Submission No 35

INQUIRY INTO INTEGRITY OF THE NSW BIODIVERSITY OFFSETS SCHEME

Organisation: Henribark Pty Ltd

Date Received: 30 August 2021

HENRIBARK
PTY LTD
ABN: 55 622 963 366
ACN: 622 963 366

30 August 2021

The NSW Upper House Inquiry into the Integrity of the NSW Biodiversity Conservation Scheme

Thank you for the opportunity to provide a submission to the inquiry being undertaken by Portfolio Committee No. 7.

We will address the items identified in the *Terms of Reference* in the following pages and attachments. We welcome any opportunity to expand on the information contained within and provide explanations if requested.

Experience with biodiversity conservation in NSW

Our experience with the scheme has extended over a number of years. The main involvement has been two-fold, with one of the directors of this company being involved in the design of the scheme and components as a senior ecologist in DPIE (and its predecessor agencies) with working experience as a vegetation ecologist across much of NSW. Since the late 1990s, Greg has sought a property on which to implement financially-viable conservation of the biodiversity of an area he grew to know well. The northern rivers region was the preferred location for this undertaking as land was able to be purchased by someone on a modest income, and not expensive like areas nearer to Sydney or Newcastle, and the years of experience gained from working in Grafton on the regional vegetation planning process that commenced with SEPP 46 – one of the first protections afforded to biodiversity that had support for its implementation.

In 2017 a 200 ha property ('Ermelo') was identified as providing an opportunity for conservation of the type allowed for under the BioBanking Scheme that had been established by the NSW Labor government as a response to the implementation of SEPP46 and the legislation that followed that. The property was able to be identified as being likely as good habitat for threatened species given the proximity to large bushland areas (adjacent to a complex of state forests) and previous surveys had provided an array of publicly-available data online about the threatened species in this area. It was also cheap, as the property had little cleared land, and had been used as a site of timber harvesting for decades. We purchased this property from the open market, and commissioned a third-party environmental consultancy to undertake the task of assessing the property in regard to the Biobanking Scheme. Greg provided assistance as a field ecologist on this work as a means of reducing costs to our company, but all work was undertaken or completely overseen by ecologists of the consultancy. The BioBanking agreement (BA449) was signed off by the Chief Executive of the Office of Environment and Heritage on 15 January 2019.

Selection of the utilized consultancy was through experience with the staff over more than a decade and also that Greg had spent a year in industry working with the consultancy and gaining greater experience on the implementation of the BioBanking Scheme 'in the real world'. The consultant identified the assessment work required, supplied the equipment utilized and billed our company for the work at normal charge-out rates and recovery for additional costs such as accommodation.

Greg has been employed by the environment agencies of NSW for most years since 1994 (in SE Queensland in 2000 and in industry in 2016). His experience with assessing and analysing native vegetation and ecological communities, threatened species and community conservation initiatives has made him a valued and highly-sought member of the staff with experience in the matters that are considered in the biodiversity assessment processes. His experience has led to a number of improvements and modifications to the schemes, and the incorporation of more rigorous science. He has published papers integral to the current scheme. Over the last decade, he has managed large numbers of threatened species and ecological communities for the Department as both accountable officer and as species project coordinator for projects scoped up for the 'Saving our Species' program. It has never been a case that one of Greg's managed entities also occurs on the property we manage as a conservation site, so no direct correlation occurs. His expertise gained in the regional areas undertaking vegetation surveys has meant that he is considered an expert in many of the threatened plants in NSW, and he does have recognition of this in the Saving our Species program. However, in accordance with the Conflict of Interest declarations he has maintained and undertaken since 2018, he declares or excuses himself (depending on extent of involvement) in any situation where species discussions consider species that occur on the 'Ermelo' property.

The 'Ermelo' property is recognised to have two threatened ecological communities (floodplain wetlands; floodplain sclerophyll forests) among the five plant community types on the property. It generates credits for eight threatened species (koala, squirrel glider, water nutgrass, Bailey's indigo, slaty red gum, native milkwort, rufous bettong, brush-tailed phascogale) and has so far been identified as occupied habitat for another 30 threatened species of which five are able to be considered for generating credits but obtaining the 'variation' process to add these to our agreement has so far been stymied by the Biodiversity Conservation Trust (BCT) for a period exceeding eight months.

