee & casuarina thicket) respectively.	Main Roads is proposing to provide a monetary contribution to the Offset Fund. Monetary funds will be based on land values and the Commonwealth Offset Calculator. Correspondence with DPaW indicated that an offset for this species may not be economically or environmentally viable and that a contribution to the Offset Fund would be preferred for strategic use in the Wheatbelt.

### 3.2.2 Assessment Against State Offset Principles

According to the Environmental Offsets Policy, released by the Western Australian Government (2011), environmental offsets are to be used as a last resort measure, after due consideration of avoidance and mitigation measures.

In this context, the assessment and decision making process in regard to offsets are underpinned by the following principles:

**1. Environmental offsets will only be considered after avoidance and mitigation options have been pursued.**

<b>Comments</b>	<p>All strategies to avoid and mitigate environmental impacts have been explored and implemented:</p> <ul style="list-style-type: none"> <li>• Temporary clearing impacts will be avoided through the use of existing cleared areas.</li> <li>• The disturbance footprint associated with the Project has been minimised as far as practicable.</li> <li>• Fencing and other management practices have been applied to prevent direct impacts to <i>Frankenia conferta</i> and project design amended to avoid clearing of this species.</li> <li>• The clearing line is checked by an Environment Officer prior to clearing to ensure strict compliance with clearing limits.</li> </ul>
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**2. Environmental offsets are not appropriate for all projects.**

<b>Comments</b>	<p>Environmental offsets are required when clearing is at variance with one or more of the biodiversity related clearing principles (principles a- f and h) and a significant residual impact remains (DER,2014). The project is at variance with principles a, b, c and e. Despite mitigation measures, this project will have a significant residual impact. An environmental offset is therefore considered appropriate.</p>
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**3. Environmental offsets will be cost-effective, as well as relevant and proportionate to the significance of the environmental value being impacted.**

<b>Comments</b>	<p>Main Roads believes that the proposed offset area represents a cost-effective solution that is proportionate to the environmental value being impacted by the project.</p>
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**4. Environmental offsets will be based on sound environmental information and knowledge.**

<b>Comments</b>	<p>Funds will be provided to the Department of Environment Regulation which will be provided to the DPaW to purchase suitable land for management as close as practical to the location of clearing. This land will be purchased for the purpose of conservation and managed in perpetuity. The physical offset for <i>Dampiera glabrescens</i> will be subject to a Revegetation Plan approved by DER and developed using current environmental information.</p>
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**5. Environmental offsets will be applied within a framework of adaptive management.**

<b>Comments</b>	<p>The proposed offset area will be managed by DPaW as part of a conservation reserve. The proposed offset has a risk of time lag associated with the surveying and subdividing of the land proposed to be purchased. This work will be conducted by DPaW, and can take up to 12 months to occur.</p> <p>The physical offset for <i>Dampiera glabrescens</i> will be subject to a Revegetation Plan approved by DER and will include management measures. The Revegetation Plan will include contingency measures to be implemented if the completion criteria are not met.</p>
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**6. Environmental offsets will be focussed on longer term strategic outcomes.**

<b>Comments</b>	<p>The financial offset will be used to purchase land as part of a larger strategic offset by the DPaW. This will be managed under a conservation covenant.</p> <p>The physical offset for <i>Dampiera glabrescens</i> will be located in an area where this species has been previously recorded. This site has been chosen as it is Main Roads land that is located behind an existing railway and a water pipeline, making it unlikely that this land will be used for any other use in the future.</p>
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### 3.3 Commonwealth Offset

The project was determined by the Commonwealth Department of the Environment (DotE) to be a 'Controlled Action' due to impacts on listed Threatened species and communities.

Specifically, the project will impact the following federally listed species:

- 13.56 ha of Carnaby's Black Cockatoo foraging habitat
- 56 potential future Carnaby's Black Cockatoo breeding trees
- Indirect impacts to 150 *Frankenia conferta* (Vulnerable) totalling 0.06 ha.

Discussions with DotE identified that a financial offset may be considered suitable for this project.

