APPENDIX E BIODIVERSITY OFFSET STRATEGY

6 December 2021

Jamie Chivers
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Level 33, 525 Collins Street
Melbourne VIC 3000

Dear Jamie

Re: Biodiversity Offset Strategy for the proposed Hills of Gold Wind Farm project
Project no. 34475

Introduction and purpose

Biosis Pty Ltd was commissioned by Hills of Gold Wind Farm Pty Ltd (Hills of Gold WF) to complete Biodiversity Offset Strategy (BOS) for the proposed Hills of Gold (HoG) wind farm (the study area).

Biosis understands that this high level BOS will be included for submission with the project Environmental Impact Statement (EIS) as well as a focus on the opportunities available across the potential offset properties and associated commercials for prioritised options.

Due to the large size of the combined offset investigation area (almost 8500 hectares) opportunities to ground-truth vegetation types, to determine suitability, and asses management requirements to determine potential costs, were somewhat limited. To overcome this, existing vegetation mapping, including that developed as part of the project's Biodiversity Development Assessment Report (BDAR), was reviewed in combination with high definition aerial imagery, to define high potential areas for ground-truthing surveys, undertaken over four days. Broad assumptions have been be made when determining the potential suitability of vegetation and associated costs of management for areas both ground-truthed, as well as those not visited on ground. The aim of this work was to determine feasibility of potential Biodiversity Stewardship Stes on identified land in order to progress landowner discussions and preparation of Biodiversity Stewardship Agreements with the NSW Minister for the Environment.

Project background

The HoG wind farm project is located approximately 4 kilometres south of Hanging Rock, 8 kilometres south east of the Nundle and 60 kilometres south east of Tamworth, within the Tamworth Regional Local Government Area (LGA) and Upper Hunter Shire LGA. The proposal includes up to 70 wind turbines, mounted on tubular steel towers, with hardstand construction areas (Arup 2020).

The study area lies on the boundary of four Interim Biogeographic Regionalisation for Australia (IBRA) regions and subregions. These are the New England Tablelands region (Walcha Plateau subregion), Nandewar region (Peel subregion), NSW North Coast region (Tomalla subregion), and Sydney Basin region (Hunter subregion). The majority of the development footprint being located within the Peel subregion of the Nandewar Basin bioregion (Arup 2020). This adds complexity to offset considerations as Offset Trading Groups (OTGs) and like-for-like credit offset rules are linked to IBRA regions. While this is not of concern in

the search for potential stewardship sites in the local area, there is an increased need for due diligence if credits are purchased from the open market.

Biodiversity Development Assessment Report biodiversity credit requirement summary (Arup 2020)

The HoG wind farm project's BDAR (Arup 2020) records 8,104 ecosystem credits related to 20 Plant Community Types (PCT) in 10 Offset Trading Groups (OTG), as being required to compensate for residual impacts of the development. Grouping of the PCTs by OTG provides insight into the volume of credits needed for each type in relation to the price of individual credits. A summary of credits required as outlined in the BDAR (Arup 2020) is included in Table 1.

A total of 10 Species Credit Species will also require offset, a summary of credits required as outlined in the BDAR (Arup 2020) is included in Table 2.

It should be noted that the level of impact calculated and assessed in the BDAR was considered to be a conservative overestimate of impacts, with future avoidance and minimisation opportunities available through project staging and design optimisations. This reduction in impacts has been achieved during the Response to Submission (RtS) phase of the project, as detailed in the Amended BDAR (Biosis 2021), with further avoidance of impacts still expected during the subsequent detailed design phase of the project.

The prices included in the tables below are those provided by the Biodiversity Conservation Trust's (BCT) Biodiversity Offset Payment Calculator (BOP-C), and are current as of 30 November 2020. Updated credit requirements following design revisions during the RtS phase are presented in Table 6 and Table 7 later in this letter.