We trust that you will be most interested in our submission, given we are among the few who would be able to provide a 'whole of program' view, with experience from across the spectrum of roles involved in implementing the components of the scheme,

Yours sincerely

Henribark Pty Ltd

Margaret Steenbeeke
Director

Greg Steenbeeke
Director

Addressing the Terms of Reference

Item 1 (a) – Effectiveness of the scheme to halt or reverse the loss of biodiversity values, including threatened species and threatened habitat in New South Wales; the role of the Biodiversity Conservation Trust in administering the scheme and whether the Trust is subject to adequate transparency and oversight,

This is a many-headed question, and primarily appears to be directed at investigating the departmental processes and role of the BCT. It is not our place to comment upon these.

However, it is worth noting our own experience with the BCT as a credit holder and site manager.

By example: in January 2021 Henribark Pty Ltd sent an email to our local contact in the BCT (identified as the appropriate process by BCT) with regard to our considering the addition of species recognised on the property in the period since the Agreement was submitted. The site had been impacted by the Busby's Flat Wildfire on 8 October 2019 and fully burnt out. Recovery was slow initially, as a period of nearly four months elapsed between the fire and the commencement of 'good rain' at the end of January 2020. Recovery of the vegetation and threatened species populations commenced at that time. Henribark sought input from BCT in January 2021 as to the data sources that would be suitable to be used for the variation to determine the Vegetation Integrity score. An email was sent in early February to clarify the position that had been discussed over the phone to allow an 11-month period to submit a variation without penalty. At early August – 6 months later – this has not been responded to by BCT apart from a single email in late April regarding the BCT seeking clarification as to whether they would allow the variation to occur as one of the directors of the landholder company (Henribark) is also a staff member of the 'Planning Cluster' of NSW government agencies, which the BCT also occurs within. As biodiversity survey is usually time-dependent, the loss of a 6-month window is reprehensible and shows that in this instance the BCT is acting as an impediment.

It was while this landscape recovery from fire and flood was happening that several of the species found since have been noticed. Populations of species respond in relation to the stimuli in the environment. Major fire and good rains are both significant stimuli. We noticed that there was a good response by one of the species we had already created credits for (*Polygala linariifolia*, native milkwort) as a result of the species being responsive to disturbance. Generally, the species remains in low numbers, dispersed across the landscape and being so small is cryptic and unlikely to be seen without extensive amounts of survey. The current version of the Biodiversity Assessment Method (BAM 2020) considers this situation, with presence of a species in a vegetation zone being sufficient for all those parts of the zone which are providing habitat being suitable to be used for credit generation. At the time we entered the agreement, this was not well understood within OEH, and they provided to us only those areas within 30 metres of the recorded locations providing for the generation of the credits in our agreement. This was an error where staff of the Office applied the 'impact' assessment criteria to an 'offset' situation. It is worth noting that this situation is now much better addressed in BAM 2020 and credits are generated across all parts of a site that provide habitat, allowing for an increase and bolstering of the population of a threatened species in a managed stewardship site.

Among the other species we wish to add was one we were not able to assess for at the time of the initial assessment as we did not have funds to cover the needs. This species –the microbat, southern Myotis, *Myotis macropus* – was noted to be present in casual observation by the landholder at the time of the initial assessment, but rigor is required to generate credits and despite the expertise of

the landholder, it was considered inappropriate to nominate the species without survey support. Survey for this (and other microbat) species is expensive, and would only be undertaken when a need exists. We have now been approached to provide these credits, but await the BCT response on the variation to be able to commence survey. Already we have lost half of the survey period available over the year, and now need to undertake those surveys after October.