Records obtained from the DPaW and the WA Herbarium indicates that there are 32 known populations of *Frankenia conferta*. This data was last updated in 2009, and correspondence from DPaW is that there are likely to be additional populations that are not included in the public data. Further, correspondence with the DPaW (Appendix B) identified that this species is widespread in Western Australia and is potentially eligible for delisting.

A total of 0.06 ha of habitat suitable for this species may be impacted by the project, assuming all plants within 50 m of the project will suffer from changes to hydrology. This equates to an offset of 0.25 ha. It is not considered efficient to purchase 0.25 ha of *Frankenia conferta* habitat, nor would this suit DPaW requirements when transferring the land for ongoing management. Correspondence with DPaW (Appendix B) indicated that the offset options for this species are limited due to the small scale of the *Frankenia conferta* impact and corresponding offset.

A parcel of land has been identified (see Appendix B) that would provide habitat protection for *Frankenia conferta*, and a direct offset for Carnaby's Black Cockatoo habitat. It is proposed that the funds provided to DPaW would be utilised to purchase this property, which is 2.56 ha in size. The remainder of the Carnaby's Black Cockatoo offset funds would be used towards the purchase of a strategic offset in Wongan Hills that contains known Carnaby's Black Cockatoo habitat.

In accordance with this, Main Roads proposes to pay a financial offset for the impacts to Carnaby's Black Cockatoo habitat and *Frankenia conferta* habitat. These funds would be contributed to the Offset Fund for the purchase of suitable offset land by DPaW to be placed in conservation covenant.

#### 3.3.1 Assessment against Commonwealth Offset Principles

Offsets are defined as measures that compensate for the residual adverse impacts of an action on the environment. Where appropriate, offsets are considered during the assessment phase of an environmental impact assessment under the EPBC Act. The proposed offset has been assessed against the Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy 2012.

#### **1. Suitable offsets must deliver an overall conservation outcome that improves or maintains the viability of the protected matter.**

<b>Comments</b>	Suitable offsets must improve or maintain the viability of the protected matter in comparison to the status quo, if the action was not undertaken or the offset provided. The funds provided for the offset of this project would be used by DPaW for the purchase of land to be placed in a conservation covenant. This is considered to be an improvement on the status quo for the
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	<p>following reasons:</p> <ul style="list-style-type: none"> <li>• Land in the project area is linear in nature and subject to edge effects from the road. Land placed in conservation covenant as part of an offset would typically be in Excellent condition, and non-linear, resulting in better quality habitat and improved management outcomes.</li> <li>• Land placed in conservation covenant as an offset would typically be adjacent to other vegetation in good condition, as well as watercourses and known foraging or breeding habitat. The project area is not known to be used by threatened species and therefore, habitat known to be used is preferable and would result in improved outcomes.</li> <li>• Land placed in conservation covenant by DPaW would be part of an overall strategic offset for the region, resulting in better habitat connectivity and the protection of other environmental values that are not specifically impacted by the project.</li> <li>• The land proposed for purchase as an offset for the <i>Frankenia conferta</i> will provide a buffer between this species and disturbing impacts associated with the road.</li> </ul>
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## 2. Suitable offsets must be built around direct offsets but may include other compensatory measures.

<b>Comments</b>	The offset proposed for this project has been built around a direct offset, in that funds provided to the Offset Fund will be used within 1 year towards the purchase of land suitable as an offset for this project.
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## 3. Suitable offsets must be in proportion to the level of statutory protection that applies to the protected matter

<b>Comments</b>	<i>Frankenia conferta</i> is listed as Vulnerable and Carnaby's Black Cockatoo is listed as Endangered. A suitable offset has been provided for both species, based on the EPBC Offset Calculator which uses the International Union for Conservation of Nature data on the probability of annual extinction for different categories of threatened species. The probability of annual extinction for <i>Frankenia conferta</i> according to the EPBC Offset Calculator is 0.2%. The probability of annual extinction for Carnaby's Black Cockatoo according to the EPBC Offset Calculator is 1.2%.
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## 4. Suitable offsets must be of a size and scale proportionate to the residual impacts on the protected matter