Table 1 Offset Trading Group credit liability summary for paying to the Fund (ARUP 2020)

Offset Trading Group	PCT	No. Credits	Average OTG credit value	OTG credit liability (ex GST)
Northern Tableland Wet Sclerophyll Forests >=70% and <90%	1194	2321	$10,817	$25,106,163
New England Dry Sclerophyll Forests >=50% and <70%	540, 541, 526	3774	$3,047	$11,497,586
Northern Escarpment Wet Sclerophyll Forests >=70% and <90%	931, 934	807	$12,421	$10,023,599
White Box Yellow Box Blakelys Red Gum Woodland	434, 433, 492, 510, 538, 599	536	$8,231	$4,411,563
Eastern Riverine Forests <50%	84, 486	284	$8,259	$2,345,442
Tableland Clay Grassy Woodlands >=70% and <90%	507, 1192	56	$7,938	$444,546
New England Grassy Woodlands <50%	490	116	$2,662	$308,761
Yetman Dry Sclerophyll Forests >=50% and <70%	450	64	$2,735	$175,027
Northern Tableland Wet Sclerophyll Forests >=50% and <70%	954	32	$3,585	$114,709
North-west Slopes Dry Sclerophyll Woodlands <50%	591	24	$4,279	$102,698

Offset Trading Group	PCT	No. Credits	Average OTG credit value	OTG credit liability (ex GST)
TOTAL		8014		$54,530,096

Table 2 Species Credit summary for paying to the Fund (ARUP 2020)

Credit type	BOP-C price per credit	No. credits required (BDAR)	Final credit price (ex GST)
Eastern Cave Bat	$741	4134	$4,029,356
Large-eared Pied Bat	$741	3767	$3,671,646
Koala	$495	2182	$1,478,753
Large Bent-winged Bat	$741	1465	$1,427,917
Little Bent-winged Bat	$464	1465	$937,019
Eastern Pygmy-possum	$495	1307	$885,761
Squirrel Glider	$495	1179	$799,014
Southern Myotis	$741	99	$96,494
Booroolong Frog	$310	77	$34,966
Border Thick-tailed Gecko	$464	8	$5,117
TOTAL			$13,366,042

Offsetting options, expected cost and timing

There are three broad options available to Hills of Gold WF for securing the offsets required for the project, each with their own benefits and drawbacks, these options are:

- Payment to the Biodiversity Conservation Fund (the Fund) managed by the BCT.
- Purchase of credits from the open market, with consideration of applying the 'Like for Like' Variation Rules.
- Establish a Biodiversity Stewardship Site(s) to generate credits to use for offsetting.

Option 1: Payment to the Fund managed by the BCT

Satisfying an offset obligation by paying to the Fund has the major benefit of being an expedited and transparent way for proponents to meet their offset obligations. However, it does include increased costs associated with the 'Risk premium' included by the BCT, and an administrative cost per credit type required.

The cost of paying to the Fund can be generated by inputting data into the online BOP-C, which is finalised once an application to the BCT is made. The process for paying into the Fund is as follows:

- Applicant submits a completed application form to pay into the Fund, accompanied by supporting documentation such as development consent, biodiversity credit reports, and GIS shapefiles of the biodiversity values impacted at the development site.
- BCT reviews the application and provides a reference number (3-5 business days).

- BCT advises in writing whether the application has been approved and if so, provides payment details (payment term is seven days).
- Applicant submits Recipient Created Tax Invoice or requests an invoice from the BCT (3-5 business days).
- Applicant makes the payment into the Fund.
- BCT confirms receipt of payment and issues a certificate under section 6.33 of the BC Act.
- The certificate issued by the BCT is used by the proponent to demonstrate to the consent authority that the relevant offset obligation consent condition(s) has been met (BCT 2020).

Meeting an offset obligation by paying to the Fund can therefore be completed within 2-3 weeks of receiving project approval, and the price provided by the BOP-C (honoured by the BCT as of the day of receipt of a completed application) includes all administrative costs associated with the process.

This process avoids delays to future project stages as a result of outstanding biodiversity offset requirements.

It should be noted that following the Commonwealth's formal endorsement of the BOS in March 2020, payment to the Fund to satisfy an offset obligation for EPBC Act listed species resulting from a significant impact due to a Controlled Action is now allowable.

Option 2: Purchase credits from the open market

Potential benefits from procuring credits from the open market include a potential increase in offsetting options when applying the like-for-like rules included in the BAM, and then further again when applying the 'Like for Like Variation Rules'. There is also the ability to negotiate with sellers on price, potentially with multiple credit holders. Drawbacks include a potential paucity of credits on the market, sellers setting a high price and not being willing to negotiate, timeframes associated with negotiations, timeframes associated with procurement of a range of credit types (if required), timeframes to process sales, and additional credit 'transfer' and 'retirement' fees.