Other species we have found on the property since the recovery have generally been found as a result of undertaking an intensive assessment of the post-fire recovery of the site at our own costs. Unlike almost every other fire-affected site, we had a near-continuous camera recording program and vegetation data from assessment plots captured less than two years before the fires. This site has been remarkably useful in undertaking post-fire science in the field. Species which have become more noticeable as a result of the recovery have included *Rotala tripartita* – one of only 8 sites known in NSW for the endangered species – as well as red-backed button-quail (*Turnix maculosus*), a small ground-bird which at the time it was recorded was the first time in over 2 years that species had been recorded into Bionet and the first time it has been seen on the NSW conservation estate since 1994 according to the species' page on the threatened species website. *Melaleuca irbyana* is known from the adjacent Ellangowan State Forest and Braemar SF and had been looked for upon the 'Ermelo' site. After the fire it has come up in a number of locations from soil seedbank. Surprisingly, it is not the only *Melaleuca* to respond in this way. Prior to the fire we recorded only two species of *Melaleuca* on the property, now we have six. We also have many more silky oaks (*Grevillea robusta*) appearing – in areas well away from the single individual we found prior to the fire. Many unlisted species have appeared since the fire too, including the first record in the state since the 1880s of *Lindernia procumbens*, a species thought previously to be exotic, but which subsequent research now supports to be native, and known only from this one location in all of NSW.

And that was before the restrictions on undertaking survey and fieldwork that the Covid lockdowns and restrictions on travel created.

Some of our other experiences with the BCT have also been problematic.

In the post-bushfire period, the BCT provided funds to undertake targeted management actions on sites that were 'passive'. This was for those stewardship sites had not yet met their Total Fund Deposit (TFD) so were reliant entirely on the landholder using their own funds and resources to undertake the passive management that follows entering into an agreement but not yet funded by the sale of credits to be recompensed for those actions. While being otherwise entitled to receive those funds, the BCT decided that we were ineligible on the basis that a director of the landholder company (Greg) was staff with one of the other agencies in the cluster. As we do not know if other cluster staff are involved in BCT programs – that is not public knowledge – we do not know if they were treated the same. However, we are aware that we are not the only staff of the cluster with contracts to the BCT, either directly (as landholder) or through landholder companies. We are aware of a number of staff of NPWS and other parts of former-OEH that have agreements with the BCT.

As to the transparency, it must be admitted that the processes they use to seek credits – through both the bi-monthly Open Fixed Price Offer process and the more-or-less annual Credit Tender processes, have been publicly advertised and are so far our only successful opportunity to sell credits into the market. The BCT has been our only purchaser, despite approaches from and to a number of developers who were seeking credits. Even our approach to Roads and Maritime Services (RMS) was unsuccessful – RMS advising us that they did not need the credits we were able to supply (although I think there may have been other processes at play – see the response to part 1(b)).

Item 1(b) – the use of offsets by the NSW Government for major projects and strategic approvals,

By comparison to the level of development across the state there are few instances of when the NSW government has been the developer seeking offsets. So far, these have mostly been for road projects through the RMS, but the Metro rail project is now also ramping up as a client. These projects are generally many years in the planning, publicly advertised and discussed, and follow identified routes (or narrow approximations of routes) across the landscape. As the available vegetation mapping identifies the impacts, and the scoping studies and available public information identify threatened species likely to be affected, it is easy to forecast likely impacts, often many years in advance.

The use of offsets is required by any development that impacts biodiversity beyond the legislated trigger values. As the majority of infrastructure is linear and often cannot implement avoidance of the biodiversity at fine scale, these projects generally have a wide and diverse array of impacts. 'Like-for-like' at the finest scale is the basic principle when undertaking offsetting. This means that, where possible, the same ecological community is offsetting the impacts of a project, and credits of the same species is offsetting impacts – or often presumed but unconfirmed impacts – of the species affected. Strategic approvals are again little different to other developments. Given all developers are then considered the same, why shouldn't government projects be subject to offsetting requirements for their impacts.

As to why government may elect to purchase from the market I can conceive of several reasons. Prime among them though is that the land on which the offsets are sourced are able to contribute to the community in several ways.

- The cost of purchasing the land is not put on government but upon the private landholder, and taxes are paid on credit sales beyond costs such as filling the Total Fund Deposit and paying for the assessments.
- The costs incurred in achieving the environmental improvements on that land are burdened upon the landholder. The payments received from the investment returns of the Total Fund Deposit, held by government on the behalf of the landholder, are provided for this activity.
- The actions required to improve the condition of the native vegetation communities on the offset land are generally contracted to third party providers like weeding contractors, pest control companies, land restoration and earthworks companies and those involved in implementing ecological fire, among the many other tasks required to manage the site.
- There is no further cost to the government once credits are transacted. The land is maintained as conservation lands of the same category as national park and nature reserve lands (being nearly as highly protected legally). Unlike government reserves though, there is no further call on the government to pay for management. Government administered sites have an ongoing drain on the public purse – over the term of their management (being in-perpetuity) the costs will mount beyond the values paid through the offsets scheme.