<b>Comments</b>	<p>The size and scale of an offset required for each impact is determined by the:</p> <ul style="list-style-type: none"> <li>• Level of statutory protection that applies to the protected matter.</li> <li>• Specific attributes of the protected matter, or its habitat, being impacted.</li> <li>• Quality or importance of the attributes being impacted with regard to the protected matter's ongoing viability.</li> <li>• Permanent or temporary nature of the residual impacts.</li> <li>• Level of threat (risk of loss) that a proposed offset site is under.</li> <li>• Time it will take an offset to yield a conservation gain for the protected matter.</li> <li>• Risk of the conservation gain not being realised.</li> </ul> <p>The above factors are included in the EPBC offset calculator.</p>
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## 5. Suitable offsets must effectively account for and manage the risks of the offset not succeeding

<b>Comments</b>	The purchase of appropriate offset land and placement in conservation covenant is not considered to be a significant risk of failure. If the proposed offset land is not available for
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	purchase, an alternative will be identified.
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**6. Suitable offsets must be additional to what is already required, determined by law or planning regulations, or agreed to under other schemes or programs**

<b>Comments</b>	The land proposed for purchase is currently private property and not part of an existing offset, scheme or program.
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**7. Suitable offsets must be efficient, effective, timely, transparent, scientifically robust and reasonable**

<b>Comments</b>	The offset has been developed in consultation with DPaW to obtain the best strategic outcomes. Offset land will be purchased within 12 months of funds transfer. The proposed offset is considered the most efficient and effective option given the constraints associated with the purchase of small areas of land. In addition, the proposed offset will provide scientifically robust and reasonable protection for both <i>Frankenia conferta</i> and Carnabys' Black Cockatoos through protection of known habitat, addition of land to an existing nature reserve, and provision of a buffer between a known location of <i>Frankenia conferta</i> and disturbance effects. <i>Frankenia conferta</i> is known to be sensitive to disturbance and this offset is considered to be the best option available.
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**8. Suitable offsets must have transparent governance arrangements including being able to be readily measured, monitored, audited and enforced.**

<b>Comments</b>	The proposed offset funds will be provided to DPaW for purchase of offset lands to be add to the existing nature reserve. DPaW have practical and long standing experience as land managers.
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## 4 FINANCIAL OFFSET CALCULATION

A summary of the inputs into the EPBC offset calculator for the proposed offset is provided in Table 5.

**Table 2 -Summary of inputs into offset calculator (Carnaby's Black Cockatoo and *Frankenia conferta*)**

Offset Calculator Input	Input Value Carnaby's Black Cockatoos	Input value future Black Cockatoo breeding trees	Input Value <i>Frankenia conferta</i>
Extent of impact	13.56 ha	56	0.06 ha
Quality of impacted area	6 – Good to Degraded Condition	n/a	8 – Very Good condition
Time over which loss is averted	20 years - The value of 20 is assigned here as using a conservation covenant has an “in-perpetuity” lifespan.	n/a	20 years - The value of 20 is assigned here as using a conservation covenant has an “in-perpetuity” lifespan.
Start quality of offset	Input 8 - The start quality of the land is based on pre-existing conditions of the property. This calculation is based on the assumption that land with a vegetation quality of Very Good - Excellent would be the minimal vegetation target for an offset. While Excellent vegetation is preferred for an offset, a value of 8 takes into the account the degradation of potential offset sites in the Wheatbelt.	n/a	Input 8 - The start quality of the land is based on pre-existing conditions of the property. This calculation is based on the assumption that land with a vegetation quality of Very Good - Excellent would be the minimal vegetation target for an offset. While Excellent vegetation is preferred for an offset, a value of 8 takes into the account the degradation of potential offset sites in the Wheatbelt.
Future quality/value without offset	Input 7 - An input of 7 assumes that there is a low to moderate chance that the vegetation that may be used for an offset for this project will be degraded by other land uses nearby, which is potentially likely in the Wheatbelt region.	Input 56 trees	Input 7 - An input of 7 assumes that there is a low to moderate chance that the vegetation that may be used for an offset for this project will be degraded by other land uses nearby, which is potentially likely in the Wheatbelt region.
Future quality/value with offset	Input 8 - Main Roads is proposing for the land to be managed by the DPaW, which have substantial experience in land management. This skill provides a confidence level that the land will not degrade over time.	Input 120 trees	Input 8 - Main Roads is proposing for the land to be managed by the DPaW, which have substantial experience in land management. This skill provides a confidence level that the land will not degrade over time.
Time until ecological benefit/time horizon	1 year - The time until ecological benefit is the estimated time that it will take to provide the habitat benefit to the offset. As the offset is to provide funds	1 year	1 year - The time until ecological benefit is the estimated time that it will take to provide the habitat benefit to the offset. As the offset is