It is difficult to accurately estimate potential costs of credits on the open market as the price is wholly determined by the credit holder (sellers) and is based on their requirements for funding the required management actions at their BioBank or Stewardship Site. However, recent investigations into the current credit market undertaken for other State Significant Development projects have shown that market prices are selling below that determined by the BOP-C in order for individual credit owners to secure credit sales over the BCT.

Biosis has undertaken initial analysis into the current market availability of the credits required for the project, the results of which are provided in Table 3 below. It should be noted that the credits presented below were available as of February 2021, however due to the nature of the open market their future availability cannot be guaranteed.

Table 3 Credit register searches for like-for-like credits (February 2021)

Credit type	Number required	Number available (BAM)
Northern Tableland Wet Sclerophyll Forests >=70% and <90%	2579	-
Northern Escarpment Wet Sclerophyll Forests >=70% and <90%	226	-
White Box Yellow Box Blakelys Red Gum Woodland	536	1941

Credit type	Number required	Number available (BAM)
New England Dry Sclerophyll Forests >=50% and <70%	3774	1395 (pending review)
Eastern Riverine Forests <50%	284	3 (pending review)
Tableland Clay Grassy Woodlands >=70% and <90%	56	-
New England Grassy Woodlands <50%	116	-
Yetman Dry Sclerophyll Forests >=50% and <70%	64	-
Northern Tableland Wet Sclerophyll Forests >=50% and <70%	32	-
North-west Slopes Dry Sclerophyll Woodlands <50%	24	2079 (pending review)

Lodge 'credits wanted' in the BAM-C

Biodiversity credits may be available for purchase, but not listed on public registers for a number of reasons. Additionally, credits created under the previous BioBanking scheme (BBAM) are not easily cross-referenced related to changes in PCT naming conventions. An alternative market engagement tool is to lodge a Credits Wanted request via the online BAM Calculator tool (BAM-C), which lists the PCT and number of credits sought on the Credit Demand Register. Interested parties may then come forward with credits for sale and/or Biodiversity Stewardship Site opportunities.

Option 3: Establish a Biodiversity Stewardship Site

Establishment of a Biodiversity Stewardship Site (or multiple sites) with the intention of generating credits to satisfy the project's offset obligation appears to be a feasible option for the current BOS. This is due to the presence of land adjacent to the development site that supports similar biodiversity values.

The major benefit of establishing a Biodiversity Stewardship Site to offset the project's impacts is the reduction in the cost of the offset credits. The price of offset credits is made up of two parts;

- Part A (compulsory) – the cost associated with implementing the required management actions at the Biodiversity Stewardship Site from where the credits are generated (this equates to the Total Fund Deposit [TFD]); and
- Part B (optional) – the cost associated with the establishment of the offset site (ie cost recovery), and most significantly, the profit to the credit holder

Calculating the Part A component of any potentially generated biodiversity credits has been undertaken as part of the current assessment based on TFDs generated for each of the potential offsets properties assessed. This Part A component allows for an assessment of baseline credit pricing prior to entering into negotiations with the landowners around compensation for entering their land into in-perpetuity biodiversity offsetting / conservation agreements, and any profits and financial incentives that landowners may seek for being part of the project. These aspects form the Part B component of a final credit price.

Local offset feasibility

Desktop review

Prior to commencing the field investigation, information provided by Hills of Gold WF, Arup, Biosis' previous vegetation assessment, and aerial vegetation mapping projects were reviewed to identify which of the proposed properties were worth targeting for field investigations.

Of the initial 12 suggested offset investigation properties, seven were assessed as highest priority for field investigation based on the results of the desktop assessment suggesting a higher likelihood of the presence of like-for-like PCTs and offsetting options. Details of the prioritised properties are provided in Table 4 below.