Item 1(c) – the impact of non-additional offsetting practices on biodiversity outcomes, offset prices and the opportunities for private landowners to engage in the scheme, and

It is hard to understand here what is mean by 'non-additional offsetting practices'. For our answer, we have presumed this to mean that the offset is generated only from the capacity to produce an improvement in environmental condition at a site through management and that management is not of the quantum and style of that already required for that site (such as legislative requirements

on landholders due to the Local Lands Services Act (LLS Act), the Biosecurity Act (BSec Act) and the Environmental Planning and Assessment Act (EP&A Act). It also is taken to exclude those areas where there is contracted provision of biodiversity offsetting that may have arisen prior to the implementation of the Biodiversity Conservation Act (BC Act) which makes the process of acquitting biodiversity impacts of development a more rigorously managed and recorded process.

It may be hearsay, but there are anecdotes about sites where the local council has been provided funds several times over decades of management to account for the impact a developer incurs when doing a development. This is a process which cannot occur under the current legislation. Biodiversity Credits are retired against a single impact incident, and cannot be 'created' again. Land gets used as an offset once, except through a process allowed for once the initial management period has elapsed and a fresh assessment is undertaken. That is, credits can only be created from a site that has a particular capacity for improvement in ecological condition (which is what the credit is actually measuring).

Offset credit prices have been one of the greatest problems with the current scheme. Biodiversity credit price has two impacts – diametrically opposed and inextricably linked:

- When very high they provide an impediment on development, or, realistically, lead to better design of development layouts so that 'Avoid' (the first requirement of the BC Act) is actually prioritised, leading to less impacts as a result of development on biodiversity. In addition, less impact also means that there is less need to purchase and retire credits from the residual and unavoidable impacts, so surely this is a 'win'. That the deputy premier describes it as a 'handbrake' is appropriate – sometimes a handbrake needs to bring something to a stop.
- When credits prices are low it leads to insufficient funds being available to cover off on the in-perpetuity costs of providing for the management of the offset, the provision of a suitable replacement living wage and any taxation obligations that arise (in particular Capital Gains Tax which is essentially 30% of any credit sale following meeting the TFD and other costs), as well as tying the land up with no opportunity of selling for anywhere near market value.

The pricing of credits needs to account for:

- the sum of required management actions (Table 6 in the BAM – the Biodiversity Assessment Method that determines how the scheme operates);
- any active management actions (Table 7) required at the site to generate the additional credit yield;
- recompense for the cost of the land or any loss in value;
- recompense for the costs of obtaining the agreement by commissioning the ecological assessment;
- recompense for the annual income the land would normally generate (this effectively being a process that leads to 'farming biodiversity' as the outcome for the land). In developing agreements, these should include what is essentially a replacement for 'foregone income';
- any taxes on 'profit' made from the sale beyond the costs incurred by the TFD, assessment and land acquisition, should the landholder succeed in selling the credits for a value greater than the cost of producing them.

Taking into account the payment of an annual value that provides recompense for the production that the land would otherwise generate is vital. No landholder will consider participating in the scheme unless there is a payment in an ongoing manner that equates to annual income to put the

land under a permanent conservation covenant inscribed on the land's title. Why would you participate in the scheme voluntarily otherwise? Would you invest in something that was guaranteed to continually lose you money? A bank or other lending institution wants to see that the purchaser or owner has a capacity to source an income. If the land is being used to 'farm biodiversity', then that becomes the source of income from the land. After all, it can no longer be grazed or logged to generate an income – so an income substitute – payable yearly – has to be included in the cost of the credits at the start.

This value of 'biodiversity farming' is the most controversial and least frequently considered, especially in regional areas and explains the lack of interest from landholders to participate. Why would they wish to do so when it will essentially create a cost on them to participate? A fair equivalent value to the productivity of the land (such as an annual payment equal to the highest value returned from the land going into the stewardship over the previous decade) would likely see landholders happy to participate, and provide certainty to a lender should the land be sought for collateral or itself require a mortgage. The required management actions undertaken for the agreement are not meant to be replacement for income – and should be considered the payment component for keeping the vegetation in better condition rather than degrading its ecological values by grazing or logging.