	for the purchase of land, it is estimated that it will take up to 1 year for the land to be purchased and placed into a conservation covenant.		to provide funds for the purchase of land, it is estimated that it will take up to 1 year for the land to be purchased and placed into a conservation covenant.
Risk of loss without offset	Input 30% - The value of 30% is assigned indicating a moderate risk of loss without the offset.	n/a	Input 30% - The value of 30% is assigned indicating a moderate risk of loss without the offset.
Risk of loss with offset	Input 10% - It is not possible to completely remove all risk associated with the loss of offset.	n/a	Input 10% - It is not possible to completely remove all risk associated with the loss of offset.
Confidence in result- Risk of loss	Input 90% - The risk of loss associated with the provision of funds for land purchase is considered minimal as funds are to be used to purchase land that is added to the conservation estate through a state guaranteed scheme. Therefore a high level of confidence is applied.	Input 90%	Input 90% - The risk of loss associated with the provision of funds for land purchase is considered minimal as funds are to be used to purchase land that is added to the conservation estate through a state guaranteed scheme. Therefore a high level of confidence is applied.
Confidence in result- Change in quality	Input 90% - The risk of change of habitat quality is minimal; therefore this result has a high level of confidence. As the land is proposed to be managed by the DPaW and agency with significant vegetation management experience, it is expected that the land will be adequately managed to minimise this risk of loss.	n/a	Input 90% - The risk of change of habitat quality is minimal; therefore this result has a high level of confidence. As the land is proposed to be managed by the DPaW and agency with significant vegetation management experience, it is expected that the land will be adequately managed to minimise this risk of loss.
Start area	A start area of 47 ha has been generated by the calculator as an offset for Carnaby's Black Cockatoo habitat.	A start area of 120 breeding trees has been generated as an offset for Carnaby's Black Cockatoo breeding trees.	A start area of 0.25 ha has been generated for <i>Frankenia conferta</i> .
Total % of land offset	101.43%	106.35%	104.81%

## 5 PHYSICAL OFFSET CALCULATION

*Dampiera glabrescens* is a Priority 1 species that appears to prefer disturbed areas. This species is difficult to identify outside its flowering period (September), and seems to occur almost exclusively in road and rail reserves, typically recorded in road drains and ditches.

Project 1 impacted 0.4 ha of *Dampiera glabrescens* habitat in Good-Very Good condition. Project 2 is expected to be undertaken in the 2015/2016 or 2016/2017 financial year and will involve the removal of 8 *Dampiera glabrescens*, totalling 0.1 ha. An offset of 2 ha has been developed according to the Offset Calculator (Table 6).