Table 4 Highest priroity offset investagion properties

Property	Approx. area (ha)	Comments
Property 01	1090 ha – mixed areas of vegetation and grazed land	Large property to the west of the wind farm study area with high ridgelines likely to support target PCTs / OTGs. Provides landscape connectivity over Crawney Mountain to Wallabadah Nature Reserve.
Property 02	830 ha – intact vegetation present of the slopes and gullies away from the norther edge of the property	Potential offset areas are immediately adjacent to the wind farm study area and already known to support areas of the target PCTs / OTGs. Provides a portion of the landscape connectivity to the south of the development footprint from Ben Halls Gap Nature Reserve to Cranwey Pass National Park.
Property 03	780 ha – mixed areas of intact vegetation, razed and pasture improved land	Potential offset areas are immediately adjacent to the wind farm and transmission line study areas and considered likely to support areas of the target PCTs / OTGs.
Property 04	1400 ha – areas on intact vegetation in the south and west, more cleared and grazed land to the north and east	Large property to the west of the wind farm study area with high ridgelines likely to support target PCTs / OTGs. Provides landscape connectivity over Crawney Mountain to Wallabadah Nature Reserve.
Property 05	830 ha – largely intact / patchy vegetation immediately below the ridgeline. South-eastern corner large ae of intact vegetation	Desktop assessment of offset potential, partly combined with BDAR mapping. Ridgeline forming the northern boundary of the property targeted for rehabilitation and enhancement of local habitat connectivity.
Property 06	104 ha – largely intact vegetation	Potential offset areas are immediately adjacent to the wind farm study area and already known to support areas of the target PCTs / OTGs.
Property 07	1735 ha – large areas of intact vegetation in the south, remainder of the property is patchy with well vegetated and cleared areas	Desktop assessment only. Large property to the south-west of the wind farm study area with high ridgelines likely to support target PCTs / OTGs
Property 08	207 ha – largely intact vegetation	Potential offset areas are immediately adjacent to the wind farm study area and already known to support areas of the target PCTs / OTGs.

Property	Approx. area (ha)	Comments
Property 09	990 ha – intact to patchy vegetation on middle to upper slopes	Desktop assessment only. Potential offset areas to the north of the wind farm on middle and upper slopes. Large areas of intact to patchy vegetation, drainage lines expected to be weedy.

Due to the large size of a number of the above properties not all areas within each property were able to be assessed, and furthermore not all areas assessed were considered suitable for potential offsets. Access to the Property 07, Property 09 and Property 05 properties were not possible during the field investigation, however they remain important opportunities to establish a potential Biodiversity Stewardship Sites. The Property 06 property was excluded following completion of the field investigation and neither are discussed further.

Field investigation

A field investigation of the study area was undertaken on 19 to 22 February 2020 by Callan Wharfe (Senior Ecologist and Offset Lead) and Brooke Corrigan (Consulting Restoration Ecologist). Vegetation within the study area was surveyed using the random meander technique (Cropper 1993) over 80 person hours.

General classification of native vegetation in NSW used in this report is based on the classification system in Keith (2004) which uses three groupings of vegetation: vegetation formation, vegetation class and vegetation type, with vegetation type the finest grouping. The target grouping referred to in this report is PCT as defined by the Biodiversity Assessment Method (BAM) (OEH 2017), and has been the standard used across NSW since 2016. However due to the rapid nature of the field investigations PCTs were not always able to be determined. Where PCTs could not be determine this was due to either the complex nature of PCTs present the study area, the disturbed nature of the vegetation in some areas due to bushfire and/or other disturbance factors, and the lack of floristic data due to the collection of floristic (BAM) plots being outside the scope of this assessment.

Where PCT could not be determined the vegetation class (Keith 2006) was able to be established, which forms the basis of the OTG for biodiversity credits, and as such is still a useable and useful guide to the suitability of proposed offset sites for matching the credit requirement at the wind farm.

Vegetation condition was assessed across all areas investigated to determine the required management actions and to facilitate the development of the TFDs. This data was again collected via rapid assessment and as such broad assumptions were made around required management actions based on the ecologists' knowledge and experience and assessment of the on-ground condition of the vegetation.

A habitat-based assessment was completed to determine the presence of suitable habitat for species credit species habitat species requiring offset (Arup 2020). This list was filtered according to species descriptions, life history, habitat preference and soil preference to determine those species most likely to be present within the study area.

Desktop assessment of credit yield and minimum credit price (Part A)

Following completion of the field investigation, data analysis was undertaken to determine the expected credit yield for each of the potential offset properties. PCT benchmark data was assessed and appropriate vegetation integrity scores were determined for each condition class mapped for each PCT, and these values were input into the BAM Calculator.

TFDs were calculated based on data gathered during the field investigation and extrapolated across the areas considered as highest potential for inclusion in a Biodiversity Stewardship Site to calculate an estimated TFD for each property, and thus the minimum credit price.

Table 5 below provides a guide to the areas assessed for inclusion with potential Biodiversity Stewardship Sites across each of the five ground-truthed and three desktop properties, the potential credit yield, the overall TFD, the minimum credit price and a comparison of that price to the BCT's price for the equivalent biodiversity credit. To simply the data and outputs, credits have been expressed as OTGs rather than PCTs.