Another reason to build an annual payment is that it removes any uncertainty to future owners of the land. If the land is sold before all of the credits are traded, there are complexities. The land receives no further income than what is in the annual payments. The credits (before first trading) remain with the person or organisation originally provided with them when the Agreement was signed. The landholding receives no benefit apart from what is in the TFD Annual Payments. In the model TFD supplied in the attached files, a foregone income value is provided of about 30% of the annual payments received from the fund. This provides certainty for the later landholders that the land provides for a fair income and does not force the landholder to seek income from off-site unless they wish to, and that they can afford to not do the required work for the absolute lowest price so they retain some income.

Let me present an example of a 100-hectare site to explain how I believe credits should be costed, in a way that will interest landholders to participate. The property is an 'ideal' case – with only 4 km of fencing to exclude stock (it is a square, 1 km along each side); has 3 gates; 6 km of fire trails that provide management access; 4 ecological fire zones; a moderate but manageable weed burden; has a general vegetation integrity of 50 and a potential to improve of about 25 VI units; PCTs with <70% cleared; with 5 threatened species (100 ha of koala and squirrel glider habitat, 5 ha of southern myotis habitat, a vulnerable plant with 10 ha of habitat and an endangered plant with 30 individuals recorded). This describes most of the general timbered grazing land along the coast and nearby ranges, although it has more threatened plants than is typical.

The property generates about 625 ecosystem credits, 625 credits of each of koala and squirrel glider, 63 credits of *Myotis* and 63 credits of the vulnerable plant, and 26 credits of the endangered plant, a total of 2,027 credits. The nominate TFD, undertaking all the required actions (Table 6 of BAM) and necessary items from the active management actions list (Table 7) is of the order of $3.8 million. This does include an annual payment value (elaborated on below) that equates to the typical value returned from 'business as usual' on the property. If the species credits sell for approximately $1000 each (very much the upper end of current pricing which itself is ridiculously twisted by misunderstandings), these sales of species credits return a total of $1.4 million, of which only $1.3m has a high likelihood of being realised (sold). The ecosystem credits have to sell for at least $3,200

each to only allow for meeting only the TFD (but $5,300 each without species credits sales). Given the property is likely worth in excess of $500,000, and the assessment will likely cost more than $60,000, the value of the ecosystem credits must also be increased by at least $1000 each to cover those proportions of the costs. Therefore, a likely sale price absolute minimum value for these credits – to meet costs and not return any profit to the landholder – must be $4,200 each, or $6,300 each if the species credits generated are not likely to sell.

Now the 'kicker' – this approximates the real-world example of our own site. And this doesn't even equate to taking any 'profit' from the process. This is purely costs to generate credits on the basis of fair returns for land use and costs of undertaking weed and pest control and implementing managed ecological fire ('hazard reduction' in most cases, with an ecological intent).

Currently, the price being offered for this style of ecosystem credits (PCTs 1209 or 1211) to us by the BCT is below $1,800 each. This is why we refused to sell them when that was the offered value. They tried to get us to sell credits for less than 40% of the value it costs us to generate these credits.

As a rule of thumb, when advising those interested in participating in the scheme, I advise that the normal returns from the land should be considered – given these normal farming / timber-getting practices will have to stop under the future conservation management program. I recommend a value of approximately $350 per hectare per year should be considered as a value that equates to the value returned from grazing in coastal woodland and open forest areas (being approximately 1 steer turned off per hectare per year). This value should be built into the TFD to be provided as part of the annual payment, certainly in the period following the 20-year management agreement term, **as this will be the only guaranteed income from the land – the other elements of the management costs being priced as though they were undertaken by contractors**. Where this equates to $35,000 per year on a 100 ha site, this item alone adds about $1.4 million to the TFD. For comparison, $35,000 per year would provide for a mortgage repayment for a $500,000 loan over 25 years at 5% p.a. Hundred hectare properties in coastal regional areas are typically more than $500,000 at present, meaning that if the annual payment for managing the property (and the only source of income for the landholder) is built into the TFD calculation, it would only just be sufficient to pay a 25-year mortgage over the property should it be sold. Any less makes the land effectively worth less than it is at present – and acts as a strong disincentive to landholders to participate.