**Table 6 –Summary of inputs into offset calculator (*Dampiera glabrescens*)**

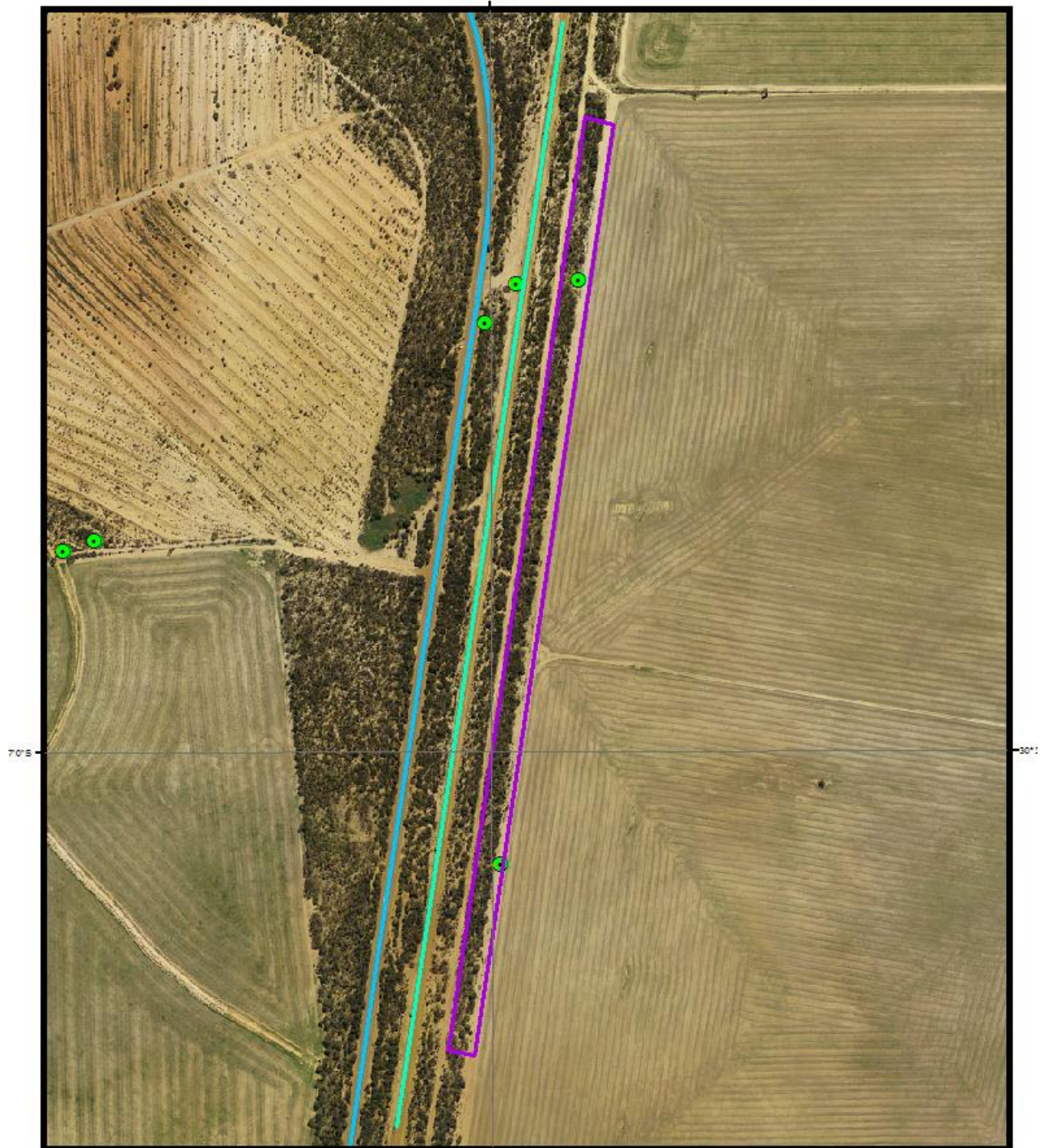
Offset Calculator Input	Input Value <i>Dampiera glabrescens</i>
Extent of impact	0.5 ha
Quality of impacted area	7 – Good to Very Good
Time over which loss is averted	20 years – The location of the offset, in the road reserve behind a water pipeline and a railway track, makes it very unlikely that this land will ever be utilised for any other purpose.
Start quality of offset	Input 7 - The start quality of the land is based on pre-existing conditions of the property. The land in the proposed offset area is in Good-Very Good condition.
Future quality without offset	Input 7 – It is assumed that the land quality in this area is unlikely to change given its unique location.
Future quality with offset	Input 8 - It is assumed that the <i>Dampiera glabrescens</i> offset will marginally improve vegetation condition in the offset area with the introduction of weed control and protection provided by installing hockeysticks.
Time until ecological benefit	1 year – The offset will be undertaken within 1 year.
Risk of loss without offset	Input 30% - The value of 30% is assigned indicating a moderate risk of loss without the offset.
Risk of loss with offset	Input 10% - Risk of loss is minimal.
Confidence in result- Risk of loss	Input 90%
Confidence in result- Change in quality	Input 90%
Start area	2 ha
Total % of land offset	100.39%

2 ha of *Dampiera glabriscens* habitat is proposed to offset impacts to *Dampiera glabrescens* for Project 1 and Project 2.