Table 5 Ecosytem credit assessment of potential offset properties

Offset Property	Offset Trading Group	Area (ha)	Potential credits	Credits per ha	Estimated Total Fund Deposit	Offset credit Part A price	BCT Credit Price (avg OTG value)	Difference in Part A vs BCT credit cost
Property 01	Northern Tableland Wet Sclerophyll Forests	184	1269	6.9	$2,134,455	$1,686	$10,817	$9,131
Property 02	Northern Escarpment Wet Sclerophyll Forests	143	861	6.0	$2,180,228	$1,123	$12,421	$11,298
	Northern Tableland Wet Sclerophyll Forests	243	1085	4.5			$10,817	$9,694
Property 03	New England Dry Sclerophyll Forests	108	750	6.9	$2,070,669	$2,465	$3,047	$582
	New England Grassy Woodlands	20	92	4.5			$2,662	$197
Property 04	New England Dry Sclerophyll Forests	213	1509	7.1	$2,203,623	$803	$3,047	$2,244
	Northern Tableland Wet Sclerophyll Forests	184	1241	6.8			$10,817	$10,817
Property 05	Northern Tableland Wet Sclerophyll Forests	137	685	5.0	$3,013,437*	$3,139	$10,817	$7,678
	Northern Escarpment Wet Sclerophyll Forests	55	275	5.0			$12,421	$9,282
Property 07	Northern Tableland Wet Sclerophyll Forests	35	175	5.0	$2,227,747	$1,379	$10,817	$9,438
	New England Dry Sclerophyll Forests	225	1125	5.0			$3,047	$1,668
	New England Grassy Woodlands	63	315	5.0			$2,662	$1,283
Property 08	New England Grassy Woodlands	7	59	8.0	$1,717,829	$1,997	$2,662	$665
	Northern Escarpment Wet Sclerophyll Forests	110	572	5.2			$12,421	$10,424
	Northern Tableland Wet Sclerophyll Forests	45	234	5.2			$10,817	$8,820
Property 09	New England Dry Sclerophyll Forests	300	1500	5.0	$2,394,335	$1,596	$3,047	$1,451

***Property 05 property TFD includes revegetation activities, costed over 20 years, to allow for enhancement of local habitat connectivity along the ridgeline (further discussed below).

Table 6 provides an estimate of the potential surplus vs deficit in biodiversity credits based on total areas assessed across all offset investigation properties and the credits required at the development site as calculated following design revisions and provided in the Amended BDAR (Biosis 2021).

Table 6 Estimate of credit generation potential of potential offset lands

Offset Trading Group	Total estimated area (Ha)	Total credits generated	Credits required (Biosis 2021)	Surplus / deficit
Northern Tableland Wet Sclerophyll Forests	827	4689	1302	3387
Northern Escarpment Wet Sclerophyll Forests	353	1940	560	1380
New England Dry Sclerophyll Forests	847	4884	1833	3051
New England Grassy Woodlands	91	466	68	398
Totals	2117	11,979	3763	8216

It can be seen from the above tables that there are opportunities for substantial cost savings in offset liability if Biodiversity Stewardship Sites can be established and matching like-for-like offsets can be confirmed.

An assessment of the potential for each of the of the offset investigation properties to generate species credit was also undertaken, and advice is provided in Table 7 below.

Table 7 Assessment of habitat for threatened fauna species credit species

Species credit species	Credits required (Biosis 2021)	Potential habitat present	Likelihood of credit generation	Expected cost to generate credits	Notes
Eastern Cave Bat	690	• Property 01 • Property 02 • Property 03 • Property 04 • Property 05 • Property 07 • Property 09	High	Low	Costs associated with deployment and collection of bat detection units, and associated data analysis. Surveys required to be undertaken in warmer months when bats are more active.
Large-eared Pied Bat	690				
Koala	1360	• Property 01 • Property 02 • Property 03 • Property 04 • Property 05 • Property 07 • Property 08 • Property 09	Moderate – High	Low – Moderate	Costs are associated with deployment and collection of remote cameras and analysis of data. However, remote cameras have a lower likelihood of capture of the species, when compared to active searched for signs of activity (scats, scratches), or nocturnal searches for individuals. These survey types have a higher associated cost.
Eastern Pygmy-possum	726	• Property 02 • Property 05 • Property 04 • Property 08	Low – Moderate	Moderate	Costs are associated with deployment and collection of remote cameras and analysis of data. However, camera trapping of Eastern Pygmy Possum requires a high level of habitat assessment to find the highest quality habitats due to the species' small home ranges.