Another reason to add this foregone income value to the TFD is that it removes any need to rely on credit sales to provide an ongoing income. In the first instance, the credits generated from a site are finite. Once all the credits are sold there is no means by which additional income from the site could be obtained. Secondly, as the land and the credits are separated entities (that is, credits are not tied to the land but remain the property of the owner under which they were generated), there is complexity involved in trying to sell a stewardship site, with the general recommendation from the BCT being to 'negotiate with the vendor to continue to source an ongoing income from the credit sales'. If the purchaser or vendor are not knowing of these complexities, the site may be sold with no source of income apart from the annual payment from the TFD. As the TFD and annual action is often costed in such a manner as it pays for the actions to be accomplished by a contractor on a very slim margin, leaving little income for the landholder unless they undertake the works themselves (even if not qualified).

The reason actions in the TFD should be costed as though they are being done by a third-party contractor is simple. Agriculture already has the oldest workforce of any industry, and one of the highest rates of industrial accident per participant. Both of these factors mean that the chances of the current landholder being the one undertaking the actions through the full 20-year initial period

are quite slim. Additionally, there is the need to consider not 'what a job can be done for', but what is required by law to be paid for the people working on the property. Various disbursement levels set by Awards are in play, including the rural workers' pay rates under the Pastoral Award and the Horticulture Award, as well as items relating to particular skills and technical specialists that must be employed / contracted to undertake the monitoring, review and implementation of some of the required elements of the scheme as outlined in Table 6 of BAM. In addition, travel to and from the site is poorly considered, and some of these sites are quite distant from the normal workplace or larger town from which the contractor is coming.

Undertaking the task of generating credits should be considered in the same vein as undertaking any other form of production from land. If a credit costs a lot to produce, it should be able to be sold for a lot. When the costs of land rehabilitation are factored into mining these costs often run to many tens of thousands of dollars per hectare to provide a simulacrum of the pre-mining environment. Additionally, where the segregation of the 'less productive land' into a stewardship occurs, the overall production benefits to the farm enterprise may be underestimated. In the tablelands and western slopes areas of NSW, this land is often where lambing occurs. Therefore, making it unavailable for the normal enterprise on the land (where that may be sheep grazing and cropping) will heavily affect the returns to the farmer, with the potential loss of all lambs where they cannot get into cover in particularly inclement weather. The production off that land, that year, will be the entire brood of lambs – which may run to tens of thousands of dollars of lost income. That is why the annual payment for foregone income must be built into the TFD, and must be considered a necessary component of the listed 'required components' (the Table 6 items in BAM) for a site. We implore this to be a recommendation from the Inquiry.

An example of a modelled nominate TFD calculation is attached to our submission files. I have also included another spreadsheet in which I have divided the payments made on an annual basis into several categories (foregone income; site administration; required technical reviews; annual recurrent fees, rates and insurances; ongoing management costs; establishment management costs) with the total funds and the proportion of the annual payment that each of these categories constitutes. As can be seen, the payment of a 'foregone income' is not onerous, being generally between 25% and 40% of the funds paid for the in-perpetuity management of biodiversity. This benefits the developer, the landholder and the sustainability of NSW more generally, by recognising that the management of biodiversity has value as a 'job', and those funds are generally spent within the local community. Surely the management of biodiversity should be considered in a complete 'life cycle analysis' of the costs incurred by development – including the costs to re-establish the same diversity, manage it in perpetuity and provide a modest living to those providing for its care. At present, that last factor does not seem to run into consideration.

Current values for the credits and distortions caused by market manipulations

Credit prices are currently distorted as a result of two processes, and neither of them is truly representative of the costs of generating a credit.

The first manipulation has been the Biodiversity Offsets Pricing Calculator (BOP-C). This has been a horrendous deviator of credit values since the continuation of this tool following the implementation of the BOS as a replacement for the previous Biobanking Scheme.