Main Roads proposes to propagate this species, collecting specimens in October from the plants that are proposed to be removed for the project, in accordance with recommendations from the Botanic Gardens and Parks Authority, who have had success growing this species in the past. Material will be collected and propagated by several local nurseries to increase the likelihood of success. These plants will then be planted at a location where *Dampiera glabriscens* have recently been recorded. This site has been chosen in consultation with DER, as it is Main Roads land that is located behind a railway and a water pipeline, making it unlikely that this land will be used for any other use. The site will be fenced, and hockey sticks will be placed to alert maintenance crews to the presence of the species in the reserve. A Revegetation Plan will be prepared for this offset, to be approved by DER.

The physical offset location proposed for *Dampiera glabrescens* is located on Northam Pithara Road approximately 1.6 km south of Ballidu (Figure 3).

Figure 3- Proposed location for *Dampiera glabrescens* offset



**Legend**

- Offset location
- Northam Pithara Road
- Previous *Dampiera glabrescens* recording
- Railway



N

1 cm = 43 meters

80 40 0 80 Meters



## 6 FINAL PROPOSED OFFSET

The project occurs half in the Shire of Wongan-Ballidu and half in the Shire of Dalwallinu. Due to a large discrepancy in the land values of these two shires, the higher land value (Shire of Wongan-Ballidu) has been used.

**Table 7 --Summary of Offsets**

Environmental value	Offset hectares or number of individuals	Cost per hectare	Total cost
Carnaby's Black Cockatoo (York Gum woodlands)	47 ha and 120 breeding trees	\$4,000 (10 ha price)	\$188,000
<i>Frankenia conferta</i>	0.25 ha	\$21,346 (1 ha price)	\$5,976.88
<i>Dampiera glabrescens</i>	2 ha		A financial offset is not suitable for this species. A physical offset is proposed.

## 7 OFFSET CONDITION MILESTONES

Condition Milestone 1: Main Roads shall provide documentary evidence to the CEO of DER that funding of \$193,976.88 has been transferred to the Department.

Timeframe for Completion: Within 3 months of approval

Condition Milestone 2: Main Roads shall submit a Revegetation Plan for approval of DER, for the revegetation of 2 ha of *Dampiera glabrescens* habitat.

Timeframe for completion: Within 3 months of approval.

Completion Milestone 3: Main Roads shall implement the approved Revegetation Plan.

Timeframe for completion: No greater than 1 year after approval of the project, subject to weather conditions and rainfall.

## 8 CONCLUSION

The benefit of the DPaW purchasing a property of excellent quality with offset funds would result in reduced ongoing management costs and ensure that the offset is placed in a conservation covenant. The requirement to manage pests and weeds would be reduced and revegetation costs would also be reduced. Therefore a financial offset is considered suitable for the project, with the exception of the *Dampiera glabrescens*.

In addition, by purchasing excellent quality land, it increases the chances of having multiple attributes of value. These attributes include habitat for declared rare flora, threatened ecological communities, and other rare or endangered fauna.

Main Roads considers the offset proposal for the provision of a payment of \$193,976.88 to be suitable for the impacts proposed within the project area. This would offer a greater strategic offset suited to the management of the DPaW.

The physical offset proposed has been negotiated with DER and would be implemented via an approved Revegetation Plan.

## 9 REFERENCES

AECOM Pty Ltd (2012) *Northam - Pithara Road Biological Assessment Ballidu to Pithara*, Prepared for Main Roads Western Australia, August 2012

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10 APPENDIX A

Correspondence with DER for *Dampiera glabrescens* offset

14/6687



Government of Western Australia  
Department of Environment Regulation

Your ref: AH 13/5010  
Our ref: CPS 818/12  
Enquiries: Simon Weighell  
Phone: 6467 5038  
Fax: 6467 5532  
Email: nvp@der.wa.gov.au

Mr Ben Hollyock  
Principal Environmental Officer (Operations)  
Main Roads Western Australia  
PO Box 6202  
EAST PERTH WA 6892  
  
Attn: Ms Rochelle Lupton



Dear Mr Hollyock

**CLEARING PERMIT CPS 818/12 – OFFSET PROPOSAL – NORTHAM PITHARA ROAD WIDENING SLK 148.8 – 150.85**

I refer to Main Roads Western Australia's (MRWA) letter of 13 May 2015 requesting an extension of time for provision of the outstanding offset proposal for the Northam Pithara Rd Widening SLK 148.8-150.85 project. The outstanding offset proposal relates to the loss of 0.4 hectares of habitat for the priority one species *Dampiera glabrescens*.