Species credit species	Credits required (Biosis 2021)	Potential habitat present	Likelihood of credit generation	Expected cost to generate credits	Notes
Squirrel Glider	622	• Property 01 • Property 02 • Property 03 • Property 04 • Property 05 • Property 07 • Property 08 • Property 09	Moderate	Low - Moderate	Costs are associated with deployment and collection of remote cameras and analysis of data. However, camera trapping of Squirrel Gliders is less intensive than Eastern Pygmy Possum as the species is known to move over large distance. Spot-lighting and call-playback options are ,also available to confirm presence, however these survey methods are more intensive and thus more expensive.
Southern Myotis	101	• Property 02 • Property 03 • Property 08 • Property 09	High	Low	Costs are associated with deployment and collection of bat detection units, and associated data analysis. Surveys required to be undertaken in warmer months when bats are more active
Booroolong Frog	33	• Property 04 (possible) • Property 08 (possible)	Low	Moderate	Cost are associated with nocturnal searches for the species within high quality habitat. However habitat for the species was not found to be present in any of the properties assessed on-ground as potential Biodiversity Stewardship Sites.
Border Thick-tailed Gecko	8	• Property 01 • Property 02 • Property 03 • Property 04 • Property 05 • Property 07 • Property 08 • Property 09	Low	High	Costs are associated with nocturnal searches for the species within high quality habitat. It is expected that a high level of repeat surveys would be required to confirm species presence.
Barking Owl **Powerful Owl** **Masked Owl** **Sooty Owl**	• 85 • 85 • 43 • 127	• Property 02 • Property 03 • Property 04 • Property 06 • Property 07	Moderate	Moderate	Costs are associated with the requirement to locate the breeding tree for any of the target owl species. It is likely that these owls may be breeding on one or more of these properties, but locating the nest may become resource heavy.

Enhancement of local habitat connectivity

The project's proposed offset strategy of targeting local properties for the establishment of Biodiversity Stewardship Sites provides potential opportunities for strategic enhancement of local habitat connectivity. Such enhancements could occur along the southern side of the ridgeline between Ben Halls Gap Nature Reserve and Crawney Pass National Park, and over Crawney Mountain to Wallabadah Nature Reserve, linking the three conservation areas. This enhancement of local connectivity can be achieved through the in-perpetuity conservation agreements being pursued over the Property 02, Property 05, Property 04 and Property 01 properties, which will improve the biodiversity values on the land and increase habitat connectivity. Connectivity enhancements realised in this strategic location will not only offset direct impacts resulting from the project, but also allow for potential indirect impacts associated with disruption of habitat connectivity to be mitigated against and offset through the establishment of a managed corridor linking local conservation reserves and high quality habitats.

Conclusion and recommendations

There are a number of limitations associated with the above calculations and advice relating to the rapid style of assessment undertaken for the current investigation, and the broad assumptions that were required to be made. Assignment of PCTs and OTGs are not based on the required level of floristic data necessary as part of an assessment by the BCT for the establishment of a Biodiversity Stewardship Site. Furthermore, the vegetation assessed as present in a number of areas is based on extrapolation of field observations, interpretation of aerial imagery and the use of topographical contours for mapping. Of particular note is the lower level of confidence in assigning a PCT to the Northern Tableland Wet Sclerophyll Forests OTG, which includes PCT 1194 a commonly mapped PCT across the wind farm corridor. Furthermore the estimated number of credits potentially generated is based on predicted Vegetation Integrity score data only, and may alter when field data is captured and utilised in the future.

To be considered a matching offset credit the vegetation at the development site and the proposed offset site need to be a match for OTG (commensurate with 'vegetation class (Keith 2004) and the estimate of percentage cleared for the PCT. PCT 1194 has a high percentage cleared value (>=70% and <90%), compared to the other PCT options in the same OTG (those being PCT 1551, 1555 and 1559). Alternative PCTs have been assessed as lower having percentage cleared (<50%), and thus would not be a suitable offset for impacts to PCT 1194. Due to this disparity, additional floristic data collection is required to determine the presence of PCTs at the potential offset sites that would be considered matching for PCT 1194.