For species which are now measured by area and not by count (almost all plants) there has been no change in the value credits are identified for sale. However, whereas it may have been hundreds (or on occasions thousands) of individuals in a hectare (and each individual created 7.1 credits), now it is

between 5 and 7 credits (generally) per hectare. By example, if a species recorded under the old scheme had 100 individuals per hectare, that became 710 credits generated. Under the new scheme, about 7 credits are generally created per hectare, yet the price at which they are 'marketed' on the BOP-C means that these credits – and therefore the funds allocated for their management in perpetuity – is now 1% of the former value. For species with naturally low density per hectare, the drop is less significant, but the funds provided through credit sales to administer the species have also dropped markedly for the same unit area. Even species which have continued to be measured by count of individuals, the number of individual credits (previously 7.1 per individual recorded) has dropped markedly and yet credit prices have not changed, reducing the funds available for their ongoing management.

For ecosystem credits there has been no recognition of the change in values that has occurred since the scheme changed. Whereas under the previous scheme a site would generate 9 to 12 credits per hectare on average, now it generates mostly 4 to 5. However, again, the values for these credits are still reflective of the old scheme despite only half of the number of credits being produced for the same unit area. This makes sites much less likely to meet TFD and become self-funding, as:

- More credits need to be sold to meet the (increasing) TFD value, yet fewer are generated so credits must sell at a higher price and the price paid previously – especially under the old scheme – cannot be correlated to the current scheme and the costs of the management needed to produce those credits.
- More developments are needed (and therefore a broader market and more impacts) in order to sell enough credits to make the TFD.

The second manipulation is caused by trades between 'related entities'. I know of instances of each of the following:

- *The purchase of credits from different parts of the same company* meaning there is no incentive, opportunity or desire to sell the credits at anything other than the base cost of generating the credits (eliminating a profit component) and the cost of the land, assessment and required actions.
- *Purchase of credits from related companies* such that the prices are also manipulated similarly – potentially with an additional opportunity of tax management.
- *Reporting of credit trade prices that are reflecting the sale of the full production of credits from a site for only the value of the TFD*. Given the price of a credit should reflect a combined value that comes from: 1. Representative component of the TFD; 2. Representative component of assessment costs; 3. Representative component of land value or land costs; 4. Any income component the landholder considers reasonable (noting that this will be subject to 25 to 47 percent taxation depending on how it is treated). Where a trade considers only the first element, it leads to significant distortion from the actual costs incurred in generating the credit.

As credit prices are driven by the values of existing sales, any sale that is less than the value identified that incorporates all the costs (land cost, production foregone, assessment, management) will lead to a lowering price trend going forward, as each sale is capped by the previous. Each sale contributes to the price calculation and the average price, if sales are progressively cheaper, this will have a downward pressure on prices, making impacts cheaper and reducing the likelihood of returns to the generating site meeting TFD and providing an incentive to participate.

Item 1(d) – any other related matters.

There has been a lot of movement of prices in the past, and much of that has led to the uncertainty of the market. While a tool exists to provide a price point, that has been manipulated by the trades being done that are not in a fair, open market and DPIE does not seem interested in excluding these trades, making the prices the BCT can offer for same or similar credits plummet – and dissuading landholders from participating. This has impacted the following entities we have been tracking over the last 4 years as can be shown in the following table:

Credit	16/08/ 2018	6/9/ 2018	10/10/ 2018	18/1/ 2019	4/2/ 2019	3/5/ 2019	5/11/ 2019	13/2/ 2020	22/10/ 2020#
PCT 780	$4661	$4661	$4661	*$2368*	$4633	$4404	$8075	$8422	**$9248**
PCT 837	$2409	*$2303*	$2303	$2515	$2794	$1651	$7181	**$7784**	$3474
PCT 852	$2409	$2409	$2409	$2515	*$2017*	$2198	$7181	**$7784**	$3474
PCT 1209*	$2409	$2409	$2409	**$2515**	$2017	$2198	$1525	$1550	*$1403*
PCT 1211*	$2409	$2409	$2409	**$2515**	$2017	*$1651*	$2037	$2043	$1881
Brush-tailed phascogale	*$513*	$513	$513	$626	$630	$627	$628	**$680**	$639
Koala	$513	$513	$513	$529	$265	$541	*$315*	**$935**	$677
Rufous bettong	$513	$513	$513	$529	*$265*	$541	$315	**$935**	$677
Squirrel glider	$513	$513	$513	$529	*$265*	$541	$315	**$935**	$677
Slaty red gum^	*$217*	$217	$217	$223	$228	$227	$227	**$312**	$288
Water nut-sedge	*$217*	$217	$217	$223	$228	$227	$227	**$312**	$288
Bailey's Indigo	*$1006*	$1006	$1006	$1039	$1062	$1058	$1072	**$1241**	$1124
Native milkwort	*$217*	$217	$217	$223	$228	$227	$227	**$312**	$288

- current price; * - not listed against or as a threatened entity; ^ - species by count (all others by area).