I understand that MRWA requests an extension in order to be able to confirm the extent of *D. glabrescens* within potential offset sites prior to the development of a proposal. I agree to an extension to 18 December 2015 for the provision of the outstanding offset proposal.

In relation to MRWA's advice request, due to the identified tenure challenges associated with *D. glabrescens*, the Department of Environment Regulation is willing to consider management/rehabilitation actions for existing populations of *D. glabrescens* occurring in road and/or rail reserves.

If you have any queries regarding this matter, please contact Senior Clearing Regulation Officer Mr Simon Weighell on 6467 5038.

Yours sincerely



M Warnock  
SENIOR MANAGER  
CLEARING REGULATION

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

20 May 2015

The Atrium, 168 St Georges Terrace, Perth WA 6000  
Phone: (08) 6467 5000 Fax (08) 6467 5562  
Postal address: Locked Bag 33, Cloisters Square, WA 6850  
www.der.wa.gov.au

## 11 APPENDIX B

### Correspondence with Department of the Environment

Good Morning Rochelle

The Department would consider the possibility of a financial offset however you would need to provide information as to why you consider this the best approach i.e alternatives have been considered, difficulty locating a suitable site. Please note that the delegate has the final decision on what offsets are appropriate for each proposal.

Regards

Dionne Cassanell  
Senior Assessment Officer  
South West Section  
West Assessment Branch  
Department of the Environment

GPO Box 787 CANBERRA, ACT 2601  
T 02 6274 2114  
[dionne.cassanell@environment.gov.au](mailto:dionne.cassanell@environment.gov.au)

## 12 APPENDIX C

### Correspondence with Department of Parks and Wildlife for *Frankenia conferta* offset

Rochelle

We may have been able to find an area that we could put up an argument to meet your requirements.

Marchagee Nature Reserve (R23601) is between Watheroo and Coorow on the Midlands Road. It has two populations of *Frankenia* on it around salt lake, but is also within the distribution of Carnaby's cockatoo. It has woodland etc vegetation on it and a record of Carnaby's.

There is a triangle of uncleared land south of the Midlands Road within the nature reserve that is private property. This is immediately adjacent to the *Frankenia* population. So while the area does not actually include the *Frankenia*, nor its habitat, being immediately adjacent, it is of value to the conservation of the *Frankenia* through providing a buffer that will assist in maintaining the viability of the known site.

The acquisition of this triangle will thus serve a dual purpose of protecting *Frankenia* habitat and reserving potential Carnaby's habitat.

Because the triangle is defined by boundaries (the reserve and the road) there is no requirement for an on site survey to define a subdivision, and hence the transfer costs involved would only be those related to preparing a deposited plan and other set costs as would occur with any purchase.

This patch is the only area we could find that was economically worth purchasing for the *Frankenia*, and having the added benefit of the Carnaby's habitat.

The lot is Part Victoria Location 5785. It is 2.56ha, so this covers the 0.4ha area required plus some of the Carnaby's area. Plans and maps attached

The balance of the Carnaby's area could be included with another offset area that I understand Main Roads is currently negotiating – this is the Wongan Hills area that Alex is referring to. I understand that this area is in excess of the required area, and hence there will be some spare capacity to incorporate the Carnaby's offset into this area.

Alex has advised that he is quite willing to negotiate the acquisition of this area if you wish.

I hope this is of assistance. Without survey, or committing to purchase an area far exceeding the 0.4ha, I cannot see that there is any other viable option.