The remaining PCTs and OTGs have a substantially higher level of confidence than the Wet Sclerophyll Forests / PCT 1194 complex.

TFDs are based on broad assumptions made from the assessment of ground-truthed vegetation and extrapolated across areas not visited on ground. As such, the total value of TFDs may change following further detailed site investigation, however they would not be expected to increase by the magnitude required to nullify potential cost savings outlined in Table 5.

It is recommended further work be undertaken to determine the presence of PCT 1194 matching vegetation at the offset properties due to the significant opportunity for cost saving that could be realised if matching credits can be generated at a Biodiversity Stewardship Site.

It should noted that the suitability of the Property 03 property for establishment of a Biodiversity Stewardship Site is dependent of the assumption that the canopy vegetation will sufficiently recover from, what appears to be, the impacts of recent herbicide drift from aerial weed spraying.

As outlined in the BDAR (Arup 2020) the project has been assessed as having the potential to result in significant impacts to one ecological community and two fauna species listed under the Commonwealth, namely White Box-Yellow Box-Blakely's Red Gum Grassy Woodland, Koala and Spotted-tailed Quoll. Locally established Biodiversity Stewardship Sites are not expected to result in offset opportunities for White Box-

Yellow Box-Blakely's Red Gum Grassy Woodland, due to the landscape positions of the proposed sites. Opportunities for offsetting impacts to Koala and Spotted-tailed Quoll are expected to be available within the proposed sites, and these would be expected to meet the requirements for offsetting under the EPBC Act.

Further discussion should also be entered into with landowners to gauge their expectations around compensation for establishing offsets on their land. It is also critical that landowners are aware of the commitments into which they would be entering and that the Biodiversity Stewardship Site would be lodged on title as an in-perpetuity agreement. Such commitments include:

- Entering into a BSA which is a legally binding contract with the BCT, through signing the document.
- The BSA is registered on the property title and remains there in perpetuity. It binds any future owners of your land.
- Biodiversity credits are generated and transferred into the ownership of the landowner. The credits are listed on the public registers so they can be seen by interested buyers.
- Landowners are obliged to undertake 'passive management' (e.g. refraining from activities that will disturb native vegetation or other fauna habitat such as bush rock and dead timber) as soon as the agreement commences.
- Once credits are sold, money from the sale(s) is provided to the BCT until the TFD (management money for the site) is fully met. This money is returned to the landowner in annual payments once the TFD is fully met and the site enters 'active management'.
- Once the first annual management payment is received and the site moves into 'active management', the landowner must begin actively managing the site (e.g. weed management, fencing, pest control etc) in accordance with the agreed management plan.
- Both passive and active management phases of the BSA require that the only activities allowable within the Biodiversity Stewardship Site area are conducive to biodiversity conservation and enhancement. Some level of stock grazing may be permitted at reduced rates considered appropriate given the characteristics of the vegetation.
- Implementation of the yearly management activities and meeting required targets outlined in the management plan are audited by the BCT prior to the release of the next annual payment. If the required activities have not been undertaken and/or targets are not met, the next payment will not be released, and the onus is on the landowner meet these requirements.
- Continued failure to meet the requirements of the management plan can result in cancellation of the credits and termination of the BSA.

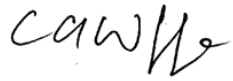
Discussion should commence with the BCT to gain an understanding around the expected lead time required form submission of the Biodiversity Stewardship Agreement application form and associated data to the generation of the credits and their availability for use in the project's offsetting strategy. Timeframes to complete the on-ground assessments and prepare the reports and BSA application are likely to be 2 to 3 months, and review by the BCT is likely to take a further 6 months. It can be expected that the whole process may take up to 12 months to reach a signed BSA and have the credits available for offsetting purposes. There are also specific survey timeframes that may need to be adhered to for threatened species credits looking to be generated. These are not entirely relevant for the project's impacts, however surveys over the warmer months would be much more likely to detect the targeted microbat species at any proposed offset site.

Commencing of the detailed investigations required to establish the Biodiversity Stewardship Sites should also occur as soon as possible to reduce any lead time referred to above. The generation of species credit

should be pursued for those species noted as having a high likelihood of generation and a low to moderate associated cost.

I trust that this advice is of assistance to you however please contact me if you would like to discuss any elements further.

Yours sincerely



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