The prices have fluctuated wildly over the four years we have had an interest in these credit types. In addition, from 2019 onwards all of the credits had to trade in the BOS (current scheme) and yet, the prices do not reflect the fact that the ecosystems dropped to half the same count of credits per unit area, and plants such as slaty red gum plummeted to only having 10% of the same type of credit. For the species that were by count and are now by area, the change has been even more significant. However, a developer looks at the prices trades are suggested at under the old scheme and thinks that they should apply in the new because the DPIE model has not been updated to reflect the enormous changes. If any company has a price fluctuation of more than a few percentage points on the stock market trading is halted. Not so for biodiversity credits, and yet, they are identical to shares in an entity.

Setting minimum or expected prices for credits should not take into account anything other than the cost of generating the credit (being the required and active management activities, the assessment, the cost of land and the TFD, as well as an opportunity to wear some of the risk of doing it). At the very least, the landholder should be receiving a value equivalent to taking the area out of

'agriculture' and putting it into 'biodiversity farming'. Especially in instances where that patch of bush was an integral, if overlooked, part of managing the agricultural enterprise.

To suggest that credits near the major cities (Sydney, Newcastle) should be more expensive because 'land is more expensive' and the landholder is giving up an opportunity to subdivide does not look at reality. Many of these lands do not have a subdivision potential. These major cities are surrounded by vegetation communities now so heavily impacted – and therefore so rare - that they have been put into a category called 'critically endangered'. These communities are therefore deemed to be at risk of total loss or collapse – impacts are serious and irreversible (SAII) – so any development has to be considered closely and the consent authority has the opportunity to deem refusal of anything deemed to be 'serious and irreversible impact'. Therefore no development potential exists, yet the credits sell at much higher prices than credits for structurally and compositionally similar communities elsewhere (like spotted gum ironbark communities in the northern rivers). These communities all have the same costs – weeds are similar, pests are similar (both are generally worse near agricultural areas) and the time a contractor has to travel to do the work is longer. However, credits are much cheaper outside the major cities because it seems it is only the next 10 years of costs and opportunities that is considered – not the fact that this land will be managed for its conservation outcomes, forever.

Our own credit prices on the north coast are below the cost of producing the credits (the last offer from the BCT was enough to cover only 40% of our input costs) – because the market is being manipulated by the trading prices paid, and related entity trades are not excluded. That is tantamount to allowing insider trades to occur and turning a blind eye!

I have heard today of situations where the developer asked for variations of a development to be run where the cost of the credits was the driving factor, not the avoid principle *per se*. They wanted to know which alignment of their development would cost them the least in having to buy credits. If there was definitely a species impacted, but in lower quality habitat than a higher-quality patch without the species, the loss of the species was treated as a financial impact. All good if it is an animal – it may well continue to move out of the way. Not so great if the impact is to a plant. It may well be gone from the area forever.

And then there are other issues. The legislation allows for a three-year window for adding credits to an agreement (variation) of things like additional threatened species that get recorded from the property. However, over the last 2 years Covid has affected the capacity to do this survey (it must be done by an accredited assessor) and then too the BCT has been problematic in trying to amend ours. In February 2021 we asked for clarification of what data to use in making the variation. We got no reply before mid-April to then be told that the BCT would 'get back to us'. Here we are, 8 months later, and no further word. The BCT is the biggest delay to our plans, and their gatekeeper role on a matter they don't have legislative oversight upon is ridiculous. We want to add five species recorded on our place since the assessment occurred. For one of these we have the first records of breeding in a conservation area in NSW in over a decade, and possibly ever. The techniques were even put to the BCT for them to simply approve. But they want to cause us problems.