Regards

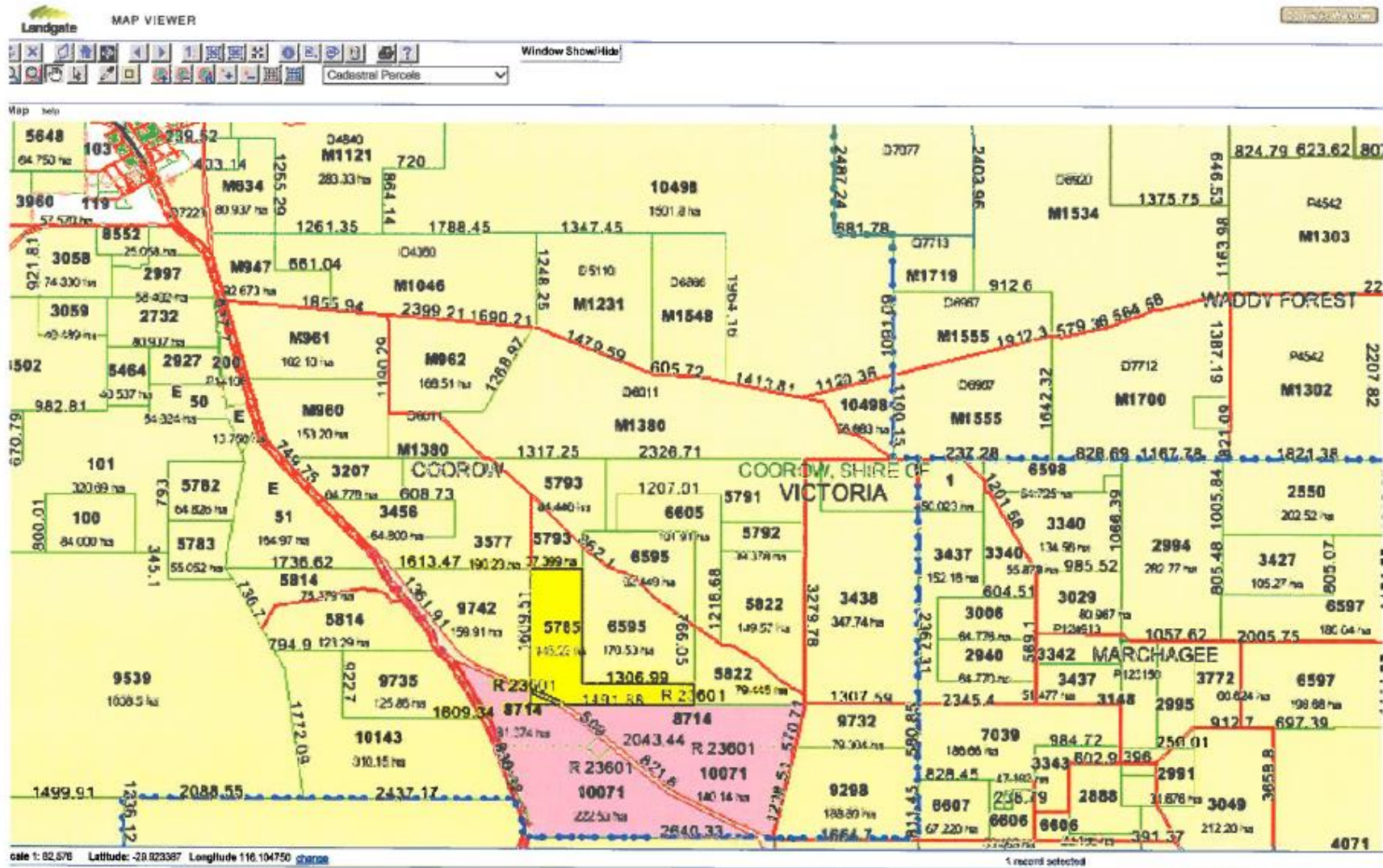
Ken

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Dr Ken Atkins  
Manager, Species and Communities Branch  
Department of Parks and Wildlife  
Locked Bag 104  
BENTLEY DELIVERY CENTRE WA 6983

Phone (08) 93340425  
Fax (08) 9334 0199





[http://www.landgate.wa.gov.au/mapviewer/erm\\_mapviewer.htm?user=ruAXE09&token=28e811cdeb9836c52a0194798b340708f08b0e0d905e019c&a...](http://www.landgate.wa.gov.au/mapviewer/erm_mapviewer.htm?user=ruAXE09&token=28e811cdeb9836c52a0194798b340708f08b0e0d905e019c&a...) 14/07/2015

